



Growing
ideas
through
networks

WORKSHOP

Dissemination of Western Balkan Sport Innovation Lab (WBSI) and COST action CA 18236 (SHIINE) Multi-disciplinary innovation for social change

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19th Annual Scientific Conference of Montenegrin Sports Academy

"Sport, Physical Activity and Health:
Contemporary perspectives"

7 - 10 April 2022, Cavtat, Dubrovnik - Croatia
Hosted by Montenegrin Sports Academy





Objectives

1. **Dissemination of COST CA18236 “18236 Multi-disciplinary innovation for social change”**
2. **Dissemination of “Western Balkan Sport Innovation Lab”**, which is formed by several colleagues in the framework of COST CA18236 “18236 Multi-disciplinary innovation for social change”,
3. **Introducing** a new methodology for accessing the innovations in sports.
4. **Promote** to students and other participants their roles in employment by **integrating education programmes into lab’s operations.**



Workshop content

- **The theoretical background of sports innovations and multi-disciplinary innovations for social change.**
- **New methodology for assessing innovation in sports.** The methodology has been developed according to the leading methodologies for assessing general innovations in the countries of Europe and the world.
- This workshop doesn't insist on previous experience in this field. So, after realizing this workshop, the participants can be introduced to a new methodology for accessing the innovations in sports.

Dissemination of COST CA18236 “18236 Multi-disciplinary innovation for social change”



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MULTI DISCIPLINARY INNOVATION FOR SOCIAL CHANGE

Action Details

 MoU - 053/19

 CSO Approval date - 04/06/2019

 Start date - 03/10/2019

 End date - 02/10/2023

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Cost Action 18236: bringing together researchers, policy makers, practitioners and communities



Funded by
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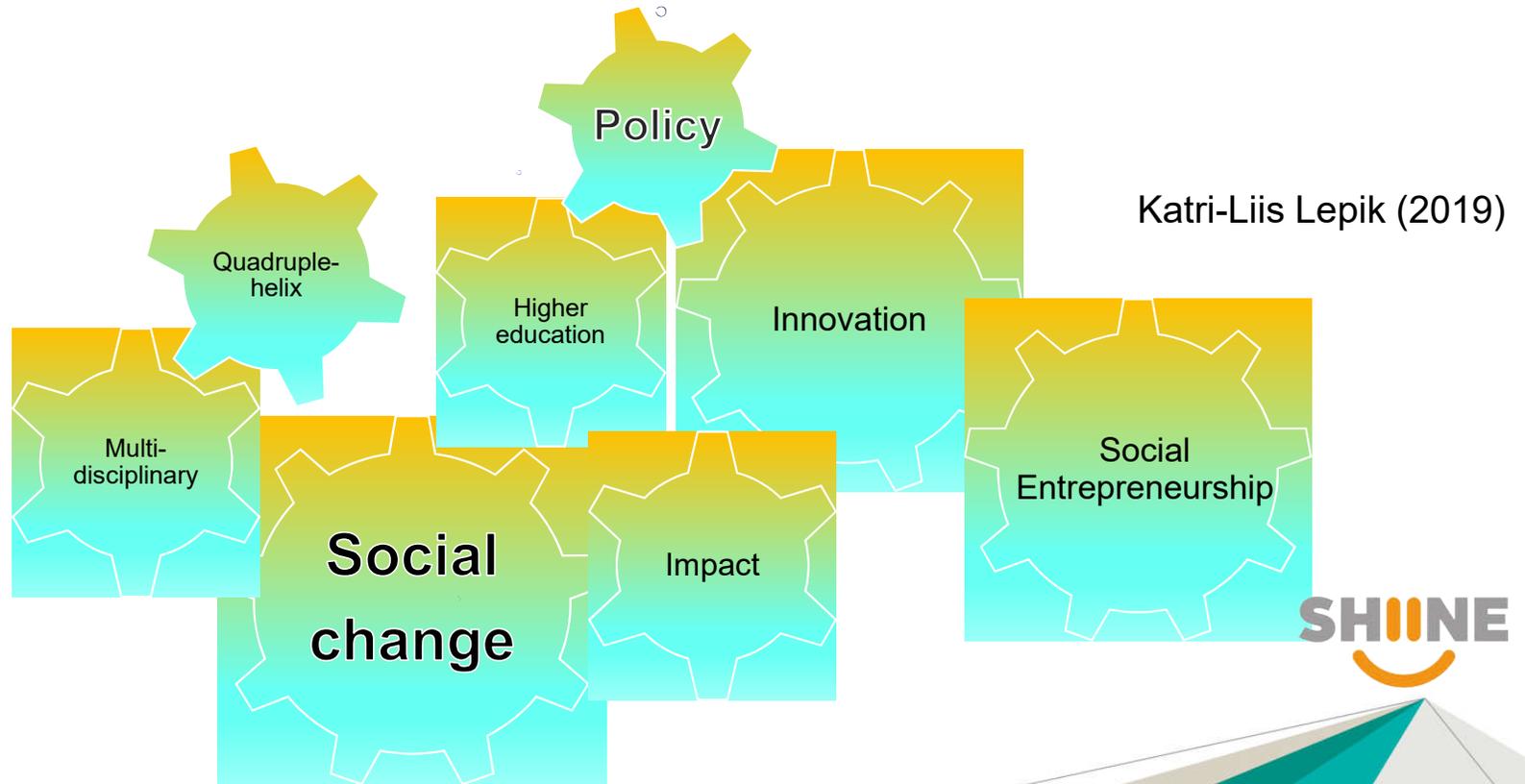


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Description

- In an increasingly complex and rapidly changing world, traditional disciplinary approaches to the framing and resolution of social and economic problems deliver ever diminishing returns.
- Discussions abound, therefore, about how best to educate and prepare graduates for the fresh challenges of the 21st century.
- **Knowledge Alliances between Higher Education Institutions (HEIs) and enterprises** which aim to **foster innovation, entrepreneurship, creativity, employability, knowledge exchange and/or multidisciplinary teaching and learning** are therefore becoming increasingly necessary and relevant.
- The challenge is to determine what we should teach in the future and how it should be taught. The changing nature of contemporary society highlights that social issues are often highly complex and multifaceted.

SHIINE





The aim of this Action is...

- to demonstrate, through the adoption of Multi-Disciplinary Innovation (MDI) methods, **how we can respond to social problems with a design-led approach** which has a problem-oriented ethos, supporting positive social change and the development of international public policy discourse.
- It will be achieved through the **establishment of a Pan-European Public Sector Innovation (ePSI) lab**. It will prepare students for roles in employment by integrating education programmes into the lab's operations and it will support agencies that have a role in responding to and developing public policy.

Current COST Action CA18236 Members



Capacity-building Objectives

- Fostering knowledge exchange and development of joint research agenda in the MDI for public sector Acting as a transnational platform with **Pan-European Public Sector Innovation (ePSI) Lab** facilitating multi-stakeholder engagement and co-creation processes linking local, national and international levels with the use of relevant methods and tools.
- Acting as a transnational platform with Pan-European Public Sector Innovation (ePSI) Lab facilitating multi stakeholder engagement and co-creation processes **linking local, national and international levels with the use of relevant methods and tools.**
- **Develop a Pan-European Public-Sector Innovation Lab** integrating education programme(s) into the fabric of the lab's operations and supporting agencies that have a role in responding to and developing public policy.

DISSEMINATION

| Stakeholder type | Purpose |
|--------------------|--|
| Research community | To encourage academics to provide their views in ePSI lab and co-create solutions for social issues |
| Policy-makers | <ul style="list-style-type: none"> To ensure the necessary political support and input to public policies To encourage them to participate in cocreation activities and bring about social changes |

| Stakeholder type | Purpose |
|---|---|
| Civil society and business organisations | <ul style="list-style-type: none"> To encourage civil society and business organisations (e.g. the Society of Evidence Based Policing, the BSC Policing Network; European Society of Criminology, associations of SEs and businesses, think-tanks, policy labs, etc.) to co-create solutions to societal problems To encourage civil society to lobby policy-makers to consider the recommendations made and implement solutions |
| EU level institutions, EU member states and other EU projects | <ul style="list-style-type: none"> To draw the attention of partners in other EC projects to the activities of the Action to further the existing contacts, widen ITCs networking scope and potential, open up new cooperation channels and research opportunities in the future To exchange information and views with other European projects |

Dissemination of “Western Balkan Sport Innovation Lab”

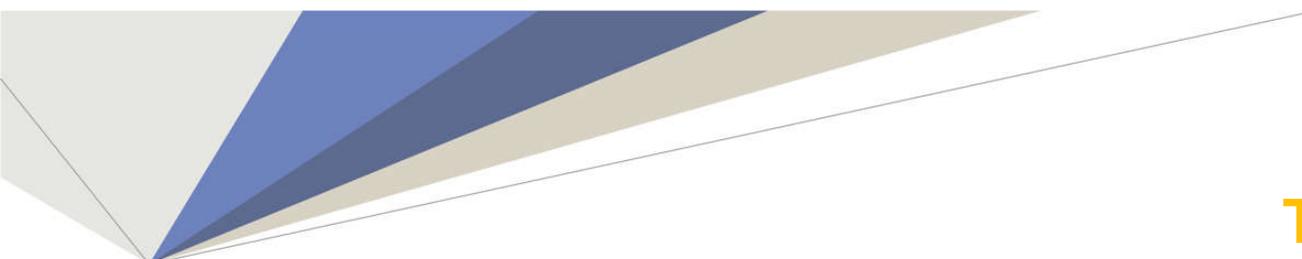


Sports industry

- Sport-related gross domestic product (GDP included **1.76-3.00%** in total GDP in the European Union
- **7.3 million employees** (3.5% of total employment in EU) generated by sports activities (Bichi, Wijlens, & Wallace, 2015)
- It means that every **37th EU employee** works in the sports industry and that every **47th euro** is generated by the sports sector (EPSI, 2020).



Bichi, A., Wijlens, R., & Wallace, E. (2015). *Strategic Research and Innovation Agenda 2016-2021*. Bruxelles, Belgium: EPSI – European Platform for Sport Innovation.

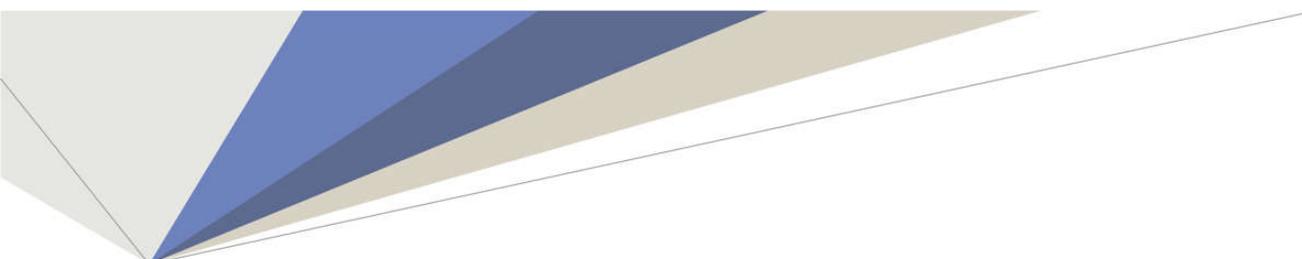


The sports industry is ...

“a global industry affecting many other sectors of the economy” (Ratten, 2015:238) and is viewed as “a multidisciplinary field that includes various disciplines such as marketing, finance, legal aspects, governance, communication, organizational behavior and theory, sport for development, tourism, facility management, and event management” (Abeza, O’Reilly, Séguin, Nzindukiyimana, 2015: 602).

Ratten, V. (2015). Sport innovation management: Towards a research agenda. *Innovation*, 18, 238–250.

Abeza, G., O’Reilly, N., Séguin, B., Nzindukiyimana, O. (2015). Social media scholarship in sport management research: A critical review. *Journal of Sport Management*, 29, 601–618.



ABOUT INNOVATIONS

Contemporary society is paying more and more attention to innovations. Etymologically, the term “innovation” comes from the word “novus”, which means new or alternative, and it is associated with “a new idea, method or device” and “the process of introducing something new”.



Gopalakrishnan, S., Damanpour, F. (1994). Patterns of generation and adoption of innovation in organizations: Contingency models of innovation attributes. *J. Eng. Technol. Management*, 11, 95–116.



Two main characteristics of innovation

- the existence of a great idea for innovation and the method of its use and application. These characteristics could be divided into
- **invention**—the existence of an idea, and
- **innovation**—translating an idea into application and use.

Today, innovation has a broader meaning and relates to an analytical concept related to various academic fields, such as political science, sociology, organization, business, management, etc.

Goldsmith, S. *The Power of Social Innovation: How Civic Entrepreneurs Ignite Community Networks for Good*; John Wiley & Sons: Hoboken, NJ, USA, 2010.

Hartley, J.; Sørensen, E.; Torfing, J. Collaborative innovation: A viable alternative to market competition and organizational entrepreneurship. *Public Adm. Rev.* **2013**, 73, 821–830.



Growing ideas through networks



Prof. Stevo POPOVIC, Head of WBSI lab

Western Balkan Sport Innovation Lab is a non-governmental organization established by the experts from the field in Western Balkan countries through COST program, as lab environment for respond to social problems in sport ecosystem,

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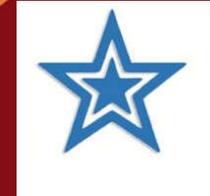


Blazo JABUCANIN,
Teaching Assistant



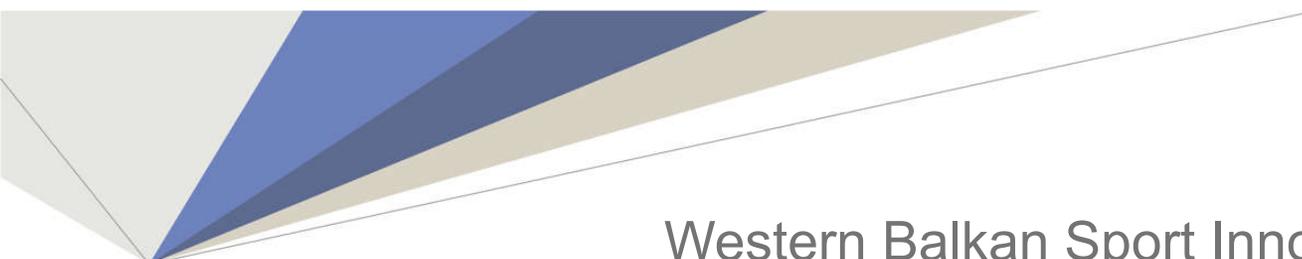
Funded by the Horizon 2020 Framework Programme of the European Union

About us



- ❑ Western Balkan Sport Innovation Lab (WBSI Lab) is a non-governmental organization established in 2020 by experts from the field in Balkan countries.
- ❑ It is based in Podgorica (Montenegro) and the aim of the organization is to build links between sports and related disciplines, industry and knowledge organizations in the field of innovation, through creating business opportunities for its members, coordination and management of preparation and implementation of investment, research and development, organizational and IT projects, and through identifying opportunities for innovations that will meet the health, social, environmental and market needs of natural and legal entities living and working in the Western Balkans.
- ❑ Therefore, it is focused on innovation in sport, leisure, health, tourism and more and striving for a innovative and sustainable environment to stimulate development within Sport Industry.





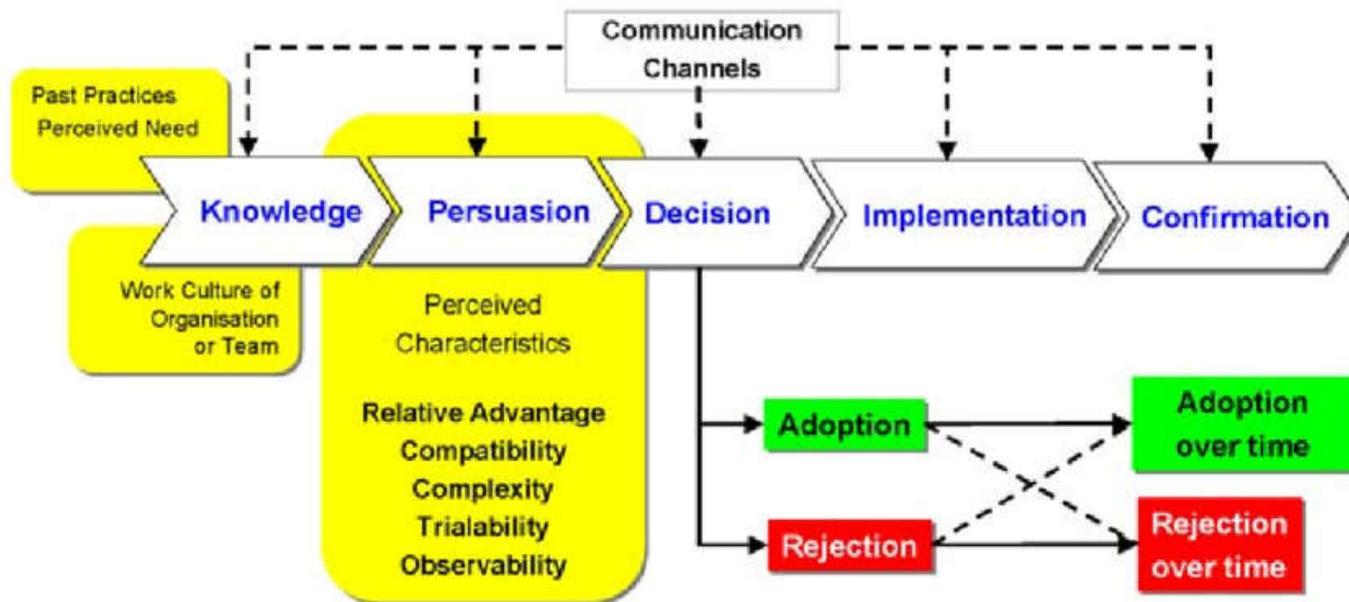
Western Balkan Sport Innovation Lab has three pillars:

Lobbying & education

Research

Service

- ❑ Through the first pillar, it is influencing policy makers at national, regional and European level to increase political attention and investments towards sport and physical activity, as well as empowering people with clear information to develop sport industry at large.
- ❑ Through the second pillar, it aims to create, coordinate or manage various types of research projects with dedication to advancing the insight inside all areas of Sport Industry.
- ❑ Lastly, through the third pillar, service, it aims to support dissemination of knowledge out of the schools – from scientific journals, through medias to end users from the sport and related industries from Western Balkan countries.



Five-stage model in the decision-making process-innovation (Rogers, 2003)

1. Knowledge - Introducing an individual or team to the functioning of a particular innovation. Following Rogers, within this level we distinguish three types of knowledge:

- **Awareness** - represents the knowledge of the existence of innovation and can contribute to the interest of the individual to reach other forms of knowledge.
- **Know how** - this knowledge includes information on how to use innovation properly.
- **Principles of knowledge** - this means getting acquainted with the principles of operation of innovation.

- 
- **Persuasion** - An individual or group creates a favorable or unfavorable attitude towards innovation,
 - **Decision-making** - The stage when an individual or some other decision-making unit involved in the activities leading to the election decides to adopt or reject the innovation,
 - **Application** - When the selected innovation is put into use,
 - **Confirmation** - review in relation to the applied innovation, i.e. possible change of the previous decision if it is assessed that there are conflicting messages about innovation.

Premier League Sustainability Rankings

| Rank | Club | Score |
|------|-------------------------|-------|
| 1 | Tottenham Hotspur | 21 |
| 2 | Arsenal | 20 |
| 2 | Brighton & Hove Albion | 20 |
| 2 | Manchester United | 20 |
| 3 | Manchester City | 19 |
| 4 | Southampton | 18 |
| 5 | Liverpool | 17 |
| 6 | Chelsea | 14 |
| 6 | West Brom | 14 |
| 7 | West Ham United | 13 |
| 8 | Everton | 12.5 |
| 9 | Crystal Palace | 12 |
| 9 | Newcastle United | 12 |
| 9 | Wolverhampton Wanderers | 12 |

How green are Premier League clubs? Tottenham top sustainability table

<https://www.bbc.com/sport/football/55790760>

Tottenham are the greenest Premier League club, coming top of a table measuring the sustainability of all 20 top-flight sides.

"Looking to our future beyond the current pandemic, our message is that the climate needs to be at forefront of all our minds," said Spurs chairman Daniel Levy.

"We have seen people take greater pride in their environment during the lockdowns of the past year. When we return to normality, we cannot slip back into bad habits and lose sight of this."

Sustainability Schemes



Several types of barriers to innovation (Tidd, 2003)

1. **economic**—personal costs, access to information, and insufficient incentives;
2. **behavior**—priorities, motivation, rationality, inertia, tendency to change, or risk;
3. **organizational**—goals, routine, power and influence, culture, and stakeholders;
4. **structural**—infrastructure, non-refundable costs, and management.

Type 4
Technologically
created to create and
accept

Type 3
They do they know that
change is necessary,
and they have certain
abilities to accept it
n't know how to change

Type 2
they know that
change is necessary,
but they do not know
how to get resources

Type 1
they don't know
how to change

Distribution of Innovative Ability (Tidd, 2005)

awareness of how to change

awareness of the need for change

New methodology for assessing innovation in sports

The National Report on Sport Innovations for Montenegro: Content Analysis



Article

The 2021 National Report on Sports Innovation for Montenegro: Content Analysis

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Abstract: This research aims to content analyze the literature on innovation in the field of sports in Montenegro to provide a better basis for the establishment of a monitoring system. The research was conducted drawing on a pre-established methodology related to the assessment of the level of sports innovation based on 16 defined indicators. Grades were attributed to data found in available scientific articles that were published until 2021, as well as in secondary data sources (Google Scholar, PubMed, Scopus, and Web of Science), such as governmental and nongovernmental reports and online content on Google (N = 18) from the same period. The findings of content analysis indicate that all indicators averaged 2.25 (fair) on a six-point scale, while only one indicator was rated as excellent, five indicators were rated as good, four indicators were rated as fair, and lastly, five indicators were rated as poor. Based on the obtained results, a low level of innovation in the field of sports in Montenegro was determined, and this also applies to innovation indicators individually. These results can be used as an initial step in planning an appropriate strategy development at the national level, which will lead to the improvement of innovation activities and their implementation in the field of sports in Montenegro.

Keywords: sport; innovation; report; indicators; monitoring; Montenegro



Citation: Katanic, B.; Pekovic, S.; Matic, R.M.; Vukovic, J.; Masanovic, B.; Popovic, S. The 2021 National Report on Sports Innovation for Montenegro: Content Analysis. *Sustainability* **2022**, *14*, 2463. <https://doi.org/10.3390/su14042463>

Academic Editors: Eloy López Meneses, M. Rocío Bohórquez and

The methodology was developed according to the leading methodologies for the assessment of general innovations in the countries of Europe and the world:

- European Commission. *European Innovation Scoreboard 2020*; Publications Office of the European Union: Luxembourg, 2020.
- WIPO. *The Global Innovation Index 2020: Who Will Finance Innovation*; World Intellectual Property Organization: Geneva, Switzerland, 2020.
- World Economic Forum. *The Global Competitiveness Report: How Countries are Performing on the Road to Recovery*, Special ed.; World Economic Forum: Geneva, Switzerland, 2020.

16 indicators for the assessment of innovations in sports

Innovative service/product

Innovative working methods

Organizational innovations

Marketing innovations

Spending annually on innovation

Income from innovation

Higher education

New Ph.D. graduates

Cooperation with universities

The person responsible for innovations

International scientific co-publications

International inventions

Research and development (R&D) as a source of knowledge

Innovation reports for the country

Scientific papers on innovations in sport

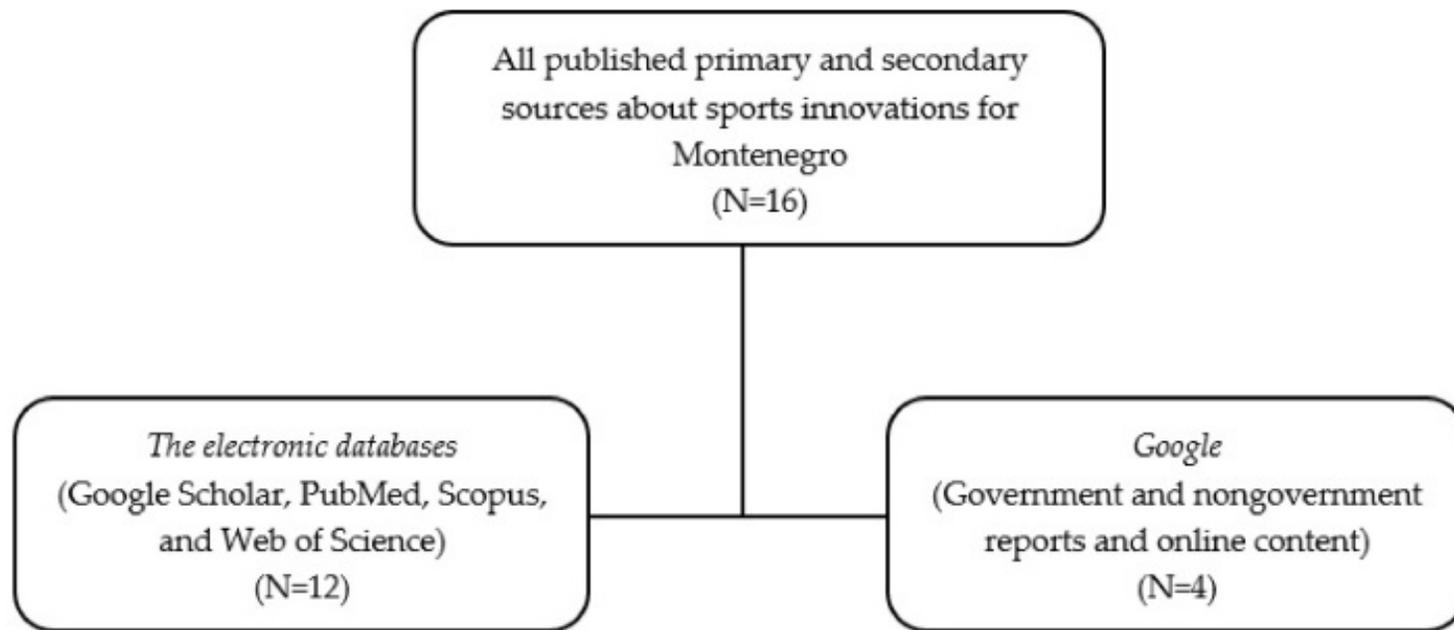
Financial support for innovations

Six-point grading scale

- 5 = excellent;
- 4 = very good;
- 3 = good;
- 2 = fair;
- 1 = poor;
- 0 = without reliable information)

- 1) **operationalization** of the concept of innovation in sports in the protocol of the study,
- 2) **training coders** for implementation of the formulated concept of sports innovation, and
- 3) **evaluation** of the implementation over the reliability of coders

The potential problem of risks of bias is solved by calculating the inter-judge agreement index using the Cohen's kappa coefficient (κ) suggested by McHugh. Recommended values of this coefficient should be between 0.81-1.00 as almost perfect agreement.



All published sources about all 16 indicators for sport innovations in Montenegro

| Indicators | Results | The innov. service/ product indicator |
|-----------------------------------|---|---|
| Innovative service/product | 42.7% of respondents stated that, in the previous three years, the organization has introduced new or significantly improved products or services. | Grade 3 |
| Innovative working methods | 45.3% of sports organizations has introduced new or significantly improved working in the previous three years. | Grade 3 |
| Organizational innovations | 56% of respondents stated that, in the previous three years, the organization has new or significantly improved marketing and organizational activities. | Grade 3 |
| Marketing innovations | 50.7% of respondents stated that, in the previous three years, the organization has new or significantly improved marketing and organizational activities | Grade 3 |
| Financial support for innovations | Only 21.3% of employee indicated that their organization received any form of financial support for innovative activities. | Grade 2 |
| Spend annually on innovation | 62.8% sport organizations spend annually on innovation less than 3% from the total profit | Grade 1 |
| Income from innovation | 45.3% of respondents answered that there is no such income | Grade 1 |
| Higher education | Only 37.5% of employee have an appropriate professional education | Grade 2 |

Note.
Grade 5 = excellent;
4 = very good;
3 = good;
2 = fair;
1 = poor;
0 - without reliable information

Popovic, Bjelica, Zarubica, Pekovic, & Matic (2021)

| | | |
|---|---|---------|
| New Ph.D. graduates | According to official data from European Commission report for Montenegro in 2019, there are 0.0 new doctorate graduates per 1000 population aged 25-34. | Grade 1 |
| Cooperate with universities | 26.7% of respondents from sports organizations stated that they had established cooperation with universities. | Grade 2 |
| A person responsible for innovations | 41.3% person(s) employed in sports organization responsible for innovative activities. | Grade 3 |
| International scientific co-publications | According to official data from European Commission report for Montenegro in 2019, there are 70.9 scientific co-publications per million population. | Grade 1 |
| International inventions | According to official data from European Commission report for Montenegro in 2019, there are 31.9 registered patent applications per million inhabitants. | Grade 2 |
| R&D as a source of knowledge | 20% of respondents recognize internal sources as the most important source of knowledge that leads to the development of innovation in the organization. | Grade 1 |
| Innovation reports for country | We found five different global innovation reports and in 3 out of 5 reports has data for Montenegro (60%). | Grade 3 |
| Scientific papers on innovations in sport | We found 91 papers on innovations in sport, of which 3 are by domestic authors. That is, the share of domestic papers represents 3.3% of all papers on a given topic. | Grade 5 |

Note.
Grade 5 = excellent;
4 = very good;
3 = good;
2 = fair;
1 = poor;
0 - without reliable information

The overall average score for sports innovation for Montenegro is 2.2.

What is the next step (potential)?

- ❑ Opportunity to develop a platform for comparing the level of sports innovation through the European Union (based on mentioned principles),
- ❑ New indicators or corrections to the current structure of sport innovations,
- ❑ Monitoring process and corrective actions.

Integrating education programmes into lab's operations



<https://www.appliedbioenergetics.org/>

Who We Are

Center for Innovative Therapeutics

Applied Bioenergetics Lab is an inventive, dynamic and multidisciplinary research facility at the University of Novi Sad.

It covers research topics from the fields of basic, translational and clinical bioenergetics. The main objective of our lab is to design and scrutinize innovative therapeutics that protect and upgrade mitochondrial bioenergetics and metabolism in health and disease.

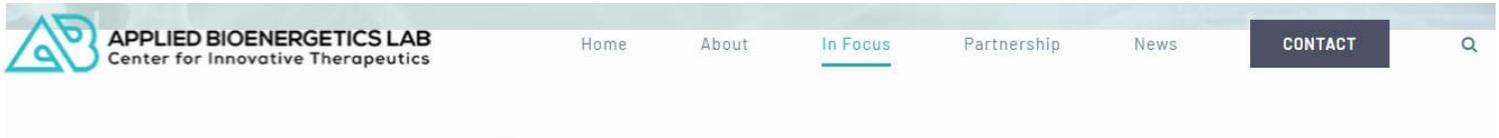
By working with different partners, from industry to government, Applied Bioenergetics Lab strives to make scientific endeavor as successful, impactful, and cost-effective as possible!

Biography

Sergej Ostojic, born 1971, is a senior biomedical scientist with broad research background in medicine, applied physiology and nutrition. He is a board-certified M.D. and holds a Ph.D. in Medical Sciences. Dr. Ostojic currently works as full professor of biomedical sciences at the University of Novi Sad, and adjunct professor at the University of Belgrade School of Medicine. His research expertise and experience include pre-clinical and clinical development of mitochondria-related nutraceuticals, pharmacokinetics of nutritional supplements, tissue-specific metabolic assessment and translation, and work physiology. He has authored more than 180 scientific papers, 30 book chapters and books, and 4 patent applications, and has been the recipient of internationally competitive research scholarships including WADA Scientific Research Grant and NSCA International Award, and many industrial endowments. He founded Applied Bioenergetics Lab in 2015, and has overall charge of the lab as its chief executive.



Lab focus...



Our focus areas



Developing and exploring treatments for better energy metabolism in health and disease

Our research currently explores several different areas of fundamental and applied bioenergetics, including cardiometabolic and neurodegenerative diseases, aging, and athletic performance, all sharing the poor cellular bioenergetics as a major pathognomonic.

Besides understanding the pathophysiology of impaired bioenergetics behind above conditions, and finding and upholding reliable biomarkers indicative of poor energy metabolism, we predominantly investigate the effectiveness and safety of novel nutritional and physiological treatments in clinical and athletic environment.

The results of our projects are routinely published by many peer-reviewed academic journals.



https://www.combatsportstudies.com/combatsports/

Combat Sports Lab

SAMBO – ART OF LIFE / LIFE – ART OF FIGHT

International Public Organization for the Promotion
of Science and Sports “Sport, People, Health”, Branch office Novi Sad, Serbia



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Author



Professor Patrik Drid, PhD

My research is focused on physiological responses to maximal and sub maximal exercise in combat sports. Besides, in last couple of years I am focused on molecular hydrogen administration on biomarkers of acid-base homeostasis and post-exercise recovery in combat sports athletes as well as on effects of oral guanidinoacetic acid in human nutrition.

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