

Behavioural Reactions of Managers Towards Airline Operations Performance In Times of Crisis and Growth

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ABSTRACT

David Llewelyn Parry

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This research was undertaken in the United States within two different regional airlines and examines the attitudes and behaviours of managers to operations performance measurement and review (PMR) systems during separate periods of crisis and growth.

The aim and objectives were to examine whether managers would consciously adopt the necessary attitudes and behaviours that are required to positively interact with a PMR system and to further examine what these behaviours should be. A secondary aim was to understand whether the prevailing business state of crisis or growth affected the attitudes and behaviours of managers as they used the PMR system.

The research spanned seven years and was conducted over four iterative cycles within an Action Research paradigm and used semi-structured interviews and repertory grids to examine individual personal construct systems. The research is essentially qualitative but draws on quantitative techniques where appropriate.

The research has shown that people do not automatically adopt the behaviours necessary to achieve performance goals. Unless there is structure, support and an inherent commitment to training managers on how to, correctly, interpret operations performance data then there is likely to be an uncommitted and uninformed response to the PMR system. The research has confirmed that both business states of crisis and growth can have a positive impact on some people and encourage them to adopt performance-driven behaviour.

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1. INTRODUCTION AND RESEARCH STRUCTURE

The objective of this chapter is to provide an overview of the research project and a discussion behind the motivation and background to the work reported with additional detail that is relevant to setting the scene for the overall research. Additionally, it provides an introduction to the design of the research, its justification, the boundaries of the project and its aims and objectives. It concludes with an outline of the structure of the dissertation.

The central theme of this research was to examine the behavioural reactions of managers to the implementation and use of performance measurement and review (PMR) systems in times of crisis and growth.

I decided to write this thesis in the first person because it details my experiences as a practitioner and researcher while I was actively, and intimately, involved in several change initiatives as the research cycles unfolded. This provides enhanced context to the storytelling to use a first person perspective, especially as the research was conducted using a participant methodology.

1.1 Background

The research presented in this thesis takes place against the backdrop of the regional airline industry in the United States during the period 2003-2010. It was initially undertaken in an attempt to make a positive contribution to the flight operations performance of the regional airline for which I was working, after our survival was threatened by our parent company following a major crisis in the airline industry that resulted from the acts of terrorism in September 2001. The research was later expanded to another regional airline.

In order to better understand the term “regional airline”, and to set the stage for the research project, it is important to make a distinction here that there are essentially three specific business models for mass air transportation in the United States:

1. Major legacy carriers such as Northwest Airlines, Delta Airlines, American Airlines, United Airlines and US Airways
2. Low Cost Carriers (LCC) such as Southwest Airlines, JetBlue Airways, AirTran Airways, Spirit Airlines, and more recently, Virgin America
3. Regional airlines such as Allegheny Airlines, Pinnacle Airlines, Mesa Airlines, Chautauqua Airlines, Mesaba Airlines, Atlantic Southeast Airlines and SkyWest Airlines

The regional airline industry is a very lean and low cost operation that focuses on providing short-haul feeder service to the mainline hubs on behalf of the major airlines and accounts for approximately 50% of the nation's commercial airline flights. This amounts to more than 15,000 regional airline flights per day operated by a fleet of more than 2,700 regional aircraft, which is almost one-third of the US commercial passenger fleet. Regional airlines carry in excess of 150 million passengers per year, which represents more than one in every five domestic airline passenger (Regional Airline Association 2005).

For example, Pinnacle Airlines provided a service of approximately 800 flights per day throughout the eastern half of the United States and Canada that fed passengers into the major hub airports for Northwest Airlines. These flights were operated with a fleet of 50-seat regional jets and were flown under the brand Northwest AirlinK, which was the name given to flights operated on behalf of Northwest Airlines. This offered a seamless service for the passenger between the mainline carrier and the regional airline. In this example, Pinnacle Airlines provided service into the hubs of Minneapolis, Detroit and Memphis, which is representative of a 'hub and spoke' system whereby the airline provides passengers with service to most cities within the country by connecting them through a central point. Rather than having an overabundance of direct flights to small markets, an airline can achieve far greater synergies by delivering passengers into a major hub and then connecting them to their destination. As an example, a passenger flying from a small community in the south, say, Fort Walton Beach in Florida, who wished to travel to San Francisco on the west coast, could take a flight on Northwest Airlines to its hub in Memphis and then connect to another larger aircraft for the onward journey to San Francisco. Additionally, having a large hub means that passengers can be more effectively fed to services with much larger aircraft travelling overseas. This

hub and spoke system also allows the ability to easily re-route passengers when the airline's operating schedule is disrupted.

The service that a regional airline provides is, by its nature, a rather intense operation. Most flights are relatively short in length, typically between thirty minutes to two hours, and each aircraft may operate as many as 10 flights per day. This rapid succession of flights does not leave much margin for errors or delays. Passengers connecting to long-haul flights can be significantly inconvenienced if their flight to the hub airport is delayed and they miss their connection. It is therefore of the utmost importance that these flights operate according to the published schedule. As we will see later, the notion of measuring performance is critical for an airline to maintain this kind of reliability and consistency and this provides a tremendous challenge requiring a host of resources to manage the daily operation effectively.

One thing that is undeniably true about the airline industry is that it is full of challenge, diversity, crisis and growth. Indeed, during my career to date I have not experienced anything quite like this before. I began my career in England during the 1980's working in an unrelated industry before embarking on a dramatic path change that led me to settle in the United States and to immerse myself in the airline industry. What has been so startlingly different is the "living for the day" approach to airline operations. Anything that took place yesterday rapidly becomes ancient history by the following day simply because the focus, of all those employed within the logistics side of the business, is on the day of operation to ensure that the schedule remains intact during the inevitable and numerous disruptions that occur. It is fair to say that no two days are the same and that we often propel ourselves from one crisis to another, either within the context of isolated problems related to a single flight, or indeed in much broader terms to that of the airline, or even the industry as a whole.

In addition, economic and political variables have a profound impact on the aviation community. The industry is truly global, not just by the very nature that the reach and influence of air transportation is obviously worldwide, but by the fact that the same principles and processes apply; that is, the fundamental requirement for safety and operational excellence. This must be maintained despite highly competitive, and at times cutthroat, conditions.

At the time that I commenced this research, the World in general was singularly focused on terrorism. This was in the recent aftermath of September 11th (2001) and

the 'shoe bomber' incident (December 2001). Economically, the industry had been on a slow decline for an extended period, but this was exacerbated by this unique event and threw the industry into chaos, and a significant slump, that saw the eventual demise of some long-established airlines. Competition and the energetic struggle for market share took on new heights as airlines rapidly struggled for survival.

My research has spanned a seven year time period from 2003 to 2010 and comprised two studies within the Flight Operations department of two prominent regional airlines whose fortunes followed opposite paths after the events of 9/11. The primary vehicle for my research centred around the implementation and use of performance measurement and review systems (PMR). It further explored how managers behaved when presented with a formal measurement and review process that required them to understand operations performance metrics while simultaneously dealing with their company being either in turmoil or in a period of prolonged growth.

A PMR system in this context is a structured process that identifies and measures the key aspects of performance that are considered important or decisive to the success of the airline and then presents the performance results in a visual and interpretive way to allow critical review, discussion and development of action plans. The foundation of the system is the identification of critical success factors (CSFs), which are the performance outcomes that are essential to the survival of the airline. These CSFs are then developed into a series of key performance indicators (KPIs) that are used as the primary metrics of the system. This in turn provides insight to how effectively and efficiently the CSFs are being met.

The first two cycles of research, were conducted at Allegheny Airlines, a mature regional airline that was a wholly owned subsidiary of US Airways. Allegheny suffered negatively after the terrorism attacks in 2001, and the continued threats of terrorism, largely because the parent airline, US Airways, had fallen victim to unfavourable economic conditions. The second two cycles of research were conducted at Pinnacle Airlines, an independent regional airline that was able to prosper during the very difficult phase that followed 9/11.

Each of these cycles involved gathering and analysing data that examined the response, reaction and thoughts of managers and directors to the implementation of a performance measurement and review system, and then their use of, and engagement

with the system, with the examination of their attitudes and behaviours forming the backbone of the research.

The approach that I adopted provided a unique perspective and an interesting opportunity for me, because as a new director I was eager to gain an in-depth understanding of how my colleagues understood and responded to operations performance, and to be able to share this insight and experience with my direct reports who were not well-versed in operations performance measurement.

It was apparent from the beginning of my tenure at Allegheny Airlines that my role as the Director of the Operations Control Centre (OCC) would not only allow me a great deal of latitude in running the daily operations of the airline, but that I would also be accountable for the results. Therefore, it was of critical importance to make the best and most informed decisions possible. This can only be achieved with consistency when those who are charged with making operational decisions universally understand the relationships between the performance variables. It was at this point that my interest took sharper focus and I decided to pursue a line of inquiry into the nature of performance measurement at Allegheny to see what my colleagues thought about it, and how they perceived that their roles influenced operational performance. This began a long and winding journey of research that has been condensed and captured into this thesis. By attempting to understand the behaviours of others and to gain an insight into the deeply rooted mechanics of operational logistics, I hoped that it would allow me to become a better manager and also provide the opportunity to enlighten others on the cause and effect relationships between various flight operations events and their associated metrics.

1.1.1 Airline Operations Performance

Measuring operational performance is a vital component of a formal performance measurement system in most companies, but it becomes even more pronounced for airlines because they live and die by the reliability of their flight operation, which in turn has a direct impact on financial performance.

The United States Department of Transportation (DOT), publishes a monthly Air Transport Report, which measures such items as on-time arrivals and lost baggage, and in turn holds the industry to high standards of output quality, and especially safety. These external standards serve to benchmark each airline's operational performance

against its competitors, but the internal factors behind each airline's operational output are not generally known to the other airlines, or detailed in the report. More insightful information, and finely detailed performance data in particular, remain closely guarded by airlines, but these DOT statistics do effectively rate airlines against one another and allows the General Public to evaluate the relative performance of each airline. However, the reports can only show the end-results of each airline's efforts during a given month. In order to understand the true determinants of operational performance it is necessary to examine processes embedded deep within the organisation that are in many cases far removed from the final service offered to the customer.

On the day of operation, all efforts at planning and preparation naturally reach their fruition and it is then left to the actions and efforts of the front line personnel, such as pilots, flight attendants, airport staff and the central operations management centre to run the airline as smoothly as possible. All of this, of course, involves human interaction, which can stumble as frequently and dramatically as any other human endeavour. By relying in very large part on human involvement, the attitudes and behaviours adopted by employees can have a very significant and profound impact on the end-result. These attitudes and behaviours, therefore, seem to be critical to the survival of any airline because it is this resultant effort, brought about by its employees, that produces its reputation with the public, be it good or bad, and that reputation can be indelible, as many now defunct airlines have discovered.

1.1.2 The Human Factor: Behaviours and Attitudes

During my career, and in particular my formative years in aviation it struck me that the effectiveness of individual departments, divisions or indeed companies seemed to be far more dependent on the attitudes and behaviours adopted by its personnel than to the views espoused by senior management. It became apparent to me that the inherent culture within the company dictated whether people would adopt the attitude of just simply working to receive their paycheque, or the attitude of striving to go 'above and beyond' on a consistent, basis. The second of these two attitudes, implying some level of constant improvement, relies very heavily on individuals feeling appreciated and knowing that their work is of value. I have experienced company cultures where pressure was exerted by senior management in the form of veiled, or even outright, threats, and consequently attitudes change dramatically for the worse and behaviours decline. There are of course times when people need to feel pressured to work harder, but this should be used constructively and wisely.

I have seen, and been on the receiving end of, different approaches to the objective of trying to obtain good performance. It has been my experience that when desired behaviours are nurtured and fostered, people tend to respond positively, but when they are forced, the result can be a decline in morale and an erosion of performance. Maintaining a reasonably high level of motivation allows individuals to engage positively and constructively with problems when they arise.

These differing personal experiences and opinions, and the psychological reaction of how individuals respond to various motivational stimuli, became an interesting personal study for me and I wanted to know if my views remained valid in other situations. These personal beliefs grew from 10 years of experience (at that time, 2003) of working in America. Being British and spending the first part of my career in Britain I was used to a rather different culture. The American way of doing things was initially at odds with my approach; a great deal of big talk and lofty goals, but with an undeniably effective “can do” attitude. However, this big talk did not always tally with reality and sometimes yielded results that were far less than expected, often at the expense of the people involved.

This interest in the attitudes and behaviour of employees also led me to adopt a psychological slant (see repertory grid technique in chapter three) to the research project that in turn provided intriguing insight into human nature and the way in which we make sense of things.

1.2 Research Overview

The motivation for the research stemmed directly from my involvement in a weekly ‘airline performance review meeting’, which was imposed on the managers and directors at Allegheny Airlines, my employer at the time. Our parent company’s management oversight body, known as US Airways Express Division, conducted the review and they expected that the key operations managers and directors from each Express Division carrier would participate in it. This was a new concept for many of the directors I was working with and there was an apparent, and at times very obvious, lack of understanding of performance measurement in general. At this realisation, I began to question how we could actually be effective as managers without having an in-depth knowledge and understanding of the measurement of operations performance. This led

me to embark on a professional doctorate (DBA) at Bournemouth University to learn how to conduct research, and develop my understanding of the subject matter.

Performance measurement is very important in the service chain because all actions leading up to delivery of the service incrementally affect the intrinsic value and quality of the final product. It is from this reasoning that the research focussed on performance measurement during the preparation and initial delivery of the service process, rather than purely on service quality as determined by the customer after the event had taken place. I have not considered financial performance because it is outside of the scope of this project, but obviously financial performance is a very important element in overall company performance. In fact at British Airways during the 1990's "financial and service performance were measured side by side to keep the quality and cost ratio in balance" (Street 1994, p.16). It is certainly recognised, that the airline industry places a great deal of emphasis on financial performance, especially following 9/11, but for this study, I have concentrated on the execution of the flight schedule, and the events that take place during the operating day, which are, collectively referred to here as 'operations performance'.

This study was worth undertaking because at the time of its commencement, the airline in question was facing a major crisis that required it to improve operational performance in order to survive.

The value of this research lies in the knowledge, skills and individual learning acquired by the people who participated in the project. The knowledge and insight gained during this project may help inform similar organisations that need to address operations performance by providing a basis from which they can consider the attitudes and behaviours of management staff in order to approach or modify their performance measurement processes.

The research was undertaken using the methodology of Action Research because of its suitability for practitioner research. It involved four iterative cycles of data-gathering and analysis across two separate and distinctly different regional airlines in the United States.

1.2.1 Cycles 1 and 2: Allegheny Airlines (Crisis)

During 9/11, when an unprecedented act of terrorism on American soil shook the World, I was working in Harrisburg, Pennsylvania for Allegheny Airlines a wholly-owned subsidiary of US Airways. This parent company, US Airways, was in turn one of the United States major legacy carriers. Allegheny's fortunes were tied to the performance of US Airways, and as such, the airline had little financial latitude. Allegheny's role was to provide regional airline service within the Northeast region of the United States from spoke airports into the major hub airports of Philadelphia, New York's LaGuardia airport, and Pittsburgh. US Airways provided the route structure and operating schedules and Allegheny's job was to ensure that it maintained schedule integrity and reliability.

Allegheny had been operating under increasingly difficult conditions even prior to the acts of terrorism on September 11th 2001. The economic downturn in the aviation industry following the events of 9/11 ultimately forced the parent company (US Airways) into Chapter 11 of the Bankruptcy Code in August 2002. The United States Constitution and the Bankruptcy Reform Act of 1978 permits bankruptcy in the United States. Chapter 11 of this code allows a company to receive bankruptcy protection by allowing the debtor to keep some or all of their property and to use future earnings to pay off creditors.

During this time it became evident that there had been mismanagement of the parent airline for a number of years, but 9/11 served as the catalyst to force the company to re-examine its deficiencies and embark on a course of significant restructuring. By filing for protection under the U.S. bankruptcy laws, it allowed the airline to formally address its need to restructure, while receiving protection from its creditors. The objective was to enable it to downsize to a level that could sustain profitability in the longer term. This change effort resulted in numerous furloughs (redundancies), station closings, a reduced flight schedule and the return of aircraft to their leasing companies. However, an aggressive restructuring plan was devised and implemented by a newly appointed CEO, and the airline successfully emerged from bankruptcy after a mere seven months at the end of March 2003. This was a record in the United States for a major corporation to restructure under Chapter 11 of the bankruptcy code and emerge as a viable concern. However, its haste would also prove to be its undoing. Shortly after it emerged from bankruptcy, the war with Iraq began in earnest and once again, the airline was forced to enter Chapter 11 in September 2004. This made it vitally important

for US Airways to more effectively address the economic and operational performance of its subsidiaries.

My research project began in 2003, following US Airways' first bankruptcy and became important in understanding the determinants of operational success. This would allow the subsidiary to examine its performance relative to the goals set by the parent airline by implementing an operations PMR system. It would be imperative to improve operational performance in order to survive.

1.2.2 Cycles 3 and 4: Pinnacle Airlines (Growth)

The second two cycles of research took place at a larger regional airline that was not a wholly owned subsidiary of a major carrier. Pinnacle Airlines was an independent airline that provided regional jet service to two customers: Northwest Airlines (NWA) and Delta Airlines (DAL) and had therefore much greater latitude in deciding how to conduct business.

When I began my tenure with the airline in November 2004, Pinnacle was already in a state of growth and was continuing to take deliveries of new aircraft to place into service for Northwest Airlines. At this time, they had a fleet of 99 CRJ200 regional jets. This fleet would continue to increase over the course of the following year to reach 145 jets.

In December 2007, Pinnacle began service for a second customer, Delta Airlines, by beginning the deployment of 16 CRJ900 aircraft. The addition of the Delta business was a new phase of growth for Pinnacle and stemmed from a deal that was negotiated after Northwest Airlines was forced to enter bankruptcy protection in 2006: a common theme amongst US airlines. One specific result from the bankruptcy was that Pinnacle Airlines was due a considerable sum of money, \$120 million, which Northwest was granted relief from paying as part of the terms of its bankruptcy protection. Additionally, the Airline Service Agreement (ASA) that Pinnacle had been operating under, which was the contract for the provision of air service that it had with NWA, was put on the table for renegotiation. This allowed the negotiators at Pinnacle some advantage and they were able to release the restriction previously placed upon Pinnacle that required it to serve just one customer, namely Northwest Airlines. In so doing, Pinnacle was then able to bid on additional business. This occurred at a time when many of the major carriers were offering requests for proposals (RFPs) to the regional airlines in the

hope of reducing costs by sub-contracting some of their flight schedule. Pinnacle was successful in winning the Delta business and began a further round of growth.

When I arrived at Pinnacle, it was clear that operational performance was at the forefront of the airline's culture. Indeed Pinnacle had a reputation for being one of the best performing airlines in North America in terms of on-time departures, arrivals and completion factor; three metrics that are considered as the cornerstones of operational performance. However, although the airline was indeed successful at delivering good performance results, the performance review process was limited to the senior management group and not divulged or disseminated to a larger group of employees. This presented a good opportunity for me to introduce a similar system to the one I implemented at Allegheny; namely to formalise our review of performance statistics weekly with the managers that had direct control or influence over them. This became the Weekly SOC (System Operations Centre) Managers Meeting and gave me an ideal opportunity to continue my research by refining the performance process and observing the behaviours and attitudes of those who had to engage with it.

The data gathering at Pinnacle followed the same approach that I adopted at Allegheny, and both pursued the overall aim of better understanding the structure of the performance measurement process and the behaviours and attitudes of managers and directors.

The results of these various implementations across both carriers form the conclusions to this thesis.

1.3 Justification

The justification for this research can be separated into three areas.

Firstly, the business justification was an attempt to assist with the survival of Allegheny Airlines, the airline at the centre of the first two cycles of enquiry, and further to engage the flight operations management team in understanding the determinants of operations performance results. During the third and fourth cycles, it was to apply the previously gained knowledge to a different setting and management team and provide them with the opportunity to materially improve their ability to measure, understand and

interpret performance results. These were all expected to have benefits to professional practice.

Secondly, the academic justification was to provide deeper understanding of the human behavioural reactions to PMR systems, which is a subject that has only been lightly covered in previous research and literature.

Finally, my personal justification was an inherent interest in the subject of human behaviours and the desire to provide a structured way to advance my own knowledge and education.

My position within each airline gave me access to the employees and processes that were involved in the daily operation and allowed a unique perspective into their thoughts and actions over several years.

1.4 Scope

The research examined a specific area of performance measurement that relates to the individuals charged with managing flight operations performance. In particular, it focused on attitudes and behaviours towards imposed performance measurement systems and collaboratively designed performance measurement systems. It then linked this to how the external environment of crisis and growth affected the ability and motivation of managers, either to engage with such a system for survival of the airline, or to facilitate efficient growth.

To better frame the scope of this research, I have listed below explanations of the main areas of concentration during the research project:

- Operations performance directly concerns the daily flight operations of each airline, and encompasses the results of the activities produced by all employees engaged within the operational side of the business. This includes all functions performed by staff within the centralised operations control centre (OCC) and all employees in the field: pilots, flight attendants, mechanics, and airport workers. Operations performance in this context does not cover the performance results of such functions as Finance, Information Technology (IT), Human Resources

(HR) or any other support function that is not directly involved in operating the daily flight schedule.

However, it is acknowledged, that these functions do have an influence on operations performance if they are unable to effectively accomplish their own objectives. For example, if HR is unable to attract and recruit sufficient new pilots then there is a significant risk that the airline will not be able to fly its published schedule. Likewise, if IT is unable to provide responsive and expert technical assistance then critical operations systems may be in jeopardy of failure, or a partial outage, that would prevent the airline from operating. Additionally, if Finance is unable to secure investment capital for future expansion, or replacement of aging aircraft and support equipment, then airline performance and the level of service provided could be restricted. Similarly, a failure to maintain an efficient and timely Accounts Payable function could lead to a suspension of critical services provided by vendors, such as aircraft fuelling, ground equipment and ad-hoc maintenance. This could not only affect operations performance but could put the entire airline at risk. Collectively all departments within a service industry, even if they are far removed from the final product, have an influential and important role to play.

- The introduction and use of the PMR systems was limited to the Flight Operations departments (cycles one, two and three) or other departments that were responsible for operations performance (cycle four), rather than the support functions mentioned above
- 'Attitude' refers to the voiced and/or demonstrated opinions and feelings that the interviewees exhibited to their working life and specifically the measurement of operations performance, rather than their much broader attitudes and beliefs to life and work in general
- 'Behaviour' refers to the actions and conduct displayed by the interviewees to the PMR systems and other external factors, such as the states of crisis and growth
- Crisis and growth refers to the prevailing climate state that each business was experiencing and represents the larger overall influences being exerted upon the airline by either internal or external factors

The primary aim was to gain a clear picture of how attitudes and behaviours can affect the effective use of a PMR system in a flight operations department, and to identify which attitudes and behaviours are fundamentally necessary for the performance measurement system to be successful. The research does not focus on a specific problem but rather seeks to identify and explain how managers work with PMR systems during separate periods of crisis and growth.

A series of objectives was designed to achieve this aim, which are detailed in the next section. They involved introducing formal operations PMR systems at both airlines and gathering data to identify the behaviours exhibited as the managers responded to their role in the measurement of operations performance.

The research has been designed around a practitioner (insider management) perspective and thus allowed me the unique prospect to explore these changes from inside the organisations and to gather both formal and informal reactions over time.

1.5 Aims and Objectives

When I initially set out to conduct this research it was with the goal of examining the involvement of my colleagues at Allegheny Airlines in a performance measurement and review process that I designed and implemented and to understand their consequent behaviours. However as time went by, I was presented with an opportunity to continue this research into another airline, Pinnacle Airlines, and to build upon the outcomes of the first study. This eventually led to four separate research cycles of data gathering and analyses across the two airlines.

The primary aims of the research project were to examine how measuring operations performance was actually practiced, and understood, by the managers and directors who had responsibility for the daily flight operation following the introduction of a performance measurement system. In particular, I wanted to concentrate on what impact their prevailing attitudes and behaviours had on the overall success and acceptance of the system. To do so required seeking an understanding of how these managers and directors initially responded to an imposed PMR system, which was then hoped to result in a clear picture of the attitudes and behaviours that can affect the effective use of a PMR system.

The following overall objectives were identified in an attempt to achieve these aims and were all designed to take place during the design, implementation, use, and refinement of operations performance measurement and review (PMR) systems. They were further magnified in each separate cycle of research to provide a specific structure for that cycle. Therefore, the following chapters that cover each research cycle contain a sub-set of these objectives that were specifically relevant to that cycle.

1. Design and introduce a formal operations performance measurement and review (PMR) process
2. Examine how individual managers view and understand the measurement of operations performance and how it relates to their everyday job following the implementation of the PMR system by conducting semi-structured interviews
3. Investigate how each manager assessed the behavioural reactions of their colleagues in response to, and engagement with, a PMR system by conducting rep grid interviews
4. Identify the displayed attitudes and behaviours of the managers who are required to engage with a PMR system by conducting repertory grid interviews
5. Discover what effect the underlying business state of crisis or growth had on the managers' attitudes and behaviours to a PMR system
6. Draw conclusions on the value of the employee, as a stakeholder having responsibility for operations performance, to the success of a PMR system

Achieving these objectives would require close contact with the people involved, and continual access over a considerable period of time, to allow time to design, implement and use a PMR system and then to gather data from the subject group for analysis. It would also require a qualitative methodology that would allow an inductive and interpretive approach.

1.5.1 Achieving the Objectives

The introduction of the PMR systems was to focus attention on the critical processes (Kaplan and Norton 1992), and the determinants of success (Fitzgerald et al. 1991)

that have the greatest impact on service output, and hence overall operational performance. To do this required capturing the results of the primary activities of operating an airline. A performance measurement system loosely modelled on a balanced scorecard framework (Kaplan and Norton 1996a) was chosen as an appropriate structure to use because it promotes measures across a broad range of activities that represent the leading and lagging indicators of performance. The notion of developing measures in four distinct categories (financial, customer satisfaction, internal processes and learning and growth) had direct relevance to the need of the airline to address measurement at all levels throughout the Flight Operations department.

My personal objective, which became a very significant part of the research project for me, was to improve practice and to provide guidance by actively coaching the managers and directors who are responsible for performance metrics, or who are required to attend formal performance review meetings. Performance management systems seek to substantially improve and optimise company performance by developing metrics that measure key processes and inform decision making (Kaplan and Norton 1996b). However, the methods can be complex and do not provide guidance on the human elements necessary for understanding and engaging with these systems. It was therefore important for me to disseminate knowledge and assist people in becoming more familiar with performance measurement and to provide guidance on how to understand the underlying drivers behind individual metrics.

1.6 Thesis Structure

Following this chapter, a literature review of performance measurement, is presented in Chapter Two, which examines the previous research in the field and why I have used it to inform this research and as a framework for analysis.

Chapter Three details the design of the research. Action Research is justified as an appropriate methodology from which to conduct the research, and the methods used for data coding and analysis are presented. Philosophical, ethical and other considerations, such as bias, are also discussed.

Chapter Four contains the initial and fundamental first cycle of research which then informed, and shaped, subsequent cycles. It is presented in-depth and provides a rich and detailed overview of the research situation, problems and outcomes.

Chapter Five outlines the events of the second cycle and illustrates the Repertory Grid method of personal construct elicitation and analysis.

Chapter Six and Seven cover the third and fourth cycles of research and moves the research setting to another airline.

Chapter Eight contains a discussion of the findings from all four research cycles and examines these findings from an academic and practitioner standpoint.

Chapter Nine discusses the contribution to knowledge and in particular the contribution to professional practice along with insight to the individual learning that was experienced during this research process.

Chapter Ten concludes the research project, makes recommendations for further research, and contains my personal reflections on the entire research process.

Additional information is contained in the appendices to substantiate and expand upon the data presented.

1.7 Footnote

Allegheny Airlines, the airline at the centre of the first two cycles of research, became a victim of the second Chapter 11 bankruptcy filing at US Airways and was successfully merged with its sister company, Piedmont Airlines, in 2005. Thus, all efforts at improving performance at Allegheny were ultimately in vain. Most of the personnel dispersed within the industry and, unfortunately, all that remains from the performance measurement intervention is this underlying research study and the knowledge and experience that the various individuals gained during a very difficult period of turmoil for them.

Pinnacle Airlines continues to operate well and successfully and performance measurement initiatives are continually being refined. Additionally, I am trying to build

upon this knowledge to further the application and understanding of human engagement with performance measurement.

1.8 Summary

This chapter introduced the reader to the research and briefly summarised the main content of the thesis and its structure. It has established that the primary focus is on understanding the attitudes and behaviours of managers when they are required to engage with PMR systems, and therefore to contribute to professional practice and a seeming gap in the literature.

2. LITERATURE REVIEW

This chapter introduces the field of performance measurement and discusses the literature applicable to the research project and why it has been used as a framework for inquiry and analysis.

2.1 Introduction

The literature consulted throughout this project falls squarely within the field of performance measurement, and more specifically the behavioural reactions to the implementation and use of PMR systems.

In my initial evaluation of the field of performance measurement and management, I discovered that there was a vast body of literature covering so many other related and sometimes cross-over aspects of performance that it was not possible to give adequate attention to them without being unwieldy and overly complex. In order for it to make sense, and to make it manageable, my review of the literature is concise and has been confined to providing an overview of the most applicable areas that comprise the following subjects in a logical sequence:

- Defining performance measurement
- Discussing performance measurement
- Design of performance measurement systems
- Communicating strategy through performance measurement systems
- Implementation of performance measurement systems
- Service quality as it relates to airlines
- People management, culture and management style as they are exhibited in the attitudes and behaviours displayed by managers and employees.

This last aspect of the performance literature was the most relevant to the topic under research. I have also limited my exploration of business performance measurement to

the last two decades because that is where the most advances in the subject have been made. The chapter concludes with a section that ties all of this together and presents a framework around which the research took place.

2.2 Defining and Positioning Performance Measurement

What is performance measurement? In order to bring perspective to this subject it is worth examining the bare bones of what performance measurement actually means.

On the face of it, it sounds straightforward enough and suggests that it is a method by which to gauge how something has been carried out, or *performed*. But, how does one accomplish this and how does it relate to running a business? If we take a brief moment to consider the immensely broad and open-ended subject of how a business operates, it is not a very big leap to conclude that all businesses, by default, must measure things. They have to do this in order to actually make sense of what they are doing as an entity and to remain solvent. Whether this measurement is a cash flow, a return on investment, or an inventory count, it requires some form of monitoring. When we then take this a logical step further, we find that in order to make further sense of things a business needs to calculate and appraise the variance, or performance, between two measurements to see how a dimension has changed over a period of time. In simple form, this could be the difference between an opening and closing balance, the time taken to make a product, or the fluctuation in the price of stocks and shares. We now have a concept, performance measurement (PM), that seems to be fundamental to the operation of a business; but what do our two key words of 'measurement' and 'performance' actually mean. On consulting The Oxford English Dictionary we can find useful definitions to put these words into context:

Performance: "The accomplishment or carrying out of something commanded or undertaken; the doing of an action or operation", or

"The quality of execution of such an action, operation, or process; the competence or effectiveness of a person or thing in performing an action; spec, the capabilities productivity, or success of a machine, product, or person when measured against a standard (Definition 1989b)

Measurement: “the action or an act of measuring or calculating a length, quantity, value, etc” or

“a dimension ascertained by measuring” (Definition 1989a)

This now leads us into the combination of these two words; the measurement of performance, which is, quantifying how an action, operation or process changes over time. This act of measuring performance has become intrinsic and fundamental to what we do as individuals and it is therefore easy to accept that all businesses must measure things. Indeed, it is an elementary aspect of running a company and can range from the most simple financial book-keeping and accounting processes, to complex performance management programmes, such as the balanced scorecard (Kaplan and Norton 1992) that are deployed corporate-wide. However, the shape, form and complexity that a measurement process takes can be an entirely different matter, but we can safely say that business performance measurement is seemingly native to every going-concern and can occur subconsciously, or be a highly visible endeavour. After all, measuring performance is the only way to determine if any kind of business is actually being transacted. The act of gauging performance is therefore ubiquitous and exists in virtually all going concerns across public and private sectors, and was undoubtedly occurring long before these words were officially defined in the year 1607, as indicated in the Oxford English Dictionary.

In further clarifying this definition it should be noted that performance measurement is the critical process that helps to quantify the efficiency and effectiveness of a business:

“Effectiveness refers to the extent to which customer requirements are met, while efficiency is a measure of how economically the firm’s resources are utilised” (Neely et al. 1995, p.80).

It should also be noted that there is a clear distinction to be made between performance measurement and performance management. Performance measurement is the act of gauging, measuring and assessing the change in some aspect of performance, whereas performance management is the act of determining what to do with the data once it has been collected (Bititci et al. 1997; Neely 2002). I feel that this is best described by the following quote:

“The performance measurement system is seen as the information system which enables the performance management process to function effectively and efficiently” (Bititci et al. 1997, p.524)

Measuring performance, and thereby the efficiency and effectiveness with which a company operates its business is an absolutely necessary and integral activity for all firms. Any improvement initiative, or indeed anything that seeks insight, cannot be assessed unless the performance measurement system provides the objectives, measures, results and a means to interpret the data (Neely et al. 1995; Simons 2000). But, what exactly is a performance measurement system?

Neely, Gregory and Platts (1995) aptly defined this as:

“The set of metrics used to quantify both the efficiency and effectiveness of actions”

“A performance measure can be defined as a metric used to quantify the efficiency and/or effectiveness of an action”

Therefore, in its simplest form a performance measurement system is comprised of a series of individual measures that when combined as an entity, represent a complete system. This system in turn should provide the insight and knowledge that is needed to understand variances in performance and to strive for improvement.

The above explanations suggest that the common underlying theme of performance measurement is that it is a fundamental and foundational aspect of running a business. It does not necessarily mean that it is actively practised. Indeed when it is practised it can be the subject of much debate, frustration and complexity that one wonders why it can be so difficult to do something that is accepted as essential to running a business. The problem lies in the fact that there are no universally applicable instructions on how to measure performance. In more recent times, there has been much work and research carried out within this broad field, but no “one size fits all” solution to measuring performance is available, and indeed the core facet that has received the least attention in the academic and practitioner literature is the element of human interaction. Each and every firm is quite distinct from one another, being that they are comprised of human beings, who by our very nature are unique individuals and the product of our cultures, upbringings, and continuous experience. This level of

uniqueness means that a PMR system must be adapted to each firm, and this creates a problem.

It is only within the last few years that there has been slightly more emphasis placed upon the behaviours and attitudes of employees when they are faced with interacting with a PMR system (De Waal 2002; Edwards and Sohal 2003a; Elzinga et al. 2009; Van Riel et al. 2009). It is perhaps not surprising that the consideration of human feelings, emotions, behaviours and reactions, was not afforded much attention when PM systems were evolving; they might have been considered 'soft' and not taken as seriously as the more rugged, and easier to define, tangible aspects of managing performance (Bourne et al. 2000; Crandall 2002; Neely 2005). But, it is this human element that caught my attention early on and prompted this research study in attempting to better understand the impact of human behaviour on PMR systems. It struck me that it was an essential component that, in my experience, had been overlooked. However, it is important to remember that my observations of human behaviour have taken place within the aviation industry in the United States. I mention this primarily because aviation is a very fast-paced, inherently stressful, and overwhelmingly over-measured operational practice (Belobaba et al. 2009). Indeed the industry is defined by performance metrics that are imposed both internally and externally, by federal agencies, the public, the stock market, union organisations, and the airlines themselves, which all have an inordinate amount of measures from which to gauge recent and historical performance (Bureau of Transportation Statistics 2006).

It can therefore, be reasonably accepted that within the aviation industry performance measurement takes on a very pronounced role, to the point of being the core method by which all airlines gauge themselves (Doganis 2002). Financial performance is acutely critical to an airline but it is its' operational performance, measured through a PMR system, that becomes its cornerstone. It is within this context of airline operational performance that I am interested to learn if, how, and why, employees respond and engage with a PMR system and the impact that their behaviours have.

2.3 Performance Measurement in the Present Context

When reviewing the performance literature it was evident that the field had been dominated by financial accounting measures of company performance until more recent times when the focus began to shift (Cross and Lynch 1988; De Waal 2002;

Fitzgerald et al. 1991; Kaplan and Norton 1992; Keegan et al. 1989; Neely 1999; Simons 2000). But, these traditional measures of financial performance do not necessarily provide insight to the internal processes that take place in other aspects of how a business performs. The growth in importance of performance measurement has developed rapidly over the last two decades and has seen a strong movement away from these traditional, financial-based measures to a better-rounded and balanced approach that encompasses other factors that are critical to success (Bititci et al. 2006; De Waal and Gerritsen-Medema 2006; Kaplan and Norton 1992; Neely et al. 2002). This move away from financial measures began in the late 1980's and early 1990's when these measures began to be criticised for their backward looking, or lagging, nature (Eccles 1991; Ghalayini and Noble 1996; Johnson and Kaplan 1987). Balanced performance measures began to emerge in the 1990's as companies realised the need to gauge performance on other more relevant and predicting factors and to focus on the underlying drivers of performance (Bourne et al. 2003a). Eccles suggested that the results of quality and customer satisfaction programmes such as the Total Quality Movement and the Malcolm Baldrige National Quality Award focused performance measurement on non-financial factors. "Quality measures represent the most positive step taken to date in broadening the basis of business performance measurement" (Eccles 1991, p.132). This was echoed by others who held the view that total quality management (TQM) represented a shift in emphasis towards customer satisfaction (Letza 1996; Neely et al. 1995).

"Most companies' operational and management control systems are built around financial measures and targets, which bear little relation to the company's progress in achieving long-term strategic objectives. Thus the emphasis most companies place on short-term financial measures leaves a gap between the development of a strategy and its implementation." (Kaplan and Norton 1996b, p.75).

Professor Andy Neely (1999) examined the performance measurement revolution and concluded that there was a significant move away from traditional accounting systems and financial measures of performance to a more 'balanced business scorecard' approach such as the Performance Pyramid (Lynch and Cross 1991), the Results-Determinants Framework (Fitzgerald et al. 1991), the performance measurement matrix (Keegan et al. 1989), and of course the Balanced Scorecard (Kaplan and Norton 1992). All of which offer frameworks from which to build a PM system. Neely also stated that "it is widely accepted that performance measures influence behaviour". This

indeed could be true but he did not substantiate this and his work did not ask how behaviours influence performance.

The development of the Balanced Scorecard in the 1990's aimed to bring structure to the measurement of performance by introducing non-financial measures and ensuring a more balanced approach to how firms managed their PM systems. This was taken up in a multitude of works that further expanded upon the core theory and its applications (Banker et al. 2004; Bourne et al. 2003b; Kaplan and Norton 1996b; Lee and Sai on Ko 2000; Libby et al. 2004; Lipe and Salterio 2000; Simons 2000) and even spawned other 'balanced' methods such as the Performance Prism (Neely et al. 2001; Neely et al. 2002). The one thing that these have in common is that the system does not put employees first (De Waal 2002). The employees are considered the instruments that must embrace change and engage with the system. Indeed the systems aim to modify employees' behaviours. However, my own personal experience caused me to question this very early on. The underlying culture and praise and reward system in place within a company can have a very profound effect upon the attitudes and behaviours that are displayed. If morale is low there can be a consequent lack of motivation to embrace a PM system if it does not consider the employees own wellbeing and motivational factors.

At about the same time that Eccles and Kaplan were voicing concerns about traditional financial measures Fitzgerald *et al* developed their framework of Results and Determinants (1991). In their model, there are two basic types of performance measure, namely results and determinants, which are measured across six dimensions. Results focus on aspects of competitiveness and financial performance, whereas the determinants that drive these results, focus on quality, flexibility, resource utilisation and innovation. The results are the lagging indicators, while the determinants comprise the leading indicators. There appeared to be a great deal of merit to their approach and it clearly illustrated that in order to obtain desirable results a company must critically evaluate its internal processes, which are the drivers of future performance. However, there was an inherent lack of method in the model to guide translating company vision into strategy, which is a necessary component.

More recently the Performance Prism has been put forward as a "stakeholder centric view of performance measurement" (Neely et al. 2002, p.151). The prism is a five-faceted model that has stakeholders at its heart. The reason for this is that in most organisations shareholders are the most important stakeholder. Within the stakeholder

group in the performance prism consideration is also given to investors, customers, employees, and suppliers. There is also recognition of other stakeholders such as regulators and pressure groups. In relation to the airline industry in the United States, the FAA (Federal Aviation Administration) has a rigid set of regulations that must be adhered to, and union groups have restrictive collective bargaining agreements that must also be complied with. These facets serve to explain, much as Fitzgerald *et al* (1991) did, that the results of stakeholder satisfaction are a function of the determinants that comprise the other facets of the prism.

In recent decades, balanced performance measurement, as a conscious business initiative, has come to the forefront of strategic thinking as firms seek ever-increasing opportunities for competitive advantage and continuous improvement (Neely 2005). In order to improve something a company must know where current performance falls short. This obviously relies upon some form of measurement to provide the necessary insight (Neely 1999). Indeed, "it is now accepted that businesses perform better if they are managed through formalized, balanced and integrated performance measures" (Bititci *et al.* 2004) that evolve over time to a refined process that can encapsulate the core operations of the business. It is not surprising that performance measurement systems in use today are now recognised as essential tools that shape how a company puts its strategy into action (Feurer and Chaharbaghi 1995; Kaplan and Norton 1996a). The measurement of performance is crucial in determining strengths and weakness and is the critical process that helps to quantify the efficiency and effectiveness of a business and provide insight to gaining competitive advantage (Neely *et al.* 1995).

From the traditional financial based measures to the more recent holistic approach to PM systems there has been an ever growing breadth of literature. The subject of business performance is vast and much of the development of this has taken place in the last 30 years. An influential article in 1991 (Eccles) predicted a PM revolution and that every company would have to reconsider how it measured business performance. This emerged from the realisation that financial measures could no longer be the primary gauge of business performance as they had been.

Not surprisingly the subject area of performance measurement, and its application, is by its very nature vast and spans a multitude of different business disciplines including: accounting, operations management, organisational behaviour, information systems, and organisational strategy, to name but a few (Neely 2005). As a research subject, performance measurement remains a relatively young field of study, with some of the

most influential works dating back to only the 1980's and 1990's (Banker et al. 1984; Cross and Lynch 1988; Dixon et al. 1990; Eccles 1991; Fitzgerald et al. 1991; Johnson and Kaplan 1987; Kaplan and Norton 1992; Keegan et al. 1989; Lynch and Cross 1991). This can make it a rather difficult field from which to adequately draw any firm conclusions. There are still many unanswered questions and further areas to explore. Indeed many studies either expose new areas for research, or tend to criticise previous approaches, as new dimensions are brought into play.

In a discussion on the evolution of performance measurement Professor Andy Neely proffers that "performance measurement is not and never can be a field of academic study because of its diversity" (Neely 2005, p.1268). This view holds that the breadth of the field is enormous and plays into practically all aspects of business and personal life. He also points out that researchers from these differing fields employ different methodological approaches, research questions, and theories, therefore making it difficult to nail down such a vast field (Banker et al. 1984; Charnes et al. 1978; Dixon et al. 1990; Eccles 1991; Kaplan and Norton 1992, 1996a; Lynch and Cross 1991; Neely et al. 1995). This interwoven complexity conjures up a minefield of potential applications that can further discolour the already murky waters.

It is no surprise that as the field of study evolved, many other criteria to a successful PM system began to emerge. This is the case with human involvement. Until the early 2000's human behaviours were not given sufficient credibility when discussing PM systems (De Waal 2002). It was assumed that the system itself was a means to create motivation for the employee (Kaplan and Norton 1992). It was not until much later that more focus was put on the question of individual attitudes thereby further defining the "balance" of PM systems, that is, the balance between the system helping managers to understand their business and the managers themselves embracing such a system so that business can be made more efficient and effective. After all, the success of any implementation is largely dependent on the people involved, and relies upon their commitment and willingness to engage with new systems (De Waal 2003a; Simons 2000).

My initial exploration of the literature provided very little performance management literature relating directly to research that has been carried out within the flight operations field (Bhat 1995, p.54). In fact, the majority of literature available within aviation is predominantly concerned with service quality as measured by customer satisfaction with the service encounter (Ekdahl et al. 1999; Gustafsson et al. 1999;

Laszlo 1999; Rhoades et al. 1998; Street 1994). However, performance management and performance measurement are very broad topics and there is a considerable body of literature available. It is assumed that there are research studies that focus specifically on flight operations but that they are likely to be of a proprietary nature and not available for public consumption.

2.3.1 Business Climate

The business environment in which organisations operate and compete is ever changing. Senior management needs to maintain a constant vigilance to ensure that existing strategies and methods are in tune with these changing circumstances, and to ensure that new, more effective strategies and methods are developed (Kennerley et al. 2003). This is especially true of the airline industry where the external environment has a profound impact on the bottom line. The economic climate largely dictates the demand for air service and consequently the prices charged. Staying one step ahead and remaining competitive is paramount to survival (Doganis 2002).

Airlines in general have developed sophisticated measurement systems. Their whole output is measured internally by the airline itself and externally by government agencies and the general public. Naturally, key performance indicators that rise to the fore are those of safety, service quality, on-time performance, customer satisfaction and finance. These measurement systems must be honed to produce leading indicators that can influence and encourage management to seek continuous improvement. Performance measurement systems must be maintained and managed in order that a company can recognise quickly when a trend must be addressed, or to benchmark itself against the competition. Therefore management systems must change and develop over time as the business climate changes, and an organisation must be ready to adapt (De Waal and Mollema 2010). In order to be agile and maintain profitability within the airline industry it therefore follows that a company must also have employees that recognise the need for change and are also willing to implement new strategies (Parast and Fini 2010; Rhoades et al. 1998).

2.4 Communicating Strategy through PMR Systems

In considering the impact of performance measurement systems on business it is argued that the most effective way to communicate company strategy and to allow it to

permeate the organisation is through a structured performance measurement system that has formal, balanced, and integrated performance measures at its heart (Bourne et al. 2000; Kaplan and Norton 1992; Neely 2002; Simons 2000). The balanced scorecard takes strategy as its central theme and promotes it as the method by which to effectively communicate a company's strategic objectives. This is reinforced by Kaplan who cites the "huge gap in vision and strategy developed at the top and the things people down in the organization, at the frontline, are doing" as being one of the most important factors contributing to the success of BSCs (in De Waal 2003b, p.31). This is especially true for large corporations where traditional methods of communication can founder in their ability to motivate and inspire employees to seek continuous improvement. Memos, updates from the president, and other types of corporate communications can fall short in inspiring the workforce to greater levels of performance. However, a well-structured and implemented PMR system can bring into sharper focus the underlying corporate goals that employees need to relate to in order to be effective (Simons 2000). Once a sense of belonging and ownership is stimulated, it is expected to result in a commitment and drive that surpasses previous performance levels (Kaplan and Norton 1996b). The predominant stance within the literature is that performance measures designed to support strategy provide information on whether a specific strategy is being successfully implemented and followed, and that it is expected that the measures will also promote behaviour consistent with the strategy (Neely 1999).

The Balanced Scorecard is probably the most popular and widely used means of deploying and implementing corporate strategy but one other such initiative was the SMART system developed at Wang Laboratories in the late 80's (Cross and Lynch 1988), which was in response to dissatisfaction with traditional performance measures. This model took the form of a pyramid with strategy and vision at the pinnacle and then four levels of building blocks in the main body of the pyramid that represented different measures. All of this was underpinned by 'operations' as the foundation of the pyramid. These systems also served to clarify, communicate and manage strategy and intended to become the core management system. Kaplan and Norton were able to point out that the shortcomings of more traditional measurement systems is "their inability to link a company's long-term strategy with its short-term actions" (Kaplan and Norton 1996b). Indeed the BSC was, and still is, considered, to be an effective means of more clearly defining and communicating a company's strategy to its employees. It has the ability, if implemented correctly, to convey the core principles that a company must follow to be successful. If the BSC is depicted in a visual sense with charts and graphs then

employees can more readily relate to it and understand why the company might be pursuing a particular direction.

There are however two sides to the strategy coin: the system that measures the results of the company's strategy, and the system that promotes strategic change, which prompts the question: Does strategy emanate from the PM system or does strategy form the core of the PM system? There are convincing arguments that PM systems are successfully used to implement strategy. The flip side is that PM systems also drive strategic change with measures that are able to highlight the ineffectiveness of a strategy and thereby provide evidence and impetus for a strategic change. A good performance measurement system can drive strategic change by providing a feedback-loop to the strategic initiatives that have been implemented (Feurer and Chaharbaghi 1995). This also supports the assertion that the PMR system should be a continuous process and not simply the design and implementation of a set of measures. The business environment is dynamic and therefore the PM system must itself be continually refined and new measures selected that best support the company's strategy, or promote strategic change.

Even a well directed strategy may provide bad results if the behaviours and attitudes of employees charged with achieving this objective are not conducive to it. It is equally important to understand the employee groups motivation levels before embarking on a strategy that will be at odds with them. If morale has suffered, or there is inherent resentment within the organisation, then achieving any lofty target may not be successfully accomplished simply by implementing a PM system. A culture of performance-driven behaviour is sought (De Waal 2004). This behaviour is manifested in employees who naturally go above and beyond in their attempts to meet targets, follow strategies, and seek continuous improvement.

2.4.1 Strategically Aligned Behaviour

New research (Van Riel et al. 2009) has begun to emerge in the strategy literature on a concept termed strategically aligned behaviour (SAB). This focuses on "the influence of employee perceptions of different managerial efforts on the degree to which employees take initiatives to implement the company's strategic goals" (Van Riel et al. 2009 ,p.1198). Although this work is largely concerned with strategy implementation it does play a role in PMR systems because of the very large influence that strategy has on a PMR system implementation, which is the core aim of implementing strategic goals.

This work supports the belief that you must carefully consider the human element when deploying strategy. Van Riel et al discovered that by providing organisational support, and managerial efforts to help employees, it was likely to lead to SAB. They found that there were essentially three types of perceived managerial effort that had a complimentary effect on SAB:

1. efforts to motivate
2. efforts to stimulate capability development
3. efforts to inform about the strategy in general

However, the researchers also point out that their findings show that for these efforts to succeed in SAB they should not occur in isolation. There appears to be a continuous need by the employee to feel involved and supported in order to modify behaviour to be consistent with the strategic goals. This once again only raises the importance of concentrating on the human element of a PM system in concert with all other factors. If the employee group is not integrally involved then there seems to be a higher likelihood of failure, or to successfully realise company goals (De Waal 2004).

2.5 Performance Measurement System Design

A core objective of a performance measurement system is to provide a means by which to gauge success and pursue continuous improvement. To meet this objective it must be carefully designed to properly and fully examine the important internal processes that a business must be aware of, and any external aspects such as industry benchmarks, that influence what the business does (Simons 2000). This should then in turn provide a balance between financial, non-financial, internal and external measures and have a systematic review process (Najmi et al. 2005). A PM system should provide more than just insight, it should be a change initiative, or an instrument that facilitates change initiatives, and be a sustainable system that can provide performance results over a period of time. But, it is also recognised that simply having a PMR system is no guarantee that performance will actually improve (Bourne et al. 2005).

Introducing performance measurement systems can present various hurdles but there is guidance proposing that PM systems should be developed in three main phases (Bourne et al. 2000):

1. The design of the performance measures
2. The implementation of the performance measures
3. The use of the performance measures

In large part these suggestions were driven by the fact that while there were many theories on what types of measures a company should use, and the management processes by which to identify them, there was little guidance on the actual implementation of the system and the “importance of designing measures in a way which encourages behaviour which will support the strategy” ((Bourne et al. 2000). This is further supported by Neely who acknowledged that measures should be established and communicated so that “people do not feel threatened, but actually see the data as a way of understanding what is working” (Powell 2004, p.1023). There is also the view that a performance measurement system should be designed by a newly created process, and led by a project manager who reports to the highest levels of the organisation so that performance criteria are linked to the company’s strategic objectives (Kuwaiti 2004). As discussed in the previous section, strategy is widely regarded as the core facet from which measures should be derived. It is also important to ensure that there is a careful assessment of performance measures so that they do not encourage inappropriate action and ‘false alarms’ (Schmenner and Vollman 1994).

In most design and implementation phases the length of time from commencement to actually using the system is considerable, with studies suggesting that it can range from 6 months to several years (Lawton 2002). This underlines that a useful PM system cannot be created overnight and that considerable thought must be put into its design.

In this research project, I have used PMR systems that were loosely modelled on the Balanced Scorecard (BSC) because it provided a structured and relatively straightforward way to rapidly implement a PMR system into the Flight Operations department. The system needed to be introduced very quickly and the BSC also had the benefit of being a reasonably well-known system that the managers and directors might accept because of its perceived credibility.

2.5.1 Balanced Scorecard

The modern evolution of PM systems towards something that provides a more balanced set of measures began in the early 1990's with Kaplan and Norton's Balanced Scorecard. This has become the most well known of all PM systems and has been cited prodigiously across the performance literature.

However, the notion of strategic performance management systems and balanced measures was not new. In the early part of the 20th century, French process engineers created the Tableau de Bord, literally a 'dashboard' of performance measures, which has become a corporate best practice in France, but unfortunately little known or practised outside of its borders (Bourguignon et al. 2004; Epstein and Manzoni 1997).

In a similar fashion to the Tableau de Bord, the framework of the balanced scorecard was designed to act as a dashboard of indicators providing a range of measures that would allow managers to view performance across four separate perspectives and answer four key questions (Kaplan and Norton 1992, p.72):

Customer Perspective: how do customers see us?

Internal Perspective: what must we excel at?

Innovation and Learning Perspective: can we improve and create value?

Financial Perspective: how do we look to shareholders?

These separate perspectives are what separate the BSC from other integrated performance measurement systems and is the fundamental basis to allow managers to see all of the important measures together (Andersen et al. 2006; Cheng et al. 2007; Chia et al. 2009; De Waal and Mollema 2010; Mendibil and Macbryde 2006). The links between the performance measures should give insight to inter-relationships and be used to test theories about cause and effect. "A strategic feedback system should be able to test, validate and modify the hypotheses embedded in a business unit's strategy" (Kaplan and Norton, 1996b, p.84)

A central component to the organisation of this framework is to limit the amount of measures used in order to avoid complicating and overwhelming managers with too much information. The principle tenet is to introduce a fundamental shift away from the reliance on traditional financial measures, and to encourage a focus on the balance between inter-related operational measures (Bourne et al. 2005; Powell 2004; Verweire

and Van Den Berghe 2003). Financial perspectives typically contain the traditional measures used to assess the wellbeing and prosperity of the business, but they are lagging indicators reporting past outcomes. Financial measures should serve as the focus for the other objectives in the scorecard (Chia et al. 2009). The Customer perspective includes measures of the value proposition that the company will deliver to its customers. The Internal perspective includes the critical internal processes in which the organisation must excel, and the Learning and Growth perspective “identifies the infrastructure that the organisation must build to create long-term growth and improvement” (Kaplan and Norton, 1996a, p.28). Team objectives are then linked to the company’s strategic goals, vision and mission. Good communication is required to promote buy-in and give everyone a “line of sight” to company goals. Kaplan and Norton provided a nice analogy for visualising the need for a balanced set of measures by explaining that a pilot needs the full array of data from all his instruments to ensure that his aircraft is performing correctly, or to take action if an irregularity occurs. “Reliance on one instrument can be fatal” (p.71). This underlines the need for managers in organisations today to simultaneously monitor many different aspects of their company to ensure that correct and appropriate action is being taken.

It is interesting to note that in this highly influential article the authors recognise in their opening statement that a firm’s PM system “strongly affects the behavior of managers and employees” (Kaplan and Norton 1992). However, this theme is presented as a one-way flow, from the PM system to the individual, without acknowledging that it is perhaps a two-way street. This is again exemplified in their conclusion, with the assertion that “people will adopt whatever behaviours and take whatever actions are necessary to arrive at those goals” (p.79).

The BSC has evolved a great deal since 1992 and has spawned a small industry of people proclaiming its benefits and advantages (Atkinson 2006; Basu et al. 2009; Marr and Schiuma 2003; Schneider and Vierira 2010; Self 2004). The implementation of BSC’s has been fairly widespread and as they have been introduced it has led to further refinements and developments. The balanced scorecard took on a new importance to many companies during the 1990’s as they developed it into a strategic management system by which they could achieve long-term strategic objectives (De Waal 2010; Paranjape et al. 2006; Simons 2000). The central principle of a balanced set of measures has been the ‘gold nugget’ in this framework. Realising the need to focus on measures that are not simply tied to financial performance has broadened the view of a firm’s performance and allowed the structured measurement of performance

to be adopted at operational levels, and then communicated in a way that workers can understand (Chan 2004; Chavan 2009).

In advancing their work on the BSC Kaplan and Norton took their framework a step further by introducing four management processes that would provide additional help in linking the relationships between strategic objectives and short-term actions, and show how the BSC can be used as a strategic management system (Kaplan and Norton 1996b):

1. **Translating the vision** – helps build a consensus around the organisation's vision and strategy.
2. **Communicating and linking** – lets managers communicate their strategy up and down the organisation and link it to departmental and individual objectives.
3. **Business planning** – enables companies to integrate their business and financial plans.
4. **Feedback and learning** – gives companies the capacity for strategic learning

These four new processes claimed to enable senior managers to better understand and implement a BSC that could be the heart of a strategic management system. These processes provide the method to develop, integrate and communicate plans and objectives that complement existing financial measures and targets. Their work also attempted to allay the fears that many BSC implementations are prone to failure (Neely and Bourne 2000; Othman 2008; Schneiderman 1999). This development of overlaying four new processes aimed to influence managers to more acutely reflect upon their business, devise thought-out strategy statements and create a scorecard that accurately portrays how to operationalise these broad strategy statements.

Despite the widespread acceptance of the BSC it does of course draw its critics. There is much talk of BSC implementation failures (Bourne et al. 2003b; Bourne et al. 2002; Paranjape et al. 2006; Schneiderman 1999), of system design faults (De Waal 2005; Ghalayini and Noble 1996; Marr and Adams 2004), and a complexity that can slow its introduction (Gautreau and Kleiner 2001; Johanson et al. 2006). By 2000 it was estimated that as many as 50% of large US firms would be using a balanced scorecard but that “70% of balanced scorecard implementations fail” (Neely and Bourne 2000, p.3). There are several reasons for this including the difficulty of designing relevant and linked measures and an inability to fully and correctly implement the programme (Neely

et al. 1997). The factors leading to the failure of balanced scorecards are concerned primarily with the design of performance measures and an unsupported implementation programme. A study In 1998 (Lipe and Salterio 2000) challenged the effectiveness of the BSC by showing that it was only the measures that were common to all business units, as opposed to measures that were unique to the respective business unit, that were used by superiors when evaluating a managers performance. This suggested that insufficient emphasis can be placed on the unique measures that may only be applicable to one business unit, but may also be the key to its success. They further proclaimed that we “know very little about the human information processing demands of the BSC” (Lipe and Salterio 2000 ,p.296) suggesting that there needs to be far more emphasis placed upon the human component of using BSC's.

Neely (2000) suggested that PM systems such as the BSC, are limited by the fact that they are just frameworks and lack the insight on how to develop, select and introduce appropriate measures that can be used to manage a business. He argued that there was a lack of specific guidance in the literature concerning the performance measures that managers should adopt. In his research on specifically designing measurement systems, he concluded that the lapse of guidance in the literature is because it “ignores the complexity involved in the actual design of measurement systems.” (p.1142). This obviously points out that undertaking the design and implementation of a PM system is not to be taken lightly and that insufficient thought and preparation is likely to result in failure.

2.6 PMR System Implementation Within the Scope of the BSC

Implementation is where the performance measurement system must interact with the wider environment. Will it be the source of individual goal setting and rewards, or be seen as a management control system? (Letza 1996).

At each of the two airlines in this research study the introduction of a PMR review system was necessary to bring about greater awareness of airline operational measures and to encourage engagement with operational performance. The implementation of a system must therefore capture the employees' interest and create a sense of attachment to the operating performance that the individual manager is deemed to have some influence or control over. The inherent expectation is that by creating awareness of the key determinants of performance excellence, and assigning

ownership and accountability for designated measures, improvement will naturally follow. However, the relationship between performance measures must be linked in order for it to be systematic. But how do managers and employees react to these measures and what satisfaction do they gain by being held accountable for performance? Empirical evidence from a German study showed that if there is a high degree of balance, or systematic linkage of performance measures, then managers' satisfaction with a performance management system implementation is higher than if the linkage is weak (Sandt et al. 2001). Additionally, the conceptual use of measures provides a higher degree of satisfaction compared to managers who do not perceive that they have a performance management system. (p.13). This in turn gives the manager understanding and insight to the strategy and underlying business model.

An alternative view to developing a set of strategies associated with the introduction of a balanced scorecard is to utilise SWOT analysis (Lee and Sai On Ko, 2000). By determining a company's strengths, weakness, opportunities and threats, it can serve as a stepping-stone to implementing a balanced scorecard. It is imperative that senior management communicates strategy to employees at all levels if the scorecard is to be successful. It is also vital when implementing a performance measurement system to guard against the phenomenon where "people modify their behaviours in an attempt to ensure a positive performance outcome even if this means pursuing inappropriate courses of action" (Neely Andy *et al.* 1997, p.1132). This was further illustrated by Neely and Bourne when discussing implementation failure that if there is a culture of blame, people will begin to seek ways to deliver the measure rather than pursue real performance (Neely and Bourne, 2000). Indeed inappropriate behaviour can occur all too often (Bourne and Neely, 2002).

Even a well-defined balanced scorecard can run into difficulties. Lawton (2002) explains that scorecards are sometimes called "dashboards" if the focus of the system tends to be on the measures themselves and not the objectives. This can lead to the situation where "studying the dashboard without also looking out of the windshield can cause accidents" (Lawton, 2002, p.67).

It is not just BSC's that have been subjected to criticism. Virtually all integrated measurement systems have received ongoing criticism over the years by highlighting their limitations. Among these limitations include the fact that they are predominantly monitoring and controlling tools, rather than directly promoting continuous improvement and that they only report performance results rather than being able to predict future

performance (Ghalayini and Noble 1996). It is obviously necessary to keep clear sight on the overall strategic objectives when implementing a PM system.

2.7 Impact of Service Quality on Airline Operations Performance

“Service quality is a matter of controlling details in the service delivery. Thus quality development means improving all the parts of the service chain and seeing the whole. Far too many companies work on the detail “the encounter with the customer” but really they should be studying critical incidents in the whole production chain. From the customer’s perspective it is essential that the whole service process functions properly” (Edvardsson 1992)

The above statement serves as a foundation for linking service quality to performance measures within an airline and highlights the necessity to examine the entire supply chain and not just the encounter with the customer. Within the airline industry the service quality literature tends to focus on those activities that the customer has direct contact with: reservations, check-in, airport facilities, the in-flight experience etc. In other words it is the customer’s experience with the service encounter and whether it matched, exceeded or fell short of perceived expectations. But, service quality really begins many months earlier when the airline is building its flight schedule and crew lines. Aircraft flows and routings, crew schedules, how and where to change crews, aircraft utilisation, airport connection time, make-up time to provide for irregular operations, training, staffing, placement of reserve crews etc, all contribute in one way or another to how the final product is delivered. Indeed “the product cannot be judged in isolation from those who deliver it” (Street 1994, p.13).

It is from this belief that to provide exemplary service performance all critical processes must be measured and analysed at all points in the service production chain. If there is insufficient understanding and awareness of process flows, inter-relationships and causes and effects then there are flaws in how the product is brought to market. It is therefore necessary to use a PMR system to monitor and control the results, but it is equally important to have regular reporting and to ensure clarity in communication (Fitzgerald and Moon 1996).

Macdonald (1995) relates a very interesting story in which he was involved in two quite different airline experiences. One was travelling on British Airways, the other on Virgin

Atlantic. He prefixed the story with his assessment of the two as British Airways being "an efficient, quality-conscious airline, interested in customer care", and Virgin as "a customer-focused airline" (p.6). The story told how British Airways would break bad news in a series of "digestible dribbles" (p.7) but always in a friendly and sympathetic manner. Conversely, Virgin went above and beyond by notifying the customer ahead of time of a delay and making all further arrangements that minimised his inconvenience. The end result was a series of extremely frustrating but friendly experiences with British Airways, but a story of superb customer concern and care with Virgin, which resulted in the customer being 'delighted' with a delayed flight! (Macdonald 1995). However, in today's environment with reduced service frequency, higher security, more hassles, and less in-flight service it is becoming increasingly difficult to delight customers and remain solvent.

Vandermerwe and Gilbert (1991) in their study on internal services contend that "corporate performance increasingly depends on internal services" (p.50). They examined the perceived gap between service users' needs and service providers' performance:

"Reliability, responsiveness and on-time delivery are equally important internally as they are externally...both internal and external service providers tend to deliver 'satisficing' service packages which fall short of user requirements"
(Vandermerwe and Gilbert 1991)

The cost to provide the service can be affected by the level of failures in the entire service delivery process. A failure to provide the promised service can occur at any point in the chain. This may manifest itself in costly and inconvenient delays and cancellations. They can be broken down into three areas:

Pre-delivery – poorly planned aircraft flows, crew swaps, crew resources and turn times

At-delivery – poor decision making during irregular events such as weather, mechanical difficulties, lack of attention to detail, failure to act to prevent cascading delays

Post-delivery – customer complaints not handled quickly or professionally

According to Edvardsson (1992) "in service companies it is estimated that as much as 35 percent of the staff are employed in correcting the mistakes made by the others"

(p.17). It therefore becomes critical to ensure that performance measures and their objectives are clearly communicated to all employees such that mistakes can be avoided. Neely *et al* (1995) citing Crosby's (1972) assertion that "quality is free" is an assumption that "for most firms, an increase in prevention costs will be more than offset by a decrease in failure costs" (p.84).

In the United States and perhaps at the pinnacle of success in providing service quality is Southwest Airlines who have maintained a solid and responsive business model for three decades that has enabled them to pursue considerable and continuous growth even in the face of losses sustained by the major airlines (Bunz and Maes 1998). The case of Southwest is truly remarkable and there have not been many successful imitators. It would appear that the key to their success lies in their culture where "employees see themselves not as an airline with great customer service, but as a great customer service organisation that happens to be an airline" (Laszlo 1999, p.95).

There are other stories of a few progressive airlines that have attempted to explain the significance of service quality to performance, most notably at Scandinavian Air Systems (SAS) where they tried to set new standards of customer services (Ekdahl *et al.* 1999; Gustafsson *et al.* 1999), at Continental Airlines where they had to transform the airline from the worst in the country to the best (Bethune and Huler 1998), and at JetBlue who set new standards for customer service and loyalty (Peterson 2004). Additionally, within the field of operations research there has also been some excellent insight (Yu 1998) on the various aspects of airline operations, and in particular how they come together to provide the service encounter, or "moment of truth" as it is often referred to. However, these studies have focused primarily on the contact the customer has with the service provider and no mention was made of the internal processes that constitute the entire service delivery chain.

Other research has focused on the service performance gap where the service offered falls short of expected standards. It emphasises the need for a firm to ensure it fosters lasting relationships with its customers, suppliers and employees in an attempt to close the gap between service performance and service quality (Chenet *et al.* 2000). An additional note on service quality concerns a study undertaken by Frost and Kumar (2001) which investigated internal customers and internal suppliers. They developed a measure of service quality known as INTSERVQUAL, which was able to "identify the critical factors influencing internal service quality amongst employees in a large service organisation" (Frost and Kumar 2001, p.383). But, the internal service providers in the

study were baggage handlers, cabin cleaners and cabin caterers. While all play a crucial role there is again no mention of the support staff further away in the service chain, those who plan, schedule, monitor and ultimately control the airlines' aircraft activity. It is likely that a service performance gap can exist that can be traced back to these staff and their activities.

2.8 The Human Factor

The aspect of the literature dealing with human behaviour as it pertains to performance measurement was the element that had received the least attention in the literature when I first began my research study. Indeed, it still remains an area with many open questions of how the behaviours and attitudes of the employees affect the implementation and use of a PMR system. A key characteristic of management research is that it is about people and how they interact with their environment. Yet within the performance literature we have tended to see a concentration on a system approach rather a people approach (Kaplan and Norton 1992; Neely 2005). Attitudes and behaviours can be influenced by the existing company culture and the business environment that the company finds itself in (De Waal 2004; De Waal 2010; Edwards and Sohal 2003b; Van Riel et al. 2009). During crisis there is a tendency for people to experience anxiety and stress about their own future and wellbeing, and during growth there is a higher likelihood of embracing change and fostering performance driven behaviour.

As we have seen, the majority of research into performance measurement lays out the tangible facets of strategy, system design and implementation of PMR systems, while there is a distinct lack of information regarding how individuals behave and react to these systems. It is assumed that individuals will adapt their behaviour to the PMR system. However, recent research (De Waal 2003a) has taken this a step further by identifying individual behaviours that are deemed to be important to a successful PM system implementation. However, there is little tying this to business climate and personal motivation, and how much of this interaction and behaviour is driven simply by job duty rather than willing participation? Indeed, how is willing participation encouraged? These are areas that we need to better understand.

2.8.1 Culture, People and Management style

Over the last two decades, a variety of approaches and methods have been developed to help businesses better understand their operations, to stave off competition and to develop improvement initiatives. Central to the success of these methods is acceptance by the employees because they are the resource to attain the desired better performance (Simons 2000). Further evolution of research into performance measurement has begun to place more emphasis on company culture and management style, suggesting that they seem to be interdependent and have a profound effect upon a performance measurement system (Bititci et al. 2004). It can be expected that the PMR system will have a distinct effect upon the behaviour of the employee, but here we can see that the inherent culture and management style impart themselves on the employees and thus influence whether the PMR system will indeed be successful or not. If the management style and culture are in harmony then the outcome may well be performance driven behaviour, which is surely the desired result of any PMR system.

Of particular interest here are the lessons and conclusions drawn by Bititci et al (Bititci et al. 2006) which found that there was a strong connection between organisational culture, management style and performance measurement. They further determined that performance measurement is a cross-functional issue that requires collaborative thinking at all levels of the organisation. These are particularly relevant to my study because the deployment of PMR systems at both Allegheny Airlines and Pinnacle Airlines are expected to be influenced by the business climate, prevailing culture and management styles. The element of attitudes and behaviours displayed by the people expected to engage with a PMR system has received little attention in the literature until more recently.

2.8.2 Attitudes and Behaviours (performance driven behaviour)

Over the last few years there has been a slowly growing focus on the behavioural aspects and human side of performance management and in particular how this can have a profound effect upon, not only the implementation of the PMR system, but on performance output itself. It has long been recognised that a successful organisation is comprised of successful people but this has not necessarily been a nucleus within the performance measurement literature.

At this juncture, it is worth putting some meaning to the terms 'attitudes' and 'behaviours' as they relate to this study, and to understand the relationship between them. In this context I have used the following definitions: an **attitude** is "an opinion that includes an evaluative and emotional component" (Aronson 2004, p.90), whereas a **behaviour** is our manner of acting and controlling ourselves. Ordinarily we might expect that our attitudes would predict our behaviour, for example if someone disliked cabbage then they would not eat it. But, Aronson points out that there is "no consistent relationship between attitudes and behavior" (p.127). He proposes that the notion that attitudes predict behaviour is all in our minds and that "we just imagine that people act consistently with their beliefs and attitudes" (p.127). For example, if I was a law abiding citizen and it was my advocated belief that the speed limit on a motorway had been correctly established at 70mph, would that predict that I would constantly adhere to this speed limit when driving on motorways? I doubt it. If I was in a hurry, or the traffic was fast-moving, then there is a high likelihood that I would drive faster and consequently my behaviour would not be aligned with my attitudes and beliefs.

How does this all relate to the subject under research? It is important to understand this distinction between what people say and what they do, because the two are not always the same. In this research, I have conducted interviews during which the interviewees have given me their attitudes about various subjects, but this does not necessarily mean that they will behave in a similar manner. Sometimes it is all too easy to criticise something, let's say a PMR system, yet still use it positively to accomplish your objectives. We need to carefully bear this in mind when conducting qualitative research and examining interview data.

De Waal (De Waal 2002) initially identified from a review of the scientific and professional literature 40 behavioural factors that were considered important to the implementation and use of a PM system. However, it seems that these identified behavioural factors are those considered to be 'expected' or observed from the "controlled system", which in this particular context is described to be the manager who has responsibility for some form of performance. Superior to him would be the "controlling system" e.g. directors and executives, who receive performance information from the established performance management system about the controlled system (manager). Rather convoluted in its description but it conveys an approach to PM that relies on the notion of control, as opposed to say, initiative and active participation.

These 40 behavioural factors were subsequently tested in three Dutch companies in the 'starting', 'development', and 'use', stages of a PM system by converting them into questions and categorising whether the behaviours were satisfied, partially satisfied, or not satisfied. Central to this was the notion of "regular use", which stems from the belief that "a performance management system is regarded successful if managers use the system on a regular basis" (De Waal 2003a, p.689). Following an analysis of these behaviours by a method of pattern matching DeWaal was able to narrow his results to 18 individual behavioural factors that are important to the successful implementation and use of a PM system. This was a very important contribution to the beginnings of understanding the impact of human behaviour on an imposed PM system. These 18 factors are recreated in table 2-2 below.

Table 2-1 Important Behavioural Factors

Classification scheme part	Areas of attention	Behavioural factors
Performance management system	Managers' understanding - a good understanding by managers of the nature of performance management	D4. Managers understand the meaning of KPIs D7. Managers have insight into the relationship between business processes and CSFs/KPIs U7. Managers' frames of reference contain similar KPIs U21. Managers agree on changes in the CSF/KPI set
Controlled system	Managers' attitude - a positive attitude of managers toward performance management, toward a performance management system and toward the project	S2. Managers agree on the starting time S4. Managers have earlier (positive) experiences with performance management U13. Managers realize the importance of CSFs/KPIs/BSC to their performance U14. Managers do not experience CSFs/KPIs/BSC as threatening
Controlling system	Performance management system alignment - a good match between managers' responsibilities and the performance management system	D9. Managers' KPI sets are aligned with their responsibility areas D13. Managers can influence the KPIs assigned to them U9. Managers are involved in making analyses U15. Managers can use their CSFs/KPIs/BSC for managing their employees

Internal environment	Organizational culture - an organizational culture focused on using the performance management system to improve	U23. Managers' results on CSFs/KPIs/BSC are openly communicated U22. Managers are stimulated to improve their performance U8. Managers trust the performance information U17. Managers clearly see the promoter using the performance management system
External environment	Performance management system focus - a clear focus of the performance management system on internal management and control	D16. Managers find the performance management system relevant because it has a clear internal control purpose D17. Managers find the performance management system relevant because only those stakeholders' interests that are important to the organization's success are incorporated

Source: de Waal (2003a)

These factors have been further categorised into areas of attention to provide a more general overview of what an organisation must pay attention to when implementing and using a performance measurement system. Evidence from De Waal's research within four Dutch companies shows that even if there is sufficient attention applied during the starting and development stages it does not therefore mean that it will lead to a successful regular-use stage (De Waal 2003a). The use stage is in many ways the most important aspect of a performance measurement system. It is here that continuous attention and evaluation of the behavioural factors is especially important because the system must be ongoing and provide some longevity. This is the stage where it becomes clearer whether the attitudes and behaviours of managers and employees change in response to the results of the performance system. As Kaplan and Norton (1992) stated, this is where the performance measurement system will affect the behaviour of employees and the expectation that people will adopt the behaviours and actions necessary to meet performance goals. In a very useful sense this has added some illumination to the problems that firms encounter when jumping on the BSC bandwagon.

This evidence suggests that performance measurement systems can only succeed if the appropriate tools, methods and techniques are used to properly design, structure and implement the system (Bourne et al. 2000; Bourne et al. 2003b; Paranjape et al. 2006; Simons 2000). However, in order for the system to be used effectively there must be a corresponding training programme that enables the users to attain sufficient knowledge and insight to not only understand the measures, but more importantly to

make decisions that can lead to an improvement in performance. This training should focus on developing the necessary behavioural qualities that are required for the continued use of the system (De Waal 2010; Van Riel et al. 2009).

Now that we have some insight to the behaviours that are desirable, how do we now go about encouraging and eliciting them from our managers and employees? De Waal's research has served to underline that human behaviour is just as important to a PM project as is the design and implementation of the programme. Subsequent research has taken this further with the development of a Performance Management Analysis tool (De Waal 2004) that attempts to measure and evaluate performance-driven behaviour. This tool took a more in-depth look at two distinct but interdependent aspects; that of the 'structural' and 'behavioural' side of performance management. The structural side refers to the performance measurement system currently in use and the measures that have been identified, whereas the behavioural side refers to the human factors that naturally guide how an individual relates to the system.

Table 2-2 The nine aspects of the performance management analysis.

Aspect	Type	Short description
Responsibility structure	Structural	A clear parenting style and tasks and responsibilities have been defined and these are applied consistently at all management levels
Content	Structural	Organisational members use a set of financial and non-financial performance information, which has a strategic focus through the use of critical success factors and key performance indicators
Integrity	Structural	The performance information is reliable, timely and consistent
Manageability	Structural	Management reports and performance management systems are user friendly and more detailed performance information is easily accessible through information and communication technology systems
Accountability	Behavioural	Organisational members feel responsible for the results of the key performance indicators of both their own responsibility areas and the whole organisation

Management style	Behavioural	Senior management is visibly involved and interested in the performance of organisational members and stimulates an improvement culture and proactive behaviour. At the same time it consistently confronts organisational members with lagging results
Action orientation	Behavioural	The performance information is integrated in the daily activities of organisational members in such a way that problems are immediately addressed and (corrective or preventive) actions are taken
Communication	Behavioural	Communication about the results (top-down and bottom-up) takes place at regular intervals as well as the sharing of knowledge and performance information between organisational units
Alignment	-	Other management systems in the organisation such as the human resource management system, are well aligned with performance management, so what is important to the organisation is regularly evaluated and rewarded

Source: de Waal (2004)

The ultimate objective of a successful PMR system is to inspire performance driven behaviour that if directed correctly will result in continuous improvement. This goal, although appearing straightforward, is a very hard to achieve, and if a company is unsuccessful in its quest it can be the downfall of a PMR system implementation. It is therefore very important that senior management have considerable and insightful understanding of the psychological barriers that can thwart a PMR initiative. It is the employees who must make the system a success and without their buy-in and support any PMR system will ultimately be doomed to failure.

A much more recent study (Elzinga et al. 2009) has sought to substantiate De Waal's research and to rank the relative importance of the previously identified behavioural factors to make it generally easier for a company to know which factors on which to place emphasis and focus when implementing a PMR system. The results from this work not only confirm De Waals' findings but also help to sharpen the focus. They have been able to identify "that the ten most important factors come from all three stages (design, implementation and use)...and thus there does not seem to be a reason to assume that one phase is more important than another" (Elzinga et al. 2009, p.518). This once again adds significant support to the assertion that employees' attitudes and

behaviours should be considered at each stage of the PMR system, and not that the expected behaviours will naturally emerge when the system is introduced.

It is curious that caring for and understanding employee behaviour has not come to the forefront of PMR research before. Everyone has spent much time and energy researching and practicing the tangible aspects of PM, such as strategy, the design of measures, implementation, etc, that the employee has been relegated to the back seat and left to simply engage with the system whether or not they truly understand it or want to become part of it. Of relevance here are also the findings of Van Riel et al (2009) who determined that managerial efforts to motivate, stimulate and inform had a significant and positive impact on aligning employee behaviours with strategic goals.

This section has established that the commonly accepted approach to performance measurement systems has been to focus on financial and operational indicators of performance (Neely 2005), rather than to pay attention to the individuals who work within these systems, and in particular how they perceive and react to the various measures that are imposed upon them (De Waal 2003a). The missing component is research that can identify and understand behavioural reactions and attitudes, and how in turn these reactions are influenced by the business climate, which also influences the design, implementation and use of a PMR system, with the desired end-result being to foster performance driven behaviour.

2.9 Tying It All Together

We have seen in the preceding sections that there has been a wealth of academic and practitioner literature and research into the various facets of performance measurement. Additionally, the subject has been discussed from two distinct angles: the view from above that suggests that employee behaviour is changed by the PMR system, and then the lesser supported view from below that employee behaviour impacts the ultimate success of a PMR system.

The various systems and frameworks that enable a company to have a central and structured performance management system, such as the BSC, Performance Prism, or SMART pyramid, have a significant part to play. However, it is argued that in order for these to be successful a company must take an introspective look within itself and

examine its employees, the culture, and the motivation and rewards systems that are available.

So how do the topics of system design, implementation, strategy, and business climate influence individual attitudes and behaviours. Do they influence employees to seek continuous improvement, or do they act as threat to the employee? The following framework, which has been derived from the preceding literature review, depicts that the development of a performance measurement system tends to follow a linear path with strategy informing system design, which is then followed by implementation and use, which is where the desired behaviours and attitudes are expected to be displayed. The flow expects that the behavioural reactions will be consistent with the chosen strategy and are the result of a systemic development of a PM system. In addition, it is expected that strategic goals will be influenced or dictated by the overlying business climate.

The framework below (Figure 2-1) presents a general model hypothesising that desired behavioural reactions will result from the linkages between performance strategy, system design and system implementation. The box depicted in dashes is the area of my research.

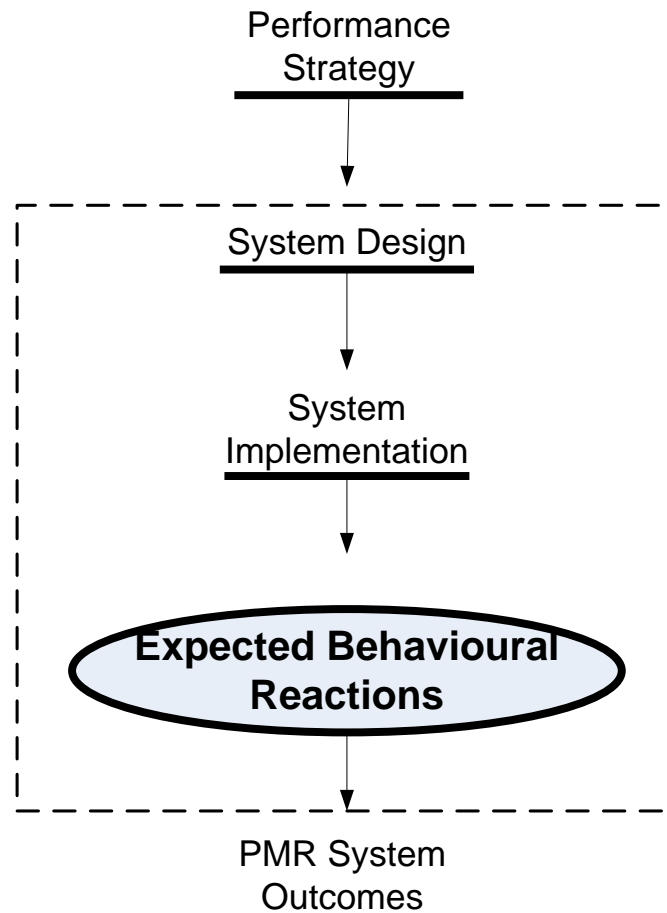


Figure 2-1 Framework from Literature Review

Even though this process flow is supported in the core literature we know that from the early applications of performance measurement as a financial measurement system to its evolution as a strategic management system, the one key theme that has been largely taken for granted is the action of the employees charged with trying to attain the established goals. We do not know with sufficient detail how and why employees might engage with a system such as the BSC and make it work. Indeed, we know that many fail. How do employees react and behave when faced with a system that has been forced upon them? The following research looks at this perspective and asks what impact employee attitudes and behaviours have on the ultimate success of a PMR system.

Table 2-4 below summarises the literature from the aforementioned review that is central to this project.

Table 2-3 Table of Literature Informing the Research

Aspect	Description	Literature Informing the Research
Performance Strategy	The drive for ever-increasing levels of performance both operationally and financially to achieve strategic objectives	(Bititci et al. 2004; Bourne et al. 2000; Bourne et al. 2003b; Feurer and Chaharbaghi 1995; Kaplan and Norton 1992, 1996a, 1996b, 2000; Neely 2002; Simons 2000)
System Design	The framework through which the performance metrics are devised	(Bourne et al. 2003a; Bourne et al. 2005; Bourne et al. 2000; Bourne et al. 2002; Ghalayini and Noble 1996; Kaplan and Norton 1992, 1996a, 1996b; Lipe and Salterio 2000; Neely et al. 2000; Neely et al. 2002; Paranjape et al. 2006; Schneiderman 1999)
System Implementation	The deployment and use of the performance measurement system	(Bourne et al. 2002; Kaplan and Norton 1993; Lawton 2002; Lee and Sai on Ko 2000; Neely et al. 1997; Sandt et al. 2001)
Expected Behavioural Reactions	The expected alignment of employees to the PM system and thus the attainment of company strategy	(Bititci et al. 2006; Bititci et al. 2004; De Waal 2002; De Waal 2003a; De Waal 2004; De Waal and Gerritsen-Medema 2006; Elzinga et al. 2009; Neely 2005; Simons 2000; Van Riel et al. 2009)

My research is not intended to validate, or even advocate, any particular performance measurement system, but rather to assess and gain a better understanding of their effect on human behaviour and what behaviours and attitudes that a PMR system stimulates in individuals.

2.10 Summary

This review has positioned, and discussed the nature of performance measurement and framed how PMR systems can be designed, implemented and used. It has also affirmed how the critical aspects of human attitudes and behaviours have been largely neglected in the literature, why these aspects might be of prime importance to the successful implementation of a PMR system, and how the formational aspects of strategy, design, and implementation can be influenced by behaviours. While other aspects of performance measurement have been examined and researched multiple times it is this aspect of human engagement that warrants further attention. This is driven primarily by what became fundamental to this research: the assertion exemplified in Kaplan and Norton's milestone paper introducing the Balanced Scorecard (Kaplan and Norton 1992). It portrayed a view of PM that suggests that the PM system itself "strongly affects the behaviour of managers and employees", and concludes that by establishing goals the PM system "assumes" that people will adopt whatever behaviours and take whatever actions are necessary to arrive at these goals. These broad assumptions struck me as being little more than derived suppositions and I began to focus my attention on whether it was actually quite the opposite effect, that is whether the behaviour of managers themselves actually had more influence on the PM system, and therefore performance, than the system itself.

This review has therefore stated that a systems approach to measuring operations performance does not properly account for the behavioural reactions of managers and that more emphasis and understanding of this aspect is needed.

3. RESEARCH METHODOLOGY

This chapter introduces the choice of methodology and its justification as an appropriate approach, along with a large section that is devoted to the methods used to gather and analyse the data. It concludes with a diagram of the overall research design.

3.1 Selecting a Methodology

As a practitioner setting out to discover knowledge I had to ask some probing questions of myself and others concerning why we did things in a certain way. It became apparent that in order to gain a better understanding of the phenomenon (crisis at Allegheny Airlines) that a rigorous approach should be taken to examine the attitudes and behaviours that were being exhibited by the managers, against the backdrop of measuring flight operations performance.

At the initiation stage of the idea for a research study it can be difficult for a practitioner to know how to logically and methodically go about the research. Although I did not really know the best method by which to approach it my intention was to better understand the situation and then take some action in an attempt to improve it. In this instance, the project was not just about researching a situation but also interacting with it. Putting together a piece of good research seemed rather daunting without being able to, at least follow some basic rules or a framework. It soon became apparent that there was not a 'one size fits all' option, and that advantages and disadvantages had to be weighed against one another before choosing the most appropriate research strategy for a specific type of investigation. Each choice carries with it a set of assumptions about how we make sense of the world in which we live, and ranges from the underlying philosophy, to the methodology, and the methods employed to elicit and analyse data, and whether these are predominantly qualitative or quantitative in nature (Denscombe 2007).

In the social sciences the type of research techniques used have particular ontological and epistemological foundations. Ontology is the philosophical study of the nature of existence and reality, and in a very simple form can be whether we approach things from an objective or subjective standpoint. Coupled with this is epistemology, or the theory of knowledge, which is the branch of philosophy concerned with the nature and scope of knowledge and considers what knowledge is and how it is acquired (Denscombe 2007; Dick 2000). These philosophical underpinnings determine the type of research approach.

If approaching research from an objective ontological standpoint then this will involve a positivist, external, or critical realist epistemology and will lead to a hypothetico-deductive methodology that will rely on the techniques of statistical testing, experimentation and secondary data analysis. Conversely, a subjective approach will involve a phenomenological philosophy resulting in an interpretivist, or action research epistemology conducted from within the research setting as an inductive or cooperative inquiry methodology that relies on techniques such as participation, interviews and observation. Results from research following a positivistic and deductive approach can be generalisable and applied to a wider context than the research setting, whereas results from a phenomenological and inductive approach, tend not to be generalisable and are specific to the research setting (De Vaus 2001; Denscombe 2007; Ritchie and Lewis 2003; Schwandt 2001).

The aim of my research was to be an integral part of a change action designed to improve a situation and therefore the research paradigm needed to be built around action and research outcomes that enrich each other. This requirement naturally demanded a cooperative and interpretive approach that would not be restricted by testing a hypothesis but allow knowledge to be uncovered so that it could be used to inform further action (Dick 1993). My research is therefore based on the principles of phenomenology, which emphasises subjectivity, description and interpretation. This was quite apt in a business setting when we wished to understand the behaviours and thoughts of others.

In both airlines, I saw many people around me who were confused or disengaged from operations performance and I wanted to understand why. But, in order to do this properly I really needed to establish a formal and organised research project. At the outset it was important to answer some basic questions about whether the problem to be examined was relevant to my role and responsibilities, and if it would be feasible to

conduct it in terms of time, resource availability, access, and finance. It was additionally important to decide whether the targeted research group was sufficiently diverse, whether the data could be precise and detailed, would the research subjects be open and honest, could the investigation focus on the vital issues, could I avoid bias and remain objective, and could I avoid misrepresentation, and protect confidentiality? This was a long and daunting list and it was obviously very important to be able to answer these questions in the affirmative before the research could begin. Because I was an integral part of the workforce responsible for daily operations performance and I had to interact with everyone else who shared these responsibilities it fortunately did not take too long to confirm that the above referenced foundational questions could be answered in the affirmative.

The fundamental starting point for this research was to determine **what** was going on, and to describe it, and then to determine **why** it was going on, and to explain it. So the two methods of description and explanation needed to be fundamental to the research approach decision. I was not concerned about testing a pre-conceived theory but rather more interested in determining what was happening within the Flight Operations department and why. It was this fundamental approach of examining and seeking out the theory, which ultimately drove me towards an emergent methodology.

Initially, my research was intended to be data-driven, rather than literature driven. In other words rather than turning to a body of extant literature on the subject as my initial starting point, and conducting the project as theory-driven, I preferred to take the path of making some sense of the research situation first and the people within it. The objective being to put aside any preconceptions so that I would be more open to fully experience the research situation and derive an initial understanding that would not be overtly influenced by the literature. This approach was necessary because until I fully understood the primary research issue it was not logical to review the literature. "In many studies you don't know the relevant literature until data collection and interpretation are under way" (Dick 1993). This approach naturally ruled out the more traditional and scientific methodologies of hypothesis testing. It also required that the research methodology allow for practitioner involvement from the inside, rather than observation as an outsider. I therefore conducted the first round of data gathering before truly engaging with the literature, which proved to be beneficial because it solidified for me the focus of the research for the remainder of the project without being swayed in a direction that the literature may have suggested.

As a consequence, in the beginning my research questions remained quite indistinct until I could satisfactorily evaluate the situation and assess the needs of my colleagues as they related to performance measurement so that any planned 'action' would be of use to them. Additionally, until understanding the true nature of the problem the methodology was also hazy, because it derived from a situation that was partly unknown and research questions that were initially fuzzy. This approach to the research problem created some anxiety and frustration for me because there was not a precisely defined problem to be addressed and thereby a tailored method by which to address it.

A theory-driven approach is most common to conventional research and works well when a problem is clearly identified and defined, and you start with precise research questions. The majority of quantitative research and much qualitative research is theory-driven, with some obvious exceptions being Grounded-Theory, Ethnography and Action Research, which by definition can readily adopt an emergent-theory approach. In my particular situation, using a theory-driven approach did not seem at all suitable because I did not have a clearly defined problem until much later in the research project. My approach needed to be rapid, responsive and flexible, and additionally needed to afford me the ability to study and improve upon my own work practice by taking action within the research situation that would eventually improve upon it. The action outcomes would hopefully benefit myself, my colleagues, and the airline as a whole. I had no prior experience or training in theory-driven research and so this helped me to adopt the data-driven approach without bringing any pre-conceived ideas or expectations to the research study.

This fundamental approach also allowed both the content and process of the research to develop as the study proceeded. This became very important because I had initially expected to undertake just one case study at Allegheny Airlines. However, this was eventually expanded to four cycles of research across two organisations because my research study and this eventual thesis came about from a decision to understand the chosen phenomena in a particular and official way by embarking on a formal research programme at Bournemouth University. I was faced with a situation that I believed fell squarely within my own area of responsibility, but also a situation that I did not know a lot about, or how to adequately tackle. The idea of pursuing a professional doctorate (DBA), as opposed to a more academically based PhD, was to allow for a more experiential and practitioner approach. To that end, I have dedicated a chapter to the contribution that this research makes, especially the contribution to professional

practice, which I feel has been the greatest, and certainly the most personal, learning experience from the whole process. Therefore, the real starting point of the research journey began with the decision to pursue a formal qualification that would provide the structure and learning opportunity to facilitate a conscientious intervention in my direct work setting and to examine and report upon it. Once that decision was made it became a matter of familiarising myself with research methodologies and choosing a suitable approach.

As my research followed the design, implementation and use of modified balanced scorecards, it began to unfold into a story that could be told as an integral part of the research. Siv Friis, writing about a practical application of action research (Greenwood 1999), relates how she used storytelling to describe "the context in which events take place" (p.101). By her justification, "every development in a change situation is unique and only the people within the work situation are in a position to tell the true (i.e. relevant) story of that workplace" (p.101). This is a compelling argument to employ storytelling as the research unfolds as it provides a rich detail of events as they happen. I have endeavoured to utilise this approach in describing the research situations and in particular my interpretation of how individual experiences unfolded from the data.

3.1.1 Practitioner Research

Conducting business research projects as part of our everyday job responsibilities has become more prevalent and valuable over time, and the people conducting them are often expected to be company employees with relevant commercial experience. Because of this, it is important to have a basic grounding in the techniques that will allow the business manager researcher to produce a report that is structured, well-founded and with coherent and supportable recommendations. In the commercial world it is far more likely that a research undertaking is conducted by a practitioner who will himself interact with the subject matter under study and either test a theory or look for explanations on a phenomenon or behaviour. Practitioner research is therefore embedded in the organisation. A research methodology that has the researcher as an integral part of the research study is consequently more appropriate for a study in this context. It is less likely that the researcher will be able to examine the research situation from an external perspective as a consultant or academic might. This insider approach is well suited to action research, grounded theory and ethnographic studies. The underlying premises of each these methodological approaches differ of course but

all require some form of participation or integration of the researcher. In a business setting, a department manager can then examine a particular problem by being involved with the research participants, and understand the dynamics of how the company operates, with insight to its culture and method of operation.

There are also disadvantages that arise from being an insider that must be addressed for the research project to have acceptance and trust. Being a practitioner researcher removes some of the barriers that can exist when seeking access to an organisation but it does bring with it other problems such as role duality, role conflict and the need to manage organisational politics carefully. The role of the researcher must be distinguished from the role that the researcher plays as an employee of the organisation. The objective is to maintain harmony and remain an 'accepted' colleague and department leader while still being able to question the actions of those being researched. It is possible to do both in concert and this is indeed how I conducted my research. It was hoped that those involved would be ready and willing to accept the challenge because both companies were in urgent need to unfreeze their current thinking and develop a critically competitive approach to change.

3.1.2 Emergent Theory Methodologies

Having determined that my interest lay in examining the behaviours and attitudes of the people I worked with to the PMR process it was not a big leap to settle upon an approach that was geared towards improving practice while at the same time letting a theory emerge, before testing any further theories. In other words an emergent-theory approach, as opposed to a theory testing approach. I was more concerned with wanting to shed light on a situation that appeared to be dysfunctional and unenlightened. However, my intention was to first examine the situation and then to go about trying to influence or correct it. Therefore, it was plainly evident from the beginning that the emergent part of the research would be important but was not the underlying foundation for the whole project.

At this point Action Research was put forward as suitable approach because it offered a means of conducting research while at the same time being actively involved in a change effort. However, in considering its suitability I reviewed several methodological approaches that might otherwise provide an acceptable approach. Each brings with it a set of assumptions about the social world and how reality is perceived, and it was apparent that there is not one 'right' way to conduct research. Having set a requirement

that an approach should provide a mechanism for theory generation and for the researcher to be an active participant in the research process, this narrowed the field to a few primary methodologies. Of tantalising interest was Grounded Theory, which has a very large following and is intuitively appealing to a researcher who does not have preconceived ideas about the research problem, Grounded Theory offered an appealing slant because it encourages only referencing the literature when fitting the emerged theories into existing research findings (Strauss and Corbin 1997).

Case Study methodology also offered an opportunity to take an in-depth look at the instance of what is to be investigated (Yin 2003). The basic premise of a Case Study approach is that insights can be gained by looking at an individual case that can have wider implications. "The aim is to illuminate the general by looking at the particular" (Denscombe 2007, p.36). I decided against this approach because I knew that at Allegheny the intervention would be linear and needed to build upon itself as lessons were learned and that these lessons needed to be an integral part of the continuing research rather than be reported as a separate instance.

Another option was Ethnography, which is traditionally concerned with the study of cultures and groups. There is some logic to applying it within a business context because of its tendency to "emphasize the importance of understanding things from the point of view of those involved" (Denscombe 2007, p.63). It has to be, by its very nature, a method to see things from the perspective of how those involved see things, rather than from an outsider's point of view. Ethnography can provide very detailed descriptions of things that are observed and witnessed by the researcher and can be used to both develop and test theories. Although appealing, this was deemed not to be a suitable approach to my situation because it is limited by the fact that it is 'stand-alone' and isolated, and the results from an in-depth ethnographic study can not readily contribute to wider theories. It can be used to provide detailed descriptive accounts but without necessarily providing analytical insight. The emphasis is on acute observation rather than the researcher directly participating in the research situation. It does not present a suitable opportunity to enact an intervention to solve a research problem or improve a situation.

Following a review of the aforementioned methodologies I made a strategic decision to adopt Action Research as the most suitable and practicable approach. This is a style that advocates participation in order to provide learning and improvement, and to critically reflect upon the action taken and the events experienced in order to inform

further action. It was appropriate for my research situation because it required an insider approach and was conducive to getting the best outcome from the research. "The great advantage of action science is that it provides the researcher with substantially improved access" (Gummesson 2000). Additionally it would allow me to fully participate in the research situation and plan, act, reflect and modify the research intervention.

3.2 Introduction to Action Research

Action Research (AR) has its roots in the pioneering work of Kurt Lewin in the USA during the 1950's (Lewin 1946). Over the past 60 years, the design and practice of action research has evolved into a diverse range of approaches that include Action Science (Argyris et al. 1985), Action Learning (Revans 1982), Experiential Learning (Kolb 1983); Reflective Practice (Schon 1991) and Soft Systems Methodology (Checkland and Scholes 1990) to name just a few. It is particularly well suited to practitioner research because it involves cycles of diagnosing problems, planning action, taking action and then critically reflecting upon that action.

Action Research is an approach, rather than a method. A method implies a step-by-step systematic process that runs in a planned and linear manner, whereas AR is much more of a winding road, akin to a philosophy, and not a set of proven rules to be followed. AR is also concerned with social practice and is aimed towards understanding and improvement. It is reflective, participative and dynamic, whereas conventional approaches tend to be static (Denscombe 2007).

The fundamental concept of Action Research is that it builds upon itself in iterative cycles, meaning that actions need to take place so that we can reflect upon them and make sense of what we are doing so that subsequent actions can then benefit from the knowledge gained in the first. This supports the principle that Weick defines as "people act in order to think" (Weick 1995). An action takes place initially with unknown results. Further action is then based on the contemplation of these results. This process is depicted visually in Figure 3-1.

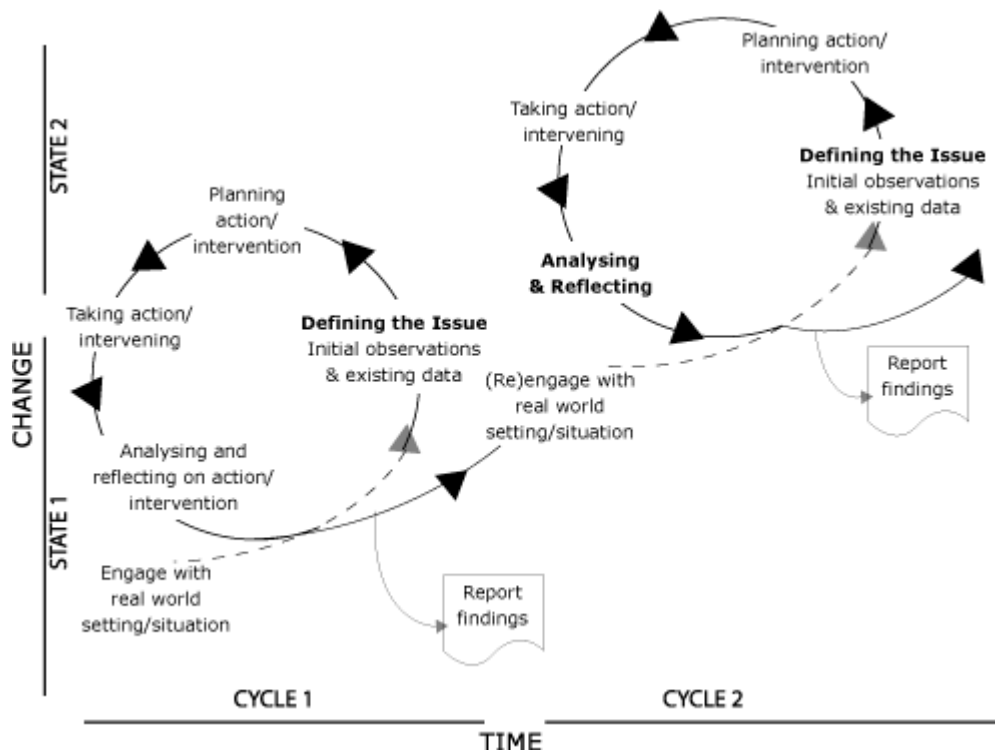


Figure 3-1 Action Research Iterative Cycle

Source: (Muir 2007)

My appreciation of action research as the most effective approach evolved during the course of the study and was guided by the works of Ellis and Kiely (2000), Remenyi (1998), Gill and Johnson (2002), Greenwood (1999), Greenwood and Levin (1998), Coghlan and Brannick (2001), Coughlan and Coghlan (2001 & 2002), Coghlan (2001), Dick (1993, 2000). All of these authors acknowledge that AR is a cyclical process involving taking action and then critically reflecting upon that action. AR constitutes interpretative research where the "emphasis is on a social rather than an economic view of organisational activities" (Alvesson and Deetz 2000), and by its nature it is participative and collaborative.

3.3 Justification for Selecting Action research

This qualitative methodology is particularly well suited to practitioner research as it involves iterative cycles of diagnosing problems, planning action, taking action and then critically reflecting upon that action. In order to study a particular problem within an organisational context, research can be effectively conducted if the researcher is an active participant in the change process. This is fundamental to an action research

approach and provides the benefit of seeing the story unfold from the viewpoint of the participants. The phenomenon being researched is a "real event that must be managed in real time" (Coughlan 2001, p.39), therefore action research "focuses on research *in* action, rather than research *about* action" (Coughlan and Coughlan 2002, p.222). My research experience to date has served to solidify this concept because I was a direct participant and initiator of change processes. Action research and its variants offer the benefit of being a practical approach that aids the researcher to effect change with the aim of improving practice. The research itself "involves a feedback loop in which initial findings generate possibilities for change which are then implemented and evaluated as a prelude to further investigation" (Denscombe 2007, p.123). It therefore lends itself to business problems where a manager wishes to better understand and then improve a certain problem, or process. It is involved with practical issues, problems and concerns that are encountered in the everyday world. It is used to gain a better understanding of the problems which arise and to actually set out to alter and improve them as an integral part of the research process, rather than to just enact recommendations that come at the end of a research study, which may at that point in time be irrelevant in a dynamic and changing environment that many firms operate within. Action research weaves its findings and evaluations into further action as a cycle of research, which in turn leads to another iteration and a cyclical process. Action research can be seen as relevant, inter-active and effective in addressing problems.

This research was conducted under the methodology of action research approach as a way of "carrying out research which is truly 'fit for purpose' in the sense of being appropriate to the business context and those working within it" (Kiely and Ellis 1999, p.32). An action research approach within an action inquiry ideology is underpinned by a philosophy of enhanced efficiency and effectiveness (Ellis and Kiely 2000). From my own personal perspective I became fully engaged with the action inquiry approach because it provided a great opportunity for individual learning while at the same time contributing something of value to my organisation. This dual benefit to the researcher and the company provided opportunities for increased improvement during all cycles of research.

Action Research as a study contrasts with traditional positivistic research, which aims to provide universal knowledge. Knowledge created through AR is embedded in the organisation being studied and does not produce theories that can be universally applied (Coughlan and Coughlan 2002, p.224). AR is conducted from the inside looking out with members of the organisation participating in change, whereas positivist

research is undertaken from the outside looking in where the employees are the objects of the study.

However, it is important to point out that there is nothing wrong with more traditional research methods. Indeed, there are situations in which they are the most appropriate. This is especially true when doing research that needs to be replicable. However, in this particular setting the choice of action research was more fitting because it was far better suited to the situation of being a practitioner researcher and it values responsiveness over work that can be replicated in order to allow action to be taken as part of the research. "Good research is designed to fit the interests and skill of those involved" (Dick 2000). It was also important to achieve a level of personal and professional growth and development, which action research facilitates by requiring active involvement.

This study was conducted using the philosophical underpinnings of phenomenology and the methodology of action research with myself as the researcher being a full participant in the intervention. It has adopted an interpretive approach and involved the collection and analysis of data and the subsequent sense making of the attitudes and behavioural effects of those engaging with it. The collection of data has been primarily qualitative and includes the use of interviews, repertory grids, observations and informal conversations. Quantitative methods were also used to analyse statistical data where appropriate.

The research described here is deeply imbedded in the actions that took place around me. I do not believe that this research could have been conducted with sufficient insight had it been approached from a more positivistic and external standpoint.

"Each turn of the spiral is an opportunity for learning and change" (Dick 2000)

3.4 Research Design

Having selected AR as the methodology it was now time to plan the intended research. As I discussed earlier the use of AR begins in a fuzzy sort of way and takes a sharper focus as the research progresses. I experienced this very same sequence during the development of the project. I initially set out to make some sense of how my colleagues understood their work situation and the company culture at Allegheny Airlines. This led

me to narrow the focus of the research study and to begin imagining how to take some action and then reflect upon what happened. Afterwards I built a plan to focus on the introduction of a performance measurement system, then to monitor how it was being used, and the reactions to it of my colleagues.

3.4.1 The Research Situations

Allegheny Airlines at this time in its life (2003/2004) was in a state of decline and impending peril. It was readily apparent that survival meant concentrating on some core aspects of the business that would enhance its strengths. The primary problems that were in existence when I began this research stemmed from lacklustre operations performance and no formal operations measurement or review process. This was further hindered by a lack of senior management involvement and support and the managers not having a real notion of how to explain the performance results. Additionally, there was an apparent unequal accountability to our parent company, US Airways Express Division, when Allegheny's performance was being compared to other US Airways Express carriers because they were operating in more favourable geographic regions.

As time went by and the fortunes of Allegheny Airlines began to dwindle it became obvious that I would need to take another job. Allegheny was slowly being wound-down and its assets transferred to its' sister airline, Piedmont Airlines. I was able to continue my research and conclude two cycles of taking action, data gathering and reflection before I was forced to move on. Very soon after my departure the airline was completely wound-up and Allegheny is now another sad victim of the ever-volatile airline industry, where such long-standing, and at one time, prestigious names such as Eastern, Pan Am and TWA have been relegated to just memories.

When I joined Pinnacle Airlines in late 2004 it was enjoying a long period of growth and prosperity. The airline had been replacing its fleet of aging turboprop aircraft with 50 seat regional jets. It once again became apparent to me that Pinnacle also did not have a very good operations performance reporting and review process and this provided me with the opportunity to continue my research work.

These diverse experiences of crisis and growth ultimately provided a good opportunity to compare and contrast the respective attitudes and behaviours of the employees who were responsible for operations performance at both airlines.

Each AR cycle followed the same series of events. These were:

1. Determining the problem
2. Planning action
3. Taking action
4. Analysing and evaluating
5. Reflecting on the action taken

These are further depicted in the following chapters, which detail each cycle of research along with the actions that were appropriate to each cycle.

3.4.2 My Role as Researcher and Practitioner

At Allegheny Airlines I held the position of Director, System Planning and Control and worked closely with a small group of directors who were mostly engaged in running the daily operation. I also had several managers who reported to me. It was this position of involvement that enabled me to have access and influence over how we approached performance measurement. It allowed me to implement a system, further refine it, and then to observe how others reacted to it and to formally elicit their views and opinions.

At Pinnacle Airlines I was the Director of the SOC (System Operations Control Centre). This was a similar position to the one I held at Allegheny and it again allowed me the same level of access and influence over how we approached performance measurement.

3.4.3 Ethical Considerations and Bias

Entering into the research there were some ethical considerations that I had to be cognizant of mostly concerned with informed consent. Prior to conducting any of the interviews I explained to the interviewee that any information they provided would be held in confidence and only used as part of the intended research thesis.

All interview candidates were selected objectively and without prejudice.

My research was self-funded and there were not any conflicts of interest with either of my employers. All reported research was carried out by myself, was not part of a group or collaborative effort and was not sponsored or directly supported by either airline.

3.5 Data Collection Process

Research data was gathered by way of semi-structured individual interviews and repertory grid interviews and was further informed by observations and informal conversations. The data was categorised and analysed using both qualitative and quantitative methods to seek out the important behavioural attitudes evident in both business states: crisis at Allegheny, and growth at Pinnacle.

3.5.1 Interviews

The initial approach to understanding what was going on at Allegheny Airlines required some method of eliciting thoughts and opinions from the research participants. It was logical and appropriate to do this in person. Semi-structured interviews were used because they are flexible and allowed me to explore relevant themes by asking additional questions depending on the interviewee's response. This enabled each participant to privately, and confidentially, explain their thoughts about the company, the culture, and more relevantly the performance review process. This was done to build an initial picture of the situation and to provide insight to help build a better performance review process.

These interviews were conducted with key managers and directors drawn from the Flight Operations department of both airlines. The objective of the interviews was to comprehend how these managers viewed the concept of performance measurement and to gain an understanding of the prevailing culture, support network and in essence the different realities they perceived of the environment they were working in.

3.5.1.1 Transcripts

Each of the interviews was transcribed by myself. I felt it would be important for me to remain close to the data, rather than have it completed by a third party. The act of transcribing the interviews also gave me close connection to the data and enabled me to fully understand their context, which was invaluable when making sense of them and drawing conclusions.

3.5.2 Repertory Grids

Following the use of interviews during the first cycle, I wanted to take this a step further for the second and third cycles and so I began to search for a method that would not only elicit useful insight, but at the same time provide some additional structure to the data generation process.

I began to explore the possibility of using repertory grids. My initial foray into the realm of repertory grids led me to the works of Devi Jankowicz (Jankowicz 2004) and Fay Fransella (Fransella et al. 2004). Both of whom have been supporting this technique for many years. The repertory grid technique itself, known as a role construct repertory test, was originally conceived and developed by psychologist George Kelly (1905-1967) in the United States during 1950's and was used as a diagnostic and research tool to build a picture of a client's view of reality in a clinical psychology setting (Kelly 1955).

He developed a philosophy known as Constructive Alternativism, which postulates that there is only one true reality, but that it is experienced from one or another perspective by each and every one of us who have alternative constructions of that reality. Everyone has their own perspective on reality and a construction of what reality means to them, "a person's processes are psychologically channelized by the ways in which he anticipates events" (Kelly 1955, p.46). This is a complex quote but it succinctly states that our understanding and sense making of reality are informed from past experiences that are then used to interpret future events. Kelly matured his theory and wrote his seminal work *The Psychology of Personal Constructs* (Kelly 1955). The fundamentals of his philosophy, and in particular the repertory grid technique, have been developed over the years and have become much more widespread in use. It was this peripheral, yet enticing, aspect of repertory grids that initially caught my attention. The technique itself is relatively straightforward, but takes quite some time to learn, and adds a different dimension to an interview that provides for structure and focus. I decided to adopt this approach as a means of identifying the behaviours resulting from the PMR system implementations and to compare how the respondents viewed their colleagues.

The main components of a repertory grid are:

Topic – what the interview is about

Elements – these are examples that illustrate the topic. In this case, they were the managers and directors involved in the PMR systems

Constructs – this is the most important component and is where the elements are compared with one another to produce statements (constructs) of what the interviewee thinks about the topic

Ratings – the interviewee rates each element on each construct against a rating scale, in this case 1-5

A construct is a bipolar statement of how someone interprets their experiences, and is expressed by saying what something is, and is not. For example, by saying that someone is happy as opposed to sad is to *construe*, or make sense of, how we interpret someone's mood. A construct always has an opposite meaning. "It is this bipolarity of a **construct** that distinguishes it totally from a **concept**" (Fransella et al. 2004, p.16).

When trying to understand another person it is important to do so in their own terms "which means finding out what their personal constructs are [or] we run the risk of simply laying our own thinking on to them" (Jankowicz 2004, p.11)

I used repertory grids to examine the relationships between a diverse group of managers who worked together in a department that was responsible for airline operations performance. This performance is measured in the way the airline is able to meet the promises it makes to its customers, the passengers, which is implicit in the schedule that it publishes. This operating schedule in simple terms states that flight 1 will travel between city A and city B at a certain frequency and at specific times. The customer has an expectation that he/she will be transported exactly as detailed in the schedule. Indeed it is implied that the customer must arrive at the departure airport within a specific time in order to be transported, therefore the expectation is that the airline the passenger is paying money to will fulfil its end of the bargain. The managers identified in this study were employed to ensure that this service was provided. While their jobs are multi-faceted they are also responsible for measuring and managing

operating performance. As outlined in chapter four of this thesis a balanced scorecard approach was used to provide the necessary interaction with a set of performance measures.

3.5.2.1 The Repertory Grid Interview Technique

The interviews followed a standard elicitation approach of presenting a triad of elements and a qualifying phrase for the interviewee to then shape a construct around. This was accomplished by asking the interviewee what two of the elements had in common as opposed to the third. A blank grid template was produced using an Excel spreadsheet and was based on a design that was depicted in The Easy Guide To Repertory Grids (Jankowicz 2004). The spreadsheet was divided into columns representing the 'Emergent' pole, the list of elements and the 'Implicit' pole. Each row was used to record a different construct and the ratings that the interviewee applied to them (Figures 3-2). The template was printed and used during the interview to write down the responses from the interviewee. Prior to the analysis stage, the written responses were typed into the spreadsheet.

Con#	Emergent	DO	ACP1	ACP2	DT	MD	MCS	MIF	DIF	Implicit
1.1	I don't care attitude - poor work ethic	1	3	4	5	3	5	3	3	Concious - wants the airline to look good - good work ethic
1.2	Less interested but fulfils job requirements, not motivated	1	3	4	5	3	3	3	3	More interested in airline performance - motivated
1.3	Still follows the rules - enforces policy as normal	4	3	3	1	3	1	1	1	More lenient to crewmembers - willing to look the other way
1.4	Still embraces issues and problems as they arise	5	2	2	1	2	1	1	1	It's a Piedmont problem - wants to push problems away
1.5	Management should run airline not union	2	3	3	1	2	1	2	1	Union should have greater influence
1.6	Management mentality - has global picture	3	3	4	1	2	1	2	1	Crewmember mentality - self-centred, individual view, does not have global picture
1.7	Excellent communicator	4	3	2	2	3	2	4	2	Poor communicator
1.8	Will see it out to the end	1	3	4	4	2	5	1	3	Will leave at first good opportunity
1.9	Career - concerned about airline performance because of time invested, loyalty	3	2	2	1	2	4	4	1	Just a job, not that concerned with future of company - less loyal
	Perceive that men should run the airline, see									

Template Eyeball Analysis Content Analysis **Grid1-DIF** Grid2-DT Grid3-MIF Grid4-ACP1 Grid5-DO Grid6-MCS Grid7-MD RG - % Similarities

Figure 3-2 A Completed Repertory Grid

When all of the individual grids were complete they were transferred into Rep IV, a specialist software programme that can graphically depict the grids and allow additional analysis to take place.

Each interviewee was briefed on the purpose of the inquiry. The concept of personal constructs was discussed with them and a high level description of the technique was provided along with how I was going to use the results. The objective that was expressed to the interviewees was to build a picture of the most influential aspects of human interaction that become necessary to effectively engage with a structured and purposeful performance management system. The overall aim was to better understand how involved each individual manager responded to the measurement system, and try to distinguish how they saw themselves in relation to their colleagues who were also charged with accountability for operational performance over the period under study.

The interviewee on each occasion was offered a triad of three elements (managers from within the department) and asked to say why two were similar in some way, yet different from the third, while considering them in the context of the PMR system that all were engaged with. Once a construct had been supplied and noted down under the Emergent pole I attempted to clarify its meaning by using a straight forward method of laddering down to examine the underlying concept at the foundation of the construct offered. Once a degree of clarity was obtained, I asked the interviewee to provide the opposite meaning of the emergent construct. This became the implicit pole. Once the full construct was elicited, the interviewee was asked to rate each of the elements on a scale, which depicted how close to each end of the scale the interviewee thought they belonged. The rating scale used was a simple 1 to 5 with 1 representing the emergent pole and 5 representing the implicit pole, or the polar opposite of the theme suggested in the emergent pole during elicitation. After the initial rating of the construct, a verification was made to ensure that each pole had been rated correctly by selecting two or more of the elements that shared similar ratings and asking the interviewee if the elements selected were indeed considered to be similar in context and rated at the appropriate end of the rating scale.

This process continued until the interviewee had exhausted all useful constructs, with each time a different triad offered for the interviewee to select two that shared something in common. Upon completion of the elicitation process the interviewee was asked if they had gained anything meaningful through the process and what they thought it meant. Each interview had its own feel and each interviewee took something different away from the experience. All of them seemed to have a more insightful understanding of how their colleagues construed things and what the individual really thought of them, and for some this was enlightening. This is the truly intriguing part of

repertory grids. The technique can be used very effectively to encourage someone to consider a relationship, or aspect of another person, in a specific context and learn something of how they really see that person. By simply showing the interviewee which elements had similar percentage similarity scores it was interesting to note whether they had already made that distinction prior to the repertory grid interview or whether it began to surface during the process. A fascinating discovery.

3.5.3 Observations

As the research progressed I also used personal observations to further inform the feedback given by the research participants. The research journey was a long one with much of it filled with critical reflection and refinement to the performance measurement processes and reviews. By using my personal observations to inform the analysis and conclusions I was able to gain deeper insight to the thoughts and comments of the participants.

3.6 Process for Data Analysis

Several methods of data analysis were used to achieve the intended aims of this research. Each of them is explained below.

3.6.1 Content Analysis of Interview Transcripts

Interview analysis was initially conducted using AnnoTape, a programme that allows direct coding and indexing of audio material in order to build a coherent interpretation of the data and to class responses into themes, categories and patterns that linked current practice to theory. Direct coding of the audio data was initially chosen over the more traditional method of transcription into text as “the direct listening to and structuring of the original oral speech allows an empathic listening to what was said in the interview interaction” (Kvale, 1996 p.174). I found that I was better able to relive in my mind the actual interview situation and recall the demeanour and body language of the interviewee. This was invaluable when it came to deciphering meaning from the interviews and in drawing conclusions.

In order to further validate the results of the audio coding the interviews were then fully transcribed and analysed in NVivo8, a qualitative data analysis software.

3.6.1.1 Coding

The interview transcripts were coded in NVivo8 using a process whereby relevant words and sections of the transcript were coded to themes that made sense to me as I conducted the analysis. These were further refined and narrowed to a set of categories. This art of coding is a process of bringing together passages in the data that seemed to represent or illustrate a particular theme or concept. By so doing, it built a greater understanding of the issues contained within the transcripts and illuminated patterns and generated ideas.

3.6.2 Repertory Grid Analysis Techniques

Several analysis techniques were employed to make sense of the repertory grid data. They comprised descriptive, relationship and multiple grid analysis. Each of these then contained several steps which are followed in a logical sequence. The techniques are listed below and are described in detail in the following section.

A. Descriptive analysis techniques:

Step 1 Process analysis

Step 2 Eyeball analysis

Step 3 Construct characterisation

B. Relationship analysis techniques:

Step 4 Cluster analysis – elements

C. Multiple grid content analysis:

Step 5 Bootstrapping

In Chapter Five, I have included a fully worked illustration of how I used these techniques to make sense of the grid for one of the interviewees. Hopefully, this will

help the reader to follow through with the various steps of the analysis, and it also lays the foundation for the same techniques used in Chapter Six, which was the third cycle of research.

A discussion of each technique now follows.

3.6.2.1 Descriptive Analysis Techniques

During the preliminary analysis of each grid three steps were taken to ensure familiarity with the grid content. They are qualitative in nature and are descriptive of the grid process and elicitation methods enabling the interviewer to get to grips with the content of each grid.

The first step was a “process” analysis, by which I thought back to the interview itself and how it was conducted. I considered the topic and the interviewee’s reaction to it was noted. Similarly, I considered whether the interviewee had any difficulty understanding the requirements of the interview or difficulty in developing constructs and rating the elements. The elements and constructs were then examined. For example, did the interviewee agree with the list of elements? During this round of grid elicitation I supplied the list of elements. Each element was an individual manager within the Flight Operations department who had a direct connection with the performance measurement system. The constructs were similarly examined to assess whether the interviewee might have had difficulty in expressing themselves. During this process I had to ask myself several questions such as: was the qualifying question useful enough to allow the interviewee to begin discussing behavioural reactions? Was it followed, or avoided? Which constructs came easily and which were difficult? What did the constructs say about the topic? Was that significant? Was the rating scale intuitive? Did it make sense to the interviewee? At the end of the process analysis I had formed a clear picture of what the interviewee had said and how they were able to relate to the subject being discussed.

The results of the grid were not complete at this stage and indeed the grid “does not have to have results to be useful. The process by which the information is obtained is informative in itself...when counsellors use the repertory grid for counselling and guidance purposes, they frequently give greater priority to what goes on *during* elicitation, and far less to what’s in the grid when the elicitation process has been completed.” (Jankowicz 2004, p.77).

Step Two was an “eyeball” analysis which involved reading the grid as a whole and gaining a familiarity with what is there and how it is represented. In other words a general examination of the grid to understand what is being said about the topic, the composition of elements and constructs, the ratings used and to begin to form some preliminary conclusions about what the grid represents and to gain a feel for what the interviewee is saying about the topic in question. This step involved a more thorough examination of the grid and the constructs. At the end of this first round of basic analysis I was able to make some conclusions about the grids. These interpretations were somewhat subjective because I was also using my own system of construction to draw these conclusions but they were done so in light of the previous process analysis that had taken place to ensure that they accurately represented what the interviewee was saying.

Step Three was a construct characterisation. This is a process whereby I sought to identify the types of constructs used and their significance. Table 3-1 below depicts the most common types of constructs and their definitions:

Table 3-1 Common Construct Types and Their Definitions.

<u>Type of Construct</u>	<u>Definition</u>
Core	Has a deep and personal significance to the interviewee
Propositional	Offers a simple description of basic and, at first glance, superficial element characteristics, e.g. male - female, right-handed - left-handed
Affective	Expresses a feeling or concern
Behavioural	Describes what the elements do, or the part they play in some process to which they belong
Evaluative	An opinion or an assessment
Attributional	Incorporates perceived reasons for behaviour
Unremarkable	No great implications can be drawn

Source: Jankowicz (2004)

The objective of this was to discover meaning, and identify what mattered to the interviewee. This was accomplished by looking at the proportion of constructs that were considered to be 'core' and thereby of personal importance and significance to the interviewee, versus those that were peripheral or of lesser importance. This helped to broaden the picture of how the interviewee had approached the topic and what was intrinsically important to them.

3.6.2.2 Relationship Analysis Techniques

The primary methods of relationship analyses involved examining the relationships between the constructs and the elements within a single grid using cluster analysis. This led to Step Four, which was an examination of the relationships between the various elements. RepGrid IV presents these in a pictorial format known as a dendrogram (see Figure 3-3 below).

A dendrogram (from the Greek *dendron* "tree" and *gramma* "drawing") is a tree structure diagram that is used to show how, or whether, the elements within a repertory grid cluster into groups. In the context of this research, the elements were the flight operations managers and directors who were interviewed using the repertory grid method. It does this by graphically showing the percentage similarities between the different elements. These percentage similarities were in turn derived from the ratings given by the interviewees during the construct elicitation interview by mathematically determining the difference between the aggregated ratings for each element across all constructs within a particular grid. The percentages show how each element is related to one another. If the percentage similarity is high, say greater than 80%, then the elements are considered to be closely related. Consequently, if the percentage similarity is low, say less than 50%, then, the elements are more opposed to one another and will represent a significant difference in how they are rated on each construct. In this research the dendrogram shows whether there are similarities or dissimilarities in relative attitudes and behaviours and can be used to draw conclusions about which elements are more, or less, aligned with the others.

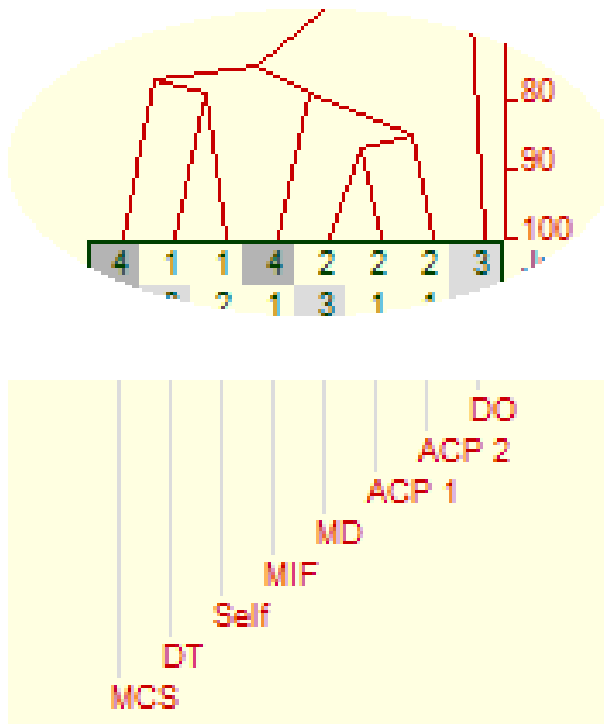


Figure 3-3 Example of Dendrogram Depicting Cluster Analysis of Elements

In the example in Figure 3-3 there is a distinct cluster of elements made up of MD, ACP1 and ACP2, who form a cluster whose lowest similarity score is 85%. This suggests that they are closely aligned on the set of constructs within this particular grid.

Conducting similar examinations of all grids paints a picture of how the group views themselves, and each other. This can lead to very interesting insight, not only for the researcher but also for the interviewee when they begin to see the relationships between elements.

3.6.2.3 Multiple Grid Content Analysis

Step Five was a content analysis, which was accomplished by using a technique called Bootstrapping. Bootstrapping is a method by which you can analyse a series of repertory grids to find combined results. Ordinarily a repertory grid is a single process conducted with one person, but in the case where multiple people have been interviewed about the same topic it is valuable to further analyse the grids together. In this case, it was particularly important because the aim of the research was to understand how the managers and directors collectively behaved towards the performance review process.

The process was carried out in an iterative series of categorising the constructs. For this I produced an index card for each of the 88 constructs that had been elicited during the interviews in the second cycle, and 74 in the third cycle. Each card contained a construct showing both of its poles and an index number so that I knew from which grid it came and which construct it was. I then viewed each card in turn and placed them into categories. The categories were determined on the fly by using terms, or themes, that the constructs themselves invoked. If a card did not fit into an already determined category then it was placed into a new category. This process took some time and was organic in that it required reviewing and re-reviewing the previously decided categories to ensure that each construct was placed properly.

Once this process was complete, I compiled the results into a table, which showed the categories into which each construct was placed. Table 3-2 below displays my first cut at categorising the constructs during cycle three.

Table 3-2 Example of Multiple Grid Construct Categorisation

Category	Definition	Constructs																		Sum	%
Conscientiousness	Demonstrates commitment to company and works to improve performance versus ready to move on, or not willing to help and does not care about performance	1.4	1.8	2.8	3.3	3.7	3.8	3.12	4.5	4.13	5.6	5.12	6.7	6.13	6.14	7.2	7.6	6.3	17	19.32%	
Accountability for performance	Holds people accountable, or is held accountable themselves versus not holding people accountable or accepting accountability	2.9	3.13	4.3	4.14	5.13	6.8	7.1	7.8										8	9.09%	
Motivation	Concerned about making improvements and determined to get work accomplished versus makes excuses, lacking drive and independent thought	1.2	3.2	3.6	6.4	6.6	6.11	7.4											7	7.95%	
Creativity and flexibility	Tendency to be creative and flexible to adapt versus being rigid, obstructionist and inflexible	1.11	2.3	6.9	3.9	6.5	4.2												6	6.82%	
Big picture versus individual view	Demonstrates larger picture perspective versus analytical perspective	1.6	2.4	2.6	6.2	7.3													5	5.68%	
Compassion and relation to employees	Empathetic and understanding towards employees versus isolated from workforce and more involved with numbers	4.10	7.7	5.2	6.10	5.7													5	5.68%	
Action orientated and using authority	Takes action and implements change versus not using authority to make changes	2.1	2.2	5.9	5.10	5.11													5	5.68%	
Miscellaneous	Constructs that do not naturally fall within the specified categories and for which a separate category is not appropriate because it would be a category of one	1.10	5.8	5.5	5.4														4	4.55%	
Communication and sharing information	Being cooperative and realising others may need information versus don't care that information should be shared	1.7	4.11	5.1	3.4														4	4.55%	
Demeanour	Calm and organised versus anxious and aggressive	2.7	4.12	6.1	6.12														4	4.55%	
Alignment and differences between management and crew	"Us vs. Them": management should run the airline versus the union/crews should have greater influence	1.5	7.5	7.10	3.10														4	4.55%	
Operational excellence	Understands and has background knowledge of line crews versus no flight experience and/or divorced from line operations	1.12	2.5	3.5	5.3														4	4.55%	
Concern about future of airline	Career versus just a job: optimistic about post-merger airline versus the future is bleak	1.9	4.6	7.11															3	3.41%	
Conformity	Fits into established system versus bucks the system	4.1	4.4	4.9															3	3.41%	
Work ethic	Good attitude versus poor attitude	1.1	1.3	2.10															3	3.41%	
Responsibility	Accepting responsibility versus passing the blame	3.11	7.9																2	2.27%	
Delegation and territory	Delegates versus remains territorial and keeps work to themselves	4.7	4.8																2	2.27%	
Outlook	Positive versus negative	1.13	3.1																2	2.27%	
Totals																			88	100%	

This was a start at combining the data from all of the grids, which then requires testing for reliability.

3.6.3 Reliability Analysis of Data

In order for the multi-grid content analysis to have reliability another person is enrolled to conduct the exact same categorisation procedure, but this time creating their very own categories and deciding into which the constructs should go. For this, I enrolled the assistance of a colleague who had some familiarity with my research but who did not work within the aviation industry, so that this person could be totally objective and impartial about how they categorised the constructs.

The two resulting spreadsheets are then combined into one table that shows all categories and constructs (Table 3-3).

Table 3-3 Example of Multiple Grid Category Comparison

Collaborator	It's just a paycheck	Creative, or business as usual	Tight control over my own little corner	Responsibility	Miscellaneous	Plays well with others
Interviewer						
Conscientiousness	7.6, 6.3, 1.4, 1.8, 2.8, 3.3, 3.7, 3.8, 3.12, 4.5, 4.13, 5.6, 5.12, 6.7, 6.14, 7.2				6.13	
Creativity and flexibility	6.11	1.11, 2.3, 3.9, 6.5, 4.2				6.9
Delegation and territory			4.7, 4.8			
Accountability for performance				3.9, 3.13, 4.3, 4.14, 5.13, 6.8, 7.1, 7.8		
Miscellaneous		5.5			5.4	1.10, 5.8
Motivation	1.2, 3.2, 6.4	6.6, 7.4		3.6		
Big picture versus individual view			2.6, 6.2			1.6, 2.4, 7.3
Compassion and relation to employees				6.10		4.10, 5.2, 7.7, 5.7
Action orientated and using authority		2.1, 5.10, 5.9		2.2, 5.11		
Communication and sharing information					5.1	1.7, 4.11, 3.4
Demeanour	6.1				2.7	4.12, 6.12
Alignment and differences between		7.10				1.5, 7.5, 3.10
Operational excellence				5.3		1.12, 2.5, 3.5
Concern about future of airline	1.9, 7.11, 4.6					
Conformity		4.1, 4.4		4.9		
Work ethic	1.1, 2.10	1.3				
Responsibility				3.11, 7.9		
Outlook		1.13			3.1	

A reliability calculation can then be applied to see how closely they match. This calculation is made by adding all the constructs that are in the categories that we agreed upon and dividing by the total number of constructs. In this instance for the first pass we only achieved a 36.4% reliability score.

Table 3-4 Example of Reliability Testing

Collaborator	It's just a paycheck	Creative, or business as usual	Tight control over my own little corner	Responsibility	Miscellaneous	Plays well with others	Total	%
Interviewer								
Conscientiousness	16				1		17	19.32%
Creativity and flexibility	1	5				1	7	7.95%
Delegation and territory			2				2	2.27%
Accountability for performance				8			8	9.09%
Miscellaneous		1			1	2	4	4.55%
Motivation	3	2		1			6	6.82%
Concern about future of airline	3						3	3.41%
Conformity		2		1			3	3.41%
Work ethic	2	1					3	3.41%
Responsibility				2			2	2.27%
Outlook		1			1		2	2.27%
Action orientated and using authority		3		2			5	5.68%
Big picture versus individual view			2			3	5	5.68%
Compassion and relation to employees				1		4	5	5.68%
Communication and sharing information					1	3	4	4.55%
Demeanour	1				1	2	4	4.55%
Alignment and differences between management and crew		1				3	4	4.55%
Operational excellence				1		3	4	4.55%
Total	26	16	4	16	5	21	88	100%
Totals							88	100%

Index A 36.4%
 (number of constructs along the diagonal for the categories agreed upon, as a percentage of all of the constructs *in the table*)

16+5+2+8+1 = 32
 88 constructs in total:
 100 x 32/88 = 36.4%

In order to improve upon this, both myself and the other analyst reviewed each construct that we did not agree upon and negotiated its meaning and therefore into which combined category that it should fall. This process continued until all of the constructs were exhausted. Another summary spreadsheet was produced and a further reliability check was made. This is repeated until we achieved an acceptable reliability score. For the analysis to be considered “reliable” it is common practice for the reliability score to be greater than 90% (Jankowicz 2004). When the reliability process is complete there is a mutually agreed upon set of categories that represents the collective constructs of all of the interviewees.

This completes the review of the research design and analysis methods. The final section encapsulates the research design into a diagram.

3.7 Diagram of the Research Process

The diagram below (Figure 3-4) summarises and illustrates the iterative loops depicting the four cycles of the overall research lifespan. Each intervention is labelled to show at what point a further round of action was taken.

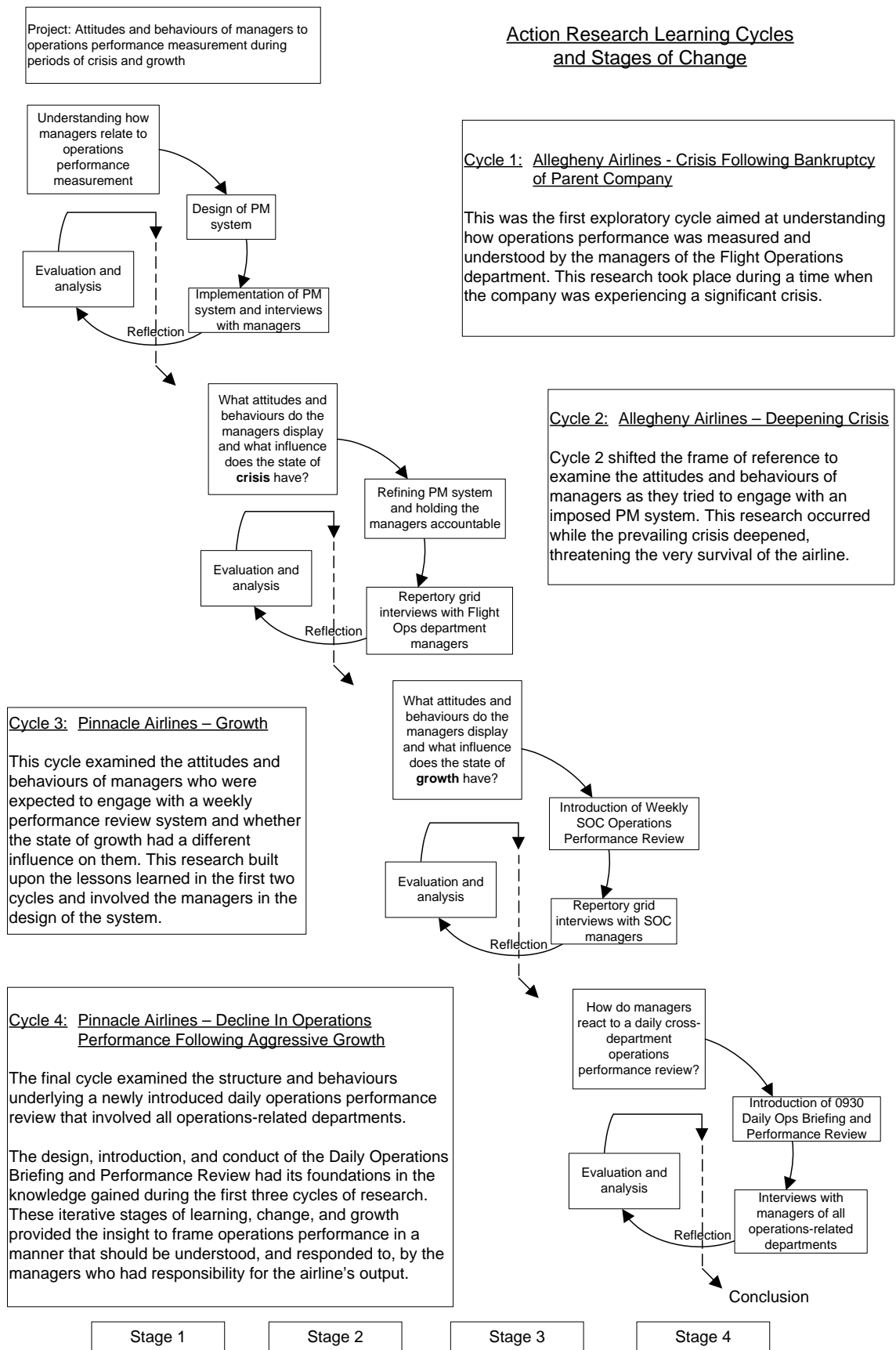


Figure 3-4 Research Process and Design Diagram

3.8 Summary

In this chapter I have outlined and justified the selection of Action Research as an appropriate methodology for this project because of its participant and collaborative nature and that knowledge builds upon itself in an iterative process. This has important applicability to practitioner research. I have also described the use of the research methods employed including semi-structured interviews and the repertory grid technique, along with how the data was coded and analysed. Additionally, concerns with ethics and bias have been discussed.

The next four chapters are devoted to the four cycles of research and are contained as separate entities, including their respective data analysis and findings, because each one had to conclude before the next could begin.

4. CYCLE 1: CRISIS AT ALLEGHENY AIRLINES

The objective of this chapter is to provide a detailed review of the first cycle of research. It follows in a specific order the prescribed Action Research approach of defining a problem, planning action, taking action and then subsequently reflecting upon the action taken.

It further describes the context of the research and provides an in depth analysis of the interview data, concluding with a summary of the findings and my personal reflections on the research process and the results produced.

4.1 Introduction

This study began in early 2003 as an attempt to bring some meaning and understanding to the measurement of operations performance at Allegheny Airlines, a wholly owned subsidiary of US Airways Inc., which itself, was a major airline in North America. The motivation for the study stemmed from a very real need to increase operational performance in the face of a major crisis that had taken hold at US Airways, which was also threatening the very survival of Allegheny Airlines.

The study had particular relevance at the time because our parent company (US Airways) had recently emerged from Chapter 11 Bankruptcy Protection after making large-scale redundancies and securing pay concessions from organised labour groups. It now needed to continue improving efficiency and reducing costs in order to remain solvent. On emerging from bankruptcy, US Airways made it abundantly clear to Allegheny that our survival depended on excellent operational performance, which in turn thrust us into turmoil because our performance had not previously been on par with their expectations.

During this period of time, the management from the operations side of our airline was required to become involved in a weekly operations performance conference call, hosted by US Airways, which sought to compare the relative performance of the 11 airlines that comprised the US Airways Express Division.

My initial exposure to this meeting immediately convinced me that we simply had to know more about the internal and external processes of how our airline operated and be fully prepared to discuss these at the weekly operations performance conference call. During these conference calls, we were frequently caught off-guard by probing questions that left us with little, or nothing, to say by way of explanation for our poor performance. This experience was eye-opening and more than a little humbling.

I quickly began to appraise how I could introduce a more informative, insightful and effective performance measurement and review process within the Flight Operations department that would allow us to have sufficient information and knowledge to speak more precisely, and certainly more intelligently, in front of US Airways and the other Express Division carriers. I then set about gathering the data that would hopefully lead to a better understanding of how my colleagues viewed and understood operations performance.

This initial action enquiry cycle explored the events, responses and attitudes surrounding the design, implementation and consequent use of this operations performance review system, and painted a picture of how the concept of performance measurement was actually understood, and practised by the managers and directors in the Flight Operations department.

During this cycle of research, the introduction of performance measurement and review systems was restricted to the Flight Operations department because it had direct control over the flight schedule, crew assignments, crew costs, flight planning, flight control and recovery from irregular operations. Additionally, it was the department that I was employed in and allowed me access to the managers and directors that ran the operation. The project was not conducted or supported as a corporate-wide endeavour.












In order to frame the research properly it is necessary to have detailed insight into the background at Allegheny. The following section therefore describes the research situation and in so doing diagnoses the problem.

4.2 The Research Situation

Allegheny Airlines was a regional airline operating in the eastern half of the United States, and was one of three wholly owned subsidiaries of US Airways, the other two

subsidiaries being Piedmont Airlines and PSA. These three wholly owned carriers plus eight other regional airlines comprised US Airways Express Division, which was an arm of the business dedicated to providing regional passenger feed to the major hub airports served by US Airways (see table 4-1 below).

Table 4-1 US Airways Express Division Carriers

-  Air Midwest
-  Allegheny Airlines *
-  Chautauqua Airlines
-  Colgan Airlines
-  Mesa Airlines
-  Midway Airlines
-  Piedmont Airlines *
-  PSA Airline *
-  Shuttle America
-  TranStates Airlines - Jet
-  TranStates Airlines – Turboprop

* wholly owned subsidiary of US Airways

In 2003, US Airways and its wholly-owned subsidiaries were operating under bankruptcy protection after experiencing difficult economic conditions following the terrorist attacks in New York on September 11th 2001. In 2002, the US Airways Group Inc. reported a net loss of \$1.65 billion on operating revenues of \$6.98 billion. Similar poor results were also being experienced at other major airlines and this underlined the serious financial difficulties that the industry in North America was facing. However, this was not the case for many of the 'low cost' airlines that had forged a niche for themselves. A comparison from both sides of the Atlantic showed that in the USA JetBlue, Airtran and Southwest Airlines were all making money, while in Europe EasyJet and Ryanair were producing better results than their competitors. They had managed to maintain profitability and continued to grow in spite of the huge losses incurred by the major airlines. This was due in very large part to the fact that over the years they had managed to keep their operating costs much lower and hence their

revenues per passenger were higher (Anonymous 2002). This focus on an airline's cost base eventually began a period of consolidation within the industry and a move towards deploying additional regional jets as a more economic venture.

US Airways successfully emerged from bankruptcy in March 2003 as a smaller and leaner company but with the very real need to continue reducing costs, and as time moved on US Airways began to make some headway and realise the benefits of its painful restructuring. For the first quarter of 2003 a pre-tax loss of \$282 million was reported, compared to \$435 million for the first quarter of 2002, and for the second quarter of 2003 a pre-tax loss of \$154 million, compared to \$250 million in the second quarter of the previous year. This suggested that progress was being made.

4.2.1 Small Jets and Forced Competition

At the outset of the post-bankruptcy restructuring, Allegheny and the other two wholly-owned carriers had a fleet of aging turboprop aircraft that was already planned to decrease in size as the leases on their aircraft expired. US Airways had made it very clear on many occasions that the future of regional service throughout its system would be with these smaller jets and that the turboprops would be phased out entirely over the following few years. So, Allegheny was operating under the assumption that it would soon be in a position to begin replacing its fleet of 37-seat Dehavilland DHC-8 twin turboprop aircraft with new 50-seat regional jets (RJ's). These regional jets had already been deployed very successfully by other major airlines throughout the world but US Airways was lagging behind its competitors with only four of its affiliated carriers flying these small jets. In fact, JetBlue and Southwest had both publicly announced their intentions to deploy small jets within the next couple of years. This would be a further blow to US Airways, posing a serious threat to its market share.

In order to be considered as an attractive company to invest in, the senior executives of US Airways directed that the wholly owned carriers all needed to provide an economical and efficient cost structure from which to operate these new aircraft. It was also implied that the company who was first to present, and implement, an acceptable plan would *likely* be the first subsidiary to receive the new aircraft. There was now a huge incentive to be that first carrier, which immediately threw these three wholly-owned carriers into serious competition with one another.

Part of the overall restructuring required each subsidiary to negotiate pay concessions from its labour unions and impose pay cuts on all other non-union personnel, including all levels of management. However, at Allegheny, this message to provide a competitive economic structure, was not communicated to the workforce very well, and although the message itself seemed simple and straightforward, it was not embraced or truly appreciated by the labour unions who believed that management was conspiring to force them into taking pay cuts and concessions with no corresponding promise of any future growth. For the pilots, this was further complicated by the need to negotiate terms whereby US Airways pilots who had been furloughed during the bankruptcy would fill 50% of the pilot seats for any new jets awarded to a subsidiary. This now meant that some jobs at each carrier would be surrendered to US Airways pilots, with their pilots taking jobs from ours. This programme, infamously known as: 'Jets for Jobs', was a very bitter pill for our pilots to swallow, and it was many months before a concessionary agreement was finally reached.

After much wrangling at each carrier, PSA presented an acceptable plan to the senior management of US Airways before either Allegheny or Piedmont. When the announcement was eventually forthcoming not surprisingly the new aircraft fell to PSA – all 60 of them!

In a press release dated 12th May 2003 David Siegel, President and CEO of US Airways stated that

“these new regional jets will enable US Airways to generate additional revenue by growing our route network and competing more vigorously in short-to-medium-length haul markets...(and) also will enable us to increase hub feed by adding new markets that were too distant for turboprop aircraft, and replace current turboprop flying”.

This news, which was only communicated to our employees by way of the very same press release, came as a major disappointment to us. Although Allegheny was not the first to present an acceptable deal, we were actually the first carrier to implement the cost saving measures and we felt that we would, at the very least, be able to share in the distribution of the new jets. That was unfortunately not the case.

During his quarterly visit to our company on 14th July 2003 the President of US Airways Express Division, Bruce Ashby, explained to management and selected members of

the pilot and flight attendant unions, the rationale behind the decision and further broke the bad news that we would not be considered for RJ's until the next round of introductions, which would be several years away. He further went on to say that "now is a good time to revise your resumes (CV's)". This was a rather callous comment that invoked much worry amongst the staff.

Considering that our fleet was expected to shrink to as little as 18 aircraft, from the original 45, by the end of 2004, the future began to look decidedly grim and there was rampant speculation of further redundancies as the airline contracted. This had naturally taken a great toll on the people working at Allegheny, which was made all the worse by the fact that there were simply no opportunities to seek alternative employment at other carriers because of the very depressed state of the industry, which still had not recovered to pre-September 11th levels. Further threats of terrorism and poor weather cost the airlines, including US Airways, tens of millions of dollars. This was lost revenue that became harder and harder, and eventually impossible, to retrieve.

4.2.2 Performance Measurement at Allegheny

As discussed in the literature review, performance measurement in business today is recognised as an essential tool that shapes how a company's strategy is put into action (Kaplan and Norton 1996a; Simons 2000). The measurement of performance is the key to determining areas of strength and weakness and providing insight on how to gain competitive advantage. The airline industry is no exception. Operating performance of all airlines is measured externally and publicly by the US Department of Transportation in its monthly Air Transport Report and details amongst other things each airlines on-time performance and ability to complete its published schedule. However, it can only show the end-results of each airline's efforts during a given month. In order to understand the true determinants of operational performance it is necessary to examine processes embedded deep within the organisation that are in many cases far removed from the final service offered to the customer. All of these processes are generally measured in one form or another by every airline.

At the time that I began my research the only performance measurement reviews that took place were the weekly conference call between the US Airways Express carriers to compare each carrier's relative performance, and an internal operations meeting each work day to review how the previous day had gone. There was nothing in-depth

at Allegheny that drilled down to the determinants of performance, or that tracked data over time to enable trends to be discerned.

In theory, if there are no external forces at play, the flight schedule operates as published. In reality however, there are never any days when this occurs and multiple internal and external forces negatively affect the end result. It is therefore important to identify what these factors are and how to minimise them. This responsibility falls on the Operations Control Centre (OCC), which is a centralised function charged with ensuring that the published flight schedule is operated to its optimum. This involves delaying or cancelling flights, and swapping aircraft and crewmembers to reduce delays.

The personnel working in the Operations Control Centre attempt to identify and minimise all of these impacts to ensure schedule integrity. Additionally, they are tasked with coordinating the provisioning of the product to the customer in terms of uninterrupted flights and efficient service.

While the processes were in place to create an optimum operation there was no real insight to the causes of performance deficiencies.

4.2.3 My Position

The previous section has hopefully provided the reader with insight to the predicament that Allegheny was in and why there was a need to intervene in the measurement and review of operations performance.

My role when embarking on this research project was that of Director of System Control. This provided me with the management oversight of our daily flight schedule and several operations management functions: Flight Dispatch, Crew Scheduling, Crew Planning, Crew Pay, Crew Accommodations and Crew Meal Catering. During my career in aviation, I had built an in-depth knowledge of and experience with many aspects of airline flight operations, through the management of flight operations at two distinctly different air carriers. In particular, I was well acquainted with the internal processes and the logistics involved in ensuring that a flight schedule is operated to the published timetable.

Having now decided that I needed to take a very active role in improving how we measured and reviewed operations performance it was important to build a framework around this in order to conduct it as a formal research project. The first step was to identify the purpose and objectives of the initial research cycle.

4.3 Purpose and Objectives of the First Cycle of Research

The methodology of Action Research prescribes that research should be conducted in a logical sequence that requires determining the problem, planning action, taking action, evaluating results, and then reflecting upon the action taken. This first research cycle, and each subsequent cycle, has therefore followed this approach and is represented in summary format below:

<u>AR Procedural Steps</u>	<u>Action for Cycle One</u>
1. Determine the problem:	Managers and directors need to better understand operations performance in order to help Allegheny survive as a viable entity
2. Plan action:	Set objectives. Design PMR system
3. Take action:	Introduction of the PMR system and interviews with Flight Operations department managers and directors
4. Evaluate and analyse:	Making sense of the findings
5. Reflect on action taken:	Personal reflection on the how the first cycle took place

Additionally, this process is depicted visually below, which is an excerpt from the overall depiction of the entire AR research plan contained in Chapter Three.

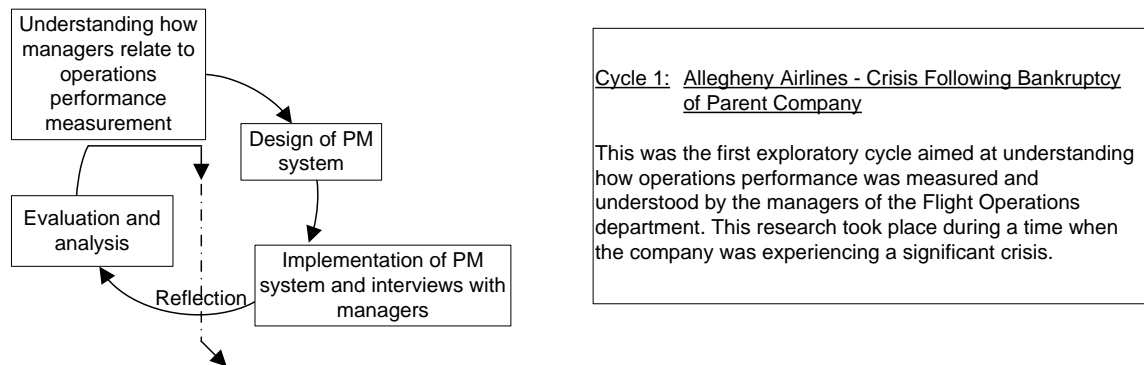


Figure 4-1 Diagram of 1st Cycle Events

From the foregoing discussion, it is apparent that the most pressing problem can be defined as the need to better understand operations performance and thereby improve our ability to influence results. Because of the situation that our company found itself in, there was a need to, fundamentally, readdress the way we measured and reviewed operations performance internally. At the heart of this needed to be a new mechanism for presenting and reviewing performance data, along with clear communication of the company's goals and the strategies to be employed to achieve them. Flying passengers from A to B at the lowest cost seemed to be the prevailing objective and, in the cut-throat market of intense price competition on heavily travelled routes, this left as the only obvious means for differentiation the ability to fly passengers on-time every time. Hence, operations performance became a top priority for everyone.

4.3.1 Objectives

To achieve the aim of understanding how performance measurement was being practised and understood the following objectives were developed to provide structure and direction for the first cycle:

1. Design and introduce a performance measurement and review (PMR) system
2. Understand how my colleagues viewed and understood the measurement of operations performance
3. Evaluate how they engaged with the new PMR process

4. Evaluate the prevailing culture at Allegheny

5. Develop ideas for further work and improvement based on the research outcomes

When embarking upon this project it was my personal goal to try to promote an awareness of how everyone's individual role influenced the final product, and also to gain a thorough understanding of the true determinants of a successful operation.

The research study ran in parallel to the implementation of the PMR system and sought to explore how my colleagues reacted to this change effort. I was concerned that enforcing change in a culture that is mature and likely to resist efforts to change would be a difficult accomplishment. An excerpt from my research journal at the time provides some insight to my own thought process when entering into the first cycle. It was not without some trepidation:

"I hope that my role as a director will enable me to facilitate a change in how we manage performance, certainly within our Flight Operations department. We must do this to survive and be better than PSA and Piedmont. I am presently more than a little worried and anxious about whether my colleagues will be willing to embrace these changes. It also remains to be seen whether Michael and Keith (my superiors) share my view of what needs to be accomplished at Allegheny..."

Would refocusing priorities and responsibilities instil a drive towards a philosophy of efficiency and effectiveness, or would it meet with resistance and fail to fulfil its objectives? This first step along the path was to design a PMR system that could be used as a mechanism to frame operations performance and provide a vehicle from which to make sense of the results.

4.4 Design of the PMR System (Planning Action)

When I decided that we needed a mechanism to measure and review operations performance it was my initial intention to first interview the managers who are responsible for daily flight operations to gain an understanding of how they would like this to be developed and to seek assistance in designing relevant performance measures. However, the pace of change at Allegheny and the pressing need to

address performance and reduce costs raced ahead of the planned research. This resulted in the performance measurement and review programme being devised and implemented prior to the interviews taking place. However, an interesting opportunity was presented to now observe how these managers would react and adapt to a system that imposed measures and a level of accountability on them.

The design of the measurement system was hastily put together as a means by which to gauge Allegheny's performance on a regular basis, and to begin formulation of plans for corrective action. I selected certain recognisable outcome measures that depicted our daily performance and which also helped build a picture of the results of these daily efforts. These measures are standard airline operating metrics and while they were used at our airline, there was insufficient emphasis placed upon them and only elementary discussions when performance fell short of the prescribed goals.

The aim of the PMR system was to measure the internal processes, from the inception of the flight schedule months before to its execution on the day of operation, and identify areas for improvement and potential cost cutting. Therefore, my driving focus was to understand how to optimise output by identifying cause and effect linkages and applying this knowledge at each point in the production process. This process was expected to produce an increase in efficiency, an overall reduction in costs, and a greater ability to effectively manage operations. However, evidence from past practice within the US airline industry (Rhoades et al. 1998) shows that cost cutting alone typically results in a decrease in service quality. Service quality is the key outcome of the production process and so it was important to ensure that the metrics we devised, as part of the review process, drew attention to deficiencies in the system

The system was modelled loosely around the balanced scorecard format as proposed by Kaplan and Norton (Kaplan and Norton 1992). The literature regarding balanced scorecards concentrates primarily on its application as a tool to manage the organisation as a whole but this type of application was beyond the scope and authority of this research project and hence it was modified for use in just one departmental. The structure of our business was such that the daily operation of the airline was in the control of the Operations Control Centre personnel, our pilots, flight attendants, and station agents. With the exception of station agents these groups all fell within the control of the Flight Operations Department and it is the actions of its members that were examined under this study. Therefore, the introduction of the performance measurement and review system was restricted to the Flight Operations department,

which had direct control over crew costs, the flight schedule, crew assignments, flight planning, flight control and recovery from irregular operations.

The initial lofty premise for the PMR system was to assist in Allegheny's future survival and the need to be competitive with our sister companies. Allegheny needed to seek all opportunities to reduce costs and increase its operating performance. Therefore, the introduction of a balanced scorecard, and the identification of performance drivers, was intended to address two specific areas:

1. An increase in operational effectiveness defined as the quantifiable output of the airline; e.g. our ability to complete the schedule as published (completion factor and on-time performance).
2. A reduction in flight crew labour costs by eliminating, as far as possible, the unproductive time that is built into a crewmember's schedule, or what is termed as 'soft time'. This comprised time that a crewmember was either deadheading, flying less hours than the monthly pay guarantee, spending time in company provided rest facilities, overtime, and rescheduling premium which is used as an enticement to cover segments that remain unmanned due to irregularities e.g. sick calls. Flight crew costs are only one component of total operating cost but represent the highest labour cost group for most airlines (Doganis, 2002).

At the heart of this system would be a weekly performance review meeting to allow us to assess recent performance and discuss ways to correct the deficiencies. I gathered the performance data daily by using a multitude of reports from our operations systems that I combined into tables and graphs for presentation at the meeting. The data was initially in a raw format and took time to collate.

The research does not intend to dwell on the mechanics of this data collection or to focus particularly on the back office work of how the system worked but rather to focus on the management teams' behavioural reactions to it.

By introducing a performance management system that brought accountability and responsibility to the review process, it was hoped that true and lasting change would ensue. The supposition was that by heightening awareness and creating ownership of performance measures, significant gain could be achieved in streamlining the internal processes that are key contributing factors to the execution of the airlines published

schedule. Additionally, by deconstructing current practices it was expected that key cost drivers would be identified, measured, and deliberately manipulated so that there would be less unproductive time unnecessarily built into a crewmember's work schedule.

4.4.1 Department Structure

The Flight Department is one of five departments that comprised the hierarchy of the company along with Human Resources, Safety, Customer Service, Maintenance and Finance (Figure 4-2).

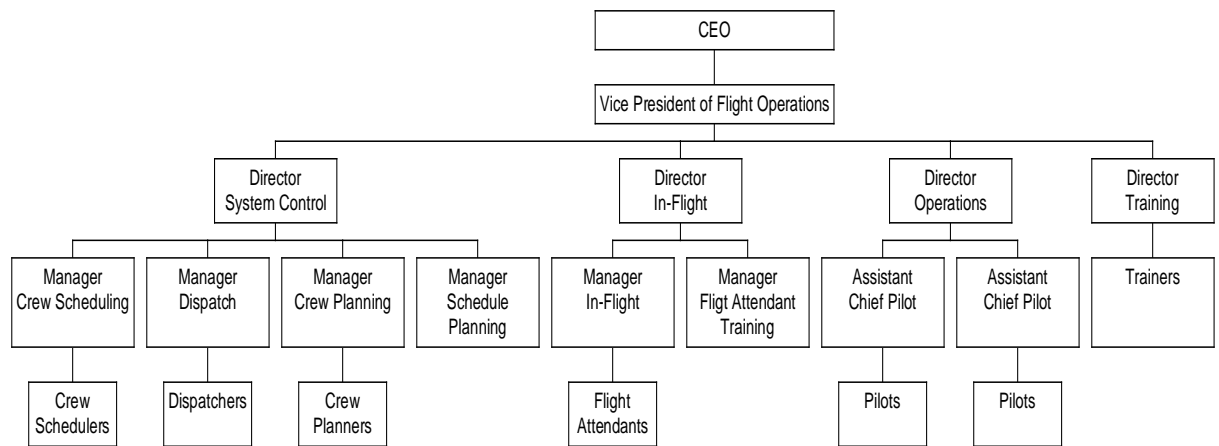


Figure 4-2 Organisation Structure of Flight Department at Allegheny

My role was that of the Director of System Control, which involved managing the departments having responsibility for the daily flight schedule. All of the directors in the Flight Department worked very closely together because of the inter-related nature and complexities of running an airline. My area of responsibility and its role in the service production chain is depicted in Figure 4-3 below.

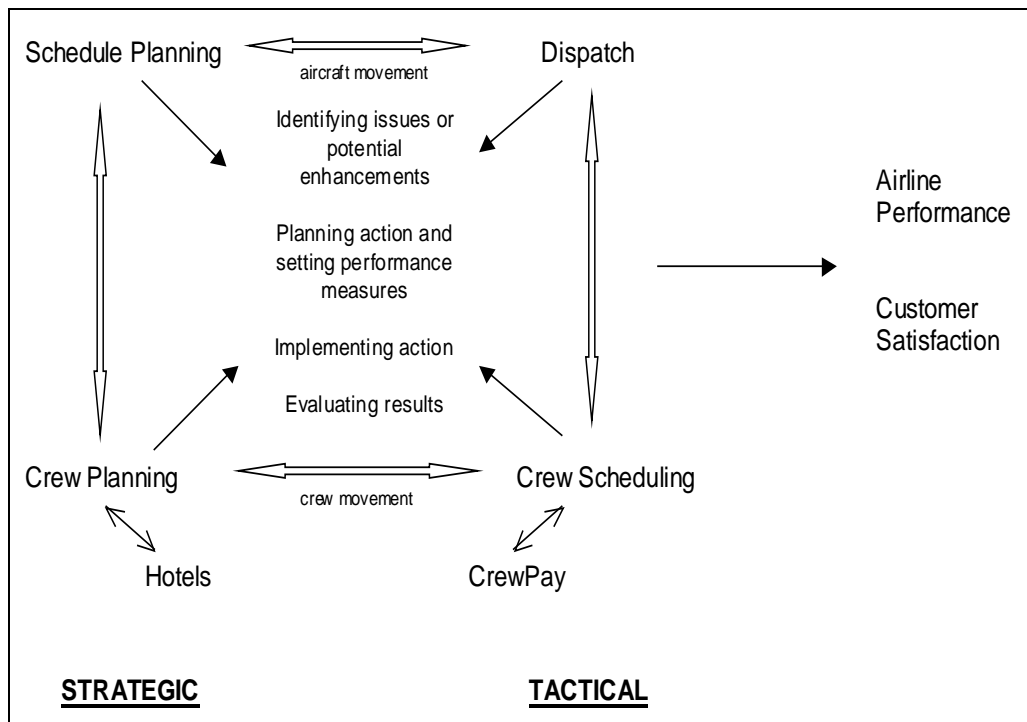


Figure 4-3 Model of Department Relationships at Allegheny

This diagram outlines the inter-related nature of the many different facets of the operation that the PMR system would need to encompass and measure. It was ultimately intended that measures would be developed to capture data during all phases of this process.

4.4.2 Adopting the Balanced Scorecard

When I was evaluating how to accomplish this, it was apparent that there was not an off-the-shelf method that could be easily applied. After researching various different methods of establishing a performance measurement system, I settled on the balanced scorecard as a framework by which I could design a PMR system in a short period of time and put it to good use. I anticipated that it would provide a balanced presentation of financial (crew cost) and non-financial (operations management) measures that in turn comprised the lagging and leading indicators of performance. By focusing attention on the determinants of results (Fitzgerald *et al.* 1991) I tried to devise realistic measures that would provide insight and knowledge that could hopefully, be used to

formulate ways to improve performance in the future. The intent was to limit the measures used to a short list of critical indicators of current and future performance which would force the managers to focus on only the most important measures (Kaplan and Norton, 1992). This viewpoint essentially provides an avenue for companies to translate their mission statements into a coherent set of performance measures and in turn transcend functional and departmental barriers and help managers to see the whole picture. The scorecard advocates putting strategy and vision, not control, at the centre, and by establishing goals assumes that people will adopt whatever behaviours, and take whatever actions, are necessary to arrive at those goals.

The PMR system that was introduced initially attempted to incorporate three of the four performance dimensions of the balanced scorecard: financial measures, customer service measures and internal process measures. All are specific to the Flight Operations Department and under the direct control of the management of the department. At the initial stage of development the learning and growth category was deferred until the system could be fully reviewed by those interacting with it and appropriate measures identified and targets set. The environment that Allegheny was operating in had been in a constant state of flux for some time, which made the incorporation of this dimension very difficult. Learning and growth measures revolved around developing resources and personnel with the organisation. Morale was a significant factor and had a negative impact on the enthusiasm and commitment of many, if not all, employees in the company.

It was anticipated that the scorecard would let us see whether improvement in one area may have been achieved at the expense of another. Cause and effect relationships between performance drivers and objectives could then be understood and detailed. This can then help to transcend functional barriers and ultimately lead to improved decision making and problem solving. By developing a scorecard of measures it was hoped that we could identify just the measures that are used to determine good performance and do away with those that muddy the waters. But for success we would need commitment, co-operation and acceptance from all involved.

4.4.3 The Measures

At Allegheny there were essentially three primary outcome measures to gauge overall flight operations performance. The first was completion factor, which is a measure of how many flights are completed on the published schedule. The second and third

measures were concerned with on-time performance, which was measured by on-time departures and on-time arrivals, and gauged our ability to fly the timetable as published. These three outcome measures were grouped into the customer satisfaction dimension because the more reliable we were, the more likely the customer was to be satisfied with our ability to get them successfully to their destinations. Alongside these were internal financial measures, but only those that we had direct control over. In particular was the level of expenditure involved in providing hotel and transportation to crewmembers who were forced to deviate from their published schedules. Of greater significance was a factor called 'rescheduling premium', which was a premium pay element that a pilot could earn for accepting deviations to his/her trip that either required him/her to report a day or more early, or terminate beyond their original trip hour period. This could be very costly. Crew meals provided during irregular operations were an additional expense that also warranted careful measurement.

Alongside the standard measures of airline performance, I also tried to balance this with measures that were relevant at our department level. For example we were able to track delays individually that were attributable to pilots and flight attendants or the human failing on the part of crew schedulers. I also included the number of sick calls received, operational decision delays, amount of rescheduling premium paid out, pay adjustments received, crewmember resignations, letters of commendation, and procedural violations.

After making a personal determination of the most important factors, I developed a spreadsheet to track our daily performance over any given week and accumulate the statistics on an ongoing basis for comparison in the future. These were then used to build a PowerPoint slideshow that was the main communication vehicle used for the weekly review. Figure 4.4 below illustrates the spreadsheet and some of the categories that were being tracked. Figures 4.5 and 4.6 show how the measures were displayed as graphs in the weekly presentation.

			Week in Review								
Source	KPI	Goal	04-Jul	05-Jul	06-Jul	07-Jul	08-Jul	09-Jul	10-Jul	WTD	Jul MTD
	Flights Scheduled		214	187	290	347	347	347	348	2080	3126
(CUSTOMER SERVICE - HEADSTART)											
	HS flights scheduled		42	41	44	44	44	44	45	304	439
All	HS delays S:00	93.00%	85.71%	97.56%	93.18%	88.10%	52.38%	95.35%	90.24%	86.08%	87.56%
	Total		6	1	3	5	20	2	4	41	53
	MT		4	0	0	0	0	1	0	5	10
	FC		0	0	1	0	0	1	0	2	6
	OP		0	1	0	0	13	0	0	14	15
	CS		2	0	2	5	1	0	2	12	13
	WX		0	0	0	0	4	0	1	5	6
	AT		0	0	0	0	2	0	1	3	3
	Downline delays		2	1	1	8	13	0	4	29	36
All	HS cancellations	99.0%	100.00%	100.00%	100.00%	95.45%	95.45%	97.73%	91.11%	97.11%	97.75%
	Total		0	0	0	2	2	1	4	9	10
	XM		0	0	0	0	2	0	3	5	6
	XC		0	0	0	1	0	0	0	1	1
	XW		0	0	0	1	0	1	1	3	3
	XA		0	0	0	0	0	0	0	0	0
(CUSTOMER SERVICE OVERALL)											
All	Completion Factor	97.5%	100.0%	100.0%	98.6%	95.7%	95.4%	98.6%	95.1%	97.3%	97.8%
	Total		0	0	3	15	16	5	17	56	68
	XM		0	0	1	1	5	0	11	18	30
	XC		0	0	1	2	0	0	0	3	3
	XW		0	0	1	8	0	3	0	12	12
	XA		0	0	0	4	11	2	6	23	23
	OT Departures S:05	85.0%	90.2%	89.8%	85.4%	67.5%	76.1%	86.5%	76.7%	81.7%	83.8%
	OT Arrivals S:14	85.0%	90.7%	92.5%	83.3%	69.0%	81.0%	89.5%	75.8%	83.1%	85.1%
	Days above goal in OT & Compl.		1	1	0	0	0	1	0	3	5
(CUSTOMER SERVICE - FLIGHT DEPT)											
Deb Pike /	HS crew delays % HS crew delays	1.0%	0.0%	0.0%	2.3%	0.0%	0.0%	2.3%	0.0%	0.6%	1.34%
			0	0	1	0	0	1	0	2	6
Deb Pike /	HS crew cancellations % HS crew cancellations	0.0%	0.00%	0.00%	0.00%	2.27%	0.00%	0.00%	0.00%	0.3%	0.23%
			0	0	0	1	0	0	0	1	1
Pike/Deb	Crew cancellations (XC)	0	0	0	1	2	0	0	0	3	3
Deb / Pike	Crew delays S:00 (FC) (FA)	1.2%	0.47%	0.53%	4.14%	3.17%	2.88%	2.02%	3.45%	2.4%	2.21%
			1	1	7	9	8	7	12	45	62
			0	0	5	2	2	0	0	9	11
Mike	OP delays S:00	0.5%	0.47%	1.60%	1.72%	1.44%	0.29%	0.29%	2.01%	1.1%	1.07%
			1	3	5	5	1	1	7	23	34
David	Sick calls - CA		4	3	2	0	3	0	6	18	25

Figure 4-4 Performance Measurement Spreadsheet

Completion Factor

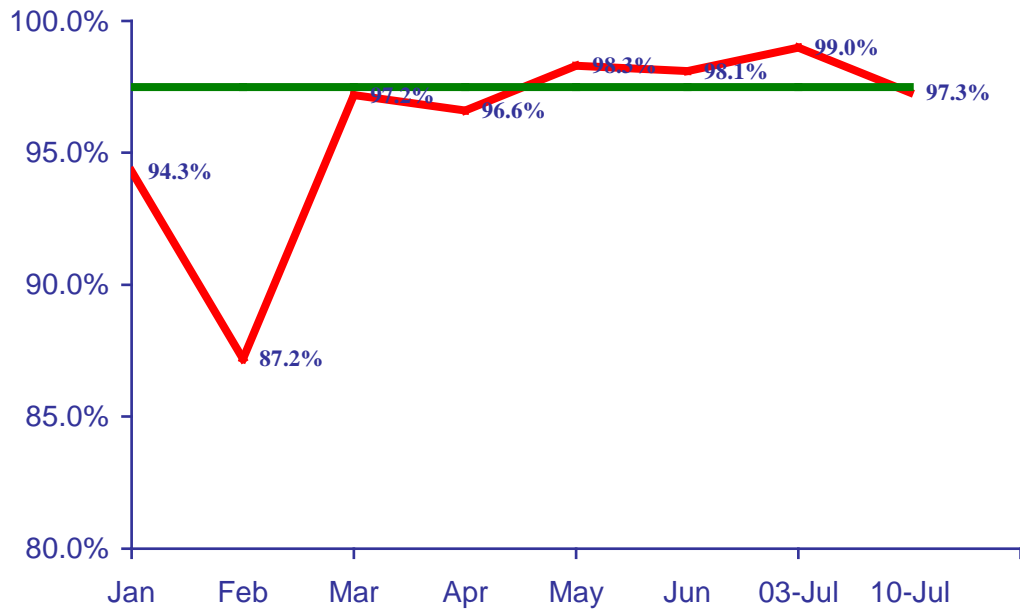


Figure 4-5 Weekly Review Slide: Completion Factor

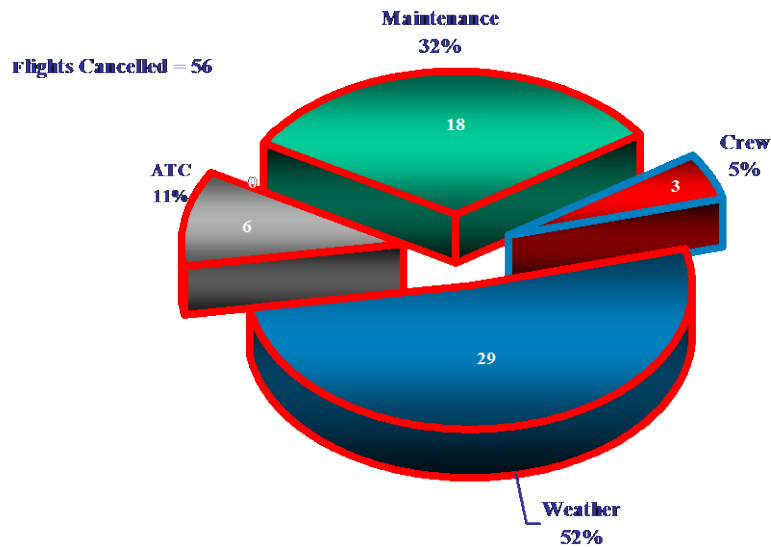


Figure 4-6 Weekly Review Slide: Cancellations

4.5 Implementation of the PMR System (Taking Action)

Due to the pressing need to understand and improve operational performance the PMR system had to be introduced rapidly. I therefore decided to introduce the system and then interview the managers afterwards taking the view that the system could always be changed and improved depending on how they engaged with it.

The performance management (PMR) system was rolled out in May 2003 and presented to the director level at an informational meeting. It was proposed that we would all meet on Monday afternoons to review the performance from the previous week of operations and examine the data to make forecasts for the following week and remainder of the month. It predictably met with a mixed response. Present at the meeting were the directors responsible for our pilots, flight attendants, System Control (myself) and the VP of Flight Operations. The concept was presented as a means to proactively intercede and identify action required to control some dimensions of performance that were recognised as lacking. During this first meeting it was apparent that the other parties were largely unaware of the determinants of acceptable performance and puzzled by what was presented.

This weekly operations performance review meeting was intended to prepare us for the weekly conference call an hour later hosted by US Airways Express division and involving all 11 US Airways Express carriers (see Table 4-1). Our review allowed us the opportunity to assess and discuss our responses to the expected questions. The US Airways call focused on performance results from the previous week with comments and questions directed to, and sometimes solicited from, the carriers that had performed poorly for the week. This was a valuable opportunity to see how we performed in relation to our sister companies and the other affiliated, but independent carriers.

4.5.1 Expanding to Flight Crews

On 24th June 2003 the Flight Department management team held an employee meeting with invited members of the pilot and flight attendant workforce. The aim was to introduce them to the way we now measured and reviewed performance to assess whether it might be worthwhile involving crewmembers also regularly at our weekly reviews, and to solicit input from them on what they believed to be the current problems. Our weekly performance review was presented and explained by myself. This proved to be an interesting and eye-opening exercise because many crewmembers were simply unaware of the level of detail that went into measuring delays and cancellations, down to the names of the crewmembers involved. This also drew some resentment from others who claimed it was no more than a “blame game” from management to the pilots. This adversarial relationship between management and pilots had been in existence for a long time and consequently there was a great deal of mistrust of management. One of the reasons for the lack of communication I noticed within the airline is that when the company does communicate it can meet with criticism and, all too often, a negative spin was put on it by union officials. Our pilot union, ALPA (Airline Pilots Association), was well-established, had a strong membership and could be somewhat militant at times and would take every opportunity to slate the company.

In late July 2003 a modified version of the weekly performance review was made available to all crewmembers via a secure link on our company website. It was prefaced with an introduction to the performance measurement process and a description of the relevant measures. It was specifically stated that the data format could be modified and changed based on any feedback they wanted to give. I included the data showing a direct comparison with other US Airways carriers so that everyone could get a feel of where we fit in.

4.5.2 Interviews with the Managers and Directors in the Flight Department

Following the introduction of the PMR system it was now important to learn how my colleagues had responded to this effort and whether it had changed their approach to operations performance at all. To accomplish this I conducted interviews in July 2003 that were intended to build a picture of how my colleagues understood and engaged with performance management at our airline. The interviews spanned a period of two months and followed a semi-structured format that allowed the interviewee to express their views relating to their encounters with the PMR system and their experience at the airline. I consciously asked the same core questions but allowed the respondents to migrate away from the topic in order to delve deeper into what really constitutes the prevailing culture and deeply held beliefs. The interview questions are contained in Appendix A.

This interview process proved to be a valuable and rewarding experience that highlighted some important issues, and clarified others that had appeared vague to me at the outset, or at least unrelated to performance measurement. There were nine interviews in total. All were recorded, transcribed, indexed and coded, so that summary interpretations could be made. The interviews took place at work, mostly in the offices of those interviewed, with their full consent and with a reassurance of confidentiality. Because the interviewees were all known to me, gaining cooperation was relatively easy. However, it must be acknowledged that some differences of opinion openly existed between myself and some of the interviewees that may have inhibited them from truly opening up and saying what they really believed. Since two of the interviews were with my direct reports, there may have been a reluctance for them to focus on anything that might have been perceived as negative in the presence of their boss. Also, I tried to remain objective in a manner consistent with that of an outsider so that the findings would have more relevance and understanding to the layman. An interview conducted by a true outsider may possibly have been more objective, but is unlikely to have reached to the core of the issue, or known how and where to lead the conversation when exploring particular peculiarities.

The interviewees comprised the directors and managers who had responsibility for flight operations. The table below lists their position, department, and the abbreviations that are used in the analysis that follows. Actual names have been omitted from this table in order to protect anonymity.

Table 4-2 List of Interviewees - Cycle 1

<u>Position</u>	<u>Abbreviation</u>	<u>Department</u>
Asst Chief Pilot 1	ACP 1	Flight Operations
Asst Chief Pilot 2	ACP2	Flight Operations
Director of Operations	DO	Flight Operations
Director of In-Flight	DIF	In-Flight
Director of Training	DT	Training (crew)
Director of Maintenance	DOM	Maintenance
Manager of Crew Scheduling	MCS	OCC
Manager of In-Flight	MIF	OCC

The majority of these people were members of the Flight Department and were directly involved in managing our day-to-day operations. One exception was the Director of Maintenance who headed-up the Maintenance department but who also played a vital role in the daily operation. The Director of Operations, both Assistant Chief Pilots and the Director of Training were also Operations Duty Managers (ODM's) who were on-call on a rotating basis once every four weeks to talk directly to crewmembers about operational or technical matters that affected the successful and on-time completion of a flight. This typically involved clarification of standard operations procedures (SOPs) and the intervention when an irregularity occurred, for example, an in-flight emergency or a non-standard mechanical issue. The same on-call requirement applied to the director and manager of In-flight who intervened directly with flight attendants when an out of the ordinary issue arose.

Scheduling and crew legality issues (regulated amount of time a pilot can spend behind the controls) are handled in a similar manner by the manager of Crew Scheduling and

myself. Therefore, all of us were intricately and continuously involved in the complex operation of the airline and had direct impact upon our ultimate operations performance. The reason I labour this point is to impress upon the reader the complex and interwoven nature of conducting flight operations.

Following this initial round of coding and analysis, the interview data was then transcribed and imported into NVivo as separate cases. Each case was then categorised during an initial round of coding. Subsequent rounds of coding narrowed the initially very broad group to the larger themes that began to emerge as I became more immersed in the data. Once the coding of the data had been completed I was able to begin interpreting the results.

The following section represents the content analysis of the interview data, and discusses the significant themes that emerged from the analysis of the interview transcripts. This provided unique insight into how the managers and directors in the Flight Department understood and interacted with flight operations performance results, and where they saw their role in the whole process. It also painted a good picture of how performance measurement was practised at Allegheny. Not surprisingly, there were some very different opinions on how and why we did things the way we did.

4.6 Understanding Performance Measurement at Allegheny

This section comprises the evaluation and analysis of the interview data. I have approached this from the perspective of ascribing significance to the interviewees' comments, discussing the various topics that emerged and drawing conclusions for each theme. In so doing, I have endeavoured to let the interviewees' words speak for themselves in order to preserve context and meaning, and to add colour to what might perhaps otherwise be a dull discourse.

The interviews were all very interesting and people genuinely opened up to me because I was a trusted colleague, and in some instances a friend. The interview data was immensely rich and provided a wealth of information on how the Flight Operations department worked, how the PMR system was viewed and received, and gave an insight to the attitudes and behaviours of those involved. It was interesting to note how close I became to the data. Very much influencing that was the fact that I continued to work closely with these people throughout the whole time. This enabled me to ascribe

significance to their comments more readily because I was intimately aware of their surroundings and shared many of their experiences.

The following sections capture the central meanings of the discussions that took place during the interviews. They have been separated into the nine significant themes that emerged during the coding of the interview transcripts, and an additional two sections that are specific to the discussions of the PMR system. Table 4-3 below lists these themes:

Table 4-3 Significant Themes - Cycle 1

- Goals
- Guidance and Support
- Accountability
- Teamwork
- Blame
- Resources
- Communication
- Attitudes and Behaviours
- Service Quality and Customer Service

- Reaction to the PMR System
- Desired Outcomes of the PMR System

The evaluation and analysis section begins with an overview of the state of performance measurement at Allegheny as articulated by the interviewees, and then proceeds into a discussion of each of the main themes listed above.

4.6.1 The Described Context of Measuring Performance at Allegheny

Prior to the introduction of the weekly performance measurement and review system, the outcomes of the daily flight operation were measured in detail but were not used to manage the day-to-day operations, or to gauge performance against an operating strategy. Indeed, there was no strategy. Nor was there the notion to properly develop one. This stands in stark contrast to the intentions of most PMR systems, which advocate the implementation and communication of strategy as its core (Kaplan and Norton 1996b; Simons 2000).

There was already a lot of measurement taking place automatically by the computer applications that were used to run the operation, but without a corresponding and organised examination and review process it was generally an overwhelming endeavour to make any sense of the performance data. The measurements were taken after the event had taken place and were merely reflective of what had already happened, that is, they were outcome or lagging measures.

Already in existence at Allegheny was a daily “Launch Meeting” which was held at 9 a.m. each weekday to review the previous days’ operation. All controllable delays and cancellations were discussed by the participants, but only in general terms, and there was very little discussion about whether we were on target or falling behind pre-established goals, and what needed to be achieved in order to meet the targets. The main reason for this was that the targets, which themselves had been predetermined by US Airways, were universally regarded as being unattainable

The interview results indicated that the majority of the interviewees had a broad idea of what the concept of performance measurement meant to them. All were able to talk in terms of the concept of measuring operations performance, but there was a lack of clarity on how it should be practised:

“It’s a measurement against a clearly defined target that the corporation is trying to meet...I’m not aware of how we measure all of that” (DT)

“How the day to day operation is monitored and measured to ensure that we maintain as high a level of quality as we can, either in people or procedures - really all aspects of the airline, both internal and external” (MIF)

“Analysis of everyday details” (MCS)

“To gauge what kind of operation we ran...and allow us to use that data to make changes” (GMM).

The internal changes that took place with the introduction of the PMR system led to these comments:

“In recent weeks I have a better understanding of performance management than I ever did before...but to be honest prior to that if you were to have said

what is performance management, I'm not sure I could give you an intelligent answer" (DIF)

"You've got to have some measure of how well a company does...the statistics that we now go over every week" (ACP1)

"I use the numbers we run through on a weekly basis. It's the statistics on how we fall with the rest of the group" (ACP2)

"I would say it's been beneficial and an education for myself" (MCS)

This was an indicator of the emphasis it had placed upon performance, coupled with the need to be competitive, and it was encouraging to hear that perhaps there was some immediate benefit being realised by the focus that the PMR system had placed on operations performance, especially in terms of providing an education on operating metrics.

For one person, however, there was a particular difficulty distinguishing between company performance and employee performance, which seemed to point to a fundamental lack of understanding of the PMR process:

"It's a very difficult thing due to the remoteness of, at least in my department, the people [pilots] who are working for me. I never see them. So when we look at performance, it's almost to the point of what you don't hear, you know what I mean? If there's problems they show up in delays and so on and so forth, they all show up" (DO)

During the interviews, I discussed the purpose of measuring performance as a means to further sharpen the thoughts of the interviewees; what did they see as the reason for why performance was now being measured and reviewed? Again, there was a variety of answers that ranged from the seemingly well-informed, to those unable to clearly articulate a purpose.

"Disseminate to the lowest levels of the company certain amounts of information" (DT).

“Ensure that we maintain the highest level of quality as we possibly can, either in people or procedures, really all aspects of the airline, internal and external” (MIF).

“So that we can improve our performance, so we know which areas in which we lack and those that maybe we excel in” (MCS)

“To get our crews not to fuck-up, and do stupid stuff. If we can reduce the amount of stupid things that they do, not just flight crew delays, but the dumb stuff, then we’ll be doing our job” (ACP2)

“I think it’s to gain knowledge and make improvements” (DO)

“I absolutely think it’s necessary to have something to work towards and if you don’t you just go through each day doing whatever comes up and you have no target” (DIF)

This dialogue suggests that the interviewees were able to explain what measuring performance meant to them, along with its general purpose. However, my observations, outside of these theoretical discussions, were that these same people would not engage with the performance data in their actions and daily routines and thereby would not place a specific focus on performance deficiencies in order to make improvements. The weekly performance reviews brought everyone together to review and discuss the results, but the action seemed to end there. Why was that?

4.6.1.1 Should Performance be Measured?

In light of an answer I received from my first interviewee, which described how the measurement or management of operations performance was not understood, I asked whether performance should be measured at all, and continued to ask this of all my interviewees. It seemed to me to be a rather basic and predictably answered question and it was therefore not at all surprising to learn that every respondent echoed a resounding yes to this question. This may seem to be a quite obvious response but, the curious and perhaps understandable issue, given the culture at Allegheny, was that nobody could give a lucid explanation of what to do with the data once collected and who should be responsible for effecting change. One of the more disturbing aspects was that although most agreed that we needed to more effectively manage how we

performed nobody was prepared to take the lead and use the data constructively to hold themselves and their staff accountable for achieving a goal.

Of the nine responses to this question of whether to measure performance, six replied with a resounding “yes”, two replied “absolutely”, three “definitely” and one “of course”. The other three seemed a little uncertain and although they all replied with the same phrase, “yeah”, there was no real conviction in their voices. One of the respondents went on to say:

“But I’m not sure, in our particular case, how much good it does for us” (ACP1)

These three “Yeahs” came from the Director of Operations, and the two Assistant Chief Pilots, all of whom are pilots. This highlighted a problem, previously recognised by others, that those responsible for pilot management were less than certain about how to manage performance, and were unclear on what direction to take. This seemed to stem from a lack of leadership and direction at the top of the organisation.

“I think if it was important enough for him to do (CEO), we’d be doing it!” (GMM)

“As a director in the company I should be keenly aware of how the company is doing. But if we do not measure performance, and somehow or another publish that information, it’s just all too easy to get wrapped up in my own little world and think that I’m doing fine, when really the company as a whole is not” (DT)

4.6.1.2 What to Measure

All interviewees were asked the question ‘if they had free reign to measure only what they thought was important what would that be?’ The most frequent answer was “on-time arrivals”. This was supported by the fact that the majority of flights that we operated were into hub airports where our passengers connected to other US Airways flights to reach their final destination. The assumption made by everyone was that any departure delay is easily forgotten by the passenger as long as the aircraft arrives at the hub on-time to make their connecting flight. However, this does not directly link to the performance measures that Allegheny was held accountable to by US Airways, which comprised several metrics requiring a balance in operations and not a specific weight given to on-time arrivals. However, these metrics were intended to be composite measures of performance, but their relevance to Allegheny was not readily

apparent to most of the interviewees. One interviewee however, was able to recognise that the recent weekly performance reviews were specifically geared towards the overall objectives that US Airways set:

“But I think what we're measuring now is probably coming from US Air to say, this is what we want to see from each carrier, so we can compare you. Now what are we going to do when we compare you. I don't know. But I think it's maybe US Air's way of saying, and making, you compete against each other” (GMM)

There was no tie-in to these objectives by the others. Although they were gaining a better understanding of operations performance and how and why we were measured against other Express Division carriers, there was yet to be an acceptance of the US Airways method.

One respondent proposed *“a composite measurement of the service we provide” (MIF)*, but was unable to explain how to go about this. Other responses pointed to a link with the company's finances and the financial budget for knowing what was important to measure:

“I guess one other aspect of what we measure is what we have the resources to measure” (MIF)

“That is definitely a deficiency in my department. And that deficiency is a direct result of money. We do not have enough override in the budget to give even one line-check to the veteran flight attendants once a year” (DIF)

This speaks directly to the need within an airline to provide annual recurrent training and checking for flight crews. In this instance, the Director of In-Flight does not have a sufficient budget allocation to pay the extra wages required by the flight attendant contract to a specially trained assessor who conducts an on-the-job evaluation of flight attendants, which is called a line check. This is designed to ensure that the airline is providing good customer service and a seamless product to that provided by US Airways, and then more importantly to ensure that the flight attendant is fully compliant with company policies and procedures and the federal aviation regulations (FARs).

“I think you’ve got to look at what you are yielding as a profit from these numbers, or how much more are you going to yield out of another 5% and how much you’re going spend to get there. And that’s why I think maybe they’re happy where they’re at, and the 99% you can make two or three months a year is a plus, but I think they’re happy with anything above 98.7” (DOM)

There was and had been a very tight control over the company’s finances. All departments were being held to strict budgets and any variance had to be explained. This lack of funds did not allow much room for developing new approaches or implementing initiatives, and most people carried out their jobs with the limited resources available to them. There was little creativity and people saw the lack of resources as a significant barrier. Challenging the CEO, or campaigning for additional funds or resources was simply not done.

4.6.1.3 Value of Performance Measurement

An underlying and largely unspoken goal was always to perform well every day, but whether the act of measuring it was valued drew mixed responses, indicating a difference between whether the company valued performance, as defined by how well the operation did on a given day, or, whether the company valued the measurement of performance.

“We would make time to do it if someone at the top thought it was important enough to do” (DOM).

“I think they value it. I’m conscious of them having to make choices about how much they can evaluate, and I think they try to do as much as they possibly can with the available resources” (MIF)

This was linked closely to a lack of communication within the organisation that emerged very forcefully as the interviews progressed. The notion of performance management not being considered important at the highest levels provided an explanation as to why the employees were not able to motivate themselves to take an active interest in it and to further communicate and discuss performance results.

“They don’t place a big enough emphasis on it” (DO)

This apparent lack of value that was placed on the process of measuring performance brought into question what the managers did with the performance results.

4.6.1.4 Performance Results

“One thing we don't do here with these goals and numbers is sit down as department heads and go over them and say, what's driving these?” (DOM)

This yet again underlined the overwhelming flaw that there was a lack of evaluation of operations performance. There simply was not the direction, or guidance, given by senior management for this to be a priority for any of the department heads. Performance results were not used to make substantive changes to the way the company operated or how it was compared with the other US Airways Express airlines.

A great drawback for Allegheny was that it operated solely within the northeast of the United States, a region that can be prone to bad weather during all seasons: frequent thunderstorms in the summer and snow and low ceilings in the winter. Allegheny connected to four major hub airports in the US Airways network: Pittsburgh, New York, Philadelphia and Boston. Each of these major cities are in close proximity to one another and all are likely to be affected simultaneously when a storm rolls through the Northeast. The greatest concentration of our operations were focused on connecting outlying cities to Philadelphia, and New York's La Guardia airport, which even on good weather days are close to capacity. During inclement weather, Allegheny is impacted disproportionately harder than its sister companies whose flight schedules are concentrated in the south and southeast of the country, which is much less frequently affected by poor weather.

“There are various handicaps. One of them is weather, and just because Allegheny experienced this weather doesn't necessarily mean that comparing it with Piedmont that you're getting the same results, because we're working in different areas and where they may not be affected to the same degree that the weather impacts us” (DO)

“I'm not sure that the other people in the Express Division are playing the same game that we're playing...how they're accounting for things. Personally, I think we're looking at apples and oranges, but even like with Mesa Jet and the other

operators, their focus is completion and ours is on-time. I think we've got two different priorities" (DIF)

"As much as I hate to agree with the crews I think it is very different where we're constantly in LaGuardia operating with it's associated problems. And comparing it, Piedmont isn't there, they are down in Charlotte. They don't have those problems, so you're not making an honest comparison" (DO)

This theme of inconsistency of measurement between the US Airways Express carriers generated much frustration at each weekly conference call with US Airways. Allegheny was invariably toward the bottom of the Express Division performance comparison list, and the overwhelming feeling amongst the managers was that it was an unfair method by which to compare our performance because of the geographical area in which we operated. This ultimately led to a feeling of 'why bother!' causing the directors and managers to disengage with the process.

On one occasion, we held a performance review meeting with some selected pilots and flight attendants in an attempt to discuss the need to improve our operation, but this was not very successful, largely because the directors running the meeting were not themselves very aware of performance measurement and what to do with the performance results.

"It didn't talk about why performance was of interest. We really were just talking about performance so I don't think we answered any questions. I think people who were there may have gotten some insight into how we measure performance, but we didn't talk about why it was important to us" (ACP2)

This attempt at communicating to the crew force and trying to inspire a need for better performance turned out to be mostly an exercise in frustration. The intentions were very good but the execution left a lot to be desired. The directors and managers conducting the meeting led it as a presentation of performance data, just showing results, and not drilling down to any of the reasons for poor performance, or even how and why certain aspects of the operation were measured. An explanation for this underlying lack of knowledge was provided up by the Director of Training:

I'm not aware of how we measure all of that. I think we measure completion....I think we measure large things like, Yep, we completed so many flights – we got

them there. We had on-time performance of such and such, but what I don't know is how many airplanes were late, and how many passengers were impacted by our performance?" (DT)

As the pressure mounted from US Airways for Allegheny to have better performance results, the weekly conference calls began to slip into a situation where each department started to blame the other for delays and cancellations. This became quite territorial and unconstructive, and arguments started to surface.

"All they have to do if they have a problem of any sort is just swap airplanes, and now it becomes a flight crew delay. Well, that's not helping us figure out that its Maintenance. One of the reasons our maintenance numbers are so stellar is that they're bright. [Name] is a smart guy, all he needs to do is swap an aircraft and he's off the hook, but not the flight crew" (ACP2)

"I've been out there flying, and these guys, they feel the pressure, they (Maintenance) pencil-whip a lot of shit. They push a lot of stuff out of the [hangar] door that has no business being pushed out" (ACP2)

This represents a classic failure of a performance measurement system (Bourne et al. 2002): a situation where people begin chasing the numbers rather than understanding the true reasons for failure. Indeed, in this situation ACP2 is implying that aircraft are being brought to the line with maintenance problems that should have been fixed during the night. However, it is commonplace for an aircraft to have maintenance 'deferrals'. These are not critical problems and can safely remain inoperative for a period of time until the aircraft can be routed into a maintenance base for repair. There is not a safety risk associated with legal deferrals.

"I think sometimes we put Band-Aids (plasters) on problems instead of fixing problems" (ACP1)

This notion of 'Band Aids' is a term that was used a lot and referred to making a visible, but very short-term fix for a particular problem.

"I would take the accounting system we use and actually have it meaningful. I want to know: is it a flight crew operational delay? Is the flight attendant delayed because of weather last night? Is it an operational reason? Or did the flight crew

screw up? I need to know. We get a lot of cases where it looks like the flight crew screwed up, or they're somehow negligent and when we make a phone call and they go "is that what they told you? God damn that's not what happened, I called that fueler seven times, seven times!". And you know, the guy's telling the truth, but somehow it got twisted around, the gate agent got mad at them or something. It's meaningless" (ACP2)

"The longer I do it, the more I see that if I can gather information from every source it's really important to get a whole picture" (ACP1)

The preceding section has provided an overview of the state of operations performance measurement at Allegheny. The findings strongly suggest that a more rigorous approach be applied to measuring performance and then using the results to correct problems. Additionally, there appeared to be a distinct lack of understanding and knowledge of the determinants of the performance results and more work is required to enhance the managers' level of comprehension.

The following sections now focus on the nine specific themes that emerged from coding the data and help to characterise and add colour to the overall picture.

4.6.2 Goals

In order for a PMR system to be meaningful there must be goals by which to measure the performance results. But, who should set these goals and how do you ensure that they are realistic and achievable, and consistent and purposeful?

In discussing who should set the goals at Allegheny a range of answers were given but not a consensus:

"A collective effort...Before imposing a goal, get the managers input...solicit my input! (DIF)

"The CEO" (DT)

"A department head" (DOM)

"Express Division" (DO)

“At a high enough level where the person who has to answer for the performance is comfortable with exactly what the goal is” (MIF)

General agreement within the literature states that realistic and achievable goals must be the cornerstone of a successful performance measurement system, but at Allegheny this seemed to be missing.

“I certainly think if that gets pushed too far down, there may be a temptation to set goals that may be more easily achieved, rather than may be achieved in the name of running a good airline” (MIF)

This exemplifies the dilemma of striking a balance between realistic and achievable goals. It can be very difficult for people to relate to a PMR system if the goals are considered to be unachievable:

“I think it should be a collective effort of Allegheny management as well as U.S. Airways management because I'm not convinced that U.S. Airways mainline management fully understands the Express operation and I think they have to allow input from the likes of you, [Name (CEO)], and [Name (VP)], who know how our system operates and what the barriers are” (DIF)

In this instance, US Airways had set the performance goals for Allegheny and there was a great deal of frustration that we were being held to standards that were unachievable. In trying to better understand how the goals should be set there were two interesting and insightful responses

“I think it works better if before imposing a goal that you get that managers input to develop a goal. I think you get a whole lot more cooperation and much more incentive to work towards that goal if you have some input to it” (DIF)

“To a degree I think there should be two sets, one that we answer to Express Division and one that we answer to ourselves...we have a better view on what we should be doing, I think we're better qualified to place a goal number out there, because we have a better handle on what our operation is. You still have to answer to the entire division...but I think internally we need to set our own goals, so that one is related to the other” (DO)

These comments point to the situation that in many cases the goals are set by people who do not really know how the operation is organised, nor the barriers that can exist to prevent excellent performance. It is also interesting to learn that one of the respondents had considered developing two different sets of goals. This seemed to be a classic case of needing ownership for a particular metric in order to 'buy-in' to its efficacy. A goal that is not suitable or realistic can put you in a situation where there is a sense of constant and uncontrollable failure:

"We're so damn far behind now, how will we ever catch up? You just need three or four bad days of weather then there goes the month!" (DO)

In this case, the goals that stipulate on-time performance and completion factor do not adequately allow for acts of nature that negatively impact an airline's ability to perform. When the goal is set too tight it can lead to a situation where achieving it becomes impossible.

In a slightly different vein, improperly thought-out performance goals can also lead to hardship and a loss of trust:

"But right now guys point at something like we had trips that start in the morning and end at night. That is just maximising a pilot's time away from home. You end up with lines that have over 400 hours away from base, which is over half the month, and so guys look at that kind of stuff and say, 'well, any company that would write this kind of stuff just doesn't care'" (ACP1)

The inference here is that the company is trying to maximise pilot productivity at the expense of a pilots' quality of life. While this may be efficient and perhaps financially beneficial to the company in the short-term, it soon becomes tiresome and irritating for the pilot, and can lead to an increase in sick calls and therefore pilots being unavailable for duty, ultimately resulting in cancellations and a great deal of inefficiency.

There was also a major disparity between how the goals were not clearly aligned with incentives, or consequences. In the case of incentives a pilot at Allegheny was paid based on the amount of time he spent behind the controls.

"When guys get paid more to get there (complete the flight) early than to get there late, they'll get there early...This business is very upside down with stuff

like that. I don't know of any place else where you get paid more to do a worse job" (ACP1)

"The compensation elements of the contract, clearly state that the longer it takes you to fly from A to B, the more you're going to get paid for doing so" (ACP2)

This situation clearly encourages the pilot to taxi and fly slowly in order to maximise his paycheque. Conversely, there was also a lack of clearly defined consequences:

"You need to tell me black and white. If the goal is 12 delays in a quarter or something like that, and if I go over that by a certain percentage I'm going to be fired. I need to know that now. Don't make me guess. So I need to know what the expectation is" (DIF)

The foregoing discussion has affirmed that goals are a fundamental aspect of a PMR system but in order to meet these goals the people charged with this responsibility inevitably require support and guidance that in turn will provide incentives and consequences.

4.6.3 Guidance and Support

In discussing the subject of support during the interviews most people felt that they were supported in their endeavours to measure performance. However, aside from the PMR system there was so little actual measurement taking place by each manager that support was not really needed. After the weekly performance review was introduced all the departments that were directly involved in the flight operation increased their activity to ensure that they had some knowledge and explanations of what occurred during the previous week. But, at this stage it still remained an uncommitted reaction to an imposed system, and there was not much enthusiasm to fully embrace the concept. This was undoubtedly due in part to the absence of the department leader (VP) to promote it and hold each individual accountable. During this period of time, the Vice President (VP) of the Flight Department had been seconded to work within another branch of the airline and consequently the Flight Department was left leaderless.

When investigating what guidance each director or manager had received over the years on performance management, the Director of Training likened it to a situation where:

“There’s 15 people in a dark room with 20 TV’s and when the lights come on we are all looking at TV’s but not the right TV at the same time. There needs to be specific guidance on what data everyone should look at, and that data should be readily available so that time is not wasted trying to find information” (DT)

The others echoed a similar theme. There was no single clear direction of what was expected of people, which in turn made holding people accountable a little nonsensical. But, there were also some differences expressed by the interviewees between what guidance had been provided and what people should be focusing on:

“I would say I’m given guidelines but I go beyond the guidelines to measure what I feel is necessary, or what I want to take a look at for a certain time period” (DOM)

“Management should make their expectations clear” (DT)

“I think from above I do receive support, fortunately. But again the workload’s just too heavy to focus on what we should” (DO)

“I don’t personally know of any guidance being given to me” (DIF)

“I would have to say that there has not been sufficient guidance from the top as to where this data is and how it should be used” (DT)

“I don’t think upper management has ever been to Dispatch and said: “Okay, remember it’s always, let’s get the people there, as many people as we can, every day, and let’s make sure that if we have to cut something out, we cut out the Albany to Buffalo flight and always make sure that Albany to Philly flight always goes”” (DT)

My own observations supported this and this apparent lack of guidance caused the managers and directors to view performance measurement with some disdain. It was not made clear to them that it should be a high priority and there were no real

consequences for not engaging with the PMR process. This in addition to their sense of isolation and detachment from senior management consequently showed in their approach to the PMR system.

4.6.4 Accountability

The term 'accountability' was used to describe the level of liability that an individual felt they had for the performance outcomes under their control. Virtually everyone thought that they were held accountable for performance:

"I certainly think I'm held accountable by my supervisor and I'm certainly given an amount of leeway to deal with certain situations as I see fit, but for me personally I need the feedback to understand what works and what doesn't. Certain issues are obviously easier to get feedback from than others. I certainly am held accountable" (MIF)

"I think ultimately everybody's accountable until you hit Dave Seigal (CEO, US Airways) in this organisation. I think everybody has a degree of accountability" (DO)

"I think the intent is good. I think the intent is to actually hold people accountable" (ACP2)

The one exception was ACP2 who remained unclear on what accountability meant to him:

"Should I be personally? I don't know. That's an interesting question" (ACP2)

The Director of In-Flight, commenting about the performance management system now in place, stated that:

"I believe we are held much more accountable. I believe that I should show up at that 4 o'clock Monday afternoon meeting with an explanation of what my four delays are" (DIF).

This was a view that was also echoed by her direct report:

"I certainly think I am held accountable by my supervisor" (MIF).

But, there was an issue about what is directly within the control of the manager and what is not. It was identified by DIF that accountability should only be enforced when:

"I feel as though I have some control over the ability to make a change" (DIF)

"I don't necessarily like being held accountable for some of the areas of catering because I can't control it...but if they ever really hold me accountable for that, I would have to speak up and say 'it's not fair' because I don't do the ordering. I don't board it on the airplane. I'm just the budget manager who sees the dollars show up into my account" (DIF)

This response refutes the directive given by US Airways Express Division that the airline was to be judged upon its complete performance, even if some of that performance was uncontrollable by the manager or the airline in general, such as delays and cancellations due to weather and air traffic control. However, when Allegheny was compared side by side with the other Express carriers there was no leeway given if our performance had suffered because of weather. This caused much exasperation amongst the interviewees and was especially evident in the conversations that followed the weekly conference calls. They universally felt that we were being held to a standard that was unattainable.

There were also some express concerns with the perceived level of apathy in the flight department to hold pilots accountable, and an interesting viewpoint was put forward by the Manager of Crew Scheduling who explained that:

"They [ACP's] don't want to be enemies of those pilots. Those who don't have any discipline, or aren't held accountable for anything are usually miserable because, for the most part, even though a person doesn't like to admit it too much, they like to realise they have boundaries and that somebody is there noticing what it is they do, and what it is they don't do". (MCS)

This has actually proven to be the case on many occasions because we heard from the same pilots regularly about some problem or another that they were unable to deal with without getting someone in the company involved. This situation however, was allowed to perpetuate because pilot management wanted to maintain a level of popularity.

"In order to be manager in that type of position you have to be able to understand that there is going to be a separation between you and the people you work with...if that boundary is not there then a person is not going to hold someone accountable" (MCS).

Perhaps one of the reasons for this was that there was a conscious decision made by the assistant chief pilots to maintain harmony. One explained that:

"There is a tremendous cut off those guys (pilots) feel from this office (Chief Pilots) and it fosters contempt" (ACP2)

When asked whether he was held accountable for their performance he replied "no" and when pushed on whether he should be held accountable his reply was a little at odds with the majority of other managers

"I don't know...I have very little control over what my guys actually do" (ACP2)

This was supported by his understanding of how he saw his role as a representative of the pilots and a liaison between management and the pilot group, which was in apparent contrast to the other assistant chief pilot who did feel that he was held accountable

"I feel I should be held responsible to know why...in my area the main thing is communication" (ACP1)

"You tell people the truth. You hold people accountable where they should be accountable. If they're not accountable you say "you know what, that's not your fault, forget about it". You cut them slack where they should be cut slack. You're honest and fair with people. You tell them the truth. Keep them informed. I think there's a lot of what we're trying to do is we're trying to be as straight as a flight department as we possibly can be" (ACP2)

This apparent disparity in approaches between Assistant Chief Pilots perhaps points again to the lack of direction and support that the managers and directors had.

There was also a perceived contrast in the level of accountability between crewmembers and other employees:

"I would say that employees in this building here are held to higher standards. They are more accountable for their actions than the crew members" (MCS)

In concert for a degree of accountability there was also the distinction made about a desire for independence:

"First, guys want to have the airplane leave on time because they know in all likelihood if there wasn't another cause, outside of the cockpit, that could be pointed to, then they get a phone call. And pilots hate getting that kind of stuff. Most of us work well on our own and we like this job because there is nobody looking over our shoulder" (ACP1)

While accountability was generally regarded as being a necessity, there were some comments stressing the negative effects of practising accountability and imposing discipline to address shortfalls:

"The flight attendants feel as though they're being targeted...so when [name] and I call them about the delay we try to be very careful and preface our comments by saying there was a delay yesterday that was attributed to the In-Flight department, rather than attributed to your flight of which you were a flight attendant. But, even when we say the In-Flight department many times the flight attendant will come back and say "well they shouldn't be blaming that on me". So they take it personally" (DIF)

"We have not reached the point when we say we're going to start disciplining for the late flights. Up to this point we've kind of taken the attitude that, well okay as long as we understand why the airplane was late and it was justifiable, to a certain extent, we will, even if it is a flight crew delay, we will just say, okay well, try not to let that happen again. Giving them fair warning and the impression that "Big Brother is looking over their shoulders" (ACP1)

In contrast is the view that feedback is needed:

"I need the feedback to really gauge how what I do on a day-to-day basis ultimately affects the quality of what happens in my department" (MIF)

A view was put forward explaining that having consequences for not meeting performance goals was important:

“I think consequences for lack of meeting certain goals have to be there I think there has to be consequences for the negative actions, or for not improving performance” (MIF)

One of the benefits of the weekly PMR system was that it increased the level of accountability that people felt. But, this also brought with it some confusion about what people should be held accountable for and how and when the pilots and flight attendants should be addressed about performance shortfalls. It was obviously a topic that was still in its infancy and the managers and directors were finding it difficult to balance being held accountable themselves, and also holding their direct reports accountable. The overriding reason for this conflict seemed to stem from the expressed view that you should only be accountable for what you can control.

Now that the PMR system had begun to assert a degree of accountability on the managers there was also a significant negative side effect, which manifested itself in a greater degree of blame being placed on others, and a distinct lack of teamwork, as the managers sought to avoid their department being seen as the reason for a delay or cancellation.

4.6.5 Teamwork

Teamwork, or more specifically in this context, the lack of teamwork, was a predominant theme in the responses. It was stated several times that teamwork was an essential element for good performance but it was also described as being non-existent at times:

“I get tunnel vision when I focus on the Flight Department, and when I look down through the list of delays and it doesn't say FC (flight crew) behind it, it doesn't bother me, you know, because that's somebody else's problem to deal with” (ACP1)

The pressure applied by US Airways for better performance had led to instances where departments sought to blame others when something went wrong, rather than trying to

cooperatively resolve the problem. This theme was articulated with the most fervour by the Assistant Chief Pilots:

“We should be a little bit more of a team, rather than trying to push things back and forth” (ACP1)

“At some point or another we need to have Maintenance and Customer Service people attend performance meetings because we push delays their way too, and they try and push them ours. Since that's the case they really should be part of the team, and they may have some ideas for reducing some of what we don't see” (ACP1)

There were also specific concerns expressed with a lack of teamwork and a division between the Flight Department and Maintenance. The actions of the personnel in these two departments were fundamentally intertwined:

“I think we are separate departments to a certain extent, especially us and Maintenance. They only measure their own statistics. They don't concern themselves at all with the airline as an overall. At least I don't believe they do, and we don't really concern ourselves with the maintenance side of things either” (ACP1)

“We're not a team spirit” (ACP2)

“You don't really get a feeling on the line that it's all for one: it's kind of every man for himself. You get in your airplane with your crew and you go where you're supposed to go, and then you go to the hotel and you've done your part. You don't really get the feeling of we're a group headed towards a goal” (ACP1)

“You forget about the 2200 people that are out there in the field. This becomes the airline to us...this building here, and when I get a phone call from a pilot it's usually a pain in the ass because it's a disruption of what I'm doing. It's easy to forget that they're the company” (ACP2)

There was also a concern about information being deliberately withheld and a lack of teamwork within the same department:

“Additionally there’s certain things, just about, how to run a flight department that we’ve never been told, and I think part of it is because that once we’re told how to do it we’re more of a threat” (ACP2)

However, even with the apparent lack of teamwork there was some recognition of the skill of others and an expressed sense of being supported by other departments:

“...particularly with swaps, I know they are built into the system for a reason, you’re trying to get an airplane into position or something. All you have to do is talk to [Name] for five minutes and you realise there’s people down there [OCC] that know what the fuck they’re doing, some bright, bright, people that are actually running some incredibly complex processes” (ACP2)

“Yes I think so. Yeah I would say. I could not give you an example where I didn’t feel supported” (DIF)

But in sharp contrast to all of that, was the gulf in perception between how the director responsible for the pilots, and the director responsible for the flight attendants fit into the overall structure of the Flight Department; both of whom theoretically reported to the same VP:

“There should be a clearly defined chain of command and an enforced chain of command. They should understand who the hell they work for. And poor [DIF], she’s swinging in the breeze. She doesn’t know who to report to” (ACP2)

The lack of teamwork was portrayed as an important issue and it was evident that a greater effort towards mutual support was needed. But, as higher accountability was being sought and pursued and with the apparent lack of teamwork it was leading to instances of blame.

4.6.6 Blame

It was interesting to learn that everyone was able to speak in terms of the standard outcome measures that were commonly used, but they were not able to give examples of processes further down the production chain that could be measured. Their overwhelming focus was on the inconsistency of how the coding of delays and cancellations was applied. This caused some grief and anguish amongst the various

departments who would often fight about who should take the blame. The fact that any delay, no matter who was at fault, was already a failing on the part of the company to provide a service, was frequently overlooked:

“Our concentration in the flight department is to find anybody else to lay that delay on, and that’s where you run into problems because you’re not getting to the core issue, you’re actually laying blame” (ACP2)

“One thing we don’t do here with these goals and numbers is sit down as department heads and go over them and say, what’s driving these? But what we do is, and it’s a difficult job that you have to do, is to try and decide who’s fault these things are. I think if you’re going to measure these things you should sit down as department heads and discuss them, and see where weaknesses are, and see what you can do to fix them” (GMM)

There was also a marked lack of understanding of how other departments worked and the feeling of operating within silos:

“All that stuff is a mystery to me: that all this stuff integrates and works and they don’t lose airplanes routinely, like where’s (aircraft number) 808, we haven’t seen aircraft 808 in days!” (ACP2)

“When guys call me and complain that somebody didn’t use night-wands to marshal them in, in Philadelphia. Well, I can send that on, but there’s no real response I can give to that other than the next time they go to Philadelphia somebody should be using night-wands and if they don’t well eventually guys quit calling because I’m not making a difference” (ACP2)

“I think when you are dealing with targets in your own department, a lot of times it’s predicated on other departments...It’s like a pilot who shows up five minutes before departure and all of a sudden there’s a (maintenance) write-up” (DOM)

This speaks directly to the interwoven nature of flight operations. Everybody is depending on someone else. In this case, if a pilot reports late to his aeroplane and discovers a mechanical irregularity then the burden for the delay is shifted to Maintenance. Had he shown up on time it is possible that a delay could have been avoided. These issues can only be effectively addressed if there is a very real sense of

collaboration and a team spirit, so that when an issue arises it is not presented as a vehicle for assigning blame, but viewed as an opportunity for the company as a whole to do better.

The assistant chief pilots enthusiastically offered further examples of what was obviously being described as a blame culture:

“We do spend a lot of time pushing problems back and forth between one department and another, and crews I know from talking to them, kind of wonder whether we’re actually getting anything done. They say you’re just trying to put the blame on somebody else, and to a certain extent they’re right” (ACP1)

“The first problem you run into is it that it becomes a question of finger-pointing and blame laying, rather than solving problems” (ACP2)

It was amazing to learn how much time was actually spent apportioning blame even though the delays negatively impacted the company as a whole. However, ACP2 did recognise that apportioning blame does not solve the problem.

“He (ACP1) spends probably half of his day, or a third of his day, every day, tracking down delays from the previous day, and trying get them put on someone else. Really, trying to get them assigned to any other department other than FC (flight crew), and that isn’t necessarily solving the problems, because a delay is a delay” (ACP2)

“A guy has a problem in an airplane, he starts up the airplane and the AEI doesn’t come up, he calls up Maintenance and they say “did you shut down the airplane? No.” So he shuts down the airplane, let’s it reboot, waits three seconds, you know all the relays close, starts it up, now it’s a flight crew delay. So I as a manager go “ well, hell, I’m not taking that shit any longer, I’m going to put out to my guys don’t ever shut that thing down again, just write it up”. Well, that’s counter-productive now. I get so upset about taking FC delays that I’m willing to go to war to take delays, which actually exacerbates the problem, so that I don’t take a hit” (ACP2)

This attitude of ACP2 resulted from his frustration in the belief that crewmembers were being incorrectly penalised for delays when the fault lay elsewhere:

“We have maintenance issues that because of statistical anomalies are being coded as flight crew delays. Maintenance loves that” (ACP2)

“ACP1 and I find some that are clearly bullshit, and we have to get the station to agree. Well, the station’s the one that’s culpable. They’re not going to agree. There’s no neutral arbitrator that I can go to get some of these overturned” (ACP2)

A negative result from trying to apportion blame or responsibility to the correct department is that it can take a lot of time and resources to research each delay or cancellation, which in this context represents a performance failure. This was aptly described once again by ACP2 who pointed out that his colleague spent quite a lot of his time correcting the coding of delays:

“[\$70,000]... That’s how much money we’re spending a year literally, on trying to correct these codes to make the statistical analysis more meaningful. That’s a lot of money and I’m not sure it’s even doing anything, it’s maybe making the Flight Department look a little better. Our objective in the Flight Department is to pass it off” (ACP2)

A reason for the demonstrated lack of teamwork and blame can perhaps be explained by the company’s resources and the expressed lack of them. All of the interviewees stated that they were heavily tasked and unable to spend the time necessary to forge relationships with other departments and truly try to understand how they operated and their perspective on running the operation.

4.6.7 Resources

“I don’t feel that any of us have all of the resources that we need, the personnel resources, that we need to keep up with the work that we have” (DIF)

The question of resources was a sore subject for most of the interviewees and the consensus was that Allegheny was resource deprived, which they saw as leading to many of the performance issues that the airline experienced.

“I think that when you operate with minimal personnel you get a minimal product” (DOM)

“We were hard pressed on a couple of occasions, and we had to pull some of those check attendants to fly the line to avoid a flight cancellation, which is the primary priority. And right now even though we may be able to pull somebody off-line periodically, I don't have enough money in the budget to pay override to a ground school instructor, plus do line-checks, and if we had a new-hire class, to do IOE (initial operating experience) and in-flight training. I had to clearly point out that I have no quality assurance and quality control program out there, so that is what we are living with” (DIF)

“I think performance does suffer, and maybe we don't see it all, but I know from a customer standpoint if you go down there (Harrisburg airport) on a morning and you've got one gate agent working six flights, yeah that suffers. They don't have enough people to get the people on the airplane: get the paperwork to the crews. It causes problems” (DOM)

“There's other things that we'd like to look at and do with the systems we have in place that we just don't have the manpower to get it done” (DOM)

“But again the workload's just too heavy to focus on what we should be” (DO)

Although the discussions surrounding resources largely centred on the number of personnel available, there was also recognition that some people did not have sufficient access to other resources that they felt they needed:

“The paint jobs look like they're bad. They need to be repainted, and that's a money issue obviously” (GMM)

“We need a spare all the time. You cannot run an airline and hope to have any completion factor without a spare airplane” (ACP2)

“I'd like to have a bigger supply of certain parts. I would like to have more resources as far as personnel, and I think we're operating on a shoestring, bare minimum level right now” (GMM)

ACP1 complained that he had to research all of the delays but did not have access to the one most important operations system:

“The one thing that I really wish I had, that I don't, is FliteTrac” (ACP1)

This lack of resources led to a sense of exasperation for some:

“I submit the money in the budget every year. Here is our baseline for line-checks: one line check per flight attendant per year, with new hires two line checks per year in the first year. David, there are flight attendants who have been here 2 or 3 years who've never had a line check, have never been seen by their supervisor out on line, or by check attendant. So this is how bad habits develop and then one day we give them a line check and they don't do something right, and then we slap their hands “you should know this, it's in the manual”. It is unfair!” (DIF)

The level of resources naturally has a financial impact, which is not always at the forefront of the minds of those who must manage the operation. Their focus is generally on making things run, which led to some frustration, particularly from the General Manager of Maintenance about the cost of performance and how performance goals are also tied to financial goals

“We gauge ourselves as we keep trying to get better but there's changes you can make to get better that I see we don't do for financial reasons. If you try to make a performance goal of 99 and you're making 98.5 every month are we really happy with 98.5 or do we want to spend another 20 grand a month to get to 99?” (GMM)

“Airlines work on such a small margin that money is a constant battle” (CP)

“I submitted the monies but U.S. Airways comes back and says cut the budget and where is it cut, in my area” (DIF)

Despite the overwhelming opinion that the company was under-resourced there was still a small hint of objectivity from one of the interviewees.

“I understand that in a pool of limited resources you have to pick your battles” (MIF)

4.6.8 Communication

The most frequently talked about subject was communication, and the very apparent lack of it:

"I think that some important things should be communicated, but they aren't"
(MCS)

"No! I don't think this company communicates well in general about anything"
(GMM)

"I know certain companies for instance, in employee break rooms or in meeting rooms will actually have mission statement up on the wall. I think it's a good idea. I don't see much of it at Allegheny here" (MIF)

"I think the company communicates very poorly" (DO)

"If they're not communicating with me, maybe they're not communicating with anybody" (DOM)

"Aramini (previous CEO) would communicate to our employees regularly through some written communication. He had employee meetings in the hangar. It was just better. He walked through the halls" (DIF)

Many blamed this directly on the culture and the example set by the current CEO who was reluctant to communicate to his employees. Even at the director level there was a feeling of being in the dark with regards to what was going on within the company: what the current priorities were, and where we should have been directing our efforts. This culture was characterised by a cloak of secrecy; there was no open communication and the ability to provide upward feedback was stifled, which had led to a marked decrease in morale at all levels. The management style perpetuated at Allegheny was a micro-management style where our efforts and short-term objectives were strongly related to what the CEO was concentrating on, on any given day. This could swing wildly from one point of focus to another. In defence of the CEO, this was likely a response on his part to the demands placed upon him by his superiors at the US Airways Express Division level. One of the major drawbacks of being a wholly-owned subsidiary is that you have very little autonomy and the general feeling was that we

were dancing at the end of strings that were being pulled by the executives in Washington DC. The CEO, who was repeatedly referred to as personable and likeable, “but not a leader”, did not take the time to visit with his employees very often and tended to restrict much of his dealings to his direct reports at the vice presidential level. In the current situation within Flight Operations, of an absentee VP, this became even more difficult to deal with because we found ourselves in the dark with respect to direction and guidance.

In a discussion regarding communication between the company and its pilots a common theme emerged that suggested a serious lack of communication and trust between management and crewmembers.

“The problem is most of the pilot employees see us as middle management, which we are, and when something catastrophic happens like the RJ announcement they don’t want to hear from us...they want to hear from the president of the company...in fact that hasn’t happened and it’s been two months” (ACP1)

This referred to the regional jets being awarded to PSA and not Allegheny. It was a major blow for us, but was not communicated or discussed at all by the CEO.

An illuminating comment was offered by the General Manager of Maintenance in describing his exasperation with the lack of communication:

“No I don’t think this company communicates well in general about anything...it seems like they keep a lot of secrets, but its like when major stuff happens and you’re finding out from somebody else and not the company...Are they that busy they can’t communicate? I don’t know why they don’t communicate well, and that is from an acting VP standpoint. I’m part of the staff and I don’t get communicated with very well” (GMM).

The company’s culture undoubtedly had a lot to do with the lack of communication. The micro-management style of the CEO meant that managers did not have the authority to make decisions and had to seek approval first. This tended to promote the unwillingness to act independently and not communicate with employees in case it was not approved by the CEO.

“I think [Name (CEO)] is an extremely poor communicator – he does not communicate with the rank and file very well” (DO)

“Everything we do has to be approved. We are theoretically given the authority. We theoretically run the flight department, but we run shit” (ACP2)

In my experience I attended many meetings where a discussion took place about something and the remarks “keep that to yourself” or “its confidential” were attached, which removed the opportunity to relay information to subordinates. All too often this information was not worthy of being kept quiet. This was summed up as “a culture of secrecy for security” (ACP2), whereby only certain information was passed down to subordinates perhaps in the fear that, once the subordinate is knowledgeable about his manager’s role and responsibility, he may prove to be a threat to his superior’s job.

“I don’t know if it’s insecurity or whatever, but there’s a lot that goes on in here that is withheld from us that I need to know in order to do my job” (ACP2)

It was clear that communication was a major problem that needed to be addressed, but it was also deeply imbedded in the culture of the airline and it was apparent that improving communication would not be an easy endeavour.

4.6.8.1 On Communicating Performance:

Not surprisingly, given that ordinary communication was so poor, there was very little communication or guidance given on performance.

“I don’t know that upper management has set up a programme that says: by the way I want every manager to convey some stats in any way you want to your people, a meeting, a bulletin board, but we want each person to have it” (DT)

“Over the years I think the company thinks that it has communicated that information reasonably well but, I think the company presumes that the employees are interested in those kind of things, but I don’t think they read the charts” (DIF)

This last sentence alludes to the fact that on rare occasions when operations performance was communicated, it was done so in a form that was not readily

understood by everyone, such as charts and graphs that required prior knowledge to properly interpret.

A rather thought provoking insight to the lack of communication was offered by the Director of Training by way of an explanation to why this occurs:

“This company has had so much bad news that no-one quite knows how to communicate effectively because it just seems like there is no good news, there is only bad news...but if you wanted to find some good news you could find it in performance” (DT).

I took this suggestion and researched our recent records and was able to find a number of areas where emphasis could have been placed on performance that was better than the established goals. If the company had wanted to communicate with the employees it could have highlighted selected measures to convey a positive message.

“I certainly think there are ways of communicating performance information that can be made real and not be destructive in nature” (MIF)

Nevertheless, the initiative to communicate to the field was not being taken:

“No. I have always left that up to the [Name] (CEO) or the [Name] (VP of Flight Ops) to do that because I thought that that was appropriate. Actually it never occurred to me to put it in there” (DIF)

“I think maybe post it on the website, or post it somewhere where everybody can see how we're doing” (GMM)

“If it's like, our completion factor was up significantly in June, and whatever we did in June, even though the weather was good, was better than we did in May you ought to be congratulated and let's continue to make these efforts” (DT)

“Why would a person in Philadelphia not be entitled to know how many passengers came through there without bags (lost bags) this month versus the previous month” (DT)

“I think that if you tell the crews we inconvenienced 1800 passengers out of the 51,000 we tried to move this month, those are different numbers than 1% or 2%. We measure in different units then they show you the real picture from the passenger perspective versus a 2%. What is that really? (DT)

“One of the problems we have as a corporation is that our communications with our field people are terrible. We have no monthly newsletters, we have no company publications. Until I came on board there was no regular dissemination of routine information to the pilots. I think it's a cultural thing. Part of it is US Air. I think US Air has had a history of non-communication” (ACP2)

These comments illustrate that there should be efforts made to communicate performance results, and that this communication can be used to send a positive message even when performance results fall short of prescribed goals. Of particular note was the apparent situation where the managers and directors were not using their own initiative to communicate with their people. They seemed to be stifled in this and the reason appeared to be a firm clasp that the CEO put on information being shared externally to the rank and file. This was seen as short-sighted and contributed in a real way to a feeling of isolation that people felt.

4.6.8.2 Communication Between Departments

Allegheny Airlines operated from two buildings located one mile apart. The main offices occupied a large building on a street called Rosedale Avenue, which was referred to as simply ‘Rosedale’. The other facility, known as ‘Building 601’, was a hangar at the airport that also housed System Control and Maintenance. Communication between the two buildings was not particularly good and those at 601 tended to be forgotten by their colleagues at Rosedale. This was emphasised by the fact that the CEO had visited building 601 only six times in the previous nine months.

Even within Rosedale, where the majority of people worked, there were psychological barriers that existed between departments. Flight attendant management and pilot management had offices next door to each other and, even though they were in the same department, communication often broke down to the point that one group had no idea what the other was doing. For instance, pilot management produced a periodic memo to the pilots but failed to discuss the contents with the flight attendant management group even though it was of specific relevance to them.

“Flight attendants are just not perceived as important as pilots or other people in the company” (DIF)

A further example of how poorly people interacted and communicated was demonstrated in a meeting attended by many of the directors and the CEO. The Director of Customer Service, a newcomer to the airline, who some of us had met previously, was unknown to the Director of In-Flight who had to introduce herself to him because the CEO had not made any introductions. She was less than impressed by this and it was used by her as an example to sum up the state of internal communication:

“It’s kind of like [Name (Director of Customer Service)] today, I guess he was introduced to a few people, I heard he was here, been here for weeks I guess – never met him!” (DIF)

As there were only ten directors in the company, it seemed inexcusable that a situation like that was allowed to occur.

There was also confusion regarding departmental boundaries:

“The upper level management of the entire department comes from one side (Flight)” (DIF)

“If you asked me now I’d be very hard pressed to tell you who’s in the Flight Department. Who is the Flight Department? Is that me and [Name (ACP1)] and [Name (DO)]? Is that me and ACP1 and DO and Scott Seders? Is he part of the flight department? Probably. How about the flight attendants? Are they in the Flight department? No, I think they’re in the In-Flight department. Well, is the In-Flight department part of the Flight department or is there anything such thing as an In-Flight department? Is In-Flight different from Flight? Is Training part of Flight? Nobody really knows” (ACP2)

That there should be such confusion at the management level was disappointing.

4.6.8.3 Sharing Data with Employees

One of the proposals to improve the PMR system was to share our performance data with our crewmembers. This was discussed with each of the interviewees and a number of useful suggestions emerged. Of paramount importance would be the need to make the data easily understood by not relying too heavily on charts and percentages and to only share data that the crewmembers have direct impact on. For example sharing the frequency of maintenance delays might only cause an adversarial relationship between crewmembers and Maintenance. However, it was roundly acknowledged that any data being shared is better than none at all. In the past, our crewmembers were left to gauge for themselves how well the company was doing. Because they are so close to the customer, it is easy for the crews to falsely conclude that we are doing well simply by judging how full their aircraft are, and not by knowing whether we are carrying the passengers on-time.

“If we are not getting them there on-time we will not keep carrying them” (ACP1)

Of universal interest was the ability to share our performance in terms of the number of passengers inconvenienced. This was felt to be the most fruitful way to encourage our crewmembers to take an interest in performance. The number of passengers inconvenienced by our actions or inactions is something that everyone can easily identify with.

“Any way that we can actually bring more focus on what our passengers go through everyday is wonderful information for our crewmembers” (MIF)

There are, of course, some conflicting opinions. If performance data is made available will everyone actually take an interest in it? The DOM and DIF did not believe so.

“If you put something out you will have a certain amount that it will inspire. I would say it would be a small percentage...but those are the people who are already coming to work everyday and busting their hump...they are not the people who are going through the motions and don't care anyway - they're here to do a job and get paid” (DOM)

“I think over the years the company thinks that it has communicated that information reasonably well. But I think the company presumes...that the

employees are interested in these kind of things, which I don't think they are...I know they want the company to survive, but I don't think they read the charts on the board, I think it's too broad, too general" (DIF)

However, the opposite seemed to be true of the pilot group:

"The pilots will take a far larger interest in it than you might have thought that they would. There is some pride in what they do and there is an air of competition" (ACP2)

"Enough would look at it that it would make a difference and it would be a topic of conversation: word would get around. "Hey did you see what we did this week and did you see how good we did this week, and did you see how bad that storm impacted us last week"? Our livelihoods depend on us doing a good job and so I think giving guys a way to measure how good of a job we are doing would be beneficial" (ACP1)

A most enlightening comment was made by MCS who stated that it was the medium and method of sharing data that is perhaps more important. This was supported by others who were able to discern that performance information needs to be relevant and understandable to the flight crews:

"We spend our time talking about statistics and living them day-to-day because they make sense to us. Completion factor at 97% is a number that means something to us, but if you tell a crew member "Hey we had a 97% day" do you think they would think wow that's great, that's an 'A', or do you think they would think well that's not really good enough. Would it have meaning?" (MCS)

"I think if we were just to communicate to our flight attendant group that the goal is 89.2% in a particular area, and that Allegheny came in at 87%, I think several flight attendants would think, like I have all along, well that's pretty darn good, that's close to 89%, when really that's not good" (DIF)

"I think maybe if there was some way to really bring it down to a level where they can understand the consequences of not only what happened but also understand it from how our passengers perceive it. I think that would certainly be more powerful" (MIF)

The overwhelming lack of communication and ability to effectively share information prompted comments about secrecy:

“Part of it is [Name]. [Name] is incredibly secretive. The pilots have no idea. That’s another one of the major problems we have historically as an airline is we tend to keep things a secret far, far longer than they need to be” (ACP2)

“Part of that’s [Name (CEO)]. I’ve actually sat down in [Name (CEO’s)] office a couple of times when I need to put something out on a weekly update and said “look [Name], if they find out from us our credibility goes up. If they find out on Tuesday what they’re going to find out because it’s already on the internet from another source, our credibility goes down. We’re better off us putting this out publicly” (ACP2)

One particularly interesting aspect that emerged from several of the interviews was the discussion of how other prominent airline CEO’s might have handled the problems that Allegheny was facing with how to share information. Several of the interviewees were highly disappointed with what had been taking place at Allegheny with the cloak of secrecy and very little information being communicated. Discussions centred around Herb Kelleher at Southwest, Fred Smith at FedEx, David Neeleman at JetBlue, and Gordon Bethune at Continental, all of whom are well known in the US aviation industry:

“I think he (Neeleman) would have come out and said “okay this is disappointing news and here’s why it happened, but here’s where we see our company going, and here’s why it is, or is not, the end. Here’s how we’re trying to position ourselves” (ACP1)

“The first thing he’d probably do is walk up and down the halls and go “what the fuck? You people need to lighten up.”...I think the place would actually go into shock for a week. They just wouldn’t know what to do” (ACP2)

“The same way that Kelleher did at Southwest: there’s no secrets here, I want you people to know that good news is easy to share” (DT)

“I remember going to FedEx years ago, back in the mid-80s. Every month Fred Smith (CEO) put a video out that was made available throughout the company. There was a TV in this building and there was Fred Smith on it, and it was a

five-minute thing on how the company did that month, and it was Fred Smith saying it was a bad month -- packages were down, a couple of things we are trying next month. But everyone, even the wives and husbands, could actually see how this company is doing. I was so impressed with that, that someone would literally be willing to take five-minutes once a month and distribute out to anyone” (DT)

However, our CEO was not adopting any of these approaches and it was looked upon very poorly:

“[Name (CEO)] has mentioned it in the morning meetings after a good month recently a couple of times, but it would be nice if he put a formal letter out to each department that we could hang up and your people could see it. That means a lot coming from the CEO of the company, or should mean a lot. No, that's not happening” (DOM)

“It's been, what, two months now? And there hasn't been a communication. I understand what the reservations are for sending out that kind of communication. You know you set yourself up for people taking potshots” (ACP1)

I do my best when I'm online to try and tell the guys that management is working hard to make sure that they have a career here if they want it. But it's not the same hearing it from me as it would be hearing it from [Name (CEO)] himself saying “here is what I am doing” (ACP1)

“There is a tremendous cut-off those guys feel from this office and it fosters contempt. They feel pissed-off that we're neglecting them: we're not bothering to talk to them or we don't consult with them” (ACP2)

Communication is a vast and varied subject and at Allegheny it was obviously a major problem that was preventing the company from operating at its optimum. Many of the reasons for poor communication seemed to suggest that it was cultural and imbedded in the organisation not to openly share information. This company culture of locking away information seemed to not only affect performance but also the employees' general outlook and level of motivation and commitment, which was seen in the behaviours they displayed and the attitudes that they adopted.

4.6.9 Attitudes and Behaviours

A very forceful aspect during the interviews was that the interviewees voiced their opinions and concerns on the behaviours of others, and also the attitudes that either they themselves adopted or were being displayed by other people. The frustration and concern over Allegheny's situation was also manifesting itself in the crewmembers flying the line.

"Right now it looks like we're working towards an end, not long-term employment. And so I think the attitude contributes to that. Guys just don't take the job as seriously, in that regard, as they should. They're supposed to be at the airplane 35 minutes prior to departure on an originator (first flight of the day). They know that if they really hustle they can get there 20 minutes before, or even 15 minutes before, and they can still get it out on time, and even if it's not out on time, "well, it's within 5 or 10 minutes, I'll call it out on time and nobody will be any the wiser". And so, to their way of thinking, it doesn't damage anything. But, it does damage something, because any time passengers see crewmembers hustling like that, it doesn't create a professional image. And I think some things would be caught sooner, maintenance problems and things like that, would be caught sooner if everybody was as religious about getting to the airplane" (ACP1)

This speaks to the fact that employees need to feel that they are valued and that the company cares about them in order to keep motivation at an acceptable level.

"I remember talking to different pilots who have been here for years, much longer than I have, and they remember when we did simple things for recognition, such as birthday cards, or whenever somebody gets married. It is not a monetary gift, it's just something that's sent in the mail as a recognition. When those people realise that they work for a company that cares about them as individuals it makes a difference. It makes them want to perform better but with a lack of that, and I've heard others say that they missed that, because now they feel that they are a number and just a resource and therefore they are not willing to do more" (MCS)

"I don't know yet all the things you do to change attitudes. I think there needs to be a major attitude change on the part of employees. Right now employees

have an attitude that the company doesn't care, or doesn't care as much they had hoped it would. They don't see a light at the end of the tunnel, so to speak, that they're working towards something" (ACP1)

4.6.9.1 Demonstrated Attitudes

During the interviews certain attitudes emerged that seemed to characterise the culture at Allegheny during this difficult period. I have listed some of these particular examples below and the comments that they brought forth:

Apathy:

"Up to this point we've kind of taken the attitude that, well okay as long as we understand why the airplane was late" (ACP1)

Denial of performance results:

"I have to believe that somehow that it's a statistical anomaly, it's so much worse than anybody else. I can't imagine that our guys are that bad" (ACP2)

Resentment of other departments:

"That seems to be the attitude...we just cow-tow to these pilots in pay, and lack of discipline, in trying to do everything with harmony, and to a certain extent we do that with the flight attendant union too. But there is just this perception that you've got to work everything out with the pilot group, then the rest will fall in line, and flight attendants are a dime-a-dozen, but not the pilot group" (DIF)

Frustration:

"I made a comment in Human Resources one time that I felt the Maintenance department was the redheaded stepchild of the company because we're constantly being beat up verbally. And I was told that they beat up everybody like that" (DOM)

Inspiration:

"I would have to think the more that you put something out, you gonna have a certain amount that it will inspire. I don't know what that percentage that would be. I would say it would probably be a small percentage" (GMM)

Pride:

"For our flight attendant group there is no room for merit increases that's why I say: it's come to work, do the minimum job or the best job possible it's got to come from pride because it's not coming from maybe I'll get a raise" (DIF)

"When you're a supervisor you are judged on getting the planes out of the hangar and different other events. Well, their pay got predicated on a union scale, which meant their competitiveness goes away because they know that they're going to get a raise at a certain time, and so I don't think there's a real incentive except self pride" (GMM)

Professionalism

"The guys that slow airplanes down are in the minority. Most of our guys here do a really good job" (ACP1)

Lack of professionalism:

"Unfortunately, I had a seat right next to the rear galley of the aircraft and there was a lot of fiery discussions, a lot of profanity, a lot of unprofessionalism, and it was really pretty shocking because I'd never been exposed to anything like that by someone who was in a uniform as a very definite visible representative of the company behaving that way" (MIF)

Lack of incentive to do better:

"When you're dealing with the union, these guys know they're getting a raise two times a year, what dates they're getting a raise, and as long as they keep getting a pay check they think everything is just fine" (GMM)

“The compensation elements of the contract, clearly state that the longer it takes you to a fly from A to B, the more you're going to get paid for doing so” (ACP1)

4.6.9.2 Displayed Behaviours

The behaviours that people displayed were influenced not only by the ongoing crisis at Allegheny but also by aspects of their personal lives that inevitably played a role in how they conducted themselves. A very insightful comment was made by ACP2, which I think it is something that we can all relate to:

“All people bring their personalities to their jobs. I'm as bad or worse than anybody. All my personal defects come out every day when I show up here. It's inescapable” (ACP2)

This has a much larger bearing than perhaps we might initially think and our personalities govern how we communicate and work with others.

A mantra that is commonly repeated by many people as a method for conduct at work is “check your baggage at the door”, referring to the expectation that people should not bring their personal issues into the workplace and/or let them cloud their judgement. But, is it even possible not to bring these influences into the work place?

I have listed below some of the behaviours that were either exhibited by the interviewees or stemmed from my own observations during the interviews, along with the comments that were made:

Competitiveness:

“That had a direct impact on me. I surely did not want to be the Department that made us fail to meet the goal” (DIF)

“I don't want to get the competitiveness to the point where people are pushing planes out of the hanger just to push them out of the hangar either, because our goal is to put the best product we can on the gate in the morning, and a safe product for our customers, and I'm afraid if you get too competitive like that, people turn their head to things just for the competitiveness and put a plane

*that's not right on the gate. So you go to be a little careful with competitiveness”
(GMM)*

“I think the priority at the moment is that we are competing with half a dozen other airlines to be favourite by U.S. Airways in growth and survival” (ACP 2)

Complacency:

I've flown the line for years, I know what it's like. I was a fairly conscientious crewmember, but I was regarded as being probably more laid-back than most, and you would think those would be a contradiction, but they're not. As long as you get your butt out to the airplane and are ready to board 20 minutes before departure, it used to be 15 but now it's 20, you're golden, you're done. As long as you sign the paperwork and make sure you've got enough fuel and just do those simple things you have to do then everything else is simply beyond your control, and then just don't worry about it. If you can help out you do” (ACP 2)

Gossip:

*“I've never worked for a place like this. You have 350 pilots, one guy hears a rumour and within a day the whole pilot group knows. That's just unbelievable”
(ACP1)*

Fear:

“One of my goals coming into this office was to begin to try to change the culture of the flight department to make it more light-hearted and laid-back, to make it more fun, so people aren't intimidated when they come in the building, which they are now. People tip-toe through this hallway because they walk in fear” (ACP2)

Stress:

*“I would say probably the stress they have been under a lot lately, because of a lack of resources, because of decisions that have been made by other departments to even limit those resources further, and...recognition is not there”
(MCS)*

Motivation:

"The flight attendant gets paid the same amount of money whether she shows up late or shows up on time, or whether she does an above and beyond job on the airplane or she does a minimum" (DIF)

"I think there are some who really enjoy their job and when they enjoy their job they're just the type of person that's within their personality to want to do the very best they can and yet there are some, who by personality, only do what it takes to get by" (MCS)

"I think there's a good core of people that truly work hard on this, to make this airline perform, and I think we do" (DO)

Recognition:

"In order to run a good airline you've got to be able to have good resources and good people behind the scenes too, which goes back to the whole thing that a person needs to be recognised for the good that they do" (MCS)

Safety:

"The first and foremost thing is that we are in the business of moving passengers and then make sure we build safety on that concept" (DT)

"We have an active safety department, a good director of safety, who I think in my estimation is doing what is necessary to make the airline a safe place to work and operate" (DIF)

The theme of attitudes and behaviours was illuminating. Everyone had an attitude. Their consequent behaviours seemed to emanate from these attitudes and play an important role in how each individual was coping with the ongoing crisis. This topic evoked the most emotional responses from the employees and was obviously close to their heart. Not only were the behaviours displayed but, the interviewees were also able to discuss the behaviours of their colleagues and ascribe some significance to them. This created a much more sharply focussed awareness for me of how important they might be in the success of a PMR system. Being human beings we all exhibit

behaviours that are influenced by our experiences, but, it was uncertain at this stage whether the interviewees would readily adopt the behaviours necessary to truly engage with the PMR system.

4.6.10 Service Quality and Customer Service

Even with the introduction of the performance management system in the Flight Department it was still unclear what the level of service quality actually was, or indeed how to measure it. Many of the respondents explained performance in terms of passenger satisfaction but there was no provision in our company to periodically survey our passengers, nor was there any other way to gauge this unless you used our completion factor and on-time performance as indicators.

“A passenger’s image of our airline is directly on: did we leave the gate on time, did we get to our destination on time? Those are the two driving things. They bought a ticket to leave at a particular time and to arrive at a particular time, and you do anything short of that and you fail to fulfil their expectations. We can use that as a gauge to judge whether passengers are happy or not” (ACP 1)

But, these do not provide true insight to the passengers’ experiences even if the flight is on-time. How courteous were the gate agents and flight attendants, what was the cleanliness of the aircraft interior or bathroom? A true measure of customer satisfaction must be taken from the passengers themselves. However, in discussing the concept of PMR and its purpose, all interviewees expressed a lot of thoughts about customer service and satisfaction:

“That’s one thing that I don’t know if this company tracks, is customer satisfaction” (GMM)

“What makes an airline truly function well? It’s hard to say because...the friendliest people are at Southwest but they don’t have the best performance numbers. The best customer service numbers were produced by, strangely enough, US fucking Airways last year, which was the laughing stock of the airlines, as far as customer service was concerned, a couple of years ago” (ACP2)

“I think travellers are certainly much more sophisticated than they used to be, so I think to a certain extent the expectations are lower than they used to be, which may be more realistic for what the airline is really able to provide” (MIF)

“I think their expectations are that employees will handle themselves with a certain level of professionalism, that it will be a safe operation, and that there will be a reasonably high a level of reliability” (MIF)

“I would say we are focused on customer service, as well as we can be with the resources that we have” (DIF)

“I think it would be important for the employees to be more aware of how their decision affects the whole operation and how it affects the paying passenger on the other end” (MCS)

“I think a lot of times they don't think about the passenger...mechanics don't really realise, don't think about, how this whole operation works together to make things happen” (GMM)

“It comes down to: were you able to take him from point A to point B on time, arrive at the destination on time, were your people able to interact with the customer, make him happy, or her, happy? I think those, truly that's what we sell. We sell delivering you from point A to point B, and obviously the goal is did we do it on-time, did we do it to the best of our ability, and were our people well represented I guess?” (DO)

There were some issues that were identified as causing dysfunctional behaviour. A key example was highlighted by ACP1;

“That image is shattered when you get a call from a supervisor saying, “why were you late?” So they would rather falsify the times outbound than have to deal with a phone call from me” (ACP1)

One problem we endure during the summer months is that of aircraft cabins that do not get a chance to cool on very hot days.

“I was out flying last week and I got an airplane without an APU. The APU has been out for over 24 hours. My opinion is that in the middle of July if the APU fails it’s going into the maintenance hangar that night. It’s the most important thing on the fucking airplane in the middle of July and August. It’s absolutely inexcusable, inexcusable, that this airline could possibly subject it’s passengers to 105° temperatures. Unbelievable to me! Absolutely unbelievable! But they don’t want to do that because it screws with their numbers. So this is a case where by chasing the numbers they’re actually hurting the airline” (ACP2)

This highlights the problem that not all measures are necessarily in the best interests of the company. By striving to achieve a particular goal it must be understood that the primary concern is the customer. This message appears to be much more ingrained in the flight attendants and crew schedulers than it is in the pilots.

“I think a lot of the decisions made about passengers are made by conscientious schedulers and not necessarily by corporate dictates” (DT).

However many job functions are so far removed from the customer that it is easy to lose sight of the big picture. A mechanic working the night shift at a maintenance base never has an encounter with a passenger and, to a large extent, is out of touch with concepts of customer service and operations performance unless it is specifically communicated to him.

From my own perspective, whenever I travel now, I take a critical look at the entire operation and make a judgement based on my knowledge and experience of how well the airline has accomplished its mission to provide safe, comfortable and timely transportation.

4.6.11 Reaction to the Performance Measurement and Review System

There was universal agreement that the weekly performance review had been beneficial, educational, and had assisted in putting into perspective what was actually within the control of the Flight Department. Each interviewee was able to articulate their experiences with the PMR system in a largely positive fashion:

“I certainly think having an understanding of what other departments go through on a regular basis is helpful” (MIF)

"I would say it's been beneficial and an education for myself. I still think there's more that we could learn if others were willing to really participate" (MCS)

"Our meetings once a week I think are very valuable, because we get to interact, and get to talk about our delays and what's happened over the last week" (ACP1)

"I took a look at your slides and they were easy to read...before this system I would not have known if we were having a good week or not" (DIF).

I think the intent is good. I think the intent is to actually hold people accountable" (ACP2)

The focus that the PMR system put on specific delay codes helped some of the managers to identify areas within their control that had deficiencies:

"I think we've gained a lot of insight and I think the programme is working and I look at interesting things and identify crews late to the airplane, which is a major, major factor in our delays" (DO)

This simple determination would not have been as easily recognisable without some kind of focus being placed upon it.

"In looking back I was not empowered and I was more of an administrative person with somebody else calling the shots" (DIF)

"I would hope that what other managers take away from that is similar to what I have taken away myself in that I feel like I get to see performance within my own department and how my department is managed side-by-side with how other departments are managed" (MIF)

"I think the objective has been to help the crew members understand the effect of their actions on our statistics with the hope that they'll do better at their jobs" (DIF)

"I think some probably resent the additional scrutiny, in that it does require, frankly, some extra work on their part" (MIF)

“We take our tally sheet and post it as you do in the hallway there, and those that are interested stop and read it” (DOM)

“We spend so much time looking at the delays now, to try and pinpoint where our specific problems are within our specific departments” (ACP1)

I know for certain that somebody is actually paying attention. It's not just a machine rolling along and nobody notices” (ACP1)

Having had several months to engage with the PMR system it had given a sense of what might be achieved if they were committed to making it a success, and during this time the knowledge that had been gained was tremendous. Everyone who attended the weekly review had taken away a greater understanding of how the company operated and how other departments managed their resources. Even though there were sceptics, and communication remained a major problem, it still allowed a level of communication within the department that had not existed before.

4.6.12 Desired Outcomes of the PMR System

Having now positively engaged with the PMR system it became a logical step for the interviewees to express their desires for improvements and the eventual outcome of the PMR initiative:

“Well I would like to know the results, positive or negative, at whatever point it is being measured. And I would like to know, whatever it is we are measuring, what portion of it I own” (DIF)

“Ultimately I think we're looking for knowledge. To find where we're deficient, to find where we did really well, and see if we can't bring where we're deficient up to where we're doing really well” (DO)

“I would like to see more motivation for others to strive to want to do better. By realising what it is we are being measured on and then seeing where we lack, that will obviously cause motivation for people to take initiative to do more than they're doing now” (MCS)

"I would like to find another way, or other ways, to make our flight attendants feel that they are an important part of this airline... Make them feel good about themselves, because they don't feel good about themselves" (DIF)

There were also some good ideas put forward on how to accomplish these desires:

"What I think I would do is publish expectations for each particular position with the understanding that everybody knows what they are ahead of time, so there can be no confusion" (MCS)

"I think certainly having the performance measured in a little bit more public fashion maybe doesn't really allow certain problems to go unrecognised. It's good. A little peer pressure goes a long way" (MIF)

"I think the idea would be if that information was shared in a way, and compiled in a way, that was beneficial to everybody" (ACP1)

"If we're going to do this we need to have some meaningful codes" (ACP2)

"I would tend to think it would be very much like the Safety system. It would disseminate to the lowest levels of the company a certain amount of information. But, I think a performance system should give feedback all the way down in some form. I don't think any employee at the end of February in this company should have had any doubts how seriously the month impacted our company" (DT)

"I think if we were able to communicate the information and really disseminate it out to our pilots and flight attendants, but could maybe pluck out one particular instance, going into some pretty extreme detail, so that they can understand how that particular problem affected the passenger, I think it would probably carry a lot more weight" (MIF)

"I think the vast majority would ask themselves next time that they're swapping airplanes, or they're doing a quick turn, they'd say "if I leave five minutes late here I'm contributing towards that statistic that says we're twice as bad as Piedmont. I think it would be a good education for them to see exactly what those statistics are, and how they're justified" (ACP 1)

“I wish we could publish the numbers on a regular basis. The pilots have a far larger interest in it than you might have thought that they would. There is a pride in what they do and there is an air of competition” (ACP 2)

“Like head-starts (first flight of the day) - we communicate to these people how important they are, and why they're important and what our goals are and where we're at, and when we meet goals we let them know, and when we don't meet goals we put out numbers to them and say “this is unacceptable, what can we do?” We try to gain a partnership with our employees to say what can we do to make it better? What are we not doing here that we can't get these planes on the gate in the morning” (GMM)

In concluding this section, perhaps the following quote sums up the core desire for what people needed:

“I want the expectation to be clear as to what the company expects of me and what they are holding me accountable for” (DIF)

This simple, but unanswered, cry was at the heart of why performance measurement at Allegheny had not previously been given the attention it deserved by the managers and directors. They did not have a clear understanding of what was expected of them and consequently did not place much importance on actively engaging with the PMR system and making the review of performance data an integral part of their daily routine. They needed leadership and support to provide some cohesion, but it was sadly not in evidence.

4.7 Summary of Findings

The preceding discussions directly focused on the nature of performance measurement at Allegheny as expressed from the perspective of, and by, the managers and directors who were responsible for flight operations performance. It became apparent to me once I began analysing the data that there was such richness and depth to it that it would not be possible to provide its full content. Instead, I had to condense it into what was hopefully an insightful summary of the situation at Allegheny for these people. It was a traumatic time and people wanted to talk, not just about the questions I had

asked, but also about the prevailing state of the company and their futures. There was a great deal of anxiety and concern.

Hopefully, it will have provided the reader with unique insight to the problems and issues that existed at Allegheny during this period of time. Not all views were shared equally among the respondents of course, but there was an overwhelming sense of confusion with how they should operate within the pressing crisis and with the new PMR system. Many of the conclusions drawn from this cycle of research may now seem readily apparent to the reader, but it is important to note that these conclusions are also supported from my own intimate involvement in the events that took place around me.

In reflecting back on the interviews, the most vocal about his frustrations was ACP2. He was very willing to share his attitudes, beliefs and thoughts on any topic and did so with fervour and in a colourful fashion. The most careful in his responses was MIF who took time to consider the subject and formulate a thought-out response, rather than an emotional response. DT was on the periphery on the day-to-day operation and did not seem to relate to the subject matter quite as well as others, and MCS was at a loss on how to articulate some things. However, they were all quite willing to be involved and there was a sense that everyone genuinely wanted to help the company succeed, but they were not really sure how to do it.

Perhaps the best way to summarise the findings is to relate them back to the aims and objectives that were set forth at the commencement of this cycle of research. These were a sub-set of the overall objectives detailed in chapter three.

4.7.1 Design and Introduction of the PMR System

The first objective, with regard to the design and introduction of a performance measurement and review system, was achieved by the implementation of a PMR system within the Flight Department. This system was modelled loosely on the concept of a balanced scorecard, but was done so mainly as a means of using an already proven framework, rather than trying to adopt, or mimic, any particular BSC implementation. It allowed the measures to be grouped into definable categories that provided a balance within the system and helped us to look at operations performance from the perspectives of the customer, incurred cost, what we needed to excel at, and what we needed to improve. It was clear that the heart of the system was the weekly

review meeting that took place prior to the conference call with US Airways. I ran this meeting, which took the form of a presentation of the prior week's performance, with added insight and narrative on where performance fell short or exceeded goals. However, at this stage the review simply provided the variances from the goals rather corresponding reasons for why that was the case.

The implementation was also restricted to the Flight Department, rather than as a company-wide deployment, which did not allow the opportunity to specifically evaluate these experiences in the context of how other departments operated. It also prevented it from gaining widespread support. Leaders of the other departments attended the weekly US Airways conference call but not the Flight Department weekly PMR meeting.

When determining what to measure I initially settled on the most important metrics that provided an aggregate picture of operations performance plus a sub-set of measures for individual components within the internal processes that the managers needed to be aware of. The measures could not unfortunately be directly devised from the company's strategy, which is held up in the literature as the core of a PMR system {Bourne, 2005 #173} because there was not a defined and communicated strategic plan. Instead, they were developed around the central theme of increasing the airlines operational reliability to meet US Airway's expectations, which can be argued is a strategy in and of itself, but was not clearly defined or articulated.

The consensus in the literature suggests that by creating an awareness of the key determinants of performance, linking them to the company's strategy and vision, and assigning ownership and accountability for designated measures is expected to generate real and continual improvement (Kaplan and Norton 1992; Neely et al. 2000; Simons 2000). However, at Allegheny because there was not a clearly defined strategy that was being pursued by the management team it was unclear to everyone what the central thrust of the system was. This did not readily promote ownership and only a limited degree of actual accountability. However, the responses from the interviewees did suggest that they were getting some benefit from the PMR system, but it was lacking a clearly outlined central purpose that could guide and hone their efforts.

A contributing factor to this was undoubtedly the absence of the Vice President of the Flight Department who had been on secondment to a sister airline for the previous three months and as such there was not a recognised authority in the department other

than the CEO. Consequently, there was nobody holding the management team accountable, and nobody to set specific direction. The managers did attend the weekly reviews regularly but did so without being able to give a clear understanding of why performance may have fluctuated in a particular area, and there was not a substantial effort made in providing the details behind the delays.

Although the implementation was successful, perhaps a failure at the beginning of the programme was not to have allocated specific measures to individuals so that they would have some ownership of the process. The literature supports that the job of identifying accurate and applicable measures is enormously difficult and cannot be undertaken in isolation from those who operate within the system (Neely and Bourne 2000). It requires the collective knowledge of all functional departments involved to identify the key components of good performance and to ensure that goals are realistic and achievable. This is a lesson to take forward to the next cycle.

In establishing the PMR system my expectation was that it would encourage the stakeholders within the Flight Department to actively become involved with improving performance. Findings from the literature research also suggest that people will adopt behaviours and actions necessary to meet performance goals (Kaplan and Norton 1992), but the analysis of the data failed to find significant evidence that the introduction of the PMR system encouraged or forced people to adopt the behaviours and actions necessary to arrive at the goals. In this regard, it did facilitate a better engagement with operations performance but there was still an insufficient understanding of what to do with the data. It added perspective to the roles of the Flight Department managers and there was evidence of some improvement behaviour taken by some of the respondents, but it was largely superficial, and did not involve drilling down to the determinants of performance.

During the final stages of this first cycle when the PMR system was broadened by making a modified version of it available to all crewmembers online, it appeared to be mostly ignored. It was disappointing, and somewhat disconcerting for me to find, that over one month after the data had been made available, I had received just one item of feedback from a pilot who roundly criticised the validity of the data. His main concern was the inappropriate coding of delays by station agents that reflected poorly on the pilots. This problem was identified during the interviews and was acknowledged by all as a potential failure in the delay coding system and the cause of behaviour that sought to pass blame to others. By providing performance data online to the crewmembers it

was hoped that it would stimulate ownership by the crewmembers for the measures that they had influence over, but at the time of writing this was not the case.

An explanation for this is that the data that was made available to the crewmembers represented the performance of the entire airline and included all delays and cancellations whether or not the crewmembers had any direct influence over them. A serious consideration for improvement is to limit this information to just the delays and cancellations that are controllable by the Flight Department. This may bring more perceived legitimacy to the process.

In an ideal situation the design of a performance review process should try to harness the knowledge and expertise that exists within a company and in doing so try to break down functional barriers and allow the managers to act as a team of professionals, intent on pursuing performance excellence. Unfortunately, the evidence from this implementation showed that it was far from the case and that barriers were in existence that inhibited the effectiveness of the system

4.7.2 Understanding Operations Performance Measurement

Secondly, in understanding how my colleagues, the interviewees, understood how performance measurement was practised at Allegheny, the extensive results in the preceding sections indicated that overall there was a fundamental lack of knowledge regarding the measurement and interpretation of operations performance. It was actually quite alarming for me to learn how much my colleagues did not know, and how unstructured the company was with regard to guidelines and objectives with operations performance. There was an unspoken and fundamental notion for everyone to perform well everyday but not a common method by which to do it

The intention was for the system to encourage people to think beyond just the results and to consider the causes (Fitzgerald et al. 1991). However, it became obvious quite early in the process that simply designing and implementing a system was insufficient without a significant investment of time in educating and nurturing the managers and directors in how to use it properly. It did not by itself, in this particular instance, promote the required behaviours necessary to meet goals. This was largely because there was not a corresponding strategy at the heart of the system that people could identify with, or commit to following. Indeed, there was no espoused strategy at all and this led to confusion.

It was also evident that we did not consider the measurement of operations performance as a critical success factor for the airline and therefore did not place sufficient importance upon it. Our day-to-day activities were not driven by performance nor was there a desire for continuous improvement. Indeed, it was a very short-term focus and our processes were not modified or altered based on the results of performance measures.

The most frequently discussed topic was that of communication. It was evident that there was not a lot of good communication taking place and this tended to foster contempt. Communication was not only poor across departments but also within the Flight Department and by extension to the crewmembers. The CEO was singled out as the main culprit and certainly the one who had the responsibility for the company's culture. It was not surprising to learn that many people had adopted the attitude that the company did not care about them. There was nothing to work towards and the CEO was not communicating with the workforce. These attitudes manifested themselves in a variety of different behaviours, including denial of performance results, resentment of other departments, resentment of other carriers, anxiety, stress, fear, frustration, a lack of ownership and a complete loss of inspiration. However, not everything was as negative as it outwardly appeared. Despite these conditions there was still an inherent and pervasive pride and professionalism that some people took in their work.

Even though there was a fair understanding of what performance management meant to the interviewees there was not a collaborative effort that brought everyone together to collectively analyse the determinants of performance. All too often people rushed to apply a temporary 'band-aid' fix to a problem without truly taking the time and initiative to examine the deeper issues and thus comprehend how to make a lasting and permanent change. This was a fundamental problem and driven largely by a lack of resources. It was easier to talk about the theory than it was to put it into practice and many of the managers just flowed from day to day believing they were making a difference.

4.7.3 Engaging with the New PMR Process

The third objective was to evaluate how the managers and directors engaged with the new PMR process. The evidence suggests that there was universal agreement amongst the interviewees that the PMR system was beneficial and educational and it helped some managers to identify areas within their control that had deficiencies. Of

particular interest were the expressed desires for the outcome of the PMR system which included: clear results, clear expectations and consequences, make people feel important, and to communicate good results, when they happen, to all levels of the company. This obviously suggests that there was still a lot of work to do at Allegheny with the PMR system.

Although the interviewees had a fair idea about the general purpose of performance measurement, they did not seem to practise it in their actions or daily routines. The weekly review meeting was successful in bringing everyone together but the action seemed to stop there. During the interviews, everyone agreed that performance should be measured, but how much of this was simply an attitude that they wanted to convey to me to sound good was unclear. Their consequent behaviours did not readily align with these expressed attitudes. Despite agreeing that performance should be measured they were uncertain on how to manage the performance results and what direction to take. This stemmed from a lack of leadership within the department and especially from the CEO, who was mostly absent during the weekly conference calls. This lack of direction and the very real lack of knowledge and understanding of PM resulted in an uncommitted response. Problems would be addressed if they became big enough, but nobody was anticipating them or taking ownership.

One of the more important and undermining factors was that Allegheny was compared with the other US Airways Express carriers even though their geographical operating areas were significantly different. This led people to believe that they were being held to an unattainable standard. The goals were not considered to be realistic and achievable and there were no incentives or consequences for the individuals. Accountability led to blame and a deterioration in teamwork that was already tenuous. The focus of attention became the coding of delays and who to point the finger at, rather than investigating the entire process to see if fundamental improvements could be made to prevent problems from recurring.

It was evident that great improvement needed to be made internally on how we communicated and disseminated information about performance. There was also an apparent lack of teamwork that was characterised by each department functioning separately without a cohesive bond, and with some animosity and unwillingness to address core issues. Our department was also hindered by a serious lack of leadership and virtually no accountability for the measures in place. All are fundamental to a successful PM programme.

An intrinsic objective of the PMR system was to identify and improve internal services in order to consequently improve service quality. In this instance the investigation of how performance was understood and practiced at Allegheny supports Vandermerwe and Gilberts (Vandermerwe and Gilbert 1991) findings that internal services fall short of user requirements and lead to a perceived gap between service users needs and the service providers performance. This was evident from discussions surrounding the needs of the passengers and the managers' largely unilluminated understanding of what the customers need and how to provide that level of service.

Curiously, considering that all of our efforts were to produce a service, there was not a good understanding of what the service quality was. There was no provision to measure it even though the interviewees were able to identify that the ultimate goal was passenger satisfaction. In this case, the crude measure of passenger satisfaction was whether or not we were able to operate the flight on-time, rather than a measure taken directly from the passenger. There were simply no resources, or motivation to want to conduct passenger surveys. Part of the reason for that was the passengers technically belonged to US Airways and Allegheny was simply providing a service for US Airways. It was also apparent in our organisation that knowledge gaps existed that prevented a superior service from being offered. These gaps were evident in the inability to know what to do with the performance results along with the lack of measures of customer service from the passenger's standpoint. There was also evidence of dysfunctional behaviour where aircraft would be operated on hot days with inoperative cooling systems, thus inconveniencing the passenger, but achieving a performance goal of operating the flight.

With the introduction of the performance measurement system and the presentation of new, less obvious measures, there was some awakening to the problems that were inherent in our operation, but unfortunately, there was still a largely uninformed view of performance measurement.

4.7.4 The Culture at Allegheny

The third objective was to evaluate the culture at Allegheny. The evidence from the content analysis shows that the overall culture was characterised by poor communication, lack of support, blame, and the dysfunctional behaviour of people chasing numbers to avoid being seen as the cause of flight delays, without really attempting to modify behaviour by identifying the true cause and effect of the problems.

There was a lack of instinctively knowing what to measure and why, and then what to do with that information once it was collected.

The ongoing crisis had affected everyone to varying degrees and the overall impact on people seemed to be negative. The CEO was not providing any inspiration, comfort or support to his workforce and people were feeling isolated and abandoned. This was evident in the attitudes and behaviours adopted by the management team.

It was unfortunate, but the culture could further be described as sad, depressing, and uninspiring. In order to have promoted a cultural shift to embrace performance initiatives a leadership change would have needed to occur, but this was almost certainly not going to happen.

4.7.5 Further Work

The fourth and final objective was to identify ideas for further work and improvement based on the research outcomes. This was achieved by identifying and uncovering the fundamental problems within Allegheny that the PMR system, and associated data-gathering, had surfaced. In this regard it was plain that more time was needed to allow everyone to better understand the cause and effect linkages in the performance data and to grasp where they could make a discernable difference.

The main areas to be addressed as enhancements to the PMR system include the need to be more customer orientated by better communicating performance shortfalls to the pilots and flight attendants so that they could see the full ramifications of delays and cancellations. Additionally, communication between departments and communication to the workforce needs to be substantially improved but it must carry with it a sense of support and encouragement rather than the intent to pass blame. This should be accomplished by providing more context to the performance issues and create a better awareness of the cascading nature of flight delays and be coupled with a concerted effort to promote teamwork and collaboration. This can only be accomplished if there is a greater degree of accountability being practised by senior level managers and an acceptance that controlling performance results are an intrinsic requirement of each managers and directors role. The focus should be on the controllable aspects of performance and there should be expectations established that are designed to promote ownership of measures.

These findings for areas of improvement will inform the changes to be made during the next cycle of research.

4.7.6 Conclusion

The introduction of the PMR system and the management team's response and behaviours towards it enabled a better understanding of the airline's operational performance. It had not, at this stage, provided full enlightenment of how to improve performance but it was the start of getting people to engage and ask questions. However, the primary goal of any PMR system should be to seek improvement and without realising such a goal it is just a reporting system that informs rather than influences behaviours and decisions. Indeed, it was the resultant attitudes and behaviours, that were heavily influenced by the ongoing crisis that limited the PMR system from being more effective.

During the interviews, strategy, as a specific subject matter, was curiously not discussed at all, but lengthy discussions surrounding guidance, direction and support have shown that there was no real strategy in operation or a central mission that could be clearly articulated by anyone. This seems to be a fundamental flaw for a service company, and even more so given that the directors should be part of formulating and communicating a company's strategy.

A significant finding was that the attitudes and behaviours of the managers appeared to be deeply ingrained in their approach to the PMR system. A greater emphasis needs to be placed on the attitudes and behaviours of the people who are expected to work with the PMR system to produce the results that are desired. This will require a deeper understanding of how they need to be nurtured and moulded.

This is where my research began to take sharper focus and I narrowed my view to that of the attitudes held by the managers and the respective behaviours that they demonstrated. All of the interviews were infused with attitudes, however, we know from Aronson (Aronson 2004) that expressed attitudes do not mean that these will be translated into corresponding behaviours and one of the fundamental expectations of a PMR system is that the users will adopt whatever behaviours are necessary to meet the goals (Kaplan and Norton 1992). Does this notion actually hold water? In the next cycle I will turn my attention to how my colleagues viewed the attitudes and behaviours of their peers as they continued to interact with the PMR system.

4.8 Personal Reflections on the First Cycle

Looking back on the whole process it now seems simply insufficient and misguided to introduce a performance measurement programme and involve people in a review process without first considering, and providing, the structure and support necessary to hold them personally accountable for the measures that fell within their control. I had not even imagined that there was such a fundamental lack of understanding of the components that comprise overall operations performance. This was startling to me and made me realise that my efforts at introducing a PMR system would need to be much more concerned with educating the management team on cause and effect linkages and also to provide encouragement and inspiration. The fact that there was not a discernable strategy, or even individual strategies that the directors developed, was a further indication of the enormity of the problem at Allegheny. It would not be a simple undertaking to correct this.

In a similar vein, it would have been better to have had discussions with the managers to gauge their overall level of knowledge and understanding of performance before introducing the system. This would have highlighted the need to provide training and education. I also learned quite quickly that it is of paramount importance that senior management buys into the system and provides strong leadership to ensure positive communication and to sustain commitment to the goals. This was obviously not the case at Allegheny and it was discouraging to feel that there was little demonstrable support from the CEO for all of the efforts that were being undertaken.

For a PMR system to be truly effective probing questions should have been asked that challenged everyone to drill down to the determinants of performance and to stimulate a reaction to develop and design methods to increase the value proposition we made to our customer. This is not what we experienced at Allegheny. Without this, it was simply a review process, and it failed to get to the heart of the issues and ultimately fell short of providing any kind of transformational change. People would attend the meetings because they had to, but would look at the slides with no real insight to what was driving the performance results.

Regrettably, a lack of any effective communication led to apathy and the inability to motivate oneself to fix the problems. Even in the climate we found ourselves in it should have been possible to motivate people provided there had been leadership, support and involvement of senior management, all of which were sadly lacking. It was

not through having mediocre personnel as there were some extremely capable people on the staff who had perhaps given up the willingness to go above and beyond and had settled for the path of least resistance.

In order to successfully reach out to these sceptics a fundamental shift in culture may need to take place. Unfortunately, this would need to come from the top because much of the data thus far has indicated that is where the problem lay. While we continued to operate in a micro-managed environment, where individual managers were unable to truly do their jobs with authority, it was unlikely that a shift in culture would ensue. Additionally, the level of frustration and lack of interest that was already present would eventually take its toll as the airline began to shrink during the next year and resulted in a further decline in morale. With an unknown future, the ability to effect change would undoubtedly be dampened. However, by chipping away at the foundations I believed it would be possible, at the very least, to educate people on performance measurement and perhaps enable a mechanism to address some of the performance issues that were identified as being deficient.

A sad sense of loss and defeat, and perhaps resignation to the inevitable decline and potential demise of Allegheny, made it very difficult for some to engage with a PMR system that did not seem to provide much help to them:

"[dejected] What does it mean after PSA was offered all them Jets. How can you sit here and say 90 anything, because with their numbers, they couldn't compete with us. So what does it mean, I don't know...that's US Air!" (DOM)

When it came time to decipher the interview transcripts I initially coded the data to very specific themes which yielded an enormous number of codes. On reflection it might have been better to do this within broader categories rather than go through the laborious process of having to rationalise and combine them.

The interviews were quite long and infused with each individual's personality. Perhaps most notable for me during the interview process, because I was exposed to the raw responses from the interviewees, were the attitudes displayed and conveyed by the respondents. This aspect of the research triggered something in me that prompted a desire to learn more about how people reacted to an imposed PMR system and whether their attitudes and behaviours could significantly affect the outcome. I found myself empathising with their situations because I too was feeling the pressure from

US Airways and the feeling of being somewhat helpless to make a significant difference.

4.8.1 Looking Forward to the Second Cycle

The second cycle commenced in October 2003 and was this time aimed at improving the PMR system and more importantly further understanding the attitudes and behaviours of the Flight Operations management group to the measurement of operations performance. However, at this time I was becoming quite concerned about our outlook...

“I enter into the second cycle with a little trepidation and anxiety because I fear that these results may only serve to further underline the lack of interest that I see being taken in truly making a difference at our airline, a lack of interest that is driven by the fear of the company being merged, or completely shut down. Everyone is very concerned, myself included” (my research journal)

4.9 Summary

This chapter has described the first cycle of the research project and explained the conditions of crisis surrounding Allegheny Airlines. It has also described the introduction of the PMR system and how it was designed and implemented, along with a comprehensive examination of how the measurement of operations performance was used and understood by the management of the Flight Department. It has drawn a picture of a distressing culture and mood that was prevalent in the airline and how this in turn impacted each individual by having an overall negative effect upon their ability and motivation to accomplish their jobs.

It has uncovered that before the introduction of the weekly department performance review that the measurement of performance was not truly practised, nor understood and that there was little true appreciation of the determinants of the performance results. It has further shown in this particular case that education and knowledge are a prerequisite for a successful PMR system.

This cycle became formative in developing the research focus and represented a very significant first step in shaping the full research project.

5. CYCLE 2: ATTITUDES AND BEHAVIOURS AT ALLEGHENY AIRLINES

This chapter provides a detailed review of the investigative process during the second cycle of research. It describes the Repertory Grid method of gathering data and illustrates the various methods of analysis that were used. The findings from the first cycle have served to alter the frame of reference of the research to that of the attitudes and behaviours displayed by the managers towards the PMR system.

5.1 Introduction

The second cycle took place during 2004 as an extension of the work already undertaken and was designed to expand upon what had already been learned. During the first cycle, I had gained a better understanding of how operations performance was measured, understood and practised at Allegheny. In this cycle, I have turned my attention, and therefore the frame of reference, to the attitudes and behaviours of the managers and directors impacted by the PMR system and the state of crisis. This was done because a significant realisation from the analysis of the first cycle interviews was that the managers' attitudes and behaviours appeared to be negatively influenced by the state of crisis occurring around them. This in turn had an impact on their engagement with the PMR system, which was not, as of yet, resulting in the actions necessary to produce improvement and meet goals. Changing the frame of reference is part of the initially fuzzy process of Action Research, which over time leads the researcher to more clearly define the problem under study (Dick 1993).

A significant amount of time had passed (12 months) since the last formal round of data collection and this had provided an opportunity to not only further consider the results from the first cycle, but also to investigate how the managers viewed each other as participants in a collaborative process. It was during this time that I was introduced to the work of Andre de Waal and his examination of attitudes and behaviours to performance management in the Netherlands (De Waal 2002; De Waal 2003a). This was previously a little-researched area and DeWaal was able to determine that behavioural factors "seem to be important to the successful implementation and use of

a performance management system (p.694). This cycle therefore uses de Waal's work to inform the research and as a source from which to compare the emergent attitudes and behaviours at Allegheny.

5.2 Purpose and Objectives

The second cycle followed the same sequential AR process that was used in cycle one, which was to: define the problem, plan action, take action, evaluate the action, and then reflect back on the action taken. In order to establish the purpose and objectives of this cycle of research it was important to complete the first two steps in the AR process, which were to define the problem, and then plan action.

This cycle initially involved modifying the PMR system to account for the knowledge gained during the first cycle. One of the key findings from the implementation of the PMR system was that it was poorly communicated and that insufficient education had been given to the managers on how to use it and make sense of the results. Therefore, the first step would be to modify the PMR system and provide a greater level of guidance and training. This meant that the initial priority was to educate the managers and directors on how to interpret the performance data, how to identify the root cause of performance deficiencies, and how the key metrics were devised, measured, and presented. Of further interest was the declining morale and the associated attitudes and behaviours of the managers that emerged during the interviews, which seemed to have a profound effect on the success of the PMR system. It was hypothesised that the state of crisis had an impact on this, and that it warranted further investigation. For that reason, the primary purpose of the second cycle of research was to identify the attitudes and behaviours of the management team and then make an assessment on whether they were being displayed in a positive or negative way, and then to further examine whether the ongoing crisis was affecting them as they engaged with the modified PMR system. Once these problems had been defined, the next step was to plan the action to be taken, which involved some thought into how to adequately modify the PMR system, and then what method to use to examine what effect the crisis was having on the managers.

The table below lays out the procedural steps in the same fashion as in the first cycle.

AR Procedural Steps

Action for Cycle Two

-
- | | |
|---------------------------|---|
| 1. Determine the problem: | Morale suffering due to an implied threat to merge Allegheny Airlines with Piedmont Airlines and a desire to know what effect the crisis was having on the managers |
|---------------------------|---|
-
- | | |
|-----------------|--|
| 2. Plan action: | Set objectives. Determine changes to make to the PMR system to account for knowledge gained in first cycle and change the frame of reference to examine attitudes and behaviours of Flight Department managers and directors |
|-----------------|--|
-
- | | |
|-----------------|---|
| 3. Take action: | Modify PMR system and conduct Repertory Grid interviews with the managers and directors |
|-----------------|---|
-
- | | |
|--------------------------|---|
| 4. Evaluate and analyse: | Use descriptive analysis, relationship analysis and content analysis of the repertory grids to make sense of the findings and identify behaviours |
|--------------------------|---|
-
- | | |
|-----------------------------|--|
| 5. Reflect on action taken: | Personal reflections on the second cycle |
|-----------------------------|--|
-

In order to achieve this work plan and the aim of this cycle of research the following sub-set of objectives were devised:

- 1) Modify and refine the previously introduced PMR system
- 2) Identify the attitudes and behaviours of managers towards the measurement of operations performance by conducting repertory grid interviews
- 3) Evaluate what effect the state of crisis had on the managers attitudes and behaviours towards the measurement of operations performance
- 4) Compare the findings at Allegheny to de Waal's research

This cycle of research and action is depicted visually below and shows re-engaging with the work situation, further defining the problem, planning action, taking action, and then reflecting upon the action taken.

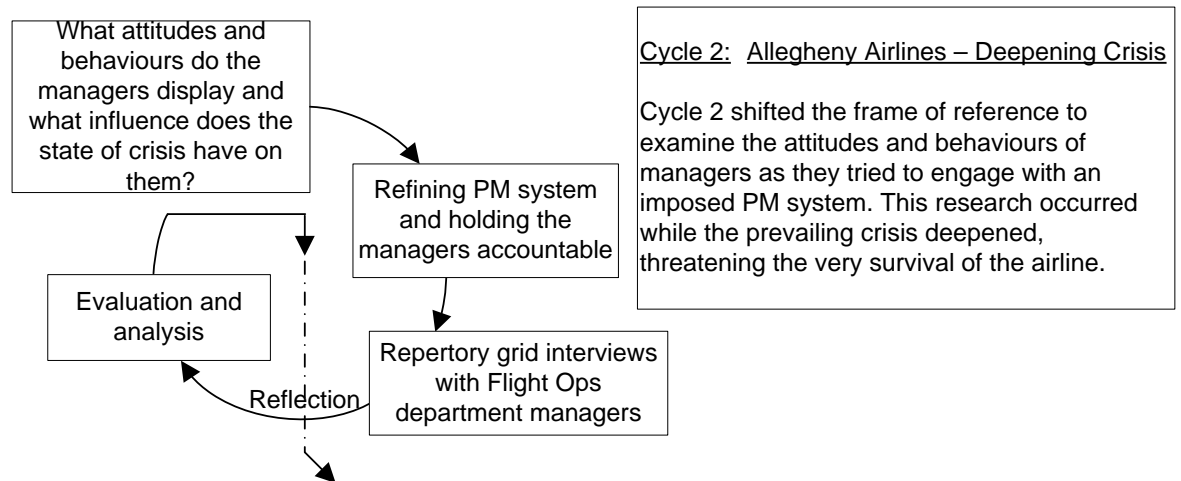


Figure 5-1 Diagram of 2nd Cycle Events

5.3 Modifying the PMR System

The main findings from the first cycle suggested that in order to make the weekly PMR system more effective there needed to be a greater understanding of what is measured and how it is measured, and more importantly how to drill down to the causes of performance rather than just to identify that a variance exists. Additionally, the codes used to analyse delays needed to be meaningful, and performance information should be communicated to a larger audience by publishing weekly results so that other employees could view them. This should also provide the opportunity to highlight when performance is good so that some pride can be taken. The system should also have clear expectations.

In order to address these I began to provide performance data to the managers during the course of the week and also prior to the weekly review meeting so that they had an opportunity to study it and decide whether they needed to research any particular performance shortfalls. This encouraged the managers to prepare for the weekly

department review and to ask themselves, ahead of time, what questions US Airways might have.

Another important change was to require each performance metric owner to personally speak about the performance in their area and provide explanations. This was required even if the performance was above goal. The intention was to create an awareness of the performance drivers so that the manager could more fully engage with the charts and graphs. I also insisted that we discuss and explain any delay or cancellation that was considered to be 'controllable', or avoidable. This was designed as an attempt to create a sense of responsibility and ownership and to generate an overall discussion and summary of the previous week's performance.

As time went by I also encouraged other directors to compile and present the weekly performance review. This forced the managers to understand the data and make an assessment of what it was telling them because they would have to talk about it with degree of self-assurance. This was not easy to do for some and they struggled with trying to make sense of things. Some refused to do it, but it was not mandatory. Many performance shortfalls were dependent on other factors and it was hard for people to identify and understand the linkages and dependencies between them.

Once the PMR system had been modified it was then logical once again to broaden the charts and graphs to a wider audience. This was accomplished by making the operations performance data available to the crewmembers online at a dedicated web page on the company's web site. I then took this a step further by measuring and publishing on-time performance by each crewmember. A finding from the first cycle was that there were no incentives. I argued for and received approval to provide an incentive to our front line pilots and flight attendants to receive an award for being the most on-time performers each week and each month. The monthly winners all received a day off work at their choosing.

5.4 Adopting Repertory Grids

During the first cycle of research, I was a little dissatisfied with the method of coding and analysing the data. Conducting interviews was a very informative, rewarding and rich experience but the subsequent coding and sense-making was a little arduous and left me wondering how to improve on this process and introduce a greater degree of

structure that would make sense to me. I was mindful of the fact that it is important for the researcher to use methods of analysis that suit the purpose to which they intend to put them (Denscombe 2007). This led me to examine the repertory grid technique and to assess whether it would be applicable to my situation. In desiring a method of gathering data that had more structure to it, I was able to come to a relatively quick conclusion that indeed the repertory grid method was not only suitable, but would also allow me to feel more at ease with the structure that it provided. It would allow sufficient latitude for delving into relevant issues and extracting the true meaning of someone's personal constructs. I therefore made the decision to proceed with a second round of interviews but this time using the repertory grid technique.

During this period, the airline had entered a very difficult stage in its history. US Airways had already implied that Allegheny Airlines might merge with another carrier and this had created a high degree of concern and discomfort among all employees. Consequently the repertory grid interviews were conducted in the full knowledge that those involved were caught in a work crisis, and almost certainly a personal crisis, as the future of the company, and of course every individual, was unknown and at stake.

5.4.1 The Interviews

The interview group essentially represented the same sample group that participated in the first cycle with a few changes: one of the Assistant Chief Pilots was not able to participate but he was still used as an element in the construct elicitation. The Director of Maintenance was not able to participate. His role in the research was replaced with the Manager of Dispatch. The Manager of In-Flight left the company in response to the ongoing crisis and was replaced by a colleague who participates here as the new Manager of In-Flight. The interviews were conducted with the list of people depicted in Table 5-1 below, and followed a standard repertory grid elicitation method as described in Chapter Three. I have used repertory grids in this context to examine the attitudes, behaviours and relationships between this diverse group of managers, and to learn how they construed their experiences with the PMR system.

Table 5-1 List of interviewees - Cycle 2

<u>Position</u>	<u>Abbreviation</u>	<u>Department</u>
Asst Chief Pilot 1	ACP1	Flight Operations
Director of Operations	DO	Flight Operations
Director of In-Flight	DIF	In-Flight
Director of Training	DT	Crew Training
Manager of Crew Scheduling	MCS	OCC
Manager of In-Flight	MIF	OCC
Manager of Dispatch	MD	OCC

Following completion of the interviews the individual grids were reproduced in Rep IV and Excel spreadsheets to allow additional analysis. The following section describes the analysis techniques used and discusses the interim results that they yielded.

5.4.2 Analysis Techniques

Several analysis techniques were employed to make sense of the repertory grid data. These consisted of:

A. Descriptive analysis techniques:

Step 1 Process analysis

Step 2 Eyeball analysis

Step 3 Construct characterisation

B. Relationship analysis techniques:

Step 4 Cluster analysis – elements

C. Multiple grid content analysis:

Step 5 Bootstrapping

The mechanics behind these techniques are described and discussed in detail in Chapter Three, but some pertinent points have been repeated here to aid the illustration of the analyses that follows.

5.5 Descriptive Analysis

During the preliminary analysis of each grid three steps were taken to ensure familiarity with the grid content. These are qualitative in nature and descriptive of the grid process and elicitation methods, which in turn enables the interviewer to get to grips with the content of each grid.

Initially all grids were analysed as individual grids in order to understand how each interviewee related to the subject. However, when there are multiple grids we need to analyse them together to gain an overall meaning. This was accomplished by a method of content analysis known as bootstrapping, which is described in section 5.8.

Appendix B contains the individual grids of each manager and director who took part in this cycle of data gathering, and the results of the analysis techniques used. Below I have used the analysis for the Director of In-Flight to illustrate how these procedures work. I feel that it is important for the reader to see this method in action in order to better understand the results.

5.5.1 Process Analysis Illustrated

The first step is a “process” analysis, in which the interviewer thinks back to the interview itself and how it was conducted. The topic in question is considered and the interviewee’s reaction to it is noted.

Below is the process analysis of the grid for the Director of In-Flight: The rating scale used was from 1 to 5. The emergent pole is on the left-hand side of the grid and the implicit pole is on the right. If the interviewee considered the element to be rated strongly on the emergent pole for a particular construct then they would indicate a

rating of '1' or a '2'. If the element was rated on the implicit pole then a rating of '4' or '5' is given. Anything that was central would be rated as '3'.

"I don't care" attitude - poor work ethic	1	3	4	5	3	5	3	3	Conscientious - wants the airline to look good - good work ethic
Less interested but fulfils job requirements, not motivated	1	3	4	5	3	3	3	3	More interested in airline performance - motivated
Still follows the rules - enforces policy as normal	4	3	3	1	3	1	1	1	More lenient to crewmembers - willing to look the other way
Still embraces issues and problems as they arise	5	2	2	1	2	1	1	1	"It's a Piedmont problem" - wants to push problems away
Management should run airline not union	2	3	3	1	2	1	2	1	Union should have greater influence
Management mentality - has global picture	3	3	4	1	2	1	2	1	Crewmember mentality - individual view, does not have global picture
Excellent communicator	4	3	2	2	3	2	4	2	Poor communicator
Will see it out to the end	1	3	4	4	2	5	1	3	Will leave at first good opportunity
Career - concerned about airline performance because of time invested, loyalty	3	2	2	1	2	4	4	1	Just a job, not that concerned with future of company - less loyal
Men should run the airline-females less competent (suggestions not taken seriously)	3	3	3	3	4	5	5	5	Believe females should be allowed to run airline
Less creative, more likely to limit thinking on improvements	2	3	5	5	3	4	3	2	More creative - thinks outside the box
Crewmember background - good appreciation of operational issues	3	1	1	3	3	4	1	2	No flight experience - little appreciation of true operational issues
Realist - looks at the negativity - accepts things as they are	1	3	4	5	2	3	3	5	Looks at the positive, makes light of things, sees the good - optimist

Figure 5-2 A Completed Repertory Grid: DIF

Step 1: Process Analysis

Topic (behavioural reactions to the measurement of operations performance)

DIF was very interested in taking part in this process and was genuinely willing to learn about repertory grids and the topic under scrutiny, and consequently she approached the interview in a very positive manner. She was in agreement that the subject warranted investigation, intrigued by the approach of looking at attitudes and behaviours, and was curious to learn how I was intending to make sense of each manager's role in performance management.

Elements

DIF considered the list of elements acceptable and appropriate because it included all of the managers and directors in the Flight Operations department who are involved with performance management. An interesting aspect of this is that the list of elements also included a "self", which served to provide the interviewee with further opportunity for introspection when rating the elements on a construct, or when presented with a triad containing "self". This was quite

enlightening for DIF who began very quickly to see everyone in relation to herself as she proceeded to develop and rate the constructs.

Constructs

The qualifying phrase, which was to consider the behavioural reactions of the other managers, was received well and served as a useful reminder during the elicitation process to ensure that the responses remained focused on the topic of the PMR system. There was a willingness from DIF to develop constructs and they flowed relatively easily once a level of comfort was reached.

Ratings

The rating procedure was straightforward and sensible to DIF. She was able to readily place each element at a distinct point on the scale and she avoided a central tendency by trying to be as objective as she could. This process was thought provoking for her and she was careful with her designations.

General

Overall, this was a positive experience for both DIF and me. She was able to provide 13 constructs that relevantly dealt with the topic in question.

5.5.1.1 Interim Findings of Process Analysis

After conducting a process analysis on each repertory grid I was able to draw some preliminary findings. These showed that all interviewees with the exception of DO were able to engage positively with the repertory grid process. Additionally, all of the participants, again with the exception of DO, were willing to discuss the performance measurement process at Allegheny, and their observations of how their colleagues interacted with it.

Interestingly, there was general agreement that the subject of attitudes and behaviours was poignant, and they recognised that the way they behaved had a lot to do with their inner level of contentment, or anxiety, with what was going on around them. Additionally, everyone considered that the list of elements was acceptable, appropriate and sufficiently comprehensive. There were no voiced concerns that anybody had been

omitted, or that someone was included who should not have been. The rating system was considered easy to understand and intuitive enough for all of the interviewees to easily rate the elements.

However, developing bi-polar constructs was initially difficult for three of the respondents (MCS, DO and ACP 1) but they were able to get to grips with it after producing a few constructs and further understanding the opposing nature of them, after which the whole process made more sense to them.

Only one interviewee, the DO, did not really engage with the process and gave very little thought to it, even though he was a willing participant. During elicitation, I constantly had to explain to him what to do and keep him focused on the topic. The concept of a repertory grid did not make much sense to him at all and he became reluctant to develop his constructs. His reaction was starkly different to everyone else and can perhaps be explained by the fact that he was suffering personally more than the others with significant concerns over his future and an innate feeling of helplessness. He had been with Allegheny for many years and was himself looking towards retirement within the next 5-10 years. The crisis was causing him a great deal of anxiety and may have led him to disengage and feel that he was powerless to do anything about it.

Nobody had any difficulty with the topic of the interview, but I did have to repeat it several times for some of the interviewees in order to keep them focused on the attitudes and behaviours of their colleagues. There was a tendency amongst most of the interviewees to wander away from this specific topic. The overall responses of the interviewees are summarised below:

- DIF – Very interested and willing to learn – a positive experience for both of us
- MD – Willing to participate, but indifferent to the subject
- DT – Enthusiastic, positive and very interested
- MIF – Greeted the topic with some curiosity and a little scepticism
- MCS – Initially had difficulty grasping the concept but soon caught on
- ACP1 – Very willing, but initially had difficulty developing constructs
- DO – Willing, but the process did not make sense to him. There were many moments of long thought and emotional responses

These observations provided an encouraging preliminary overview of how the interviewees engaged with the construct elicitation procedure, and gave insight to their disposition toward the topic of attitudes and behaviours as they related to operations performance. They all genuinely wanted the airline to survive this predicament and were willing to do what they could to help. Their willingness and enthusiasm to become involved in the repertory grid interviews and to develop useful constructs had validated its use as an effective data-gathering tool. It also provided an initial insight into the mood of the respondents, which could be characterised as anxious, powerless, and frustrated: wanting to help but not knowing how.

5.5.2 Eyeball Analysis Illustrated

Step Two in the analysis routine was an “eyeball” analysis, which involved reading each grid as a whole and gaining an insight into the meanings of what had actually been said and how the interviewee had represented the topic. Jankowicz (2004) suggests that the objective of this exercise is to consider what the interviewee was thinking about, how they represented the topic, *what* they think and *how* they think. The analysis below answers these questions.

I continue here with the eyeball analysis of the grid for the Director of In-Flight:

Step 2: Eyeball Analysis

The grid represents DIF’s view of the attitudes and behaviours of her colleagues, and their level of involvement, at that particular moment in time as Allegheny dealt with a major crisis. DIF has represented the topic well and remained focused on performance measurement relating it back to the weekly meetings that were held with the parent company and other subsidiaries. She saw herself in a very similar light to the other two females in the group, which is interesting and infers that there is perhaps a divide between genders, or that the females relate better to each other.

What DIF’s grid says about the elements and constructs:

DO: Demonstrates a poor attitude, is uninterested in his job, is lenient to crewmembers and likely to let the issues slip by and not hold crewmembers accountable for delays that they may have caused.

Wants to push problems off onto somebody else, believes that the union should have more influence, will likely see it out to the end even though he is obviously unhappy, and is unlikely to create or take an opportunity to move on. Does not show any creativity and tends to dwell on the negative and accept things the way they are rather than trying to see some positive in the gloom. Her ratings for DO seem to have him leaning toward the negative poles of each construct – perhaps some lack of respect for him here?

ACP1: Seems to lie mid-way between each construct and is largely unremarkable. There is a feeling that he also likes to push things off “as a Piedmont problem”, in other words the problem is not his concern but that of the acquiring company, which has allowed for some apathy to set in. He shows a lack of initiative and problems that would ordinarily be taken care of, are not addressed. However, ACP1 does have a very good technical background and appreciation of operational issues.

ACP2: Is seen as conscientious, interested in airline performance, and still tackles the issues when they arise. But he does exhibit some of the crewmember mentality of tending to look at things from an individual, or self-centred perspective, without grasping the bigger picture. He is seen as a good communicator but will likely leave at the first opportunity. He is creative and has a very good technical knowledge and tends to look at the positive side of things - tries to remain optimistic.

DT: Is seen as very conscientious, committed and motivated to improve performance. DIF feels that he strongly follows the rules and embraces the issues. He firmly believes that management, not the unions, should run the airline, and as such has a good global perspective. He is a good communicator, is creative and always remains positive and optimistic but will leave the company at the first opportunity.

MD: The majority of MD's ratings fall with a central tendency. He still tries to embrace the issues and feels that management should run things. Is likely to see it out until the bitter end – has been with the company for 25 years and is unlikely to leave without being asked to. Believes in

females as effective managers, but tends to be pessimistic in what he says and how he behaves.

MCS: Very conscientious, follows all rules, tackles problems, and does not pass off anything. She believes that management should be in control, has a good picture of the operation and communicates well. Although she believes that females can run the airline she views her position largely as just a job and will leave at the first good opportunity. Is creative but lacks flight operations experience.

MIF: Is seen as effectively fulfilling her role. She tackles the problems, follows the rules, holds flight attendants accountable and tackles the problems, refusing to pass them off to someone else. She believes that management should have firm control of the company, She is not seen as a particularly good communicator. She will stay until the end, even though she considers it just a job and not necessarily a career. Believes that females should have a greater role and are capable of running the airline, but lacks true operational flight experience.

Self (DIF): DIF sees herself as an ardent follower of the rules, and accountable for her area of operations. She tackles problems head-on and will not bow to union pressure. She is a good communicator and takes her career seriously. She is unlikely to leave the company until the bitter end because of 25 years of service already invested. She believes that females should be given a greater role and that they are more than capable of running the airline. She does not think that she is very creative in finding solutions but she does remain very positive and optimistic and has good technical flight knowledge and experience.

5.5.2.1 Interim Findings of Eyeball Analysis

Each of the individual repertory grids was subjected to an eyeball analysis in exactly the same manner as laid-out above. This enabled me to draw some preliminary conclusions, in concert with the results of the process analysis, about how each interviewee represented the topic and a perception of what each individual was thinking. This yielded the following summary of how each interviewee represented themselves in relation to the other interviewees:

DO

DO showed a lot of concern over the merger and everyone's apparent lack of knowledge about it. He pointed to the perceived dysfunction between trying to improve operations performance and the hopelessness of it all, considering that Allegheny was likely to merge with Piedmont Airlines.

When considering how he himself was represented by the constructs he produced, he saw himself as very similar to DIF, which was completely opposite to how she saw him. He was involved with the workforce and had direct management oversight of the pilots and she oversaw the flight attendants. He saw himself as dedicated to his job and very much set direction for the department, although this was refuted by others. He said that he wanted improvements in performance and believed that he was held accountable for performance to some degree, but he was unable to be explicit about it.

During the interview he mentioned the financial budgets several times and these were obviously something that he was responsible for, but he was unable to fully understand and get to grips with them. This subject caused him a lot of worry because he was charged with explaining pilot pay, which was a minefield and very complex, and he was lost with how to do this effectively.

ACP1

ACP 1 had built a clear view of the core behaviours that he observed in his colleagues, which painted a picture of concern and frustration about the future. Whereas he saw himself as fairly positive about the future, he is not very impressed with his boss's capabilities (DO) but worked with him to accomplish things.

When looking at himself, ACP1 believed that he held his employees accountable (contrary to what some others thought of him), and cared about performance measures. He was willing to delegate, and had a sympathetic view towards his employees (concurrent with what others thought). He felt that he was not communicated to by his boss or the CEO but also felt that he was held accountable by the DO. Despite that, he was generally easy going and wanted to improve performance.

DT

He appeared to think that the DO had a good approach and demonstrated a good attitude. He also seemed to be very supportive of the roles played by DO, ACP1 and ACP2. This aligns itself with the fact that the DT was also a pilot for some of his career and seemed to have empathy with their position.

He saw himself on the emergent pole more often than not and believed that he had a good attitude despite the troubles that the company faced. He also saw himself as having some authority and following the rules. He exhibited an individual view and was more technical and analytical. He could also be aggressive and looked for immediate action. He worked to improve performance but was definitely not held accountable for his actions. This was largely because there were no specific measures that pertained to his area of responsibility, which was Training.

MD

MD represented the topic well and tended to focus on the individual behaviours that were demonstrated by his colleagues. He was able to produce 11 constructs that summed up his view of how he saw his colleagues and their interaction with the performance management process. It was interesting that he viewed the pilot management group quite negatively, except for those that he worked with closely.

When he considered his involvement he saw himself as accepting responsibility and holding people accountable. He viewed things from an administrative perspective and would have liked to do things differently if he could, by using his own methods rather than being told what to do. He took pride in his job and believed that he was held directly accountable for his actions, and therefore accepted the blame for errors. He also believed that the Flight Operations department was disorganised and that there was not a future for the airline. He saw himself as being quite similar to DO. This was interesting because they both had a tendency for being quite negative, according to their colleagues.

MCS

MCS represented the topic well and provided insightful constructs. However, she was quite unflattering about the DO and ACP's and seemed to have very little respect for the entire pilot management group, seeing them as not engaged, reactionary and

unable or unwilling to solve problems. She seemed to like DT and DIF, and perhaps looked up to DIF. Both are female.

When evaluating herself she viewed herself as a problem solver who shows initiative and is a very independent thinker. She was company-minded, recognised the situation for what it is, and wanted to fix it. She was willing to make a stand, was impartial and consistent, and professional and proactive.

MIF

MIF focused her constructs around the core behaviours that her colleagues demonstrated. She was able to readily place each element on the scale and used the ratings carefully. She seemed to identify herself with the other crewmember managers and obviously had respect for them.

When rating herself she saw herself as concerned about performance and was very willing to go the extra mile, even operating a flight as a flight attendant if it avoided a cancellation. She shared information and had a good knowledge of crewmembers. She did not make excuses for her flight attendants and always followed through when researching a problem. She accepted responsibility, worked to improve performance, and was definitely held accountable. Naturally, she saw herself on the positive end of the scale for most of the constructs.

5.5.2.2 Summary of Eyeball Analysis

These findings and the reflections by the interviewees again produced very interesting awareness of their individual experiences. There was a universal tendency for the interviewee to see themselves as making a positive contribution and doing things correctly, however these statements were quite often contradicted by their peers, for example, DO thought he was similar to DIF but she was adamant that they were not at all alike.

This has shown that relying simply on how an interviewee perceives themselves, and the contribution they made, was not a reliable way to predict their actual demonstrated attitudes and behaviours. It was far more important to consider these in conjunction with the observations and thoughts of their colleagues. There was also a perceived divide by gender, with the females in the group believing that they had a lesser role

than their male counterparts. The male-dominated pilot management group sometimes referred to their female counterparts in a less than positive manner by making snide comments about them inferring that the females had inferior capability. There was an observed lack of willingness to accept them as equals at Allegheny.

The remainder of the analyses now turns its attention to the expressed behaviours and attitudes by identifying the types of constructs that were generated by each interviewee.

5.5.3 Construct Characterisation Illustrated

Step Three was a process known as construct characterisation, whereby the researcher identifies the types of constructs used by each interviewee and their significance. The objective of this was to discover what areas have greater meaning and substance to each person in the context of the subject of behaviours and attitudes. This was accomplished by looking at the proportion of constructs that were considered 'core' and had a personal significance to the interviewee, versus those that were more peripheral in nature. This helped to further broaden the picture of how the interviewees had approached the topic and what was intrinsically important to them.

I continue here with the construct characterisation of the grid for the Director of In-Flight.

Step Three: Construct Characterisation

See chapter 3 for a description of each type of construct.

Table 5-2 Cycle 2 Construct Characterisation: DIF

Emergent	Implicit	Type of Construct
I don't care attitude - poor work ethic	Conscientious - wants the airline to look good - good work ethic	Core
Less interested but fulfils job requirements, not motivated	More interested in airline performance - motivated	Behavioural
Still follows the rules - enforces policy as normal	More lenient to crewmembers - willing to look the other way	Behavioural
Still embraces issues and problems as they arise	It's a Piedmont problem - wants to push problems away	Behavioural
Management should run airline not union	Union should have greater influence	Core
Management mentality - has global picture	Crewmember mentality - self-centred, individual view, does not have global picture	Propositional
Excellent communicator	Poor communicator	Evaluative
Will see it out to the end	Will leave at first good opportunity	Evaluative
Career - concerned about airline performance because of time invested, loyalty	Just a job, not that concerned with future of company - less loyal	Core
Perceive that men should run the airline, see females as less competent (e.g. suggestions not taken seriously)	Believe females should be allowed to run airline	Core
Less creative, more likely to limit thinking on improvements	More creative - thinks outside the box	Propositional
Crewmember background - good appreciation of operational issues	No flight experience - little appreciation of true operational issues	Core
Realist - looks at the negativity - accepts things as they are	Looks at the positive, makes light of things, sees the good - optimist	Core

In DIF's grid there were 13 constructs. Of those 13, there were six that seemed to have a deep and personal significance to her. DIF is very particular about attitudes. She saw herself as making a big effort to be professional and was very loyal to the airline and feels that the seriousness with which one views their job is important, e.g. a career rather than just a job. She thought that an important distinction should be made between management and the union leadership. She also perceived an apparent difference between genders, and felt that one's technical experience was very important and should not be downplayed because of gender.

5.5.3.1 Interim Findings from Construct Characterisation

Each grid was similarly subjected to the same construct characterisation analysis. In assessing the number and content of the core constructs some preliminary conclusions were drawn. All interviewees had between six and eight core constructs, except DT who had just four. This suggested that each person was able to articulate concepts that were important to them and represent them with some prominence amongst the other more tangential constructs. However, some core constructs were repeated in slightly different ways, for example, both MCS and MD had two core constructs each that dealt with accountability. Further conclusions were drawn when these core constructs were grouped into themes. I have summarised the core constructs for each interviewee and categorised them into the following table:

Table 5-3 Construct characterisation – Cycle 2

Interviewee	No. of Core Constructs	Categories
DO	7	Knowledge of Merger, Involvement with Workforce, Involvement with Regulations, Taking Action, Direction, Accountability
ACP 1	8	Flexibility, Accountability, Delegation, Specificity of Tasks, Sympathy, Communication, Work Ethic
DT	4	Authority, Demeanour, Work Ethic, Accountability
MD	7	Responsibility, Commitment, Involvement with Workforce, Accountability, Work Ethic, Organisation, Outlook
MCS	7	Detail Orientation, Approach to Problems, Initiative, Independence, Work Ethic
MIF	8	Work Ethic, Technical Knowledge, Integrity, Presence, Responsibility, Accountability
DIF	6	Work Ethic, Leadership, Career Orientation, Gender, Technical Experience, Outlook

Two important themes emerged strongly from this simple categorisation: “Work Ethic” and “Accountability”. Work ethic was considered a core construct by all of the interviewees except DO, and Accountability was listed as a core construct by all except MCS and DIF. These findings suggest that there was a high emphasis placed on accountability, whether it was practised or not, and that work ethic was represented as a fundamental aspect of their work lives. Both seemed to be highly valued and they saw them as being particularly relevant at Allegheny during this period of intense focus on operations performance. This was borne out by their continued desire for the company to succeed, and the professional manner in which they conducted themselves, even though their actions were not producing the level of change that was required.

5.6 Relationship Analysis

The primary method for assessing the relationships between the elements within an individual grid involved using cluster analysis. Doing so highlighted these relationships so that they became more visible. This process is illustrated below by again using the grid for DIF.

5.6.1 Cluster Analysis Illustrated

Steps Four in my analysis routine involved an examination of the relationships between the various elements. Rep IV conveniently presented these relationships diagrammatically in the form of dendrograms. For an explanation of dendrograms please see Chapter Three. These dendrograms represented the percentage similarities between the elements when all ratings for each element were compared side by side, and again the percentage similarities between all of the constructs when they were compared side by side.

Here I continue with the cluster analysis of the grid for DIF:

5.6.2 Step 4: Cluster Analysis of Elements

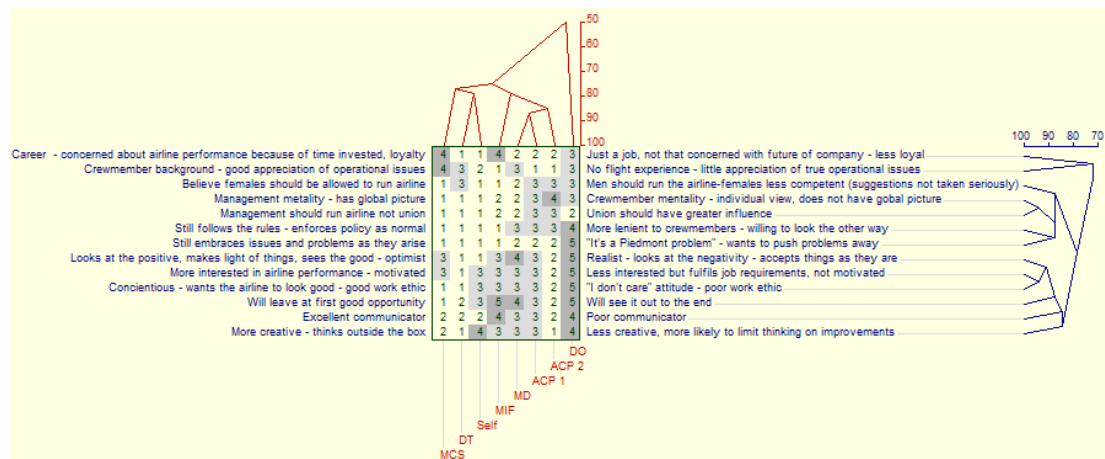


Figure 5-3 Cycle 2 Cluster Analysis: DIF

The objective of this analysis was to find out how DIF saw everyone else in the department, who she saw as being similar in their attitudes and behaviours, and in particular, where they clustered. This helped to further uncover the interpersonal

relationships within the Flight Department and added deeper colour to the emerging picture of the company's culture and the behaviours being demonstrated.

Table 5-4 Example of meanings drawn from the cluster analysed grid for DIF

Cluster analysis procedure for elements: **DIF**

Examine the shape of the element dendrogram	There are two main clusters: MD, ACP1 & ACP2, versus DT, DIF & MCS
Identify construct similarities and differences	MD, ACP1 & ACP2 are similarly rated on all constructs with no more than one rating point difference between them, with the exception of the second and 13th constructs where the rating difference is 2 points. MD & ACP1 share the same ratings on 7 constructs. DT, DIF(self) & MCS are all rated the same on 5 constructs, sharing the same attitudes and behaviours
What does this mean?	Each of these clusters of elements adopts similar attitudes and behaviours in how they view and engage with the performance measurement and review system, i.e. each element within each cluster tends to act in a similar way
Find the highest % similarity score	MD & ACP1 show the highest % similarity score at 86%. ACP1 & ACP2 are matched at 85%. Thus MD, ACP1 & ACP2 form a cluster whose <i>lowest</i> similarity score is 85%. The next closest is DT & DIF(self) with a match of 79%. The cluster of DT, DIF(self) & MCS has a % similarity score of 77%
Examine the remaining scores	MD, ACP1 & ACP2 form a distinct cluster being matched at 85%; their highest match with the other cluster is through MD's match with MIF at 79%. The most disparate match is between ACP2 & DO at 50%. This is interesting because ACP2 works for DO but DIF sees them as approaching performance measurement and review in distinctly different ways and with largely opposite attitudes and behaviours

The cluster analysis for DIF's grid shows that she saw two distinct clusters of people exhibiting similar behaviours: MD, ACP1 & ACP2 versus DT, DIF (self) & MCS. She has identified herself with MCS who is also female, and DT who was previously described as being very positive.

Additionally her cluster analysis shows that the lowest similarity match is between ACP2 and DO (50%). She sees them as approaching the performance measurement and review process in distinctly different ways and with largely opposite attitudes and behaviours. This is an interesting assessment because ACP2 actually reports to DO, but appears to be quite at odds with his approach. Is this perhaps creating friction and a hindrance to their roles? This was confirmed when I posed this question to ACP2 and he explained that they did not always see eye-to-eye and he felt that DO was uncommunicative and secretive, and that this prevented him from being more effective in his role by not sharing information.

Each of the individual repertory grids was similarly analysed (see Appendix B) and the primary clusters were discussed through a feedback loop with the interviewees. This is also represented visually in Table 5-5 below:

Table 5-5 Cluster analysis – Cycle 2

Element (Interviewee)	Main Cluster	% match	Secondary Cluster	% match	Lowest match	% match
DIF	MD & ACP1	86%	ACP1 & ACP2	85%	ACP2 & DO	50%
DT	DIF & DO	90%	MD, MCS, ACP1 & MIF	88%	ACP2 & Self	70%
MIF	Self & MD	92%	MCS & DIF	88%	MD & DO	75%
ACP1	MCS & Self	89%	MIF, DT & DIF	80%	ACP2 & MCS	59%
DO	DIF & Self	92%	ACP1, ACP2 & MIF	88%	ACP2 & MCS	67%
MCS	DO & ACP2	92%	DIF, DT, Self & MD	81%	DO & MIF	58%
MD	MCS & Self	95%	DT, MIF & ACP1	91%	DIF & ACP2	77%

This process was enlightening and intriguing for the interviewees who all expressed some measure of surprise at the comparisons. It became an exercise in personal discovery, which is one of the main benefits of repertory grids and why it is used effectively in clinical psychology.

5.7 Findings from the individual Grids

All of the preceding analyses were carried out on the grids as individual entities. This provided a lot of rich information about how each interviewee felt about the topic and their colleagues. The overall comparisons between the grids showed that there were not any universally agreed upon clusters, although there were some that had very strong matches between certain people, for example MD forming a cluster between MCS and himself at a 95% match. The interesting thing is that there were not any completely diverse attitudes displayed, except the lowest percentage similarity match of 50% between ACP2 and DO that was represented by the cluster analysis for DIF. In fact the best dissimilar match was represented by MD, who showed the lowest similarity cluster between DIF and ACP2 at 77%. Even though he felt that they were dissimilar, the difference between them was relatively marginal.

This suggests that overall there was a level of cohesion amongst the group and although differences of attitude and behaviour obviously existed, there was a uniform acceptance that the expressed attitudes were generally acceptable and each person was able to work with and relate to the others without any major clashes.

The findings suggested that everyone benefited from taking an introspective look at how they had framed relationships with their colleagues. This provided the opportunity for each person to reflect on the results and for them to make changes if they so desired.

The above analysis dealt with how each individual viewed their colleagues' engagement with the PMR system and showed where they saw similarities in behaviour. What we have not yet been able to do is identify the attitudes and behaviours as a group. The analysis routines thus far were of great value but are significantly enhanced by the content analysis technique that follows. This technique known as bootstrapping actually combines the results of the grids into one set of categories that helps to paint a picture of the overall culture.

5.8 Content Analysis – Bootstrapping

This is the fifth step and the final analysis performed on the repertory grid data. This differs significantly from the previous steps because it now accounts for the grids grouped together. This had the advantage of aggregating the responses across categories and enabled me to draw some conclusions about how the group acted as a whole.

5.8.1 Data Categorisation

Here I show the results of the bootstrap analysis and then a method developed to provide significance to the initial results.

After conducting a bootstrap analysis and testing for reliability as described in Chapter Three a set of eight distinct categories emerged that described an attitude or behaviour that was demonstrated by the research group:

1. Conscientiousness
2. Accountability and Responsibility

3. Teamwork
4. Demeanour
5. Flexibility and Creativity
6. Big Picture View
7. Delegation and Territory
8. Motivation

The constructs within each category were arranged so that those having a positive emphasis were on the left hand side of the grid and those having a negative emphasis were on the right hand side of the grid. The ratings for each element, on each of the constructs, in each of the eight categories, were averaged to arrive at an individual rating for each category. In order to separate the elements by whether they demonstrated behaviours and attitudes that were either positive, neutral or negative, I created a band for each of the three results as follows:

Positive: any averaged rating that fell within the band: 1 to 2.3

Neutral: any averaged rating that fell within the band: 2.4 to 3.6

Negative: any averaged rating that fell within the band: 3.7 to 5

This was achieved by using a close approximation of three equal divisions of the four possible rating outcomes. An averaged rating can fall between four possible outcomes: 1-2, 2-3, 3-4 or 4-5. These four possible outcomes were divided by the number of rating bands sought, which was three. Therefore, $4 \div 3 = 1.3333\dots\infty$

Because the ratings of '1' and '5' are absolutes, e.g. a rating cannot be lower than '1' or higher than '5', I rounded 1.333... ∞ to one decimal place, and added 1.3 to '1', and subtracted 1.3 from '5'. This resulted in the bands listed above. The 'neutral' band is consequently marginally smaller than the other two bands by 0.1. This difference is small, but must still be explained. It could be argued that the 'neutral' band should include the rating 3.7, which is instead included within the 'negative' band. However, there were no ratings in any of the grids that fell at 3.7, and so the decision to represent

the 'neutral band as marginally smaller than the other two bands did not materially affected the results at all.

The desire would be for everyone to have behaviours that fall on the positive side of the equation. Table 5-6 summarises these results.

Table 5-6 Summary of results from 1st cycle content analysis

	Average rating of category		# constructs	DO	ACP 1	ACP 2	DT	MD	MCS	MIF	DIF
Category = Conscientiousness	2.4	Ⓜ	15	3.1 Ⓜ	2.6 Ⓜ	3.3 Ⓜ	1.5 ✓	2.5 Ⓜ	1.8 ✓	2.5 Ⓜ	1.9 ✓
Category = Accountability and Responsibility	2.5	Ⓜ	14	2.8 Ⓜ	2.9 Ⓜ	3.9 X	2.3 ✓	2.0 ✓	2.0 ✓	2.4 Ⓜ	1.7 ✓
Category = Teamwork	2.6	Ⓜ	14	3.1 Ⓜ	2.6 Ⓜ	2.9 Ⓜ	2.8 Ⓜ	2.9 Ⓜ	2.3 ✓	2.6 Ⓜ	2.0 ✓
Category = Demeanour	2.7	Ⓜ	12	3.3 Ⓜ	2.7 Ⓜ	3.0 Ⓜ	2.6 Ⓜ	2.8 Ⓜ	2.7 Ⓜ	2.9 Ⓜ	1.9 ✓
Category = Flexibility and Creativity	2.6	Ⓜ	10	3.1 Ⓜ	2.8 Ⓜ	2.9 Ⓜ	2.4 Ⓜ	2.4 Ⓜ	2.1 ✓	2.9 Ⓜ	2.4 Ⓜ
Category = Big Picture View	2.6	Ⓜ	9	2.9 Ⓜ	2.4 Ⓜ	2.4 Ⓜ	2.9 Ⓜ	2.8 Ⓜ	2.7 Ⓜ	2.2 ✓	2.2 ✓
Category = Delegation and Territory	2.7	Ⓜ	4	3.8 X	2.3 ✓	2.8 Ⓜ	2.3 ✓	2.5 Ⓜ	2.0 ✓	2.8 Ⓜ	3.5 Ⓜ
Category = Motivation	2.9	Ⓜ	4	4.3 X	3.3 Ⓜ	4.0 X	1.5 ✓	2.3 ✓	2.8 Ⓜ	3.0 Ⓜ	2.0 ✓

Overall:	3.3 Ⓜ	2.7 Ⓜ	3.1 Ⓜ	2.3 ✓	2.5 Ⓜ	2.3 ✓	2.6 Ⓜ	2.2 ✓
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		Range	
		from	to
✓	Positive	1	- 2.3
Ⓜ	Neutral	2.4	- 3.6
X	Negative	3.7	- 5

The nature of peoples construct systems reflect what they have previously experienced and what is important to them and because of this the number of constructs in each category is a measure of their relative importance. Each of these categories is

discussed below in order of relative importance. Negotiation over the definition of each category took place during the reliability testing phase outlined in Chapter Three.

5.8.1.1 Conscientiousness

This category was defined as:

Demonstrating commitment to the company and working to improve performance versus adopting the attitude of "it's just a job", being ready to move on, or not willing to help or care, about performance

There were 15 constructs in this category, of which seven were considered to be 'core'. All interviewees had at least one construct in this category except for MD. Five of the constructs belonged to DIF alone indicating that she placed a lot of emphasis on this category. This suggested that being conscientious was a highly valued behaviour by the group.

When all interviewees were rated using the analysis scale to show whether their behaviours were considered to be positive, neutral or negative only DT, MCS and DIF were considered to be demonstrating positive behaviours and thus showing an active commitment to the company and to improve performance. The remainder all fell within the neutral spread.

5.8.1.2 Accountability and Responsibility

This category was defined as:

Demonstrating responsibility and holding people accountable, or is held accountable themselves: has good work ethic, versus not holding people accountable, not accepting accountability, or not showing responsibility: assigning blame

There were 14 constructs in this category of which 13 were considered to be 'core'. This is a very large number of core constructs and indicates that this category is by far and away the most important to the interviewee group. All interviewees had constructs in this category except DIF.

Four of the interviewees demonstrated positive behaviours, three neutral and one negative. It was not surprising to see that the negative rating was ACP2, because during the interviews in the first cycle, he was the most vocal in his dissatisfaction with the direction the company was going. This seemed to be borne out by his colleagues who saw him as not behaving in an accountable and responsible way, yet he believed that he was held accountable.

5.8.1.3 Teamwork

This category was defined as:

Works cooperatively with others, is empathetic, compassionate and understanding, and relates well to other employees, versus an "Us against Them" approach, and being more isolated from the workforce

There were 14 constructs in this category with only five being 'core'. All interviewees had at least one construct in this category. MCS and DIF both had ratings that fell within the 'positive' band, while all the rest fell into the neutral rating. This was interesting because MCS and DIF, both females, were now exhibiting positive behaviours and attitudes in the first three categories, while the others were decidedly neutral. This was also borne out in the cluster analysis for both these interviewees with both MCS and DIF having rated themselves very closely with each other. This relationship was also recognised by MIF. DO rated himself similarly to DIF with a very high percentage similarity match of 92%, but this was not shared by the other interviewees who rated him neutral in most categories and negative in two.

5.8.1.4 Demeanour

This category was defined as:

Remaining calm, organised and helpful versus being anxious, aggressive and unhelpful

There were 12 constructs in this category of which five were 'core'. MIF and DO did not have any constructs that fell within this category.

Only one person, DIF, was comparatively rated as positive. Indeed this was now the fourth category that DIF was rated as positive and clearly showed her as standing apart from the rest of the group.

5.8.1.5 Flexibility and Creativity

This category was defined as:

Demonstrating a tendency to be flexible, creative and adaptive to change versus being rigid, obstructionist and inflexible

There were 10 constructs in this category with four being 'core'. Only one person, MCS, was rated as positive with everyone else being neutral.

5.8.1.6 Big Picture View

This category was defined as:

Demonstrating a larger picture perspective, versus having a narrow or departmental view

There were nine constructs of which five are core.

Both MIF and DIF were rated as positive, both of whom run the In-Flight department. It seems that with the struggles going on with the pilot group and the ongoing crisis that the In-Flight department was able to remain more objective and keep a better perspective. This was represented in constructs that depicted the management versus crewmember view of how to run the airline and having all-round knowledge of the airline from the crew viewpoint and the manager viewpoint.

5.8.1.7 Delegation and Territory

This category was defined as:

Delegates and shares information, versus remaining territorial and keeping a tight control over their own little corner

There are only four constructs in this category of which only one was 'core'. However, there were three people exhibiting positive behaviours: ACP1, DT and MCS. DO was negative and the remainder neutral. It was encouraging to see that there was a concerted effort on the part of these people to share information and delegate work rather than being territorial. These are both positive behaviours, but in light of the crisis and the general level of concern, it could also be discerned that these behaviours might have been a reaction to the problems, and that shedding work in the form of delegation, was to avoid doing it themselves, and sharing information was merely voiced frustrations and concerns about the crisis at Allegheny.

5.8.1.8 Motivation

This category was defined as:

Concerning themselves with making improvements and being determined to get work accomplished, versus making excuses, lacking drive and independent thought

There were only four constructs in this category, of which two were 'core'. DT, MD and DIF all exhibited positive behaviours. DO and ACP2 were negative, which was also borne out by their attitudes during the interviews. The remaining three were neutral.

5.9 Findings from the Combined Grids

In essence what has been captured here is a representation of the culture within the Flight Department and what qualities were currently required to be successful. The relative importance of these categories and what is missing says a lot about the company and provides many insights to the interactions of the team. It has shown that that only three people (DT, MCS, DIF) were considered to be consistently demonstrating positive behaviours when aggregated across all eight categories. This was less than half of the group and improvement by the others was obviously needed to enhance their engagement with the measurement and review of operations performance. When all ratings were aggregated across all categories the overall rating was neutral.

ACP2 and DO both had two negative marks over the list of categories. They were the only people to have any negative marks. ACP2 was rated negatively in accountability

and responsibility, and motivation. This meant that the interviewees did not see corresponding behaviours from him that would suggest alignment with the desired behaviours for these categories. ACP2 also appeared on five of the seven cluster analysed grids as being in the lowest percentage similarity cluster with others, which showed that the interviewees regarded him as behaving in dissimilar ways to everyone else. DO was rated negatively in delegation and territory, which was also mentioned during the interviews in cycle one when he was described as being secretive. Like ACP2 he was not motivated and had a remarkably low rating of 4.3 in this category.

This effectively showed that there was a division amongst the displayed behaviours of the interview group. With only three people overall being considered as positive, and not in all categories, it indicated that there was a lot more work to do to encourage people to adopt the positive attitudes and behaviours that were identified during this analysis as being needed for success.

During this process and through the bipolar nature of constructs, a lot was uncovered about the negative behaviours requiring change and the positive behaviours that may need to be further strengthened to meet the strategic needs of the airline. This insight proved very valuable and provided the impetus and sharp focus to continue with improvements to the PMR process.

5.10 Summary of Findings

The findings from the analyses above have been summarised below by relating them back to the objectives established at the beginning of this cycle

5.10.1 Modification of the PMR System

The first objective of modifying and refining the previously introduced PMR system was accomplished by adopting the recommendations from the first cycle. This led to a more focused approach to the weekly reviews and allowed the Flight Department managers to gain a more in-depth understanding of how the various facets of the operation were measured. The addition of these modifications elevated the PMR system to something that could potentially become a very significant part of everyone's daily routine.

Measuring each crewmembers on-time performance proved to be very useful and quite popular, but it also drew its critics who claimed that it was harder for some pilots to be in contention because of the bases from which they flew. However, it really did highlight the poor performers and we were able to see over a period of time that some were clearly not at all interested in performing well and indeed it did uncover that there was a significant amount of 'slow flying' taking place with the deliberate intent to pad the pilots flight hours and therefore pay hours.

The weekly performance review meetings that were held prior to the US Airways conference call progressed well and attendance was, by and large, good. The managers and directors came to realise that they needed to provide explanations for any performance shortfalls and that they would be held accountable for results within their area of responsibility, which in turn provided a higher degree of ownership and responsibility. This weekly meeting served to prepare us for the US Airways conference call that followed and as time went by we became much more adept at answering US Airway's questions and we were able to assert our own informed explanations about occurrences. This was enhanced by requiring each director to present the overall summary and discussion of the previous week's performance results. Initially they found it hard to identify and understand the linkages and dependencies between the metrics, and especially how to clearly articulate them. However, this exercise was very beneficial in increasing their education on how aspects of the operation were measured and then used to build the picture of the overall level of performance. However, the evidence showed that identifying causes and remedying them had not yet become a prevalent practice. Without this fundamental ability to understand the linkages and dependencies between the various measures, and identify potential solutions to problems, it meant that the performance review meeting was less than effective and may have lacked a real objective. Uncovering the causes of performance shortfalls and developing action plans to correct them is a central requirement of a good PMR system (Fitzgerald et al. 1991; Neely and Bourne 2000; Simons 2000). This step is critically important, but was lacking at Allegheny.

Although the PMR system had enabled a more comprehensive review of the data, the response had not provided the level of ownership that I had expected. However, we had become smarter in our understanding of our operation and how to intelligently relay problems to the Express Division. It did provide a greater degree of confidence and the weekly US Airways call became less daunting as the anxiety about being shown-up in front of the other carriers lessened.

5.10.2 Attitudes and Behaviours

The second objective set out to identify the attitudes and behaviours of managers towards the measurement of operations performance during the ongoing crisis by conducting repertory grid interviews. These interviews were very useful and provided a great deal of rich data that was able to be interpreted both individually and as a group by using several analysis methods. This process gradually built a picture of how everyone related to each other and how they perceived their relative behaviours. We were able to put this to good use in an attempt to work better together. This was illuminating and enabled me to further uncover the culture within the Flight Department and apply this knowledge to how we approached the performance review meetings.

The primary attitudes and behaviours that emerged were represented as eight categories that were ranked by their relative importance. This showed that the group most highly valued conscientiousness, accountability and teamwork, and placed less emphasis on delegation and motivation. They saw the primary categories as containing the most important behavioural traits that were necessary to seek improvement in operations performance.

These categories converged with de Waal's research (2002) in respect of the behavioural factors contained within his subparts of management level, management style, responsibility, supervision, alignment, organisational culture and external environment. These subparts fell within what he called the 'controlled system, the 'controlling system', the 'internal environment' and the external environment', which relate primarily to the development and use stages of a PMR system (see Table 2-2 in Chapter Two). The behaviours that fall within these classifications were identified by de Waal as being important to the implementation and regular use of a PMR system. It was interesting to note that the behavioural categories that emerged through this research cycle had a strong correlation with de Waal's results. This suggests that if these behaviours can be modified so that they are displayed positively by the managers, then it should promote a solid foundation from which to strengthen the engagement and use of the PMR system.

The overall results indicated that, while there was a neutral behavioural response to the PMR system, there were some people who were demonstrating behaviours conducive to its success, but not consistently across all behavioural categories. There were three people overall who exhibited positive behaviours. These were DT, MCS and DIF, two

of whom were female. There were only three females in the interview group of seven. This showed that there was potentially a divide between gender, which might need to be a subject for further research.

The managers under study demonstrated a relatively good attitude towards operations performance but all seemed to be constrained from actually making a significant difference in how well the company performed. There was still a pervasive feeling of being powerless to affect US Airways' perceptions, and this seemed to restrict people from making significant gains in performance. They were involved in the performance management process but it was largely in the capacity of just reviewing the data rather than actually being able to use it. All attended the weekly performance review meetings and seemed to understand the general objective, but remained handcuffed in their ability to take matters into their own hands. All had the ability to do a better job in this regard but there was an overwhelming lack of authority and support from senior management to do so. The CEO in this instance preferred that the majority of decision-making be made at his level and/or with his consent. This served to frustrate those who were tasked with running the department or seeking improvements. The qualities about how the interviewees judged each other's effectiveness, or lack thereof, could now guide further work.

5.10.3 Crisis

The third objective was to understand what effect the state of crisis had on the managers attitudes and behaviours towards the measurement of operations performance. It became clear that there was a direct link between the crisis and the behavioural reactions of the managers. This was evident in all of the interviews and was a subject of much discussion. Even though the behaviours that surfaced during this cycle covered a broad spectrum from positive to negative there were strong indications that the negative responses were being driven by the ongoing crisis. This was particularly apparent in the cases of ACP2 and DO, who both spoke in very frustrated tones and had already considered that there was nothing left to do to make things better. When considered in conjunction with the previously found knowledge gap and the lack of support and guidance from senior management it was easy to see how these behavioural reactions may not have been favourable.

During the interviews there was an overwhelming concern with what the future held. It was obvious that many people believed that their future at Allegheny was bleak and it

created a large black cloud for them. This led to a sense of helplessness and consequently for some people to disengage, show complacency, a lack of direction and commitment and to simply get through the day without taking any kind of pre-emptive actions.

However, in contrast to this there were some instances where the crisis influenced the attitudes and behaviours towards the positive. In the case of DIF, it prompted her to do more in terms of understanding the causes of performance deficiencies, how to improve performance, and to be a supporter of the PMR initiative. There was a demonstrated attitude of hanging on, not giving up, and intending to 'go down with the ship'. This was a very strong character trait. In others, it caused them to disengage and give up. This would suggest that someone's character and outlook on life is also very important when dealing with adversity. This can prompt the behaviour to tackle the problem head-on, or to run away.

It is therefore important for the facilitator of a PMR system to gain a good understanding of human behaviours when seeking a drive towards better performance and be able to recognise when someone is being motivated or de-motivated and how to respond to it and encourage them to adopt alternative behaviours. It is especially important when the company is experiencing a crisis. This research has shown that positive behaviours *can* be displayed during a significant crisis.

In this instance the prevailing crisis had a significantly negative impact on the personnel in the Flight Department. But there was still a lot of professional pride and a reluctance to give up that kept everyone going. Even though there was a keen desire for Allegheny to survive, there was also a lack of knowledge needed to make it happen. There was a sense of helplessness and a feeling of 'what will be, will be'. They realised that the decisions were being made at the division level within US Airways regardless of whether Allegheny was able to improve performance or not

5.11 Reflection

Reflecting back on this experience and the methods used, provides an insightful story of how the research itself gave insights to my own personal values and construction system, and adds strength to Kelly's view that the final conclusions drawn are done so in concert with the participant researcher's own construct system.

I have found this repertory grid technique to be of great benefit for me personally and an improvement over conducting a standard interview. I believe I was able to elicit a higher level of introspection from the managers than I could have otherwise. It took a long time to learn the technique and to understand its psychological underpinnings but it was very useful. When I was first introduced to repertory grids I was a little concerned about its applicability to the business world. It raised a doubt in my mind as to whether it would have as much credibility as other methods, but after now having worked with grids I am convinced of their practical application in a business setting and indeed I have used them for other projects unrelated to this thesis. After all, in business, much like in any clinical setting, we are dealing with people and their problems. While arguments can be made that what people do at work is different to what they do at home, it is the very fact that as individual human beings we are imposing our own personal beliefs and understandings on the way that we do things that are based on our own personal construct system. An individual's interpretation of the reality of their work environment, and the people with whom they interact, is based on their own conception of the world and the way in which they make sense of things based on their prior personal experiences. This existential quality lies at the heart of being able to use the repertory grid method.

During some of the interviews, when the interviewee could see the constructs written down before them it helped them to narrow their field of thought to more specific perceptions of reality and provide useful constructs about a person or people rather than talking in generalities, which was the case during the unstructured interviews in the first cycle. If the interviewee wanders away from the topic they can be brought back to the task at hand relatively easily by repeating the qualifying phrase and/or laddering down the construct to seek deeper or more precise meaning. A learning experience for me was that the grids elicited during this second cycle might have benefited from being laddered down to arrive at more personal values. The constructs that were developed were informative but some could have been sharpened. This is a lesson to take into the third cycle.

One drawback that I can see to this process is that an interviewee can inadvertently rate an element on the opposite end of the scale than they had intended, by getting confused about which end represents '1' and which '5'. I have noticed that sometimes there is a tendency for the emergent pole to contain more positive constructs and so an interviewee becomes used to '1' representing the positive end of the spectrum and '5' representing the negative. When a construct takes on an opposite feel with the

emergent pole representing something that is perceived to be negative, the interviewee could mistakenly rate some of the elements incorrectly. Indeed, during the analysis I had to be very careful to ensure that I was recording the rating to the correct pole. It also becomes my responsibility as the interviewer, to clarify with the interviewee that they were using the rating scale correctly. There always exists the possibility in a human involved system that the ratings could be accidentally reversed on a construct and thus introduce error. While I have been very careful in my analysis it is inevitably a failing that can exist.

This now provided a much more rounded picture of how my colleagues interpreted performance measurement and how they interrelated and worked together.

This cycle of research was enormously beneficial to me personally. Having to learn the repertory grid technique and gain a better understanding of human behaviours was fascinating. Indeed, it made me take an entirely different perspective on how I viewed people, and especially how I managed them. In discussing attitudes and behaviours with my colleagues, and conducting this research and analysis, it became quite obvious to me that as human beings we simply cannot, and do not, react in a business environment without our own prejudices and experiences playing a very significant role.

5.11.1 Looking Forward to the Third Cycle

Having now identified the behavioural categories that were considered important to the interviewees and whether they were being demonstrated in a positive or negative manner it was important to try to change some of these for the better. Regrettably, before the results of this research could produce any long-term, useful and meaningful results, US Airways, as part of the second Chapter 11 reorganisation, decided to merge Allegheny Airlines with its sister company, Piedmont Airlines.

It then became increasingly difficult for any of us to remain constructive because the aircraft fleet would be transferred slowly over a period of many months approaching a full year and no further efforts on our part to impact operations performance would change the outcome. The outlook for the third cycle was now looking rather gloomy....

“We appear to be headed for a slow and painful death!” (my research journal)

This left me in a position of either concluding my research and writing it up as a standalone project or putting it on indefinite hold until an opportunity arose that would allow me to continue with it.

5.12 Summary

This second cycle of research continued the theme of how the individual managers and directors at Allegheny responded to the PMR system, and further identified their attitudes and behaviours as seen through the eyes of their colleagues. This showed that the crisis was influencing everyone and caused many people to exhibit attitudes and behaviours that were not in alignment with the initiative to improve operations performance. However, there was evidence to show that for a few of the managers the crisis had the effect of making them take a more pronounced role in response to the PMR system.

6. CYCLE 3: ATTITUDES AND BEHAVIOURS AT PINNACLE AIRLINES

The research study has now moved on to another airline and again explores behavioural reactions to a PMR system but this time when the airline is experiencing growth. It provides an overview of Pinnacle Airlines and an examination of the behaviours displayed by the managers in the System Operations Control (SOC) centre when they were required to be part of the design and use a new PMR system.

6.1 Introduction

The beginning of the third cycle occurred more than two years after the second cycle concluded. During those intervening years, I had moved to Pinnacle Airlines and spent a considerable amount of time becoming acquainted with the intricacies of how they ran a much larger and more complex flight operation and I spent a sustained period of time fixing existing problems. It became readily apparent to me that many of the issues identified at Allegheny were also evident at Pinnacle

I was able to re-engage with the data gathering process between 2007 and 2010 to continue the research from where I had left off. This then resulted in two further cycles of research that were designed to examine the attitudes, behaviours and experiences of the managers in the SOC as they were integrally involved in the introduction of a PMR system. This took things a step further than at Allegheny, and thereby shifted the frame of reference to the displayed attitudes and behaviours during a growth phase.

6.2 The Research Situation

The pressure to address costs within the airline industry that followed 9/11 was also being felt by Northwest Airlines (NWA). These changes saw a shift away from NWA flying large aircraft to the smaller, short-haul, markets and a move towards the deployment of regional jets that could be operated much more economically by its regional carriers. Northwest Airlines, the parent company of Pinnacle at that time had

decided Pinnacle was to replace its aging fleet of Saab 340 turboprop aircraft with 50-seat regional jets.

When I arrived at Pinnacle in November 2004, the airline was still in the middle of this long and sustained period of growth having already put 98 jets into operation, with a further 40 to go over the forthcoming year or so. The Saab turboprop aircraft had already been retired. The growth was very significant for Pinnacle but the airline had failed to plan for it correctly and especially to strengthen its infrastructure to account for its massive growth in size, complexity and breadth of operation. During a particularly severe winter storm over Christmas 2004 the airline consequently suffered a major failure in its ability to run the daily operation because the quantity of staff and level of automation were already strained, and when further stressed, they fell apart. The onslaught of this disaster began on 20th December, and completely disintegrated in the week before Christmas, one of the heaviest travelled seasons of the year. The chaos led to massive cancellations leaving passengers stranded for days over the Christmas holidays. The SOC simply could not cope and the operation fell into an unrecoverable slide. Aircraft and pilots were out of position, people were not available to undertake the sheer enormity of work required to recover the operation, and morale was very low. Virtually all of these people were specialists and could not be replaced with temporary help without months of specific training. The management of the SOC ended up working 14-18 hour days for the next several weeks and in some cases when the pressure from NWA became too intense, 24 hour shifts. It was a catastrophe and a major failing on the part of the senior executive team. It can be argued that had a PMR system been in place there might have been indicators of a trend that was on a path for disaster. This was not the case and the signs went unnoticed.

Northwest Airlines seized upon this with ferocity. It was a very serious failure on the part of Pinnacle and a potentially contract-breaking situation. The result was an extensive remediation plan that would last for a considerable amount of time while Pinnacle attempted to correct its short-sightedness in managing its rapid growth. This remediation plan was geared towards fixing the infrastructure, automation and processes that the growth had failed to plan for. Suddenly the purse strings were released and a major investment in the SOC staff and systems began. But, a problem like this simply could not be corrected overnight and it took two years to bring the SOC to a level where it was operating with a degree of reliability and confidence.

From my personal perspective, I was to be completely engulfed in rebuilding the infrastructure of the SOC, and developing formal policies, processes and procedures that the previous management team had failed to put in place as the airline grew. As we began the long road to operational stability it was apparent to me that I needed to introduce and measure operations performance in order to manage the growth in a much more considered and methodical fashion and to anticipate and identify the issues that could potentially cause problems. There were many telltale signs in evidence at Pinnacle that I had seen already at Allegheny, including the lack of any kind of performance measurement or review system within the SOC. Therefore, in 2005, I implemented a PMR system, but the process of formally continuing the research by data-gathering took place in 2007 and 2008 when the airline was in a much more stable growth phase. Additionally in late 2007 Pinnacle began service with a second customer Delta Airlines after successfully winning a bid to fly sixteen 76-seat aircraft from its hub in Atlanta.

On a company-wide scale the formal review process for operational performance was a weekly meeting held by the COO. This had been ongoing for several years and up until early 2008, this meeting had also included select directors, but was mostly comprised of Vice Presidents. Weekly and month-to-date performance was reviewed and commented on by the COO, however, there was no mechanism for disseminating this information further afield, particularly to front line managers. During 2008, a regrettable decision was made by the COO to restrict attendance at this meeting to just Vice Presidents and the downward flow of information and performance insight dried up very quickly.

6.3 Purpose and Objectives

This section outlines the purpose and objectives that are specific to this third cycle of research and accomplishes the first two formative steps in the AR process of defining the problem and planning action.

The main problem that needed addressing was the understanding and communication of operations performance following the operational failures in the winter of 2004/2005 and the continuing growth of the airline. This was also an opportunity to see if the attitudes and behaviours of flight operations managers at Pinnacle were influenced by a PMR system during a period of growth. In keeping with the defined AR process the

third cycle again follows the same steps that were used in the previous two cycles and is depicted below with the actions that I deemed to be appropriate to this cycle,

<u>AR Procedural Steps</u>	<u>Action for Cycle Two</u>
1. Determine the problem:	No performance measurement system at Pinnacle and little understanding of how to measure operations performance and use results
2. Plan action:	Set objectives. Design PMR system using lessons learned from cycles 1 and 2
3. Take action:	Implement PMR system. Conduct Repertory Grid interviews with the SOC managers
4. Evaluate and analyse:	Use descriptive analysis, relationship analysis and content analysis of the repertory grids to make sense of the findings and identify behaviours
5. Reflect on action taken:	Personal reflections on the third cycle

The following specific objectives were designed to aid the completion of the work plan depicted above:

1. Design and implement a PMR system within the SOC
2. Identify the attitudes and behaviours of the SOC managers towards the measurement of operations performance during an ongoing period of growth by conducting repertory grid interviews
3. Understand what effect the growth had on the managers' attitudes and behaviours towards the measurement of operations performance

The cycle of research is depicted visually below and is an excerpt from the overall depiction of the entire AR research plan which is contained in Chapter Three.

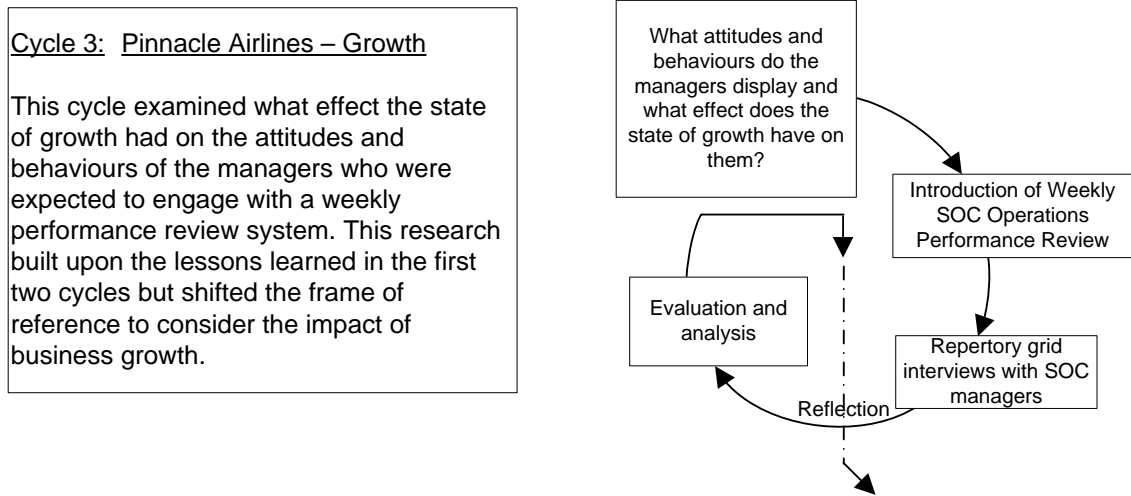


Figure 6-1 Diagram of 3rd Cycle Events

6.4 Designing a PMR System for the SOC

The first step was to design a PMR system that would allow the SOC managers to better understand and engage with operations performance results. At this time the SOC managers were not used to being held accountable for specific performance measures and did not have any kind of review process for the events that had led to performance shortfalls. This would be a significant change for them.

The SOC comprised several departments and their respective staff who were charged with managing the day-to-day operation. The main departments were Crew Scheduling, Flight Dispatch, Operations Management, and Maintenance Control. My role was the Director of the SOC and as such I had the responsibility and accountability for running the daily flight operation. Figure 6-2 below shows the organisation chart of the SOC in 2005. Over the years this would be revised to accommodate the growing complexities of the operation.

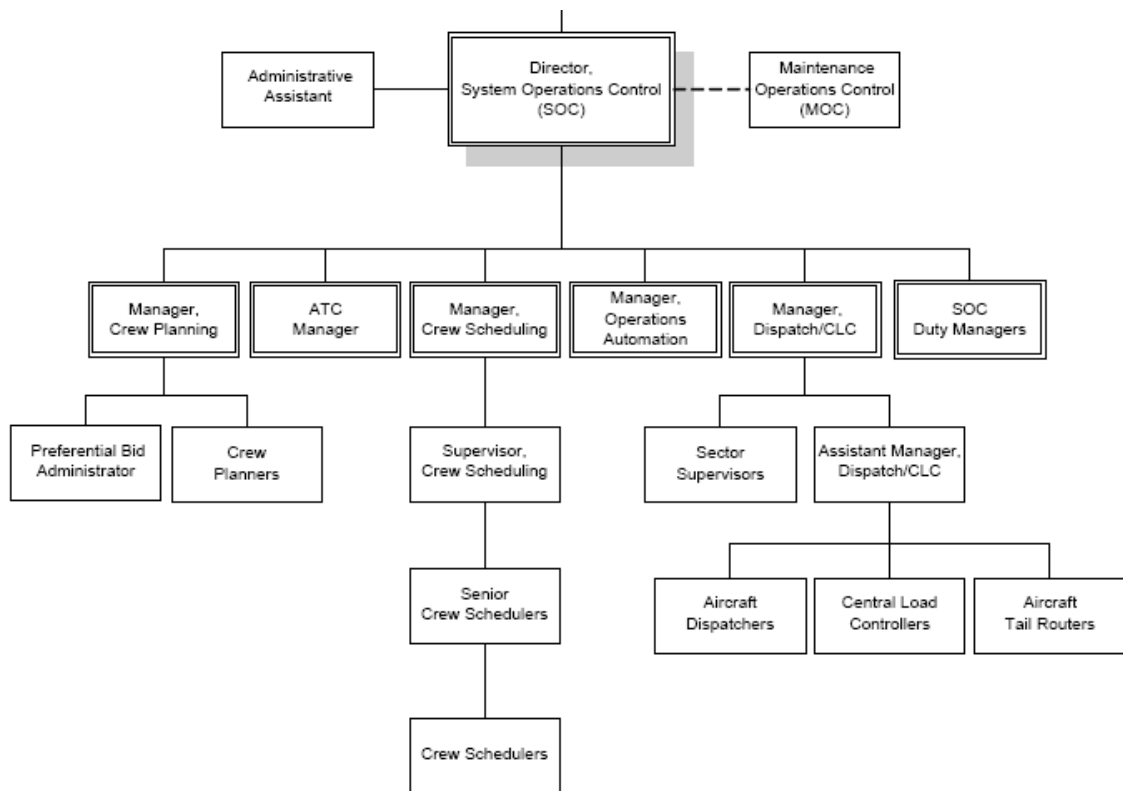


Figure 6-2 System Operations Control (SOC) Organisation Chart

The SOC makes all operational decisions for planning the safe execution of a flight including assigning crews, determining the route to fly, delays, cancellations, aircraft swaps, and crew swaps amongst others. These individuals have responsibility for ensuring that collectively as an operations centre we maintain an acceptable level of operating performance.

At the time I joined Pinnacle they were operating a fleet of 98 aircraft and approximately 580 flights per day. This was a large operation and required constant vigilance to ensure that the operation ran as smoothly as possible. In designing a PMR system for the SOC it would be important to capture measures that encompassed all of these functional areas and in particular to focus on measures of operational performance that were controllable by these areas. This would be important to ensure that when it was time to set the goals the managers would feel some connection and responsibility toward them. This was a lesson learned from Allegheny where the measures were initially too broad, covered uncontrollable aspects of the operation and consequently goals were felt to be unrealistic or unachievable and did not therefore promote ownership. A further lesson learned was to directly involve the managers in its design. Fortunately I had on my staff a performance engineer who was an expert in

using statistics and Microsoft Excel and we met with the SOC managers as a group several times to specify how the PMR system should work and be used.

In the meetings that we conducted as a management team we agreed that the best approach would be to measure each delay and cancellation code that was specific to the SOC in addition to composite measures of performance for the company as a whole. In other words the delays and cancellations that we had direct control over, and also to measure certain factors that were part of the jobs of the people who worked in the SOC, such as the quality of the work they were producing, the cost of actions taken, and the development of their abilities.

I again loosely modelled the system on a BSC format as a means of providing a basic framework that could develop and evolve over time. None of the managers were familiar with performance measurement systems so I also provided some training and background on the BSC and the concept of balancing measures across a range of activities.

The eventual system measured processes that covered the four facets of the BSC:

1. **Customer service:** Operating performance that directly impacted the passenger such as on-time performance and completion factor, and customer service quality controls for internal customers such as the pilots and other operating departments. Plus measures of performance to avoid contractual penalties applied by NWA
2. **Internal perspective:** Measures of internal SOC processes that ultimate effect operations performance such as planned fuel on arrival, quality control audits, and IT system reliability
3. **Financial perspective:** Measures of activities that generate costs, such as staffing levels, overtime, accommodations, and ferrying aircraft
4. **Innovation and Learning:** Reinforcement measures of corrective action taken to remedy problems, and the personal development and learning that the SOC managers would undertake during the review period

The individual measures were laid out in a purpose built spreadsheet that resided on a secure server and was accessible by all of the SOC managers. The data was collected from various sources and combined automated and manual methods. A big benefit at Pinnacle was that it used an operations management software application that was also used by its customer, Northwest Airlines. A central database was maintained by Northwest containing data from every single flight operation over several years. By using a data mining tool it was easy to extract data and then establish measurements for many different aspects of flight operations.

At Allegheny, one of the major benefits of the PMR system was that the performance data was presented visually in graphs and colour-coded tables. This proved to be a more intuitive way for people to interpret the results, especially when it came to looking at trends over time. The same method was therefore applied at Pinnacle because the PMR system was devised as a vehicle for measuring and presenting the airline's operating performance. I scheduled a weekly meeting with all of the managers together to review and discuss how the airline and each department within the SOC had performed over the previous week and to examine trends over time. These weekly meetings also had the benefit of enabling me to 'teach' aspects of the system to them and became the weekly SOC Managers Meeting that has subsequently endured for the last five years (as of 2010).

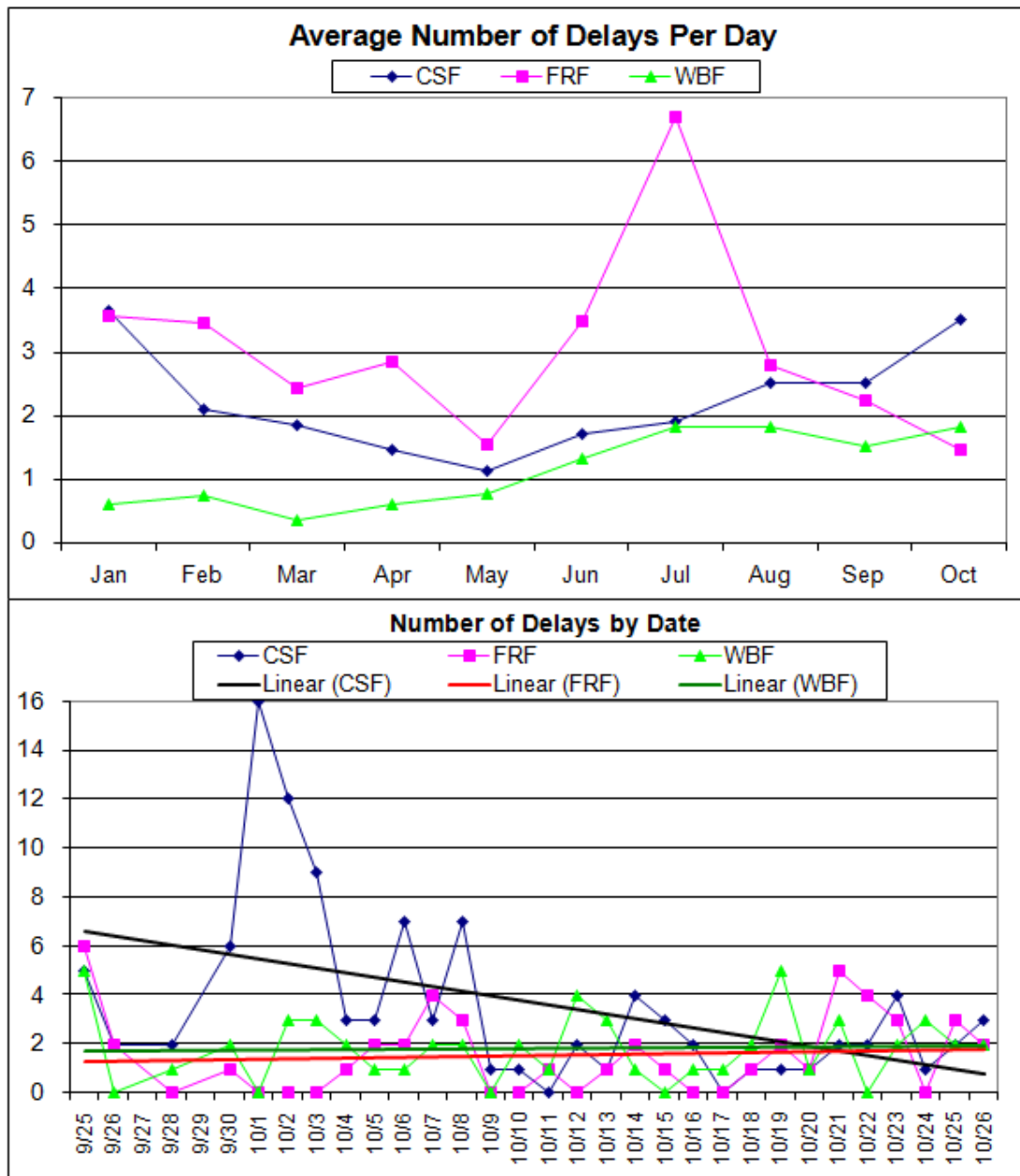
I eventually expanded the performance review to the entire Flight Operations department as part of an initiative to communicate the importance of operations performance results to a much broader audience.

6.5 Implementation of a PMR System in SOC

The PMR system was introduced in late 2005 after the managers were trained in how to interpret the performance data and drive down to the determinants of operational problems. This was a big undertaking but began to show results almost right away because the managers were eager to be part of the initiative and learn how they could be more effective.

The data was presented in a series of graphs that depicted the various measures and their performance over time. The following examples give an idea of the general format and presentation of the data. The graph in Figure 6-3 below is an example of how an

operating metric, 'number of delays', is further sub-divided into three specific delay codes that represented delays caused by Crew Scheduling (CSF), late flight releases (FRF), and weight and balance (WBF). The performance for each metric is shown over the previous 10 months allowing a trend to be discerned. Additionally, the relative performance over the prior 30 days is shown in the second graph and provides an indication of more recent performance. This method was applied to a multitude of different delays. Codes that 'belonged' to each department were grouped together to allow an assessment of how each operating department was performing.



Average Delay Minutes Per Code			
	CSF	FRF	WBF
Last 30 Days	63.2	10.1	19.8
Yearly Avg	53.5	14.9	22.2

Figure 6-3 Flight Delay Data From First PMR Meeting at Pinnacle

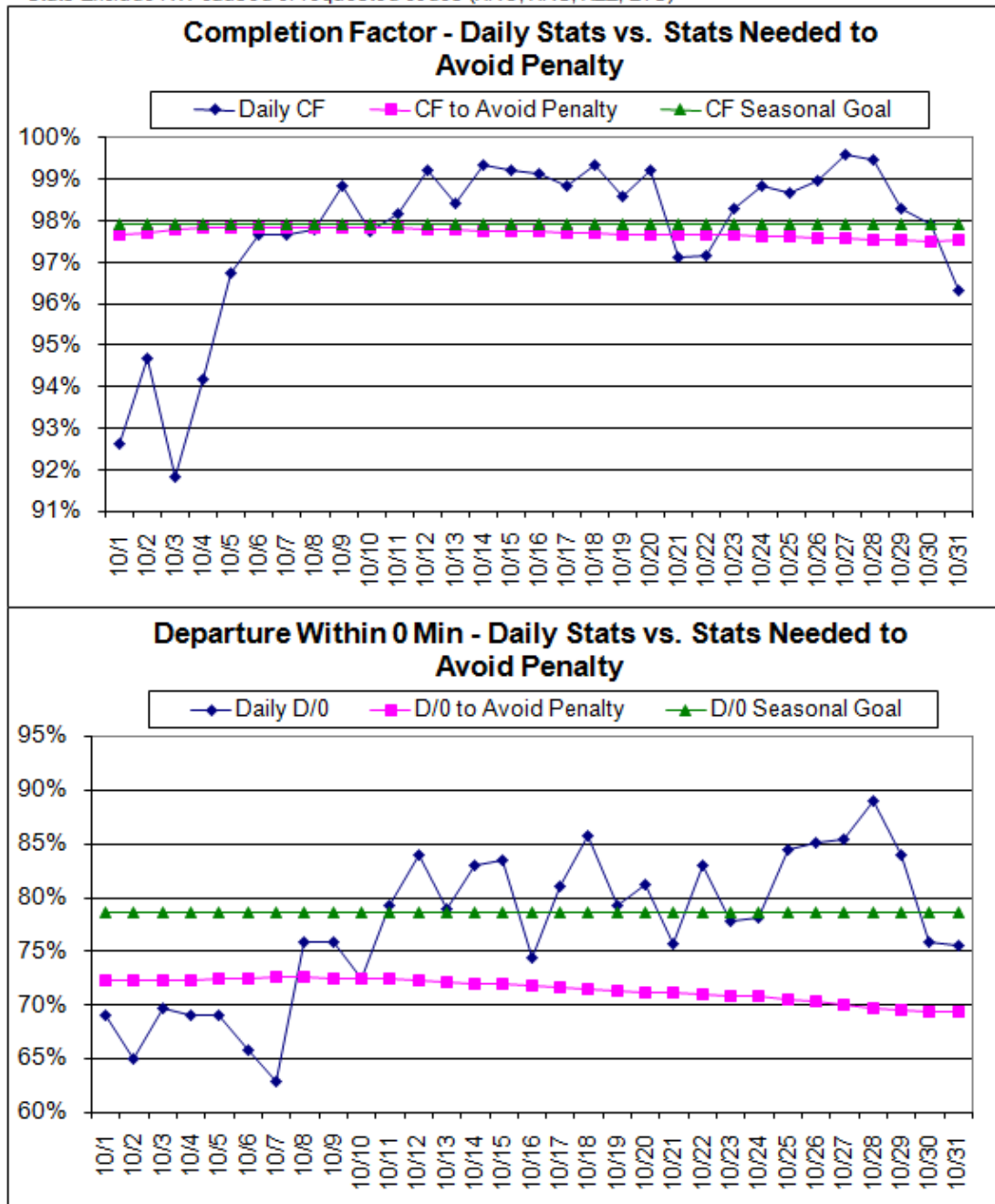
Figure 6-4 below is an example of how measures were built around a core operating strategy. These graphs specifically depict two core measures of overall airline performance: completion factor and on-time departure performance. They are shown as depicting the level of performance required in order to avoid a financial penalty being applied by Northwest Airlines. This was a very easy way for the managers to

gauge how the airline was performing relative to its contractual obligations and proved to be a very popular and critical aspect of the entire review process.

SOC Managers Meeting

Company Completion Factor and D/O

* Stats Exclude NW caused or requested codes (XNO, XNS, XZZ, LTS)



	CF	D/O
MTD Stats	97.76%	77.44%
Stats Needed to Avoid Penalty	97.53%	69.25%

Figure 6-4 Measures Designed Around the Airline's Operating Strategy

Figure 6-5 below depicts another aspect of performance that directly impacts financial performance and that is fuel. There are many different 'buckets' that fuel can be classified in. For example, some of these classifications are: the fuel burn required for an aircraft to reach its destination, the fuel required to taxi the aircraft to and from the runway, fuel for any kind of deviation from the flight plan, holding fuel in case of airborne ATC delays, contingency fuel for unanticipated delays, et cetera. The top graph in Figure 6-5 represents contingency fuel, which is presented over a 30 day period and shows that it was significantly and consistently higher (worse) than the established goal. The graph below represents planned fuel on arrival (PFOA) and is a measure of how much fuel each flight is planned to still have in the tanks upon its arrival at the destination. The idea here is to ensure that fuel was not being unnecessarily carried to the destination unless there is a need to do so. This 'tankering' of fuel can be very costly. The amount of fuel that an aircraft burns is directly related to the weight of the aircraft. If an aircraft is over-fuelled then it costs more in fuel to carry this extra and unnecessary fuel.

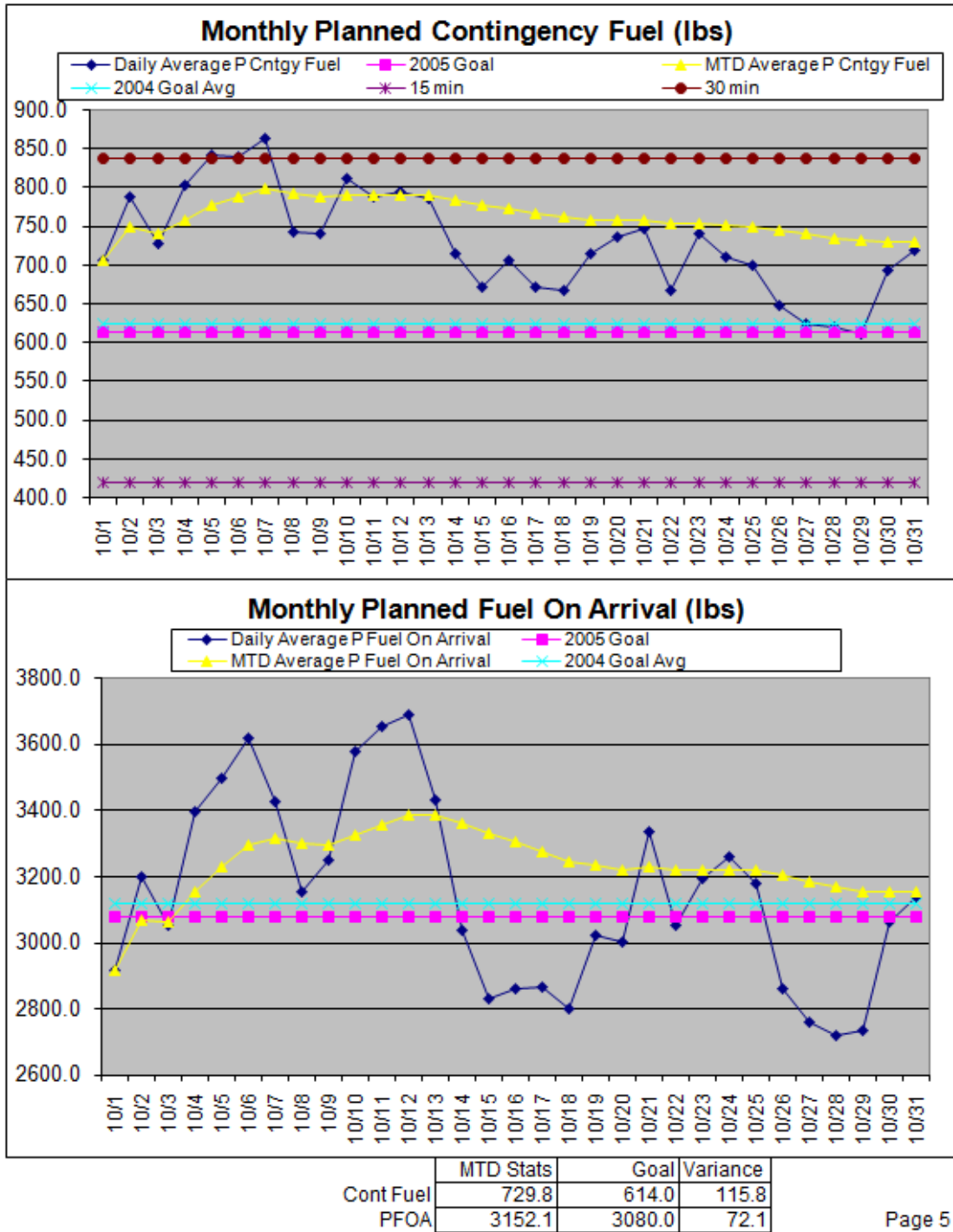


Figure 6-5 Measures of Fuel

The PMR system grew and was refined over the next year and reached a settled state by 2007. By this time, the managers were fully conversant with the presentation of the data and had begun drilling down to the real cause of problems. There had also been a focus placed on performance shortfalls and many of the flight delay categories had

been targeted as areas for corrective action. This was yielding results and the PMR system was also becoming the means for the managers to brag about good performance in their area of responsibility. Each delay code was assigned to a manager and there was an air of ownership and friendly competition.

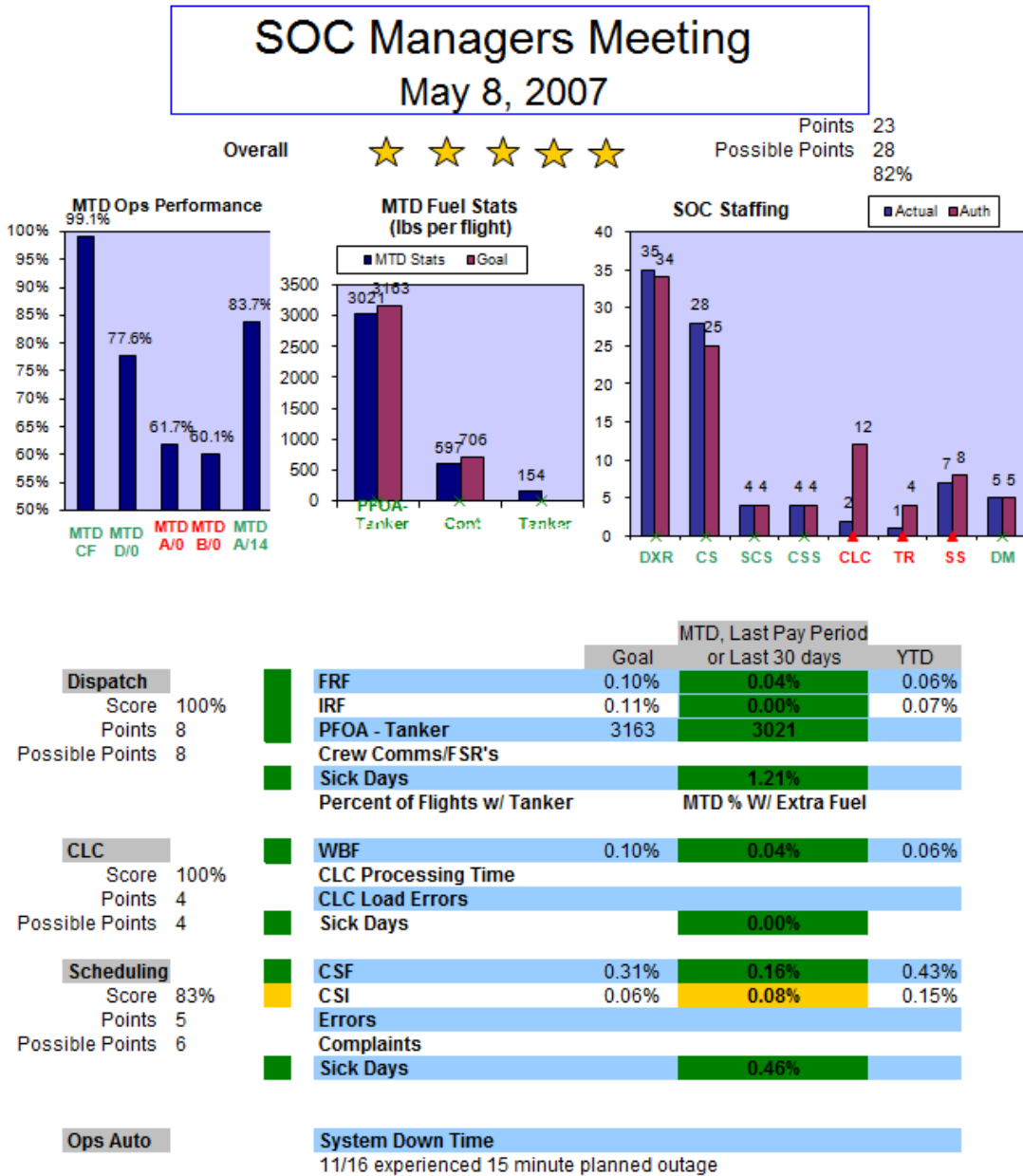


Figure 6-6 Introductory Page of SOC Managers Meeting performance review

Number of 100% CF days each month (excluding NW requested delays and cancels)

Pinnacle	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Jan	0	2	4	5	6	3	2	0	5	0
Feb	2	3	10	6	4	2	4	0	2	0
Mar	1	5	20	13	7	8	6	0	8	0
Apr	4	11	11	14	3	5	7	1	9	5
May	6	14	14	10	11	7	2	1	6	0
Jun	3	13	7	8	5	6	2	1	3	
Jul	3	7	7	17	5	5	0	0	1	
Aug	2	12	7	12	6	9	2	0	4	
Sep	3	17	11	11	9	6	0	1	15	
Oct	6	9	5	7	10	4	0	0	5	
Nov	5	8	6	8	8	4	1	5	2	
Dec	8	13	2	5	4	1	0	0	3	
Totals	43	114	104	116	78	60	26	9	63	5
Yearly Scheduled Flights	77032	68273	76074	90075	106990	148466	205824	254026	252346	93333
Scheduled Flights/Day	211	187	208	247	293	407	562	696	691	735
# of Days	365	365	366	365	365	365	366	365	365	127
% of Days w/ 100% CF	11.78%	31.23%	28.42%	31.78%	21.37%	16.44%	7.10%	2.47%	17.26%	3.94%
100% CF Rating	24.2	57.7	56.4	78.4	62.5	66.2	36.4	16.4	118.6	29.2

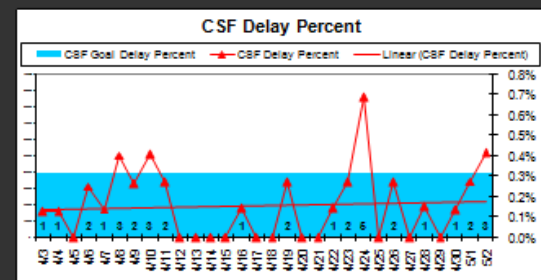
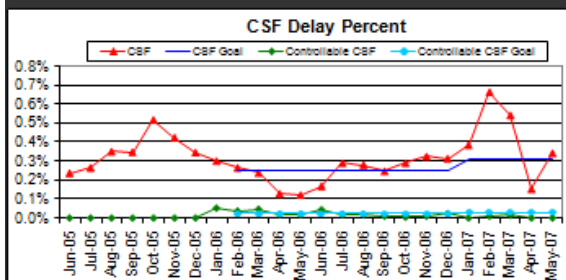
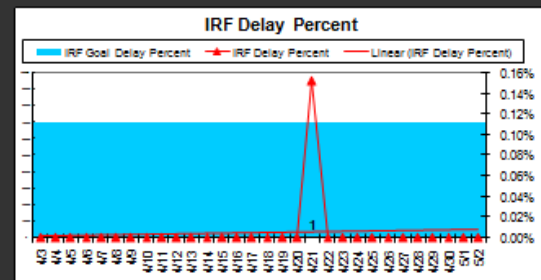
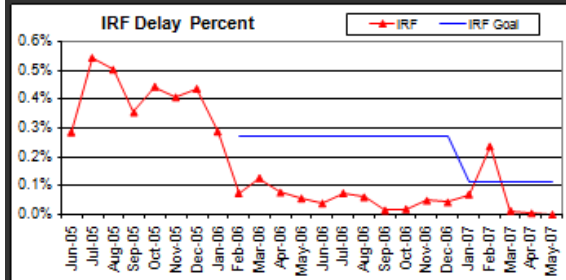
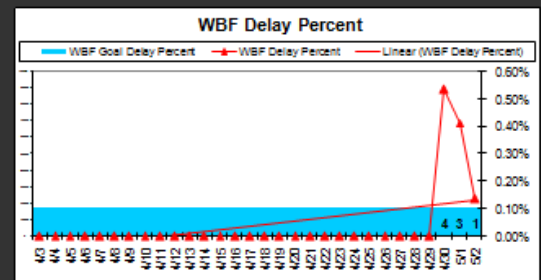
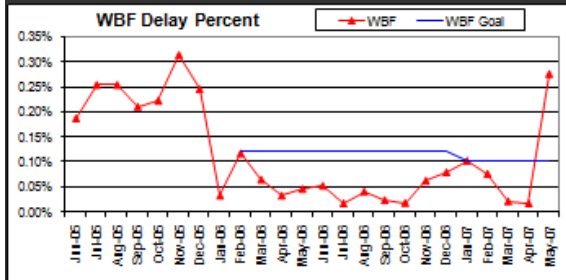
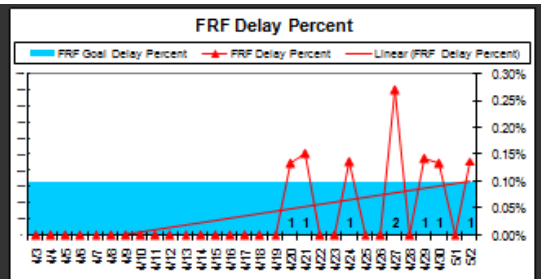
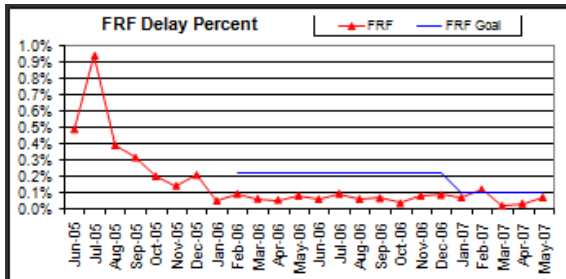


Figure 6-7 Refined and Improved Presentation of Flight Delay Data

As the PMR system grew the managers began to take a more pronounced role in its presentation by carefully preparing for the meeting and ensuring that any performance shortfalls were adequately explained along with how they would be corrected. It also spawned several projects that the managers themselves initiated as off-shoots of the PMR system to help engage their staff in examining performance results.

6.5.1 Repertory Grid Interviews

Having implemented the PMR system the next step was to consider how to effectively gather data to assess the attitudes and behaviours of the managers to this new system. Being satisfied with the repertory grid interviews at Allegheny, I decided to use the same method again at Pinnacle. It was concise, practical, focused and encouraged the managers to be introspective and clearly consider the topic and the observed and perceived behaviours of their colleagues.

The interview group consisted of the six people shown in Table 6-1 below. They were all managers within the SOC who ran various sub departments.

Table 6-1 List of interviewees – Cycle 3

<u>Position</u>	<u>Abbreviation</u>	<u>Department</u>
Manager, Dispatch	MD	Dispatch
SOC Operations Manager	SOM	SOC
Manager of Crew Scheduling	MCS	Crew Scheduling
Manager, SOC *	MSOC	Operations Management
SOC Duty Manager	SOCDM1	Operations Management
SOC Duty Manager	SOCDM2	Operations Management

These interviewees were also asked to consider three other people as ‘elements’ in the repertory grids when they were developing constructs. These three other people were either unavailable or had declined to be interviewed. They were:

Manager, Performance Engineering	MPE	Performance Engineering
SOC Duty Manager	SOCDM3	Operations Management
SOC Duty Manager	SOCDM4	Operations Management

* MSOC only participated as an interviewee and declined to be considered as an element.

The repertory grid interviews were conducted as detailed in Chapter Three and the individual grids were reproduced in Rep IV and Excel spreadsheets to enable analysis.

6.6 Understanding Performance Measurement in the SOC

The analysis and evaluation process followed the same steps and procedures that were used in cycle two and comprised descriptive and relationship analysis for the individual grids and content analysis for the combined grids.

The following presentation of the analysis and discussion of the repertory grid data has been condensed from the format used in cycle two as there was no longer a need to provide an illustrated example. The fully worked analysis itself is contained in Appendix C. The individual grids were all subjected to a process and eyeball analysis in the same manner as they were in the previous cycle. This was a reinforcement exercise for me and showed that all of the interviewees positively engaged with the repertory grid process and all considered that the list of elements was appropriate. There was intrigue about why behaviours and attitudes were being examined, but they seemed keen to learn more. This was also an unusual occurrence for them because most of the time they were engulfed in running the operation and they did not dwell on the processes and procedures that might affect performance.

6.6.1 Process Analysis

During the interviews I did have to repeat the qualifying phrase several times to keep some of the interviewees on the topic of how they saw the behaviours of their colleagues in relation to operations performance. The overall responses from the process analysis revealed that:

MD – MD is not a natural conversationalist and so the interview remained on task without her deviating away from the main purpose. She took the whole process very seriously and was intent on doing a 'good job'. She occasionally looked to me for approval of her constructs for which I countered with the statement that there were no right or wrong answers and that only she could represent her thoughts, opinions and observations. Overall, it was a pleasant and interesting interview, which provided an eye-opening experience for her. MD was the first person I interviewed at Pinnacle and it left an impression on me about how energised people were, when they have an influential impact on the outcome of each flight.

SOM –SOM was eager to be a part of this research and tried hard to be as thoughtful, insightful and constructive as possible, remaining fully engaged throughout the interview. We were also able to have conversations related to each construct and the general operating environment. It was an enjoyable interview for both of us and provided some excellent insight into the operation from his perspective.

MCS - MCS was involved in the daily operation and took her role seriously. She was flattered to be a part of this research and made a concerted effort to do her best. She remained attentive throughout the interview. Her constructs were well thought out and after providing 10 of them she declared that it fully represented her thoughts at that point in time

MSOC - MSOC was very interested in the research and especially the academic process of gathering and analysing data, of which he asked several questions, although he declined to include himself as an element. He quickly picked-up on the grid process and developed some of the more distinct constructs of all the interviewees, which showed a good appreciation of the subject.

SOC DM1 – SOC DM1 was excited to be part of this process and she found the experience quite enlightening as she began to realise how she truly considered the behaviours of her colleagues. She had a little difficulty developing constructs to begin with, but after having produced a few that we dismissed she began to get the hang of it and developed constructs that were concise, focused and well thought out. She was not afraid to offer her opinions and several conversations ensued that delved deeper into certain aspects of her construction system.

SOC DM2 – SOC DM2 approached the topic in a laid-back manner but soon took a much greater interest when he realised what his constructs and ratings would say. He admitted to not really paying attention to people's behaviours before and this process became quite revealing for him.

This process showed a universal willingness to participate and no one felt that they were being unfairly examined, or that the study was inappropriate or irrelevant. Similar to what I saw at Allegheny, it provided everyone with an insight into the behaviours of others that they had previously not considered. It also proved to be a valuable learning tool for me because I gained a glimpse into how each person made sense of things by the way they articulated their responses and their process of developing a construct. Not only did I learn about their abilities, but it gave me pause to think about how I could best work with them to elicit positive responses to the PMR system. I preferred to encourage and motivate rather than be perceived to be authoritarian and controlling.

6.6.2 Eyeball Analysis

The eyeball analysis again involved reading each grid as a whole and gaining an insight into the meanings of what the interviewee was thinking about, how they represented the topic, *what* they think and *how* they think. This is distilled below to paint a picture of how each interviewee represented their behavioural approach and those of their colleagues to the PMR system.

MD

MD saw several similarities in the behaviours of the SOC DM's. All were seen as very focused on the daily operation and they all adopted a laid-back approach. The differences in approach were noted particularly with SOC DM4 who had a negative

outlook and a militaristic approach to getting things done. SOCDM1, 2 and 3 were seen as positive, and remained calm under stress. MCS was singled out as being markedly different to everyone else. She tried very hard to please people, was very lenient and disorganised, which resulted in her getting 'frazzled' very often. MD did not regard these qualities as being good.

MD saw herself as being fairly intense and very focused. She was ambitious, took her job seriously and looked beyond the current day's operation to consider impacts on future events. She worries after work and does not like criticism from others. She is strict about doing things by the book.

SOM

SOM viewed MCS as being reactive, uncreative and not knowing what the goals are, but he liked her personally. This was in contrast to how he saw MD, who was considered as serious, authoritative, confident, unapproachable and having a self-serving agenda. MPE was represented as being serious, professional and confident, and remained aloof. The SOCDM's were grouped into three, similar to MD's outlook, separating SOCDM4 as being reactive and not taking his job seriously. He was seen as being uncreative and unable to effectively use his authority. The other SOCDMs were seen as being positive and confident.

SOM saw himself as being very confident, professional, positive and approachable. He wants to succeed and be a role model for others. He tries to promote teamwork, but does not take the time to explain things, expecting people to intuitively know. He can be fickle.

MCS

MCS sees MPE as being very organised, professional, reserved and not emotional or sensitive. MD was represented as very concerned about how things reflect on her and did not want to look bad. She is very organised but micro-manages her people, Defensive, private and not connected to her employees. In contrast SOM cares about people and is very approachable and not defensive. The SOCDMs were again separated in the same two groups with SOCDM 1, 2 and 3 being professional and knew how to respond to operational issues. SOCDM2 was regarded as the most

effective DM, while SOCDM4 was seen as not having any original thoughts and detached from the operation and performance results.

MCS saw herself as a people person who was very approachable and gave a lot of her time to her employees. She did recognise that she was disorganised and spontaneous in voicing her thoughts without thinking them through.

MSOC

MSOC saw MCS as reactive and driven by her emotions. She would sacrifice performance for customer service and was not motivated to improve performance. MPE was proactive and practical, but aloof. He was analytical and would try to predict performance problems by analysing data. MD was seen as committed, focused and practical, but reactive. She would follow common practices and was not swayed by her emotions. SOM was focused on actions. He was proactive but disinterested in performance results. SOCDMA was reactive but tried to improve performance. SOCDM2 was very aware of performance goals and tried to achieve them. He was motivated. SOCDM3 was reactive and emotional in his decision making. SOCDM4 was considered practical, focused and would follow standard practices, but he preferred to be told what to do. He was uninformed and not committed to improving performance.

SOCDM1

SOCDM1 saw MCS as having a very emotional and unpractical approach, but she would not cast blame on others, instead providing positive reinforcement to her employees. However, she was easily distracted and disorganised and not respected by her peers. MPE was practical and calm and had great attention to detail, but he was distant. MD was regarded as very competent and took an active role in solving problems, but she could let her emotions get in the way. She stood up for what she thought was right but could offend people. She was not well respected by her peers. SOM was also regarded as very competent, practical and respected, but would concede to other people too quickly. He was good at motivating others. SOCDM2 was seen as highly competent and good at solving problems. He was respected and stood up for his beliefs but could provide negative reinforcement to others when he did so. SOCDM3 was also highly competent, well respected and defended his people. However, SOCDM4 was seen as trying to escape blame by pointing his finger at others. Consequently he was not respected.

SOCDM1 saw herself as competent and very centred on the current days' operation. She was practical but also swayed by her emotions. She was positive and goal orientated and rated herself highly on all constructs.

SOCDM2

SOCDM2 saw MCS as being approachable and patient, having high expectations of others, but seeking approval before acting. MPE was represented as being out of touch with the daily operation and rather passive. MD gave prompt attention to operational issues, but was not very approachable and could be impatient, aggressive and very defensive. She seeks approval and recognition and needs to feel valued. SOM was willing to engage, be decisive and explain operational issues. Both SOCDM3 and SOCDM4 were seen as being knowledgeable, but the noticeable difference between them was that SOCDM3 seeks guidance before making decisions and SOCDM4 could be defensive and seeks recognition.

SOCDM2 saw himself as giving very prompt attention to operational problems and easily able to speak about performance results. He considered himself as patient but with a tendency to be aggressive because of having high expectations of others.

These findings and the reflections by the interviewees again produced very interesting awareness of their individual experiences, and I was able to use these insights to gauge how to manage these people and to better develop their leadership and management skills. In a similar fashion to the second cycle there was a tendency for the interviewee to see themselves as making a positive contribution and doing things correctly, however these statements did not always tally with how they were perceived by their peers.

6.6.3 Construct Characterisation

A construct characterisation exercise was conducted by evaluating the 'core' constructs from each interviewee and discovering what areas had greatest meaning and significance. Some preliminary conclusions were drawn. Once again, all of the interviewees had between six and eight core constructs. This was quite similar to what I saw at Allegheny and suggested that each person had developed constructs that had a personal significance to them. The core constructs for each interviewee are summarised in Table 6-1 below:

Table 6-2 Construct Characterisation – Cycle 3

Interviewee	No. of Core Constructs	Categories
SOM	8	Knowledge, Attitude, Demanour, Creativity, Authority, Teamwork, Respect
MD	5	Work Ethic, Attitude, Demeanour, Initiative,
MCS	5	Ownership, Micro-management, Attitude
MSOC	7	Focus, Awareness, Initiative, Creativity, Motivation, Commitment, Involvement, Work Ethic
SOC DM 1	6	Focus, Accountability, Assertive, Work Ethic, Attitude, Support
SOC DM 2	7	Work Ethic, Knowledge, Initative, Decision-making, Ambition, Expectations

There was no significant theme that emerged from these in terms of the frequency with which any of them occurred. In fact the only theme that was repeated across four of the interviewees was 'attitude'. This was conveyed as either describing a displayed attitude, or indicating that a construct was suggestive of an attitude. At this stage the only conclusion was that there was a healthy diversity to the constructs and that the interviewees displayed no indication that there were issues collectively identified as being prevalent.

6.7 Content Analysis of Combined Grids

It was first important to identify the attitudes and behaviours being displayed and then to analyse whether the state of growth was influencing them positively or negatively.

6.7.1 Data Categorisation

After conducting a bootstrap analysis and testing for reliability as described in Chapter Three a set of nine distinct categories emerged that described an attitude or behaviour that was being demonstrated by the members of the research group. These are listed below in order of their relative importance as ranked by the number of constructs in each category.

1. Demeanour
2. Conscientiousness
3. Teamwork

4. Motivation
5. Knowledge and Skill Level
6. Responsibility and Accountability for Performance
7. Creativity and Flexibility
8. Delegation and Territory
9. Big Picture versus Individual View

Table 6-2 below, illustrates these and presents the data in a format from which to draw conclusions.

Table 6-3 Summary of Results for 3rd Cycle Content Analysis

	Average rating of category		# constructs	MCS	MPE	MD	SOM	SOCDM 1	SOCDM 2	SOCDM 3	SOCDM 4
Category = Demeanour	2.66	①	15	2.7 ①	1.9 ✓	3.3 ①	2.1 ✓	2.7 ①	3.0 ①	2.4 ①	3.1 ①
Category = Conscientiousness	2.43	①	14	3.4 ①	2.4 ①	1.8 ✓	2.3 ✓	1.9 ✓	2.4 ①	2.3 ✓	3.1 ①
Category = Teamwork	2.61	①	11	2.6 ①	2.3 ✓	3.0 ①	2.9 ①	1.5 ✓	2.8 ①	2.6 ①	3.1 ①
Category = Motivation	2.49	①	11	3.7 X	1.8 ✓	2.1 ✓	1.9 ✓	1.5 ✓	2.6 ①	3.0 ①	3.2 ①
Category = Knowledge & Skill	2.66	①	10	4.0 X	3.3 ①	2.2 ✓	3.2 ①	2.2 ✓	1.7 ✓	2.2 ✓	2.5 ①
Category = Accountability and Responsibility	2.73	①	6	3.7 ①	3.5 ①	1.8 ✓	2.2 ✓	2.2 ✓	2.2 ✓	3.2 ①	3.2 ①
Category = Delegation and Territory	2.54	①	3	3.0 ①	4.0 X	4.0 X	2.3 ①	2.7 ①	1.3 ✓	1.0 ✓	2.0 ✓
Category = Flexibility and Creativity	2.56	①	2	3.5 ①	2.0 ✓	2.0 ✓	2.5 ①	2.5 ①	1.5 ✓	1.5 ✓	5.0 X
Category = Big Picture View	2.75	①	2	3.5 ①	5.0 X	3.5 ①	4.0 X	1.0 ✓	1.5 ✓	1.5 ✓	2.0 ✓
Overall:	74			3.3 ①	2.9 ①	2.6 ①	2.6 ①	2.0 ✓	2.1 ✓	2.2 ✓	3.0 ①

Each of these categories is now examined to reveal its applicability to the group. The definition for each category was the result of the negotiations about their meanings that took place when testing for reliability.

6.7.1.1 Demeanour

This category was defined as:

Calm, organised and helpful versus anxious, aggressive and unhelpful

There were 15 constructs in this category, of which four were considered to be 'core'. All interviewees had at least one construct in this category, suggesting that it was an important value to all of them, and SOCDM1 alone had four, suggesting that she placed a greater emphasis on demeanour than any of the others. This was actually affirmed to a certain extent by my own observations, because she endeavoured to hold herself to a high standard of politeness and courtesy and she considered herself as always willing to assist others.

When all interviewees were rated using the analysis scale to show whether their behaviours were considered to be positive, neutral or negative only MPE and SOM were considered by the group to be demonstrating positive behaviours and thus showing a consistently calm, organised and helpful approach. The remainder all fell within the neutral spread. Curiously, the collective ratings for SOCDM1 fell in the neutral band indicating that the group did not regard her behaviour in the same positive light that she herself did. This highlights the fact that although we may have a positive opinion of our own behaviours, they can often be perceived by others in a rather different light.

6.7.1.2 Conscientiousness

This category was defined as:

Demonstrates commitment to company and works to improve performance versus "it's just a job", not willing to help or care about performance

Of the 14 constructs in this category seven of them were core constructs. This represented the category with the highest number of core constructs suggesting that it had the most fundamental importance to the group. Everyone, except SOCDM2, had

constructs in this category with MD and SOM having four each. For them the behaviour of demonstrating commitment to the company and working to improve performance was very important. My observations confirmed that they both took their jobs seriously, regarded it as a career and genuinely wanted to make the company better. SOCDM2 on the other hand was more lacklustre in his commitment and regarded his role as a job rather than a career. However, he was very competent at his job and would always strive to ensure that we ran a good operation.

Four of the managers were considered by the collective group to be demonstrating attitudes and behaviours within the positive band of the ratings. They were MD, SOM, SOCDM1, and SOCDM3, with MD displaying the highest level of conscientiousness.

6.7.1.3 Teamwork

This category was defined as:

Works cooperatively with others, is empathetic, compassionate and understanding, and relates to other employees, versus an "Us vs. Them" approach, or being more isolated from the workforce

There were 11 constructs in this category with five of them being core. Three of these core constructs belonged to SOM who felt that this behaviour was centrally important, however, he was viewed as neutral, which again showed that how one regards oneself is not necessarily how others do. MCS did not have any constructs in this category. I found this curious because my observations suggested that she was a team player and that she valued being on a team. In fact, she was far more effective working on a team than she was working independently.

Only two of the managers, MPE and SOCDM1, were considered by the group as consistently displaying behaviour representative of teamwork. This was now the second category that SOCDM1 was represented in the positive band of the ratings. All other aggregated ratings showed the rest of the team as being neutral.

6.7.1.4 Motivation

Concerned about making improvements and determined to get work accomplished versus makes excuses, lacking drive and independent thought

This category also had 11 constructs but six of them were core. Three of these six belonged to MSOC who placed a high value on being determined and thinking for himself. Neither, MCS, MD or SOM had core constructs in this category, which may show that they did not consider motivation to be an important factor or that it was integral and obvious to them and they did not consider it when developing constructs.

The overall results showed that four managers were considered by the group as positively demonstrating motivation. They were MPE, MD, MSOC and SOCDM1. This was very interesting because neither MD or SOM, as previously mentioned, had developed constructs about motivation but both were regarded by the group as displaying it in a very positive way. This suggests that it is central to their whole approach to the job. In stark contrast to this was MCS who was rated by the group as negative. This was the first negative rating in the categories and was the first indication that not all was well with everyone.

6.7.1.5 Knowledge and Skill

Knowledge, skill and capability to effectively manage operations versus inexperienced, untrained or incapable

This category contained 10 constructs of which five were core. SOM and SOCDM2 had two each. MSOC had a total of seven constructs overall that were considered core and now over the last two categories he had five. This grouping of his core constructs suggested that his most deeply held values in terms of behaviours was the level of motivation, knowledge and skill that people displayed. Similarly SOCDM2 had four of his total of six core constructs clustered in the last two categories. For both of them this represented a significant indication of their core values. Everyone, except SOM, had constructs in this category suggesting that it was a fundamentally important category.

There were four managers who displayed positive behaviours: MD, SOCDM1, SOCDM2 and SOCDM3. This was now the fourth category in which SOCDM1 was considered positive, and the third for MD. MCS once again was rated overall as negative, suggesting that she lacked the knowledge, skill or experience to manage operations. From my own observations this was largely borne out. MCS had a positive outlook and a friendly approach but she seemed to take longer than others to grasp concepts and put words into action.

6.7.1.6 Accountability and Responsibility

Good work ethic, demonstrates responsibility and holds people accountable, or is held accountable themselves, versus not holding people accountable, not accepting accountability, or not showing responsibility

This category had just six constructs, however five of them were considered as being core, which meant that it was a behaviour that was highly valued. Everyone with the exception of MSOC had a construct in this category. My own observations showed that MSOC did not like being held accountable and he sometimes felt that it was unfair to be accountable for the actions of his direct reports, especially when he believed that he had done all he could. There was also a slight sense of him feeling powerless to make a difference within the larger scale of the operation as a whole.

There were again four managers who were considered as practising accountability and responsibility. They were: MD, MSOC, SOCDM1 and SOCDM2. This was now the fifth straight category that SOCDM1 was represented as positive and the fourth for MD. Both were seen as having a good work ethic, displaying responsibility and holding others accountable. My observations confirmed this and also that they were both being held accountable themselves, which in turn made them take their job seriously. This was done constructively and was not used as a method of placing blame or pointing fingers, but this higher level of accountability was sometimes seen by their direct reports as being heavy-handed.

6.7.1.7 Delegation and Territory

Delegates and shares information versus remains territorial and keeps a tight control over their little corner

There were only three constructs in the category with two of them being core and represented by MCS and SOCDM2. This was an interesting category because the combined ratings showed managers behaviours across all three rating bands. Three managers were represented as positive: SOCDM2, SOCDM3 and SOCDM4. All of these individuals performed the same role but during different shifts. It was clear that they were managing and interacting with their people well by sharing information and delegating tasks. In contrast there were two managers, MPE and MD, who were viewed as behaving in a negative fashion by remaining territorial, not sharing information and keeping a tight control over their job.

However, now that the categories were being defined by just a few constructs from less than half of the group their universal applicability had to be questioned and these categories may not be accurately representative of the group. However, having said that my own observations did largely support this, especially with MPE and MD as having a tendency to keep things close to their chest.

6.7.1.8 Flexibility and Creativity

Tendency to be flexible and creative to adapt, versus, being rigid, obstructionist and inflexible

This category had just two constructs, but both were core. Four of the managers were rated as displaying this behaviour positively: MPE, MD, SCODM2 and SOCDM3. There was one who was rated as negative: SOCDM4.

6.7.1.9 Big Picture View

Demonstrates larger picture perspective versus having a narrow view

There were again just two constructs in this category with only one of them being core. Of the combined ratings four managers were seen as behaving in a positive manner and maintaining a larger picture perspective of operations performance, rather than getting caught up in minor aspects that did not influence the whole, and two were considered as negative, MPE and MSOC.

6.7.2 Findings from the Combined Grids

When the ratings on the individual behaviours are averaged for each individual across all behaviours there were three managers who were considered as displaying positive behaviours. The three managers were all SOCDM's, which is rather intriguing. Each of them is charged with running the daily operation of the airline while they are on duty and consequently they are closely involved with operations performance. None of the managers displayed consistently negative behaviours and although the remainder were rated as neutral, each of them with the exception of MCS, had at least one behavioural category in which they were rated as positive. MCS is the lone exception. She did not receive any positive ratings and was rated negatively in motivation, and knowledge and skill. This perhaps exemplified what the group thought of her approach, and although not damning, it did point to some significant shortcomings that needed correction.

When analysed from the perspective of the overall ratings per category the best overall rating (2.43) was 'conscientiousness' and the worst rating was 'big picture view' (2.75) closely followed by 'accountability and responsibility' (2.73). This showed that the team placed the highest value on demonstrating commitment and working to improve performance, but that being accountable and holding others accountable and keeping a perspective on the overall picture was not yet at a level of being performance driven behaviour.

A useful way to summarise this information is depicted in the table below. I compiled this to provide me with a good representation of who was generally on the right track and who needed additional work. It was sorted by ranking each interviewee on the number of categories in which they showed positive behaviours and then sorting from highest to lowest.

Table 6-4 Summary of Repertory Grid Bootstrap Analysis – Cycle 3

		Behaviour Categories									Ratings		
		Demeanour	Conscientiousness	Teamwork	Motivation	Knowledge & Skill	Accountability and Responsibility	Delegation and Territory	Flexibility and Creativity	Big Picture View	Positive	Neutral	Negative
Managers	SOC DM 1	Ⓜ	✓	✓	✓	✓	✓	Ⓜ	Ⓜ	✓	6	3	0
	SOC DM 2	Ⓜ	Ⓜ	Ⓜ	Ⓜ	✓	✓	✓	✓	✓	5	4	0
	SOC DM 3	Ⓜ	✓	Ⓜ	Ⓜ	✓	Ⓜ	✓	✓	✓	5	4	0
	MD	Ⓜ	✓	Ⓜ	✓	✓	✓	✗	✓	Ⓜ	5	3	1
	SOM	✓	✓	Ⓜ	✓	Ⓜ	✓	Ⓜ	Ⓜ	✗	4	4	1
	MPE	✓	Ⓜ	✓	✓	Ⓜ	Ⓜ	✗	✓	✗	4	3	2
	SOC DM 4	Ⓜ	Ⓜ	Ⓜ	Ⓜ	Ⓜ	Ⓜ	✓	✗	✓	2	6	1
	MCS	Ⓜ	Ⓜ	Ⓜ	✗	✗	Ⓜ	Ⓜ	Ⓜ	Ⓜ	0	7	2
<u>Sum of ratings by behaviour category</u>											<u>Totals</u>		
Positive	2	4	2	4	4	4	3	4	4	31			
Neutral	6	4	6	3	3	4	3	3	2	34			
Negative	0	0	0	1	1	0	2	1	2	7			

So how does all of this help the practitioner researcher? In my case, this information and the light bulb moments during the grid elicitation procedure provided incredible insight. They were especially helpful in showing me how to progress and enhance the PMR system, how to 'manage' each individual to play to their strengths, and where I really needed to do some work to adjust their behaviours towards the positive.

6.8 Summary of Findings

The culmination of this cycle of research led to the very real need to expand the lessons learned to a much broader audience, which needs to capture all operations departments. These lessons showed that having a structure, providing education and support, and holding people accountable are fundamental to a successful interaction and engagement with a PMR system. These attributes were identified during the first two cycles at Allegheny, and were then directly used to shape and design the performance review process at Pinnacle, which further solidified their applicability. This supports the action research process of learning in action to produce iterative growth in the application of knowledge.

The findings from this cycle of research are summarised below by relating them back to the aims and objectives that were set forth at the beginning of the cycle.

6.8.1 PMR System in the SOC

The first objective of designing and implementing a PMR system within the SOC was accomplished by the introduction of a weekly SOC Managers Meeting that was built around a review of the airline's operations performance. Once again loosely modelled on a BSC approach, it contained measures of specific aspects of performance that were balanced across the four dimensions of the BSC.

In contrast to the implementation at Allegheny this PMR system was built around the strategic objectives of ensuring that we met our contractual obligations with NWA and the objective of continuously working towards an increase in the overall effectiveness of the SOC. These objectives were refined over time as we began to hone in on the core facets of operational strategy. Additionally, involving the managers in its design and implementation meant that the measurements were relevant, realistic and acceptable. Goals were determined based on the previous year's results and performance levels necessary to avoid contractual penalties imposed by NWA. Up until

this cycle of research there was not a performance measurement system in the SOC and the managers did not have access to performance results, much less know what to do with them. They were focused entirely on the day's operation and not on trying to find root causes and thus fix systemic issues.

The weekly meetings were initially led in a nurturing and educational fashion to encourage the managers to engage rather than shy away from the new process. It was already apparent to me from the first cycle that the biggest hurdle was a lack of education of the determinants of performance results, coupled with a lack of business experience and education. This meant that I had to hold them by the hand for a while until they learned how to be independent in their research and explanation of performance that fell within their areas of responsibility. These weekly meetings also led to the SOC managers having to give presentations on a regular basis. I had made it an important part of their management development to teach them how to develop a useful presentation and then how to deliver it with conviction. In the same manner we broadened this to developing formal reports and papers on the more important projects and assignments that they were working on. This enhancement to their overall management capability began to raise their capital in the SOC. They were slowly gaining a higher level of respect as professional managers, rather than being seen as simply administrators. It was also intriguing for me to see that their individual behaviours were modified over time so that they embraced the new PMR system and adopted a greater degree of motivation towards accomplishing their jobs more effectively. This was undoubtedly the result of my role in being not only the facilitator as the project manager, but also by providing the management support and guidance that everyone required in order to remain focused on the PMR system and especially the results. I was able to do this far more effectively at Pinnacle than at Allegheny because I was also the director for all of these managers and there was a certain obligation for them to comply. However, I approached my role in an encouraging and supportive way without being authoritarian or threatening.

The performance review mechanism was also expanded to the entire Flight Operations department by way of a monthly review. This was a large undertaking and ran into the same problems as the initial implementations at Allegheny and Pinnacle, namely a lack of underlying knowledge and understanding about operations performance and the results presented. This caused the monthly meeting to remain simply a review, without taking an in-depth and critical look at the results. Most people just followed along rather than taking an active role, or questioning assumptions. This was unsatisfactory, but to

have truly engaged people would have taken an extensive project to train and educate them, which was simply beyond the resources that I had available at the time.

6.8.2 Attitudes and Behaviours

Secondly, the objective to identify the attitudes and behaviours that were adopted by the SOC managers towards the PMR system, was accomplished by extensive analysis of the repertory grid interviews. Following extensive reliability testing this resulted in nine behavioural categories. These behaviours are not an exhaustive list of all the behaviours necessary to successfully engage with a PMR system, but they do represent the behaviours deemed important by the group. De Waal identified 18 behaviours as being important across the spectrum of a PMR system from its design to its continued use. The evidence from this cycle showed that there was again a strong convergence with de Waal's derived behavioural categories (De Waal 2002). This further validates the results from the second cycle that suggested that the behavioural categories identified by the interviewees were important for them to feel alignment with the PMR system.

While there was a good degree of positive behaviours there was still a lot of shortcomings that needed to be addressed. There is insufficient evidence at this stage to say that people will adopt the behaviours and actions necessary to arrive at the goals. My evidence showed that there was a significant lack of knowledge in how to measure and then interpret performance data and that training and education are still essential components to success.

The individual grids provided me with very rich insight into everyone's behaviours and attitudes, not only from their own personal perspective, but more importantly from their peers. This built a picture for me of how each person was seen and regarded by the others and allowed me to adapt my approach based on this new knowledge. I was able to identify individual shortcomings and work to improve them. This involved either a one-on-one session with an individual to address or correct the issue, or a more tailored approach to how I trained them on the PMR system.

6.8.3 Growth

The third objective was to understand what effect the state of growth had on the managers attitudes and behaviours towards the measurement of operations

performance. It was interesting to note that nobody specifically spoke in terms of growth during the repertory grid interviews, unlike at Allegheny where the crisis was ever present in their responses. There was however an underlying energy that the growth was instilling in people. It was exciting to be part of a progressive company and there was a pervasive determination to do well. This was evidenced quite strongly during the interviews by the way that the respondents related their experiences and thoughts. Nobody spoke in overly negative terms and there was a distinct willingness to be involved and learn.

The growth was undoubtedly having a positive effect.

6.9 Personal Reflections on the Third Cycle

I again enjoyed using repertory grids because of the structure they provided and the immense detail that could be extracted. However, I had a lot of difficulty in trying to articulate in writing the insights that it provided. My understanding and appreciation of the capabilities of the SOC was enhanced significantly by this research and it played a pivotal role in how I progressed the PMR system. However, the knowledge was continuously being built which made it hard to say with clarity what the actual results were.

Having now had experience of two extensive applications of repertory grids I truly appreciate the need for the interviewer to be an integral part of the exercise. An insightful repertory grid interview is not something that can really be carried out automatically without the interviewer having a very good knowledge of the subject matter. Had these constructs been elicited in an impersonal manner by computer then they may not have yielded the level of insight that I was able to derive from them. This made me much more aware of the thoughts of the managers in the SOC and gave me pause to consider their roles and the level of capability that each offered. Some responses were remarkably insightful. For others they were humdrum, but collectively it painted a very good picture of the culture.

As time went by the SOC actually developed its own separate culture, different from the company's overlying culture. The SOC functions in a largely autonomous way and is housed in a secure facility that requires authorised access. This meant that most people in the company did not have access to it and were mainly ignorant of what

activities took place in this facility. This separation and the attitudes and behaviours exhibited by its staff moulded the unique sub-culture that existed. It was very encouraging to see that this sub-culture began to show very strong signs of being representative of performance-driven behaviour.

6.9.1 Looking Forward to the Fourth Cycle

Having now established a robust PMR system within the SOC, and a monthly performance review for the Flight Operations department, it was important to bring these lessons and concepts to a larger audience. The fourth cycle explored the introduction of a daily PMR system that was designed to involve all operating departments.

6.10 Summary

This chapter has reported on the design and implementation of a weekly performance review system within the SOC at Pinnacle Airlines and then examined the attitudes and behaviours of the SOC managers as they engaged with it, and were held accountable for reporting on their areas of responsibility. This showed that even though structure, support, guidance and growth were prevalent, managers still did not automatically adopt the behaviours necessary to engage with a PMR system. It showed again that there was a significant knowledge gap that needed to be addressed. Without education and training it may result in just a review of performance results rather than critical understanding of the determinant of the results. However, when the knowledge gap is closed it facilitated a movement towards performance-driven behaviour.

7. CYCLE 4: CROSS-DEPARTMENT OPERATIONS PERFORMANCE REVIEW

The fourth and final cycle of research focused on the managers' behavioural reactions to a newly introduced cross-department daily operations briefing. This cycle again took place at Pinnacle Airlines and provides an account of the structural and behavioural factors of a newly implemented daily operations review system as the managers and directors engaged with it.

7.1 Introduction

Following the introduction of a performance measurement and review system within the SOC at Pinnacle during cycle three, which was then expanded to the entire Flight Operations department, I was given the opportunity to enlarge this to all operating departments by way of a formal and daily Operations Performance Briefing.

The fourth cycle began in late 2007 and coincided with a knee jerk reaction by senior management to punish and threaten staff after a brief period of significantly declining performance. This declining performance was the result of prolonged bad weather, a shortage of crewmembers and reliability problems with our aircraft. It also coincided with the implementation of new business flying for Delta Airlines. Pinnacle had successfully won a contract to fly 16 new aircraft for Delta which entered service in December 2007. However, once again Pinnacle had failed to adequately plan for the addition of this new business and consequently resources were once again stretched thin and when combined with these operating problems there was insufficient flexibility over the entire airline to maintain our previously industry leading performance.

This led to the senior executives imposing a mandatory seven day per week conference call at 06:00, which was designed to be inconvenient and punitive for the management staff. Their logic was that it would convince people to expeditiously improve performance so that they would not have to continue with the inconvenient conference calls. Inevitably, and not surprisingly, this led to discouragement, fear and anxiety. Fortunately, I was able to convince my boss at the time to allow some common sense to prevail and I launched a daily 09:30 Operations Briefing. This was deliberately

timed to be at an hour when everyone would be at work and not inconvenienced, and was designed to be constructive rather than destructive. The aim was to review performance from the previous day, identify major constraints on the operation and to look ahead to the current day of operation.

7.2 Purpose and Objectives

In a similar fashion to the previous three cycles this section outlines the purpose and objectives of the fourth cycle. The issue in question for this cycle was how to engage all operations departments collaboratively in a daily operations briefing that was designed to review performance and identify shortfalls that could be remedied to improve performance.

<u>AR Procedural Steps</u>	<u>Action for Cycle Four</u>
Determine the problem:	No collaborative and cross-department performance measurement system and little understanding of how to measure operations performance and use results
Plan action:	Set objectives. Design a cross-department daily operations briefing
Take action:	Introduce the daily 0930 Operations Briefing and conduct interviews with the managers and directors who attended the briefing
Evaluate and analyse:	Descriptive analysis and content analysis of the interviews to make sense of the findings and identify behaviours
Reflect on action taken:	Personal reflections on the fourth cycle

The following specific objectives were established to provide the necessary structure for this cycle of research:

1. Design and introduce a daily cross-department Operations Briefing
2. Evaluate how the managers responded to this system by conducting semi-structured interviews
3. Examine whether the structural and behavioural aspects of the system were being met by content analysis of the interview transcripts

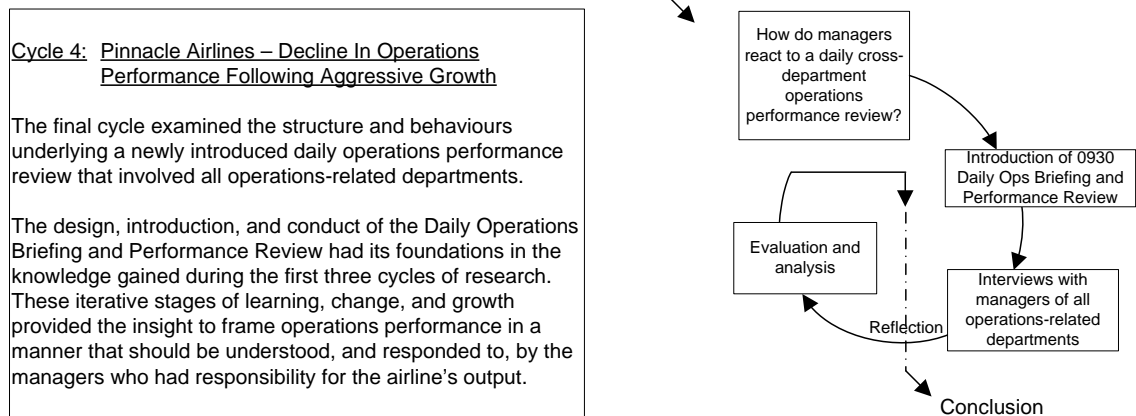


Figure 7-1 Diagram of 4th Cycle Events

7.3 Design of Daily Operations Briefing

My main goal in designing the 09:30 Operations Briefing was that it needed to be informative, concise and easy to understand and interpret. I intended to keep the meeting duration to approximately 15-20 minutes and so it was important to condense the operating data into a few pages that captured the essence of what we all needed to know. It was also of crucial importance that the each operating department had to participate and speak about performance within their domains.

There were two distinct aspects to this. Firstly there was the collection of the data and its presentation in a format that could be viewed and understood by a large group of people and secondly the flow of information that would comprise the agenda of discussion topics for the actual review.

The audience for this PMR system would be the department heads and key managers within all operating departments that were based at the headquarters. In addition to this

would be the base managers, hub coordinators, and assistant chief pilots in their respective bases throughout the country.

Obtaining the data was a matter of culling statistics from several different sources and combining them into one document. I decided to do this using an Excel spreadsheet because Excel was available to everyone as a company deployed application and also offered a good way of importing and sorting the performance data into tables and graphs. When setup correctly it was just a matter of entering some information manually and then letting automation populate the rest of the fields. The spreadsheet was located on a secure server and accessible by all who needed to review it. Everyone located at the headquarters building would gather in a large conference room and those in the field would join via conference call. The spreadsheet was sized and formatted so that it could be displayed on a projector and would flow in a logical manner with each tab representing another page.

I designed the format so that there were two parts to the review: firstly, a brief review of the key performance indicators from the previous day's operation such as completion factor, on-time departures, on-time arrivals and controllable completion factor, and secondly an outlook for the current day's operation. Each part of the review also presented a breakdown of the delays and cancellations by operating department. By the time that the review took place, which was 09:30 CST (10:30 EST) the day's operation had already been in full swing for several hours and it was commonplace to discuss delays and cancellations that had occurred just hours or minutes before.

My main intention was to focus on the current day rather than dwell in the past and so this part of the review received the most attention. It was designed to begin with a weather briefing from the operations management team in the SOC and was followed by a review of the launch performance. The meeting was then turned over to each operating base who in turn would have to discuss any operational problems that could affect their hub. This was followed by a review of the current delays and cancellations and was concluded with identifying any issues that required follow-up. They were recorded on an Action Item list with the expectation that answers would be provided at the meeting on the following day.

Finally, it would be important to run the meeting in such a way that people felt encouraged and that their input was valuable. It was also important to present the data cleanly and clearly and with explanation of what the data was showing – colours for

above/ below goal, etc, and to elicit the input from our managers and directors in the field.

7.4 Implementation of the 0930 Daily Operations Briefing

The 0930 daily Operations Briefing was implemented in early 2008. I chaired this meeting for the first six months before handing it off to the Manager of Dispatch. In conducting the meeting I was conscious to include as many people as possible and to highlight the positive and negative performance results to address the findings from the first cycle.

The first part of the meeting was a high level overview of the previous day's operation starting with the most important aspect of running an airline, which is safety (Figure 7-2). During the course of our daily business, operating in excess of 700 flights per day, it is inevitable that mistakes are made in handling aircraft. One such frequently occurring event is damage to an aircraft either in-flight or while it is on the ground. For example this can occur through bird strikes (very common), contact with a piece of ground equipment, scratches to the airframe from loading bags, or foreign object damage (FOD) while taxiing to or from the runway. These incidents of aircraft damage are carefully recorded, reported and tracked. Additionally, how an aircraft is loaded is very important in order to maintain the correct centre of gravity (CG). Occasionally load errors occur that can have serious safety ramifications. If an aircraft is loaded so that it's CG is too far forward it may be difficult for the pilots to elevate the aircraft during takeoff. Similarly, with an aircraft that has been loaded too far aft it can lead to a high angle of attack when climbing and descending, which could potentially cause the aircraft to stall. This was a contributing factor to the crash of Air Midwest flight 5481 at Charlotte/Douglas International Airport in January 2003, which led to heightened awareness of aircraft loading practices. Most load errors occur due to an incorrect count of bags loaded onto the aircraft. Naturally, this is a serious issue so I decided to incorporate it into the review, so that it could be tracked and discussed daily.

Safety		Rate per		
		Yesterday	MTD	1000 depts
Aircraft Damage	1	7	0.39	0.37
Load Errors	0	2	0.11	0.26
FICONS (unreported)	0	0		

Figure 7-2 0930 Ops Briefing Excerpt (Safety)

The next section focused on the key operations metrics of completion factor, on-time departure performance (D:0) and on-time arrival performance (A:0). These are shown in Figures 7-3 and 7-4 below. They are the airline's primary KPI's. They were further broken down by our lines of business: NWA and DAL, and then by department. This provided all operating groups with a snapshot of how their area of responsibility had performed the previous day and their contribution to overall airline performance.

NWA Performance						
KPI	System	DTW	MEM	MSP	Goal	System MTD
CF	99.3%	100.0%	100.0%	100.0%	98.3%	98.3%
D:0	85.3%	80.3%	84.3%	88.9%	76.0%	74.0%
A:0	77.3%	76.2%	80.7%	76.1%	65.5%	65.6%

CANCELLATIONS				
Uncontrollable	CF	Cxls	Goal	MTD
Weather/ATC	100.0%	0	99.45%	

Controllable	CF	Cxls	Goal	MTD
- Ops Decision	100.0%	0	99.70%	
- Flight Ops	99.9%	1	99.66%	
- Maintenance	99.7%	2	99.58%	
- InFlight	100.0%	0	99.99%	
- Ground Ops	99.7%	2	99.96%	
Controllable CF	99.3%	5	99.30%	

DELAYS						Strn D:0	
	Deps	Dlys	D:0	Goal	MTD	Strn D:0	Goal
DTW	152	30	80.3%	76.0%	71.9%	91.4%	88.5%
MEM	121	19	84.3%	76.0%	68.6%	99.2%	93.4%
MSP	72	8	88.9%	76.0%	73.6%	98.6%	89.0%
IND	22	6	72.7%	76.0%			
Flight Ops		24	96.7%	92.7%			
Maintenance		45	93.9%	94.0%			
InFlight		6	99.2%	98.8%			
Ground Ops		22	97.0%	89.8%			

Scheduled Flights: 742	Actual Deps: 737
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Figure 7-3 0930 Ops Briefing Excerpt (NWA)

DAL Performance

KPI	System	Goal	Sys MTD
CF	100.0%	98.5%	95.80%
D:0	93.0%	73.6%	57.17%
A:14	100.0%	86.9%	72.49%

CANCELLATIONS	CF	Cxls	Goal	MTD
Weather/ATC	100.0%	0	99.45%	
Controllable CF	100.0%	0	99.30%	
- Ops Decision	100.0%	0	99.70%	
- Flight Ops	100.0%	0	99.66%	
- Maintenance	100.0%	0	99.58%	
- InFlight	100.0%	0	99.99%	
- Ground Ops	100.0%	0	99.96%	

0

Scheduled Flights: 42

DELAYS	D:0	Dlys	Goal	MTD
Weather/ATC	100.0%			
Flight Ops	97.6%	1	92.7%	
Maintenance	100.0%		94.0%	
InFlight	97.6%	1	98.8%	
Ground Ops	100.0%		89.8%	
Late Equip	97.6%	1		
Other	100.0%			

Actual Deps: 42

Figure 7-4 0930 Ops Briefing Excerpt (DAL)

The second part of the meeting was devoted to an outlook of the current day's operation (Figure 7-5). This commenced with a weather outlook for the main operating regions and continued with a review of the mechanical status of the fleet, the available crewmembers who were on reserve status and the performance of the first flight of the day for each aircraft, known as launch flights.

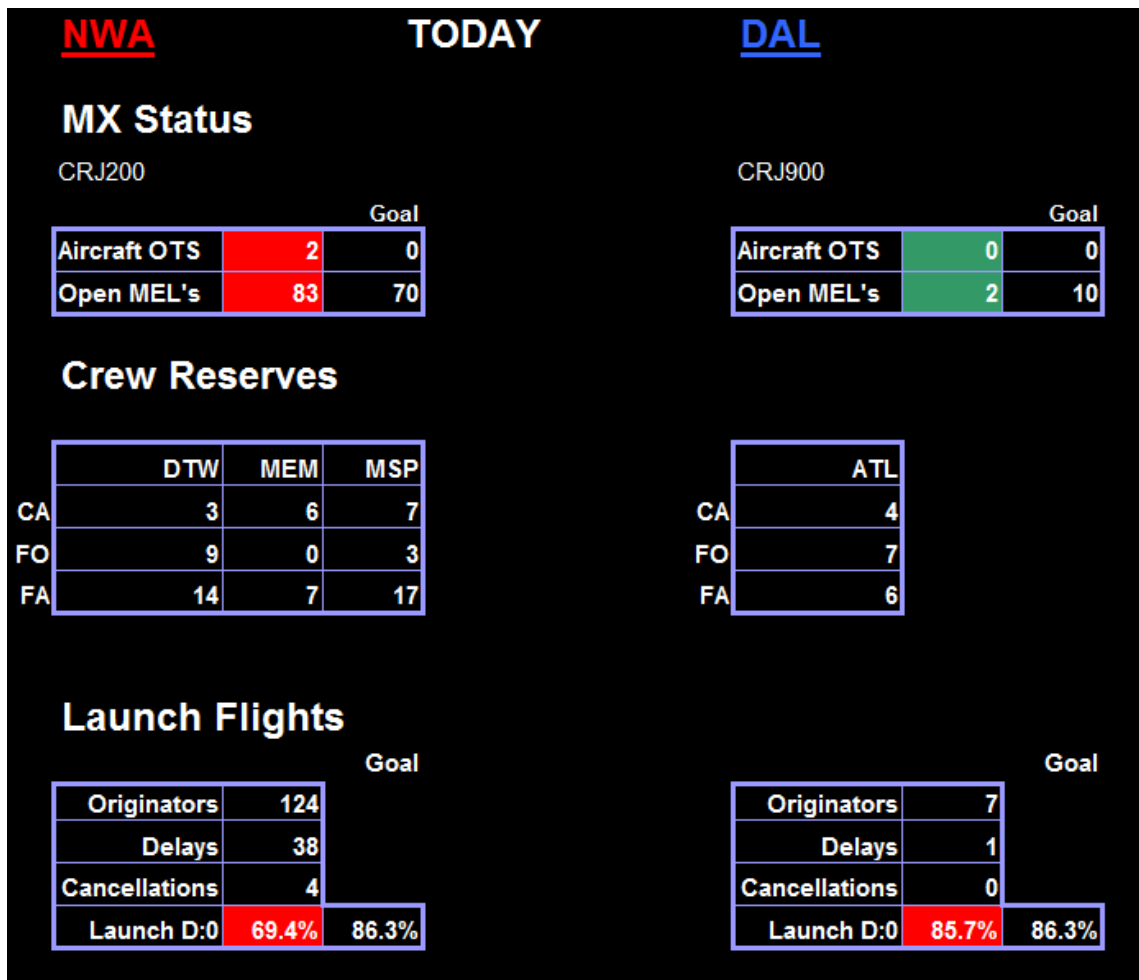


Figure 7-5 0930 Ops Briefing Excerpt (day of operation)

The final aspect of the briefing was to identify any operational issues that had caused a performance discrepancy, assign an appropriate person to formulate corrective action and record this item on the Action Item Follow-up List. Any previously added items were reported on by the person to which they had been assigned.

Action Item Follow-Up List:

Responsible Person	Follow Up	Follow Up Date	Resolution
IT	DLMatic Undelay message	5/2/2008	Tom working with Steve Borden to resolve. Currently looking at 2 instances
Brett Mannion	Fueling the night before on overnights?	5/2/2008	Night of 3/27 testing procedure in TUL will update 4/3. Survey of all stations completed. Need min. load from P. Long to develop "min" fuel by location.
Bob Hartley, Barry Baker, Mike Garvin, David Parry	DTW IND Launch flight which is a priority is running at 37%. Need plan to address this.	5/12/2008	Bob Hartley is working with Phil Reed to list the past problems this flight has had and plan how to avoid them in the future. Expect to have a meeting on this shortly. Bob is going to get with planning and mx - complete. We have seen improvement. Will review at months end. Operates until 6/4
Maintenance	Passenger Door Assist straps & sticker. Also cargo door sticker is needed.	5/1/2008	Sticker is in process. Vendor is making these. Brian will get answer.
Charlotte Williams, David White, Tom Chapman, Ted Davies	Master Crew list. Names dropping off. Need additional access to correct.	5/1/2008	Ted is requesting the written process from Mgr of Training Resources/Scheduling. Mtg on Wed 4/30
Greg Uribe	Fuel load communication	5/2/2008	Process change/training by next week. Tom Chapman is working on automation - by when? Testing week of 4/10. ASIG testing, update next Friday. Did not occur - testing will commence in 2 weeks. Will be implemented on 5/14.
Grady / SOC	OKC Originator process / Gate issue	5/2/2008	More separation between launch flights in June, airbottle is in OKC - Outlet installed waiting the plug, 2nd gate not available at this time
Patricia Noel / Grady Earnheart	TUL Bag belt inop 4/23	5/9/2008	Airport retraining with TSA and agents + MX problems. Grady calling Airport Dir - update next week. 5/8 Presenting to Board for updates to system.
Maintenance	Dent mapping / old damage marking	6/1/2008	Virtual Dent folder on the MTC file server. Sub folder for each aircraft with virtual dent map for each aircraft. Each dent identified by DI# and given a specific location. June 30 th. (Optimistic)

Figure 7-6 0930 Ops Briefing Excerpt (action items)

7.4.1 Interviews

The interviews began in August 2008 and were designed around de Waal's nine aspects of performance management (De Waal 2004; De Waal and Gerritsen-Medema 2006). These divided the use of a PMR system into two aspects: the structural side and behavioural side.

The interview questions were designed to elicit predominantly 'yes' or 'no' answers but left plenty of opportunity for elaboration by the interviewee (Appendix D). An interview was conducted with each of the nine managers or directors who attended the daily briefing, see table 7-1 below. These people represented all of the departments that had responsibility for operations performance.

Table 7-1 List of interviewees - Cycle 4

<u>Position</u>	<u>Abbreviation</u>	<u>Department</u>
Ground Ops Regional Manager	GORM	Ground Operations
Director of Maintenance	DOM	Maintenance
Director of Flying	DOF	Flight Operations
SOC Duty Manager	SOCDM	Operations Management
Manager, Dispatch	MD	SOC
Director of Safety	DOS	Safety
Manager, Crew Scheduling	MCS	SOC
Director of Operations	DO	Flight Operations
Director of In-Flight	DIF	In-Flight

7.5 The Structural and Behavioural Aspects of the PMR System

A significant factor of de Waal's research was to assess the structural and behavioural aspects of a performance measurement system by applying a performance management analysis to 135 Dutch companies (De Waal 2004).

There are two distinct parts to this: the first part examines the organisational 'structure' that is in place to allow engagement with, and consistent use of, the PMR system, and the second part examines whether the managers and directors displayed performance-driven 'behaviour'. In this cycle, I have used a similar approach but conducted the data-gathering by way of one-on-one interview questions and analysing the data using content analysis.

The interview transcripts were imported into NVIVO8 to facilitate content analysis and are presented here in subject order to follow de Waal's (2004) nine aspects of performance management analysis (see Table 2-2 in chapter two). Each individual

aspect is presented in the order that the questions were asked and discussed from the interviewee's perspective. The analysis is further informed by my own observations and the conversations that took place with those involved.

7.5.1 Structure: Tasks and Responsibilities

The first subject area involved questions concerning the tasks, responsibilities and roles of the managers and directors and whether they felt they were clearly defined.

"Yes, definitely, they are clearly defined, not fully documented, but defined and understood" (SOCDM)

"I do feel that they are defined, but I don't have a sense of determining the limits of my responsibilities" (DOF)

"It is ever-changing...and adapting to whatever is thrown your way. It is not like a manual or checklist. Clearly defined would be checking things off. So, you deal with what is thrown your way and try to predict what is going to happen in the future...and when it doesn't you change again. In the hierarchy pyramid, the plans are put together by the people at the top but don't include the people lower down. It is hush-hush until the last minute and then you are left scrambling" (MD)

"Looking at it from my role as the manager of dispatch, I don't think that any role is clearly defined" (MD)

"Not particularly...There is insufficient infrastructure. I don't have a clear definition of the role and responsibilities" (DO)

"It was never really clearly defined when we went into the 0930" (DOM)

"My tasks and responsibilities are clearly defined because I wrote them myself!" (DOS)

"Yes, I think so....because I largely set them myself!" (DIF)

It appeared that some had worked proactively to ensure that the tasks and responsibilities for themselves and their departments were clearly established:

“We have worked to further define roles and responsibilities so that we understand and can think outside the box” (GORM)

“The position has evolved into what it has become now and we have really worked on what we need to do and why” (SOCDM)

“Just the basic job description...so when it came down to the daily tasks and ‘how to’...I was just feeling my way, but as time went on I figured out my responsibilities and how to meet goals” (MCS)

This suggested that while some further clarification was required for the others they may also benefit by taking the initiative to clarify tasks and responsibilities, rather than expecting them to be defined for them.

This was indicative of an ill-defined job description that saw him performing the role that normally typifies a Chief Pilot, but with a job title that suggests a far broader range of responsibilities. This caused a degree of role confusion for him and a sense of anxiety in not knowing whether an issue was really in his area of concern or not.

“There are issues with determining the limits of my authorities. People have an unclear view of who I am and what my role is” (DOF)

Having ascertained that there was not a consensus that their tasks and responsibilities were clearly defined, it was therefore important to understand from the perspective of the interviewees what could be done differently to improve the situation:

“What I need to understand about the info I am giving on impact MEL’s is what use is it to other people? If nobody is getting anything out of it [0930 report] then I don’t understand what they want” (DOM)

“Stop bending to political pressure...as long as I hold a position that is ill-defined I will never be able to do that - I mean have a clear limit of my authority. I wish the organization was more steadfast and resolute” (DOF)

"I guess just a blanket list of specific expectations up front, for example, once a month do this, once a quarter have a meeting, etc. It would have been helpful..."
(MCS)

In distinction to the majority there were two responses that indicated that there was little that needed improvement:

"We have really worked to take all the negative things out of it. Everything is aimed at meeting our goals and hitting performance measures" (GORM)

"I don't know. I think we have got it to the best it's ever been without having to hire more people. It works, but has become very demanding time-wise"
(SOCDM)

The focus on understanding the distribution of tasks and responsibilities was further sharpened by enquiring whether they were applied consistently at all management levels and across all departments. In first examining their application at management levels:

"Not sure. I say that because I am not sure how every department communicates goals and responsibilities and what the follow-through is"
(GORM)

"It seems like you guys (SOC) have more to do than the rest of us (re the 0930)" (DOM)

"...down to front-line manager levels? Yes. We do a good job of delineating and distributing the load" (DOF)

"I don't know enough about tasks required of the other departments. Within our department, I would say yes" (SOCDM)

"No. There are very different departments, different positions, different responsibilities and different goals" (MD)

"I would say that not everybody understands their duties and responsibilities and the authority they have to perform them. I see a lot of people who send

stuff up the chain instead of doing it themselves. At the recent Directors meeting the approach was: the VP's would do the strategic thinking and let the directors run the airline. There is fear" (DOS)

"We are all maxed-out. There are some who push back and refuse to take things on, but most people have to take on more tasks, especially in the SOC" (MCS)

"The VP's carry some of the load that directors should and directors carry some of the load that managers should, which is why we are so damned stressed at the end of the week. As a company we suffer from a lack of resources and infrastructure to support the type of operation we are trying to operate" (DOF)

The majority of the interviewees thought that there was an uneven distribution of workload and that the burden fell on them. This subject caused some exasperation amongst the respondents who on the whole believed that the operations side of the business, and in particular Flight Operations, was more heavily tasked than others:

"Flight Standards has a lighter load of responsibility and it does not fluctuate. Flight Ops Administration carries a heavier burden throughout the year. Flight Ops fluctuates constantly, and is under a constant state of having issues to handle. The CEC workload and responsibility varies with whether we are hiring and training or not and is dependent on the health of the airline" (DOF)

"The absolute bulk of performance responsibility rests with Flight Ops and then Ground Ops. HR, Legal and Payroll are just there to support these departments. All of us individually carry more weight than we should. We do not delegate effectively, and do not have the resources to delegate to" (DOF)

"There is so much more pressure in the SOC. Anyone in the SOC MUST be more flexible than other departments. Any plan you have could be completely wiped away by the demands of the operation" (MCS)

Overall, there was evidence that tasks and responsibilities were being unevenly distributed, with Flight Operations carrying the heaviest load and burden, and that there was still work to do in clearly defining the roles, tasks and responsibilities for some of the attendees at the 0930 Operations Briefing.

This discussion on structure continued with a look at 'content', and the sources of performance information that people used.

7.5.2 Structure: Content

The subject of 'content' considered whether the managers used both financial and non-financial information to assist them in achieving their operations performance objectives and to learn whether they used a balanced approach when making decisions. In regards to using financial information, there was an overwhelming agreement that it was considered:

"Absolutely! Everything we do has that financial hit to it. If we don't look at it financially we miss the big picture" (GORM)

"Yes. I don't look at financial measures daily...the average is 3-4 times per month. Items that come out of CASP (continuing analysis and surveillance programme) meetings that affect the operation and have a financial impact have to be looked at and evaluated carefully. I also look at the financials to see where we are year to date" (DOM)

"There are financial decisions made.....calling in overtime for example. So, yes we use both" (SOCDM)

"Yes. We use the financial part to determine staffing, and base the schedule on our financial position – training, etc" (MD)

"Yes, I think so. When looking at crew utilisation....will it will cost the company more to use this pilot than that pilot? We must follow the contract when we junior-assign. If we make a mistake it may cost the company thousands in grievances. Mistakes can inconvenience passengers and cause costs: hotels, buses etc. Everything is tied to the bottom line" (MCS)

"I do. The simplest example I can think of is the Preferential Bid solution meeting. The first thing I look for is the financial impact to our block hour cost" (DO)

“Yes. I have to take into account staffing and departmental G&A (general and administrative) and where to put assets. I only have X amount of heads and have to get the best bang for the buck” (DIF)

A slight variation was the Director of Flying who stated that financial information was not critical to operations decisions:

“But, the plane has to fly regardless. Financial constraints would be ignored in the everyday objective of accomplishing the mission. They have their uses in the planning stage but in the everyday operation they carry less weight” (DOF)

There was only one who excluded financial information in his role and that was the Director of Safety (DOS), whose primary objective was to ensure that all operations were conducted with the highest regard for safety:

“I exclude financial performance. It is not measured by my department, nor do we get involved. We are looking strictly at operational performance” (DOS)

In enquiring whether the non-financial information has a strategic focus by using success factors and key performance indicators (KPI) there was universal agreement:

“Absolutely! We look at our performance within the department as well as the company. In the 0930 we look at station D:0 versus company D:0 and what we are doing to hit these goals. We are looking for ways to hit targets and ensure we meet our piece of the goal” (GORM)

“We always focus on on-time performance...getting an aircraft out of the hangar and meeting the D:0 goal for the kick-off (first flight of the day)” (DOM)

“Yes. In operating with pilots I am interested in anything to do with behaviour e.g. long-term absences, sick calls, fatigue, staffing, extension refusals, etc. We use real-time indicators to make adjustments to policy and procedure and to meet any decline in performance. They (absences) are a large influence on how this department operates on a day-to-day basis and how it reacts...the bell-weather for how we are doing” (DOF)

“Absolutely! Our performance for yesterday, month-to-date, year-to-date....all have a bearing on the decisions I make today” (SOCDM)

“Our controllable delays like FRF, WBF etc, revolve around the weather primarily and staffing” (MD)

“Oh, yeah. Whether I have control over damage or not it is part of my performance objectives” (DOS)

“Yes, completion factor and ‘D:0’. I have put together a Powerpoint for the team, showing how what we do affects the key metrics” (MCS)

“They are and have gotten much better. I have been accountable for metrics over the last 10-12 years as a manager at Pinnacle. I look at certain things – it is much better – I have found ways to mine information. The 0930 has shown that. The 0930 has turned out to be a good thing for us. Initially it did not fit for us but since we were given the responsibility for it and were able to adapt it, it has been good. There is no organisation on the servers - there are thousands of folders, no indexing, but the 0930 does that for us and at a face-to-face level. We know how to get much of what we need. Our group has done much better with this. All in all I am much happier on where and how to search out information” (DO)

“Yes....very strategic for the operation. I can drill down to the station level. For example I can tell you if Norfolk has FA (flight attendant) issues” (DIF)

This resounding expression of using CSFs and KPIs was very encouraging to hear. It added validity to the 0930 Operations Briefing and showed that the managers were actively involved with performance metrics and were keenly engaged in trying to obtain optimum performance. Having now established that the right inputs were being used the integrity of the information system was examined.

7.5.3 Structure: Integrity

This subject examined whether the interviewees considered that the performance information was reliable, timely and accurate. The majority of the interviewees thought so, of note were:

“If I didn’t have the 0930 meeting info I don’t think we have a good avenue for recovering that info, although we do get the SOC pages” (DOM)

“Before the 0930 we only had access to the NWA report - we are now stepping into what you use and have developed, for example the Flight Ops Monthly Performance Review” (DO)

“Yes, I put it together! And, I do not rely on anyone else – just rely on Brio (data mining tool), but pull out the data myself: graphs, charts...everything is mine. I disseminate them daily amongst the (In-Flight) management group and they are posted at the bases for FA’s to see. It has really focused attention” (DIF)

“We work to get our information out. We do a department conference call at 0830, 7 days a week, where we talk about issues occurring now and in the past, and what we can do to fix them. They will occur again otherwise” (GORM)

“The 0930 is a source of information and I look to the newsletter and SOC pages” (MCS)

This suggested that the availability of performance information was adequate, but there were two responses that indicated some doubt:

“Consistent? Yes. Reliable? Not as much - delay reports have no real meaning to us until delays have been truly identified to their root cause. Timely? I get it fairly quickly, but unless the data is given to me quickly it is no use” (DOF)

“It’s reliable, but never timely” (DOS)

Overall, the integrity of the performance data in terms of its reliability, accuracy, and timeliness was considered to be sufficient. There was certainly room for improvement but everyone was satisfied with the data provided at the 0930.

7.5.4 Structure: Manageability

Manageability examined whether the interviewees were able to easily obtain performance reports and what they do when they need additional information. In terms

of obtaining performance reports all but one agreed that they received performance management reports:

“Yes. We use much of what the company produces and other reports on the server” (GORM)

“Yes. I can ask MOC to provide them. We have a pretty close-knit group. We talk about it and get what we need” (DOM)

“We are now because we have developed some systems over the last year. We are just now getting the software programmes that allow us to do that, for example FOQA reports, Flight Safety reports, etc” (DOS)

“Sure! Now that you have the 0930 spreadsheet on the server. I don’t know if I could physically crunch the numbers without that” (MCS)

“Yeah, I can pull from the data warehouse. I used to be invited to the Monday 1230 Ops Meeting, but, like all directors, I have been excluded from it for a long time, yet I run In-Flight! They ostensibly talk about the operation but there is absolutely no feedback from it” (DIF)

The Director of Flying however had a conflicting view, which was at odds with everyone else:

“No. I have to struggle to get them. I am computer literate but have to navigate to get reports. As an airline in this day and age we should not be doing this in spreadsheets. It is ludicrous that we track some crew qualifications in Excel. The company will not invest in the infrastructure that is needed” (DOF)

In drilling down further the explanation can be found in his inability to readily understand the data that was available.

“This is my first management position and when data is found it is a struggle for me to be able to look at the data, read it and interpret it and get something meaningful out of it. There is no guidance on how to interpret data. It is a sink or swim mentality” (DOF)

It seemed that he wanted it handed on a platter complete with interpretations and meanings rather than being the analyst and using his expertise and knowledge to interpret what the data was telling him. This highlights an important point. Should performance data be provided in raw form so that the managers could make their own interpretations or should the data be provided with the meaning already attached?

If the available performance data was not sufficient where did they turn to when they needed more info? Everyone was able to state where they could go to obtain additional performance information.

“Usually we go within our own department to [Name]. She can help or point us in the right direction” (GORM)

“I would think that Performance Engineering should be able to get it for us” (DOM)

“I can get it...but it requires relying on human involvement and human observation. We are saturated in data at times – no core KPI’s etc” (DOF)

“I do not need more detailed info. If I did I would go to you!” (SOCDM)

“I usually just research it, so yeah I can obtain it. If I need additional or in-depth data I pull it from FliteTrac reports” (MD)

“I just have to find the SME (subject matter expert) in each department and dig it out” (DOS)

“Well if its performance information as far as the team is concerned I would use transaction reports, Symposium reports, FliteTrac reports and also the NWA report” (MCS)

“Well, I generally task it out to subordinates – we have some base managers that are very good at that sort of thing. I have become much more of a generalist than in the past...mainly through delegating effectively” (DO)

“Yeah, but in terms of running the operation there is no more detailed info that I need” (DIF)

There was general agreement that the structure in place was adequate for the 0930 Ops Briefing. Of the 72 possible responses to the seven questions concerning the subject of 'structure' there were 48 affirmative responses, 16 that did not agree and eight that were undecided. This 3:1 ratio suggests that although there was still improvement to be made the necessary structure was largely sufficient to allow everyone to function effectively.

The next section now examines whether the interviewees themselves displayed performance-driven behaviour. This was assessed over twelve specific questions.

7.5.5 Behaviour: Accountability

This examined whether the interviewees felt responsible and accountable for the airline's performance results. It was encouraging to learn that of the nine interviewees seven of them categorically felt that they were accountable for performance results.

"Of course!" (DOM)

"Absolutely! It comes from ensuring that standards are in place and procedures are in place and more importantly accountability is in place"(DOF)

*"Yes...it's my department...my ass on the line...it keeps us all in a paycheque"
(DIF)*

This indicated that the 0930 Operations Briefing was having a positive impact, whereas previously there was no visible accountability taking place.

One response indicated uncertainty, but when questioned further it emerged that this emanated from the fact that her dispatchers had such a low rate of causing flight delays that the issue of being held accountable for a performance shortfall had never arisen. This actually indicated and was subsequently confirmed that this manager had already done a very good job in virtually eliminating delays caused by her employees that it was no longer even considered as a potential cause of poor performance.

"It's only a few (flights) that dispatchers now affect negatively - ours are so minimal that they do not have as big of an impact as others" (MD)

The Director of Safety responded that he was not held accountable for performance results. His logic was that his role was not in providing good performance results, just good safety results. This slight difference in interpretation of what is considered performance caused him to say no, but good safety results are part of good performance results. He had lost sight of the fact that all aspects of performance are combined into ensuring that the company is successful. This aspect of looking after just your area of responsibility was a theme that emerged quite strongly over the course of the analysis suggesting that people and departments were operating in silos and unconcerned about the big picture.

“No. I am always the sniper, never the target. We live in a happy world of trailing indicators. Most of it is out of my hands. 9 times out of 10 we have a good process but we simply don’t follow them...especially on-line, where we probably have our less educated people...they have to have a process....how to capture the airplane properly or bad things can happen” (DOS)

When asked specifically about whether they felt they were accountable for performance results in their own area of responsibility there was almost universal agreement that they did with only the DOS again in disagreement:

“If I don’t take on that basic burden, oversee my group, then that reflects poorly on me” (GORM)

“Yes, but I cannot prevent someone from calling in sick or refusing an aircraft etc, but I can hold them accountable” (DOF)

“Yes, right now. I mean there is the dual reporting structure with the Duty Managers, and then they oversee the Sector Supervisors, and they make decisions on delays and cancellations, so yes” (MD)

The director of safety was again deliberately separating his job obligations from the performance of the company, seeing his role as ‘policing’ what others do:

“No. Like I said, the only thing we are responsible for is process improvement” (DOS)

Having established that virtually everyone felt that they were accountable for performance results in their area of responsibility, it was further questioned whether they felt an obligation and commitment for the performance of the organisation as a whole. Now that the focus was on a larger scale there were some disagreements that began to emerge. Although five agreed that they felt their efforts were in alignment with helping the entire company the other four painted a picture that suggested segregation within the company:

Of those in agreement that accountability encompassed the results for the company as a whole, of note were:

“Absolutely! Again it comes down to, if I’m not doing my piece then we all fail. Each individual has to do what they can to help the company be successful” (GORM)

“We all play a role in working with one another to meet company goals” (DOM)

“Yes, but probably not any more than operational performance. I have no influence over our financial performance” (SOCDM)

“Yeah, I think they are directly related and I think some of my senior people see that too. I feel directly connected to the organisation” (MCS)

The responses that painted a different picture were:

“We (SOC) are a huge driving force in it but not ultimately responsible” (MD)

“I’m responsible just for achieving mine... I figure I’ll do my part and they’ll do theirs...If a department fails there is very little sympathy...thank God it’s them, not us....the heat is off us! Old adage...we don’t have to run faster than the bear, just faster than you!” (DIF)

“Yes, but only as my piece relates to the whole. I feel no connection or influence to Ground Operations or In-flight. I feel as an airline, the way our organisation is setup, we own one segment of the pie chart but we do not cross those lines. We are segregated as departments” (DOF)

This apparent difference in attitude can also be explained as a difference in perspective: either not feeling departments were working together, or feeling that the individual was contributing to the larger cause simply by doing their part. This was an interesting distinction. The theme was developed further when talking about management style and support below.

7.5.6 Behaviour: Management Style

This subject examined the management style of the senior management group who ostensibly set the direction and strategy for the airline. It sought to ascertain whether they were visibly involved and interested in performance and whether they stimulated a culture of continuous improvement and proactive behaviour.

The first question asked whether senior management was visibly interested and involved in the performance of their employees. This drew largely negative responses:

“No. The VP’s and higher-ups are interested but only in how it relates to success of the operation” (DOF)

“Some are, some aren’t. They should be more interested in strategic actions not how to run the day-to-day operation” (DOS)

“Interested, Yes. Involved, No. They want to know what is going on but it doesn’t feel like they’re involved with employee performance. They are more interested in the operation than the employee” (MCS)

“Not as much as I have seen elsewhere. Their heart is in the right place, but the mission of a very lean, low-cost regional airline, is an obstacle all too often. Evaluations, reviews, succession planning, training replacements...all fall down the priority list, whereas other companies make them a priority. Other companies start with training their people before they ever actually do the job. That is completely foreign here. We have never focused on the development of our people. We say we are going to, but never do” (DO)

“They aren’t visibly involved in my performance. I think they are more interested in the things that are going poorly rather than well” (DIF)

In drilling down to examine why they showed a lack of interest and involvement drew the following responses:

“They’re interested in the operation and the airplanes and how we look in other peoples’ eyes, not the employees...up until today’s conference call where they mentioned [DIF] leaving, there was no interest in him” (MD)

“Micro-managing, interference” (DOS)

“It’s not just evident by their absence, it can be evident in the newsletters and the reports they send to the employees. If you read between the lines...you know, the last line says...”don’t forget to take care of each other”...but the rest is about the operation, not the employee, and they don’t take care of us. They are always saying they want everyone to do a better job, which is evidenced by saying “look at our performance numbers”. It’s made very obvious to the employee that it’s always about performance numbers and much less about the employees’ contribution to performance” (MCS)

“[Company President] has never asked me how it is that we continue to make goal each year despite the fact that our goal level has always increased – they have never asked that....but they will be quick to ask why haven’t you made goal?” (DIF)

These comments very strongly suggested that the focus of senior management was just on the results and not the people who had to produce them. This was borne out by my own observations and conversations. There was a distrust of senior management. No matter how well you thought you were doing and which performance goals that you exceeded the focus was always on “why didn’t you do better”..! There was no thanks, support, or consideration for the human side of performance.

The subject was further broadened to enquire whether senior management stimulated an improvement culture. Once again the consensus was that they did not. In fact they seemed to stimulate a blame culture.

“No. they stimulate a “work harder until it gets better culture”. They do not buy-in to the theory that improvements in the soft areas will help overall performance. They won’t spend money that does not provide an immediate

return versus investing in areas that provide intangible results that have been proven in other organisations to be of benefit to the success of the organisation. They “step over a dollar to save a nickel. There is no investment for the future” (DOF)

“(laughs out loud..) NO, all the directors are quitting. No, they are focused on numbers and how the airline as a whole is doing, not the employees....the negative connotation of “lessons learned”....It’s like [Name’s (company president)] message today... “ our performance is really good for now...I think” what was that all about?” (MD)

“Lessons learned” refers to an infamous charter flight that we conducted in 2008. The charter actually went very well, but there was one minor problem concerning the weights of the passengers that had been overlooked during the planning stage but was addressed during the execution stage. To the passengers on the charter flight and the company that contracted for the charter the operation was smooth, on-time and successful. The problem was easily rectified by the operations staff in the SOC on the day of the charter, but this one problem was highlighted by senior management as a failure and an overbearing “lessons learned” meeting was ordered to identify who as at fault and to fix it. The result was to take a successful event and turn it into a negative experience for those involved. Naturally, it was a little demoralising. The sentiment expressed to me afterwards was that the individual would never go ‘above and beyond’ again because they would get criticised no matter the outcome.

“No. We are crisis driven...almost 100% crisis driven. We do not use the time well, when we are successful, to plan for the future. For example right now we should be implementing change and innovation to prepare for winter. We chase after crises when we don’t have a crisis” (DO)

“Ummm...they stimulate increases in performance by freaking people out. They have the carrot and the stick.....but there’s not a lot of carrot” (DIF)

In agreement that an improvement culture was stimulated were the following:

“I believe they are interested in improvement. I don’t know if that is working with all of the group...” (GORM)

“Yeah, I do. It’s based on the communication they give us and they constantly ask what changes would help the organization and each department. They are looking at our needs...we may not get everything but they are interested” (DOM)

“Yes, I think so overall. Pinnacle has proven itself to promote from within...that may be because we can’t get people from the outside. There are also training classes: LMS, PMU, and different classes, but you have to make time for it. If you don’t have time it’s tough luck. You have to get the tools and educate yourself” (MCS)

“I would say I have a neutral answer.....maybe some but not a whole lot” (SOCDM)

A further aspect of management style was assessing whether senior management encouraged proactive behaviour. This again drew some exasperated remarks:

“No. they are reactive” (DOS)

“No, they talk about it but there’s nothing in place to encourage proactive behaviour” (DIF)

“Yes - by expecting everybody to take care of everything! [sarcasm]. We see that a lot. Take a look at the charter operation – it was successful but the expectation was for something perfect – then we had to endure a “lessons learned” exercise rather than accepting the success” (DO)

“Yes, in a threatening sort of way they do. It’s always after the fact...”you should have done this or that”.....”you should have been proactive”. They have the benefit of hindsight, which is easy...they know the result already” (MD)

“They ask for it and then inhibit the possibility of it...make it impossible to do...because you have to look at yesterday so often. So, typically the question is “I want to talk to you about yesterday”...like “why weren’t you proactive yesterday?” (MCS)

These remarks exemplified the all too often experienced criticisms that happened long after an event had taken place, and were always with the benefit of hindsight, but used as a tool to scorn the decision-maker.

In contrast to this there were some positive comments:

“I think so. In fact it is one of the things I enjoy. Again, they are approachable and can work with the entire workforce to ask for that behaviour” (GORM)

“Yes. They never question decisions that I have made or am making” (SOCDM)

“They do encourage you to find the problem and provide the solution – but not at a cross-department level” (DOF)

In delving into whether management addressed employees whose area of responsibility produced sub-standard results drew largely negative responses:

“No. They rely on us (directors) to do that” (DOM)

“No. Pinnacle as an organisation is rife with pockets of inefficient employees, but they are kept on, past the level at which their performance would indicate a different path for them. It hampers our success. As a company we accept sub-standard performance routinely” (DOF)

“You know, they don’t do it early enough in the process. We don’t use the drop at a time method, we use the bucket method. For example, [Name] had no encouragement to fix things...he got blindsided...was only gone for 12 hours and still got fired...a scapegoat!” (DOS)

This referred to the operational disaster at Christmas time in 2004 and how one unfortunate person was singled-out as at fault and fired.

“We get the “set your hair on fire” speech, so I guess, No!” (MCS)

This term “set your hair on fire” was deliberately used by the COO at a management meeting that was hastily called to bring all of the company’s managers, directors and VPs’ together in a large ballroom of a downtown hotel. At this meeting the COO,

President, and other VP's spoke about the need for all of the managers to work harder, fix our operational performance problems, and to 'motivate' ourselves to do a better job. This phrase was used multiple times throughout the meeting as a 'motivator'. The tone of the meeting was bordering on panic and it left many managers bewildered.

In agreement was one comment, but it was offered tongue-in-cheek. The individual referred to here had a big reputation for firing anyone who made the slightest mistake. He was considered a bully and used threats to intimidate people.

"Some have...Russ has no problem letting people go!" (DIF)

Do they provide motivation and inspiration.....

"[laughs out loud]...\"light your hair on fire\"! Not in a positive fashion, No. They provide threats and negative views – always focused on the negative – \"could'a, should'a, would'a\"” (MD)

"No. We subscribe to a playbook – they say the right things at the right times but their heart is not in them” (DOF)

" [laughs] No, uh, Fear!” (DOS)

"No, not really, What comes down from above might be to create some motivation to do better because it is your job....but not inspiration” (MCS)

"They provide motivation but it only comes in certain flavours and one of them is fear. They try to put fear in you. I have never been inspired by senior management. Our senior staff have never really shown true leadership...where our leaders have said “we messed up here” and are going to make strategic changes to put us back on track. They tell others that the problem is theirs! Motivation by fear...!” (DO)

"No! Unfortunately they don't. They don't know how. There are folks who can lead and those who can manage. There are very few true leaders here, but plenty of managers. I can't think of anyone above me that I see as an inspiration” (DIF)

There were only two positive responses. GORM again was in this category. His outlook and experience was positive.

“I do. One of the things I have seen in my tenure is that they try to keep us on the path we need to be on and I have appreciated that motivation. Inspiration is there, but unfortunately some of it has gone in waves” (GORM)

“Yeah. I feel you could go to any one of them and ask them for their input, or ask them what they would do and they would take time to do that. I think that is motivational” (DOM)

7.5.7 Behaviour: Action Orientation

This subject examined whether performance information was integrated into the daily activities of employees in such a way that problems are immediately addressed and corrective or preventative actions taken. It was encouraging to see that the majority of the responses were positive suggesting that there was an integral behaviour of correcting problems and taking proactive action at the mid-management level.

“Currently yes. It is one of the things in Ground Ops I am sure of. I would hope it is the same across the company and that we push what is needed to the frontline employee” (GORM)

“Yeah, that is the whole point of the 0930. It can be mundane from time to time when things are going well, but when it’s not going well then problems can be addressed instantaneously via email or at the 0930” (MD)

“I think more so now than in the past” (DOS)

“Yeah, I do. We have put some tools in place. Today we have the daily pilot delay reports. The Assistant Chief Pilot sits down and reviews delays from yesterday, analyses them and develops corrective action” (DO)

Amongst the group was just one negative response, which was from the Director of Flying claiming that only a small portion of the organisation focuses on performance data.

“Only at the director level, for them to take action on. Others do not have a real-time idea. In fact it seems that only 10% of the organisation focuses on performance data” (DOF)

This was explained to me as meaning that departments who provide a support function such as Finance, Human Resources, and IT do not maintain any awareness of how the operation is doing. It seemed that there was an intensity for operations people to be very aware of overall performance results but when talking with employees from other departments they simply did not have any idea whether the operation was performing well or not. Their focus was just on their aspect of the company, despite the fact that we are an airline and that our entire future rests on whether we are able to provide reliable, timely and safe air service!

I questioned everyone on why and how performance information was integrated into the daily activities.

“Through the different meetings we have (0930) and communication of daily stats and when a problem arises” (DOM)

“Only because I remember when it was not that way at all. The same problems would come up repeatedly but now the department managers are quick to correct problems, or address them” (SOCDM)

“We have a good set of base managers in Flight Ops that track pilots down and tackle issues” (DOS)

“The 0930 is the closest thing we have to an integrated performance review. The next step is to further develop the monthly Flight Ops review” (DO)

“We really know how to run a good operation, but not a ‘bad’ operation. When we have difficulties we do not know what to do with them. The VP’s run around with their “hair on fire” – none of them are calm. It sends completely the wrong message. They should show “grace under fire”, not incite panic” (DIF)

7.5.8 Behaviour: Communication

This subject is divided into three distinct areas and examined whether:

Performance results were communicated at regular intervals and how that communication flowed from the bottom of the organisation up to the top, and from senior management down to the line workers

Knowledge was shared between departments and between individuals

Performance information was shared between departments and between individuals

In general, there were more responses that showed agreement that communication was good rather than it needed improvement, but, this was a big and important subject and there were inevitably some divisions of opinion.

The first area was whether communication about **performance results** took place at regular intervals. Seven of the nine interviewees emphatically believed that it did. Most notably were:

“We look at it everyday, but the managers do not...at least not to the extent that we do. Items of performance are discussed at the 0930 e.g. why we took that delay or cancellation” (DOM)

“Oh yeah...the Pinnacle Update, the Weekly Message, the 0930.....much better than we used to” (DOS)

“Yes, I think so. We have the 0930, the newsletter, periodic letters, our SOC Managers Meeting” (MCS)

“Yes, on a weekly basis through phone and face to face....among frontline flight ops management. We have an agenda that we cover, it’s fairly structured and involves performance” (DO)

When asked whether it was driven from the top down seven agreed that it was and only two disagreed, believing that it was sporadic at best. But, when asked whether communication also flowed from the bottom up the consensus was that it did not. There was a fear that by providing information up through the ranks you would be criticised:

“We continue to ask for it and we need to continue reaching for it. Frontline employees can be shy or timid in providing that...fear of being chastised” (GORM)

“No. the structure is such that data and communication is not provided up the chain. It is not encouraged” (DOF)

“No. The shift workers are only there to work their shift and go home, unless they are held accountable for individual delays” (MD)

“No. For example in MEM (Memphis) there are a large percentage of part-time people who just come in, do their time, load airplanes, and go back home. It’s just an extra paycheque to them. They are not interested in pushing information back up the chain. We have designed that into the system” (DOS)

However, in contrast to this was the view from the Maintenance organisation and Crew Scheduling who seemed to agree that information did flow from the bottom up:

“I think at least on the Maintenance side when there are issues in the field they are bringing them forward and it is getting to us so we can look at doing something different. They want to help the organisation. Everyone is concerned for their jobs and to make the organisation better” (DOM)

“I think so. There is probably a pretty good flow. Pilots have to report things as they go. Schedulers have to report delays that are charged to Scheduling” (MCS)

When evaluating whether **knowledge** was shared there was general agreement that it was, but it did not always appear to be open and transparent:

“We get into department silos. We share what we need to share and keep close what we don’t need to share. Perhaps it’s a fear of being evaluated.....or others being able to do it better” (GORM)

“From what I experience, yes. Could it be improved? Definitely, but it’s always been that way” (SOCDM)

“Yes and No. Sometimes people are so busy they neglect to, forget to, or don’t have time to. Some people view it as security if they hold it to themselves” (MD)

“No, we are silo’d. There are a lot of secrets out there” (DOS)

“I think so, yeah. There is certainly a lot of it, particularly in my department where you deal with people who come in with no knowledge, so it has to be shared” (MCS)

It seemed that overall knowledge was being shared, but it also appeared that it might have been just within the department that the individual was working in. I further enquired whether knowledge was shared between departments. This brought a mixed response and no consensus. Of those in agreement were comments such as:

“Recently probably...more than we have before over the last 6-8 months. Some of the ideas from last winter allowed us to tear down some of boundaries and barriers” GORM)

“It’s improving. Oddly enough from my perspective, I go to the 0930 everyday and talk with others. It builds some camaraderie outside of the SOC. After the 0930 we sometimes sit around and talk a little bit – it makes me more understanding of what they do and are responsible for. It helps me know what to include them on” (MD)

“I think so, but there’s very little structure to that. The best is the 0930. Another one of my goals was to build bridges between departments. A by-product is that I can go and get help and information from them. One of the reasons why I am successful is that area” (DO)

In contrast were those in disagreement:

“No, departments do not really talk, only when a shortfall causes a problem with another department. They don’t really care otherwise” (DOF)

I further sharpened this line of enquiry to learn whether knowledge was shared *between* employees. This showed that the majority did. The difference here when

compared to sharing with an entire department was that the individual could choose who to share knowledge with.

“Again, yes and no. It is up to the individual. Some don’t see it as their job, some don’t want to be bothered” (MD)

“I do, especially in similar jobs, but there is a lot of room for improvement so those not up to speed can catch up to those that are. We need to foster that growth more” (GORM)

“Probably not, they are too busy doing what they need to do” (DO)

“Yes, but between the same levels, i.e. manager to manager, and director to director, etc” (DIF)

There was general agreement that knowledge and information were shared between departments and between individuals, but I now wanted to learn whether **performance information** in particular was shared. Again, this supported the previous findings. Seven of the nine adamantly agreed and the 0930 Operations Briefing was singled out as being the catalyst and mechanism to share performance information:

“Yes, everyday at the 0930 ops meeting” (DIF)

“I believe so. We get info from Aaron [Performance Engineering] and his group and internally within our department” (GORM)

“Yeah, we are forced to – we have to share that. The 0930 does that – a great vehicle for that” (DOM)

“I do. Giving the folks the knowledge of what we need to do to be better” (DOM)

“Yes, we have the 0930” (SOCDM)

“Yes, but not prior to the 0930. It’s nice to see the maintenance and station side of things” MCS)

There were however two responses that indicated that performance information was not shared:

“Not unless you ask. There’s only a couple of outlets for that: the 0930 and the kick-off report, and it took a while to get Ground Ops to share that with us” (DO)

“Not really, only at the VP level and then only to weigh ourselves against the metric. For example [DOM] does not come to me about how he is doing” (DOF)

Similar to the questions on whether job knowledge was shared I also asked the interviewees about whether performance information was shared between departments and between individuals. This again showed that there was a consensus that performance info was shared:

In considering the communication at a department level

“Predominantly we do it within our own departments. The senior officers share it at the VP level between departments” (GORM)

“I would say yes, all departments get the same reports and have access to the same info. We are also telling everyone (SOC pages) 4 times a day” (SOCDM)

“0930 – and now the monthly Flight Ops review. The individual department delays are in that box on the 0930. We also have the SOC Managers Meeting where we talk about performance” (MD)

“Yes, the 0930 really brought that together” (MCS)

These comments suggest that performance information was shared but it appeared to be within the same departments. There were two who thought otherwise:

“No. There is hardly anything we get from Maintenance, at least not at our level” (DO)

“No. No-one has ever asked me what I do” (DIF)

It was further questioned whether performance information was shared between employees.

"I'm sorry to say some of our employees don't know what the goals are"
(GORM)

"I think it is discussed...more now than I have ever heard it. I think when the Delta contract was almost lost everyone now seems to have a better idea about performance, and also when everyone was losing their City Team bonuses (quarterly bonus)" (SOCDM)

"In the SOC I think so because we focus on it so much. In the pilot ranks I don't know if it is quite as important. In Ground Ops it is relatively important. They are more in tune with getting things out on-time so they don't have to explain a delay. It depends on whether the individual will be held responsible for their delay" (MD)

"I know in my department it is" (DOS)

"Yeah, I think they do on a management level and above" (MCS)

"Perhaps at the senior staff level" (DO)

This was a long, but very important section. It showed that performance results were communicated well and that information was largely shared amongst employees and across departments. It was encouraging to affirm that the 0930 Operations Briefing was being used as the primary vehicle from which to share information.

7.5.9 Behaviour: Alignment

This subject examined whether the interviewees thought that other departments such as Finance and HR were aligned with operations performance so that what is important to the organisation (operations performance) is regularly evaluated by others. The overwhelming opinion was that they were not. There was even some disdain and exasperation in their comments:

“They don’t have a frickin’ clue. They don’t understand at all how they are involved in getting a passenger on a plane” (DOS)

“I don’t think so, No! HR is not concerned. Finance is more concerned with the budget – they don’t understand the intricacies of the operation. At the last budget meeting the CFO even suggested that we “fly slower” because our block (planned flight time) is too high.!!!” (DIF)

“I don’t believe they are...but I absolutely believe that they should be. They don’t have a direct impact on making the planes fly but they have a direct impact in providing training and ensuring that finance is available” (GORM)

“No. I don’t think they have any daily view of performance” (DOF)

“I don’t believe it is evaluated by them. I think they know that performance is evaluated by us, but they just want a Pass/Fail assessment” (SOCDM)

“They look at it from different perspectives and are not focused on performance metrics. HR focuses more on the individual employee, and Finance on getting the most for their money” (MD)

“That’s hard to know. On the HR side I would say no. I’ve no idea about Finance” (MCS)

“I don’t think so. The best way to look at that is that we have been tasked with the catch 22 situation of increasing performance and reducing costs at the same time. This past winter was a good example, we had to turn performance around and at the same time were asked to cut costs by 10%!” (DO)

Only one interviewee seemed to believe that the other departments were aligned with operations performance:

“Sure. Finance needs to be able to give us numbers we are spending to. HR needs to align us to the people. They play just as an important role as the rest of us” (DOM)

But, this really pointed at the dependency on these departments rather than them being involved in operations performance.

7.5.10 General understanding of PMR process

This final section represents a question that I posed to all of the interviewees about whether they could describe the performance measurement and review process at Pinnacle. It was designed to see if they could articulate the process now that all of them had been participating in the 0930 daily Operations Briefings. Many also participated in the weekly SOC Managers Meeting and the monthly Flight Operations Performance Review. Unfortunately, it was a little startling to learn that nobody could readily put the process into words and speak specifically about the PMR system. The question asked was: "Can you describe the performance measurement and review process at Pinnacle?"

"Not really, but I recognise that our operations performance is our bread and butter" (DIF)

"I don't guess so. I do really like the 0930. I like the way you bring the supervisors into our SOC meetings and explain the delays and what we look at. You do a good job at helping their base-level understanding" (MCS)

This was disappointing and disconcerting considering all of the effort and time taken to help people engage with the system. However, even though people were unable to clearly articulate the process, there was evidence that they understood the purpose of the 0930 Operations Briefing and their role in the performance of the airline:

"Poor performance drove the establishment of the 0930 meeting. There is a lot of good info there...and it has enlightened everyone" (DOM)

"It's better than I have ever seen it. Knowledge of performance is now at higher levels" (SOCDM)

"It's better than it used to be...we are making progress. I'd like to see the people who actually affect the day to day success have more resources, rather than the people who do the ancillary stuff. You don't get any kind of recognition unless you screw up!" (DOS)

*“I appreciate the need for focusing on performance. It is how we are judged”
(DO)*

However, this question also prompted two interviewees to again talk about the lack of respect for the employees. This was a significant topic for everyone but there was also some reluctance to talk too openly about it for fear of repercussions:

“...but if the focus is solely performance, like some of the VP’s are right now, you end up with situations where people are quitting, or fed up and you get back into the same situation of unhappy people at their wits end. People are not appreciated” (MD)

*“If we think people should work around the clock and produce massive amounts of data and work because they are told to, then we are wrong. People have to be happy to produce more. That is what drives people to be hyper-productive. Senior management thinks that because we work at Pinnacle we should be hyper-productive regardless of our emotional state. If you lead and inspire people then they are more likely to be happy. You cannot just say this is the Pinnacle culture so work hard. There is very little inspiration and leadership. Leadership consists of soft and hard qualities like the ability to communicate, accountability, having the courage to make decisions, flexibility and adaptability, and humour. Our leadership does not really display these leadership qualities
(DO)”*

7.5.11 Summary analysis

The results of the content analysis discussed above were compiled into a table providing summary results. For each question the answer was assessed as either being in the affirmative (Y), negative (N) or uncertain (U). This allowed an aggregate picture to be obtained and the results to be quantified. These results are presented in table 7-2 below.

Type	Aspect	Questions	Interviewees										Count			Aspect	Y	N	U
			DOF	DO	DIF	DOM	MD	DOS	MCS	GORM	SOC	MDM	Y	N	U				
STRUCTURAL	S:R	1 Do you feel that your tasks and responsibilities are clearly defined?	U	N	Y	N	N	Y	N	Y	Y	4	4	1	S:R	29.6%	44.4%	25.9%	
		2 Are tasks and responsibilities applied consistently at all management levels?	Y	N	Y	U	N	N	N	U	Y	3	4	2					
		a.) across all departments?	N	N	Y	U	N	U	N	U	U	1	4	4					
	S:C	3 Do you use financial and non-financial performance information to assist you in achieving your performance objectives?	Y	Y	Y	Y	Y	N	Y	Y	Y	8	1	0	S:C	94.4%	5.6%	0.0%	
		4 Does this information have a strategic focus by using success factors and key performance indicators?	Y	Y	Y	Y	Y	Y	Y	Y	Y	9	0	0					
	S:I	5 Is the performance information reliable, timely and consistent?	U	Y	Y	Y	Y	N	Y	Y	Y	7	1	1	S:I	77.8%	11.1%	11.1%	
	S:M	6 Are you easily able to obtain performance management reports?	N	Y	Y	Y	Y	Y	Y	Y	Y	8	1	0	S:M	94.4%	5.6%	0.0%	
7 What if you need more detailed information?		Y	Y	Y	Y	Y	Y	Y	Y	Y	9	0	0						
Sub-total: Structural													49	15	8	S	68.1%	20.8%	11.1%

BEHAVIOURAL	B:A	8 Do you feel responsible for performance results?	Y	Y	Y	Y	U	N	Y	Y	Y	7	1	1	B:A	74.1%	22.2%	3.7%	
		a.) in your own area of responsibility?	Y	Y	Y	Y	Y	N	Y	Y	Y	8	1	0					
		b.) what about the organisation as a whole?	N	Y	N	Y	N	N	Y	Y	Y	5	4	0					
	B:MS	9 Is senior management visibly interested and involved in the performance of their employees?	N	N	N	Y	N	N	N	Y	Y	3	6	0	B:MS	31.1%	60.0%	8.9%	
		10 Do they stimulate an improvement culture?	N	N	N	Y	N	N	N	Y	Y	3	6	0					
		11 Do they encourage proactive behaviour?	Y	Y	N	Y	Y	N	N	Y	Y	6	3	0					
		12 Do they confront employees who have sub-standard results?	N	U	U	N	U	N	N	U	N	0	5	4					
		13 Do they provide motivation and inspiration?	N	N	N	Y	N	N	N	Y	N	2	7	0					
	B:AO	14 Do you feel that performance information is integrated into the daily activities of employees in such a way that problems are immediately addressed and corrective or preventative actions are taken?	N	Y	Y	Y	Y	Y	Y	Y	Y	8	1	0	B:AO	88.9%	11.1%	0.0%	
	B:C	15 Does communication about performance results take place at regular intervals?	Y	Y	Y	Y	N	Y	Y	U	Y	7	1	1	B:C	64.2%	30.9%	4.9%	
		a.) top down?	Y	Y	Y	Y	Y	N	N	Y	Y	7	2	0					
		b.) bottom up?	N	Y	N	Y	N	N	Y	N	N	3	6	0					
		16 Is knowledge shared?	Y	Y	Y	Y	U	N	Y	N	Y	6	2	1					
		a.) between departments?	N	Y	N	Y	Y	N	N	U	Y	4	4	1					
		b.) between employees?	N	N	Y	Y	U	Y	Y	Y	Y	6	2	1					
	B:AL	17 Is performance information shared?	N	N	Y	Y	Y	Y	Y	Y	Y	7	2	0	B:AL	11.1%	88.9%	0.0%	
		a.) between departments?	N	N	N	Y	Y	Y	Y	Y	Y	6	3	0					
		b.) between employees?	N	N	Y	Y	Y	Y	Y	N	Y	6	3	0					
B:AL	18 Are other departments in the company such as Finance, and HR, aligned with performance management, so that what is important to the organisation (ops performance) is regularly evaluated?	N	N	N	Y	N	N	N	N	N	1	8	0	B:AL	11.1%	88.9%	0.0%		
B:G	18 Can you describe the performance measurement and review process at Pinnacle?	N	N	N	Y	Y	Y	N	U	Y	4	4	1	B:G	44.4%	44.4%	11.1%		
Sub-total: Behavioural													99	71	10	B	55.0%	39.4%	5.6%

Y = Yes	10	15	17	24	14	11	16	18	23	148	86	18	< Overall >	58.7%	34.1%	7.1%
N = No	16	12	10	2	10	16	12	4	4	59%	34%	7%				
U = Uncertain	2	1	1	2	4	1	0	6	1							

Abbreviations

- S:R Structural: Responsibility
- S:C Structural: Content
- S:I Structural: Integrity
- S:M Structural: Manageability
- B:A Behavioural: Accountability
- B:MS Behavioural: Management Style
- B:AO Behavioural: Action Orientation
- B:C Behavioural: Communication
- B:AL Behavioural: Alignment
- B:G Behavioural: General

Expressed as percentages:

35.7%	53.6%	60.7%	82.1%	50.0%	39.3%	57.1%	64.3%	82.1%	Positive Attribution
57.1%	42.9%	35.7%	10.7%	35.7%	57.1%	42.9%	14.3%	14.3%	Negative Attribution
7.1%	3.6%	3.6%	7.1%	14.3%	3.6%	0.0%	21.4%	3.6%	Uncertainty
DOF	DO	DIF	DOM	MD	DOS	MCS	GORM	SOC	MDM

Table 7-2 Summary results of interview content analysis: Cycle 4

From this summary, it can be seen that on the structural side of performance there were a total of 49 responses that were in agreement with de Waal's assertions, 15 that were not and 8 that were uncertain. This strongly suggests that the structural side of the 09:30 Ops Briefing was sufficiently developed to allow people to use and engage with it. The responses in agreement outweighed those in disagreement by a ratio of over 3:1. This was encouraging and meant that the 0930 Ops Briefing was providing the structure and information that people needed. There were of course areas for improvement.

Looking at each component in turn it can be seen that tasks and responsibilities (S:R) stood out from the others by receiving a significant number of negative replies. There was consternation that there was not an even distribution of workload and responsibility across the operating groups and some people felt that they were targeted unfairly when performance fell short of prescribed goals. However, the content of the PMR system (S:C) was considered to be very good, only receiving one negative comment from a possible 18. The integrity of the system (S:I) was also acceptable and manageability (S:M) was again considered to be very high just receiving one negative remark out of 18.

In order to increase the success of the structural side of the PMR system then the distribution of workload and responsibilities would need to be brought into line with what people were able to do, or expected to do.

On the behavioural side there were 99 positive responses, 71 negative and 18 uncertain. The category that showed the most acceptance amongst the group was action orientation (B:AO), which indicated that there was overwhelming agreement that performance information was being integrated in the daily activities of the employees. In contrast, there was a significant problem with alignment (B:AL). This represents the alignment that other non-operations departments such as Finance and HR have with the daily operation. The evidence showed that there was virtually no involvement by these departments and they did not consider operations performance when exercising their duties. It can be argued that they do not need to do so because their role did not directly influence the day-to-day running of the airline. Indeed it was clear that many people felt this way. However, their functions do play an important part in the planning and preparation that goes into making the operation a success. If the airline did not

maintain good financial relationships with its suppliers, then it would negatively impact the operation. Equally, if HR did not fulfil their obligations in efficiently providing benefits to employees, or in meeting their recruitment goals then this would also affect the operation. A pertinent example was when HR was unable to recruit sufficient pilots against the timeline that was planned by Crew Planning and Training. The airline went for several months with a shortage of crewmembers that resulted in numerous flight cancellations and a failure to provide reliable service. The other category that was poor was management style (B:MS). Of the 41 possible responses only 14 were positive and 27 negative. This indicated that senior management were still out of touch with how to effectively and supportively run a flight operation. It was remarked on several occasions that we were a finance company that happened to be an airline, rather than first and foremost an airline. It was demonstrated on several occasions that the revenue of the airline was held in higher regard than the employees and sometimes even safety.

These results from the behavioural side showed that there was still much work to do to bring these categories into alignment with the others. .

When comparing the structural and behavioural aspects together, of the 252 possible responses 147 in the affirmative, 87 negative and 18 uncertain. This equates to 59% of the responses indicating that the system was working according to the criteria set forth, but 34% in disagreement. These results were then transferred into a bar graph (Figure 7-7) that more clearly shows the composition of each category:

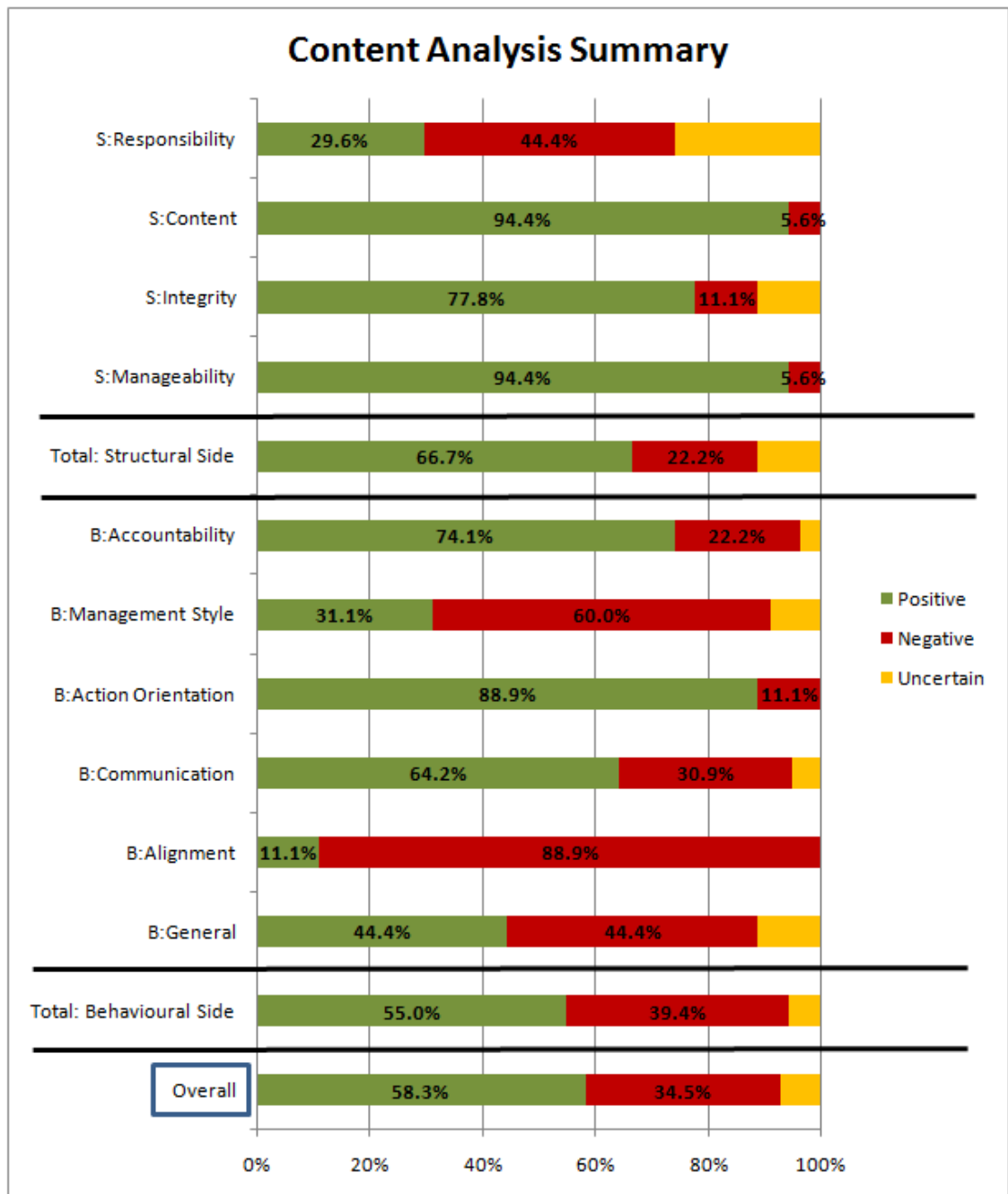


Figure 7-7 Content analysis summary – Cycle 4

When comparing the individual components of each aspect it can be readily seen that the problems lie in: management style, which scored only 31% positive, and alignment with a lowly 11%. The most highly rated was action orientation at 89%.

A graphical depiction of the interviewees' content analysis also helps to provide a clear picture of where everyone stood in relation to one another. Figure 7-8 is a simple stacked bar graph showing the proportion of answers that were considered as either positive, negative or uncertain.

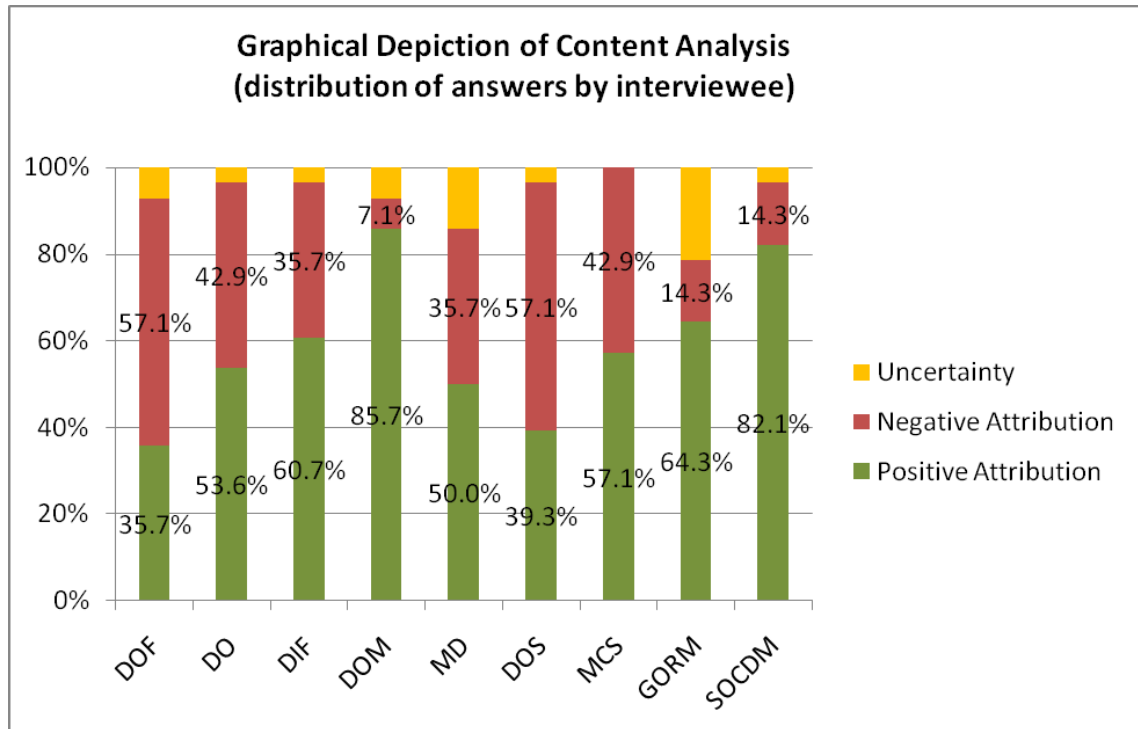


Figure 7-8 Distribution of answers by interviewee – Cycle 4

When the responses of each interviewee were aggregated across both aspects of the PMR system it can be seen that there is a cluster of two people who expressed very positive thoughts and remarks: DOM and SOCDM, and a sub cluster comprising DO, DIF, MCS and GORM whose responses were positive more than 50% of the time. This was interesting because it represented people from all four major operations departments: Flight Operations, Maintenance, Ground Operations and the SOC. On the opposite end of the spectrum was DOF and DOS who expressed more negative comments than positive.

On the whole the attitudes and behaviours of the interviewees to the 0930 Operations Briefing was healthy and encouraging with 59% of the remarks being positive, 34% negative, and 7% uncertain. This showed that at this stage the system was proving useful and informative. These results also indicated that while the managers might have adopted the necessary behaviours, senior management certainly had not.

7.6 Summary of Findings

The findings for this cycle of research have been summarised in line with the objectives set forth at the beginning of the cycle.

7.6.1 Introduction of Cross-Department Operations Briefing

The first objective of designing and implementing a cross-department performance review system was accomplished with the introduction of the 0930 Operations Briefing. It was designed to take advantage of the lessons learned in the first three cycles and to follow the guidance in the literature (Bourne et al. 2000; De Waal 2002; De Waal 2004; Van Riel et al. 2009).

This performance review is now simply referred to by all parties as “the nine-thirty”, no other explanation is needed. It has been in existence for two years and has proven to be a very valuable communication and collaboration tool for all operations departments.

7.6.2 Behavioural Response

The second objective was to evaluate how the managers responded to this system by conducting semi-structured interviews to identify their behaviours.

The aggregated findings show that when compared to de Waal’s nine aspects of performance management there was significant agreement that the correct structure was in place to allow people to engage with the PMR system. Similarly, when examining behaviours there was also significant agreement that the interviewees were demonstrating behaviours conducive to effectively interacting with the PMR system.

This evidence suggested that the introduction of the 0930 Operations Briefing was successful and facilitated a previously unattained level of insight to operations performance and provided a mechanism to illuminate and collaboratively discuss performance shortfalls. There are improvements to be made to this system but its success lies in its design and an implementation that was supported.

7.6.3 Structure and behaviour

The third objective was to use the work of de Waal (De Waal 2004) to examine whether the structural and behavioural aspects of the system were being met. This was accomplished through content analysis of the interview transcripts.

The evidence showed that the structural side of the PMR system was healthy and provided the necessary framework and organisation that the managers needed. However, there was still room for improvement, especially in the level of responsibility that the system should provide, but it could be considered a success.

On the behavioural side of the system the picture was not as optimistic. Although the number of positive responses slightly outweighed the negative responses it was clear that the behavioural aspects of the PMR system still needed significant work before the system could be considered a success. Significant improvement was needed in alignment and management style. However, for this to happen there would need to be an intervention and change of tactics on behalf of senior management. The interview transcripts painted a disturbing picture of a culture that was rife with threats and blame. If that is not addressed then the behavioural side of the PMR system would not strengthen. This may eventually take its toll on those who have to engage with it.

The overall cycle has again confirmed that behavioural reactions play an important role in the successful implementation and use of a PMR system. Positive behaviours are not automatically adopted by managers, unless there is a corresponding support structure in place and the necessary training and education on how to interpret performance results.

7.7 Reflection

The 0930 Operations Briefing was my attempt at bringing some normality back to how we interacted as a group and dealt with performance deficiencies. The meeting that it replaced, which was the 0600 mandatory conference call was simply punishment for everyone and served no productive purpose. It epitomised the bullying tactics that we began to see more frequently in 2008 and 2009 when senior management, through lack of any other intellectual ways of dealing with poor performance, resorted to blame, threats, bullying and deliberately causing inconvenience by over-reacting to operational

issues. This was indicative of panic on their part and was in response to pressure exerted by Northwest Airlines and Delta Airlines.

It caused a great deal of resentment and discord. Morale declined further. The scars from this period are still in evidence today (2010) and people comment about those times with scorn. Perhaps representative of their inconsistent approach, there have been six different Vice Presidents of the Flight Operations department during my six year tenure with the airline. This is quite remarkable and indicative of the dictatorial approach that the senior executive team pursued. The VP was expected to 'toe the line' and simply enact their dictates. This only went so far before resistance was met.

At one period in 2008 I tried taking these findings and this message to the COO and President. They listened, disagreed, and then quietly began restricting me from involvement in senior level meetings. They did not like my findings, did not want to hear what I had to say, and thought that problems could be controlled by maintaining the pressure on people.

However, the 0930 Operations Briefing continues to this day (2011) and has evolved into a very useful and integral part of our daily activities. It has been further refined to account for changes in our business and particularly to reflect our operating strategy, which has finally become a central point of focus for everyone. Some of the performance data that was presented in tables is now presented in graphs to allow easy interpretation of the results and to show trends over time. In 2009, I passed off the responsibility for this meeting to one of my managers and it is encouraging and refreshing to see that she has revamped it to make it even more informative and accessible. This is of particular satisfaction to me because I spent several years during both the third and fourth cycle of research actively coaching and mentoring this individual, along with the other SOC managers, and she has risen to the challenge and become a much stronger and more capable manager. My role in her education was a conscious intervention because of what I had learned at Allegheny about how people did not really know what to do with performance results, how to interpret them and kept quiet so as not to show their ignorance. This individual stubbornly applied her own construction system to the newly redesigned review and it met with praise upon introduction.

The benefits of combining quantitative analysis on top of the qualitative analysis helped to validate the results and gave richer and deeper insight. Nevertheless, the level of

detail gained from talking to everyone and being able to get very close to the data was unparalleled.

7.8 Summary

This chapter has reviewed the fourth and final cycle of research. It has described how the introduction of a cross-department operations briefing was well-received and provided benefit to those involved.

It has also provided evidence that strongly links behavioural reactions to the success of a PMR system and has shown that these behavioural reactions must be nurtured and encouraged, rather than be expected to occur unaided.

8. DISCUSSION OF OVERALL FINDINGS (CYCLES 1- 4)

The objective of this chapter is to amalgamate the findings from all four cycles of research and assess whether the aims and objectives of the research have been achieved.

The findings from the four cycles of research have been summarised below by relating them back to the six overall objectives, listed in chapter one, that were established at the outset of the research project.

1. Design and introduce a formal operations performance measurement and review (PMR) system

There were actually three separate instances of the design and introduction of PMR systems throughout the four cycles: one at Allegheny Airlines and two at Pinnacle Airlines. At the outset, the lofty expectation was that by trying to create an awareness of the key determinants of performance, linking them to the company's strategy and vision, and assigning accountability for individual measures it would generate a sense of ownership and a desire for real and continual improvement (Fitzgerald et al. 1991; Kaplan and Norton 1992; Neely et al. 1997; Simons 2000). This was not successfully accomplished at Allegheny, but at Pinnacle there was evidence to show that the PMR system promoted and encouraged a level of engagement in these behaviours. One of the major differences was the approach taken.

The initial implementation at Allegheny suffered from some elementary problems by not directly assigning ownership for the measures and not providing an assertive level of accountability. Additionally the array of measures was at first too broad and included some that were uncontrollable by the managers and directors. There was not a true team spirit, or collaborative approach that linked all departments to seek solutions to problems together, and this resulted in blame and an uncommitted response. All too often people tended to avoid the true issues and therefore the ability to learn was not fostered. This was largely due to the culture that existed. The airline was very mature and had been in existence for over 40 years. Many of the employees were long-serving

and accustomed to the non-communicative, and at times micro-management style of the CEO. This led in some instances to complacency and an unhurried approach when dealing with problems. This is supported by findings from the literature suggesting that there is interplay between organisational culture, management styles and performance measurement and the need for a consultative management approach (Bititci et al. 2006).

There was also a significant lack of knowledge regarding the cause and effect linkages of the performance measures that should have been addressed prior to the systems' implementation. However, as time progressed the system matured and developed into a more useful and informative review that was gaining momentum before the airline announced its pending merger.

At Pinnacle, the PMR systems built upon the knowledge gained at Allegheny and were therefore more successful. This prior experience actually led to a burgeoning effort during cycle three that engrossed the SOC managers in more and varied attempts at measuring many other aspects of performance that were originally out of the scope of the research project, such as dispatch release audits and customer service telephone audits. Involving the managers in the design and implementation of the system also proved to be a significant contributing factor to its successful use. The PMR system evolved and matured and is still a cornerstone of the everyday activities of the operations managers.

The general framework contained within a balanced scorecard seemed like a good vehicle from which to launch a performance measurement drive at both airlines because it encouraged the use of a balanced presentation of performance measures. Without this foundational concept, it would have been all too easy to focus the measures simply on operating performance and neglect other equally important areas such as the ability to identify and learn from performance shortfalls. This concept alone was new for most of the interviewees because they had not previously considered that a broad sweep of measures across all facets of the operation was important. The need to use both financial and non-financial measures was pivotal in providing a more well-rounded understanding of the company's overall purpose. This also provided the lagging and leading indicators of performance. Additionally, by borrowing from the concept put forth by Fitzgerald, and placing a focus on the determining factors of good performance, realistic measures were devised that could guide future improvement (Fitzgerald et al. 1991). Indeed, the objective of identifying areas for developing the

skills of managers and their subordinates and then committing to providing them was not previously considered as an activity that should garner attention from senior management.

It was evident at both airlines that the company culture and management style had a significant impact on the successful implementation of the PMR systems. This is supported by Bititci et al (2006) who found that PMR systems “through cultural change, lead to a more participative and consultative management style” (p.1344). They concluded that “external stimuli, including action researchers, play an important role in leading managers to change their management styles” (p.1344).

At Allegheny, there was an attempt to engage with the PMR system but the underlying crisis made it difficult for the managers to feel that they were making a difference. At Pinnacle, there was a pervasive tendency for senior management to focus on performance shortfalls and make a big deal of them while neglecting to recognise what was really going well or why the shortfall had occurred. This led to a considerable deterioration in morale and a sense of apathy towards the measurement process...“no matter what you do, it is not good enough”. The underlying ‘blame’ culture and a tendency for each department to operate independently led to defensive behaviours that further served to isolate various aspects of the operation. This was aggravated when the senior officers interfered in the daily operation and created unnecessary panic. Far from encouraging better performance they actually contributed to an attitude of disengagement and an unwillingness to go above and beyond. Every shortfall therefore became a crisis and after a while the employees stopped taking their cries for “work harder”, “set your hair on fire”, and “get your head in the game”, seriously. Indeed, these well-worn ‘motivators’ became something of a joke amongst the managers, resulting in a decline in morale, a loss of focus and a general feeling of helplessness. Despite this, there was still perseverance with the formal PMR process and people remained engaged. This was because the ownership of the PMR system did not reside in the senior management ranks and there was some personal pride being taken by the managers in making the reviews effective. Had senior management been responsible for the PMR system then the result would undoubtedly have been a disengagement from the system. However, there was a lack of true motivation to seek solutions to problems at their root cause. The primary response from many managers was to explain a particular delay or cancellation, and then remove themselves from the spotlight without elaborating on the underlying causes.

Was the BSC the right PM framework to use for this implementation? I believe so. Despite the criticisms in the literature it did provide a good basis from which to tailor the PMR system at both Allegheny and Pinnacle. However, it did not provide any link to rewards or benefits for achieving performance goals. Professor Ken Merchant (De Waal 2005) is quoted as saying that the BSC “has been oversold” (p.31) and that “the advocates basically sell everybody a hammer and then state that everything is a nail, hitting it as much as possible will solve the problem” (p.31). I thought that this was a rather amusing remark, and whether this is actually the case or not in its wider application in other industries, it did not bear any similarity with how the PMR system was implemented and used during this research project. It does however, point to the fact that if managed without care then there is an inherent risk that the system could be overused. At both Allegheny and Pinnacle the systems were kept alive and carefully monitored by a facilitator (in this case, me) who continued to promote them and require attendance and participation.

The BSC remains the most prevalent and influential performance measurement system to date, despite concerns over how to select and implement measures in practice, and especially with keeping them relevant to organisational changes (Paranjape et al. 2006). During its use at Allegheny and Pinnacle the PMR system was in a continuous state of refinement, not only to ensure the measures were relevant but also to ensure that the presentation of the data remained meaningful.

Of most satisfaction, and an enduring success, was the 0930 Operations Briefing that continues to this day and provides *the* meeting that all operations departments are required to attend and participate in. It is now attended by senior management and recognised as a very important facet of the daily operation.

2. Examine how individual managers view and understand the measurement of operations performance and how it relates to their everyday job function

This was accomplished over all four cycles by continually examining the responses displayed by managers to the PMR system implementations and their subsequent use of it after they had become familiar with it. At both airlines prior to the PMR systems it was enlightening, and rather disappointing, to discover that insufficient emphasis was placed on standard airline operating metrics and that only elementary discussions took place when performance fell short of the prescribed goals. This led me to further

assess each manager's knowledge regarding operations performance. At both airlines the staff charged with making the strategic, tactical and operational decisions had a poor understanding of what the primary measures meant, and little or no knowledge of how they were measured. This was further compounded by the complexity of airline operations, which required a good deal of broad operating knowledge to properly comprehend. This led to missed opportunities to truly rectify problems and improve performance.

At Allegheny, my research led to the conclusion that there was a real lack of understanding of the determinants of performance within the airline, and revealed a culture that was not conducive to fostering performance-driven behaviour. While most of the managers understood that performance measurement was necessary they could not readily articulate what the measures meant or how they were derived. There were big concerns about the alignment of measures and who should be held accountable. Communication and senior management support were seen as highly significant factors in the failure to properly establish a performance drive, leading to the conclusion that the prevailing culture, associated with the ongoing crisis, prevented a commitment to embrace change. These findings are supported by Cheng et al (Cheng et al. 2007) who established through research case studies that the barriers to implementing PMR systems “stem from a lack of senior management commitment and support, employee resistance to change, and a absence of appropriate learning interventions to facilitate their introduction” (p.72). In contrast Neely *et al* (1995) claim that “managers find it relatively easy to decide what they should be measuring” (p.93). In my experience, I found that it is a source of great frustration in deciding upon what to measure and how to measure it. It can be just as hard to establish realistic and achievable goals that motivate people to excel. Indeed in a later publication Neely *et al* agree that designing performance measures is a complex process that requires careful consideration (Neely Andy *et al.* 1997).

At Pinnacle I was able to use this previously discovered knowledge to aid in educating the SOC managers about how a change in one variable could have a consequent affect on another, or several others. This education process was long and continues to this day as different people become involved in performance related projects. However, it has had an undeniable effect. Not only do the SOC managers now instinctively know what the cause of a problem is, they are able to competently address it with long-term solutions and not simply apply a quick fix and move on.

In both airlines the promotion of performance measurement was left to the operating managers and was not at all driven by the senior leadership. At Allegheny, the managers were left to defend for themselves with the only motivation being to have answers for the weekly US airways conference call. At Pinnacle, the leadership made noises towards the operating goals but there was no discussion or communication of corporate objectives, no structured PMR systems, and no balanced goals. It can be argued that both of these cases are wholly unacceptable, but it would not be surprising to learn that they exist in much the same form in other airlines and companies. However, it is a fundamental lack of true leadership that can result in employees being 'at risk' and in danger of leaving the company, especially if they feel unsupported.

At both airlines, there was considerable disquiet about the coding of delays. Managers were keen to avoid problems being incorrectly attributed to their area of responsibility and so a great deal of effort was invested in researching and changing delay codes so that they did not get blamed for poor performance. This resultant effort in correcting delay codes took a lot of time and resources. According to Edvardsson (1992) "in service companies it is estimated that as much as 35 percent of the staff are employed in correcting the mistakes made by the others" (p.17). It would therefore seem to be critical to ensure that these mistakes are rectified, However, there was not an initiative to actually try to fix the incorrect coding by training the gate agents who were responsible for coding delays to accomplish it with more accuracy. Performance measures and their objectives need to be more clearly communicated to all employees such that mistakes can be avoided.

The findings from the initial research results during cycle one convinced me that the behavioural reactions of employees were of key importance to the success of a PMR system.

3. Investigate how each manager regarded and assessed the behavioural reactions of their colleagues in response to, and while engaging with, a PMR system

This was accomplished primarily through the use of repertory grids. The repertory grid process prompted introspection and a psychological slant to making sense of other peoples' construction systems. This was an eye-opening and at times humbling experience. This method was invaluable in eliciting constructs that dealt with behaviours and then directly comparing those behaviours across all elements

(interviewees). The analysis routines used (Process, Eyeball, Construct Characterisation, and Cluster Analysis) all provided slightly different angles to the elicited constructs and served to effectively build an emergent picture of how each individual construed their role, their behaviours and the behaviours of others. These behavioural reactions were primarily assessed during the second and third cycles by examining and reflecting on the individual grids. This also provided me with a unique insight to whether the team was working together or not.

At Allegheny, it showed that there was a small cluster of three people, out of seven, who were exhibiting similar behaviours and that nobody was very dissimilar. This suggested a level of cohesion and a uniform acceptance by the interviewees that the displayed attitudes and behaviours were acceptable. At Pinnacle, there was a greater diversity of constructs but again there was acceptance that the demonstrated behaviours of the group were acceptable.

The use of repertory grids proved to be a useful tool in identifying the important attitudes and behaviours and understanding their impact. It allowed an assessment of the behavioural modifications that were required to successfully operate within the existing culture. It is acknowledged that a company's culture will not change appreciably in the short-term and it is therefore better to harness the already existing positive behaviours and attempt to modify those that are not in alignment. In concert with this must be a carefully designed effort to provide the necessary education and support that are needed to fully understand the system and the implications of the results. Additionally, when a culture of blame persists people seek to achieve the numbers without really trying to improve overall performance. This was seen at its worst at Pinnacle where the finger pointing and a blame mentality forced people to be defensive, so that the spotlight did not fall upon them. There was not a unified effort to improve overall performance. This was exemplified during the winter of 2007/2008 when the "light your hair on fire" speeches were farcical in nature.

4. Identify the displayed attitudes and behaviours of managers in response to a PMR system

Of most benefit to achieving this objective was the multi-grid content analysis (bootstrapping) which yielded the demonstrated behavioural categories that could then be assessed as being exhibited positively or negatively. This directly provided insight to how each member of the interview team was rated in terms of the displayed behaviours

that were considered important by the interview group. As a consequence, it allowed the facilitator to see who needed to modify their behaviours and also which behaviours were being displayed in a weaker manner than others.

These behavioural categories, while not exhaustive, were considered by the interviewee group as being important to the use of the PMR system. The categories from both airlines are listed in Table 8-1 and show that there was significant commonality between the two. The category titles were taken from the themes of the core constructs in each common group.

ALLEGHENY	# constructs	PINNACLE	# constructs
Conscientiousness	15	Demeanour	15
Accountability and Responsibility	14	Conscientiousness	14
Teamwork	14	Teamwork	11
Demeanour	12	Motivation	11
Flexibility and Creativity	10	Knowledge & Skill	10
Big Picture View	9	Accountability and Responsibility	6
Delegation and Territory	4	Delegation and Territory	3
Motivation	4	Flexibility and Creativity	2
		Big Picture View	2
			□
	Overall: 82		Overall: 74

Table 8-1 Behavioural Categories

These behavioural factors played a very important role in the implementation and use of the PMR systems at both airlines.

The second cycle at Allegheny surfaced eight behavioural categories that were displayed and observed by the management team. The three considered by the group

to be the most important were: conscientiousness, accountability and teamwork. The results at Allegheny showed that there was reasonably good cohesion among the Flight Department managers and directors and that the observed and described behaviours were not markedly dissimilar. Three of the eight interviewees were actually marked as demonstrating positive behaviours when considered across the eight identified behavioural categories, but not in each category. Improvement was needed. The evidence showed that the neutral and negative behaviours were the result of the stress that everyone was under during the ongoing crisis, the inability to take ownership of business processes, and the lack of education, training and senior management leadership and support.

At Pinnacle, there were nine behavioural categories, of which the top three were demeanour, conscientiousness and teamwork. It is very interesting to note that two of these coincided with the observed behaviours at Allegheny. This suggests that there is an intrinsic and personal value to these two categories and that a PMR system implementation should be mindful to ensure that these behaviours are actively supported and encouraged. Similar to Allegheny, three of the eight interviewees were demonstrating positive behaviours when considered across all nine behavioural categories. The evidence showed that the neutral and negative behaviours were the result of a lack of education and training and an underlying culture of imparting blame.

Both examples showed a strong convergence with de Waal's (De Waal 2004) findings, which supports the assertion that individual attitudes and behaviours are important to the successful implementation and use of a PMR system. This is also reflected in de Waal's later work reinforcing the importance of the behavioural dimensions of performance measurement (De Waal 2010).

In order for a system to be effective and embraced by those using it, it must adequately address these behaviours, but the larger more significant contributor is the underlying culture and management style. During a period of crisis, morale can suffer greatly, as was seen at Allegheny, and if this is not held together by a strong positive culture it is very difficult, if not impossible, to attain the objectives of a change initiative unless there is an inherent ownership promoted at all levels.

As a result of this research it is possible to state that there are behavioural reactions, specific to each airline context, that lend themselves to a successful PMR system. However, it is far more than just the attitudes and reactions of managers. Cycle four

showed that despite a very good effort from the managers the system will not be successful without a corresponding level of support from senior management.

5. Discover what effect the underlying business state of crisis or growth has on the managers' attitudes and behaviours to the PMR system

The ongoing crisis and eventual demise of Allegheny had a big impact on the behaviour of managers and played a significant role in the implementation and use of the PMR system. There was initially a move to embrace it and an attempt to improve performance in the belief that there was still time to save Allegheny but this was overshadowed by the additional problems that arose surrounding the inability to truly understand the performance results and the sense of helplessness. However, for three of the managers, the crisis did influence them to engage with the PMR system more than their peers. They sought to learn the really important performance indicators and to measure what was controllable. For them there was an energy that had not existed previously. In contrast were the other five managers for whom the crisis had more of a negative impact. They displayed this in their unwillingness to participate and an attitude of 'why bother'.

At Pinnacle, the state of growth itself was a motivator. There was an inherent willingness to embrace the PMR system and to try to make use of it. This was also because the PMR system implementation had involved the managers from the outset and they had developed a feeling of ownership.

It was interesting to conclude that although the business climate had an impact at both airlines it was not the sole driving factor behind behaviours. At Pinnacle, there was an eagerness to get involved and do better simply because the airline was growing and it was a new and exciting endeavour. The complacency that existed at Allegheny can be attributed to the crisis but also to the lack of direction support and guidance provided by the CEO.

The findings from both airlines have shown that there were many similarities between the two, despite the different states of crisis and growth. The objective must therefore be to identify and understand behavioural reactions in order to provide insight and guidance for the use of a PMR system when the business climate is changing. Understanding the major influences and anticipating behavioural reactions will lead to a

more informed approach when engaging employees in a PMR initiative and can provide greater motivation.

6. Draw conclusions on the value of the employee as a stakeholder having responsibility for operations performance, to the success of a PMR system

The literature to a large extent takes a detached view of performance measurement and does not pay sufficient attention to the value of the employee as a significant stakeholder in a PMR system. After all, what we are trying to encourage is performance-driven behaviour. If it is expected to happen in response to the PMR system then it requires involvement and training.

What has been determined from these studies is that for a PMR system to be successful not only must a supportive organisational structure exist, but significant attention must be paid to the existing behavioural factors and the prevailing culture of the organisation. Also, of paramount importance is education for the individual to effectively engage with the system and ensure that they are able to understand what each metric means and their control over the outcome. In the case of Allegheny, the introduction of the PMR system was largely unsuccessful. This was attributed to insufficient involvement of the managers during the design phase, lack of any real senior management support and an ongoing crisis that had thrown the airline into a state of chaos where managers had no direction, no authority, an uncertain future, and a lack of initiative to do anything outside of protecting their own territory. The result was an uncommitted reaction to an imposed system that did not sufficiently align itself with the roles and responsibilities of the managers. There was not much enthusiasm to embrace the concept and no incentive to be accountable for the measures. This highlighted some of the structural and behavioural factors that contributed to an unsuccessful implementation. The introduction of a performance review system at Pinnacle was much more successful, and gradually led to a deeper and more informed performance culture among the managers, but it still suffered from the same issues identified at Allegheny, namely education and a lack of senior management support.

It can be concluded that a great deal of value must be placed on the employee as a stakeholder in a successful PMR system implementation. It is the employee who must strive to achieve the performance goals and to do this they must feel valued and supported. The evidence of this research has shown that managers will not

automatically adopt the behaviours necessary to achieve performance goals. These behaviours must be developed over time by ensuring that the implementation addresses the structure and behavioural side of the PMR system to allow people to engage with it and produce the desired results. This is supported by Bititci et al (Bititci et al. 2006), who assert that managers will not readily change their management style without external stimuli.

8.1 Summary

This chapter has discussed the collective findings from all four cycles of research and related them back to the original objectives.

An overall conclusion can be drawn that shows that the successful implementation and use of a PMR initiative is dependent on the right behavioural reactions of the managers who engage with it, but this must be coupled with education, training and support.

9. CONTRIBUTION

This chapter seeks to identify the contribution to knowledge and in particular, because it was practitioner research, the contribution to professional practice and the corresponding contribution to learning.

9.1 Contribution to Knowledge

The central theme of this research, which was to understand behavioural reactions and provide insight on how a regional airline can better engage employees in a productive effort to improve operations performance, has been addressed through four cycles of research across two different airlines. These four cycles represent clear examples of the implementation, use of and refinement of PMR systems that were designed to provide a balanced view of each airline's operations performance. This was necessary because the literature generally lacked examples of research undertaken from the perspective of those who are required to engage with a PMR system and especially because there was no literature examining the behavioural reactions within an airline.

The study has reached beyond the detached view of performance and delved very deeply into the personal aspects of how managers' attitudes and behaviours are affected by, and can impact, their ability to successfully work within a highly measured environment. The research has looked at the behavioural reactions to imposed measurement systems, collaboratively designed measurement systems, and the impact on these behaviours by the business climate. The overall success or failure of a PMR initiative is ultimately influenced by all of these factors, but of special importance is the need to gain acceptance from managers and to ensure that sufficient training and awareness of the measures and results is achieved before holding managers accountable. Being able to address these before implementation will lead to a more committed approach to the PMR system and can result in performance-driven behaviour.

Even though these studies were restricted to two airlines, the results should be meaningful to other airlines that are considering a more robust approach to measuring and reviewing operations performance. The results themselves may not be applicable, but the realisation that human attitudes and behaviours are centrally important can guide managers in their formulation and deployment of PMR systems.

It can be difficult to encourage the positive behavioural reactions that lead to a greater level of involvement and ownership. To do so successfully requires an understanding of the influences and actions that shape individual behaviour and define the culture of the company. In addition, it is important to understand the effect that the business environment can have on motivation and commitment. The research addressed this by examining in-situ, and in-depth, the reactions, behaviours and attitudes of managers when they had to use a PMR system and sought to understand whether the system motivated them to adopt positive behaviours as suggested in the literature. The results have shown that the transition from not having and using a formal PMR system to collectively agreeing upon using a PMR system, and how to make it work in two separate airlines can take a tremendous amount of time and effort and requires commitment and support.

The original framework, derived from the literature, showed that the desired behavioural reactions during a BSC implementation were expected to be displayed after following a logical sequence of designing a PMR system around a company's operating strategy, implementing it, and then relying on those who engage with it to adopt the necessary behaviours and attitudes to meet performance goals (Kaplan and Norton 1992). This implied that the goals themselves would provide inspiration, and the initiative to spur people on to achieve them (Figure 9-1).

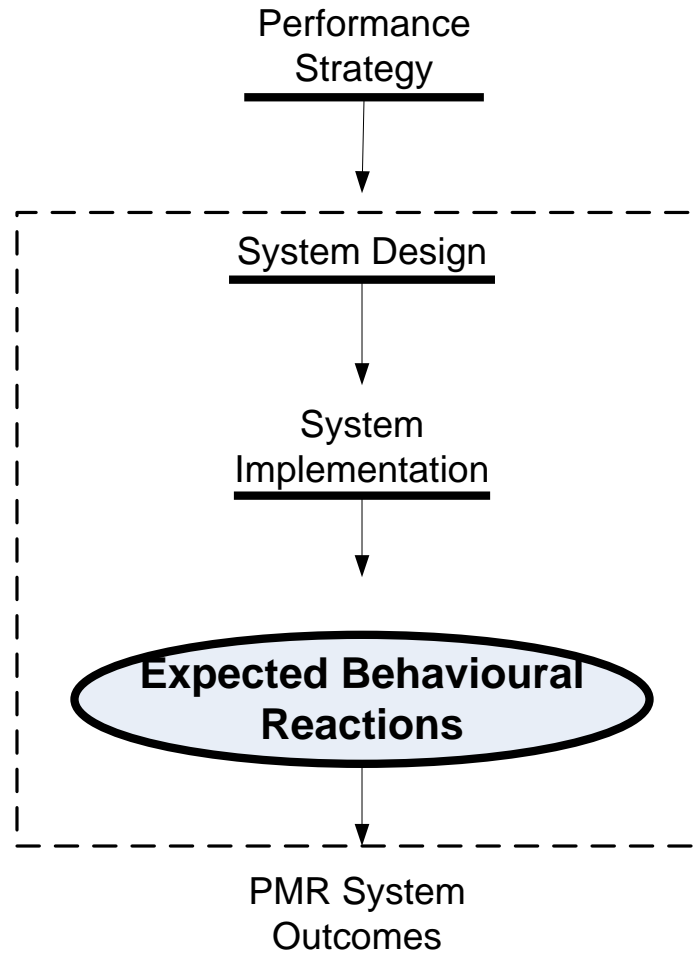


Figure 9-1 Original PMR System Implementation Model Adapted From the Literature

However, the research has demonstrated that in these two particular cases the attitudes and behaviours of the managers and directors were not directly affected by the introduction of a PMR system, but they did have a profound effect upon the effectiveness of the system and that positive behaviours are not automatically displayed by those who engage with it. This was also supported by de Waal (De Waal 2002; De Waal 2003a; De Waal 2003b, 2004) who found that behavioural reactions were very significant to the successful implementation and use of a PMR system.

At both Allegheny and Pinnacle there was a significant lack of education in terms of interpreting performance data, and the ability to drive down to the determining factors of poor performance was not readily apparent. Consideration and planning for attitudes and behaviours should take place at the strategy formulation stage and at each

subsequent step in the design and implementation of a PMR system. Measuring and subsequently interpreting airline operations performance is complex. Each outcome measure is the result of actions taking place across the breadth of the company's operation and requires extensive knowledge of the inner workings of all aspects of the production line.

Within these two airlines there was evidence to suggest that a more appropriate approach to implementing a PMR system was to consider the approach in reverse order by first deciding what behavioural reactions you want to achieve and then determine how the company's strategy can best be communicated to everyone so that the eventual response is positive. To do so requires a detailed understanding of the company's culture and the prevalent attitudes and behaviours of those who will be influential in working with the system. This is not to say that the system must be moulded around the attitudes in existence because they may be negative but to first understand the human and social side of the group and then provide in-depth education on the system, measures, results and in particular how to analyse and interpret them.

Based on my findings, Figure 9-2 modifies the model derived from the literature by acknowledging that the PMR initiative must also take account of the prevailing business climate, attitudes and behaviours and management style that will eventually lead to performance driven behaviour.

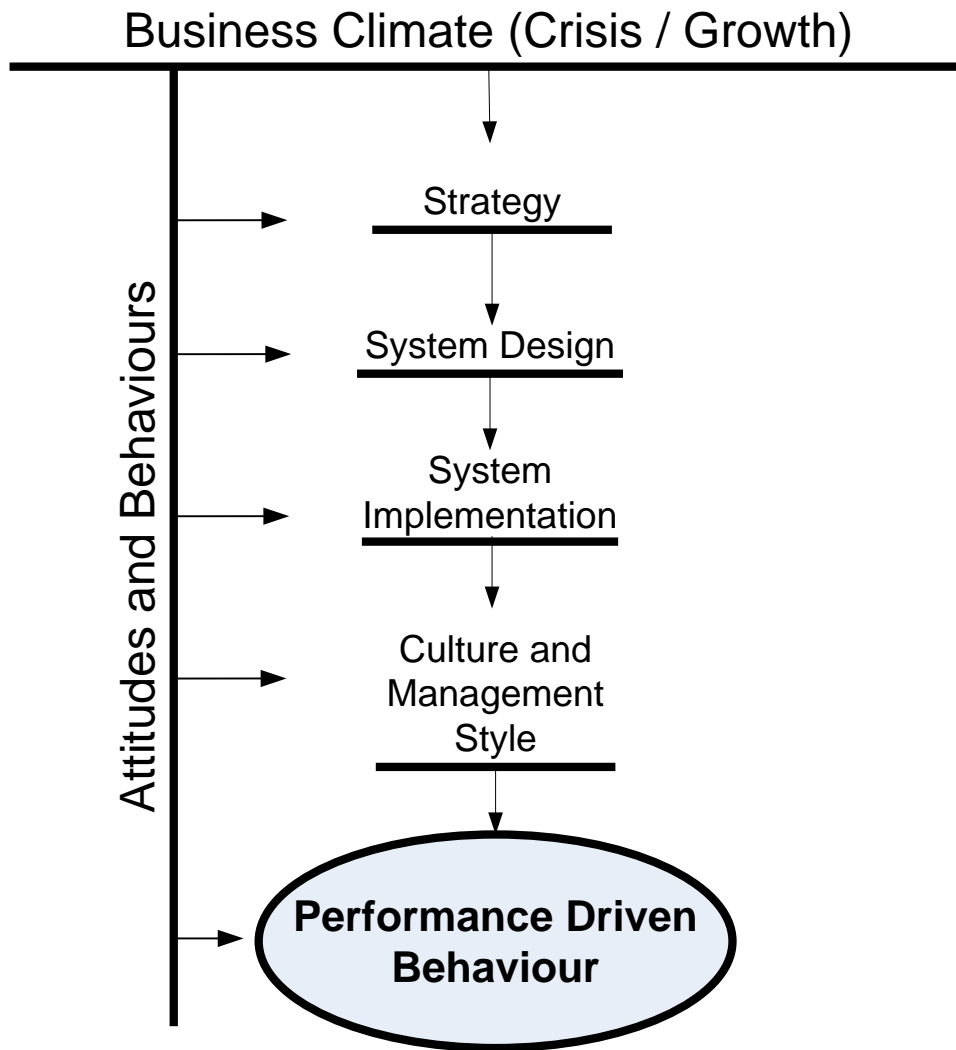


Figure 9-2 Revised Model for PMR System Implementation

The changes in this model are based on the evidence contained within the thesis. Not all people will naturally relate to this. At Pinnacle in particular, where the culture was one of blame and threats, there was little, if any, emphasis placed on what mattered to people and how to successfully harness their positive behavioural reactions. Nevertheless, it remains a thorough reflection of the situations as related to me during the various interview stages and represents a more intuitively systematic and encompassing approach than simply forcing people to accept something that they do not instinctively understand or know how to engage with.

This research has therefore shown the evolvement from the fairly strong approach of *expecting* behaviours to the softer, more encouraging approach of *cultivating* behaviours through systematic training and education and recognising that humans will

react in personal ways. For example, the response of managers to Pinnacle's 'set your hair on fire' speech was displayed across the whole spectrum, from being inspired to being totally divorced and despondent with this misconceived approach.

The contribution from this research must then be a continuing growth in appreciation of human behaviours and the social needs and reactions of the influential people who will ultimately determine the success of a PMR system.

9.2 Contribution to Professional Practice

I have been working on this research and working within this subject matter for over seven years now at the time of concluding this thesis, and it is a little difficult to accurately articulate what has been achieved from the perspective of professional practice because it has simply been so extensive. My personal learning has been turned to good use within the day-to-day practice of running the operations of both of these airlines and also in my ability to motivate, nurture and train managers. In a very real sense, it has had a dramatic impact on how I set direction and strategy for the future. The sheer amount of knowledge gained has been tremendous. Indeed, the lessons learned at Allegheny played a very important role in the introduction and use of a PMR system at Pinnacle and will inevitably factor into any organisation that I work for in the future.

This study has effectively demonstrated how a researcher, who is also a practitioner intimately involved in the research situation, can make a big impact on the research when he himself is actively pursuing a change initiative through the methodology of Action Research. My recommendation to practitioners, citing the experience from this research, is that one needs to establish the underlying culture and behaviours before embarking on a change process that will require active involvement of managers.

The ultimate goal in conducting a study such as this using an action research approach is to seek and implement improvements in practice and to contribute to overall organisational learning. This has been the undeniable benefit of this research and below I have briefly described the contributions to professional practice during each cycle. Collectively they amount to a unique body of work that enabled the managers in both companies to learn and grow from their experiences.

9.2.1 Cycle One Contribution

During this formulation phase of the research the managers and directors in the Fight Department at Allegheny began to learn about the key performance metrics that were important to our parent airline and why they were significant. Consequently, they started to tentatively assume responsibility and accountability for trying to achieve them. This led to a fledgling start at engaging with an imposed PMR programme and trying to make sense of what was before, simply data. Having a structured PMR review meeting each week and exerting a little pressure in the form of increased accountability actually made the managers and directors prepare for the meeting, not wanting to look bad in front of their peers. This was aided by the fact that the PMR system presented data in a more easily understood format. It could be argued that this may inevitably have occurred anyway, as a result of the increasing pressure by US Airways, but equally argued that without the structure of a PMR system to more clearly see and understand the performance linkages and shortfalls and identify critical performance, it would not have been as effective. Without the introduction of the PMR system the managers and directors would have continued to struggle with the demands placed by US Airways and would have continued to avoid attending the conference call. It was a dreaded part of everyone's week because we knew that criticism would be levelled at Allegheny, yet nobody was adequately prepared to refute it. Even though there was little support from the CEO, the PMR system did provide a robust foundation from which the managers and directors could learn, and allowed them to feel more comfortable when questioned by US Airways.

The primary contribution during this cycle was introducing a system that required the management team to extend themselves and become more aware of how they could influence the performance of the airline. The findings from this cycle allowed me to think more deeply about how to continue with the PMR system and how to broaden its reach to the crewmembers. A further outcome of this first cycle was to sharpen my focus on the real topic that needed investigating, which were the behavioural reactions of the managers and directors.

9.2.2 Cycle Two Contribution

By the time I commenced cycle two, the PMR system was already well established and the management team knew what was expected of them. They had already benefited from the contribution of the first cycle and had begun to learn about the attitudes and

behaviours of their colleagues, and how to better collaborate and cooperate with them. It also provided each interviewee with an opportunity to introspectively consider their colleagues and their behaviours in the specific context of a professional setting. This encouraged the managers to try to make a difference, even if they felt that their efforts would not sway US Airways.

This was still far from perfect, but it ensured that we kept momentum in the continued use of the PMR system, and the weekly reviews became more productive and useful. By intrinsically involving them in the presentation of the performance reviews it further solidified their knowledge and made them take a critical view of their area of responsibility and examine what could be improved.

The results from cycle two also contributed to professional practice by identifying the behaviours that the management group were demonstrating, and also recognising other behaviours that de Waal had identified, which provided opportunities for personal improvement.

9.2.3 Cycle Three Contribution

The impact and contribution of cycle three continues to this day. Even though the research moved beyond the SOC to encompass all operating departments by the fourth cycle, the managers in the SOC are still continuously exposed to a philosophy of seeking permanent improvement, not only in the performance results, but also in the manner in which we measure, interpret and review the data. I use the word 'permanent' specifically to denote that improvement efforts need to have a long-term benefit, rather than being a reflexive reaction to solve a problem that in its solution may have unintended consequences. Airline performance is a complex and interwoven set of measures that are dependent on many variables. Adjusting one to solve a problem can cause a bigger problem unless thoroughly investigated and tested. Beforehand, the experience at Pinnacle was to rush to apply 'band-aid' fixes, but, inevitably, these turned out to be very short-term because of a lack of underlying knowledge in the linkages between performance components.

The initial PMR system has been refined and modified numerous times to account for the continual lessons that were learned as it grew, and to adjust for changes in operating strategy. Not only has this led to a far greater level of knowledge but it has

also defined how we now run the daily operation with a vast array of more productive policies, procedures and methods that were not in existence before.

I hold my managers to high standards and it is not easy for them to simply 'get by'. They must continually demonstrate that they understand the data by making weekly presentations of performance in their area, with a detailed discussion of why the performance is what it is. Any variances that are worse than the established goals must be backed up with solid and verifiable reasons. This result of this is that the SOC managers have an intricate knowledge of the operation to a degree that maybe higher than the senior management of the airline. A downside is that when they provide an explanation for a performance variance the senior management group can have difficulty grasping it and are invariably sceptical because they assume they know better. It takes some effort on the manager's part to eventually persuade them that they now instinctively know what happens in the operation. The SOC managers in some regards have become a threat to those higher up in the organisation who falsely believe they know things and this has led, on several occasions, to the insight provided by an SOC manager being dismissed, with the naive assumption that the senior manager knows best. This has fuelled a good deal of frustration. Unfortunately, it leads me to believe that there is little future for this kind of initiative and learning at an organisation that simply does not value it, and will not recognise that the experts do indeed know the right course of action, even if that action is in the face of what senior management believes.

The most significant contribution to professional practice during cycle three was the introduction and perseverance with the weekly SOC Managers Meeting. The managers had to prepare for the meeting and more importantly interpret the data so that when called upon for explanations they could provide a rudimentary explanation of any performance variations. It was not easy for them to embrace this level of formal review. It was new to them, somewhat daunting, and they were uncomfortable and out of their element. It also required a higher degree of research and analysis on their part to trace the origins of particular delays or cancellations. Once they realised that it was not punitive, but rather a means to understand, learn and grow, they eventually began to prioritise this meeting as a central part of their week and the vehicle from which to raise operational concerns without fear, and to take pride in performance improvements in their area. Initially, this was a steep and long learning curve for everyone. They not only accepted this formal review, but actually began to see, perhaps for the first time, that their efforts could make a marked difference to the company's overall performance.

The success of this effort also led to the monthly Flight Operations performance review. It also became a significant part of the Quarterly Managers Meeting, which required the SOC managers to make various presentations to the entire management group about operations performance.

A further contribution was the introduction of periodic operations performance updates during the course of the operating day that were disseminated to a large audience throughout the company and contained pertinent and real-time information on operations performance. This not only broadened the reach of operations data to other departments that were on the periphery of the operation but it also served to bring closer meaning to those in the field who are divorced from the central operations centre.

Pinnacle's SOC is a much better run and managed organisation now that the managers' daily activities include a critical look at operations performance and whether our operating strategy is still in line with the company's mission. The managers have a clear purpose, well-defined goals and an appreciation of the strategic objectives that are relevant to their area of the operation. Each manager in the SOC has actually taken the lessons learned from their involvement in the PMR systems and this research and applied this knowledge to measuring various aspects of their departments that we would not have dreamed of doing before. This has included customer service telephone audits, and in particular dispatch release quality audits, which have been confirmed as the most rigorous in regional industry in North America.

9.2.4 Cycle Four Contribution

During the fourth cycle we had really begun to professionalise the daily performance review and put accountability and participation at the forefront. It was no longer acceptable to just read the numbers and then go about your day without paying further attention to them.

The introduction of the 0930 Daily Operations Briefing was the first real attempt at bringing together disparate work groups and forcing them to discuss performance data and cooperate on finding solutions. The meeting has evolved since its first introduction and has grown in status. It is now recognised as the most important daily meeting to review and discuss the operations of the airline. It is even held on weekends via conference call.

Additionally, I developed a weekly operations performance dashboard that I present weekly at the senior staff meeting (Appendix E). This proved so popular that it has now been copied and used in two other airlines that are owned by our parent company.

During this cycle I was also called upon to make a presentation to the Board of Directors on operations performance. This was a very unusual event and was a little intimidating. However, the presentation was very well received and I was offered praise from all who attended. In fact, it went so well that I was invited to present a modified version of it to other functional departments that were not normally involved in operations performance. This led to presentations to the Finance, Accounting, Human Resources and IT departments. For these presentations I also involved the SOC managers so that they could gain experience and also participate in a unique event. For all of us this was a contribution to our own professional practice because we now had to disseminate complex performance information to other departments in a manner that could be readily understood and digested.

9.3 Contribution to Learning

It is a little difficult to single out specific contributions to learning. Indeed, the forgoing discussions regarding contributions to professional practice also contain the main contributions to learning. The whole premise of action research is that it is research *in action* and requires active participation. By default, this results in learning. The knowledge gained during the first two cycles at Allegheny helped the airline further its ability to meet customer expectations and served to provide the foundation for the interventions that took place at Pinnacle during the third and fourth cycles.

The contribution to learning can be viewed from two perspectives. Firstly, from the perspective of all of those involved in this research and secondly from my own personal perspective. When considered in the context of the people involved, it can be stated assuredly that there was a contribution to the individual learning at each stage of the research by the insights that it provided and the advances that we made in furthering the understanding and appreciation of operations performance results.

At both airlines, people learned about themselves, their construct system and by extension how their colleagues behaved. This was noticeably evident during the repertory grid process when there was an awakening and realisation for many of the

interviewees that their construction system was based on prior experiences and perceptions, and that it was used to anticipate their response to events. It was also discovered that even though people had a positive outlook to the PMR system it did not automatically translate to positive behaviours with corresponding education on the facets of operations performance. The education that took place at both airlines about how to use a PMR system contributed to the growth and effectiveness of everyone involved. In the case of Pinnacle this resulted in the SOC managers reviewing performance data in a critical light and delving into the root causes without being prompted to do so. There is a natural inclination to be able to understand the phenomena and to explain it. This has been invaluable in identifying dysfunctional behaviour and correcting processes that under the surface are counter productive to the goals of the airline.

From my own personal perspective, the increase in my knowledge and capability has been enormous. It has led to better judgement, a more attuned understanding of human nature and has had a tremendous influence on the way I manage and tackle problems. I do so in a much more methodical, thought-out, well-structured and indeed academic fashion. The whole process has been extremely beneficial to me personally and to the way in which my colleagues have engaged with and understood the measurement of operations performance. It has substantially elevated my ability to examine, critically appraise and analyse a problem and then go about solving it. Additionally I have unintentionally taken on the role of being a mentor and coach for people who are doing similar activities in the company. I find that I want to share my knowledge and experience with people and in particular to educate them on how to look beyond the performance numbers and to truly read the charts, and question the assumptions and initial conclusions.

The lessons learned from the various implementations of PMR systems and the deeper knowledge gained of how people react to these systems has allowed me to be far more effective and take greater leadership, initiative and innovation in how we approach the measurement of critically important aspects of our organisation and in particular how we interpret the results. These lessons have, to a certain degree, been transferred to my direct reports and peers who worked with me during these ventures. The process became organic and spurred many other analyses and reviews that arguably would not otherwise have occurred.

In visits to other departments, it now becomes apparent to me that they are only in the elementary stages of truly understanding how to use a PMR system. The review is simply that, a review of the data with no informed or intelligent explanations of the true causes. The managers can fool themselves into believing that they are part of a productive process without actually making any informed insight. Much of this is still unfortunately driven by senior management threats at Pinnacle. Whenever there is a performance deficiency the inevitable response by senior management is to find out who is at fault so that there is someone to blame.

This research and practical experience has taught me an immense amount about how people think, react and behave. It has presented unique opportunities for me to provide motivation and support to others by recognising where a shortcoming might exist, making me a much stronger manager. This has led me to become very much a people-centric manager who believes that performance-driven behaviour can be nurtured and developed by providing people with the necessary education, support and encouragement.

9.4 Summary

This chapter has identified where and how the research has made a contribution to knowledge, practice, and learning. It has explained that undertaking this research provided me with an unexpected, yet very rewarding experience that has deepened and broadened my entire academic and practitioner education and knowledge, and by association, this has had a positive effect on those who worked with me.

The next and final chapter synthesises the various strands of this thesis and makes recommendations for further research. In so doing, it presents the final contribution to the research project.

10. CONCLUSION AND RECOMMENDATIONS

This final chapter provides a closing summary and conclusion to the research project by asking what has been achieved. It is a little difficult to place an exact end-point on the process because the nature of this research means that learning and experience continue consciously and subconsciously without the requirement of a formal research objective. Here I attempt to conclude the project, make recommendations for further research and reflect on the overall experience.

10.1 Summary of the Four Cycles

The research from Cycle One, showed that the reaction to the imposed PMR system did not automatically generate the required responses because of a lack of company support, a lack of education, and a prevailing crisis that was having a personal effect on everyone. Cycle Two took this further by identifying the existing behaviours and assessing those that were positive and how to use them to gain a better commitment to the PMR system during an ongoing crisis. This provided insight into how better to implement and use a PMR system but was lost when the airline was merged. Cycle Three showed that in a time of business growth there was a much healthier attitude in the desire to engage with a PMR system, but again, there was a very significant lack of knowledge and understanding of the complexities of airline operations. Cycle Four identified that a cross-department operations briefing had a positive effect on people and provided a means of interacting and modifying behaviours to accept the PMR system.

10.2 Discovering a More Informed Way to Implement PMR Systems

This research endeavoured to learn how to better engage employees in a productive effort to understand and improve operations performance by identifying and encouraging positive behavioural reactions that lead to a greater level of involvement and ownership. It has shown that to do so requires an appreciation of the influences and actions that shape individual behaviour. This includes the culture of the company,

the external environment and the support network. Whoever is responsible for the PMR system must therefore have a good knowledge of the differences in displayed attitudes and behaviours in different business climates, so that they can specify the level of human involvement and coordination that is required to improve operational performance.

Expecting a PMR system to promote the desired behaviours without intervention from the project leader and senior management is an altogether ineffectual way of approaching a performance initiative. It is simply insufficient to design and implement a performance measurement system without serious consideration given to the key factors of manager involvement, senior management support, an understanding of the behaviours and attitudes of those involved, an acute awareness of the prevailing culture, and the environment within which the business is operating. It is of paramount importance that senior management 'buys-in' to the system and provides strong leadership to ensure positive communication and to sustain commitment to the goals. Probing questions must be asked that challenge everyone to drill down to the determinants of performance and stimulate a reaction to develop and design methods to increase the value proposition being made to the customer. Without this it can simply become a review process that fails to get to the heart of the issues, and ultimately falls short of providing any kind of transformational change. This is especially the case when the PMR system does not have strategic objectives at its core. A lack of understandable communication can lead to apathy and the inability to motivate oneself to fix the problems. Even in the climate that Allegheny found itself in, it should still have been possible to motivate and thrive, if only there had been leadership and involvement of senior management, all of which were sadly lacking at this airline. It was not through having mediocre personnel, because there were some extremely capable people on the staff who had perhaps given-up on the willingness to go above and beyond and had settled for the path of least resistance. Ownership had been lost if indeed it ever existed.

However, the PMR system alone cannot introduce the magnitude of change or improvement that might be sought without a corresponding effort on behalf of the employees themselves. These efforts by employees are displayed as positive or negative influences and lie within the individual attitudes and behaviours that they regularly demonstrate. They are inevitably the result of not only the company culture but individual psychology as well. Establishing and communicating company goals is not sufficient to change many people's behaviour, but the expectation of a PMR system

is that establishing goals for individuals will lead to behaviour that is conducive to achieving the desired result. To be truly effective these individual goals should be established in collaboration with the individuals concerned and not as an isolated activity. Otherwise they can be little more than threats or demands for better performance, without providing any inspiration, motivation or encouragement.

A successful PMR system also needs a “champion”, perhaps a dedicated Performance Manager, to ensure that everyone is being held to task. As deWaal points out “the behavioural factors that are important to the ‘use’ stage have to be monitored continuously to ensure regular use of the performance management system” (De Waal 2003b).

It is also vital when implementing a performance measurement system to guard against the phenomenon where “people modify their behaviours in an attempt to ensure a positive performance outcome even if this means pursuing inappropriate courses of action” (Neely Andy *et al.* 1997, p.1132). This was further illustrated by Neely and Bourne when discussing implementation failure that if there is a culture of blame, people will begin to seek ways to deliver the measure rather than pursue real performance (Neely and Bourne, 2000). Unfortunately, this was and still is in evidence at Pinnacle. It is a major failing within the system and one that we have been unable, as yet, to correct.

The combined threads from this research suggest that if there is an understanding of the business climate, a binding interaction between performance strategy, system design, system implementation and people management, that is also coupled with education, support and guidance then it is possible to achieve a successful PMR system implementation and pursue performance-driven behaviour.

After conducting this research project, I now firmly believe that understanding human behaviour is key to a successful PMR system implementation.

10.3 Implications

These implications of this research will only have situational relevance to the companies within this research project, but by listing them concisely below it may

provide some thought-provoking ideas for anyone considering implementing a PMR system, or trying to modify an existing system to make it more effective.

- The business state of crisis or growth can have a profound effect on the attitudes and behaviours of managers. Crisis caused a sense of helplessness. Growth caused an undercurrent of willingness and eagerness to be involved and to learn
- Expressed attitudes do not always result in corresponding behaviours
- How an individual views their own behavioural reactions may not tally with how others see them
- A PMR system needs to be designed around, and with, the people using it
- Expecting a PMR system to promote desired behaviours is misleading. It requires significant investment of time and understanding on the part of the facilitator to ensure that there is an environment that can foster the desired behaviours
- Education and training are essential, not only on how to read, understand and interpret performance data, but also how to examine processes to determine the causes and reasons for performance shortfalls
- Reflection by managers through repertory grid elicitation is particularly beneficial to encourage introspection about their role and that of their colleagues
- Performance data needs to be presented in a manner that is easy to read and interpret, especially when shared with a wide audience

10.4 Limitations

The study was limited by the fact that it was an in-depth examination of only two regional airlines and the results will not be representative of other airlines. Additionally,

it is embedded in the regional airline industry and does not consider the major airlines who may have more sophisticated PMR systems.

This study used a subjective and inductive approach that drew findings from examination of actual events that took place over a seven year period. While there was real insight that might be useful to others, there is no expectation that these results can be duplicated elsewhere. The entire thrust of the project has been to understand the behaviours and attitudes exhibited by specific individuals and these are by their nature unique.

However, it is hoped that insights from this study may provide guidance to others on the importance of understanding and cultivating behavioural reactions if they are contemplating introducing any kind of performance initiative.

The research was also restricted to just the managers having responsibility for flight operations performance and did not consider the much larger population of all the personnel who reported to these managers.

10.5 Recommendations for Further Research

Further research is required into what effect the external business environment has on the behaviours and attitudes of the managers working within a PMR system. Although this research was able to show that the business state did have an influence it was not conclusive and requires additional in-depth analysis.

Research is also required into how to provide the necessary education and training on understanding and interpreting airline operations performance. This is a complex area and more understanding is needed on the level of knowledge required by managers so that they can recognise the linkages between performance metrics and to avoid unintended consequences.

It would also be useful to expand this research to several more airlines, or similar companies, to see if the findings have relevance elsewhere.

10.6 Reflections on the Repertory Grid Method

A very significant and largely unexpected outcome of this research project was the value and insight that the repertory grid method provided. When I initially decided to use repertory grids, it was to add more structure to an interview and to allow a more intuitive way to analyse the data. However, this method turned out to be truly eye-opening and a very valuable contribution to the overall research findings. It not only sharpened the focus for the interviewee but also, added a deeper psychological insight than would have been possible with a standard interview.

The findings from cycles two and three, during which the technique was used, were therefore much richer in colour. This was due to the ability to logically compare the interviews side by side and discern differences in perception and meaning about the topic and the interviewee's awareness and observation of their colleagues. This was particularly appropriate because it provided the means to identify and explain the attitudes and behaviours that were being demonstrated, and to do so in an informed and personal manner. I found that I was able to elicit a higher level of introspection from the managers than I might have otherwise. It further allowed the findings to build incrementally by first examining and analysing the individual grids, and then combining them through a bootstrap analysis technique to add deeper meaning as to how the group collectively worked together and saw the contribution of their colleagues. The findings therefore became interwoven in the various stages of analysis.

The method itself is able to identify the way that a person interprets and gives meaning to their experiences. This in turn allows the interviewer to make inferences about the interviewee's personality, which is a very powerful facet of the method.

It can take quite a long time to learn the technique and to understand its psychological underpinnings but once mastered it is very useful. When I was first introduced to repertory grids I was a little concerned about its applicability to the business world. It raised a doubt in my mind as to whether it would have as much credibility as other methods, but now, after having worked with grids for several years I am convinced of their practical application in a business setting and indeed I have used them for other projects unrelated to this thesis. After all, in business, much like in any clinical setting, we are dealing with people and their problems. As individual human beings, we are imposing our own personal beliefs and understandings on the way that we do things, which are formed from our prior personal experiences and become our own personal

construct system. Therefore, an individual's interpretation of the reality of their work environment, and the people with whom they interact, is derived from their conception of the world and the way in which they interpret actions and events. This existential quality lies at the heart of the repertory grid method.

On reflection, it is fair to say that using repertory grids provided greater insight and understanding of human nature. Because the repertory grid is carried out in a personal and collaborative fashion, and with the analysis often conducted while the grid is being elicited, it can provide immediate and useful insight for both the interviewer, and in particular the interviewee. At times, this was enlightening for the interviewee and caused them to pause and consider their own construction system, and how and why, they regarded their colleagues in a certain way. It was a light-bulb moment for some that led to further introspection, greater awareness and incremental learning. This is not the case with other methods that typically require remote analysis of the data, which may never be discussed with the interviewee. Of particular note here, was when DIF in cycle two, and MD in cycle three, had sudden realisations of how they had subconsciously classified some of their colleagues. This awareness then allowed them to talk further, and more acutely, about how and why they had drawn certain distinctions.

The results of this research study generated knowledge of the very real differences between the various personalities and how they interacted with the PMR system. These insights and findings then allowed me to tailor my approach to the PMR systems and provided me with a level of knowledge and realisation that I would not otherwise have had. I was then able to augment, refine and improve the PMR system. The whole process further added to the findings because the conclusions drawn were done so in concert with my own construct system.

10.7 Personal Reflections on the Research Study

Reflecting back at this final stage the first two cycles of research at Allegheny could have constituted a thesis on their own. There was so much data and so many conclusions to be drawn on how to improve the performance review process that it could have been even more lengthy that it actually was. It was truly an eye-opening experience for me and I felt like I was drinking from a hose. There was simply so much to absorb. It was a great shame that the company was eventually forced to merge and

disappear from the American regional aviation scene, but this did present the ability to compare those findings against another regional airline to verify whether the same conclusions could be drawn. This juncture was also a very difficult and challenging time for me because I was left with a real sense of loss, not only with the demise of Allegheny but also with how, or indeed if, to continue my research. There were many times over the years when I shelved the project, not being able to see a clear path to an end. This led to some procrastination and frustration in trying to further the research project.

As time went by it became apparent to me that what I was doing in the course of my job was indicative of the lessons I had learned at Allegheny. I began to formalise a cycle of research that provided insight to a different organisation and how a separate group of people engaged with the PMR process. This was enlightening and made the overall research project and hence this thesis more interesting and useful.

It would be an untruth to say that I have enjoyed this process. It has certainly had its moments of pleasure and sudden illumination, but there have been many grey times when it was hard and sometimes impossible to provide myself with the inspiration I needed to make headway. During the course of writing this thesis I have written and rewritten much of it many times, and I am sure by this stage the reader will realise that it is rather lengthy and perhaps a little cumbersome. The data and information that I had was overwhelming. Trying to break it down and make sense of it was tiresome, complicated and more than a little time consuming. When I initially began the research, I think I was expecting a more serious approach to PMR but this proved to be somewhat naive. There was simply not the level of comprehension with operations performance and I had to rethink my approach, many times.

As discussed in the previous chapter the benefit of conducting this study has been immense to me personally and this learning has been shared with those around me. Not only did it highlight the need to pay particular attention to the behavioural reactions of those who must use a PMR system, but it also underlined that the PMR system needs to be structured and that sufficient guidance and support are required in order to ensure success. My own education in this endeavour has focused my priorities on the people reporting to me and not just to those above me. I believe very strongly that I have become a much better and more effective manager but also an empathetic and very tolerant boss. I allow people to make mistakes without berating them, and I encourage them to grow and prosper through support, insight and guidance. In fact

when people make mistakes it is a unique instance of learning in practice. For those who make a mistake but also recognise it as a learning opportunity it is rewarding. There are others who will continue to make the same mistakes. They are much harder to help. I now consciously try to put myself in their shoes before issuing any directives, or when providing advice and guidance. As this study has progressed I have also been able to impart to others some of the knowledge that I have gained. This has been rewarding and has allowed me to assemble my collective experiences into an order that I can discuss with others so that they may either learn from them, or gain some insight to help themselves or others. What has become an infallible truth for me is that in order for any performance initiative to succeed it must have complete acceptance and 'buy-in' from those who must engage with it.

One overwhelming aspect of conducting a lengthy and in-depth study like this is the reward when you discover things that at first were not apparent. In particular the views and personal constructs of my colleagues were eye-opening, and became more so when I conducted the analysis. This reminded me of a phrase that has stuck with me since hearing it in a song many years ago: "once in a while you get shown the light, in the strangest of places if you look at it right" (Hunter 1993,p.197). I think this exemplifies for me in an esoteric way the value of the AR process and the repertory grid construct elicitation method. There were long periods of boredom, and then incredible frustration when I could not make sense of things, or I lost direction in what I was endeavouring to do. But, with some forced perseverance and persistence there was that occasional and unexpected light bulb moment that appeared from out of nowhere, when I was looking in odd places, that allowed me to make some small headway, or on a few occasions that magical enlightenment that all of a sudden illuminated the way and provided the essential encouragement to continue. There were many times when I felt like packing the whole thing in but my stubbornness (learned through my own introspection while experimenting with repertory grids) refused to let go, even though there were long periods of inactivity and lack of motivation to reengage.

In my approach to a practical application of a performance measurement system, I have experienced a confusion of approaches and a plethora of methods that have made the research study at times confusing and far from illuminating. Indeed, it is fair to say that during this extended study I have felt more aggravation and frustration than I have actually found a clear pathway to a solution that would be robust and easy to implement. I have every empathy with anyone who must implement a PMR system.

However, my conclusions from this research study have led me to firmly accept that individual attitudes and behaviours have a very profound impact on the successful implementation and use of a PMR system.

Notwithstanding the difficulties that I encountered, this entire experience has been of exceptional value to me. One other satisfying aspect of such a lengthy research process and accompanying thesis is when you can finally lay your pen down, for good or bad, and say..."it's finally, finally done!" Perhaps the reader will share the same sentiment.

10.8 Summary

This final concluding chapter provided a summary conclusion to the research project and identified areas for additional research that arose from this study.

I have also provided my personal reflections on the research process and hopefully provided an insight to my thought processes, motivations, and frustrations, which may be worth consideration for future researchers as they embark upon what has been for me, a very large, challenging but ultimately immensely rewarding and immersive experience.

GLOSSARY OF ABBREVIATIONS AND ACRONYMS

9/11	The infamous acts of terrorism committed in NY on 11 th September 2001
9E	IATA designation for Pinnacle Airlines
A:0	On-time flight arrival performance measured to the minute against the published scheduled arrival time
A:14	On-time flight arrival performance measured within 15 minutes of the published scheduled arrival time
ALO	ICAO designation for Allegheny Airlines
AR	Action Research
ASA	Airline Service Agreement
ATC	Air Traffic Control
ATL	IATA Airport Code for Hartsfield-Jackson Atlanta International Airport in Atlanta, Georgia
BSC	Balanced Scorecard
CBA	Collective Bargaining Agreement
CEO	Chief Executive Officer
CF	Completion Factor: a measure of the number of flights actually operated as a percentage of the total flights that were scheduled to be operated
CFR	Certified Flight Rules
COO	Chief Operating Officer
CSF	Critical Success Factor

D:0	On-time flight departure performance measured to the minute against the published scheduled departure time
DAL	Delta Airlines
DOT	United States Department of Transport
DTW	IATA Airport Code for Detroit Metropolitan Wayne County Airport in Detroit, Michigan
FAR	Federal Aviation Regulation
FLG	ICAO designation for Pinnacle Airlines
FOD	Foreign Object Damage
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
IND	IATA Airport Code for Indianapolis International Airport in Indianapolis, Indiana
KPI	Key Performance Indicator
LGA	IATA Airport Code for La Guardia Airport in New York
MBO	Management by Objectives
MEM	IATA Airport Code for Memphis International Airport in Memphis, Tennessee
MSP	IATA Airport Code for Minneapolis-Saint Paul International Airport in Minneapolis, Minnesota
NWA	Northwest Airlines
OCC	Operations Control Centre
PM	Performance measurement
PMR	Performance Measurement and Review System
RAA	Regional Airline Association

SOC	System Operations Control Centre (aka OCC)
SOP	Standard Operating Procedure
U.S.	United States
UQ	IATA designation for Allegheny Airlines

GLOSSARY OF TERMS

Controllable delay or cancellation

A delay or cancellation to a flight caused by actions that are within the control of the aircraft operator. For example a mechanical problem rendering the aircraft not airworthy, boarding the passengers late, the flight crew not being at the aircraft in sufficient time to allow for an on-time departure, or not having a full flight crew to operate the aircraft

Uncontrollable delay or cancellation

A delay or cancellation to a flight that is not within the control of the aircraft operator. For example: weather at the departure airport, destination airport, or en-route that would prevent a safe operation, or lengthy ATC delays into congested airports that cause a carrier to cancel a flight in order to protect the operating schedule later in the day

Express Division

A division of US Airways known more formally as US Airways Express. This comprised a number of airlines all providing regional passenger feed to the major hubs. Three of the eleven (at the time) US Airways Express carriers were wholly-owned by US Airways.

Deadheading

When a flight crewmember is carried on a flight but is not working. This occurs when a crew needs to travel from one place to another to take up their duties. Also known as 'positioning'.

Station

A term used to represent the operations of the airline at an airport. For example, each airport that an airline flies to is referred to as a station. If it opens or closes a station it means that the airline is beginning service to, or removing service from, an airport. The

airport itself continues to operate whether it is considered as a 'station' for the airline. It is similar to a railway station in that it is a stopping off point to allow passengers to board and disembark.

References

REFERENCES

- Alvesson, M., and Deetz, S., 2000. *In: Doing critical management research*. London, Thousand Oaks, Calif: Sage Publications.
- Andersen, B., Henriksen, B., and Aarseth, W., 2006. Holistic performance management: An integrated framework. *International Journal of Productivity & Performance Management*, 55 (1), 61-78.
- Argyris, C., Putnam, R., and Smith, D., 1985. *Action science: Concepts, methods and skills for research and intervention* San Francisco: Jossey-Bass.
- Aronson, E., 2004. *The social animal*. 9th ed. New York: Worth
- Atkinson, H., 2006. Strategy implementation: A role for the balanced scorecard. *Management Decision*, 44 (10), 1441-1460.
- Banker, R. D., Chang, H., and Pizzini, M. J., 2004. The balanced scorecard: Judgmental effects of performance measures linked to strategy. *Accounting Review*, 79 (1), 1-23.
- Banker, R. D., Charnes, A., and Cooper, W. W., 1984. Some models for estimating technical and scale inefficiencies in data envelopment analysis. *Management Science*, 30 (9), 1078-1092.
- Basu, R., Little, C., and Millard, C., 2009. Case study: A fresh approach of the balanced scorecard in the heathrow terminal 5 project. *Measuring Business Excellence*, 13 (4), 22-33.
- Bethune, G., and Huler, S., 1998. *From worst to first : Behind the scenes of continental's remarkable comeback*. New York: John Wiley.
- Bhat, V. N., 1995. A multivariate analysis of airline flight delays. *International Journal of Quality & Reliability Management*, 12 (2), 54-59.
- Bititci, U. S., Carrie, A. S., and Mcdevitt, L., 1997. Integrated performance measurement systems: A development guide. *International Journal of Operations & Production Management*, 17 (5), 522.
- Bititci, U. S., Mendibil, K., Nudurupati, S., Garengo, P., and Turner, T., 2006. Dynamics of performance measurement and organizational culture. *International Journal of Operations & Production Management*, 26 (12), 1325-1350.

- Bititci, U. S., Mendibil, K., Nudurupati, S., Turner, T., and Garengo, P., 2004. The interplay between performance measurement, organizational culture and management styles. *Measuring Business Excellence*, 8 (3), 28-41.
- Bourguignon, A., Malleret, V., and Norreklit, H., 2004. The american balanced scorecard versus the french tableau de bord: The ideological dimension. *Management Accounting Research*, 15 (2), 107-134.
- Bourne, M., Franco, M., and Wilkes, J., 2003a. Corporate performance management. *Measuring Business Excellence*, 7 (3), 15-21.
- Bourne, M., Kennerley, M., and Franco-Santos, M., 2005. Managing through measures: A study of impact on performance. *Journal of Manufacturing Technology Management*, 16 (4), 373-395.
- Bourne, M., Mills, J., Wilcox, M., Neely, A., and Platts, K., 2000. Designing, implementing and updating performance measurement systems. *International Journal of Operations & Production Management*, 20 (7), 754-771.
- Bourne, M., Neely, A., Mills, J., and Platts, K., 2003b. Implementing performance measurement systems: A literature review. *International Journal of Business Performance Management*, 5 (1), 1-24.
- Bourne, M., Neely, A., Platts, K., and Mills, J., 2002. The success and failure of performance measurement initiatives. *International Journal of Operations & Production Management*, 22 (11), 1288-1310.
- Bunz, U. K., and Maes, J. D., 1998. Learning excellence: Southwest airlines' approach. *Managing Service Quality*, 8 (3), 163.
- Bureau_of_Transportation_Statistics, U. S. D. O. T. Eleven measures of airline performance. Available from: http://www.bts.gov/programs/airline_information/performance_measures_in_the_airline_industry/2006_summary/ [Accessed: 2007].
- Chan, Y.-C. L., 2004. Performance measurement and adoption of balanced scorecards: A survey of municipal governments in the USA and Canada. *International Journal of Public Sector Management*, 17 (3), 204-211.
- Charnes, A., Cooper, W. W., and Rhodes, E., 1978. Measuring efficiency of decision-making units. *European Journal of Operations Research*, 2 (6), 429-444.
- Chavan, M., 2009. The balanced scorecard: A new challenge. *Journal of Management Development*, 28 (5), 393-406.
- Checkland, P., and Scholes, J., 1990. *Soft systems methodology in action*. Chichester: John Wiley & Sons.

- Chenet, P., Tynan, C., and Money, A., 2000. The service performance gap: Testing the redeveloped causal model. *European Journal of Marketing*, 34 (3/4), 472-495.
- Cheng, M.-I., Dainty, A., and Moore, D., 2007. Implementing a new performance management system within a project-based organization - a case study. *International Journal of Productivity and Performance Management*, 56 (1), 60-75.
- Chia, A., Goh, M., and Hum, S.-H., 2009. Performance measurement in supply chain entities: Balanced scorecard perspective. *Benchmarking: An International Journal*, 16 (5), 605-620.
- Coghlan, D., 2001. Insider action research - implications for practising managers. *Management Learning*, 32 (1), 49-60.
- Coghlan, D., and Brannick, T., 2001. Doing action research in your own organization. *In: London ; Thousand Oaks, CA : Sage Publications.*
- Coughlan, P., and Coghlan, D., 2002. Action research for operations management. *International Journal of Operations and Production Management*, 22 (2), 220-240.
- Crandall, R. E., 2002. Keys to better performance measurement. *Industrial Management*, 44 (1), 19.
- Cross, K. F., and Lynch, R. L., 1988. The "smart" way to define and sustain success. *National Productivity Review*, 8 (1), 23-33.
- De Vaus, D. A., 2001. *Research design in social research / david de vaus*. London :: SAGE.
- De Waal, A., 2002. *Quest for balance: The human element in performance management*. John Wiley and Sons, Inc.
- De Waal, A. A., 2003a. Behavioral factors important for the successful implementation and use of performance management systems. *Management Decision*, 41 (8), 688-697.
- De Waal, A. A., 2003b. The future of the balanced scorecard: An interview with professor dr robert s. Kaplan. *Measuring Business Excellence*, 7 (1), 30-35.
- De Waal, A. A., 2004. Stimulating performance-driven behaviour to obtain better results. *international Journal of Productivity and Performance Management*, 53 (4), 301-316.
- De Waal, A. A., 2005. Forget value-based management and the balanced scorecard! An interview with professor ken merchant. *Measuring Business Excellence*, 9 (2), 30-32.

- De Waal, A. A., 2010. Performance-driven behavior as the key to improved organizational performance. *Measuring Business Excellence*, 14 (1), 79-95.
- De Waal, A. A., and Gerritsen-Medema, G., 2006. Performance management analysis: A case study at a dutch municipality. *International Journal of Productivity & Performance Management*, 55 (1), 26-39.
- De Waal, A. A., and Mollema, E., 2010. Six courses of action to survive and thrive in a crisis. *Business Strategy Series*, 11 (5), 333-339.
- Definition. 1989. "Measurement, *n*". *The Oxford English Dictionary Online* 2nd ed. Available from: <http://dictionary.oed.com/cgi/entry/00304127> [Accessed].
- Definition. 1989. "Performance, *n*". *The Oxford English Dictionary Online* 2nd ed. Available from: <http://dictionary.oed.com/cgi/entry/50175368> [Accessed].
- Denscombe, M., 2007. *The good research guide : For small-scale social research projects*. 3rd ed. ed.: Maidenhead : Open University Press, 2007 (Reprinted 2008).
- Dick, B., 1993. You want to do an action research thesis? Available from: <http://www.scu.edu.au/schools/qcm/ar/art/arthesis.html> [Accessed: 2009].
- Dick, B., 2000. Postgraduate programs using action research. Available from: <http://www.scu.edu.au/schools/qcm/ar/arp/ppar.html> [Accessed: 2009].
- Dixon, J., Nanni, A., and Vollman, T., 1990. *The new performance challenge*. Burr Ridge, IL: Irwin.
- Doganis, R., 2002. Flying off course : The economics of international airlines. *In*: Vol. 3rd ed: London : Routledge.
- Eccles, R. G., 1991. The performance measurement manifesto. *Harvard Business Review*, 131-137.
- Edvardsson, B., 1992. Service breakdowns: A study of critical incidents in an airline. *International Journal of Service Industry Management*, 3 (4), 17-29.
- Edwards, R., and Sohal, A. S., 2003a. The human side of introducing total quality management - two case studies from australia. *International Journal of Manpower*, 24 (5), 551-567.
- Edwards, R., and Sohal, A. S., 2003b. The human side of introducing total quality management - two case studies from australia. *International Journal of Manpower*, 24 (5), 15.
- Ekdahl, F., Gustafsson, A., and Edvardsson, B., 1999. Customer-oriented service development at sas. *Managing Service Quality*, 9 (6), 403-410.

- Ellis, J. H. M., and Kiely, J. A., 2000. Action inquiry strategies: Taking stock and moving forward. *Journal of Applied Management Studies*, 9 (1), 83.
- Elzinga, T., Albronda, B., and Kluijtmans, F., 2009. Behavioural factors influencing performance management systems' use. *International Journal of Productivity & Performance Management*, 58 (6), 508-522.
- Epstein, M. J., and Manzoni, J., 1997. The balanced scorecard and tableau de bord: Translating strategy into action. *Management Accounting*, 79 (2), 28-36.
- Feurer, R., and Chaharbaghi, K., 1995. Performance measurement in strategic change. *Benchmarking for Quality Management & Technology*, 2 (2), 64-83.
- Fitzgerald, L., Johnston, R., Brignall, S., Silvestro, R., and Voss, C., 1991. *Performance measurement in service businesses*. London : Chartered Institute of Management Accountants, 1991.
- Fitzgerald, L., and Moon, P., 1996. *Performance measurement in service industries : Making it work*. London: Chartered Institute of Management Accountants.
- Fransella, F., Bell, R., and Bannister, D., 2004. *A manual for repertory grid technique*. U.K.: John Wiley and Sons.
- Frost, F. A., and Kumar, M., 2001. Service quality between internal customers and internal suppliers in an international airline. *International Journal of Quality & Reliability Management*, 18 (4), 371-386.
- Gautreau, A., and Kleiner, B. H., 2001. Recent trends in performance measurement systems - the balanced scorecard. *Management Research News*, 24 (3/4), 153-156.
- Ghalayini, A. M., and Noble, J. S., 1996. The changing basis of performance measurement. *International Journal of Operations & Production Management*, 16 (8), 63.
- Gill, J., and Johnson, P., 2002. Research methods for managers. *In: Vol. 3rd ed: London : SAGE*.
- Greenwood, D. J., 1999. Action research from practice to writing in an international action research development program. *In: Action research from practice to writing in an international action research development program*. Amsterdam, Philadelphia: John Benjamins Pub. Co.
- Greenwood, D. J., and Levin, M., 1998. Introduction to action research : Social research for social change. *In: Thousand Oaks, Calif. ; London : Sage*.
- Gummesson, E., 2000. Qualitative methods in management research. *In: Vol. 2nd ed: Thousand Oaks, Calif. ; London : Sage Publications*.

- Gustafsson, A., Ekdahl, F., and Edvardsson, B., 1999. Customer focused service development in practice. *International Journal of Service Industry Management*, 10 (4), 344-358.
- Hunter, R., 1993. *A box of rain*. New York: Penguin Books.
- Jankowicz, D., 2004. The easy guide to repertory grids. *In*: John Wiley and Sons.
- Johanson, U., Skoog, M., Backlund, A., and Almqvist, R., 2006 Balancing dilemmas of the balanced scorecard *Accounting, Auditing & Accountability Journal* 19 (6), 842-857.
- Johnson, H. T., and Kaplan, R. S., 1987. Relevance lost : The rise and fall of management accounting. *In*: Vol. [Pbk. ed / with a new preface by the authors]: Boston, Mass. : Harvard Business School Press, c1987.
- Kaplan, R. S., and Norton, D. P., 1992. The balanced scorecard - measures that drive performance. *Harvard Business Review*, 70 (1), 71.
- Kaplan, R. S., and Norton, D. P., 1993. Putting the balanced scorecard to work. *Harvard Business Review*, 71 (5), 134.
- Kaplan, R. S., and Norton, D. P., 1996a. The balanced scorecard : Translating strategy into action. *In*: Boston, Mass. : Harvard Business School.
- Kaplan, R. S., and Norton, D. P., 1996b. Using the balanced scorecard as a strategic management system. *Harvard Business Review*, 74 (1), 75.
- Kaplan, R. S., and Norton, D. P., 2000. The strategy-focused organization : How balanced scorecard companies thrive in the new business environment. *In*: Boston : Harvard Business School Press.
- Keegan, D. P., Eiler, R. G., and Jones, C. R., 1989. Are your performance measures obsolete? *Management Accounting*, 70 (June), 45-50.
- Kelly, G. A., 1955. *The psychology of personal constructs*. London: Routledge in association with Centre for Personal Construct Psychology, London, 1991.
- Kennerley, M., Neely, A., and Adams, C., 2003. Survival of the fittest: Measuring performance in a changing business environment. *Measuring Business Excellence*, 7 (4), 37-43.
- Kiely, J. A., and Ellis, J. H. M., 1999. Actions speak louder than words. *Management Services*, 43 (10), 32.
- Kolb, D. A., 1983. *Experiential leaning: Experience as the source of learning and development*. Financial Times / Prentice Hall.

- Kuwaiti, M. E., 2004. Performance measurement process: Definition and ownership. *International Journal of Operations & Production Management*, 24 (1), 55-78.
- Laszlo, G. P., 1999. Southwest airlines - living total quality in a service organization. *Managing Service Quality*, 9 (2), 90.
- Lawton, R., 2002. Balance your balanced scorecard. *Quality Progress*, 35 (3), 66-71.
- Lee, S. F., and Sai on Ko, A., 2000. Building balanced scorecard with swot analysis, and implementing "Sun. *Managerial Auditing Journal*, 15 (1/2), 68.
- Letza, S. R., 1996. The design and implementation of the balanced scorecard. *Business Process Re-engineering & Management Journal*, 2 (3), 54-76.
- Lewin, K., 1946. Action research and minority problems. *Journal of Social Issues*, 2 (4), 34-46.
- Libby, T., Salterio, S. E., and Webb, A., 2004. The balanced scorecard: The effects of assurance and process accountability on managerial judgment. *Accounting Review*, 79 (4), 1075-1094.
- Lipe, M. G., and Salterio, S. E., 2000. The balanced scorecard: Judgmental effects of common and unique performance measures. *Accounting Review*, 75 (3), 283.
- Lynch, R. L., and Cross, K. F., 1991. *Measure up! : Yardsticks for continuous improvement*. Cambridge, Mass., USA: Blackwell Business.
- Macdonald, J., 1995. Customer care is not good enough. *The TQM Magazine*, 7 (4), 5-8.
- Marr, B., and Adams, C., 2004. The balanced scorecard and intangible assets: Similar ideas, unaligned concepts. *Measuring Business Excellence*, 8 (3), 18-27.
- Marr, B., and Schiuma, G., 2003. Business performance measurement - past, present and future. *Management Decision*, 41 (8), 680-687.
- Mendibil, K., and Macbryde, J., 2006. Factors that affect the design and implementation of team-based performance measurement systems. *International Journal of Productivity and Performance Management*, 55 (2), 118-142.
- Muir, P., 2007. Action research in the scholarship of learning and teaching. *The RMIT (Royal Melbourne Institute of Technology) Teaching and Learning Journal*, 2 (3).
- Najmi, M., Rigas, J., and Fan, I.-S., 2005. A framework to review performance measurement systems. *Business Process Management*, 11 (2), 109-122.

- Neely, A., 1999. The performance measurement revolution: Why now and what next? *International Journal of Operations & Production Management*, 19 (2), 205-228.
- Neely, A., 2005. The evolution of performance measurement research - developments in the last decade and a research agenda for the next. *International Journal of Operations & Production Management*, 25 (12), 1264-1277.
- Neely, A., Adams, C., and Crowe, P., 2001. The performance prism in practice. *Measuring Business Excellence*, 5 (2), 6-13.
- Neely, A., and Bourne, M., 2000. Why measurement initiatives fail. *Quality Focus*, 4 (4), 3-7.
- Neely, A., Gregory, M., and Platts, K., 1995. Performance measurement system design. *International Journal of Operations & Production Management*, 15 (4), 80-116.
- Neely, A., Mills, J., Platts, K., Richards, H., Gregory, M., Bourne, M., and Kennerley, M., 2000. Performance measurement system design: Developing and testing a process-based approach. *International Journal of Operations & Production Management*, 20 (10), 1119.
- Neely, A., Richards, H., Mills, J., Platts, K., and Bourne, M., 1997. Designing performance measures: A structured approach. *International Journal of Operations & Production Management*, 17 (11), 1131.
- Neely, A. D., 2002. *Business performance measurement : Theory and practice*. Cambridge ; New York, NY: Cambridge University Press.
- Neely, A. D., Adams, C., and Kennerley, M., 2002. *The performance prism : The scorecard for measuring and managing business success*. London ; New York: Financial Times/Prentice Hall.
- Othman, R., 2008. Enhancing the effectiveness of the balanced scorecard with scenario planning. *International Journal of Productivity and Performance Management*, 57 (3), 259-266.
- Paranjape, B., Rossiter, M., and Pantano, V., 2006. Performance measurement systems: Successes, failures and future - a review. *Measuring Business Excellence*, 10 (3), 4-14.
- Parast, M. M., and Fini, E. E. H., 2010. The effect of productivity and quality on profitability in the us airline industry. *Managing Service Quality*, 20 (5), 458-474.
- Peterson, B. S., 2004. *Bluestreak : Inside jetblue, the upstart that rocked an industry*. New York: Portfolio.
- Powell, S., 2004. *The challenges of performance measurement - andy neely in conversation with sarah powell*. (8 0025-1747).

- Raa. Regional airline association mission statement. Available from: <http://www.raa.org/RAAHome/MissionStatement/tabid/77/Default.aspx> [Accessed: 2005].
- Remenyi, D., 1998. Doing research in business and management : An introduction to process and method. *In: G.B. : SAGE.*
- Revans, R. W., 1982. What is action learning? *Journal of Management Development*, 1 (3), 64-75.
- Rhoades, D. L., Waguespack Jr, B., and Treudt, E., 1998. Service quality in the us airline industry: Progress and problems. *Managing Service Quality*, 8 (5), 306.
- Ritchie, J., and Lewis, J., 2003. *Qualitative research practice : A guide for social science students and researchers / edited by jane ritchie and jane lewis.* London :: Sage Publications.
- Sandt, J., Schaeffer, U., and Weber, J., 2001. Balanced performance measurement systems and manager satisfaction.
- Schmenner, R. W., and Vollman, T. E., 1994. Performance measures: Gaps, false alarms and the "Usual suspects". *International Journal of Operations & Production Management*, 14 (12), 58-69.
- Schneider, R., and Vierira, R., 2010. Insights from action research: Implementing the balanced scorecard at a wind-farm company. *International Journal of Productivity and Performance Management*, 59 (5), 493-507.
- Schneiderman, A. M., 1999. Why balanced scorecards fail. *Journal of Strategic Performance Measurement*, January (Special Edition).
- Schon, D. A., 1991. *The reflective practitioner: How professionals think in action.* Ashgate Publishing Limited.
- Schwandt, T. A., 2001. Dictionary of qualitative inquiry. *In: Vol. 2nd ed: Thousand Oaks, Calif. ; London : Sage Publications, c2001.*
- Self, J., 2004. Metrics and management: Applying the results of the balanced scorecard. *Performance Measurement and Metrics*, 5 (3), 101-105.
- Simons, R., 2000. *Performance measurement & control systems for implementing strategy.* Upper Saddle River, N.J.: Prentice Hall ; London : Prentice-Hall International.
- Strauss, A., and Corbin, J. M., 1997. *Grounded theory in practice.* SAGE Publications.
- Street, M., 1994. Training people to deliver service excellence in british airways. *Managing Service Quality*, 4 (4), 13-16.

- Van Riel, C. B. M., Berens, G., and Dijkstra, M., 2009. Stimulating strategically aligned behaviour among employees. *Journal of Management Studies*, 46 (7), 1197-1226.
- Vandermerwe, S., and Gilbert, D. J., 1991. Internal services: Gaps in needs/performance and prescriptions for effectiveness. *International Journal of Service Industry Management*, 2 (1), 50-60.
- Verweire, K., and Van Den Berghe, L., 2003. Integrated performance management: Adding a new dimension. *Management Decision*, 41 (8), 782-790.
- Weick, K. E., 1995. Sensemaking in organizations. *In: Thousand Oaks ; London : Sage Publications*, c1995.
- Yin, R. K., 2003. *Case study research : Design and methods*. 3rd ed. ed. Thousand Oaks, Calif. ; London: SAGE.
- Yu, G., 1998. Operations research in the airline industry. *In: Boston ; London : Kluwer Academic Publishers*.

APPENDICES

Behavioural Reactions of Managers Towards Airline Operations Performance In Times of Crisis and Growth

David Llewelyn Parry

This volume contains all supplementary material and that has been referred to in the main text, or has been the underlying work behind the results in the main text. It is better suited to residing in an appendix as material to be referenced for further insight.

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Bournemouth University

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Appendix A INTERVIEW QUESTIONS AT ALLEGHENY – CYCLE 1

Interview questions

1. How would you describe operations performance management at this airline and what does performance mean to you?
2. Do you think performance should be measured?
 - At what level: company, department, individual?
3. How is operations performance measured here?
 - What is the objective?
4. Does the company value performance measurement?
5. Are you supported in your endeavours to measure performance?
6. Are you held accountable?
7. How do you measure performance in your department?
8. How does the way we manage performance relate to customer satisfaction?
9. If you had free reign to measure only what you thought was important what would that be?
10. What would you like to see as the outcome of a PM system?
11. Who should set the goals?
12. Does the company communicate effectively?
13. Are you provided with sufficient and necessary information and resources to do your job?
14. Should performance data be made available to other employees?
 - in particular crewmembers?

Appendix B REPERTORY GRIDS - ALLEGHENY AIRLINES - CYCLE 2

B.1 DIF (Director of In-Flight)

Display Debra Hoke ((Attempt to understand how yourself and other managers and directors view your colleagues attitudes to performance measurement at Allegheny during this time of crisis))
 "ALO: Flight Operations Management Involved with Performance Measurement"

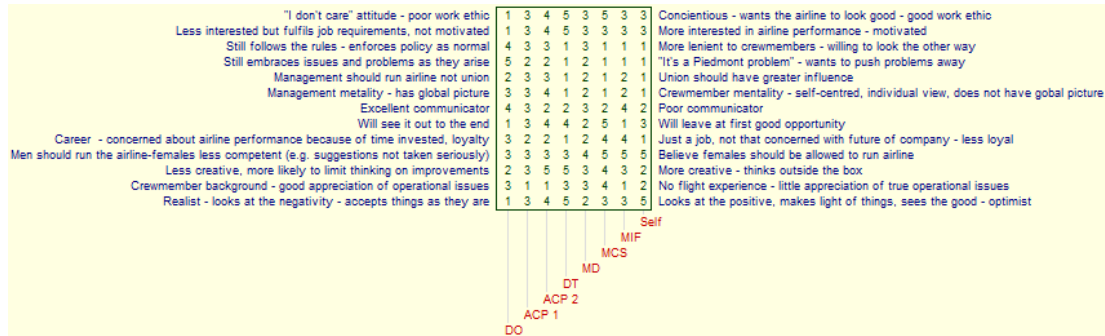


Figure C-1 Repertory Grid: DIF - Allegheny

B.1.1 Process Analysis

Topic

DIF was very interested in taking part in this process and was genuinely willing to learn about repertory grids and the topic under scrutiny, and consequently she approached the interview in a very positive manner. DIF was in agreement that the subject warranted investigation and was curious to learn how I was intending to make some sense of each manager's role in performance management.

Elements

DIF considered the list of elements appropriate and acceptable because it included all of the managers and directors in the Flight Operations department who are involved with performance management. An interesting aspect of this is that the list of elements also included a "self", which served to provide the interviewee with further opportunity for introspection when rating the elements on a construct, or when presented with a triad containing "self". This was quite enlightening for DIF who began very quickly to see everyone in relation to herself as she proceeded to develop and rate constructs.

Constructs

The qualifying phrase was received well and served as a useful reminder during the elicitation process to ensure that the responses remained focused on the topic of the performance management system. There was a willingness from DIF to develop constructs and they flowed fairly easily once a level of comfort was reached.

Ratings

The rating procedure was straightforward and sensible to the DIF. She was able to readily place each element at a distinct point on the scale and she avoided a central tendency by trying to be as objective as she could. This process was thought provoking for her and she was careful with her designations.

General

Overall, this was a positive experience for both DIF and I. She was able to provide 13 constructs that relevantly dealt with the topic in question.

B.1.2 Eyeball Analysis

The grid represents DIF's view of the level of involvement and the attitudes of her colleagues at that particular moment in time as Allegheny dealt with a major crisis. DIF has represented the topic well and remained focused on performance management relating it back to the weekly meetings that were held with the parent company and all subsidiaries. She sees herself in a very similar light to the other two females in the group which is interesting and infers that there is perhaps a divide between male and female when it comes to this topic, or that the females share similar values and relate better to each other. Her responses fall into a group of distinguishable categories: interest, commitment, control, vision, communication, gender, creativity, technical knowledge, and outlook.

What DIF's grid says about the elements and constructs:

DO: Demonstrates a poor attitude, is uninterested in his job, is lenient to crewmembers and likely to let issues slip and not hold crewmembers accountable for delays that they may have caused. Wants to push problems off onto somebody else, believes that the union should have

more influence, will likely see it out to the end even though he is obviously unhappy, unlikely to create or take an opportunity to move on. Does not show any creativity and tends to dwell on the negative and accept things the way they are rather than trying to see some positive in the gloom. The ratings for DO seem to have him leaning toward the negative poles of each construct – perhaps some lack of respect for him here?

- ACP 1 Seems to lie centrally between each construct and is largely unremarkable. There is a feeling that he also likes to push things off “as a Piedmont problem”, in other words the problem is not his concern but that of the acquiring company, which allows for some apathy to set in. Problems that would ordinarily be taken care of, are not addressed and he shows a lack of initiative. However, ACP1 does have a very good technical background and appreciation of operational issues.
- ACP 2 Is seen as conscientious, interested in airline performance, and still tackles the issues when they arise. But he does exhibit some of the crewmember mentality of tending to look at things from an individual, or self-centred perspective, without grasping the bigger picture. He is seen as a good communicator but will likely leave at the first opportunity. Is creative and has a very good technical knowledge and tends to look at the positive side of things - tries to remain optimistic
- DT Is seen as very conscientious, committed and motivated to improve performance. DT feels that he strongly follows the rules and embraces the issue and believes firmly that management should run the airline, and as such has a good global perspective. He is a good communicator but will leave at first opportunity. Is creative and always remains positive and optimistic.
- MD The majority of MD's ratings fall with a central tendency. He still tries to embrace the issues and feels that management should run things, is likely to see it out until the bitter end – has been with the company for 25 years and is unlikely to leave without being asked to. Believes in females as effective managers, but tends to be negative in what he says and how he behaves.

- MCS Very conscientious, follows all rules, and tackles problems, does not pass anything off as not hers, believes that management should be in control and has a good picture of the operation, communicates well but will leave at first good opportunity. She views her position as largely just a job, but fully believes that females can, and should, run the airline. Is creative but lacks flight operations experience.
- MIF Is seen as effectively fulfilling her role. She follows the rules and holds flight attendants accountable and tackles the problems, refusing to see them as somebody else's problem. She believes that management should have firm control of the company, She is not seen as a particularly good communicator. She will stay until the end, even though she considers it just a job and not necessarily a career. Believes that females should have a greater role and are capable of running the airline, but lacks true operational flight experience.
- Self: DIF sees herself as an ardent follower of the rules, and accountable for her area of operations. She tackles problems head on and will not bow to union pressure. She is a good communicator and takes her career seriously. She is unlikely to leave the company until the bitter end because of 25 years of service already invested. She believes that females should be given a greater role and that they are more than capable of running the airline. She does not think that she is very creative in finding solutions but she does remain very positive and optimistic and has good technical flight knowledge and experience.

B.1.3 Construct Characterisation

Table C-1 Construct Characterisation: DIF - Allegheny

Con#	Emergent	Implicit	Type of Construct
1.1	I don't care attitude - poor work ethic	Conscientious - wants the airline to look good - good work ethic	Core
1.2	Less interested but fulfils job requirements, not motivated	More interested in airline performance - motivated	Behavioural
1.3	Still follows the rules - enforces policy as normal	More lenient to crewmembers - willing to look the other way	Behavioural
1.4	Still embraces issues and problems as they arise	It's a Piedmont problem - wants to push problems away	Behavioural
1.5	Management should run airline not union	Union should have greater influence	Core
1.6	Management mentality - has global picture	Crewmember mentality - self-centred, individual view, does not have global picture	Propositional
1.7	Excellent communicator	Poor communicator	Evaluative
1.8	Will see it out to the end	Will leave at first good opportunity	Evaluative
1.9	Career - concerned about airline performance because of time invested, loyalty	Just a job, not that concerned with future of company - less loyal	Core
1.10	Perceive that men should run the airline, see females as less competent (e.g. suggestions not taken seriously)	Believe females should be allowed to run airline	Core
1.11	Less creative, more likely to limit thinking on improvements	More creative - thinks outside the box	Propositional
1.12	Crewmember background - good appreciation of operational issues	No flight experience - little appreciation of true operational issues	Core
1.13	Realist - looks at the negativity - accepts things as they are	Looks at the positive, makes light of things, sees the good - optimist	Core

In DIF's grid there are 13 constructs. Of those 13, there were six that seemed to have a deep and personal significance to her. DIF is very particular about attitudes. She saw herself as making a big effort to be professional and was very loyal to the airline. She feels that an important distinction should be made between management and the union leadership. She feels that the seriousness with which one views their job is important, for example a career rather than just a job. She also sees that there is an apparent difference between genders, and feels that one's technical experience is very important.

B.1.4 Cluster Analysis

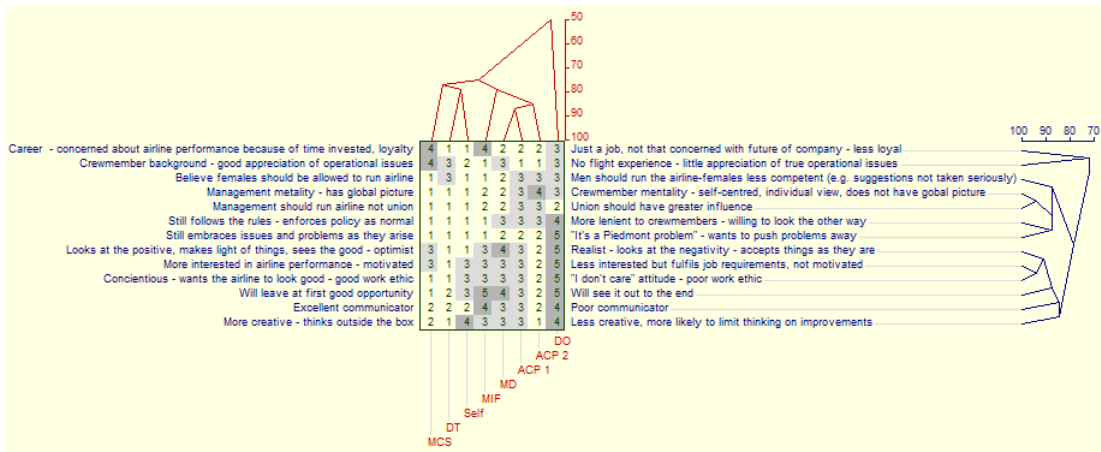


Figure C-2 Cluster Analysed Grid: DIF - Allegheny

Table C-2 Cluster Analysis: DIF - Allegheny

Cluster analysis procedure for elements: **DIF**

Examine the shape of the element dendrogram	There are two main clusters: MD, ACP1 & ACP2, versus DT, DIF & MCS
Identify construct similarities and differences	MD, ACP1 & ACP2 are similarly rated on all constructs with no more than one rating point difference between them, with the exception of the second and 13th constructs where the rating difference is 2 points. MD & ACP1 share the same ratings on 7 constructs. DT, DIF(self) & MCS are all rated the same on 5 constructs, sharing the same attitudes and behaviours
What does this mean?	Each of these clusters of elements adopts similar attitudes and behaviours in how they view and engage with the performance measurement and review system, i.e. each element within each cluster tends to act in a similar way
Find the highest % similarity score	MD & ACP1 show the highest % similarity score at 86%. ACP1 & ACP2 are matched at 85%. Thus MD, ACP1 & ACP2 form a cluster whose lowest similarity score is 85%. The next closest is DT & DIF(self) with a match of 79%. The cluster of DT, DIF(self) & MCS has a % similarity score of 77%
Examine the remaining scores	MD, ACP1 & ACP2 form a distinct cluster being matched at 85%; their highest match with the other cluster is through MD's match with MIF at 79%. The most disparate match is between ACP2 & DO at 50%. This is interesting because ACP2 works for DO but DIF sees them as approaching performance measurement and review in distinctly different ways and with largely opposite attitudes and behaviours

The cluster analysis for DIF's grid shows that she sees two distinct clusters of people exhibiting similar behaviours: MD, ACP1 & ACP2 versus DT, DIF (self) & MCS. She has identified herself with MCS who is also female, and DT who was previously described as being very positive.

Additionally her cluster analysis shows that the lowest similarity match is between ACP2 and DO (50%). She sees them as approaching the performance measurement and review process in distinctly different ways and with largely opposite attitudes and behaviours. This

is an interesting assessment because ACP2 actually reports to DO, but appears to be quite at odds with his approach. Is this perhaps creating friction and a hindrance to their roles? I posed this question to ACP2 and he explained that they do not always see eye to eye and he feels that DO is uncommunicative and secretive, not sharing information.

B.2 DT (Director of Training)

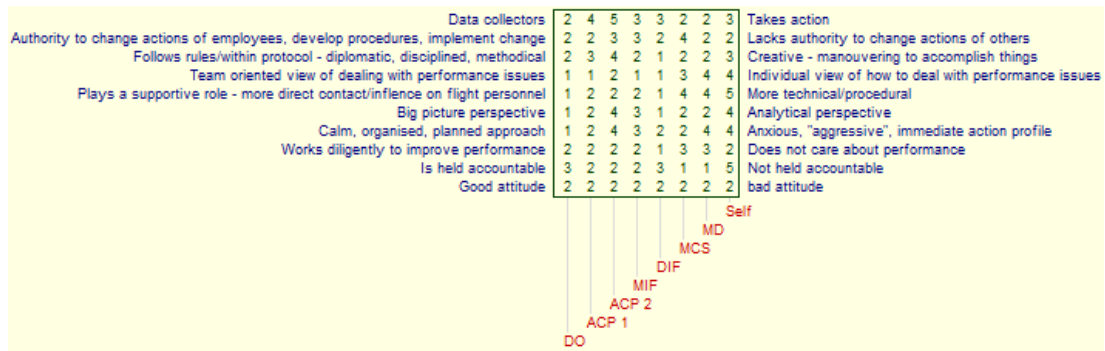


Figure C-3 Repertory Grid: DT - Allegheny

B.2.1 Process Analysis

Topic

The interview was greeted with a positive reaction. DT agreed that performance management was an area that warranted further understanding. He readily accepted the topic as being a useful means of examining the behaviours of his peers and its purpose in seeking a better understanding of their attitudes during a very difficult time in the company's history. There was a willingness to develop constructs and they flowed fairly easily with little prodding.

Elements

The list of elements was acceptable because it incorporated all the managers in the Flight Operations department who are involved with performance management.

Constructs

The qualifying phrase was received well, but it was repeated several times to keep the interviewee focused. DT likes to talk and would develop the discussion in a number of different directions. He would use a construct to validate why or how things are done and also offered general views on how ineffective and uncommunicative senior management were (CEO). The constructs flowed slowly but steadily and are fairly straightforward in that they drew differences between the attitudes displayed by the managers. There was a focus on the lack of authority and helplessness for the interviewee in his involvement in the

performance management process and he was anxious to do more to improve the current level of performance. DT portrayed himself more on the emergent rather than the implicit side of the scale.

Ratings

The rating procedure was straightforward and sensible to the interviewee. At times it was eye-opening for DT as he considered some of the inferences he was making. The ratings spanned the whole scale and did not follow a central tendency. DT did not need to think deeply when rating each element because he seemed to have a ready opinion on where each manager fell on the scale.

General

DT is a natural talker and would take the conversation off on tangents very quickly. I would let these wander for awhile and then try to bring him back to the core topic by repeating the qualifying phrase. Overall, it was an interesting and pleasurable experience that included a lot of conversation.

B.2.2 Eyeball Analysis

The grid represents DT's views on the level of involvement and attitudes of his colleagues as Allegheny dealt with a major crisis. He appears to think that the Director of Operations has a good approach and demonstrates a good attitude. DT sees himself on the emergent pole more often than not and considers that he has a good attitude. He addresses a number of different and distinct categories in the grid including, Role, Authority, Conformity to rules, Teamwork, Manner and behaviour, Commitment, Accountability and Attitude.

What DT's grid says about the elements and constructs:

- | | |
|-------|--|
| DO | Tends to collect data, or has it available to him, but does not act upon it. He has the authority to change actions but conforms to the rules and works as a team member and not as a leader. He plays a supportive role, has a big picture view and remains calm and organised. He wants to improve performance and has a relatively good attitude. |
| ACP 1 | Takes action, wants to fix problems, has some authority and works as a team player to support others. He has a good grasp of the bigger picture |

and remains calm. Wants to improve performance, is held accountable, and has a good attitude.

- ACP 2 Most definitely wants to take action but has no real authority to do so. He is creative, works mostly as a team player and is supportive of others. However, he does not possess a larger view of things and can be aggressive, or looks for immediate action. He cares about performance and is held accountable. He has a relatively good attitude.
- MIF Does not seem to be that involved and neither has, or lacks, authority. She tends to follow the rules and is definitely team oriented and supportive. She is neither anxious nor calm, but works to improve performance. She is held accountable and displays a relatively good attitude.
- DIF Is perceived to be not that involved, but does have authority to act. She always follows the rules and is creative when trying to get things accomplished. She is team oriented and very supportive, has a big picture view and is mostly calm and organised. She demonstrates a relatively good attitude.
- MCS Tends to be a data collector rather than having any influence on overall performance. She has some authority and tends to follow the rules. She is not seen as being a team member. She has a technical/procedural approach and a fairly good big-picture view of how the company is operating. She tends to be calm, sits in the middle of the road regarding improvement but is definitely held accountable. She has a relatively good attitude.
- MD Also tends to be just a data collector but has some authority to change the actions of others and implement change. He follows the rules, works independently, rather than being a team player, is more technical and procedures oriented. He has a big picture view of the operation, can be aggressive, but sits on the fence regarding the need to make improvements. He is definitely held accountable and has a relatively good attitude.
- Self: Neither collects data or takes any action. DT sees himself as having some authority and following the rules. He exhibits an individual view and can be more technical and analytical. He can also be aggressive and looks for immediate action. DT works to improve performance but is definitely not

held accountable for his actions. This is largely because there are no specific measures that pertain to DT's area of responsibility, which is Training. He sees himself as having a pretty good attitude despite the troubles that the company faces.

B.2.3 Construct Characterisation

Table C-3 Construct Characterisation: DT - Allegheny

Con#	Emergent	Implicit	Type of Construct
2.1	Data collectors	Takes action	Behavioural
2.2	Authority to change actions of employees, develop procedures, implement change	Lacks authority to change actions of others	Core
2.3	Follows rules/within protocol - diplomatic, disciplined, methodical	Creative - manouering to accomplish things	Behavioural
2.4	Team oriented view of dealing with performance issues	Individual view of how to deal with performance issues	Behavioural
2.5	Plays a supportive role - more direct contact/inflence on flight personnel	More technical/procedural	Behavioural
2.6	Big picture perspective	Analytical perspective	Propositional
2.7	Calm, organised, planned approach	Anxious, "aggressive", immediate action profile	Core
2.8	Works diligently to improve performance	Does not care about performance	Core
2.9	Is held accountable	Not held accountable	Core
2.10	Good attitude	Bad attitude	Behavioural

B.2.4 Cluster Analysis

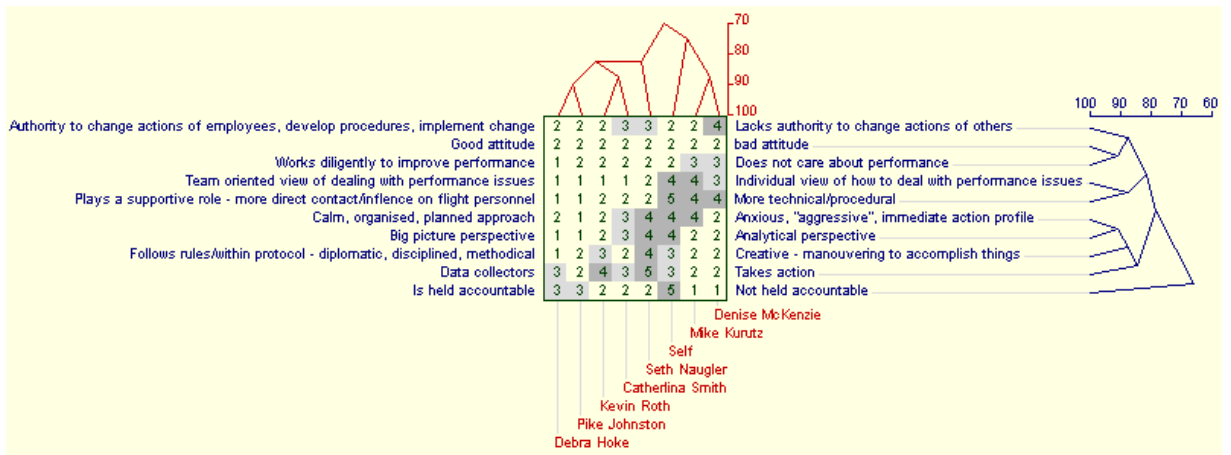


Figure C-4 Cluster Analysed Grid: DT - Allegheny

Table C-4 Cluster Analysis: DT - Allegheny

Cluster analysis procedure for elements: **DT**

Examine the shape of the element dendrogram	There are three main clusters: DIF & DO versus MD & MCS versus ACP1 & MIF
Identify construct similarities and differences	DIF & DO are similarly rated on all constructs with no more than one rating point difference between them. MD & ACP1 share the same ratings on 6 constructs. ACP1 & MIF share the same ratings on 5 constructs. MD & MCS are rated the same on 7 constructs, sharing the same attitudes and behaviours
What does this mean?	Each of these clusters of elements adopts similar attitudes and behaviours in how they view and engage with the performance measurement and review system, i.e. each element within each cluster tends to act in a similar way
Find the highest % similarity score	DIF & DO show the highest % similarity score at 90%. MD & MCS are matched at 88%. ACP1 & MIF are also matched at 88%. DIF, DO, ACP1, MIF & ACP2 form a cluster whose <i>lowest</i> similarity score is 83%. The next closest is Self, MD & MCS with a match of 75%.
Examine the remaining scores	The most disparate match is between ACP2 & Self at 70%. This is interesting because DT sees them as approaching performance measurement and review in quite different ways and with largely unrelated attitudes and behaviours

B.3 MIF (Manager of In-Flight)

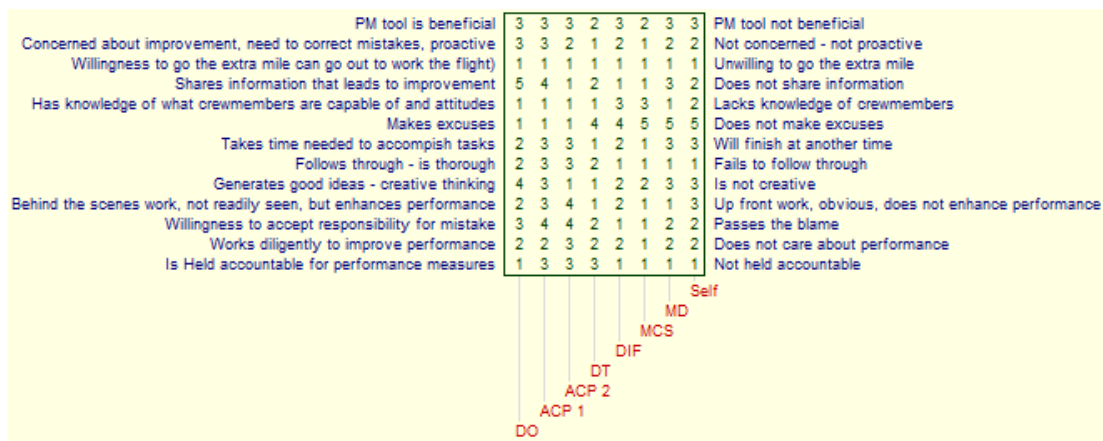


Figure C-5 Repertory Grid: MIF - Allegheny

B.3.1 Process Analysis

Topic

The interview was greeted with some curiosity and scepticism. MIF agreed that performance management was important, but was not certain why we should dig any deeper into it. However, she was willing to develop constructs and they came quite easily to her.

Elements

The list of elements was considered appropriate and acceptable because it included all of the managers in the Flight Operations department who are involved with performance management.

Constructs

The qualifying phrase was received well and served as a useful reminder during elicitation.

Ratings

The rating system was seen as straightforward and intuitive to the interviewee and she was able to easily place each element on the scale.

General

The interviewee related to the topic quite well but had to be prompted on occasion to remain focused on the topic.

B.3.2 Eyeball Analysis

MIF focused her constructs around the core behaviours that her colleagues demonstrated. She was able to readily place each element on the scale and used the ratings carefully. The categories that her constructs fall into are: the PM system, Concern, Commitment, Communication, Technical knowledge, Demeanour, Creativity, Responsibility, Accountability. She seemed to identify herself with the other crewmember managers and obviously has respect for them.

What MIF's grid says about the elements and constructs:

- DO Is viewed as very willing to go the extra mile to ensure a flight happens, including flying it himself if nobody else is available. However, he does not share information with the In-Flight department. He has a very good knowledge of crewmember capability and attitudes, but makes excuses for them all the time. He takes time to accomplish tasks and tends to follow through, but he is not creative. He tends to work behind the scenes to improve performance, and his work is not easily seen. He works to improve things and is held directly accountable – (contrasts wildly with other views of DO)
- ACP 1 Very willing to go the extra mile. He does not always share information but has an excellent knowledge of crewmembers and their attitudes and capabilities, but makes excuses for them and passes the blame to others. However, he does work to improve performance.
- ACP 2 Is concerned about improvement and is very willing to go the extra mile. He shares information that can lead to improvement, much more so than his co-workers. He has an excellent knowledge of crewmembers but makes excuses for them and passes the blame elsewhere. He generates very good ideas and is a creative thinker. Tends to work in the forefront and likes to be noticed.
- DT Believes that the performance measurement and review process is beneficial and is genuinely concerned about making improvements and

correcting mistakes. He is proactive and very willing to go the extra mile. He tends to share information that can lead to performance improvement and has a very good knowledge of crewmembers. He is a pilot himself but does not make excuses for them, which is the opposite of how [Name] sees the other management pilots (ACP 1, ACP 2 & DO). DT takes the time needed to accomplish tasks, follows through and is very good at generating ideas. He is a creative thinker and tends to work behind the scenes, making contributions to enhance performance, without being terribly noticeable. He is willing to accept responsibility for a mistake, and works diligently to improve performance. MIF seems to have a very firm view of DT and has only rated him as a 3 (central tendency) on one of the constructs, which is the one dealing with accountability.

DIF DIF is MIF's direct superior. DIF is concerned about performance and very willing to go the extra mile. She shares information that can lead to improvement, does not make excuses, and takes the time needed to accomplish tasks. She always follows through, generates good ideas and works out of the limelight. She is very willing to accept responsibility for mistakes, and works diligently to improve performance. She is held directly accountable.

MCS Believes that the performance measurement and review tool we use is beneficial. She is very concerned about improvement and the need to correct mistakes. She is always willing to go the extra mile to ensure that a flight departs as scheduled and shares all information that can lead to improvement. She does not make excuses and takes the time to accomplish tasks properly. She does not rush, always follows through and is thorough. She tends to be creative and generates good ideas, while working behind the scenes. She is willing to accept responsibility, works diligently to improve performance, and is held accountable.

MD Is concerned about performance and is very willing to go the extra mile. He has a good knowledge of crewmembers and what they are capable of. He does not make excuses and always follows through. He also works behind the scenes, is willing to accept responsibility, works diligently to improve performance, and is held accountable.

Self: MIF sees herself as concerned about performance and very willing to go the extra mile, including taking a flight as a flight attendant if it avoids a cancellation. She shares information and has a good knowledge of crewmembers. She does not make excuses for her flight attendants and always follows through when researching a problem. She accepts responsibility, works to improve performance, and is definitely held accountable. Naturally, she sees herself on the positive end of the scale for most of the constructs.

B.3.3 Construct Characterisation

Table C-5 Construct Characterisation: MIF - Allegheny

Con#	Emergent	Implicit	Type of Construct
3.1	PM tool is beneficial	PM tool not beneficial	Evaluative
3.2	Concerned about improvement, need to correct mistakes, proactive	Not concerned - not proactive	Core
3.3	Willingness to go the extra mile can go out to work the flight)	Unwilling to go the extra mile	Core
3.4	Shares information that leads to improvement	Does not share information	Evaluative
3.5	Has knowledge of what crewmembers are capable of and attitudes	Lacks knowledge of crewmembers	Core
3.6	Makes excuses	Does not make excuses	Core
3.7	Takes time needed to accomplish tasks	Will finish at another time	Behavioural
3.8	Follows through - is thorough	Fails to follow through	Behavioural
3.9	Generates good ideas - creative thinking	Is not creative	Propositional
3.10	Behind the scenes work, not readily seen, but enhances performance	Up front work, obvious, does not enhance performance	Core
3.11	Willingness to accept responsibility for mistake	Passes the blame	Core
3.12	Works diligently to improve performance	Does not care about performance	Core
3.13	Is Held accountable for performance measures	Not held accountable	Core

B.3.4 Cluster Analysis

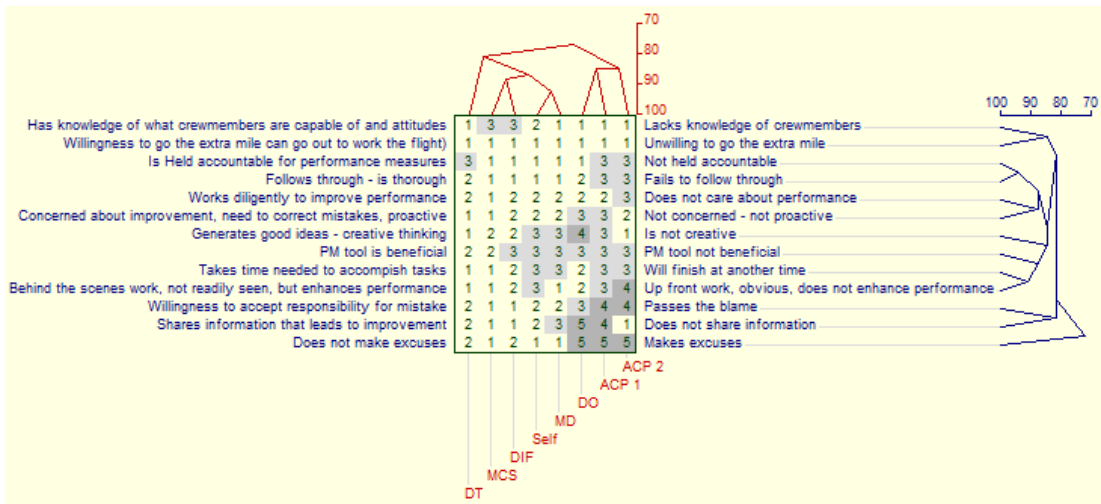


Figure C-6 Cluster Analysed Grid: MIF - Allegheny

Table C-6 Cluster Analysis: MIF - Allegheny

Cluster analysis procedure for elements: MIF

Examine the shape of the element dendrogram	There are two main clusters: Self & MD versus MCS & DIF
Identify construct similarities and differences	Self & MD are similarly rated on 10 constructs with no more than one rating point difference between them. MCS & DIF share the same ratings on 7 constructs.
What does this mean?	Each of these clusters of elements adopts similar attitudes and behaviours in how they view and engage with the performance measurement and review system, i.e. each element within each cluster tends to act in a similar way
Find the highest % similarity score	Self & MD show the highest % similarity score at 92%. MCS & DIF are matched at 88%. MCS, DIF, Self & MD form a cluster whose lowest similarity score is 86%. The next closest is DO, ACP1 & ACP2 at 85%
Examine the remaining scores	The lowest match amongst the whole group is 75% (MD & DO) indicating that MIF thought that all of the interviewees reacted in a not too different manner

B.4 ACP 1 (Assistant Chief Pilot)

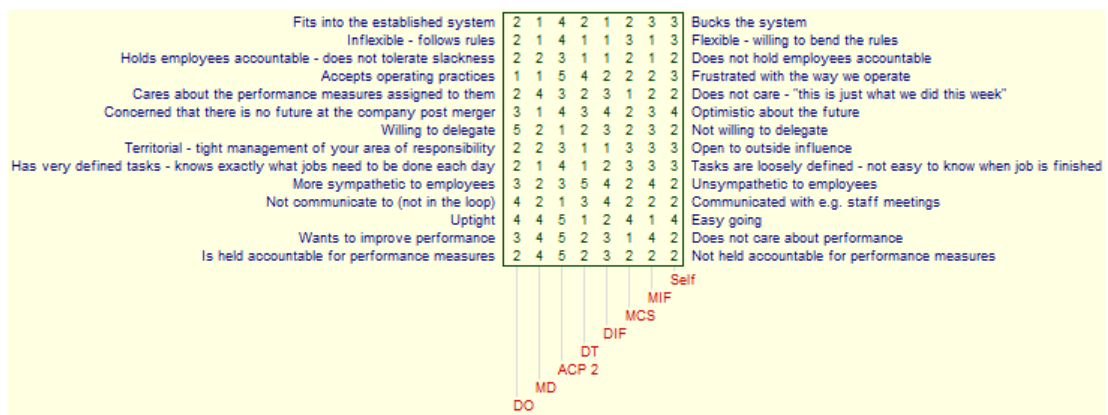


Figure C-7 Repertory Grid: ACP1 - Allegheny

B.4.1 Process Analysis

Topic

The topic was readily accepted. ACP1 is an easily approachable and amiable person and was very willing to participate, seeing it as an interesting development of the performance measurement process and the interview we conducted during the first cycle.

Elements

The list of elements was considered quite appropriate and acceptable because it incorporated all of the managers in the Flight Operations department who are involved with performance management.

Constructs

The qualifying phrase was received well and served as a useful reminder during elicitation to ensure responses remained focused on the performance process.

Ratings

There was nothing remarkable here. The rating system was seen as straightforward and easy to understand.

General

ACP1 works for DO and is closely associated with ACP 2 – both are pilots and assistants to the Director of Operations. ACP1 had some difficulty trying to develop constructs and towards the end repeated the central theme of others: i.e. not a lot of creativity and some negativity.

B.4.2 Eyeball Analysis

ACP1 has built a view of the core behaviours that he observes in his colleagues. He has represented the topic fairly well and his constructs fell into the categories of: Role, Flexibility, Accountability, Ownership, Delegation, Communication and Accountability.

What ACP1's grid says about the elements and constructs:

- DO Sees DO as fitting into the established system, inflexible and follows the rules, holds employees accountable and does not tolerate slackness. He accepts the operating practices, cares about performance measures that are assigned to him, but is not willing to delegate anything. He is territorial and has tight management of his area of responsibility. He has very defined tasks and knows exactly what jobs need to be done. He holds staff meetings and communicates with his direct reports, but can be uptight. He is held accountable for performance measures.
- MD Very much fits into the established system, is very inflexible and follows the rules. He holds employees accountable, accepts current operating practices but does not care about performance measures. He is very concerned about the future. He is willing to delegate, is territorial, has defined tasks and is sympathetic to employees. He is not communicated to (not in the loop), but is very easy going, does not care about performance, and is not held accountable.
- ACP 2 Tends to buck the system, is flexible and willing to bend but is very frustrated with the way we operate. He has some optimism about the future, is very willing to delegate. His tasks tend to be loosely defined and he is not communicated to. He is very easy going, but does not care about performance, and is not held accountable.
- DT Fits into the established system, very inflexible, holds employees accountable, and does not tolerate slackness. He is frustrated with the way

we operate, cares about performance, is willing to delegate and is very territorial. He has very defined tasks, and knows exactly what needs to be done each day. He is unsympathetic to employees, very uptight, wants to improve performance, and is held accountable.

DIF Very much fits into the established system (this seems to be the case for anyone who has been with the airline for some time). She is very inflexible, follows the rules and very much holds employees accountable. She accepts current operating practices, has some optimism about the future, is very territorial and has tight management of her area of responsibility. Her tasks are clearly defined. She is unsympathetic to employees. [Name] sees her as being rigid with the flight attendants whereas he tends to be sympathetic to the pilots plight. She is communicated to. She is seen as uptight.

MCS Tends to fit into the established system, holds employees accountable, accepts operating practices and very much cares about performance measures assigned to her. She is also concerned about the future, is willing to delegate, more sympathetic to employees, is not communicated with, tends to be easy going and wants to improve performance. She is held accountable.

MIF Very inflexible, holds employees accountable, does not tolerate slackness and accepts how we currently operate. She cares about the performance measures assigned to her, tends to be unsympathetic to employees, is not communicated to, is very uptight, does not really care about performance, but is held accountable.

Self: Holds employees accountable, cares about the performance measures and is optimistic about the future. He is willing to delegate, and has a sympathetic view towards his employees. He feels that he is not communicated to, but is easy going and wants to improve performance. He is held accountable.

B.4.3 Construct Characterisation

Table C-7 Construct Characterisation: ACP1 - Allegheny

Con#	Emergent	Implicit	Type of Construct
4.1	Fits into the established system	Bucks the system	Behavioural
4.2	Inflexible - follows rules	Flexible - willing to bend the rules	Core
4.3	Holds employees accountable - does not tolerate slackness	Does not hold employees accountable	Core
4.4	Accepts operating practices	Frustrated with the way we operate	Behavioural
4.5	Cares about the performance measures assigned to them	Does not care - "this is just what we did this week"	Evaluative
4.6	Concerned that there is no future at the company post merger	Optimistic about the future - post merger airline	Evaluative
4.7	Willing to delegate	Not willing to delegate	Core
4.8	Territorial - tight management of your area of responsibility	Open to outside influence	Attributional
4.9	Has very defined tasks - knows exactly what jobs need to be done each day	Tasks are loosely defined - not easy to know when job is finished	Core
4.10	More sympathetic to employees	Unsympathetic to employees	Core
4.11	Not communicate to (not in the loop)	Communicated with e.g. staff meetings	Core
4.12	Uptight	Easy going	Evaluative
4.13	Works to improve performance	Does not care about performance	Core
4.14	Is held accountable for performance measures	Not held accountable for performance measures	Core

B.4.4 Cluster Analysis

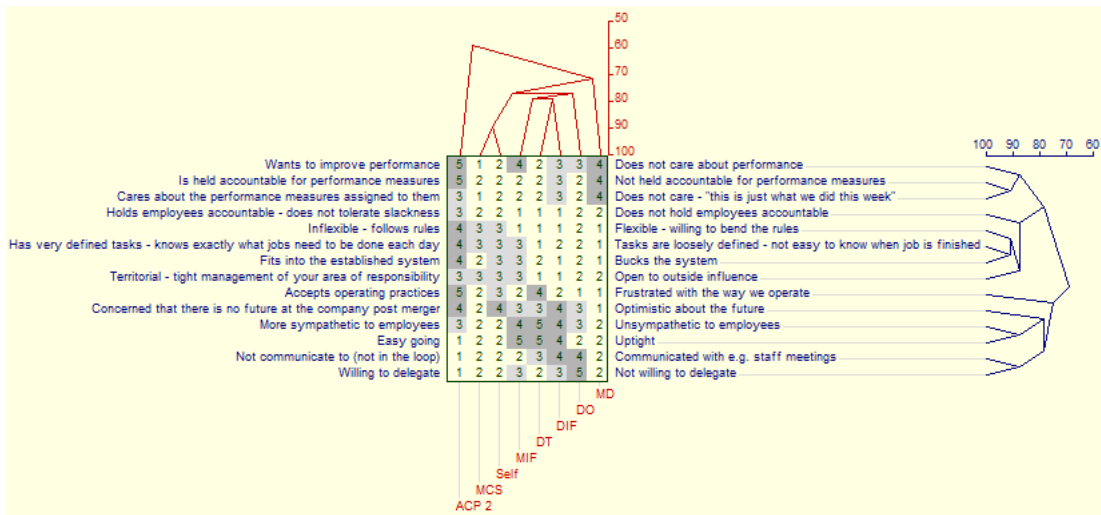


Figure C-8 Cluster Analysed Grid: ACP1 - Allegheny

Table C-8 Cluster Analysis: ACP1 - Allegheny

Cluster analysis procedure for elements: ACP1

Examine the shape of the element dendrogram	There is one main cluster: MCS & Self. The next nearest match is a cluster between MIF, DT & DIF
Identify construct similarities and differences	MCS & Self are similarly rated on 9 constructs with no more than one rating point difference between them.
What does this mean?	Each of these clusters of elements adopts similar attitudes and behaviours in how they view and engage with the performance measurement and review system, i.e. each element within each cluster tends to act in a similar way
Find the highest % similarity score	MCS & Self show the highest % similarity score at 89%. MIF, DT & DIF are matched at 80%.
Examine the remaining scores	The lowest match amongst the whole group is 59% which is ACP2 & MCS

B.5 DO (Director of Operations)

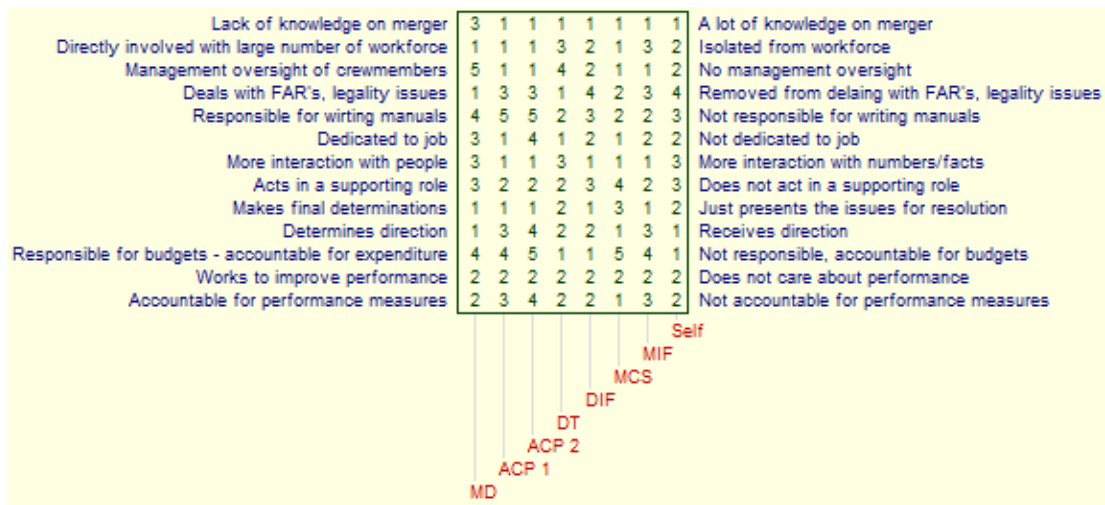


Figure C-9 Repertory Grid: DO - Allegheny

B.5.1 Process Analysis

Topic

The interviewee was willing to participate but could not understand the reason why. During elicitation I constantly had to explain what to do and keep him focused on the topic. He gave very little thought to this and did not engage with the process. The concept of a repertory grid did not make any sense to him and he became reluctant to develop his constructs. He did not seem to understand the purpose of the research. This was rather significant because he was acting “dumb” and simply could not, or would not, engage.

Elements

The elements were supplied by myself and there was agreement on why they were selected.

Constructs

DO could not remain focused on the qualifying phrase and it had to be repeated multiple times to provoke answers. He was distant and became reluctant to share any of his true feelings. This interview appeared to be of little use. The topic seemed to be avoided as if it was a source of pain or frustration for him. All constructs required a lot of thought. He focused on the subject of “it’s not in

our control or worth it” attitude. We eventually managed 14 constructs but it was a long, arduous and very trying process. He was disinterested and very distracted by what the future held and had a sense of helplessness and hopelessness. DO was a senior captain at the airline and was not looking forward to the prospect of having to fly the line again. He was also very concerned about his future employment prospects. He was considering leaving the industry and this seemed to trouble him a great deal.

Ratings

I had to prompt DO to rate each of the elements for virtually every construct that was developed. The scale made sense to him but quantifying each individual was a chore. It was emotionally involving in that DO demonstrated a sense of “I don’t care” and detachment from what is going on and the serious concern over the future.

General

There were many moments of thought and emotion. DO was resentful and resigned to a slow death. He also made comments about the CEO and the lack of information he has. He did not make any comments about the repertory grid procedure although he clearly did not understand it, but probably participated because I was a colleague and had asked him to.

B.5.2 Eyeball Analysis

There was a lot of concern over the merger and the relative position of the elements in the scheme of things as it relates to performance management. DO drew distinctions between our role in trying to improve performance and the hopelessness of it all considering our future was poor and that Allegheny was likely to merge with Piedmont Airlines. The constructs covered such categories as; Information, Management, Legality, Manuals, Dedication, Interaction, Authority, Responsibility, Leadership, Commitment and Accountability.

What DO’s grid says about the elements and constructs:

MD Is directly involved, must consider crew legality in his decisions making. He has some interaction and makes final decisions. He determines direction,

but is not responsible for budgets. He does some work to improve performance and is held accountable to some degree.

ACP 1 Lacks knowledge of the merger, is directly involved with the workforce, but also has management oversight of them. Deals with legality but does not write manuals or policies. He does not demonstrate a noticeable level of dedication and is not interactive. He makes the final determination on delay codes, but is not responsible for budgets. He does some work to improve performance and is accountable to some degree.

ACP 2 Lacks knowledge of merger. Is directly involved and has some management oversight. He is not involved with writing manuals and not dedicated to his job. Tends to act in a supporting role, but makes final determination of delay codes. He is not responsible for budgets but does work to improve performance, but is not held accountable.

(both ACP 1 and ACP 2 work directly for DO)

DT I seen as lacking knowledge on the merger, has no management oversight, deals with legality and is responsible for manuals. He is very dedicated to his job with medium interaction with others. He tends to act in a supporting role and makes some final determinations for delay coding. He is responsible for dealing with budgets and is accountable for expenditure. Wants to improve performance and is held accountable to some degree.

DIF DO sees DIF as very similar to himself, probably because she shares a similar role being responsible for flight attendants as opposed to pilots. She lacks knowledge on the merger, is involved with the workforce and has management oversight. She does not seem to deal with legality issues. She tends to be dedicated to her job and has a lot of interaction with others. She makes the final determination on delay coding and sets direction. She is highly responsible for budgets and expenditure and is held accountable to some degree.

MCS Has no knowledge on the merger. She is involved with the workforce, has management oversight and deals directly with crew legalities. She is responsible for manuals, very dedicated to her job and has a lot of

interaction with others. She does not act in a supporting role, and neither gives nor receives direction. She is not involved much with budgets. She tends to care about performance and is definitely held accountable.

MIF Has no knowledge on the merger. She has management oversight, is responsible for manuals, tends to be dedicated, interacts with people, and acts in a supporting role by just presenting the issues for resolution. She does not make the final determination or seek solutions. She is not involved much with budgets but does tend to want to improve performance, however she is not really held accountable.

Self: DO sees himself as very similar to DIF. He has no real knowledge on the merger, is involved with the workforce and has direct management oversight. He does not tend to deal with legality issues (possibly wrong rating?). He tends to be dedicated to his job and makes the final determination and very much sets direction (Flight Operations is under DO). He is very responsible for budgets, tends to want improvement in performance and believes he is held accountable to some degree.

During the interview DO mentioned 'budgets' a lot and it was obviously something that he was responsible for but could not get to grips with. DO was charged with explaining pilot pay, which was a minefield and very complex, and he was lost with how to do this effectively.

B.5.3 Construct Characterisation

Table C-9 Construct Characterisation: DO - Allegheny

Con#	Emergent	Implicit	Type of Construct
5.1	Lack of knowledge on merger	A lot of knowledge on merger	Core
5.2	Directly involved with large number of workforce	Isolated from workforce	Core
5.3	Management oversight of crewmembers	No management oversight	Propositional
5.4	Deals with FAR's, legality issues	Removed from dealing with FAR's, legality issues	Core
5.5	Responsible for writing manuals	Not responsible for writing manuals	Unremakable
5.6	Dedicated to job	Not dedicated to job	Propositional
5.7	More interaction with people	More interaction with numbers/facts	Affective
5.8	Acts in a supporting role	Does not act in a supporting role	Propositional
5.9	Makes final determinations =- ODM decisions	Just presents the issues for resolution	Core
5.10	Determines direction	Receives direction	Core
5.11	Responsible for budgets - accountable for expenditure	Not responsible, accountable for budgets	Core
5.12	Works to improve performance	Does not care about performance	Behavioural
5.13	Accountable for performance measures	Not accountable for performance measures	Core

B.5.4 Cluster Analysis

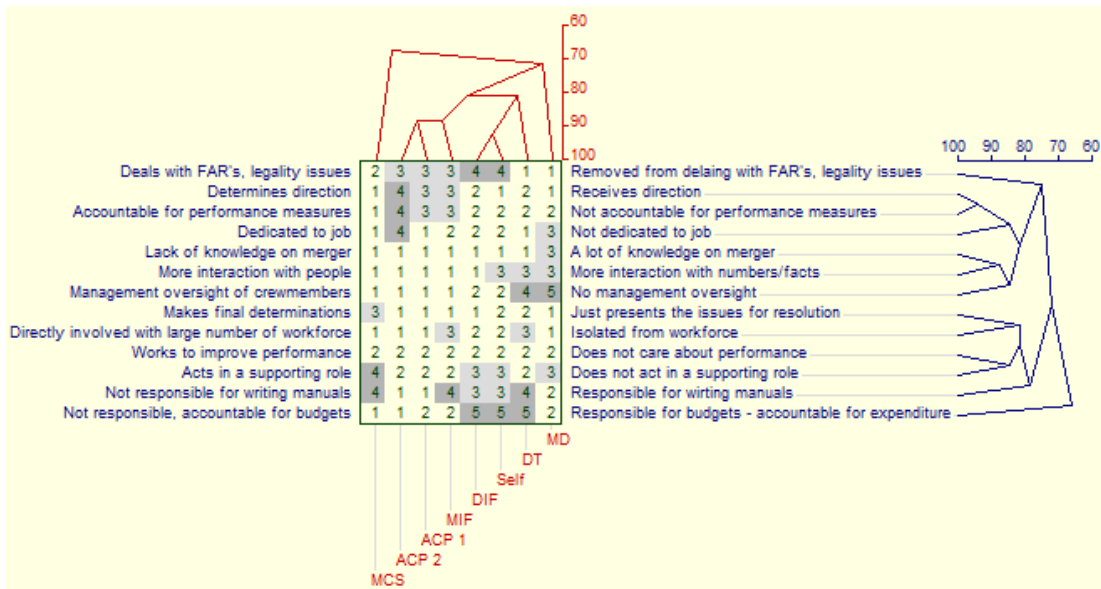


Figure C-10 Cluster Analysed Grid: DO - Allegheny

Table C-10 Cluster Analysis: DO - Allegheny

Cluster analysis procedure for elements: DO

Examine the shape of the element dendrogram	There are two main clusters: DIF & Self versus ACP2, ACP1 & MIF.
Identify construct similarities and differences	DIF & Self are similarly rated on 10 constructs with no more than one rating point difference between them.
What does this mean?	Each of these clusters of elements adopts similar attitudes and behaviours in how they view and engage with the performance measurement and review system, i.e. each element within each cluster tends to act in a similar way
Find the highest % similarity score	DIF & Self show the highest % similarity score at 92%. ACP2, ACP1 & MIF are matched at 88%.
Examine the remaining scores	The lowest match amongst the whole group is 67% which is ACP2 & MCS

B.6 MCS (Manager of Crew Scheduling)

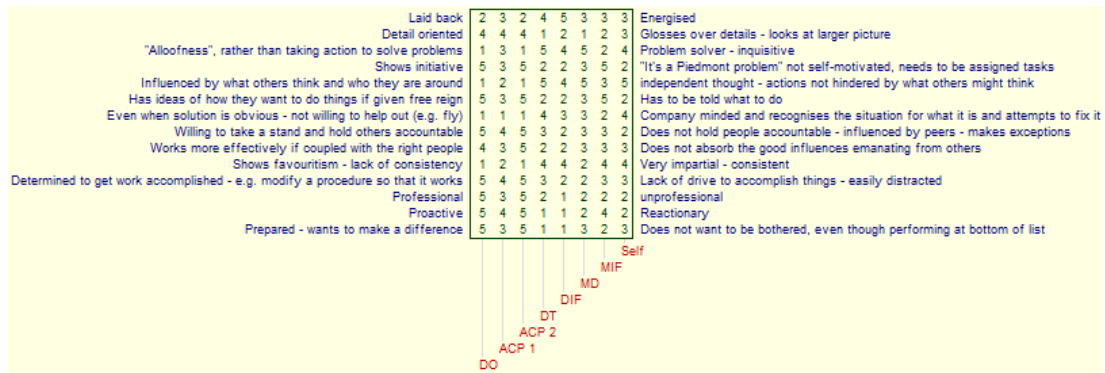


Figure C-11 Repertory Grid: MCS - Allegheny

B.6.1 Process Analysis

Topic

[Name] understood the topic and was pleased that some intense scrutiny of the performance management process would take place.

Elements

The list of elements was considered appropriate and acceptable because it incorporated all of the managers in the Flight Operations department who are involved with performance management.

Constructs

The qualifying phrase was received well and served as a useful reminder during elicitation to ensure responses remained focused on performance management.

Ratings

The rating scale was straightforward for MCS and she was able to rate everyone quite easily.

General

[Name] initially had difficulty grasping the concept of the grid and how to produce constructs after being offered the triad of elements. After some trial

and error she was able to get into a rhythm and begin relating to the topic. MCS has represented her view of performance management in light of the difficulties she faces as the manager of Crew Scheduling and has focused on the crewmembers as the primary source of poor performance. Consequently, she looks at the pilot managers rather negatively and does not see them as doing anything constructive to ensure that their pilots are being held to task and required to perform to an acceptable standard.

B.6.2 Eyeball Analysis

The MCS represented the topic well and provided insightful constructs. She However she was quite unflattering about the DO and ACP's and seems to have very little respect for pilot management, seeing them as no engaged, reactionary and not able or willing to solve problems.

She seems to like DT and DIF and perhaps looks up to DIF. Both are female.

What MCS's grid says about the elements and constructs:

DO Is seen as laid back and perhaps disinterested. He tends to gloss over the details and looks at the larger picture, acts aloof and does not take action to solve problems. He does not show any initiative and pushes problems off as "a Piedmont problem". He is not self motivated, but is very influenced by what others think and has to be told what to do! Even when the solution is obvious he is not willing to help out, does not take a stand and does not hold people accountable. He does not absorb the good influences emanating from others, shows favouritism and lacks consistency. He also lacks the drive to accomplish things and is easily distracted. He seems very unprofessional, always reactionary rather than proactive, and does not want to be bothered, even though the airline is performing "at the bottom of the list". MCS did not give him a single central rating. She was very emphatic in the way she portrayed DO and seems to consider him as somewhat worthless when it comes to the topic in question. He seems to be an obstacle that must be overcome and perhaps a contributor to the problem rather than taking steps to find solutions. He has the authority and position to direct others to focus on improvement initiatives, but decides not to. Has become very complacent and is just trying to get by with minimum

commitment or involvement. The crisis within the company has affected him greatly.

- ACP 1 Tends to gloss over the details and is influenced by what others think. Even if the solution is obvious he is not willing to help out, does not hold people accountable, and shows favouritism. He lacks drive, and is reactionary.
- ACP 2 Very much like DO and ACP 1 who are all pilot managers. He is viewed as also glossing over the details, is laid back, acts aloof, and does not take action to solve problems – “it’s a Piedmont problem”. He is very much influenced by others, has to be told what to do and will not use his own initiative for fear of working against his peers. He is not willing to help out, does not hold his pilots accountable, does not adopt any of the good influences that others may, and he lacks consistency. He shows favouritism to some crewmembers, lacks drive, is very unprofessional, reactionary and does not want to be bothered.
- DT In contrast DT is seen as energised and detail oriented, with a very high tendency to be a problem solver. He shows initiative, thinks independently and is not encumbered by what others think. He has ideas of how to do things, is company-minded, works well if coupled with the right people, is impartial and consistent. He acts professionally and has a proactive approach. He is prepared to, and wants to, make a difference.
- DIF: Similar to DT she is highly energised, and detail oriented. She is seen as a problem solver, shows initiative, thinks independently and has ideas on how to make improvements. She is willing to take a stand and hold others accountable. She works effectively if coupled with the right people, is impartial and consistent. She is determined to get work completed and make modifications as needed. She is very professional, proactive, and wants to make a difference.
- MD Is very detail oriented and a problem solver. He is an independent thinker, but tends to show favouritism and lacks consistency. He is determined to get work done, and acts professionally, but can be reactionary rather than trying to anticipate problems before they arise.
- MIF Is detail oriented, has an aloofness, rather than seeking to solve problems and is a firm believer that “it is a Piedmont problem”. She has to be told

what to do, and is not willing to help even when the solution is obvious. She tends to be impartial and consistent, is professional, reactionary, but wants to make a difference. Some contradictions here perhaps?

Self: MCS views herself as a problem solver who shows initiative and is a very independent thinker. She is company-minded, recognises the situation for what it is, and wants to fix it. She is willing to make a stand, is impartial and consistent, and professional and proactive

B.6.3 Construct Characterisation

Table C-11 Construct Characterisation: MCS - Allegheny

Con#	Emergent	Implicit	Type of Construct
6.1	Laid back	Energised	Behavioural
6.2	Detail oriented	Glosses over details - looks at larger picture	Core
6.3	Alloofness, rather than taking action to solve problems	Problem solver - inquisitive	Core
6.4	Shows initiative	It's a Piedmont problem not self-motivated, needs to be assigned tasks	Core
6.5	Has ideas of how they want to do things if given free reign	Has to be told what to do	Core
6.6	Influenced by what others think and who they are around	Independent thought - actions not hindered by what others might think	Core
6.7	Even when solution is obvious - not willing to help out (e.g. fly)	Company minded and recognises the situation for what it is and attempts to fix it	Core
6.8	Willing to take a stand and hold others accountable	Does not hold people accountable - influenced by peers - makes exceptions	Evaluative
6.9	Works more effectively if coupled with the right people	Does not absorb the good influences emanating from others	Attributional
6.10	Shows favouritism - lack of consistency	Very impartial - consistent	Propositional
6.11	Determined to get work accomplished - e.g. modify a procedure so that it works	Lack of drive to accomplish things - easily distracted	Behavioural
6.12	Professional	Unprofessional	Propositional
6.13	Proactive - prepared	Reactionary	Propositional
6.14	Prepared - wants to make a difference	Does not want to be bothered, even though performing at bottom of list - unprepared	Core

B.6.4 Cluster Analysis

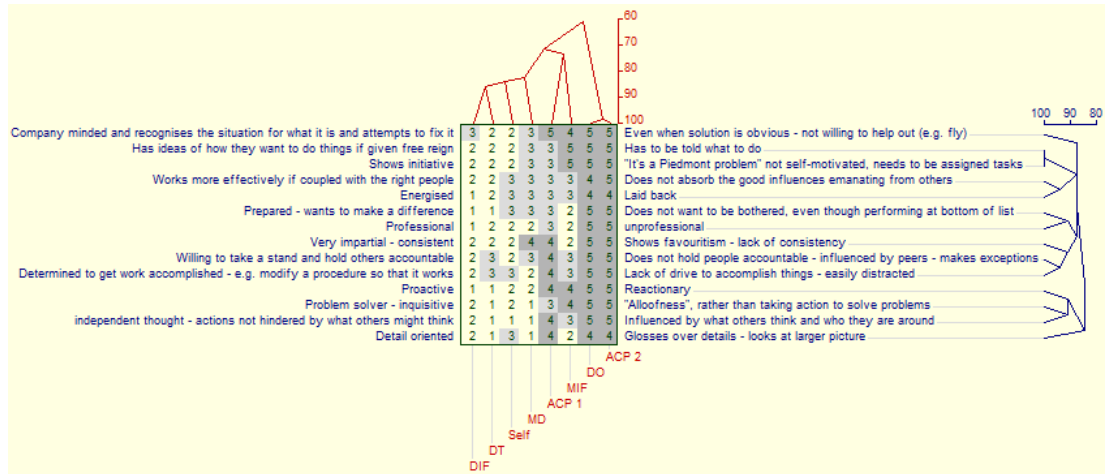


Figure C-12 Cluster Analysed Grid: MCS - Allegheny

Table C-12 Cluster Analysis: MCS - Allegheny

Cluster analysis procedure for elements: MCS

Examine the shape of the element dendrogram	There are two main clusters: DO & ACP2 versus DIF, DT, Self & MD.
Identify construct similarities and differences	DO & ACP2 are similarly rated on 13 constructs with no more than one rating point difference between them.
What does this mean?	Each of these clusters of elements adopts similar attitudes and behaviours in how they view and engage with the performance measurement and review system, i.e. each element within each cluster tends to act in a similar way
Find the highest % similarity score	DO & ACP2 show the highest % similarity score at 92%. ACP2, ACP1 & MIF are matched at 81%.
Examine the remaining scores	The lowest match amongst the whole group is 58% which is DO & MIF

B.7 MD (Manager of Dispatch)

Fails to accept responsibility for pilots' actions - does not hold crews accountable	3	4	3	4	5	4	4	4	Accepts responsibility - holds crewmembers accountable
Wants to stay and hopes for a place in new company	3	2	2	2	2	4	2	3	Ready to move on
Deals with crewmembers - views things from the "line" side	1	3	3	3	4	3	4		Views from administrative, ops management side
If given opportunity would do things differently	5	3	3	2	2	2	2	2	Would do things the same
Believes in "Us and Them" division between Flight Dept and SysCon	2	3	4	3	4	3	4	3	Does not believe in "Us and Them" division
Takes pride in doing job as best as they can	3	2	3	2	2	2	2	2	Just goes through the motions
Handles themselves very well when dealing with people	3	2	3	3	2	2	3	3	Handles themselves poorly
Accepts direct accountability - has to provide answers	4	3	4	2	1	1	3	1	Does not accept accountability - not required to provide answers
Looking for someone else to blame	2	4	2	2	4	4	3	4	Accepts blame
Believes that Flight Dept is disorganised	3	3	2	3	2	2	3	2	Believes that Flight Dept. is organised
Does not believe there is a future for them at the airline	3	3	4	3	4	2	3	2	Believes there is a future

									Self
									MIF
									MCS
									DIF
									DT
									ACP 2
									ACP 1
									DO

Figure C-13 Repertory Grid: MD - Allegheny

B.7.1 Process Analysis

Topic

Elements

The list of elements was considered appropriate and acceptable because it included all of the managers in the Flight Operations department who are involved with performance management.

Constructs

The qualifying phrase was received well and accepted as a useful way to view his colleagues. It helped in the formation of the constructs and was repeated each time that a triad was offered. The constructs focused largely on the behaviours exhibited by his colleagues in their approach to performance management.

Ratings

The rating system was sensible to the interviewee and he was able to easily rate everyone for each construct. There was a tendency not to stray too far from the central rating with only a few of the elements receiving a '1' or a '5' and then on only three constructs.

General

MD was at ease with the process and began to develop some interesting insights as the interview progressed which allowed him to think more deeply about how the team works together and how they each view their role in the weekly performance review meetings.

B.7.2 Eyeball Analysis

MD has represented the topic well and has tended to focus on the individual behaviours that he has demonstrated by his colleagues. He was able to produce 11 constructs that sum up his view, at this point in time, of how he sees his colleagues and their interaction with the performance management process. It is interesting that he views the pilot management group quite negatively but those that he works closely with in a more positive light. His responses fell into a group of distinguishable categories: responsibility, outlook for the future, perception, commitment, professionalism, accountability, and organisation. It is interesting that MD did not include communication in any of his constructs. (Why? The others have).

What [Name]'s grid says about the elements and constructs:

- DO Has a strong tendency to view things through a pilot's eyes, but if given the opportunity would not change the way he handles performance management. He believes that an "us and them" divide exists between the pilots that he supervises and management. DO does not accept that he is accountable and looks for someone else to blame.
- ACP 1 Tends to accept responsibility, and would like to stay at the company, he takes pride in his job and accepts the blame for delays that are incurred by pilots. Other than that, he is seen as being fairly middle of the road.
- ACP 2 Appears to want to stay with the company. He does not believe that an "us and them" divide exists, which is starkly at odds with how his boss is seen (DO). ACP 2 tends not to accept that he is accountable for delays taken by his pilots and will readily look for someone else to blame. This is more in keeping with how MD views DO and is perhaps because he is seen as following his lead. He believes that the department is disorganised, but is hopeful for a future at the airline.

- DT Accepts responsibility, but is ready to move on. He would do things differently if given the opportunity but just goes through the motions right now. He does accept responsibility for operational issues but does not really accept any blame. This is probably because his direct involvement in the daily operation is limited.
- DIF Fully accepts responsibility and holds crewmembers accountable. She wants to remain and is looking for a future at the company. She would like to be given the opportunity to do things differently. She does not think there is an “us and them” divide and takes pride in her role and how she handles herself. She is seen as being held accountable and accepts blame, She thinks that department is disorganised, but believes there is a future. DIF was only rated a ‘3’ once on all 11 constructs and stands out along with MCS for having that distinction. MD seems to have a very well defined opinion of DIF and clearly thinks highly of her. He knows her well and has a lot of respect for her.
- MCS Accepts responsibility and likes to see people held accountable, but is ready to move on. She views the issues from an administrative perspective and not from the same perspective that a pilot would, however she takes pride in her job and handles herself well. She is seen as most definitely accepting that she is accountable and will accept the blame for delays that are attributable to her area of responsibility. She also believes that the department is disorganised. She does not believe that there is much of a future for the airline.
- MIF Tends to accept responsibility and holds crewmembers accountable. She wants to stay on and has hopes for a place in the new company. She would like to do things differently. She does not think there is an “us and them” divide between crews and management and she takes pride in doing a good job.
- Self: MD sees himself as accepting responsibility and holding people accountable. He views things from an administrative perspective and would like to do things differently if he could. He takes pride in his job and believes that he is held directly accountable for his actions, and therefore accepts the blame for errors. He also believes that the department is disorganised and that there is not a future for the airline. MD sees himself as being very

similar to DO. This is interesting because they both work very closely together and report to the same director.

B.7.3 Construct Characterisation

Table C-13 Construct Characterisation: MD - Allegheny

Con#	Emergent	Implicit	Type of Construct
7.1	Fails to accept responsibility for pilots' actions - does not hold crews accountable	Accepts responsibility - holds crewmembers accountable	Core
7.2	Wants to stay and hopes for a place in new company	Ready to move on	Core
7.3	Deals with crewmembers - views things from the "line" side	Views from administrative, ops management side	Core
7.4	If given opportunity would do things differently	Would do things the same	Propositional
7.5	Believes in "Us and Them" division between Flight Dept and SysCon	Does not believe in "Us and Them" division	Affective
7.6	Takes pride in doing job as best as they can	Just goes through the motions	Behavioural
7.7	Handles themselves very well when dealing with people	Handles themselves poorly	Attributional
7.8	Accepts direct accountability - has to provide answers	Does not accept accountability - not required to provide answers	Core
7.9	Looking for someone else to blame	Accepts blame	Core
7.10	Believes that Flight Dept is disorganised	Believes that Flight Dept. is organised	Core
7.11	Does not believe there is a future for them at the airline	Believes there is a future	Core

B.7.4 Cluster Analysis

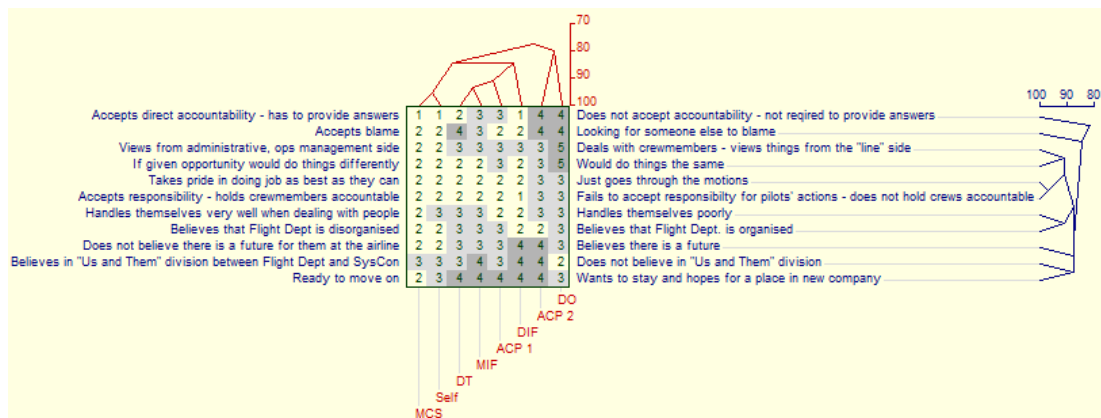


Figure C-14 Cluster Analysed Grid: MD – Allegheny

Table C-14 Cluster Analysis: MD - Allegheny

Cluster analysis procedure for elements: MD

Examine the shape of the element dendrogram	There are two main clusters: MCS & Self versus DT, MIF & ACP1
Identify construct similarities and differences	MCS & Self are similarly rated on 9 constructs with no more than one rating point difference between them.
What does this mean?	Each of these clusters of elements adopts similar attitudes and behaviours in how they view and engage with the performance measurement and review system, i.e. each element within each cluster tends to act in a similar way
Find the highest % similarity score	MCS & Self show the highest % similarity score at 95%. DT, MIF & ACP1 are matched at 91%.
Examine the remaining scores	The lowest match amongst the whole group is 77% which is DIF & ACP2

Appendix C REPERTORY GRIDS AT PINNACLE AIRLINES - CYCLE 3

C.1 MD (Manager, Dispatch)

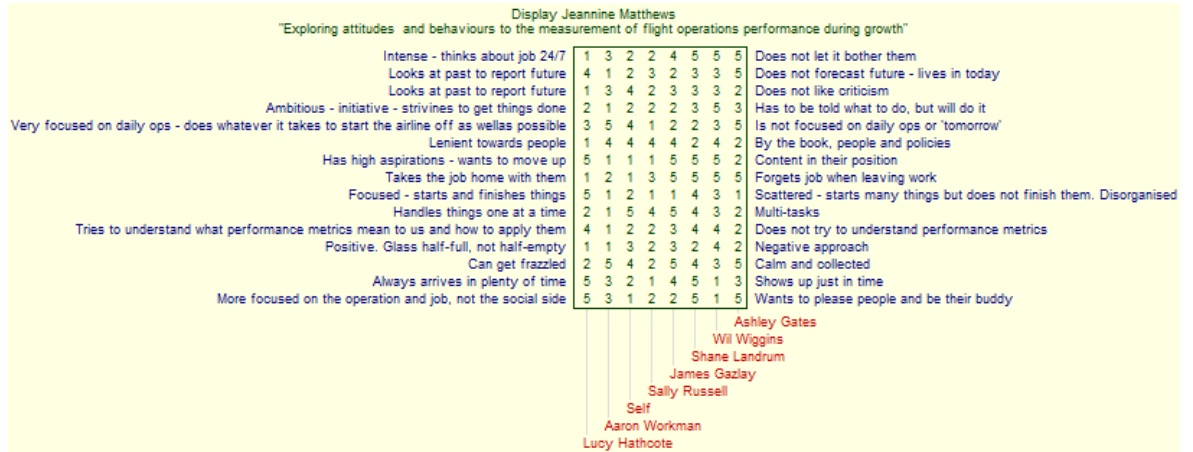


Figure D-1 Repertory Grid: MD - Pinnacle

C.1.1 Process Analysis

Topic

MD approached the interview positively and was pleased to be involved in my research. She was relatively inexperienced in her management role and she took this as a learning opportunity. She was already quite well-versed on how Pinnacle measured flight operations performance and was keen to offer her thoughts on the matter. She was interested in the topic and curious to know what the repertory grid process was all about, and why I was interested in everyone’s behaviours and attitudes. She had not previously considered the question of how people react to imposed measures. MD had been with Pinnacle before the growth into regional jets occurred and so she had a good perspective on the effects of change. It took her a few minutes to settle into the elicitation process and she was quite thoughtful when considering each triad, but once comfortable she was willing to develop constructs more freely and they began to flow with little prodding. She would sometimes show a lack of self-confidence and look to me for approval when offering up a construct. I countered with the statement that there were no right or wrong answers and that only she could represent her thoughts and observations.

Elements

MD considered the list of elements appropriate and acceptable because they were all managers in the SOC and colleagues that she works with, all of whom have direct involvement in how well the daily flight schedule operates.

Constructs

Once MD settled into the elicitation process it became eye-opening for her to compare her colleagues and then rate where they fell on each construct. It actually provided her with some enlightenment on how she construed their actions and behaviour and perhaps brought into sharper focus her thoughts on each of them. The qualifying phrase was received well, but I did have to remind her a few times to consider the triads in the context of how people behaved towards operations performance. Her constructs focused on the stress and intensity of the job and the side conversations showed that she took her role very seriously and understood the ramifications to the passengers when mistakes are made. Her discussions also reflected an energy that seemed to be evident in the SOC. MD seemed to know herself quite well and did not have any hesitation on rating herself on the far end of a construct if she thought it was closely related to her attitude and behaviour.

Ratings

The rating procedure was straightforward and easy for MD to discern. She tried to avoid a central tendency unless appropriate and gave each rating careful consideration. She was able to quickly, and assuredly, establish a position on each construct for everyone.

General

MD is not a natural conversationalist and so the interview remained on task without her deviating away from the main purpose. She took the whole process very seriously and was intent on doing a 'good job'. Overall, it was a pleasant and interesting interview, which provided me with some excellent insight. MD was the first person I interviewed at Pinnacle and it left an impression on me about how energised people were when they have an influential impact on the outcome of each flight.

C.1.2 Eyeball Analysis

The grid represents MD's views on the observed attitudes and behaviours of her colleagues at Pinnacle during a time when the airline was enjoying a sustained period of growth in its fleet size and scale of operation. It is clear that she differentiated the SOC Duty Managers (SOCDM2, SOCDM3 and SOCDM4) from herself, seeing them as having a different role, and approach. She rated the elements carefully and was able to avoid simply settling for a central tendency. She knew her own mind and was not afraid to rate people on the far ends of constructs.

What the grid says about the elements:

- MCS: Takes her job very seriously and adopts a 24/7 approach, but focuses on today's operation rather than anticipating the future. She is conscientious and works hard to get things done. She welcomes feedback and critique from others so that she can try to improve. She tries to please everybody and be their friend and is consequently very lenient with people, especially her employees, which can lead to her not being taken seriously. She is very content in her current position. She will invariably have to take work home with her because she is disorganised, arrives late for meetings, starts many tasks without finishing prior tasks, and is unable to effectively multi-task, resulting in a lot of time spent on one item at a time. She displays a very positive approach to work and life but can become overwhelmed and 'frazzled' quite quickly. MCS has the distinction of being very different from her colleagues not sharing the same rating on any construct, except P2.15. This is significant because in MD's view she stands apart from everyone else.
- MPE: Is seen as very ambitious, positive, forward thinking, and has high aspirations for himself and his work. He is very focused, handles tasks diligently and tries to relate them to improving operations performance. He is very calm and organised in his approach and it is clear that he is highly respected by MD.
- SOCDM1: Takes her job very seriously, welcomes feedback, and is very focused on the daily operation seeing it as her responsibility to ensure that the airline performs well. She has been able to relate performance metrics to how she approaches her job. She has high aspirations for herself and adopts a very

positive and confident approach. She conducts her job by the book and puts aside friendships with colleagues in order to be as effective as possible.

SOC DM2: Is seen as relatively laid back but with the ability to use his initiative and effectively run the daily operation. He multi-tasks very well and remains calm and collected when under stressed. He is very content in his current position with no aspiration to rise any higher in the organisation or take on a different role. He is very focused while at work but is happy to leave the job behind when his shift is over, not dwelling on any operations issues after work.

SOC DM3: Is very laid back, has a positive demeanour and does not let the job get under his skin. Like SOC DM2 he is very content in his position, has no particular aspirations and leaves the job at the door when his shift is over. When he is under pressure he can remain calm and collected. He is focused on the daily operation, but does not readily see the impact and effect on performance metrics that his actions and those he is managing will have. He will manage multiple tasks, but has a somewhat disorganised approach. He goes out of his way to be approachable and he genuinely wants to please everyone.

SOC DM4: Is very laid back, not particularly focused and has to be told what to do rather than recognising it himself or using his own initiative. He adopts a more negative approach and does not try to relate his actions to performance metrics. Similar to SOC DM2 and SOC DM3 he is also very content in his position and is happy to leave any worries about the job at the door when he leaves for the day. He is task oriented and focused when he is told what to do and approaches it in a militaristic manner, largely resulting from his experiences in the Army. It is not important to him to be well-liked or popular, but he does expect people to do as he says.

SOM: Is seen as very laid back and focused on today's operation only, rather than anticipating the future. He is receptive to feedback and criticism, shows ambition and strong initiative, but can be too lenient with people. He will worry about his job after work and is very concerned about finishing any job that belongs to him. He prefers to handle only one or two tasks at a time but he knows how his actions effect performance and he has a good understanding of the performance measurement and review system. He has

a positive outlook, tries to please everyone and be their friend and always remains calm and collected

Self: MD sees herself as fairly intense as it relates to the job, and very focused on her responsibilities. She has high aspirations for herself and is ambitious. She takes the job seriously and is able to look beyond today's operation and consider the impact on future events. She will worry a great deal about the job after work. She does not like criticism from others and is strict about doing things by the book, seeing this as the only acceptable approach. She does not like to be sociable at work and it is unimportant to her whether she is liked or not. MD's ratings for herself were positioned toward one side or another on each construct, some of them being '1's' or '5's'. Only one was a '3'. This suggests that she represented her construction system well and was able to articulate constructs that meant a lot to her personally.

C.1.3 Construct Characterisation

Table D-1 Construct Characterisation: MD - Pinnacle

Construct Characterisation: Jeannine Matthews		Type of Construct	
	Emergent	Implicit	
P2.1	Intense - thinks about job 24/7 - wakes up at night	Does not let it bother you	Core
P2.2	Reporting: looking at past to forecast future	Not forecasting the future, living in today	Unremarkable
P2.3	Receptive to people's comments and critiques	Does not like criticism	Core
P2.4	Ambitious - initiative - striving to get things done	Has to be told what to do, but will get it done	Core
P2.5	Direct result: put airline to bed. Very focused on daily ops. Doing whatever it takes to start the airline off as well as possible	Not being focused on "tomorrow" with the operation	Propositional
P2.6	Lenient towards people	By the book, people and policies	Affective
P2.7	Higher aspirations	Content in their position	Attributional
P2.8	Takes job home with them	Forgets job when leaving door	Evaluative
P2.9	Focused - starts and finishes	Scattered - starts many things but does not finish. Somewhat disorganised	Behavioural
P2.10	Handles things one at a time	Multi-tasks	Behavioural
P2.11	Tries to understand what performance metrics mean to us and how to apply them	Does not go out of their way to understand performance metrics	Core
P2.12	Positive. Tries to approach things that way. Glass half-full, not half-empty	Negative - negative approach, not destructive	Behavioural
P2.13	Can get frazzled	Calm and collected	Behavioural
P2.14	Always arrives in plenty of time	Shows up just in time (meetings)	Behavioural
P2.15	More focused on operation and job, not the social part of it and being someone's friend. Not important for people to like us	Wanting to please people and be their buddy	Core

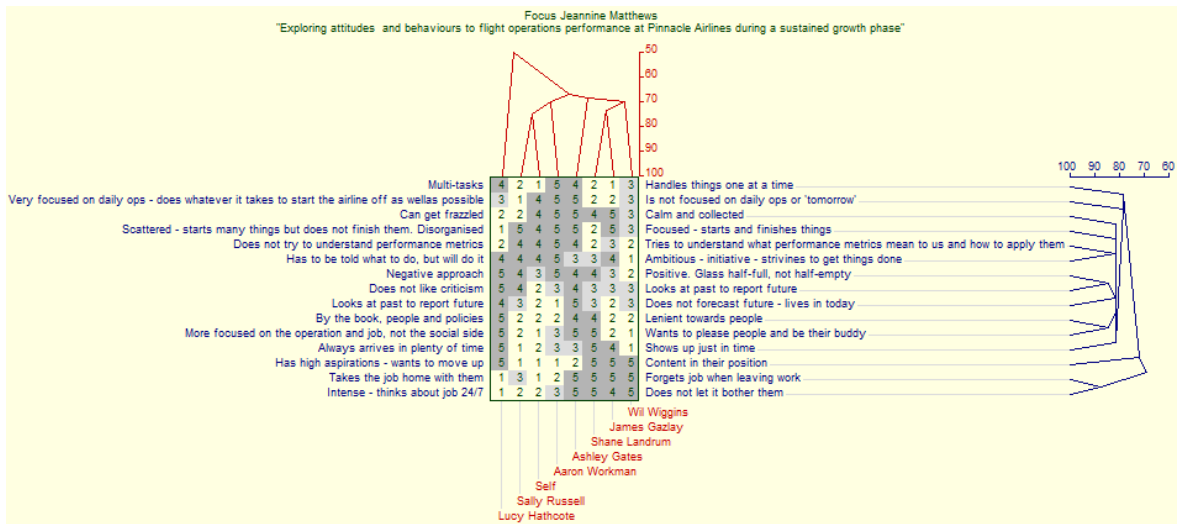


Figure D-2 Cluster Analysed Grid: MD - Pinnacle

C.2 SOM (SOC Operations Manager)

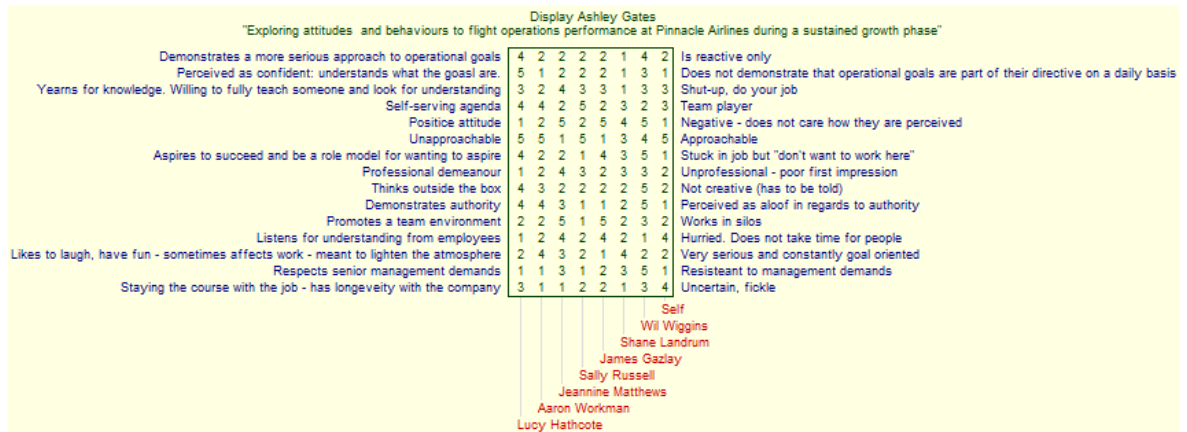


Figure D-3 Repertory Grid: SOM - Pinnacle

C.2.1 Process Analysis

Topic

SOM was pleased to be part of the research and he consequently approached the interview in a positive manner. SOM was on secondment to the SOC for several months having previously worked here as a dispatcher and then Manager of Dispatch for several years. He was experienced in his role and had a good knowledge of how to run the daily flight operation. The repertory grid process was intriguing to him and was interested to learn more. SOM was able to understand the construct elicitation process quickly and was thoughtful when considering each triad, which yielded a good overall presentation of his thoughts and construction system. During the interview we also engaged in conversations related to each construct and the general operating environment.

Elements

SOM considered the list of elements appropriate and acceptable because they were all managers in the SOC and colleagues that he has worked with for a long time. All have a direct involvement in how well the daily flight schedule operates, and also the performance and review process.

Constructs

The elicitation process of providing a triad of elements was received very well and SOM enjoyed sharing his thoughts. As with others it provided him with an

insight that he had previously not fully considered when comparing the attitudes and behaviours of his colleagues. His constructs were focused on the importance of the job that people do in the SOC and remained on the topic of attitudes and behaviours.

Ratings

The rating procedure was straightforward and easy for SOM to discern. He was able to rate everyone carefully on each construct and was not lost for where to position anyone.

General

SOM was very involved in the daily operation and took his role seriously. He was therefore eager to be a part of this research and tried hard to be as thoughtful, insightful and constructive as possible, remaining fully engaged throughout the interview. It was an enjoyable interview for both of us and provided some excellent insight.

C.2.2 Eyeball Analysis

The grid represents SOM's views on the observed attitudes and behaviours of his colleagues at Pinnacle during a time when the airline was enjoying a sustained period of growth in its fleet size and scale of operation. It was clear that he was excited to be a part of this growth. He rated the elements carefully and was able to avoid simply settling for a central tendency.

What the grid says about the elements:

MCS: Has a reactive approach to achieving operational goals, and does not seem to know what the goals are or how to achieve them. She is very respectful of senior management demands and will conform to what she is asked to do. She is viewed as professional, a team player with a very positive attitude, and very approachable. She will listen to her employees, try to do well by them and foster a fun environment. But she is not creative and not able to convey her authority to others very well. SOM has a high regard for MCS as a person but seems quite a few shortcomings in her ability and approach to work.

- MPE: Is seen as having a serious, professional and confident approach and fully understands the performance goals that need to be achieved. This approach may have lead to him being considered aloof by some. However, SOM also believes that he is a team player, with a positive outlook and very approachable to his colleagues. He will listen for understanding from employees when tasking them with a assignment. He likes to laugh and have fun sometimes but is very respectful of senior management.
- MD: Has a serious and authoritative approach to operational goals. Is perceived as confident, but will not take the time to explain things to her employees. She is unapproachable, has a self-serving agenda and does not care how she is perceived by others. She can be unprofessional and gives a poor first impression. She will think outside of the box on operation problems but will not work collaboratively with others. She is hurried and does not make time for her employees. She will stay with the company. SOM does not seem to have much respect for MD, seeing her as an impediment at times.
- SOC DM1 Is seen as having a serious approach to achieving operational goals. She is very much a team player who has a positive attitude and will not hesitate to exert her authority when needed. However, she will also take the time to work closely with her people and ensure that they understand what is needed. Consequently, people do not hesitate to approach her. She aspires to succeed, will remain with the company and demonstrates a great deal of respect for senior management.
- SOC DM2: Also has a serious and professional approach to achieving operational goals and is confident in his work, himself, and in exerting authority. However, he can have a self-serving agenda and does not care about how he is perceived by others. People consider him unapproachable and he tends to work independently without taking time for other people. However, he does like to lighten the mood and have fun from time to time.
- SOC DM3: Has a very serious but confident approach to work and is seen as very knowledgeable and promotes a team environment. He demonstrates authority, and is willing to share this with employees to ensure that they understand. He is creative with operational problems and goal oriented. Will stay with the company for a long time.

SOC4DM: Is seen as reactive to operational problems, rather than being able to anticipate them as others would, and does not take his role very seriously at times. Prefers to have laugh and have fun when he really should be setting a better example. He is not creative and is not able to effectively use his authority – people tend to ignore him (bark worse than bite). Tends to have a self-serving agenda and does not care how others see him, but is approachable and will listen to his co-workers to ensure they understand what is needed. He is stuck in his job and gives off the impression that he does not want to work here.

Self: SOM sees himself as taking his job seriously, being very confident and professional in what he needs to do, and understands how it relates to operations performance. He has a positive attitude and is very approachable to his colleagues. He truly wants to succeed and be a role model for others. He promotes team work but sometimes does not take the time needed to fully explain things to his employees or colleagues, perhaps thinking that they should intuitively know what he means or wants. He is very respectful of senior management, and knows how and when to use his authority. He can be fickle or uncertain at times, while he decides on a course of action regarding his career.

C.2.3 Construct Characterisation

Table D-2 Construct Characterisation: SOM - Pinnacle

Construct Characterisation: Ashley Gates		Type of Construct	
	Emergent	Implicit	
P1.1	More serious approach to achieving operational goals	Reactive	Behavioural
P1.2	Perceived as confident: understands what the goals are. Confidence in understanding what we need to do today	Does not demonstrate that operational goals are part of their directive on a daily basis	Core
P1.3	Yearning for knowledge. Willingness to fully teach someone and look for understanding	Shut-up, do your job	Core
P1.4	Self-serving agenda	Team player	Evaluative
P1.5	Positive attitude / the desire to have a positive attitude	Do not care how they are perceived	Core
P1.6	Unapproachable	Approachable	Core
P1.7	Aspiring to succeed and being a role model for wanting to aspire	Stuck in job but "don't want to work here"	Behavioural
P1.8	Professional (demeanor) upon first impression	Unprofessional - poor first impression	Propositional
P1.9	operationally thinking outside the box	operationally not creative (has to be told)	Core
P1.10	Demonstrating authority	Perceived as aloof in regards to authority	Core
P1.11	Promotes a team environment	Works in silos	Core
P1.12	Listening for understanding from employees	Hurried. Does not take time for people	Evaluative
P1.13	Likes to laugh and have fun and sometimes affects work - meant to lighten the atmosphere	Very serious and constantly goal oriented	Behavioural
P1.14	Respect for senior management demands	Resistant to management demands	Core
P1.15	Staying the course with the job. Longevity with the company	Uncertainty, fickle	Attributional

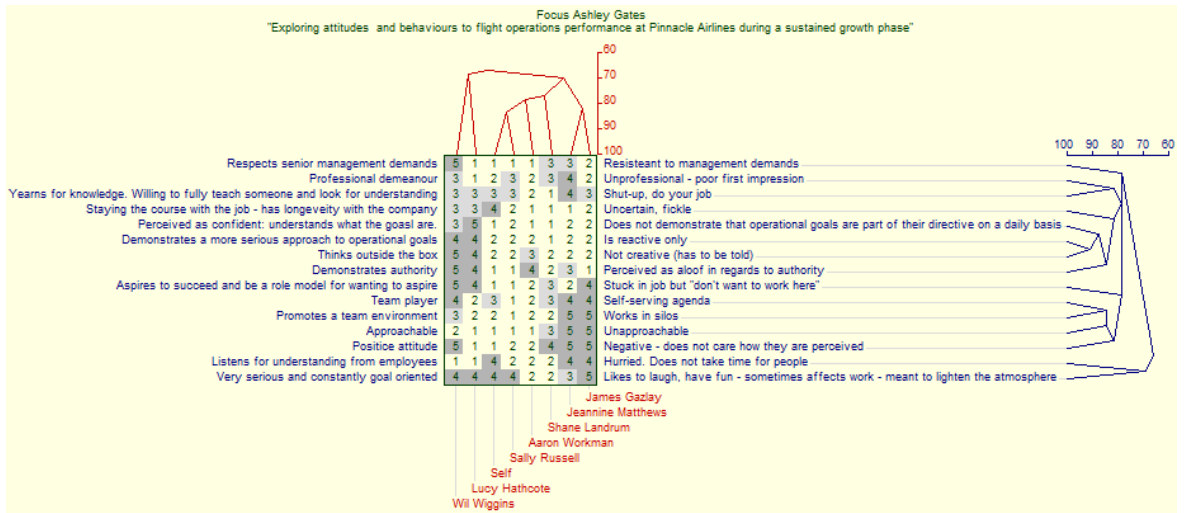


Figure D-4 Cluster Analysed Grid: SOM - Pinnacle

C.3 MCS (Manager, Crew Scheduling)

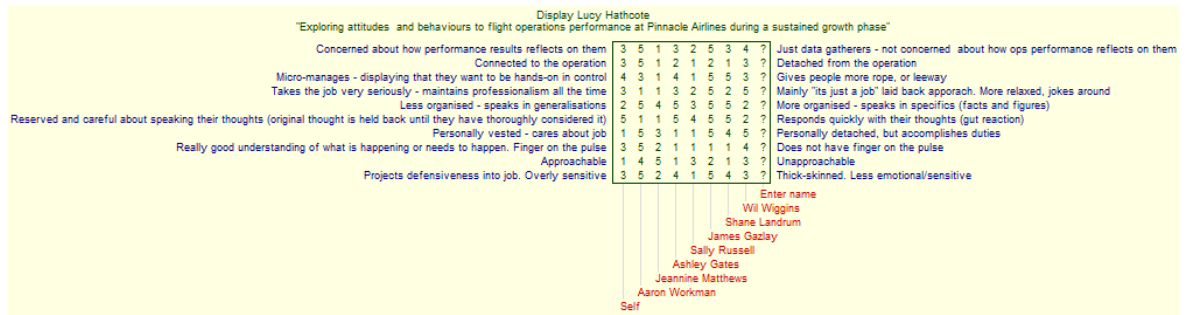


Figure D-5 Repertory Grid: MCS - Pinnacle

C.3.1 Process Analysis

Topic

MCS was pleased to be part of the research and she approached the interview in a positive manner. The repertory grid process was interesting to her and she picked-up the process quite quickly. During the interview we also engaged in conversations related to each construct and the general work environment.

Elements

MCS considered the list of elements appropriate and acceptable because they were all managers in the SOC and colleagues that she has worked with for a long time. All have direct involvement in how the daily flight schedule operates, and also the performance and review process.

Constructs

The elicitation process of providing a triad of elements was received very well and MCS did not have much difficulty in sharing her thoughts. As with the others it provided her with an insight that she had previously not fully considered when comparing the attitudes and behaviours of her colleagues. Her constructs were well thought out and after providing 10 of them she declared that it fully represented her thoughts at this point in time.

Ratings

The rating procedure was straightforward and easy for MCS to discern. She did not have difficulty in rating everyone.

General

MCS is very involved in the daily operation and takes her role seriously. She was flattered to be a part of this research and made a concerted effort to do her best. She remained fully engaged throughout the interview. It was an enjoyable for both of us, and provided good insight.

C.3.2 Eyeball Analysis

The grid represents MCS's views on the observed attitudes and behaviours of her colleagues at Pinnacle during a time when the airline was enjoying a sustained period of growth in its fleet size and scale of operation.

What the grid says about the elements:

- Self:** MCS sees herself as people person who is prepared to provide plenty of leeway to her employees. She recognises that she is not very organised and accepts that it is one of her shortcomings. She also has a propensity to be spontaneous with voicing her thoughts before thinking them through, which can lead to some unusual conversations. However, she is personally vested in her job and takes it seriously. She does feel that she has her finger on the pulse but equally she is not too distant from it. She is considered to be very approachable by her employees and genuinely tries to give them her time and consideration.
- MPE:** MCS sees MPE as a data gatherer who does not really have an impact on the daily operation. He takes his job very seriously, is very organised and maintains professionalism. He is reserved and careful about speaking his thoughts. In fact you more often than not have to pry them out of him. He does not have his finger on the pulse because of his detached connection to the operation, but he does know how we perform. His detachment from the day to day operation also gives the impression of being unapproachable. Likewise he is seen as thick-skinned and not emotional or sensitive to operations performance. He simply reports it and gives insight to trends.
- MD:** Is seen as being very concerned about how performance results reflect on her and her department. She does not want to look bad. She is very connected to the operation and tends to micro-manage people to ensure that things are done her way. She takes her job very seriously and is

organised in her approach and method of conducting work. She focuses on facts and figures and is defensive if they show any shortcomings in her department. She is very reserved about speaking her thoughts, especially anything on a personal level. She will express thoughts on operational issues but they tend to be defensive of her department or accusatory of others. She has her finger on the pulse and knows how to run the operation well. Her aloofness makes her unapproachable and unfriendly, and she is therefore, perceived to be thick-skinned and not at all sensitive to others.

SOM: SOM is closely connected to the operation and likes to allow his employees a high degree of freedom in doing their jobs. He is organised and is able to speak in specifics when discussing operations performance. He also responds quickly with his thoughts on questions about performance. He cares a great deal about his job and will do his best to ensure that the operation runs well. He has a very good understanding of how the daily operation works and what we need to do to perform. Consequently, he is able to identify problems quickly and easily. He is very approachable and not defensive about his actions.

SOC DM1 Is concerned about how performance results reflect on her and will strive to do the best she can. She is very closely connected to the operation and will micro-manager her colleagues and employees to achieve the right results. She takes her job very seriously and is personally vested in the company with a high degree of loyalty. She instinctively knows what is happening in the operation and how to respond to problems when they arise. She can be defensive when criticisms are levelled her way regarding operational decisions.

SOC DM2: In contrast to SOC DM1, SOC DM2 (also a Duty Manager) is not concerned about how operations performance reflects on him. He adopts a laid back approach and likes to have fun and joke around. He is closely connected to the operation but likes to give his employees free reign to make their own decisions. He is very organised and will respond quickly with his thoughts on how things should be done. Although he is personally detached he accomplishes his duties very well because he has a very good understanding of what is happening in the operation and how to deal with problems. This has been learned through years of experience. He is regarded as one of the most effective duty managers. He is approachable

but has a thick skin when it comes to criticism and is not always sensitive to the needs of other employees.

SOC DM3: Is very closely connected to the operation and actively encourages his employees to make their own decisions. He takes his job very seriously and is professional. He is very organised and deals in facts, however he has a tendency to respond quickly with his thoughts without thinking through why performance is the way it is. He is personally detached from the operation, and sees problems as operational issues not caused by him. He has a very good understanding of what needs to happen with the operation on a daily basis but is unable to explain trends or spikes in performance. His focus is one day at a time. SOC DM3 is very approachable and respected by his colleagues.

SOC DM4: Is seen as not worried about how operations performance reflects on him and he adopts a laid back, relaxed and unconcerned approach. He does not offer much original thought and remains detached from the operation and performance results.

C.3.3 Construct Characterisation

Table D-3 Construct Characterisation: MCS - Pinnacle

Construct Characterisation: Lucy Hathcote

	Emergent	Implicit	Type of Construct
P3.1	Concerned about how performance results reflects on them	Just data gatherers - not concerned about how ops performance reflects on them	Core
P3.2	Connected to the operation	Detached from the operation	Core
P3.3	Micro-manages - displaying that they want to be hands-on in control	Gives people more rope, or leeway	Core
P3.4	Takes the job very seriously - maintains professionalism all the time	Mainly "its just a job" laid back approach. More relaxed, jokes around	Evaluative
P3.5	Less organised - speaks in generalisations	More organised - speaks in specifics (facts and figures)	Evaluative
P3.6	Reserved and careful about speaking their thoughts (original thought is held back until they have thoroughly considered it)	Responds quickly with their thoughts (gut reaction)	Core
P3.7	Personally vested - cares about job	Personally detached, but accomplishes duties	Core
P3.8	Really good understanding of what is happening or needs to happen. Finger on the pulse	Does not have finger on the pulse	Evaluative
P3.9	Approachable	Unapproachable	Behavioural
P3.10	Projects defensiveness into job. Overly sensitive	Thick-skinned. Less emotional/sensitive	Behavioural

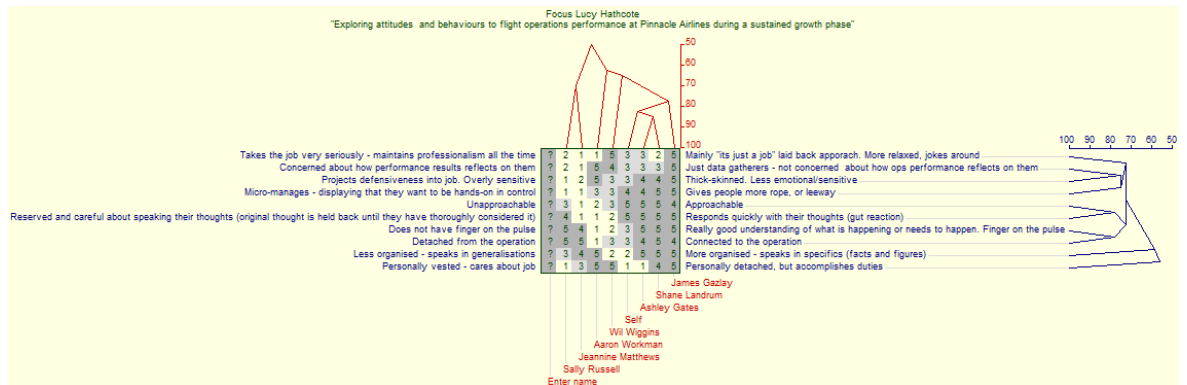


Figure D-6 Cluster Analysed Grid: MCS - Pinnacle

C.4 MSOC (Manager, SOC)

"Exploring attitudes and behaviours to flight operations performance at Pinnacle Airlines during a sustained growth phase"		Display Jorge Quizada	
Similarity	Focused on numbers - pays close attention to performance against metrics	1	3
	Proactive	5	1
Practical - will look at several options before committing to achieve performance goals		5	1
Focused - aware that we have goals and objectives and strives to achieve them		1	2
Always adheres to practices to improve operational performance		5	1
Aware - knows what goals are, knows what needs to be done		5	1
Reactive - does not foresee problems that may be coming, but does respond when they arrive		1	5
Concerned about operations performance - striving for better		5	1
Has creative ways to improve performance		3	1
Interested in operations performance - excited to see numbers even if they don't know what to do with them		5	1
Motivated by poor performance		5	1
Committed to good performance		4	1
	Focused on actions - not paying attention to metrics, just striving to do well	1	2
	Reactive	2	4
	Emotional - goes with gut instinct	3	2
	Aloof - not focused on operational goals	3	4
	Sacrifices operations performance for other reasons, e.g. crew rest delays for customer service reasons	2	3
	Unaware - may not know goals but still tries to achieve good performance	1	3
	Analytical - relies heavily on data to predict problems	1	3
	Not concerned about operations performance. Has to be made aware and will then worry	2	2
	Black and white methods (learned through experience)	1	5
	Disinterested in reviewing performance numbers	3	5
	Not motivated to improve performance if it is low	2	5
	Not committed to improving performance	1	2

	Wil Wiggins
	Shane Landrum
	James Gazlay
	Sally Russell
	Ashley Gates
	Jeannine Matthews
	Aaron Workman
	Lucy Hathcoote

Figure D-7 Repertory Grid: MSOC - Pinnacle

C.4.1 Process Analysis

Topic

Jorge was very willing to be a part of the research and he approached the interview in a positive and inquisitive manner. He was also interested in the academic process of gathering data and analysing it and asked several questions as the interview proceeded. Jorge was able to make sense of the repertory grid process quickly and he provided some of the more distinct constructs that showed an appreciation of the subject and the intent of the interview. He was in agreement that the subject of attitudes and behaviours was appropriate and topical.

Elements

Jorge considered the list of elements appropriate and acceptable. He worked closely with all of them over the last three years.

Constructs

The elicitation process of providing a triad of elements was received very well and Jorge had no difficulty in sharing his thoughts and providing insightful constructs. He was inquisitive about the process and genuinely seemed to take it very seriously. He produced 12 constructs.

Ratings

The rating procedure was straightforward and easy for Jorge to discern. He did not have difficulty in rating everyone.

General

Jorge was very interested in the research and especially the academic process of gathering and analysing data, of which he asked several questions during the interview. He quickly picked-up on the grid process and developed some of the more distinct constructs of all the interviewees, which showed a good appreciation of the subject.

C.4.2 Eyeball Analysis

The grid represents Jorge's views on the observed attitudes and behaviours of his colleagues at Pinnacle during a time when the airline was enjoying a sustained period of growth in its fleet size and scale of operation.

What the grid says about the elements:

- MCS:** Is seen as being aware of performance numbers but is likely to sacrifice performance for customer service reasons. She is reactive rather than proactive and uses her emotions to make decisions. She is not at all interested in reviewing performance numbers and her motivation to improve performance was low.
- MPE:** Proactive and practical, but remained aloof from the others. He was seen as being concerned about improving performance and very aware of the goals. He was excited to see the numbers even though he may not know what actions were behind them. He was analytical by nature and would try to predict performance problems by analysing the data.
- MD:** Committed, focused and practical, but tended to be reactive. She would always adhere to practices to improve performance and not be swayed by emotions. She was very aware of the goals and tried to be creative to improve performance.
- SOM:** Focused on actions rather than results. Proactive, but might sacrifice performance numbers to ensure better customer service. Not fully aware of the goals, and a little disinterested in reviewing performance results, but was motivated to improve them if told to do so.

SOC DM1 Committed to good performance, but reactive in her approach. Is aware of the goals and objectives and adheres to practices to improve performance and concerned about performance but disinterested in reviewing performance results.

SOC DM2: Pays close attention to performance, is very aware of the goals and strives to achieve them. He is proactive, practical, and creative and will put performance results above customer service. Poor results motivates him to do better.

SOC DM3: Focussed, knows the goals and strives to attain them, but can be reactive and emotional in his decision-making. He does not show creativity, instead preferring black and white rules.

SOC DM4: Practical, focussed, always follows standard practices, but is not at all creative and prefers to be told what to do. He enjoys reviewing performance results but is uninformed on how they are measured and is not committed to improving results unless told to do so.

C.4.3 Construct Characterisation

Table D-4 Construct Characterisation: MSOC - Pinnacle

Construct Characterisation: Jorge Quezada

	Emergent	Implicit	Type of Construct
P4.1	Focused on numbers - pays close attention to performance against metrics	Focused on actions - not paying attention to metrics, just striving to do well	Core
P4.2	Proactive	Reactive	Propositional
P4.3	Practical - will look at several options before committing to achieve performance goals	Emotional - goes with gut instinct	Affective
P4.4	Focused - aware that we have goals and objectives and strives to achieve them	Aloof - not focused on operational goals	Core
P4.5	Always adheres to practices to improve operational performance	Sacrifices operations performance for other reasons, e.g. crew rest delays for customer service reasons	Behavioural
P4.6	Aware - knows what goals are, knows what needs to be done	Unaware - may not know goals but still tries to achieve good performance	Core
P4.7	Reactive - does not foresee problems that may be coming, but does respond when they arrive	Analytical - relies heavily on data to predict problems	Core
P4.8	Concerned about operations performance - striving for better	Not concerned about operations performance. Has to be made aware and will then worry	Behavioural
P4.9	Has creative ways to improve performance	Black and white methods (learned through experience)	Core
P4.10	Interested in operations performance - excited to see numbers even if they don't know what to do with them	Disinterested in reviewing performance numbers	Evaluative
P4.11	Motivated by poor performance	Not motivated to improve performance if it is low	Core
P4.12	Committed to good performance	Not committed to improving performance	Core

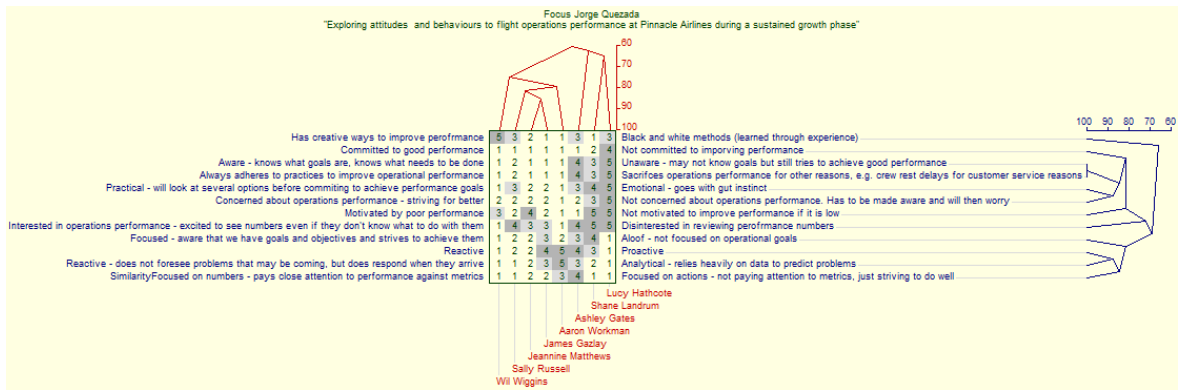


Figure D-8 Cluster Analysed Grid: MSOC - Pinnacle

C.5 SOCDM 1 (SOC Duty Manager)

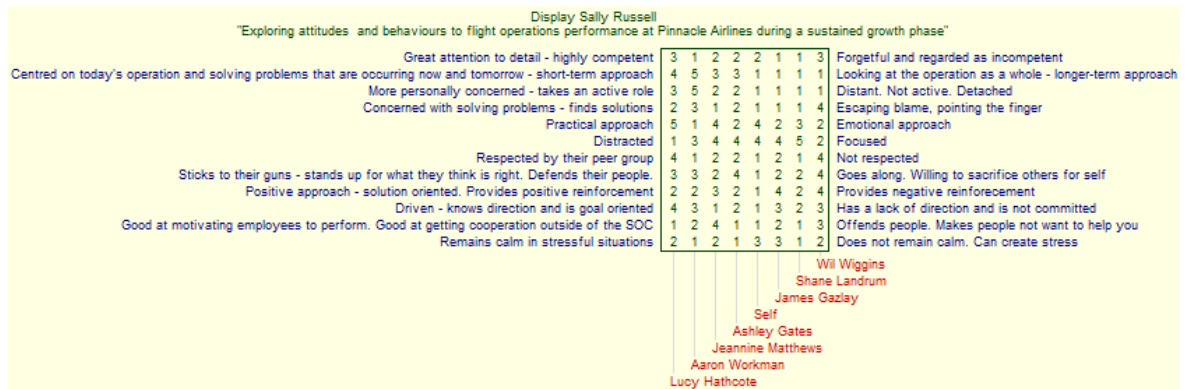


Figure D-9 Repertory Grid: SOCDM 1 - Pinnacle

C.5.1 Process Analysis

Topic

SOCDM1 was excited to be part of the process and agreed that the subject was relevant and very useful. She commented that the behaviours of her colleagues were not always as she would like.

Elements

SOCDM1 considered the list of elements appropriate, especially the other SOCDM's because she works hand in hand with them and shares the responsibility for running the daily flight operation when she is on duty.

Constructs

SOCDM1 initially had some difficulty in developing constructs and was a little unsure how to select from the triad of elements presented to her. Once she had produced a couple of constructs that we dismissed she began to get the hang of it and it flowed. She was not afraid to share her thoughts and opinions and was quite vocal about the subject. As we progressed she began to see a pattern developing with the elements and how she rated them. She thought this was fascinating and wanted to learn more. This was insight that she had previously not fully considered when comparing the attitudes and behaviours of her colleagues. She produced 12 constructs that were concise, focussed and well thought out.

Ratings

The rating procedure was straightforward and easy for SOCDM1 to discern and consequently she did not have difficulty in rating everyone. She was also cognisant of avoiding a central tendency in her ratings and only selected '3' when she truly could not make up her mind.

General

SOCDM1 was excited to be part of this process and she found the experience quite enlightening as she began to realise how she truly considered the behaviours of her colleagues. She had a little difficulty developing constructs to begin with but once she had produced a few constructs that we dismissed she began to get the hang of it and it flowed. She was not afraid to offer her opinions and several conversations ensued that delved deeper into certain aspects of her construction system.

C.5.2 Eyeball Analysis

The grid represents MCS's views on the observed attitudes and behaviours of her colleagues at Pinnacle during a time when the airline was enjoying a sustained period of growth in its fleet size and scale of operation.

What the grid says about the elements:

- MCS:** Has a longer-term view of operation, rather than focussing just on today. She is concerned with solving problems, and is careful not to cast blame on others. She has a very emotional approach and is not seen as practical. She can become very distracted and finds it hard to remain on task. Her approach to work is generally not respected very well by her peers or staff. She is likable and she does adopt a positive approach and tries to provide positive reinforcement to her people. She has a lack of direction and does not seem committed, but is good at getting cooperation from others and remaining calm in stressful situations.
- MPE:** Great attention to detail, looks at the operation as a whole, but is distant and not active. He is practical, calm, good at motivating employees and very well respected.

- MD: Very competent, takes an active role, finds solutions and solves problems, but can let her emotions get in the way. She is focussed, stands up for what she thinks is right and is driven and goal orientated. She can offend people and is consequently not as respected by her peer group as she could be. She remains calm in stressful situations.
- SOM: Very competent, is personally concerned, finds solutions, is practical, focussed, and respected by his peers. He is unlikely to stick by his guns, and will concede to others. Provides positive reinforcement, is driven to do well, excellent at motivating others, and will remain very calm in stressful situations.
- Self SOCDM1 sees herself as competent, very centred on today's operation, and very capable in solving problems as they occur. She does concede that she has an emotional response, but she is focussed on the operation. She believes she is very well-respected by her peers and will always stand by her people. She considers that she has a very positive approach, and is driven and goal orientated. She rated herself highly on all of the constructs that had a strong positive slant to them.
- SOCDM2: Is seen as highly competent, focussed on today's operation and very good at finding solutions and solving problems. He has a practical approach, is not swayed by emotions and is respected by his peer group. He stands up for what he thinks is right, but he can provide negative reinforcement to others when he does so. SOCDM1 regards him highly.
- SOCDM3: Is also considered as highly competent, takes an active role and is very good at solving problems. He is highly focussed, very well respected, defends his people, provides positive reinforcement, is excellent at motivating others and remains very calm in stressful situations.
- SOCDM4: Is centred on today's operation, is personally concerned, has a practical approach, but likes to escape blame and point the finger at others. He is also willing to sacrifice others for himself and provides negative reinforcement, which in turn leads to him not being respected by others.

C.5.3 Construct Characterisation

Table D-5 Construct Characterisation: SOCDM 1 - Pinnacle

Construct Characterisation: Sally Russell

	Emergent	Implicit	Type of Construct
P5.1	Great attention to detail - highly competent	Forgetful and regarded as incompetent	Core
P5.2	Centred on today's operation and solving problems that are occurring now and tomorrow - short-term approach	Looking at the operation as a whole - longer-term approach	Core
P5.3	More personally concerned - takes an active role	Distant. Not active. Detached	Behavioural
P5.4	Concerned with solving problems - finds solutions	Escaping blame, pointing the finger	Core
P5.5	Practical approach	Emotional approach	Evaluative
P5.6	Distracted	Focused	Evaluative
P5.7	Respected by their peer group	Not respected	Propositional
P5.8	Sticks to their guns - stands up for what they think is right. Defends their people.	Goes along. Willing to sacrifice others for self	Core
P5.9	Positive approach - solution oriented. Provides positive reinforcement	Provides negative reinforcement	Core
P5.10	Driven - knows direction and is goal oriented	Has a lack of direction and is not committed	Core
P5.11	Good at motivating employees to perform. Good at getting cooperation outside of the SOC	Offends people. Makes people not want to help you	Evaluative
P5.12	Remains calm in stressful situations	Does not remain calm. Can create stress	Evaluative

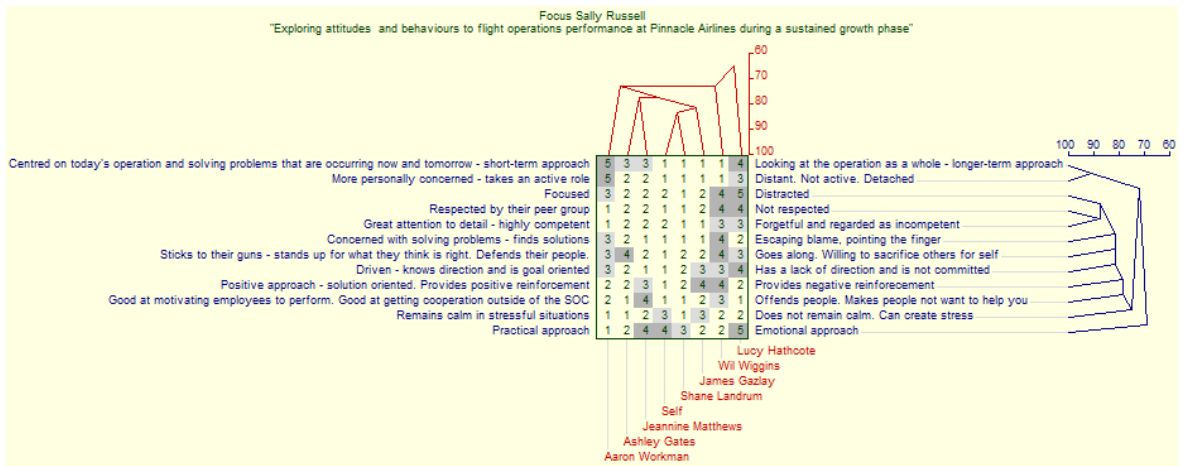


Figure D-10 Cluster Analysed Grid: SOCDM 1 - Pinnacle

C.6 SOCDM 2 (SOC Duty Manager)

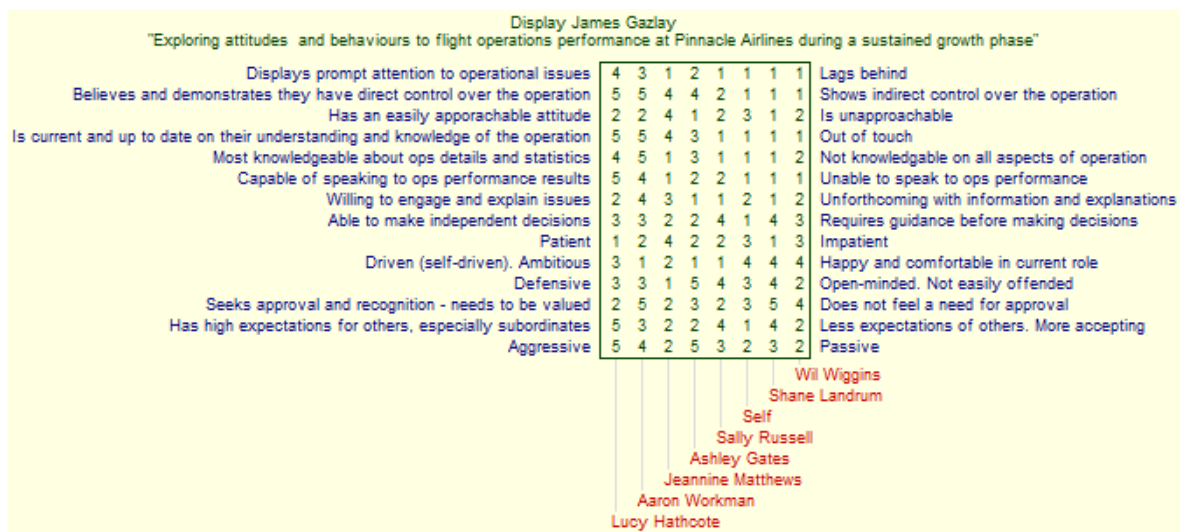


Figure D-11 Repertory Grid: SOCDM 2 - Pinnacle

C.6.1 Process Analysis

Topic

SOCDM2 approached the topic in a nonchalant sort of way but soon developed an interest in what it might reveal.

Elements

SOCDM2 considered the list of elements appropriate and acceptable because they were all managers in the SOC and several of them were SOCDM's that he had worked with for several years.

Constructs

The elicitation process of providing a triad of elements was received very well and he found it quite easy to develop constructs and did not have to hesitate when selecting from the triad of elements. He produce 14 constructs that all focussed on the behaviours of his colleagues.

Ratings

The rating procedure was straightforward and easy for SOCDM1 to discern. He did not have difficulty in rating everyone.

General

SOCDM2 is very involved in the daily operation and takes his role seriously. He approached the topic in a laid-back manner but soon took a much greater interest when he realised what his constructs and ratings would say. He admitted to not really paying attention to people's behaviours before and this process became quite revealing for him.

C.6.2 Eyeball Analysis

The grid represents SOCDM2' views on the observed attitudes and behaviours of his colleagues at Pinnacle during a time when the airline was enjoying a sustained period of growth in its fleet size and scale of operation.

What the grid says about the elements:

- MCS:** Lags behind on operational issues and shows only indirect control over the operation. She is approachable and patient but seeks approval and recognition. She is out of touch, not knowledgeable about the operation and is unable to explain operational results. She has low expectations of others and is passive.
- MPE:** Has indirect control over the operation, is easily approachable, but is out of touch with his knowledge of the operation and is unable to explain performance results. He is passive, patient, driven and ambitious, and does not feel a need for approval.
- MD:** Displays very prompt attention to operational issues, has indirect control over the operation, but is very knowledgeable about ops detail and statistics. She is not very approachable, but can be impatient and aggressive. Makes independent decisions, is driven and ambitious, but very defensive. She seeks approval and recognition and needs to be valued. She has high expectations of others especially subordinates.
- SOM:** Gives prompt attention to ops issues, but indirect control of the operation. He is passive and very approachable. Capable of speaking to ops performance, and is very willing to engage and explain issues. Makes independent decisions, and is very ambitious. Open minded and not easily offended. Has high expectation of others.

Self SOCDM2 sees himself as giving very prompt attention to operational issues, and having a very direct control over the operation. He is up to date on his understanding of the operation and is easily able to speak to ops performance issues. He is patient, but can be a little aggressive and has high expectations of others. He is and happy and comfortable in his role.

SOCDM3: Displays a very prompt attention to ops issues and has direct control over the operation. He is knowledgeable and up to date on understanding of the operation and he is able to speak to performance results, but he requires guidance before making decisions. He is very patient, easily approachable, and happy in his role. He is open minded, does not feel a need for approval, and has less expectations of others.

SOCDM4: Has direct control over the operation and responds to operational issues promptly. He is approachable, up to date in his knowledge and capable of speaking to ops performance issues. He is happy and comfortable in his role, but can be defensive and seeks approval and recognition. He has high expectations of subordinates,

C.6.3 Construct Characterisation

Table D-6 Construct Characterisation: SOCDM 2 - Pinnacle

Construct Characterisation: James Gazlay

	Emergent	Implicit	Type of Construct
P6.1	Displays prompt attention to operational issues	Lags behind	Core
P6.2	Believes and demonstrates they have direct control over the operation	Shows indirect control over the operation	Core
P6.3	Has an easily approachable attitude	Is unapproachable	Behavioural
P6.4	Is current and up to date on their understanding and knowledge of the operation	Out of touch	Core
P6.5	Most knowledgeable about ops details and statistics	Not knowledgeable on all aspects of operation	Attributional
P6.6	Capable of speaking to ops performance results	Unable to speak to ops performance	Core
P6.7	Willing to engage and explain issues	Unforthcoming with information and explanations	Evaluative
P6.8	Able to make independent decisions	Requires guidance before making decisions	Core
P6.9	Patient	Impatient	Behavioural
P6.10	Driven (self-driven). Ambitious	Happy and comfortable in current role	Core
P6.11	Defensive	Open-minded. Not easily offended	Behavioural
P6.12	Seeks approval and recognition - needs to be valued	Does not feel a need for approval	Behavioural
P6.13	Has high expectations for others, especially subordinates	Less expectations of others. More accepting	Core
P6.14	Aggressive	Passive	Propositional

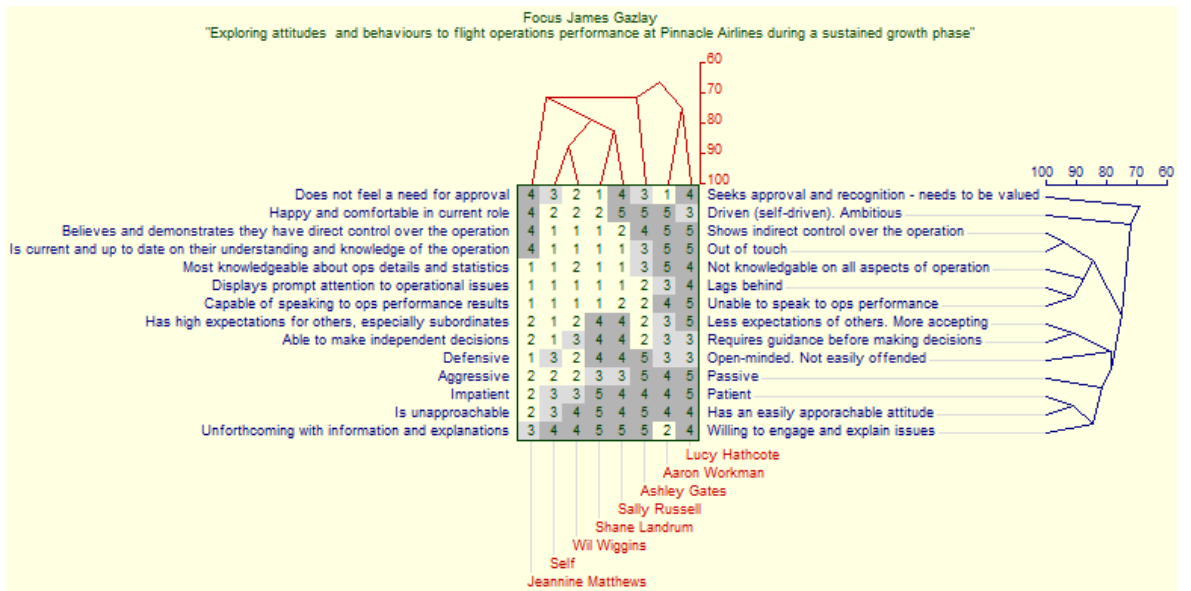


Figure D-12 Cluster Analysed Grid: SOCDM 2 - Pinnacle

Appendix D INTERVIEW QUESTIONS AT PINNACLE – CYCLE 4

Concept A: Structure

Q.1 Responsibility

Do you feel that your tasks and responsibilities are clearly defined?

Q.1a

Why do you think that is?

Q.1b

What could be different?

Q.2 Responsibility

Are tasks and responsibilities applied consistently at all management levels?

Q.2a

Are they applied across all departments?

Q.2b

Can you give me any examples?

Q.3 Content

Do you use financial and non-financial performance information to assist you in achieving your performance objectives?

Q.4 Content

Does this information have a strategic focus by using success factors and key performance indicators?

Q.5 integrity

Is the performance information reliable, timely and consistent?

Q.5a

Why do you think that is?

Concept B: Behaviour

Q.6 Manageability

Are you easily able to obtain performance management reports?

Q.7 Manageability

What if you need more detailed information?

Q.8 Accountability

Do you feel responsible for performance results?

Q.8a

What about in your own area of responsibility?

Q.8b

What about the organisation as a whole?

Q.9 Management Style

Is senior management visibly interested and involved in the performance of their employees?

Q.9a

How do they exhibit this?

Q.10 Management Style

Does senior management stimulate an improvement culture?

Q.11 Management Style

Do they encourage proactive behaviour?

Q.12 Management Style

Do they confront employees who have sub-standard results?

Q.13 Management Style

Do they provide motivation and inspiration?

Q.14 Action Orientation

Do you feel that performance information is integrated into the daily activities of employees in such a way that problems are immediately addressed and corrective or preventative actions are taken?

Q.14a

Why do you think this is?

Q.15 Communication

Does communication about performance results take place at regular intervals?

Q.15a

Is it driven from the top down?

Q.15b

Does communication flow from the bottom up?

Q.16 Communication

Is knowledge shared in general?

Q.16a

Is knowledge shared between departments?

Q.16b

What about between employees?

Q.17 Communication

Is performance information shared?

Q.17a

Is it shared between departments?

Q.17b

What about between employees?

Q.18 Alignment

Do you think other departments in the company such as Finance, and HR, aligned with performance management, so that what is important to the organisation (ops performance), is regularly evaluated?

Q.19 General

Can you describe the performance measurement and review process at Pinnacle?

Q.20 Conclusion

Is there anything further you would like to comment on?

Q.21 Interviewee questions

Do you have any questions?

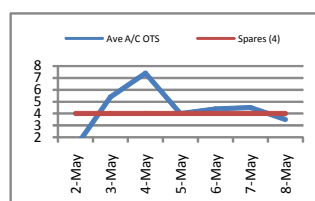
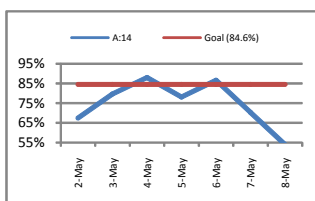
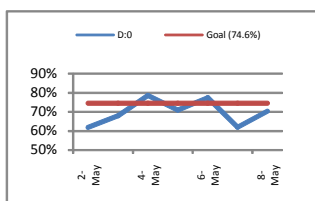
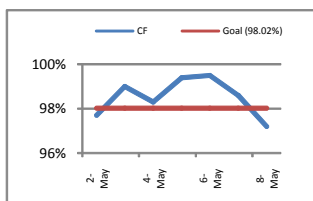
Appendix E

WEEKLY OPERATIONS PERFORMANCE DASHBOARD

Weekly Operations Performance (7 days: Sun - Sat inclusive)

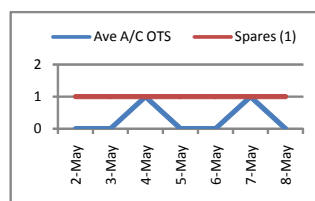
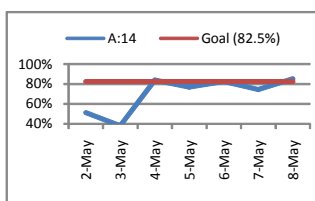
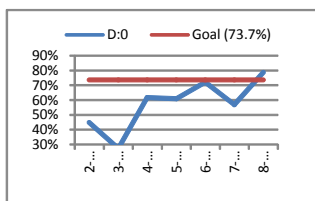
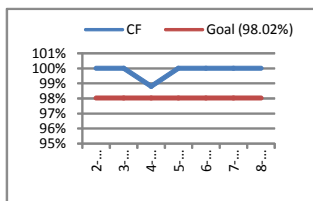
CRJ200

	CF	D:0	A:14	Ave a/c	MEL's	Cxls	WX	MX	Pilot	FA	Stn/Dmg	Other	Comments	UA's - CRJ200			
														Pilot	FA	TTL	
Su	2-May	97.7%	61.8%	67.5%	1.2	43	16	2	1	8	2	0	3	1 sub in flight, 2 sub mx	53	22	75
Mo	3-May	99.0%	68.0%	79.7%	5.4	37	7	0	3	0	2	0	2	2 sub mx	47	23	70
Tu	4-May	98.3%	78.7%	88.1%	7.4	45	12	0	11	0	0	0	1	1 sub mx	39	15	54
We	5-May	99.4%	71.0%	78.2%	4.0	45	5	0	0	0	0	0	5	3 ATC/1 FC/ 1 EQP SUB MX	45	15	60
Th	6-May	99.5%	77.4%	86.7%	4.4	44	4	0	2	0	0	0	2	2 atc	43	12	55
Fr	7-May	98.6%	61.9%	70.4%	4.5	55	10	1	2	2	0	0	2	EQP SUB MX	42	19	61
Sa	8-May	97.7%	70.3%	53.9%	3.5	50	14	2	4	1	0	0	7	5 ATC, 2 eqp sub (mx)	37	18	55
Ave:		98.5%	69.9%	74.9%	4.3	46	68	5	23	11	4	0	22	<- Totals	Ave: 43.7	17.7	61.4



CRJ900

	CF	D:0	A:14	Ave a/c	MEL's	Cxls	WX	MX	Pilot	FA	Stn/Dmg	Other	Comments	UA's - CRJ900			
														Pilot	FA	TTL	
Su	2-May	100.0%	44.9%	51.3%	0	5	0	0	0	0	0	0	100% completion	5	6	11	
Mo	3-May	100.0%	27.4%	38.1%	0	8	0	0	0	0	0	0	100% completion	7	8	15	
Tu	4-May	98.8%	61.7%	84.0%	1	7	1	0	1	0	0	0	0	cx mem atl	8	6	14
We	5-May	100.0%	61.0%	77.1%	0	7	0	0	0	0	0	0	0	100% completion	9	6	15
Th	6-May	100.0%	72.1%	82.6%	0	8	0	0	0	0	0	0	0	100% completion	11	9	20
Fr	7-May	100.0%	57.0%	74.4%	1	10	0	0	0	0	0	0	0	100% Completion	6	6	12
Sa	8-May	100.0%	78.7%	85.2%	0	6	0	0	0	0	0	0	0	100% completion	7	7	14
Ave:		99.8%	57.5%	70.4%	0	7	1	0	1	0	0	0	<- Totals	Ave: 8	7	14.4	



Outlook

ATL: No Sig WX expected for majority of week
 DTW: Mon=rain. Tue-Fri=TSRA.
 MEM: Mon=TSRA. Tue=Thu=clear. Fri-weekend=TSRA
 MSP: Mon=CHC TSRA. Tue-Wed=TSRA. Fri=clear

UA's Combined			
Pilot	FA	TTL	
58	28	86	
54	31	85	
47	21	68	
54	21	75	
54	21	75	
48	25	73	
44	25	69	
Ave:	51.3	24.6	75.9