

**Title:** Digital innovation in sport - Barriers and opportunities for branded fitness apps for fans

## **Abstract**

The COVID-19 pandemic is challenging the growth and future of businesses globally and technological innovation, via digital means, has been identified as a key factor for brands to survive the pandemic. However, whilst the majority of decision-makers in sports clubs recognise the value of innovation, less than half have a clear strategy in this area generally let alone in digital innovation. This paper examines the opportunities and barriers for sporting brands in adopting digital innovations to engage fans.

Using a branded fitness smartphone app as an example of a digital innovation to stimulate discussion, we interviewed 13 decision-makers in sport primarily working in marketing, communications and managerial roles within professional sports clubs. Following thematic analysis, the themes from the interview data were, perceived benefits, barriers to adoption, and overcoming barriers. The study also presents potential solutions to enable sports clubs to overcome such adoption barriers in the future. It provides important managerial and tactical recommendations to sports clubs. The need for a clear strategy for digital innovation is identified and we conclude that digital innovation is missing from typologies of sport innovation, reflective of its overlooked importance within the sector and call for greater recognition.

**Keywords:** Digital technology, sport, Barriers, smartphone apps, innovation, sport, fans

## 1.0 Introduction

It is now widely accepted that being innovative will allow an organisation to respond to an ever-changing society and an increasingly competitive market (Corthouts et al., 2020; Crossan and Apaydin, 2010). Furthermore, it has been argued that every organisation could benefit from digital technology and innovation in order to protect their business and respond to changes in a disruptive and uncertain world (Hueske and Guenther, 2015; Ferreira, Fernandes & Ferreira, 2019; Fenton et al., 2020; Jahanmir et al. 2020). The COVID-19 pandemic presents one of the greatest challenges to the growth and future of brands. Technological innovation, potentially via digital means has been identified as a key factor for brands to survive the pandemic (Ratten, 2020) and will require decision makers to identify and overcome barriers to innovation. Digital innovation, described as “the use of digital technology during the process of innovating” (Nambisan et al., 2017: 223), has radically changed the nature and structure of new products and services in a disruptive world (Fenton, 2020). Consumers engage globally with sporting brands through their smartphones, which creates excellent opportunities for innovation to engage fans.

Research on changing sporting consumption behaviours demonstrate that young people are increasingly turning away from more traditional media consumption such as television and towards smartphone engagement, which creates a complex and shifting market and highlights the importance of innovation in digital spaces (Fenton and Helleu, 2019; Lehew, 2019; Miah, 2017). The need for digital innovation may be more significant for sports organisations (Ratten, 2020). However, recent research has shown that although decision-makers within sports clubs recognise the value of innovation, less than half have a clear strategy in this area, leaving them behind

other sectors in terms of innovation strategy (PwC, 2019). For example, whilst most sporting brands engage fans through social media applications (apps), a much smaller number of clubs have their own branded smartphone app and finding the balance of useful features and content is an ongoing challenge (McMullan, 2018).

Hueske & Guenther (2015) argue that context-specific research into innovation barriers is needed, and this paper responds to their call by contributing towards studies in this area by providing an understanding of digital innovation barriers in a sport context. Shah (2000) suggests that existing businesses are less likely to be dominant innovators when it comes to new products. As such, this study aims to identify the perceived barriers in the adoption of digital innovation by existing sports organisations. Specifically, we used a project called FanFit, ([www.FanFit.co.uk](http://www.FanFit.co.uk)) a new digital innovation for engaging sports fans through branded fitness smartphone apps as a vehicle for the study of digital innovation in sport. The FanFit project began in 2015 at the University of Salford in the UK and aimed to use digital innovation and smartphone apps to engage sports clubs and their fans around fitness and wellbeing. It was designed to be native to Android and iPhone operating systems and to automatically read in sports club news, match fixtures and social media updates as a typical club app would. In addition, it was able to track walking and running levels of fans automatically through just a smartphone or with the addition of a fitness wristband. The app also had the ability to create fitness leagues between fans (private, global, or monthly). The app was designed to be 'rebrandable' and customisable for different sport club brands and allowed fans to engage with their favourite team in order to promote healthier lifestyles. Two iterations of the

project exist at the time of writing including Salford Red Devils Rugby League Club and Rangers Football Club from Scotland.

We, therefore, pose the question, what are the opportunities and barriers for sporting brands to adopt digital innovations to engage fans? Our sub questions were:

1. How can sports clubs benefit from digital innovations?
2. What are the barriers to adoption of digital innovations?
3. How can digital innovation barriers be overcome?

## 2.0 Conceptual Framework

To understand the barriers to innovation, it is first necessary to understand the extent and nature of innovation in the sport industry. This sector is often viewed as a market where innovation is crucial (Winand et al., 2016) and a critical focus of many organisations (Ratten, 2016). In the case of professional sport, innovation is often linked to economic benefit or competitive advantage on the playing field (Escamilla-Fajardo et al., 2019). Pajoutan & Seifried (2014) emphasise the importance of innovation, claiming that the creation or maintenance of competitive advantage is significantly impacted by a lack of innovation. Sports teams may innovate through increasingly high-quality and high-tech broadcasts (Meese and Podkalicka, 2015), and sport, as a sector, is often linked with technological innovation (Trequattrini et al., 2016). However, not all innovation in sport is product or performance based and it can also be process-based and innovation can be seen in off-field developments such as digital tickets sales and products (Ratten, 2016).

Nevertheless, Tjørndal (2016: 39) identifies the lack of a strategic approach to innovation by sport organisations, a failure to anticipate the changes that may result

and goes on to claim that sport organisations “need to develop strategies for innovation and implement strategic management of innovation processes”. In doing so, she echoes the thoughts of Damanpour & Schneider (2006) who claim that any organisation should innovate to be effective or to survive.

Tjørndal (2017) developed a typology of innovation in sport, based on a review of 73 academic publications on the topic. Her typology lists social innovation, technological innovation, commercial innovation, community-based innovation and organizational innovation. Ratten (2016) also includes technological innovation (alongside service and disruptive innovation) in her discussion of sport innovation but in both cases digital innovation is lacking and so its use by sports organisations is not well understood. Given the lack of a “coherent body of literature about the role of innovation in sport” (Ratten, 2010: 239), it is, therefore, necessary to turn to the wider field of innovation studies to understand the adoption of digital innovations by sports organisations and the opportunities and barriers that may be faced.

## 2.1 Innovation

Although early definitions of innovation focussed on new outputs (see Zaltman, Duncan, and Holbek, 1973) it refers as much to new ideas or practices as well as new objects. Indeed, Escamilla-Fajardo, Núñez-Pomar, & Parra-Camacho (2019) argue that innovation includes novelty, experimentation and any creative process that result in new products, experimentation or technology. Following a systematic review of innovation literature published across 27 years, Crossan & Apaydin (2010: 1155) define innovation as:

production or adoption, assimilation, and exploitation of a value-added novelty in economic and social spheres; renewal and enlargement of products, services, and markets; development of new methods of production; and establishment of new management systems. It is both a process and an outcome.

At an organisational level, innovation can involve “the adoption of a new product, service, process, technology, policy, structure or administrative system” (Damanpour & Schneider, 2006: 216). While creativity can play a key role in driving innovation (Ucar, 2018), an organisation does not need to create a new practice/artefact to innovate but may do so by the early adoption of it, or by the successful exploitation of the new ideas of others that are of use to the organisation (Winand and Anagnostopoulos, 2017). Therefore, innovation can originate from within an organisation or come from outside, which requires an adoption decision within the organisation (Hueske and Guenther, 2015).

Damanpour and Schneider (2006) identify three broad phases of innovation; *initiation*, *adoption decision*, and *implementation*. During the initiation phase, members of an organisation learn about the existence of an innovation and propose its adoption. These ‘implementing agents’ (Winand and Anagnostopoulos, 2017) must first gain knowledge about the innovation and, importantly, be persuaded about its merits. During the next phase, the proposed innovation will be assessed with a final decision made by what Damanpour and Schneider (2006: 217) refer to as “top organizational echelons”, further emphasising the role of key decision-makers in the adoption of innovations. Finally, an innovation is then put into use by the organisation, typically by more front-line employees. In our current study it is, therefore, important to consider a variety of different positions within organisations to identify attitudes to innovation at all levels.

As innovation has become increasingly embedded in scientific and technological knowledge (Gagliardi, 2013), the intellectual capital of an organisation has become increasingly important. However, this requirement may also be an impediment to innovation as organisations may lack the requisite knowledge to create new products or strategies. As such, an organisation's capacity to innovate is tied to its ability to recognise the value of and then exploit new ideas and depends on the existing intellectual capacity of the organisation and its history of innovation (Winand et al., 2016). It is of vital importance that they develop their innovation capacity as management scholars identify it as being the key determinant of business performance (Crossan and Apaydin, 2010). Therefore, it is now recognised that collaborations with the wider community, other organisations, networks, intermediaries, and outsourcing are essential if organisations such as sports clubs are to develop innovation strategies and remove innovation barriers (De Fuentes et al., 2018; Füller et al., 2007; Gagliardi, 2013; Gerke, 2016; Jenson et al., 2019). However, such collaborations are deterred when firms lack the requisite skills, information on technology or markets, and finance (Antonioli et al., 2017), all factors that may be salient for sporting organisations.

## **2.2 Innovation Barriers**

Innovation can be the result of managerial decision-making at a number of levels, often linked to a strategic approach to drive change within an organisation. The willingness of managers to explore or exploit new innovations and their attitude to innovation are crucial for its success, even when innovations come from outside an organisation (Damanpour and Schneider, 2006; Winand et al., 2016; Winand and Anagnostopoulos, 2017). Those managers with more liberal attitudes towards

change and a willingness to accept new ideas are more likely to engage with innovation and likely to possess an innovation strategy (Damanpour and Schneider, 2006; Ratten, 2016; Winand and Anagnostopoulos, 2017). Those without this attitude can impede, delay or completely block innovation, acting as innovation barriers (Hueske and Guenther, 2015).

It should also be noted that a distinction can be drawn between firms that are either not willing to innovate or have no need to and those that choose to devote resources to innovation, but, due to innovation barriers, do not manage to innovate successfully (De Fuentes et al., 2018). In such instances, the organisation is likely to be unskilled in the identification of innovation barriers, a skill that has been described as fundamental to not only understand the innovation process but to overcome innovation barriers (Hueske and Guenther, 2015). Interestingly, it is argued that it is the more innovative firms that identify more barriers, but they are also able to overcome them (Hölzl and Janger, 2013). Through two separate reviews of innovation barriers, Hueske and Guenther (2015) and De Fuentes et al. (2018) list the lack of knowledge (as discussed above), external stakeholders, market barriers, the state and regulations, access to public support, and a lack of information in technologies and markets as organisational innovation barriers. However, while barriers to innovation can be non-financial in nature, cost is frequently cited as a significant innovation barrier (Bodlaj et al., 2020; D'Este et al., 2012; De Fuentes et al., 2018; Hueske et al., 2015), particularly for organisation with abandoned innovation projects (Hölzl and Janger, 2013).



In addition to the role that strategic decision-makers play in innovation, a number of organisational factors can act as innovation barriers, such as a lack of an innovation strategy and poor resourcing (Hueske and Guenther, 2015; Ratten, 2016). One of these key factors is the role of technology, both during the development of the innovation and its integration within an organisation (Trequattrini et al., 2016). In particular, Web 2.0 technology is driving innovation in a number of areas and digital innovations are increasingly the focus of academic research (Ferreira et al., 2019). As noted above, the lack of understanding of digital innovation in sport presents a challenge but the use of smartphones by consumers and organisations is growing and provides an avenue for us to explore this area.

### **2.3 Smartphones and innovation**

Whereas traditional forms of media have used one-directional communication models, smartphone communication practices such as social media applications permit two-way communication between the site and users that allows them to create their own content and interact with other users (Fenton & Heleu, 2019). The development of Web 2.0 technology has also “fuelled the tremendous growth in mobile marketing activities, including mobile advertising, location-based marketing, mobile couponing, and mobile marketing apps” (Lam & Shankar, 2014: 26). In a sport context, technology developments enable fans to play sport-related games online, gamble online and watch matches on their mobile devices (Ratten, 2010). As a result, Kang (2015) has identified that smartphone usage by fans is associated with increased loyalty in both direct and indirect fans.

Successful smartphone games such as Pokémon GO have also highlighted the popularity of immersive, augmented reality apps (Adlakha et al., 2017; Rauschnabel, Rossmann & Dieck, 2017) and the effectiveness of gamification on health behaviours and social life (Kaczmarek et al., 2017). While virtual mobile games and games that require physical play/activity have existed for many decades, Pokémon GO successfully connected users to urban (physical) spaces, augmenting the real and the digital, in ways that previous games had not (Adlakha et al., 2017). The app generated approximately US\$600m (£470m) in global revenue in its first three months (Adlakha et al, 2017). Yet, more significantly, it also increased levels of physical activity, particularly in groups that traditionally have lower levels of activity, such as teens, preteens, and younger men (Clark & Clark, 2016; Gabbiadini, Sagioglou & Greitemeyer, 2018; Ma et al 2018; Marquet, Alberico & Hipp, 2018).

Nevertheless, negative attitudes towards technology, often based on leaders' own use of the technology can limit the uptake of digital innovation in an organisation (Jahanmir and Cavadas, 2018). However, the growing influence of information communication technology and smartphones, in particular by younger fans has created increasing pressure on sporting bodies to be more innovative (Sellitto et al., 2016). It is therefore crucial that sports organisations understand, accept and utilise new technologies to meet the expectations of the marketplace and their fanbase (Fenton et al., 2020; Pajoutan and Seifried, 2014). Yet, as we note above, discussions of digital innovation in sport and smartphones are still lacking. This study addresses this gap and aims to add to the existing theoretical understanding of innovation in sport by identifying the barriers and opportunities that arise from the adoption of digital innovations.

### 3.0 Methodology

In order to effectively answer the research questions, a qualitative, inductive approach was adopted to gain in-depth data to allow a deep understanding of the evolving area of digital innovation in sport (Geertz, 1973; Klein and Myers, 1999). In order to create a richer and focussed discussion around the barriers and opportunities of such an innovation, we first provided the interviewees with stimulus material (in the form of details of FanFit). Semi-structured interviews, guided by the research questions in this study relating to their experiences with the barriers and opportunities for digital innovations, then enabled the team to expand upon individual responses in more detail, which also enabled elaboration on the discussion.

Participants consisted of 13 decision-makers in sport, primarily working in marketing, communications and managerial roles within professional sports clubs as detailed in Table 1, aged from 24-60. Interview participants were recruited using purposive sampling techniques (Nelson et al., 2017) and recommendations of interviewees in order to identify appropriate decision-makers. It was important that respondents were over 18 and had recent experience of innovation and decision-making in a professional sports club. An overview of the key demographic characteristics of interviewees is shown below in Table 1. The interviewees were chosen because of their connections to the research team, which allowed us to access interviews to these busy individuals.

<b>Participant</b>	<b>Club</b>	<b>Occupation</b>	<b>Location</b>
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1	Top Club – Premier League	Product Manager	England
2	Top Club – Premier League	VP Media Technology & Delivery	England
3	Mid Club – Premier League	Director of Health and Sport	England
4	Top Club – Premier League	Head of Research	England
5	Top Club Charity – Premier League	Head of Communications	Scotland
6	Small Club – Second Division	Technical and Sporting Director	India
7	Small Club – League Two	Media & Marketing Manager	England
8	Top Club Charity – Premier League	Senior Communications Executive	Scotland
9	Mid Club Charity – Championship	Programme Director	Wales
10	Top Club – Premier League (Rugby)	Social Media Producer	England
11	Small Club – League One	Associate Director	England

12	Top Club – First Division (Top Tier)	Executive Marketing Director	Brazil
13	Top Club – First Division (Top Tier)	VP of Communications and PR	Brazil

Interviews took place between July 2019 and January 2020, over the telephone, in person or via Skype and lasted between 20 to 40 minutes each. Furthermore, recognizing that decision-makers are busy people, we also accepted a smaller number of responses by email. This agile, bricolage approach was adopted in order to achieve a geographically dispersed sample from the UK, India and South America, which had the added advantage of allowing us to include participants who work for a range of clubs from different leagues and of different sizes and cultures.

All interviews in this study were transcribed and encoded. We used a thematic approach as outlined by Braun and Clarke (2012), generating themes rather than constructing them. In line with this approach, we employed a qualitative data analysis software package NVivo to analyse and initially code the dataset. The initial codes were reviewed to identify areas of similarity and overlap that could be used to generate a theme, which would have captured something important about the data in relation to the research question. All themes were then independently reviewed by the research team in relation to the initial codes and all of the data gathered to ensure that all the themes were relevant. Throughout this process, the fourth and fifth authors acted as ‘critical friends’. Their role was to challenge the first and second authors on their interpretation of the data, and the organisation of the

thematic structure. The themes from the interview data were, perceived benefits, barriers to adoption, overcoming barriers.

## 4.0 Findings and discussion

### 4.1 Perceived benefits of digital innovation

#### 4.1.1 – Corporate social responsibility (CSR)

The primary benefit noted by interviewees related to Corporate social responsibility (CSR). CSR is a self-regulating business model that helps a company be socially accountable—to itself, its stakeholders, and the public. By practicing CSR, organisations can be conscious of the kind of impact they are having on all aspects of society, including economic, social, and environmental (Chen, 2020) and sports clubs are no different from other businesses. Eight of the participants believed that digital innovation, particularly through the use of a health and fitness-related app, would be a good tool for them to enhance their CSR activity. P5, talks about how the club can “*promote health benefits with participants*” with the help of a fitness app. Functions such as a step tracker and the ability to promote competition between participants were identified as particularly beneficial. It was suggested by our participants that sports clubs and their charity foundations are increasingly looking to improve the fitness and wellbeing of their local community as suggested by P11: “*we wanna [want to] be able to help the community be as fit as possible so what we try and [be a] delivery vehicle for things like camp to be able to help the community as best as we can*”. Digital innovations with a health and fitness focus can, therefore, also then help clubs to achieve their CSR goals by including the psychological factors which affect brand community and physical activity among fans. When the

participant enjoys the activity, then it tends to have a positive impact on their participation in leisure-time sports (Henderson & Ainsworth, 2002; Rocha & Gratao, 2018; Visek et al., 2015).

#### 4.1.2 – Digital community through gamification

As noted earlier, the gamification of health behaviours and social life is increasingly popular and can be effective in increasing physical activity (Kaczmarek et al., 2017). However, gamification has an added benefit in terms of building brand community. As P7 elaborates, *“by making it [activity tracking] a competition, people are going to have more competitiveness about it and to compete with friends”*. Brand communities can have a positive impact on an individual and brand building (Peterson and Reid, 2003) and the sense of competition gives a sense of reward. A fan might also claim that they’ve *“ran more than [a club’s] star players... be able to say I’ve beaten you this week and the great thing about that is that the fan become fitter”* (P11).

Allowing fans to feel closer to the players is also a key aspect of sports club digital marketing (Anagnostopoulos et al., 2018; Chadwick, 2009). In terms of fan engagement, providing access to social media platforms, news and club updates in one place was seen as an important innovation by P8 saying that their strategy involved *“engaging with our fans in a way which enables them to access our news and social media on the go”*. Digital innovations should therefore help to build a brand. P10 further elaborates this with regard to a branded fitness and wellbeing app, such as FanFit, identifying a *“two-fold benefit to it as one, the app served the purpose of club to get the product and brand in the hands of fans and give another*

*platform for the fans to engage in*". P10 therefore highlights that digital innovations can not only get the club brand and news to fans but also have the benefit of the fitness features as another platform for engagement.

According to Gary and Gary (2012) a good fan engagement strategy can result in greater fan loyalty and increase the intention of casual fans to support the team, which could act as one of the key unique selling points (USP) for digital innovations such as FanFit. According to P13, *"The more it [digital innovation] offers; the more he will stay using FanFit."* However, these strategies need not be limited to digital spaces and in order to engage with consumers, it was also suggested that digital innovations can link to physical events as P1 states: *"we [the club] do run events and we do run content, marketing content, we do run these engaging sessions with organisations immediately around us in our own city"*. Therefore, an innovation strategy that combines both online and offline activities can be a positive way to engage local fans. Organizing small-scale events is going to reinforce community building, which would lead to greater engagement with members who have a strong feeling of community with the added benefits that they are likely to benefit from improved civic participation (Chavis and Wandersman 1990), be less introvert, and more likely to volunteer (Omoto and Snyder 2009). These events will also create social interaction which often leads to the adoption of wearable fitness trackers and also highlights how consumers have more intention to take part in physical exercise (Zhu, Dailey, Kreitzberg, & Bernhardt, 2017).



## 4.2 Barriers to the adoption of digital innovations

### 4.2.1 Cost

For our participants, the primary barrier for the adoption of new digital innovations was cost and resourcing, as has been found previously (see Bodlaj et al., 2020; D'Este et al., 2012; De Fuentes et al., 2018; Hueske et al., 2015). Participants also highlighted a public misconception that professional sports clubs are very rich, with a number of participants keen to stress that there is a difference in the budget for first team players and the lesser budget available for other areas of the club, such as innovation. According to The European Champion report by KPMG Football Benchmark (2019), playing staff costs of the clubs included in the report accounted for more than 50% of their total outlay, which leads to clubs being tightly budgeted. P11, for example, who is in a directorial role for an English football club, says that “*contrary to popular belief, sports team do not have a lot of money*”. This view is also valid not just for smaller clubs but also for bigger clubs which have also made significant financial losses. Financial decision-makers in sport and SMEs have found costs of digital innovations to be a barrier (Bodlaj, 2020; Fenton, 2020) and it was suggested that innovation promoters had to make a very clear case for return on investment, as the following quote exemplifies:

*the decision-makers want to know the difference it [innovation] will make and if it is worth the cost and reward that's gonna [going to] be there...it is hard to get a decision out of those guys because they are busy unless you are bringing an idea to the table that will move the balance sheet by £10 mil[lion] quid. P11*

As noted above, managers without the vision to see the benefits from innovation can act as innovation barriers (Hueske & Guenther, 2015). From our interviews, this

barrier is evident not just through a reluctance to allocate finances that might be required to facilitate innovation but also as a reluctance to redistribute human resources. Highlighting this barrier, P4 said,

*The clubs typically have limited human resources that are already dedicated to specific daily tasks. Consequently, creating the bandwidth to manage new applications that are outside of the core day-to-day activities is a challenge.*

Thus, while sports organisations may be well resourced, generally the area of innovation is poorly resourced and creates a barrier, as has been found previously (Hueske and Guenther, 2015; Ratten, 2016). Such a finding may be indicative of an industry that is not open to innovation and where innovation strategies are lacking (Tjørndal, 2016).

#### **4.2.2 Technology as a barrier**

The constant need to evolve and utilise data appropriately via innovations such as smartphone apps is critical (Fenton et al, 2020). P10 highlights the challenge of a rapidly changing mobile application market, stating that it is important “*to keep up with what is a very fast-moving platform and marketplace but also reinvigorate the app every time it needs to*”. Another argument for the need to continually innovate came from P8 who is currently working at a major football club in Scotland. P8 highlighted the fact that “*tracking steps isn’t really a new thing*”. Therefore, digital innovations should continue to develop and evolve to meet the shifting needs of fans and take advantage of the capabilities of mediums such as smartphones as outlined by Adlakha et al., (2017).

Furthermore, P8 spoke about the need to ensure that a health-focussed digital innovation, such as FanFit, is not just a step counter, stating that “*I’d just make sure*

*that the app is about more than just steps etc. Prizes is a great initiative for this...*

P12 has similar views, saying that *“the consumer has to have a benefit, with gamification, with fantasy games, or with partnerships and discounts. He needs to feel that he is getting benefits.”* These mentions of gamification ties in with the literature such as Kaczmarek *et al.* (2017) and Ratten (2010) who highlight the importance of this concept for engagement. In a similar manner, interviewees from England and Brazil discussed the need for health apps to involve more features. P13 suggests that *“the more [an app] is active with the end-user through its multiplatform of entertainment and consumption, digital content and shopping, the more [it] is running and being used.”* This highlights another technology challenge of trying to integrate different services as a multi-platform.

The customer base of sports clubs are generally fans who are more passionate, engaged and loyal to their clubs (brands) than an average customer. Being a loyal fan is not the same as changing one’s habit or behaviour as per the whim of the sports club, especially when the fans are dissatisfied and disconnected with the clubs, so adapting and making changes as part of a club’s innovation strategy will not be easy. P1 highlights that *“It requires [effort] to get people to take part to maintain that momentum is a challenge for projects like FanFit to find resource in order to change behaviours.”*

P11 discussed the legal aspects as a barrier, saying that for apps there are *“certain requirement we’ve [got] to adhere to. Because they do not want to take the eyeball of certain things. So that’s where for example it looks little difficult for us to utilise this.”*

Regulation and requirements for digital innovations can therefore be considered

another barrier which due to the external bodies which sports clubs have to adhere to.

So, it is clear there are a range of barriers to adopting digital innovations such as the FanFit smartphone app, but we also asked the same decision-makers for their views on overcoming these barriers for continuity to achieve a more complete understanding of the barriers and related opportunities to fully answer the research questions.

### 4.3 How can digital innovation barriers be overcome

#### 4.3.1 Strategy and Innovation

One of the solutions suggested (by eight out of eleven participants) for overcoming innovation barriers was to have a clear strategy in place. For example, P7 suggested the need for, *“just having a great plan in place about how you want to progress and what roadmap you want”*. A lot of organizations enter a market without a strategy, and they do not have a clear plan. This lack of planning has been shown to be particularly the case for innovation (Tjørndal, 2016). While an innovation strategy is needed at a broad level (with a clear business and revenue model), it was also shown to be important that there was a strategy for how digital innovations would be used and particularly the data that can (legitimately) be gleaned from users. The data that gets collected can be used in order to refine the offering and unique selling points, to understand more about the audience and to develop the road map or future direction of a digital innovation. Useful data can also be used to overcome barriers, as pointed out by P10, *“Once you’ve got that data, you can streamline into anything you want and those barriers disappear”*. Data was therefore seen as a

critical aspect of overcoming digital innovation barriers, which concurs with the literature such as Fenton et al, (2020). Participants highlighted that this data had the added advantage of allowing clubs to generate income, if they were prepared to be innovative, as shown in the following three quotes:

*people can use it [a digital innovation] for free and into the licensing can it be backed into a project potentially that might have funding already secured. P9*

*we are still thinking about generating revenue on our digital platforms, social media, our content, revenue on our consolidated social media such as YouTube and Facebook. P12*

*sponsors would have an interest on the database that the football clubs could have with this App, this data could provide a better commercial experience of the brand with the fans. P13*

Furthermore, income generation was also linked to the opportunity to develop collaborations with external organisations (De Fuentes et al., 2018; Füller et al., 2007; Gagliardi, 2013; Gerke, 2016; Jenson et al., 2019). P12 is of the opinion that:

*foreign investment funds are looking for assets all around, especially in emerging markets such as Brazil. So, important brands want to team up with football clubs and you have infinite possibilities of exploring this.*

It has been noted above that the attitudes of decision-makers is a key factor in the presence of innovation strategies or the adoption of innovations and our interviewees highlighted the need to engage with these individuals in order for digital innovations to succeed. As an example, P1 put great emphasis on establishing relationships with sport club officials and getting the leaders in sports clubs involved at an early stage by having a conversation “*with the senior leadership team is going to help because they become champions and are involved right the way through*”. In some ways, these leaders can act as fans and have a sense of commitment, involvement, shared values and trust (Bee & Khale, 2006) with digital innovations. However, it was

again clear that these leaders needed to be convinced of the benefits, particularly the financial ones of innovations.

#### 4.3.2 Adaptability and Content curation

P9 highlighted the importance of flexibility to engage fans:

*in terms of obviously engagement keeping it fast and exciting going forward... and getting the potential service users to shape to make sure it's what they want and what they need, and you can get across any future developments they might want to see as well.*

One of the participant suggestions to overcome the barriers of content and app fragmentation was a “joint-applications” approach as suggested by P3. This would involve “*integrating [health and wellbeing] capabilities into the club app that they [consumers] might already have*” as highlighted by P7. This integration may have the added benefit of helping to reduce the barrier of cost and human resourcing, whilst removing the worry of sports clubs that they would be fragmenting their fans and content. According to P12, this approach could also help clubs increase usage, return and retention to the club’s app. The more a fan engages the more that fan will consider himself as a part of the sport team they support (Pronschinske et al., 2012) and the team to be their own (Sashi, 2012). Being able to add fans’ loyalty to sports clubs through a digital innovation is a big asset and unique selling point whilst potentially acting as a solution to the barriers highlighted.

## 5.0 Conclusion and future directions

In this study, we aimed to provide insight into the opportunities and barriers for sporting brands to adopt digital innovations to engage fans. Logically (or perhaps naïvely), sport may be seen as a site that embraces digital innovation and mobile

games that encourage physical activity. However, as we have shown, these organisations have been slow to adopt such approaches and numerous barriers to innovation have been identified. As evidenced by the omission of digital innovation from typologies of innovation, it is frequently overlooked and under-resourced by sports clubs. We, therefore, call for increased recognition of digital innovation and its inclusion in wider typologies of innovation in sport.

Additionally, we set out to identify how sports clubs can benefit from digital innovations and it was found that such innovation would provide the organisation with reputational benefits and help them to achieve their CSR goals by improving the fitness of their fans. In addition, it is likely that digital innovations can help sports clubs to further engage with their fans and increase loyalty to the brand – a key driver for most sports clubs.

Next, we explored the barriers to adoption of digital innovations. Cost was seen to be the biggest barrier and was tied to the resourcing of innovation in terms of human capital, a finding consistent with a variety of previous studies on innovation. Similarly, the rapidly changing nature of technology and the need to constantly adapt and evolve was identified as another barrier to digital innovation as it requires ongoing financial outlay. As has been identified previously, a lack of knowledge within organisations and a lack of information on technologies and markets have been identified as organisational innovation barriers (De Fuentes et al., 2018; Hueske & Guenther, 2015). Although sports club administrators may have the desire to innovate, sport has been resistant to change at governance level and is largely traditional, run by over-conforming former players who uphold historic practices

(Anderson, 2009). Those at the top of sports organisations can, therefore, act as impediments to innovation.

Our final question was, how can digital innovation barriers be overcome? Our study showed that a clear strategy for innovation, incorporating digital innovation was seen as the key to overcoming barriers, confirming findings from a variety of earlier studies (Damanpour and Schneider, 2006; Ratten, 2016; Winand and Anagnostopoulos, 2017). It was also suggested that integrating digital innovations into existing platforms and creating multi-platform offerings may be a solution to some innovation barriers including cost and buy in from managers.

This study has revealed that, despite public perceptions, sports clubs often either do not have the resources and/or expertise to adopt digital innovations or those in charge do not dedicate these to digital innovation. Therefore, it is important that sports clubs (and other small and medium-sized enterprises) work collaboratively with organisations to both develop innovations and successfully exploit the new ideas of others that may be of use to the organisation. By doing so, they will be able to position themselves as early adopters of digital innovations and gain competitive advantage over their competitors. We end with a recommendation that sports organisations prioritise the adoption of digital innovation strategies and dedicate resources (both financial and human) to this important area of innovation. They should develop strategies that incorporate digital innovation alongside the innovation typologies identified previously.



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**Table 1**

<b>Participant</b>	<b>Club</b>	<b>Occupation</b>	<b>Location</b>
1	Top Club – Premier League	Product Manager	England
2	Top Club – Premier League	VP Media Technology & Delivery	England
3	Mid Club – Premier League	Director of Health and Sport	England
4	Top Club – Premier League	Head of Research	England
5	Top Club Charity – Premier League	Head of Communications	Scotland
6	Small Club – Second Division	Technical and Sporting Director	India
7	Small Club – League Two	Media & Marketing Manager	England
8	Top Club Charity – Premier League	Senior Communications Executive	Scotland
9	Mid Club Charity – Championship	Programme Director	Wales
10	Top Club – Premier League (Rugby)	Social Media Producer	England
11	Small Club – League One	Associate Director	England



12	Top Club – First Division (Top Tier)	Executive Marketing Director	Brazil
13	Top Club – First Division (Top Tier)	VP of Communications and PR	Brazil