

SYSTEMS APPROACH TO SPORTS EVENTS: FROM EVENT ANIMATION TO LEGAL REGULATION

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Sports events represent a complex tourism system that includes various interdependent and intertwined relationships between organisers, participants, the local community and legal regulations. The paper researches sports events from a systems-methodological perspective, where sports events are not treated as isolated phenomena, but as dynamic systems with lively relationships between various stakeholders. The paper analyses three dimensions of sports events in tourism: (1) the animation potential of sports activities, (2) the systemic modelling of sports events using the methodology of system dynamics, and (3) the legal and organisational framework that ensures the safety, responsibility and sustainability of sports event tourism. Using qualitative modelling (causal loop diagram (CLD)) and systems thinking, the article proposes a multi-criteria decision model as a concept for planning sports events, while also indicating the possibility of superimposing the model onto a so-called simulation quantitative model.

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1 Introduction

Sports events have become one of the fastest growing segments of the global tourism economy, with significant economic, social and cultural implications for host destinations.¹ As social phenomena, sports events transcend the competitive dimension and establish networks of relationships between various stakeholders – from organisers, sponsors and the media to visitors, the local population and regulatory bodies.²

Contemporary scientific literature increasingly emphasises the need for an interdisciplinary understanding of sports events that combines economic, sociological, legal and organisational perspectives.³ Nevertheless, there remains a lack of systemic-theoretical approaches that comprehensively capture the complexity of sports events like tourism systems. Traditional linear models of planning and management do not take into account the feedback loops, emergent properties and contextual dependencies that are characteristic of all social, soft and technical systems.⁴ The paper addresses the methodological gap by using a systems approach based on the epistemological principles of complex systems theory⁵ and the methodological tools of system dynamics.⁶ The research objectives of the paper are: *to present the animation potential of sports activities* in the context of tourism offerings and *to identify the factors* of successful event animation; *to develop a conceptual model of the system dynamics* of sports events that includes economic, social, environmental and legal dimensions; to provide a legal and organisational framework for sports events; *to propose a systems approach* to the planning and management of sports events in tourism.

Methodologically, the contribution is based on qualitative system modelling⁷, analysis of legal texts⁸ and synthesis of empirical case studies from international literature. The epistemological basis of the research is a constructivist understanding

¹ Getz & Page, 2016; Gibson, Kaplanidou & Kang, 2012.

² Chalip, 2006; Müller, 2015.

³ Horne, 2007; Preuss, 2007.

⁴ Sterman, 2000; Meadows, 2008.

⁵ Capra & Luisi, 2014; Morin, 2008.

⁶ Forrester, 1961; Richardson, 2011.

⁷ Lane, 2000; Wolstenholme, 1999.

⁸ Finnis, 2011.

of systems, which considers the role of the observer in constituting systemic boundaries and relationships.⁹

The paper is divided into eight parts. The second part discusses the theoretical foundations of a systems approach to sports events; the third part presents the animation potential of sport in tourism; the fourth part presents the methodology of system dynamics and develops a conceptual model of sports events; the fifth section discusses the legal and organisational framework; the sixth section presents the practice and proposes a systems approach; the conclusion summarises the findings and areas for future research.

2 Theoretical Framework: a Systems Approach to Sports Events

2.1 Epistemological Foundations of Systems Theory

Systems approach to understanding sports events is based on theoretical insights from general systems theory,¹⁰ cybernetics¹¹ and complexity theory.¹² The central epistemological principle advocated by this perspective is the idea that the whole is not divisible into the sum of its parts, but has emergent properties that only appear at the system level when all parts interact.¹³ In the context of sports events, this means that the "holistic" impact of the event – economic, social, cultural, environmental – is not a simple aggregation of individual components (competition, infrastructure, promotion, etc.) but rather the result of complex interactions between these components and their broader social context.¹⁴ As Jackson (2019) notes, sports events are "complex adaptive systems" that evolve over time and adapt to changing environmental conditions. An important epistemological insight from the constructivist tradition of systems theory is that system boundaries are not objectively given but are constructed by the observer according to their research interest and perspective.¹⁵ This has important methodological implications: different stakeholders (organisers, tourists, local residents, regulators) may define the "system"

⁹ von Foerster, 2003; Maturana & Varela, 1987.

¹⁰ von Bertalanffy, 1968.

¹¹ Wiener, 1948; Ashby, 1956.

¹² Holland, 1995; Kauffman, 1993.

¹³ Checkland, 1999; Jackson, 2003.

¹⁴ Preuss, 2015; Hede, 2007.

¹⁵ Luhmann, 1995; Maturana & Varela, 1987.

of a sports event differently, leading to potentially conflicting interpretations of its purpose, value and effects.¹⁶ In the Slovenian context, this perspective is complemented by dialectical systems theory,¹⁷ which emphasises the law of requisite holism as a fundamental principle for the comprehensive treatment of complex phenomena.

2.2 Systems Complexity of Sports Events

Sports events exhibit several characteristics of complex systems as defined in the literature on complexity.¹⁸ *Diversity of elements*: Sports events involve various elements – physical (infrastructure, venues), organisational (committees, volunteers), technological (information systems, safety equipment), social (participants, spectators, media) and institutional (rules, regulations, norms).¹⁹ *Non-linearity and feedback loops*: Relationships are not only linear cause-and-effect, but also involve positive and negative feedback loops. For example, a successful sports event attracts more visitors, which increases revenue and enables better infrastructure, which in turn increases the attractiveness of the event (positive loop); at the same time, too many visitors can cause congestion, dissatisfaction and environmental degradation, which reduces the quality of the experience and future participation (negative loop).²⁰ *Emergence*: The effects of a sports event – e.g. improved international recognition of the destination, increased sense of community among the local population, changes in the spatial structure of the city – are emergent properties that cannot be predicted from the properties of individual elements.²¹ *Adaptability*: Sports events adapt to changing environmental conditions – economic crises, technological innovations, changes in public values (e.g. greater emphasis on sustainability), public health crises.²² *Contextual dependence*: The effects of sports events are highly dependent on the local context – economic development, political arrangements, cultural norms, existing tourism infrastructure. The same event can have very different effects on different destinations.²³

¹⁶ Getz, 2012.

¹⁷ Mulej, Hrast & Dyck, 2014.

¹⁸ Mitchell, 2009; Page, 2015.

¹⁹ Masterman, 2009; Parent & Smith-Swan, 2013.

²⁰ Dwyer, Forsyth & Jago, 2006.

²¹ Chalip, 2014; Kaplanidou & Vogt, 2007.

²² Parnell, Widdop & Groom, 2021.

²³ Müller, 2015; Smith, 2012.

2.3 Systems Thinking: from Linear to Systems Perspective

Traditional analytical (reductionist) approaches to sports event management are based on Cartesian reductionism: the problem is broken down into smaller components, each component is considered separately, and then the solutions are reassembled into a whole.²⁴ This approach is suitable for problems where the relationships between components are stable, linear and well understood.²⁵ Sports events, which are complex, intertwined systems, present problems where there is no clear definition of the problem, the solution has unexpected side effects, and each intervention changes the system itself.²⁶ Such problems require a systems approach that:

- recognises interconnections: instead of treating individual elements in isolation, it analyses the relationships and mutual influences between elements;
- takes feedback loops into account: recognises the dynamics of the system, that effects feed back on causes, creating changing patterns of system behaviour over time;
- recognises delays: understands that months or years may elapse between an action and its effect, making causal attribution difficult;
- explores unintended consequences: takes into account that interventions in one part of the system can have unexpected effects in other parts;
- thinks in time horizons: distinguishes between short-term and long-term effects and between different time scales.²⁷

3 The Animation Potential of Sports Activities in Tourism

3.1 Definition of Event Animation

Event animation is defined in scientific literature as "a system of activities that encourage the active participation of tourists and improve the quality of their tourist experience".²⁸ Cerovič (2008) distinguishes between three basic functions of

²⁴ Senge, 1990.

²⁵ Rittel & Webber, 1973.

²⁶ Churchman, 1967; Conklin, 2006.

²⁷ Meadows, 2008; Sterman, 2000.

²⁸ Mieczkowski, 1990, p. 459.

animation: recreational (relaxation, entertainment), educational (acquiring new knowledge and skills) and socialisation (establishing social contacts). Event animation is thus defined as a specific form of event animation, where the core activity is sports-related.²⁹ In the context of sports events, event animation can be understood more broadly – not only as organised sports and recreational activities for tourists, but as a whole system of experiences surrounding a sports event and increasing its value for various stakeholders.³⁰ This includes: *Active participation*: direct participation in sports activities – as competitors, recreational athletes or participants in accompanying activities.³¹ *Passive participation*: watching a sports event as a spectator in an environment that allows for an intense emotional experience and a sense of community.³² *Complementary activities*: a variety of accompanying activities – social events, cultural events, gastronomic experiences, educational workshops – that enrich the overall experience.³³

3.2 Typology of Sports Events in Tourism

Sports events in tourism are a phenomenon that requires typological differentiation. Getz (2008) proposes a classification based on size and effects (Table 1).

Table 1: Typology of sports events by size and impact (according to Getz, 2008)

Type of event	Characteristics	Examples	Scope of effects
Mega-events	Global reach, extensive infrastructure investments, and billions of viewers	Olympic Games, World Cup	Geopolitical, long-term structural changes
Hallmark events	Inseparably linked to the identity of the destination, recurring periodically	Wimbledon, Tour de France, F1 Monte Carlo	Heritage building, long-term recognition
Regional and local events	Domestic and regional market, direct effects on the local community	Marathons, cycling races, amateur tournaments	Local economy, social cohesion

Source: own, according to Getz, 2008

Table 1 presents the types of events, ranging from mega to local. *Mega-events*

²⁹ Ivkov-Džigurski, 2012.

³⁰ Funk & James, 2006.

³¹ Green & Chalip, 1998.

³² Wann, 2006; Smith & Stewart, 2007.

³³ Brown et al., 2010.

These are globally resonant sports events with enormous media coverage, billions of viewers and very high infrastructure investments (stadiums, transport, accommodation). Typical examples are the Olympic Games and the World Cup, which often trigger geopolitical debates and lead to long-term structural changes in a city or country (e.g., new transport networks, regeneration of city districts). *Hallmark events* are closely linked to the identity of a particular destination and are repeated periodically, so that they almost become their symbol. These include, for example, Wimbledon, the Tour de France or the Formula 1 race in Monte Carlo. Their main effect is to build sporting and cultural heritage and long-term recognition of a place or region, often through iconic images and tradition. *Regional and local events*: on the other hand, mainly target the domestic and regional market and have a direct impact on the local community (participants, visitors, local providers). Examples include city marathons, smaller cycling races or amateur tournaments. Their impact is reflected in the strengthening of the local economy (spending on accommodation, catering, services) and in the promotion of social cohesion and a sense of community.

An alternative typology is based on the nature of the sport (Table 2).

Table 2: Typology of sports events by nature of sport

Category	Description	Examples
Competitive sports	Professional competition with a clear hierarchy of winners	Championships, cups, leagues
Recreational sports	The primary purpose is participation, not competition	Mass runs, cycling tours, hiking festivals
Extreme/adrenaline sports	Element of challenge and risk	Mountain biking, paragliding, triathlons
Heritage/traditional sports	Preservation and revitalisation of traditional sports practices linked to cultural identity	Folk games, traditional martial arts, historical reenactments

Source: own

Table 2 is based on existing discussions about types of sports tourism and sports events and on the concept of heritage sports events. It presents a typology of sports events according to their primary purpose, form of participation and cultural significance. *Competitive sports*: these are events where the focus is on professional or

highly organised competitions, with clearly defined winners and a hierarchy of results. Typical examples are championships, cups and leagues in various sports. Such events are highly regulated, linked to federations and ranking systems, and aim for sports success, prestige and media visibility. *Recreational sports*: In recreational sports events, the main focus is on participation, experience and a healthy lifestyle, rather than on results or elite competitiveness. These include mass runs, cycling tours, hiking festivals and similar open-type events. Participants come for the socialising, personal challenge and experience of space, making these events key to promoting an active lifestyle and engaging the wider population. *Extreme/adrenaline sports*: these are events whose central element is challenge, risk and intense experience, often in demanding natural environments. Examples include mountain biking, paragliding, triathlons and various adventure race formats. Participants seek an adrenaline-fuelled experience and to test their own limits, while organisers must pay particular attention to safety, environmental impacts and insurance. *Heritage/traditional sports*: these are intended to preserve and revitalise traditional sports and games practices and are often linked to the cultural identity of a place or community. These include folk games, traditional martial arts, historical reenactments, and other practices that have symbolic and heritage significance. Such events contribute to the intergenerational transfer of knowledge, strengthen local identity, and can act as a bridge between tourism, culture, and sport.

3.3 Factors Influencing the Success of Animation at Sports Events

Empirical research identifies several key factors that influence the success of event animation in tourism (Table 3).

Table 3: Factors influencing the success of event animation in tourism

Factor	Description	Sources
Authenticity of the experience	Locally rooted sports experiences, the incorporation of local traditions	MacCannell, 1973; Chalip & Leyns, 2002
Quality of organization	Precise scheduling, clear communication, efficient logistics	Parent & Smith-Swan, 2013
Infrastructure	Appropriate sports facilities, accessibility, safety equipment, and support services	Kasimati, 2003
Competence of animators	Professional knowledge, teaching skills, communication skills, empathy	Jere Lazanski, 2004; Cerovič, 2008

Factor	Description	Sources
Inclusion of different groups	Inclusiveness, programme differentiation, accessibility adaptation	Darcy & Dickson, 2009
Connection with cultural identity	Resonance with local culture, integration into the broader story of the destination	Chalip, 2006; Green & Chalip, 2004

Source: own

Based on Table 3, we can identify the factors that contribute to the success of animation in the design of a sports event. Example: for a triathlon in a coastal town, the organising team can use the success factors as a practical framework for creating a fan zone that truly "comes alive" with visitors and the local community. First, *the authenticity of the experience* is essential. Animation is not just a series of universal games that could take place anywhere but must reflect the place and the people. In the fan zone at a triathlon by the sea, this means that the programme includes local sports customs, traditional games or props – for example, children's "mini regattas" with wooden boats, balance exercises related to the fishing tradition, or short stories about local athletes that the entertainers include in their announcements. Visitors should feel that they are getting to know the destination through entertainment, not just "passing the time" during the competition. The second pillar of success is *the quality of the organisation*. Even the most imaginative content loses its power if visitors cannot find their way around or have to wait in illogical queues. The entertainment programme must have a clear schedule, clearly marked venues and an easy-to-understand route: from the entrance to the fan zone, through the points where they can join in the activities, to the rest areas. In triathlons in particular, it is important to coordinate with the rhythm of the competition – the biggest entertainment activities should not "overshadow" key sports moments, but rather support them, for example, with joint cheering, explanations of what is happening on the course, or "warm-up games" before the first competitors reach the finish line. Behind successful entertainment is also the appropriate *infrastructure*. The cheering area must be safely located in relation to the competition routes; clearly separated from the triathlon transition zones, but at the same time close enough for visitors to feel connected to the event. The area should offer shade, seating, drinking water, toilets and accessible routes for all visitors, including those with reduced mobility. Safety equipment for more dynamic games (e.g., obstacle courses, mini-cycling challenges) should not be an afterthought, but a planned part of the setup. All of this creates a sense of professionalism and care, which increases people's willingness to get

involved. The central human factor is *the animators*. At a sports event, they are much more than just "game leaders" – they are the face of the destination, the first interpreters of the event and often the first source of information for visitors. A well-trained animator knows how to explain the rules of the activity, recognise different levels of physical fitness, motivate reluctant guests and recognise when someone is more inclined to observe than actively participate. It is important that they know the basic facts about the triathlon and the destination so that they can answer questions such as "when will the competitors reach the finish line" or "who are the local favourites". Their empathy and communication skills determine whether a family with small children will stay in the fan zone for an hour or five minutes. *Inclusivity* is also an important element of success. Entertainment at a sports event should not be reserved only for "fit" visitors in sportswear. The programme should include easier activities that children, older people, beginners and those with limitations can join in with – for example, slow skill courses, precision games, creative workshops with a sports theme or seated exercises. This way, the fan zone becomes a place where the community meets, not just where more athletic individuals duplicate their training. For quality entertainment, *a clear story* that connects all the elements is also needed. If the triathlon is presented as a "celebration of movement by the sea", each animation point can carry part of this story: from the morning "warm-up with a view of the sea", through children's activities related to waves and wind, to the evening music programme that rounds off the day. When animators and volunteers consistently use the same key motifs and messages, visitors find it easier to understand why this particular event and location are so special. Finally, successful animation also requires *learning*. After the event, the organising team does not just look at the numbers of participants, but listens to the animators, volunteers and local partners: where was it crowded, where was there a lack of information, which activities were oversubscribed and which were left empty. With such a reflective approach, animation gradually develops from "this year's programme" into a recognisable fixture of the sports event – something that keeps visitors coming back, even if they are not competing, but come "for the atmosphere".

3.4 Animation Potential in Sports Events

The entertainment potential of a sports event can be defined as an emergent property of the system that arises from the interactions between several subsystems: the sports content subsystem, the experiential environment subsystem³⁴, the accompanying activities subsystem, the communication and promotion subsystem, the organisation and management subsystem, and the regulatory framework subsystem. These subsystems are interconnected through a multitude of feedback loops. For example, high-quality sports content attracts more visitors, which increases revenue, which enables greater investment in the experiential environment and ancillary activities, which in turn increases the attractiveness of the event (positive reinforcement loop). At the same time, excessive commercialisation can reduce perceived authenticity, which reduces visitor satisfaction, which in turn reduces future visits and revenues (negative balancing loop). These interdependencies are illustrated in more detail in the causal loop diagram (CLD) in section 4.1.

4 System Dynamics of Sports Events

4.1 System Dynamics Methodology

System dynamics, as developed by Forrester (1961) at MIT, is a methodology for studying and managing complex systems that change over time. It is based on conceptual modelling of structural relationships and feedback mechanisms that generate variable system behaviour.³⁵ System methodology has proven particularly useful in tourism research for understanding nonlinear dynamic processes, as demonstrated by Jere Jakulin (2017) and Richardson (2011). The methodology involves several steps: *Problem definition*: clear formulation of the dynamic problem – e.g. "Why has participation in local sports events declined over the years, despite increased marketing efforts?" *Formulation of a hypothesis*: development of a hypothesis about the structural causes of the problem – which feedback loops, delays and nonlinearities are responsible for the observed variable behaviour? *Construction of a causal loop diagram (CLD)*: visualisation of the hypothetical structure of the system

³⁴ Pine & Gilmore, 1998; Schmitt, 1999.

³⁵ Sterman, 2000.

using a causal loop CLD model of loops that shows the essential variables and the relationships between them (positive and negative influences). *Simulation model design*: translation of the CLD model into a formal simulation model that uses differential equations to represent flows and stocks in the system.³⁶ *Model validation*: testing whether the model reproduces the historical behaviour of the system and whether it behaves sensibly under extreme conditions.³⁷ *Policy analysis*: using the model to test different policies and interventions – which policy leads to the desired results? What are the unintended side effects?³⁸ In the context of sports events, system dynamics is particularly useful for understanding the long-term effects ("legacy") of events, the dynamics of participation and satisfaction, the evolution of tourist destinations, and the mutual influences between different stakeholders.³⁹ Figure 1 presents an example of a model within the framework of system dynamics, namely a conceptual CLD of a sports event.

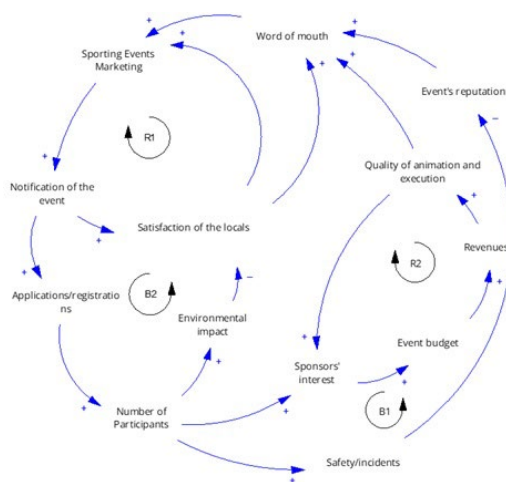


Figure 1: Causal loop model of a sports event in tourism

Source: own

Figure 1 presents a simplified CLD of a sports event, showing the dynamics, interdependence and influences of the elements of a sports event. In order to understand the dynamics that occur in the sports event's environment, we must

³⁶ Pruyt, 2013.

³⁷ Barlas, 1996.

³⁸ Morecroft, 2015.

³⁹ Leopkey & Parent, 2012.

interpret the above model correctly. The marketing of a sports event has a growing (+) impact on awareness of the event, and awareness accelerates (+) registrations for the event. The more registrations there are for the event, the greater (+) the attendance, and the greater the attendance, the greater (+) the possibility of incidents at the event, and incidents or danger reduce the event's reputation. The reputation of the event increases (+) word of mouth, which has a positive (+) effect on the marketing of the event. Since we have one negative (-) loop in this dynamic, we call this loop the B1 balance loop. The second balance loop, B2, is evident in the relationship between environmental pollution and population satisfaction: environmental pollution (-) has a negative effect on population satisfaction (+). The reinforcement loops show the increasing influence between the elements of the event. The more information (+) the local population has about the event, the more satisfied they are, and the more satisfied they are, the greater the word-of-mouth propaganda (+) and the greater (+) the marketing of the event. The second reinforcement loop R2 is evident in high attendance (+), which increases sponsor interest, and with sponsors, the event budget and revenue (+) increase, while at the same time increasing (+) the quality of entertainment events at the event and its execution, which leads to even greater (+) interest from sponsors.

4.2 Dynamics of the Legacy of Sports Events

An important aspect of the system dynamics of sports events is the dynamics of the legacy of the long-term effects of the event on the host destination.⁴⁰ Legacy is not a static result, but a dynamic process that develops through several phases:⁴¹ *Planning and preparation phase* (before the event): initial effects include infrastructure investments, increased employment in construction, improved international recognition of the destination, but also increased public debt and potential emigration of residents due to gentrification. *Implementation phase* (during the event): peak of positive effects – maximum tourist consumption, full employment, sense of pride and community among the local population, global media exposure; but also, peak negative impacts – traffic jams, crowds, increased crime, environmental pressures. *Transition phase* (immediately after the event): "post-event blues" – dramatic decline in tourism activity, unused infrastructure, reduced media attention,

⁴⁰ Preuss, 2007, 2015.

⁴¹ Leopkey & Parent, 2012.

job losses. *Long-term legacy phase* (years after the event): stabilisation of effects – new use of infrastructure, long-term changes in the tourist image of the destination, possible increased tourist flows, but also long-term infrastructure maintenance costs, servicing of public debt. If we think systematically and imagine a CLD model, we could comment that the legacy model of sports events involves several delays: (a) a time lag between investments and effects – infrastructure investments before the event do not have an immediate impact on tourism, but only years after the event;⁴² (b) a delay between negative impacts and reactions – negative impacts can accumulate unnoticed and only manifest themselves years later; (c) a delay between changes in circumstances and the adaptation of organisers.

5 Legal and Organisational Framework for Sports Events

5.1 Complexity of Legal Regulation

The legal regulation of sports events involves the interplay of multiple legal areas and levels of regulation.⁴³ At the *international level*, sports organisations (e.g., the International Olympic Committee, FIFA, UEFA) establish rules that are binding on national federations, clubs, and athletes. This "lex sportiva" acts as a global legal regime that often prevails over national legislation.⁴⁴ At the *supranational level*, e.g. the EU, EU law is an important source of legal regulation, influencing sports events through rules on the free movement of workers (athletes as workers), competition law (commercialisation of sports rights), consumer protection and prohibition of discrimination.⁴⁵ At the *national level*, legislation regulates essential areas, including sports law, tax treatment, labour law, health and safety regulations, criminal law (violence at sports events), and the management of public sports facilities.⁴⁶ In the Slovenian legal system, the basic regulations in this area are the Sports Act (ZŠpo-1), which regulates the organisation of sports activities and events, the Public Gatherings Act (ZJZ), which sets out the conditions for organising public events, and the Environmental Protection Act (ZVO-2), which regulates the environmental assessment of the impact of major events. At the *local level*, regulations and decrees

⁴² Baade & Matheson, 2016.

⁴³ Foster, 2006; Gardiner et al., 2012.

⁴⁴ Mitten & Opie, 2010.

⁴⁵ Weatherill, 2011; Parrish, 2003.

⁴⁶ Gardiner et al., 2012.

regulate specific aspects – the use of public spaces, traffic arrangements, opening hours, noise levels, waste.⁴⁷ At *the contractual level*, private contracts between different parties – organisers, sponsors, media, athletes, volunteers – establish specific rights and obligations.⁴⁸

This complexity creates a challenging legal environment where conflicts between different levels of regulation can arise. A systems approach to law and legal regulation requires an understanding of the interrelationships between these different legal regimes and their mutual effects.

5.2 Legal Liability of Organiser

Organisers of sports events bear a wide range of legal responsibilities.⁴⁹ Table 4 summarises the main types of responsibility.

Table 4: Legal liability of sports event organisers

Type of liability	Content	Penalties for violations
Responsibility for safety	Risk assessment, safety plan, medical services, emergency protocols	Civil and criminal liability
Contractual liability	Contracts with contractors, sponsors, media, athletes, and volunteers	Contractual sanctions, damages
Environmental liability	Environmental impact assessment, measures to reduce negative effects	Fines, bans on implementation, and civil lawsuits
Responsibility to the community	Minimising negative impacts on the local population	Ethical and contractual obligations
Anti-discrimination	Equal access regardless of gender, race, age, or disability	Lawsuits, administrative fines

Source: own

In the event of an accident or injury, organisers may be liable under civil law (liability for damages) and even criminal law (in cases of gross negligence). Precedent case law has established the standard of a "reasonably prudent organiser," who is obliged to anticipate reasonably foreseeable risks and take appropriate preventive measures.⁵⁰ Under Slovenian law, the organiser is liable under the general rules of

⁴⁷ Hylton, 2013.

⁴⁸ Beloff, Kerr & Demetriou, 2012.

⁴⁹ Spengler et al., 2009; Cotten & Wolohan, 2012.

⁵⁰ Gardiner et al., 2012.

liability for damages (Obligations Code, OZ) and under the specific provisions of the ZJZ, which prescribes the mandatory provision of safety and order at public events.

5.3 Rights and Protection of Participants

Participants in sports events (competitors, spectators) have several fundamental rights: the right to safety (a safe environment, medical services, protection from violence); the right to information (clear and accurate information about the event, rules, risks, ticket refunds); the right to privacy (in the age of digital technologies and mass video surveillance, organisers must comply with personal data protection rules, in the EU: GDPR); and the right to complain and receive compensation in justified cases.⁵¹

At the same time, participants have an obligation to respect the rules of the event, the instructions of the organisers and to behave respectfully towards other participants and the local community. Violations can lead to exclusion, a ban on future participation or even criminal prosecution (in the case of violence or vandalism).

The legal regulation of sports events can be defined as a systemic process of dynamic balancing between several conflicting objectives: the objective of protecting the public interest versus the objective of enabling private economic activities; the objective of equality versus the objective of sports excellence; the goal of protecting participants versus the goal of self-regulation; the goal of international harmonisation versus the goal of national sovereignty. Legal regulation operates through several regulatory mechanisms (Table 5).

Systems approach to legal regulation recognises that it is impossible to achieve all objectives at the maximum level at the same time – there are compromises and a need for balance. Overly strict safety regulations can narrow the range of possible sports events and limit innovation, while insufficient regulation can lead to accidents and a loss of public trust. It is important to find a flexible balance that adapts to changing circumstances.

⁵¹ Fuller & Drawer, 2004.

Table 5: Legal mechanisms for sports events

Mechanism	Description	Examples
Ex-ante regulation	Preventive mechanisms before problems arise	Permits, standards, insurance
Ex-post regulation	Sanctioning violations after they occur	Civil and criminal liability, fines
Information regulation	Enabling informed decisions by participants	Disclosure obligation, transparency
Self-regulation	Sports organisations' own codes of conduct	Certificates, arbitration mechanisms

Source: own

6 Systems Approach in Practice

Traditional linear approaches to planning and managing sports events are fragmented – different components (marketing, logistics, security, finance) are treated separately, with limited coordination and understanding of the interconnections.⁵² This leads to several problems: sub-optimal optimisation (each sector optimises its own goals without considering the effects on other sectors), unintended consequences (interventions in one sector have unexpected negative effects in others), short-term thinking and reactive management. Systems approach overcomes these limitations by establishing unified management that:⁵³ recognises interdependencies, balances short-term and long-term goals, combines different stakeholder perspectives, and anticipates different effects. We propose a comprehensive, systemic model for sports events that integrates entertainment, economic, social, environmental, and legal aspects (Table 6).

Table 6 presents the phases of the systems approach together with activities, tools and expected results. To support a comprehensive systems approach, we suggest using several analytical tools: CLD diagrams,⁵⁴ stakeholder analysis,⁵⁵ multi-criteria decision analysis – MCDA,⁵⁶ scenario analysis⁵⁷ and simulation modelling using software such as Vensim, STELLA or AnyLogic.⁵⁸

⁵² Parent & Smith-Swan, 2013.⁵³ Senge, 1990; Sterman, 2000.⁵⁴ Sterman, 2000; Wolstenholme, 1999.⁵⁵ Freeman, 1984; Mitchell et al., 1997.⁵⁶ Belton & Stewart, 2002; Figueira et al., 2005.⁵⁷ Schoemaker, 1995; van der Heijden, 2005.⁵⁸ Pruyt, 2013.

Table 6: Phases of the systems approach to sports events

Phase	Activities	Tools	Expected results
1. Systemic diagnosis	Identification of stakeholders, mapping of relationships (cooperation networks), context analysis, and capacity assessment	Stakeholder analysis, CLD, interviews	System map, identified structural causes
2. Vision and objectives	Participatory visioning, definition of measurable goals, and identification of trade-offs	Workshops, MCDA, AHP	Achieved goals, defined compromises
3. System planning	Preparation of a plan for all subsystems, testing with simulations	CLD, simulations (Vensim, STELLA), scenario analysis	Comprehensive event plan
4. Flexible implementation	Implementation with real-time observation, decentralised decision-making	Control panels, indicators	Timely adjustments
5. Evaluation and learning	Economic, social, environmental, cultural evaluation; knowledge sharing	Surveys, data analysis, and comparison with objectives	Insights for future events

Source: own

As a case study, we can use the literature-based example of Triathlon Costa Verde, which is facing declining participation, dissatisfaction among the local community and environmental problems. In the literature, triathlons in coastal cities are analysed through the prism of economic effects, social relations and environmental impacts (coastal ecosystems, traffic, noise), which provides a good empirical background for a systemic diagnosis.⁵⁹ Studies emphasise that triathlons can lead to commercialisation, pressure on local infrastructure, and tensions with the local population, while also having significant economic effects and contributing to destination branding.⁶⁰ The International Triathlon Union and national federations are developing sustainability protocols (certification system, reduction of environmental footprint, stakeholder involvement), which fits well the vision phase, system planning and "green protocol".⁶¹ *Systemic diagnosis*: Due to aggressive marketing, the triathlon in a popular coastal town has become a "must-do" event, with the number of participants growing rapidly, causing congestion, pressure on beaches and the marine environment, more waste and saturation of local infrastructure; local residents experience disturbances (noise, road closures, seasonal

⁵⁹ Avesani, 2023; Chaves-Castro et al., 2025; Pereira et al., 2022; Alguacil et al., 2026.

⁶⁰ Avesani, 2023; Ko & Stewart, 2019; Rinker et al., 2025.

⁶¹ Gray, 2020; Triathlon Canada, 2020; World Triathlon, 2025; Moon et al., 2022.

"overcrowding" of the area).⁶² At the same time, the event is becoming increasingly commercialised (high fees, corporate sponsors), while traditional local participation and volunteering are declining, creating a sense of alienation.⁶³ *Vision and goals:* In coastal cases, participatory approaches are already emerging in which municipalities, tourism stakeholders, athletes and environmental groups are considering reorienting the event towards a "sustainable triathlon" that combines sport, local identity and environmental protection.⁶⁴ Goals such as a 50% reduction in environmental footprint and a 30% increase in local participation can be justified by the triple bottom line concept and recommendations for sports events (environmental, social, economic dimensions).⁶⁵ *Systemic planning:* In practice, tools such as participant limits, sustainable transport, waste reduction, communication with the local community and integration of local providers are already being used in triathlons.⁶⁶ The package of measures (participant limits, green protocol, lower fees for locals, accompanying activities for the community) is in line with trends in green event management in triathlons.⁶⁷ *Evaluation and learning:* Studies point out that making events more sustainable often creates new areas of tension; fewer participants and stricter standards can reduce revenue, requiring innovative ways to find new sources (partnerships, public funding, programme expansion, longer visit durations, etc.).⁶⁸

7 Discussion and Recommendations

7.1 Theoretical Contribution

This paper contributes to the literature on sports events and tourism events in several ways. It provides *epistemological clarification* by presenting the epistemological foundations of a systems approach to sports events, emphasising the constructivist nature of systemic boundaries, the importance of the observer's perspective, and the inevitability of contextual dependence. This goes beyond the predominantly positivist approaches that dominate the literature on event management.⁶⁹ *Integrative theoretical framework:* the literature on sports events is fragmented across disciplines –

⁶² Avesani, 2023; Alguacil et al., 2026; Chaves-Castro et al., 2025.

⁶³ Avesani, 2023; Ko & Stewart, 2019; Rinker et al., 2025.

⁶⁴ Avesani, 2023; Pereira et al., 2022; Pourpakdelfekr & Oboudi, 2022.

⁶⁵ Chaves-Castro et al., 2025; Gray, 2020; Dingle & Mallen, 2023.

⁶⁶ Gray, 2020; Avesani, 2023; Pourpakdelfekr & Oboudi, 2022; Triathlon Canada, 2020.

⁶⁷ Pourpakdelfekr & Oboudi, 2022; Dingle & Mallen, 2023; Rinker et al., 2025.

⁶⁸ Avesani, 2023; Chaves-Castro et al., 2025; Ko & Stewart, 2019; Rinker et al., 2025; Moon et al., 2022.

⁶⁹ Getz, 2012.

economic analyses neglect social and environmental aspects, sociological studies neglect economic logic, and legal analyses are separated from organisational studies. This paper develops an integrative theoretical framework that crosses disciplinary boundaries and shows interconnections. *Methodological novelty*: the use of system dynamics and qualitative causal modelling in the context of sports tourism is still relatively rare. The paper also shows how a systems approach can reveal the structural causes of problems that remain hidden from traditional linear methods. *Definition of animation potential*: the paper offers a new definition of animation potential as an emergent system property, which transcends the traditional understanding of animation as merely a series of organised activities.

7.2 Limitations and Future Research

This paper has several limitations that unlock possibilities for future research. *Empirical validation*: the proposed model is conceptual and needs empirical validation. Comparative studies: sports events in different contexts (different countries, cultures, economic development, types of sport) could reveal which aspects of system dynamics are universal and which are context-dependent. *Quantitative modelling*: the qualitative CLD presented in this paper would need to be upgraded to a quantitative simulation model using empirical data. *Comparative legal analysis*: an in-depth analysis of legal regulations in different countries could identify best practices and innovative approaches in legislation. *Impact studies*: long-term longitudinal studies are needed to systematically monitor the legacy of sports events over several years or decades after the event. *Methodological development*: approaches need to be developed that understand and support systemic modelling by involving different stakeholders, overcoming epistemological conflicts and combining different perspectives, and ensuring the legitimacy of models.

8 Conclusion

Sports events are complex systems whose success stems not only from the excellence of individual elements, but also from the quality of relationships, connections and balance between different subsystems. Traditional fragmented approaches to planning and managing sports events are inadequate for managing complexity and often lead to unforeseen negative consequences – economic losses, environmental degradation, social conflicts, legal disputes. The paper showed how a

systems approach – using conceptual tools from complex systems theory, methodological techniques of system dynamics and an interdisciplinary understanding of economic, social, environmental and legal dimensions – enables a more comprehensive understanding of sports events and more effective management. The proposed causal loop diagram system model (CLD) includes system diagnosis, participatory vision setting, system planning considering feedback loops and delays, adaptive implementation and systematic learning. A key epistemological insight is that there is no single "correct" perspective on a sports event – different stakeholders legitimately construct different "systems" with different boundaries and goals. The task of the systems approach is not to eliminate this plurality of perspectives, but to establish mechanisms for the dialectical integration of different views and the search for sustainable balances that consider the interests of different stakeholders. In an era of increasing global competition for sports tourism events, growing social demands for sustainability and inclusion, and complex legal and regulatory frameworks, a systems approach to sports events is not just an academic curiosity, but a practical necessity. Organisers who embrace systemic thinking and integrated management will have a competitive advantage in creating events that are economically successful, socially responsible, environmentally sustainable and legally compliant.

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Declaration of generative AI in scientific writing

During the preparation of this paper, the author used Grammarly and DeepL Pro to proofread and improve the readability of the text. After using these tools/services, the author reviewed and edited the content as needed and takes full responsibility for the content of the publication.

Legal Acts

Environmental Protection Act (ZVO-2; Zakon o varstvu okolja): Uradni list RS, št. 44/22, 18/23 – ZDU-10, 78/23 – ZUNPEOVE, 23/24, 21/25 – ZOPVOOV, 56/25 – PoZ.

Obligation Code (OZ; Obligacijski zakonik): Uradni list RS, št. 97/07 – uradno prečiščeno besedilo, 64/16 – odl. US; 20/18 – OROZ631

Public Gatherings Act (ZJZ; Zakon o javnih zbiranjih). Uradni list RS, št. 64/11 – uradno prečiščeno besedilo.

Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free

movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) (Text with EEA relevance) (GDPR): OJ L 119, 4.5.2016, pp. 1–88.
Sports Act (ZŠpo-I; Zakon o športu): Uradni list RS, št. 29/17, 21/18 – ZNOrg, 82/20, 3/22 – ZDeb, 37/24 – ZMat-B.

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