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## **PROPOSED MEASURES FOR THE DEVELOPMENT OF THE MEMBERSHIP BASE IN PARASPORTS**

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### **Abstract**

The membership base represents the fundamental pillar of every parasport organization and an important indicator of the level of inclusion of people with disabilities in society. This study examines the reasons why the growth of parasport membership in Slovakia remains below potential, identifies the theoretical determinants of participation, and evaluates the functions and developmental trends of membership in parasport organizations. Existing literature confirms that participation in sport significantly improves physical health, psychological well-being, self-esteem, and social integration among people with disabilities (Charalampous et al., 2019; Wang et al., 2021; Vacchiano et al., 2024). In addition, participation contributes to empowerment, stronger identity formation, and reduced social exclusion (Bentley et al., 2016; Waizenegger et al., 2020).

The research applies a mixed-method design combining literature review, benchmarking, semi-structured interviews with key stakeholders, and economic feasibility analysis. Benchmarking focused on successful systemic models in the Czech Republic, Austria, and Slovenia, where coordinated recruitment and retention strategies have increased participation rates and organizational effectiveness (Choudhury et al., 2021; Bloom et al., 2024). Findings indicate that the Slovak system is mainly hindered by fragmented communication, weak transition pathways from rehabilitation to sport, insufficient youth engagement programs, lack of club capacities, and limited long-term funding. Similar barriers have also been associated with reduced innovation, lower collaboration quality, and weaker retention outcomes (Gibbs et al., 2024; Bloom et al., 2024).

Based on the findings, a four-phase framework for sustainable membership development was proposed: recruitment, engagement, retention, and development. Key recommended measures include the creation of a national single-entry platform for beginners, stronger links between rehabilitation centers and sports clubs, structured youth

pathways, coach education, monitoring of athlete progression, and the establishment of a Parasport Development Fund. International evidence suggests that systematic governance models, digital accessibility, and flexible organizational structures significantly improve participation and retention outcomes (Waizenegger et al., 2020; Choudhury et al., 2021). The study concludes that sustainable growth of the parasport membership base in Slovakia requires coordinated policy support, institutional cooperation, and targeted investment in accessible pathways from first contact to elite participation.

### **Keywords**

parasport, membership development, people with disabilities, inclusion, recruitment, retention

### **Funding**

This research was supported by project 052ŽU-4/2025: Creation of Multimedia Content for Online Dual Education of Athletes in Management and Marketing in Sports - Career after Career.

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## **SUSTAINABLE MANAGEMENT OF SPORTS ORGANIZATIONS – THE PROCESS OF ATHLETES’ EDUCATION AS PART OF HUMAN CAPITAL DEVELOPMENT**

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### **Abstract**

Sustainability, with its many aspects, is a current and important social topic. It needs to be addressed in various sectors, including sports and its management. Sustainable goals include a focus on meaningful education and development. In the field of sports, it is therefore necessary to set the education of current athletes at a strategic level so that the subsequent implementation of educational processes by the associations and clubs themselves can be sustainable.

The contribution builds on several analyses focused on sustainable education and its implementation in sports. The assessment of sustainable behaviour of sports organizations was performed using automated text analysis. The Sustainability Mapping Tool was used, with which thematic connections between the analysed document and individual SDGs (Sustainable Development Goals) were identified. The research sample consisted of twelve sports associations from the Slovak and Czech Republic. Within the associations, documents with titles such as development concept, annual report or strategic document or plan were searched. According to official sources, 224 sports are currently recognized in Slovakia and 195 are recognized in the Czech Republic. Given the scope, the most popular sports were selected for the analysis based on their membership base and social significance. The five most popular sports were processed by text analysis. The TOP 5 sports were selected based on a combination of several criteria used in the distribution of state funds in Slovakia. The number of members, the popularity of the sport, and the results achieved were considered, with the greatest weight being put on the achievements of youth and adults in the years 2022 to 2025 and the number of active athletes under 23 years of age.

The selected organizations within the automated text analysis included: Slovak Football Association, Slovak Ice Hockey Association, Slovak Tennis Association, Slovak Athletics Association, and Slovak Cycling

Association. These sports were subsequently analysed for the Czech Republic as well. The results point to an insufficient connection of strategic documents of Slovak and Czech sports organizations with the principles of sustainable development, especially in SDG 4 – quality education. Education is often perceived only as a supporting element of sports performance, not as a separate strategic priority. At the same time, it turned out that several sports organizations do not have developed conceptual documents or their strategic planning is not sufficiently developed.

Based on these findings, it is possible to identify the scope for the implementation of a systematic and sustainable model of athletes' education, which would connect sports training with personal, academic, and professional development. This knowledge forms the basis for the analysis of the internal environment of the selected two sports organizations and the creation of recommendations.

The selected sports organizations include the Handball Club MŠK Považská Bystrica and the Slovak Tennis Association. A combination of several methods was used to analyse their internal environment, including document analysis, semi-structured interviews (with representatives of the management of both selected organizations), and a questionnaire survey.

Based on the information obtained from the interviews, it can be stated that in the tennis environment in Slovakia, more attention is currently paid to the education of coaches, officials and referees, while the systematic education of the athletes themselves is not yet significantly developed. The questionnaire consisted of 16 questions. The basic set consisted of 20 athletes (members of the Handball Club MŠK Považská Bystrica), with 18 of them participating in the survey. The permissible error of estimation is 7.49%. The results show that athletes are significantly aware of the importance of education for their future careers and for the period after the end of active sports careers. They do not perceive education as an additional activity, but as an important tool for ensuring professional stability and personal development.

Recommendations following the research findings concerned the design of a development concept for individual sports organizations, the support of cooperation between sports clubs, and the setting of systematic education for athletes.

## **Keywords**

sustainability, education, sustainable education, athletes' development

## **Funding**

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## **EDUCATING TO EXCELLENCE IN HORSEBACK ARCHERY**

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### **Abstract**

The project Educating to Excellence in Horseback Archery is a transnational initiative co-funded by the European Union through the Erasmus+ programme, aimed at promoting, developing, and connecting the sport of horseback archery across Europe. Despite its historical roots and growing popularity, horseback archery remains a fragmented discipline, often lacking formal structures, standardized teaching methods, and coordinated international cooperation. The project responds directly to these challenges by seeking to transform the sport from a loosely organized recreational activity into a more structured and internationally recognized discipline.

A central focus of the project is the development of coaching competencies. The project aims to improve the knowledge, skills, and attitudes of coaches through the introduction of contemporary approaches to sport education. This includes not only technical aspects of training but also pedagogical, organizational, and ethical dimensions. By strengthening coaching quality, the project contributes to the overall safety, consistency, and sustainability of the sport. At the same time, it supports the renewal of transnational cooperation that was disrupted during the COVID-19 pandemic, enabling mobility, cultural exchange, and the sharing of best practices.

The project is guided by several key objectives. One of the main priorities is fostering cooperation by building a stable network of horseback archery organizations and clubs across Europe. Another objective is the development of a standardized methodology for teaching the sport, including shared principles and fair play rules. A strong emphasis is also placed on equine welfare, ensuring the biological integrity, safety, and psychological well-being of horses as essential participants in the sport. In addition, the project promotes horseback archery as an outdoor activity that supports healthy lifestyles and helps counter sedentary behavior.

The project is implemented through the collaboration of diverse partners from Slovakia, Poland, and Finland. The Slovak Equestrian Archery Association (SAJL) acts as the project coordinator, linking traditional practices with modern approaches. Kawalkada Sports Club from Poland contributes expertise in training and large-scale event organization. The Finnish Mounted Archery Association provides advanced knowledge in equine welfare and diagnostics. The academic dimension is represented by the Faculty of Management Science and Informatics at the University of Žilina, which supports methodological quality and innovation.

Project activities are organized through a series of transnational meetings and workshops. In Poland, the focus was on sport performance, event management, and marketing, including experience from organizing international competitions. In Finland, activities concentrated on equine welfare, including diagnostic tools, biomechanics, and saddle fitting. In Slovakia, workshops in Kolárovo addressed technical skills, traditional practices, and innovations such as 3D printing of equipment, while the meeting in Žilina focused on management, community building, and marketing, including work in the OMiLab laboratory.

The project outputs include a comprehensive set of materials documenting its implementation and results. These consist of reports, multimedia content, and educational resources, particularly short training videos supported by accompanying documents on sport management and animal care. Dissemination has been carried out continuously through online platforms and social media, ensuring broad accessibility of the results.

An important milestone was the presentation of project outcomes at the international conference Sports Management in Central & Eastern European Countries: Grassroots and Club Development Perspectives (SMICEE 2026), which increased the project's visibility within the professional and academic community. In addition, all key materials remain publicly available online, supporting long-term impact.

Overall, the project represents a coordinated effort to address fragmentation in horseback archery through education, cooperation, and innovation, while emphasizing ethical responsibility and sustainable sport development.

### **Keywords**

horseback archery, coach education, transnational cooperation, equine welfare, sport development

### **Funding**

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## INCLUSION OF PARASPORTS INTO MULTI-SPORT EVENTS

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The integration of parasports into multi-sport events represents an important step toward equality, diversity, and social sustainability in contemporary sport systems. Parasport is no longer understood solely as an adapted physical activity for persons with disabilities, but increasingly as a space for the development of athletic identity, psychological resilience, social support, and full social participation (Mira et al., 2023; Rougeau et al., 2025; Storli et al., 2022). The aim of this paper is to analyze the mechanisms of integrating parasports into multi-sport events, identify the main barriers to inclusion, and propose recommendations for more effective organizational practice in the Slovak context. The study is based on a review of academic literature and the interpretation of empirical data. Findings indicate that 40.8% of respondents have no direct or mediated experience with parasports, highlighting a low level of public awareness and limited exposure to this area of sport. On the other hand, more than 70% of respondents support joint events involving athletes with and without disabilities, suggesting strong societal potential for inclusive event models. These findings correspond with previous studies showing that demand for inclusion is often constrained more by organizational and systemic barriers than by public resistance (Campos et al., 2024; Hammond et al., 2022). The main barriers to integration include insufficiently accessible infrastructure, limited funding, a shortage of qualified coaches and sport managers, and stereotypical media portrayals of para-athletes through narratives of tragedy, gratitude, or “overcoming adversity” (Page et al., 2024). The results also confirm that successful inclusion requires systemic reforms based on universal accessibility, diversified funding, flexible organizational models, and professional communication strategies focused on athletic performance rather than pity-based narratives (Patatas et al., 2020; Campos et al., 2024; Takata et al., 2024). In the Slovak environment, practical initiatives such as Slovak Paralympic Committee and the PARÁDA Festival provide examples of successful community engagement and positive attitude change through experiential contact with parasports. Therefore, the integration of parasports should be understood not as an optional

addition, but as a strategic necessity for the development of a modern, equitable, and socially responsible sport ecosystem.

### **Keywords**

parasport, inclusion, multi-sport events, social sustainability, accessibility, sport management

### **Funding**

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## DIGITAL PRODUCTS IN SPORT

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### **Abstract**

Digital sports products are reshaping the way sports organizations manage information, engage with stakeholders, and provide services. With the rapid advancement of digital transformation, these products have transcended their original role as supplementary tools for fan engagement, evolving into essential components of modern sport management systems. As the demand for digital solutions continues to rise, sports organizations are increasingly relying on web-based platforms to streamline operations, improve communication, and provide stakeholders with accessible, real-time information. This study examines the broader concept of digital sports products, focusing on their significance in supporting information access, communication, education, and knowledge transfer within the sports ecosystem.

The primary objective of this study is to analyze how digital sports products, particularly web-based platforms, contribute to enhancing the functionality, efficiency, and professionalism of sport management practices. These platforms provide stakeholders, including athletes, sport managers, and fans, with structured, user-friendly interfaces that enable easier access to sport-related content. In addition to improving the accessibility of information, digital sports products serve as key tools in promoting education and facilitating the transfer of expert knowledge to a wider audience. This is particularly relevant in a time when real-time content access, mobile-first engagement, and personalized user experiences are increasingly becoming the norm. Digital sports products extend the value of sport beyond traditional live events by offering continuous access to relevant content and fostering digital interaction among users, thereby creating new opportunities for engagement, learning, and collaboration.

As part of this study, two web-based platforms sportman.sk and insportman.sk were developed to address the growing need for a clearer, more efficient, and professional digital environment for sport management. Sportman.sk was redesigned to improve the clarity and accessibility of sport-related information, integrating features such as

AI-assisted article summaries, enhanced user navigation, and an English-language version aimed at increasing international accessibility. These features were designed to make expert knowledge more easily available and digestible, particularly for international users and stakeholders. Similarly, the redesigned insportman.sk platform sought to enhance user experience by introducing a more unified visual identity, reducing unnecessary navigation, and creating a more coherent presentation of issues. These platforms represent critical outputs of the study but also illustrate a broader trend in the development of digital sports products that bridge academic research with practical applications in sport management.

The research findings suggest that while digital solutions are increasingly being adopted in the sports industry, many organizations still face challenges in integrating their digital platforms effectively. 75% of European football clubs have yet to integrate their customer-facing digital platforms into a unified omnichannel experience, highlighting a significant gap in digital integration across the sector. This gap presents a major opportunity for improving the way organizations communicate with their audiences, streamline internal processes, and enhance the fan experience. Furthermore, the study reveals important trends, such as the widespread usage of mobile apps during live events. 82% of fans use mobile apps during matches, with 91% of them actively engaging with these apps during the event. These trends underscore the growing role of mobile technology and digital tools in enhancing fan engagement and improving communication between sport organizations and their audiences.

In addition to addressing the digital engagement of fans, the study emphasizes that the true value of digital sports products lies not only in content presentation but also in their ability to serve as comprehensive, interactive platforms. These platforms facilitate knowledge transfer, enable real-time data analysis, and support collaboration across the sports ecosystem. The study also highlights the growing importance of digital sports products in enhancing communication within the sector, improving transparency, and supporting the long-term sustainability of sport organizations. The shift from static content presentation to dynamic, user-oriented services signals a broader transformation in how sports organizations utilize digital tools to achieve strategic goals and optimize organizational performance.

In conclusion, this study underscores the growing significance of digital sports products in modern sport management. These products are no longer merely passive sources of information but have become

powerful tools that support the professionalization of sport management, improve communication within the industry, and contribute to the long-term sustainability and development of sports organizations. The study calls for further development of integrated digital ecosystems capable of streamlining communication, improving knowledge transfer, and enhancing operational efficiency across the sport sector. As digital solutions continue to evolve, they will play a pivotal role in shaping the future of sport management practices, facilitating global collaboration, and improving the overall efficiency of the sport industry.

### **Keywords**

digital sports products, sport management, knowledge transfer, fan engagement, digital transformation

### **Funding**

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## **DATA-INFORMED MANAGEMENT OF THE ATHLETE LIFECYCLE IN GRASSROOTS SPORT: TOWARDS SUSTAINABLE SPORTS ORGANIZATIONS**

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### **Abstract**

Grassroots sports organizations increasingly need to manage athlete development as a long-term process rather than as a series of isolated coaching decisions. The aim of this paper is to propose a conceptual view of the athlete lifecycle in grassroots sport that connects long-term athlete development, club-level implementation conditions, and data-informed management. Long-term athlete development is built around athlete progression across developmental stages and emphasizes physical literacy, developmental age, holistic development, and sport for life.

However, the implementation of these principles at the grassroots level is not automatic. Evidence from community sport shows that adoption depends on communication with stakeholders, organizational capacity, local conditions, and the ability of clubs to translate broader policy directions into their own environment. In practice, this means that athlete development is shaped not only by training design, but also by governance, shared values, human resources, and the overall club context.

From the managerial perspective, this challenge is reinforced by the growing importance of data and information systems in sport. Integrated sports information systems can improve data processing and support managerial decision-making. Their effectiveness depends on transparency, automation, interoperability, and strategic planning. At the same time, the long-term sustainability of sports organizations is closely linked to their ability to attract and retain members over time.

The paper therefore argues that athlete lifecycle management in grassroots sport should be approached as a strategic management issue linking athlete progression, stakeholder coordination, retention, and information support. Such an approach can help sports organizations create more adaptive pathways for athletes and strengthen the sustainable development of grassroots sport.

### **Keywords**

athlete lifecycle, grassroots sport, long-term athlete development

### **Funding**

This research was supported by project 052ŽU-4/2025: Creation of Multimedia Content for Online Dual Education of Athletes in Management and Marketing in Sports - Career after Career.

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## **APPLICATION OF DIGITAL DESIGN THINKING TO MODEL THE SUPPORT OF SPORTS FUNDING**

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### **Abstract**

Sports funding is a complex public management domain that connects public authorities, sports organisations, clubs, athletes, educational institutions and the public. In Slovakia, this area operates at national, regional, and local levels and is influenced by several sources of public funding, including personal income taxes, European Union funds, budgets of state-owned enterprises and resources from state administration or local governments. The selected domain for this project was the funding of sports and sports activities in the Slovak Republic, with emphasis on clearer communication, better access to information, process digitalisation, and higher transparency in the allocation and control of financial resources.

The aim of this contribution is to present the application of digital design thinking and domain-specific conceptual modelling to analyse the support of sports funding. The project was carried out in the OMiLAB environment, which supports open collaboration between people and technology and enables the transformation of creative ideas into conceptual models. The Scene2Model tool was used as a software environment for supporting physical workshops and transforming tangible models into their digital versions. The focus was not on creating a complete information system, but on understanding the selected domain, identifying key actors and modelling the communication and information flows that such a system should support.

The methodological approach was based on a design thinking workshop. The workshop included an introductory activity supporting open thinking, a discussion with a domain expert, and practical scene modelling in the OMiLAB environment. The expert interview provided practical insight into the current sports funding environment, especially the sources of funding, redistribution of public resources, communication between sports organisations and public authorities, reporting the funds allocation, and the need for transparent control.

These findings created the basis for modelling the most important relationships and processes in the selected domain.

An important part of the project was the preparation of a domain-specific object library for Scene2Model. Based on brainstorming, the team identified key functionalities and represented them through graphical shapes. The library included domain users, functional and non-functional system requirements, and connectors used to illustrate the sequence of steps. It contained objects such as clubs, athletes, universities, self-governing regions, public authorities and the public, as well as objects connected with money, grants, budgets, databases, calendars, information, invoices and GDPR compliance.

The main results of the workshop were a mind map and several modelled scenes. These outputs visualised communication between stakeholders and the proposed information system. The scenes focused on access to information about grants, subsidies, redistribution criteria, resource reallocation, and the use of financial resources. They also represented communication between sports clubs and the information system, including the submission of data about funding sources, amounts, deadlines, and the purpose of spending. Another part of the model showed the integration of self-governing regions with the information system, including data evaluation, report preparation and communication of results to sports organisations.

The findings show that digital design thinking can support the analysis of complex public management domains in sports. Scene2Model helped transform abstract issues into visual scenes and supported shared understanding among participants. The proposed conceptual model creates a basis for future work on an information system that could link self-governing authorities, sports clubs, and the public, support clearer records, improve communication, and strengthen the control of fund allocation.

### **Keywords**

digital design thinking; OMiLAB; Scene2Model; sports funding; conceptual modelling

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## **STRATEGIC FRAMEWORK FOR MANAGING THE DEVELOPMENT OF DIGITAL PRODUCTS**

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### **Abstract**

Product management has developed into a board managerial discipline covering the entire product lifecycle. This function represents responsibility for success of a specific product through entire development. In practice, organizations implement different configurations of product roles, which range from a Product Owner to larger product management teams, depending on how the product and the organizational context is. Although product management is more recognized as a critical capability in software and digital product environments, empirical research remains limited on its implementation in large agile organizations. This problem is especially seen in setting where B2B and B2C products coexist and where multiple markets cross technological dimensions (Berntzen et al., 2019; Ebert & Brinkkemper, 2014).

In this context authors posed three main research questions:

1. How is the concept of product management understood and implemented in companies?
2. What steps are used by companies in the product management process?
3. What responsibilities are associated with the role of a product manager in companies?

The origin of product management is commonly traced to Procter & Gamble in 1931, where responsibilities for a single product were assigned to a single brand manager. Over time, this practice extended from consumer goods only to other sectors. In FMCG environment, at first product management was strongly oriented toward branding, pricing, communication and promotion, however in software companies the focus shifted toward product development, creation of a value and alignment between customer need, technology and business goals of the company. In this case, software product management can be understood as a discipline and business process, which coordinates the

product from the concept to market delivery in order to maximize organization values (Ebert & Brinkkemper, 2014; Springer & Miler, 2022; Gorchels, 2011; Kittlaus & Fricker, 2017).

In literature it is consistently shown that product manager is an important part of product and company success. The software product manager is responsible for what the product is, how it works, whom it serves, and how it affects both the organization and its customers. When product management role is clearly defined it measurably improves project success, while weak implementation reduces process efficiency and overall performance. The role of product manager is called interdisciplinary as a result of expectation to provide cross-functional leadership across management, engineering, marketing, sales and customer service teams. Important activities of a software product management include vision creation, lifecycle management, roadmapping, release planning and requirements engineering (Gorchels, 2011; Maglyas et al., 2017; Kittlaus & Fricker, 2017; Ebert & Brinkkemper, 2014).

Product strategy on the other hand is closely linked to competitive advantage and the ability to respond to changing customer requirements and constantly changing market conditions. Several authors emphasize that the absence of a clear product strategy is associated with weak decision-making, poor resource allocation. Ineffective prioritization can negatively affect organizational performance and limit the ability to respond to the market changes (Pattyn, 2023; Merminod et al., 2022; Grigoryan et al., 2023).

The literature also points to differences between product management and project management as project management is primarily concerned with delivering a defined outcome within scope, time, and budget. On the other hand, product management focus on customers, value creation, market success, and long-term product growth through continuous process. This is important especially in software product companies, where the success of product activities depend on how effectively organizations coordinate product and project management processes (Springer & Miler, 2022).

The growing importance of digital products in product management is also evident in sectors such as education, culture and sport. Digital platforms provide new opportunities for organizations to connect with communities and increase awareness of their activities. In a sports club environment, digital solutions can support participation and contribute to the long-term growth of sport at the local level.

Overall, the literature shows product management as a complex and cross-functional discipline that integrates strategic direction, customer and market orientation, lifecycle coordination, portfolio decisions, and collaboration across multiple stakeholders. Despite the numerous frameworks describing the process of product management, not a single universal model appeared which can be applied across all organizations and product types (Ebert & Brinkkemper, 2014; Kittlaus & Fricker, 2017).

The study adopts an exploratory qualitative approach. Individual, structured interviews with current and former product managers were conducted. This methodology will allow for the identification of key factors influencing the role of product managers, while allowing the questions to be adapted to the course of discussion and the specific experiences of the respondents. The final results will be presented at the conference.

### **Keywords**

digital product, development, product lifecycle, product management, product management process

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