ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΙΓΑΙΟΥ

ΠΟΛΥΤΕΧΝΙΚΗ ΣΧΟΛΗ

ΤΜΗΜΑ ΜΗΧΑΝΙΚΩΝ ΟΙΚΟΝΟΜΙΑΣ ΚΑΙ ΔΙΟΙΚΗΣΗΣ

«ΕΚΠΟΝΗΣΗ – ΥΠΟΣΤΗΡΙΞΗ ΜΕΤΑΠΤΥΧΙΑΚΗΣ ΔΙΠΛΩΜΑΤΙΚΗΣ ΕΡΓΑΣΙΑΣ»

ΤΙΤΛΟΣ ΕΡΕΥΝΗΤΙΚΗΣ ΔΡΑΣΤΗΡΙΟΤΗΤΑΣ:

Διοίκηση Λειτουργιών και Διαχείριση Ποιότητας στις Αθλητικές Επιχειρήσεις και Αθλητικά Σωματεία

ΦΟΙΤΗΤΡΙΑ

ΤΣΙΠΟΥΡΑ ΞΑΝΘΗ

Α.Μ. : 2342021012

ΕΠΙΒΛΕΠΩΝ ΚΑΘΗΓΗΤΗΣ

ΓΛΥΚΑΣ ΜΙΧΑΗΛ

ΧΙΟΣ

2023

CONTENTS

LIST OF FIGURES

LIST OF TABLES

ABSTRACT

Nowadays, the sports industry has grown in a vast rising million-dollar global market. As a result, sports organizations constantly seek ways to remain feasible and competitive. Although a significant volume of studies highlights the importance of applying methodologies and techniques to increase their efficiency, profits and management control the need for a holistic approach emerges. In this context the present study presents the results of a literature survey on the application of management science fields to sport management. The survey covers existing published research outputs of sport management maturity assessment frameworks and the application of process mining in business process management. Specifically, the aim of the study is to highlight the most prominent Critical Success Factors (CSFs) used by SM maturity assessment frameworks utilizing the existing published work on the application of management theories to SM for each CSF. The main goal is to point out the need for a holistic and comprehensive view that encompasses a broader spectrum of management control.

Keywords: Sport Management, Maturity Assessment, Maturity Frameworks, Process Mining, Critical Success Factors.

1. INTRODUCTION

The popularity of sports globally has created a multi-billion-dollar industry. Sports managers deal with increased competition and the ongoing need to attract spectators/fans to sporting events. The demands and expectations of the spectators-fans are constantly more challenging issues for sports organizations.

Therefore, the provision of service quality and customer satisfaction in a consistent manner in order to response to their customers needs, is a constant goal for sports organizations.

In the past decades there was a strong belief that a winning team increase spectrators interest for the certain sport and rise the fun participation in the stadiums. This is probably/possibly true for well-known and popular groups or events but this is not true in the rest of the cases. Instead, many other factors influence spectator preferences, ranging (or varying) from seat selection, ticket prices, use of ticketing technology, transportation-parking convenience, to name just a few.

In recent years, this need has forced sports organizations to look for methodologies and techniques that can help them manage their operations more efficiently. Operations management seems to provide the best solution to these issues. More specifically, operations management allows sports organizations to focus on process modeling and analysis, performance measurement and quality management.

Processes modeled and analyzed include warehousing, crowd management, logistics, event management, etc. Quality management systems that have been implemented range from ISO standards to Six Sigma systems to Servqual systems, which assess service quality. However, these applications are still at an early stage, as sports organizations have only recently begun to understand their importance.

The focus of the research carried out is to examine the implementation of operations management and quality management in sports organizations. The process mining implementations identified is also presented focusing on the identification of the most prominent Critical Success Factors that should be achieved for successful process mining implementation.

In chapter two a theoretical framework is presented, to provide a context for this study, based on the clarification of previous studies in the field to understand management control practices, dynamic tensions, and the balance between control and freedom in challenging times along with a description of the role of management control systems in organizations.

In chapter three a literature survey on the application of management science fields to sport management is presented along with the research questions. Specifically, a theoretical approach of Sport Management is provided with emphasis on management-organizational theory, assessment framework in sport event legacies and critical success factors and enablers for successful sports management implementation.

Chapter four focuses on Process Mining, as a critical application that aims at automatic extraction of process knowledge from event logs and makes possible the understanding of the functioning of even the most complex industrial processes.

A methodical approach to performance management is therefore a critical tool for identifying strengths and weaknesses and devising strategies to improve overall organizational performance. It is also necessary to determine how measurable resources should be directed in order to achieve the greatest possible effect.

It can also show how an organization, club or association compares to other organizations, clubs or associations. This performance snapshot can be used to assess deficiencies and develop strategies to strengthen critical performance points in the upcoming season or annual sports cycle.

In summary, developing a performance management model is critical to the long-term success of sport organizations. However, the question of how to go about building an effective performance management model remains, as well as where could be also addressed in future research.

In the last chapter the conclusions of the literature survey is presented along with topics for future research and limitations experienced during the present study.

CHAPTER 2. THEORY

2.1 DOMAIN THEORY

A description of the role of management control systems in organizations is necessary to provide a context for this study. The following section serves to structure the area in which I attempt to summarize the previous literature on hybrid organizations in order to answer my research question. Specifically, I clarify previous studies in the field to understand management control practices, dynamic tensions, and the balance between control and freedom in challenging times.

2.1.1. MANAGEMENT CONTROL PRACTICES

Management researchers have conducted studies for many years on what we usually refer to as management control. Early on, Anthony (1965) defined management control as "the process by which managers ensure that resources are effectively and efficiently obtained and used to achieve the organization's objectives" This description led later management researchers to think of management control systems not only as accounting-based planning and performance measurement, but also served to distinguish management control from strategic and operational control (Langfield-Smith, 1997).

Management control practices are an approach to achieving cooperation among organizational departments and individuals who may share some compatible goals and direct those efforts toward a quantified set of overall organizational objectives (Ouchi, 1977).

The term "control" has been variously outlined in previous research, but it is generally understood as "the authority to govern and command, the process of leading and directing, and the power to supervise and govern" (Collier, 2005, Merchant, 1998).

The concept of control has been used for various reasons and in various fields such as psychology, behaviorism, science, and accordingly, business management. Control in management is generally associated with organizational commitments, resource allocations, behaviors, and performance and is considered a fundamental requirement for managers and organizations (Merchant & Otley, 2007). However, the interpretation

of the term "management control" is broad and fuzzy in the accounting and management literature (Merchant & Otley, 2007).

The lack of a general model of management control systems that encompasses broad elements of control has led to difficulties in synthesizing and combining conclusions from previous research because their results can be contradictory in some cases (Chapman, 1997).

As a result, studies have argued that future research should bring together a holistic and comprehensive view that encompasses a broader spectrum of management control (Malmi & Brown, 2008, Langfield-Smith, 1997, Chenhall, 2003). In the following section, some well-known models of management control are reviewed to understand the various proposals for a broader assessment of management control systems and to consider the extent to which they are relevant to the present study.

The concept of management control has evolved from a tool to support decision-making processes through monetary, formal, and measurable information to one with a less limited characterization of information that includes internal and external as well as non-financial information (Chenhall, 2003). Chenhall (2003) asserts that previous studies have focused on formal accounting-based controls such as budgets, activity-based costing, or balanced scorecards (Henri, 2006, Gosselin, 1997). Separating these formal controls from other management control strategies risks producing incoherent results, as conclusions may exclude correlation between different control elements, potentially leading to an inappropriate framework (Chenhall, 2003).

Management control systems are a complex instrument that affects and is affected by the social, economic, and political environment, so it cannot be considered in isolation from the organizational and social environment (Hared et al., 2013).

Consequently, researchers have used various methods to understand the intimations of management control that are embedded in the organizational environment, shifting the focus from examining single issues limited to financially measurable control (see Davila & Foster, 2007; Horngren et.al, 2005; Stringer et.al, 2011) to instead attempting to broaden the scope of management control and cultivate its role in institutions (see Simons, 1995; Otley, 1999; Malmi & Brown, 2008).

Given the strong culture that organizations typically embody, this line of reasoning proves appropriate in the context of this study. Neglecting cultural and informal control tools could potentially lead to contradictory results, as culture tends to have an impact on other components of the management control system. Consequently, a broader perspective on management control that includes both formal and informal controls is necessary to provide an all-inclusive and holistic view in sport organizations.

2.1.2. MANAGEMENT CONTROL IN ELITE SPORTS ORGANIZATIONS

According to Hoye et al. (2006), the organizational structure of sports clubs is usually centralized, with the board of directors making decisions and setting direction for the organization. Studies have shown that despite turbulent times, directors of sports clubs are not as reluctant to relinquish control as the organization grows as is the case with traditional businesses, suggesting that leaders in sports clubs occupy an even more important position (Hoye et.al, 2006; Amis & Slack, 1996).

A key aspect that facilitates leaders' control is the budget process (Carlsson-Wall et.al, 2016). The budget sets the organizational agenda, as revenue streams in sport organizations tend to be uncertain, while costs are usually fixed and known at the beginning of the year (ibid.). The sports industry differs from other industries in that almost all surpluses are reinvested in the organization, making it even more important to have a clear business plan with ongoing assessment of organizational success (Watt, 2003).

The implementation of sophisticated numbers as control mechanisms is important because a lack of accuracy can lead to the company being steered in the wrong direction (ibid.). Carlsson-Wall et.al (2016) studied a professional sports organization and showed how, in relation to its different institutional logics, the club alienated the organization into a business unit and a sports unit, with each division emphasized by different budget allocations, spatial separation, and clothing styles.

Ekholm & Stengård (2014) further discuss this issue by examining another Swedish professional soccer club and found that the club had performance metrics for both the sports and business units and that continuous dialog between managers supported decision making when conflicts arose between the different institutional logics.

In soccer, competition is structured, and success in competition is easily measured. Success is measured not only in economic terms but also in sporting terms.

Examples include the number of games won, placement in the final table, and trophies won. Few industries have such clear indicators of who is the winner or loser as the soccer industry does (Szymanski, 1998). Carlsson-Wall et.al (2017) discussed management control in organizations that handle sporting events, emphasizing the importance of comprehensive action projection in particularly vibrant institutions that build and handle sporting competitions in a short period of time. Social and self-control are two instruments of control that guide organizational behavior (Byers et.al, 2007).

Nevertheless, there are few studies that aim to provide a holistic and comprehensive assessment of management control systems, especially in sports clubs.

2.2. METHOD THEORY

In the interest of answering my research question and shedding light on leadership functions in hybrid organizations, particularly sports organizations, the following section presents and summarizes previous literature to nuance the study and further explain the intriguing factors that influence hybrid organizations. Specifically, I clarify previous studies in this area of research to understand the function of sport organizations along with management control and examine the various institutional logics that characterize sport organizations.

2.2.1. SPORTS ORGANIZATIONS AND INSTITUTIONAL LOGICS

A good starting point for thinking about management control in sports organizations is to illustrate the captivating dynamics in sports clubs. Compared to traditional businesses, the focus on profit is a clear difference for sport organizations, where they are perceived as "utility maximizing" and thus use revenue as a system to achieve sporting success (Hassan & Hamil, 2010).

Historically, sport organizations have been voluntary and virtually non-profit organizations (Fahlén, 2006). However, increasing commercialization and professionalization has led to sport organizations becoming "business-like" and having multiple sources of revenue, such as through the sale of match events and sponsorship,

with revenue seen as increasingly essential to sporting success (Ferkins et.al., 2005; Stewart & Smith, 2010).

In addition, sports are characterized by the uncertainty and unpredictability of outcomes, which helps create an attention-grabbing product with dedicated fans who cheer on the team despite underperforming (Stewart & Smith, 2010). Consequently, sport organizations engage multiple stakeholders with multiple institutional logics and are therefore considered hybrid organizations (Battilana & Dorado, 2010). Only recently have researchers begun to examine and analyze in depth the different institutional requirements and expectations of specific organizations. These analyzes are often based on the concept of institutional logic, which was first introduced by Alford & Friedland (1985) in order to understand the

Friedland (1985) was introduced to describe the ambiguity and inconsistency of actions and perceptions between different institutional rules/systems in a society. A number of studies have begun to examine how the aforementioned diversity of logics affects organizations (see Battilana & Dorado, 2010; Carlsson-Wall et.al, 2016; Almandoz, 2014). As Battilana & Dorado (2010) put it:

"Dealing with multiple logics is challenging for organizations because it is likely to trigger internal tensions that may generate conflicts among organizational members, who are ultimately the ones who enact institutional logics" - Battilana & Dorado (2010).

However, several research papers suggest that the logics can coexist in some undisturbed way, so that no specific attempts at separation or compromise seem to be necessary (Goodrick & Reay, 2011). To clarify these divergent considerations, some researchers have identified field- and organizational-level reasons that lead to different outcomes, where certain logics are compatible in some settings but not others, or why tensions occur in some settings but not others (Carlsson-Wall et.al, 2016; Greenwood et.al, 2011).

Carlsson-Wall et.al. (2016) shed light on this by asserting that the degree of compatibility may vary in different circumstances, as some situations are characterized by operations and outcomes that favor different logics simultaneously, while other situations involve operations that are consistent with one logic but inconsistent with others, thus leading managers to interpret how best to prioritize them.

Fahlen & Stenling (2016) discuss three specific logics that apply to Swedish sport organizations: the results-oriented competitive logic, the "sport-for-all" logic that promotes democratic values, and the commercialization logic that focuses on financial performance.

However, there are two main types of ownership in sports organizations: Private ownership, in which private individuals or corporations control and manage sports clubs, or member ownership, in which members hold the majority of votes (Gammelsater & Senaux, 2011; RF, 2013).

This issue continues to generate heated debate among the various parties, those who want to maintain the member-ownership model and those who want to see organizations owned by private individuals (Uksila & Norman, 2012).

Dietl & Franck (2007) note that both types of ownership involve dysfunctional incentives that hinder substantial financial performance, with member ownership posing risks because it results in no one being directly accountable for outcomes, while private ownership poses risks of overspending and owners willing to take a loss in order to achieve athletic success.

Pache & Santos (2013) discuss sports logic in terms of four characteristics: Purpose, Organizational Form, Governance Mechanism, and Professional Legitimacy. Sport federation logic refers to sport performance before financial goals, with financial performance being of lesser importance, although it is fundamental to ensuring the continuity of the organization (Cooper & Joyce, 2013; Pache & Santos, 2013; Anthony & Young, 1999). Since Swedish sports clubs are member-owned organizations, any potential financial gains are retained and reinvested into the club, ensuring that the assets serve a greater purpose for the institution (Sargeant, 1999). Because clubs are member-owned, each member can elect the board of directors, which means that sports organizations rely heavily on democratic values and morals (Pache & Santos, 2013). Consequently, the main drivers of professional legitimacy are voluntary commitment and contribution to sports operations.

A review of the existing literature on institutional logics in sports clubs suggests that the predominant logics pursue goals that are reserved for a broader set of stakeholders than mere shareholders, analogous to non-profit organizations (Pache & Santos, 2013).

Sports clubs are primarily expected to promote activities in society because, similar to non-profit organizations, it is important to meet social needs. In addition, a professional sports club is expected to achieve sporting success, while organizations that follow this logic regularly rely on public and private donations for their dedication to the principles and community mission of the club. Consequently, the management approach associated with sports logic is closely linked to organizational culture. In business logic, the organization's employees are directed to maximize value relative to revenue by increasing revenue, decreasing expenses, and improving customer satisfaction, and this form of logic is often built on values promoted by shareholder-focused truth seekers.

Sports logics		**Business logics**
Objective	Promote sport within society	Maximize shareholder's value through increased profit
Means to reach objective	Competition and achieving sporting success	Maximize income, reduce expenses and improve customer gratification
Management approach	Interconnected with organizational culture	Shareholder focus where performance is alienated with shareholder value

Table 1: *Sports vs Business logics (Pache & Santos, 2013).*

2.2.2 MANAGEMENT CONTROL IN TIMES OF CRISIS

In times of crisis, managers generally face a high degree of ambiguity because it is difficult to predict what will happen in the future and what to do to "secure, achieve, or avoid certain outcomes" (Goretzki & Kraus, 2020). Studies have shown that in times of crisis, organizations tend to focus on resource allocation and budgeting and pay less attention to the performance measurement system because it is difficult to determine accurate goals and predict the future in times of crisis (Becker et.al, 2016).

Goretzki & Kraus (2020) indicate that a balance between diagnostic and interactive control systems is needed in times of great uncertainty. Creating a balanced approach to control that includes components of both tighter and more adaptive management control system procedures is critical in times of crisis. It is not enough to focus on diagnostic control systems; it is necessary to implement interactive controls to "learn, adapt, and adjust" (Goretzki & Kraus, 2020).

In addition, implementing interactive control systems has been shown to help minimize risk during uncertain times. Janke et.al (2014) shows how an organization can take advantage of interactive control systems during a crisis to support necessary adjustments and improve performance. Sakka et.al. (2013) argue, however, that this is only the case when unpredictability and ambiguity are high, otherwise interactive control systems degrade performance. This form of management control facilitates innovation and creativity, but only in organizations with lowlevels of innovation, while the result seems to be the opposite in organizations with highlevels of innovation (Bisbe & Otley, 2004). Furthermore, Hofman (2012) that the interactive use of control in planning can have negative effects on performance, arguing that diagnostic control results in conclusive performance development.

However, previous research has recognized that the purpose of an organization's control mechanisms is clearly shaped by the cultural context of the particular society and therefore requires an understanding of the social environment in which management control appears (Hofstede, 1980; Minkov & Hofstede, 2011). Given the organizational environment of professional sport organizations and the presence of numerous stakeholders adhering to different institutional logics, this feature of Merchant & Van der Stede (2017) presented framework of importance when it comes to understanding the numerous control mechanisms in sports clubs.

As a result, this framework appears to be the most comprehensive framework for this specific research study, as it provides additional understanding of management control systems in hybrid organizations, and in soccer clubs in particular.

2.2.3. MERCHANT & VAN DER STEDE'S OBJECT OF CONTROL

Over the past two decades, the focus of management control research has shifted from studying its design and implementation to better understanding the use and impact of these systems (Bititci et al., 2012). However, Merchant & Van der Stede's control objects model remains one of the most widely used taxonomies in studies of management control, with several studies applying the framework to understand issues of strategic change management and control (Martyn et al., 2016; Baird et al., 2019).

The main difficulties faced by managers are how to implement sufficient control in organizations that require and demand resilience, creativity, and innovation. To activate employees' potential, supervisors must despair of control and allow employees to develop their capabilities, in addition to supporting them by communicating organizational principles and core values (Merchant & Van der Stede, 2017).

In addition, Merchant (1982) designed a basic model for management control systems that includes outcome, action, and people control. The model has been further developed and revised several times with Van der Stede and currently includes cultural control, and this typology provides a better understanding for both profit and non-profit organizations (Hared et.al, 2013). The authors argue that management control systems are essential due to three potential employee concerns related to organizational goals: lack of direction, motivational issues, and personal constraints (Merchant & Van der Stede, 2017).

Employees may not know what the organization wants them to do, may not want to perform at the level the organization expects them to perform, or may be unable to perform due to personal limitations. To overcome these problems, the objects of control in the organization must be combined to provide good management control.

(Merchant & Van der Stede, 2017). Although some researchers have criticized the framework for its inflexibility in the explicit objects of control, where they claim that the model lacks specificity in clarifying the link between different control characteristics and the consistency of its components (Malmi & Brown, 2008; Ferreira & Otley, 2005; Sandelin, 2008).

Merchant & Van der Stede (2017) propose four objects of control as a tool for balancing the behavioral tensions in organizations, and since the purpose of this study is to understand the institutional logics within hybrid organizations, the framework provides an appropriate foundation since the focus is on the use of management control systems rather than the design or technical aspect thereof. The impact of control is not in the use of a single object, but in the interaction between them and how they complement each other are significant.

Consequently, the interaction between objects provides arguments for why hybrid organizations, operating in a complex enterprise with various conflicting organizational goals, consider the dynamic tensions and interaction between the various objects as a practical tool for their functioning and provide perceptual guidance for this study.

2.2.3.1. RESULTS CONTROL

Results control is an indirect form of management control and acts as a complement to action and people control by setting specific goals to ensure that employees perform as intended and deliver the desired results (Anthony & Young, 2002; Merchant & Van der Stede, 2017). This form of control is used to manage employee behavior at various organizational levels and is often used in managing behavior in a professional setting.

The performance responsibility assigned to an employee should advantageously consist of multiple factors that are aggregated to reduce the risk of neglecting the organization's interest (Merchant & Van der Stede, 2017). Outcome responsibility in the sports department includes responsibility for player issues, recruitment, and athletic performance, while administrators are responsible for managing operations and organizing them according to the needs of the organization (Ekblom & Stengård, 2014).

The main advantages of outcome control are its feasibility and that it can influence employees' behavior without curtailing their freedom, helping employees understand their own capabilities and limitations (Merchant & Van der Stede, 2017). However, this type of control makes it difficult to choose the right type of measure to determine whether the work being done is good or bad. When results are affected by factors other than the employee's work (which is usually the case), the risk is transferred to the employee, which means that management must offer some kind of premium to compensate for this risk. The three conditions for achieving optimal outcomes are that

the organization must distinguish which outcomes are desirable,that the people controlled must have a significant impact on the outcomes, and that management must be able to measure those outcomes (Merchant & Van der Stede, 2017). Thus, the focus is on measuring performance and establishing reward systems rather than planning and coordination (Macintosh, 1994).

The first step in exercising outcome control is to set goals for employees to achieve, which may be budget goals or general strategic goals, for example. By setting goals, employees understand what is expected of them, and this makes it easier for them to work

(Merchant & Van der Stede, 2017). In addition, budgets that are structured by projects (group or individual) can create structured control over employees' actions, actions of employees, but these risks come with high administrative costs (Child, 2005). A clear plan of how employee performance will be measured based on these goals is important, and it should be based on financial and non-financial goals that have a clear link to the established objectives (Merchant & Van der Stede, 2017). Research within sport organizations has found that budgets are of critical importance as they are perceived as the first issue for financial control (Carlsson-Wall et.al, 2016). Consequently, professional sports clubs that focus on both financial and sport performance could be expected to use the budget diagnostically as a control tool to identify conventions of financial goals and performance evaluation.

The final step is to design appropriate reward systems for the goals set, with the most common purpose of reward systems being to recruit, retain, and motivate employees to work toward the organization's financial goals, thus serving a motivational purpose to create conditions for internal and external motivation. When designing reward systems, the needs of employees must be considered, and organizations should use the reward systems that provide the greatest motivation to employees while still being as cost-effective as possible (Merchant & Van der Stede, 2017). However, soccer clubs are subject to laws and employer agreements, which can complicate the use of a monetary incentive system and lead to a greater focus on internal rewards (Anthony & Young, 2002; Merchant & Van der Stede, 2017).

2.2.3.2. ACTION CONTROL

Action control, in contrast to outcome control, is the most direct form of control system with the goal of influencing employee behavior to ensure that employees act in accordance with the organization's strategy and goals (Anthony & Young, 2002; Merchant & Van der Stede, 2017).

This form of control is used to set limits on risky behavior and is a braking system because it creates guidelines for how employees can act and contributes to better efficiency (Kimura & Mourdoukoutas, 2000).

According to Merchant and Van der Stede (2017), action control is divided into four different forms: Behavioral Restrictions, Action Accountability, and Redundancy. Behavioral constraints, as the name implies, are a negative form of action accountability that aims to limit employees' ability to do undesirable things; these include physical or administrative barriers that result in limited access to information Pre-action reviews are preventive controls used to verify that employees' proposed documents and plans, such as the budget, are approved or rejected before implementation. Action accountability aims to hold employees accountable for their actions, which requires defining and communicating acceptable and unacceptable actions that employees are aware of. Finally, redundancy involves allocating more resources (personnel or equipment) to ensure that tasks are completed to the best of their ability regardless of any obstacles (Dury, 2004; Merchant & Van der Stede, 2017).

The use of action control is beneficial when it is difficult to measure outcomes in a fair manner, and is therefore an effective method for coordination within organizations as it increases the predictability of events. It is of great importance that organizations can decide which actions are desirable and undesirable in order to reduce the risk of negative actions occurring.

Figure 1: *The division of action control into four different forms (Merchant and Van der Stede , 2017)-adapted from author.*

However, the implementation of action control can lead to high management costs due to limited feasibility and consequently inhibiting creativity, innovation, and adaptation, leading employees to become passive (Merchant & Van der Stede, 2017). With the complex business structure that exists in sports organizations, it is a constant balancing act for clubs due to the different rules and laws that apply to the different institutional logics. Sports clubs are professional organizations, which results in action control that leads people to (or not) perform certain desired (or undesired) actions (Merchant, 1985).

Specifically, it requires determining appropriate actions, tracking performance, and rewarding or punishing performance according to results, and this form of control is most applicable when mediated by established policies and procedures (ibid.). Since resources in sports clubs are highly dependent on athletic performance, the importance of boundaries becomes even more fundamental in line with Tuomela's (2005) findings, which show that management control can be used both diagnostically and interactively.

2.2.3.3. PERSONAL CONTROL

Personal control aims to motivate employees to do a good job and meet the organisation's goals through self-control. In operations where clear work procedures are lacking and cannot be designed, employees' actions cannot be controlled through outcome or action control. The focus is on ensuring that employees are able to control and motivate themselves. By clarifying expectations and ensuring that employees have the knowledge necessary to do a good job, personal control can contribute to a more efficient organisation.

An important aspect of personal control is that it must involve a high level of trust in order to function as a means of control. The implementation process of personal control is divided into three categories, all of which steps must be met for control to work: selecting the right employees, training employees, and providing the right work environment and resources necessary to do a good job (Merchant & Van der Stede, 2017).

The first step, selecting the right employees, can be costly and time-consuming because it requires a well-thought-out decision-making process. However, by training employees, which is the second step, companies can expect lower costs than hiring employees without the right skills or attributes (Ouchi, 1979). The football business is as much about finding suitable administrative staff as it is about finding talented players and coaches that meet the needs of the business. This is evidenced by the fact that when hiring new players and coaches, football clubs often require that the individual have clear skills to improve the team athletically. Finding a person who both meets these criteria and has the right qualities can be challenging, and many companies therefore have to settle for finding individuals with the right qualifications but rejecting other desires (Ouchi, 1979). Training can satisfy these specific desires and thus match the employee to the needs of the company, increasing the likelihood that the employee will do a good job. Training motivates employees because they have a stronger belief in themselves and can experience a sense of professionalism. When people believe they are good at something and understand their job, it often leads to increased interest in performance (Merchant & Van der Stede, 2017).

In addition, it is about providing the right work environment for employees and giving them the resources they need, such as access to information, support from staff, support in decision-making, and the opportunity to work undisturbed. As a result, it is important for sports clubs to hire and train their staff with the right qualities, put the right people in the right places, and provide them with the resources they need to do a good job.

2.2.3.4. CULTURAL CONTROL

Cultural control is exerted through a strong form of peer pressure on individuals who deviate from the prevailing norms in the organization and has a link to personal control as both are classified as informal control (Merchant & Van der Stede, 2017). Culture is based on learning through problem solving and adaptations that impact the organization and its members as it is only sustained to the extent that it is legitimate (Schein, 1990). A culture takes shape when a group of people has a stable and shared history, which is as important in sports clubs as in any other organization. However, the creation of an organizational culture can occur in a variety of ways, the most common being the creation of formal policies such as codes of conduct or collective rewards, as well as informal tools that can be shared traditions, norms, and values (Merchant & Van der Stede, 2017; Ouchi, 1979). To understand the function of cultural control, Hofstede (1980) recognized beliefs, norms, and values as the most important aspects that characterize management control systems in an organization. Operations need to develop their own subculture aimed at establishing goal congruence within the organization (Feldman, 1988). This can be done by implementing informal control systems that ensure that members of the organization do not work at odds with the interests of the organization and instead strive for goal congruence (Jensen & Helber, 2004). There may also be subcultures consisting of smaller groups, referred to by Ouchi (1979) as clans. The idea behind this is that individuals are destined for a socialization process in which they acquire the necessary knowledge, but are also indoctrinated with the prevailing values within the group. This type of control would be expected in sports clubs with their multiple institutional logics that coexist and the small number of employees compared to multinational companies.

Although the understanding of culture is complex (Hofstede, 1984), the literature distinguishes three types of cultural control depending on how management views recruitment. The first is that management intentionally hires individuals who share the

company's values, and the second is that management attempts to influence employees so that their values are consistent with those of the company. The third way is that the company informs employees what actions and values are desirable and consequently employees have the option to accept them or not (Malmi & Brown, 2008).

An advantage of cultural governance is that non-financial aspects are addressed, which provides a more comprehensive understanding of how the company can achieve its goals (Malmi & Brown, 2008).

If the company succeeds in creating a strong community around cultural factors, employees feel more individually and collectively responsible, which leads to employees and managers being engaged and motivated to achieve the company's goals, thus reducing the need to apply other control systems (Ouchi, 1979). On the other hand, professional affiliation with soccer reduces the need for control systems because management can rely on professional standards that permeate employees' daily work (Ibid.). As globalization and commercialization continue in the soccer industry, employees in sports clubs often face a high degree of ambiguity in their jobs because of their dependence on athletic performance, and the demand for a formal system is exacerbated when employees are well-educated, as insignificant financial gains are not enough to motivate (Simons, 1995). The strong demands for adaptation and innovation mean that organizations that rely only on adopting and implementing predetermined procedures cannot survive in a constantly changing environment. This indicates that formal control systems must be adaptable and flexible to enable innovation and modernization (Davila, 2009).

2.2.3.5. CONSEQUENCES OF CONTROL

What all control systems have in common is that regardless of how they are implemented and executed, the resulting controls or measurements always affect employee behavior (Ouchi, 1979). The clearer and more apparent it is what the company is controlling or measuring, the more detrimental it is because it reduces the company's own ingenuity and employee motivation. The given advantage of management control is the increased likelihood that employees will act in the company's best interest. However, this also has negative consequences, which are divided into two categories (Ouchi, 1979). First, there are direct consequences, which

include all the monetary costs required to design and implement management control systems such as planning and budgeting. Second, there are four different indirect consequences that result from the fact that unavoidable adjustments must be made to fit the control system into the existing organization, including behavioral displacement, gamesmanship, operational delays, and negative attitudes (Merchant & Van der Stede, 2017).

Behavioral displacement occurs when management's control procedures encourage behaviors that are inconsistent with the organization's goals, and specifically when the organization prescribes a set of outcome measures that are inconsistent with the 'true' goals. Gaming refers to the activities that employees undertake to improve their performance indicators without producing positive results for the organization, and typically occurs in situations where forms of accountability control are used. Delays in operations are a fairly inevitable consequence as they relate to action control and therefore occur when management constrains employee behavior and controls their action plan prior to implementation. Finally, negative attitudes refer to contradictions of employees when they perceive their work environment as inferior and consequently cause negative behaviors such as conflicts, frustrations, absenteeism, and lack of commitment (Merchant & Van der Stede, 2017).

	Behavioral displacement	**Gamesmanship**	**Operating delays**	**Negative attitudes**
Results control				
Results accountability	X	X		X
Action control				
Behavioral constraints	X	X	X	X
Pre-action reviews			X	X
Action accountability				X
Redundancy				X
Personal control				
Selecting the right people	X			X
Training	X			

Workplace & resources	X			
Cultural control Formal control systems Informal control systems	X X	X		X X

Table 2: *Illustration of negative consequences of control systems (Merchant & Van der Stede, 2017).*

2.3 THEORETICAL FRAMEWORK: THEORETICAL MODEL

The literature review in the previous sections has presented previous studies in two predominant areas: Management Control and Institutional Logic in Hybrid Organizations. The findings of previous studies on hybrid organizations indicate that opposing institutional logics can coexist in situations where individuals maintain their separate institutional identities but appropriately participate in collaborations and discussions that promote the coexistence ofthe opposing logics (Reay & Hinings, 2009). I strongly believe that these contributions of hybrid organizations will be reflected in xxx F.C. and its management control systems.

However, previous literature on management control systems in sport organizations has addressed only a few aspects and has not developed a holistic methodology for the design and use of control systems. In order to analyze the use and adaptation of management control systems specifically in soccer clubs to manage behavior in difficult times, the key concepts of the Merchant & Van der Stede Object-of-Control framework are included to shed light on the chosen topic.

The reason for choosing the present framework is that it provides a fundamental basis for analyzing different types of management control and the resulting behavior. This model adds an extra dimension to the study because of the complexity of structures in

hybrid organizations. In order to adequately map and examine the management control systems of the chosen organization and how the crisis experienced has affected the club, a holistic framework is needed that can capture this. Given that the traditional soccer club has significant legacy and passionate commitments, as well as limited resources, it is reasonable to assume that such clubs lack sophisticated and thorough formal control systems. Moreover, the widespread practice of compensation and reimbursement must be considered unlikely, as the typical sports club relies heavily on unrewarded commitment, and thus intrinsic rewards such as a sense of contributing to a larger cause seem more meaningful. Moreover, the self-governing and democratic system that is the mainstay of the member-supported sports club makes strong hierarchical instruments of control seem unlikely.

The following theoretical model illustrates how control systems work, with the first line indicating which control systems are included. The second line describes which instruments organizations can use for each control system. The third line describes the conditions that must be met for each control system to function and have the intended impact on operations. The model is based on the theory included in the frame of reference of the study and thus forms the basis for the designed interview guides.

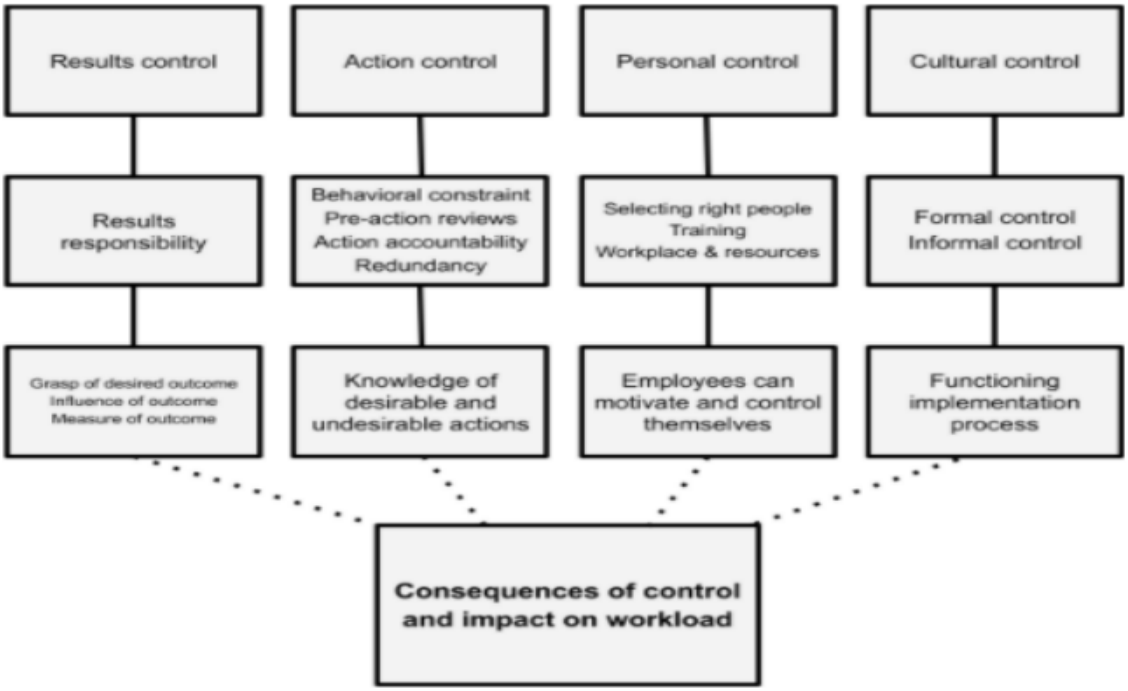

Figure 2: *Illustration of control system according to Merchant & Van der Stede (2017).*

CHAPTER 3. SEL MATURITY MODELS: A Holistic management assessment.

3.1. INTRODUCTION: DEFINING SPORT MANAGEMENT.

The definition of sport management (SM) has been causing serious debates amongst scholars during the last decade. Dowling (2018) argues that SM has not been defined properly and many definitions do not take into account the required abilities and competencies SM professionals should posses. Stokowski et. al (2018) have backtracked all the way to ancient Greece to discover SM origins. More recently Stokowski et. al., (2022) undertook one of the most notable research efforts to define the SM field. The authors identified more that 505 SM undergraduate and postgraduate programs internationally. In their survey involved 154 academics working in these programs who were asked to provide a definition of SM.

The responses covered a large spectrum of answers with very revealing results. None of the academics' definitions mentioned the term "athlete". Very few (2.6%) mentioned "athlete development". From the responses became evident that neither athletic management or coaching is by any means a part of SM. The vast majority of responses included the terms "management" and "business". Similarly terms and issues related to processes, organizational resources, budgeting, objectives, strategy, planning, directing etc were reported extensively. The outcomes justified Alexakis'es (2017) opinion who argued that future SM professionals should combine competencies of management related subjects and some more subjects that are specifically related to sports.

One of the most important outcomes of Stokowski's et. al., (2022) study is that SM is maturing and can be developed to become an academic discipline rather than a field. Wohlfart et. al. (2022) elaborated on the importance of the application of performance analysis techniques in analyzing the development of competencies of both SM professionals and students attending SM courses in higher education.

In order to further explore the application of management theories in SM in the next sections a literature survey is presented. In section 3.2 the literature survey is focusing on the application of management science fields to sport management in order to identify research gaps and formulating our research questions. In section 3.3 is aiming on literature survey on SM maturity assessment frameworks which is our main research

focus. In section four the most prominent Critical Success Factors (CSFs) are highlighted used by SM maturity assessment frameworks focusing on existing published work on the application of management theories to SM for each CSF. Also a classification of enablers that are necessary to exist in the SM organization for the achievement of the selected CSFs is presented.

In section 3.5 the research outcome is presented, a holistic SM maturity assessment framework called Glykas Sport Management Compass (GSMC). In section 3.6 is provided an application of the proposed framework to the most known SM competencies accreditation framework called COSMA. The resulting proposed tracking matrix is requested by the COSMA accreditation. In section seven our discussion and in section eight our conclusions is presented.

3.2. MANAGEMENT AND ORGANIZATIONAL THEORIES IN SM: RESEARCH QUESTIONS

During the last two decades researchers have attempted to elaborate on the relationships, overlapping areas and interconnections of management-organizational theory and SM (Adair, 2017; McDowell, 2015; Slack and Parent, 2006). The vast majority of them argue that SM specific management theories, frameworks and methodologies should be developed based on well established sub-disciplines and theories of management (Cunningham 2013).

There exist numerous examples of successful applications of management theories, methodologies and concepts to SM. Institutional analysis has been used in many publications (Nite & Edwards 2021; McSweeney et. al. 2019; Nite 2017; Washington & Patterson 2011). In recent approaches analysis concentrates on organizational actors in SM organizations that undertake activities that add value and trigger changes.

Laurell and Soderman, (2018) analyzed the relationship between SM and the remaining core management disciplines. A literature survey on the most influential journals related to marketing, organizational studies and strategy was presented. The focus was on the analysis of “interplay” amongst SM and the subfields of management science and business studies. The research concluded that the connections and overlapping areas were still very poorly published and research outcomes are still rare. The researchers proposed that further research efforts should emphasize on the convergence between SM and management theories, methodologies, tools etc. and vice versa.

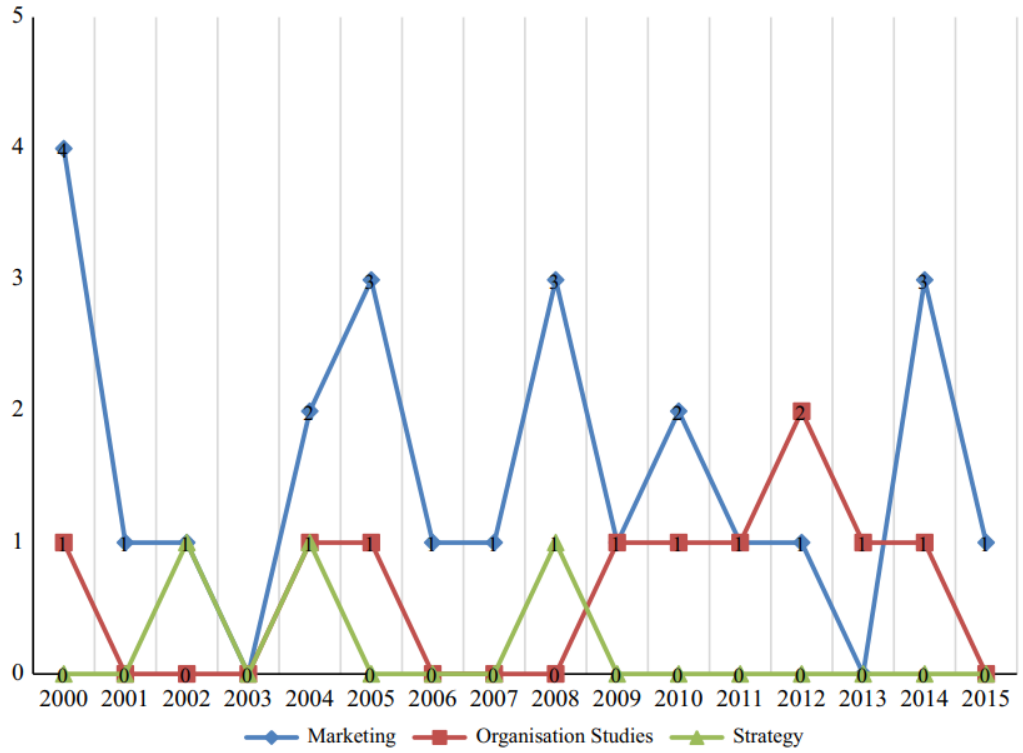

Figure 3: *Published articles on sports per respective subfield 2000–2015 (Laurell & Soderman, 2018, p.13).*

The shortcomings identified in the literature on the Laurell and Soderman, (2018) "interplay" emerge from the issue that management science applications are encountered in quite diverse SM topics, ranging from a vast variety of amateur or professional sports (team or individual e.g. football, basketball, swimming, tennis etc) to a large variety of social or professional event types (local, international, touristic e.g. marathons, triathlons, etc).

Many authors have additionally highlighted the need for holistic theoretical approaches based on a variety of concepts and techniques stemming from various management disciplines to be developed and applied in SM (Thomson et. al. 2019; Bocarro et al., 2018; Pentifallo & VanWynsberghe 2015; Brown & Getz 2015; Girginov & Hills 2009; Rogerson 2016; Mair & Whitford, 2013).

3.2.1. ASSESSMENT FRAMEWORKS IN SPORT EVENT LEGACIES

During the last two decades there is a growing interest in sport event legacies (SEL). SELs are repetitive events that refer to large numbers of international participants who visit the event venue and thus contribute to the local economy by attracting inbound tourism. This later issue interests especially the local authorities as in many cases event participants combine their participation with their holidays for themselves and their family or friends.

The repetitive nature of the events and the large number of direct (athletes) or indirect (visitors) participants require a considerable investment by both the event organizers and the local authorities in both infrastructure and human resources. The investment required as well as the very large number of direct and indirect participants makes management and governance a very difficult task in comparison to other SM traditional events.

Therefore, it comes as no surprise that many researchers have highlighted the need for theoretical SEL frameworks that analyze and assess SEL organizational structures, operations, resources as well planning and monitoring systems in the pre, during and after the event phases (Clarke et. al. 2016; Rogerson 2016).

A pre covid-19 literature review (Thomson et. al. 2019) of the period 2000-2016, revealed that although there exists a growing interest in the subject there is very limited published work on SELs theoretical approaches. There are only very few that have started developing conceptual underpinnings and even these are at their primitive stages. This comes to no surprise as the need for theoretical approaches has been suggested by many researchers (Doherty 2013; Cunningham 2013) in the field of sports management in general. The frameworks identified in the literature in Thomsons et. al. (2019) study were based on social exchange theory, process theories, stakeholder theory, event leverage, critical urban theory and governmentality.

These very few approaches have been applied only in one SEL case and therefore none of them can be considered as an established framework by any means (Table 3)

Therefore authors suggest that theoretical approaches and frameworks should be developed and applied in the field (Thomson et. al. 2019 pp. 308 and 309).

Legacy type	Focus of investigation								
	Legacy outcomes	Legacy delivery	Governance, guidelines and policy	Concept-ualisation of legacy	Legacy projections	Frameworks for legacy planning	Politics	Frameworks for legacy evaluation	Legacy perceptions
Public life, politics and culture	High	Medium	Low	Low	Low	Low	Medium	Low	Medium
Sport – mass participation	High	Medium	Low	Low	Low	Low	Low	Low	Low
Economy	Medium	Low	Low	Low	Low	Low	None	Low	Medium
General level	Low	Low	Low	Medium	Low	Low	Low	Low	None
Built environment – non-sporting	Low	Low	Low	Low	Low	Low	Low	Low	Low
Environment	Low	Low	Low	Low	Low	Low	Low	Low	Low
Sport – physical infrastructure	Low	Low	Low	Low	Low	Low	Low	Low	Low
Health	Low	Low	Low	Low	Low	Low	None	Low	Low
Sport – information and education	Low	Low	None	Low	Low	Low	None	None	Low
Sport – elite performance	Low	Low	Low	None	None	None	None	None	Low
Sport – symbols, memory, history	Low	Low	None	Low	Low	None	Low	None	Low
Sport – financial administrative	None	None	None	None	None	None	None	None	None

Key:

High	Medium	Low	None
More than 30 articles	16-30 articles	1-15 articles	No articles

***Table 3**: Legacy types and Focus of legacy investigation matrix (Thomson et. al. 2019, p. 304).*

Robust program management and organizational structures should be in place in accordance to strategic and operational plans (Preus 2018). The needs and interests of stakeholders should be taken into consideration (Parent 2016).

3.2.2. RESEARCH QUESTIONS.

The aforementioned issues addressed by researchers in the SM and in particular the SEL field formulate the research questions that our research aims to address:

RQ1: What are the specific fields of management-organizational theory applied to SM?
RQ2: How can the specific fields of management-organizational theory be combined to formulate a holistic approach?

RQ3: What are the Critical Success Factors (CSFs) that a holistic approach to SM should contain?

RQ4: What are the enablers for the achievement of these CSFs in a holistic approach? RQ5: How can a proposed holistic approach to SM be useful to academics and practitioners? In order to answer the first four research questions in the next two sections we present an extensive structured literature survey. The aim of our survey is therefore to identify the specific fields of managementorganizational theory that have already been applied to SM (RQ 1) and how can these identified fields of management-organizational theory be combined to formulate a holistic approach (RQ 2).

3.3. LITERATURE REVIEW: HOLISTIC ASSESSMENT FRAMEWORKS IN SPORT EVENT LEGACIES AND SPORTS MANAGEMENT.

The need for holistic SM implementation assessment has been elaborated by many authors. One of the first SM assessment models was the legacy cube (Gratton & Preuss, 2008). The model does not, however, provide any assistance or assessment on processes-operations and the evaluation of any results.

Parent et. al. (2011) proposed an SM assessment framework that is composed of 16 assessment categories. Five contextual-based and eleven generic. The contextual categories are: political status, geography, resources and funding. The generic categories are: turnover, structure, social issues, relationships, power, planning, operations, legal, knowledge management, activation/leveraging, accountability/authority (organizational structure).

Cserhát & Polák-Weldon (2013) attempted to capture the critical success factors of international SELs of different European regions. They proposed a framework for SEL assessment that consisted of six success factors: Planning, Contract Strategy, Leadership, Organizational Culture-Learning-Teamwork, Cooperation and Communication and Stakeholder Management, Partnerships.

Plumley et. al. (2014) proposed a variation of the ForNex (Football Organization Nexus Index) model for the measurement and assessment of a clubs organizational performance. The same authors in (2017) have proposed a holistic model for

professional football clubs and stressed the need for holistic performance measurement an appraisal approaches to SM.

Chalip et. al. (2016) developed a SEL assessment model that assesses sport participation. The model which is illustrated in the figure below:

Figure 4: *Sport Participation Assessment Model (Chalip et. al. 2016).*

The model is composed of four circles. The inner-core is concentrating on the SEL goals (SPD Goals). The second wider circle is assessing systems and structures. The third attitudes and opinions of stakeholders and the wider-outer circle the culture. There are also three rays cutting across all circles related to resources, namely: physical, human and knowledge resources.

These three rays distinguish the goals into three categories: sport, non-non sport and event specific. Systems and structures in the model play a vital role. Structures refer to organizational structures needed for managing the pre, during and after the event phases. Systems refer to managerial systems (reporting, costing, budgeting, planning systems etc) and the use of information systems that automate and enhance their functionality.

More recent research has highlighted that SEL assessments focus more on the results-outcomes rather than on the process-operations that have produced these results (Bocarro et. al. 2018; Koenigstorfer et al., 2019). Other researchers have highlighted the need for more robust organizational focus. Chen et. al. (2018) developed an organizational lifecycle approach to SEL assessment. Identified four main criteria categories: change triggers, challenges and opportunities, strategy, organizational structure, change management.

Byers et. al. (2020) attempted to provide a holistic theoretical approach developed for SELs and SM. The proposed approach is based on the wicked problem framework (Head & Alford 2015; Alford & Head 2017) which was not previously applied to the fields of SELs and SM in general. However, the resulting proposed approach is based on the wicked problem framework and the Critical Realist perspective. The approach considers SEL and SM assessment as a holistic concept rather than a holistic assessment framework (Byers et. al. 2020, pp. 179).

The approach states the need for taking into account issues like stakeholder management, processoperations, strategy-planning, human resources, organizational structures, organizational resources used etc., but by no means proposes an approach to be used in SEL assessment in a holistic manner.

Kittikumpanat (2021) presented a model that assesses the success of digital transformation in sport organizations. The model contains six critical success factors: strategy, agility (organization and culture), operations, people, technology, fans/customers.

Thanavutd & Teepakorn (2022) conducted an extensive literature survey on critical success factors for successful SELs. They identified many different perspectives in the definition of SELs success. They applied the RBV approach in classifying the identified critical success factors. They identified two major categories of tangible and intangible resources. The tangible resources are divided into three sub-categories: human, financial and physical resources. The intangible resources are further subdivided into: organizational and reputational resources.

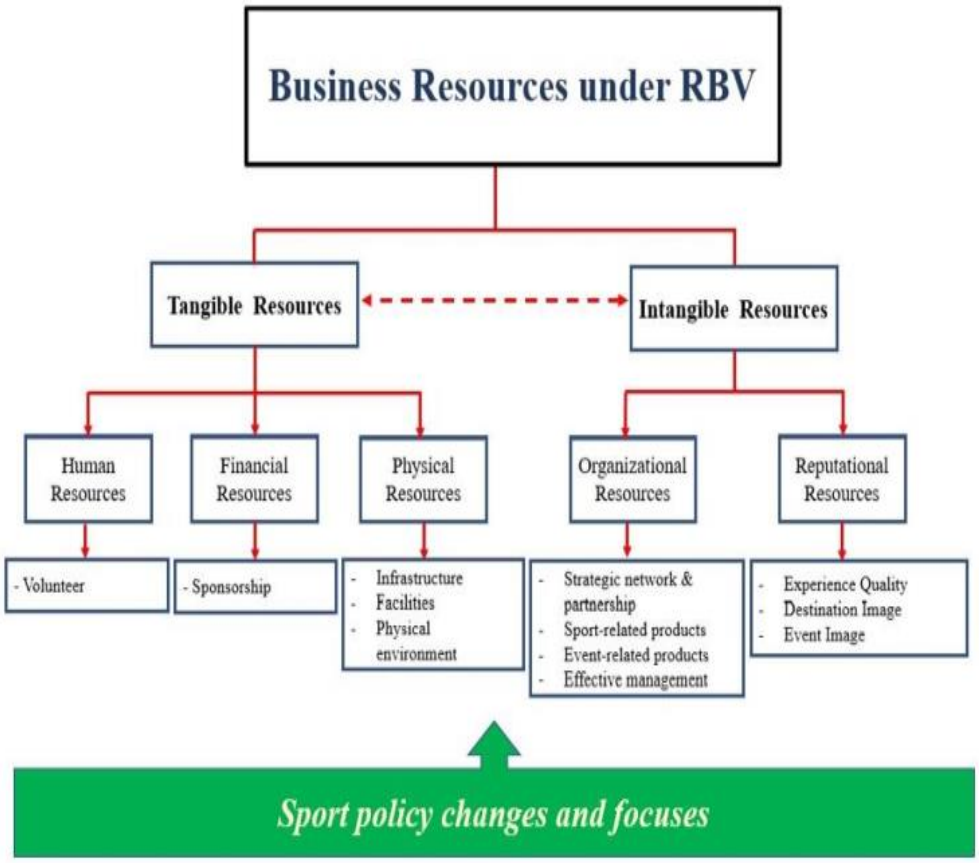

Figure 5: *Project Management in SELs (Thanavutd & Teepakorn, 2022).*

The UK Chartered Goverance Institute in association with Sport England has developed the "Governance Maturity Matrices for Sports Organizations" (https://sportsgovernanceacademy.org.uk/media/tjslwzvn/sgagovernance-maturity-matrix.pdf, 2020)[1]. The matrices developed refer to each governance maturity level proposed. These governance maturity levels are: Compliant, Developing, Mature, Advanced, Vanguard. The aim of the metrics provided per matrix and maturity stage are related to: processes, organizational structures-accountability, job descriptions, managerial systems, organizational resources, strategy, human resources, performance measures, change management, knowledge management, stakeholder management, corporate social responsibility etc. The aim is that SM organizations reach the highest possible maturity level and the desired goal of continuous improvement.

[1] sga-governance-maturity-matrix.pdf (sportsgovernanceacademy.org.uk)

Sport New Zealand has developed and proposed a maturity model called the "Insights and Evaluation Maturity Model" (https://sportnz.org.nz/media/4153/insights-and-evaluation-maturity-model-11_17.pdf, 2017)[2]. The model assists sport organizations to evaluate the maturity level they have attained. The model is assessing sport organizations in four dimensions: knowledge, processes, attitudes and behavior. They have proposed four levels of maturity: Emerging, Developing, Consolidating and Highly Developed. The model sets the criteria that should be met in these four dimensions at each level of maturity in selected areas of analysis. These areas are: competencies, leadership, organizational structures, technology, knowledge, stakeholder management and managerial systems.

3.4. LITERATURE SURVEY: CRITICAL SUCCESS FACTORS AND ENABLERS FOR SUCCESSFUL SPORTS MANAGEMENT IMPLEMENTATION.

In the table below is presented the CSFs proposed by all SEL and SM assessment frameworks and approaches presented in the previous section. The aim is to identify the most prominent CSFs proposed in the literature mainly during the last decade.

Reference	Critical Success Factors
Gratton & Preuss, (2008)	Infrastructure-resources, Knowledge, Performance measurement, Customer-tourist,
Parent et. al. (2011)	Resources, customers-participants, funding-capital, stakeholder management, strategy-planning, operations-processes, knowledge management, organizational structure-authority
Cserhát & Polák-Weldon (2013)	Strategy, Planning, Leadership, Human Resources, Stakeholder Management, Partnerships
Chalip et. al. (2016)	Strategy-Goals, Managerial Systems, Organizational Structures Stakeholder Management, People-Culture, Organizational Resources, Human Resources and Knowledge Resources.
Plumley et. al. (2017)	Strategy, People, Process-Operations, Structures, infrastructures, Performance measurement and assessment of clubs

[2] insights-and-evaluation-maturity-model-11_17.pdf (sportnz.org.nz)

https://sportnz.org.nz/media/4153/insights-and-evaluation-maturity-model-11_17.p (2017)	Competencies, Leadership, Organizational structures, Technology, Knowledge, Stakeholder management and Managerial systems
Bocarro et. al. (2018)	Customer-Participant, Stakeholder Management, Performance Measurement, Managerial Systems, Resources and Infrastructure Management
Chen et. al. (2018)	Strategy, Customer-Participant, Process-Operations, Performance Measurement, Change Management, Organizational Structure, Managerial Systems, Resources and Infrastructure.
Koenigstorfer et al. (2019)	Customer-Participant, Knowledge Management, Performance Measurement, Managerial Systems, Organizational Structure, Resources and Infrastructure Management
Byers et. al. (2020)	Stakeholder management, Customer-participants, Process-operations, Strategy, People-human resources, Organizational structures, Organizational resources, Managerial Systems,
https://sportsgovernanceacademy.org.uk/media/tjslwzvn/sga-governance-maturity-matrix.pdf (2020)	Processes, Organizational structures-Accountability, Job descriptions, Managerial systems, Organizational resources, Strategy, Human resources, Performance measures, Change management, Knowledge management, Stakeholder management, Corporate social responsibility, Technology, Continuous mprovement
Kittikumpanat (2021)	Strategy, Performance measurement, operations, people, technology, fans/customers.
Pianese (2021)	Sport resources, Infrastructure (buildings, equipment), Organizational structure, Processes, Environmental and Corporate Social Responsibility, Human resources, Stakeholder management, Knowledge management, Financial-Capital, Managerial Systems
Thanavutd & Teepakorn (2022)	Human resources, Financial resources, Physical resources (Land, Buildings, Equipment, Inventories) Organizational Structure, Processes, Managerial Systems, Technology

***Table 4**: Literature overview of SM Maturity Frameworks.*

From the table 3. above is concluded that there is a confusion identified in the SM and SEL literature regarding CSF and enablers definitions and or assessment. One of the contributions of our research is related to the classification of CSFs and enablers that should be included in future SM assessment frameworks. The most prominent CSFs identified in the literature survey as presented in the table above are: Strategy, Customer Spectator, Process, People, Leadership, Performance Measurement, Change Management, Continuous Improvement, Knowledge Management, Stakeholders and Corporate Social Responsibility.

The most prominent Enablers identified are divided into two categories: governance and organizational resources. Governance related enablers are: Organizational Structure, Processes (designs, costing, measures), Job Descriptions, Managerial Systems. Organizational Resources are subdivided into six further elements: land-buildings, equipment, inventories, human resources, capital (finance), technology.

Laurell and Soderman, (2018) proposed that in future publications there must be a selection and determination of which specific management subfields-disciplines to be applied to specific sports management areas. Following their suggestion and in this section extending our literature survey in an attempt to present published management theories, frameworks, approaches or methodologies related to each CSF or groups of CSFs that have already been applied to SM. Also existing published research outcomes related to the aforementioned identified enablers is presented.

3.4.1. STRATEGIC MANAGEMENT-LEADERSHIP CSFS

The application of Strategic Management to SM has been a research focus of many researchers. A recent edited volume contains a very useful insight on the advances of the application of strategic management theories, methodologies and tools to SM (Varmus et. al., 2021).

Leadership also plays a vital role for the success of SM related initiatives. The leadership style is considered as vital for successful strategic management implementation (Martínez-Moreno et. al. 2021). Martínez-Moreno et. al. (2021) applied the four identified leadership styles (traits and roles of the leader, situational, transformational, transactional) to sport organizations.

Recent research efforts have combined the aforementioned two concepts (strategic management and leadership) and advocate that the leadership style and approach are considered as key elements for successful strategic management in SM (Martínez-Moreno et. al. 2021).

Strategic sport sponsorship has been a research issue in SM in the last decades. Koronios et. al., (2021) developed the "Strategic Sport Sponsorship Scale". The proposed scale included 11 factor categories and 38 items.

3.4.2. CUSTOMER FOCUS CSF: SPECTATORITIS AND SPORTAINMENT.

Some strategic management approaches have concluded that analyzing and acquiring competitive advantage are not suitable to SM and propose a customer focus oriented approach called "spectatoritis" based on the spectators' perspective (Agha & Dixon 2021).

Strategic sport marketing has attracted the attention of many scholars. Sports and entertainment have been mixed in recent years thus forcing sport organizations to focus more on the added value they provide to their fans. New schools of thought and practical considerations have emerged in the area of "sportainment". (Richelieu & Webb, 2021) have proposed a strategic sportainment mix.

Biscaia et. al. (2021) provided an analysis of service quality assessment in spectator sports. Developed a framework for service quality measurement and analysis.

3.4.3. PROCESS AND KNOWLEDGE MANAGEMENT CSFS

Bamford et. al. (2018) elaborated on the need for applying operations management principles to sports management. They concentrated on the application of quality management principles to sports management that require process based approaches. They concluded that process performance management is the most significant factor in sport management implementation. Meier et. al. (2018) elaborated on the use of additive manufacturing methodologies and 3D printing technologies on sports equipment.

Herold et al. (2019) conducted a thorough survey of the literature on the application of of logistics in the SM field. They proposed the Sports Logistics Framework (SLF) that

assesses organizational structure, processes and resources of sport logistics. They divided sports logistics into four mega processes: equipment, athletes, venue and spectator logistics management as shown in the following figure:

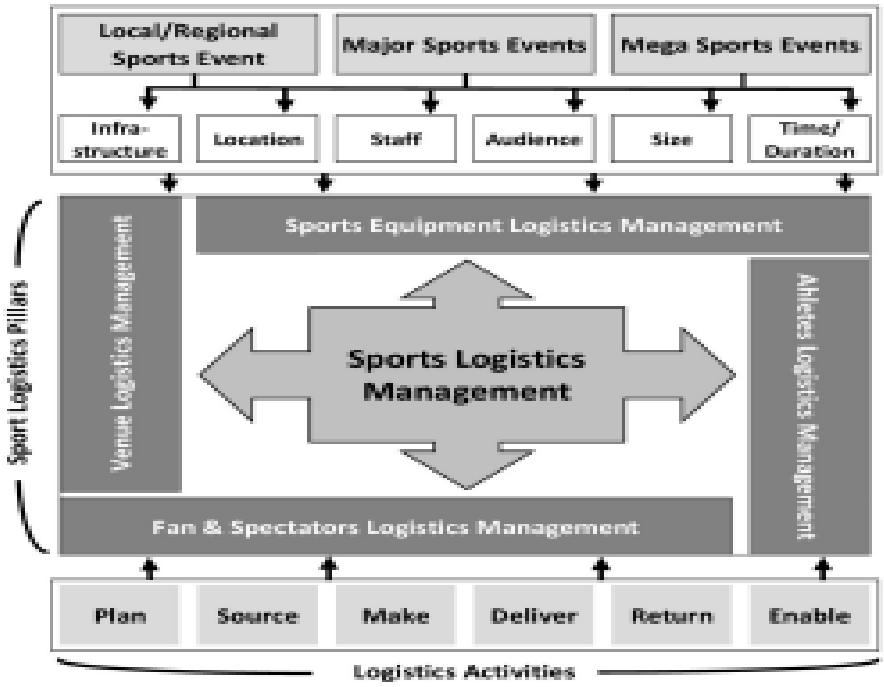

Figure 6: *The Sports Logistics Management Framework (Herold et al. 2019).*

The researchers have concluded that research in modeling, analyzing and measuring sport event logistic processes is still limited (Herold et al. 2019, page 374). One of the identified reasons for this limitation is the lack of specification of the field of sport logistics. The authors suggested that leading SM journals should publish research outcomes in the area at an increasing pace in the forthcoming years. Evidence of the realization of the authors' recommendation was not identified in our literature survey. According to García-Vallejo et. Al. (2020) there is still no clear definition of processes that should be executed in sport events and have identified a lack of application of process management methodologies, process maps and process simulation tools in SM. In their research they classified marathon management processes into nine broad mega processes (functional areas): general management, communication, marketing, production, administrative, medical, commercial-sponsorship, logistics-security and technical-athletic.

The issue of knowledge management (KM) is becoming of central importance in both academia and practice of SM with many publications focusing on KM performance management (Delshab et. al. 2022), knowledge translation (Bartlett& Drust, 2021),

customer KM (Behnam et. al, 2022), one of the dimensions of corporate social responsibility (Tabar et, al., 2022) etc.

3.4.4. PEOPLE CSF

Human Resources Management (HRM) theories have been applied to SM since its emergence as a discipline. Santos et. al. (2022) published a literature survey of a period of nine years (2010-2019) in an effort to capture a generic job description of the sport manager. The study concluded with the basic competencies of the sport manager in order to advance in his career path as well as the activities he/she executes during his/her daily working life. The study defined the required competencies of the sport manager, namely: leadership, knowledge, resource allocation and management, innovative thinking as well as abilities to organize, asses, plan, coordinate activities etc. Nová J. (2021) has applied a competency based model in SM professionals training. The most well known sports managers' competency model called COmmission on Sports Management Accreditation (COSMA) was developed by Toh and Jamieson (Toh & Jamieson, 2000). A description of the COSMA model will be provided in section 6.6.

3.4.5. STAKEHOLDER MANAGEMENT AND CORPORATE SOCIAL RESPONSIBILITY CSF

Stakeholder Management has been a central research theme since the origins of SM. During the last two decades research in the area has been expanding as its importance has been appreciated by the academic community. Recently, edited volumes dedicated in the field have been published (Strittmatter et. al. 2021) as well as extensive literature review papers covering the last two decades (Wood et. all., 2021).

Some researchers have highlighted the importance of stakeholder management and inclusion in elite sports(De Bosscher et. al, 2021; van der Roest & Dijk, 2021). Others have applied stakeholder theory in analyzing and classifying football funs' behavior and needs (Jaeger 2021; Perechuda & Čater 2022)and others to basketball (Leiñena & Merino 2021). Neto et. al. (2021) elaborate on the concept of stakeholder leadership in soccer clubs.

Corporate Social Responsibility (CSR) applications also gains significant attention in sports management in recent years (Carlini et. al. 2021, Zeimerset. al. 2021; Breitbarth et. al.,2019).Ashraf et. al. (2021) provides a critical review on the issue of strategic CSR during the crisis era. Ebadi Barbain et. al. (2022) highlighted the role of ethics in (CSR). Chen & Lin (2021) provided a comparison of CSR initiatives based on spectators' preferences and attitudes. Zamanidadaneh et. al. (2021) stressed the impact of CSR on sports branding and on the supportive behavior of fans for their clubs. Herold et. al. (2022) assess the impact of CSR in professional football. Raimo et. al. (2021) advocate that CSR can be applied as a legitimation strategy in football clubs. Anagnostopoulos et. al. (2021) argue that sports can be used as a means for CSR implementation.

3.4.6. PERFORMANCE MEASUREMENT AND CHANGE MANAGEMENT CSFS.

Performance measurement in SM is not related to the assessment of athletes and coaches. On the contrary it is related to anything else apart from these two categories. The stakeholder analysis approach has been used in SM performance measurement (Thompson & Parent2021). In some cases stakeholder analysis has been based on agency theory to analyze performance (Sanchez et. al. 2017).

Thompson and Parent (2021) have classified the value factors and how these are measured. These value factors influence performance from the perspective of the stakeholder. Accounting theories were analyzed that provided methods and techniques that SM measure performance. Performance measures were classified into three groups: Economic Value Added , Market Value Added and Shareholder Value Added.

Change Management (CM) is also gaining interest in the academic community of SM. Cruickshank & Collins (2012) elaborate on CM in the case of Elite Sports Performance. Fahlén & Stenling,(2019) has used institutional analysis for CM in sports organizations.Babaei et. al. (2020) analyze the process of CM and its contribution to policy making in Olympic sports. Gibson and Groom (2021) elaborated on organizational change in youth football.

3.4.7 SPORT GOVERNANCE AND ORGANIZATIONAL RESOURCES ENABLERS.

Sport governance has been a research topic in SM for decades. Research has focused on its application on organizational structures and processes (Kerwin & Doherty, 2019), job descriptions and levels of authority (Lang et. al., 2018) and process designs and performance metrics (Nowy et. al., 2015). Recent literature survey papers (Chappelet and Mrkonjic, 2019; Zintz and Gerard 2019) have provided indicators for governance assessment as well as managerial systems for capturing and analyzing real time data in information and reporting systems.

Parent et. al. (2021) provided a review of sport governance research efforts and a thorough comparison of the widely appearing indicators in sport governance assessment. These indicators were used in the development of governance design archetypes based on: structures and processes as well as stakeholder and institutional dimensions. They concluded that sport governance should be further expanded and research by academics and scholars and research outputs should be developed. Resource management in sports has also been attracting attention during the last two decades in both academia and practice. Research has been concentrating in at the level of sports clubs, leagues, sport authorities, sport organizations etc. (Robinson and Minikin, 2012). Follow Ray et. al. (2004) suggestion that consider resource management as prerequisites or preconditions for developing competitive advantages and achieving success. Galbreath (2005) provided a distinction of resource types into: tangible and intangible. The former are related to balance sheet assets. The later are more related to organizational structures, personnel job descriptions and skills etc. One of the most prominent approaches used in sports management is called Resource Based View (RBV) based on the aforementioned theories (Byun & Leopkey, 2021; Jensen et. al. 2022; Chutiphongdech & Kampitak, 2022).

Pianese (2021) conducted a thorough literature survey on resources used in sport events and applied RBV to sport events. He concluded with the following resource types as being the most prominent in SELs: sport resources (athletes, teams etc.), infrastructure (buildings, equipment, organizational structure, processes, etc.), environmental (landscape, local community resources), event reputation, human resources, relational (stakeholder management), and financial.

The study concluded with two key findings that future research and practice should take into consideration and closer focus (Pianese 2021): an event governance model and an organizational knowledge. The event governance model is related to organizational structure and processes-operations and their management and on the issue that some resources might be more decisive relative to others depending on the event type. Organizational knowledge was identified as a vital additional resource that is a concept applying to individuals and teams that in many cases reviewed proved to be of strategic importance. Especially in the cases of recurring SELs there is an imperative need for knowledge and information management to be included in the model.

3.5. A PROPOSED HOLISTIC FRAMEWORK IN SPORT MANAGEMENT MATURITY ASSESSMENT.

In the previous section we presented the most prominent enablers and enablers that should be included in a holistic SM maturity assessment framework. The most prominent CSFs identified are: Strategy, CustomerSpectator, Process, People, Leadership, Performance Measurement, Change Management, Continuous Improvement, Knowledge Management, Stakeholders and Corporate Social Responsibility.

The most prominent Enablers identified are divided into two categories: governance and organizational resources. Governance related enablers are: Organizational Structure, Processes (designs, costing, measures), Job Descriptions, Managerial Systems. Organizational Resources are subdivided into six further elements: land-buildings, equipment, inventories, human resources, capital (finance), technology.

The holistic SM maturity assessment matrix-framework proposed in this section is based on previous research outcomes created by the authors (Glykas 2019b; 2019a; 2017; 2015) that proposed and applied a maturity assessment framework called Glykas Quality Compass (GQC) to a variety of industrial sectors. The resulting SM specific maturity framework is called Glykas Sport Management Compass (GSMC) and is composed of the CSFs and enablers identified in our literature survey presented in the previous section and the table above. The proposed GSMC maturity assessment framework is a 10X10 matrix that contains all the identified CSFs (vertical axis) and enablers (horizontal axis) as shown in the following figure:

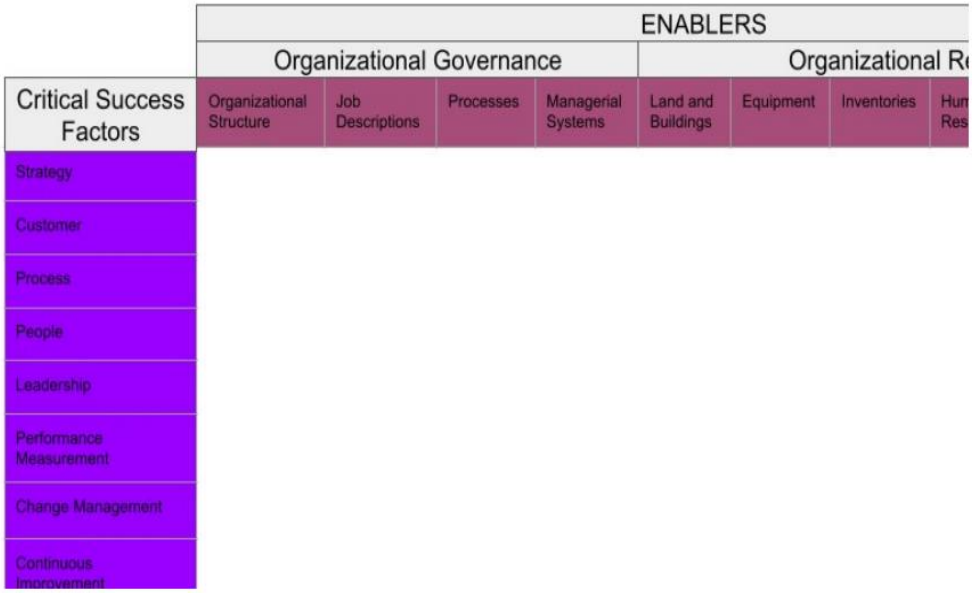

Figure 7*: The proposed Glykas Sport Management Compass maturity assessment framework (Gykas, 2019a; 2019b).*

The proposed GSMC maturity assessment matrix is similar to the "Governance Maturity Matrices for Sports Organizations" framework (https://sportsgovernanceacademy.org.uk/media/tjslwzvn/sga-governancematurity-matrix.pdf , 2020) developed by the Chartered Governance Institute in association with Sport England. However, the contribution of our research is that the matrix is expanded to include all management concepts, governance concepts and organizational resources and there is theoretical justification on its composition based on our literature survey. The division of enablers into organizational governance and organizational resour outputs of Parent et. al. (2021), Pianese (2015), Chappelet and Mrkonjic (2019), Zintz and Gerard (2019), Pianese (2021), Robinson and Minik resources for the later.

The GSMC framework follows the "Governance Maturity Matrices for Sports Organizations" These governance maturity levels are: Compliant, Developing, Mature, Advanced, Vanguard. matrix is used for the assessment of the current state of SM maturity of a sports organization. The end result of the current state assessment is the specificati shown in the upper part of the following figure:

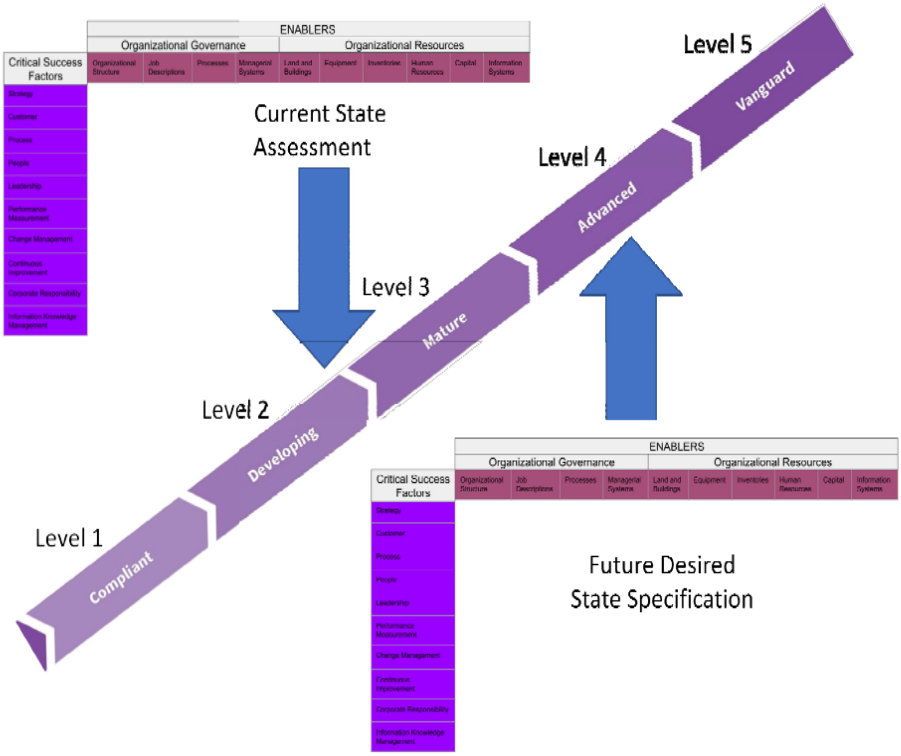

Figure 8: *The maturity levels of GSMC framework (Tsipoura, Sakellariou, Glykas, & Tsimpidou, 2022).*

The GSMC matrix can also be used for the specification of the future desired state of the organization's maturity level. An action plan is created that includes all actions that should be undertaken by the organization for the improvement of SM implementation. The use of the framework ensures, therefore that the SM continuous improvement mentality is implanted in the organization.

3.6. GSMC COSMA TRACKING MATRIX.

COSMA is an organization that accredits SM master's and bachelor courses worldwide. The aim of the assessment-accreditation is similar to the proposed GSMC maturity assessment framework, the implantation of a continuous improvement mentality in SM courses and SM related organizations. The COSMA model provides a competency skills scale that is composed of six factor categories: Governance, Sport Foundations,

Budgeting, Risk Management, Computer Skills and Communications and 30 individual competencies (called items) belonging to these six categories representing SM skills that both university graduates and employees should poses. The COSMA categories and items are shown in the following picture:

Factor	Item No	
Governance	G1	Implements sound procedures for postponements, rescheduling, and forfeiture of games
	G2	Handles disciplinary action, accidents, game protests, and eligibility status reports
	G3	Implements appropriate sport rules and regulations
	G4	Implements appropriate system of procurement and evaluation for officials
	G5	Utilizes procedures to regulate the conduct of participants and spectators
	G6	Uses sound procedures for settling protests
	G7	Establishes eligibility guidelines for participants
Sport Foundations	SF1	Applies updated knowledge in recreational sport research to practice
	SF2	Articulates the benefits and values of recreational sport to individuals
	SF3	Demonstrates an understanding of the sociological and psychological aspects of sport
	SF4	Demonstrates an understanding of human limitations in sport
	SF5	Applies leadership theories applicable to recreational sport.
	SF6	Applies theories of cooperative and competitive play
	SF7	Demonstrates an understanding of the organizational and operational aspects of different types of sport programming
Budgeting	B1	Identifies sources of revenue and expenditures for the budget
	B2	Defends a budget proposal.
	B3	Prepares a budget proposal.
	B4	Monitors the budget
Risk Management	RM1	Coordinates training for staff on legal and safety issues (e.g., first aid and CPR training)
	RM2	Establishes a safety program to prevent injuries and accidents
	RM3	Conducts routine inspections of facilities and equipment
	RM4	Designs strategies/policies to prevent misuse of facilities and equipment
	RM5	Exercises effective decision making in dealing with accidents
Computer Skills	CS1	Utilizes computer software for word processing, spreadsheet, presentation, etc.
	CS2	Utilizes computer operating system (e.g., Windows 95, Mac OS, etc.)
	CS3	Utilizes customized computer software programs for such purposes as scheduling, reservations, registration, etc.
Communications	COM1	Promotes harmony among personnel
	COM2	Uses good verbal communication skills
	COM3	Maintains effective communications with staff
	COM4	Motivates staff or volunteers

Table 5: *The COSMA Competency Skills Scale. Six Categories and Thirty Items (Toh & Jamieson, 2000).*

In the last two decades the COSMA model was applied in different countries, to many industries and contexts. One of the most notable recent application was published by Duclos- Bastías et. al. (2021) who suggested a smaller number of factors-categories, namely: Sports and Facilities Use-Regulation, Budget Management, Communication Skills (personnel management) and 22 competencies (items).

COSMA is accrediting higher education departments that offer SM programs of study. In their accreditation manual there are specific directives of the traditional areas that a sport management education program should include. Indicative disciplines are

(COSMA Accreditation Manual pp. 7-8): Management, Administration, Marketing, Finance, Leadership, Communications etc. In the undergraduate courses COSMA requires cull coverage of the so called Common Professional Component (CBC). Part B of CBC is called “Functions of Sport Management” is probably the most important. These functions of sport management are: Operations, Marketing, Media and Communications and Sport Finance, Budgeting, Accounting and Economics. Part C (Sport Management Environment) includes technological advances in sport management and Part E (Innovations) includes subjects like Human Resources Management etc.

COSMA accreditation is based on a set of principles that assess outcomes with the aim of promoting excellence. Therefore outcomes assessment (principle 1) is maybe the most important component of the accreditation process and focuses on strategic planning and budgeting. Strategic planning is the focus of the second principle. COSMA identifies the organizational unit that is responsible for the development of a strategic plan and how this is documented as a managerial system. It demands justification of modeled processes for its implementation and the job descriptions and personnel responsible. It also requires a “tracking matrix” that specifies the use of organizational resources (financial, human, physical) that monitors strategic plan execution in real time (COSMA accreditation manual, page 13 https://www.cosmaweb.org/uploads/2/4/9/4/24949946/accreditation_principles_march_2022.pdf)

In this section a generic GSMC COSMA tracking matrix is presented by having allocated the COSMA items presented in table 5 to GSMC matrix cells as presented in the following figure:

Critical Success Factors	Enablers									
	Organizational Governance				Organizational Resoures					
	Organizational Structure	Job Descritpions	Processes	Managerial Systems	Land and Buildings	Equipment	Inventories	Human Resources	Capital	Information Systems
Strategy	SF7		SF7		RM4	RM4		RM2, RM4		
Customer			G5, G6	G7						
Process		RM5	G1, G6		RM3	RM3		G5, G6		
People		SF3, SF4, RM5	G1,G5	G2, G3, G4, G7, B2, B3, B4	RM3	RM3	G4	G2, G4, G5, SF2, SF3, SF4, SF6, RM1, COM1, COM2, COM3, COM4	B1, B2, B3, B4	CS1, CS2, CS3
Leadership	SF5, SF7	SF3, SF4, SF5, SF6, SF7		SF3, SF4, SF5, SF6, SF7				SF3, SF4, SF5, SF6, SF7		
Performance Measurement										
Change Management										
Continuous Improvement										
Stakeholders and CRS			G6, G7							
Information Knowledge Management	SF7	SF1, SF6	SF7	SF1, SF6				SF1. SF2, SF3, SF6		

***Figure 9**: The GSMC COSMA Tracking Matrix (Tsipoura et.al., 2022).*

By associating COSMA items-competencies to GSMC cells were associated with the corresponding critical success factor and the corresponding organizational governance or resource enabler that should be provided by the organization for its achievement. For example the item-competency G4 “Implements appropriate system of procurement and evaluation for officials” appears in three cells of the GSMC COSMA tracking matrix, namely: “People (CSF) - Managerial Systems (Enabler)”, “People (CSF) -Inventories (Enabler)”, “People (CSF) - Human Resources (Enabler)”. The G4 competency belongs to the governance factor-category of the COSMA competency skills scale. It contributes to the achievement-improvement of the people CSF. As its description implies it requires a managerial system for procurement (People-Managerial Systems) that refers to purchasing inventories (People-Inventories) as well as a managerial system (People-Managerial Systems) for evaluation of officials (People- Human Resources).

Our research outcomes presented in this paper have provided answers to the research questions set out at section 3.2 as presented in table 6 below.

No	Research Question	Sections Answered
RQ1	What are the specific fields of management-organizational theory applied to SM?	2, 3,4
RQ2	How can the specific fields of management-organizational theory be combined to formulate a holistic approach?	2, 3, 4
RQ3	What are the Critical Success Factors (CSFs) that a holistic approach to SM should contain?	3, 4
RQ4	What are the enablers for the achievement of these CSFs in a holistic approach?	3, 4
RQ5	How can a proposed holistic approach to SM be useful to academics and practitioners?	5, 6

***Table 6**: Research Questions and Sections.*

CHAPTER 4. PROCESS MINING MATURITY ASSESSMENT CRITICAL SUCCESS FACTORS.

In the fourth chapter a literature survey of process mining implementations identified is presented. The aim is the identification of the most prominent Critical Success Factors that should be achieved for successful process mining implementation. The conclusions lead to ten proposed critical success factors that should be assessed in any process mining implementation. Also the attempt elaborate on the role of process mining in business process management and its contribution in resolving identified drawbacks.

4.1. PROCESS MINING.

Over the last decades there is a rising interest from scholars and academics in process Mining as it consists of a novel and multi promising technological approach in multi aspect process management. Process Mining as an innovative tool could provide an efficient and supportive framework for widely known industries connecting innovation with practical implementations. The management, through the implementation Process Mining, of the daily information /input drift from multiple processes could lead in the production of new ideas/ concepts creating a smooth, diffuse and transparent entity (Reinkemeyer, 2020).

Process Mining refers to the discovery, monitoring and improvement of real processes by extracting knowledge from event logs (Van der Aalst et al., 2018, p. 8). Process mining implementations approach and investigate three different aspects related with the process/methods (how?), with the organization/ company (who?) and with the case /circumstances (what?) (Van der Aalst et al., 2007). The creation of specified and occurring maps of real processes in order to address different aims is one of the most exquisite potential of Process Mining. Van der Aalst (2009) proposes the application of the analogy of Process Mining as a navigation system that could lead in organizational transformation.

Process Mining aims at automatic extraction of process knowledge from event logs and makes possible the understanding of the functioning of even the most complex industrial processes. These industrial processes change over time, and through the process mining, they can be analyzed dynamically (Corallo et al., 2020).

4.2. BUSINESS PROCESS MANAGEMENT.

Business processes are a key factor of organizations/corporations and form the ways that an organization manages and incorporates assets, daily facts/data and systems in order to improve their efficiency. The perceived quality of services by the customers and the efficiency of the provided services are both affected by the way processes are planed and implemented (Dumas et al., 2013). Nowadays there is a rapid change of organizations behavior and customers' expectations related mainly with the new technological implementations and novel inventions (Brzychczy, 2017). As such, business processes need to be continuously monitored and relevant changes should be introduced.

Business Process Management (BPM) is the practice of evaluating, enhancing, and monitoring the business processes for continuously improving them (Houy et al., 2010). Specifically, BPM helps the organizations inspect the variety of tasks that are performed and the way that are executed within the organization. Furthermore, BPM helps an organization to keep up with market's latest evolutions and seek opportunities for process upgrade and expansion. (Dumas et al., 2013; Rosemann & Brocke, 2010). Therefore, BPM can be broadly described as a provider of tools and techniques to efficiently manage business processes (Huang et al., 2011). BPM plays a key role in the advancement of an organization, especially which focuses on a business process view (Kohlbacher, 2009) because BPM can provide interaction, control, analysis, and optimization of processes (Smith, 2003).

BPM originated as the next big thing after the workflow wave (Anand et al., 2013). According to Wesk et al. (2004) BPM systems were initially applied through different versions like workflow management (WFM), case handling (CH), enterprise application integration (EAI), enterprise resource planning (ERP), and customer relation management (CRM).

4.3. WEAKNESSES IN BUSINESS PROCESSES.

A process weakness, as a part of a procedure with deteriorated performance, ineffectiveness or low levels of quality, is the similar concept of a weak point which was introduced by Coskun et al. (2008), which can be reformed into an elevated form.

In order to improve the process, under the optimization probability of a weak point, specific remodeling factors need to apply.

From a purely organizational perspective, a process is considered defective (weakness process) when for instance duties are not contacted in the optimum order or tasks repeated twice. In contrast, new technological trends and applications could be beneficial in different organizational stages. A major part of process weaknesses activities is specified on data collection and information flows. These information flows are primarily resulting from the division of business processes in individual parts (Berente et al., 2009). Consequently, there is no connection of weaknesses with a certain task/job during a process, but weaknesses are related to the planning and implementation of work and to the processing of information widely (Algermissen et al., 2005).

Different processes are likely to appear with comparable elements of deficiency. Though another approach, provided by Reijers and Liman Mansar (2005), suggests the utilization of the most effective methods combined with personal experience and existing theoretical frameworks can lead to the reorganization and to the implementation of innovation on business processes, instead of just focusing on problematic spots. Despite their incomplete agreement with the classic weakness approach, Reijers and Liman Mansar (2005) highlight the fact that inefficient parts will enhance the possibilities of solving potential problems and create new solutions. Some researchers have identified some typical weaknesses in the literature survey (Hammer & Champy, 1993; Davenport, 1993). As a result, a classification of weaknesses into four distinct categories, presented below occurred. The level of information reformed (medium) through processing is taken under consideration, for instance researchers evaluate the changes on manual entry of different types of paper, along with printing, scanning, or changes on manual data transmission between systems (Algermissen et al., 2005; Berente et al., 2009).

Reijers and Liman Mansar and (2005) report indirect medium converts adopting a related approach during a “task elimination” process, as a more efficient method. Based on the above, the elimination of low customer value tasks is proposed (e.g. Buzacott, 1996; Peppard & Rowland, 1995; van der Aalst & van Hee, 2004). Berente et al., 2009) argued that information deficits are situations where missing information prevents the further execution of the Process. Further investigations needed to be taken into consideration to obtain the previous suggestion. The missing information can create

serious disruption in the process by blocking supplies and causing serious delays on resources, demanding additional collaborative practices between other stages. Furthermore, Reijers and Liman Mansar (2005) proposed the application of "Information" a best practice divided into subcategories: "control addition" and "buffering". Control addition is related with the evaluation and improvement of the inflow and outflow information/data (Hammer & Champy, 1993; Poyssick & Hannaford, 1996; Buzacott, 1996). On the other hand, "buffering" is based on the update of the preserved incoming information through subscribing and not through demand. Additionally organizational barriers were identified as a common source of problems (Davenport, 1993; Hammer & Champy, 1993). Organizational barriers occur when multiple organizational units are involved in a business process, these interactions can cause problems like waiting and idle Items (Berente et al., 2009) or create medium changes, interaction between customers and vendors could be an obstacle in a business process (Berente et al., 2009).

Moreover, incomplete cooperation among participants organizational units may lead to task duplication or excessive discipline actions. In the last decades many authors identify a corresponding best practice "numerical involvement", which proposes a reduction of staff and sections who are participating in a process (Reijers & Liman Mansar, 2005; Hammer & Champy, 1993; Rupp & Russell, 1994). Another important factor for the development of business processes is the implementation of information technology (Davenport, 1993; Margherita & Petti, 2010). Thus, if IT is utilized as an activated factor for automation or as a manual activities booster, the weakness type can beneficially affect the automation procedure. Better support can aim to avoid a large number of mistakes, for example, in calculations, and lead to more standardized processes. Information technology is considered as an efficient means for the optimization of business processes (Reijers & Liman Mansar, 2005). Furthermore a variety of best practices, that were suggested in the past still remain timely, such as "Technology" category (distinguished in two best practices), "task automation" through the implementation of IT or "Integration technology" using technological probes to surpass limitations in a process (Reijers & Liman Mansar, 2005; Hammer & Champy, 1993; Peppard & Rowland, 1995). An extra-close approach also suggested by Klein (1995), Peppard and Rowland (1995), and van der Aalst and van Hee (2004).

4.4. CRITICAL SUCCESS FACTORS IN BPM MPLEMENTATION.

A variety of definitions attempted to address the way in which BPM is considered as a highly efficient and successful process, primarily focusing on two core factors, such as organizational elements and project/planning. According to Trkman (2010, p.126) "BPM is successful if it continuously meets pre-determined goals, both within a single project scope and over a longer period of time". The level of success is mainly determined by the highly proficiency of Critical Success Factors (CSF), which enhance and ensure business competitive performance in and across organizations (Abdolvand et al., 2008).

The need for a generic model of implementations in BPM by incorporating the most common and well-known reasons for success or failure in order to provide organizations with a theoretical base to manage attitudes and to increase their effectiveness is pointed out by Castro et al. 2019, along with the limited research activity.

Issues referred to top management support (Goodyear, 2012; Kassahun et al., 2011; Kennedy et al.,2012), project management and project management skills (Jurisch, et al., 2012; Weerakkody et al., 2011), communication and inter-departmental cooperation (Alves et al., 2014; Borras 2012; Nfuka et al., 2011) preparedness for organizational change (Ahmad et al., 2007; Meier et al., 2013) are consider of high interest among academics and scholars in contrast to the reports in the CSFs related to BPM creativities, which are usually of general content. Specifically top management support constitutes the most vital factor related BPM supportive efforts (Ranganathan et al., 2001). Moreover, leadership, investment IT infrastructure, and ICT awareness that are usually connected with traditional information systems also used in BPM initiatives as a widely known CSFs (Lu et al., 2006).

Despite the investment that organizations make on BPM initiatives, 60 to 80 percent of such initiatives have failed (Trkman, 2010). Such risky nature of BPM domain motivates further detailed evaluations of its critical success and failure factors (Castro et al., 2019).

A BPM success assessment framework suggested by Malinova et al., (2014), constituted by ten interconnected factors. The proposed model was designed utilizing six main stages of BPM implementation lifecycle (Dumas et al., 2013) and

four central elements that influence BPM implementation (Rosemann & Brocke, 2010). However, the presented framework lucks in the evaluation of technological inputs, which consist of the key factor of measurement in BPM efficiency and performs a critical role in contemporary organizational frameworks.

In order to design an analytically and aligned with the markets needs measuring framework for the evaluation and improvement of the BPM success and efficiency, research findings, (such as a case study results) and literature sources could be leveraged adding a new dynamic in BPM expanding.

4.5. PROCESS MINING IN BUSINESS PROCESS MANAGEMENT.

Nowadays human resources in BPM or business optimization have close encounters with the emerged discipline of "process mining" (van der. Aalst et al., 2011; Dakic et al., 2019; 2020). According to Turner et al. (2020) Process Mining systems accelerate the process event log visualization and analysis by applying algorithms and mathematical models and procedures. For instance, collecting real data on a daily basis during a task completion, allows for automatically modeling business processes to occur and detect the potential bottlenecks and inefficiencies (Turner et al., 2020).

Van der Aalst (2011) suggests three distinguishing categories of PM: (a) process discovery, (b) conformance checking, and (c) model enhancement. Process discovery refers to forming a process model by defining a group of actions related to tracking event logs in certain business activities. Currently, algorithms originating from processes are developed and applied in a target manner in different fields such as, e-learning, banking, insurance, and health care (Park & Kang 2016). Conformance is related with the diagnostic deviations of an event log and the corresponding process model in order to reinforce the process analysts to evaluate the factors that affect the the quality of discovered process models and enhance elements such us auditing, six sigma, and compliance checking (van der Aalst, 2011). Finally, Model Enhancement describes the analysis of the process model for optimization potentials. For instance, analysis of an event log containing information about resources would discover possible roles, work distribution mechanisms, and resource characteristics (van de Aalst, 2011).

The application of BPM systems such as BPMS, create the perfect conditions for organizations to generate, analyze, perform, apply and plan the prosses models((Oruthotaarachchi & Wijayanayake, 2021). However, the aforementioned models have a low level of interaction with the actual operation of the process (Young, 2019). P process mining is offering an innovative approach to traditional BPM initiatives which is easy applicable and capable of enhancing and optimizing business processes (Dakic et al., 2018). Specifically, process mining techniques facilitate a dynamic system that reflects the changes in the process in real time (Oruthotaarachchi & Wijayanayake, 2021).

The benefits from the conjunction of process mining techniques and traditional BPM are significant (Young, 2019). One of the most frequent and important deficiencies that BPM experts encounter is the efficient administration of the interaction between human resources during the contucted processes (Arias et al., 2018). Process mining can enable the efficient allocation of available human resources for the execution of process activities which will affect the process performance and cost limitations and will enhance the productivity of the resources (Arias et al., 2018). Process mining offers a major contribution to manage such problems within BPM disciplines by providing the appropriate mining tools for processes and relative activities evaluation (Cabanillas et al., 2015). The provision of a google map-like facility to organizations' business processes is one of the most important applications of process mining in BPM (van der Aalst, 2011; Oruthotaarachchi & Wijayanayake, 2021). Oruthotaarachchi & Wijayanayake (2021) suggest the use of constant updates with real-time data through an up-to-date map for each process, so that the information systems could predict a potential "traffic jams" in processes and provide alternative solutions

4.6. PROCESS MINING MATURITY FRAMEWORKS: THE NEED FOR HOLISTIC APPROACHES.

The literature survey presented in this section is based on reviews of researchers that have taken into consideration hundreds of PM Human Resources frameworks and thousands of published journal papers in respected journals. This vast knowledge base proves that the topic has attracted the attention of thousands of researchers as well as the significance of the topic. However, these reviews revealed the need for a holistic-integrated approach that incorporates the most prominent CSFs as well as the most

prominent enablers (or resources). In the literature survey the structured literature survey of Glykas Quality Compass was used (Bougoulia & Glykas, 2022; Glykas, 2022; 2019a; 2019b; 2015; Glykas, et. al., 2018; Glykas & Johnichen, 2017; Glykas, et. al., 2015; Kouroupaki, et. al., 2022; Vitzileou, et. al., 2022; Sachini, et. al., 2022). The data collection started with the search of term process mining and human resources management and a sufficient number of articles were identified. Peer reviewed, academic journals and English as the written language were used as criteria.

According to these criteria, a large number of articles that did not meet them were excluded. Then another key criterion was added, the years of writing the articles. The period 2017 to 2021 was selected. The last criterion selected was the journals in which the articles are published. Process Mining is a concept that is constantly evolving, influenced by the advancement of technology and follows the operational needs of modern organizations and companies. This paper examined research papers published from 2017 to 2021 because it is a concept that has been integrated into the operation of companies on a global scale in recent years and therefore was an urgent need for its evaluation.

Over the past years, Process Mining (PM), as an emerging discipline specifically for business processes management, has been applied in different sectors such as manufacturing supply-chain, government organizations, healthcare system and software engineering (Dakic et al., 2019). Nowadays many researchers use Process Mining (PM) technique (Gupta et al., 2017; 2019; Arias et al, 2018; Batista et al., 2018; Dakic et al., 2018; 2020; Srivastava et al., 2019; Kouhestani & Bakht, 2020; Bicknell & Krebs 2020; Pereira et al., 2020; Wunnik et al., 2021; Nogueira et al., 2021) which is a unique approach to extract workflow models of actual real-world activities. Process Mining (PM) technics apply in to determine, monitor and increase efficiency and effectiveness in different stages of processes and extract knowledge from event logs connected with real events (Dakic et al., 2018; 2020; van der Aalst et al., 2018; 2007). Due to its ability to improve business processes, track bottlenecks, and minimize costs. and be applicable in a variety of industries/organizations is considered a rapidly evolving research field (Dakic et al., 2020; 2018; Djedovic et al. 2017).

Several literature reviews, highlight the application of PM tools in healthcare from different point of view, specifically in clinical guidelines and pathways, oncology field and health care units' management Especially in high demanding and conforming

environments like hospitals with complex procedures and unstable variables, the use of this mining techniques can be proved quite challenging (Martin et al., 2020). Erdogan & Tarhan (2018) presented the results of a Systematic Mapping (SM) which is conducted to structure the information available in the primary studies. Evolutions in data Process Mining algorithms combined with the accessibility of complicated software have formed fertile conditions for innovations and technological applications in simulation modeling (Kouhestani, 2019; Ribeiro et al. , 2020). More specifically Mesabbah et al. (2019) presented a hybrid Process Mining framework for automated simulation modeling for healthcare aiming to improve ER process, arising from the necessity of a highly coordinated team of medical professionals during emergency incidents. In addition Alvarez et al. (2018) attempt to approach the importance of interaction models in Emergency Rooms(ER) processes utilizing process mining techniques, imprinting the the dynamic perspective of healthcare professionals collaboration, In that way is allowed the discovery of role interaction models through the use of real-life clinical data and process mining techniques. According to Pereira et al. (2020) Process mapping in the healthcare environment provides several managerial benefits, which are reflected in the quality of patient care, specifically mapping the processes through a method called “Process Mining" could lead to significant results, such as improving the quality of health services and Furthermore Pereira et al. (2020) developed a Process Mining project methodology in healthcare, which was a case study in a tertiary hospital. The suggested methodology was developed progressively through an overview of the methodological approaches applied on Process Mining in the generic applications of Process Mining in health case studies (Pereira, et al. 2020; Martin, et al., 2020; Dunkl, et al. , 2011).

According to Martin et al. (2020) healthcare systems are facing constantly demanding factors such as low budgets and rising care needs. In order to confront these challenges, practitioners raise awareness related to the medical need and to the assurance of care-services quality (Martin et al. (2020). As a result Martin et al. (2020) designed proposals for enhancing the utilization and perception of Process Mining in healthcare, aiming towards a development of a new research agenda target in Process Mining applications in healthcare.

Process Mining (PM) initiatives have also an impact on Business Process Management. Nowadays there is a growing tendency in global industries in evidence-based management. According to Cho et al. (2017) business process evaluation indicators

tend to focus on process performance underestimating factors related to the evaluation of different perspectives of the business process lifecycle. As a result, Cho et al. (2017) propose a new framework of business process assessment, aiming mainly on the reformation process of the lifecycle phase and combining it with process mining as an operational framework to calculate indicators.

Organizations use Business Process Management to identify opportunities to reduce costs, increase service or product quality, etc. Djedović et al. (2017) presented a new method of enhancing Business Processes using Process Mining tools and standard methods of business process utilization. These days, organizations use Business Process Management (BPM) around the world to maintain a competitive advantage related to their Business Processes (BP). Lamghari et al. (2019a; 2019b) approached business process improvement metrics based on BPM life cycle and Process Mining techniques. Recognizing specific improvement metrics according to the BP types is always a challenge for B Business Process efficiency (Lamghari et al., 2019a; 2019b).

Kouhestani, (2019) argues that Building Information Modelling (BIM) is able to address the demands of the generation and management of the digital representation for building products combining building elements and their information in a unique project (Kouhestani, 2019). Kouhestani (2019), assist BIM and project managers by enabling BIM as a management tool for design processes via some algorithms. In this way, all businesses have continuous improvement. Ribeiro et al. (2020) is focusing on using BIM to capture digital footprints of project actors and create event logs for the design authoring phase of building projects by using files in IFC (Industry Foundation Classes) format, collected during the design process (Kouhestani, 2019). A BIM manager can implement such measures in monitoring, controlling and re-engineering work processes related to design authoring.

Process Mining is a new kind of Business Analytics and has emerged as a powerful tool. Zerbino et al. (2021) conducted a management-oriented literature survey on Process Mining and Business Management to assess the state of the art and to open the way for further study. In that way, stimulates the application of Process Mining in promising business contexts and in mostly unaddressed managerial areas.

Process Mining (PM) plays a major role in strategy. Juhanak, Zounek & Rohlíkova (2019) applied a process-oriented approach investigating perspectives on using Process Mining methods in the context of online learning and assessment. The results of the study highlight that Process Mining methods can be used to detect the standard quiz-

taking behavior pattern and differentiate it from non-standard or aberrant behaviors. These methods simultaneously allow for identifying and differentiating between various types of non-standard student behaviors during involvement with quiz-taking learning activities in LMS (Juhanak et al., 2019, p. 9). Process Mining provides an insight and deep understanding of customer preferences and behaviors. Dogan et al. (2019) analyzed Gender Behaviors via Process Mining in a case study of a shopping mall application. Moreover Michael et al. (2019) developed a privacy-preserving method planned for Process Mining in which information systems provide event data aiming to point out the real implementation of business processes in organizations. The System Design allows to track who does what, when, why, where and how using personal data as the centered view is targeted on the user. As a result an ABAC-based authorization model to support the eight privacy design strategies for event logs was adopted (Michael et al., 2019).

Mannhardt's (2018) study was focused on problematic situations where a multi-perspective approach on processes was necessary to predict potential control-flow deficit, capable of determining the repetition of activities of a process. For instance, topics like flow data, resources allocation, duration and functions which demand specific control and are interconnected should be considered together. Mining techniques attempt to extract non-trivial knowledge and insights from activity logs and use them for further analyses. Yang (2019) explored how Process Mining can be used in real-world process analysis to reveal process insights and help human's decision making by using activity logs and further analyses.

Process mining provides valuable insights into business processes using event logs, whereas goal modeling focuses on the representation and analysis of competing goals of stakeholders. Ghasemi & Amyot (2020) provided a systematic literature review that assessed the state of goal-oriented Process Mining. The literature survey emphasizes the fact that application of process mining in correlation with goal setting lacks in research coherence whereas intention mining reveals a potential topic for further research (Ghasemi & Amyot, 2020). The previous scientific field is developed by taking into account the notions of intention and strategies of the process enactment.

Process Mining is an emerging issue that exposes various challenging topics, with the most significant being presented in the Process Mining Manifesto. Lamghari et al. (2019a; 2019b) provided researchers with the recent challenges that emerged during the passage from data-intensive system to knowledge-intensive system. Implementing

methods to extract knowledge from databases may guide in the decision-making process. Ribeiro et al. (2020) described the challenges and the opportunities that Data Mining methods offer to Human Resources Management and conducted through an application of an algorithm step, the Gower's Distance coefficient.

Process Mining enables organizations to streamline and automate their business processes. Zerbato et al. (2021) reported the results of an empirical study investigating exploration practices in process mining. The primary stages of Process Mining projects usually contain elaboration actions, focusing on data best perception and on process assimilation. Bicknell & Krebs (2021) provide an attempt to unify the optimum reproductive methods into a complicated grouping algorithm in order to progressively optimize the research of suspicious software, cross-platform weaponization, and plan data related to warfare campaigns from the past.

The last decades, the business process is considered as a fertile and emerging research field due to rising academic interest in Process Mining systems and the use of event logs for the invention of new applications. Sikal et al. (2018) propose a novel pattern for variability discovery in configurable processes. Specifically, the application of mining tools in different stages of business processes will significantly automate process systems and aspects related to creativity, discipline and development (Sikal et al., 2018). Martino et al. (2021) identifies and analyzes the 'outlier' processes that have been developed and detect characteristics which could justify delays in the processes' completion.

Process Mining is a useful tool for businesses to improve their performance measurements. Djedovic et al. (2017) improves business processes using Process Mining techniques and standard methods of business process improvement is presented. The implementation of basic performance indicators, for the evaluation of process performances and a process model are also provided along with an improved version of a resource allocation, regarding preconcerted main performance suggestions (Djedovic et al., 2017).

Furthermore, Maddah et al. (2021) suggest an analytic framework for the evaluation of the performance of business departments of an organization aiming in the identification of performance indicators with significant influence and giving space to managers for documented decisions related to data extracted from the operational information systems. In that way, it improves the business departments performance of an

organization with a process perspective and enables managers to make more informed decisions.

According to Dakic et al. (2018; 2019; 2020) process mining utilizes real event data, presented like event logs, which are retrieved mainly from Process-Aware Information Systems (PAIS), in order to configure automated business process models and upgrade the existing ones by comparing event log of the same process, aiming mainly to converge process model analysis and data-oriented analysis. In addition, Dakic et al. (2018; 2020) proposed a useful implementation of Process Mining on manufacturing data retrieved from ERP systems. The limited volume of reference points and mining techniques were approached by the researcher through the comparison of a two well-known process mining systems and result evaluation, aimed at the creation of a new methodological approach for this specific situation (Dakic et al., 2018; 2019; 2020)

In table 4. CSF occurrence per reference as well as the references whose authors propose CSF classification in categories are presented.

Reference	CSF FOCUS											ENABLERS	
	STRATEGIC	CUSTOMER	HUMAN RESOURCES	PROCESS	LEADERSHIP	CHANGE MANAGEMENT	PERFORMANCE MEASUREMENT	CONTINUOUS IMPROVEMENT	INFORMATION AND KNOWLEDE MANAGEMENT	CORPORATE SOCIAL REESPONSIBILITY	SUPPLIER RELATIONSHIP	ORGANIZATIONAL RESOURCES ENABLERS	ORGANIZATIONAL ELEMENT ENABLERS
M Cho, M Song, M Comuzzi ,2017			✓	✓	✓	✓	✓	✓	✓			✓	✓
Almir Djedović; Emir Żunić; Almir Karabegović, 2017		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
M Gupta, A Serebrenik, P Jalote ,2017		✓	✓	✓		✓	✓	✓	✓			✓	✓
Michael Arias, Rodrigo Saavedra, Maira R. Marques, Jorge Munoz-Gama, Marcos Sepúlveda ,2018	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓
F Mannhardt ,2018	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

R Sikal, H Sbai, L Kjiri ,2018		✓	✓	✓	✓	✓	✓	✓	✓			✓	✓
TG Erdogan, A Tarhan ,2018		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
E Batista, A Solanas ,2018		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
W. Van der Aalst 2018		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C Alvarez et al.,2018	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
B. Jokonowo et al. 2018		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
ER Mahendrawathi et al. 2018	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
C. Lim et al. 2018	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Z Lamghari, M Radgui, R Saidi ,2019(1)		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
S Yang ,2019			✓	✓	✓	✓	✓		✓		✓	✓	✓
Kouhestani, Sobhan ,2019			✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Z Lamghari, M Radgui, R Saidi ,2019(2)		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
L Juhaňák, J Zounek, L Rohlíková ,2019		✓	✓	✓	✓		✓		✓				
Onur Dogan, Jose-Luis Bayo-Monton, Carlos Fernandez-Llatas ,2019		✓	✓	✓		✓	✓	✓	✓			✓	✓
M Mesabbah, W Abo-Hamad ,2019		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	
D Dakic, D Stefanovic, T Lolic, D Narandzic ,2019		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S Srivastava, G Srivastava, R Bhatnagar ,2019	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
J Michael, A Koschmider, F Mannhardt ,2019	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
D Dakic et al., 2019		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
N Martin et al., 2020		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
M Ghasemi, D Amyot ,2020			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

S Kouhestani, M Nik-Bakht - Automation in Construction, 2020		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
J Bicknell, W Krebs ,2020	✓	✓	✓	✓	✓		✓	✓	✓		✓		
GB Pereira, EAP Santos, MMC Maceno ,2020			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
R Andrews, CGJ van Dun, MT Wynn, W Kratsch ,2020	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
S. Kedem-Yemini 2020	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
E. Ruschel et al. 2020	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
D. Aloini et al. 2020		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
M. Harl et al. 2020		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
JW Bicknell, WG Krebs ,2021		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BD Martino, LC Cante ,2021			✓	✓	✓	✓	✓	✓			✓	✓	✓
F Zerbato, P Soffer, B Weber ,2021	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Negin Maddah, Emad Roghanian ,2021	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
AF Nogueira, M Zenha-Rela ,2021			✓			✓	✓	✓	✓		✓	✓	✓
Van Wunnik, Lucas Philippe, Volling, Thomas ,2021		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
P Zerbino, A Stefanini, D Aloinia, 2021		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
R. Lorenz et al.2021	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
P. Grajewski et al.2021	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
R. Hicham et al. 2021		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
D. Aloini et al. 2021	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BA. Lameijer et al. 2021	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Table 7*: Literature Survey Finding Table: PM Perspectives and Critical Success Factors.*

CHAPTER 5. DISCUSSION AND CONCLUSIONS

Based on the literature survey we identified research gaps based on recommendations of respected SM scholars and formulated the research questions. Section three is focused our literature survey on the identification of the most well-known SM maturity assessment frameworks.

Our literature survey presented in sections 3.2, 3.3 and 3.4 has provided an insight on the fields of management-organizational theory fields that have been applied in SM (RQ1). Also it is elaborated, in these sections, on how these fields can become a basis of a holistic approach (RQ2) and what are the CSFs and enablers that should compose a proposed holistic approach (RQ3 and RQ4). In the final sections (5 and 6) a novel holistic approach for SM implementation maturity assessment is proposed.

A summary table of these identified frameworks was presented in section 3.4. In the summary table, presented above, the CSFs used by each framework with the aim of specifying the most prominent ones is highlighted. In the same section existing applications of management science concepts to SM is presented and thus provided the theoretical underpinnings for the validation of each CSF. Also, a classification of enables in two categories is identified, namely: organizational governance and organizational resources. In section five, a holistic SM maturity assessment framework called Glykas Sport Management Compass (GSMC) is presented. Assessment in the proposed framework is performed with the use of a 10 by 10 matrix composed of the 10 most prominent CSFs identified and validated in the previous section and ten enablers four for organizational governance and six for organizational resources.

In section 3.6 the application of the proposed framework to the COSMA items-competencies was presented. The resulting proposed tracking matrix is requested by the COSMA accreditation. The matrix was created by associating COSMA items-competencies to GSMC cells and thus associating them with the corresponding critical success factor and the corresponding organizational governance or resource enabler. In terms of research contributions of our research outcomes-proposals. Both the proposed

GSMC maturity assessment framework and the GSMC COSMA tracking matrix are novel approaches and there is not identified any similar approach in the literature to date. The major limitations in the present attempt are related to the immaturity of the field of SM implementation maturity assessment frameworks as well as the vast variety of existing applications to different SM event types and SM sport organizations. The limitations experienced justify the shortcomings identified by Laurell and Soderman, (2018) who argued that the lack of "interplay" between management theories and SM is due to their application to quite diverse SM topics, ranging from a vast variety of sports and sport event types. Our imminent research efforts focus in developing a full set of metrics per GSMC COSMA tracking matrix cell of figure 5. Applying the proposed GSMC COSMA tracking matrix and the GSMC framework of figure 4 in various SM related organizations is also commenced.

The resulting GSMC COSMA tracking matrix could be used by both academics and practitioners that have been or are in the process of being accredited by COSMA. The same applies for the ones that would like to further research or respectively apply the competency skills scale presented in table 1 for assessing the human resources in SM organizations.

The empty cells of the GSMC COSMA tracking matrix provide very useful data in analysis. For example, the absence of any association of items-competencies with cells associated with the "performance measurement", "change management" and "continuous improvement" CSFs proves that there is no specific guidance on the achievement of these CSFs and their associated enablers. Therefore, each organization using the resulting GSMC COSMA tracking matrix should define its own performance metrics for the measurement of the achievement-improvement of the CSFs a finding also suggested by COSMA (COSMA accreditation manual, point 6 of page14 https://www.cosmaweb.org/uploads/2/4/9/4/24949946/accreditation_principles_march_2022.pdf).

Similarly, the respective organization should also specify the way to manage change and achieve continuous improvement. The later CSF is achieved by the GSMC framework as presented in figure 4. In the current research a full set of metrics per GSMC COSMA tracking matrix cell was developed and presented.

Furthermore, regarded to process mining a literature survey was presented aiming to identifying the most prominent CSFs that can be used in assessing process mining implementation maturity assessment.

Specifically, the ten most prominent CSFs was identified. There are five **core CSFs**, namely the ones assessing the contribution of process mining implementations in achieving: *Strategic Customer, People, Leadership and Process* related objectives or measures. There are three **intra-core CSFs** that assess the implementation achievements of the previous five critical CSFs in relation to: *Performance Measurement, Change Management and Continuous Improvement*. Also two **auxiliary CSFs** that are used recently in many process mining implementation initiatives was identified: *Knowledge-Information Management and Stakeholder Management-Corporate Social Responsibility*.

In future research the proposed of CSFs will be included in a maturity framework that will encompass maturity stages and the acceptable result ranges of each of the ten CSFs in each stage.

6. REFERENCES

Abdolvand, N., Albadvi, A. & Ferdowsi, Z. (2008). Assessing readiness for business process reengineering. *Business Process Management Journal*, 14(4), 497-511.

Adair, D. (2017). Sport Management with Historical Perspective. *The International Journal of the History of Sport*, 34:5-6, 309-314. doi: 10.1080/09523367.2017.1378182

Agha, N. & Dixon, J. C. (2021). The Uniqueness of Spectator Sport from a Strategic Management Perspective: The Case for Spectatoritis. *Journal of Global Sport Management*, 6:1, 7-29. doi: 10.1080/24704067.2019.1641830

Ahmad, H., Francis, A. & Zairi, M. (2007). Business process reengineering: Critical success factors in higher education. *Business Process Management Journal*, 13(3), 451-469. doi: 10.1108/14637150710752344

Alford, J. & Head, B.W. (2017). Wicked and less wicked problems: A typology and contingency framework. *Policy and Society*, 36 (3), pp. 397-413.

Algermissen, L., Delfmann, P. and Niehaves, B. (2005). Experiences in process oriented reorganization through reference modelling in public administrations – the case study REGIO @ KOMM. *Proceedings of the European Conference on Information Systems (ECIS)*, Regensburg, p. 134.

Aloini, D., Benevento, E., Stefanini, A. & Zerbino, P., (2020). Process fragmentation and port performance: Merging SNA and text mining, *International Journal of Information Management*, Volume 51, April 2020, 101925 - Elsevier.

Aloini, D., Colladon, A.F., Gloor, P. & Guerrazzi, E. (2021). Enhancing operations management through smart sensors: measuring and improving well-being, interaction and performance of logistics workers. *TQM Journal*, 2021 - emerald.com.

Alvarez, C., Rojasa, E., Ariasa, M., Munoz-Gama, J., Sepúlveda, M., Herskovic, V. & Capurro, D. (2018). Discovering role interaction models in the Emergency Room using Process Mining, *Journal of Biomedical Informatics*. Volume 78, pp: 60-77, https://doi.org/10.1016/j.jbi.2017.12.015

Amis, J. & Slack, T. 1996, The Size-Structure Relationship in Voluntary Sport Organizations. *Journal of Sport Management*, vol. 10, no. 1, pp. 76-86.

Anagnostopoulos, C., López-Carril, S., & Żyśko, J. (2021). Sport as a vehicle for implementing corporate social responsibility: firms listed on the Warsaw and Moscow stock exchanges. *European Journal of International Management*, *15*(2-3), 367-390.

Andrews, R., van Dun, C. G. J., Wynn, M. T., Kratsch, W., Röglinger, M. K. E., & Hofstede, A. H. M. ter. (2020). Quality-Informed Semi-Automated Event Log Generation for Process Mining. *Decision Support Systems*, *113265*. doi:10.1016/j.dss.2020.113265

Anthony, R. N. & Young, D. W. (2002). *Management Control in Nonprofit Organizations*. New York: McGraw-Hill.

Arias, M., Saavedra, R., Marques Samary, M., Munoz-Gama, J. & Sepulveda, M. (2018). Human resource allocation in business process management and process mining: A systematic mapping study. *Management Decision*, 56*(2), 376–405.* doi:10.1108/md-05-2017-0476

Ashraf, Z., Afshan, G., & Sahibzada, U. F. (2021). Unpacking strategic corporate social responsibility in the time of crisis: a critical review. *Journal of Global Responsibility*, 13(2), 127-156.

Babaei, M., Noorbakhsh, M., Khodayar,i A., Nourbakhsh, P. (2020). The Effect of Modernization on Process of Change Management with the Mediating Role of Policy Making in Olympic Sports. *Sport Management Studies*, (), -. doi: 10.22089/smrj.2020.8900.3030

Bamford, D., Hannibal, C., Kauppi, K. & Dehe, B. (2018). Sports operations management: examining the relationship between environmental uncertainty and quality management orientation. *European Sport Management Quarterly*, 18:5, 563-582. doi: 10.1080/16184742.2018.1442486

Bartlett, J. D & Drust, B. (2021). A framework for effective knowledge translation and performance delivery of Sport Scientists in professional sport. *European Journal of Sport Science*, 21:11, 1579-1587, doi: 10.1080/17461391.2020.1842511

Battilana, J. & Dorado, S., (2010). Building Sustainable Hybrid Organizations: The Case of Commercial Microfinance Organizations. *Academy of Management Journal*, 53 (6), pp. 1419– 1440.

Batista, Edgar; Solanas, Agusti (2018). Process Mining in Healthcare: A Systematic Review. *[IEEE 2018 9th International Conference on Information, Intelligence, Systems and Applications (IISA) - Zakynthos, Greece (2018.7.23-2018.7.25)] 2018 9th International Conference on Information, Intelligence, Systems and Applications (IISA) -. , (), 1–6.* doi:10.1109/IISA.2018.8633608

Becker, S. D., Mahlendorf, M. D., Schäffer, U. & Thaten, M. (2016*)*. Budgeting in times of economic crisis. *Contemporary Accounting Research,* 33, 1489-1517.

Behnam, M., Delshab, V. & Trong Tuan, L. T. (2022). Perceived service innovation in non-profit sports clubs: the antecedents and consequence. *European Sport Management Quarterly*, 22:3, 440-462, doi: 10.1080/16184742.2020.1799051

Berente, N., Vandenbosch, B. & Aubert, B. (2009). Information flows and business process integration. Business Process Management Journal, 15 (1), 119-141.

Beverungen, D., Buijs, J., Becker, J., Ciccio, C., van der Aalst, W., Bartelheimer, C., Brocke, J., Comuzzi, M., Kraume, K., Leopold, H., Matzner, M., Mendling, J., Ogonek, N., Post, T., Resinas, M., Revoredo, K., del-Rı´o-Ortega, A., La Rosa, M., Santoro, F., Solti, A., Song, M.,Stein, A., Stierle, M., Wolf, V. (2020). Seven Paradoxes of Business Process Management in a Hyper-Connected World. *Business & Information Systems Engineering*. doi: 10.1007/s12599-020-00646-z.

Bicknell, J. W., & Krebs, W. G. (2021). Detecting botnet signals using process mining. *Computational and Mathematical Organization Theory*, 27, 161–178. doi:10.1007/s10588-020-09320-x

Biscaia, R., Yoshida, M.,& Kim, Y. (2021). Service quality and its effects on consumer outcomes: a meta-analytic review in spectator sport. *European Sport Management Quarterly*. doi: 10.1080/16184742.2021.1938630

Bititci, U., Melnyk, S., Platts, K., Tobias, J. & Andersen, B. (2012). Performance Measurement: Challenges for Tomorrow. *International Journal of Management Reviews*. Vol 14, 305-327, British Academy of Management.

Bizagi. "Bizagi." https://www.bizagi.com/ (accessed. 1, March 2022) jBPM. "jBPM." https://www.jbpm.org/ (accessed. 1, March 2022)

Bocarro, J., Byers, T. & Carter, L. (2018). Legacy of sporting and non-sporting mega event research: what next? In Legacies and mega events: Fact or fairy tale. *Routledge, Oxon*, pp. 7-24.

Breitbarth, T., Walzel, S. & van Eekeren, F. (2019). European-ness in social responsibility and sport management research: anchors and avenues. *European Sport Management Quarterly*. 19:1, 1-14, doi: 10.1080/16184742.2019.1566931

Brown, S., & Getz, D. (2015). Event evaluation: Definitions, concepts and a state of the art review. *International Journal of Event and Festival Management*, 6.

Brzychczy, E. (2017). Use of process mining techniques in an enterprise. *Inzynieria Mineralna*, (2), 237-244. doi: 10.29227/im-2017-02-26

Buzacott, J.A. (1996). Commonalities in reengineered business processes: models and issues. *Management Science*, 42(5), 768-782.

Byers, T., Hayday, E., Pappous, A. (2020). A new conceptualization of mega sports event legacy delivery: Wicked problems and critical realist solution. *Sport Management Review 23*, pp. 171-182.

Byers, T., Henry, I. & Slack, T. (2007). Chapter 14 - *Understanding Control in Voluntary Sport Organizations.*

Byun, J., & Leopkey, B. (2021). A resource-based view of post-Games legacy strategy: the case of the 2018. PyeongChang Olympic games. *Sport in Society*, 24(12), 2139-2158.

Carlini, J., Pavlidis, A., Thomson, A. & Morrison, C. (2021). Delivering on social good - corporate social responsibility and professional sport: a systematic quantitative literature review. *Journal of Strategic Marketing*. doi: 10.1080/0965254X.2021.1881147

Carlsson-Wall, M., Kraus, K. & Messner, M. (2016). Performance measurement systems and the enactment of different institutional logics: Insights from a football organization. *Management Accounting Research*, vol. 32, pp. 45-61.

Castro, B. K. d. A., Dresch, A. & Veit, D. R. (2019). Key critical success factors of BPM implementation: a theoretical and practical view. *Business Process Management Journal*, 26(1), 239-256. doi: 10.1108/BPMJ-09-2018-0272

Chalip, L., Green, B.C., Taks, M. & Misener, L. (2016). Creating sport participation from sport events: making it happen. *International Journal of Sport Policy and Politics.* doi: 10.1080/19406940.2016.1257496

Chappelet, J.L. & Mrkonjic, M. (2019). Assessing sport governance principles and indicators. In M. Winand & C. Anagnostopoulos (Eds.). *Research handbook on sport governance* (pp. 10–28). Edward Elgar.

Chen, C. Y. & Lin, Y. H. (2021). Comparison Between Various Corporate Social Responsibility Initiatives Based on Spectators Attitudes and Attendance Intention for a Professional Baseball Franchise. *Sport Marketing Quarterly*, *30*(2).

Chen, S., Zheng, J. & Dickson, G. (2018). An Organizational LifeCycle Approach to Exploring the EliteSport Legacy of Summer Olympic Host Nations: The Casesof China (Beijing 2008) and Australia (Sydney 2000). *The International Journal of the History of Sport*, 35:12-13, 1276-1305. doi: 10.1080/09523367.2019.1583646.

Chenhall, R.H. (2003). Management control systems design within its organizational context: findings from contingency-based research and directions for the future. *Accounting Organizations and Society 28,* pp. 127–168.

Child, J. (2005). *Organization - Contemporary Principles and Practice*. Singapore: Blackwell Publishing.

Cho, M., Song, M., Comuzzi, M. & Yoo S. (2017). Evaluating the effect of best practices for business process redesign: An evidence-based approach based on process mining techniques. *Decision Support System*, 104, 92-103. https://doi.org/10.1016/j.dss.2017.10.004

Chountalas, P. & Lagodimos, A. (2018). Paradigms in business process management specifications: a critical overview. *Business Process Management Journal*, 25. doi: 10.1108/BPMJ-01-2018-0023

Chutiphongdech, T., & Kampitak, T. (2022) A Systematic Review of the Key Success Factors of Sports Event Management: A Resource-based View Approach. *Annals of Applied Sport Science,* 0-0. Article in press.

Clarke, J., Kearns, A., & Cleland, C. (2016). Spatial scale, time and process in mega-events: The complexity of host community perspectives on neighbourhood change. *Cities*, 53, 87–97.

Cooper, C. & Joyce, Y. (2013). Insolvency practice in the field of football. *Accounting, Organizations & Society,* vol. 38, no. 2, pp. 108-129.

Corallo, A., Lazoi, M. & Striani F. (2020). Process mining and industrial applications: A systematic literature review. *Knowledge and Process Management,* 27(3), 225–233. https://doi.org/10. 1002/kpm.1630

Coskun, S., Basligil, H. & Baracli, H. (2008). A weakness determination and analysis model for business process improvement. *Business Process Management Journal*, 14 (2), 243-261.

Cruickshank, A. & Collins, D. (2012). Change Management: The Case of the Elite Sport Performance Team. *Journal of Change Management*, 12:2, 209-229, doi: 10.1080/14697017.2011.632379

Cserhát, G. & Polák-Weldon, R. (2013). Success factors of international sporting events in different regions of Europe. doi: 10.19041/Abstract/2013/.

Cunningham, G. (2013). Theory and theory development in sport management. *Sport Management Review*, 16 (1), pp. 1-4.

Dakic, D., Stefanović, D., Cosic, I., Lolić, T. & Medojevic, M. (2018). Business Process Mining Application: A Literature Review, pp. 0866-0875.

Dakic, D., Stefanovic, D., Lolic, T., Narandzic, D. & Simeunovic, N. (2020). Event log extraction for the purpose of process mining: a systematic literature review. In: Prostean, G., Lavios Villahoz, J., Brancu, L., Bakacsi, G. (eds). Innovation in Sustainable Management and Entrepreneurship. SIM 2019. Springer Proceedings in Business and Economics. Springer, Cham. https://doi.org/10.1007/978-3-030-44711-3_22

Davenport, T.H. (1993). Process Innovation: *Reengineering Work Through Information Technology*, Harvard Business School Press: Boston, MA.

Davila, A. & Foster, G. (2007). Management control systems in early-stage startup companies. *Accounting Review*, vol. 82, no. 4, pp. 907-937.

De Bosscher, V., Dooms, M., De Cocq, S., & De Rycke, J. (2021). Stakeholder inclusion in elite sport. *In Stakeholder Analysis and Sport Organisations* (pp. 31-48): Routledge.

Delshab, V., Winand, M., Boroujerdi, S. S, Hoeber, L. & Mahmoudian, A. (2022). The impact of knowledge management on performance in nonprofit sports clubs: the mediating role of attitude toward innovation, open innovation, and innovativeness. *European Sport Management Quarterly*, 22:2, 139-160, doi: 10.1080/16184742.2020.1768572

Dietl, H.M. & Franck, E. (2007). Governance Failure and Financial Crisis in German Football, *Journal of Sports Economics*, vol. 8, no. 6, pp. 662-669.

Djedović, A., Żunić, E. & Karabegović, A. (2017). A combined process mining for improving business process. *Conference on Smart* …, 2017 - ieeexplore.ieee.org.

Dogan, O., Bayo-Monton, J.-L., Fernandez-Llatas, C. & Oztaysi, B. (2019). Analyzing of Gender Behaviors from Paths Using Process Mining: A Shopping Mall Application. *Sensors*, 19(3), 557. doi:10.3390/s19030557

Doherty, A. (2013). Investing in sport management: The value of good theory. *Sport Management Review*, 16 (1), pp. 5-11.

Duclos-Bastías, D., Giakoni-Ramírez, F., Parra-Camacho, D., Rendic-Vera, W., Rementería-Vera, N. & Gajardo-Araya, G. (2021). Better Managers for More Sustainability Sports Organizations: *Validation of Sports Managers Competency Scale (COSM) in Chile.* Sustainability, 13, 724. https://doi.org/10.3390/su13020724

Dumas, M., La Rosa, M., Mendling, J. & Reijers, H. A. (2013). *Fundamentals of Business Process Management.* Berlin, Heidelberg: Springer. https://doi.org/10.1007/978-3-662-56509-4

Dunkl, R., Fröschl, K. A., Grossmann, W., & Rinderle-Ma, S. (2011). Assessing Medical Treatment Compliance Based on Formal Process Modeling. *Information Quality in e-Health*, 533–546. doi:10.1007/978-3-642-25364-5_37

Dury, C. (2004). *Management and cost accounting*. London: Thomson Learning.

Ebadi Barbain, H., Sadegehi Burojerdi, S., & Saboonchi, R. (2022). The role of professional ethics and social responsibility on athletes' satisfaction. *Sociological studies*, *14*(53), 111-128.

Ekblom, E., Stengård, D. (2014). Management control systems as a package in a hybrid organization. *Department of Accounting*, Stockholm School of Economics.

Erdogan, TG. & Tarhan, A. (2018). Systematic mapping of process mining studies in healthcare, *IEEE Access*, 2018 - ieeexplore.ieee.org.

Fahlén, J. & Stenling, C. (2019). (Re)conceptualizing institutional change in sport management contexts: the unintended consequences of sport organizations' everyday organizational life, *European Sport Management Quarterly*, 19:2, 265-285, doi: 10.1080/16184742.2018.1516795

Fahlen, J. & Stenling, C. (2016). The order of logics in Swedish sport – feeding the hungry beast of result orientation and commercialization. *European Journal for Sport and Society*, vol. 6, no. 2, pp. 121-134.

Fahlén, J. (2006). Structures Beyond the Frameworks of the Rink: *On Organization in Swedish Ice Hockey*, PhD Thesis, Umeå University.

Feldman, J. M., & Lynch, J. G. (1988). Self-generated validity and other effects of measurement on belief, attitude, intention, and behavior. *Journal of Applied Psychology*, 73(3), 421–435.

Ferkins, L., Shilbury, D. & McDonald, G. (2005). The role of the board in building strategic capability: towards an integrated model of sport governance research. *Sport management review*, 8(3), 195-225.

Gammelsater, H. & Senaux, B. (2011*). The Organisation and Governance of Top Football Across Europe An Institutional Perspective.* New York: Routledge.

García-Vallejo, A.M., Albahari, A., Añó-Sanz, V. & Garrido-Moreno, A. (2020). What's Behind a Marathon? *Process Management in Sports Running Events*, 12(15):6000. https://doi.org/10.3390/su12156000

Ghasemi, M. & Amyot, D. (2020). From event logs to goals: a systematic literature review of goal-oriented process mining. *Requirements Engineering*, 25, 67–93. https://doi.org/10.1007/s00766-018-00308-3

Gibson, L. & Groom, R. (2021). Understanding 'Vulnerability' and 'Political Skill' in Academy Middle Management During Organisational Change in Professional Youth Football. *Journal of Change Management*, 21:3, 358-382. doi: 10.1080/14697017.2020.1819860

Girginov, V. & Hills, L. (2009). The political process of constructing a sustainable London Olympics sports development legacy. *International Journal of Sport Policy and Politics*, 1:2, 161-181. doi: 10.1080/19406940902950713

Glykas, M. (2022). Quality management implementation maturity assessment in the food industry: glykas quality compass assessment on ISO 22000. *International Journal of Productivity and Quality Management*, **1**(1), 1. https://doi.org/10.1504/ijpqm.2022.10047704

Glykas, M. (2022). Quality management implementation maturity assessment in the food industry: glykas quality compass assessment on ISO 22000. International Journal of Productivity and Quality Management, 1 (1), 1. https://doi.org/10.1504/ijpqm.2022.10047704

Glykas, M. (2019a). Quality Management Review: A Case Study of the Application of the Glykas Quality Implementation Compass. *Journal of Multidisciplinary Engineering Science and Technology*, 6(12). https://www.jmest.org/wp-content/uploads/JMESTN42353230..pdf

Glykas, M. (2019b). Audit Process Quality Management in the Airlines Sector with Glykas Quality Compass. *International Journal of Management Sciences and Business Research*, 8(12), 155-183. https://doi.org/10.5281/zenodo.3613296

Glykas, M., Valiris, G., Kokkinaki, A., & Koutsoukou, Z. (2018). Banking Business Process Management Implementation. *International Journal of Productivity Management and Assessment Technologies*, 6(1), 50-69. https://doi.org/10.4018/IJPMAT.2018010104

Glykas, M. & George, J. (2017). Quality and process management systems in the UAE maritime industry. *International Journal of Productivity Management and Assessment Technologies* (IJPMAT), 5(1), 20- 39.

Glykas, M. & Johnichen G. (2017). Quality and Process Management Systems in the UAE Maritime Industry. *International Journal of Productivity Management and Assessment Technologies*, 5(1), 20-39. https://doi.org/10.4018/IJPMAT.2017010102

Glykas, M. (2015). Cluster Business Processes Management with 3D Immersive Environments. *International Journal of E-Entrepreneurship and Innovation*, 5(2), 1-23. https://doi.org/10.4018/IJEEI.2015070101

Glykas, M., Bailey, O. H., Al Maery, M. O., & Al Maery, N. O. (2015). Process and Quality Management in Vocational Education & Training (VET). *International Journal of Management Sciences and Business Research*, 4(10). https://www.ijmsbr.com/Volume%204%20Issue%2010%20Paper%2013%20Final.pdf

Glykas, M. (2014). Fuzzy Cognitive Strategic Maps. In: Papageorgiou, E. (Eds.), Fuzzy Cognitive Maps for Applied Sciences and Engineering. *Intelligent Systems Reference Library*, Vol. 54. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-39739-4_17

Goodrick, R., Reay, T. (2011). Constellations of Institutional Logics Changes in the Professional Work of Pharmacists. *Work and Occupations*, 38(3), 372-416.

Goodyear, M. (2012). Organizational Change Contributions to E-Government Project Transitions. *Managing E-Government Projects: Concepts, Issues, and Best Practices*, 1-21, 01/01. doi: 10.4018/978-1-4666-0086-7.ch001.

Goretzki, L., Kraus, K. (2020). Balancing diagnostic and interactive control systems. *Stockholm School of Economics.*

Grajewski, P., Sliż, P. & Tenbrink, C. (2021). Assessing efficiency and effectiveness in the automotive after-sales processes. *International Journal of Services and Operations Management*, 1-1. doi: 10.1504/IJSOM.2021.10039383

Gratton, C. & Preuss, H. (2008). Maximizing Olympic impacts by building up legacies. *The International Journal of the History of Sport.* 25 (14), pp. 1922-193.

Greenwood, R., Raynard, M., Kodeih, F., Micelotta, E.R., Lounsbury, M. (2011). *Institutional complexity and organizational responses.* Acad. Manage. Annals 5, 317–371.

Gupta, S., Modgil, S. & Gunasekaran, A. (2019). Big data in lean six sigma: a review and further research directions. *International Journal of Production Research*, 1-*23.* doi:10.1080/00207543.2019.1598599

Gupta, M. (2017). Improving Software Maintenance Using Process Mining and Predictive Analytics. *IEEE International Conference on Software Maintenance and Evolution (ICSME)*, Shanghai, China: IEEE. doi:10.1109/icsme.2017.39

Hammer, M. & Champy, J. (1993). *Reengineering the Corporation: A Manifesto for Business Revolution. New York:* Harper Business.

Hared, B. A., Abdullah, Z., Huque, S. M. R. (2013). Management control systems: A review of literature and a theoretical framework for future researchers. *European Journal of Business and Management*, 5 (26).

Harl, M., Weinzierl, S. & Stierle, M. (2020). Explainable predictive business process monitoring using gated graph neural networks. *Journal of Decision Systems*, 2020 - Taylor & Francis.

Hassan, D., & Hamil, S. (2010). Models of football governance and management in international sport. *Soccer and Society*, vol. 11, no. 4, pp. 343-353.

Herold, D. M., Breitbarth, T., Schulenkorf, N., & Kummer, S. (2019). Sport logistics research: Reviewing and line marking of a new field. *The International Journal of Logistics Management*, 31(2), 357–379.

Herold, D. M., Harrison, C. K., & Bukstein, S. J. (2022). Revisiting organizational identity and social responsibility in professional football clubs: the case of Bayern Munich and the Qatar sponsorship. *International Journal of Sports Marketing and Sponsorship*, (ahead-of-print).

Hicham, R. & Anis, BM. (2020). Processes meet Big Data: Scaling process discovery algorithms in Big Data environment. *Journal of King Saud University - Computer and Information Sciences*, 2020 – Elsevier.

Hofmann, S., Wald, A., & Gleich, R. (2012). Determinants and effects of the diagnostic and interactive use of control systems: An empirical analysis on the use of budgets. *Journal of Management Control*, 23(3), 153–182.

Hofstede, G. (1980). *Cultures' consequences.* Beverly Hills: Sage Publications.

Hofstede, G. (1984). Cultural dimensions in management and planning. *Asia Pacific Journal of management*, vol. 1, nr. 2, ss. 81-99.

Horngren, C., T., Sundem, G., L. & Stratton, W., O. (2005). *Introduction to Management Accounting.* 13ed. Upper Saddle River: Pearson.

Hoye, R., Nicholson, M., Smith, A., Stewart, B. & Westerbeek, H. (2006). *Sport Management - Principles and Applications*. Oxford: Butterworth-Heinemann.

Huang, Z., Lu, X., & Duan, H. (2011). Mining association rules to support resource allocation in business process management. *Expert Systems with Applications, 38(8), 9483–9490.* doi:10.1016/j.eswa.2011.01.146

Huang, Z., van der Aalst, W. M. P., Lu, X. & Duan, H. (2011). Reinforcement learning based resource allocation in business process management. *Data & Knowledge Engineering*, 70,(1), 127- 145. doi: https://doi.org/10.1016/j.datak.2010.09.002.

Houy, C., Fettke, P. and Loos, P. (2010). Empirical research in business process management – analysis of an emerging field of research. *Business Process Management Journal*, 16(4), 619-661. https://doi.org/10.1108/14637151011065946

Jaeger, J. (2021). Football fans and stakeholder theory–A qualitative approach to classifying fans in Germany. *Sport, Business and Management: An International Journal*, 11(5), 598-619.

Janke, R., Mahlendorf, M., Weber, J. (2014). An exploratory study of the reciprocal relationship between interactive use of management control systems and perception of negative external crisis effects. *Management Accounting Research*, 25(4).

Javidroozi, V., Shah, H., & Feldman, G. (2019). A Framework for Addressing the Challenges of Business Process Change during Enterprise Systems Integration. *Business Process Management Journal*, vol. ahead-of-print. doi: 10.1108/BPMJ-03-2019-0128.

Jensen, F. & Helber, M. (2004). *Goal differences in non-profit associations*, Master Thesis: Linköping University.

Jensen, J. A., Wakefield, L., & Walkup, B. (2022). Sponsorship and the Resource-Based View of the Firm: Effects on the Acquisition of Resources, Demand, the Recruitment of Human Capital, and Organizational Performance. *Journal of Sport Management*, 1(aop), 1-15.

Jokonowo, B., Claes, J. & Sarno, R. (2018). Process mining in supply chains: a systematic literature review. *International Journal of Electrical and Computer Engineering* (IJECE) Vol.8, No.6, December 2018, pp. xx~xx ISSN: 2088-870, 2018 - researchgate.net.

Juhaňák, L., Zounek, J. & Rohlíkova, L. (2019). Using process mining to analyze students' quiz-taking behavior patterns in a learning management system, *Computers in Human Behavior*, 92, 496-506. https://doi.org/10.1016/j.chb.2017.12.015

Kassahun, A. & Molla, A. (2011). BPR Complementary Competence For Developing Economy Public Sector. *A Construct And Measurement Instrument*, 92. https://aisel.aisnet.org/pacis2011/92

Kedem-Yemini, S. (2020). Analysis of Cargo Release Services with Process Mining, *International Journal of Industrial Engineering*, 2020 - ieomsociety.org.

Kennedy, A., Coughlan, J. & Kelleher, C. (2010). Business Process Change in E-Government Projects: The Case of the Irish Land Registry. *Technology Enabled Transformation of the Public Sector: Advances in E-Government*, 9-22. doi: 10.4018/978-1-61520-967-5.ch068

Kerwin, S., & Doherty, A. (2019). Board dynamics in non-profit sport organizations: Contemporary research directions. In M. Winand & C. Anagnostopoulos (Eds.), *Research handbook on sport governance* (pp. 439–454). Edward Elgar.

Kimura, S., Mourdoukoutas, P. (2000). Effective integration of management control systems for competing in global industries. *European Business Review*, 12(1), 41-45.

Kirchmer, M. (2017). *High performance through business process management*. Switzerland: Springer Cham. https://doi.org/10.1007/978-3-319-51259-4

Kittikumpanat, M. (2021). A Conceptualized Model of Digital Transformation for Sport Organization in Thailand. *Turkish Journal of Computer and Mathematics Education*, Vol.12 No.8, pp. 2270-2276.

Klein, B. (1995). The economics of franchise contracts. *Journal of Corporate Finance*, 2(1-2), 9-37. doi:10.1016/0929-1199(95)00003-q

Koenigstorfer, J., Bocarro, J., Byers, T., Edwards, M., Jones, G. & Preuss, H. (2019). Mapping research on event-attributed installations, consequences, and stakeholder evaluations considered in empirical studies on the legacy of mega sporting events. Leisure Studies (2019) in Review.

Koronios, K., Vrontis, D. & Thrassou, A., (2021). Strategic sport sponsorship management – A scale development and validation. *Journal of Business Research*, Volume 130, June 2021, Pages 295-307. https://doi.org/10.1016/j.jbusres.2021.03.031

Kouhestani, S. & Nik-Bakht, M. (2020). IFC-based process mining for design authoring. *Automation in Construction*, 112, 103069. doi:10.1016/j.autcon.2019.103069

Kouhestani, S. (2019). Integration of Building Information Modeling (BIM) and Process Mining for Design Authoring Processes, - spectrum.library.concordia.ca.

Kouroupaki, I., Mpafas, C. & Glykas, M. (2022). Fuzzy Cognitive Strategic Map Hierarchies in Performance Measurement, Modeling and Reorganization. In & E. N. Degirmenci (Ed.), New Frontiers for Management and Strategy in the Post-Pandemic Era, vol 130. *European Proceedings of Social and Behavioural Sciences* (pp. 239-259). *European Publisher*. https://doi.org/10.15405/epsbs.2022.12.02.18

La Rosa, M., Dumas, M., Uba, R., & Dijkman, R. (2013). Business Process Model Merging: An Approach to Business Process Consolidation. *ACM Transactions on Software Engineering and Methodology*, *22(2), 1–42*. doi:10.1145/2430545.2430547

Lameijer, BA., Pereira, W. & Antony, J. (2021). The implementation of Lean Six Sigma for operational excellence in digital emerging technology companies. *Journal of Manufacturing*, 2021 - emerald.com.

Lamghari, Z., Radgui, M., Saidi, R. & Rahmani, M. D. (2019a). Defining business process improvement metrics based on BPM life cycle and process mining techniques, *… Journal of Business …,* 2019 - inderscienceonline.com

Lamghari, Z., Radgui, M., Saidi R. & Rahmani, M. D. (2019b). Passage challenges from data-intensive system to knowledge-intensive system related to process mining field, ArabWIC 2019: Proceedings of the ArabWIC 6th *Annual International Conference* Research TrackMarch 2019 Article No.: 3 Pages 1-6. https://doi.org/10.1145/3333165.3333168

Langfield-Smith, K. (1997*).* Management control systems and strategy: a critical review. *Accounting Organizations and Society*, 22 (2), pp. 207–232.

Laurell, C. & Soderman S., (2018). Sport in business studies: a state-of-the-art literature review. *Sport, Business and Management: An International Journal*, Vol. 8 No. 5, 2018, pp. 529-546. doi: 10.1108/SBM-09-2017-0042

Lauster, C., Klinger, P., Schwab, N. & Bodendorf, F. (2020). Literature Review Linking Blockchain and Business Process Management. *15th International Conference on Wirtschaftsinformatik*, 1802-1817. Potsdam, Germany.

Leiñena, X. M., & Merino, J. D. G. (2021). Social value measurement in basketball clubs: is it possible? *CIRIEC- España, revista de economía pública, social y cooperativa*, (101), 57-83.

Lim, C., Kim, M.J., Kim, K.H. & Kim, K.J. (2018). Customer process management: A framework for using customer-related data to create customer value. *Journal of Service Management*, ISSN: 1757-5818, 2018 - emerald.com.

Lorenz, R., Senoner, J. & Sihn, W. (2021). Using process mining to improve productivity in make-to-stock manufacturing. *International Journal of Production Research*, Volume 59, 2021 - Issue 16.

Macintosh, N. B. (1994). *Management accounting and control systems: an organizational and behavioral approach.* Chichester: Wiley.

Maddah, N. & Roghanian, E. (2021). Data-driven performance management of business units using process mining and DEA: case study of an Iranian chain store. *International Journal of Productivity and …,* 2021 - emerald.com.

Mahendrawathi, E.R., Arsad, N. & Astuti, H.M. (2019). Analysis of production planning in a global manufacturing company with process mining. *Journal of Enterprise Information Management, 31(2), 317–337.* doi:10.1108/jeim-01-2017-0003

Mair, J. & Whitford, M (2013). An exploration of events research: Event topics, themes and emerging trends. *International Journal of Event and Festival Management*, 4 (1) pp. 6-30.

Malinova, M., Hribar, B. & Mendling, J. (2014). A framework for assessing BPM success. *ECIS 2014 Proceedings - 22nd European Conference on Information Systems*, 0-15. http://aisel.aisnet.org/ecis2014?utm_source=aisel.aisnet.org%2Fecis2014%2Fproceedings%2Ftrack06%2F5&utm_medium=PDF&utm_campaign=PDFCoverPages

Malmi, T., & Brown, D.A. (2008). Management control systems as a package - Opportunities, challenges and research directions. *Management Accounting Research 19*, pp. 287–300.

Mannhardt, F. (2018). Multi-perspective Process Mining. *BPM (Dissertation/Demos/Industry),* 2018 - pure.tue.nl.

Martin, N., De Weerdt, J. & Fernández-Llatas, C. et al. (2020). Recommendations for enhancing the usability and understandability of process mining in healthcare. *Artificial Intelligence in Medicine* Volume 109, September 2020, 101962, https://doi.org/10.1016/j.artmed.2020.101962

Martínez-Moreno, A., Cavas-García, F., & Díaz-Suárez, A. (2021). Leadership Style in Amateur Club Sports: A Key Element in Strategic Management. *Sustainability*, *13*(2), 730. MDPI AG. Retrieved from http://dx.doi.org/10.3390/su13020730

Martino, B.D., Cante, L.C. & Esposito, A. et al. (2021). Temporal outlier analysis of online civil trial cases based on graph and process mining techniques. *Journal of Big Data …*, 2021 - inderscienceonline.com.

McDowell, M. L. (2015). Towards a Critical Dialogue between the History of Sport, Management History, and Sport Management/Organization Studies in Research and Teaching. *The International Journal of the History of Sport*, 32:15, 1750-1758. doi: 10.1080/09523367.2015.1098623

McSweeney, M., Kikulis, L., Thibault, L., Hayhurst, L. & Van Ingen, C. (2019). Maintaining and disrupting global-North hegemony/global-South dependence in a local African sport for development organisation: The role of institutional work. *International Journal of Sport Policy and Politics*, 11(3), 521–537. https://doi.org/10.1080/19406940.2018.1550797

Meier, M., Tan, K.H., Lim, M.K. and Chung, L. (2019). Unlocking innovation in the sport industry through additive manufacturing. *Business Process Management Journal*. Vol. 25 No. 3, pp. 456- 475. https://doi.org/10.1108/BPMJ-10-2017-0285

Mendling, J., Weber, I., van der Aalst, W., Brocke J.V., Cabanillas, C., Daniel, F., Debois, S., di Ciccio, C., Dumas, M., Dustdar, S., Gal, A., Garcia-Banuelos, L., Covernatori, G., Hull, R. & la Rosa, M. (2018). Blockchains for Business Process Management - Challenges and Opportunities. *ACM Transactions on Management Information Systems, 9(1), 1–16.* doi:10.1145/3183367

Mendling, J., Pentland, B. T. & Recker, J. (2020). Building a complementary agenda for business process management and digital innovation. *European Journal of Information Systems, 29(3), 208–219.* doi:10.1080/0960085x.2020.1755207

Merchant, K. A. (1998). *Modern management control systems: text and cases,* Prentice Hall.

Merchant, K. A. and Otley, D. T. (2007). A review of the literature on control and Accountability. *Handbooks of Management Accounting Research*, 2, pp. 785-802.

Merchant, K.A. (1982). The control function of management. *Sloan Management Review*, (pre-1986); Summer 1982; 23, 4.

Merchant, K.A. (1985). Organizational Controls and Discretionary Program Decision Making: A Field Study. *Accounting Organizations & Society*, pp. 67-86.

Merchant, K.A., Van der Stede, W.A. (2017*). Management control systems*. Edinburgh Gate: Pearson education limited.

Mesabbah, M., Waleed, A.H. & McKeever, S. (2019). - A Hybrid Process Mining Framework for Automated Simulation Modelling for Healthcare. *[IEEE 2019 Winter Simulation Conference (WSC) - National Harbor, MD, USA (2019.12.8-2019.12.11)] 2019 Winter Simulation Conference (WSC), (), 1094–1102.* doi:10.1109/wsc40007.2019.9004800

Michael, J., Koschmider, A., Mannhardt, F., Baracaldo, N. & Rumpe, B. (2019). User-Centered and Privacy-Driven Process Mining System Design for IoT, *International Conference on Advanced Information Systems Engineering* CAiSE 2019: *Information Systems Engineering in Responsible Information Systems*, pp. 194-206 Springer.

Minkov, M., & Hofstede, G. (2011). The evolution of Hofstede's doctrine. Cross Cultural Management*: An International Journal*, 18(1), 10-20.

Mohammed, M. (2019). Waleed Abo-Hamad, Susan McKeever, A hybrid process mining framework for automated simulation modelling for healthcare, 2019 *Winter Simulation* - ieeexplore.ieee.org. IEEE

Mohey, El-Din D., Taha, M. & Khalifa, N. E. (2018). A Blockchain Technology Evolution Between Business Process Management (BPM) and Internet-of-Things (IoT*). International Journal of Advanced International Journal of Managing Value and Supply Chains* (IJMVSC) Vol. 12, No. 1, March 202113 Computer Science and Applications, 9, 442-450.
doi: 10.14569/IJACSA.2018.090856.

NetoL, V. D. S., Miragaia, D. A. M. & Ibáñez, S. J. (2021). Stakeholders leadership approaches in soccer context: a systematic review. *Soccer & Society*, 1-23.

Nite, C. & Edwards, J. (2021). From isomorphism to institutional work: advancing institutional theory in sport management research. *Sport Management Review*, 24:5,815-838. doi: 10.1080/14413523.2021.1896845

Nite, C. (2017). Message framing as institutional maintenance: The National Collegiate Athletic Association's institutional work of addressing legitimate threats. *Sport Management Review*, 20(4), 338–351. https://doi.org/10.1016/j.smr.2016.10.005

Nogueira, A.F., Zenha-Rela, M. (2021). Monitoring a CI/CD Workflow Using Process Mining. *SN COMPUT. SCI.* 2, 448. https://doi.org/10.1007/s42979-021-00830-2

Nová, J. (2021). New directions for professional preparation: A competency-based model for training sport management personnel. *Sport Governance and Operations*, 244-268.

Nowy, T., Wicker, P., Feiler, S., &Breuer, C. (2015). Organizational performance of non-profit and for-profit sport organizations. *European Sport Management Quarterly*, *15*(2), 155–175. https://doi.org/10.1080/16184742.2014.995691

Oracle (2020). Oracle Business Process Management. https://www.oracle.com/middleware/technologies/bpm. html (accessed 16 December 2020).

Oruthotaarachchi, C.R & Wijayanayake (2021). A thematic literature review on business process management. *International journal of Managing Value and Supply Chains (IJMVSC)*, 12(1), 1-12. doi:10.5121/ijmvsc.2021.12101

Osmundsen, K., Iden, J., & Bygstad, B. (2019). Organizing Robotic Process Automation: *Balancing Loose and Tight Coupling*. http://hdl.handle.net/10125/60128

Otley, D.T. (1999*).* Performance management: a framework for management control systems research*. Management Accounting Research*, 10, pp. 363–382.

Ouchi, W. (1979). A conceptual framework for the design of organizational control mechanisms*. Management Science*, 25(9), 833–848.

Ouchi, W. G. (1977). The Relationship between Organizational Structures and Organizational Control. *Administrative Science Quarterly*, pp. 95-l 12.

Pache, A.C. & Santos, F. (2013*).* Inside the Hybrid Organization: Selective Coupling as a Response to Competing Institutional Logics. *Academy of Management Journal*, 56 (4), pp. 972– 1001.

Parent, M. M., Hoye, R., Taks, M., Thompson, A., Naraine, M. L., Lachance, E. L. & Séguin, B. (2021). National sport organization governance design archetypes for the twenty-first century. *European Sport Management Quarterly*. doi: 10.1080/16184742.2021.1963801

Parent, M.M, Rouillard, C. & Leopkey, B. (2011). Issues and Strategies Pertaining to the Canadian Governments' Coordination Efforts in Relation to the 2010 Olympic

Games. *European Sport Management Quarterly*, 11:4, 337-369. doi: 10.1080/16184742.2011.599202

Pentifallo, C. & VanWynsberghe, R. (2015). Mega-event impact assessment and policy attribution: Embedded case study, social housing, and the 2010 Winter Olympic Games. *Journal of Policy Research in Tourism, Leisure and Events*, 7 (3), pp. 266-281.

Peppard, J. & Rowland, P. (1995). *The Essence of Business Process Reengineering*. New York: Prentice-Hall.

Perechuda, I., & Čater, T. (2022). Influence of stakeholders' perception on value creation and measurement: the case of football clubs. *Sport, Business and Management: An International Journal*, 12(1), 54-76.

Pereira, G.P., Santos, E.A.P. & Maceno, MMC. (2020). Process mining project methodology in healthcare: a case study in a tertiary hospital. *Network Modeling Analysis in Health Informatics and Bioinformatics*, 9, 28. https://doi.org/10.1007/s13721-020-00227-w

Pianese, T. (2021). Interpreting sports events from a resource-based view perspective. *International Journal of Sports Marketing and Sponsorship*, Vol. 22 No. 2, pp. 240-261. https://doi.org/10.1108/IJSMS-09-2019-0095

Plumley, D., Wilson, R. & Ramchandani, G. (2014). Towards a modelfor measuring holistic performance of professional Football clubs. *Soccer & Society*. doi:10.1080/14660970.2014.980737

Plumley, D., Wilson, R. & Ramchandani, G. (2017). Towards a model for measuring holistic performance of professional Football clubs. *Soccer & Society*, 18:1, 16-29. doi: 10.1080/14660970.2014.980737

Poyssick, G. & Hannaford, S. (1996). *Workflow Reengineering*. Mountain View, CA.: Adobe Press Editions.

Raimo, N., Vitolla, F., Nicolò, G., & Polcini, P. T. (2021). CSR disclosure as a legitimation strategy: Evidence from the football industry. *Measuring Business Excellence*, 25(4), 493-508.

Ranganathan, C. & Dhaliwal, J. S. (2001). A survey of business process reengineering practices in Singapore. *Information & Management*, 39(2), 125–134. doi:10.1016/s0378-7206(01)00087-8

Ray, G., Barney, J.B. and Muhanna, W.A. (2004). Capabilities, business processes, and competitive advantage: choosing the dependent variable in empirical tests of the resource-based view. *Strategic Management Journal*, Vol. 25 No. 1, pp. 23-37.

Reay, T. & Hinings, C.R. (2009). Managing the rivalry of competing institutional logics. *Organization Studies*, 30, pp. 629-652.

Reijers, H.A. & Limam Mansar, S. (2005). Best practices in business process redesign: an overview and qualitative evaluation of successful redesign heuristics. *Omega*, 33(4), 283-306. doi:10.1016/j.omega.2004.04.012

Reijers, H.A., van Wijk, S., Mutschler, B. & Leurs, M. (2010). BPM in Practice: Who Is Doing What? In: Hull, R., Mendling, J. & Tai, S. (eds). *Business Process Management. BPM 2010. Lecture Notes in Computer Science, vol 6336*. Berlin, Heidelberg: Springer. https://doi.org/10.1007/978-3-642-15618-2_6

Reinkemeyer, L. (2020). Process Mining in Action. *Principles, Use Cases and Outlook*. Santa Barbara: Springer.

Richelieu, A. & Webb, A. (2021) Strategic sport marketing in the society of the spectacle, *Journal of Strategic Marketing*. doi: 10.1080/0965254X.2021.1965188

Robinson, L. & Minikin, B. (2012). Understanding the competitive advantage of national olympic committees. *Managing Leisure*, Vol. 17, pp. 139-154.

Rogerson, R. (2016). Re-Defining temporal notions of event legacy: Lessons from Glasgow's Commonwealth Games. *Annals of Leisure Research*, 19 (4), pp. 497–518.

Rosemann, M. & vom Brocke, J. (2010). The Six Core Elements of Business Process Management. *Handbook on Business Process Management 1*, 107–122. doi:10.1007/978-3-642-00416-2_5

Ruschel, E., Santos, E.A.P. & Loures, E.F.R. (2020). Establishment of maintenance inspection intervals: an application of process mining techniques in manufacturing. *Journal of Intelligent Manufacturing*, 31, 53–72. https://doi.org/10.1007/s10845-018-1434-7

Sachini, E., Nikou, E., & Glykas, M. (2022). Process Mining Human Resources Cost Calculations in Time Driven Activity Based Costing. In & E. N. Degirmenci (Ed.), New Frontiers for Management and Strategy in the Post-Pandemic Era, vol 130. *European Proceedings of Social and Behavioural Sciences* (pp. 170-193). European Publisher. https://doi.org/10.15405/epsbs.2022.12.02.15

Sakka, O., Barki, H. and Côte, L. (2013). Interactive and diagnostic uses of management control systems in IS projects: Antecedents and their impact on performance. *Information & Management*, 50(6), 265-274.

Sanchez, M., Luis, C., Barajas, A. & Sánchez-Fernández, P. (2017). Does the agency theory play football? *Universia Business Review*, Vol. 53, pp. 18-59.

Sandelin, M. (2008*)*. Operation of management control practices as a package – A case study on control system variety in a growth firm context. *Management Accounting Research*, 19, 324- 343.

Santos, J. M., Batista, P., & Carvalho, M. J. (2022). Framing sport managers' profile: A systematic review of the literature between 2000 and 2019. *SPORT TK-EuroAmerican Journal of Sport Sciences*, *11*, 24. https://doi.org/10.6018/sportk.479841.

Sargeant, A. (1999*). Marketing Management for Nonprofit Organizations 3 ed*. New York: Oxford University Press.

Schein Edgar H. (1990). Organizational Culture. *American Psychologist* Vol. 45, No. 2, 109- 119.

Sikal, R., Sbai, H. & Kjiri, L. (2018). Configurable process mining: variability Discovery Approach, - 2018 IEEE *5th International Congress* …, 2018 - ieeexplore.ieee.org.

Smith, H. (2003). Business process management - The third wave: Business process modelling language (bpml) and its pi-calculus foundations. *Information and Software Technology*, 45, 1065-1069. doi: 10.1016/S0950-5849(03)00135-6.

Slack, T., Milena M. & Parent M. M. (2006). Understanding Sport Organizations. *The Application of Organization Theory*, 2nd ed, Leeds: Human Kinetics.

Stewart, B. & Smith, A.C.T. (2010). The special features of sport: A critical revisit. *Sport Management Review*, vol. 13, no. 1, pp. 1-13.

Stokowski, S., Li, B., Goss, B. D., Hutchens, S. & Turk, M. (2018). Work motivation and job satisfaction of sport management faculty members. *Sport Management Education Journal*, 12(2), 80–89. https://doi.org/10.1123/smej.2017-0011

Stravinskiene, I. & Serafinas, D. (2020). The Link between Business Process Management and Quality Management. *Journal of Risk and Financial Management*, 13(10), 225. https://doi.org/10.3390/jrfm13100225

Stringer, C., Didham, J. & Theivananthampillai, P. (2011). Motivation, pay satisfaction, and job satisfaction of front-line employees. *Qualitative Research in Accounting &Management*, 8(2), 161-179.

Strittmatter, A.-M., Fahlén, J., Houlihan, B. (Eds) (2021). *Stakeholder Analysis and Sport Organisations.* Routledge, London, ISBN 9780367630164.

Szymański, S. (1998). Why is Manchester United so successful? *Business Strategy Review*, 9, 47-54.

Tabar, M. N., Andam, R., Bahrololoum, H., Memari, Z. & Abbas Rezaei Pandari, A. R. (2022). Study of football social responsibility in Iran with Fuzzy cognitive mapping approach. *Sport in Society*, 25:5, 982-999. doi: **10.1080/17430437.2020.1818720**

Thanavutd, C. & Teepakorn, K. (2022). A Systematic Review of the Key Success Factors of Sports EventManagement: *A Resource-based View Approach. Annals of Applied Sport Science,* in Press available online: (https://aassjournal.com/article-1-1100-en.pdf)

Thiede, M., Fuerstenau, D. & Barquet, A.P.B. (2018). How is process mining technology used by organizations? A systematic literature review of empirical studies. *Business Process Management Journal*, 24 (4), 900-922. https://doi.org/10.1108/BPMJ-06-2017-0148

Thomson, A., Cuskelly, G., Toohey, K., Kennelly, M., Burton P. & Fredline L. (2019). Sport event legacy: A systematic quantitative review of Literature. *Sport Management Review*, 22, pp. 295–321.

Thompson, A. & Parent, M.M. (2021). Understanding the impact of radical change on the effectiveness of national-level sport organizations: a multi-stakeholder perspective. *Sport Management Review*, Vol. 24 No. 1, pp. 1-23.

Toh, K. L., & Jamieson, L. M. (2000). Constructing and Validating Competencies of Sport Managers (COSM) Instrument: A Model Development. *Recreational Sports Journal*, *24*(2), 38–55. https://doi.org/10.1123/nirsa.24.2.38

Toumela, T. (2005). The interplay of different levers of control: a case study of introducing a new performance measurement system. *Management Accounting Research*, 16, 293-320.

Trkman, P. (2010). The critical success factors of business process management. *International Journal of Information Management*, 30 (2), 125-134. doi: 10.1016/j.ijinfomgt.2009.07.003

Tsipoura, X., Sakellariou, S., Glykas, M. & Tsimpidou, A. (2022). Sport Management Maturity Assessment: Application To Cosma Competencies Scale. *Balkans JETSS*, 2, 125-141. DOI: https://doi.org/10.31410/Balkans.JETSS.2022.5.2.125-14

Turner, C. J., Tiwari, A., Olaiya, R., & Xu, Y. (2012). Process mining: from theory to practice. *Business Process Management Journal*, *18(3), 493–512.* doi:10.1108/14637151211232669

Ubaid, A. & Dweiri, F. (2020). Business process management (BPM): terminologies and methodologies unified. *International Journal of System Assurance Engineering and Management*, 11, 1046–1064. https://doi.org/10.1007/s13198-020-00959-y

Van der Aalst, W. (2018). Spreadsheets for business process management: Using process mining to deal with "events" rather than "numbers"? *Business Process Management Journal*, 24 (1), 105-127. https://doi.org/10.1108/BPMJ-10-2016-0190

Van der Aalst, W. M. P., Reijers, H. A., Weijters, A. J. M. M., van Dongen, B. F., Alves de Medeiros, A. K., Song, M. & Verbeek, H. M. W. (2007). Business process mining: An industrial application. *Information Systems*, 32(5), 713–732. doi:10.1016/j.is.2006.05.003

Van der Aalst, W.M.P. (2009). TomTom for business process management (TomTom4BPM). in P., van Eck, J. Gordijn & R. Wieringa (Eds), *Advanced Information Systems Engineering*. CAiSE 2009. Lecture Notes in Computer Science, Vol. 5565, pp. 2-5. Berlin and Heidelberg: Springer.

Van der Roest, J-W. & Bake Dijk, B. (2021). Developing an elite sports' public value proposition in Northern Netherlands. *European Sport Management Quarterly*, 21:5, 677-694. doi: 10.1080/16184742.2021.1915354

Van Looy, A. & Poels, G. (2019). A Practitioners' Point Of View On How Digital Innovation Will Shape The Future Of Business Process Management. Towards A

Research Agenda. Proceedings of the 52nd Hawaii International Conference on System Sciences. http://hdl.handle.net/10125/60079

Varmus, M., Milan, Kubina, M., Adámik, R (Eds) (2021). Strategic Sport Management: Sustainability of Sports Clubs. *Springer, London, Business and Management series*, VI, 144, ISBN 978-3-030-66732-0. https://doi.org/10.1007/978-3-030-66733-7

Vitzileou, M., Glykas, M., & Melidis, G. (2022). Quality System Management: The Role of Human Resources. In & E. N. Degirmenci (Ed.), New Frontiers for Management and Strategy in the Post-Pandemic Era, vol 130. *European Proceedings of Social and Behavioural Sciences* (pp. 210-238). European Publisher. https://doi.org/10.15405/epsbs.2022.12.02.17

vom Brocke, J. & Rosemann, M. (2010). *Handbook on Business Process Management*. Springer. doi:10.1007/978-3-642-01982-1

Washington, M. &Patterson, K. D. W. (2011). Hostile takeover or joint venture: Connections between institutional theory and sport management research. *Sport Management Review*, 14(1), 1–12. https://doi.org/10.1016/j.smr.2010.06.003

Waszkowski, R. & Kowalski, A. (2017). *Comparative analysis of Business Process Management frameworks.* 2017.

Weske, M., Aalst, W. & Verbeek, H. (2004). Advances in business process management. *Data & Knowledge Engineering*, 50 (1), 1–8. doi: 10.1016/j.datak.2004.01.001

Watt, D. C. (2003). Sports management and administration. *Psychology Press.*

Wohlfart, O., Adam, S., Hovemann, G. (2022). Aligning competence-oriented qualifications in sport management higher education with industry requirements: An importance–performance analysis. *Industry and Higher Education*, 36(2):163-176. doi:10.1177/09504222211016284

Wood, D. J., Mitchell, R. K., Agle, B. R., & Bryan, L. M. (2021). Stakeholder identification and salience after 20 years: Progress, problems, and prospects. *Business & Society*, 60(1), 196-245.

Xiang-Hua, L., Huang, L.H. & Heng, M.S.H. (2006). Critical success factors of inter-organizational information systems—A case study of Cisco and Xiao Tong in China. *Information & Management*, 43(3), 395–408. doi:10.1016/j.im.2005.06.007

Yang, S. (2019). *Applied process mining, recommendation, and visual analytics*, *rucore*.libraries.rutgers.edu.

Young, E. (2019). *Process mining and its impact on BPM*, 2019. [Online]. Available: assets.ey.com/content/dam/ey-sites/ey-com/fi_fi/pdf/ey-process-mining-and-its-impact-on-bpm.pdf.

Zamanidadaneh, S., Esmaili, M. R., & Zarie, A. (2021). The Impact of Club Social Responsibility on Brand Supportive Behavior with the Mediating Role of Attitude and Positively Moral Positive Fans. *Jounal of Marketing Management*, *16*(50), 79-95.

Zeimers, G., Lefebvre, A., Winand, M., Anagnostopoulos, C., Zintz, T. & Willem, A. (2021). Organisational factors for corporate social responsibility implementation in sport federations: a qualitative comparative analysis. *European Sport Management Quarterly*, 21:2,173-193. doi: 10.1080/16184742.2020.1731838

Zerbato, F., Soffer, P. & Weber, B. (2021). Initial insights into exploratory process mining practices. In: Polyvyanyy, A., Wynn, M.T., Van Looy, A., Reichert, M. (eds). Business Process Management Forum. Lecture Notes in Business Information Processing, vol 427. Springer, Cham. https://doi.org/10.1007/978-3-030-85440-9_9

Zerbino, P., Stefanini, A. & Aloini, D. (2021). Process Science in Action: A Literature Review on Process Mining in Business Management. *Technological Forecasting and Social*, (172), 1-20, https://doi.arg/10.1016/j.techfore.2021.121021

Zintz, T. & Gérard, S. (2019). Support the implementation of good governance in sport (SIGGS): A European project for national Olympic committees and national sport federations. In M. Winand&C. Anagnostopoulos (Eds.). *Research handbook on sport governance* (pp. 53–71). Edward Elgar.