

# Applications of knowledge transfer to small and medium sized businesses

2007 edition

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**Knowledge Transfer Partnerships  
Applications of Knowledge Transfer to Small and Medium Sized Businesses  
2007 Edition**

British Library Cataloguing in Publication Data.  
A catalogue record for this book is available from the British Library.

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Published by:

Bournemouth University  
KTP Centre  
Talbot Campus  
Fern Barrow  
Poole  
Dorset  
UK  
BH12 5BB

**ISBN 978-1-85899-223-5**

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Printed and bound in the UK

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## Acknowledgements

The authors and editors wish to express their sincere thanks to the following organisations:

Bournemouth Churches Housing Association  
Bournemouth University  
Grapevine Telecoms Ltd  
Momenta  
Nutech Ltd  
SPOCE Project Management Ltd  
TSG South Ltd

## Terminology used in this publication

- Company Partner:** Company, Charity or Social Enterprise.
- Knowledge Base Partner:** Bournemouth University.
- KTP Associate:** Graduate employed by the Knowledge Transfer Partnership.

## Editorial

Knowledge Transfer Partnerships (KTPs) are a DTI business support solution designed to enable companies to grow through the provision of managed funding/academic support to develop and implement 18-36 month projects of strategic importance.

The purpose of the Bournemouth KTP Centre is to facilitate and support the delivery of the University's KTP projects.

At the end of 2006 the KTP Centre was supporting 17 KTP Associates which represented a £1.7million portfolio of private/public sector Knowledge Transfer income.

A review by Bournemouth KTP Centre of its recently completed KTP projects revealed that they had delivered the following benefits:

### Company benefits

- Increase in sales of over £9 million
- One-off increases in profits of almost £1 million
- Predicted future increases in profits of £2.7 million pa

### University benefits

- Teaching case study materials
- Higher degrees
- Publications

Each chapter within this volume is a case study based upon a KTP project completed during 2006 and clearly describes the initial objectives, process undertaken and benefits obtained from the Knowledge Transfer.

**Professor Jim Roach and Dr Martyn Polkinghorne** (Editors).

## 1. Developing & Exploiting New Market Opportunities

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### 1.1 Introduction

1.1.1 The objective of this Knowledge Transfer Partnership (KTP) was to develop a new market for the company. This new market would be in the delivery of project management training via blended learning.

1.1.2 Face-to-face training was considered to be too expensive in most circumstances, which significantly limited the potential market for the company.

1.1.3 Training approaches which used only open or distance learning tended to have low completion rates, hence the desire to develop a blended approach by combining classroom time with other online delivery.

### 1.2 The Process of Knowledge Transfer

1.2.1 The aim of the KTP was modified in the light of the marketing information gathered in the initial part of the programme. It became clear that the growth in demand for project management training was being fuelled by quality enhancement initiatives. This particularly applied to the local government sector.

1.2.2 It was also soon realised that there was considerable resistance to releasing staff, even for the shorter timeframes envisaged in the blended learning approach. Therefore, a decision was taken to focus on the development of distance learning, delivered by Compact Disk and also via the Internet.

1.2.3 The existing product was substantially extended following a detailed evaluation of customer information. More capabilities were provided to allow the user to personalise their experience.

1.2.4 A second product was developed towards the end of the KTP, and like the earlier product it was the first in the market to be approved by the Association of Project Management Group.

1.2.5 An Order Management System was developed and built which improved capability and availability of the Company partner's sales operation. The transaction costs were reduced as a result.

1.2.6 Due to their product's availability, the Company partner was able to join a Council lead consortium bidding for funding from the Office of the Deputy Prime Minister (ODPM) under the e-innovation initiative.

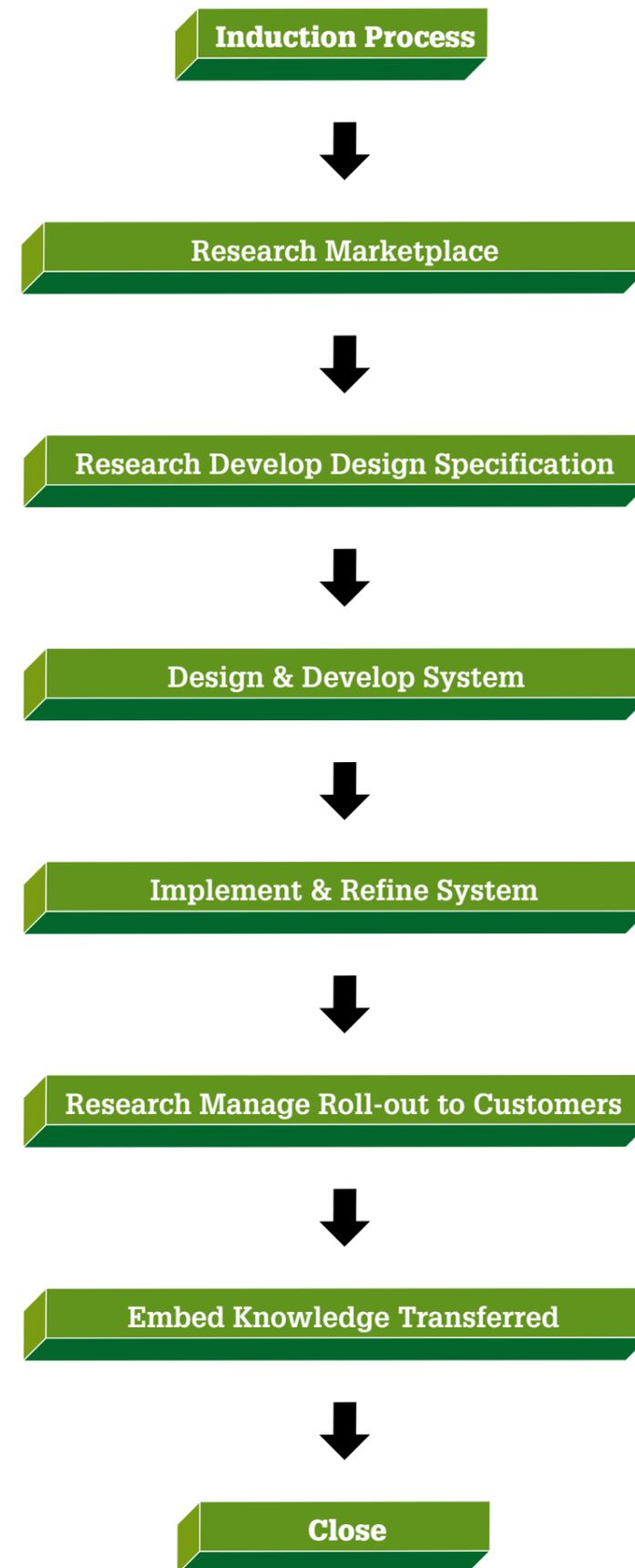
1.2.7 They were successful, and there followed deployment of the product to the Council and also to a number of local enterprises.

1.2.8 In a recent evaluation of all ODPM funded projects, this consortium received the award for the most innovative e-learning project.

1.2.9 The new products developed have become central to the Company partner's efforts to extend their market beyond the UK. The size of the foreign orders for the products has been encouraging.

1.2.10 To widen their appeal, the Company has also started to explore the possibility of translation. A current initiative is the translation of the product into Polish.

Figure 1 - Knowledge Transfer Process Utilised



### **1.3 Benefits to the Knowledge Base Partner**

- 1.3.1 The Academic team gained valuable experience in the design and development of an e-learning presentation system, incorporating copyright security for CD-based materials, monitoring website statistics and search engine performance management. This experience had a significant impact upon teaching within the Knowledge Base partner.
- 1.3.2 Additional indirect benefits have been gained through the understanding of issues relating to the successful development and selling of an e-learning package. This is a valuable insight and highly relevant to modern Universities where Virtual Learning Environments are an integral element in the design of an effective learning experience.
- 1.3.3 The Associate continued their research collaboration with staff from the Knowledge Base partner focussing on the area of the personalisation of virtual learning environments. This research included data gathering from all of those involved in the ODPM-funded project.
- 1.3.4 Working on this KTP brought very useful practical experience into the University. This experience will be reflected in future teaching and research activities, and case study material will be developed as appropriate. Development of web-based solutions is now an integral part of the computing awards at the Knowledge Base partner.

### **1.4 Benefits to the Company Partner**

- 1.4.1 At the outset of the programme, the Company had little experience, and few skills, in the production, marketing, selling, and supporting of e-learning packages. All employees are now involved in one or more of these processes.
- 1.4.2 Operational benefits for the Company partner have included an Order Management System. This integrated web-based system has replaced a number of disparate spreadsheets and databases.
- 1.4.3 The transition to the new system was achieved with active support from the order processing staff, and has significantly improved the Company's order processing capabilities for both classroom-based courses and for e-learning packages.
- 1.4.4 Specific secondary benefits included Company staff being able to analyse information more effectively, and collaborate more closely.
- 1.4.5 The operation of the Company website, and technical support for processing of orders for e-learning packages, were areas which had to be transformed as a result of the KTP so that the Company could exploit the results.
- 1.4.6 The Company now has additional knowledge and skills in the areas of protecting copyright in CD, analysing website statistics, and improving performance on search engines.
- 1.4.7 Importantly, the Company now also has a expanded portfolio of products that offer improved delivery.
- 1.4.8 Thanks to the funding obtained from ODPM, the Company's product base now has an improved profile in the market place and an international dimension to its customer base.
- 1.4.9 At an operational level, the Order Management System has facilitated a 24/7 availability for order processing, has reduced transaction costs by 20%, together with an important reduction the incidence of errors and omissions which has improved customer satisfaction.
- 1.4.10 Although the Knowledge Base partner does not envisage receiving any commercial benefits from the exploitation of the results of this KTP, the Company partner is expected to receive significant commercial benefits and there have been significant levels of interest in the new product line from several public sector authorities.

### **1.5 Conclusions**

- 1.5.1 The new product was launched. This widens the range of e-learning products available from the Company partner and represents a significant addition to their portfolio of products.
- 1.5.2 Having participated in this KTP, the Company partner has gained the skills and experience required for product development, which they will be able to utilise in the development of future products, and also with product revisions and upgrades.
- 1.5.3 Operational efficiency within the Company partner, and a significantly improved product base, has in turn improved turnover and simultaneously reduced costs for the Company.
- 1.5.4 Throughout the project, staff and students from the Knowledge Base partnership have been involved in additional collaborative projects with the Company partner.
- 1.5.5 The development of key web resources for the original product involved both the Academic team, and also an additional student supplied by the Knowledge Base partner.
- 1.5.6 A further student engaged on a Shell Enterprise Technology Programme (STEP), revitalised crucial aspects of the Company partner's website and publicity materials.
- 1.5.7 Students were also engaged in the production of the web-based materials for use with the training product.
- 1.5.8 The relationship between the Company and Knowledge Base partners has continued in several forms, including the Associate becoming an employee of the Company and the Associate's registration and supervision for an MPhil higher degree.
- 1.5.9 The Company also plans for further investment to support continued product development, software development, and marketing so that they can fully exploit the potential of the KTP.
- 1.5.10 The partners are discussing consultancy and other potential avenues in the area of marketing support, and there is continuing discussion and support between the Company and the Knowledge Base partners in the area of technical support for e-learning.
- 1.5.11 Both the Company and the University see this KTP as being the start for an on-going relationship.

### **1.6 References**

- 1.6.1 Knowledge Transfer Partnership Proposal - Reference 6104, DTI, 2003
- 1.6.2 Knowledge Transfer Partnership Final Report - Reference 6104, DTI, 2006

## 2. Developing & Expanding the Product Base

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### 2.1 Introduction

2.1.1 The objective of this Knowledge Transfer Partnership (KTP) was to develop existing and new products, providing cross-platform functionality and on line access, paying attention to product design, security, business planning and distributed market delivery. More specifically the KTP was to develop existing PC-based products for web use on multiple hardware platforms using Service Orientated Architecture, adding additional functionality and expanding the product range.

2.1.2 The Company partner sold their products (a suite of financial and management software solutions) for membership/subscription based organisations. These products were based around the Company's central member relationship management database.

2.1.3 The Company partner wished to use this new product to enhance its market position. The potential market was 4,000 UK Trade Associations and Professional Membership organisations which predominantly bought PC based product solutions.

2.1.4 With an online solution, the Company partner envisaged that they would be able to both secure their current market share and also expand their sales by moving into new market areas that required membership databases, eg. sports and leisure clubs.

### 2.2 The Process of Knowledge Transfer

2.2.1 Following completion of an in-depth investigation into the Company partner's current products and services, the KTP undertook research into their existing customers to determine their needs and requirements.

2.2.2 This research also designed, developed and utilised questionnaires to gather useful information regarding how customers used the current products. The data collected was analysed and used to inform the product specification process to ensure that it was based upon sound academic principles.

2.2.3 In parallel, research was undertaken so that the Associate could experience the whole procedure for development of web applications and web services.

2.2.4 A functional specification was developed and agreed for the new product and technical optimisation applied to ensure performance using Object Orientated N-Tier structures.

2.2.5 Software modules were developed and deployed and it was found necessary to upgrade the entire system from Web.UI 2.0 to Web.UI 3.0.

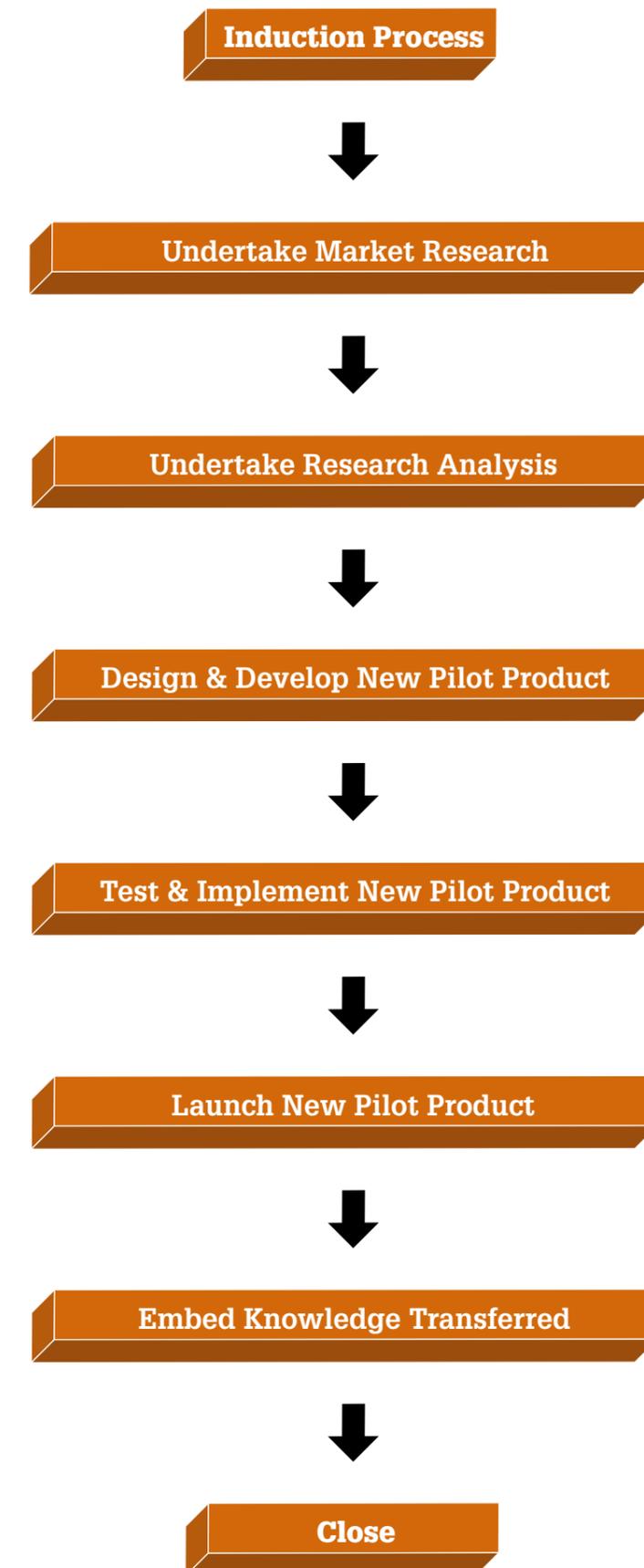
2.2.6 Problems were experienced with the development of certain modules, and the KTP was refocused to concentrate on completing the core modules required for product implementation.

2.2.7 ASP.NET authentication and login mechanisms were then developed and the created modules were deployed to an external web server for diagnostic testing.

2.2.8 During the product design phase, additional and unexpected technical problems needed to be overcome in the following areas:

- Access restriction of remote and local web services
- Embedding interactive web controls
- Enforced user login encryption
- Web reference of web services in web environment
- Code conversion
- Hierarchy of classes
- Rich Interactive interface
- Flexibility and customisability

**Figure 2 - Knowledge Transfer Process Utilised**



## 2.3 Benefits to the Knowledge Base Partner

- 2.3.1 In addition to publishing a paper based upon this KTP, the Academic team gained valuable expertise including the practical applications of service orientated architectures and web-enabling products/services.
- 2.3.2 This had a significant impact upon teaching and provided practical case study material that was used for demonstration purposes. In particular, the Academic team has gained knowledge of the development of Web Portals and the difficulties in web development when transferred to a larger arena. In particular, the need for detailed planning and monitoring for this type of project.
- 2.3.3 The Knowledge Base partner is undertaking research into the needs and issues facing SMEs in the region and the ability of knowledge transfer programmes to address these needs. The experience and lessons learnt from this KTP made a useful contribution to this research to enhance its quality and scope, and to demonstrate salient problems and issues.
- 2.3.4 The Company partner has supported three undergraduate and three postgraduate students which included two MSc students from the Knowledge Base partner who used the Company as a case study for their Masters projects.
- 2.3.5 One of the research students was permitted to visit several of the Company partner's customers and the KTP was able to support the completion of the Associate's PhD.
- 2.3.6 The KTP was a concrete example of the need, and problems, associated with the delivery of projects within defined timescales and how projects can succeed or fail based upon the quality of the planning undertaken. Due to the innovative nature of the KTP there were few other examples for comparative purposes during the planning phase.
- 2.3.7 The Company partner now has this experience and the KTP is to be used by the Knowledge Base partner as an example to support the teaching of management and planning related subjects.
- 2.3.8 Working on this KTP has also brought other very useful practical experience into the University. This experience will be reflected in future teaching and research activities, and case study material will be developed for inclusion within both information technology and internet applications taught units.

## 2.4 Benefits to the Company Partner

- 2.4.1 This KTP improved the Company's operations through the development of a new and enhanced product that secured their current market share and provided them with the platform from which they could expand into new market sectors.
- 2.4.2 As such, the KTP will make a significant impact on the Company partner's future financial position and is expected to lead to:
- Increased competitiveness
  - Increased market security
  - Increased market share
  - Increased profitability
  - Increased profile
  - Increased turnover
- 2.4.3 The KTP has developed foreground IP with commercial potential. The Company partner intends to exploit this IP for commercial benefit. The IP agreement established at the start of the KTP allows for a percentage of this commercial benefit to be returned to the Knowledge Base partner in recognition of its role in developing the foreground IP and its provision of background IP.
- 2.4.4 The Company partner has already secured potential sales for the new product and the online accessibility of its products will cement their position as a major distributor.
- 2.4.5 Through the Knowledge Transfer process, the Company partner now also has the ability to manage, manipulate and modify their new product in the future to ensure that their improved competitive position is sustainable in the longer-term.
- 2.4.6 As a direct result of the KTP, the Company partner has gained an improved understanding of the developmental issues associated with internet portals, and of the resource requirements for this type of product development.

- 2.4.7 The Company's internet portal development skills have been extended and in particular they have been updated with improved knowledge of Visual Basic system development, and its potential functionality, and .NET software solutions with their related developmental issues
- 2.4.8 The Company partner has also developed a capability for product design manipulation of the new product to ensure optimal commercial benefits are achieved.

## 2.5 Conclusions

- 2.5.1 This KTP has successfully designed and developed the core modules for use in a prototype beta version of an online Customer Relationship Management (CRM) product that the Company can exploit to maintain their current market share, and utilise to expand into new market areas.
- 2.5.2 Further investment was required from the Company partner to continue the implementation and commercial exploitation of the product developed by the KTP.
- 2.5.3 The Company partner employed a graduate from the Knowledge Base partner to complete the remaining tasks and to undertake product implementation.
- 2.5.4 Transfer of knowledge has been achieved to ensure that the benefits of this successful KTP are fully embedded within the Company partner.
- 2.5.5 The Company partner intends to exploit the IP developed by this KTP for commercial benefit which it will be shared with the Knowledge Base partner.
- 2.5.6 The KTP has proven to be a good lesson in how to realise and maximise benefits for all partners.
- 2.5.7 The experience and knowledge gained has resulted in more effective processes for the development and conduct of new programmes, with greater emphasis on teaching case studies, research opportunities, and publications.
- 2.5.8 This KTP has also created opportunities for research and consultancy collaborations between the Company and the Knowledge Base partners. One of the additional students who supported the Company partner has been employed by them on a full-time basis.

## 2.6 References

- 2.6.1 Knowledge Transfer Partnership Proposal - Reference 0267, SEEDA, 2004
- 2.6.2 Knowledge Transfer Partnership Final Report - Reference 0267, SEEDA, 2006

### 3. Introducing Design Processes & Techniques

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#### 3.1 Introduction

3.1.1 The Company partner for this Knowledge Transfer Partnership (KTP) had recently added a new engineering and manufacturing division to design and manufacture specialist equipment.

3.1.2 The aim of the KTP was therefore to develop an in-house computer aided design and engineering capability for this division which would replace the need and expense of outsourcing.

3.1.3 More specifically, the introduction of Computer Aided Design (CAD) and Finite Element Analysis (FEA) expertise was required to develop in-house modern design processes and techniques, with the implementation of a supporting information system to improve the efficiency of internal and external workflows.

#### 3.2 The Process of Knowledge Transfer

3.2.1 A new Computer Aided Engineering (CAE) package was identified, and an appropriate and complimentary information system was evaluated and purchased to store and manage design information, and to carry out design modelling and design analysis tasks.

3.2.2 The system was compatible with the existing infra-structure within the Company and was also considered to be capable of being upgraded to address future needs when they arose.

3.2.3 All Company design data, including 2D AutoCAD templates already in existence were, converted and stored in the new CAE system so that an archive of material was created.

3.2.4 It was then necessary to develop a design tool which could be implemented to generate product specifications in response to specific client inquiries.

3.2.5 Implementation of the above design system incorporated new procedures, the CAE and the information system so that they were integrated together.

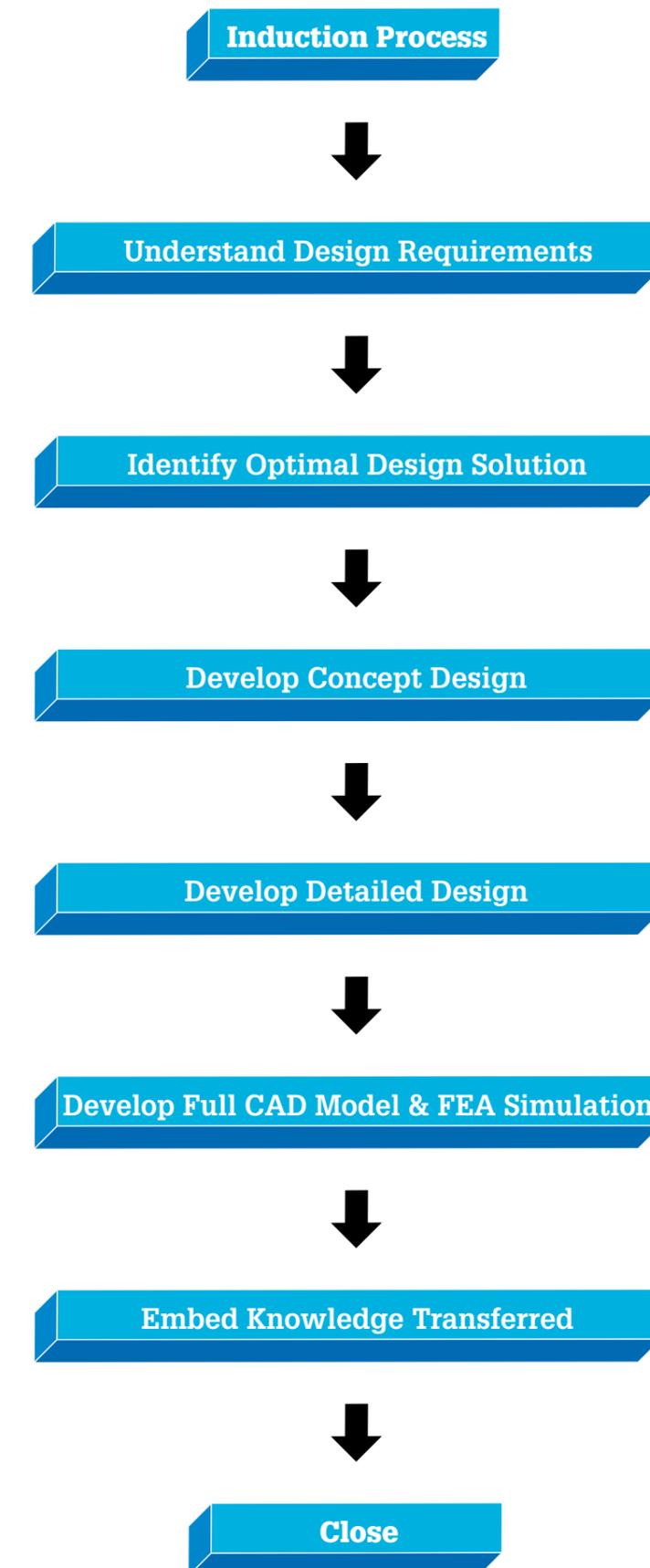
3.2.6 Thorough testing and embedding of the systems was then undertaken which focussed upon the design and testing of a new (and improved) modular version of the Company's specialist equipment.

3.2.7 A Technical File was formulated for all the Company's products.

3.2.8 The need to undertake additional design and development work for a major international client resulted in the design of the new modular specialist products being suspended, and the KTP was therefore extended by six months to accommodate this change in timescales.

3.2.9 To further test and validate the system, a new product was successfully designed and developed for a major international client. Company staff were then trained in both CAD and other in related CAE skills to ensure that they were able to fully utilise the systems and procedures developed.

Figure 3 - Knowledge Transfer Process Utilised



### **3.3 Benefits to the Knowledge Base Partner**

- 3.3.1 This KTP proved to be useful experience for the Academic team and it enhanced their practical understanding of design systems knowledge.
- 3.3.2 The KTP also provided useful exposure to industrial practices and experience of practical people management.
- 3.3.3 A better understanding of the use of Product Data Management tools and software within Companies was obtained, and the important balance between client requirements and the competitive rigours of modern engineering industry was demonstrated
- 3.3.4 The work undertaken on this KTP provided a useful insight into modular design and solid modelling. Significant case study material has been developed which is directly useful to support teaching and research in these fields.
- 3.3.5 In addition, this KTP supported research being undertaken within the Knowledge Base partner by providing additional evidence to support knowledge development and product data management.
- 3.3.6 A total of three undergraduate and two postgraduate students were provide by the Knowledge Base partner to support this KTP, and to provide added-value to the Company partner. For the students this was a valuable experience that enhanced their learning.

### **3.4 Benefits to the Company Partner**

- 3.4.1 Through its participation in this KTP, the Company partner was able to gain key new skills and capabilities.
- 3.4.2 In particular, the Company partner developed in-house expertise in and efficient use of computer aided modelling in the design of components and products.
- 3.4.3 To support these skills, the Company partner also developed competence in the efficient use of computer aided stress analysis tools (Finite Element Analysis) used in the design of the individual components.
- 3.4.4 The effective use of Product Data Management systems was introduced which enable the Company partner to improve the flow of critical information.
- 3.4.5 The Company partner's enhanced design capacity included modular design, and the ability to develop custom made products using existing proven design solutions.
- 3.4.6 This provided the Company with the ability to respond to clients' enquiries quickly with detailed product specifications.
- 3.4.7 Furthermore, the findings and new ideas created by the KTP opened up numerous potential routes for improving the Company's standard range of products, and also for the design of additional new products.
- 3.4.8 The Company benefited internally from the perspective of reduced operational costs, and offered an excellent marketing tool due to their enhanced capabilities and responsiveness to customer enquiries.
- 3.4.9 Research and development in the Company is now seen as a long term requirement which will help Company to maintain their awareness of new technologies in the field of CAE.
- 3.4.10 The KTP provided the Company with a well documented design process which can be used as the foundation for any such future developments.
- 3.4.11 The documentation developed facilitated the development of overseas distributors which would not previously have been possible.
- 3.4.12 The Company is now better positioned to monitor, analyse and reduce costs thanks to improved systems and design. The Company therefore has a stronger position from which it can develop and expand export markets.
- 3.4.13 An increase in profits was recorded due to both an increase in sales and also the improved design process which incorporated reduced manufacturing costs.

- 3.4.14 A further increase in sales/profits is expected in the future as the Company moves to exploit the full benefits of the KTP.

### **3.5 Conclusions**

- 3.5.1 The KTP was very successfully and provided the Company partner with a significant enhancement to its design capabilities.
- 3.5.2 As a result the Company partner recorded improved profits and was more competitive.
- 3.5.3 Once the technical files and documentation had been created, the possibility of export markets become real and this presented the Company partner with a great opportunity that they can exploit.
- 3.5.4 The Company's design and prototyping facilities will be continually enhanced and there will be a need to continued investment and support in this area.
- 3.5.5 The Company has arranged to access the rapid prototyping facilities offered by the Knowledge Base partner to assist with future product development needs.
- 3.5.6 The Knowledge Base partner gained valuable experience and insights which it has used to create teaching case studies.
- 3.5.7 Elements of this experience have also supported on-going research activities.
- 3.5.8 A number of both undergraduate and also postgraduate students supported the KTP, and one of these was appointed by the Company.
- 3.5.9 There was an opportunity for further collaboration between the Company and the Knowledge Base partners. This related to the development of a European funded research and development project.

### **3.6 References**

- 3.6.1 Knowledge Transfer Partnership Proposal - Reference 6048, DTI, 2003
- 3.6.2 Knowledge Transfer Partnership Final Report - Reference 6048, DTI, 2006

## 4. Developing & Implementing a Strategic Marketing Plan

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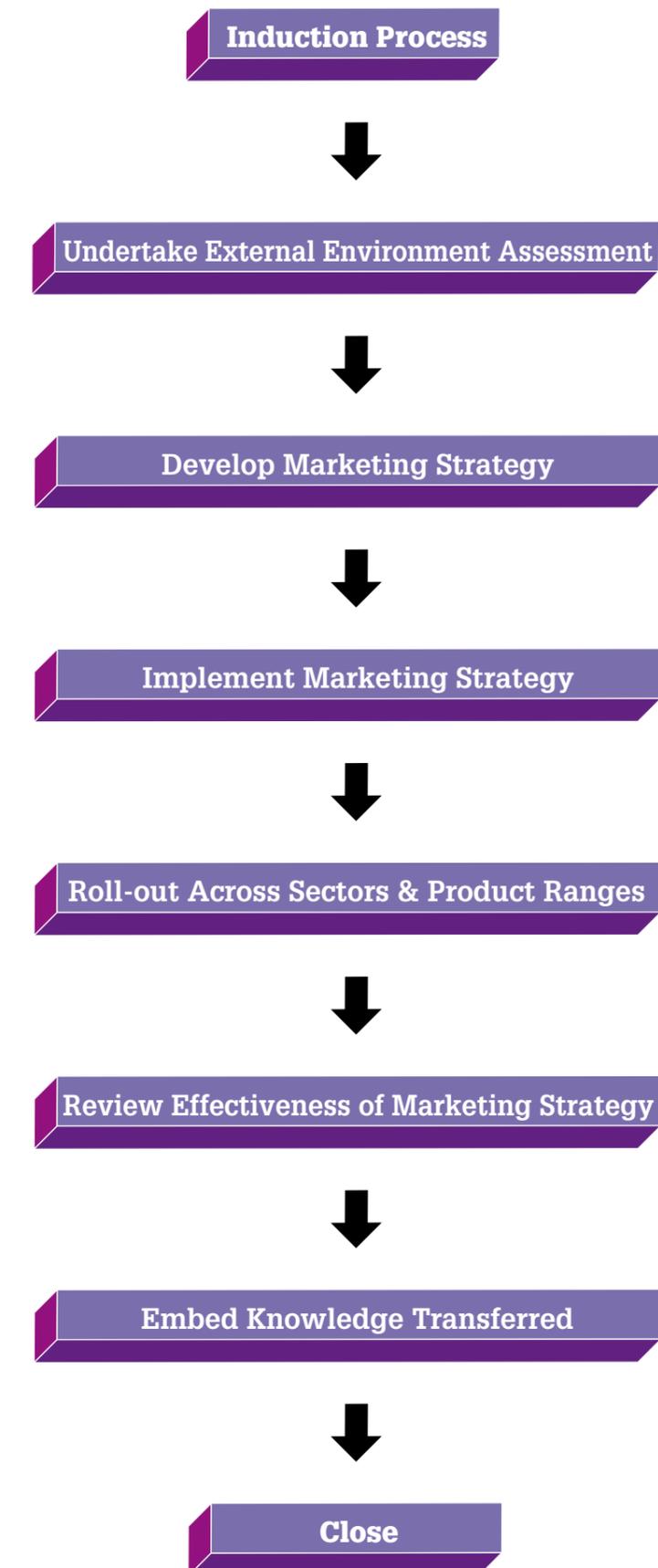
### 4.1 Introduction

- 4.1.1 The Company partner for this Knowledge Transfer Partnership (KTP) was a technology company that provided cost-effective and reliable mobile communication solutions.
- 4.1.2 The Company exclusively used Vodafone tariffs and acted on behalf of the network as its local business specialist.
- 4.1.3 It aimed to provide business users with a complete communication package to meet their precise needs and requirements.
- 4.1.4 The objectives of this KTP were to develop and implement a strategic marketing plan which repositioned the Company in the face of uncertainty and radical technological change in the mobile telecommunications market.

### 4.2 The Process of Knowledge Transfer

- 4.2.1 Following a period of familiarisation with the products and operations of the Company partner, it became apparent that although a considerable amount of information was held regarding their customers, there were also many key areas of missing data.
- 4.2.2 An evaluation was therefore undertaken of the data held, and restructuring was required so that it could be used as a platform for future marketing activity.
- 4.2.3 A marketing system was then established to facilitate the contacting of local media using templates and agreed formats. This enhanced the professional image of the Company and also made their marketing communications more effective.
- 4.2.4 Benchmarking the Company's current position was of clear importance and therefore contacting the key customers and clients was considered to be primary activity. This was achieved using a questionnaire that targeted strategic decision makers and probed their views concerning their dealings with the Company.
- 4.2.5 The feedback provided by the questionnaire indicated an overall level of satisfaction with certain key areas for immediate action.
- 4.2.6 A new corporate identity was then considered which reflected these positive messages, and acted as the foundation for the Company's future development and growth.
- 4.2.7 New business events were undertaken that built upon the positive messages determined from the benchmarking process, and fact-finding performed to establish a set format for the Company to follow when conducting future concentrated marketing campaigns.
- 4.2.8 Events held included the opening of the Company partner's new premises, to which many key customers (both current and potential) were invited, and from which several large contracts were secured.
- 4.2.9 With the Company web site acting as a major gateway for new business opportunities, proposals were developed and implemented that revised this facility to enhance information flow and to bring it in-line to reflect the new image and portfolio of marketing messages.
- 4.2.10 The structure and the content of the site was professionally laid out, and tailored to appeal to the Company partner's target markets.
- 4.2.11 Strategic alliances were created with suitable complimentary businesses to facilitate the sharing of business opportunities and the undertaking of joint publicity that would be of mutual benefit.

**Figure 4 - Knowledge Transfer Process Utilised**



4.2.12 A pilot programme was undertaken with Vodafone and as a result the Company received a 400% increase in funding. This demonstrated the great potential for growth in the Company's business that could be achieved through partnership activity.

4.2.13 As part of the development and business growth that was stimulated by the creation and implementation of the Company's strategic marketing plan, a corporate hospitality box was secured at a major sporting venue. Use of this facility led to securing the new business which resulted in the Company growing its customer base by a further 73 lines.

### **4.3 Benefits to the Knowledge Base Partner**

4.3.1 This KTP created the opportunities for research and consultancy collaborations between the Company and the Knowledge Base partners. IT related consultancy was delivered by the Knowledge Base partner to assist the Company partner with development activities.

4.3.2 The results of the KTP were fed into the postgraduate research to be undertaken by the Knowledge Base Partner into the effectiveness of Knowledge Transfer programmes working with local SMEs.

4.3.3 The profile of the Knowledge Base Partner was been raised through the positive publicity and promotional activity undertaken by the Company partner. This form of awareness raising often has a direct impact upon student numbers and can stimulate interest from other businesses requiring Knowledge Transfer support.

4.3.4 The KTP influenced the teaching of the Academic team and the curriculum of their taught courses at both undergraduate and post-graduate levels in the subject areas of strategy and marketing.

4.3.5 The KTP itself has provided very useful practical experience. This experience will be reflected in future teaching and research activities, and case study material will be developed for inclusion within both business development and marketing taught units.

4.3.6 The Knowledge Base Partner subsequently arranged for a Shell Technology Enterprise Programme (STEP) student to be placed within the Company.

### **4.4 Benefits to the Company Partner**

4.4.1 The Company partner gained in many different ways from working on this KTP. This included an enhanced understanding of marketing and the appropriate criteria for success.

4.4.2 The KTP also provided the Company with an improved perception of how customers and clients viewed them , and a portfolio of marketing messages that reflected both the Company's image and products.

4.4.3 A Marketing department was established for the Company to co-ordinate proactive campaigns and an awareness of future business development opportunities leading into potential new market areas was created within the Company.

4.4.4 An integrated system for the accounts, stock and contact relationship management was developed. This new system provided the Company with the capability to fully manage current and future marketing campaigns.

4.4.5 A professional website was created and implemented. The web site could be easily updated to ensure that its content was fresh and up to date. Other useful features included the ability to present the customer testimonials and an e-business facility that linked to the back office systems.

4.4.6 The KTP developed and implemented the infrastructure necessary to position the Company in such a way that it could react quickly to the changing needs of customers and clients. This enabled the Company partner to increase its proactive work and improve retention efficiency.

4.4.7 As a result, the Company partner were on course to complete their 3-year plan to increase their customer base by 50%.

4.4.8 The increase in sales reported by the Company partner is due to their enhanced relationship with Vodafone, which has in turn generated increased support for marketing and new business acquisition activities.

### **4.5 Conclusions**

4.5.1 The experience and knowledge gained by the Knowledge Base partner has resulted in more effective processes for the development and conduct of new programmes, with greater emphasis on IPR exploitation, research opportunities, and publications.

4.5.2 The KTP undertook a systematic review of the Company's product/service portfolio, market opportunities and competitors, to identify a clear focus and strategic direction. A strong strategic foundation was developed that enabled a shift in approach from reactive to proactive, with an increased ability to identify and exploit new opportunities in a busy market.

4.5.3 The KTP led to the establishment of an ongoing professional marketing activity, and contributed to the Company's future business plans by consolidating the growth of the business, with increased products and services targeted at customers.

4.5.4 In addition, the Company benefited from an increase in new sales leads resulting from concentrated marketing activity and an overall raising of the Company's profile in the region.

4.5.5 The KTP assisted in the establishment of a 3-year plan focusing on new business, retention and the growth of the Company's customer base.

4.5.6 Although the full impact was not visible at the end of the KTP, the Company partner will also benefit from further future improvements in both quality and operations which will lead to the revealing of new markets and the subsequent potential for increasing current markets, market share and overall profitability.

### **4.6 References**

4.6.1 Knowledge Transfer Partnership Proposal - Reference 0112, DTI, 2003

4.6.2 Knowledge Transfer Partnership Final Report - Reference 0112, DTI, 2006

## 5. Establishing Quality Monitoring & Management

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### 5.1 Introduction

5.1.1 The objective of this Knowledge Transfer Partnership (KTP) was to establish a quality and management framework that addressed the funding, organisational structure and service levels of the Company partner. This was to be achieved by making effective use of relevant analysis and monitoring tools, and was considered to be an essential strategic development for the Company partner which would have critical impact upon their future business direction and operations.

5.1.2 The quality models outlined for use in this KTP were the European Foundation for Quality Management (EFQM), Business Excellence Model and the Balanced Scorecard (BS) Framework.

5.1.3 The knowledge base partner had considerable experience in the development and implementation of these models, however the application to this particular Company partner was considered to be a challenge due to the nature of their sector and the types of activities that they undertook.

### 5.2 The Process of Knowledge Transfer

5.2.1 The KTP Associate undertook a review to identify the process, organisational implications and associated short-term actions required.

5.2.2 The correlation between markets and service ranges was also analysed to determine both penetration and coverage.

5.2.3 A competitor analysis was completed with comparisons to the Company partner made in the areas of their strengths, weaknesses and positioning. Partnership opportunities were also identified and key collaborations were established.

5.2.4 Critical activities relating to service delivery were process mapped, these included interactions with outsourced organisations. The basis for the EFQM excellence model was employed so that it could be used as a diagnostic tool. This resulted in restructuring proposals and EFQM reviews with senior management.

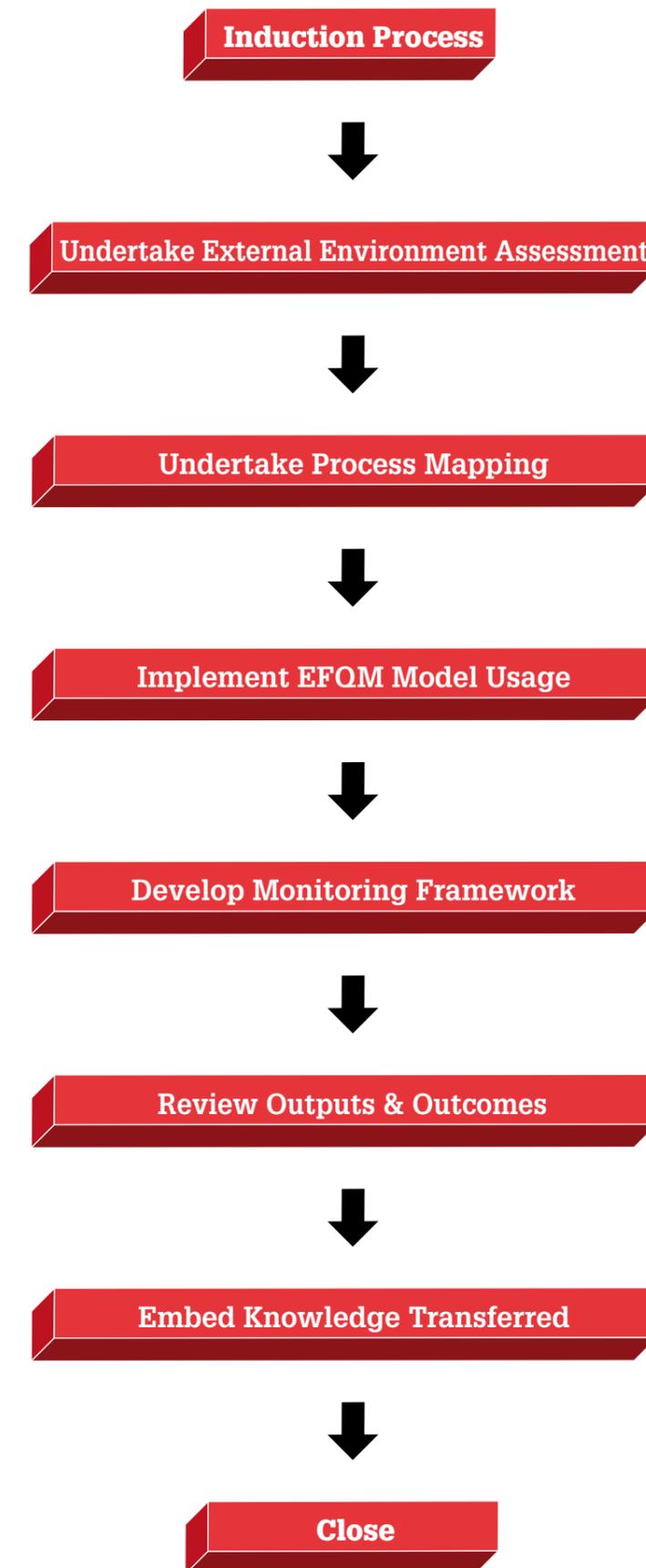
5.2.5 The implementation of the EFQM model was an interactive process with repeated analysis, reviews and self assessments until improved levels of operational performance and quality were achieved. The vehicle for continued management commitment and the targeting / implementation of improvement opportunities was the monthly Operational Management Team Meetings (OMT). The establishment of the OMT group was as a result of the KTP initiative and this helped to embed a culture of continuous improvement throughout the organisation.

5.2.6 Using the Balance Scorecard approach, on-going monitoring systems were also established to ensure performance levels were maintained based upon a portfolio of key performance indicators developed. Feedback mechanisms were implemented and the regular completion of departmental scorecards achieved.

5.2.7 Key processes within the Company partner were identified through the mapping exercise, eg. "floating support". This ensured that the appropriate number of workers with the requisite skills set were available at each of the Company's sites in order to meet service user demand. The processes were subsequently re-engineered using business process re-engineering methods to improve performance in critical areas of the organisation.

5.2.8 A change management process was also undertaken to ensure that a culture change was established within the Company partner so that the new working methods development by this KTP could be fully embedded within the entire organisation.

Figure 5 - Knowledge Transfer Process Utilised



### **5.3 Benefits to the Knowledge Base Partner**

- 5.3.1 The Academic team gained valuable expertise in a number of key areas including the practical application of the quality models utilised to support the Company partner. These have had a significant impact upon teaching and have provided the basis for practical case study material which has been used to demonstrate the outputs and outcomes that can be achieved through the application of quality models.
- 5.3.2 Work undertaken to support this KTP was used to support the Academic Supervisor's application for Certified Management Consultant status with the Institute of Management Consultancy, and had direct input to their being awarded a Postgraduate Diploma.
- 5.3.3 The Academic Supervisor obtained a life coaching certificate and undertook a life coaching Diploma. The Academic Supervisor mentored the KTP Associate as part of the required fieldwork to obtain this diploma.
- 5.3.4 The KTP provided the Academic Supervisor with an opportunity to further develop their own personal area of research which the results of which will form part of their PhD submission.
- 5.3.5 This research was strengthened by links with the Performance Management Association (PMA) which is a 'think tank' headed by Cranfield University.
- 5.3.6 The KTP influenced the teaching of the Academic team and the curriculum of taught courses at both undergraduate and post-graduate levels in the subject areas of balance scorecard and EFQM which are traditionally 'dry' areas without real life practical examples to bring the subjects to life.
- 5.3.7 Working on this KTP brought very useful practical experience into the Knowledge Base partner. This experience was reflected in teaching and research activities. Case study material was developed for inclusion within taught units on Strategic Management and also Corporate Performance Management.
- 5.3.8 The use of five undergraduate and two postgraduate students to support this KTP proved to be of benefit to all partners, and provided the students involved with a worthwhile learning experience that supported their studies.

### **5.4 Benefits to the Company Partner**

- 5.4.1 The Company partner was introduced to the principles of process mapping. The Academic Supervisor mapped the first process and carried out a subsequent review with the process owner. This provided the Associate with the confidence to repeat the process across the organisation. The mapping provided a unique insight into the Company's operations.
- 5.4.2 The generic EFQM excellence model was tailored to the strategy, culture, vision and business processes of the Company partner. The Academic Supervisor facilitated the Associate through this process and ensured that the model was relevant to the needs of the Company partner and was specified in terms that reflected the working environment. This allowed the model to be readily understood by all of the stakeholders within the Company.
- 5.4.3 The annual EFQM self-assessments were generated and disseminated to senior, middle and junior management. The results of the assessment, and opportunities for improvement, were subsequently posted on the Company's intranet.
- 5.4.4 The monthly building of balanced scorecards was achieved using a computerised system which recorded hard objective data based on agreed Key Performance Indicators (KPI) that complemented the self assessed EFQM Framework.
- 5.4.5 Development of the Operational Management Team meetings equipped the Operational Managers with a forum to discuss improvement initiatives and ensured that the managers embraced the principles of continuous improvement. As a result they have become more proactive in the implementation of strategy.
- 5.4.6 The KTP facilitated the transfer of 'organisational effectiveness' expertise, thereby enabling the Company partner to improve its on-going performance and reporting/monitoring, with improved allocation of resources, and a better knowledge of how to strive towards organisational excellence.

### **5.5 Conclusions**

- 5.5.1 The partnership exceeded all of the objectives defined in the original KTP proposal. It improved the organisational effectiveness of the Company partner in the context of new legislation. The organisation, processes and models of service delivery used by the Company partner were reviewed to meet the needs of particular client groups and of the various geographic demands.
- 5.5.2 Organisational performance was dramatically improved through the setting up of an EFQM Excellence Model Framework by which effectiveness in processes could be better understood and assessed. The EFQM Excellence Model was also linked to a Balanced Scorecard Framework to provide a means by which the key dimensions of management and monitoring could be reported to critical stakeholders to form part of the decision making process.
- 5.5.3 The basis of the EFQM/BS Frameworks was established as a clear and authoritative foundation for Service Review under the requirements of the relevant funding streams and legislation appropriate to the Company partner. Further requirements for Management Information Systems (MIS) to support the EFQM/BS-based monitoring were developed and the Framework created was embedded within the Company partner's operations to enable it to deliver desired improvements on an on-going basis.
- 5.5.4 Dissemination to, and training of, Company staff was undertaken to ensure take-up and full compliance throughout the organisation so that the impact and benefits of the KTP were maximised, and the foundations for a long-term relationship with the Knowledge Base partner established.

### **5.6 References**

- 5.6.1 Knowledge Transfer Partnership Proposal - Reference 0147, DTI, 2004
- 5.6.2 Knowledge Transfer Partnership Final Report - Reference 0147, DTI, 2006



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