Digitalization as Part of the Game?
—
Examining the Digital Readiness of Tennis Clubs

MASTER THESIS

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Abstract

The multifaced phenomenon of digitalization is reshaping our world like never before. Societies and economies undergo profound changes in an accelerating speed, which transform every facet of life. While the digital impact is shortening organizations’ lifespans from 67 to 15 years in the last 60 years, today approximately 70% of all change programs fail. The reasons for this are manifold but can usually be traced back to a lack of (digital) readiness. This thesis investigates the importance of digital readiness within the digital transformation process by means of the example of non-profit tennis clubs in Austria and Germany. The findings take prevalent attitudes and external challenges into consideration to assess the current digital status quo of clubs. In the course of this research project, 11 semi-structured expert interviews were conducted, transcribed, coded, and analyzed. These experts are characterized by their many years of experience within the field of tennis and club management. The results agree with existing literature which states that tennis clubs have not comprehensively adopted digital applications yet, but also reveal that this is not necessarily due to a lack of readiness. Generally, the greatest potential can be found in the online presence of clubs, including the provision of a contemporary homepage and the usage of social media channels. Generally, more affordable new technologies such as virtual or augment reality may pave the way for tennis clubs to align their capabilities in a more digitally driven direction in the future. Besides, the digital deficits on the federal state level, which have become increasingly apparent as a result of the Covid-19 pandemic, might likewise promote a stronger integration of digital solutions within tennis clubs. Overall, this thesis fosters an increased understanding of digitalization within the field of sport management and change management and attempts to contribute to a more successful tennis ecosystem in the long run.

Keywords: Digital Readiness, Digitalization, Sports, Tennis, Clubs, Digital Transformation Process, Innovation, Organizational Change Readiness, Business Model Canvas
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<td>AI</td>
<td>Artificial Intelligence</td>
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<td>BM</td>
<td>Business Model</td>
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<td>Business Model Canvas</td>
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<td>DT</td>
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<td>et al.</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>IoT</td>
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<td>IT</td>
<td>Information Technology</td>
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<td>NGO</td>
<td>Non-Governmental Organization</td>
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<td>SBM</td>
<td>Social Business Model</td>
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<td>SMEs</td>
<td>Small and Medium-Sized Enterprises</td>
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<td>TLBMC</td>
<td>Triple Layer Business Model Canvas</td>
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1 Introduction

“In times of change, the greatest danger is to act with yesterday's logic.” – Peter Drucker

Initial Situation

Today’s economy and society are undergoing profound changes. Digitalization is taking place in various forms by transforming and reconstructing existing processes, strategies, and entire businesses across all industries (Iansiti & Lakhani, 2018). Voices claim that the collection and utilization of data is replacing oil as a global trade currency with the groundbreaking difference of not being exhausted by usage (Rusche, 2018; Lenzen, 2018). However, through digitalization, not only fundamental changes in market structures but also the disruption of existing business models take place, additionally, reformulating ethical and moral principles. Driven by ones and zeros, digitalization is affecting millions of peoples' daily lives and does not only change the environment they are living in but also the way of communicating and consummating – in brief: the way we live. (Rachinger, Rauter, Müller, Vorraber, & Schirgi, 2019). Everyday products are becoming increasingly digital (Iansiti & Lakhani, 2018), while the preparedness of individuals, as well as organizations in terms of being digitally ready, varies.

Digitalization is even transforming not too information-intensive industries (Sanchez, 2017). Hence, the sports industry is not excluded from digital change. The global sports industry, worth up to 700 billion dollars in 2018 and growing faster than the global GDP (Collignon, 2011; Gruettner, 2019), undergoes a digital transformation in numerous forms. Big data, artificial intelligence & Co. affect not only business processes of professional clubs but also the way decisions are taken on an individual athlete level. Social networks change the course of action on how sports organizations, athletes, and clubs are interacting with customers and fans (Sanchez & Zuntini, 2018). Daily player transfers are followed via apps, and bets are placed on favorite sports clubs (Stolterman & Fors, 2004). The internet of things connects products through sensors with software, while cloud technologies are driving real-time analyses helping to improve performances. Vital parameters about the actual heart rate, sleeping pattern, or energy consumption are easily accessible through fitness trackers and hence, adjust daily workout routines are adjusted to individual needs. The long history of sports experiences the alteration from an activity of game to an “activity of organization that has been codified, strategized, professionalized, and in many cases, commercialized” throughout its evolution (Xiao et al., 2018, p.2).
According to the Global Sports Innovation Center (2019), the commercialization of professional sports predominantly focuses on four main segments, namely fan engagement, smart stadium, business insight, and productivity of team and athlete performance. Generally, digitalization is profoundly changing the way of playing, to the way of managing, to the way of experiencing (Dellea, Schmid, & Zahn, 2014). Digital technologies in sports help athletes, teams, and stakeholders with organizing and managing tasks, accessing and interpreting decision-relevant information. The invention of new instruments and strategies brings out the best physical and economic performance (Caya & Bourdon, 2016; Xiao et al., 2018).

Problem Statement

Although the role of digitalization in sports is widely recognized in global business and media, less attention has been centered on it from an academic point of view and with a focus on sports clubs (Potts & Ratten, 2016). It is remarkable that up until now, digital transformation has received little attention in sport management research and sports innovation management compared to other management fields (Ströbel, Stieler, & Stegmann, 2019). So far, sport management scholars have only investigated selected facets of the phenomenon, such as for example, social media or eSport. Despite the massive transformation of sports triggered by digitalization, academic research on the topic is still limited within the information system discipline (Xiao et al., 2018). With more than 870 citations since 2009, the readiness theory indeed has been widely acknowledged, but no prior studies have explicitly been centered around organizational digital readiness (Lokuge, Sedera, Grover, & Dongming, 2019).

In their call for academic papers, Ströbel, Stieler, and Stegmann (2019) refer to the urgency of building a holistic understanding of digitalization in sports by establishing new ways for sports management research.

Especially tennis has not been the focus of investigation yet. In tennis, one of the fundamental challenges is the growing gap between sports and business with its lack of adapting to the new digital age (International Tennis Federation, 2018). New technology carries along new ways for tennis to increase participation and profitability in the future. The tennis of the future will look different from the tennis in the present, but how might the future of tennis be designed? Currently, the future does not seem too bright in terms of digital catch-up. Especially tennis centers and tennis clubs are still barely digitalized (Larkin, 2019). Here, a clear outline of the reasons why that is the case is missing (Ehnold et al., 2019). Although it is said that information technology and digitalization change the way sports operate (Krzanich, 2016), many clubs have not been implementing digital solutions yet (Ehnold et al., 2019).
Research Question

The above-described problem statement leads to the following conceptual formulation of the research question:

**How does the digital readiness of traditional, membership-based tennis clubs in Austria and Germany is currently looking like?**

The main research question is divided into two sub-questions that provide guidance and structure along with the central research efforts.

a) What is the tennis clubs’ attitude towards digitalization?
b) What are the current challenges tennis clubs are facing when adopting digital solutions?

Contribution & Outlook

The master’s thesis contributes towards a better understanding of the current situation tennis clubs are facing related to digitalization. Insightful information about overall attitudes towards digitalization on the part of these clubs is generated, and hence, conclusions about the current digital readiness can be drawn. To adopt digital solutions, requirements which therefore have to be met and barriers to be overcome are identified. An examination of existing capabilities, skills, and willingness to change are investigated. Furthermore, the existing literature is extended in such, that existing digital readiness literature is applied for a specific industry and may reveal groundbreaking differences to other industries. With the identification of current challenges and the inquiry of the degree of digital readiness, applicable directives for tennis clubs, to foster a digital strategy and implementations, are created. Overall, the goal of the master’s thesis is to provide pivotal guidelines for tennis clubs to master digitalization and hence, contribute to a more successful tennis ecosystem in the long run.

Structure

The thesis outline is structured in six sections. First, a short introduction including a problem statement, a research question, and the research distribution is outlined. Second, a literature review is building the thesis' theoretical basis by thematizing the topics of digitalization in sports, digital readiness, and the business model canvas. Next, an approaching methodology containing the depiction of research design, research setting, and analysis is identified, followed by the presentation of findings. Lastly, a discussion and conclusion are complementing the master’s thesis.
2 Theoretical Background

The following literature review serves as a theoretical basis for the master’s thesis. It aims at gaining an in-depth understanding of the underlying field of research by outlining the occurrence of digitalization in sports, especially in tennis, the detailed examination of the phenomenon of digital readiness, and the contemplation of the business model canvas.

2.1 Digitalization

The phenomenon of digitalization has made its way into almost every corner of the world and is taking place in various forms (Iansiti & Lakhani, 2018).

At breathtaking speed, new technologies are changing the entire economic fabric, society, and the way we live, work, and consume. The digital transformation surpasses all previous developments in terms of speed, scope, and systemic impact. Besides, the combinatorics of individual technologies opens up unexpected new possibilities: Cloud computing, IoT, artificial intelligence, robotics, 3D printing, sensor technology, big data, blockchain, etc. and their combinations lead to entirely new products, services, business models and ecosystems in various industries (Matzler, Bailom, Friedrich von den Eichen, & Anschober, 2016). Whether mobility, energy, production, medicine, finance, or housing - all sectors and areas of life are affected and can be made more effective, efficient, and intelligent (Füller & Hutter, 2017). The opportunities of smart, connected products are exponentially expanding in terms of functionality and offer far greater reliability, significant higher product utilization and capabilities cutting across traditional product boundaries. The disruption of traditional value chains forces companies to rethink nearly everything they do, while a completely new supporting technology infrastructure is required (Porter & Heppelmann, 2014, 2015).

In a variety of organizations, an increasing number of digital business roles and functions are growing as a reaction to a more and more digital market environment (Kane, Palmer, Phillips, Kiron, & Buckley, 2016). However, Lahkani and Iansiti (2014) state that no opportunity comes without risk, and hence, risks will be more difficult than ever to be identified and managed.

Although some companies have heavily invested in technology, as well as operational, and cultural changes (Bock, Iansiti, & Lakhani, 2017), many have difficulties adjusting to the phenomenon of digitalization, underestimate the dynamics and react too slow while sticking to their existing business models.
As a rule, it is newcomers, and start-ups whose disruptive business models change industries or even make them redundant (Matzler et al., 2016) by using, for example, the power of big data for a more enhanced decision making (McAfee & Brynjolfsson, 2012). Besides, digitalization goes hand in hand with globalization leading to the situation that the most potent competitor is not sitting within sight on the other side of the market place but maybe on the other side of the world (Löwe, 2018). All in all, there are no signs that the widespread of digitalization is slowing down, and either business adapts to this change or will be replaced sooner or later. How digitalization is embedded in the sports industry is evaluated in the next section.

2.2 Digitalization in Sports

The progress of digitalization does not leave sports unaffected (Bruckschlögl, 2018). More and more sports rely on digital technologies creating new opportunities for fans, athletes, clubs, sponsors, investors (Elishkov, Erdmann, & Flaumenhaft, 2017; Seddon, Chan, Fleetham, Trivedi, & Hack, 2019) and competing participants such as right owners, agencies and sponsors (Collignon et al., 2011). Digitalization takes place on- and off-site the field in various forms supporting along with managing the team as well as athlete activities and performance with, for example, wearables or via video analytics (Gruettner, 2019). Furthermore, it plays a crucial role in managing and organizing key responsibilities that are usually related to enhancing the overall operational efficiency like, for instance, stadium management, events, leagues, or associations. Lastly, digitalization is addressing fans and creates content (Ekanem, Kariappa, & Jain, 2020). Here, digital ticketing, sports streaming platforms, or sports betting systems are prime examples. According to Deloitte (2017), the global sports industry is worth more than 700 billion US dollars, equaling about 1 % of the global GDP. The European SportsTech Report (2020) reveals that for the first time in history, investments exceeded 500+ million US dollars in 2019 with no signs of slowing down (Ekanem et al., 2020). Consequently, sport is much more than just a fun game. Sports influences life in manifold ways, culturally as well as socially, and, now more than ever, also economically (Elishkov et al., 2017).

Lately, the world of sports has been creating an entirely new digital ecosystem with new stakeholders on various layers of engagement that is also requiring new skills (see figure 1). In addition, new digital technologies enable advanced ways of organizing and managing athletes, sports teams, and clubs through assessing and interpreting data more comprehensively, inventing performance-enhancing instruments, or establishing unique strategies (Xiao et al., 2018).
In symbiosis with the phenomenon of globalization, digitalization offers great potential for sports organizations to engage internationally with new and existing fans while monetizing ascending trends (Seddon et al., 2019). Here, according to the Stanford Graduate School of Business, three significant trends are shaping the future of the sports industry. First and foremost, the importance of creating the ultimate fan experience remains the highest priority (Lee, 2018), since the fan is the center of attention (Elishkov et al., 2017). Here, digitalization creates a positive effect in terms of engagement by building and driving brand value and revenue growth (Buvat et al., 2019). Second, new stadiums and stadium modifications are on the rise. Equipped with cloud, mobile, and analytics technology, stadiums boost fan attendance and enhance the experience (Elishkov et al., 2017; Esposito, 2015; Lee, 2018). Third, the evolution of e-Sports continues. Emerged recently, e-Sports offers new channels for advertisement and sponsorship and addresses mainly a young, globally-connected audience (Elishkov et al., 2017; Lee, 2018). The leading research institutes IBM (2019), Deloitte (2017 & 2020), and Capgemini (2019) extend the focus of sports industry trends by complementing wearables & performance enhancement, sponsorship assets, data analytics and the rise of women’s sports. However, the sports industry undergoes an unprecedented change offering high potentials through digitalization. How this change manifest in the sport of tennis is depicted in the next chapter.
2.3 Digitalization in Tennis

Emerged in the 12th century from the handball game “jeu de paume” and initially played by French royalty, today, tennis faces immense opportunities driven by digitalization such as social media, big data, or IoT (Kavanaugh, Seifert, & LaBauve, 2020). Eighty-seven million people, around 1.17% of the world's population, are playing the game on one of 489,000 tennis courts dispersed over 71,000 clubs (International Tennis Federation, 2019). In 2017, the Technical Commission of the International Tennis Federation “agreed to promote the use of technology” (International Tennis Federation, 2017, p. 15) to foster the technological progress of the sport while protecting its cultural heritage. Modern tennis is verging a new era evolving parallel with digital signs of progress like, for instance, the increase of screen time, social media influence, or the use of mobile phones (Kavanaugh et al., 2020).

On the other hand, tennis is also competing with more sports and other kinds of leisure activities than ever before, which intensives vying for consumers’ attention (Carayol, 2019). Ultimately, tennis has to take appropriate actions to stay competitive if the goal of 120 million participants until 2025, set by ITF president David Haggerty should be reached (International Tennis Federation, 2019).

Regarding a study by the Infosys Research Institute, recently adopted as major strategic innovation partner by the French Open¹, tennis has to adopt its offer towards a younger audience by creating “sharable micro-moments by implementing tennis-focused, tech-enabled experiences”(Kavanaugh et al., 2020, p. 5). Here, Wimbledon² as the second most popular sports event globally (behind the Super Bowl) is demonstrating how it is changing its relationship towards a younger generation by being, for example, the first European sports property launching their event on Snapchat (Arnold, 2018). The focus has to be drawn on professional, as well as non-professional tennis, to guarantee success in the long run. Next, an elaboration of both is provided.

2.3.1 Professional Tennis

In recent years, professional athletes have become stronger, faster, and bigger than ever before, while equipment like rackets or strings and workout methods are consequently improving (Corbett, 2015).

¹, also known as „Roland Garros”; the biggest tournament played on clay courts
² Most prestige tennis tournament taking place on grass at the All England Lawn Tennis & Croquet Club in London
Digitalization, with its highly dynamic components, creates vast possibilities for players and coaches to identify and quantify the demands of the game (Giles, Kovalchik, & Reid, 2019) like for example Babolat’s smart racket that is capturing data about speed, precision or ankle of different strikes (Perrotta, 2014). Hence, the integration of digital technology, including analytics or artificial intelligence as an element of the athletic training and competitive matches, has become integral and irreplaceable (Farrell, 2019; Jenkins, 2019; McCaskill, 2018). Tennis facilities and stadiums are not excluded from this transformation process. For example, the US Open rely on advanced analytics providing deep match insights for fans while cloud technology forecast internet traffic and cloud storage to ensure fans are constantly getting updates about schedules and have access to video and social media streams (Esposito, 2015).

On the court, the Hawk-Eye ball tracking system is a revolutionary technology. First introduced at the Australian Open in 2007 (Giles et al., 2019), it creates fair and unbiased judging of the balls’ mark (Rathonyi, Bácsné Bába, Müller, & Rathonyi-Oder, 2018) while adding entertainment value for the audience (Clarey, 2016) by creating tension before the decision takes place. Overall, technology is gaining increasingly in importance to keep fans loyal. Here, to create incentives to visit a tennis event, one has to consider that a shift towards a holistic event experience rather than just a match takes place (Kavanaugh et al., 2020). Supplemented by smart perimeter advertisement, fan engagement possibilities reach an entirely new level. High-quality, moving advertisements are presented to the audience in the stadium while, as soon as the perimeter advertisement is broadcasted on TV, it virtually changes its content to certain country specifics. Ultimately, “broadcasters become a platform for fan and market engagement” (Cavestany, Lanne, & Hiremath, 2019, p. 1), and consequently, prices for sports rights are steadily increasing.

However, the numerous opportunities digitalization offers professional tennis have to be in line with customs and traditions of the sport while protecting the human element (Kavanaugh et al., 2020) without ignoring areas of the sport which might not be too profitable such as the traditional club tennis which is considered next.

2.3.2 Non-Professional Tennis

The success of sports clubs cannot be operationalized based on growth and profitability targets as they are usually aiming, especially in Europe, at being non-profit.
Therefore, at best, clubs can be evaluated in terms of the club-specific performance in satisfying the interests of the members or in the course of facilitating the work processes of the volunteer employees (Breuer & Feiler, 2019; Ehnold et al., 2019). Especially the non-professional tennis could be a beneficiary from digital solution accelerating beginner and amateur players’ learning curve or help a club with its operational business. However, improvements have almost solely centered around the professional tennis so far because “the cost of installing, maintaining and operating such systems has far prevented greater market penetration” (Guevara Martinez & Schlögl, 2018, p.1). Besides, non-professional tennis has to adapt its offer to reach out to a younger audience. Currently, a value shift is taking place. Millennials are said to be samplers, collecting many experiences while not committing as a club member anymore since the number of opportunities to be active in leisure time is higher than ever (Kavanaugh et al., 2020; Trägner, 2017). Corbett (2015) argues that way too often, clubs still have the image of being for high-income white families and that millennials are not looking for something like this. To stay attractive, clubs have to adjust their offer and structures to the changing needs (Larkin, 2019). Here, modern communication and technological value-adding retain members and attract new customers (Trägner, 2017). Recently, the number of clubs, academies, and public facilities relying on software for carrying out their operational business-like, for instance, internal and external communication, administration, (further) training, member retention or training and competition control, increased (Ehnold et al., 2019; Guevara Martinez & Schlögl, 2018). Besides, conditions imposed by the tennis associations on the use of specific software, for example, to report competition results have a significant influence (Ehnold et al., 2019). However, digitalization creates not only opportunities for the club but also its members. Online court booking systems, for example, enable players to virtually check at what time a court is free to use and to book it if needed. Further, instruction videos and apps are more frequently used for either teaching tennis to yourself or training purposes including the recording and analyzing of players’ strokes such as “Tennis Coach Plus” (Perrotta, 2014), the in 2019 found startup “Wingfield” or even on YouTube and Instagram. Astonishingly, although even more affordable devices are emerging, many players and coaches have not been accepting and adopting them in their training yet (Ehnold et al., 2019).

All in all, digitalization comprises a great potential to adapt to changing player needs and to establish new ways to learn the sport faster while improving the efficiency of the clubs’ operational business. For this purpose, especially clubs have to evince a certain degree of digital readiness and willingness to adapt to digital solutions, based on their special club characteristics that are observed in the following paragraph.
2.4 Special Characteristics of Clubs

As the previous abstract addresses digitalization within the sport of tennis, it is now also important to clarify on characteristics of a traditional, membership-based tennis club. Generally, it is essential to get a better understanding of how the environment looks like and where digitalization in sports is taking place on the amateur level. Here, a short overview of legal form, strategy, and goals is provided.

There is no doubt that in recent decades the way the sport is organized, communicated, and practiced has undergone profound changes (Xiao et al., 2018). Professional sport is increasingly adapting to market characteristics, which is why here - in the interrelation of sport, the public, the media, and business - one will encounter football clubs and sport event agencies listed on the stock exchange.

Despite all the individualization, commercialization, and professionalization that sport has experienced in recent decades, one thing remains especially in Germany and Austria unmistakable: The most important organizational form of sport is still called "sports club" (Borggreffe, Cachay, & Thiel, 2012). Companies are considered successful as long as they achieve their original goals of survival in the market and the generation of profits. Similarly, unprofitable organizations are not considered successful for the same reason (Ingerfurth & Helmig, 2013). In contrary to many clubs in America, the European sports club landscape is usually characterized by a high number of voluntary clubs that offer their members the opportunity to perform a variety of sports activities. Therefore, clubs are usually classified as non-profit organizations (NGO’s) since they do not strive for profits.

According to Walzel and Römisch (2019), sports clubs are mainly characterized by five constitutive qualities:

- Association
- Democracy
- Honorary
- Voluntariness
- Autonomy

Generally, sports clubs are independent of third parties with their jurisdiction and usually have a democratic decision-making structure where members aim at common interests.
An elected board of directors regulates decisions about the use of funds. A common source of resources are membership fees and voluntary cooperation.

Studies show that clubs are ascribed far-reaching positive characteristics like, for instance, making a considerable contribution to educational work, the inclusion of seniority and immigrants to foster integration, increase a person’s work-life balance and improve socialization contact points (Breuer, Wicker, & Orlowski, 2014).

However, today, clubs are confronted with a multitude of various difficulties, while some of them increasingly threaten the clubs’ existence. Very often, issues are centered around a lack of (voluntary) personnel. The retention and recruitment of voluntary functionaries, young competitive athletes, as well as trainers and coaches, are, on average, the biggest problems for clubs (Breuer & Feiler, 2019). Especially in today’s times of declining volunteer numbers, the role of volunteers and effective volunteer management plays a crucial role in clubs, as well as non-profit organizations (Gross & Rottler, 2019). From an organizational perspective, volunteers are seen as a valuable resource and essential element of nonprofit organizations' workforce whereas a volunteer position in a board of directors always goes along with strategic responsibility.

Moreover, today, a financially stable situation has become increasingly important for non-profit organizations compared to recent decades. In times of decreasing public subsidies and increasing commercialization of the entire non-profit sector, clubs have to generate a surplus income to survive (Englert & Helmig, 2018). An important role in this scenario can play the phenomenon of digitalization. To successfully integrate digital components into a club, a certain degree of digital readiness is required. What digital readiness is and what role it plays in a digital transformation process is examined in the subsequent section.

2.5 Digital Readiness

Following, the concept of digital readiness (DR), a preliminary state for digital transformation, is exerted based on the underlying principles and assumptions of change management and change readiness. At first, a detailed review of the related terms is provided, followed by the elaboration of the different dimensions and levels of (digital) readiness and required (digital) capabilities. Further, ways to build, measure, and assess digital readiness are identified. Overall the investigation takes place from the lens of organizational change readiness, one of the two levels of change readiness (Voß & Pawlowski, 2019). Talking about organizations throughout this master thesis is designed in such a way that it is also applicable to, for example, tennis clubs.
2.5.1 Relevance

The multifaced phenomenon of digitalization is reshaping our world like never before. Societies and economies undergo profound changes at an accelerating speed, transforming every facet of life, such as, for instance, work, social relations, or tourism.

Especially companies have been confronted with change ever since. Nowadays, the digital component strongly affects companies’ development. The digital impact shortened, for example, a firm’s lifespan from 67 years in the 1960s to 15 years in 2017, while 88% of the Fortune 500 companies of 1955 no longer exist in 2018 (Perry, 2016). Today, the world’s largest taxi company Uber owns no single taxi, while Airbnb, the largest accommodation provider, owns no single real estate (Goodwin, 2015). That are only two of many examples where platform economies have disrupted entire industries. Hence, especially companies are facing mounting pressure to adjust their orientation towards current standards set by the today’s digital age, aiming to stay competitive in a more challenging market environment and to seize the opportunity of increased profitability in the long run (Holt & Vardaman, 2013b; J. P. Kotter, 2007).

Approximately 70% of all change programs fail (By, 2007; Morgan, 2019). The reasons for failure are manifold, reaching from poorly executed integration to employees’ resistance to adopting new technologies. Often, change management initiatives lack the understanding that change concern the organization as a whole, requiring to rethink organizational structures, functions, and management practices, just as planning, budgeting, and measurement systems (Hamel, 2009). It is not just about implementing new digital technologies. Moreover, a holistic alignment of the organization with its digital environment is needed (Kane et al., 2016), and adjustments of the underlying business model have to take place (Weil & Woerner, 2015). According to Holt et al. (2007), successful organizational change proceeds through the stages of readiness, adoption, and institutionalization. Hence, change always implicates a temporal dimension (Hutterer, 2012).

Nevertheless, many companies are still not well prepared for digital transformation and have to improve their digital readiness. However, what exactly is digital readiness? Ensuing, an explanation of the underlying term is derived.
2.5.2 Definitions

Recently, technological progress is proceeding faster than people can adopt (Kane, 2017). For many years, the only question centered around whether people have access to digital technologies or not. Today, the focus increasingly shifts towards the assessment to what extent people are capable of using digital technologies to manage their environment, make decisions or solve problems (Horrigan, 2016), since change is unavoidable (By, 2007). Nevertheless, the terminology of digital readiness in the existing literature is widely diversified.

DR is used in the context of industries, institutions, countries, or individuals (Nasution, Rusnandi, Qodariah, Arnita, & Windasari, 2018) but also in organizational behavior, strategic change, and management of technology (Ramaseshan, Kingshott, & Stein, 2015).

For instance, Horrigan (2016) uses the term in the context of Americans’ skills coping with digital technologies while the Queensland Department of Trade and Industry (2016) is accessing the digital readiness of its industry to identify a range of opportunities and James (2008) applied digital readiness in a comparison of developing and developed countries. Nonetheless, although existing literature is lacking in the uniformity of its use cases, they commonly state that readiness starts on an individual level and with the willingness to change.

Hence, change readiness, and digital readiness are heavily intertwining (Voß & Pawlowski, 2019). Therefore, the research is mainly framed around the construct of readiness whereas readiness, also interchangeably associated with the term “maturity” (Pirola, Cimini, & Pinto, 2019), which is defined as a “state of being fully prepared for something” (Ramaseshan, Kingshott, & Stein, 2015, p.2). Armenakis et al. (2007) extent this view by stating that readiness is a mindset during the implementation of change and comprises beliefs, attitudes, and intentions of change target members.

Readiness is generally seen as a cognitive precursor for the behavior of either resistance or empowerment towards change. Thus, given that digital transformation requires an individual’s readiness to perform a particular behavior as a precursor for change, it is addressed within this thesis so far, helping to derive an understanding for the overall organizational change.

Digital transformation refers to the “ability of organizations, its leaders and employees, to adapt to rapid changes wrought by evolving digital technologies” (Kane, 2017, p. 3) while everything that can be digitized, from products to processes to entire business models, will be digitalized (Matzler et al., 2016).
Voß and Pawlovski (2019) argue that readiness for digital transformation inevitably interrelate with change readiness and therefore can be seen as a part of change management while Burnes (2017) state that change management itself is not limited to one discipline per se, instead it draws on various social science disciplines.

To complete the elaboration of the underlying terms, “digital”, according to Ross (2017), refers to “social, mobile, cloud, analytics, internet of things (SMACIT), cognitive computing, and biometric technologies” (Ross, 2017, p. 3).

Now, that there is a common understanding of the terms readiness, digital and digital transformation, a broad definition of digital readiness within the context can be drawn: “Digital readiness is the inclination and willingness to switch to and adopt digital technology and the readiness to create new innovative opportunities by using this technology to bring an individual, organization, industry, and country to achieve their goals faster and with greater results” (Nasution et al., 2018, p.4).

A more tailored definition of digital readiness towards the organizational level is based on the reasoning of Holt et al. (2007) and states that digital readiness includes a company’s capability to utilize benefits arising from information technologies and the employee’s overall preparedness to adopt and employ those in their job.

Hereafter, the importance of organizational readiness, for digital change is examined in the following chapter.

2.5.3 Organizational Readiness for Digital Change

As already stated, change is unavoidable (By, 2007), and organizational change is often rather unsuccessful (Lokuge et al., 2019). More recently, organizations have difficulties coping with external change like, for instance, global environmental and technological shocks (Thomas & Hardy, 2011) and struggle in overcoming the process of internal change (Kotter, 2011). Nevertheless, organizational readiness is considered to be a critical precursor for successful change initiatives (Weiner, 2009). Lokuge et al. (2019) argue that organizational readiness is a state that attains before the start of a specific activity involving the psychological, behavioral, or structural preparedness of an organization.
Further, the scholars point out that readiness can be observed from multiple perspectives such as the individual, team, department, or organizational level and is best conceptualized as a degree in a continuum, rather than a state of being ready or not ready (Lokuge et al., 2019). Further, organizational readiness implies various dimensions, as seen in figure 2.

![Figure 2. A Model of Organizational Readiness for Digital Innovation (Lokuge et al., 2019, p.5)](image)

<table>
<thead>
<tr>
<th>Cognitive Readiness</th>
<th>Organizational knowledge base underpinned by knowledge, skills, and adaptability</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Readiness</td>
<td>Availability of technology and its enterprise system and IT infrastructure stability</td>
</tr>
<tr>
<td>Resource Readiness</td>
<td>Configuration and re-configuration of human, financial and physical resources to address to meet new requirements</td>
</tr>
<tr>
<td>Cultural Readiness</td>
<td>Organizational core values affiliating digital implications through e.g. decentralized decision-making or a low-risk aversion</td>
</tr>
<tr>
<td>Strategic Readiness</td>
<td>Managerial activities fostering digital innovation through e.g. good communication</td>
</tr>
<tr>
<td>Partnership Readiness</td>
<td>Affiliation of external stakeholders through initiating and maintaining relationships with vendors, consultants, or customers</td>
</tr>
<tr>
<td>Innovation Valance</td>
<td>Organizational motivation, attitude, and empowerment towards digital innovation</td>
</tr>
</tbody>
</table>

Table 1. Organizational Readiness Dimensions (Lokuge et al., 2019)

The complex phenomenon of change leads to a surplus of solutions sold by various consultancy firms in the economy who advise how companies smoothly integrate change in their operational business.
Although organizations should always be prepared for change and adapt to newly emerging social and cultural needs, market changes or strategic issues (Alwheeb & M Rea, 2017), the scope of change highly depends on a company's age, size, growth rate and the industry they are operating in (Appelbaum et al., 2017).

Westermann, Bonnet, and McAfee (2014) state that the need for organizational transformation (change) increases exponentially in the future. Here, digitalization and digital organizational readiness play a major role. However, the concept of change in academic literature has widely been examined. Generally, researchers share the opinion that change readiness manifest on two levels, which are the micro-level or individual readiness, like, for example, motivation or competencies, and the macro-level or organizational level like, for instance, the organizational strategy or culture. (Vakola, 2013; Voß & Pawlowski, 2019).

This research mainly focuses on the organizational level, including an emphasis on the entire organization but also considers groups, teams, and individuals contributing to the organization's readiness. To better understand the concept of change within the digital transformation process, one has to consider change as a precursor of readiness, whereas readiness is a precursor of transformation. This line of thought is examined next.

In the existing change literature, two dominant approaches have been identified over the past decades. The two approaches are the planned change and the emergent change (Liebhart & Garcia-Lorenzo, 2010). The former has been derived from the three-phase model of change developed by Kurt Lewin around 1950 and is a systematical procedure of planning, arranging, and implementing change introduced by an organization to move in a short time from present status to the desired future status (Burnes, 2017). Although phases usually are not sharply separable, his model gives orientation to many organizations during their transformation process. Lewin identified that organizations go through the stages of i) unfreeze, ii) change, and iii) refreeze during a process of change. Here, a step of creating awareness, from the need of change to the development of new methods and the learning of new attitudes and behaviors, to reinforcing the change that has occurred, takes place (Burnes, 2017; S. Cummings, Bridgman, & Brown, 2016). Lewin’s model served as a simplistic foundation for many researchers in the 20th century and has been complimented, for instance, by Edgar Schein several years later. Schein back-fills Lewin’s model with mechanisms of attitude change, initially developed by Herbert Kelman, stating that in a first step, creation of motivation for change has to take place, followed by the learning of new concepts and finalized through the institutionalizing of the new concept.
Nevertheless, the model of unfreezing, change, and then refreezing has validity ever since and serves as the foundation of any change initiative of organizations and academic research of change management (Burnes, 2017; S. Cummings et al., 2016; Liebhart & Garcia-Lorenzo, 2010).

The second dominant approach is emergent change. Here, a more process-oriented perspective is chosen. According to Burnes (2017), emergent change is an “ongoing, dynamic process which emerges unpredictable and unplannable”. Here, many different approaches and methods can be found in academic literature as well. Kraus, Becker-Kolle, and Fischer (2010) identified that throughout existing literature, the three common aspects of strategy, structure, and culture play a significant role in the emergent change approach. Former is referring to the direction of the change effort, followed by the identification of necessary processes and structures and finally, the involvement of respective individuals within the change initiative.

All in all, many different approaches and theories are existing, with all having advantages and disadvantages. No matter in which form change occurs, there is not the one concept to tackle it. Consequently, it is even more decisive to timely integrate digital readiness within the overall digital transformation process to take appropriate action.

To do so, out of various models, the five-step digital transformation process developed by Schallmo, Lang, and Plechaty (2017) is used. Here, at first, an organization has to identify its digital ambition by analyzing the company’s value chain and included actors, while outlining the business model and existing customer needs. Second, digital ambitions are identified by defining goals and prioritize them according to the dimensions of the business model. Third, digital potentials are recognized, and adoptions of the business model are designed. Fourth, the digital fit assesses options based on the conformity with customer needs and organizational goals. Fifth and last, the digital implementation takes place by integrating partners within the network and the design of customer experience. The better the steps one through four are executed, the higher the likelihood of a grounded organizational readiness for transformation.

However, how do you know how much change is enough? According to the literature, there are three prominent models which are the incremental model of change, stating that one problem and one goal is addressed at a time, the punctuated equilibrium, which is triggered by environmental modifications such as new technology or industry deregulations, and lastly, the continuous transformation model, where the organizational ability to change continuously is key to success (Burnes, 2017; Ford & Ford, 2009).
Holt et al. (2007) argue in their research five key factors which mainly affect readiness on an individual level and therefore inevitably contribute towards readiness on an organizational level:

- Discrepancy
- Efficacy
- Organizational valence
- Management support
- Personal valence

On the contrary, Thijs Homan (2017), a leading expert and researcher in the field of change management, states the more critical opinion that change is neither a smooth process, nor can it be managed. He is underlining his argumentation by referring to two different perspectives. First, the monocentric change where change originates from one center and second, the polycentric development where change originates from everywhere. In the former, the role of the manager is considered to be the one who creates movement of the mass since the organization itself does not. Here, the message of change is transported in a top-down approach, whereas the manager is the one monitoring the progress and adapt it in case of deviance from planning. Consequently, the underlying assumption is that if a change is not managed, nothing will happen, and a successful organization is the result of proper change management (Pieterse, Caniëls, & Homan, 2012). Second, Homan argues that within the polycentric development of a dynamic and complex organizational system, the problem arises that change initiatives face various, already existing change initiatives.

All in all, when change initiatives are introduced, there is usually a high degree of uncertainty, ambiguity, and information overload which employees try to make sense of. In this phase, impressions and beliefs about the organization’s readiness for change are created. In the indicated continuum, employees either tend to view the organization capable of coping with change, resulting in a high readiness for adjustment, or they believe the organization is not able to cope with change, resulting in a low readiness for development (Eby, Adams, Russell, & Gaby, 2000). The person managing change usually cannot capture the holistic dimension of the change initiative. In this cycle, everybody is trying to make the best out of the given circumstances. Hence, everybody is changing continuously, and therefore, the assumption is that change is wanting to happen while being influenced by everyone and controlled by no one. Speaking about influence and control, one has to consider the phenomenon of resistance, which usually goes along with change and that is examined in the previous section.
2.5.4 Digital Change Resistance

Researchers and practitioners from all over the world agree that the number one reason for organizational difficulties during the implementation of change initiatives and their failure is the socially constructed phenomenon of resistance (Erwin & Garman, 2010; Ford, Ford, & D’Amelio, 2008; van Dijk & van Dick, 2009). Today, resistance regularly goes along with the phenomenon of digitalization. New technologies in the day-to-day operational business require new abilities to navigate through the highly dynamic and challenging digital landscape (Horrigan, 2014). The degree of resistance is significantly contributing to an organization’s success (van Dijk & van Dick, 2009). Rooted in the anxiety of losing security and coping with uncertainty (Liebhart & Garcia-Lorenzo, 2010), resistance appears in many different forms, varying from a lack of team solidarity and conformity of norms to the rejection of outsiders or decision taken from management (Vakola, 2013). In more extreme cases, resistance appears from sabotage to whistleblowing to strikes. Usually, resistance takes place on a micro- and meso-level and is represented by individuals and groups (Pieterse et al., 2012). Often it is the meso-level which is decisive for a particular behavior since the belonging to a group is from high importance for many people (Cummings, 2004). Individuals act upon positive self-esteem, creating a social identity that is based on group membership norms they want to belong to (van Dijk & van Dick, 2009). In some cases, employees overtly follow change initiatives while intrinsically being resistant (Pieterse et al., 2012).

Literature states that people do not resist change per se but rather the consequences they are anticipating like, for instance, a loss of status, comfort, or money; generally, threats to their self-interests. This so-called “person-oriented resistance to change” affect employee’s beliefs towards a negative impact on their personal work experience and is a counterpart of the “principle-oriented resistance”. Here, resistance is seen somewhat like a conflicting interaction phenomenon (van Dijk & van Dick, 2009). However, to realize change efforts, the cooperation of employees is needed (Thomas & Hardy, 2011).

A committed employee is less resistant and more open to change than an uncommitted employee (Appelbaum, Habashy, Malo, & Shafiq, 2012). Critical change literature states that resistance within an organization goes along with the appearance of the concepts of power and discourse.
Former relates to unequal power relations and center the attention towards internal power dynamics, whereas discourse refers to the way of how language, as one’s expressions of beliefs, influences the way information is transported across an organization (Burnes, 2017; Pieterse et al., 2012). According to the literature, there are several different theories of resistance, of which one is named the theory of cognitive dissonance. Rooted in the work of Leon Festinger in the 1950s, cognitive dissonance states that people aim to be consistent in their attitude and their behavior. If there is a dissonance between those two, people tend to feel uncomfortable and frustrated and attempt to re-establish the balance (Burnes, 2017).

To sum up, resistance can be seen as protecting action of individuals and groups towards change and the accompanying uncertainty. To overcome resistance, a transparent communication and the involvement of employees in the change strategy is mandatory. Concerning digitalization, it is getting more and more important to foster peoples’ competences and strengthen their esteem to cope with digital change. To do so, many people have to be empowered by their organization. A more in-depth view of the phenomenon of empowerment is provided in the next section.

2.5.5 Digital Empowerment

To successfully implement organizational change, overcome the phenomenon of resistance, and create digital readiness, employees, as well as volunteers, have to be empowered towards change and digitalization. Empowerment can be applied and used in various forms and on different levels regardless of organizational goals. In the context of this thesis, empowerment aims at bridging the gap between the resistance to organizational change and the overall use of digital technologies.

Recently, scholars around the globe are investigating the phenomenon of the digital divide, which refers to a widening gap within the society where people lack the access and use of technology (Bock, Iansiti, & Lakhani, 2017; van Dijk, 2008). Literature states that the digital divide is a twofold concept that, on the one hand, is based on access to technology and the other hand, based on skills and usage. Since in the European Union, around 85% of households have access to the internet, scholars argue that the biggest problem is not the access to technology anymore but rather a lack of people’s skills and usage. Nowadays, successful participation in society depends considerably more on information and the way they are gathered (Peromingo & Pieterson, 2018).
Lately, virtual environments are transforming the way individuals are interacting and communicating with each other (García Galera, Muñoz, & Pedrosa, 2017) and changing workplace structures across all industries (Peromino & Pieterson, 2018). Technology is evolving at such an accelerating pace that the broad mass is unable to catch up, and modern employees are confronted with new challenges arising in digital format (García Galera et al., 2017). By far, the number of already-skilled people is too small to serve the broad mass of existing digital needs. The question arises how to approach solving the problem.

According to Moritz and Stubbings (2019), the focus should lie on empowering the existing workforce to adapt to the new demands in the form of training and education and equip the next generation with digital knowledge to manage in the digital age. Here, the upskilling goes beyond the physical dispute with technology. It moreover changes the way people learn, think, and feel about technology and digitalization. This enabling process of improvements in skills and knowledge can only take place by empowering people and therefore refers to the concept of digital empowerment (Horragan, 2014). Mäkinen (2006) defines digital empowerment as the ability of an individual to use digital technologies to foster one's capacity within the information society while Horrigan (2014) extent this view by stating that digital empowerment contributes towards better networking, communication and cooperation opportunities, leading to a higher degree of individual and organizational competences.

Mainly the role of the manager is of great importance. To adapt to and create change for business' needs, the manager has to align the necessary capabilities according to the changing requirements. Within this scenario, establishing trust at an individual level is very important for managers. Trust, as a critical component in management, mainly contributes towards a well-functioning social exchange relationship and is linked to commitment for change (Eby et al., 2000). Organizational entities actively foster the trust of their employees so that they later support future organizational decisions and initiatives for change (Gigliotti, Vardaman, Marshall, & Gonzalez, 2019).
However, Burnes (2017) states that individual dynamism is created through empowerment and involvement rather than controlling employees. He argues that instead of directing and controlling change, employees should be receptive to the change process and intrinsically develop necessary skills, willingness, and motivation to take part actively. To do so, effective leadership, a trustworthy relationship between managers and employees as well as organizational commitment and understanding are crucial factors to overcome resistance (Burnes, 2017; Cummings, 2004; Homan, 2017; Weiner, 2009). Additionally, the self-efficacy of individuals is of crucial importance. People with a high level of self-efficacy tend to adopt faster, more comfortable, and more fearless to change than people with low-efficacy (Nasution et al., 2018).

Next, establishing an empowered digital culture within an organization or within a specific change initiative enriches participation through fostering information flows and horizontal communication (Mäkinen, 2006). To empower employees to overcome resistance and to successfully accompany an organization on its way to establish an overall digital readiness, a holistic understanding of how different divisions and entities of an organization contribute towards this status has to be created. Therefore, an analysis of an organizations’ different capabilities as a prerequisite for digital readiness is presented in the following section.

2.5.6 Dynamic Capabilities & DR

Digital technologies have essential means for modern society and redefine the way how organizations work (Arkhipova & Bozzoli, 2018). From the new office software to the digitally controlled production machines, transformation is establishing in all organizational areas and force organizations to take appropriate actions. In times of change, dynamic capabilities (DC) have to be developed by organizations to create, extend, and modify their course of action and therefore achieve and sustain competitive advantage (Helfat et al., 2007; Teece, Pisano, & Shuen, 2009). Nevertheless, many organizations have already experienced disruption in their daily operation caused by mobile, big data or cloud computing, while more recent digital technologies such as IoT or AI are on their way and alarmingly, they still appear as an unrealistic science-fiction scenario for many organizations outside the field of information technology (Arkhipova & Bozzoli, 2018).
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Thus, the organization needs to develop some level of adaptive capability (Schoemaker, Heaton, & Teece, 2018). Helfat et al. (2007) define dynamic capabilities as the capacity to create purposefully, extend, or modify its resource base, while Teece et al. (2009) extend this view by arguing that DC reflect the ability to obtain new forms of competitive advantage given path dependencies and market position. Overall, organizations aim at surviving in the long-term. From a strategic perspective, capabilities arise in many forms and manifest on multiple levels (Ferrari, 2013; Helfat et al., 2007). Often, different terminologies for capabilities exist in academic literature. To complement the understanding of strategic capabilities and set the cornerstone for these, one has to look at its two components of resources and competences, as presented in table 2 (Johnson, Whittington, Scholes, Angwin, & Regner, 2014). Here, a differentiation between physical, financial, and human resources and competences is made. Resources usually refer to tangible objects an organization owns. This includes, for example, computer systems or machines. Competences, on the other hand, include intangible components such as, for example, skills to deal with new software or even programming skills.

<table>
<thead>
<tr>
<th>Resources: what we have, e.g.</th>
<th>Competences: what we do well, e.g.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machines, buildings, raw materials, products, patents,</td>
<td>Physical</td>
</tr>
<tr>
<td>data bases, computer systems</td>
<td>Ways of achieving utilisation of plant,</td>
</tr>
<tr>
<td></td>
<td>efficiency, productivity, flexibility,</td>
</tr>
<tr>
<td></td>
<td>marketing</td>
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<tr>
<td>Balance sheet, cash flow, suppliers of funds</td>
<td>Financial</td>
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<tr>
<td></td>
<td>Ability to raise funds and manage cash</td>
</tr>
<tr>
<td></td>
<td>flows, debtors, creditors etc.</td>
</tr>
<tr>
<td>Managers, employees, partners, suppliers, customers</td>
<td>Human</td>
</tr>
<tr>
<td></td>
<td>How people gain and use experience, skills,</td>
</tr>
<tr>
<td></td>
<td>knowledge, build relationships, motivate</td>
</tr>
<tr>
<td></td>
<td>others and innovate</td>
</tr>
</tbody>
</table>

Table 2. Components of Strategic Capabilities (Johnson et al., 2014, p. 71)

However, organizations currently in and right before their digital transformation process are becoming increasingly aware of a skill deficit directly related to a lack of digital capabilities. Often, this gap is barely closed before the transformation starts. A range of new job roles and skill sets is required that organizations try to serve by building digital competencies in-house or sourcing digital talent from outside.

An increasing reliance on real-time data in decision-making requires, for example, hard skills pertinent to data mining and extraction or database management. Data scientist or data analyst, two examples of newly emerged job roles, have to have knowhow in dataset analytics for example RapidMiner, programming languages like Python or JavaScript, and statistical
software like SPSS or MatLab. Challengingly, skills for job requirements are constantly changing, while it is not always possible to transfer them across companies and industries. Generally, the success of a transformation heavily depends on how rapidly employees can learn and work with the newly rising demands (Arkhipova & Bozzoli, 2018).

Figure 3 displays the adoption life cycle, adapted by Rogers (1995) and Moore (2002) and indicates that with an increase in time, more people use a given application. The authors identified five types of adapters, which are the innovators, early adopters, early majority, late majority, and laggards. The scenario is also transferable to the macro-level such for example, entire organizations adopting a new IT back-office and micro-level like, for instance, the acquirement of specific skills dealing with the web conference app Zoom. The graphic shows that at the beginning, there are always entities going ahead by trying new things. Before the majority adapt to new circumstances, a critical point, called the "chasm", has to be overcome. The mass always wants to be convinced, whereas the enthusiasts and visionaries are actively seeking new possibilities. The high proportion of conservatives and skeptics are harming a fast and holistic adoption. While in the digital era, the life cycles are getting shorter and shorter. This is hampering, especially organizations, to keep up with the pace of digital change. All in all, one has to identify reasons why the adoption often takes so long to overcome the chasm and initiate appropriate action to countervail this resistance.

Figure 3. Adoption Life Cycle adapted from Rogers (1995) and Moore (2002)

To do so, one can look, for example, at the sinus milieu like depicted in table 3. With this tool, a closer investigation of individuals, groups, or organizations from a social perspective is possible.
Table 3. _Sinus-Milieu® Germany_ (Sinus Markt und Sozialforschung, 2020)

Here, like-minded people are categorized based on shared values, beliefs and social status. While the y-axis entails the social status categorized from lower to higher, the x-axis contains fundamental values reaching from traditional to modern perspectives. The “Traditionalists” in the left lower corner are, for example, said to be characterized by a growing resignation towards the new and share the feeling of being left behind. The “Adaptive Navigator” on the right side is, on the other hand, for example, said to be the modern young center of society that is motivated and prepared to adapt (Sinus Markt und Sozialforschung, 2020). Concerning digital readiness, this categorization provides an opportunity to understand how people within a society or even an organization are thinking, where their motivation is coming from, or what their attitude towards a given phenomenon is. Consequently, it helps to create individualized indicators and ways to address their needs in compliance with organizational change goals.

An even greater focus on ascertaining digital capabilities is provided in the next section “measure & assessment”.

2.5.7 Measure & Assessment

Organizations aiming to digitally transform their business model with all its facets, inevitably have to measure and access the progress along the transformative process. As stated previously, digital readiness can be timely integrated as one of the first steps within the digital transformation process.
As a prerequisite before starting a transformation process, it is required to evaluate the current status quo of the organization and to derive future steps by outlining an appropriate strategy (Bücker, Pentek, & Otto, 2016). In other words, an organization has to identify its level of digital readiness. For this purpose, many scholars have developed maturity and assessment models as tools helping to evaluate nations, companies, and individual’s status quo and giving knowledge how to assign a particular stage or degree of readiness (De Carolis, Macchi, Negri, & Terzi, 2017).

On the organizational level, which is particularly interesting for this thesis, existing models target a broad spectrum of different enterprises and include various organizational dimensions. Here, according to Voß and Pawloski (2019), who examined various existing readiness and maturity models, common differentiation is taking place based on the approach (e.g. quantitative, qualitative or non-empirical), the type (e.g. conceptual, literature review, case study or survey), the industry (e.g. productive, service or media industry) and the focus (e.g. organization, technology and infrastructure, strategy, management, employees and culture). Pirola et al. (2019) approach a similar investigation but center a sharper focus on small and medium-sized enterprises (SMEs) by addressing specifically four dimensions exemplified in table 4 (Pirola et al., 2019; Voß & Pawlowski, 2019).

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Description</th>
<th>Considered literature dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy</td>
<td>Analyses the strategy of the company with respect to digitalization and the adoption of Industry 4.0 principles</td>
<td>Strategy, organisation, innovation and risk</td>
</tr>
<tr>
<td>People</td>
<td>Analyses people skills and how the know-how is managed inside the company</td>
<td>People/Culture</td>
</tr>
<tr>
<td>Processes</td>
<td>Analyses how internal processes are managed from a digitalization point of view and how data are collected, shared and managed inside the company</td>
<td>Products, customers, services and operations</td>
</tr>
<tr>
<td>Technology</td>
<td>Analyses the current adoption of the Industry 4.0 enabling technologies of the value chain</td>
<td>Technology</td>
</tr>
<tr>
<td>Integration</td>
<td>Analyses the digitalization level and the integration with other actors</td>
<td>Integration</td>
</tr>
</tbody>
</table>

Table 4. Description of the DLR 4.0’s Five Dimensions (Pirola et al., 2019, p. 11)

Further, most of the tools contain systematic frameworks enabling an organization to describe business performances in detail through benchmark and performance improvements. The description is then usually organized into different capability levels reaching from “not able to do” to “continuously improving” and follow a logical progression through stages, reaching from low to high (De Bruin, Rosemann, Freeze, & Kulkarni, 2005).
THEORETICAL BACKGROUND

Usually, tools include around five levels but can also vary between three and nine (Pirola et al., 2019; Vivaes, Sarache, & E. Hurtado, 2018). Holt et al. (2007) argue that regardless of the field of application, tools to measure readiness inevitably determine what and who is involved and how and where change occurs or, in other words, the content, process, context, and attributes. In some cases, models feature a modular structure allowing for a more tailored analysis and provide flexibility and adaptability to organizational needs (Pirola et al., 2019).

According to Wenzler, Bhambhani, and Schmidthaler (2014), indicators for digital assessments are often grouped into soft and hard metrics. Soft metrics typically measure the impact of digital interaction concerning organizational changes like, for instance, employee’s willingness to share content online or the engagement in internal forums. On the other hand, hard metrics usually relate to financial indicators and bridge the gap between digital change and system performance.

Because the employee is mainly contributing to an organization’s success as a valuable resource, various models have been developed to measure an individual’s digital readiness. Horrigan (2016) states that on an individual level, it is the preparedness and the comfort people feel towards the use of digital tools. Here, skills, trust, and use are elements that can easily be measured and provide information about attitudes and behavior. He further argues that individual-level factors like demographics and education also play a crucial role.

Additionally, Nasution et al. (2018) complete this line of argumentation by stating that the measurement of individual digital readiness strongly relates to attitudinal and action readiness since perception and knowledge are often insufficiently grounded. Here, individual beliefs and attitudes towards technology have to be complemented when measuring individual digital readiness. On the other hand, Parasuraman (2000) developed a Technology Readiness Index (TRI), including an attitudinal scale elaborating on an individual's propensity to embrace and use new technologies. The multi-dimensional construct includes four dimensions, which are optimism, innovativeness, discomfort, insecurity.

As stated earlier, the individual’s level of trust towards management mainly influences the success of change initiatives (Burnes, 2017). More frequently, organizations rely on a benchmarking tool named the Employee Engagement Index, to identify what drives employees across different cultures. Exemplified themes are employee engagement, leadership, and organizational commitment, vitality, and trust (Barends, 2018).
Critical literature states that models, frameworks measure and (digital) readiness assessment are overly simplistic in comparison to the problem complexity, are limited to a particular aspect of a domain, and therefore lack in validity (Dada, 2006; Pirola et al., 2019). Hamel (2009) claims that there is an overemphasize on single goals and proposes that there is not a holistic measurement system developed yet. Besides, too little emphasis has been centered on the modularity of models allowing for a more tailored assessment.

To sum up, measuring and assessing digital readiness can take place in various forms and dimensions, offering a structured assessment of the company’s capabilities in varying domains. Scholars place enormous efforts in developing (digital) readiness models and frameworks trying to give guidance along the way. However, since an organization is embedded in an extremely dynamic and fast-moving environment and deals with highly complex structures and processes on a meso- and micro-level, models and frameworks regularly have to be adjusted according to the changing requirements.

One way to accomplish those adjustments is by using the business model canvas that is presented in the following chapter.

### 2.6 Business Model Canvas

In the previous section, the necessary components of digital readiness and its antecedent role within the digital transformation process have been discussed. Subsequently, the intention lies in creating a basic understanding of the structure and use of the business model canvas (BMC). The modularity of this management tool allows not only the creation of a holistic depiction of organizational key activities but also enables the user to adapt their specific demands within the BMC’s framework. Hence, the following section includes an emphasis on digital organizational readiness and describes its relation to the BMC.

#### 2.6.1 Business Model Relevance

Before looking at the specifics of the business model canvas, a general observation of business models is outlined.

Generally, it is necessary to mention that even the smallest firm has a business model (BM), whether this model is explicitly articulated or not (Chesbrough, 2003; Teece, 2010). Up until today, there is no generally valid definition of the term business model in the scientific literature, which is widely spanning, cross-disciplinary and systemic by nature (Ahokangas & Myllykoski, 2014; Häckel & Übelhör, 2019).
THEORETICAL BACKGROUND

According to Massa, Tucci, and Afuah (2014), three perspectives of a BM's function have emerged over time which are i) the BM as an attribute of a firm, ii) the BM as cognitive schema, and iii) the BM as a conceptual framework.

As one of a variety of business model views, Teece (2010, 2018) states that a business model is an architecture of how firms create and deliver value to customers and mechanisms to capture a share of this value. Yeger & Shenhar (2019) further outline that firm's dimensions should be seen as one construct which is linked by a firm's architecture.

Generally, a BM can be seen as a simplification of real systems used to explain performance and competitive advantage (Zott, Amit, & Massa, 2011). BMs fill a conceptual gap between an organization's strategy and its processes by holistically analyzing the value creation and capture of a single organizational entity within a specific context (Osterwalder, Pigneur, & Tucci, 2005). Due to the fast-paced macro-environment in which organizations operate, BMs are liable to the risk of becoming obsolete (DaSilva & Osiyevskyy, 2019). Therefore, a constant rethinking and redesigning of BMs is mandatory to react appropriately to changes. In scientific literature, this phenomenon is referred to as business model innovation (BMI) (Harwardt, 2019). A BMI can be introduced step by step and thus incremental, semi-radical, or radical, giving insights about the nature of an organization's transformation. (Harwardt, 2019; Yeger & Shenhar, 2019). Speaking about transformation, Cuc and Miina (2018) have developed a Strategic Business Model Innovation (SBMI) matrix, seen in figure 4, which allows the categorization of any organizations’ business model based on the degree of innovation and strategic focus to determine the current position as well as changes.

Figure 4. The Strategic Business Model Innovation Matrix (Cuc & Miina, 2018, p.16)
In this context, there is also no exception for the already well-established organization since they are striving to maintain or expanding their strategic positions (Drejer, Byrge, & Lyndgaard, 2019; Sparviero, 2019).

In the past, many successful corporations in the past, like, for example, Nokia, Kodak, or the Encyclopedia Britannica, have been disrupted due to a missed or late adjustment of their business models. Each business model design project is unique and has its challenges, obstacles, and critical success factors. Organizations start at different points and have their context and intentions when business model changes are addressed. Some may be responding to a crisis, others may be looking for new growth potential, some may be in the start-up phase, and still others may have the intention of bringing a new product or technology to market (Osterwalder et al., 2005). Hence, the ability to flexible arrange and re-arrange an organization's dynamic capabilities as already stated in section 2.5.4 plays a vital role in business model changes (Teece, 2018). BMI is generally carried out using an orderly process to create a degree of novelty for customers, competition, industry, or the company itself. Intended to generate benefits for customers and partners in a new way, further opportunities for differentiation are aspired to be identified. Differentiation, in turn, consolidates customer relationships and builds a competitive advantage because the competition does not have these innovations. These newly introduced innovations make it more difficult for competitors to imitate (Harwardt, 2019). According to Yeger and Shenhar (2019), changes in a given organizational BM addresses one or more dimensions of either the target market, value proposition, value delivery, or value capture.

A unique form of business model is the social business model (SBM). SBMs contain elements of both for-profit and non-profit businesses. On the one hand, the organization aims at making profits, but on the other hand, the owners do not intend to make profits for themselves. Therefore, in case there is a financial surplus, a reinvestment takes place. (Yunus, Moingeon, & Lehmann-Ortega, 2010). Generally, the goal is to develop a self-sustaining business rather than a profit-maximizing one. Osterwalder and Pigneur (2010) extended this approach by the introduction of their Triple Layer Business Model Canvas (TLBMC), targeting social and environmental concerns next to economic ones. The model aims at reducing negative impacts while increasing positive ones.
Due to a large number of different definitions of the term business model, there are also a variety of different approaches to develop a business model. However, once the right approach for the business model is found, be it the product, a new service, or the adaptation of an already successful concept, this is only the beginning of a process that should end in a comprehensive business model. For this purpose, a structured approach is recommended to consider all relevant aspects of a business model (Harwardt, 2019). Osterwalder and Pigneur also recognized this and developed a universal framework called the Business Model Canvas.

In the next section, the BMC is introduced.

2.6.2 Structure & Elements

The most well-known and globally wide used business model framework is the Business Model Canvas (BMC), developed by Osterwalder and Pigneur. Next, an outline of its features and applications is depicted.

Osterwalder’s and Pigneur’s Business Model Canvas intent to create a holistic model, like a shared language for describing, visualizing, assessing, and changing business models (Osterwalder & Pigneur, 2010). Moreover, the MBC is less a model than a tool for business model development (Nagl & Bozem, 2018) and is applicable regardless of industry specifics, products or services, and regions (Lukas, 2018). The characteristic of modularity allows modifying the tool according to the user’s preferences. Therefore, the BMC can be easily adapted to, for example, non-profit oriented organizations. Due to its structure, which is outlined in detail soon, various analyses can be performed to assess and re-imagine an organization's capability in an existing BM.

Particular popularity enjoys the BMC among entrepreneurs because of the promotion of creativity and the need to holistically consider all elements of a business (Sparviero, 2019). According to Osterwalder et al. (2005), the BMC is following an ontology, where the elements are grouped into the four pillars of customer interface, product, infrastructure management, and financial aspects. All in all, the Canvas’s main objective is to support a business model thinking rather than one-dimensional product-centric thinking by creating values (Osterwalder, 2013).
Following, the nine building blocks of the BMC are presented on a one-page template, as seen in figure 5 below and outlined in more detail. The nine blocks cover the four most important areas of a company: customers, offerings, infrastructure, and financial viability. The business model is comparable to a blueprint for a strategy that is implemented through organizational structures, processes, and systems (Osterwalder & Pigneur, 2010).

First of all, the three blocks on the left side of the model, namely, key partners, key activities, and key resources are referring to a business’s internal processes and efficiencies.

In comparison, the three blocks on the right-hand side, namely customer relationships, channels, and customer segments are associated directly with the customers. The value proposition in the middle is the heart of the model, while the revenue structure is displayed at the bottom in the form of cost structure and revenue streams.

Each block is equipped with several guiding questions. A brief outline of the most important questions of each block is provided in table 5:

Figure 5. *The Business Model Canvas* (Osterwalder & Pigneur, 2010, p.48)
<table>
<thead>
<tr>
<th>Building Block</th>
<th>Explanation</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Customer Segment</strong></td>
<td>The group of people or organizations that a company wants to reach and serve</td>
<td>For whom do we create value?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Who are our most important customers?</td>
</tr>
<tr>
<td><strong>Value Proposition</strong></td>
<td>Products or services that represent value for a specific customer segment, for example, because they satisfy a need</td>
<td>Which of our customer's problems do we help to solve?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Which customer needs do we meet?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Which product and service packages do we offer to each customer segment?</td>
</tr>
<tr>
<td><strong>Channels</strong></td>
<td>Different customer segments are reached via channels where the value propositions are communicated, e.g. social media</td>
<td>Through which channels do our customer segments want to be reached?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>How do we reach them now?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>How are our channels integrated?</td>
</tr>
<tr>
<td><strong>Customer Relationship</strong></td>
<td>Customer relationships describe the type of relationships that a company forms with its customers, such as personal contacts or automated support</td>
<td>What kind of relationship does each of our customer segments expect from us?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Which ones have we established?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>How cost-intensive are they?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>How are they integrated into our other business model integrated?</td>
</tr>
<tr>
<td><strong>Revenue Streams</strong></td>
<td>Revenues that can be generated from each customer segment</td>
<td>What values are our customers willing to pay for? How do they pay now?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>How would they like to pay?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>How much does each revenue source contribute to the total revenue?</td>
</tr>
<tr>
<td><strong>Key Resources</strong></td>
<td>Physical, financial, intellectual or human resources vital to run the business model successfully</td>
<td>What key resources do our value propositions require? Our distribution channels? Our customer relationships? Revenue streams?</td>
</tr>
<tr>
<td><strong>Key Activities</strong></td>
<td>Activities in a company that are necessary to make the business model work</td>
<td>What key activities require our value propositions? Our distribution channels? Our customer relationships? Revenue streams?</td>
</tr>
<tr>
<td><strong>Key Partner</strong></td>
<td>Suppliers and partners that are indispensable for the business model</td>
<td>Who are our key partners? Who are our key suppliers? What key resources do we obtain from our partners?</td>
</tr>
<tr>
<td><strong>Cost Structure</strong></td>
<td>The cost structure breaks down the main costs incurred by the business model</td>
<td>What are the main costs associated with our business model?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Which key resources are the most expensive?</td>
</tr>
</tbody>
</table>

Table 5. *The Nine Building Blocks of the Business Model Canvas* adapted from (Harwardt, 2019, p. 68; Osterwalder & Pigneur, 2010, p. 48)

Besides all the positive aspects of the model, it is not entirely immune to criticism. Scholars claim that the BMC does not allow for a direct comparison with competitors. This requires additional instruments such as heat maps for weak-point analysis, competitive analyses, or transformation and investment plans for operational implementation (Häckel & Übelhör, 2019).
Further, scholars criticize that the model is isolated from its environment, whether it is the industry structure nor external stakeholders like, for instance, society (Sparviero, 2019). However, besides some minor shortcomings, the BMC is, all in all, a practical and useful tool to identify and adjust essential building blocks of a business and, thus, a great way to holistically display interrelations.

2.7 Interim Summary: Theory

The underlying theory of this thesis covers a range of topics reaching from digitalization and its manifestation in sports over the temporal and contextual integration of digital readiness within the digital transformation process to parameters such as, for example, digital capabilities impacting an organizations' change initiative success. Talking about organizations throughout this thesis always implies a transferability to sports clubs because fundamental structures resemble one another. Generally, the literature reveals that the state of being ready or not ready is often challenging to assess because change is unavoidably progressing. In addition, change readiness and digital readiness are heavily intervening (Voß & Pawlowski, 2019). Fast pace digital progress allows for infinite possibilities and makes it more and more challenging to keep up. Scholars state that people do not necessarily lack the excess to technology anymore, but moreover, they lack competences dealing with it. According to Holt et al. (2007), organizational change proceeds through the stages of readiness, adoption, and institutionalization. Organizations also have to consider the individual level while striving to become digitally ready because it actively contributes to a successful change initiative on an organizational level. Generally, the state of readiness is seen as a cognitive precursor for the behavior of either resistance or empowerment towards change and is best conceptualized as a degree in a continuum, rather than a state of being ready or not ready (Lokuge et al., 2019). Therefore, it is getting more and more important to holistically align organizations in the digitally changing environment (Kane et al., 2016) and to strategically adjust their business models (Weil & Woerner, 2015).
3 Empirical Study

In the previous chapter, essential literature in the context of this thesis, like the depiction of the phenomenon of digitalization with regards to sports, organizational change readiness, and the business model canvas, have been elaborated. Following, this chapter introduces the reader to the way how qualitative research has been approached along its process. For this purpose, a narrow perspective is centered around the comprehensible description of the research method and sample, as well as the collection and analysis of data.

3.1 Research Approach & Methodology

To better understand what the current digital readiness of tennis clubs in Austria and Germany looks like and to derive an appropriate recommended course of action, one has to investigate current challenges and chances a club is facing while further investigate attitudes, needs, and capabilities which are prevailing with regards to digital readiness.

When setting up an empirical study, researchers are confronted with the problem that there are no hard and fast rules to apply. Matching the researchers' design to the research question can be seen as much art as science (Bono & McNamara, 2011). Here, design refers to the overall plan of the research where many external factors influence the researchers’ ability to carry out an optimal way and strongly influence decisions that are made during the research design set up. Further, the research design strongly impacts the degree of confidence the reader places in conclusions drawn from the study. The readers and reviewers should be able to understand the conceptual meaning clearly and to point out the validity of their operationalization. There are several different ways to conduct qualitative research (Bryman & Bell, 2011).

To ease the understanding of the process how the empirical study has been set up and approached in this thesis, the “research onion”, initially developed by Saunders, Lewis and Thornhill (2009), serves as an orientation and is illustrated in figure 6 below. Here, peeling away layer by layer, does not only enhance the understanding of applied philosophies and approaches within this thesis, but moreover, research strategies, choices, and time horizons are identified and formulated (Saunders et al., 2009).
The innermost layer referring to the data collection and data analysis is discussed in sections 3.2 and 3.3. Starting by looking at the outer layer, two of the dominant ways of seeking knowledge in the social sciences are positivism and interpretivism (Creswell, 2013; Ozanne & Hudson, 1989). The two approaches indicate two different world views, including varying assumptions, goals, and research processes.

Whereas the positivistic view is invariably associated with an epistemological position favoring multiple subject designs implying that the researcher's assumption state that truth exists in the world outside theories, interpretations or value judgments by the researcher, the interpretivist, on the other side, occupies the view that the world is being interpreted or socially constructed. (Bryman & Bell, 2011; C. Clarke, 2009). To fully grasp the expertise and insights from different perspectives, an interpretative standpoint is occupied.

Moving closer to the middle of the ‘research onion’, one has to deal with the reasoning within the research. Here, the reasoning is the act of drawing inferences from the evidence. Descriptively, deduction involves determining whether an inference necessarily follows from a given set of premises, while induction includes the assessment of the plausibility of an inference given the premises (Hayes, Stephens, Ngo, & Dunn, 2018). Generally, qualitative research designs are flexible rather than fixed and inductive rather than deductive (Robson, 2011).
Interestingly, deductive and inductive theories are more often seen as tendencies rather than mutually exclusive strategies.

An inductive, exploratory reasoning approach with semi-structured interviews as a qualitative mono-method is applied in the submitted thesis (Bryman & Bell, 2011).

Moving forward to the research strategy and its time horizon, a cross-sectional case study approach is chosen. In this sense, cross-sectional refers to the data collection at a particular time, rather than over an extended period (Greener, 2008; Kelle, 2019). According to Creswell (2013), the case study is suitable when exploring a program, event, activity, process, or one or more individuals in depth. Overall, based on the work of Lincoln and Guba (1985), a detailed description of how the research is going to be tackled, considering that there potentially could be an imitation of the research with a similar outcome, should increase the trustworthiness of the readers’ interpretation, perception of validity and credibility and is outlined in the following section (Maxwell, 2013). To further increase the trustworthiness of the reader, one has to be aware of biases before and during the interview. Here, common interview biases that are kept in mind are confounding biases, response biases, selection biases and observer biases. Generally, to avoid or minimize biases, the interviewer has to take an objective and unbiased position and create a friendly and open atmosphere. A proper study design increases the comparability of the results (Saunders et al., 2009).

3.2 Research Setting

To best address the research question by gathering insightful information, a well thought out research setting has to be established. To accomplish this, various considerations have to be made. The formulation of the research question already narrowed down the purpose of the study towards a specific setting, and hence, based on the research question, an appropriate research design in the form of a case study approach is selected. The qualitative research approach is intended to gather in-depth knowledge by having the chance to provide room for interpretation and inquiries. Appropriate interview partners are chosen according to their expertise in tennis and their hierarchy within a tennis club. The respondent in an expert interview is characterized by carrying an in-depth knowledge about the research object and the ability to professionally assess the research topic (Libakova & Sertakova, 2015).
Further, a non-probability sampling in the form of a criterion, and later a snowball sampling lead to the selection of tennis club board members from clubs in Austria and Germany with an affinity to tennis and a solid understanding of the phenomenon of digitalization (Palinkas et al., 2015). As criterion sampling refers to the selection of cases that meet some predetermined criteria, board members with several years of organizational club experience and a good understanding of structures, processes, and capabilities of their clubs are chosen (Helfferich, 2019; Patton, 2002). A further restriction is made by selecting board members with the position of either first or second chairmen (in Austria, also known as "Obmann") or as athlete directors. Therefore, four clubs with less than 200 members, three clubs between 200 and 550, and two with more than 550 members are selected. Some of them are among the most traditional once’s in their country. However, due to reasons of confidentiality the names of the clubs are not mentioned. However, to increase the validity and reliability of the findings, two clubs are selected which provide two instead of one interview. Further, this selection discloses two perspectives within the same setting and hence, give a basis for comparison.

<table>
<thead>
<tr>
<th>Nº</th>
<th>Code Name</th>
<th>Nationality</th>
<th>Tennis Experience</th>
<th>Country</th>
<th>Members</th>
<th>Member Development</th>
<th>Interview Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Novak</td>
<td>German</td>
<td>&gt; 20</td>
<td>Germany</td>
<td>550</td>
<td>steady</td>
<td>48:03</td>
</tr>
<tr>
<td>2</td>
<td>Rafael</td>
<td>German</td>
<td>&gt; 40</td>
<td>Germany</td>
<td>150</td>
<td>increase</td>
<td>47:08</td>
</tr>
<tr>
<td>3</td>
<td>Dominic</td>
<td>German</td>
<td>&gt; 24</td>
<td>Germany</td>
<td>590</td>
<td>increase</td>
<td>54:46</td>
</tr>
<tr>
<td>4</td>
<td>Roger</td>
<td>German</td>
<td>&gt; 50</td>
<td>Germany</td>
<td>590</td>
<td>increase</td>
<td>73:57</td>
</tr>
<tr>
<td>5</td>
<td>Daniil</td>
<td>Austrian</td>
<td>&gt; 24</td>
<td>Austria</td>
<td>235</td>
<td>declining</td>
<td>48:31</td>
</tr>
<tr>
<td>6</td>
<td>Stefanos</td>
<td>Austrian</td>
<td>&gt; 30</td>
<td>Austria</td>
<td>235</td>
<td>declining</td>
<td>67:57</td>
</tr>
<tr>
<td>7</td>
<td>Alexander</td>
<td>German</td>
<td>&gt; 20</td>
<td>Germany</td>
<td>535</td>
<td>steady</td>
<td>85:33</td>
</tr>
<tr>
<td>8</td>
<td>Matteo</td>
<td>Austrian</td>
<td>&gt; 30</td>
<td>Austria</td>
<td>200</td>
<td>declining</td>
<td>37:52</td>
</tr>
<tr>
<td>9</td>
<td>Gael</td>
<td>Austrian</td>
<td>&gt; 25</td>
<td>Austria</td>
<td>60</td>
<td>increase</td>
<td>51:13</td>
</tr>
<tr>
<td>10</td>
<td>David</td>
<td>Austrian</td>
<td>&gt; 40</td>
<td>Austria</td>
<td>180</td>
<td>steady</td>
<td>56:59</td>
</tr>
<tr>
<td>11</td>
<td>Fabio</td>
<td>German</td>
<td>&gt; 50</td>
<td>Germany</td>
<td>800</td>
<td>increase</td>
<td>39:02</td>
</tr>
</tbody>
</table>

Table 6. Expert Interview Overview & Club Characteristics

For the development of the semi-structured interview guideline that is attached in appendix A and B in German and English, several digital readiness frameworks of leading consultancies like, for instance, McKinsey, Deloitte, KPMG or Capgemini but also frameworks from leading experts in the field of change and change readiness like, for example, Holt et al. (2007), Ferrari (2012, 2013), Pirola et al. (2019), or Voß and Pawlowski (2019) have been considered. Several elements of their framework have been adjusted and integrated to gather insights about:

- Current degree and level of awareness for digital readiness
- Personal perception and attitude
- The extent of acceptance and application of digital solutions
Skills needed for a successful integration
Attitude towards innovation using the example of tennis court maintenance
Degree of individual and collective readiness for change/ resistance
The clubs’ business model

Before the interview takes place, interview experts were kindly asked to participate through an introductory email or a personal phone call.

Then, in a first step, the respondent is shortly introduced to the context of the overall topic, informed about the data confidentiality, asked for permission to record the interview, and encouraged to speak his or her opinion freely. Afterward, a short warm-up section asks open-ended, preparing questions about individual competences with regards to tennis and digitalization, and please the expert to respond in complete sentences according to their perspective.

In the second step, the overall situation of the club (organizational level) is examined. Here, questions about clubs’ organization, culture, economic situation and opinions about statements are asked. Third, a closer examination of digitalization of the club is fulfilled by diving deeper into club and member administration, training, and online presence. Then, a short case study of an innovative tennis business idea is presented, either by describing the idea or showing a short image video as stimuli. Here, the respondent is stating his or her first impressions and opinions.

The stimuli has been tested in an user-experience test scenario at the "Innecator", an innovation hub in Innsbruck, several weeks before the interviews took place. Last, the interview is debriefed by asking the respondent for any additional input and feedback. Generally, various probing and follow-up questions guarantee an ease of the interview procedure. The awareness of respondent and researcher biases is kept in mind and tried to be as minimized as well as possible, like, for instance, by trying to avoid leading questions or seeking confirmation.

Overall, the interview is designed to last 45 – 60 minutes, whereas the shortest lasted 39:02 minutes and the longest 85:33 minutes, leading to a total of 10 hours and 14 minutes. In total, 11 interviews were conducted one-to-one in the German language either via telephone, skype, or facetime until theoretical saturation was reached (Bryman & Bell, 2011). Afterwards, the tape-records were transcribed word-by word which lead to a total number of 120 transcribed pages.
3.3 Data Analysis

Within literature, there exist different definitions of the term content analysis. In general, content analysis describes written, verbal, or graphic communications. Through coding and systematically identifying themes and patterns, core consistencies, meanings, and relationships, as well as word patterns, structures, and frequencies are identified (Bryman & Bell, 2011). The creation of a coding scheme helps to infer decisions in the analysis by organizing the data into categories. Subjective interpretations help to develop and extend the knowledge and make sense of the content (Bryman & Gurgess, 1994).

In the beginning, there is a significant volume of qualitative text which will be reduced to the critical content of the material and therefore shift the focus to more quantitative coding and descriptions (Hsieh & Shannon, 2005; Mayring & Fenzl, 2019). Moreover, content analysis can be divided into an inductive and a deductive approach. Inductive refers to the analysis of the text with an open mind to identify meaningful subjects answering the research question.

On the other hand, deductive refers to looking at existing or predetermined subjects by testing principles and hypotheses (Wildemuth, 2016). The inductive approach is chosen for this master’s thesis. There are several vital steps in the qualitative content analysis shown in figure 7, which serve as orientation for this research. Here, after all interviews have been conducted and transcribed, the coding starts.

![Figure 7. Key Steps in Qualitative Content Analysis (Heiser, Schmidt, Urban, & Wörndl, 2019, p.2)](image)
In general, there are three approaches to qualitative content analysis coding, namely the conventional, directed, and summative content analysis (Hsieh & Shannon, 2005). The conventional approach serves as a foundation within this thesis and is also known as inductive category development. Here, “coding categories are derived directly and inductively from the text data” (R. Clarke, 2017, p.1). It is an effective method to describe a phenomenon when existing theory or literature is limited. Often, the content of the examined text is not well-defined. The external validity of conclusions may therefore be limited. As an advantage, this approach helps to gain information directly from respondents without enforcing them with pre-selected categories or a pre-defined perspective. On the other hand, it is challenging to build up a holistic understanding of the context and to identify essential categories. Here, the risk of lacking in representative data increases. Lincoln and Guba (1985) describe this as credibility within the naturalistic paradigm of trustworthiness or internal validity within a paradigm of reliability and validity one has to be aware of.

Looking at the individual steps of the conventional content analysis, four main steps are identifiable (Hsieh & Shannon, 2005). At first, to understand the big picture, gain engagement, and a holistic understanding of the idea, the text is quickly skinned. Second, a more detailed view and a word-by-word procedure help to capture crucial concepts. This is done by highlighting precise words, followed by making notes. The step is executed to point out main impressions, thoughts, and initial findings. While this process is taking place, labels for codes are developed that represent the main aspects of the data it examines. The more precise the note-making part is carried out, the easier it gets to develop codes. The identified codes are, as the last step, organized into groups. The grouping system is completed based on how the codes correlate. Here, overlaps and redundancies have to be avoided. The main objective of code-grouping is to build reasonable clusters in the form of a code-book, which is the basis for later interpretation (Bryman & Bell, 2011; Hsieh & Shannon, 2005). Categories are iteratively added until no new insights emerge, and theoretical saturation is reached.

Following a systematic procedure, information is extracted from the texts, assigned to the respective category systems, and further processed independently of the original text. Evidentially, while scanning the text word-by-word, different themes are looked out for. This technique is also known as “scrutiny” and can provide useful information.
Here, according to Ryan and Bernard (2003), the most common themes are:

- Repetition
- Indigenous typologies
- Metaphors and analogies
- Transitions
- Similarities and differences
- Linguistic connectors

This approach with all its steps has been accomplished by the use of the computer software MAXQDA, a program which supports qualitative data analysis. A screenshot of how the coding has been approached can be seen at figure 8 below as well as a codebook in appendix C.

![Codesystem Diagram](image)

Figure 8. MAXQDA Coding Scheme Screenshot
4 Findings

After the empirical approach has been outlined in the previous chapter, this chapter portrays the findings of the collected data. For this purpose, the main categories are qualitatively described in an individual manner but also in relevant combinations. The analysis is structured in such a way that the statements are assigned to the corresponding research questions. For reasons of comprehensibility, the sub-questions are addressed first, which guarantees the most comprehensible derivation for addressing the main research question in a later step.

The results are briefly presented and are supported by exemplary quotations, tables, or visualizations. The position in the material is, for reasons of traceability, marked in brackets while the first number indicates the interview number, followed by a code name and second number referring to the position in the coded transcript (e.g., 01 Novak, 34). The coded transcripts of the interviews edited by the MAXQDA software are used as a basis. Following, the interview partner is designated as either expert, participant, or respondent.

4.1 Digitalization

In order to answer the first sub-research question which addresses the attitude towards digitalization, the main category "digitalization" and its sub-categories are examined in more detail and merged with other relevant categories. In a first step, this includes an examination of the general understanding and individual competencies as well as attitudes towards digitalization.

**Brief summary:** Generally speaking, all respondents acknowledge that the topic of digitalization is of great importance for them and for their club. The participants' understanding and competences to maneuver through the digital environment vary widely, starting with only a few contact points up to daily interaction in the form of professional consulting or programming. The attitude towards digitalization is mainly positive, with some participants also mentioning concerns towards digitalization like, for example, over-digitalization or data security issues. Some reveal concerns about digital divide and a lack of digital catch-up.
4.1.1 Understanding

When asking about the general understanding of digitalization, it becomes apparent that the participants all have a particular notion of the term but considerably vary in its extent of comprehensiveness. On the one hand, some statements address isolated areas of digitalization such as for example, dealing with smartphones:

“I associate with digitalization the smartphone generation, which was practically non-existent at that time and where people had different devices to check emails, watch TV, take photos. Today, everything is possible, compact on one device, the smartphone.” (01 Novak, 48)

On the other hand, some respondents articulate a more holistic understanding of digitalization, addressing, among other things, the transformation process from analog to digital:

"Digitization means a complete paradigm shift, away from partially tangible things like a sheet of paper or a book. In the end, digitalization is the social change from former analog things to virtual reality." (06 Stefanos, 39)

Finally, several participants reveal an even more holistic understanding, emphasizing on several dimensions of digitalization:

“Digitalization permeates our entire society, and in recent years we have seen the increasing importance of linkages between people through technologies, the use of data to create new business models, etc. When I think of digitalization, I think of course of Amazon, of Apple and all these companies, I think of course of the increasing importance of devices, not only devices for communication but also devices that are part of the real world like, for example, connecting machines, the internet of things. I am also thinking about the integration of chips and similar sensors in clothing, but also at the end of the day right into people. So, I think digitalization is part of the reality of everyone's life, and it does not end where people are now staring into their cell phones all the time, but it goes much further. In other words, the linkage of all living worlds." (02 Rafael, 36)

Besides, participants report on the simplification of processes in everyday life (02 Rafael, 46 & 05 Daniil, 34), accelerated information processing (09 Gael, 34), and ease of use through automatization (05 Daniil, 38).
4.1.2 Applicability

A closer look reveals that the participants possess different levels of competences, which are categorized in Table 7, starting with almost no contact points with digitalization, over self-taught competences in specific areas, to professionally acquired and executed skills.

Table 7. Experts Digital Competence Levels

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginner</td>
<td>&quot;I do not go into too much detail, but I am already trying to get or save the information that I need for life or the club, so that I somehow get or save it digitally&quot; (11 Fabio, 48)</td>
</tr>
<tr>
<td>Advanced</td>
<td>&quot;Maybe I am not completely incompetent, but because I do not do anything groundbreaking except working on the computer and have grown up with all this stuff, that is my understanding. But I can neither program nor anything else. Rather small, I would say.&quot; (03 Dominic, 48)</td>
</tr>
<tr>
<td>Competent</td>
<td>&quot;It is perhaps important to say that I have no background in computer science. I have acquired most of my digital competence myself, or, I would say because I came into contact with people in my professional environment who know about it. I have acquired a lot of it by myself by gathering information from the internet. In the professional environment, I have received training from various people who have trained me specifically on the aspects I needed in the professional environment. So, I would not say that I have a wide range of digital skills, but specifically in certain areas where they were needed professionally or privately, I would say that I have a solid understanding.&quot; (07 Alexander, 39)</td>
</tr>
<tr>
<td>Experienced</td>
<td>&quot;On a scale of 1-10, now as an end-user, I am not talking about programming skills, but I would say I am close to 8, which I can tell by the fact that digitalization is part of my work environment from day one, that I work with different devices, using digital processes for all kind of activities. I would almost say I may be a little older, but I still feel like a digital native. For me, digitization is part of my everyday life.&quot; (02 Rafael, 42)</td>
</tr>
<tr>
<td>Expert</td>
<td>&quot;I studied computer science, and the entire study was focusing on software development, so this is certainly something where I took a lot from. From my family environment, because my mother is also from the industry, I also learned a lot, which still helps me to earn money today since I do the entire administration of systems in companies. Of course, everything that is connected to it, up to the protection of company networks, firewall systems, UTM. On a professional level, the attempt of the paperless office. I am an architect of many who is trying to bring digitalization forward.&quot; (06 Stefanos, 43)</td>
</tr>
</tbody>
</table>
4.1.3 Attitude

Most respondents express themselves as proponents of digitalization by naming various advantages that digitalization implicates. On the other hand, they also state several concerns caused by digitalization. Generally, the attitude is derivable by the proportion of positive and negative aspects of digitalization and the importance weighting given by the respondent. No participant articulated solely negative arguments. The attitudes are reaching from i) slightly more negative and mindful of the consequences, over ii) neutral and socially obligated, to iii) positive and completely open.

i) "My attitude towards digitalization is surely influenced by my background, positive as well as negative, but perhaps I see more negative aspects. An actual topic is, for example, the recording of people's movement patterns with the help of digital technologies, i.e., smartphones, in the interest of public safety." (06 Stefanos, 45)

ii) “My attitude is that you have to participate in it, to help shape it so that you can then also benefit from it. That is now in the private sphere as well as in the professional sector, and in every job and in every sport, you simply have to observe this critically, but try to find out the best aspects for yourself.” (05 Daniil, pos. 36)

iii) “Completely open. I am very interested in it because technology and digitalization are part of my job description. Through digitalization, we have new business models, new service models that we can establish. However, I am also always completely open to technological change. I am not an early adopter or innovator. I am more of a follower. I only use technologies once they are reasonably well established on the market.” (02 Rafael, 38)

To further underpin their opinions, respondents cite various advantages and disadvantages, displayed in table 8. Although their opinions are almost solely from positive nature, more and far more precise negative examples are stated. Advantages mainly focused on an increase in efficiency, ease of processes and tasks, and better communication possibilities. Disadvantages are addressing a diverse spectrum reaching from data security issues, over an oversupply of information, to concerns about the digital divide.
Table 8 summaries the main topics addressed by the experts:

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ease of communication</td>
<td>Permanent availability (03 Dominic, 42)</td>
</tr>
<tr>
<td>(03 Dominic, 42 &amp; 11 Fabio, 43)</td>
<td></td>
</tr>
<tr>
<td>New possibilities (08 Matteo, 57)</td>
<td>Total transparency (03 Dominic, 42)</td>
</tr>
<tr>
<td>The assistance of life processes (01 Novak, 45)</td>
<td>Social disconnection (02 Raphael, 42)</td>
</tr>
<tr>
<td>Economic &amp; social efficiency (02 Raphael, 42)</td>
<td>Flood of information (09 Gael, 36)</td>
</tr>
<tr>
<td></td>
<td>Information over pace (08 Matteo, 57)</td>
</tr>
<tr>
<td></td>
<td>Job cuts (03 Dominic, 42)</td>
</tr>
<tr>
<td></td>
<td>Data security issues (07 Alexander, 35 &amp; 06 Stefanos, 41)</td>
</tr>
</tbody>
</table>

Table 8. Advantages & Disadvantages caused by Digitalization

4.2 External Changes trigger Internal Challenges

In order to address the second sub-research question and further pave the way for answering the main research question, current challenges that clubs are facing have been identified. As digital readiness is mainly depending on the organizational readiness, participants are asked to talk about topics which they think impact the organizational readiness of their club the most. Therefore, the main category, "digital adoption challenges" with their according sub-categories are examined. In the beginning, a general perspective is chosen to fully grasp the understanding of what tennis clubs trigger nowadays, while section 4.2.3 addresses particular challenges with regards to digitalization.

**Brief summary:** Basically, changes in the tennis macro- and micro-environment force clubs to permanently adapt to new circumstances. Participants indicate various external changes that indispensably affect the club's internal situation. All in all, the changes and challenges can vary according to the location but generally address issues centered around the topics of member obsolesce, a shift in member expectations, decreasing willingness to volunteer, and declining membership numbers. All respondents state that they include some degree of digital application within their club administration, but they are varying from a couple of excel sheets to fully integrated software systems. The most significant lack in terms of digitalization is the online appearance where, for example, only two of nine clubs keep their social media accounts up-to-date, and the lack of implementation of digital solutions in the daily training operations.
The changes clubs are facing are multifaced and often mutually interdependent. For instance, an increased fan engagement for professional tennis is ultimately affecting the population of the sport and hence, influencing membership numbers. Further, there can be a mutual influence within the same category. For example, a lousy gastronomy strongly influencing the club’s attractiveness.

Figure 9 displays a summary of external changes and internal challenges reported by the participants. The outer circle includes external changes separated in professional and non-professional tennis. The assignment is based on the respondent's comments, which are tagged according to interview number and code name. The inner cycle represents areas within a club, impacted by external changes. Here, for the reasons of completeness, it is essential to mention that the listed bullet points do not represent all present changes and challenges but only those named by the participants.

![Figure 9. Tennis Macro-Environmental Changes Trigger Clubs’ Internal Challenges](image)

4.2.1 External Change

Following, the most frequent topics of external changes are exemplified starting by looking at the right side of figure 9. The professional tennis experiences significantly change with regards to the individual athlete levels. Here, the sport develops continuously at an accelerating pace.
Through technical developments, enhanced equipment, and improved sports medical care, the evolvement of the athletes' body is on the cutting edge of its potential (08 Matteo, 26). This is especially noticeable in women's tennis. Recently, the professionalization has been increasing the athleticism and fitness of the female athletes and expectations converge to men’s performances (02 Rafael, 29). To increase the fan engagement, several adjustments like, for example, the installation of automated rooftops at grand slam tournaments or the introduction of new rules and game modes take place (01 Novak, 36 & 03 Dominic, 27). On the other hand, non-professional tennis also undergoes profound changes. Although "tennis is developing in the right direction so that it is no longer only accessible to the upper classes, but more people can now afford the sport" (10 David, 81), through for example new forms of training (04 Roger, 34), tennis is for many still just a niche sport:

"There is now far too much variety in other directions. The children are now being educated to try out many sports. They learn many things and nothing genuinely, but everything a little bit. You can see that very clearly in tennis. You can see this on the fact that only a few children play the sport in such a way that they play tournaments or consider the sport as their primary sport. Often it is only the niche sport." (10 David, 44)

"This is because tennis is very expensive, challenging to learn, very difficult to supervise, and very difficult to learn compared to many other sports with which tennis competes, such as football, volleyball, ice hockey, etc. That is why many parents decide that their children should not play tennis but go to other sports, where they are supervised, where they do not have any costs, and where everything is much cheaper compared to tennis." (08 Matteo 39)

4.2.2 Internal Challenges

Having a closer look at the internal challenges tennis clubs are facing, it becomes apparent that the participants cite a wide range of issues. Some respondents state that recently the member's expectations have changed:

"I have to explain to people that we are a club and not a company. This mindset, this egoism, (...) that people believe that just because they pay 310 € membership, they have bought everything and no longer have to contribute to the club's welfare. And then catch with the same valences as in the company. As a service provider, where I say, well, I pay for it, and I expect the best food and the best service in return. This way of thinking is the same when consuming, and unfortunately, it is the same in the clubs. This has become very popular. This egoism." (10 David, 54)
“Maybe the needs have changed a little bit in so far that you might expect a little bit more from the tennis club. As we said before, we compete with golf, and we compete with the fitness centers, we compete with the available leisure facilities, we compete with the internet when it comes to our young people. We have to go and try to re-position ourselves so that we remain interesting and become even more interesting for the members.” (04 Roger, 78)

On the other hand, it is getting more challenging to fulfill the changing requirements due to an ever-shrinking willingness to volunteer. Especially the board of directors, where in the past a dozen people have applied for a seat in the board, bear the burden on ever less shoulders. As they already invest time and love for the volunteer work, the feeling of ungratefulness is hanging over their head like a Damocles sword (07 Alexander, 63). Although the solidarity and atmosphere in some clubs are like a community with many friendships (09 Gael, 41), declining membership numbers and obsolescence makes it increasingly challenging for clubs to balance their budget as the fees are the primary source of income (07 Alexander 87 & 08 Matteo, 37).

"We have the problem, like most clubs, that on the one hand, we are obsolete, i.e., we have to try to get more young people into the club (...)." (10 David, 32)

“Besides, we have very obsolete club structures, old members, which, logically, simply just do not enrich the club life anymore.” (08 Matteo, 47)

On the contrary, for example, sanitary renovation projects or court maintenance are mandatory to be executed. A club’s infrastructure is seen as a critical success factor in the eyes of the respondents. A holistic offer in the form of outdoor and indoor courts, a restaurant, nice changing rooms or even a fitness or wellness facility might create interest for new members (08 Matteo, 49). Especially the gastronomy plays a crucial role for some respondents:

“We have to fight with changing tenants of our club restaurant, and our club life has become very much overshadowed by this.” (07 Alexander, 74)

“As with many clubs, the gastronomy makes a huge part of whether a club life works or not.” (08 Matteo, 47)
4.2.3 Digital Status Quo & Challenges

Participants state diverse challenges concerning digitalization. Generally, all clubs have implemented digital solutions to some extent. Here, the dimensions differ widely. Some respondents reveal that they do not see the cost-benefit-advantage and conclude that they do not need a digitalized administration or social media. Others state that after they digitalized the administration, there is nothing left to digitalize, but when follow-up questions asked in more detail about, for instance, the use of social media or the online presence in general, they admit that there is still a lot to do and a high potential for digitalization (02 Rafael, 107 & 03 Dominic, 120). Nevertheless, nearly all participants state that there is still great potential with regards to their online presence, as seen in table 9:

<table>
<thead>
<tr>
<th>Online Appearance</th>
<th>#1</th>
<th>#2</th>
<th>#3</th>
<th>#4</th>
<th>#5</th>
<th>#6</th>
<th>#7</th>
<th>#8</th>
<th>#9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homepage</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Active Facebook</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Active Instagram</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Newsletter</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Digital Strategy</td>
<td>no</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>

Table 9. Online Appearance of Clubs

While some clubs are present on social media like Facebook or Instagram, others do not have an account yet. Those clubs who are already online state that they are having difficulties in keeping the provided information up to date while the majority admit that they are not following a clear online strategy. The content is often outdated due to an internal lack of responsibility or missing knowhow, and actual content is not regularly provided. Nevertheless, there are also some exceptions. Some respondents state that they are trying to keep their homepage and social media accounts up to date. However, most of the homepages are said to be rudimentary, loaded with only the necessary information and often in an unsophisticated manner:

"In many tennis clubs, there is the biggest need to catch up, because there are partly still from the stone age." (05 Daniil, 102)

A challenge, especially in clubs with an obsolete member structure, is the provision of information through online channels:

"Whereby one has to say, you do not reach an entire target group with Facebook at all, as I said we have 50%, senior members."
When we make a Facebook posting, half of the members does not see the posting because they are not on Facebook or they do not know, they cannot read it, the writing is too small, or they do not want it at all, they have a rejection of these modern media." (08 Matteo, 59)

With regards to the implementation, respondents state that clubs are often confronted with the problem that the people who are volunteering do not have the appropriate digital skills to drive digitalization forward (06 Stefanos, 102). Respondents further state that the digital transformation of their processes takes human initiatives to, for example, enter and maintain data in a database (08 Matteo, 61).

“If you use such a CRM tool, then you have to make sure that the data quality matches and so on, but then you have to take care of it yourself somehow.” (09 Gael, 89)

“We already bought the court booking system three years ago, but it is not implemented yet. Nobody knows why that is the case.” (01 Novak 108)

Lastly, participants state that there is, especially in the training area, some internal conflict of interest and resistance towards change:

“The organization of the training is not digital. I would like to do that, but there is no acceptance among the responsible people.” (07 Alexander, 97)

“It would be nice to have digital components in the training operation. That would be very nice. I would like to do it but those who organize the training are not interested.” (06 Stefanos, 112)

4.3 Tennis Clubs’ Organizational Readiness

In order to address the main research question that tries to identify the digital readiness of tennis clubs, one has to look at the situation of tennis clubs from multiple perspectives. Therefore, the participants are asked to reveal information about their club’s business model and to illustrate the organizational situation the clubs are currently in from many angles. Therefore, the main category, "parameters determine organizational readiness," with its respective sub-categories, is examined.
Brief summary: It turns out that clubs find themselves in very different situations. Shaped by years of different leadership styles, the clubs’ business model and business infrastructure remarkably vary. All respondents declare that a club's situation is directly linked to the number of members, paying membership fees. Here, the amount varies from 185€ in rural areas to over 500€ a year for adults in urban areas. Generally, experts state that there is a declining interest in participating as a volunteer, which they assume, is related to social value changes. Further, clubs are differently situated in terms of their strategy and IT infrastructure. While some try to use digitalization as a tool to increase efficacy, others still run their operational business based on a couple of excel sheets. Those who are using digital solutions are mainly satisfied with the operations and conclude that it is beneficial for their club. Concerning innovation valance, clubs tend to be open-minded but driven by pending costs as a critical success factor for adoption.

4.3.1 Business Model

Asking respondents about their club’s respective business model reveal many similarities, such as their non-profit orientation:

"Our club can be seen as an organization that is not allowed to make significant profits. The idea of a club is that the income covers the club's expenses. This is the business model "non-profit." (06 Stefanos, 79)

In order to cover the club's expenses, respondents indicate that membership fees are the primary source of revenues:

"Of course, it depends on the club's situation; the more paying members there are, the better a club is running." (03 Dominic, 172)

However, a club is not funded solely by membership fees. Often, sponsors contribute a significant amount of money to the wellbeing of the club. 10 to 15 % of the total cost are no rarity (01 Novak, 105). Further, the club is supported by local grants or grants from leading sports institutions. This is especially the case when significant investments like, for example, pipeline renovations are needed (07 Alexander, 91). Some clubs have additional revenue streams in the form of gastronomy lease income (07 Alexander, 85), revenues from charity events (01 Novak, 103), or sports events like, for example, tournaments (06 Stefanos, 85). Lastly, local companies like banks, carpentry, or bakeries donate money to support their local tennis club (05 Daniil, 80). On the other hand, clubs do have several expenditures.
Besides, most of the clubs have to pay yearly facility rent; the main costs originate directly from the facility itself. Here, extreme variations occur. While some clubs have the advantage to be, for example, part of the local sport supporting program and have to pay only a fraction of the regular rent, others are paying several thousand Euros (10 David, 57). Furthermore, all clubs having a facility are paying energy fixed costs and insurance (07 Alexander, 85). While some of the clubs are preparing their courts by themselves (05 Daniil, 82), others hire an external company that costs them several hundred to thousands of Euros, while even others have a permanently employed groundskeeper as a cost factor (10 David, 57). Finally, some clubs are paying interest for loans they need, for example, for renovation projects and licenses fees for teams in an active league (09 Gael, 61).

Participants further state that in order to keep a club alive, grow and flourish, an excellent team of coaches is needed. The composition and communication of the team, as well as the support, is noted as critical evaluation factor (04 Roger, 48).

“A good team of coaches attracts the children, the youth, as well as the parents.” (08 Matteo, 81)

Further resources contributing to a club's situation are the composition of the board of directors (04 Roger, 142), as well as an excellent infrastructure. For example, gastronomy is actively contributing to balanced social club life. Some respondents also have the advantage of owning a tennis hall and generate additional revenues. Some also have installed a fitness room and a swimming pool (10 David, 54). An essential resource a club is having is its members. Here, the situation widely spreads in terms of member composition and segmentation. Almost all respondents state that they are having problems of creating an age-homogeneous membership base:

“We have a total weak spot between 14/15 and 25; in this teenage age, we are missing people." (01 Novak, 68)

“We have the problem that we do not have members in the age of 30-40” (03 Dominic, 61)

"It is important to pay attention to the youth, but you should not forget about the parents of these young people for reasons of balanced club life.

Certainly, this is something that has been a problem for us for many years, that we have focused too much on the youth and completely ignored their parents.” (06 Stefanos, 150)
In order to address all members of a club, several vital activities have to be continuously fulfilled. All respondents stated that the administration and organization of club activities are most work intensive. Most clubs are trying to organize additional events such as tournaments, trial courses, club parties, or club championships (04 Roger, 76 & 11 Fabio 48). Furthermore, the main tasks a club needs to perform are the court and facility care and maintenance, as well as the organization of league games or tennis camps, in coordination with the respective coaching team (01 Novak, 43). Lastly, respondents state that the integration of people into the club is essential (04 Roger, 93).

All respondents further state that the relationship towards their members is from crucial importance, as the experts name the priorities "community" and "identification." Further, they state that the community is built on friendship and trust (02 Rafael, 51 & 75). Additionally, an openness to integrate externals indicates a characteristic of a clubs' relationship with its members. Some clubs' have special "loyalty programs" where they, for example, give away branded towels (09 Gael, 96). Generally, the relationship is described as a sportive, mutually supportive relationship, based on trust and voluntary engagement (04 Roger, 93).

Looking at the value proposition, the respondent's idea of a club somehow varies. The majority associate that a tennis club is a place for leisure activity, where the sportive advancement (04 Roger, 36 & 103), physical exertion, athletic challenge (11 Fabio, 104 & 106) and pleasure, fun, and entertainment (02 Rafael, 75) are paramount activities. Some experts extent the view by adding characteristics like social belonging to a group in the form of recognition and a place to build social and business contacts (11 Fabio, 106 & 08 Matteo, 23).

About meaningful partnerships, respondents state a variety of partners that are not necessarily important for each club. Some state that local sponsors (05 Daniil, 80), court maintenance companies (01 Novak, 77), the corresponding gastronomy (02 Rafael, 104), or tennis hall operators (09 Gael, 30) are from significant importance for their business model. Others extent this perspective by addressing partners like the national and local tennis association and federation, the local government (03 Dominic, 110), IT vendors (11 Fabio, 75), lawyers, and consultants (11 Fabio, 62).

Lastly, almost all respondents note they are reaching their members through word-of-mouth propaganda (01 Novak, 159), their homepage, and the club’s newspaper and newsletter (06 Stefanos, 104). Some are present on social media like Facebook or Instagram (05 Daniil 101).
4.3.2 Capabilities

Concerning a club's capabilities, respondents state far opposing aspects. While most respondents refer to the situation that people in the board of director are usually no professionals in their area of responsibility (11 Fabio, 62), internal responsibilities often switch:

"In the last two years, I have, because our former treasurer left, taken over the treasurer's position and was able to give it up again with the recent election at the beginning of March because we have found someone good for it." (07 Alexander, 25)

This re-configuration of human capability leads to the situation that board members have to spend time delving into new topics and get familiar with it (07 Alexander, 66). In many cases, respondents argue that this foster "knowledge lacks" within the board (01 Novak, 73) that ultimately affect the management of the club. These knowledge lacks are said to be most influential with regards to technology and digitalization:

“In tennis, the people who want to get involved in the club are not exactly people who come from a high-tech background and who are now extremely keen or enthusiastic about technology.” (06 Stefanos, 102)

In most cases, the performed tasks require a certain extent of multitasking as the requirements are multifaced, reaching, for example, from the planning and organization of tennis camps, over the formulation of protocols, to the supervision of teams (01 Novak, 37). Concerning human resources, clubs are positioned in totally different situations. They all state as a rule that the situation of a club stands and falls with the number of paying members (03 Dominic, 171). Whereas the majority of respondents worry about losing a single member while one club faces the other extreme of having too many members (11 Fabio, 32). The membership fees diverge extremely starting by 185 € for an adult membership a year in a more rural area, to 540 € in urban clubs.

Independent of the revenues, all clubs state that they are thoroughly dealing with accruing investments. Unavoidably, court renovations arise from time to time with, for example, costs for three courts of 80.000€ for three courts. Also, court maintenance during the season costs up to 400€ to 600€ a month (01 Novak, 76). Cost intense projects "always require an accurate weighing of urgency and financial volume" (04 Roger, 134). Almost all participants are facing a situation of a financial conflict where they are trying to balance their budgets (07 Alexander, 86) and to aim at a "small back zero" (01 Novak, 93).
Therefore, some clubs are re-calculating their membership fees yearly based on the membership number to slightly making positive numbers (10 David, 56). Further respondents argue that the costs are in direct relation to the tennis facility. Here, some clubs do not have a tennis facility as their property (09 Gael, 30). Others play on a commercial tennis facility (02 Rafael, 52), still others are tenants, and some own the facility. Within each club, there is a varying number of physical resources, like for example, tennis ball machines, speed measuring devices (01 Novak, 140), or devices for the gardener, while devices for court maintenance are usually in property of the maintenance company (03 Dominic, 116). Some clubs have built their own tennis hall (01 Novak, 37), whereas the majority rely on external tennis hall operators.

Generally, participants state that it is getting more and more difficult to find people willing to participate in volunteer work (04 Roger, 100). Beyond that, the size of the board varies from 6 to 14 and ultimately affects the speed and enforcement of decisions. Some clubs are employing a secretary and a groundskeeper as additional support while others are having a revision committee responsible for monitoring the financial numbers and for generating the clubs' balance sheet and profit and loss statement (11 Fabio, 62).

"We are not professionals. Let us just say we are just ordinary people, and we have to deal with the matter somehow and rely on some experts, lawyers, and consultants." (11 Fabio, 63)

4.3.3 Strategy

With regards to the clubs strategies, respondents have in common that the board of directors decide all strategic implementations and reinvest profits:

"The premise is to run the club as if it is a business, but we are still a voluntary club (...) we are not profit-oriented, but if we make profits, they are immediately reinvested in the club." (10 David, 41)

Within the board, the decision-making process varies from club to club. Most participants state that each member of the board has one vote. In some clubs, the first president has, in case of a tie, two votes (05 Daniil, 63).

Generally, in case of more substantial consequences, a general member conference is held, where each member has one vote like, for example, in the case of a membership fee raise (03 Dominic, 73). Others use a member conference just to inform members, without giving them the right to vote, referred to as "indirect democracy" (05 Daniil, 63). One club is adjusting the way of leading based on the wishes of its members:
"The only club structure that works is "Demokratur," a mix of democracy and dictatorship. People want to be led, but you have to make it democratic. However, not too democratic, because too many questions require too many answers. The people want to be led but not in a dictatorial way. People want decisions from the board, and they have to be made quickly." (10 David, 49)

Generally, most of the respondents try to make their decision-making process transparent (05 Daniil, 65), while in some clubs, an old-fashioned nepotistic structure is still prevalent (01 Novak, 88). The decision-making process is instead seen as slow and hence, characterized as a disadvantage (06 Stefanos, 66). Strategically, some clubs let the club life flourish by itself (10, David 52) while others are aiming, for example, at growing membership numbers.

4.3.4 Change Culture

Clubs deal differently with change. While some state that they are not in the “comfortable situation” of being confronted with change (06 Stefanos, 73), others do not see the need for change. Respondents argue that in the past, members spend far more time in clubs, socializing, and building relationships, whereas today, many people immediately leave after they are done with playing (08 Matteo, 47 & 02 Rafael 72). Experts state that the "togetherness" is more robust in rural areas compared to urban areas (09 Gael, 28). With regards to i) members dealing with change, respondents see a tendency towards resistance and ii) an initial reluctance:

i) "One tries to make the change for members as small as possible to create just little rejection. I believe that changes are not perceived positively, just to give a simple answer." (07 Alexander, 80)

ii) (...) “this is always the case in our conservative club. First, there is as a rule "listen, that is not possible," then you annoy the board four more times while having a beer, and after the fifth beer, it works somehow.” (01 Novak, 111)

On the contrary, there are also clubs i) representing an openness towards change and ii) empowerment of members:

i) "I never turn things down on principle. Neither we do that on the board. If someone has a good idea and it makes sense, then you certainly do not reject things in advance." (05 Daniil, 59)
ii) “If members have ideas and want to organize something, they can, of course, do so. They will be financed if they need it.” (10 David, 52)

Lastly, some clubs intentionally avoid specific changes to protect their club life:

“No, we do not have a digital court booking system. We also discussed it in a general meeting, because we thought "should we do that," and it was almost universally rejected because the club life would suffer as a result. People would sit at home, rent a court, come, play, and go home again. Those are the reasons why we said no. They should come an hour before, sign in, drink coffee, talk to someone; that way, club life will be kept up a bit.” (11 Fabio, 77)

4.3.5 IT Infrastructure

While some participants state that their club is still organized manually by a couple of excel sheets (01 Novak, 133), others have already digitalized the entire administration including court booking, accounting and membership management:

"In our club, we have the system "Tennis 04". With this program, we can control the entire accounting and store the member files there. We can manage the court bookings through this program. We have direct contact with the people through this program also the guest bookings. We can also use it to control the hall lighting and heating in the hall. We do that via mobile phones. I have constructed this myself. It works via SMS. I can adjust the light and heating accordingly. That save costs, of course." (10 David, 60)

Some IT systems offer online access where the membership administration like, for example, the registration of new members or the calculation of membership fees, takes place. Further, the system functions as an interface for partners and associations (11 Matteo, 75). Some clubs steer their court irrigation and the floodlight via an app (10 David, 77, 06 Stefanos 93)

Those who are using implemented IT solutions are principally satisfied:

“The experience with the IT system has been good over the years. It works smoothly. It is an attractive option and gives more insight into the whole system for the board of directors. It is far less problem-driven. It takes a few hours to write out membership fees, etc., and before that, it took you forever. It is also easier to get a universal corporate design for invoices etc. - so that works well. (06 Stefanos, 93)
Some clubs encounter barriers on their way, which makes the implementation take longer than expected:

"I have been trying to implement a cloud solution for our board activities for some time now because we still exchange endless emails or short messages. Exchange documents, that is something I think we need now." (07 Alexander, 97)

4.3.6 Innovation Valance

In order to analyze the attitude of clubs towards innovation, a case study with an image video as stimuli or a verbal explanation has been presented. All clubs articulate a positive attitude towards the innovative product but see the financial scope of the project as a critical factor:

“I think the idea is awesome, I would like nothing more than a robot that can do it all, but I really think it is a budget issue.” (06 Stefanos, 136)

“As a player, there is nothing better than pressing a button after the game and not having to clean the court yourself. If everything is performed all in one, you have no work, and the following player has the best possible conditions. (03 Dominic, 152)

While most experts like the idea, some are skeptical about whether the product adds value and will perform the way it was said to be (11 Fabio, 94). Further, experts refer to high chances of acceptance in traditional clubs with well-known tournaments like, e.g., Rochusclub Düsseldorf or Iphitos München, since this could create a unique selling point (02 Rafael, 119 & 08 Matteo, 75). Respondents name several requirements which are decisive for a potential adoption:

- Costs of the product (04 Roger, 134)
- Potential savings for the club (05 Daniil, 118)
- Quality of performed service (11 Fabio, 94)
- Number of products needed (03 Dominic, 154)

Respondents see potential advantages in the treatment of courts, water savings, and equal irrigation, an increased club image, and a relief for players from the court maintenance (07 Alexander, 129). Potential disadvantages: high costs (06 Stefanos, 126), a consolidated use (07 Alexander, 133), and the risk of theft (03 Dominic, 164). Two clubs articulated a particular interest independent of the costs.
4.4 Interim Summary: Findings

The findings reveal that digitalization is mainly perceived as positive, although respondents name more particular negative aspects digitalization implies. The respondents’ level of digital knowledge and skills are distinct. Whereas some have a holistic understanding of what digitalization covers, most experts are only passive users and dispose of just a narrow perspective towards digitalization. Not only that individuals are in different digital stages but also their tennis clubs. The findings reveal that clubs are integrating a varying number of digital solutions reaching from only some excel sheets to fully integrated software systems covering, for example, the administrative, membership, and court management. The clubs, already on their digital path, are overall satisfied with their systems. All respondents unfold that there is a massive need to catch-up with regard to their online presence. Only a few try to actively provide up-to-date information through their social media channels, whereas more than half do not even have a Facebook or Instagram account yet. Here, clubs name a lack of volunteers as a main reason and refer to a societal shift in norms and values where individuals do not want to incur obligations anymore to keep their flexibility. Generally, clubs are facing various internal challenges ranging from member obsolescence, over a loss of members, to a dwindling club spirit. Reasons for that are, on the one hand, the enormous increase of competitive recreational activities that are by far cheaper and easier to learn and, on the other hand, an increasing cognitive shift towards a service mentality. Members progressively expect to get a “full package” without making a personal contribution to the club life by arguing that they are paying membership fees. All in all, clubs find themselves in a variety of different situations facing different challenges. Extrapolating from the findings, while individual clubs show variations in some business model characteristics as well as their overall digital readiness, many common challenges do exist.
5 Discussion

In the following paragraphs the findings presented in the previous section are interpreted and critically examined in the overall context of the theoretical background. The underlying content is discussed in order to ground the path to answer the research question how the digital readiness of tennis clubs is currently looking like and is, basically, guided along the structure of the findings. In the first step, attitudes and competence are examined. This is followed by an evaluation of external, internal and digital challenges. The results of both assessments are then embedded into the overall context of digital readiness. Here, the organizational change readiness model with its evaluation parameter (Lokuge et al., 2019) and the business model canvas (Osterwalder et al., 2005) support the examination of clubs’ digital readiness by framing, understanding and communicating the clubs’ features and strategies (Sparviero, 2019). As this thesis aims to examine the digital readiness of tennis clubs, a consideration of the overall attitude towards digitalization and occurring digital challenges is needed. Figure 10 illustrates this at the micro and macro level. To reveal information about attitudes and challenges which can be used to create a bigger picture of tennis clubs’ organizational digital readiness, various experts were interviewed. Tennis clubs across Germany and Austria find themselves in very different positions, as the findings indicate. Clubs face a variety of diverse external changes and internal challenges leading to a multitude of different situations. Whereas some clubs still run their day-to-day business with a few excel sheets, others have already established a holistic IT infrastructure with features such as digitalized administration processes. This begs the question: Is this digital divide also dividing tennis clubs?

Figure 10. Methodological Discussion Structure
5.1 Ready or not?

Nowadays, successful participation in society is considerably more dependent on information and the way this is gathered (Peromingo & Pieterson, 2018). Change readiness literature states that readiness is seen more as a degree in a continuum rather than a state of being ready or not ready (Lokuge et al., 2019). Therefore, clubs have to be examined from various perspectives and several dimensions.

Starting by looking at individual readiness, which is strongly influencing organizational readiness (Vakola, 2013; Voß & Pawlowski, 2019), the findings from the interviews indicate that numerous competence levels exist. The results confirm the prevalent theory that there is a widening gap, a phenomenon of the digital divide, within society in terms of access and use of technology (Bock et al., 2017; Horrigan, 2016; Peromingo & Pieterson, 2018; van Dijk, 2008). On the one hand, the interviewed experts revealed that they do not have any or just a few digital skills, whereas, on the other hand, some experts explain that digitalization is part of their job, and therefore they have solid digital skills which even include programming. According to Rogers (1995) and Moore’s (2002) adoption life cycle, the aforementioned experts with very little digital skills can be classified as “laggards” or “late majority”, while the experts with increasing capacity in the realm of technology belong to the group of the “early majority”, “early adopters”, or even “innovators”. Consequently, the majority of experts are, according to the adoption life cycle, people who want to be convinced and who are aiming at only gradual improvements, whereas a minority is actively striving for new things permitting disruption. This is represented by the findings that most clubs do not actively move towards something new, although they are aware of the need caused by changing demands.

Nevertheless, most clubs’ position is perceived as a passive rather than an active one. Hence, the individual level matters even more, as it is also the preparedness and the comfort people feel towards the use of digital tools (Horrigan, 2016) which actively contributes to the digital readiness on an organizational level. This phenomenon is consistent with current literature stating that technology is evolving at such an accelerating pace that the majority of people are unable to catch up and that the number of already-skilled people is too small to serve the broad mass of existing digital needs (García Galera et al., 2017).

Further, one has to consider individual beliefs and attitudes to conclude digital organizational readiness (Nasution et al., 2018). The findings show that even within the 11 participants of this study, a variety of different opinions and beliefs exist. Especially the experts with a high level of digital competence – who form the minority – draw the attention towards the perceived risk that digitalization includes and state a quite reserved attitude towards digitalization.
They see data issues and social disconnection as significant problems. On the other hand, the majority of experts, who have less experience in the field of data, note a vast number of positive attributes brought by digitalization. They conclude a neutral or positive attitude towards digitalization by naming advantages such as ease of communication or increased efficiency. This is congruent with academic literature, which states that all sectors and areas of life are affected by digitalization and can be made more effective, efficient, and intelligent (Füller & Hutter, 2017).

Even though the majority of the interviewed experts evaluated digitalization as something positive, various more concrete disadvantages are named which may indicate just "acted" digital knowledge and skills, which could be traced back to literature declaring that individuals act upon positive self-esteem, creating a social identity that is based on group membership norms they want to belong to (van Dijk & van Dick, 2009) and hence, they do not want to fall behind. All in all, individual readiness can be seen as a cognitive precursor for the behavior of either resistance or empowerment towards change and, thus, as a critical factor for digital readiness and a successful digital transformation process.

To fully grasp the understanding of the current situation of tennis clubs' digital readiness, one has to look closer at external and internal changes and challenges within the tennis environment. It becomes apparent that tennis clubs find themselves in a variety of different situations. Accompanying existing literature, which confirms that generally, sports clubs are confronted with a multitude of different difficulties, where some of them increasingly threaten clubs’ existence (Breuer & Feiler, 2019), tennis clubs are no exception. This study’s findings reveal that especially the non-professional external environment strongly impacts the internal club situation. All experts stated that the attractiveness of tennis is increasingly threatened by a rising number of newly emerging sports which are cheaper and easier to learn. Although existing literature states that tennis is progressively accessible for the broad mass (Ehnold et al., 2019), the interviewed experts discarded by saying that people see tennis still as a sport for the upper class with an adhering elitist prestige. This observation converges with Corbett (2015) who argues that way too often, clubs still have the image of being for high-income white families. This societal perspective goes hand in hand with the internal challenge of changing member expectations. The findings reveal in unison that members are seen as more frequently treating clubs as service providers rather than places which promote an active club spirit. This societal re-orientation is illustrated in literature in the form of a sinus milieu (table 3) where, for example, modern mainstreamers or adaptive navigators are moving away from the importance
of traditions towards modernization and individualization. People progressively strive to experience and explore various activities without losing their flexibility through long-term obligations. Here, the findings are in agreement with existing literature stating that a value shift is taking place; or example, millennials are said to be “samplers”, collecting many experiences without wanting to commit to club memberships, as the number of opportunities to be active during leisure time is higher than ever (Kavanaugh et al., 2020; Trägner, 2017). Compared to other sports, this makes it particularly tricky for tennis clubs to manage its operations, since their primary sources of income are membership fees. Consequently, the fewer members a club has, the less income is generated.

Additionally, clubs face challenges in terms of their member structure. Not only that, the findings reveal that the majority of clubs are moving towards a member obsolesce. Further, clubs face the challenge of addressing the needs of several member generations at the same time. The potential of an orientation conflict has been on the increases since, in recent decades, ways in which the sport is organized, communicated, and practiced have undergone profound changes (Xiao et al., 2018). On top of this, the findings highlight the declining numbers of volunteers who are willing to spend their free time for the good of the club. It appears that people are not willing to burden themselves with additional responsibilities, and therefore volunteer numbers are steadily declining, which, according to literature, applies to other sports clubs as well to non-profit organizations (Breuer & Feiler, 2019; Gross & Rottler, 2019).

Looking at this trend together with the diminishing interest of people to make long-term commitments as stated before, clubs, in contrast to organizations, have the crucial deficiency of lacking in resources to create strong incentives. Due to that, some experts reveal that they hire people on a 450€ per month basis and charge the costs on top of the membership fees to compensate for the missing initiative to volunteer.

Although Westermann, Bonnet, and McAfee (2014) state that the need for organizational transformation (change) increases exponentially as time passes, some interviewed experts concluded with regards to the digital status quo of clubs that they do not see the cost-benefit advantage which digitalization promises. Hence, they may be deemed resistant to change. Looking at theories which state that digital technology has become integral and irreplaceable as an element of professional athletic training (Farrell, 2019; Jenkins, 2019; McCaskill, 2018) and then matching these with the trend that more and more affordable devices are emerging (Ehnold et al., 2019), the question arises why almost no digital solutions are integrated within the training operations yet.
Contradictory, experts in this study admitted that the majority of their club members would endorse digital implementations within the training operations and would even financially support this initiative. Concurringly, this phenomenon can be found in literature as “person-oriented resistance to change”, where people - in this scenario tennis coaches - do not resist per se. Rather, they anticipate consequences like, for instance, a loss of status, comfort, or money; generally, threats to their self-interests (van Dijk & van Dick, 2009). In addition to said perceived consequences, new digital skills would be needed, as stated at the beginning of this discussion. Therefore, similarly to organizations and applicable to other sports, to realize change efforts, the willingness to cooperate is needed (Thomas & Hardy, 2011).

Generally, clubs find themselves in different stages of the three-phase model introduced by Kurt Lewin. While some of the interviewed experts reveal that their club has started to introduce digital solutions many years ago, others initiate that a couple of excel sheets still manages their club. Similarly to organizations, clubs go through the stages of unfreezing, change, and refreezing during a process of transformation. The time horizon, therefore, is not particularly decisive. Therefore, some clubs are currently in the change stage, whereas only the minority has already reached the stage of digital refreeze. The vast majority of clubs are stagnating at the first stage and even experience problems to initiate change at all. Here, a step of creating awareness about the need for change is needed to achieve the development of new methods and the learning of new attitudes and behaviors, and to reinforce the change that has occurred already (Burnes, 2017; S. Cummings et al., 2016).

This is not only necessary in the context of the overall alignment of the club, but also when it comes to its online presence. The findings show that all clubs lack in terms of their digital appearance. Interview experts state that they have difficulties in keeping their information up-to-date due to a lack of knowhow and missing volunteers.

On the other hand, social media channels to promote club activities are actively only used by the minority of clubs. Although tennis faces immense opportunities through social media (Kavanaugh et al., 2020), the experts declared that the right approach to exploit this potential is missing. This is also reinforced by the finding that only two of nine clubs declared that they are indeed following a digital strategy. Here, a club could benefit the most from digitalization by creating online points of contact, which may be a decisive factor for new member acquisition in the future. Here, according to literature, sharable micro-moments consisting often tennis-focused, tech-enabled experiences could particularly address younger generations (Kavanaugh et al., 2020, p. 5) and win them over by emphasizing the advantages of a club.
Intermediately summarizing, various individual competence levels, attitudes, as well as a multitude of different external and internal challenges and changes prevail in Austrian and German tennis clubs, hampering them to focus on the implementation of digital solutions.

On an organizational level, clubs also have their unique characteristics; this indicates that some might be more digitally ready than others. To assess digital readiness, some evaluation parameters are essential. Lokuge et al. (2019) argue that organizational readiness is a state that is attained before the start of a specific activity involving the psychological, behavioral, or structural preparedness of an organization and takes place on an organizational level such as organizational capabilities, strategy or culture (Vakola, 2013; Voß & Pawlowski, 2019). Therefore, the assessment criteria guide along the individual advancement of clubs within the aspects of IT readiness, strategic readiness, cultural readiness, partnership readiness, resource readiness, and innovation valance. Most tennis clubs follow a variety of different approaches that are discussed from multiple perspectives adapted by Lokuge et al. (2019) model of organizational readiness for digital innovation.

Following, the underlying business model, with its dynamic components, serves as the basis for in-depth analysis and are set in relation to the model's parameters. An exemplified integration of the findings within the organizational model's context is provided in table 10 below, while the interview findings have been integrated within the business model canvas, as seen in figure 11 and in appendix D.

<table>
<thead>
<tr>
<th>Cognitive Readiness</th>
<th>&quot;In tennis, the people who want to get involved in the club are not exactly people who come from a high-tech background and who are now extremely keen or enthusiastic about technology.&quot; (06 Stefanos, 102)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Readiness</td>
<td>&quot;I have been trying to implement a cloud solution for our board activities for some time now because we still exchange endless e-mails or short messages. Exchange documents, that is something I think we need now.&quot; (07 Alexander, 97)</td>
</tr>
<tr>
<td>Resource Readiness</td>
<td>&quot;Of course, it is always a question of how big the investment is and how necessary. I think that smaller clubs have to look at them accurately. The bigger clubs, they can perhaps be a little more generous, but they also have to look at how necessary it is to repair or rebuild it in order to bring the club forward or keep it alive.&quot; (04 Roger, 87)</td>
</tr>
<tr>
<td>Cultural Readiness</td>
<td>&quot;If members have good ideas and want to organize something, they can, of course, do so. They will be financed if they need help.&quot; (10 David, 52)</td>
</tr>
<tr>
<td>Strategic Readiness</td>
<td>&quot;Everything is often planned based on the status quo, and if there is no status quo, it is becoming more difficult because there may be disagreement about what the right way forward is. Then two things can happen: either one person takes the lead for this issue, exposes himself on the topic with his solution, and then, as a rule, it is often followed due to a lack of competence or knowledge that the others have. On the other hand, (...) it can be the case that one then says, &quot;I do not want that. I do not want to go forward.&quot;</td>
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DISCUSSION

It often ends up in long detailed discussions and, in most cases, in a compromise, which then slows the initiative down instead of moving it forward." (07 Alexander, 67)

<table>
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<th>Partnership Readiness</th>
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<tr>
<td>&quot;We are not professionals. Let us just say we are just ordinary people, and we have to deal with the matter somehow and rely on some experts, lawyers, and consultants.&quot; (11 Fabio, 63)</td>
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</table>

Table 10. Reflective Exemplary Depiction of Organizational Readiness Areas

It becomes apparent that a tennis club’s business model is a highly complex and dynamic construct. While literature states that a business model is an architecture of how firms create and deliver value to customers and mechanisms to capture a share of this value (2010, 2018), tennis clubs have different ways of doing so. This situation corresponds to business organizations and other sports, where each business model design project is unique and has its challenges, obstacles, and critical success factors. Organizations also have differing starting points and vary in context and intentions: Some may be responding to a crisis, others may be looking for new growth potential, and still, others may have the intention to include a new service or technology in their existing business model (Osterwalder et al., 2005).

Figure 11. Tennis Club Business Model Canvas

The findings indicate that all clubs generally address the same customer segment of youth, adult, and senior tennis players. As previously stated, the age structure differs among clubs due to the disinterest of the next generations. Therefore, according to their profile, clubs rely on a diverse range of channels to reach their members.
While the findings show that all clubs have a homepage and send out newsletters or newspapers, the most significant potential to market the club’s attractiveness in a fast and affordable way, namely through social media channels, is barely utilized. Here, clubs face the situation that especially the people in charge are lacking in individual competencies for these recently emerged channels and do not have the time to update them frequently. On the other side, in most clubs, the younger generations who have the required affinity for social media often lack in willingness to take on long-term obligations. On top of this, board members may see risks in transferring a high amount of responsibility to youth, since their actions online are likely to create the club’s outward appearance and might (unintentionally) communicate image-damaging content.

The findings further reveal that multiple motives and demands, reaching from the physical exertion through the physical activity, over the desire of social belonging, to wishes of entertainment, fun, and amusement, come together in a club. Consequently, a multitude of different commitments and demands need to be simultaneously satisfied and room for group formations with different interests must be provided. The experts from this study indicated that particularly members in urban areas have been noted to increasingly avoid spending additional time at the club, whereas parallel member expectations also shift towards a more holistic tennis experience. In their expectation, tennis might be the reason to come to the club; however, aspects such a social interaction, gastronomy or maybe a wellness area present reasons to stay. This way of thinking is coherent with studies from professional tennis, where tournament organizers progressively create incentives for visitors to attend a tennis event by establishing a holistic social and commercial experience rather than just a match (Kavanaugh et al., 2020).

Especially important, not only for professional tennis but also for non-professional tennis, are loyal relationships with fans and members. The interview findings show that in all clubs, the relationships with members are favorable, and thus, the cultural readiness is positive. Studies show that clubs are ascribed far-reaching positive characteristics such as making a considerable contribution to educational work, the inclusion of seniority and immigrants to foster integration, increasing a person’s work-life balance and the improvement of socialization contact points (Breuer, Wicker, & Orlowski, 2014). This has been confirmed by the experts consulted in this study.
Capabilities arise in many forms and manifest on multiple levels (Ferrari, 2012; Helfat et al., 2007; Holt & Vardaman, 2013). Therefore, some experts revealed that their club owns physical assets such as the tennis facility, tennis hall, or ball machines. On the other hand, one expert stated that their club does not even have a facility where members can regularly play.

Table 11 summarizes the significant (digital) dynamic capabilities of tennis clubs. Dynamic capabilities are essential for tennis clubs, just as they are for other organizations sports. This is because in times of change, dynamic capabilities help to create, extend, and modify their course of action and therefore achieve and sustain competitive advantage (Helfat et al., 2007; Teece, Pisano, & Shuen, 2009, Teece, 2018).

<table>
<thead>
<tr>
<th>Resources</th>
<th>Competences</th>
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<tbody>
<tr>
<td>Tennis facility, tennis hall, ball machine, camera, software programs, homepage, etc.</td>
<td>Physical: Knowhow about court maintenance, event planning e.g. tournaments, marketing, etc.</td>
</tr>
<tr>
<td>Membership &amp; license fees, lease income, donations, court rental, etc.</td>
<td>Financial: Acquire sponsors &amp; partners, calculate membership fees, balance sheets &amp; income statements, etc.</td>
</tr>
<tr>
<td>Board of directors, volunteers, members, partners, sponsors, etc.</td>
<td>Human: Ability to lead a club, communicate with members, motivate others, teamwork, etc.</td>
</tr>
</tbody>
</table>

Table 11. Dynamic Capabilities of Tennis Clubs

A particularly important role is played by the board of directors and its course of action, thus the strategic readiness. The interviewed experts reported about a variety of different board structures. In some clubs, more than ten people have a seat in the board of directors, and other clubs record just three or four board members. Additionally, voices within decision-making processes are weighted differently. While some clubs have a decentralized decision-making structure where each board member has one voice, others give the entire power to the first chairman alone, while even others actively include their members in almost every decision they make. Juxtapose the findings and existing literature, apparent differences are demonstrated as clubs initiate multiple different ways of leading a club compared to organizations that often hold only a fraction of this arbitrary freedom (Burnes, 2017).

Besides, experts state that especially the re-configuration of human capital confronts clubs with difficulties and sometimes slows down the decision-making process due to a lack of knowledge. This poses a big difference to existing organizations.
While organizations try to serve a need, such as new skillsets or even new job roles, by building digital competencies in-house or sourcing digital talent from outside (Arkhipova & Bozzoli, 2018), interview experts state that positions are filled according to the availability of people and usually change a lot. So, for example, one expert revealed that they had to switch from having responsibility for public relations to the lead for financials, since nobody else wanted to fill the position. This shows that competences often lack in knowhow and skills and the dynamism of re-arranging existing human capabilities. Thus, the cognitive readiness is rather limited.

Organizational change literature states that when change initiatives are introduced, there is usually a high degree of uncertainty, ambiguity, and information overload of which people try to make sense of. In this phase, impressions and beliefs about an organization’s readiness for change are created. In this continuum, people either tend to view the organization capable of coping with change, resulting in a high readiness for change, or they believe the organization is not able to cope with change, resulting in a low readiness for change (Eby et al., 2000). In this phase, impressions and beliefs about the organization’s readiness for change are created. In this continuum, people either tend to view the organization capable of coping with change, resulting in a high readiness for change or they believe the organization is not able to cope with change, resulting in a low readiness for change (Eby et al., 2000). Clubs’ change readiness is therefore limited due to the extent of a high level of uncertainty rooted in people’s digital qualifications and due to the speed of how rapidly people can learn and work with the newly rising demands (Arkhipova & Bozzoli, 2018).

Besides, the findings also reveal that the possibilities to re-arrange (digital) physical resources are extremely varying among the clubs. While some experts conclude that they have digitalized the entire administration and organization, others lead their club with some Excel sheets. The majority is adapting isolated solutions, for example, for the clubs’ accounting or court booking. The reason for this considerable disparity is supported by literature which states that “the cost of installing, maintaining and operating such systems has far prevented greater market penetration” (Guevara Martinez & Schlögl, 2018, p.1). Some clubs have built a solid financial resource-base over the years, which enables them to establish and maintain a good club infrastructure. This creates better opportunities to invest in digital solutions compared to other clubs. The findings further show that the cost structure is strongly linked to a club’s physical resources. For example, a club which owns a hall has much more costs to cover than a club without a hall.
Opposing revenues also vary and are strongly linked to the number of members a club has, since membership fees are the primary source of income for all clubs. On the other hand, the majority of clubs are not in the favorable situation of flexibly arranging their financials for digital investments and instead appear to be in the position where digital solutions are future dreams. Digitalization often remains in these dreams as the necessity to first address essential investments such as the renovation of the club facility takes precedence. Based on this dichotomous situation, the IT and resource readiness of clubs is very contrasting and puts clubs in a wide array of starting points in their journey to establishing digital solutions.

Overall, the tennis club landscape remarkably differs in terms of digital readiness. Some are more ready than others, but generally, the “construct” tennis club is highly dynamic and is limited in its capabilities, which makes it difficult to flexibly react to changing needs and demands. While some clubs have paved the way for digital adoption very well and therefore have established a solid digital readiness, the majority is still facing profound difficulties in their club management, where digital solutions do not necessarily solve the core of the problems and might even amplify the situation. The potential that digitalization may contribute not only to the club management but also to players is unquestionable.

5.2 Theoretical Implications

This thesis makes a specific contribution to the fields of research in digital change readiness and sport management. The results enlarge existing literature in several aspects. First, although change literature states that readiness is a degree in a continuum rather than an explicit state of being ready or not (Lokuge et al., 2019), the author suggests expanding the existing definition by Nasution et al. (2018) to state that “digital readiness is the inclination and willingness to switch to and adopt digital technology and the readiness to create new innovative opportunities by using this technology to bring an individual, organization, industry, and country to achieve their goals faster and with greater results” (Nasution et al., 2018, p.4) by adding a temporal dimension. This assumption is justified in such that the findings indicate that it is not only the “inclination and willingness” of individuals, organizations or clubs, that is decisive, but also the possibilities to do so. Many clubs are willing to switch and adapt to digital technologies but do not have the necessary capabilities to access the advantages of these digital technologies. This scenario is also applicable to other sports and established organizations.
Therefore, the author suggests the following definition based on the reasoning of Holt et al. (2007) and Nasution et al. (2018):

\[
\text{Digital readiness is the availability, ability, and willingness of individuals, organizations, industries, and countries to build and enhance physical, financial, and human digital capabilities in order to access opportunities arising from contemporary digital technology in a significant temporary period.}
\]

Second, the findings extend the field of application of digital readiness by the context of non-profit organizations and sports clubs. So far, digital readiness has been examined concerning country comparisons, individual competences and skills, as well as for-profit organizations (Horrigan, 2016; Nasution et al., 2018). This thesis extends the scope of applicability and contributes to an increased understanding of the phenomenon of digital readiness by showing the importance of the interdependence of organizational and individual readiness. Without digital competence on an individual level, the digital readiness on an organizational level is insufficient, and therefore the risk of digital change initiatives’ failures high.

Lastly, the thesis corroborates the priori organizational readiness model introduced by Lokuge et al. (2019) by applying the model on the example of tennis clubs. The various dimensions of readiness have been made applicable not only for digital innovation but also for examining digital readiness. Therefore, the findings confirm Lokuge et al’s qualitative study, strengthen its validity and extent its applicability in the context of digital readiness.

**5.3 Managerial Implications**

Especially non-professional tennis could be a beneficiary from digital solution accelerating beginner and amateur players’ learning curve or help a club with its operational business. (Breuer & Feiler, 2019; Ehnold et al., 2019). However, due to the fast-paced macro-environment in which clubs and organizations operate, business models are liable to the risk of getting obsolete (DaSilva & Osiyevsky, 2019), especially in times where tennis is facing more competition than ever before, and digitalization is transforming entire industries. Consequently, for clubs, it is getting more and more relevant to adopt digital solutions in the short- and long-term. Following, managerial implications are provided to illustrate digital potentials clubs should start, or continue, to access.
The findings identify three areas where digitalization can add value, as shown in figure 12 and appendix E. Generally, the most significant digital potential for clubs exists in their online channels - namely, in their online appearance, the development or extension of the clubs’ IT infrastructure, and in training operations.

Firstly, the interviewed experts across all clubs revealed that their digital channels are barely established. In times of increased screen time and online information procurement, it is mandatory to set up a stable and up-to-date homepage where people can quickly find necessary information such as phone numbers of people in charge, in case they have any concerns. Especially given the current reality of Covid-19, information actuality of homepages is of great importance, not only for the safety of people but also to establish a trustful and caring club image.

Figure 12. Digital Potential within the Business Model of Tennis Clubs

Furthermore, the findings show that nearly all clubs lack human capabilities to build a substantial social media presence. Facebook, Instagram, and even Snapchat are channels addressing a wide range of people and creating room for information exchange and marketing activities to increase clubs’ image and to attract people from various paths of life. Although the experts consulted in this study confirmed the advantages that those channels bring, the majority lack in realization initiatives. Here, the author suggests creating incentives for young volunteers with an affinity for social media in the form of, for example, internships.
In close collaboration with the board of directors, a digital strategy can be formulated, including the corresponding image that a club is aiming to establish. Established rules for appropriate online behavior minimize the risks of contributing club image damaging content. Especially youth volunteers between 15 and 18 years of age may see the long-term advantage of adding a volunteer role with high responsibility for marketing activities to their resume, as one of five motivations to engage in volunteering obtain career-related benefits (Englert & Helmig, 2018). Thus, clubs could convert the overall existing problem of decreasing volunteer numbers partially into a new possibility. All in all, volunteers should not be confronted with one big piece of work, but somewhat fragmented parts distributed among several volunteers to keep up the motivation and avoid overwhelming them with too much work which is in the literature referred as fragment volunteering (Englert & Helmig, 2018).

Next, as the evolution of e-Sports continues, e-Sports not only offers new channels for advertisement and sponsorship but also addresses mainly a young, globally-connected audience (Elishkov et al., 2017; Lee, 2018). This could present an excellent way to attract young, new members. One only has to look at professional football clubs that are all little by little joining the virtual game. Here, newly emerged channels, including Amazon’s streaming platform Twitch or the currently evolving platform TikTok could also be new ways to attract new members. Generally, intergenerational incentives should be established to exclude a preponderance of single channels. For example, longstanding members in seniority will perhaps not adapt to the digital newsletter and therefore prefer a printed version.

All in all, deriving from the findings, clubs have to foster a clear formulated online strategy that includes the aspired club image and concrete ways of addressing particular target groups with the appropriate content through suitable social media channels. This study has also concluded that the progressiveness of established IT solutions, in the business model canvas integrated within key resources and key activities, remarkably varies among clubs. The author suggests investing time to foster a paperless office in order to ground the path to increase the overall transparency, enhance communication efficiency, and improve the decision-making process. Making documents accessible to all board members by, for example, uploading them to a Cloud server is an important future step to improve a club’s management. To access the digital potential on an organizational level, clubs should keep the individual competence level of staff members in mind. It does not make sense to implement a fully integrated software system if only one person has the necessary skills to cope with it.
To avoid resistance toward digital initiatives, people on an individual level have to be empowered to use digital solutions. Therefore, a shared understanding and willingness (joint vision) to adapt to changes brought by the decision to implement digital solutions is a mandatory prerequisite. This way, people have the chance to get ready for change.

This thesis has also uncovered a high potential in training operations. The findings reveal that almost no club is implementing digital solutions for the organization and execution of the daily training, yet. Here, the potential reaches from an enhanced organization, over increased transparency of individual learning progress, to additionally exploitable revenue channels. All experts interviewed in this study confessed that the reason why no digital solutions are implemented in the training operations yet is the lacking willingness of the coaching team. The resistance is rooted in the individuals' self-protecting attitude. As most coaches see themselves as prevalent power on the court, their diminishing enthusiasm for digital solutions may be grounded in anxiety to become redundant in the future. Here, a general rethinking has to take place. Digital solutions introduce not only an enhanced way for individuals to learn the sport but also a potential new revenue stream, by providing data analyses. For example, in 2019, founded start-up Wingfield analyzed a player strikes and provided data about the frequency, speed, or precision via an app. Here, a coach could turn into a data analyst designed for tennis players. Further, recently emerged digital technologies like augmented reality or interactive game wall technology create new fun ways to learn the sport by, for instance, striking at projected fishes swimming in a fishbowl.

Lastly, clubs should be aware of ever-changing member needs. In fast-paced urban environments, digital solutions such as a digital court booking accelerate the booking process and is perceived as something positive. On the other hand, in rural areas, members may put greater emphasis on the club life and therefore prefer to book a court manually. The regional differences and digital dichotomy often make the requirements unique.
6 Limitations, Future Research & Conclusion

This work is one of the first attempts to investigate digital readiness within the setting of non-profit sport clubs by the example of tennis clubs. This thesis contributes to a better understanding of the topic and uncovers the situations that tennis clubs are currently facing by conducting and evaluating interviews with experts from Austria and Germany, with the goal of investigating prevailing attitudes and challenges. Nevertheless, there are certain limits to this approach. Besides classical limitations of qualitative work including enlarging the sample size, adding additional examiners or data collection biases (Bryman & Bell, 2011; Saunders et al., 2009), there are several other limitations within this thesis which also provide opportunities for future research.

First, according to Holt et al. (2007), successful organizational change goes through the stages of readiness, adoption, and institutionalization; however, this thesis focuses solely on the first stage. To deepen the understanding of clubs’ change process, further research might investigate clubs that currently go through the stages of adoption and institutionalization. Potential outcomes of the investigation of those different stages could be set in relation and compared to the findings of this master’s thesis and thus, give digestion of critical success factors for overall change processes.

Second, this thesis has geographical restrictions to Austria and Germany. As there are many cultural differences to other countries like, France, Spain or Italy, it might not be prudent to generalize the findings for all clubs around the world. Therefore, future research could continue investigating the digital readiness of tennis clubs in other countries and compare the results.

Third, as the interviews were conducted by only one person, the thesis might be influenced by subjective opinions. Therefore, future research might gather additional data from other perspectives such as tennis club members. Here, the individual digital readiness could be quantitatively investigated set into relation with existing findings through a data triangulation approach.

Lastly, this thesis was particularly framed around the sport of tennis. Future research may investigate clubs from other sports fields and elaborate similarities and difference to further understand digital readiness in the context of sport.
To conclude, the phenomenon of “digital readiness” does not necessarily include many digital components in the first place. Digital readiness should be seen as more of a state of aspiration to establish preliminary conditions to ground the path for the subsequent digital transformation process. As digital readiness is a multifaced, highly dynamic construct with various dimensions, permanent adjustments are required. Even though this thesis examines digital readiness on an organizational level, it is not possible to not overstate the importance of digital readiness on an individual level. Especially in times where technology is evolving at an accelerating pace, one should not forget that it is still the individual who executes tasks and ensures a seamless process. Although there is no such thing as the one state of being ready, good preparation and an equal initial (digital) understanding increase the chances of successful transformation initiatives. Generally, the advancement of being ready for change can greatly vary as seen in the situation of tennis clubs. Although the findings are concurrent with literature stating that not many clubs are implementing digital solutions yet (Ehnold et al., 2019), the findings reveal that this does not necessarily indicate that clubs are digitally not ready. Indeed, many clubs are not ready yet but on the contrary, there are also a vast number of clubs which are. Basically, each club has its unique challenges to overcome, and therefore instead of trying to generalize an argument for being ready or not ready, each club situation has to be examined individually. However, many clubs appear to be on the right track strategically and seem to be aligning their capabilities for future digital changes, even though those capabilities are often quite limited. Restrictive to this day the image of tennis is still too often seen as elitist. New digital applications, already used in professional tennis, could be a way to overcome prejudices and help individuals to learn tennis faster, cheaper, and more efficiently. Besides, newly emerging modifications of tennis such as Padel or Beach Tennis could create positive externality.

In addition, the Covid-19 pandemic has not only unveiled that home office, digital schooling or conference calls are feasible, but also that countries have a serious need to digitally catch up. Particularly, Austrian and German small-and medium-sized enterprises currently experience firsthand that there is a great backlog in terms of digitalization. This may, consequently, boost the awareness of the digital potential waiting to be accessed. Therefore, now more than ever before might be the right time for tennis clubs to hop on this train and to focus even more on getting digitally ready.

As the great Arthur Ashe once said: “Success is a journey not a destination. The doing is usually more important than the outcome.”

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REFERENCES


Appendix

Appendix A: *German Interview Guideline*

**Interviewleitfaden - Deutsch**

**Forschungsfrage(n)**

Wie sieht der derzeitige, digitale Bereitschaftsgrad von traditionellen Tennisvereinen in Österreich und Deutschland aus?

a) Wie ist die Einstellung der Vereine gegenüber der Digitalisierung und zu digitalen Innovationen?

b) Was sind aktuelle Herausforderungen die Tennisclubs daran hindern digitale Lösungen zu etablieren?

**Zielgruppe**

- Entscheidungsträger in Tennis Vereinen in Österreich und Deutschland

**Beschreibung der Interviewziele**

*Einblicke erhalten in:*

- Aktueller Stand und Grad des Bewusstseins für eine digitale Bereitschaft
- Persönliche Wahrnehmung und Einstellung
- Umfang der Akzeptanz und Anwendung von digitalen Lösungen
  - In der Vergangenheit, zum jetzigen Zeitpunkt, in der Zukunft
- Kompetenzen die für eine erfolgreiche Integration der Digitalisierung nötig sind
- Grad der individuellen und kollektiven Bereitschaft für Veränderung bzw. Resistenz
- Aktuelle Vereinssituation, Entwicklung und Herausforderungen
- Einstellung gegenüber digitalen Innovationen am Beispiel der Tennisplatzpflege
AGENDA

I. Begrüßung und Eröffnung ................................................................. 5 MIN

II. Warm-up: Individuelle Kompetenzen ............................................. 5 MIN
   Tennis ............................................................................................... 5 MIN
   Digitalisierung................................................................................ 5 MIN
       Digitales Verständnis ................................................................. 5 MIN
       Digitales Wissen ................................................................. 5 MIN
       Digitale Fähigkeiten ................................................................. 5 MIN

III. Vereinssituation ........................................................................... 10 MIN
    Organisation ................................................................................ 10 MIN
    Vereinskultur und Mitgliederbelangen ........................................ 10 MIN
    Ökonomische Situation ................................................................. 10 MIN

IV. Digitalisierung im Verein und auftretende Barrieren ...................... 10 MIN
    Digitale Strategie .......................................................................... 10 MIN
    Vereins- und Mitgliederverwaltung .............................................. 10 MIN
    Trainingsbetrieb ........................................................................... 10 MIN
        Organisation ........................................................................... 10 MIN
        Durchführung ........................................................................... 10 MIN
        Analyse ................................................................................ 10 MIN
    Spielbetrieb ................................................................................ 10 MIN
        Platzbuchung .......................................................................... 10 MIN
        Saisonspiele ........................................................................... 10 MIN
        Spielervermittlung ................................................................. 10 MIN
    Online Präsenz ........................................................................... 10 MIN

V. Fallbeispiel - Innovation in der Platzpflege .................................... 5 MIN

VI. Wrap-up und Ausblick ................................................................. 5 MIN

TOTAL 40 – 60 MIN
I. Begrüßung und Eröffnung

Sei gegrüßt!

Vielen Dank, dass du dir Zeit nimmst, um dieses Interview mit mir zu führen. Bevor wir starten möchte ich betonen, dass alles was wir gleich besprechen werden für Dritte ausnahmslos unzugänglich ist und die Informationen, die du offenlegst, strikt anonymisiert werden.

Damit ich die Informationen zu einem späteren Zeitpunkt bestmöglich verarbeiten kann, würde ich unser Gespräch gerne aufgezeichnet und anschließend transkribieren.

- Bitte antworte kurz mit „Ja“, wenn du damit einverstanden bist.


- Bitte antworte kurz mit „Ja“, wenn du damit einverstanden bist.

Ich werde dich jetzt gleich mit ein paar vorbereitenden Fragen durch das Interview führen, in deren Beantwortung du komplett frei bist.
Hier gilt: Sage mir deine eigene Meinung frei und spontan heraus. Es gibt hier kein richtig oder falsch.

Am Ende unseres Interviews hast du die Möglichkeit, einzelne Punkte zu ergänzen oder Themen anzusprechen, die du für relevant hältst und nicht durch meine Fragen angesprochen wurden. Ein kurzes Feedback rundet unser Interview ab.

Insgesamt wird unser Interview zwischen 45 und 60 Minuten dauern.
Ich wünsche uns viel Spaß!
II. Warm-up: Individuelle Kompetenzen

Tennis
Welchen Bezug hat der Interviewpartner zum Tennissport und seinem Verein?

- Spielst du selbst Tennis und wenn ja, wie lange spielst du schon?
- Nenne mir bitte eine Persönlichkeit aus dem Tennis, die für dich eine wichtige Rolle gespielt hat und warum.
- Was war dein prägendstes Tennisereignis, indem du selbst involviert warst?
- Wie hat sich deiner Meinung nach der Tennissport in den letzten 10 Jahren verändert?
- Bitte stelle dich und deine Funktion im Verein / Akademie / Verband vor und schildere kurz ein paar Aufgaben, denen du dort nachgehst.
  o Wie lange hältst du diese Position schon inne?
  o Gab es interne Positionswechsel?
    ⇒ z.B. vom Sportwart zum Präsidenten

Bitte ergänze den folgenden Satz: Tennis ist für mich…

Digitalisierung
Wie ausgeprägt ist die digitale Kompetenz des Interviewpartners?

Digitales Verständnis
- Was verbindet du persönlich mit dem Begriff „Digitalisierung“?
- Wie ist deine Einstellung gegenüber Digitalisierung?
- Wie wird sich deiner Meinung nach die Welt durch die Digitalisierung verändern?

Digitales Wissen
- Wie ausgeprägt würdest du dein digitales Wissen beschreiben?
  o Wie stehst du zu den aktuellen Trends wie der künstlichen Intelligenz, Big Data oder maschinellem Lernen gegenüber?
  o Wie stehst du zu neue technologische Trends?
  o Inwiefern nutzt du das Internet gewissenhaft und weißt über mögliche Risiken Bescheid?

Digitale Fähigkeiten
- Wie findest du dich mit digitalen Produkten und Prozessen zurecht?
- Wie würdest du deine digitalen Fähigkeiten beschreiben? Von einer Skala von 1 – 10?
- Wie intensiv nutzt du digitale Produkte oder Programme in deinem Alltag?
    ⇒ z.B. Apps, Fitness Tracker oder Smart-Home Produkte

Bitte vervollständige den folgenden Satz: Digitalisierung ist für mich…

III. Vereinssituation

- Nenne mir bitte einen Punkt, der deinen Verein besonders macht
- Bitte versuche, den Verein mit drei prägnanten Wörtern zu beschreiben
- Wie lange besteht der Verein bereits?
- Ist die Tennisanlage vereinseigen oder kommunal?
  o Falls kommunal, müssen Nutzungsgebühren gezahlt werden? Wie viel?
- Wie viele Mitglieder hat der Verein ungefähr? Wie viele spielen davon aktiv Tennis?
- Wie hat sich die Mitgliederzahl in den letzten Jahren entwickelt?
- Wie hat sich das Altersverhältnis in den letzten Jahren entwickelt?
Organisation
Wie organisiert sich der Verein?

- Wie viele Personen sind in die Vereinsorganisation involviert?
- Welche Themen stehen bei Vorstandssitzungen immer wieder auf dem Programm?
- Wie würdest du die Atmosphäre im Vorstand beschreiben?
  ⇒ z.B. angespannt, freundschaftlich, distanziert, kooperierend etc.
- Wie wird über größere Projekte entschieden?
  ⇒ z.B. Vorstandsintern, gemeinsam mit Mitgliedern oder nur vom Präsidenten etc.
- Wie werden die Pflege und Instandhaltung der Tennisplätze gewährleistet?
  ⇒ z.B. vereinseigener Platzwart, Instandhaltungsfirma oder Mitglieder etc.
- Wie würdest du die Atmosphäre im Vorstand beschreiben?
  ⇒ z.B. angespannt, freundschaftlich, distanziert, kooperierend etc.
- Wie wird über größere Projekte entschieden?
  ⇒ z.B. Vorstandsintern, gemeinsam mit Mitgliedern oder nur vom Präsidenten etc.
- Wie werden die Pflege und Instandhaltung der Tennisplätze gewährleistet?
  ⇒ z.B. vereinseigener Platzwart, Instandhaltungsfirma oder Mitglieder etc.

Wie ist deine Meinung zu folgendem Statement: „Veraltete Vereinsstrukturen verlangsamen Entscheidungen und enden häufig in Uneinigkeit“.

Vereinskultur und Mitgliederbelangen
Wie ist die Vereinskultur?

- Wie würdest du die Vereinskultur beschreiben / das Vereinsleben außerhalb des Platzes?
- Wie würdest du die Atmosphäre unter den Vereinsmitgliedern beschreiben?
- Würdest du sagen, dass sich die Bedürfnisse der Mitglieder in den letzten Jahren verändert haben?
  o Falls ja, in welcher Weise?
- Gibt es Anliegen, über die sich Mitglieder beschweren?
  o Falls ja, welche sind das und wie werden diese behandelt?
- Wie reagieren Mitglieder auf Veränderungen im Verein?
  ⇒ z.B. ein digitales Platzbuchungssystem etc.
- Werden Mitglieder in Entscheidungen einbezogen?
  o Falls ja, in welchen Bereichen des Vereins?
  o Falls ja, wie werden die Mitglieder einbezogen?
- Wie zufrieden sind die Mitglieder mit der Qualität der Plätze?

Ökonomische Situation
In welcher wirtschaftlichen Lage befindet sich der Verein?

- Wie sieht das Geschäftsmodell aus?
  o Welche Einnahmequellen hat der Verein?
    ▪ Wie hoch ist der Mitgliedsbeitrag?
  o Bezieht der Verein fördergelder?
  o Wie volatile sind Spendengelder?
  o Welche Ausgaben hat der Verein?
- Wie viel Zeit wird für die Pflege und Instandhaltung der Plätze aufgewendet?
- Wie viel Geld wird für die Pflege und Instandhaltung der Plätze aufgewendet?
- Wann und wofür wurde das letzte Mal eine höhere Investitionssumme in die Hand genommen?
- Welche Rolle spielen Sponsoren für den Verein?
  ⇒ z.B. Abhängigkeit, Förderer etc.
- Wie könnte man deiner Meinung nach generell die wirtschaftliche Situation von Vereinen verbessern?

Wie ist deine Meinung zu folgendem Statement: „Größere Investitionen werden prinzipiell erstmal abgelehnt“.
IV. Digitalisierung im Verein und auftretende Barrieren

- Was kommt dir als erstes in den Sinn, wenn du an Digitalisierung in eurem Verein denkst?
- Welche digitalen Veränderungen gab es in den letzten Jahren im Verein?
  - Wie waren die Erfahrungen damit?
  - Welche Schwierigkeiten gab es und wie wurden sie gelöst?
    ⇒ z.B. Annahme durch die Mitglieder etc.
- Welche Vereinsbereiche könnten deiner Meinung nach stärker digitalisiert werden?
- Wie würdest du die Einstellung des Vereins beschreiben, digitale Lösungen für einzelne Vereinsbereiche zu integrieren / anzunehmen?
  - Aus Vereinsicht
  - Aus Mitgliedersicht
    ⇒ z.B. Analysesoftware für den Trainingsbetrieb etc.

Wie ist deine Meinung zu folgendem Statement: „Die Digitalisierung wird im Tennis nur langsam Anklang finden“.

Gerne würde ich jetzt die einzelnen Vereinsbereiche etwas genauer betrachten, um herauszufinden zu welchem Grad die Digitalisierung dort Einzug hält.

Digitale Strategie
Verfolgt der Verein eine formulierte, digitale Strategie?
  - Falls ja, wie sieht diese aus?
    ▪ Welche Ziele werden damit verfolgt?
      ⇒ z.B. Neue Mitglieder, Informieren etc.
  - Falls nein, steht die Ausarbeitung einer digitalen Strategie für die Zukunft im Raum?
    ▪ Falls nein, wieso nicht?

Vereins- und Mitgliederverwaltung
In welchem Umfang sind digitale Komponenten in der Vereins- und Mitgliederverwaltung integriert?

Wie organisiert sich der Verein digital in Hinsicht auf:
  i) Personal
  ii) Mitglieder
  iii) Sponsoren
- Welche potenziellen Probleme treten hier auf?

Wie ist deine Meinung zu folgendem Statement: „Die Digitalisierung von Produkten und Prozessen in Tennisvereinen interessieren die Mitglieder nicht“.

Trainingsbetrieb
In welchem Umfang sind digitale Komponenten im Trainingsbetrieb integriert?

Organisation
- In welchem Umfang sind digitale Lösungen in der Planung und Organisation des Trainings involviert?
- Nutzt ihr eine Software für die Planung, Organisation, Steuerung und Analyse des Trainingsbetriebs?
  ⇒ z.B. WhatsApp, zentraler Kalender, Apps
  - Falls ja, welche ist/ sind das?
  - Falls nein, habt ihr schon mal über eine Implementierung nachgedacht?
    ▪ Falls nein, wieso nicht?
Durchführung
- In welchem Umfang sind digitale Lösungen in der Durchführung des Trainings involviert?
- Nutzt ihr eine Software für die Durchführung des Trainingsbetriebs?
  ⇒ z.B. digitale Trainingspläne: Häufigkeit, Trainingsschwerpunkte, Trainingsziele
  o Falls ja, welche ist/ sind das?
  o Falls nein, habt ihr schon mal über eine Implementierung nachgedacht?
    ▪ Falls nein, wieso nicht?

Analyse
- In welchem Umfang sind digitale Lösungen in der Analyse des Trainings involviert?
- Nutzt ihr eine Software für die Analyse des Trainingsbetriebs?
  ⇒ z.B. Bewegungs- und Spieleranalysen per Video, Spielstatistiken etc.
  o Falls ja, welche ist/ sind das?
  o Falls nein, habt ihr schon mal über eine Implementierung nachgedacht?
    ▪ Falls nein, wieso nicht?

Spielbetrieb
Wie wird der Spielbetrieb von der Digitalisierung beeinflusst?

Platzbuchung
- Verwendet der Verein ein digitales Platzbuchungssystem?
  o Falls ja, welche Vor- und Nachteile fallen dir hierzu ein?
  o Falls nein, habt ihr schon mal über eine Implementierung nachgedacht?
    ▪ Falls nein, wieso nicht?

Saisonspiele
- Wie verwaltet der Verein die Spiele der Mannschaften während der Saison?
  o Wie werden Ergebnisse erfasst und verwaltet?

Spielervermittlung
- Verwendet der Verein ein digitales System für die Spielervermittlung?
  o Falls ja, wie sind die Erfahrungen der Mitglieder damit?
  o Falls nein, habt ihr schon mal über eine Implementierung nachgedacht?
    ▪ Falls nein, wieso nicht?

Online Präsenz
Wie präsentiert sich der Verein online?

- Wer kümmert sich um den digitalen Inhalt im Verein und was sind seine Aufgaben?
- Werden Mitglieder aktiv aufgefordert, Content über den Verein zu posten oder zu teilen?
- Wie würdest du den Online Auftritt des Vereins im Vergleich zu anderen Vereinen beschreiben?
- Verfügt der Verein über digitale Kanäle?
  o Falls ja, welche Kanäle werden verwendet?
    ⇒ z.B. Homepage, Instagram, Facebook
    ▪ Wie regelmäßig werden diese genutzt, um etwas zu kommunizieren?
    ▪ Was sind hier Ziele eines Beitrags?
      ⇒ z.B. informieren, Akquise, Bekanntheitssteigerung etc.
      ▪ Bitte beschreibe mir einen Post, der dir besonders in Erinnerung geblieben ist.
  o Falls nein, habt ihr schon mal über eine Implementierung nachgedacht?
    ▪ Falls nein, wieso nicht?
V. Fallbeispiel - Innovation in der Platzpflege 5 MIN

Wie ist deine Meinung zu folgenden Statements:
„Jeder will bei perfekten Platzbedingungen spielen, ist aber selbst nicht bereit viel Zeit für die Platzpflege aufzuwenden“.

„Die Platzpflege wird von der Mehrheit der Tennisspieler als mühsam empfunden“.

Gerne würde ich dir jetzt ein Video über ein Produkt zeigen, dass ich für Tennisvereine entwickeln möchte. Bitte scheue dich hier nicht, auch Kritik zu äußern

- Was ist dein erster Eindruck? Was kommt dir zu dieser Idee als erstes in den Sinn?
- Könntest du dir vorstellen, dass euer Club mit solchen Geräten ausgestattet wird?
  o Falls ja, könntest du dir vorstellen für die Nutzung Geld zu bezahlen?
     ▪ Falls ja, wieviel?
  o Falls ja, wie denkst du würden es die Mitglieder annehmen?
     ▪ Wie viel Geld wären die Mitglieder bereit, pro Benutzung zu zahlen?
     ▪ Wieviel wäre der Club bereit für das solch ein Gerät zu zahlen?
       • Würde der Club es immer noch annehmen, wenn ein Gerät 20.000 € kostet?
       • Würde eine monatliche Miete von 300 € in Frage kommen?
  o Falls nein, wieso nicht?
     ▪ Was müsste geschehen, dass solch ein Gerät genutzt wird?
- Worin siehst du Vor- und Nachteile bei solch einem Gerät?

VI. Wrap-up und Ausblick 5 MIN

- Wie wird sich deiner Meinung nach der Tennissport in den nächsten 10 Jahren verändern?
  o Wie muss er sich verändern, um konkurrenzfähig zu bleiben?
- Was würdest du jedem Tennisverein raten, um erfolgreich zu sein?

Wir sind am Ende unseres Interviews angekommen. Wie bereits zu Beginn erwähnt, wird mein nächster Schritt das Transkribieren des Interviews sein, gefolgt von einer Analyse des Inhalts – natürlich alles anonymisiert.

- Wie empfandest du das Interview? Gab es Fragen, die unangenehm zu beantworten waren?
- Gibt es noch etwas, dass du gerne mitteilen möchtest und nicht durch meine Fragen abgedeckt war?
- Hast du noch ein anderes Feedback für mich?

Vielen Dank nochmal für deine Teilnahme und deine Zeit! Solltest du weitere Fragen oder Anliegen haben, zögere nicht mich zu kontaktieren!
Appendix B: Interview Guideline - English

Interview Guideline - English

Research Question(s)

How does the digital readiness of traditional, membership-based tennis clubs in Austria and Germany currently look like?

a) What is the tennis clubs’ attitude towards digitalization?
b) What are the current challenges tennis clubs are facing when adopting digital solutions?

Target Group
Decision-makers in tennis clubs in Austria and Germany

Interview Goal Description

Receive insights into:

- Current situation and degree of awareness for digital readiness
- Personal perception and attitude towards digitalization
- Degree of acceptance and applicability of digital solutions
  - Past, present, future
- Resources and competences needed for successful digital integration
- Individual and collective readiness for change or resistance
- Current club situation, development and challenges
- Attitude towards digital innovations
AGENDA

I. Welcome and Opening 5 MIN

II. Warm-up: Individual Competences 5 MIN
   Tennis

   Digitalization
   Digital Understanding
   Digital Knowledge
   Digital Skills

III. Club Situation 10 MIN
   Organisation
   Club Culture and Member Concerns
   Economic Situation

IV. Digitalization in the Club and Emerging Barriers 10 MIN
   Digital Strategy
   Club and Member Management
   Training Operation
   Organisation
   Implementation
   Analysis
   Gaming Operation
   Court Booking
   Saisonal Games
   Player Agency
   Online Presence

V. Case Study – Court Maintenance Innovation 5 MIN

VI. Wrap-up and Outlook 5 MIN

TOTAL 40 – 60 MIN
I. Welcome and Opening 5 MIN

Greetings!
Thank you for taking your time to conduct this interview with me.
Before we start, I would like to point out that everything we are about to discuss is, without exception, inaccessible to third parties and the information you reveal will be strictly anonymous.
In order to be able to process the information in the best possible way at a later date, I would like to record our conversation and then transcribe it.
- If you are fine with that, please confirm this with a short "Yes"
I would also like to show you a video about an innovative tennis project at a later time. I would like to ask you to confirm that you will not pass on the ideas and information to third parties.
- Please answer briefly with "Yes" if you agree with this.
I am leading you through the interview with a few guiding questions, in which you are completely free to answer.
The rule here is: tell me your own opinion freely and spontaneously. There is no right or wrong here.
At the end of our interview, you have the opportunity to add individual points or address topics that you consider relevant and that were not addressed by my questions. A short feedback completes our interview.

All in all, the interview is designed to last between 45 and 60 minutes.
I wish us much fun!
II. Warm-up: Individual Competences 5 MIN

Tennis
How does the interviewee relate to tennis and his or her club?

- Do you play tennis yourself and if so, how long have you been playing?
- Please name a tennis personality who has always been important to you and why.
- What was your most memorable tennis event in which you were involved yourself?
- How has tennis in your opinion changed in the last 10 years?
- Please introduce yourself and your function in the club and briefly describe some of the tasks that you perform there.
  o How long have you been in this position?
  o Have there been internal changes of position?
  ⇒ e.g. from sports director to president

Please complete the following sentence: "Tennis for me is...

Digitalization
How advanced is the digital competence of the interview partner?

Digital Understanding
- What do you personally associate with the term "digitalization"?
- What is your attitude towards digitalization?
- How do you think digitalization will change the world in the future?

Digital Knowledge
- How advanced would you describe your digital knowledge?
  o How do they relate to current trends like artificial e.g. intelligence, Big Data or machine learning?
  o How do you feel about new technological trends?
  o To what extent do you use the internet conscientiously and know about possible risks?

Digital Skills
- How do you find your way around digital products and processes?
- How would you describe your digital skills? From a scale of 1 - 10?
- How intensively do you use digital products or programs in your everyday life?
  ⇒ e.g. apps, fitness trackers or smart home products

Please complete the following sentence: Digitalization for me is...

III. Club Situation 10 MIN

- Please tell me one thing that makes your club special.
- Please try to describe the club with three striking words.
- How long has the club existed?
- Is the tennis facility club-owned or communal?
  o If communal, do fees for use have to be paid? How much?
- How many members does the club have? How many of them actively play tennis?
- How has the number of members developed in the last years?
- How has the age ratio developed in recent years?
Organization
How is the club organized?
- How many people are involved in the organization of the club?
- What topics are regularly on the agenda at board meetings?
- How would you describe the atmosphere in the board?
  ⇒ e.g. tense, friendly, distanced, cooperating etc.
- How do you decide on larger projects?
  ⇒ e.g. within the board, together with members or only by the president etc.
- How is the care and maintenance of the tennis courts ensured?
  ⇒ e.g. club-owned groundskeeper, maintenance companies or members etc.
  o How is this decided?

What is your opinion about the following statement:
"Obsolete club structures slow down decisions and often end up in disagreement"

Club Culture and Member Concerns
What is the club culture like?
- How would you describe the club culture / club life outside the court?
- How would you describe the atmosphere among the club members?
- Would you say that the needs of the members have changed in the last years
  o If so, in what way?
- Are there any concerns that members are complaining about?
  o If so, what are they about and how are they addressed?
- How do members react to changes in the club?
  ⇒ e.g. a digital court booking system etc.
- Are members involved in decisions?
  o If so, in which areas of the club?
  o If so, how are members involved?
- How satisfied are the members with the quality of the courts?

Economic Situation
What is the economic situation of the club?
- How does the business model look like?
  o Which sources of income does the club have?
    ▪ How much is the membership fee?
  o Does the club receive subsidies?
  o How volatile are donations?
  o Which expenses does the club have?
- How much time is spent on the care and maintenance of the courts?
- How much money is spent on the care and maintenance of the courts?
- When and for what was the last higher amount of investment made?
- What role do sponsors play for the club?
  - e.g. dependency, supporters etc.
- In your opinion, how could the economic situation of clubs generally be improved?

What is your opinion about the following statement:
"Larger investments are generally rejected at first".
IV. Digitalization in the Club and Emerging Barriers 10 MIN

- What is the first thing that comes to your mind when you think of digitalization in your club?
- What digital changes have there been in your club in the last few years?
  o What were the experiences with it?
  o What difficulties did you encounter and how were they solved?
  ⇒ e.g. acceptance by the members etc.
- In your opinion, which areas of the club could be digitized more?
- How would you describe the attitude of the club to integrate and adopt digital solutions?
  o From the club's perspective
  o From a member perspective
  ⇒ e.g. analysis software for training operations etc.

What is your opinion about the following statement:
"Digitalization will only slowly find acceptance in tennis".

Now, I would like to take a closer look at the individual areas of the club in order to find out to what extent digitization is integrated.

Digital Strategy
Does the club follow a formulated, digital strategy?

  o If so, how does this strategy look like?
- What are the goals of this strategy?
  ⇒ e.g. new members, informing etc.
  o If not, is there a focus on developing a digital strategy for the future?
  o If not, why not?

Club and Member Management
To what extent are digital components integrated in the club and member administration?

How is the club organized digitally in terms of:
i) Personnel
ii) Members
iii) Sponsors
- What potential problems arise here?

What is your opinion on the following statement:
"Members are not interested in the digitalization of products and processes in tennis clubs"

Training Operation
To what extent are digital components integrated in the training operation?

Organization
- To what extent are digital solutions involved in the planning and organization of the training?
- Do you use software for the planning, organization, control and analysis of training operations?
  ⇒ e.g. WhatsApp, central calendar, Apps
  o If so, which is/are this/these?
  o If not, have you ever thought about an implementation?
    ▪ If not, why not?
Implementation
- To what extent are digital solutions involved in the execution of the training?
- Do you use software to manage the training operation?
  ⇒ e.g. digital training plans: frequency, training focus, training goals
  o If so, which is/are this/these?
  o If not, have you ever thought about an implementation?
    ▪ If not, why not?

Analysis
- To what extent are digital solutions involved in the analysis of the training?
- Do you use software for the analysis of the training operation?
  ⇒ e.g. motion and player analysis via video, match statistics etc.
  o If so, which is/are this/these?
  o If not, have you ever thought about an implementation?
    ▪ If not, why not?

Gaming Operation
How is the gaming operation influenced by digitalization?

Court Booking
- Does the club use a digital court booking system?
  o If so, what advantages and disadvantages do you think of?
  o If not, have you ever thought about an implementation?
    ▪ If not, why not?

Seasonal Games
- How does the club manage the teams' matches during the season?
  o How are results recorded and managed?

Player Agency
- Does the club use a digital system for player referrals?
  o If so, what is the members' experience with it?
  o If not, have you ever thought about an implementation?
    ▪ If not, why not?

Online Presence
How does the club present itself online?

- Who takes care of the digital content in the club and what are its tasks?
- Are members actively encouraged to post or share content about the club?
- How would you describe the online presence of your club compared to other clubs?
- Does the club have digital channels?
  o If so, which channels are used?
    ⇒ e.g. homepage, Instagram, Facebook
  o How regularly are they used to communicate something?
  o What are the objectives of an post here?
    ⇒ e.g. informing, acquisition, increasing awareness, etc.
  o Please describe a post that you remember in particular.
    ▪ If not, have you ever thought about an implementation?
    ▪ If not, why not?
V. Case Study – Court Maintenance Innovation

What is your opinion on the following statements?

"Everyone wants to play on perfect court conditions, but is not willing to spend much time on court maintenance".

"Court maintenance is perceived as exhausting by the majority of tennis players"

Now I would like to show you a video about a product that I would like to develop for tennis clubs. Please state your opinion free and openly.

- What is your first impression? What comes to your mind first when you think of this idea?
- Could you imagine that your club would be equipped with such devices?
  - If so, could you imagine paying money to use them?
    - If so, how much?
  - If so, how much do you think members would accept it?
    - How much money would members be willing to pay per use?
    - How much would the club be willing to pay for such a device?
      - Would the club still accept it if a device costs 20.000 €?
      - Would a monthly rent of 300 € be possible?
  - If not, why not?
    - What needs in your opinion to happen that such a device is widely accepted?
- What advantages and disadvantages do you see in such a device?

VI. Wrap-up and Outlook

- How do you think tennis will change in the next 10 years?
  - How should it change to remain competitive?
- What would you advise every tennis club to be successful in the future?

We have reached the end of our interview.
As mentioned at the beginning, my next step is transcribing the interview, followed by an analysis of the content - of course all anonymized.

- How do you perceived the interview? Were there any questions that you found uncomfortable to answer?
- Is there anything else you would like to share that was not covered by my questions?
- Do you have any other feedback for me?

Thanks again for your participation and your time!
If you have any further questions or concerns, please do not hesitate to contact me!
### Appendix C: MAXQDA Codebook

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<th>02 Rafael</th>
<th>03 Dominic</th>
<th>04 Roger</th>
<th>05 Danil</th>
<th>06 Stefanos</th>
<th>07 Alexander</th>
<th>08 Matteo</th>
<th>09 Gaël</th>
<th>10 David</th>
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Appendix D: Tennis Club Business Model Canvas
Appendix D: Digital Potential within the Business Model of Tennis Clubs

**Key Partners**
- Local Companies as Sponsors ($5,000, 80)
- Sponsorship by Major Tennis Brands (e.g. Wilson, Babolat)
- Tennis Association and Federation ($6,000, 23)
- Local Bank ($5,000, 79)
- Local Governmental Support ($5,000, 110)
- Court Maintenance Company ($5,000, 77)

**Key Activities**
- Membership Management & Acquisition
  - Court Maintenance ($0, Men's, 34)
  - Social Integration ($0, Women's, 34)
- Tennis Camps ($0, Novak, 41)
- Game Data Analysis ($0, Roger, 97)
- Board Meetings ($0, Roger, 64)
- League Games ($0, Novak, 57)
- Marketing ($0, Men's, 72)
- Facility Care & Maintenance
  - Performance of Training ($1, Fabio, 40)

**Value Proposition**
- Leisure Time Activity ($4, Roger, 30)
- Physical Exercise ($1, Fabio, 104)
- Social Benefit ($0, Stefan, 72)
- Pleasure, Fun and Entertainment ($0, Rafal, 133)
- Sporting Advancement ($0, Roger, 103)
- Athletic Challenges ($1, Fabio, 105)

**Customer Relationships**
- Loyalty ($0, Graf, 40)
- Authenticity ($0, David, 30)
- Appreciation ($0, Novak, 43)
- Collaborative ($0, Fabio, 40)
- Mutual Trust ($0, Alexander, 62)
- Personal & Mutually Supportive ($0, Novak, 62)

**Cost Structure**
- Renovations ($1, Novak, 102)
- Insurance ($0, Alexander, 34)
- Coaches ($0, David, 103)
- Leisure ($0, Alexander, 87)
- Investments ($0, Alexander, 71)

**Channels**
- Homepage ($6, Roger, 133)
- Social Media ($6, David, 101)

**Customer Segments**
- Kids ($0, Roger, 51)
- Youth ($0, David, 113)
- Adults ($1, Fabio, 53)
- Seniority ($0, Novak, 98)
- Passive Members ($1, Fabio, 33)

**Revenue Streams**
- Good Fee
- Membership Fee ($3, David, 172)
- Game Data Analyzer
- Donations ($0, Novak, 65)
- Sponsoring ($0, Alexander, 102)
- In-door Court Rental ($0, Novak, 103)
- Grant ($0, Alexander, 93)
- Lease Income ($0, Alexander, 35)
- Administration Fee ($1, Fabio, 35)
Affidavit

I hereby declare that this master’s thesis has been written only by the undersigned and without any assistance from third parties. I confirm that no sources have been used in the preparation of this thesis other than those indicated in the thesis itself.

This Master’s thesis has heretofore not been submitted or published elsewhere, neither in its present form, nor in a similar version.

Innsbruck, 26.05.2020