Evaluating Digital Transformation in Vietnamese Football Clubs Using Deloitte's Five-Level Digital Maturity Framework - Cultural Industry Perspective

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ABSTRACT

Football holds a significant position and plays an essential role within the cultural industries of every economy. The adoption of information technology and digital transformation has become an inevitable requirement in modern football, serving as a key driver for the development and expansion of the cultural industry. This study assesses the current state and digital maturity of Vietnamese football clubs by applying Deloitte's Five Levels of Digital Maturity framework. Data were collected through an online survey conducted among five representative clubs: Hanoi FC, Viettel FC, SHB Da Nang, SLNA, and PVF. The analysis focuses on five critical domains of digital transformation: digital governance, match and tactical analytics, fan experience, player development and training, and commercialization and media. The findings reveal that digital transformation in Vietnamese football remains at a relatively low and uneven level across these domains. Among them, player development and training exhibit the highest level of digital maturity, followed by fan experience, while match and tactical analytics as well as commercialization and media remain underdeveloped. These results underscore the urgent need for a comprehensive and long-term digital strategy that integrates technological innovation, governance enhancement, and improved fan engagement. Such a strategy would not only strengthen the competitiveness of Vietnamese football but also foster its sustainable development within the broader context of the digital cultural economy.

Keywords: Digital Transformation, Digital maturity, Vietnamese Football, Deloitte's Digital Maturity Framework

INTRODUCTION

The football industry functions as a multidimensional socio-economic ecosystem that extends far beyond professional competition (Hesmondhalgh, 2013). It encompasses grassroots development, clubs, leagues, coaching infrastructures, sponsorship, broadcasting rights, consumer products, commercial services, sports tourism, and the integration of digital technologies (Andreff & Szymański, 2006). Over time, football has evolved into a major cultural and entertainment industry, generating significant value across its entire value chain, including talent development, media commercialization, brand promotion, and fan community engagement (Deloitte, 2021). This multifaceted sector serves a wide range of economic, cultural, social, and political objectives, contributing to job creation, stimulating consumer spending, and fostering economic growth at both national and local levels (Hamil et al., 2010; Rompotis, 2024), while also promoting the development of related industries such as tourism and sports (Higham & Hinch, 2009).

In Vietnam, football holds a unique position as both the most popular sport and a cultural practice fostering social cohesion. According to Vietnam Investment Review (https://vir.com.vn), the country's sports economy is valued at approximately USD 300 million, and the 2023–2024 V.League season attracted more than 1.4 million spectators. Vietnam currently has 26 professional football clubs, including 14 teams in V.League 1 and 12 teams in V.League 2 (Bongda.com.vn, 2024). Vietnamese football has also achieved remarkable milestones, such as

winning the 2018 AFF Cup and, for the first time, advancing to the final qualifying round of the 2022 FIFA World Cup in Asia. These accomplishments not only strengthen national pride but also reinforce social cohesion. Economically, football generates substantial revenues from broadcasting rights, sponsorships, and ticket sales, while simultaneously boosting sports tourism. However, the industry still faces structural challenges, including unstable governance, limited commercialization capacity, and a slow pace of digital transformation. The absence of a national digitalization strategy, underdeveloped infrastructure, and financial constraints continue to hinder the sector's ability to fully unlock its economic and cultural potential (Government of Vietnam, 2024).

The purpose of this study is to assess the current status and level of digital transformation (DT) in Vietnamese football by applying Deloitte's (2018) Five-Level Digital Maturity Framework. The research seeks to identify the extent to which Vietnamese football clubs have advanced in their digital maturity journey, thereby clarifying their achievements, persisting limitations, as well as the opportunities and challenges encountered in the digitalization process. This effort not only provides a systematic perspective on the digital transformation of Vietnamese football but also serves as a foundation for formulating sustainable development strategies in the context of globalization and increasing competition.

THEORETICAL FRAMEWORK

Concept of Digital Transformation and Digital Maturity

Digital transformation (DT) is understood as the process of integrating digital technologies into all aspects of an organization in order to fundamentally reshape its operations, governance, value creation, and stakeholder experience (Westerman et al., 2014).

In the field of sports, DT goes beyond the mere adoption of new technologies; it also encompasses the restructuring of management processes, the innovation of business models, the optimization of training activities, and the enhancement of fan engagement (Ratten, 2020). Anagnostopoulos et al. (2022) further emphasize that DT is not solely a technological endeavor but is intrinsically linked to changes in governance, organizational culture, business models, and stakeholder interactions—particularly with fans and sponsors. Crucially, the digital maturity of sports organizations depends on their capacity to align technology with organizational strategy and to manage change effectively.

Digital transformation (DT) and digital maturity are closely interconnected (Gökalp & Martinez, 2021). Digital maturity reflects the state or level of DT that an organization or enterprise has achieved at a given point in time. This concept not only indicates the extent to which digital technologies are applied in governance, production, services, and customer interactions, but also demonstrates an organization's readiness to leverage digital technologies to create new value, improve operational efficiency, and build sustainable competitive advantages in the market (Deloitte, 2020; Yezhebay et al., 2021). Thus, digital maturity serves as a benchmark that reveals where an organization stands in its DT journey, as well as its ability to harness technology to seize opportunities, innovate business models, and strengthen competitiveness.

Digital Transformation in Football

Football, traditionally structured around analog infrastructure and conventional business models, is increasingly shaped by digitalization trends (Deloitte, 2020). Football clubs and academies have implemented a wide range of digital technologies, such as match data analytics, fan engagement platforms, e-commerce systems, and digitalized internal management (PwC, 2019; Accenture, 2021). Diel et al. (2021) found that digital technologies are applied in the football industry both on the field (e.g., performance analytics) and off the field (e.g., fan engagement). Their study identified several digital technologies integrated into football-related processes and activities, including digital management, fan engagement, and revenue generation.

Metelski and Leszczyński (2022) discovered that the use of social media significantly influences the popularity, interaction, and image of football clubs, with the number of followers serving as a key indicator of both reputation and commercialization potential.

More recently, Merten et al. (2024) identified critical internal factors for the DT of football clubs, which football associations and governing bodies must support. These include fostering an organizational culture, developing modern ICT infrastructure, enhancing digital human capital, ensuring leadership support, strengthening knowledge management capabilities, and building dedicated DT teams.

Overall, digital transformation in the football industry is driven by both internal and external demands. This process requires clubs to rapidly embrace DT in order to adapt to an increasingly digital environment.

Deloitte's Five-Level Digital Maturity Framework (2018)

To assess the degree of digital maturity, Deloitte (2018) proposed a five-level framework consisting of the following stages:

1. Initial – organizations adopt digital technologies in a fragmented manner, lacking an overarching strategy.
2. Developing – digital solutions are piloted in selected areas but without comprehensive integration.
3. Emerging – a clear digital strategy is established, and technologies are deployed more systematically and consistently.
4. Integrated (Managing) – digitalization processes are monitored, measured, and optimized through data-driven approaches, with integration into organizational processes.
5. Optimized – digital transformation becomes a core organizational capability, technologies are fully integrated, driving continuous innovation and sustainable competitive advantage.

The framework conceptualizes digital transformation as a continuous process rather than a fixed end state. Deloitte developed this model by drawing on theories of organizational innovation, strategic management, and change management, while also synthesizing data from over 1,000 digital consulting projects across industries such as finance, healthcare, manufacturing, retail, sports, and technology. In addition, Deloitte conducted global surveys of senior executives (CEOs, CIOs, CDOs, CFOs) to gather insights on digital adoption, strategic alignment, managerial capacity, and innovation culture, which were subsequently used to refine the five levels for greater practical relevance (Deloitte, 2018).

This framework has been widely applied in both research and practice. For instance, Deniz Merdin et al. (2023) employed it to assess corporate digitalization levels, while Edwin et al. (2024) used it to evaluate the digital maturity of small and medium-sized enterprises (SMEs), framing their analysis within the resource dependency theory. In Vietnam, the framework has also been adopted by scholars such as Hoang et al. (2023) and Luu Thi Minh Ngoc et al. (2025) in studies assessing digital transformation in the education sector.

In the field of sports, the study by Yixi Wan (2024) identified the impacts of digital transformation (DT) in several critical areas of football, including business models, revenue generation, and fan engagement, with case studies conducted at Liverpool Football Club, ESPN, and the NBA as three representative sports organizations. Kittikumpanat et al. (2023) proposed a digital maturity framework for sports media in Thailand, highlighting factors such as technology, organization, culture, data analytics, strategy, operations, innovation, and customers— dimensions largely consistent with Deloitte's digital maturity frameworks.

In addition, another Deloitte (2024) report on the future of digital transformation in sports revealed that applying the Five-Level Digital Maturity Framework (Deloitte, 2018) provides a comprehensive approach to assessing the extent of digitalization in football clubs today. Building on these studies, this research proposes an analytical framework of digital maturity in the football industry, encompassing five key domains of digital transformation in football and describing them across Deloitte's (2018) five maturity levels.

Table 1. Description of the five levels of digital transformation across domains of the football industry

Domain	Five levels of DT				
	Initial	Developing	Emerging	Integrated	Optimized
1. Digital gervernance (DG)	Fragmented adoption of basic management tools, absence of a digital strategy.	The club has begun adopting certain digital tools for governance; however, their application remains fragmented and lacks full integration	The club has issued a clear digital governance strategy and developed an implementation plan	The club has a dedicated unit/personnel responsible for digital governance and periodic evaluation	DG is comprehensively integrated, functioning as a core foundation for organizational management and strategic decision-making.
2. Match & Tactical Analytics (MTA)	Manual recordkeeping, dispersed data, no digital analytics applied.	The club utilizes fundamental tools (e.g., statistical data and video highlights) to support performance analysis	The club adopts advanced technologies (e.g., GPS tracking and in-depth video analysis) to enhance training processes	Analytical data are systematically employed to refine tactical approaches and optimize overall performance	The club leverages artificial intelligence and big data to generate predictive insights, optimize tactical strategies, and support real-

					time decision-making
3. Fan Experience (FE)	The club engages with fans mainly through traditional channels, such as direct interactions and print journalism	The club operates social media accounts, an official website, and provides online ticketing at a basic level	The club utilizes applications, CRM platforms, livestreaming, and official digital content to facilitate fan engagement	The club employs fan data analytics to deliver personalized experiences and targeted marketing campaigns	The fan experience is comprehensively digitized through the integration of AR/VR technologies, electronic ticketing systems, and over-the-top (OTT) platforms
4. Player Development & Training (PDT)	The training process relies predominantly on coaches' experiential knowledge, with minimal integration of digital tools	The club utilizes fundamental digital tools and equipment to track player development.	The club integrates GPS technology, video analytics, and biometric data into its training practices	The club manages player data in a centralized system and employs it for long-term development strategies.	The club implements a holistic training ecosystem that integrates AI, simulation technologies, and IoT to enhance player development
5. Commercialization & Media (CM)	Revenue is primarily derived from direct ticket sales and traditional sponsorships	The club has initiated online ticketing and utilizes social media platforms for promotional activities	The club has adopted e-commerce and capitalizes on digital broadcasting rights	The club leverages data to enhance marketing effectiveness, dynamic ticket pricing, and media strategy.	The club has developed a comprehensive digital media ecosystem (OTT platforms, digital content, sustainable revenue streams, and digital asset

Source: Author's compilation

RESEARCH METHODOLOGY

Questionnaire Design

In addition to demographic questions and instructions for respondents on how to select items and response options, the questionnaire focuses on assessing the level of digital transformation (DT) application in football clubs across the domains extracted from Table 1. Table 2 summarizes the questions used to evaluate the degree of DT across five key domains in football clubs/organizations, employing a five-point Likert scale ranging from Initial = 1 point to Optimized = 5 points.

Table 2. Questionnaire on the Level of DT Application in Football Clubs

Domain	1 – Initial	2 - Developing	3 - Emerging	4 – Integrated	5 - Optimised
1. Digital Governances (DG)	☐	☐	☐	☐	☐
2. Match & Tactical Analytics (MTA)	☐	☐	☐	☐	☐
3. Fan Experiences (FE)	☐	☐	☐	☐	☐
4. Player Development & Training (PDT)	☐	☐	☐	☐	☐
5. Commercialization & Media (CM)	☐	☐	☐	☐	☐

Sample Characteristics

Data were collected through an online survey. Out of 500 distributed questionnaires, 435 valid responses were obtained, yielding a response rate of 87.0%. Respondents included managers, administrative staff, referees, coaches, former players, current players, and football fans. The majority of managerial staff came from five representative clubs: Hà Nội FC, Viettel FC, SHB Đà Nẵng, SLNA, and PVF.

• Age distribution: 63% were between 16–30 years old, 31% were 31–45 years old, and 6% belonged to other age groups.

• Occupational distribution: 6% were managers, administrative staff, and former players; 3% were coaches; 12% were former and current players; 3% were referees; and 76% were fans.

• Professional experience (excluding fans): 20% had 1–3 years of experience, 65% had 3–10 years, and 15% had more than 10 years.

• Fan characteristics: 100% reported using smartphones with internet access to purchase tickets, follow live matches, participate in online communities, and maintain social media accounts.

• E-readiness: 100% of respondents indicated a high level of readiness to adopt digital technologies for both work-related and recreational football activities.

According to the Vietnam Football Federation (VFF, 2023), the professional football system currently comprises 14 clubs in V.League 1 (Vietnam's top-tier national championship) and 12 clubs in the V.League 2 (First Division). The selection of five clubs for analysis was based on criteria such as governance models, performance, investment levels, fan engagement, and potential for digital technology adoption. These clubs represent diverse governance structures, strong competitive achievements, significant fan bases, and high digitalization potential.

• Hà Nội FC: A highly successful club with strong emphasis on commercialization and fan engagement.

• Viettel FC: Affiliated with a leading technology corporation, representing a model integrated with digital infrastructure.

• Sông Lam Nghệ An (SLNA): A club with a long-standing tradition and a strong pipeline of young talent.

• SHB Đà Nẵng: Known for its youth development system, with potential for restructuring through digital technologies.

• PVF Football Academy: A youth training academy focusing on player

In addition, the selection of only five clubs was intended to ensure the feasibility of data collection, given the constraints of resources and time, while surveying all 26 professional clubs was deemed unnecessary. In summary, the choice of five clubs and the attainment of 435 valid responses demonstrate that the survey sample retains a high degree of representativeness for stakeholders across Vietnam's professional football ecosystem. According to Yamane (1967), when the overall population cannot be precisely determined, the minimum sample size required at the commonly accepted margin of error of ±0.05 is greater than 384.16. Furthermore, Hair et al. (2019) suggest that a minimum sample size of 200 is appropriate for factor analysis and other advanced statistical techniques. In this study, the survey results are applied solely for descriptive statistical analysis. With 435 valid responses, the sample is therefore statistically meaningful for conducting analysis and drawing conclusions (Yamane, 1967; Hair et al., 2019).

RESEARCH FINDINGS

Data Analysis Method

The data were processed through the following steps: (i) coding and cleaning; (ii) descriptive statistical analysis to outline sample characteristics; (iii) data analysis using a five-point Likert scale, based on Deloitte's (2018) Five-Level Digital Maturity Framework; and (iv) visualization of results through charts.

Data Analysis Results

For the question concerning the level of digital transformation (DT) in digital governance (DG) activities of football clubs, 385 valid responses were collected. Among them, 230 respondents (59.7%) selected level 2, while 155 respondents (40.3%) selected level 3. The calculated mean score is $(2*230 + 3*155)/385 = 2.40$. This result indicates that football clubs have only begun to adopt certain digital tools in governance, but their implementation remains fragmented and unsystematic, lacking a long-term strategic approach to digital governance.

For the question on DT in match and tactical analytics (MTA), 386 valid responses were analyzed. Respondents included coaches, referees, managers, and former players (including football commentators), who accounted for 55%, with the remainder consisting of players and fans. The results show that responses were concentrated mainly at the mid-levels. Specifically, 152 respondents selected level 2, 184 selected level 3, and 50 selected level 4. The average score for MTA is $(2*152 + 3*184 + 4*50)/386 = 2.73$. This reflects that clubs have started to adopt some tools for match data analysis, such as technical statistics or video-based situation analysis, but systems remain fragmented and lack high-level integration. According to the survey, a number of former players and coaches—who represent 50% of those choosing level 4—demonstrated greater awareness of the strategic value of tactical data and expressed a stronger desire for deeper application in training practices.

These findings suggest that DT in match and tactical analytics in Vietnamese football has reached the "emerging" stage and is progressing toward the "developing" stage within Deloitte's (2018) five-level framework. In other words, while technology has been introduced, the extent of data exploitation remains limited, lacking systematic integration and underutilizing advanced analytical solutions such as artificial intelligence, machine learning, and big data analytics. This presents not only a challenge but also a critical opportunity for clubs to invest in and accelerate digital transformation in order to enhance their competitive capacity in the future.

For the survey question on Player Development & Training (PDT), 392 respondents participated, of which 98 were coaches, players, or club staff—groups with direct practical experience in professional activities. The detailed results show that 280 respondents selected level 4, 92 selected level 3, and 22 selected level 2. The average PDT score was 3.67 = (22*2 + 92*3 + 280*4)/392. This outcome indicates that Vietnamese football clubs have been applying digital technologies in player training and development, such as video analysis systems, GPS tracking devices, and fitness evaluation software. These tools not only assist coaches in enhancing training strategies but also help players optimize performance and reduce injury risks. However, the predominance of level 4 responses suggests that the current systems have not yet reached an optimal state. Clubs are primarily at the stage of standardizing the use of digital tools, while more advanced practices—such as personalized training data, in-depth analytics using Artificial Intelligence (AI), and integrated data systems across different training levels—remain limited. According to Deloitte's (2018) five-level digital maturity framework, these results place the field of Player Development & Training at the "Integrated" stage, meaning that digital processes have been clearly established and applied consistently, but further investment is needed to advance toward the "Optimized" stage.

For the survey question on Commercialization & Media (CM), 399 respondents participated, accounting for approximately 91.80% of the total valid samples. The results show a clear divergence: 120 respondents (30.0%) rated below level 2, 150 (37.6%) rated below level 3, while the remaining 129 respondents (32.3%) rated at level 4. The average CM score was 3.0 = (2*120 + 3*150 + 4*129)/399. These findings reflect that although some clubs have implemented digital commercialization and online media activities (e.g., online ticketing, e-shops, or live streaming of matches), overall adoption remains limited and inconsistent. The majority of respondents rated at a low to medium level, indicating that commercialization and media exploitation remain significant weaknesses in Vietnamese football's digital transformation process. The group rating at level 4 reflects some positive recent initiatives, such as greater use of social media to engage with fans, leveraging online broadcasting rights, and entering commercial partnerships with digital platforms. Nevertheless, this proportion remains relatively low compared to expectations, suggesting that most clubs are still at the experimental stage and have not fully capitalized on the revenue potential of digital commercialization.

According to Deloitte's (2018) five-level digital maturity framework, these results place the domain of Commercialization & Media at the "Emerging" stage—beyond the "Developing" stage but not yet reaching "Integrated." To progress further, clubs must establish more professional digital business models, strengthen e-commerce operations, develop exclusive digital content, and fully utilize fan data analytics to increase commercial value. The evaluation results across the five domains of digital transformation for Vietnamese football clubs, as benchmarked against Deloitte's five-level digital maturity framework, are presented in Figure 1.
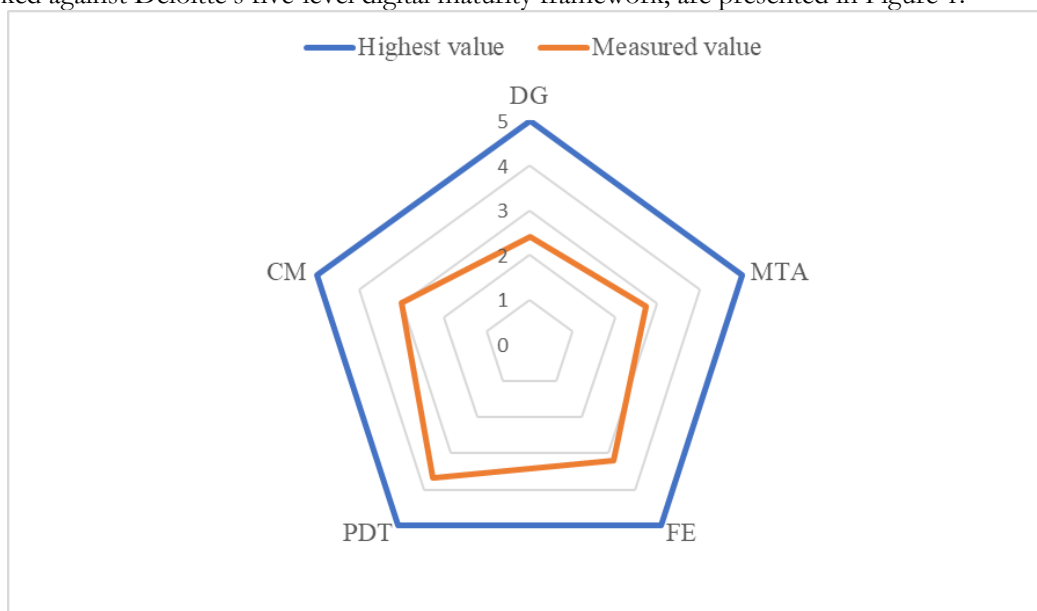

Figure 1. Radar Chart of the Five Levels of Digital Transformation across Five Domains: DG, MTA, FE, PDT, and CM

From the radar chart in Figure 1, it is evident that the degree of digital transformation across different domains in Vietnamese football varies significantly. Player Development & Training (PDT) stands out as the most advanced, with the majority of responses at level 4. This indicates that clubs have actively adopted performance analysis technologies, GPS tracking, training software, and biomedical data systems to support players. Such developments reflect a clear prioritization of professional quality, aligning with international trends.

Fan Experience (FE) ranks second, with most responses clustered at levels 3 and 4. Online ticketing solutions, live match streaming, and digital fan communities have been implemented, fostering stronger engagement between clubs and their supporters. However, this domain remains primarily at the "Emerging" stage, as more advanced technologies such as data personalization or virtual reality experiences have yet to be fully utilized.

Commercialization & Media (CM) ranks third and remains at the "Emerging" stage. This domain shows the most fragmented distribution of responses, with ratings spread across levels 2, 3, and 4. The findings highlight that clubs and associated companies need to further leverage digital broadcasting rights, e-commerce, and online promotion, which remain limited and predominantly rely on traditional methods.

Match Analysis & Tactics (MTA) demonstrates development at a near-"Emerging" level. While clubs have begun adopting video analysis tools and tactical data systems, these remain inconsistent and lack depth, constrained by financial resources and human capacity.

Finally, Digital Governance (DG) is assessed at the lowest level—classified as "Developing." This reflects the incomplete application of digital management technologies. Data management systems, customer relationship management (CRM), and integrated platforms are still in their early stages, with no comprehensive synchronization strategy at either the club or federation level.

RECOMMENDATIONS

Based on the analysis of the five domains of digital transformation (DT) in Vietnamese football, several strategic recommendations can be proposed as follows:

For Digital Governance (DG): Clubs should consider digital governance as the foundation for implementing comprehensive digital transformation. The adoption of enterprise resource planning (ERP), customer relationship management (CRM), and human resource management (HRM) systems will help standardize workflows, reduce operating costs, and enhance financial transparency. Each club should establish a long-term digital strategy aligned with both sporting and commercial objectives, while also building a dedicated digital transformation team responsible for coordinating, monitoring, and evaluating digital initiatives, as well as enhancing the application of digital tools.

For Match Analysis & Tactics (MTA): In modern football, data is a critical factor for improving on-field performance. Clubs should invest in GPS tracking systems, 360° tactical cameras, and advanced video analysis software to measure physical metrics, tactical movements, and player performance. In parallel, highly specialized data analytics teams should be developed to support coaching staff in decision-making. The application of data in training and player scouting not only optimizes tactical performance but also minimizes injury risks and prolongs player careers. Clubs are advised to collaborate with domestic and international technology partners to stay updated with cutting-edge analytical tools.

For Fan Experience (FE): Fans are the most valuable "asset" of a football club. Therefore, clubs should invest in digital platforms to enhance fan experiences, ranging from online ticketing and dedicated mobile applications to personalized content such as match highlights, mini-games, and exclusive membership perks. Clubs could develop digital membership programs to foster long-term loyalty while leveraging behavioral data for tailored experiences. Furthermore, live streaming, virtual reality (VR), and augmented reality (AR) should be adopted to provide innovative fan experiences. Maintaining regular interaction on social media and digital communities will not only strengthen brand identity but also extend global reach.

For Player Development & Training (PDT): Player training is the cornerstone of sustainable football development. Clubs should implement personalized training solutions based on biometric data and artificial intelligence (AI), enabling close monitoring of health, nutrition, and workload for each player. Additionally, simulation and VR technologies should be integrated into tactical training, helping young players improve cognitive decision-making in simulated match scenarios. Clubs should also establish longitudinal training databases spanning from youth academies to first teams, ensuring continuity and talent progression. International collaboration with advanced football academies will further help update global best practices and enhance training quality.

For Commercialization & Media (CM): Commercialization plays a vital role in ensuring the financial sustainability of clubs. Efforts should be intensified in e-commerce (e.g., ticketing, merchandise, memorabilia) through websites and mobile applications. At the same time, clubs should capitalize on over-the-top (OTT) platforms and partnerships with broadcasters to distribute digital rights while expanding advertising and sponsorship revenues. Media activities should be strategically invested in, with creative content strategies and brand

storytelling linked to players, history, and club identity to increase attractiveness for both fans and sponsors. Moreover, clubs can leverage blockchain and NFTs to commercialize digital assets such as player collectibles, thereby unlocking new revenue streams.

Overall Recommendation: Digital transformation in football is seen as a vital factor in the development of Vietnam's cultural industry, particularly within the creative economy. By implementing digital technologies, the football sector can improve management efficiency, enhance fan experiences, streamline training processes, and boost the commercial value of football clubs. This transformation not only strengthens competitiveness but also helps promote cultural values and enhance the national image. Vietnamese football clubs need to establish long-term digital transformation strategies through a comprehensive approach that integrates digital governance, big data utilization, and technological innovation. This integration should apply to both internal operations and market-oriented activities. Additionally, expanding e-commerce, licensing digital content, and implementing multi-platform communication strategies will help support sustainable revenue growth. Furthermore, forming partnerships with technology companies, investing in the development of digital talent, and enhancing data analytics capabilities will be crucial for enabling Vietnamese football to integrate more deeply into the global cultural industry and creative economy.

CONCLUSION

This study demonstrates that digital transformation (DT) has become an inevitable trend and plays a pivotal role in the sustainable development of football clubs in Vietnam. Through the survey and analysis of five key domains—Digital Governance (DG), Match and Tactical Analysis (MTA), Fan Experience (FE), Player Development & Training (PDT), and Commercialization & Media (CM)—it is evident that the level of digital maturity varies across domains. Among them, Player Development & Training (PDT) achieves the most advanced degree of DT, reflecting the prioritization of technological applications in coaching and professional training. Fan Experience (FE) also reaches a relatively high level, indicating the growing use of digital platforms to enhance community engagement. In contrast, Match and Tactical Analysis (MTA) and Digital Governance (DG) remain underdeveloped, revealing untapped potential.

Digital transformation in football extends beyond the adoption of new technologies; it entails restructuring governance models, training systems, commercialization approaches, and fan engagement strategies. The findings suggest that, to enhance the effectiveness of DT, clubs and associations should establish an integrated strategy that synchronizes governance, coaching technologies, match data analytics, fan interaction, and e-commerce models. Moreover, fostering digital talent, collaborating with technology enterprises, and leveraging big data will strengthen competitiveness. DT is not merely a supportive tool for professional and business activities but a critical lever for elevating Vietnamese football in the digital era.

REFERENCES

Accenture. (2021). Digital transformation in global football: The Manchester City case study. Accenture Sports Innovation Reports.

Anagnostopoulos, C., Parganas, P., Chadwick, S., & Fenton, A. (2022). Digital transformation and innovation in sports organizations: An integrative framework. Sport, Business and Management, 12(2), 123–139. https://doi.org/10.1108/SBM-07-2021-0082

Andreff, W., & Szymański, S. (2006). Handbook on the Economics of Sport. Edward Elgar.

Deloitte, L. (2018), Digital maturity model achieving digital maturity to drive growth, Presentation of Deloitte, TM Forum Digital Maturity Model, Feb. Search in

Deloitte. (2020). Digital transformation in sports: Deloitte digital maturity model. https://www2.deloitte.com

Deloitte. (2021). 2021 Sports Industry Outlook. Deloitte.

Deloitte (2024), The Future of Sport 2024: Seizing the Moment, Deloitte UK. Retrieved from https://www.deloitte.com/uk/en/services/consulting-financial/research/the-future-of-sport.html

Deniz Merdin, Filiz Ersöz, Harun Taşkın (2023), Digital Transformation: Digital Maturity Model for Turkish Businesses, Journal of Science, 36(1), 263-282.

Diel, Sören; Ifland, Sebastian; Wytopil, Frederic; and Buck, Christoph (2021), How Digital Technologies Transform Football – A Structured Literature Review. PACIS 2021 Proceedings. 81. https://aisel.aisnet.org/pacis2021/81

Edwin Juma Omol, Lucy Waruguru Mburu, Paul Anyango Abuonji (2024), Digital Maturity Assessment Model (DMAM): assimilation of Design Science Research (DSR) and Capability Maturity Model Integration (CMMI), Digital Transformation and Society, Emerald Group Publishing Limited, vol. 4(2), 128-152.

Government of Vietnam (2024). National Sports Development Strategy to 2030, with a Vision to 2045 (Decision No. 1189/QĐ-TTg). Hanoi: Prime Minister's Office.

Gökalp, E., & Martinez, V. (2021). Digital transformation capability maturity model enabling the assessment of industrial manufacturers. Computers in Industry, 132, 103522. https://doi.org/10.1016/j.compind.2021.103522.

Hair, J. F., Babin, B. J., Anderson, R. E., & Black, W. C. (2019). Multivariate Data Analysis (8th ed.). England: Pearson Prentice.

Hamil, S., Walters, G. and Watson, L. (2010) The Model of Governance at FC Barcelona: Balancing Member Democracy, commercial Strategy, Corporate Social Responsibility and Sporting Performance. Soccer & Society, 11, 475-504. http://dx.doi.org/10.1080/14660971003780446

Hesmondhalgh, D. (2013). The Cultural Industries (3rd ed.). SAGE Publications.

Higham, J., & Hinch, T. (2009). Sport and Tourism (1st ed.). Routledge. https://doi.org/10.4324/9780080942643.

Hoang, K., Tran, L., & Mac, T. (2023). Digital transformation in higher education institution through the lens of the digital maturity model: The case study of Economics and Law. VNUHCM Journal of Economics - Law and Management, 7(2), 4355-4370. https://doi.org/https://doi.org/10.32508/stdjelm.v7i2.1199.

Kittikumpanat, M., Chankuna, D., & Sriboon, N. (2023). A Suggested Framework of Digital Maturity Dimension for Sport Media in Thailand : Review and Comparative Analysis. Business Administration and Management Journal Review, 15(1), 95–110. retrieved from https://so01.tci-thaijo.org/index.php/bahcuojs/article/view/249618.

Lưu Thị Minh Ngọc, Nguyễn Phương Mai, Vũ Thị Minh Hiền, Phạm Hoàng Hải (2025), Đánh giá mức độ trưởng thành số trong giáo dục đại học: Nghiên cứu trường hợp một số trường đại học công lập trên địa bàn Hà Nội, VNU Journal of Economics and Business, Vol. 5, No. 1 (2025) 81-89.

Metelski Adam & Leszczyński Marcin (2022), The digital transformation of football clubs based on the example of social media. Journal of Education, Health and Sport. 12(5): 204-214. eISSN 2391-8306. DOI http://dx.doi.org/10.12775/JEHS.2022.12.05.015.

PwC. (2019). The future of sports: PwC Sports Survey 2019. https://www.pwc.com

Ratten, V. (2020). Coronavirus (COVID-19) and entrepreneurship: Cultural, lifestyle and societal changes. Journal of Entrepreneurship in Emerging Economies, 12(5), 747–761. https://doi.org/10.1108/JEEE-06-2020-0163.

Rompotis, G. G. (2024). The Financial Performance of the English Football Clubs, International Journal of Finance Research, 5(2), 181 - 203. https://doi.org/10.47747/ijfr.v5i2.1792.

Sebastian Merten, Sascha L. Schmidt, Mathieu Winand (2024), Organisational capabilities for successful digital transformation: a global analysis of national football associations in the digital age. Journal of Strategy and Management, 17 (3): 408–426. https://doi.org/10.1108/JSMA-02-2022-0039

VFF. (2023). Report on Technology Implementation in Club Licensing and Match Operations in Vietnamese Professional Football. Hà Nội: VFF.

Yezhebay, A., Sengirova, V., Igali, D., Abdallah, Y. O., & Shehab, E. (2021), Digital maturity and readiness model for Kazakhstan SMEs, 2021 IEEE International Conference on Smart Information Systems and Technologies (SIST). Nur-Sultan, Kazakhstan, 2021, pp. 1-6, doi: 10.1109/SIST50301.2021.9465890.

Yamane, T. (1967). Statistics: An introductory analysis (2nd ed.). Harper and Row.

Yixi Wan (2024), The Impact of Digital Transformation in the Sports Industry, Proceedings of the 3rd International Conference on Business and Policy Studies. | https://doi.org/10.54254/2754-1169/77/20241821

Westerman, G., Bonnet, D., & McAfee, A. (2014). Leading Digital: Turning Technology into Business Transformation. Harvard Business Review Press.