SUSTAINABILITY & SPORTS SCIENCE JOURNAL

REVIEW ARTICLE

Information systems for sports governance during mega-events: A systematic literature review

Fatima-Zahrae Eddif . *Research Team in Sports Sciences. Hassan First University of Settat. Morocco.*
El Mostafa Rajaallah. *Watch Lab for Emerging Technologies. Hassan First University of Settat. Morocco.*
Nadia Jemjami. *Research Team in Sports Sciences. Hassan First University of Settat. Morocco.*
Salma Arich. *Learning, Cognition, and Educational Technology. Mohammed V University. Rabat, Morocco.*

ABSTRACT

International sports mega-events are complex organizational undertakings requiring sophisticated information systems (IS) for governance, yet research examining IS implementation in this context remains fragmented. This systematic review synthesizes evidence on IS deployment in sports governance during mega-events to identify core technologies and inform future event planning. The literature search was carried out on Scopus, Web of science, and curated databases that included the studies published between 2005 and 2025. Following PRISMA 2020 guidelines, two-stage screening identified 28 studies from 129 initial records. Five major IS categories emerged: Analytics & Data Management Systems; Management Information Systems (MIS); Knowledge Management Systems; Governance and Planning Platforms; and Wearables and Monitoring Technologies. Important conclusions are that digital transformation can lead to more operational efficiency in four studies, multi-level governance coordination may also be better, knowledge transfer barriers are persistent despite the implementation of an information system, data protection systems are also underdeveloped, and stakeholder engagement platforms become more critical. Developing nations hosting mega-events require targeted capacity-development support for IS implementation. This first systematic review bridging information systems and sports management literature provides evidence-based guidance for future event governance.

Keywords: Information systems, Sports governance, Mega-events, Digital transformation, Systematic review, PRISMA.

Cite this article as:
Eddif, F., Rajaallah, E. M., Jemjami, N., & Arich, S. (2026). Information systems for sports governance during mega-events: A systematic literature review. *Sustainability and Sports Science Journal*, *4*(3), 165-181. https://doi.org/10.55860/LCTI5863

Corresponding author. *Research Team in Sports Sciences, Hassan First University of Settat, Morocco.*
E-mail: f.eddif@uhp.ac.ma
Submitted for publication January 19, 2026.
Accepted for publication March 04, 2026.
Published March 18, 2026.
Sustainability and Sports Science Journal. ISSN 2990-2975.

Identifier: https://doi.org/10.55860/LCTI5863

INTRODUCTION

International sports mega-events such as the Olympic Games, FIFA World Cups, and Commonwealth Games represent complex organizational undertakings involving thousands of stakeholders, billions of dollars in investment, and unprecedented logistical challenges. These events have grown exponentially in scale and complexity over the past two decades. Concurrently, information systems (IS) and digital technologies have become increasingly central to how organizations plan, execute, and evaluate mega-events.

Mega-sports events such as the Olympic Games and FIFA world cups are part of the most complex forms of organizations in the modern society. These games include thousands of stakeholders, require investments in the billions of dollars, and require an unprecedented level of logistical mobilization across the countries and organizations (Ludvigsen & al., 2023; Xiang & al., 2023). The number and magnitude of such mega-events have increased significantly; an example is the 2020 Olympics in Tokyo where approximately 11,000 athletes wore representation of 206 countries participating in 33 different sports, hence necessitating the efforts of hundreds of governmental and non-governmental organizations (Al-Thani & al., 2025). This complexity requires advanced forms of governance and increasingly depends on information systems (IS) as the means of decision-making, coordination with stakeholders, and organizational activities (Qi & al., 2024).

The use of information and communication technologies (ICTs) in sports mega-events has grown at an increasingly fast rate including performance monitoring analytical systems, real-time data platforms to support decision-making, organizational learning knowledge management systems, and stakeholder engagement digital platforms (Berente & Seidel, 2022; Wang & al., 2024). However, the academic research on sports management has been more focused on the organizational structures and policies, and was relatively silent on the matter of the IS underlying the governance processes (France & al., 2024). In contrast, the information systems literature exploring the concept of digital transformation has rarely addressed sports situations, especially the temporal, stakeholder, and outcome peculiarities of the mega-event situation. This disciplinary discontinuity creates a salient knowledge gap that is about what IS is being deployed, how successfully it can achieve the goal of governance and what lessons can be learned to apply in the future.

Mega-events are a unique organizational setting that should be given a special consideration to the deployment and governance of IS. Such events bring into existence temporary organizations having fixed timelines (usually 710 years between bid and completion), unprecedented multi-level governance systems across multiple nations and organizations, unprecedented monetary and human interests, and stakeholders across various national and technical backdrop (King, 2016; Santos & Gómez, 2022). Besides, mega-events theoretically lead to the transfer of knowledge to future host cities, yet, systematic evidence shows that knowledge transfer is still lacking with regard to technology investments (Zhou, 2023). Knowledge of how IS can be better used to help governance efficacy, stakeholder coordination, and organizational learning is thus important in achieving better efficiencies in event planning and implementation in the future.

The current systematic review aims at closing the gaps that exist between the information systems and sports governance literature by synthesization of empirical evidence that IS has been used in international mega-events and what it signifies in terms of governance. The three related research questions are answered: (1) Which IS are implemented in sports governance at international mega- events? (2) What are the recorded effects of these IS on governance effectiveness, operational efficiency, and engagement with the stakeholders? (3) What are the barriers and enablers to IS implementation in the context of mega-event, and what can be learnt about implementing it in future events? The output of this review is practical advice on

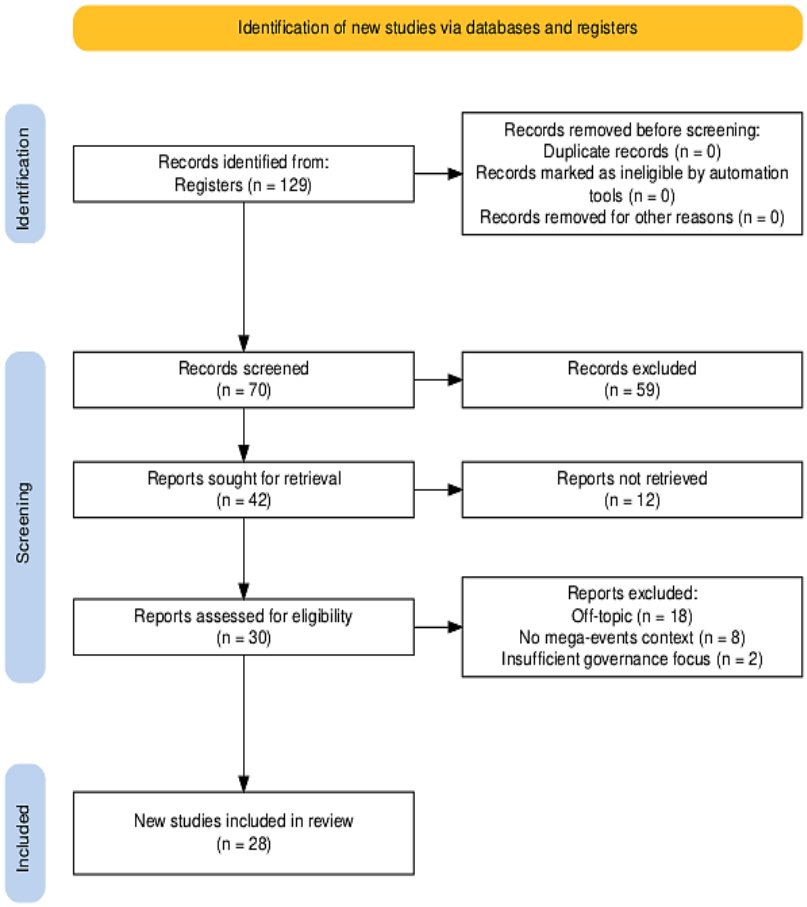
future mega-events, theoretical development that coordinates the disjointed literatures and policy implications on international sports organizations and host countries that are planning to host global events (France & al., 2024; Imran & al., 2021).

METHODS

To ensure the transparency of the methods and the reproducibility of the results, this systematic review was built on the Preferred Reporting Items of Systematic Reviews and Meta-Analyses (Haddaway & al., 2022). The search, filtration and careful documentation steps of the procedure were designed in a manner that reduces biases and maximizes internal validity. An extensive literature search was conducted using three bibliographic databases Scopus, Web of science, and Zotero library. The search strategy involved controlled vocabulary terms in four thematic areas, namely; (i) information systems (information systems OR digital transformation OR information technology OR management information systems OR data management); (ii) sports governance (sports governance OR sports organizations OR sports management); (iii) mega-event (mega-events) and (iv) governance functions. Peer-reviewed articles and reviews, articles written in English, publications published between 2005 and 2025, articles in the field of Sports Science, Business Management, Computer Science, and Social Sciences were filtered. The search in question in the identification phase identified 129 records; no duplication records were detected (n = 0), and automation tools identified no ineligible records (n = 0). All identified records were imported and managed using Zotero 7.0 reference management software to organize, deduplicate, and screen studies systematically. Zotero enabled automated deduplication and facilitated collaborative screening across the review team.

The evaluation of eligibility was done in two stages in succession to maintain methodological rigor. In the screening stage, independent title and abstract review was applied on 70 records; 59 records were filtered based on the a priori inclusion-exclusion criteria and 42 records passed to the full-text appraisal stage. The access restrictions hindered retrieval of twelve records and limited the pool to 30 articles to assess the full-text. In the next eligibility step, full-text screening revealed three groups of exclusion, including studies that did not have an information-systems focus (n = 18), studies that did not have a mega-event or major sports-organization context (n = 8), and studies with an inadequate governance focus (n = 2). As a result, 28 studies met all the inclusion criteria and were included in a final synthesis. Relevant characteristics of the study such as author(s), year of publication, country of origin, and study design were taken during data extraction. Other variables that were documented included population and sample, the information-systems components that were identified, the outcomes that were measured, and the key findings.

The quality appraisal was carried out based on criteria designed according to each study design, and the methodological rigor, measurements validity, and clarity of the reported outcomes. Synthesis of data was done through narrative methods were tabulated characteristics of the study were combined with thematic analysis. The thematic analysis revealed five major categories of information-systems, which were analytics and data management, management information systems, knowledge management systems, governance and planning platforms, wearables and monitoring technologies, and five general governance themes, which included digital transformation as a catalyst, governance evolution, data management and protection, challenges to knowledge transfer, and implementation challenges. A conceptual map was designed to establish the position of information-systems elements in the main governance functions they serve.



Source. Authors according to (Haddaway & al., 2022).

Figure 1. Prisma follow chart.

RESULTS

Study selection and characteristics

The systematic review consolidates 28 published articles, which examine information systems and governance frameworks in sports organizations, specifically in mega-event management. The papers cover the year 2005 to 2025, and thus, reflect the developments in digital transformation, sustainability reporting, and governance practices in the sports industry. The sample is a heterogeneous collection of methodological models and organizational environments, which can cover thoroughly information-systems implementation in different sports governance environments (see Table 1).

Publication timeline and research trajectory

Temporal Distribution of Research: A strong tendency in the trend of the selected studies publication is presented. According to Figure 2, 17 researchers (60.7% of the total studies) were published after 2021, which shows a swiftly growing interest in the scholarly community in information systems and digital transformation in sports governance. The first-documented studies are dated 2005, which means that the systematic scholarly interest in the deployment of information-systems in sports governance is a fairly new phenomenon, though the move is significantly gaining traction in the last five years. This pace of acceleration can be seen as an intensification of awareness of the importance of information systems in the management of the complexity of the modern mega events and sports organizations.

Table 1. Basic publication information of the final sample, involving 28 documents.

N°	Autor	Research objectives	Research methods	Research results	Research gap & key concepts
1	(Al-Thani & al., 2025)	Examine governance and planning framework resilience during FIFA WC Qatar 2022	Qualitative: Document analysis, policy review, semi- structured interviews with key stakeholders	Qatar's governance evolved from rigid hierarchical control to flexible, multi-level coordination. Resilience defined as capacity to anticipate, absorb, and adapt while sustaining strategic objectives	Governance Resilience Gap: Need for adaptive capacity frameworks across planning and legacy stages → Mega-Event Governance
2	(Alnaqbi & al., 2025)	Compare sustainability- related documents and reporting in mega-events (Tokyo Olympics & Dubai Expo)	Quantitative: Text mining, correspondence analysis using GRI framework; systematic review	Shift in sustainability focus from socioeconomic to health/ethical concerns post-COVID. Official documents show modest changes vs. academic documents. Underrepresented sustainability indicators identified	Sustainability Reporting Gap: Comprehensive approach to sustainability documentation needed; need for integrated reporting systems → IS Documentation
3	(Blobel & al., 2021)	Systematic review of sports information systems (SIS) implementation and usage in professional sports organizations	Qualitative: Systematic literature review of SIS applications and effectiveness	SIS used extensively for athlete management, performance analysis, and decision support. Current implementations address operational needs but lack integration	Sports IS Integration Gap: Limited research on comprehensive SIS frameworks; need for standardized architectures → Core IS Discipline
4	(Chen & al., 2021)	Review digital platform governance mechanisms and design features; develop integrative framework	Qualitative: Systematic literature review; framework development	Three building blocks identified: value, governance, design. Governance mechanisms categorized into incentive and control systems. Design features mapped onto organizational mechanisms	Platform Governance Gap: Limited empirical testing; need for sport- specific platform governance models → Digital Governance
5	(Cosa & Torelli, 2024)	Examine how digital transformation influences performance measurement systems	Quantitative: Systematic review of 47 studies across industries; meta-analysis approach	Digital transformation fosters dynamism and adaptability of performance measurement systems. Shifts toward decision-making agility, inclusivity, and sustainability. Human resources crucial for adaptation	Flexible Performance Systems Gap: Limited sport-specific research; need for industry- tailored performance frameworks → DT & IS Alignment
6	(Henriette & al., 2016)	The primary objective of the research was to gain a deeper understanding of the digital transformation process within companies. This involved clarifying the definition and dimensions of digital transformation through a systematic literature review and Exploring Stakes and Impacts	Qualitative: The research utilized an exploratory qualitative design, relying on semi-structured interviews and thematic analysis to delve into the complexities of digital transformation, with plans for further data collection.	Digitalization presents significant strategic, organizational, and cultural challenges for companies, necessitating strong commitment and involvement from top management. The study's initial findings highlight how digital transformation profoundly impacts business models, processes, resources, operational methods, and organizational culture/	Flexible Performance Systems Gap: Need for context-specific frameworks linking DT-driven flexibility to sport management performance outcomes. → Sport-Specific Adaptive Systems
7	(Ferraz & al., 2023)	Provide comprehensive framework for tracking device application in physical performance analysis	Quantitative: Scoping review of 79 studies; systematic analysis of GPS/LPS technology applications	Tracking technology enables analysis of external/internal load, fatigue, and performance. Primarily kinematics- focused metrics. Lack of integrative model for EL/IL metrics analysis across sports	Performance Analytics Gap: Need for integrated analytical frameworks; standardization across team sports lacking → Sports Data Systems
8	(France & al., 2024)	Map accountability literature in sport organizations; identify research gaps and opportunities	Qualitative: Scoping review of 44 articles; systematic mapping of research field	Dominance of conceptual/theoretical studies; case study methodology prevalent; international and national sport organizations most studied. Limited integration of accountability discourses across organizational types	Organizational Accountability Gap: Need for empirical accountability frameworks; integration of governance and accountability systems → Governance Accountability
9	(Glebova & Madsen, 2024)	Explore Twin Transformation (digitalization + sustainability) as strategic approach in sport management	Qualitative: Conceptual analysis; synthesis of theoretical and practical examples	Twin Transformation fosters innovation, enhances fan engagement, promotes environmental responsibility. Integration of digital and sustainability principles creates transformative paradigm for sport management	Twin TransformationGap: Limited empirical evidence; need for case studies demonstrating simultaneous DT and sustainability implementation→ Integrated Strategy
10	(Hu & Shu, 2024)	Examine traditional and innovative governance approaches in US professional sports leagues	Qualitative: Literature review; analysis of governance documents from NFL, MLB, NBA, NHL	NFL/MLB use hierarchical models; NBA shows decentralized franchise model; NHL established Players' Association. Evolution toward collaborative and empowering governance structures; impact on labour relations evident	League Governance Innovation Gap: Limited empirical comparison of governance impacts; need for IS-

					supported governance frameworks → Org Governance
11	(Imran & al., 2021)	Explore digital transformation enablers and their impact on performance outcomes in industrial organizations	Qualitative: Case study of 4 leading industrial organizations; sociotechnical systems theory framework	Leadership, structure, and culture identified as key DT enablers. Performance outcomes include collaboration, customer-centricity, and agility. Joint optimization of social and technical systems essential	DT Enablers Framework Gap: Limited sport-specific application; need for sports organization DT adoption models → Organizational Transformation
12	(Kim & Grix, 2021)	Analyse implementation of sustainability legacy plan for PyeongChang 2018 Winter Olympics	Qualitative: Document analysis (16 documents); semi- structured interviews (10 stakeholders)	Strategic goals achieved for regional development; obstacles identified in post-Games venue use planning and stakeholder conflict resolution. Effective tool for regional development but sustainability planning gaps evident	Olympic Legacy Planning Gap: Limited post-Games monitoring systems; need for integrated legacy → Mega-Event Legacy
13	(X. Li & Guo, 2024)	Analyse factors affecting protection of data rights in sports events using configurational analysis	Quantitative: Fuzzy- set qualitative comparative analysis; configurational theory	Three configuration paths for high data protection effectiveness identified; two for low effectiveness. Study provides theoretical support for data rights governance in sports; facilitates safe data use	Sports Data Rights Gap: Limited governance frameworks for mega-event data; need for IS-based data protection systems → Data Governance
14	(G. J. Li & Ma, 2014)	Review development and management of sports information systems and their role in sports information management	Qualitative: Literature review; systems analysis approach (CBA example)	SIS development based on user needs; software engineering methods essential. Systems analysis, design, evaluation, and implementation framework outlined for sports management	Sports IS Development Gap: Limited integration of systems across sports organizations; need for standardized IS architectures → Systems Design
15	(Ng & Kankanhalli, 2012)	Case study of information systems for large-scale event management	Qualitative: Case study approach; event management system analysis	Information systems critical for coordinating complex event operations. Integration of multiple system components essential for effective event management	Event Management IS Gap: Limited frameworks for mega-event IS integration; need for enterprise- wide event management systems → Event Operations
16	(Qi & al., 2024)	Investigate technology adoption rates and impacts on performance, injuries, operations, and fan experience in sports organizations	Mixed: Survey (21 organizations); semi-structured interviews (17 experts); mixed methods approach	Extensive usage of analytics, wearables, MIS, and fan engagement platforms. Analytics and MIS most influential for performance; wearables crucial for injury prevention. Data-driven systems enhance outcomes but human expertise remains vital	Technology Adoption Gap: Ethical considerations underexplored; need for responsible technology integration frameworks → Tech Integration Strategy
17	(Qin & al., 2022)	Systematic review of knowledge management in sport mega- events	Qualitative: Systematic review (PRISMA protocol); academic and grey literature analysis (16 final studies)	Knowledge management mainly researched in Olympic context. Tacit knowledge and stakeholder roles critical. Social, cultural, political differences weaken knowledge transfer effectiveness	Knowledge Management Gap: Limited cross-event knowledge transfer systems; need for KM IS frameworks for mega-events → Organizational Learning
18	(Ranaweera & al., 2022)	Optimize information flows for athlete management using Business Process Management approach	Mixed: Case study (rugby union club); BPM methodology; System Usability Scale testing (55 players); cognitive walkthroughs (9 staff)	Information flow redesign improved data accessibility and quality. Data collection systems achieved Grade A usability. Positive improvements across all information quality dimensions; automation identified	Information Flow Optimization Gap: Limited cross-sport BPM applications; need for standardized athlete management information systems → Process Management
19	(Saeedikiya & al., 2025)	Develop multilevel framework explaining DT innovation nexus and organizational contingencies	Qualitative: Systematic literature review; integrative framework development	DT influences innovation through structural change; contingencies include market dynamics, technological advancement, organizational capacity. DT as strategic asset must align with firm capabilities and environmental dynamics	DT-Innovation Integration Gap: Limited sport-specific models; need for empirical testing in sports governance context → Strategic Management
20	(Şimşek & Devecioğlu, 2025)	Examine technologies used in mega sports events historically and contemporarily; predict future technologies	Qualitative: Review study; analysis of academic publications, event reports, company websites, news sites, videos	Technologies categorized into five areas: athlete performance/health; refereeing/decision support; fan experience; organizational/infrastructure; education/preparation/analysis. Historical and contemporary evolution documented	Mega-Event Technologies Gap: Limited framework for technology governance at mega-events; need for comprehensive technology

					management IS → Tech Management
21	(Stein & al., 2017)	Develop comprehensive framework for analysing team sport data from acquisition to modelling	Qualitative: Conceptual framework development; multi- faceted analysis approach including pattern detection and visual analytics	Framework addresses heterogeneous data perspectives (high-dimensional, video, movement); team behaviour analysis and rule constraints integrated. Methods and technologies proposed for team sport data analysis	Sports Data AnalysisGap: Limited integration across sport types; need for standardized data architectures in sports governance→ Data Analytics
22	(Taylor & O'Sullivan, 2009)	Explore appropriate board structure for National Governing Bodies (NGBs) of sport in UK	Qualitative: Semi- structured interviews (22 senior administrators); exploratory study	Consensus: NGBs should reform board composition for business demands; optimal size 5-12; separate CEO/chairman roles; increase non-executive directors. Boards should move beyond representative to include business expertise	NGB Governance Structure Gap: Limited empirical governance effectiveness data; need for IS-supported governance systems → Corporate Governance
23	(Tettamanzi & al., 2023)	Investigate COVID-19 impact on sustainability of sports business models in football	Qualitative: Case study (M-I Stadio S.r.l.); interviews with management; archival data analysis; information triangulation	Pandemic acted as catalyst for digital transformation. Digitalization preserved financial position; increased partner information flows; risk aversion behaviour adopted. Sustainability practices accelerated in football industry	Digital Sustainability Gap: Limited long-term pandemic impact data; need for sustainable digital transformation frameworks → Business Continuity
24	(Varmus & al., 2024)	Compare sports information systems implementation across Slovakia, Czech Republic, England, and Denmark	Quantitative: Comparative analysis; data collection from national sports databases; hypothesis verification	Slovakia's SIS implementation less efficient in cost/technology despite supporting managerial decision- making adequately. Recommendations: ensure transparency, automation, strategic planning. Ethical/legal issues emerging	International SIS Comparison Gap: Limited framework for cross-national sports governance IS; need for standardized European sports → Comparative Systems
25	(Wang & al., 2024)	Assess digital transformation influence on corporate sustainability in sports organizations	Quantitative: Panel fixed effects model; chain mediating effects model; panel threshold model (48 Chinese sports corporations, 2012-2021)	DT significantly aids sports enterprises in sustainability pursuit. Heterogeneity evident; high-tech eastern region firms benefit most. DT-innovation-TFP chain mediating effect validated. Threshold effects identified regarding financing and operational efficiency	DT- Sustainability Link Gap: Limited non- Chinese empirical evidence; need for mega-event specific sustainability IS models → Performance Measurement
26	(Wixom & Todd, 2005)	Integrate user satisfaction and technology acceptance literature; develop unified research model	Quantitative: Survey (465 users, 7 organizations); testing of integrated model; data warehouse software analysis	Integrated model supported; distinguishes object-based beliefs/attitudes from behavioural beliefs/attitudes. Successfully bridges design/implementation (satisfaction) to usage prediction (acceptance) literature	IS Success Integration Gap: Limited sport organization validation; need for sports governance IS acceptance models → IS Adoption
27	(Xiang & al., 2023)	Systematic review examining role of sports mega- events in cities' sustainable development and residents' attitudes	Qualitative: Systematic review (PRISMA); database searches (Science Direct, Sport Discus, Scopus); 30 studies included (9 qualitative, 10 quantitative, 11 mixed)	Sports mega-events integral to sustainable city development; contribute to political, economic, cultural development. Benefits include job creation, city visibility, economic development. Post-COVID strategic focus needed	Urban Sustainability Gap: Limited IS role in managing mega-event sustainability; need for IS-based sustainable development monitoring → Mega-Event Sustainability
28	(Zhou, 2023)	Systematic review of knowledge transfer barriers/enablers at international sport mega-events	Qualitative: Systematic review (PRISMA protocol); academic and non- academic literature (11 academic + 6 non-academic works)	Three barriers identified: knowledge accessibility/availability, lack of absorptive capacity, knowledge sharing/protection dilemma. Three enablers: context-based knowledge tailoring, improved learning culture, communication/cooperation strategies	Knowledge Transfer Gap: Limited IS support for KT between mega- events; need for knowledge management systems for mega-event hosts → Organizational Learning

The fact that the number of publications grew after 2021 is an indication of a paradigm shift in sports-management research, not only due to the growing use of digital technologies by international sports organizations *(IOC, FIFA, National federations)* but also because of the focus on digital resilience and remote coordination tools in the aftermath of the COVID-19 pandemic.

Distribution methodology

Methodological composition

As Figure 3 shows, the sample mainly consists of qualitative studies (18 studies, 72 per cent) that include systematic literature reviews (16 studies), case studies, document analysis, and conceptual analysis. Quantitative research includes 7 studies (21%), which use surveys and statistical modelling methods, and 3 studies (7%), which use mixed-method designs which combine qualitative and quantitative data collection procedures.

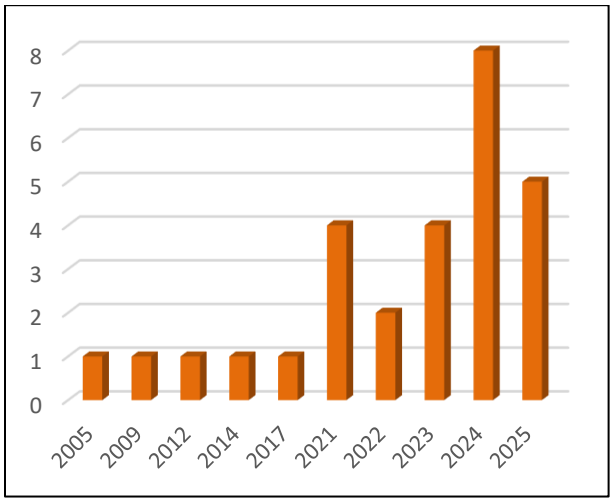


Figure 2. Publication year distribution of included studies (n = 28).

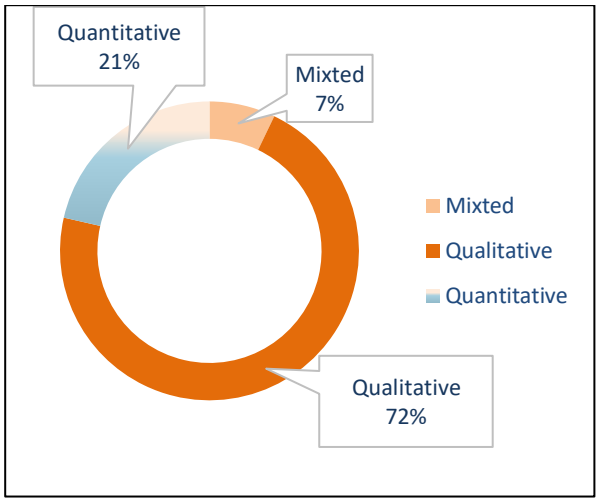


Figure 3. Distribution of research methodologies (n = 28)

Such a methodological profile suggests the presence of an exploratory approach to the implementation of information systems in sports governance, during which the emphasis is made on the comprehensive study of processes, mechanisms, and contextual aspects instead of the numerical measurement itself. The use of more qualitative methods indicates a need to capture the contextual (dependent) complexity of the manner in which information systems are implemented and lived in sports organizations.

Information systems categories

The thematic analysis of the 28 studies produced five significant types of information systems that performed different governance roles:

- *Analytics and Data Management Systems* (linked to 11 studies): These systems are focused on performance analytics, wearable integration, tracking systems, e.g. GPS/LPS, and data-analytic frameworks that can lead to optimizing athlete performance and event management. The common examples are performance-monitoring analytical systems and real-time data platforms to assist in decision-making.
- *Management Information Systems* (MIS) (identified in 9 studies): MIS support the managerial decision-making process, operational planning, and real-time data platforms in the coordination of organizational activities because MIS integrate information across various sources to enable the decision makers to have timely and right information.

- *Knowledge Management Systems* (found in 7 studies): KM Systems are designed to store, encode, and communicate organizational learning, specifically focused on the legacies of mega-events and how the knowledge is transferred between the event hosts of the past and the present.
- *Governance and Planning Platforms* (named in 8 studies): This group includes digital platforms, which facilitate multi-level coordination, stakeholder, accountability, and event-planning activities in temporary organizations and across international borders.
- *Wearables and Monitoring Technologies* (identified in 6 studies): This category is represented by physical tracking devices and real-time monitoring systems that track the athlete health, performance, and injury prevention, which are becoming essential infrastructure in the modern sport governance.

These types do not exclude each other and integrated methods, which apply various types of systems to satisfy complicated governance needs, are used in many organizations.

Key findings on IS impact

A review of various studies that explore the impact of Information Systems (IS) on sports governance provides various relevant findings. Digital transformation is also linked with a reduction in operational efficiency, but four studies show an increase in process automation, resource allocation, and organizational agility. Moreover, the implementation of IS is also claimed to promote coordination of multi-level governance, since the studies demonstrate that in six studies, there is improved alignment of stakeholders and communication across organizations. However, there are still obstacles to the transfer of knowledge despite the adoption of IS and insufficiently developed data protection measures are still relevant, and overall information control and privacy issues regarding the information about athletes and stakeholders still persist.

The analysis also outlines five general themes of governance, such as Digital Transformation as a Trigger, Governance Evolution and Data Management and Protection. Digital channels are starting to become more central platforms as a stakeholder engagement system and sports organizations seem to be shifting to less hierarchical and more collaborative systems of governance. However, there are still widespread barriers to implementation and long-term sustainability concerns that are apparent. The results of the above findings highlight the need to address these issues by sports organizations, and to ensure effective governance in the digital age. Altogether, although IS has much to be desired (e.g., improving operational effectiveness and organizational coordination), it is necessary to fill the existing gaps and challenges to realize the full potential of the IT in the sports governance market.

DISCUSSION

Novel integrated framework: Synthesizing fragmented domains

The systematic review contributes to the academic discourse by integrating three traditionally distinct fields of literature: mega-event governance (Al-Thani & al., 2025), sustainability legacy accounting (Alnaqbi et al., 2025), and sport-specific information systems (Ng & Kankanhalli, 2012), into a unitary conceptual framework. The existing literature isolates these areas: governance reforms regarding Qatar 2022 are written without references to digital infrastructure (Hu & Shu, 2024) ; sustainability studies of Tokyo 2020 and Expo Dubai are conducted without integrated information systems (Alnaqbi & al., 2025) ; and research on digital transformation is not related to sport-specific realities (Saeedikiya & al., 2025). Such fragmentation hinders the process of coming up with holistic solutions that maximize the results of events in terms of seamless accountability and data-driven decision-making (Ng & Kankanhalli, 2012). The synthesis that we have performed demonstrates the fact that digital platforms are able to simultaneously support risk-based planning,

stakeholder engagement, and legacy tracking, which was largely missing in the previous research that focused on governance (Hu & Shu, 2024) and single-digital transformation studies (Saeedikiya & al., 2025). The new IS architecture is proposed as a modular, stakeholder-based IS architecture that incorporates three essential elements: Adaptive policy instruments resiliency dashboard (Hu & Shu, 2024, p. 2); Weighted sustainability indicators include child labour, anti-corruption and economic performance (Alnaqbi & al., 2025; Glebova & Madsen, 2024, p. 4); Data-rights controls that demand synergistic technical, organizational and policy protective measures (X. Li & Guo, 2024).

This design is flexible enough to support both the legacy-oriented event planning (Kim & Grix, 2021) and the industrial-scale model of the digital transformation (Imran & al., 2021), which means that it is applicable across contexts. Most importantly, the review determines that there are three interconnected themes that do not respect disciplinary boundaries: how to manage knowledge effectively (Qin & al., 2022), how to transform digitally strategically (Qi & al., 2024), and how to ensure unswerving commitment to sustainability (Qi & al., 2024). The combination of these factors confirms the opinion that the key to the successful implementation of mega-events is highly advanced IS solutions to control logistics in real-time, effective communication, and permanent situational awareness (Ng & Kankanhalli, 2012), but the existing systems are still disjointed in terms of governance, sustainability, and technical aspects of the implementation.

Critical performance deficiencies and missing metrics

Although sport information systems have been widely adopted, their effectiveness and support of governance are fatally affected by critical performance maladaptation. The study conducted by (Blobel & al., 2021) indicates that the existing versions of SIS use operational requirements, but they are not fully integrated, and not many standardized architectures are offered (Blobel & al., 2021). More importantly, existing SIS only capture limited operational metrics, but they do not capture the entire triple bottom line of environmental, social, and economic results, which are referred to as the missing social justice indicators (Alnaqbi & al., 2025; Qi & al., 2024). The comparison of sustainability reports of Tokyo 2020 and Dubai Expo shows that key metrics such as child labour, anti-corruption, and health/ethical issues are grossly under-reported (Alnaqbi & al., 2025), and the change in sustainability focus towards health-related metrics since the COVID exposure reveals a problematic reporting system (Alnaqbi & al., 2025). Another underlying failure of configuration is the protection of data rights: to ensure comprehensive protection, the combinations of technical, organizational, and policy aspects have to be synergistic and coordinated, which is what is systematically missing in the current systems (X. Li & Guo, 2024). Moreover, the notion of stakeholder-focused accountability is still not present in the design of sport organization IS, as scoping reviews reveal that more conceptual rather than practical models of accountability are predominant (France et al., 2024).

The literature of the "*Twin Transformation*" demonstrates the lack of unified structures connecting digitalization and sustainability objectives and presupposes an excellent dedication of the top management to organizational and cultural issues (Glebova & Madsen, 2024; Henriette & al., 2016). The technologies used in mega-events, such as performance of athletes, refereeing, entertainment, and management of infrastructure, do not have governance strategies (Şimşek & Devecioğlu, 2025). These loopholes are not only technical incompetencies but also in endorsing a solid evidence-based governance, exhaustive sustainability reporting, and transparent stakeholder communications. IS must ensure constant connectivity and high security and 24-hour situational awareness to combine sports informatics to close the gaps between SIS providers, sport practice, and sport science (Ferraz & al., 2023; Ng & Kankanhalli, 2012), but the existing systems do not meet these specifications. Other barriers to knowledge management such as knowledge accessibility, absorptive capacity limitations and knowledge sharing dilemmas also hamper effective information flow among mega-events (Qin & al., 2022; Zhou, 2023).

Research gaps and fragmentation in mega-event governance

The primary gap identified across the sources is the fragmentation of research, leading to a lack of cohesive, integrated frameworks. While individual areas like Digital Transformation (DT), sustainability, and innovation are well-studied in isolation, there is a critical need for studies that synthesize them, such as the proposed Twin Transformation (TT) approach linking digitalization and sustainability (Glebova & Madsen, 2024; Saeedikiya & al., 2025).

A second major gap lies in the disconnect between aspirational goals and measurable outcomes. Research into Knowledge Transfer (KT) in mega-events suffers from a scarcity of empirical, theory-based studies capable of measuring tacit knowledge transfer, while official sustainability reports frequently omit critical indicators like anticorruption and specific social justice metrics (Alnaqbi & al., 2025; Zhou, 2023).

Third, there is a deficit in understanding causal mechanisms and organizational governance at the micro-level. Many studies lack integrative models to connect external physical data to internal performance metrics for injury prediction, and there is insufficient empirical work detailing the configurations necessary for robust data rights protection within sports organizations (X. Li & Guo, 2024; Stein & al., 2017). Governance innovation is also an ongoing gap, as decentralized structures need longitudinal testing to confirm that adaptive reforms persist beyond the event's immediate focus (Al-Thani & al., 2025; Hu & Shu, 2024).

Systematic research agenda bridging theory and practice

The current review suggests institutionally based intricate mechanisms to propel market motivations and information systems (IS) capacity building in the sports mega-events. The event licensing provisions should require weighted reporting for sustainability and data-rights standards to be incentivized, compliant SIS vendors (Chen et al., 2021), and special capacity-building programs will address endemic financial and skills barriers, and ethical barriers, identified in sport technology adoption research (Alnaqbi & al., 2025; Qi & al., 2024). The suggested architecture can be operationalized by the governance bodies to institutionalize stakeholder responsibility, which is a significant gap in sport organization scholarship (France & al., 2024), as shown by the acceleration in digitalization during the pandemic preserving financial stability, improving communication with partners, and hastening sustainability practices (Tettamanzi & al., 2023; Wang & al., 2024). This framework goes further than single-event analyses and enables systematic cross-event comparative analysis ((Glebova & Madsen, 2024; Qin & al., 2022; Ranaweera & al., 2022) in which an integrated IS architecture is critical to the provision of resilient governance, transparent sustainability reporting, and equitable value creation.

The innovative forms of governance require digital platforms that incorporate the empowerment of the players by the collective centralization of power in the form of collective bargaining and community-focused social responsibility strategies (Hu & Shu, 2024), and inclusive board design that involves combining the experience of the business with non-executive representation to enhance organizational performance (Taylor & O'Sullivan, 2009). The framework explicitly goes beyond individual case studies to provide nine key research priorities, such as sport-specific platform governance models (Chen & al., 2021; Kim & Grix, 2021), configurational data-rights protections (X. Li & Guo, 2024), longitudinal resilience measures (Al-Thani & al., 2025; Blobel & al., 2021), and standardized cross-event sustainability measures (Alnaqbi & al., 2025; Xiang & al., 2023) This agenda fills the gap between theoretical frameworks and empirical implementation pathways, offering not only short-term practical advice to event organizers, but also a longer-term basis to develop sports mega-event governance in a more digital ecosystem.

Table 2. Priority-research areas that bridge theory ↔ Practice (as highlighted in the review).

	Research-area (theoretical ↔ practical focus)	**Why it matters (key insight)**	**Representative sources (all 28 files are drawn on)**
1	A novel, integrated "*Twin-Transformation*" framework – linking digitalization and sustainability as a single strategic engine for sport organizations.	Shows that treating DT and sustainability as separate silos leaves a conceptual void; the TT model offers a unified theory that can be operationalized in policy, governance and technology design.	Twin-Transformation study; the multi-level DT-innovation synthesis
2	Multi-level digital-transformation → innovation – mapping antecedents, mediators and outcomes (organization, industry and macro contexts).	Provides a hierarchical lens that explains *how* DT reshapes capabilities, resources and market dynamics, guiding both model development and concrete innovation programs.	DT-innovation systematic review
3	Critical performance-deficiency & missing metrics in Knowledge Transfer (KT) especially the "*accessibility-availability*" barrier and the "*knowledge-sharing vs. knowledge-protection*" dilemma.	Empirical evidence shows KT is the weakest link in mega-event legacies; filling the metric gap is needed for credible impact evaluation and for designing knowledge-sharing platforms.	Systematic review of KT in sport mega-events; Critical-deficiency summary
4	Governance innovations for resilient mega-events and professional leagues – decentralized decision-making, stakeholder-centred structures and adaptive planning (e.g., Qatar 2022, NBA/NHL, US leagues).	Traditional top-down models hinder legitimacy and rapid response; governance redesign is a practical lever that can be tested with organizational-theory and measured through performance indicators.	Governance analysis of Qatar World Cup 2022; US professional league governance review.
5	Weighted, transparent sustainability reporting – addressing the "*economic-blind-spot*", anticorruption, child-labour and social-equity omissions in official event documents (Tokyo 2020 vs. Expo 2020 Dubai).	Aligns sustainability reporting with the SDG-GRI framework, enabling auditors, sponsors and policymakers to hold organizers accountable for the full triple-bottom-line.	Comparative sustainability report analyses.
6	Protection of sports-event data rights (configurational analysis) – organizational-level mechanisms (TOE, fsQCA) that achieve high data-security effectiveness.	Moves the debate from legal-theoretical to managerial practice; identifies concrete technology-organization-environment (TOE) configurations that can be institutionalized.	Configurational study of data-rights protection.
7	Efficiency of Sports Information Systems (SIS) and digital optimization of information flows – cost-inefficiency, data duplicity and limited automation (e.g., Slovakian case) versus best-practice automation, transparency and strategic planning.	Demonstrates that even well-funded SIS can fail without process-re-engineering; provides a practical checklist for managers and a test-bed for IS-theory.	Integrated SIS evaluation (Slovakia).
8	Refined Technology-Acceptance models for sport-IT – preserving the theoretical separation between object-based beliefs (system quality) and behavioural beliefs (usefulness, ease-of-use) to improve predictive power.	Offers a diagnostic tool for designers of data-warehouses, wearables and fan-engagement platforms, linking system attributes to intention-to-use and actual adoption.	User-satisfaction & TAM integration study.
9	Next-generation Performance Measurement Systems (PMS) for DT-enabled sport organizations moving beyond monitoring to attention focusing, strategic decision-making and legitimacy functions, while accounting for sustainability, resilience and ethical risks.	Supplies a concrete performance framework that can be operationalized in dashboards, KPI-sets and governance contracts, closing the gap between DT capability and measurable outcomes.	PMS systematic review & agenda.

To make this framework operational, we put the identified gaps in a systematic research agenda. Table 2 is constructed to outline nine interconnected priority research domains to integrate theoretical fragmentation with practice imperatives. All priorities are based on the gaps reported directly in the 28 studies under investigation and they focus on specific obstacles to the successful implementation of information systems in mega-event governance.

There are three areas in this research agenda that are interrelated. Priority 1-3 regard theoretical integration, namely, Twin -transformation, DT- Innovation mapping and Knowledge Transfer metrics, thus creating unified frameworks that present digitalization, innovation and learning as undivided entities. Priorities 46 are institutional mechanisms such as the innovation of governance, sustainability reporting, and protection of data-rights that are needed to implement these frameworks on organizational and policy levels. The translation of conceptual developments into empirically verifiable, measurable results by priority 7 to 9 is by optimizing SIS efficiency, developing better technology-acceptance models, and creating dynamic performance-measures systems.

All these nine areas are a response to these three underlying research questions. Priorities 7, 8, and 9 (system efficiency, acceptance, and measurement) address RQ1(Which IS are deployed?); priorities 1, 2, and 9 (transformation, innovation, and performance measurement) address RQ2 (What are the effects on governance?); and priority 3, 4, 5 and 6 (knowledge transfer, governance, sustainability and data protection) address RQ3 (What barriers and enablers exist?). This methodical mapping is so that future research in the field of mega-event governance will create integrated solutions instead of replicating the disjointedness that is apparent in the extant literature.

Having been compiled through a review of 28 peer-reviewed sources, the current research agenda provides not only a short-term practical advice but also a long-term basis of the development of sports mega-event governance and digital-transformation studies. Without built-in information-systems (IS), adaptive governance, old-school measurement, and data-rights protection is disjointed; on the other hand, the deployment of an integrated IS architecture can empower mega-events to achieve higher resilience, clear sustainability reporting, and equitable value-generation. The new concept of Twin Transformation is a strategic combination of digitalization and sustainability as an inseparable source of improvement (Glebova & Madsen, 2024), and the frameworks of resilience need to be multi-level, coordinating adaptively (Al-Thani & al., 2025), but not centrally (Hu & Shu, 2024). Digital transformation (DT) requires more adaptable performance-measurement frameworks including sustainability measures, but it faces a range of implementation issues, such as expensive costs, skills shortages, and ethical ambiguity (Henriette et al., 2016; Qi et al., 2024).

The transfer of data to cloud architectures is widely adopted (Blobel & al., 2021), but the existence of inefficiencies in integrating national contexts (Varmus & al., 2024) suggests that the digitalization of athlete data flows (Ranaweera & al., 2022)and data-protection in configurational data-rights (X. Li & Guo, 2024), is required. Such interdepartmental obstacles to knowledge transfer as the problem of accessibility and the insufficient absorptive capacity place the emphasis on the fact that KT research is still more limited than larger knowledge-management schemes (Qin & al., 2022; Zhou, 2023), and comparative sustainability studies demonstrate that post-pandemic social attention is rarely focused on economic disclosures (Alnaqbi et al., 2025). Accountability research highlights the lack of transparency in reporting that goes beyond the governance framework (France & al., 2024). The future research directions are necessitated by technology-acceptance models distinguishing between object-based beliefs and behavioural attitudes (Wixom & Todd, 2005), spatio-temporal analysis of team-sport metrics (Stein & al., 2017), incorporation of digital-twins

(Şimşek & Devecioğlu, 2025), and the strategy of legacy based on empirical reality (Kim & Grix, 2021). Most importantly, the achievement of DT hinges on equating leadership, culture, and organizational structure (Imran & al., 2021; Saeedikiya & al., 2025; Tettamanzi & al., 2023), platform governance design in the context of inter-firm coordination (Chen & al., 2021), and the need to go beyond the fragmented event-management literature (G. J. Li & Ma, 2014; Ng & Kankanhalli, 2012) to inform cross-sector policy.

CONCLUSIONS

The current review shows that information systems have become important to the governance of mega sporting events and that they have played a vital role in the governance of these events in five functional categories. As the existing empirical evidence shows, digital transformation, in fact, enhances the efficiency and coordination of operational processes, though the implementation of the corresponding technologies is uneven. One of the central discoveries is that technology alone is not sufficient; organizational, cultural and systemic barriers are often present, but inhibit the effectiveness and limit the necessary transfer of knowledge between host countries. The synthesis determines that there are a number of pressing issues that need to be addressed on an urgent basis. They include geographic differences in capacity of implementation that are highly marked, urgency of ethical and data-governance concern that are heightened by increased data gathering, and visible lack of coordination between technological investment and institutional learning. It is interesting to note that the research reports about the transition to more inclusive forms of governance, in particular, the development of stakeholder engagement platforms. However, it notes that this is an imbalanced advancement that requires a calculated strategic intervention.

In line with this, the future development needs a combined solution. In practice, the information-systems strategies must be integrated into governance and sustainability models early instead of being viewed as technicality add-ons, and standardized guidelines and specialized support should be provided by international organizations to the developing countries. In the academic field, there has been a dire need to develop sport-specific theoretical frameworks and to conduct longitudinal and outcome-based studies. However, it is only by taking into account technical, human, and systemic aspects in a holistic approach that the full potential of information systems in sports governance will be achieved and thus be able to promote more efficient, equitable, and ethically responsible mega-events.

AUTHOR CONTRIBUTIONS

Conceptualization: Eddif F. Z., Arich S.; writing & original draft & preparation: Eddif F. Z.; review & editing: Rajaallah E. L., Jemjami N.; supervision: Rajaallah E. I.; project administration: Eddif F. Z.

SUPPORTING AGENCIES

No funding agencies were reported by the authors.

DISCLOSURE STATEMENT

No potential conflict of interest was reported by the authors.

REFERENCES

Alnaqbi, M., Murayama, T., Nishikizawa, S., & Suwanteep, K. (2025). Comparative Analysis of Sustainability-Related Documents for Mega-Events: Case of Tokyo Olympics and Expo Dubai. Event Management, 29(5), 661-680. https://doi.org/10.3727/152599525X17385344274478

Al-Thani, M., Al-Jabrah, A., Al-Momani, H., & Mukattash, A. (2025). Governance and planning for resilient mega-sport events: Lessons learnt from FIFA World Cup Qatar 2022. Urban Governance. https://doi.org/10.1016/j.ugj.2025.09.004

Berente, N., & Seidel, S. (2022). Digital Technologies: Carrier or Trigger for Institutional Change in Digital Transformation? In T. Gegenhuber, D. Logue, C. R. (Bob) Hinings, & M. Barrett (Eds.), Digital Transformation and Institutional Theory (Vol. 83, p. 0). Emerald Publishing Limited. https://doi.org/10.1108/S0733-558X20220000083008

Blobel, T., Rumo, M., & Lames, M. (2021). Sports Information Systems: A systematic review. International Journal of Computer Science in Sport, 20(1), 1-22. https://doi.org/10.2478/ijcss-2021-0001

Chen, L., Tong, T., & Tang, S. (2021). Governance and Design of Digital Platforms: A Review and Future Research Directions on a Meta-Organization. Journal of Management, 48. https://doi.org/10.1177/01492063211045023

Cosa, M., & Torelli, R. (2024). Digital Transformation and Flexible Performance Management: A Systematic Literature Review of the Evolution of Performance Measurement Systems. Global Journal of Flexible Systems Management, 25(3), 445-466. https://doi.org/10.1007/s40171-024-00409-9

Ferraz, A., Duarte-Mendes, P., Sarmento, H., Valente-Dos-Santos, J., & Travassos, B. (2023). Tracking devices and physical performance analysis in team sports: A comprehensive framework for research-trends and future directions. Frontiers in Sports and Active Living, 5. https://doi.org/10.3389/fspor.2023.1284086

France, A., Dickson, G., McDonald-Kerr, L., & Ozdil, E. (2024). A scoping review of sport organisations' accountability. Managing Sport and Leisure. https://doi.org/10.1080/23750472.2024.2365208

Glebova, E., & Madsen, D. Ø. (2024). Twin transformation as a strategic approach in sport management: The synergy of digitalization and sustainability in sports. Frontiers in Sports and Active Living, 6. https://doi.org/10.3389/fspor.2024.1403793

Haddaway, N. R., Page, M. J., Pritchard, C. C., & McGuinness, L. A. (2022). PRISMA2020: An R package and Shiny app for producing PRISMA 2020-compliant flow diagrams, with interactivity for optimised digital transparency and Open Synthesis. Campbell Systematic Reviews, 18(2), e1230. https://doi.org/10.1002/cl2.1230

Henriette, Emily; Feki, Mondher; and Boughzala, Imed, "Digital Transformation Challenges" (2016). MCIS 2016 Proceedings. 33. Retrieved from [Accessed 2026, 11 March]: https://aisel.aisnet.org/mcis2016/33/

Hu, Y., & Shu, S. (2024). Exploring the dynamics of governance: An examination of traditional governance and governance innovation in the United States professional sports leagues. Heliyon, 10(13), e32883. https://doi.org/10.1016/j.heliyon.2024.e32883

Imran, F., Shahzad, K., Butt, A., & Kantola, J. (2021). Digital Transformation of Industrial Organizations: Toward an Integrated Framework. Journal of Change Management, 21(4), 451-479. https://doi.org/10.1080/14697017.2021.1929406

Kim, H.-M., & Grix, J. (2021). Implementing a Sustainability Legacy Strategy: A Case Study of PyeongChang 2018 Winter Olympic Games. Sustainability, 13(9), 5141. https://doi.org/10.3390/su13095141

King, N. (2016). Sport Governance: An introduction. Routledge. https://doi.org/10.4324/9781315623313

Li, G. J., & Ma, S. Q. (2014). Research on Development of Sports Information Management Systems. Advanced Materials Research, 926-930, 2594-2597. https://doi.org/10.4028/www.scientific.net/AMR.926-930.2594

Li, X., & Guo, X. (2024). Factors affecting the protection of data rights in sports events: A configurational analysis. Scientific Reports, 14, 5353. https://doi.org/10.1038/s41598-024-56074-6

Ludvigsen, J. A. L., Rookwood, J., & Parnell, D. (2023). Introduction-The sport mega-events of the 2020s: Governance, impacts and controversies. In The Sport Mega-Events of the 2020s. Routledge. https://doi.org/10.4324/9781003454458-1

Ng, B.-Y., & Kankanhalli, A. (2012). Information Systems for Large-Scale Event Management: A Case Study. Pacific Asia Journal of the Association for Information Systems, 4(3). https://doi.org/10.17705/1pais.04302

Qi, Y., Sajadi, S. M., Baghaei, S., Rezaei, R., & Li, W. (2024). Digital technologies in sports: Opportunities, challenges, and strategies for safeguarding athlete wellbeing and competitive integrity in the digital era. Technology in Society, 77, 102496. https://doi.org/10.1016/j.techsoc.2024.102496

Qin, Y., Rocha, C. M., & Morrow, S. (2022). Knowledge management in sport mega-events: A systematic literature review. Frontiers in Sports and Active Living, 4. https://doi.org/10.3389/fspor.2022.1056390

Ranaweera, J., Weaving, D., Zanin, M., Pickard, M. C., & Roe, G. (2022). Digitally Optimizing the Information Flows Necessary to Manage Professional Athletes: A Case Study in Rugby Union. Frontiers in Sports and Active Living, 4, 850885. https://doi.org/10.3389/fspor.2022.850885

Saeedikiya, M., Salunke, S., & Kowalkiewicz, M. (2025). The nexus of digital transformation and innovation: A multilevel framework and research agenda. Journal of Innovation & Knowledge, 10(1), 100640. https://doi.org/10.1016/j.jik.2024.100640

Santos, C. D. F. S. O., & Gómez, C. P. (2022). Governance for Major and Mega-events: A Framework Proposition. Event Management, 26(5), 1097-1111. https://doi.org/10.3727/152599522X16419948390871

Şimşek, A., & Devecioğlu, S. (2025). The Future of Technology at Mega Sports Events. Türkiye Spor Bilimleri Dergisi, 9(1), 48-66. https://doi.org/10.32706/tusbid.1695111

Stein, M., Janetzko, H., Seebacher, D., Jäger, A., Nagel, M., Hölsch, J., Kosub, S., Schreck, T., Keim, D. A., & Grossniklaus, M. (2017). How to Make Sense of Team Sport Data: From Acquisition to Data Modeling and Research Aspects. Data, 2(1), 2. https://doi.org/10.3390/data2010002

Taylor, M., & O'Sullivan, N. (2009). How Should National Governing Bodies of Sport Be Governed in the UK? An Exploratory Study of Board Structure. Corporate Governance: An International Review, 17(6), 681-693. https://doi.org/10.1111/j.1467-8683.2009.00767.x

Tettamanzi, P., Grazioli, F., & Murgolo, M. (2023). The Quest for Sustainable Sports Management: Evidence from the Football Industry. Sport Business and Management An International Journal. https://doi.org/10.1108/SBM-04-2023-0048

Varmus, M., Kubina, M., Mičiak, M., & Šarlák, M. (2024). Integrated Sports Information Systems: Enhancing Data Processing and Information Provision for Sports in Slovakia. Systems, 12(6), 198. https://doi.org/10.3390/systems12060198

Wang, H., Lu, L., Fu, Y., & Li, Q. (2024). An empirical assessment of the influence of digital transformation on sports corporate sustainability. PLOS ONE, 19(4), e0297659. https://doi.org/10.1371/journal.pone.0297659

Wixom, B. H., & Todd, P. A. (2005). A Theoretical Integration of User Satisfaction and Technology Acceptance. Information Systems Research, 16(1), 85-102. https://doi.org/10.1287/isre.1050.0042

Xiang, C., Wenting, D., Tengku Kamalden, T. F., Ismail, N., Jie, Z., Xiaoming, Y., & Hua, L. (2023). The role of sports mega - events in the sustainable development of cities: A systematic review. Malaysian Journal of Sport Science and Recreation, 19(1), 16-36. https://doi.org/10.24191/mjssr.v19i1.21727

Zhou, J. (2023). Systematic Review for Knowledge Transfer at International Sport Mega-Events. Sustainability, 15(6), 4902. https://doi.org/10.3390/su15064902