Master Thesis

Digital transformation in sports:

How digital transformation influence value creation in sports organizations

MSc in Business Administration and E-Business
Nanna Juli Lauth Poulsen (130379)
Supervisor: Xiao Xiao

May 17th 2021
Number of characters: 140.742
Number of pages: 93

CBS COPENHAGEN BUSINESS SCHOOL
HANDELSHØJSKOLEN

Abstract

The purpose of this research paper is to provide an understanding of the possible changes digital transformation creates on sports organizations and value creation based on existing organizations digital platforms and business models. Three different sports organizations and their digital offering were analyzed through a coding procedure, of secondary data obtained from their websites, and other reliable sources with information regarding their service offering. The first parameter was to analyze the business models through a digital business model framework in order to understand the nature of their offering. Furthermore, the value creation and co-creational level derived from service-dominant logic were analyzed through the analysis of their data and business model. Following that the various parameters were compared with the aim of revealing differences and similarities between the organization's digital offerings. Through the cross-case comparison the revealed a range of dynamics that lead to co-creation within the organizations. The value drivers that derive in the usage of the platforms, entailing benefits for each of the organizations and network participants resulting in an outcome reflecting on the community and society surrounding the sports organizations. The reflection of the findings within the analysis includes the value creation in business and sports, a reflection on the competitive advantage that can be obtained through the digital transformation and the application of digital technologies. The research concludes with the practical implications digital transformation has on organizations and the management practice, being the implications, it has on existing sports organizations and those who are considering adopting new digital services, and new approach on how value co-creation is captured through their new digitals service and thereby digital busines model. To summarize this leads this research provides the sports management field with a better understanding of the phenomenon and the important implications it has on their organizations business model.

Table of Contents

Table of Figures & Tables

1.0 Introduction

In recent years digital transformation has emerged as an important phenomenon. At a high level, digital transformation encloses the profound changes that are taking place in both society and various industries with the influence and use of digital technologies. When looking at the organizational level, it has been argued that businesses should find ways to innovate with the technologies by developing *"strategies that embrace the implications of digital transformation and drive better operational performance"* (Hess et al., 2016). Research has found that the technology itself is only a part of the complex puzzle, that organizations must solve to remain competitive and survive in the digital world. They need to consider their strategy, and the changes that their organization may experience in terms of structure, process, and culture, in order to exploit their capability to generate possible new paths of value creation (Vial, 2019).

The increased digitization of a business influences various business activities, including an organization's business model, management, and internal and external processes. Digital technologies have enabled various new forms of cooperation between businesses both leading to new products, service offerings and new forms of relationships with the actors involved, being customers, employees, and partners. With the rapid development of digital technologies, organizations have had to adapt to the situation, as the classical way of doing business has been disrupted. Within the modern view of service exchange, value creation focuses on the interactions between the various actors involved. Meaning, that value is not created through a single act, but in the integration of resources between the different actors.

Sports organizations are increasingly employing technology in order to enhance the performance in all of their business processes both on and off the field and is expected a continuous growth, *"the global sports technology market was valued at USD 17.9 billion in 2021 and is expected to reach USD 40.2 billion by 2026"* (Market, 2021). Advanced materials, data-driven solutions, and information and communication technologies such as augmented reality are all new sources of competitive advantage. The effect of technology in the business context has been questioned but eventually it

was proven that investments in information technology has increased the quality of processes and therefore increased value on an organizational level when it comes to profit (Brynjolfsson and Hitt, 2000). Adopting the same connections in a sports context to see whether a similar underlying logic can be applied, acts as an interesting research topic. Digital platforms and services within the sports industry are an emerging phenomenon in the current business value creation (Vial, 2019). In sports management the facilitation of platforms has been emerging in order for various actors to integrate their resources (Woratschek et al., 2017). Until now the business literature has conceptualized around the value creation of platform business models in general (Fehrer et al., 2018) and the examination of the influence digital transformation has had on the corporate world (Legner et al., 2017). As in other fields of business, the digital transformation is radically changing and influencing the field of sports and sports management in many areas. Within the field of sportstech the phenomenon has evolved from a niche topic to a key component in sports organizations globally.

1.1 Problem statement

Based on the aforementioned technological development, being an enabler for new management opportunities and business models, it seems that little attention has been given in the field of sports and sports organizations. Sports management scholars have investigated selected areas such as the influence of social media, the communicative side and eSports within the field of sports organizations, but there is a gap in the research on, how digital technologies have influenced the sports organization on a deeper level such as the business model innovations and value creation affecting their organization. Therefore, this research paper aims at answering the broader spectrum of digital technologies in sports organizations with the following research question:

How does digital transformation influence the possibilities for new value creation in sports organizations?

The aim of research in this paper is threefold. Firstly, the research examines the value creation in new digital services within sports organizations, and what influence it has on

their digital business model in order to derive general frameworks for future use. Secondly, various cases are analyzed through the current theories to form a framework that can be adopted in the sports context. Lastly, the cases are contrasted with the aim of finding common and generalizable elements supporting the sports and business side.

2.0 Literature review

In order to answer the research question, it is of high importance that the concepts of digital transformation are introduced in detail including the evolution and current influence on organizations. Following that the concept of sports and the sports industry is introduced. Additionally, the concepts of value, value creation and business models will be outlined to get an overall picture of their definitions, by reviewing previous literature. The objective of doing this is not to outline the descriptions of the concepts, but to understand the main elements. Following that, the theoretical framework guiding the analysis will be introduced.

2.1 Digital transformation in organizations

In today's landscape digital transformation has become the most important part of the human life, affecting almost every part of a business. Digital transformation can be divided into two, being the ‘digital’ and the ‘transformational’ part. Whereas digital refers to information technology, transformation refers to the domain of innovation and creativity. The change happening in the world today is driven by a rapid development and adoption of technology, putting organizations under a great deal of pressure (Reis et al, 2018). This results in digital transformation, not only enhancing and supporting the traditional methods but adopting and innovating new ones. Some explain the term ‘digital transformation’ as going paperless, affecting not only an individual business but also whole segments in society such as government, communication, medicine, and science (Vezyridis et al., 2011). In recent years born digital pioneers such as Amazon and Facebook have grown into powerful organizations, dominating industries, who have found their traditional value proposition to be under a threat.

To successfully overcome digital transformation, it is required for organizations to develop a wide-range of capabilities depending on the business context and organizational needs. Digital technologies need to become a central part of how the business is operating, influencing the need for re-thinking, and possibly re-inventing their business model in order to stay competitive. (Carcary et al., 2016).

There are various definitions of digital transformation. Fitzgeral et al. (2013) define digital transformation as the *"use of new digital technologies, such as social media, mobile, analytics or embedded devices, in order to enable major business improvements like enhancing customer experience, streamlining operations or creating new business models".* While Kane et al. (2015) argues the following: *"while digitization commonly describes the mere conversion of analogue into digital information, the terms Digital Transformation and digitalization are used interchangeably and refer to a broad concept affecting politics, business, and social issues"* Furthermore, Westerman et al. (2011) states that *"Digital Transformation is defined as the use of technology to radically improve performance or reach of enterprises"*. The different definitions can be categorized into three distinct elements being, (1) technological, where digital transformation is based on the usage of new digital technologies, (2) organizational, where digital transformation requires a change in the organizational processes or a creation of a new business model, or (3) social, where digital transformation is seen as a phenomenon which influences all aspects of the human life, e.g., in the enhancement of customer experience. Therefore, digital transformation in this research paper is defined as the use of new digital technologies, which enables vital business improvements and can influence all aspects of a customer's existence and experience.

2.2. Sports and the sports industry

Sports is a well-known concept all around the world, but the definition of sport proves to be a challenge since sport covers such a wide field of activities. Professor Kevin Krein provides the typical definition of sports in his work Reflections on competition and nature sports from 2015: *"Sports have been understood to be activities in which individuals or teams compete against each other in a variety of athletic formats. While*

the activities themselves may differ radically, it is common wisdom that in sports, participants are trying to win, that is, to beat the other competitors." While this definition can be adopted when addressing a broad spectrum of sports in the professional field, as it might exclude leisure sport activities since they are typically carried out for personal pleasure, not with the aim of winning. Hozke (2001) even states that a general applicable definition of sports is simply not possible, without the exclusion of specific types of sports. Likewise, John W. Loy in his paper 'The nature of sports: a definitional effort' from 1968 found that *"the broad yet loose encompass of sport reflected in the mass media suggest that sport can and perhaps should be dealt with on different planes of discourse if a better understanding of its nature is to be acquired.*" Loy defines sports not only in the form of the game occurring alone, but as an institutional game, a social institution and a social situation as seen in the figure below.

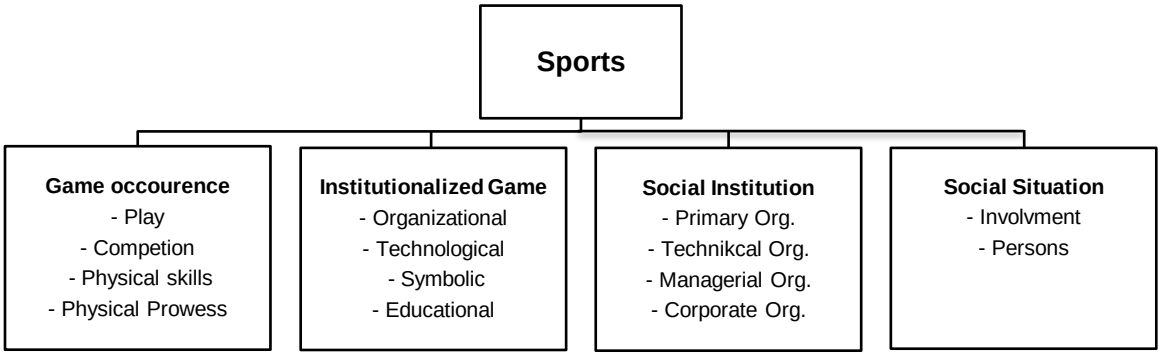


Figure 1: The definition of sports, inspired by Loy (1968)

As a game occurrence, the characteristics of sports include competitiveness on one side, because of the ultimate aim of excelling against the opponent versus playfulness on the other side, due to the inherent uncertainty, freedom, and the way it is governed. In the definition of game performance, the physical side in the form of physical prowess and skills, strategy and chance as well comes to light.

In the second dimension of his framework Loy states that *"the institutionalization of a game implies that it has a tradition of past exemplifications and definite guidelines for future realizations"* (Loy, 1968). Here the organizational sphere which is defined as teams, sponsors and government who together organize sports is included. Furthermore, the technological sphere covers equipment and physical skills as well as knowledge. The symbolic sphere in his model consists as a secretive component in sports, such as the display of team coherence, and "shaking hands" before and after a game. The fourth and last sphere is the educational sphere, which at first covered informal instructions about rules and regulations and later developed into the formal instructions in major league sports. The social aspect in Loys (1968) definition distinguishes between sport as a social institution and a social situation. The social institution is defined as a justification of the significance of sports in the modern society and is separated into four being, the primary, technical, managerial, and corporate organization. It scales from the tight and face-to-face relationship between the primary members of a social institution towards a centralized and hierarchical relationship between corporate members.

In conclusion, sports exist as a social situation due to the involvement of individuals in a social system, or as Loy describes it *"a set of persons with an identifying characteristic plus a set of relationships established among these persons by interaction"* (Loy, 1968). The persons being not only the active producers such as players and coaches but also being the consumers of sports, the fans. Furthermore, the differentiation of sports should be acknowledged in the scope of the above definition. Apart from the differentiation between individual and team sports, sport can be broken down to what they compete against *"competition between an individual or team and an inanimate object of nature, e.g., a canoeist running a set of rapids or a mountain climbing expedition"* (Loy, 1968). Typically, it is individuals who compete against nature, but it is seen in both types of sports. In summary, sport can have multiple definitions depending on the perspective and activity taken into account.

After clarifying how sport is defined, an investigation of the sports industry can be provided. Pedersen and Thibault (2019) state that the sports industry covers three organizational sectors, which is the public, the non-profit and the commercial which they summarize in the Contemporary Sports Management (CSM) Sports Industry Sector Model which can be seen in appendix A. The categorization of the different types is important, since it is central to the creation and production of products, services, programs, or facilities.

The three categories all though they are different all contribute to the sport industry. The public sector, including government-based units, agencies and departments are created by the people for the people. Elected officials and representatives create different units in order to serve the residents in a town, municipality, region, territory or country in the best possible way. The governmental part covers the provision of facilities such as parks, recreation centers and sports areas which is a part of the development of sport and recreation programs for all residents regardless of age. Pedersen and Thibault (2019) state that typically local governments have specific departments to support the agenda, and in some countries a branch of a government can provide financial support to a nonprofit sport organization or subsidies to professional sports organizations. Furthermore, the government bodies may develop various policies to ensure that every single individual has access to sports in a safe environment, policies against doping, and policies in order to protect participants in a given sport.

The second sector is the nonprofit sector, which includes voluntary organizations. Here the purpose is not to make a profit but rather to address a social cause, special interest, and the needs of the members. Primarily organizations focusing on education, culture, religious or public services operate as nonprofit sports organizations. Most national, international, and local sports organizations operate as nonprofit organizations, e.g., as the International Olympic Committee (IOC). Educational institutions such as schools, colleges and universities are as well counted as a nonprofit sports organization, but they are also highly affected by the public sector and government, therefore they are located in between these two types of sectors.

The third sector in the model is the commercial sector. Organizations within this sector have the ultimate purpose of generating profit. A large part of the organizations in the industry operates within this sector, including professional sport franchises, leagues, sports entities, sport providers, sporting goods manufacturers, retailers, media, and corporations that support sports with either sponsorships or endorsements of various kinds. These commercial organizations play a central role in the operations of the entire sports industry, as they serve as a key function in providing both products and services to the population.

2.3 The concepts of Value, Value creation and Value co-creation

In order to sufficiently understand value and how it is created, we firstly need to reach a common understanding of what value is. Therefore, the concepts of value, value creation and value co-creation will be outlined below.

2.3.1 Value

The term value is a widely used concept in management literature, however, there are different academic views on what it actually means. The traditional view of value and how it is generated can be explained by Michael Porter (1985) and his value chain concept. Porter's basic assumption was that an organization consists of activities, through which value is generated as a direct result of the price a customer is willing to pay, subtracted the cost of the production. In 1988 Zeithaml demonstrated the diversity in the meaning of how value is perceived as either 1) low price, 2) whatever the customer wants with the product, 3) the quality the customer gets for the price paid, or 4) what the customer gets for what he gives. In essence it is the consumer that defines the value of a given product. Shortly after Porter and Zeithaml, Normann and Ramirez (1993) developed value constellation as a concept, arguing that the classical view of value chain, no longer was a representative approach for analyzing or forming business strategies since companies had moved away from selling just a product, to selling an offering. Therefore, the relationship between a provider (organization) and customer had to be seen as an entity, *“in which the provider helps the customer create value (...) Customers, in turn, are to be conceived not as passive consumers of offerings but as*

active contributors to value creation: without their contribution, the value of the offering would not exist" (Anderson and Narus, 1998).

On the contradictory Stabell and Fjeldstad (1998) supported the value chain concept from Porter, with an expansion, by proposing new concepts such as value shop and value network. Value shops focus on an organization that provide a special offer, while value networks focus on organizations, where their primary function is to act as a mediator in a network, whereas the value creation happens in the linkage between two or more parties (Normann and Ramires, 1993; Allee, 2008). Bowman and Ambrosini (2000) created a two-fold explanation for the concept of value by creating a distinction between the use of value and the exchange of value. The use value is based on a subjective viewpoint since it is based on how customers perceive the quality of a product in relation to the need of it. Whereas exchange value refers to the amount that is being paid by the customer in the sales process, adopting a viewpoint that is clearly price focused.

Verna Allee (2000) delineates three types of value, the so called "value currencies". The first one being goods, services, and revenue, where the traditional exchange of value involves physical goods, services, or money. The second one is knowledge, being the exchange of *"strategic, information, planning knowledge, process knowledge, technical know-how, collaborative design, policy development, etc,"*. The third one is intangible benefits, where the focus is the intangible value, such as a sense of community, customers loyalty, brand, etc. Allee (2000) argues that these three types of value are the ones being exchanged in a value network, where the primary benefit is the facilitation of all three kinds, apart from the more traditional value chain by Porter where the focus is on traditional product or service offerings. Value networks exist in parallel in all aspects of an organization, which means that you can view an individual employee or a department as a node in the network or take the organizational as one entity and map out the network including both suppliers and customers (Allee, 2008).

2.3.2 Value creation

After clarifying how value is defined, it is important to investigate how value is created. Again, there are several different views on the concept of value creation. Bowman and Ambrosini (2000) added the concept of value creation in their research, where they explain how organizations create value, use value, and realize exchange value. In their work they suggest that the resources purchased as inputs by an organization then the production process needs to be handled by members of the organization, and the exchange of value can only be obtained on the point of a sale and not beforehand. In 2007 Lepak, Smith and Taylor extended the work of Bowman and Ambrosini (2000) by adding the multilevel perspective to the definition. In their multilevel perspective they differentiate between whether the target user is an individual, an organization, or the society. In their work they state that in order for the target user to exchange money the perceived value of the good or service needs to overcome their willingness not to consume.

When looking at the organizational level they emphasized that the organization needs to create novelty and benefits for their target user to increase the willingness to pay. On the societal level value creation is conceived when organizations innovate and expand their value to a broader level like society and the members. Mizik and Jacobson (2003) support the claim that when an organization engages in innovative activities, that produces and delivers value to the market it creates value. In 2007 Richard Priem in his research on ‘A consumer perspective on value creation’ similarly suggested that value creation is about innovation that increases the consumers valuation of the benefits of the consumption. In his work Priem (2007) considers value creation from a consumer perspective and states that when value is created the consumer will be willing to pay for a novel benefit of the product, pay more for something that is perceived to be better or buy more at a low cost where a previous benefit is received.

In their empirical study on value creation in e-business Amit and Zott (2001) found that the value creation potential is dependent on four interdependent elements being efficiency, complementarities, lock-in and novelty. By increasing the transaction

efficiencies between the parties, the costs are decreased and thus the transaction value is increased. E-businesses leverage the potential for value creation when they offer complementarities to their customers. Amit and Zott (2001) argue that when organizations use lock-in mechanisms the customers are less likely to choose competitors and therefore engage in repeated transactions creating value. The concept of novelty is referred to as when organizations adopt innovative ways of structuring their transactions. They state that an organization's business model is an important source of value creation influencing their suppliers, partners, and customers.

2.3.3 Value co-creation

After researching the concepts of value and value creation, the concept of value co-creation naturally must be investigated. In their work on service-dominant logic Vargo and Lusch (2004), explain how marketing has been influenced by the emerging models of economics, where goods are exchanged. However, they emphasize that new perspectives have emerged, shifting the focus from tangible to intangible assets, from value creation to value co-creation and relationships, offering a new core logic based on services as the main element of exchange (Vargo and Lusch, 2004). In the research the involvement of the customer as a co-creator of value can be seen in one of the nine foundational propositions created in order to better understand the exchange of value.

One of the propositions is that the customer is always a co-producer, since they are involved in the production of value before, during and after a ‘purchase’ of a service, creating a continuous value production. Following Vargo and Lusch (2004), Prahalad and Ramawamy (2004) in their work; ‘co-creation experiences: the next practice in value creation’ provide a more holistic perspective to the discussion on value co-creation in a managerial setting. In their research, one of their main points is the discussion of the transformation in the traditional concept of market, which changes the relationship between the customers and the organizations. There has been a shift from the organizational-centric concept of the market to a market where the customers are informed, connected, and empowered to choose the organization they see fit to meet their needs, and the value they seek to be created for them. Prahalad and Ramaswamy

(2004) support the service-dominant logic on value creation, stating that value creation is created through co-creating unique customer experiences with an organization. This also affects innovation, since it is seen that there is a shift from product innovation solely to experience innovation (Prahalad and Ramaswamy, 2004).

The technological evolution has influenced the process, since the customers now have the opportunity to stay engaged through the creation of communities, where they can get and produce information, creating a high level of power in the value creation process. Their argument is that the consumer becomes an operant resource for organizations, who can be involved in the value creation process from A to Z. In their work 'Making sense of value and value co-creation in service logic' from 2013, Grönroos and Voima states that value needs to be formally and rigorously defined so *"the nature, content and locus of value and the roles of service providers and customers in value creation can be unambiguously assessed."* The authors developed a theory dividing the value creation process into the customer sphere and organizational sphere. According to Grönross and Voima (2013) value creation occurs in the customer sphere, whereas the organizations in the provider sphere are facilitators of value creation while producing both resources and processes which can represent potential value or expected value-in use towards their customers.

2.4 Concepts of Business Models

Business models as a term is often used without any context and can be a confusing concept for some. Typically, the concept is heavily linked with the strategy of a given organization, but a business model is not similar to a strategy. An organization's strategy is a conscious plan to align the opportunities and threats that are lying in their environment (Ansoff, 1965). In their work 'Strategy and Business Models: What's the difference' from 2003, Seddon and Lewis argue that *"strategy seems more concerned with competition between companies, whereas business models are more concerned with the core logic that enables firms to create value for its customers and owners".* Before reviewing the literature on the definitions and the components of a business model, it must be acknowledged that there is some disagreement regarding the

scientific validity. Some scholars cast doubt on the utility of business models, postulating that they are able to lure managers into both flawed thinking and decision making (Porter, 2001). Whereas on the contrary, others argue that they have a positive and powerful influence in corporate management (Shafer et al., 2005). Whilst the points from scholars like Porters are acknowledged, this research sees the value in business models and how they provide important and holistic insights into both internal and external factors influencing an organization.

In 2016 Bolton and Hannon stated that the literature on business models tends to focus primarily on the way businesses are structured in order to create and capture as much of their value in the day-to-day activities. This interpretation of business models is the most common reflection of the analysis on the most notable results achieved in this area from Osterwalder and Pigneur, among others. Osterwalder and Pigneur (2010) provide a clear interpretation of a business model and define it as the embedded philosophy behind a business' value creation, delivery, and capture. Comparably David Teece (2010) in his article 'Business Models, Business Strategy and Innovation' argue that the *"essence of a business model is in defining the manner by which the enterprise delivers value to customers, entices customers to pay for value and converts those payments to profits".* In a previous study, Osterwalder and Pigneur fragment the definition of a business model, and have presented it as a conceptual blueprint, where pre-structured components engage and facilitate a company's internal analysis, discussion, and performance (Osterwalder and Pigneur, 2002).

Even though the business model canvas has been proven to be a straightforward and simple tool for organizations to adopt and implement, scholars have defined it as being too simplistic and lacking theoretical underpinnings. In that context, Hedman and Kalling (2003) suggested that a more theory-based approach should be adopted. In their framework, they recommended that organizations should not leave out external elements such as customers, competitors, and suppliers as well as the resources that directly influence the creation and capture of value (respectively, referring to the theoretical background provided in the resource-based view) when assessing their

business model. Likewise, Amit and Zott (2001) and Teece (2010) agree with their analysis, acknowledging that business models as the paramount source of value creation and therefore a competitive advantage.

All things considered; the most straightforward definition of business models is provided by Bocken et al (2014) who in his attempt of summarizing the existing literature defines it as a *"holistic description of how a firm does business".* Similarly, Schaltegger et al. (2016) defines it as *"a concept describing what value a company proposes to existing and potential customers (value proposition), how the business is organized to create value (value creation), with which resources and infrastructure (value creation infrastructure) under which circumstances (value creation conditions) and how financial value is retained for the company (value capture)".* When undertaking a path leading towards innovation, organizations cannot be exempt in re-designing their business models accordingly (Bolton and Hannon, 2016). In fact, Boons and Lüdeke-Freund (2013) argue that the existing knowledge on business model management can prove to be vital in the implementation of sustainable technologies in terms of efficient and effective value creation and retention propositions.

Chesbrough and Rosenbloom (2012), identify business models as a tool for mediating the technical and economic dominance, and state that a successful business model creates an understanding of the economic value when realizing the technical potential. It is in their belief that in order to capture value from technology it has to be commercialized and that managers should change the business model to fit the circumstances of the technological opportunity (Chesbrough and Rosenbloom, 2002). The core components of a business model are value creation, describing how resources in an organization are orchestrated to produce and deliver a defined value proposition. The value proposition, describing what can be offered to parties consuming and value capture, describing how the value proposition is turned into monetary earning for the organization. The core components are summed up in the figure below.

3.0 Theory

Before analyzing the value creation process and the new emerging digital business model for organizations operating in the sports industry, the development of value research and digitalization is emphasized. At first the service-dominant logic (SDL) is examined by laying out parts from existing literature and research which leads to the introduction to the newly developed sports value framework which helps to better comprehend the value creation process in sports organizations. Next, the value creation sphere model by Grönroos and Voima (2013) with underpinnings from the service-dominant logic is introduced in order to understand the value co-creation process. Furthermore, an integrated digital business model framework is introduced to understand the mechanisms of the new digital services in the sports organizations. The theoretical framework in this research as well touches upon the transferability of the digital business model framework, by showing the differences and similarities in the field of business and sports.

3.1 Service-dominant logic

Vargo and Lusch (2004) proposed the service-dominant logic as a continuation of the evolution of marketing thought that can be dated back to the beginning of the 1950's when the views on resources started to evolve (Zimmermann, 1951). Throughout the following decades, the emphasis within customer fulfillment and satisfaction shifted towards a value-in-use principle (Vargo and Lusch, 2004). In their paper, they found that the focus was shifting from tangible to intangible assets, the producer to consumer, the good exchanged to the process of the exchange and the operand resources to the operant resources. Based on those fundamental premises, Vargo and Lusch (2004) concluded that the appropriate unit of exchange should rely on *"the application of competencies, or specialized human knowledge and skills, for and to the benefit of the receiver"*. In their logic, *"humans both are at the center and active participants in the exchange process"* (Vargo and Lusch, 2004) but what happens after the transaction is actually more important than the transaction itself since. A couple of years later Vargo and Lusch clarified the definition of service as *"the application of specialized competences (operant resources - knowledge and skills) through deeds, processes and*

performances for the benefit of another entity or the entity itself" (Vargo and Lusch, 2006). The service-dominant logic was believed to have potential implications not just influencing the field of marketing, but also for theories on an organizational, economic, and societal level. (Vargo and Lusch, 2006).

One of the key elements of the theory is that value is determined and created through a participation with the customers as they present in one of their eight fundamental premises being *"The customer is always a co-producer"* (Vargo and Lusch, 2004). Involving the consumer should be according to their framework and be fully utilized in order to customize the service offering and by that meet the needs of the individuals. Consequently, value creation has shifted from a separated process for organizations and customers, to a continual process that now includes the customers and producers who co-creates value through the tailored offerings (Vargo and Lusch, 2008). Therefore, value according to the service-dominant logic is determined by the beneficiary, implying that the service provider singularly can offer value propositions and input in a potential value creation process.

Value co-creation requires that the consumer integrates the provider of the service value proposition with his or her own skills and knowledge, as well as other resources affecting it. Furthermore, value co-creation is seen as a mutual and reciprocal process, where service is exchanged for service. Vargo and Lusch (2011) suggest that all entities involved in a value co-creation process are described by using the term 'actor', which emphasizes that the role of organizations and consumers are similar and distinct that the two are theoretically obsolete. No single actor possesses adequate resources for creating value, the resources such as competencies, knowledge and skills are constantly evolved through interactions with actors external to an exchange.

As a consequence, mutual service provision is not limited to the dyadic relationship between providers and beneficiaries (e.g., organizations and customers), as the central actors must interact with others to co-create value (Vargo and Lusch, 2011). The service dominant logic advocates for a network-with-network model of value creation

that enables central providers and beneficiaries in integrating resources from the actors connected in the network, as seen in figure 4.

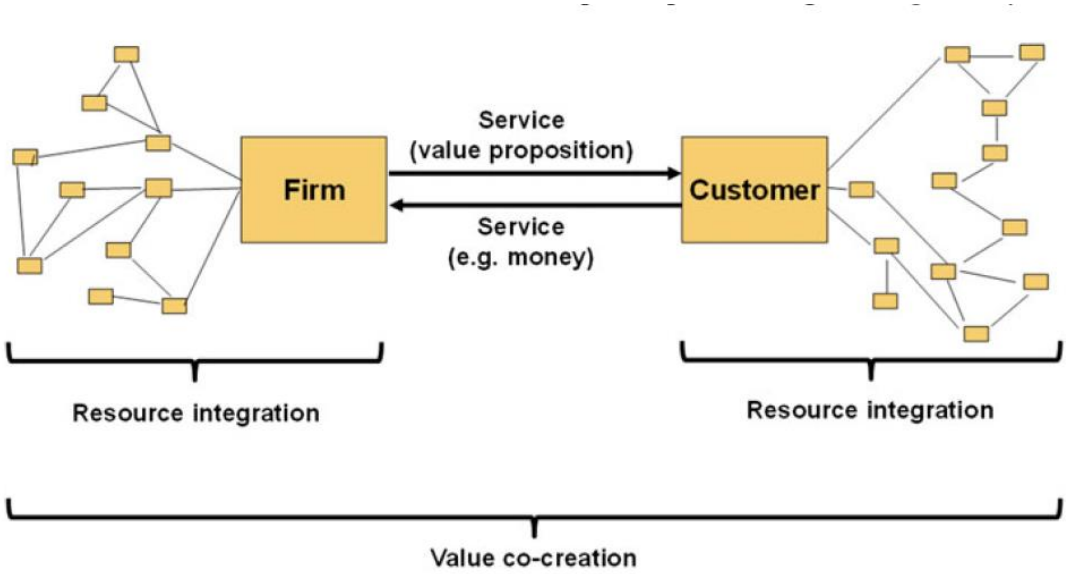


Figure 3. Service-dominant logic adapted from Vargo (2009)

3.2 The sports value framework

The sports organizations we see today, are at a larger extent adopting services to their business models, giving them the opportunity to operate with service-oriented platforms. The technological influence on sports organizations creates new offerings which are intangible and customized towards their customers. The tangible goods function as an appliance or part of the service offering. For organizations within the sporting industry, it is seen that these new service platforms play a significant role of the resources integrated.

Woratschek et al. (2014) emphasize that even though the service-dominant logic can be applied as a perspective to better understand sports management difficulties they acknowledge that the sports industry consists of specific characters. Characters that include the concept of coopetition, the simultaneity of cooperation and competition as a basic principle. Sports management is inseparable linked with sporting activities, and that too covers some specific characteristics. Characteristics such as, the uncertainty of outcome, role of athletic display, kinesthetic nature of sporting activities, central nature

of many types of sporting engagement and the extreme emotions involved (Biscaia et al., 2012; Woratschek et al., 2014). All these distinguish sports management from other management areas. Therefore, they propose a ‘sports value framework’ (SVF) that is based on the fundamental ideas of service-dominant logic but takes the characteristics of the sports ecosystem into account.

The authors argue that SVF illustrates how alternative models of value creation can lead to a better analysis and with that a better strategy within sports management. The SVF consists of 10 foundational principles (FPs) representing the basic assumptions, which can be seen in figure 4. The 10 FPs can be divided into three different levels. The first three FP’s (FP1 - FP3) express the nature of economic exchange, underlying the basic assumptions of the framework. The following seven FPs (FP4 - FP10) describes the nature of value co-creation, whereas the complexity of the analyzed object increases from the individual level (intra-level), the dyads and triads of actors (micro level) and the entire value co-creation system (meso-level) (Woratschek et al., 2014). The three levels differ with regard to the perspective of analysis and the degree to which they cover the complexity of value co-creation.

FP 1	Sporting activities are the core of sport management.
FP 2	Service is the fundamental basis of exchange in sport.
FP 3	Sport goods (products and services) are vehicles for service provision.
FP 4	Firms and customers can only offer value propositions.
FP 5	Sport firms create value propositions mainly in the configuration of a value network.
FP 6	Sport customers co-create value primarily by integrating resources from their social groups.
FP 7	Value is always co-created by firms, customers and other stakeholders.
FP 8	Co-created value is always value-in-use.
FP 9	Co-created value is always value-in-context.
FP 10	The role of firms, customers and other stakeholders is to integrate the resources of their specific networks to co-create value.

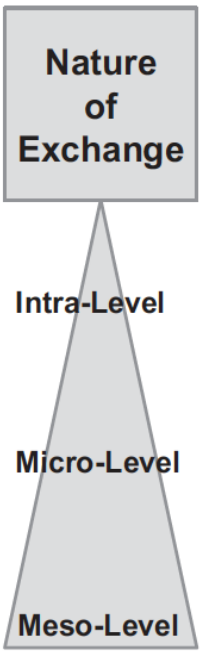


Figure 4. The Sports Value Framework by Woratschek et al. (2014).

The aim of the SVF is to analyze the value co-creation system, which as mentioned has three different levels to support the matter at hand. The meso-level provides a comprehensive view of the different relationships within a specific sports industry. The micro-level covers the dyadic, triadic, or even more complex relationship between actors, but without the full appreciation of the entire value-creation network. At the highest level the intra-level the focus is on the single actors (e.g., individuals or organizations), here a rich body of research is dedicated to understanding the actors within the field of sports (Woratschek et al., 2014). Even though three levels can help in the analysis of value creation within the different fields, it is important that the interfaces with the other levels are always kept in mind, considering possible consequences and results.

3.3 Spheres of value co-creation

The following section elaborates on the above presented content on value and introduces three value creation spheres, focusing on the customers' and service providers' role within the value co-creation process (Grönroos and Voima, 2013). In their work Grönroos and Voima (2013) demonstrates that following the underpinnings from the service-dominant logic, both the service providers and customers are considered to be value creators. But in order to demonstrate the value-creation, the sphere within it is created needs to be clarified. Grönroos (2008) defines the concept of value-in-use which can be regarded as the extent to which the customer is seen as an integration within the solution therefore being user-driven. The concept refers to the actions taken by a customer and how they affect the value creation process. As a consequence, it can be interpreted as if the customer is in charge of the value creation, since value is not created solely by the provider.

As in the service-dominant logic, the customer is identified as having a critical role, however it can as well be interpreted that the provider is overseeing the delivery of value creation. Grönross and Voima state that the value of co-creation with the customers is possible in a joint sphere integrating both the customer and service provider, as seen in figure 6.

The figure presents the value creation spheres, whereas the joint sphere, the value provider and the customer mutually influence each other, leading to the value co-creation (Grönroos and Voima, 2013).

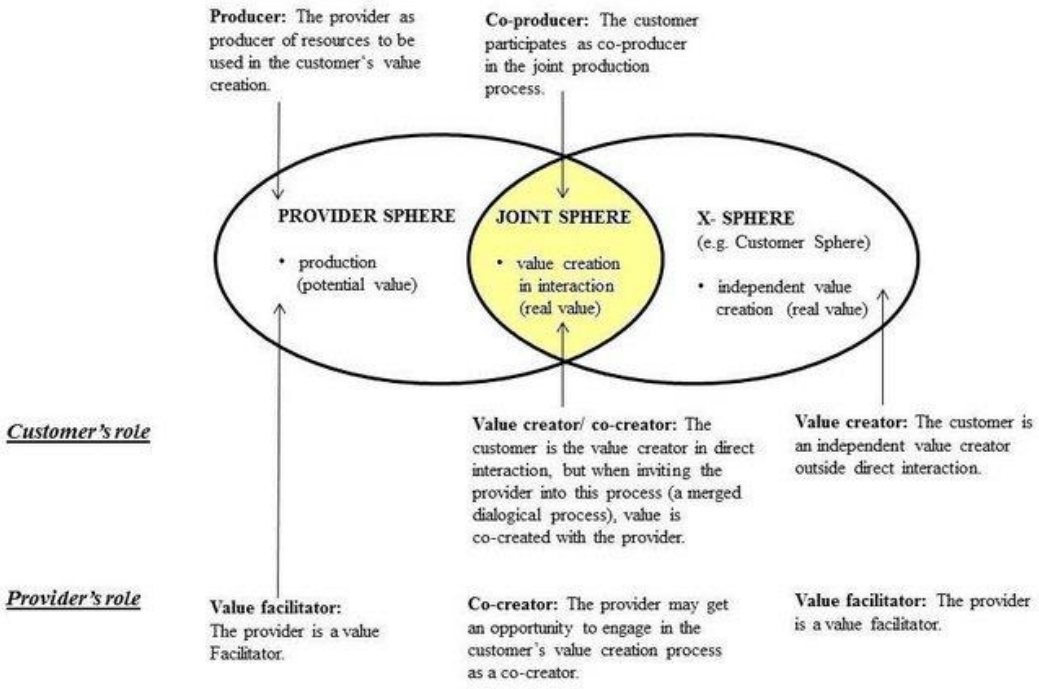


Figure 5: Value creation spheres, Grönross and Voima (2013).

Within the provider sphere the potential value is created, which later turns into the real value (in-use) by the customer. The aim of the providers in the sphere is for the activities to facilitate the customer value creation. From an organizational point of view the external stakeholders such as, as customers are invited into the sphere in order to contribute to the development of ideas and solutions. (Grönroos, 2011).

The customer sphere covers the area where the customers in an independent matter combine various resources and experiences to interact in the value creation process. One may see the customer sphere as a rather experimental sphere in which the concept of value-in-use is created through the combination of the customers' experience with both resources and processes. Within this perspective, the actor's

engagement towards value creation positively influences both customer loyalty, satisfaction as well as the relationship with the organization (Grönroos and Voima, 2013).

The joint sphere covers the dialogical process between the provider and customer sphere leading to value creation. However, the provider has an opportunity to affect the customers' value co-creation process by direct interactions. Grönroos (2011), states that the direct interaction is essential for value co-creation, since without a direct interaction, the value co-creation process cannot happen. The interaction between the actors can as well be interpreted as a platform, where the joint value co-creation occurs (Grönroos and Voima, 2013). The co-created content is generally outperforming the content solely created by the provider, when looking like several key market performance metrics.

Taking an innovative stance, the providers often tend to focus on the information that they consider important, whereas opportunities to innovate and create alternative solutions corresponding to the customers' needs and demands are missed. In order to understand the customers' point of view when developing new products or service offerings, organizations can exploit enabling open dialogues, which can meet the preferences and at the same time reduce risks or failures with the customer base. Furthermore, the provider can benefit from developing and strengthening the relational bond with the customers through the process of value co-creation. According to Grönroos and Voima (2013), the joint sphere is the area where the customers can take responsibility for the value creation, through the interactions in a dialogical or direct approach. During the process, the provider has the possibility to influence the value creation process, making them value co-creators, creating a mutual value within the sphere.

The value creation sphere model is found to be a more appropriate lens in order to examine the sports organizations digital service offerings or platforms from the value creation perspective, and the process of actor involvement than the service-dominant

logic. This is primarily due to the distinctions made within the definition of the different spheres and actor involvement. In the sports ecosystem, the actors typically have a two-fold role since they act as both consumers and producers. The platform or service as an entity acts as a value facilitator since it either provides the potential value or offers the infrastructure needed for the actors to interact and exchange value. In some cases, the organization acts as the facilitator of the value creation process, and therefore becomes a value co-creator on the same level as the individual provider of a given service.

3.4 The digital business model

As the technological development and influence on organizations and their businesses evolves, and organizations increasingly are moving from the physical world of ‘place’ to the digital world of ‘space, it is important for organizations to acknowledge that they have to strengthen their digital business model. Technological development influences all aspects of society, influencing the customer's demand for interactions with organizations and brands at anytime and anywhere. Strengthening their digital business model will affect the value creation, since a new form of value is created with the new service offered to the customers.

According to Weil and Woerner (2013) a great digital business model challenges the traditional business model relying on people and place within three main areas. The first one being internal power since the aspect of ownership of the customers experience plays an important role. It is seen that the experience for the customer typically changes from product groups to the unit that manages the multi product customer experience. The second one, is business processes, where organizations need to rethink their processes in order to act seamlessly across all channels. The third and last one, customer data, broadens the scope of the resource to the organization as a whole, restricting it to from being hidden in only one area. Weil and Woerner (2013) emphasize that businesses need to be aware of the increased movement from place to space, where three trends tend to raise the stakes.

In the continued march towards the digitization of the ever-increasing aspects of the business, incorporating more and more of the customers' experience, executing more on the business processes, and working together with partners who lie in the organization's value chain. The second trend covers the increasing number of digital natives, who are the young current and future customers or employees who expect an excellent digital experience in every aspect of the interactions with an organization. Lastly, the dawning of the age of the customer voice acts as the third trend, since customers have a much stronger impact on an organization, in terms of influencing them with ratings and online comments.

Prior to the technological domination, business primarily operated within a physical world of place, where the products were tangible, product based and oriented towards the customer transactions. The shift due to the digital world, has moved industries to 'space' as their operating field, where the product is intangible, service-based, and oriented towards the experience the customer has (Weil and Woerner, 2013). This influences the customer value as well as it is now produced through a modular combination of content, packaging, and infrastructure, creating a different value proposition (Rayport and Sviokla, 1994; Weil and Woerner, 2013).

Inspired by Weil and Vitale (2001), Weil and Woerner (2013) argue that the digital business model consists of three components; content, experience and platform all influencing the value proposition of the service, visualized in the framework as seen in figure 6.

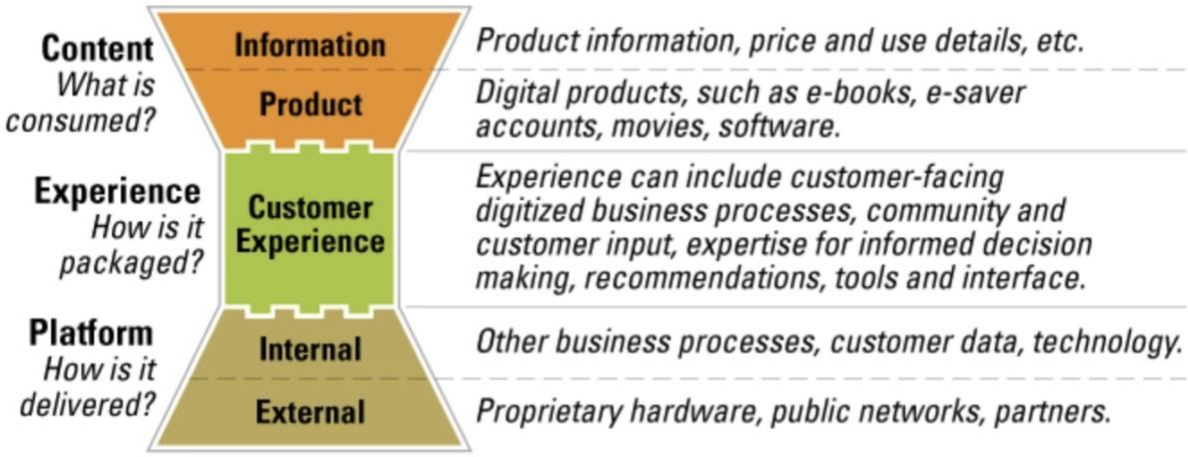


Figure 6: Overview of the Digital Business Model Framework inspired by Weil and Vitale (2001) in Weil and Woerner (2013).

The content component covers the content that is consumed, in terms of the information of the product and the product itself in its digital form. The customer experience component embodies the feeling of what it is like to be a digital customer in an organization, when consuming a product. The customer can spend from a website visit and other digitized business processes to an actual ‘delivery’ of the product including messaging and alerts. Furthermore, it can include customer-created content such as ratings, reviews, search, and recommendations. The platform consists of a coherent set of digitized business processes, data, and infrastructure, influenced by both internal and external components which may deliver digital content to the customer. Internal platforms can include customer data and all of the business processes that do not touch the customer, e.g., customer analytics, human resources, finance and merchandising to name a few. The external platform includes tangible and intangible assets such as phones, tablets, or computers to consume the digital product along with intangible offerings affecting the service such as the internet, digital networks, and partnerships.

3.5 Differences and similarities in sport and business ecosystems

After having investigated the concept of value, value creation and value co-creation in the value sphere model, the sports value framework inspired by the service-dominant logic and the digital business models framework, the differences and similarities between the sports and business context are inferred which will induce implications regarding the applicability of the theories and framework. In order to do so, the ecosystem and context of organizations and sports are contrasted and researched further, taking the above latter into account. In their paper on *"Sports Digitalization: An overview and a research agenda"*, Xiao et al. (2018) considers the sports context topic and found that *"it is imperative to not dismiss sports organizations as just another empirical context, but rather, to recognize the contextual distinctiveness at the theoretical level."* The research illustrates the distinction by analyzing the sports context along Loy's (1968) four components: organizations, technology, symbols, and education of sports as an institutionalized game.

In the model the organizational component presents sports as a complicated context due to the many stakeholders. Next to players and the team, a wide range of additional actors play an important role in a sports organization. Closest to the team there are the coaches and staff members, whose goals are to increase the value of the players and their skills as much as possible. But another important key stakeholder are the ones taking up the commercial side, such as sponsors and the various governing bodies, securing that both the investments, rules and collaborations are secured. These stakeholders are influencing the sports organization making it a highly complicated environment to navigate in.

The assembly of involved parties has a significant impact on the second component, technology. Not only are the players involved, but the stakeholders as well need to have experience, skills, and sometimes certificates to operate within the field. The interplay between knowledge and skills are further complicated by the fast-paced technological development, which requires an important change in the technological component. The dependency between the technological component and the educational is powerful. The

technical sphere calls for continuous improvements, making the educational dimension critical in order to adapt to the knowledge and skills. Once again this is not limited to the direct producers of the sport, as it is important for the indirect ones as well. The ever-increasing performance standards requires a firm and formal training in order to compete and create value in professional sports events. As a consequence, education, skills and knowledge take up an important part in sports organizational contexts. The symbolic component of Loy's (1968) theory originates from the extensive history of sports, and still plays a crucial role in the context up until today. It is deeply embedded in the sports producers as well as the consumers and fans of a given sport.

Nevertheless, the rituals and displays in sports can vary depending on the one consuming the sports, which requires a constant readjustment of the symbolic elements within. Following the institutional standpoint, sports organizations differ from conventional business entities due to the heightened complexity caused by an assembly of stakeholders of both producers and consumers, the vast and increased pace of technological development, which requires a both rapid and ever-present adoption, followed by the acquisition and improvement of skills and knowledge (Xiao, et al., 2018). However, the sports context shares a range of attributes with the business context as well, as Moore and Levenmore (2012) highlight in their work *"the sports industry can be regarded as one that is largely constituted of elements ascribed with characteristics associated with small medium sized enterprises"*.

In both organizational fields, the interaction with consumers and consumption of product plays a significant role in their source of income as an off-field activity. Similar to the business context the off-field activities aim at increasing revenue, by generating fan engagement through the sales of products such as tickets and merchandise. There is a direct relationship between the off-field performance of sports organizations and the on-field performance of the athletes. On-field performance is typically accompanied by a large fan base, which creates a higher revenue stream, and vice versa. These parallels can be drawn if Loy's (1968) different dimensions are looked at in another perspective. In sports the organizational sphere is more complex due to the stakeholder

environment, but the core actors in both sports and business are similar. In both there are relatively permanent social groups, such as athletes or teams who play a specific role and their coaches and relevant medical personnel and staff in sports and equivalent in a business there is a project team consisting of employees covering different roles and one or more managers. Additionally, the organizational sphere covers rules and regulations which is quite important in the sports context, this is seen in the business context as well, since it is highly important for companies to structure their processes and guide their employees.

There are similarities in the technological sphere in both the business and sports context since they both are struggling in keeping up with the rapid technological development. Even though there are differences in the skills and knowledge needed within the two, they are both facing a significant challenge in developing the skills and knowledge with their primary assets being their teams (players, coaches, or employees). The ritual sphere covers the display of secrecy, symbols, or rituals in sports. These are also found in the business context in the form of various agreements or secrecy about details in the company, as well as the rituals related to business processes or specific workflows.

Lastly, is the educational element, where training and skill improvement plays an imminent role in sports, the importance of education in the business context is gradually being substituted by experience as such. Nevertheless, there can be drawn a parallel in search for talent in both contexts as it can be hard to gain highly skilled employees or athletes in such matters (Loy, 1968). In general, by utilizing the research of Loy (1968) in the analysis of the business and sports context, it can be argued that while there is a greater complexity in the sports context due to the numerous stakeholders, there are clear overlaps in the main characteristics of the two. As a consequent, the uniqueness of the sports context can be supported by the business context setting as a starting point for this research and subsequently use the distinctions that arise as a result of the complexity of sports.

4.0 Methodology

In order to investigate the field of digital transformation and value in a business and sports context, the following chapter contains an explanation and justification of the methodology and philosophical approach chosen to exploit the area. The chapter contains the various relevant research philosophies, the research design and choice of methodology. Furthermore, the chapter contains a description of the data collection process and methods.

Before applying the research design, it is important to understand the purpose of it, what it is and what it is not. This is done in order to ensure that the research process runs as smooth as possible, from framing the research question to analyzing and discussing the data. A research design is a strategy for integrating various components in a cohesive and coherent approach. The research design should contain the full variety of components in the project, from the philosophical assumptions, research method, data collection techniques and qualitative and quantitative approach (Myers, 2009).

4.1 Research Philosophy

The philosophical aspect serves as an important factor in order to discover the implicit assumptions of the research, and support both the author and the reader in order to be aware of these assumptions. Saunders, Lewis and Thornhill (2016) define research philosophy as *"the development of knowledge and the nature of that knowledge"* furthermore, they state that a research philosophy contains important assumptions of the way in which the one views the world and how it creates and reflects the knowledge. Within research philosophy there are two major perspectives, ontology, and epistemology. Ontology refers to the 'nature of reality', the ontology of a given research therefore determines how you see the world (Saunders et al., 2016). On the contrary epistemology concerns assumptions about knowledge, and what is constituted as acceptable, valid, and legitimate knowledge, and how it can be communicated to others (Burell et al. 1979, Saunders et al. 2016).

An exact understanding and suitable adoption of the research philosophy will affect both the research strategy and method (Saunders et al., 2016) and with that improve the quality of the given research and increase the creativity for the researchers. Under the ontological assumption, objectivism is described as being, where social entities exist in reality to social actors. This means that this stance embraces realism, where social entities are considered as being physical entities of the natural world, as they exist independently of how we think of them, label them, or become aware of them (Saunders et al., 2016). This ontological worldview fits well with the position of this research paper, as we aim at analyzing value creation and capture and how they are influenced by the digital transformation, and how they can adapt digital strategies in order to survive. Saunders et al. (2016) argue that *"... research philosophies are scattered along a multidimensional set of continua"* being objectivism and subjectivism. In the subjectivist stance *"social reality is made from the perceptions and consequent actions of social actors"* (Saunders et. al., 2016).

This research aims at investigating how digital transformation influences the value creation in sports organizations, which means that the subjectivist view will not fit, as we would be stating that these fields would rely primarily on perceptions and social actors. It is acknowledged that the organizations are entities in a social phenomenon, and that we are moving towards finding a more generic stand as a part of the phenomenon. But with that being said, the result of the analysis is based on factual findings, regardless of the social actors influenced. As the epistemological perspective, where the assumptions are made determines the contribution to knowledge, a positivist philosophy has been adopted. Saunders et al. (2016) states that positivism is a *"stance of the natural scientist and entails working with an observable social reality to produce law-like generalizations."* which fits very well with the position of the research. Furthermore, by adopting the positivist stance, it is assumed by the researcher that the objective aspects of the phenomenon in question is studied, because *"...social entities exist in reality external to and independent from social actors…"* (Saunders et al., 2016).

The sports and business side are inherently different to a certain extent, which is why factors which go beyond the existing theory in place are recognized. Therefore, one could argue that this research opens up for an interpretivist position, where factors that the sports entities experienced are acknowledged but not necessarily captured by the theories applied. One could argue that the research combines the positivist with a note of the interpretivist stance, because combining them both would contribute with information which might have been missed adopting only one of the perspectives.

4.2 Research Approach

In this research it is expected to find out how digital transformation influences the possibilities for new value creation in sports organizations. This will be done through analyzing the digital business model through the digital service or platform in the sports organization and comparing the different cases to each other. Furthermore, the co-creation levels will be evaluated for each of the organizations, adding to the digital business model framework. In order to do so the theory based digital business model framework by Weil and Woerner (2013) has been adopted to examine the organizations digital service or platform, implying a deductive approach to the research (Saunders et. al., 2016). Nevertheless, this research does not aim at examining the theories and concepts solely. It can therefore not be categorized as an entirely deductive study. As the aim is to find a generalized understanding of how the value creation is influenced, the research adopts an inductive approach, because we want to *"... develop a richer theoretical perspective than already exists in the literature."* (Saunders et al., 2016). In this research a combination of both the inductive and deductive approach has been applied, where deduction is rooted in the theoretical framework adopted, the inductive stance drives the purpose of the research.

4.3 Research Design

According to Saunders et. al (2016) a research design serves as the plan for how the researcher will answer the question, and turns it into an actual research project, seeking coherence all the way through. The nature of this research is exploratory as the aim is to assess the phenomenon in an understudied perspective and seek new insights. Furthermore, I wish to clarify the understanding of the phenomenon, as I am unsure of

the precise nature. Following that, the data collection methods most applicable for this type of project is qualitative secondary in line with existing cases, so it is possible to investigate both value creation and digital technologies in order to discover how value creation in sports organizations are influenced by digital transformation, and how digital strategies can be exploited.

4.3.1 Data collection

This section aims at explaining, how the data used throughout the research has been obtained, in order to answer the research question. Robert K. Yin (2016) identifies four major qualitative data collection methods, namely interviewing, observing, collecting and examining, and feeling. For this research, collecting and examining has been found to be the most suitable in order to support the capabilities of the researcher and the aim of the research. The purpose of the research is to study how digital disruption affects the business models of sports organizations, and as there are a large variety of organizations within different locations, the interview method would not be viable, taking both time and resource limitations into account. Furthermore, observing is seen as an unsuitable method, for the same reasons as mentioned above, and as it would not produce the data required for this research, since we are focusing on the business practices rather than the human actors. Feeling as a data collection method is to some extent found to be contradicting with the research philosophy adopted in this study, as we do not take the social actors into account, nor does the environmental stance play a specific role in approaching the phenomenon. On the other hand, collecting, that involves gathering documents, artifact, and archival records in order to produce data that are not directly observable (Yin, 2016), will fulfill the data needed for the aim of this research.

Yin (2016) states that the abundance of the documents and records which can be collected, can be a time-consuming process, therefore one needs to exert great care in deciding which objects that need to be examined. In this research the data related to the sports organization, value and technology will be examined and the data involving personal attitude, bias, praise, or criticism will be excluded. Even though such information is a natural part of the data collection, it will be analyzed solely under the

purpose to reason how the value is being influenced. This should result in reducing the time required for collecting data and positively affect the quality of the data and therefore the reliability of the study. The quality of the secondary source data has also been evaluated. Whilst technological development and Web 2.0, has made information more accessible to individuals it has also created a question on the quality and reliability of the data found. Therefore, the collection of the data has been done taking “reliable” sources into account, such as organizational websites, recognized media, press and books and previously conducted studies.

4.3.2 Case Sampling

Following the data collection section, where it is explained how the data was collected, this section will focus on the actual collection or sampling of the data. Given the large number of sports organizations within the field, in terms of both sport types, size and sectors, analyzing them all will be impractical. Therefore, purposive sampling has been adopted, where the samples are chosen in a deliberate manner, in order to yield the most relevant and plentiful data (Yin, 2016). As a purposive sampling strategy, the typical case sampling has been adopted. Saunders et. al., 2016 describes this strategy as to *“provide an illustrative profile using a representative case”.* By adopting this strategy, the research will provide an illustration of what is ‘typical’ to those who may be reading the research, and not act as a definitive stand. Since the sports organizations operate within the same industry, in order to find generalizable findings within the phenomenon, the cases are sampled from the variety of technologies applied. The combination of the industry specific and variety of technologies in terms of service or platforms, will support in the broader understanding of how they differ from one another and share possible traits, leading to the discovery of a pattern. The following three sports entities representing various adoptions of digital technologies in their digital transformation have been selected.

The three cases are:

- LaLigaSportsTV
- The Robot Piers Chatbot
- Formula E

Comparing distinct entities and technologies will reveal differences and similarities among them and thus hopefully support in the creation of valid findings. However, if after the analysis of the four sports entities no significant pattern is identified, additional has to be added and analyzed. In order to increase the validity of the data, the triangulation method has been adopted when collecting the data. This has been done by collecting data from at least three different sources having different origins, according to Yin (2016).

The data collection level generates an overview of the type of data that should be collected. For the broader level of data collection, usually a single unit is examined, while the narrower level includes multiple entities (Yin, 2016). For this research project the main topic is the digital service or platform including the digital business models and more exact the value creation within. The broader level is the organizational level of the sports organizations and on the opposite scale, the narrow level covers the specific elements of the digital business models and the value creation. The goal is to compare and contrast them on the narrow level in order to discover meaningful patterns among the cases, resulting in an overview of the possibilities digital transformation creates. If a pattern does not emerge, it will help shed light on the possible mismatch within the data in the narrow level with the broader level or if there is a need for additional elements to be examined.

4.3.3 Data analysis

When having collected the necessary data concerning the digital business model, and value creation concerning the sports organization and their digital service the data is examined. In order to analyze the qualitative data collected for the research project, the template analysis model has been adopted. The template analysis offers a *"... systematic, flexible and accessible approach to analyze qualitative data"* (Saunders et

al., 2016). To start the template analysis model, a selection of the data is coded in order to create a hierarchical list of codes turning into what will be used as the coding template. The coding procedure is structured as taking each sentence from the original data representing the organization's digital service and summarizing it with the phrases that characterize certain aspects within the digital business model and value creation. After coding the first organizations the codes are compared and consolidated into a template used for the following cases. Throughout the process of analysis, additional codes can be added as the cases are coded in order for the template to fit all of the cases. Following that the coding results will be aggregated and compared across the various codes. The aim of doing so is to find the differentiation within the companies through a certain pattern. To understand the organization's operations fully, the value co-creation level derived from the service-dominant logic through the value sphere model will be evaluated.

4.4 Research Quality

In order to determine the quality of the research process, Saunders et al. (2016) identify reliability and validity as important terms in order to demonstrate the quality and comparable status of the research. Even though qualitative research is not necessarily intended to be replicated as it reflects interpretations which is constructed in a particular setting at the time it is conducted, a rigorous description of the research design, its context and methodology may help others replicate a similar study (Saunders et. al., 2016).

4.4.1 Validity

Saunders et al. (2016) refers to validity in two ways *"the extent to which data collection methods or methods accurately measure what they were intended to measure" and "the extent to which research findings are really about what they profess to be about".* Since the source of data in this research study is secondary, the evaluation and validity of the data come into question. Stewart and Karmins (1993) argue that, using secondary data is an advantage compared to researchers using primary data, because the data can be evaluated beforehand (Saunders et al., 2016). Even though it can be an advantage, Denscombe (2007) states that you need to be cautious before accepting the records at

face value, in order to secure the validity of the data. With the use of secondary data, the validity can be improved, due to the fact that all the data collected from a business perspective are on a factual basis, and not praising or criticizing the organization. To further improve the validity of the data collected, the triangulation method has been adopted, as mentioned in the data collection section.

The collection of data from multiple sources and origins can enhance the possibility of the data referring to the same fact (Yin, 2016). Furthermore, it ensures that the data is factually correct, minimizing the possibility of the data being manipulated. The triangulation method does not only refer to the gathering of data from three different sources, but also to the fact that the sources are not connected through mutual ones, if it is possible (Yin, 2016). This can for example be done by comparing data from an official website, articles in the press or prior conducted interviews. Moreover, if there is a discrepancy between the data collected and the previous observations and understandings of the organization, a more specified search should be conducted to clarify the facts. The template analysis as well contributes to the validity of the research. By adopting the same template for the analysis, ensured that all of the cases were analyzed from the same perspective of their digital business model.

4.4.2 Reliability

Reliability refers to *"... replication and consistency. If a researcher is able to replicate an earlier research design and achieve the same findings, then that research would be seen as being reliable."* (Saunders et al., 2016). When considering reliability, a distinction between internal and external reliability is made. In order to ensure consistency through the research project internal reliability is typically referred too. A typical method for that is using more than one research to obtain data in interview, collection, or observational manner, and analyze it, to evaluate if they can agree on the results. Since this research project has been written solely, it is not possible to obtain internal reliability in this way. Therefore, consistency has been ensured through the various stages of the project, by writing memos when coding, analyzing, and interpreting the data. External reliability refers to data collection techniques and the analytical procedures adopted. Here the importance is that they would produce

consistent findings if they were repeated on another occasion by yourself or another researcher (Saunders et al., 2016).

Ensuring reliability is not easy, and there lies a number of threats of bias and errors from both the participants and researchers. Therefore, methodologically rigorous in the way the research is carried out, is key to avoid the threats. In this research the research process has been clearly thought through and evaluated, securing that it does not contain logic leaps or false assumptions (Saunders et al., 2016).

4.4.4 Generalizability

The matter of generalizability covers to what extent the findings obtained in the research study are transferable and applicable to other contexts. Quantitative research stands in contrast to qualitative, as we are not able to use the data for statistical generalizations (Saunders et al., 2016) On the other hand qualitative studies are more likely to be used to develop theory, as it can explore, explain, and provide insights. Therefore, findings from a qualitative research context, may lead to generalizations across other settings, if, for example, the characteristics of the settings are similar, or where the findings from the research can be applied within other contexts (Buchanan, 2012, Saunders et al., 2016). By establishing a relationship between the existing theories from business model research and digitalization and the collection and examination of data on sports organizations, this research is able to reveal the broader sense of the particular findings in a sport's organizational context.

5.0 Analysis

The following chapter consists of the analysis, where the coding of the results of each digital service the sports organizations has adopted following a brief introduction on the organizations and how it is structured. In order to capture the value of the service offering, the main aspects of the digital business model framework (Weil and Woerner, 2013) will be used as a unit of analysis. Furthermore, including the value sphere model (Grönroos and Voima, 2013) which is based on the service-dominant logic, the co-creation levels have been evaluated for each of the organizations, adding to the digital business model framework. The sports value framework (Woratschek et al., 2014) will act as support to the value sphere model, since it is developed on top of the service-dominant logic having a sports focus.

The second part of the chapter of analysis will focus on the results from the first chapter and compare them with each other, both in terms of the business model and value co-creation levels. The aim of the comparison is to reveal dynamics in the value-creation, and a deeper understanding of the levels of the digital business model to reveal patterns for future development of digital services or platforms for sports organizations.

5.1. Digital Business Models & Value creation

The following section dives into 4 digital service offerings in sports organizations, which has been chosen as the unit of the analysis for this research project. At first a presentation of the sports organization is presented, followed by an analysis of the digital service offering, powered by the prior presented theoretical framework, focusing on the value creation process and digital business model. Following that, the co-creation level will be determined and explained, for each of the digital service offerings in the sports organizations.

5.1.1 LaLigaSportsTV - The Over-The-Top offering

Research shows that in the next ten years, more than 50% of the audiovisual revenue will come from over-the-top (OTT, used in reference to devices that go “over” a cable box to give the user access to TV content.) streaming services. This offers a dramatic shift in the broadcasting landscape, since the right holders now in order to follow the development, have to become experts within the technology.

The Campeonato Nacional de Liga de Primera División, or commonly known as LaLiga, is the men's top professional football division of the Spanish football league system. LaLiga is a global, innovative, and socially responsible organization, leading the leisure and entertainment sector (LaLiga, 2021). LaLigs is a private sports association composed by 20 clubs and the public limited sports companies, the Sociedad anónima deportiva (SAD’s) in LaLiga Santanders and the 22 clubs in LaLiga SmartBank, who are responsible for the organization of the national professional football competitions. LaLiga, has their headquarter in Madrid, and are present in more that 55 countries, through 11 offices and 46 delegates. (LaLiga, 2021). LaLiga has a global reach, and in the 2018/2019 season, they reached more than 2.7 billion people. Both Innovation and technology represents one of the cornerstones in the development and growth of the organization (LaLiga, 2021).

The club’s association consists of a digital ecosystem where channels, services and data are combined providing LaLiga with a complete overview they can use in order to improve various components that benefits their supporters, sponsors, broadcasters and obviously the clubs. LaLiga is the first major football competition to develop its own OTT service, the LaLigaSportsTV enabling them to remain at the forefront of technology within the audiovisual sector. The platform offers coverage of live and pre-recorded content, reports and interviews relating to the main competitions that run in the Spanish federations and leagues. The platform is not restricted to the football division but covers the most of top Spanish sports. As they state, *“All of your favorite sports are now in the same place.”* (LaLiga, 2021) This analysis will focus on the innovation connected to LaLiga and their digital business model, and the value sphere in order to determine the

value co-creation level. The table below shows the digital business model for LaLigaSportsTV inspired by Weil and Woerner (2013) presented in the theory section, following that a description of the three levels will be provided.

Digital Business Model Level	LaLigaSportsTV
Content	• 64 national sports federations • Live sports • On-demand interviews, games, reports and more. • Exclusive content • Independent from other providers.
Customer Experience	• Easily accessible (wherever and whenever) • Subscription based • Community feeling – 410.000 users • Personalized • All in one platform
Platform	• Global accessible platform, customized to every user. • Solid connectable business architecture • Expandable and scalable • One single data lake • Collaborative

Table 1: LaLigaSportsTV - Digital Business Model

The content consumed in the LaLiga OTT platform consists of live sports and pre-recorded content such as documentaries, reports and interviews. The service can be used anywhere, through a mobile device, desktop or smart tv as long as you have a network connection. The product or service in itself is a type of software accessible through the cloud. You are able to create an account for free giving you access to some of the content, and for 2.99€ a month or 14.99€ on a yearly plan to get the full access. LaLigaSportsTV diversifies its content to make it more interesting and valuable for their consumers. To create unique content Jose Carlos Franco, the managing director of LaLiga's business intelligence and analytics department states that *"(...) the world of OTT offers an enormous opportunity for data analysis, helping competitions to understand their fans better and build new followings across the world*" (LaLiga, 2019).

Utilizing the OTT platform gives LaLiga the perfect position in order to develop better knowledge of their users and their consumption of sports. Having spearheaded the launch in 2016 of LaLigaSportsTV, a project designed to drive growth across 64 national sports federations, the emergence of OTT has served as a catalyst, elevating LaLiga's collaborative approach to new levels. Today, LaLigaSportsTV has more than 410,100 registered users. (LaLiga, 2019). To grow the platform, building bridges with other sports organizations and sharing the knowledge has been an important part in the strategy and content development. All of the efforts are a big part of the creation of unique content which are not available via any other sources.

The customer experience component embodies the feeling the customer has when consuming the digital product/service offered by the organization. The president of LaLiga, Javier Tebas stated that: "*The aim is to offer less high-profile sports greater and improved visibility via a platform where content is quickly and easily accessible, allowing fans to enjoy their favorite sport wherever, whenever and however they want."* (Carp, 2019). Within the platform the customers have a variety of opportunities to consume content. When signing up to the platform, the consumer has the opportunity to choose their favorite sports and sports teams, giving them a more personalized experience when using the platform. On the platform you are able to watch a variety of sports, save things to 'your channel' and create a schedule for the sports events you want to interact with, giving the customer the opportunity to act as a co-creator.

LaLigaSportsTV represents a huge investment and change in their technologies and processes. Resources and processes connected to the delivery of the product can be divided into internal and external points of views. From the external view, the public and private network plays a significant role since it is crucial for the consumers in order to use the platform. Furthermore, since the platform has become a platform where almost all sporting disciplines in the top Spanish leagues are covered and showcased, partnerships are important in order to develop and showcase the content. Internally investment in new business processes has been done. Every user creates a unique data footprint, the data from the OTT platform combined with the data from other digital

platforms such as websites, mobile applications or games is crucial and combined in a single data lake (LaLiga, 2019). This gives their team an opportunity to analyze the data in a broader range and use it across departments to develop a wide variety of offers. The LaLigaSportsTV service offers an enhanced user experience, by having all the top Spanish sports leagues gathered in one place, the consumer therefore does not have the need to go and invest in multiple platforms. They can access all of the content from their pocket giving them the advantage of being a consumer that can be online at all times. As Franco explains, the data sources and opportunities delivered to the consumers gives them a 360-degree view on every single person, *"The sports you choose on the OTT service, the games you play on your mobile, the team you follow in LaLiga, all form a picture of what kind of content you want to receive. This multiplies the amount of relevant and timely offers we can make, which creates much more room for growth."* (LaLiga, 2019). The LaLigaSportsTV project was designed to drive growth across the 64 national sports federations, with the emergence of OTT, the platform has served as a catalyst, elevating the collaborative approach in LaLiga at a whole new level (SportsBusiness, 2020).

The co-creational level is dependent on the involvement of the provider and the consumers, the integration of resources that create mutually beneficial value, and the willingness and possibility to interact. When individuals use the LaLigaSportsTV platform, the primary role of the provider is to make the content easily accessible for the consumer whenever and wherever. Hence the core value creation process is considered to be carried out mainly by the provider of the platform acting as a facilitator for the value creation. There are opportunities for the consumer to co-create value by interacting with the platform integrating their resources such as engagement, knowledge, and data. There is a high willingness to interact with the platform, which can be seen on the high number of users, although the possibility to provide content other than their digital footprint is low. The ability to co-create from the consumers side is more in the technicalities, rather than in the obvious. Therefore, co-creational level is assessed as medium to low.

5.1.2 Artificial intelligence Chatbot in Arsenal F.C.

Artificial intelligence (AI) has been progressing for some years influencing different forms of technologies, giving the consumer a more personal experience when using them. Chatbots have been used for many years, and were originally powered by automation, with the influence of AI chatbots are now able to simulate human conversations using natural language processing (NLP) and can address the users' needs independently of a human operator. AI has been changing the world, no doubt about that, but in order for it to have the right functionalities, there is a requirement for data. Sports teams of various kinds are using these virtual assistants to answer fan inquiries across a wide range of topics, including live game information, statistics, ticketing, parking, and logistics. A human is able to intervene if the bot is unable to provide a satisfactory response to the inquiry in question. The chatbot technology can help fans in the identification of key statistics and hotspots in real time, enhancing the customer experience (PwC, 2019).

In 2018 the South English top professional football club Arsenal announced their official Arsenal chatbot, Robot Piers. The name derived from the Arsenal legend Robert Pires and the aim is to provide the users with real time results, statistics, news exclusive videos from the Premier League Club with a humorous tone and simple language that is easy to understand. With help from their editorial team and the American based chatbot specialist GameOn, they created a new communication channel across various social media such as Facebook, Messenger, Skype, Slack, Kik and Telegram. (Arsenal, 2018). Within the last five years the club has experienced a 400% increase in its social followers, however Arsenal is keen to remain cutting edge and embrace new ways and technologies to further endear themselves to their fans (McCarthy, 2018). The table below shows the digital business model for the Arsenal, Robot Piers chatbot inspired by Weil and Woerner (2013). Following that a description of the three levels will be provided.

Digital Business Model Level	Robot Pierce, Chatbot
Content	• Statistics, news, scores, and videos • Live and On-demand • Exclusive content • Empathic and friendly tone
Customer Experience	• Easily accessible (wherever and whenever) • Free to use • Personalized • Integrated with already existing platforms • Real-time reactions and engagement
Platform	• Global social media platforms • Hub for information • Collaborative • Data collection

Table 2: Robot Piers, Arsenal - Digital Business Model

When using the Robot Piers chatbot, the consumers have the opportunity to consume content such as specific news, scores, stats, videos and more on-demand. The service is available through various social media, requiring that the users are already present in these places. Whenever a consumer interacts with the chatbot data is collected, giving the sports organization an important guidance in their wishes. Digital managing director in Arsenal Chris Harris states that; ”When *you publish content you broadcast one to many, this moves it to one-to-one at scale with fans. From the fans' point of view, it is a smarter form of engagement, we are so used to pushing content out to fans with a good idea of what they may like. This is a case of fans selecting content and we can understand them a lot better when they do”* (McCarthy, 2018). The content consumed by the fans are done on a smaller scale than they are used to, giving them the opportunity to decide which content that should be pushed. The content consumed is as Harris emphasizes delivered in a *“cultivated, friendly and empathetic tone”* making them more like the fans. Therefore, they have made a great investment in acknowledging the understanding, that the chatbot is not human, and therefore have had to have an element of control and empathy, following the logic that the messaging of the content reflects whether the fans are celebrating or commiserating (McCarthy, 2018). By adding

that extra layer and naming it after an Arsenal legend, brought in a level of personality which also reflects on the content. Superfans will embrace the chatbot as a means of consuming club updates, rather than passively getting the news drip wise in their feed on social media. But it is important to acknowledge that the solution is not a one-size-fits-all.

The Robot Piers is not just a small gimmick, but a long-term incentive to get fans to operate and exploit these channels as Harris explains *"In terms of business objectives, you reach a new audience, reach them in a smart way. It will increase traffic to our website and further down the line there will be commercial benefits."* Senior content manager at Arsenal Tom Hines states that in their search for competitive edge they are *"constantly looking at ways to bring fans content that makes their match day experience even more entertaining (...)"* (Hardaker, 2018). The goal for Arsenal is that their fans feel a personal connection with the club, and with the chatbot and AI it has become easier and even more important to give the fans a personalized experience. The fans are able to personalize their experience by following their favorite topics and players, customizing their match alerts, getting targeted news and updates, and allow real-time reactions and engagement, directly from the club (Arsenal, 2018). The customers are highly involved in the digital business process since their inputs act as the driver in the development of the digital service. As Harris further states *"We can learn about what brings fans back to the bot, what they consider to be spam and what they find useful"* (McCarthy, 2018). This gives the organization an important role in balancing their interactions, while learning along the process, so more features can be added as they go down the path.

The experience is delivered through social media and powered by AI technology giving the organization an even greater understanding of their users, since they are collecting data along the way. Hines also sees the implementation of this type of technology on a deeper level *"The bot is the next step in us developing a hub for fans that houses the answers to all of their questions - that feels intuitively part of the Arsenal voice and experience"* (Arsenal, 2018). The investment Arsenal has made in their digital

department is extensive, since the adoption of a technology in that form requires a variety of business processes, skills, and knowledge to be in place. As seen in the importance of having the human resources to support when a beneficiary answer can be delivered from the technology. Chatbots are a great way for organizations to evolve their platforms for when speaking to fans, since it benefits both the consumer and organization in terms of data collection and personalization. An entertaining and clever chatbot may even support in reaching new target groups and strengthening the loyalty among the fan base, optimizing, and supporting other business processes within the organization.

Given the nature of a chatbot, and in the case of Robot Piers both the organization and the consumer need to be present within the consumption process. An Arsenal fan or customer cannot experience the service without the technological development and interaction from the organization. The skills, resources and experience within the organization transferred to the technology will have a great impact on overall experience when using the service. Since there would be no service without the customers interactions, guiding and training the platform, the organization always be considered as a value co-creator, and the Robot Piers chatbot are always co-created by both the provider (Arsenal) and the consumer (fan). Since the organization is dependent on both the technology, human resources, and customers in order to deliver the service, the co-creation level is set to be high.

5.1.3 Formula E - Virtual E-Village

The global electric vehicle fleet has expanded significantly within the last decade, supported by technological development and advances. The global consultancy firm Deloitte, forecasted in 2020 that the compound annual growth rate of eclectic vehicles is 29 percent over the next ten years reaching a total sales growth of 31.1 million by 2030 (Woodward et al., 2020). With the development and global expansion highly influencing the consumers, it is seen that the electrical vehicles as well influence the sports industry.

The Fédération Internationale de L'Automobile (FIA) was founded in 1904 in order to safeguard the rights and promote the various interests of motorsports and their drivers. FIA governed racing events in more than 30 motor racing series in all over the world, and in 1950 they launched their flagship championship series, the Formula 1. The concept of an electric car series was initiated in 2011 to support the development of technology and accelerate the interest while promoting sustainability. The year after in the summer FIA gave the green light to Formula E, giving them the exclusive license to the commercial rights of an all-electric championship for at least 25 years (Standaert and Jarvenpaa, 2016). Formula E's CEO Alejandro Agag stated that the goal of the championship is *"...a real competition between cars and drivers, where the best technology and the best pilot win. (...) We have definitely succeeded in creating an exciting and competitive race (...) Yet we want to further revolutionize the fan experience, catered to the millennial generation"* (Standaert and Jarvenpaa, 2016). In season 5 2018/2019 Formula E could celebrate them being the fastest growing motorsport series in the world (FIA, 2021). The table below shows the digital business model for the Virtual E-Village in Formula E, inspired by the model from Weil and Woerner (2013). Following that a description of the three levels will be provided accordingly.

Digital Business Model Level	Allianz Virtual E-Village, Formula E
Content	• Exclusive videos and imagery directly from the paddock • Live Q&A sessions and quizzes • Race feeling and experience
Customer Experience	• Easily accessible when the race is on • At home race experience • Inclusive and • A broader digital experience
Platform	• A global and easily accessible platform • Connected to other digital (physical) initiatives • Expandable and scalable • Collaborative • Technological innovation and validation

Table 3: Virtual E-Village, Formula E – Digital Business Model

The case of Formula E is special since the product itself is to an extent digital as well as the initiatives taken within the organization. The Formula E platform consists of a variety of digital technologies in both the on-and off-site experience. Digital initiatives on-site include eRace, a virtual competition in races, instant replays on demand and their Roborace consisting of driverless car competitions. The off-site experience is supported by digital initiatives such as their own mobile application, FanBoost, e-sports and virtual reality. Due to the covid-19 pandemic, it has not been possible for the fans to engage in the race on-site like they are used to. In the season 2020 their Allianz E-Village concept went virtual, giving the consumers the exact same experience direct from the comfort of their own home. In the virtual Allianz E-Village consumers are able to find the best of the physical E-Village present at the races. The content consumed on the platform ranges widely from exclusive videos and imagery directly from the paddock, Live Q&A sessions, quizzes, digital autograph sessions and more (FIA, 2021). The content consumed on the various digital initiatives vary but the main thoughts around all of them is to get the fans to engage and by that gain a better customer experience.

All of the digital supported initiatives are a part of a bigger goal to appeal to the millennial generation. Formula E had already made a big effort in easing out pollution, elitism and the sexistic perceptions in motorsport, but they yet had to overcome their biggest struggle, how to effectively reach and engage with their target audience. Agage states that *"While traditional fans attend races purely for the on-track action, millennials expect a broader experience"* (Standaert and Jarvenpaa, 2016). With their Virtual Allianz E-Village, Formula E gives the consumers the feeling of being a part of the race, even though they are not able to attend it physically. The E-Village experience of course is linked to a lot of their other digital initiatives, and as they say, *"We are looking for you to get involved too"* (FIA, 2021) trying to engage the consumers in interacting with them on e.g., social media using the #AllianzEVillage.

Since it has been tough to sell motorsports to millennials, while the generation was showing a less interest in driving a car, and even owning a car due to sharing economy organizations such as Uber, the key challenge for Formula E was to overcome these obstacles and appeal to the next generation of motorsport fans. When looking at the platform, Formula E has made huge investments in their various digital initiatives, especially in their website being their main digital platform. When looking at traditional motorsport events the main race is the main event, and whether you are on- or off-site, you are primarily present to see the race.

Within Formula E they have created a platform (or platforms) where the consumer engages on a broader level, capturing not only the experience of the race but also prior and after. This of course includes a great investment in having the right resources and processes, influenced by both internal and external factors. For the Virtual Allianz E-Village, they are very dependent on of course both public and private networks and the devices the consumers use to access the platform. Furthermore, they are highly dependent on other actors both direct such as the drivers and teams, and the more indirect being sponsors and partners to provide the resources needed in order to develop the content. There are still some barriers that the industry and Formula E as an organization has to overcome, yet Agag envisions the innovation of Formula E to go

way beyond the electric vehicle, stating that *“We offer a platform for innovation and validation of all technologies relating to racing and fan engagement. We are at the hub of a whole ecosystem of technological innovators that are interested in this millennial generation.”* (Standaert and Jarvenpaa, 2016). The whole Formula E ecosystem goes way beyond their digital initiative such as their Virtual Allianz E-Village, giving the meaning of the platform a whole new definition.

Formula E brings a typical example of the aim when developing and operating digital platforms. The aim is to act as a hub for the whole ecosystem supporting and engaging the customer, prior, during and after the events. With the Virtual Allianz E-village, the organization is trying to interact with their customers in various ways, making them co-producers of the content developed on the platform. There is a continuous interaction between the organization and their resources and the customers throughout the user journey, why value is believed to be co-created between the two parties. However, the organization as a producer acts as a more active role than the customers hence the value co-creation level is assessed to be medium to high.

5.2 Cross-case comparison

Following the coding and analysis of each of the sports organizations and their digital service, a comparison of them is made in order to gain a better understanding of the similarities and differences between them. The comparison will be focused around the three levels of the business model followed by the findings from the adoption of the value sphere model, revealing several dynamics within the organizations.

5.2.1 Content

The coding of the result revealed that the studied sports organizations digital services or platforms deliver content that primarily are related to the actual sports event occurring. Although the unit of exchange on the various platforms varies depending on the core business, digital service offering, skills and knowledge, the way the units are being exchanged can somewhat resemble one another.

The content created on the platforms are somewhat unique and is being offered both with help from and without the consumers. One of the main findings when comparing the organizations and their different platforms with one another, is that they highly rely on the opportunity for the consumers to engage in and develop the content with them. This can be due to the fact that the consumers in this specific industry are highly passionate and invested in the initiatives taken by the organizations. In the cases of LaLigaSportsTV, the Robot Piers chatbot and partially Formula E, the consumers have the opportunity to utilize the content wherever and whenever they want, giving them a lot of opportunities both before and after a specific sporting event. Although, Formula E mainly focuses on keeping their consumers engaged when the actual event is happening. This means that the requirement for content that has a longer life cycle is not as important as in the two other cases.

The co-creational level of content is strongest and most visible in the case of Robot Piers, since in order for the technology to learn and be useful for the consumers, there has to be a high level of interactions. The consumers to somewhat extent co-produce the content being delivered, always improving the service. Whereas LaLigaSportsTV mainly serves as a facilitator for the users to consume the content on the platform, they

have implemented some content specific features, for the users to co-create and influence the platform together with them.

5.2.2 Customer Experience

The customer experience for the studied sports organizations digital service, is to some extent similar in the basic assumptions, because as the analysis revealed, enhancing, and improving the customer experience is the main focus for all of the organizations. The digital services developed is a proof of the investment the organizations are doing in order to give its customers the best possible experience, both prior, during and after a specific sports event. While the organizations operate mainly with the same aim of providing their customers with the best possible tools to enhance the experience, there is a small difference in the period of time they can serve their customers.

For LaLigaSportsTV the main experience they are providing is that they are "*allowing fans to enjoy their favorite sport wherever, whenever and however they want"* (Carp, 2019). Not only are they focusing on the specific sports event, but by providing the users with the opportunity to consume exclusive content on-demand in the form of interviews, reports and documentaries, they are creating a community within the platform for super fans who have a passion for any one of the 64 national sports federations present on the platform.

In terms of business objective, the Robot Piers chatbot is an opportunity to reach a new audience and increase the traffic to their website, which may result in future commercial benefits. The chatbot does not singularly serve as a business objective for commercial benefits, but also a way to provide fans with content in an easy and more entertaining way improving their experience on match days. With the Robot Piers chatbot, Arsenal has been able to personalize the experience in an easy and smart way, by providing them with the opportunity to directly interact with the club. Arsenal has substituted the traditional business process of having a customer service agent present at the phone and email to answer the inquiries, giving the fans an easier way of connecting with the organization. Furthermore, they substitute other digital platforms by providing their fans with the tailored information they need whenever they need it.

In Formula E the digital initiatives taken is with the aim of reaching the millennial generation, because as they state, "*While traditional fans attend races purely for the on-track action, millennials expect a broader experience" (*Standaert and Jarvenpaa, 2016). As Arsenal, Formula E is as well seeking a more digital solution to get their consumers to engage with them. While the other platforms support a broader spectrum of the prior and after experience, the Virtual Allianz E-Village primarily focuses on giving their customers a digital experience during their events. The aim is to provide the consumers a feeling of being a part of the rice, while not being able to attend it physically, by engaging and interacting with them.

5.2.3 Platform

The platform consists of a logic set of digital business processes, data, and infrastructure. The platform contains both internal and external components and may act as the facilitator of the service delivered, while as well producing and delivering the digital content consumed by the customers. Digital technologies influence various levels of the organization, and one could argue that there are 3 different main areas, where digital transformation influences the organization resulting in the development of sports tech, which can be seen in figure 8.

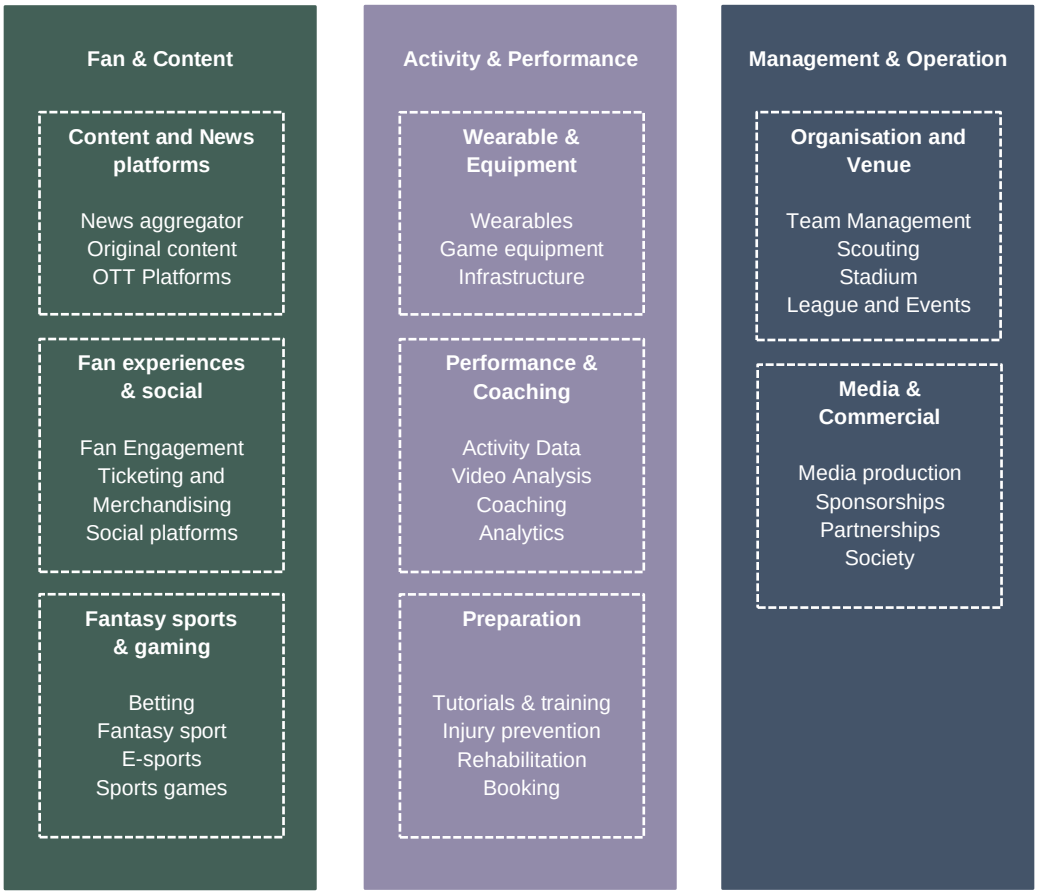


Figure 8: Main areas for the development of sports tech in sports organizations

The platforms can be divided into three categories targeting various parts of the organizations. The three categories are fans and content, focusing on the end consumer and the fans, activity and performance, focusing on the athlete and the staff, and management and organization focusing on the executives responsible for managing the entities. The platforms are distinct, touching upon various operations within an organization influencing the organizational performance and management team.

The fans and content category are focused on the fans and the content they consume, where the goal is to increase the involvement and experience for the fans related to the team and sports of their choice. The activity and performance category covers solutions related to the athlete and the actual sports acidity, covering both before, during and after the activity has been done. Here the goal is to track the performance, prevent injuries and give the coaches and staff the best possible conditions to enhance the team performance. The third and last category are the management and organization. This category supports the executive team of the sports organizations in their various responsibilities, all from the facilities to the league and media corporations. The goal here is to improve the efficiency in their operations supporting in providing a better experience to both the consumers, athletes, team, and staff.

All of the researched cases fall under the same category, being fan and content, where it is all about how sports connect with or is consumed by its fans and viewers. The platforms are different from each other, even though they are categorized the same. LaLigaSportsTV represents a solution where the aim is to provide the fans with all kinds of content, through their OTT platform. Both the external and internal factors influence the digital platform since they are highly dependent on external factors such as technological and network availability and the partnerships in order to develop and showcase the content. The usage of the platform supports many other business processes connected to the sports organization, since they are able collect data and combine it with other platforms and services in one single data lake (LaLiga, 2019).

While LaLigaSportsTV operates within the subcategory of news and content, the two other cases in a higher-level focus on fan engagement through social platforms.

The Robot Piers chatbot, can be seen as laying in the middle of the news and content category and the fan engagement and social platform category. The digital offering is supported by social media platforms since the fans can interact with the chatbot through the various platforms. Furthermore, it has changed a variety of business processes, and set a requirement for skills and knowledge to function. Since the AI chatbot learns along the way it still has to be supported by human resources in order to interact when a beneficiary answer cannot be delivered. This requires content, why the platform can be placed in between the two categories. But the main aim is to engage the fans in an entertaining and clever way, both increasing the loyalty in the existing fan base as well as reaching new target audiences, while also supporting various other business processes, by collecting data.

In Formula E, the target audience was showing a less interest in driving or owning cars, making it hard for them to appeal to the user. Their digital service offerings mainly surround the fan engagement part, helping the fans to connect with them in order to enhance the experience. The investment in their fan engagement initiatives, have required them to have the right resources and process, both internally and externally. The Virtual Allianz E-Village is dependent on the network to support the users when sitting at home. The platform is an initiative to build a community around the Formula E races, therefore they are as well highly dependent on the social platforms surrounding them, as for the direct and indirect actors to develop engaging content.

5.2.4 Co-creation

The co-creational levels were measured applying the definition used in Grönroos and Voima (2013) paper on the value creation sphere model, introduced in the theory section. In order to determine the level of co-creation, the level of involvement from the organization has to be determined. If the organizational provided is present during the consumption process, when using the service like the Robot Piers chatbot, the level of co-creation be assessed as high. Whereas in platforms where the organization merely acts as the facilitator for the access of the service, as in the case of LaLiga, the level of co-creation will be assessed as medium to low. The co-creational levels of the digital service offerings within the sports organizations are listed in the table below, drawn from the analysis of the organizations co-creational levels in the first section of the analysis.

Organization and digital service offering	**Level of co-creation**
LaLigaSportsTV	Medium - Low
Arsenal, Robot Piers chatbot	High
Formula E, Virtual E-village	Medium - High

Table 4: Level of co-creation

Following the analysis of the digital business model as an approach to understand the digital service, the actual value that can support the future development of services powered by digital transformation is missing. Therefore, the following part of the analysis will focus on the dynamics which lead to the co-creation of value supported by the value co-creation levels. Figure 8 shows the value drivers that derive from the use of the digital platform. These drivers entail benefits for each of the sports organizations participating in the network and gives an outcome to the community of sports organizations.

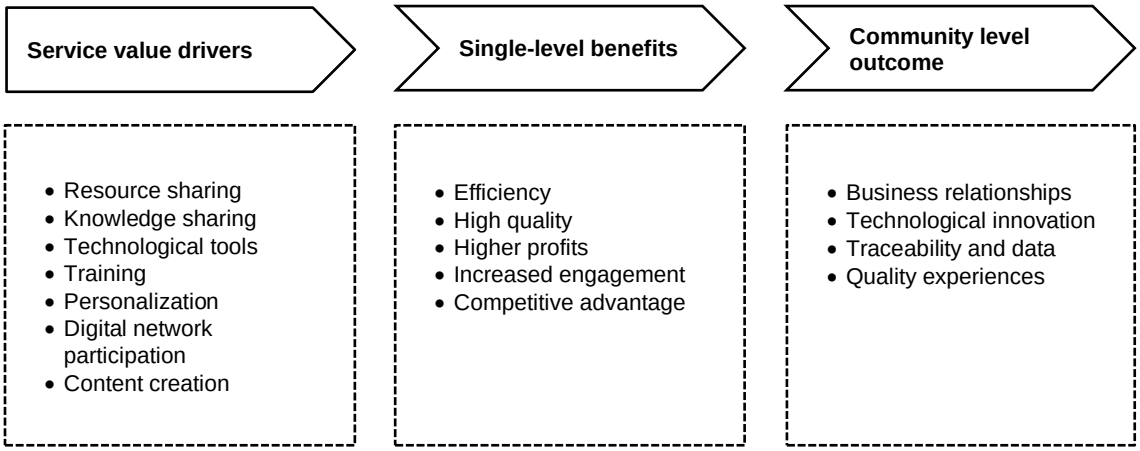


Figure 9: Value co-creation drivers, benefits, and outcomes

Beginning with the service value drivers, these digital platforms aim at innovating the current sports ecosystem in a complex context, bringing together a variety of actors in one single platform, through the sharing of resources and professional support. The digital network the organizations participate in, improves the experience for actors involved, especially consumers, employees, and partners by supplying them with information and content needed in order to interact and gain a better experience when attending live sports events, watching on-demand or collaborating with the organizations.

When looking at the single-level benefits and the community-level outcome, a digital platform can support other business processes, provide the actors with a more effective competitive advantage as well as provide the customers with a better experience. These digital platforms and services can as well influence and improve the efficiency in the whole sports ecosystem, by changing the design and operational aspect of the various activities. Enhancing the customer experience through digital services that are easily accessible, gives the sports organizations a competitive advantage. By expanding their services and further developing their platform, the organizations are able to acquire new users, while enhancing the loyalty within the existing ones. In this way, they have the opportunity to increase their businesses significantly.

6.0 Discussion

The following section provides a discussion and reflection of the findings in the above analysis on the digital transformations influence on value creation in sports organizations. Firstly, the theoretical framework applied to the research and the model obtained through the analysis are contrasted. Moreover, the potential gain of competitive advantage through the service in the digital business model is assessed. Next, the findings in the analysis are linked to the business context by comparing and contrasting the application of digital technologies in sports organizations and businesses. The section concludes with a discussion on the practical implications.

6.1 Value creation in business and sports

Digital transformation has triggered a significant change in existing business models, due to the geographical independence and the possibility for instant interaction with different actors (Vial, 2019). Organizations in various industries are rearranging their business model for a more digital perspective (Bouncken et al., 2019). The disruptive changes within the organizations rely on the development and integration of more sophisticated digital technologies. These technologies facilitate new services and platforms, which creates a novelty of opportunities for value creation, giving various actors the ability to integrate their skills and knowledge to co-create value. In sports management, are influenced by heterogeneous actors, e.g., the fans who are willing to integrate their resources due to the emotional relationship bound to the organization. Therefore, value co-creation within various digital platforms and services enhances the actor club relationship influencing the behavior of the consumer both on- and offline.

Digital technologies enable organizations to redefine their offerings e.g., through in stadium experiences supported by data, IoT or virtual reality. Sports organizations are able to gather data from various actors through the interactions from the actors and integrate the different resources in their platform. The availability of data empowers the organizations to personalize and thereby differentiate the experience between the different consumers. Furthermore, it acts as an enabler for other actors in the ecosystem such as sponsors or the media, to address potential customers in a more

accurate manner. The linkage between technological investments and value is indirect, and business processes serve as intermediaries. As mentioned before, the outcome is often expressed with measures capturing the impacts on the organizations bottom-line. It is shown that such impacts are as well present within the sports organizations, in the form of reduction of cost and gain of productivity. Similar to the way digital applications are being used to support interorganizational relationships and information exchange, a unified digital solution consisting of different modules facilitates knowledge sharing and process integration which can be utilized across various departments of the sports organization both internal and external.

In conclusion, the findings show that the theory on value and value creation from the business context, constitutes a suitable starting point in order to research the sports organizations and the industry. However, as the sports value framework shows, the frameworks and models have to be modified or combined with others in order to enable a comprehensive understanding of the processes. Additionally, the complexity and competitive environment in the sports industry, require adjustments and additions to fit the characteristics of the professional sports organizations.

6.2 Competitive advantage through digital transformation

Digital transformation is no longer optional for organizations. Implementing digital technologies throughout business operations and services is necessary of an organization to survive in the global competitive market. But in order for the organization to utilize the competitive advantage, they need to know how to do so. In 1985 Porter, stated that *“Technological change is one of the principal drivers of competition. It plays a major role in industry structural change (...) Of all the things that can change the rules of competition, technological change is among the most prominent.”* The idea of competitive advantage is mainly to measure an organization's success relative to its competitors. The relative success could be measured through “economic value” that the organization was able to generate (Porter, 1985). Since competitive advantage mainly focuses on explaining the relative success of the organizations, the organization in question does not need to be the best player within the industry in order to achieve the competitive advantage.

Technology is embodied in every value activity in an organization. The technological change can affect competition through its impact on virtually any activity. The technological progress is shaping the surrounding world, changing the various ecosystems and day-to-day culture. The various actors such as customers and partners create new habits and solutions resulting in new demands for the organizations. With these conditions and opportunities emerging, the organizations are required to prioritize the digital transformation by adopting technologies, to secure their competitive advantage. Some might assume that the process of innovation and adoption of digital technologies creates an advantage, but in reality, almost everyone in the ecosystems are developing the tools at the same time. Therefore, digital technologies cannot stand alone as a resource, the key is to leverage the technologies on a strategic level with the aim of creating a differentiated value for the customers.

This research shows that the investment in digital technologies can generate value if the organizations implement the right processes and resources. The competitive advantage can especially emerge if the sports entity consists of a network of actors who are unique and highly skilled. The human actors within a sports organization cannot be imitated by competitors or technologies. The athletes and coaches are required to be in great physical shape and tactically intelligent to perform and outcompete their opponents.

Likewise, the unique possessed knowledge the actors have obtained through education and time cannot be imitated that easily. Overall, the adoption of digital technologies can create value for an organization. But in order for it to create a sustainable competitive advantage it needs to be deployed in combination with the unique resources such as knowledge, skills, and the network in the organizations, that are hard to imitate nor transfer for others in the ecosystem. Digital transformation is vitally important, as a driver for innovation and activities that can support the growth and thrive of the organization.

6.3 Application of digital technologies in business and sports

Following the layout of the findings from the analysis, it makes sense to take a step back and reflect on the starting point, and the implications drawn from the organizations implementing digital technologies in their business models. Professional sports organizations can be considered as a business, consisting of professional athletes as the primary and most expensive resource. In addition to that, both sports organizations and businesses in general consist of a variety of repeatable processes and structures which can be supported by the implementation of digital technologies. Numerous studies have pointed out the fact that the sports industry is in the middle of a digital revolution, transforming the organizations. All of their process from player safety, to broadcasting, and strategizing and management is dynamically driven by the digital technologies. Just like the businesses in other industries, the organizations in the sports industry must learn to adapt to the change in the environment. Digital transformation has drastically influenced various parameters such as the fan experience, revenue opportunities, as well as the very nature of sports and how it is consumed. This research shows that the alignment of leadership does not only pertain to managerial level but influences so much more, including various actors.

The purpose of the digital technology and the information obtained through the implementation must be relatable to the specific characteristics and purpose of the central entities and must be implemented effectively into the various activities and processes within the organizations. Traditionally, the sports fans consumed various sporting events on a linear television. With the digital transformation, the modern sports fans get an unparalleled freedom, so they are able to consume sporting events on-demand, giving them the complete flexibility to enjoy the sports event they prefer. Furthermore, as seen with the OTT case of LaLigaSportsTV, the technological development and the availability of smartphones and tablets gives the fans the utmost flexibility and freedom allowing them to enjoy the sporting events wherever and whenever they want, something they could not gain from an in-stadium experience. Furthermore, in a world where flexibility and streaming has dominated businesses in various industries, the same goes for the sports organizations. Streaming services and

OTT broadcasters combined with other actors are in a position where they can collect a massive amount of data on the various consumers. This data can be utilized in a number of ways in order to maximize the bottom line. The consumers can be presented with highly personalized ads, based on their individual preferences as a result of their interactions with the platforms. For actors such as sponsors the data collected can support them in the development and targeting in terms of timing, content. Moreover, the massive amount of consumer analytics can support the business in developing content that is tailored to the specific target group.

The potential application of big data in sports organizations goes way beyond the consumer experience. Sports organizations can utilize the big data to perform an extensive analysis of players, competing teams, and more to strategize. Scholars are talking about the death of the local sports market. Today sports fans are able to interact and enjoy the events they like, regardless of where they are living, giving the organizations global opportunities. With fans at any corner of the world, the organizations can entertain them with digital sports content, as with the case of Formula E where the aim is to reach a global audience. Artificial intelligence has been an emerging technology for the last decade influencing a variety of business processes within organizations. For the case of Arsenal, the organization has adopted the technology in their chatbot Robert Piers in order to serve their consumers in the best possible way. In the application of a technology like AI, it is important that the alignment on various business processes has been done, in order to exploit the potential. The chatbot supports the customers in giving a fast and helpful answer, but also provides the organization with data they can use to improve their service and exploit across their various platforms to give the consumer an even better and more personalized experience.

The impact of digital transformation goes beyond the incremental business opportunities and easily maneuverable challenges, organizations have a range of opportunities waiting to be exploited, if they are adventurous enough to grab them. Enterprise organizations are able to utilize a variety of existing technologies to unlock the new

opportunities lying there. However, for the organizations to achieve sustainable and future success, they must develop a strong vision that draws the lines for a clear path to develop innovative digital services or platforms and experiences that can give them an edge in the increasingly competitive industry of sports.

6.5 Practical implications

Since digital transformation has a great influence on sports organizations and sports management practices in various fields, the goal of this research paper is to enhance the field of sports management research. The research provides implications for existing organizations in the sports industry and future organizations who would adopt a new service as a result of their digital transformation. Furthermore, it presents a new approach on how value co-creation is captured through digital services by integrating their digital business model. This will lead to a better understanding of the phenomenon and the important implications for organizations and their management.

It can be difficult to find a universal measure in order to compare the different sports organizations digital business model and in that value co-creation aspect of their digital service, partly due to the fact that they operate within different fields and levels of the sports industry and with different statuses. Besides that, the different organizations vary in terms of user base due to the operational scope of the organization. With that being said they are a lot alike as well. They operate within the same unique industry, the sports industry where passion and engagement play a huge part of the interactions from the user base. The identification of the flow of value creation in sports organizations contributes significantly to the practitioners. As a start, the research provides sports organizations with an understanding of the potential influence digital transformation has when applying digital technologies, in terms of digital business model and value creation process. This can support the organizations in deploying the digital technologies and take the necessary investments to realize the value. Moreover, the findings of the study show that there has to be an alignment of the resources and processes within the organization in order to reach an efficient solution. This research as well provides the sports organizations with insights on how to adopt the digital technologies in the 3

layers of their business model. Digital technologies can influence the sports organization in various areas from internal actors such as players, staff, and coaches internally to external stakeholders such as fans, partners, the community, media and society in general.

In order for organizations to ensure competitive advantage through value creation, the organizations should seek developing services or platforms where value can be co-created rather than just providing access to it. Following the suggestion from Grönroos and Voima (2013), organizations could enhance their level of co-creation by actively interacting with their customers in the consumption phase. All though, the interactions point should be carefully thought of, in order to become a natural part of the service, so the customer experience is not undermined. The research shows that to enhance the value creation, the management department within the organizations, needs to adopt a perspective inspired by the service-dominant logic, influencing where the value is created. The service-dominant logic supports that the value should be created between the sports organization (provider) and the consumer, in the joint sphere allowing the organizations to engage in the customers value creation process which will positively affect the customer experience (Grönroos and Voima, 2013). All in all, this research provides practitioners with a deeper understanding of the implications digital transformation has on sports organizations and how they should or could create value in a co-creational process in order to have a competitive advantage.

7.0 Limitations and Future research

This chapter covers the limitations of the findings as well as potential future research within the area of digital transformation and sports organizations. As other exploratory studies, the aim of this research paper is to explore a phenomenon without drawing any conclusions for it. Besides that, limitations to such a study cannot be avoided, but the findings can act as a support or guidance for future literature or potential future studies.

This research was not possible to conduct under perfect conditions and, thus, shows limitations that are acknowledged in this section in order to build up awareness for areas of improvement. Firstly, the scope of the research is limited, since there is a conscious limitation as the available quantity and time did not suffice to cover all areas of digital transformation. As a consequence, this paper only covers a small fraction of the platforms within the sports industry. Therefore, amateur clubs are not taken into account in this research, but this limitation becomes less significant when put into perspective.

The professional sports organizations usually have more financial means and resources and thus can stem the high initial investment costs for the adoption of digital technologies. Most amateur clubs do not have the reserve to do so. Furthermore, the methodology shows weaknesses as the qualitative research could not be conducted under perfect circumstances, since its primary source of data is secondary. In order to enrich the findings qualitative interviews with key actors connected to the various cases could have been done, if both the necessary time and access to the organizations were possible. Overall, these limitations should be taken into account when reading and reflecting on this research. Additionally, the gaps within should encourage other researchers to focus on specific areas to enrich the research field with new findings.

The research has met the initial goal to provide an understanding of the possibilities digital transformation creates in terms of business model and value creation in sports organizations. Where the organizations in the industry to some extents were lost in assessing the influence digital technologies had on their business model and the value

creation process, they now have an opportunity to assess the application and tailor it according to the value drivers and benefits they want to achieve. This research is just a small step in the deeper understanding of digital transformation in sports organizations, and there are a range of topics which could be studied further. Since the sample cases are selected from a diverse range of sporting activities, one direction could be to focus on one particular sports organization in terms of activity or organizational type, to dive even deeper into the adoption of digital technologies. Another direction could be to analyze a specific organization in order to understand the historical level and observe the change in business model and value. Furthermore, taking a different stance in terms of theory, in order to understand the sports fans' role in the co-creation of value through the consumer culture or the importance of the various resources through the resource-based view in order to understand the value of them.

8.0 Conclusion

This research was intrigued by the fact that digital transformation rapidly is changing and influencing the field of sports and sports management, but little attention had been given to how digital technologies have influenced the sports organizations on a deeper level such as their business model innovations and value creation. Until now scholars had conceptualized around value creation of platform business models and digital transformation in the corporate world but adopting it in a sports context was still an area the literature had not covered. The aim of this research is to give an overview of the possibilities digital transformation creates in terms of business model and value creation in sports organizations.

Firstly, by reviewing the institutional characteristics of sports, as an institution with long and glorious traditions, it was clear that the established theoretical importance of treating sports organizations in a different context was the key. As previously explained, the complexity in the organizational structures and activities, the costumer's composition of engagement and passion and the relationship it creates, and the technological skills and knowledge that is required and continuously improves, together represents an industry that is very different from others. Through a systematic demonstration of the differences in sports organizations across various factors, the research contributes to the theoretical understanding of the sports industry and ecosystem.

The research adopted the sports value framework (Woratsheck, 2014) which originates from the service-dominant logic as a theoretical framework supported by the value creation sphere (Grönroos and Voima, 2013), as the logic provided the opportunity to analyze the value co-creation perspective in the organizations. Furthermore, the digital business model framework (Weill and Woerner, 2013) were adopted in order to analyze the collected and coded secondary data related to the business model of the sports organizations. The analysis led to the comparison of the various business models, where it was found that there were minor differences within the various service offerings on the different levels, but that they all were operating with the aim of creating value for

their target audience, the fans. The analysis of the value co-creational levels illustrated that there were differences in the ability to co-create value within the different platforms. In order to understand the actual value-creation process within the digital platforms and how it can support the future development of services, the dynamics leading to co-creational value were laid out. The analysis revealed a variety of drivers which entail benefits for each of the sports organizations participating in the network and resulting in an outcome to the community of sports organizations.

Hereby, this research concludes that digital transformation creates a range of possibilities for organizations in the sports industry, in terms of new digital business models and thereby value-creation. Digital technologies can improve business processes connected to fan engagement and content development, where organizations can gain a better insight and support their organization in taking the right strategic decisions apart from traditional methods used. This research leads to a better understanding of the factors contributing to value creation, and thus, enables a focused enhancement of activities an organization can carry out. Due to the current development in digitalization, it is expected that the number of sports organizations investing heavily into technology will increase rapidly in the future, resulting in a more digital and enriched sports experience for the fans and consumers.

9.0 Bibliography

Allee, V. (2000). "Reconfiguring the Value Network." Journal of Business strategy, 21(4), pp. 36-39

Allee, V. (2008). "Value Network Analysis and Value Conversion of Tangible and Intangible Assets." Journal of intellectual capital, 9(1), pp. 5-24.

Amit, R., and Zott, C. (2001). Value creation in e-business. Strategic management journal, 22(6-7), pp.493-520.

Anderson, J. C., and Narus, J. A. (1998). "Business Marketing: Understand What Customers Value." Harvard Business Review, 76, pp. 53-67.

Ansoff, I. (1965). Corporate strategy. McGraw-Hill: New York. 241 pages

Bocken, N. M., Short, S. W., Rana, P., and Evans, S. (2014). A literature and practice review to develop sustainable business model archetypes. Journal of cleaner production, 65, pp. 42-56.

Bolton, R., and Hannon, M. (2016). Governing sustainability transitions through business model innovation: Towards a system understanding. Research Policy, 45(9), pp. 1731-1742.

Boons, F. & Lüdeke-Freund, F. (2013): Business Models for Sustainable Innovation: State of the Art and Steps Towards a Research Agenda. Journal of Cleaner Production 45, pp. 9-19

Bouncken, R.B., Kraus, S., and Roig-Tierno, N. (2019). Knowledge- and innovation-based business models for future growth: digitized business models and portfolio considerations. Review of Managerial Science, 15, pp. 1-14.

Bowman, C., and Ambrosini, V. (2000). Value creation versus value capture: towards a coherent definition of value in strategy. British Journal of Management, 11(1), pp. 1-15.

Brynjolfsson, E. and Hitt, L.M. (2000) Beyond Computation: Information Technology, Organizational Transformation and Business Performance. Journal of Economic Perspectives 14(4).

Carcary, M., Doherty, E., and Conway, G. (2016). A dynamic capability approach to digital transformation–a focus on key foundational themes. 10th European Conference on Information Systems Management. Academic Conferences and publishing limited, pp. 20– 28.

Chesbrough, H., and Rosenbloom, R. (2002). The role of the business model in capturing value from innovation: Evidence from Xerox Corporations technology spinoff companies. Industrial and Corporate Change, 11(3), pp. 529-555.

Fehrer, J., Woratschek, H., Germelmann, C.C and Brodie, R.J. (2018). Dynamics and drivers of customer engagement: within the dyad and beyond. Journal of Service Management 29(3).

Fitzgerald, M., Kruschwitz, N., Bonnet, D., and Welch, M. (2013). Embracing Digital Technology: A New Strategic Imperative. MIT Sloan Management Review, Research Report.

Grönroos, C. (2008). Service Logic revisited: who creates value? And who co-creates? European Business Review, pp. 298-314.

Grönroos, C. (2011). Value Co-creation in Service Logic: A Critical Analysis. Marketing Theory 11(3), pp. 279-301

Grönroos, C., and Voima, P. (2013). Critical service logic: making sense of value creation and co-creation . Journal of the Academy of Marketing Science, pp. 133-150.

Hedman, J., and Kalling, T. (2003). The business model concept: theoretical underpinnings and empirical illustrations. European journal of information systems, 12(1), pp. 49-59.

Hess, T., Matt, C., Benlian, A., and Wiesboeck, F. (2016). Options for formulating a digital transformation strategy. MIS Quart. Execut., 15(2). pp 123-130.

Kane, G., Palmer, D., Phillips, A., Kiron, D., and Buckley, N. (2015). Strategy, not Technology, Drives Digital Transformation. MIT Sloan Management Review and Deloitte University Press, vol 14.

Krein, K. (2015). Reflections on competition and nature sports. Sport, Ethics and Philosophy, 9(3), pp. 271–286.

Legner, C., Eymann, T., Hess, T., Matt, C., Böhmann, T., Drews, P., Mädche, A., Urbach, N. and Ahlemann, F. (2017), “Digitalization: opportunity and challenge for the business”

Lepak, D.P., Smith, K.G., and Taylor, M.S. (2007). Value creation and value capture: a multi-level perspective. Academy of Management Review, 32(1), pp. 180-194

Loyd, J.W. (1968). The Nature of Sport: A Definitional Effort. Quest: Vol. 10, No. 1, pp. 1-15

Mizik, Natalie and Jacobson, Robert. (2003). Trading Off Between Value Creation and Value Appropriation: The Financial Implications of Shifts in Strategic Emphasis. Journal of Marketing - J MARKETING, 67, pp. 63-76.

Moore, N., Levermore, R. (2012). English professional football clubs: Can business parameters of small and medium-sized enterprises be applied?. Sport, Business and Management: An International Journal, 2(3) pp. 196-209

Myers, M. (2009). Qualitative research in business & management. London, UK: Sage. Chapter 3 pp. 19-33

Normann, R., and Ramirez, R. (1993). From Value Chain to Value Constellation. Harvard Business Review, 71(4), pp. 65-77.

Osterwalder, A., and Pigneur, Y. (2002). An eBusiness Model Ontology for Modeling eBusiness.

Osterwalder, A., and Pigneur, Y. (2010). Business model generation: a handbook for visionaries, game changers, and challengers. John Wiley & Sons.

Pedersen, P. M., and Thibault, L. (2019). Contemporary Sports Management. 6th ed. Human Kinetics, IL: Versa Press.

Porter, M. E. (1985). Competitive Advantage: Creating and Sustaining Superior Performance. New York: Free Press.

Prahalad, C., and Ramaswamy, V. (2004). Co-creation experiences: The next practice in value creation. Journal of Interactive Marketing, 18(3), pp. 5-14.

Priem, R. (2007). A Consumer Perspective on Value Creation. The Academy of Management Review, 32(1), pp. 219-235.

Reis, J., Amorim, M., Melão, N., and Matos, P. (2018). Digital Transformation: A Literature Review and Guidelines for Future Research. Trends and Advances in Information Systems and Technologies. Springer International Publishing AG, pp. 411-421.

Saunders, M., Lewis, P. and Thornhill, A. (2016). Research methods for business Students. 7th ed. Pearson Education, UK: Prentice Hall.

Schaltegger, S., Lüdeke-Freund, F., & Hansen, E. G. (2016). Business models for sustainability: A co-evolutionary analysis of sustainable entrepreneurship, innovation, and transformation. Organization & Environment, 29(3), pp. 264-289.

Seddon, P.B., and Lewis, G.P. (2003). Strategy and Business models: What's the difference. Department of information systems, The university of Melbourne. pp. 236-248

Shafer, S.M., Smith, H.J., and Linder, J.C. (2005). The Power of Business Models. Business Horizons 48(3), pp. 199-207

Stabell, C.B., Fjeldstad and Ø.D. (1998). Configuring value for competitive advantage: on chains, shops, and networks. Strategic Management Journal, 19(5), pp. 413-437.

Standert, W., and Jarvenpaa, S.L. (2016). Formula E: Next Generation Motorsport with Next Generation Fans. Conference: International Conference on Information Systems.

Stewart, D.W. and Karmins, M.A. (1993). Secondary Research: Information Sources and Methods. Sage.

Teece, D. J. (2010). Business models, business strategy and innovation. Long range planning, 43(2-3), pp. 172- 194.

Vargo, S. L., and Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. Journal of Marketing, 68, pp. 1–17

Vargo, S. L., and Lusch, R. F. (2006). Service-dominant logic: What it is, what it is not, what it might be. Journal of the Academy of Marketing Science, 6(3), pp. 281-288

Vargo, S. L., and Lusch, R. F. (2011). It's all B2B… and beyond: Toward a systems perspective of the market. Industrial Marketing Management, 40, pp. 181–187.

Vezyridis, P., Timmons, S., and Wharrad, H. (2011). Going paperless at the emergency department: A socio-technical study of an information system for patient tracking. International Journal of Medical Information. 80(7), pp. 455-465

Vial, G., 2019. Understanding digital transformation: A review and a research agenda. The Journal of Strategic Information Systems, 28(2), pp. 118-144.

Weil, P., and Vitale, M.R. (2001). Place to Space: Migrating to eBusiness Models. Boston: Harvard Business Press.

Weil, P., and Woerner, S.L. (2013). Optimizing your digital business model. MIT Sloan Management Review, vol 54 (3), pp. 71-78.

Westerman, G., Calméjane, C., Bonnet, D., Ferraris, P., and McAfee, A. (2011). Digital Transformation: A Roadmap for Billion-Dollar Organizations. MIT Sloan Management, MIT Center for Digital Business and Capgemini Consulting.

Woratschek, H., Horbel, C., and Popp, B. (2014) The sport value framework – a new fundamental logic for analyses in sport management, European Sport Management Quarterly, 14(1), pp. 6-24

Xiao, X., Chian Tan, F. Ter, Lim, E. T. K., Henningsson, S., Vatrapu, R., Hedman, J., Tan, C. W., Clemenson, T., Mukkamala, R. R., and Van Hillegersberg, J. (2018). Sports Digitalization: An Overview and A Research Agenda. ICIS 2017: Transforming Society with Digital Innovation, pp. 1-21.

Yin, R. (2016). Qualitative research from start to finish. 2nd ed. NY: The Guilford Press.

Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. The Journal of marketing, pp. 2-22.

Digital references:

Arsenal, 2018. *Introducing the official Arsenal bot* 🤖. [online] Arsenal.com. Available at: https://www.arsenal.com/news/introducing-the-official-arsenal-bot [Accessed 3 May 2021].

Brandcrunch, 2019. LaLiga Tests out Sceenic's Watch Together on OTT Platform. [online] BrandCrunch. Available at: https://www.brandcrunch.com.ng/2019/12/17/laliga-tests-out-sceenics-watch-together-on-ott-platform/ [Accessed 2 May 2021].

Carp, S., 2019. La Liga launches OTT service to boost visibility of Spanish sport. [online] Sportspromedia.com. Available at: https://www.sportspromedia.com/news/la-liga-ott-streaming-platform-launch [Accessed 2 May 2021].

FIA, 2021. The Official Home of Formula E | FIA Formula E. [online] Fiaformulae.com. Available at: https://www.fiaformulae.com/en [Accessed 3 May 2021].

Fitzpatrick, A., 2019. Why This Electric Car Racing League Matters Even If You Don't Care About Cars. [online] Time. Available at: https://time.com/5622578/formula-e/ [Accessed 3 May 2021].

Hardaker, A., 2018. Arsenal fans in for a treat with new 'pioneering' tech. [online] BusinessCloud. Available at: https://businesscloud.co.uk/arsenal-fans-in-for-a-treat-with-new-pioneering-tech/ [Accessed 3 May 2021].

Johan Cruyff Institute, 2020. "LaLiga is a good case study as a business model". [online] Johan Cruyff Institute. Available at: https://johancruyffinstitute.com/en/blog-en/laliga-is-a-good-case-study-as-a-business-model/ [Accessed 22 April 2021].

LaLiga, 2019. How LaLiga's OTT platform is building a new global following | Global Fútbol. [online] Global Fútbol. Available at: https://newsletter.laliga.es/global-futbol/laliga-ott-platform-building-a-new-global-following [Accessed 22 April 2021].

LaLiga, 2021. What is LaLiga?. [online] Página web oficial de LaLiga | LaLiga. Available at: https://www.laliga.com/en-GB/pressroom/what-is-laliga [Accessed 22 April 2021].

Market, S., 2021. Sports Technology Market Size, Growth, Trend and Forecast to 2024 | MarketsandMarkets. [online] Marketsandmarkets.com. Available at: https://www.marketsandmarkets.com/Market-Reports/sports-technology-market-104958738.html [Accessed 6 May 2021].

McCarthy, J., 2018. Arsenal guns for 'one-to-one' conversations with fans via quirky Robot Pires chatbot. [online] The Drum. Available at: https://www.thedrum.com/news/2018/10/26/arsenal-guns-one-one-conversations-with-fans-via-quirky-robot-pires-chatbot [Accessed 3 May 2021].

PwC, 2019. Artificial Intelligence: Application to the Sports Industry. [online] PwC. Available at: https://www.pwc.com.au/industry/sports/artificial-intelligence-application-to-the-sports-industry.pdf [Accessed 22 April 2021].

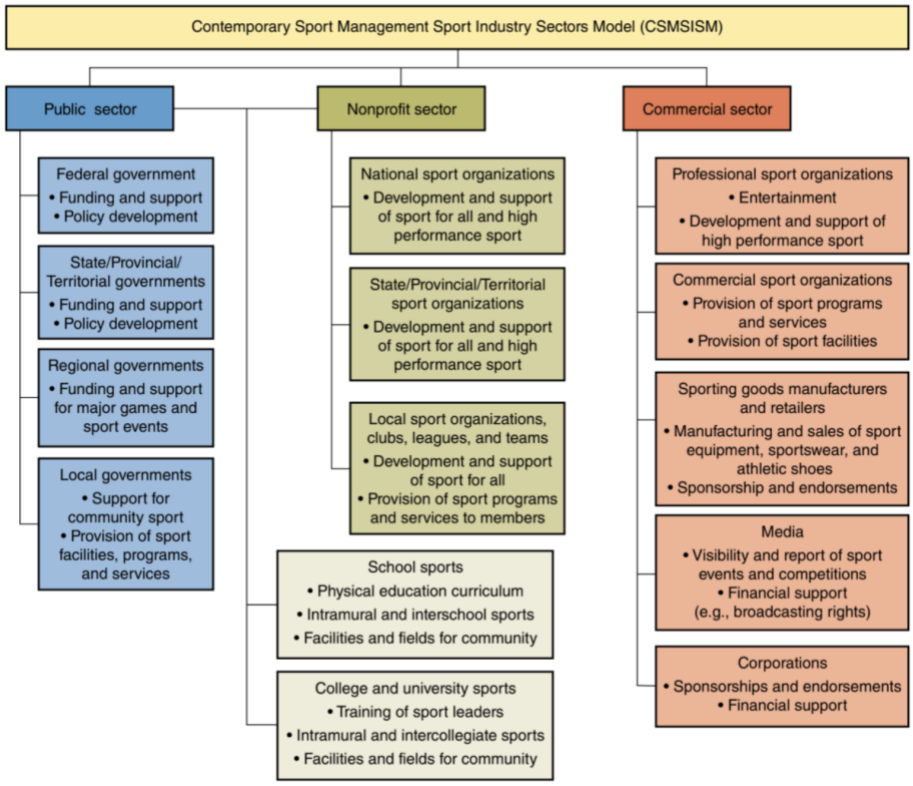
SportBusiness, 2020. LaLiga taking the lead with OTT | SportBusiness. [online] SportBusiness. Available at: https://www.sportbusiness.com/2020/02/laliga-taking-the-lead-with-ott/ [Accessed 2 May 2021].

Woodward, M., Walton, D. and Hamilton, D., 2020. Electric vehicles: Setting a course for 2030. [online] Deloitte Insights. Available at: https://www2.deloitte.com/us/en/insights/focus/future-of-mobility/electric-vehicle-trends-2030.html [Accessed 3 May 2021].

9.0 Appendix

9.1 Appendix A - Contemporary Sports Management Sport Industry Sector Model

Overview of the CSM Sports Industry Sector Model by Pedersen and Thibault (2019).



9.2 Appendix B - Coding of the cases

9.2.1 LaLigaSportsTV – OTT

Text	Source	Content	Customer Experience	Platform	Value creation
New streaming service LaLigaSportsTV has surpassed 400,000 global users.	www.newsletter.laliga.es		x		
LaLiga became the first major football competition to develop its own OTT service	www.newsletter.laliga.es			x	
OTT offers an enormous opportunity for data analysis, helping competitions to understand their fans better and build new followings across the world	www.newsletter.laliga.es				x
a multi-channel platform that was created to provide coverage of less-mainstream Spanish sports	www.newsletter.laliga.es	x			
a unique data footprint that can help LaLiga to improve its offering	www.newsletter.laliga.es			x	x
we can then send notifications or recommendations for a specific match, TV	www.newsletter.laliga.es		x		

service or event					
The aim is to offer less high-profile sports greater and improved visibility via a platform where content is quickly and easily accessible, allowing fans to enjoy their favourite sport wherever, whenever and however they want.	https://www.sportspromedia.com/news/la-liga-ott-streaming-platform-launch		x		x
a key aim of the niche sports platform is to assist federations in gaining a better understanding of evolving user consumption habits,	https://www.sportspromedia.com/news/la-liga-ott-streaming-platform-launch		x	x	x
Crucially, data from the OTT platform is combined with data from LaLiga's many other digital platforms, including its website, mobile applications or games, in a single data lake. This allows for the team to analyse a much broader range of fan behaviours and use data-driven marketing to make a wider variety of relevant offers.	www.newsletter.laliga.es			x	x
LaLiga's biggest aim: to build a loyal and strong community.	https://www.brandcrunch.com.ng/2		x		x

	019/12/17/laliga-tests-out-sceenics-watch-together-on-ott-platform/				
Watch Together will be a feature available for LaLiga Sports TV users, allowing fans to watch together	https://www.brandcrunch.com.ng/2019/12/17/laliga-tests-out-sceenics-watch-together-on-ott-platform/	x		x	
By making these competitions available around the world, we want to increase the visibility and exposure that they receive	https://www.sportbusiness.com/2020/02/laliga-taking-the-lead-with-ott/	x			x
fans are keen to discover this content and by using this data we are offering personalised recommendations to them, carefully	https://www.sportbusiness.com/2020/02/laliga-taking-the-lead-with-ott/	x	x		
ur most important focus is to create the best broadcast experience for viewers and sports federations, while studying the data to	https://www.sportbusiness.com/2020/02/laliga-taking-the-		x		x

define the best future strategies	lead-with-ott/				
the idea behind establishing a direct-to-consumer platform is to embrace future technological opportunities and adapt to evolving viewer habits	https://www.sportbusiness.com/2020/02/laliga-taking-the-lead-with-ott/			x	x
Through an OTT operation, we realised we would be able to offer users an experience that catered to their preference for on-demand, mobile-ready content, while providing a world of relevant data that can help us get closer to fans.	https://www.sportbusiness.com/2020/02/laliga-taking-the-lead-with-ott/		x	x	
The data is also being used to optimize the OTT offering, with LaLiga working on improving the product, user experience and quality of content.	https://www.sportbusiness.com/2020/02/laliga-taking-the-lead-with-ott/	x	x	x	
When we launched LaLigaSportsTV one of our promotional messages was: ‘The more we see it, the bigger it will be.’	https://www.sportbusiness.com/2020/02/laliga-taking-the-lead-with-ott/				x

9.2.2 Arsenal AI Chatbot

Text	Source	Content	Customer Experience	Platform	Value creation
Giving you personalised and unique access to the club (...) And it's all delivered through our bot personality - Robot Pires.	https://www.arsenal.com/news/introducing-the-official-arsenal-bot	x		x	
Whether you want the latest news, fixtures, results, videos, player stats or ticket information, Robot Pires can show you around, keep you up to date and answer your questions.	https://www.arsenal.com/news/introducing-the-official-arsenal-bot	x			x
it responds to fans' natural language requests for news, scores, stats, videos and more.	https://www.arsenal.com/news/introducing-the-official-arsenal-bot	x		x	
Chatbots are a great way for clubs to evolve their platforms for speaking to fans, and we're excited to work with Arsenal to help bring shape to the category.	https://www.arsenal.com/news/introducing-the-official-arsenal-bot		x	x	
We're constantly looking at ways to bring fans content that makes their	https://www.arsenal.com/news/introducing-the-		x		

matchday experience even more entertaining	official-arsenal-bot				
The bot is the next step in us developing a hub for fans that houses the answers to all of their questions – that feels intuitively part of the Arsenal voice and experience. Fans feel a personal connection to Arsenal, and AI is more important than ever for us to give fans a personalised experience	https://www.arsenal.com/news/introducing-the-official-arsenal-bot	x	x	x	
When you publish content you broadcast one to many, this moves it to one-to-one at scale with fans.	https://www.thedrum.com/news/2018/10/26/arsenal-guns-one-one-conversations-with-fans-via-quirky-robot-pires-chatbot	x	x		
The club has experienced a 400% increase in its social following over the last five years	https://www.thedrum.com/news/2018/10/26/arsenal-guns-one-one-conversations-with-fans-via-quirky-robot-pires-chatbot		x		x
some fans may well	https://www.t	x	x		

opt in for moment-by-moment match updates from it	hedrum.com/news/2018/10/26/arsenal-guns-one-one-conversations-with-fans-via-quirky-robot-pires-chatbot				
In terms of business objectives, you reach a new audience, reach them in a smarter way. It will increase traffic to our website and further down the line there will be commercial benefits	https://www.thedrum.com/news/2018/10/26/arsenal-guns-one-one-conversations-with-fans-via-quirky-robot-pires-chatbot		x	x	x
We need to strike a balance between not being too intrusive, so this will be a learning process for us. We can add more features to it as we go down the path.	https://www.thedrum.com/news/2018/10/26/arsenal-guns-one-one-conversations-with-fans-via-quirky-robot-pires-chatbot	x		x	
As the way fans engage with teams evolves, there are more exciting and dynamic ways we can craft chatbots.	https://www.thedrum.com/news/2018/10/26/arsenal-guns-one-one-conversations-with-fans-via-quirky-robot-pires-chatbot	x		x	

using artificial intelligence (AI) to give its fans and supporters a more personalised experience	https://businesscloud.co.uk/arsenal-fans-in-for-a-treat-with-new-pioneering-tech/		x	x	
We’re constantly looking at ways to bring fans content that makes their match day experience even more entertaining	https://businesscloud.co.uk/arsenal-fans-in-for-a-treat-with-new-pioneering-tech/	x	x		
Fans feel a personal connection to Arsenal, and AI is more important than ever for us to give fans a personalised experience.	https://businesscloud.co.uk/arsenal-fans-in-for-a-treat-with-new-pioneering-tech/		x	x	x
Chatbots are a great way for clubs to evolve their platforms for speaking to fans, and we’re excited to work with Arsenal to help bring shape to the category.	https://businesscloud.co.uk/arsenal-fans-in-for-a-treat-with-new-pioneering-tech/		x	x	x

9.2.3 Formula E

Text	Source	Content	Customer Experience	Platform	Value creation
a variety of digital innovations at FE, leveraging social, mobile, virtual reality, gaming, and artificial intelligence technologies.	https://biblio.ugent.be/publication/8525586/file/8525587.pdf		x		x
Formula E is aimed at a new, younger motorsport fan –the smartphone millennial generation.	https://biblio.ugent.be/publication/8525586/file/8525587.pdf		x		
we want to further revolutionize the fan experience, catered to the millennial generation	https://biblio.ugent.be/publication/8525586/file/8525587.pdf		x	x	
They come to see the races because it's the future, it's new technology, it's exciting, and so on	https://biblio.ugent.be/publication/8525586/file/8525587.pdf	x	x	x	
At the "eVillage," electric concept cars were exhibited and fans could compete in an electric kart race	https://biblio.ugent.be/publication/8525586/file/8525587.pdf			x	
"We offer a platform for innovation and validation of all	https://biblio.ugent.be/publication/8		x	x	x

technologies relating to racing and fan engagement. We are at the hub of a whole ecosystem of technological innovators that are interested in this millennial generation.”	525586/file/8525587.pdf				
“While traditional fans attend races purely for the on-track action, millennials expect a broader experience”	https://biblio.ugent.be/publication/8525586/file/8525587.pdf		x		
A common view of all of the people involved in Formula E is, we want to focus on the electric drivetrain,	https://time.com/5622578/formula-e/	x		x	
The focus of Formula E is efficiency, and deriving the maximum efficiency out of your powertrain system,	https://time.com/5622578/formula-e/			x	x
what sustainable mobility was capable of, driving electric vehicles to the fore in the race for a better, cleaner future	https://www.fiaformulae.com/en/discover/history	x			x
the arrival of FANBOOST, a first in sport that allows fans to play an active role in the race by voting to award their favourite an extra boost of power during the race.	https://www.fiaformulae.com/en/discover/history	x	x		
Formula E stars went	https://www.	x	x	x	

virtual with the ABB Formula E Race at Home Challenge	fiaformulae.com/en/discover/history				
Virtual Allianz E-Village you'll be able to find the best of the Allianz E-Village	https://www.fiaformulae.com/en/fan-zone/virtual-allianz-e-village	x	x	x	

9.3 Appendix C – Number of search results

Organization & Digital service	Number of search results
LaLigaSportTV	803.000
Arsenal Chatbot	899.000
Virtual Allianz E-Village	790.000