



D1.4 Guidelines for policy makers



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DISCLAIMER

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ACRONYMS

Acronym	Full name
ESG	Environmental, social, and governance
SMEs	Small, medium-size enterprises
CSRD	Corporate Sustainability Reporting Directive
IP	Intellectual Property
IPP	Intellectual Property Protection
A2B	Academia-to-Business
PPPs	Public-private partnerships
R&D	Research and Development



INTRODUCTION

This set of guidelines for local and regional policymakers aims to specify recommendations for upgrading the existing entrepreneurial ecosystem in the Western Balkans' widening countries: Serbia, Albania, Bosnia & Herzegovina, and North Macedonia. The recommendations are proposed as the result of the research based on focused groups, the Delphi method, and needs analysis conducted in the mentioned four countries between September 2023 and November 2024 within the USE IPM project.

The guidelines explain the importance and objectives of each proposed topic, chosen as significant for enhancing the skills of young people necessary for a better understanding modern entrepreneurial context and for easier inclusion into the entrepreneurial ecosystem. Four topics include: soft skills, sustainability and sustainability reporting, technology transfer and open innovation, and innovation process management. Since entrepreneurship is directly connected to innovations, innovations, as entrepreneurs' tools for entering and spreading their market, and innovation process management, as a way for the successful introduction of innovations, are the final destination of the recommendations. As a very important topic, technology transfer, intellectual property protection and open innovation are selected due to their insufficient presence in business practice in the mentioned widening countries. Bearing in mind the European Green Deal and Agenda 2030, the Agenda for sustainable development, the USE IPM encourages entrepreneurship focused on sustainability. For this reason, sustainability and sustainability reporting are considered inevitable topics. Finally, for building the spirit of entrepreneurship and facilitating entrepreneurs' communication with other actors in the entrepreneurial ecosystem, soft skills are found to be necessary, especially for young entrepreneurs. For each widening country are presented challenges which should be given special attention.

Public academic institutions are recognized as actors capable of energizing entrepreneurship ecosystems to transform the business sector and strengthen the general welfare through sustainable entrepreneurship. The improvement of the relationship between the academic and non-academic sectors in widening countries can be achieved through mutual learning on the mentioned topics, primarily through educational support of academic institutions and feedback from the business sector.

However, policymakers represent very important actors of the entrepreneurial ecosystem. Their support, but also active role is necessary, especially for young entrepreneurs. Therefore, such guidelines would benefit primarily young entrepreneurs, but also the wider community. Their acceptance by policymakers should ensure project sustainability after its termination.



1. SOFT SKILLS FOR ENTREPRENEURIAL BUSINESS

Importance and objectives

The entrepreneurship of young people is important for the development of every country. As young people are generally innovative, risk-orientated, and flexible, they represent a pool of young entrepreneurs who can add value to society in many different ways. However, to develop successful entrepreneurial businesses, young people, in addition to hard skills, must also possess certain soft skills, including a set of interpersonal skills such as communication, empathy, emotional intelligence, conflict resolution, and negotiation, as well as personal qualities, attitudes, motives, work ethic, etc. These skills enable young people to interact successfully with other entities in the business sphere, recognise opportunities in the market, and be flexible and innovative.

Soft skills are observed as a complement of hard skills and as an integral component of an individual's intelligence quotient. While hard skills are related to a specific job, soft skills can be applied in any position (Cimatti, 2016). Hence, there should be a balance, alignment, and unity between hard and soft skills. Soft skills might also be referred to as non-technical skills, which were unquestionably just as important as academic skills (Asbari et al., 2019). Even though soft skills cannot replace technical skills, the person can be upskilled in the technical domain by adding a soft skills component (Cacciolatti et al., 2017).

The objectives of analysing this topic include: the identification of individuals' soft skills significant in contemporary business conditions, identifying reasons and factors for the development of soft skills, highlighting soft skills that respondents consider crucial for starting their own business, identifying soft skills that respondents consider crucial for positive evaluation by HRM during the selection process, and identifying methods for recognising/assessing soft skills.





Key challenges

Based on the answers of the participants in the focus groups and Delphi study results regarding the soft skills necessary for young entrepreneurs, some challenges were identified. In the following text, their opinions regarding those challenges are summarised into seven groups.

Key challenges regarding the essential interpersonal and intrapersonal skills crucial for successfully running entrepreneurial businesses that were identified are as follows: developing active listening skills to understand business partners' needs and build trust with them, developing social skills vital for team dynamics, conflict resolution, and building customer relationships, demonstrating personal integrity and persistence, building emotional intelligence, and setting realistic objectives for entrepreneurial ventures.

Key challenges regarding managerial skills and problem-solving skills that were identified are: building planning, time management, and problem-solving skills essential for successful goal realisation and demonstrating flexibility and proactive adjustments to stay competitive in a dynamic marketplace.

Key challenges regarding information, opportunity, and risk management skills are: building critical thinking skills and the ability to cope with uncertainty and risks, establishing a system for measuring key performance indicators.

Key challenges regarding building creative thinking and innovativeness that were identified are as follows: demonstrating flexibility and adaptability, especially during the initial phase of a business, building a culture that encourages sharing and accepting creative ideas.

Soft skills additionally identified as crucial for the successful entrepreneurial ventures of young people are as follows: personal skills - self-motivation, work ethic, stress management, time management; social skills – teamwork, conflict resolution, mentoring and transferring knowledge and skills, negotiation skills; and methodical skills – self-marketing, non-verbal communication, change management, financial literacy, speech communication.

The challenges regarding the identification of “soft” skills during the selection process are: creating adequate tests for assessing soft skills and conducting adequate interviews for assessing the skills.

The challenges regarding the methods for the development of soft skills of young people are: creating adequate curricula that foster acquiring the soft skills, integrating diverse educational methods, including training, internships, and practical tasks facilitated by experts from different fields, and stimulating continuous learning.



Key challenges in Serbia

Key challenges regarding the essential soft skills that young people in Serbia should possess in order to become successful entrepreneurs are as follows:

- **Underestimated Importance of Emotional Intelligence.** In Serbia, young people through the educational system are not equipped at an adequate level with this soft skill, which is essential for successfully running the business, as it provides successful relationship establishment, conflict resolution, stress management, etc.
- **Insufficient Development of Time Management Skills.** In Serbia, young people are generally not aware of the importance of time management, which is crucial for successful business. In most cases, they lack the knowledge and skills on how to prioritise their activities, resulting in wasting valuable time.
- **Insufficient Development of Risk Management Skills.** Young people in Serbia generally possess a high level of risk aversion (mostly due to cultural constraints). In most cases, they try to avoid risks rather than minimise them, which is essential in entrepreneurial business.
- **Low Awareness of the Importance of Active Listening Skills.** Active listening skills, as a part of communication skills, are very important for the success of a business, as they help gain the trust of clients and allow for flexibility and adaptability in meeting their needs. However, these skills are often neglected.
- **The Educational System does not Support Soft Skills Development.** In Serbia's educational system from the earliest ages, teaching on the importance of soft skills is not on an adequate level, nor is it orientated enough on their development. As a result, students as future entrepreneurs during the education are not sufficiently exposed to these skills.
- **Missing the Practical Experience Regarding the Soft Skill Development of Young People.** Trainings and workshops led by experts in soft skills are rarely organised at faculties, although they are highly valuable. As a result, some essential soft skills for business and entrepreneurial ventures of young people are not being developed at an adequate level.
- **Creating adequate tools for soft skills identification.** In order to identify and measure essential soft skills among young people entering the world of work, it is necessary to implement adequate tools.

By overcoming the above challenges, young people in Serbia will be better equipped with the soft skills that will form the base for successful entrepreneurial ventures and inclusion in the world of work.



Key challenges in Albania

Entrepreneurial success requires a careful balance between technical and soft skills. While technical skills provide the necessary expertise, soft skills are crucial for problem-solving, teamwork, and effective communication. In Albania, several challenges hinder the development of soft skills:

- **Lack of Integration in Education Programs.** The Albanian education system does not include dedicated modules for soft skills development. As a result, graduates enter the workforce with technical knowledge but without essential interpersonal and professional skills.
- **Deficiencies in the Workforce.** Many employees lack soft skills such as resilience, problem-solving, and adaptability. Companies struggle to find professionals who can effectively communicate, network, and demonstrate business ethics.
- **HR Challenges in Talent Acquisition.** Managers and HR professionals seek employees with a strong mix of soft and technical skills. In an evolving business environment, resilience and adaptability are crucial for navigating uncertainty.
- **Barriers to Youth Employment.** Many young job seekers struggle with self-presentation and communication. Their job applications often lack clarity and direction, making it harder for them to secure employment.
- **Delayed Development of Soft Skills.** In other countries, soft skills training begins in high school through structured learning activities and practical assignments. Albanian students do not receive similar opportunities, delaying their ability to work collaboratively and handle real-world challenges.
- **Need for Government and Policy Support.** There is a lack of national programs or policies aimed at fostering soft skills development. The government should support initiatives such as specialized training programs to enhance these skills in both students and professionals.
- **Weak Link Between Education and Work Experience.** Students graduate with little to no practical work experience. Internships and hands-on learning should be integrated into educational programs to help students develop workplace-relevant soft skills.
- **Individualistic Mindset and Lack of Teamwork.** Many young Albanians struggle with teamwork and group collaboration. The absence of team-based learning experiences in their education contributes to this issue.

To address these challenges, Albania must prioritize soft skills training across all levels of education and professional development. Encouraging hands-on learning, mentorship programs, and government-supported initiatives can help bridge the current gap and better prepare the workforce for future demands.



Key challenges in Bosnia & Herzegovina

Key challenges regarding the evolving and improvement of soft skills in Bosnia and Herzegovina reflect broader regional and socio-economic factors, as well as specific cultural and organizational dynamics within the country. Some of the primary challenges include:

- **Assertive Communication.** Communication skills and the lack of effective communication among employees are identified as a major concern. It is becoming increasingly difficult to find individuals who can communicate effectively, both in expressing their ideas and in listening to colleagues.
- **Lack of Awareness of Soft Skills' Importance.** Many employers continue to prioritize technical expertise and experience over soft skills, even though these attributes can play a significant role in creating effective teams, improving customer relations, and enhancing organizational performance.
- **Generational Divide.** There is a generational gap in B&H when it comes to the appreciation and use of soft skills. The generation gap can lead to friction, as younger employees may feel that their skills are not sufficiently appreciated, while older employees may feel that the emphasis on soft skills is unnecessary.
- **Adapting to market changes.** In many organizations there may be resistance to the adoption of modern management practices that emphasize soft skills such as empathy, adaptability, and coaching.
- **Organizational culture barriers.** In B&H, a strong emphasis is often placed on hierarchy, respect for authority, and a more formal communication style in the workplace. These cultural factors can hinder the development of open communication, team collaboration, and constructive feedback.
- **Limited Emphasis on Soft Skills in Education.** The education system has placed more emphasis on technical knowledge and academic achievements rather than development of soft skills. While there has been progress in recent years, soft skills such as communication, leadership, and emotional intelligence are often overlooked or not systematically incorporated into curricula.
- **Lack of Training and Development Opportunities.** While some larger organizations or international companies in B&H invest in training programs for soft skills, smaller businesses often lack the resources or awareness to prioritize such development.

The challenges with mentioned soft skills limits employees' ability to grow in this area. Many individuals may rely on their innate abilities to communicate or lead, but without formal training or feedback, their skills remain underdeveloped or unrefined.



Key challenges in North Macedonia

In North Macedonia, challenges include insufficient emphasis on practical communication exercises and a lack of integration of emotional intelligence training in educational curricula.

- **Enhancing Managerial and Problem-Solving Skills.** A major hurdle is the limited availability of vocational and professional training programs that focus on building resilience, creativity, and adaptability. Many existing programs lack interdisciplinary approaches that combine key managerial elements such as team building, resource management, and decision-making.
- **Promoting Risk Management and Critical Thinking.** The development of critical thinking and analytical reasoning skills is often neglected during formal education. Furthermore, companies rarely establish systems to promote a culture of risk-taking and scenario planning, hindering the ability of individuals to address and mitigate uncertainties effectively.
- **Encouraging Creativity and Innovation.** Creativity and innovation are frequently undervalued in traditional educational and professional settings. Organizations often fail to reward creative contributions, while punitive approaches to failure discourage risk-taking. This stifles innovation and creative problem-solving among employees and students alike.
- **Broadening the Scope of Essential Soft Skills.** There is a lack of focus on additional critical skills, such as active listening, empathy, change management, and financial literacy. Public awareness campaigns and curricular reforms to highlight these skills remain underdeveloped, limiting their adoption.
- **Soft Skills in the Recruitment Process.** Recruitment processes often prioritize technical over soft skills. Tools and methods to evaluate soft skills, such as the STAR and CAR methods, are underutilized. Additionally, there are few standardized certifications to validate soft skills proficiency.
- **Continuous Development Through Lifelong Learning.** Lifelong learning platforms that address soft skills are either insufficient or inaccessible for many professionals. Rapid market changes make it critical to update skills continuously, yet opportunities for ongoing training are limited, especially for mid-career professionals.

It has been implied that many institutions fail to provide students with networking opportunities to enhance social and proactive communication skills. Additionally, personal integrity and self-confidence are often overlooked in favour of academic achievements, leaving young professionals unprepared for workplace demands.



Policy Recommendations

Based on the information gained from the focus group discussions in four widening countries (Serbia, Bosnia and Herzegovina, North Macedonia, and Albania), in order to empower young people with the soft skills necessary to become successful entrepreneurs, the following recommendations for policymakers in all countries could be made.

✓ *Incorporating Soft Skills Development into Educational Curricula*

To empower young people with soft skills necessary for successfully running entrepreneurial businesses (or increasing attractiveness to employers), it is of high importance to incorporate soft skills development into educational curricula since the existing ones in most cases are orientated towards the development of hard skills.

Actions. To realize the above measure, policymakers could undertake the following actions: providing accreditation licenses for modules and courses at the faculties that include developing different kinds of soft skills, encouraging the development of specific modules or courses focused on specific soft skills, providing funding and resources to support national projects dedicated to the development of soft skills programs at educational institutions, providing funding for the establishment of collaborative learning environments at educational institutions that enable students to work together and solve different kinds of real business problems that require different kinds of soft skills.

The Impacts. The impacts of the above-listed actions are as follows: increased probability of the success of entrepreneurial businesses of young entrepreneurs, as they will be better equipped with soft skills, raised employability of students in general since they will graduate with a well-developed skill set that includes both technical and soft skills, and long-term economic growth as students equipped with developed soft skills will be able to express flexibility, adaptability, and innovativeness in business.

✓ *Encouraging Lifelong Learning Programs*

For young entrepreneurs to continue to grow and adapt to the changing business environment, it is essential to encourage lifelong learning of soft skills.

Actions. To encourage lifelong learning of soft skills among graduated students, policymakers could undertake the following actions: developing and funding lifelong



learning programs that offer courses and workshops focused on the development of soft skills, providing certification for training courses or programs in soft skills development, encouraging universities to offer short-cycle courses and programs for the development or enhancement of soft skills, and raising public awareness on the importance of soft skills by promoting successful entrepreneurs who achieved success in business based on developed soft skills (flexibility, innovativeness, etc.).

Impacts. The impacts of the above-listed actions are as follows: as young entrepreneurs continue to grow and learn soft skills throughout their entrepreneurial careers, they will make a greater contribution to the economic growth of society, lifelong learning of soft skills will lead to personal growth and improved emotional intelligence of entrepreneurs, resulting in better interpersonal relationships and relations with business partners, entrepreneurs who continue to develop their soft skills will be better equipped to adapt their businesses to changes in the business landscape.

✓ *Training Programs for the Development of Teachers' Soft Skills*

To innovate curricula with more content regarding the importance and development of soft skills, the first step is providing training programs for the development of soft skills for teachers and university professors.

Actions. To equip teachers and university professors with knowledge on the importance of soft skills and possibilities for their development, policymakers could undertake the following actions: organizing professional development workshops and training sessions for teachers and university professors focused on teaching methodologies for soft skills development on a regular basis, integrating soft skills training into teachers' and university professors' education programs, ensuring that they will be equipped with the necessary skills from the beginning of their teaching careers, developing specialized courses that focus on communication, emotional intelligence, teamwork, etc., offering incentives for teachers and university professors' participation in soft skills training programs, such as certifications or career advancement opportunities.

Impacts. The impacts of the above-listed actions are as follows: through enhanced knowledge of the importance of soft skills as well as their development, teachers and university professors can create and implement more engaging tools and methodologies for the soft skills development of students, well-developed soft skills can help build stronger relationships with their students and motivate them for personal growth, students with highly developed soft skills, thanks to the competencies of teachers and university professors in soft skills building, will contribute more to the economic and social growth of the community.



✓ ***Encouraging Internship Programs with the Business Sector***

To empower young people with the soft skills necessary for successfully running entrepreneurial businesses (or integrating into the labour market), internship programs represent invaluable opportunities for this purpose. These programs provide the development of such skills in real-world business environments and equip students with real business experience.

Actions. To encourage internship programs with a focus on soft skills development, policymakers could undertake the following actions: providing tax benefits or financial incentives to organizations that offer internship programs focused on soft skills development, facilitating partnerships between faculties and the business sector to create internship programs aligned with academic curricula, establishing clear guidelines and standards for internship programs to ensure that they provide meaningful and relevant experiences for students, creating digital platforms that connect students with internship opportunities, allowing for easy application and matching based on skills and interests.

Impacts. The impacts of the above-listed actions are as follows: by equipping students with practical experience and developing soft skills in real business environments, students will be more competitive in the labour market, internship programs can help students overcome the skills gap between education and employment, ensuring that they will be well-prepared for the labour market, by working closely with businesses, students can build professional networks and relationships, which can lead to future job opportunities and career growth, students equipped with both technical and soft skills can contribute more to economic growth, as they will be drivers of innovation and creativity in society.

✓ ***Establishing Community Learning Centres***

To empower young entrepreneurs and other interested parties with soft skills, establishing community learning centres that offer free or low-cost soft skills training programs represents a valuable tool.

Actions. To establish and provide conditions for functioning community learning centres for developing soft skills (and other types of knowledge and skills), policymakers could undertake the following actions: providing funding and resources to support the establishment of community learning centres for soft (and other) skills development, creating and implementing campaigns to raise public awareness on the importance of lifelong learning and the benefits of developing soft skills, certifying programs that recognise individuals have completed soft skills training courses.



Impacts. The impacts of the above-listed actions are as follows: enhanced competencies of young entrepreneurs (and others) for successfully running a business, enhanced employability and attractiveness of people in the labour market, long-term economic benefits as young entrepreneurs (and others) will be equipped with many valuable soft skills (communication, flexibility, emotional intelligence, teamwork, etc.).

✓ ***Creating Digital Platforms for the Development of Soft Skills***

In addition to establishing community learning centres for the development of soft skills, policymakers could establish digital platforms for the same purpose.

Actions. To establish and provide conditions for functioning digital platforms for developing soft skills (and other types of knowledge and skills), policymakers could undertake the following actions: conducting surveys and research to understand the specific needs and gaps in soft skills and knowledge in the country, providing financial support and incentives for the development and maintenance of digital platforms for soft skills development, certifying soft skills training courses, creating and implementing campaigns to raise public awareness on the importance of lifelong learning and the benefits of developing soft skills.

Impacts. The impacts of the above-listed actions are as follows: enhanced competencies of young entrepreneurs (and others) for successfully running a business, enhanced employability and attractiveness of people in the labour market, long-term economic benefits as young entrepreneurs (and others) will be equipped with many valuable soft skills (communication, flexibility, emotional intelligence, teamwork, etc.).



2. SUSTAINABILITY AND SUSTAINABILITY REPORTING

Importance and objectives

In the business world, issues of sustainability, social responsibility and good governance are becoming increasingly important. The concept of ESG (Environment, Social, Governance) has become a key framework for assessing and managing these issues. Although the term ESG standards can often be heard, in fact, there are no universal ESG standards in the true sense of the word. Several different frameworks / methodologies / standards can be used to define the criteria by which ESG performance is measured, disclosed and evaluated.

ESG reporting is the process of creating and publishing reports by a company on the impact it has on the environment (Environmental), social environment (Social), as well as on the way it manages the organization (Governance). ESG reporting includes qualitative disclosures related to the three elements mentioned above, but also quantitative measurements. Creating ESG reports can often be challenging, given that companies must first determine how, what ESG information and indicators they will measure and communicate, as well as what reporting methodology they will use.



Sustainable entrepreneurship and innovation are gaining more and more importance (Rosário et al., 2022), and the goal of the USE IPM project is to encourage entrepreneurship focused on sustainability and the creation of innovative solutions that respect the framework of three norms: do good, avoid harm and protect both society and the planet. An insight into the level of development of business practices that contribute to sustainability (Sreenivasan, & Suresh, 2023) which is an important task of every business entity, can be seen on the basis of reporting on this issue. Bearing in mind the above, the objectives of the focus group are identifying ecological aspects of sustainability, economic aspects of sustainability, social aspects of sustainability, aspects of sustainability that must be improved in widening countries, circular economy activities, especially those that can be applied in widening countries, as well as the representation of sustainability reporting practices in widening countries.



Key challenges

The general objective of the USE IPM project is to accelerate cooperation between the academic institutions from widening countries and non-academic community, by enhancing capacities of the academic institutions for research and innovation towards sustainable entrepreneurship, based on innovation process management. Sustainability and particularly Sustainability Reporting as one of most crucial components recently for businesses, brings it out as a priority for Western Balkans to go side by side with EU countries.

European Union industrial policy strengthens competitiveness, facilitates structural change and encourages a business-friendly environment that stimulates small and medium-sized enterprises (SMEs). Overall, the enterprise and industrial policy would benefit from improved coherence and institutional coordination while the impact of the policies for private sector development remain unclear. The legal framework for sustainable and digital finance is partially in place whereas the institutional framework needs further strengthening. The financial support for introducing innovations in green and digital sectors needs to be improved, in particular for SMEs, including start-ups. The sustainable finance framework outlines the commitment of economy to sustainable development, focusing on ESG policies. The diverse strategies intended to contribute to the UN SDGs, supporting the global decarbonisation and promote social inclusion. The framework should serve as a guide for issuing Green, Social and Sustainable Finance Instruments to raise funds from international capital markets. A general lack of awareness and understanding of sustainable finance principles among stakeholders in the Western Balkan presents a significant barrier to the effective adoption and implementation of sustainable finance practices. Many stakeholders are not fully informed about the benefits and requirements of sustainable finance. Without a clear understanding of sustainable finance principles, stakeholders may underestimate the potential long-term economic and environmental benefits, such as increased resilience to climate risks, enhanced reputation and access to new markets and funding opportunities.

The companies that prepared a sustainability report for the fiscal year 2024 were mainly companies that are subsidiaries of European companies, mostly financial institutions, which had a legal obligation to prepare these reports regarding the Corporate Sustainability Reporting Directive (CSRD) as the first CSRD reporting year. But since the legislation in the Widening Western Balkan countries also requires that large companies prepare Sustainable/ Non – financial report, it is expected that ESG teams to be created at these companies, which also implies a need in the market for specialists in this area. Challenges have been identified through the opinions of several business representatives gathered together in focus groups led by academics in each of the countries.



Key challenges in Serbia

To gain a deeper insight into the importance of sustainability and reporting on this topic in Serbia, as well as to design training programs to empower young people to create and implement innovative business solutions for sustainability, a focus group was organised. Regarding these topics, many challenges were identified.

- **Insufficient Awareness of the Companies of the Importance of Environmental Practices Regarding Sustainability.** In Serbia, many companies do not pay sufficient attention to their impact on the environment, as they pollute air and water, do not save energy, insufficiently implement the circular economy activities, and only a small number of companies use renewable energy sources, etc.
- **Lack of Alignment Between Economic Activities and Sustainable Practices.** Some of the examples of inappropriate alignment between economic activities and sustainable practices in Serbia are as follows: a certain number of companies avoid paying eco taxes, investments in environmental sustainability are considered as costs, irrational spending of resources, and bureaucratic obstacles in obtaining various permits.
- **Lack of Appropriate Recycling Infrastructure.** For many types of waste in Serbia, there is no appropriate recycling infrastructure. Some companies have to export the waste, which significantly increases the cost of the recycling process. In addition, the infrastructure for collecting the waste from households is not developed at a proper level.
- **Lack of Public Awareness and Engagement with Sustainability Practices.** In Serbia, there is generally low awareness among people about the importance of sustainability practices, as they do not select waste for selection in the area where infrastructure for this exists, irrationally use energy, etc.
- **Insufficient Implementation of IT Solutions to Support Sustainability-Based Practices.** The possibilities of applying IT to support sustainability-based practices are not well used. IT could be used for data reduction, waste sorting (especially in the field of e-recycling), optimisation of business processes for energy saving, etc.
- **Lack of Clear and Mandatory Legal Regulations for Sustainability Reporting.** In Serbia, only big companies have the obligation to report on sustainability, which causes medium and small companies to not be dedicated to this issue. On the other side, the legal regulations in this area are imprecise, i.e., the indicators that should be monitored are not specified.

The above challenges highlight the need for increased public awareness, improved infrastructure, and better regulatory enforcement to support sustainability efforts in Serbia.



Key challenges in Albania

Sustainability is a critical yet under-discussed issue in Albania. Addressing it requires greater awareness, structured frameworks, and policy support. Below are the key challenges:

- **Lack of Public Awareness and Knowledge.** Sustainability concepts are not widely understood by businesses or individuals. There is a need for education on the financial and social impacts of sustainable practices.
- **Absence of an ESG (Environmental, Social, and Governance) Network.** Albania does not have an ESG network where companies can collaborate and share best practices. Such a network could provide economic opportunities, promote responsible corporate behavior, and support environmental sustainability.
- **Challenges for High-Polluting Companies.** Companies classified as “polluters” face greater sustainability challenges due to a lack of unified technological standards. There is a legal obligation to rehabilitate the environment, yet many companies fail to track their environmental impact.
- **Lack of Alternative Materials in Cement Production.** Albania has no government agreement for alternative materials in cement production. Using alternative raw materials would conserve natural resources and promote sustainability. The country lacks a functional waste management system, making the supply of sustainable materials difficult. A 2011 ban on waste imports prevents industries from sourcing alternative fuels from abroad.
- **Limited Environmental Considerations in Business Loans.** Private banks in Albania should integrate environmental impact assessments when providing loans. Prioritizing environmentally friendly investments would promote sustainable business practices.
- **Sustainability Lacks Market Value.** There is no evaluation system to differentiate sustainable businesses from less sustainable ones. Consumers lack awareness of sustainability benefits, limiting demand for eco-friendly businesses.
- **Gaps in Non-Financial Reporting and IT Utilization.** Most Albanian companies have not yet adopted non-financial reporting practices. Traditional businesses often lack knowledge of IT integration, which can support sustainability initiatives.

To drive sustainable development, Albania must implement structured policies, develop ESG frameworks, and encourage businesses to integrate sustainable practices. Raising public awareness and improving waste management systems are crucial for long-term environmental responsibility.



Key challenges in Bosnia & Herzegovina

The key challenges related to sustainability and sustainability reporting in B&H can be summarized as follows.

- **Regulatory and Policy Barriers.** Lack of Clear Environmental Regulations: Regulations regarding waste management and renewable energy infrastructure (e.g., for solar energy) are not well defined or enforced, leading to underutilization of sustainable solutions and the failure to capitalize on opportunities like recycling or green energy investments.
- **Environmental Challenges.** Pollution and Waste Management: B&H faces significant challenges in managing waste, including illegal landfills, wastewater discharge into rivers, and insufficient recycling infrastructure. Impact of Energy Projects on Biodiversity: While there is an increasing investment in renewable energy projects (e.g., mini hydro-power plants, solar energy), these projects sometimes have negative environmental effects, such as the disruption of local plant and animal life. Balancing ecological sustainability with energy needs remains a key challenge.
- **Economic and Financial Constraints.** High Costs of Sustainable Practices: The upfront investment required for sustainable technologies, such as renewable energy sources (solar panels) or digitalization, can be expensive for small and medium-sized enterprises (SMEs) in B&H. The absence of financial support mechanisms or incentives compounds this challenge.
- **Lack of Awareness and Education.** Low Ecological and Social Awareness: Participants noted that ecological awareness is generally low in B&H, both within businesses and the general public. Need for Education on Waste and Resource Management.
- **Fragmented Efforts and Lack of Coordination.** Limited Collaboration Across Sectors: While individual companies and sectors are taking steps toward sustainability, there is a lack of coordination between businesses, governmental bodies, and educational institutions.

Economic benefits of recycling and, generally sustainability focused efforts are unclear. The low economic return from recycling or waste-to-energy projects (due to insufficient waste supply or low scalability) makes it difficult to convince businesses to invest in such innovations. On the other hand, costs of sustainability reporting are rather high. This means that the high cost of preparing the ESG (Environmental, Social, and Governance) reports limits the capacity of smaller firms to use this ESG practice.



Key challenges in North Macedonia

Sustainability in North Macedonia faces multiple barriers, particularly in environmental, economic, technological, and regulatory domains. Addressing challenges requires policy alignment, increased awareness, and stronger institutional support.

- **Low ESG Standards Implementation and Regulatory Gaps.** ESG adoption remains low, especially among SMEs, while larger firms comply primarily due to foreign parent companies. Weak enforcement of ESG regulations and misalignment with EU sustainability frameworks further discourage widespread implementation. Aligning with the EU Corporate Sustainability Reporting Directive (CSRD) is crucial.
- **Limited Awareness and Knowledge Gaps.** Many businesses lack understanding of ESG principles, viewing them as additional burdens rather than strategic opportunities. This knowledge gap also increases the risk of *greenwashing*, where companies falsely portray sustainability efforts, undermining stakeholder trust.
- **Cost Perception and Financial Barriers.** Businesses often perceive sustainability regulations as financial burdens rather than long-term investments in efficiency and competitiveness. High costs associated with sustainability reporting, digitalization, green technology adoption limit engagement, especially among SMEs.
- **Weak Circular Economy and Waste Management Systems.** Recycling and waste management remain underdeveloped due to weak cooperation between stakeholders and the absence of incentives for businesses to adopt circular economy models. The lack of alternative materials in industries further restricts sustainable resource use.
- **Resistance to Change and Governance Challenges.** Many companies hesitate to integrate sustainability into their business strategies due to uncertainty, short-term financial priorities, and limited understanding of sustainability-related profitability.
- **Technological Barriers to ESG Implementation.** Weak digital infrastructure and lack of expertise in digital transformation prevent businesses from leveraging advanced and modern tools such as AI and data analytics for ESG reporting and sustainability management. Companies struggle with data collection, processing, and reporting, highlighting the need for education, training and improved systems.
- **Dependence on External Support and Lack of Local Capacity.** Many sustainability initiatives in North Macedonia rely on international funding, donor programs, or foreign regulatory pressure rather than local institutional frameworks.

To advance sustainability in North Macedonia, greater regulatory enforcement, enhanced sustainability education, improved technological infrastructure, and stronger corporate engagement are needed. Aligning with EU standards and fostering cross-sector collaboration will be essential in overcoming these challenges.



Policy Recommendations

Based on the information gained from the focus group discussions in four widening countries (Serbia, Bosnia and Herzegovina, North Macedonia, and Albania), in order to enhance the sustainability in innovation by entrepreneurs, the following recommendations for policymakers in all countries could be made.

✓ *Incorporating Sustainable Developments Goals into Curricula*

Higher Education Institutions should promote the knowledge transfer of towards the business practices through incorporating ESG-s and Non-Financial Reporting main issues into the academic curricula. This will empower young people with knowledge of sustainable development for successfully running entrepreneurial businesses. It is so significant to integrate skills of sustainable development into educational curricula towards the best sustainable practices of business. Meanwhile, Higher education institutions should encourage the innovation and critical thinking in the skills necessary for developing the Circular Economy. The education approach closely connected to the economic system, in order to stimulate the economic development, by educating young people who soon will be part of the labour market, with innovative and entrepreneurial capacities. Furthermore, academia contributes to the Circulation Economy by improving knowledge and skills on this issue and conducting research and development.

Actions. The policymakers achieve the above priority sustainable issues as following: Higher Educations Institutions should encourage the incorporation in their programs' curricula of specific modules or courses focused on sustainable development issues in developing countries; Higher Educations Institutions in Western Balkan Countries should design support programs and propose mechanisms and instruments for micro, small and medium enterprises to develop Circulation Economy - based business models through academic research towards innovation; Higher Educations Institutions in Western Balkan Countries should establish an incentivizing atmosphere for potential entrepreneurs (mostly young people) to develop Circulation Economy - based business models.

The Impacts. The impacts of the above-listed actions would encourage: start-ups that will have sustainability, circulation, energy efficiency, etc. at the core of their activity; employability of students in general since they will graduate with a well-developed skill towards sustainable entrepreneurship; success of businesses operating in the market to adapt sustainability principles and actions.



✓ **Governmental support**

The successful business experience has demonstrated the huge benefits due to sustainable practices. This means that when governments undertake sustainability policies, they must be harmonized in order to obtain all the benefits that come from sustainable development. Also, it encourages initiatives for regional businesses, that is, for collaborations or expansion of activities in neighbouring countries. What has been observed in the Western Balkan countries is that the policies are very good, the legislation is very good, coherent, and adequate, mainly adapted from those of European Union countries, while their implementation often falls short of expectation. Therefore, in order for all actions taken to be successful, increased attention is needed in the implementation and control of compliance with standards.

Actions. The policymakers achieve the above priority sustainable issues as following: the governments of Western Balkan Countries should design support programs and propose funding mechanisms and instruments for micro, small and medium enterprises to develop sustainable business models; the governments of Western Balkan Countries should establish an incentivizing atmosphere for potential entrepreneurs to develop the sustainable innovative business models; Synchronize sustainable finance initiatives across Western Balkan economies to avoid duplication and ensure cohesive efforts; compilation of common guidelines, methodologies, and standards for sustainable finance activities; when providing loans for business, the banking sector must consider the environmental impact assessment of the investment financed with these loans.

The Impacts. The impacts of the above-listed actions should promote the benefits of sustainable finance and advocate for supportive policies and regulations within countries; provide training and resources to enhance technical capabilities of stakeholders; improving sustainable finance and aligning with the European Union Taxonomy in the Western Balkan are important steps towards creating a strong financial system that supports environmental and social sustainability; track the progress of sustainable finance implementation and assess the effectiveness of policies and initiatives; prioritize investments that have a positive impact on the environment by banking sector.



✓ *Develop Incentives for Circular Economy Practices*

Financial support is very important for achieving dedication of business community to circular economy and environment protection. In terms of small and medium enterprises it is usually essential. The following actions are seen as options.

Actions. Introduce fiscal and regulatory incentives for businesses investing in renewable energy projects, waste recycling, and circular economy practices, such as tax reliefs for companies that adopt energy-efficient technologies or engage in waste-to-energy processes. Also, provide grants or low-interest loans for businesses transitioning to renewable energy sources, and incentivize the adoption of circular economy models, such as reusing waste materials, improving recycling infrastructure, and promoting waste-to-resource technologies. Establish a national fund or public-private partnerships to build recycling facilities, including those for hazardous and organic waste; Provide incentives for private companies to invest in recycling technologies and waste incineration plants.

Impact. Implementation of modern green and circular practices, introducing new eco-products, using eco-friendly technology, reducing waste, development of green entrepreneurship, implementing digital solutions that improve sustainability.

✓ *Strengthen Waste Management and Recycling Infrastructure*

The Western Balkan countries should establish an Environmental Social Governance network where companies can join. This will come with many benefits for companies, as businesses can share information, experiences, and benefits by investing with a sustainability focus. Cooperation with all economic actors, such as academia, local and national authorities, is much more effective in this way.

Actions. The policymakers achieve the above priority sustainable issues as following: Create a waste management strategy focusing on reducing illegal landfills, enhancing recycling rates, and promoting waste-to-energy projects;

Impacts. The impacts of the above-listed actions would encourage: Strategic channelling of financial allocations at the local and regional level, More companies will adopt the sustainable business models, green innovation and technology, circular economy, social entrepreneurship, green entrepreneurship, sustainable marketing and branding, eco-innovation and product development, green financing; Waste reduction trend will be demonstrated; Environment protection will be provided; The first step towards regenerative economics will be made.



✓ ***Promotion of sustainability issues through societal awareness***

The Western Balkan countries have not implemented the comprehensive waste management system and as a result there are no real, sustainable, and well-prepared streams that can supply the factory with the alternative fuels. The overall lack of awareness and understanding of sustainable finance principles among stakeholders in the Western Balkan presents a significant barrier to the effective adoption and implementation of sustainable finance practices. Various stakeholders are not well – informed about the benefits and requirements of sustainable finance due to the lack of significance and impacts of sustainability issues. Without a clear understanding of sustainable finance principles, stakeholders may underestimate the potential long-term economic and environmental benefits, such as increased resilience to climate risks, enhanced reputation and access to new markets and funding opportunities. Business organizations in collaboration with academia can support the process of awareness-raising, as well as the creation or strengthening of the capacities, with the aim of accelerating the approach to sustainability and making it efficient.

Actions. *The policymakers achieve the above priority sustainable issues as following:* guide the private sector towards more sustainable business models; provide education and training for health, social and environmental sustainability; improve alignment of policies and strengthen collaboration across sectors; foster meaningful inclusive community engagement.

The Impacts. The impacts of the above-listed actions focus towards: businesses bear a social and environmental responsibility to minimize their negative impacts and maximize their positive contributions; sustainability engagement plays a pivotal role in assisting organizations in meeting their environmental, social, and governance (ESG) goals; adopting sustainable behaviours at an individual level, including actions such as saving energy, reducing waste, using sustainable transportation, and buying green products; Higher Educational Institutions can promote research projects focused on finding innovative solutions to the problems of sustainable development; adopting sustainable practices in our daily lives and supporting social movements and public participation.



3. TECHNOLOGY TRANSFER AND OPEN INNOVATION

Importance and objectives

The USE IPM aims to encourage entrepreneurship focused on sustainability, and knowledge spill over amongst various stakeholders within the emerging open innovation ecosystems in the Western Balkans region. However, the green transition might be a development opportunity for the Western Balkans, which should enable sustainable economic growth as well as energy security and environmental protection.

Technology transfer is also known as knowledge transfer. Knowledge and technology transfer undertaken in HEIs seeks to increase the impact of the research carried out by teaching and research staff through joint university-external actor actions and the commercialization of intellectual property, seeking to benefit external, public and private organizations (Leon-Roa, et al, 2024). The idea is to strengthen interaction with external organizations, public and private, in relation to knowledge and technology transfer

processes. These transfer processes would then in turn leverage innovation actions with emphasis on social and sustainable organizations (Leon-Roa, et al, 2024).

In this sense, the following are the specific objectives of the research: Identification of the key actors in the open innovation ecosystems in developing transitional economies, Identification of key challenges of technology transfer and sustainable entrepreneurship in emerging open innovation ecosystems in developing transitional economies, Identification of the obstacles and challenges in the intellectual property protection system in developing transitional economies, Identification of possible government incentives that support collaboration in the technology transfer, Identification of key opportunities for technology transfer and sustainable entrepreneurship in emerging open innovation ecosystems in developing transitional economies.





Key challenges

Open innovation is based on the concept that, in today's competitive climate, the linear innovation model not sufficient explain innovative activities (Bigliardi et al., 2020). Chesbrough (2003) introduced the concept of open innovation, emphasizing the importance of leveraging external knowledge and resources for innovation. Open innovation activities can be differentiated into *in-flow* (outside-in) and *out-flow* (inside-out) knowledge transfer. The literature on open innovation distinguishes between three open innovation strategies – inbound, outbound, and coupled (Radicic & Petković, 2023). One of the primary challenges of technology transfer in open innovation within emerging innovation ecosystems is the lack of institutional support and low level of intellectual property protection (<https://www.ipr.gov.ba/en>).

The challenges of technology transfer in open innovation ecosystems in developing transitional economies are complex and multifaceted. While the potential benefits of open innovation are clear, the lack of institutional support, inadequate infrastructure, and limited access to funding remain significant barriers to successful technology transfer. Additionally, cultural differences, legal frameworks, and intellectual property rights issues further complicate the process. A collaborative and strategic approach involving government, industry, and academia is essential to address these challenges effectively. The importance of analysing the university-industry partnerships, proceeds from the obstacles of these relationships, such as cultural disparities, difficulties in technology transfer, and the necessity of cultivating relational social capital (Gustina et al, 2024). By fostering a conducive environment for knowledge sharing, capacity building, and creating innovative partnerships, developing countries can maximize the opportunities presented by open innovation. Ultimately, overcoming these challenges will require a holistic and coordinated effort to unlock the full potential of technology transfer and drive sustainable economic growth in transitional economies. the USE IPM aims to encourage entrepreneurship focused on sustainability, and knowledge spill over amongst various stakeholders within the emerging open innovation ecosystems in the Western Balkans region. One of the primary challenges of technology transfer in open innovation within emerging innovation ecosystems is the lack of institutional support and low level of intellectual property protection.

By combining their efforts with the resources and know-how of external partners, companies can develop innovative solutions more efficiently, sharing costs and risks. At the same time, to effectively collaborate with external actors, companies must be willing to take into account their needs and include social and environmental sustainability objectives among their goals (Strazzullo, et al, 2025).



Key challenges in Serbia

To gain deeper insight into the challenges and opportunities of technology transfer and sustainable entrepreneurship in the open innovation ecosystem in the Republic of Serbia, a focus group on this topic was organised. The participants of the focus group identified several challenges.

- **Unsatisfactory Knowledge Transfer Between Actors in the Innovation Ecosystem.** In Serbia, there is no optimal collaboration between the actors in the innovation ecosystem. It is usually sporadic and based on a project basis. Innovations generated at faculties are, in most cases, not adapted to the needs of the economy, which hinders the knowledge transfer between academia and business.
- **Gap Between State Support and Small Business Needs.** Small innovative businesses in Serbia, in addition to needing funding, often require more support in the process of commercialising their innovations. However, institutional support in this regard is lacking.
- **Improvement of Intellectual Property Protection.** In Serbia, although the legal regulations regarding intellectual property protection are well-developed, there is a need for further improvement and alignment with EU standards, which is crucial for technology transfer. In addition, existing regulations should be better implemented. Finally, the long period for intellectual property protection should be overcome.
- **Inadequate Financial Support Mechanisms.** Regarding government incentives and policies that support innovative projects, the following issues are identified: a small portion of funds goes to the less-developed parts of the country, too much funding is dedicated to financing pilot projects and much less to supporting the commercialization of new products. Start-ups and small businesses need more mentoring support.
- **Constraints Regarding Innovative Mindset.** To improve the capacity of Serbian companies for innovation, it is important that managers change their mindset, i.e., think more innovatively and see innovation as a tool for market competition.
- **Absence of Tailored Educational Programs to Support Innovation.** To enhance innovativeness among young people, it is important to encourage innovative thinking among students through tailored educational programs.

By overcoming the above challenges, Serbia can enhance its technology transfer processes and sustainable entrepreneurship and create a more innovative and competitive business environment.



Key challenges in Albania

Technology transfer and open innovation are very important for fostering collaboration, accelerating progress, and enhancing the competitiveness of organizations. While technology transfer and open innovation offer significant benefits for all stakeholders, they also come with several challenges in Albania:

- **Cultural Resistance to Change:** In Albania, many entrepreneurs struggle to embrace innovation, particularly when it comes from employees, clients, or competitors. Change is often resisted, especially by those without international exposure.
- **Outdated Perception of Technology:** While technology may seem "old" elsewhere, in Albania, it is often viewed as new because it is applied in a different context or market. This can lead to a limited understanding of how to leverage more advanced technological trends.
- **Weak Link Between Education and Business:** There is a lack of a well-structured connection between the educational system—particularly in scientific research—and the needs of SMEs. This gap restricts the potential for businesses to tap into cutting-edge knowledge and innovation.
- **Short-Term Focus and Micromanagement:** Many Albanian entrepreneurs prioritize short-term profits and maintain a micromanagement style. With business ownership and management roles often combined, there is little room for delegation or long-term strategic thinking, delaying innovation.
- **Lack of Innovation Commercialization Mechanisms:** There are few specific mechanisms in place to commercialize or implement innovation within Albanian businesses, making it difficult for new ideas to be launched.
- **Employee Demotivation:** Many businesses fail to properly recognize or reward employees for their innovative ideas, leading to demotivation and dissatisfaction. Few companies actively invest in employee engagement or offer tangible rewards for contributing to the company's success.
- **Unclear Merit-Based System:** A lack of a transparent and merit-based justice system in the workplace can result in unequal treatment and obstructs the development of a fair, competitive environment where talent and innovation are truly rewarded.

To overcome these challenges, Albanian businesses can foster a culture of innovation by promoting openness to change and encouraging long-term thinking. Strengthening connections between the education system and SMEs can bridge knowledge gaps, while empowering managers to delegate can free up time for strategic innovation.



Key challenges in Bosnia & Herzegovina

The key challenges in technology transfer and sustainable entrepreneurship in Bosnia and Herzegovina can be summarized as follows:

- **Lack of collaboration among stakeholders.** Limited interaction between academic institutions, government, and businesses prevents the establishment of an effective innovation ecosystem. Each stakeholder operates in isolation, reducing the potential for cross-sectoral collaboration. Minimal interaction between academia, businesses, and public institutions hampers effective technology transfer and innovation.
- **Insufficient legal and institutional frameworks.** The lack of clear policies and mechanisms to support innovation and sustainable entrepreneurship, coupled with bureaucratic barriers, and the current regulatory environment does not provide adequate support for innovation and technology transfer. Ambiguities in legislation and bureaucratic hurdles discourage both innovators and investors.
- **Inadequate financial support mechanisms.** Funding for innovative projects is scarce and often not aligned with local needs. Access to grants, subsidies, and venture capital remains limited, hindering entrepreneurial growth. Difficulty accessing resources for R&D, intellectual property registration, and market commercialization. Green and sustainable innovations often receive priority funding over locally driven initiatives.
- **Inadequate intellectual property protection.** Insufficient understanding and capacity among key actors regarding intellectual property protection, technology commercialization, and sustainable business practices represents a challenge in B&H that needs more attention.
- **Low awareness and adoption of sustainable practices:** Many businesses and institutions lack clear understanding of sustainable entrepreneurship and its long-term benefits. This results in resistance to adopting innovative, sustainable solutions.
- **Market constraints.** The local market is often unable to absorb innovative products and services, primarily due to low purchasing power and limited demand.
- **Resistance to digital transformation.** Hesitance within organizations to adopt digital tools and processes that could enhance innovation capacity and operational efficiency.

The absence of tailored educational programs to support innovation and entrepreneurship in terms of technology transfer has created a skills mismatch in the labour market. Better connections with business community, training programmes in the field of intellectual property rights and sustainability may be beneficiary for dealing with mentioned challenges.



Key challenges in North Macedonia

Despite a range of key actors, including state institutions, higher education institutions, SMEs, corporations, and international networks, North Macedonia's innovation ecosystem lacks synergy. Collaboration is sporadic, with limited integration hindering knowledge sharing and resource utilization. The absence of systematic coordination and a unified approach restricts open innovation and commercialization, while international networks remain underutilized.

- **Unclear Role of the State.** The role of government in the innovation ecosystem is perceived as ambiguous. Public service digitization is in its early stages, with some progress. However, corruption in allocating and monitoring state funds remains a significant obstacle.
- **Limited Technology Transfer.** Technology transfer to businesses faces challenges due to weak institutional support, ecosystem fragmentation, and a lack of global perspective among local businesses. Many firms fail to adapt technologies contextually, focusing on local markets rather than global opportunities. This undermines the potential impact of technology transfer and limits its commercialization.
- **Intellectual Property (IP) Protection Challenges.** IP protection in North Macedonia is viewed as complex, expensive, and time-consuming, discouraging innovators. There is a lack of awareness and institutional support for securing IP rights, with most businesses relying on trademarks and avoiding patents. Administrative hurdles and financial costs further complicate the process, leading many to use non-disclosure agreements (NDAs) instead.
- **Ineffective Legislation Implementation.** While IP laws and other innovation-related legislation are adequate in theory, enforcement is weak. Institutions lack the capacity to implement punitive measures, and the slow judicial process discourages companies from defending their IP. Limited public knowledge of IP rights further undermines compliance and trust in the system.
- **Limited Support Structures.** Financial support schemes, such as grants and tax reliefs, are hindered by corruption, bureaucratic complexity, and poor oversight. Non-financial support, such as training, mentorship, and digital literacy programs, is fragmented and poorly promoted. This weakens both the sustainability of funded projects and the ecosystem's capacity for growth.

Even when knowledge and technology are available, translating them into profitable ventures is difficult. The primary issue is aligning innovations with specific market needs at the right time. Misalignment with local and global demands often leads to failure in commercializing innovations.



Policy Recommendations

Based on the information gained from the focus group discussions in four widening countries (Serbia, Bosnia and Herzegovina, North Macedonia, and Albania), in order to create a more supportive environment for technology transfer and open innovation across the region, the following recommendations for policymakers in all countries could be formulated.

✓ *Strengthening Academia-Business Collaboration*

Establishing and developing collaboration between academia and businesses can develop a more skilled workforce and stimulate local economic growth. Innovation and entrepreneurship skills can be essential for starting new business or improving and developing existing ones.

Actions. In order to strengthen academia-business collaboration, policymakers could undertake the following actions: developing joint research programs, incubators, and innovation hubs involving universities and industry partners, updating university curricula to align with industry needs, ensuring that graduates are prepared to tackle current challenges in the economy and ensuring that innovations generated at academic institutions are better adapted to the economy's requirements, establishing advisory boards that include business leaders, government and academic institutions to facilitate systematic coordination of the innovation ecosystem.

Impacts. The impacts of the above-listed actions are as follows: bridging the gap between academia and industry, leading to better alignment of research outputs with market demands, increased innovation absorption by businesses as a result of more relevant and applicable research, and enhanced collaboration among stakeholders, including academia, government and businesses. Improved access to cutting-edge knowledge and technologies.

✓ *Enhancing Legal and Institutional Frameworks*

Although the legal regulations regarding intellectual property protection are well-developed, there is a need for further improvement and alignment with EU standards, which is crucial for technology transfer. Strengthening institutions that support entrepreneurship through targeted programs and advisory services could be beneficiary.



Actions. In order to enhance legal and institutional frameworks related to technology transfer and open innovation, policymakers could undertake the following actions: modernizing intellectual property protection (IPP) legislation and establishing clearer policies for intellectual property and technology transfer, simplifying bureaucratic procedures for technology transfer and IP registration to reduce delays and administrative burdens, and providing training on intellectual property protection for innovators and businesses.

Impacts. The impacts of the above-listed actions are as follows: improved intellectual property protection and greater confidence in commercializing innovations, improved technology transfer and increased investments in innovations, and faster and more efficient technology transfer processes, making it easier for innovators to bring new products to market.

✓ *Improving Access to Funding and Financial Support*

Funding priorities should be aligned with local needs by conducting regular needs assessments. Unequal distribution of funds, in terms that a small portion of funds goes to the less-developed parts of the country. Also, too much funding is dedicated to financing pilot projects, on one hand, while much less to supporting the commercialization of new products, on the other hand. Access to grants, subsidies, and venture capital remains limited, thus hindering entrepreneurial growth. Difficulty in accessing resources for R&D, intellectual property registration, and market commercialization should attract policymakers' attention, as well.

Actions. In order to improve access to funding and financial support, policymakers could undertake the following actions: establishing funding programs that support R&D and the commercialization of innovations, with a focus on product development and market entry, improving coordination of state funds for innovation and establish transparent processes for grants and financial support, and allocating funds to less-developed regions to encourage innovation and reduce regional disparities.

Impacts. The impacts of the above-listed actions are as follows: improved access to capital for R&D and market launch, encouraging more businesses to invest in new technologies, improved transparency and coordination of state funds for innovations, which leads to reduced corruption and increased confidence of business community, and improved R&D and greater innovation across regions, contributing to balanced economic growth.



✓ *Addressing Brain Drain and Talent Retention*

Many businesses fail to properly recognize or reward employees for their innovative ideas, leading to demotivation and dissatisfaction. On the other hand, start-ups and small businesses need more mentoring support.

Actions. In order to address brain drain and talent retention, policymakers could undertake the following actions: introducing financial and non-financial incentives (e.g. financial rewards, career development opportunities, recognition, housing programs etc.) to retain young talents and skilled workers, encouraging the return of expatriate professionals with financial and non-financial incentives, and promoting international collaboration and networking opportunities that make staying in or returning to the country more attractive.

Impacts. The impacts of the above-listed actions are as follows: reduced brain drains, with more young talented people and skilled workers staying in the country contributing to its innovation ecosystem, increased return of expatriate professionals, thus improving domestic innovation and technology capacities, and improved knowledge development, R&D, innovations and technology transfer.

✓ *Fostering Innovation Culture and Mindset*

Many businesses and institutions lack a clear understanding of sustainable innovations and their long-term benefits. Change towards sustainable innovations is often resisted, especially by those without international exposure.

Actions. In order to foster innovation culture and mindset, policymakers could undertake the following actions: implementing programs that promote an entrepreneurial mindset among students, encouraging them to think innovatively, creating incentives for companies that reward employees for generating new ideas and solutions, and fostering a culture of risk-taking and learning from failure, where businesses and employees are encouraged to experiment with new approaches.

Impacts. The impacts of the above-listed actions are as follows: a more innovative and dynamic business environment where new ideas and solutions are actively pursued, increased employee engagement, creativity, and motivation, leading to better organizational performance, and a shift in cultural attitudes that embraces innovation and creative thinking across sectors.



✓ ***Closing the Commercialization Gap***

The local market is often unable to absorb innovative products and services, primarily due to low purchasing power and limited demand. In that sense, it is important to support local businesses in accessing regional and global markets by providing export incentives and organizing trade missions.

Actions. In order to close the commercialization gap, policymakers could undertake the following actions: establishing commercialization offices (in academic institutions, innovation centers or scientific-technology parks) that focus on transferring research findings into marketable products, and organizing mentorship programs, innovation challenges, and capacity-building workshops that help businesses identify market needs and adapt their innovations to meet those needs.

Impacts. The impacts of the above-listed actions are as follows: faster and more efficient transition from research to market, resulting in the increased commercialization of innovations, and increased commercialization of innovations due to better alignment with market demands.



4. INNOVATION PROCESS MANAGEMENT

Importance and objectives

A lack of interdisciplinary teams and limited cooperation between technical and business professionals hinder innovation success. Strong team dynamics, complementary skills, and external collaboration are crucial but often missing. Many companies do not provide employees with adequate training in innovation methodologies, reducing their ability to develop new ideas. There is also a lack of industry networking and incentives to foster an innovation-driven culture. The Western Balkan cultural resistance to flexible and iterative approaches hinders the ability to revisit and refine earlier stages of innovation, leading to products with limited commercial viability.

As the way of improvement, the innovation process management is seen enhancing collaboration between academia, business, and other stakeholders, addressing market needs effectively while fostering a culture of innovation, enhancing the milestones around the idea to restructure and optimize the systematic process of developing, implementing, and scaling innovative ideas within organizations and across industries is crucial (Peters, & Buijs, 2022). A2B approach (Raziei, 2020) seeks to foster a structured approach to ideation, prototyping, and deployment, ensuring that innovations align with strategic goals and deliver measurable impact. Additionally, it emphasizes collaboration across stakeholders, enhancing the sustainability and scalability of innovative initiatives.

Based on input from focus groups, the following key objectives have been identified to guide the evolution of innovation strategies: Creating a supportive and efficient innovation environment, Expanding investment opportunities for emerging businesses, Ensuring innovation aligns with real-world needs, Building skilled and collaborative workforce, Strengthening knowledge exchange between academia and industry.





Key Challenges

Many businesses, particularly SMEs, invest little in innovation due to financial constraints and a lack of a strategic innovation mindset. Risk aversion and a focus on short-term profitability further discourage businesses from engaging in innovative activities. The main challenges concerning innovation process are presented below.

- **Bureaucratic inefficiencies and weak institutional support** – Public sector programs often impose cumbersome administrative processes and fail to offer tailored support, reducing their effectiveness in fostering innovation ecosystems.
- **Resource limitations and restricted private sector investment**– Insufficient financial resources, particularly for SMEs and start-ups, restrict the scalability and sustainability of innovative solutions. Access to financing for green and social enterprises is limited, as traditional banks and investors do not differentiate them from conventional businesses.
- **Lack of problem-centric and market-driven innovation:** Limited integration of problem identification market research, and user feedback into the innovation process reduces the relevance and effectiveness of solutions in addressing real needs. Organizations often lack the capacity to adapt and implement tools such as Design Thinking, Business Model Canvas, and prototyping effectively, diminishing their potential impact.
- **Weak A2B collaboration frameworks:** Organizational resistance to new collaboration methods and siloed communication channels limit cross-departmental and cross-organizational innovation.
- **Weak knowledge transfer and industry alignment** – Many university professors and researchers lack real-world business engagement, resulting in research that is disconnected from industry needs. Businesses hesitate to collaborate with academia due to the limited practical applicability of academic research. Universities primarily offer theoretical knowledge but lack strong industry partnerships and practical entrepreneurial training.
- **Limited metrics for success:** A lack of robust frameworks for measuring innovation outcomes—both quantitatively and qualitatively—makes it challenging to assess the effectiveness of initiatives, such as start-up survival rates or collaborative agreements. There are no standardized metrics to assess the effectiveness of business incubators, accelerators, and university-led sustainability initiatives.

The absence of clear legal frameworks for social enterprises and sustainable business models limits the development of responsible innovation. Without dedicated policies, sustainable businesses struggle to gain recognition and support.



Key challenges in Serbia

Regarding innovation process management and sustainable and responsible innovation in Serbia, the following challenges are identified.

- **Unsatisfactory Cooperation Between Key Actors in the Open Innovation Ecosystem.** Although there are many actors in the innovation ecosystem in Serbia (universities and faculties, state institutions, hubs, start-up centres, coworking spaces, and corporations), cooperation between them is unsatisfactory, which constrains greater innovativeness in society.
- **Constraint in Mentality Regarding Innovations.** Many people in Serbia are reserved about innovations and new things. There are also managers who have a non-innovative mindset, which constrains the innovativeness of their companies.
- **Non-Supporting Organisational Culture Regarding Innovativeness.** In many Serbian companies, organisational cultures are not orientated toward innovation. Employees do not receive adequate training to support innovative activities and innovative ways of thinking. Both financial and non-financial support are missing to stimulate the innovativeness of employees.
- **Insufficient Support for Small Businesses Regarding Sustainable Innovations.** Small businesses in Serbia need more institutional support for green innovations due to their limited resources.
- **Inadequate Institutional Support for Sustainable and Responsible Innovation.** In Serbia, there is insufficient state support for the purchase of green energy, use of gas, and installation of solar panels, as well as incentives for wind farms and solar power plants. In addition, there is no obligation for entrepreneurs and small businesses to engage in green reporting, resulting in a lack of motivation to develop green innovations.
- **Unsatisfactory Cooperation Between the Academic Community and Business in the Context of Sustainable and Responsible Innovations.** Academic institutions often focus on theoretical and research-orientated innovations, while businesses need practical and market-orientated solutions in the area of sustainability.

Overcoming these challenges will enable Serbia to enhance its overall innovation ecosystem, promote sustainable entrepreneurship, and create a more innovative business environment that is aligned with sustainability goals.



Key challenges in Albania

Effective **innovation process management** is crucial for ensuring that ideas are consistently transformed into valuable products, services, or internal improvements. Below are mentioned the key challenges related to IPM in Albania.

- **Insufficient Information on Required Resources:** There is a gap in knowledge regarding the specific resources needed—whether financial, technological, or human capital—for developing sustainable innovation, that can prevent companies from taking the necessary steps toward adoption of innovation projects.
- **Lack of Communication Between Key Innovation Actors:** There is a disconnect between the primary stakeholders in innovation process—such as government, businesses, universities, and research institutions. This lack of communication and collaboration can slow down the diffusion of new technologies and ideas.
- **Business Readiness for Sustainable Innovation:** Many businesses are not prepared or willing to invest in sustainable innovation, often due to a focus on short-term profits, risk aversion, or a lack of understanding of the long-term benefits that sustainable practices can offer.
- **Mindset Issues for Sustainable Innovation:** There is often a lack of awareness or willingness among individuals and companies to adopt sustainable innovation practices. Changing the mindset from traditional methods to more sustainable and innovative approaches is a significant difficulty.
- **Lack of Technical and Scientific Skills:** In Albania, there is a shortage of highly skilled professionals with the technical and scientific expertise needed to drive innovation. This skill gap limits the ability to develop and implement new technologies or sustainable solutions effectively.
- **Lack of Interdisciplinary Skills:** Innovation often requires collaboration across various fields—engineering, business, design, etc. The lack of interdisciplinary skills among the people involved in the innovation process can delay the successful implementation of new ideas.
- **Lack of Electronic Certificates and Intellectual Property Protection (IPP):** Without the proper legal and technological infrastructure to protect intellectual property, businesses are less likely to invest in innovative solutions, especially sustainable ones. The absence of electronic certificates and proper IP protection mechanisms leaves innovations vulnerable to theft.

Many key actors, including businesses, researchers, and policymakers, are unfamiliar with how the innovation ecosystem functions. This lack of understanding leads to missed opportunities for collaboration and the effective development of sustainable innovations.



Key challenges in Bosnia & Herzegovina

The innovation process begins by identifying the core problem and defining the purpose of innovation. This is followed by thorough research on the matter at hand, exploring potential solutions. Next, two or three viable plans are developed, from which the most suitable concept is selected and applied, ensuring it aligns with the company's goals and capabilities.

The key challenges in innovation process management in Bosnia and Herzegovina can be summarized as follows:

- **Closed society resistant to innovation.** A societal culture that discourages sharing and collaboration. There is a reluctance to share valuable information, a lack of openness to new ideas, and limited engagement in collaborative innovation efforts.
- **Insufficient collaboration between innovation actors.** Limited interaction between businesses, academia, public institutions, and other stakeholders. They operate in isolation, reducing the potential for cross-sector innovation.
- **Lack of A2B collaboration.** Companies and organizations often struggle to access cutting-edge and up-to-date research or conduct new studies tailored to their needs, which academia could help with.
- **Lack of institutional support and a systematic approach.** Weak regulatory frameworks and insufficient incentives for innovation. This problem includes unclear regulations, inadequate subsidies, and limited educational programs to promote innovation.
- **Lack of knowledge and understanding of innovation concepts.** Misunderstandings around sustainability, digital transformation, and other key terms hinder meaningful adoption.
- **Insufficient financial support.** Limited access to funding and lack of support from banks and financial institutions. The funding often prioritizes green and sustainable innovations over innovations that address specific local needs.
- **Resistant to change.** An uninformed market resistant to change, compounded by a workforce that is often uneducated, inefficient, or disloyal.

In today's business environment, managing the innovation process well allows companies to stay ahead of industry trends, respond to customer demands, and achieve the desired results. However, not all the companies manage to address correctly this process.



Key challenges in North Macedonia

Businesses and consumers often lack knowledge of sustainability trends and fail to prioritize responsible innovations. Resistance to change and scepticism toward eco-friendly solutions further slow the adoption of sustainable practices. Here are some challenges North Macedonia faces concerning responsible innovation and generally innovation process management.

- **Bureaucratic inefficiencies.** Excessive bureaucracy, slow administrative processes, and burdensome documentation requirements delay project implementation and reduce the effectiveness of support programs. Local authorities lack capacity and alignment with national innovation strategies, while poor coordination among stakeholders leads to duplicated efforts and fragmented resource allocation.
- **Rigid regulatory environment.** The regulatory framework is complex and inflexible, forcing start-ups into unsuitable legal forms such as NGOs, which limits operational flexibility and funding access. Social enterprises lack legal recognition.
- **Limited access to financial products.** Banks and financial institutions offer standardized products unsuitable for green and social enterprises, limiting funding opportunities.
- **Low public awareness and cultural resistance.** Social entrepreneurship and sustainable innovation are poorly understood and accepted by policymakers, investors, and the public. The absence of legal definitions and societal recognition reduces the legitimacy of social enterprises and their access to support.
- **Fragmented stakeholder collaboration.** Coordination among public institutions, local authorities, academia, accelerators, and donors is weak, leading to overlapping initiatives and inefficient resource use. Businesses are rarely involved in academia through mentorship, research collaboration, or curriculum design. Academic resources, such as labs, are underutilized for business validation.
- **Knowledge transfer and commercialization barriers.** Academic institutions fail to leverage alumni networks and faculty expertise to support start-ups. Innovations often remain unused due to insufficient support for prototype testing or proof-of-concept development. Academic spin-offs lack partnerships to drive marketable product development.
- **Imbalance in support for physical product innovation.** Ecosystem support mechanisms like incubators and accelerators focus predominantly on software start-ups, neglecting hardware-based innovations and manufacturing. This creates gaps in scaling and commercialization for physical product entrepreneurs.

Slow decision-making and the failure to adapt policies to dynamic entrepreneurial needs further hinder innovation. Dealing with mentioned challenges would facilitate innovation process and produce increased number of responsible innovations.



Policy Recommendations

Based on the findings from the research conducted through focus groups in Serbia, North Macedonia, Albania, and Bosnia and Herzegovina the following are policy recommendations to enhance sustainable and responsible innovation through academia-to-business (A2B) collaboration.

✓ *Streamlining public sector support for innovation*

Many businesses and researchers struggle with excessive bureaucracy when applying for public innovation funds. Excessive bureaucracy and slow approval processes hinder access to public innovation funds, reducing their impact. Governments should simplify the application processes for grants, subsidies, and innovation funding in a way that they will digitize application processes, reduce administrative burdens, and introduce fast-track approval mechanisms for high-potential projects. Additionally, public innovation programs should introduce performance-based incentives to ensure that funding is allocated to projects with the greatest impact. Governments should also align national innovation policies with EU funding opportunities to maximize external financial support.

- **Recommended actions:** Reduce bureaucratic hurdles, implement digital funding platforms, create offices dedicated to supporting innovation, and align public funding with EU programs.
- **Expected impact:** Faster access to funding, increased participation in innovation programs, and higher efficiency in public support mechanisms.

✓ *Introducing incentives for sustainable innovation*

Sustainable innovation often requires higher upfront investment, making it financially challenging for businesses. To address this, governments should introduce tax benefits, grants, and preferential loans for companies investing in green and responsible innovations. Special incentives should be provided to SMEs and start-ups, ensuring they can compete in the sustainability-driven economy. Governments should introduce R&D tax incentives, innovation vouchers, and matching grants to encourage businesses to invest in research partnerships with universities. Public-private partnerships (PPPs) should be leveraged to co-finance large-scale R&D projects in clean technologies, renewable energy, and sustainable materials. Additionally,



corporations should be encouraged to create internal innovation funds that support start-up collaboration and spin-off development.

- **Recommended actions:** Implement tax credits, grants, and low-interest loans for sustainable projects; establish preferential procurement policies for green businesses.
- **Expected impact:** Increased adoption of sustainable business models, reduced financial risks for green enterprises, and expanded private-sector investment in responsible innovation.

✓ ***Align innovation with societal and market needs***

Many innovations fail due to insufficient integration of market research, problem identification, and user feedback, leading to solutions that do not effectively address real-world needs. Additionally, resistance to iterative and flexible development processes prevents companies from refining their innovations based on user insights, reducing their market success. To improve the relevance and impact of innovation, businesses must adopt structured, problem-driven development approaches that incorporate continuous feedback from customers and industry stakeholders. Encouraging a culture of iterative product development and cross-functional teamwork will enable businesses to refine their offerings and remain competitive in evolving markets.

- **Recommended actions:** Implement structured innovation methodologies, prioritize customer and market feedback, and foster cross-functional collaboration for iterative product development.
- **Expected impact:** More commercially successful innovations, stronger industry-academia collaboration, and increased adoption of problem-driven, user-centric business strategies.

✓ ***Strengthening academia-business collaboration***

A structured, long-term collaboration between universities and businesses is essential for fostering innovation. Current cooperation is often project-based and sporadic. Academic institutions often struggle to commercialize research due to a lack of structured collaboration with businesses. To enhance this relationship, policies should encourage joint research initiatives, develop long-term A2B partnerships through co-funded research programs, co-funding of innovation hubs, and technology transfer offices. These initiatives should focus on patenting, licensing, and market-driven research, ensuring that academic discoveries translate into tangible business



solutions. Universities should integrate mandatory business engagement programs within their curricula, allowing students to gain real-world experience through internships, joint R&D projects, and university incubators. Governments should also provide funding for joint research funds where universities and businesses co-apply for projects addressing sustainability and innovation.

- **Recommended actions:** Establish co-funded research centers, mandate business-academic collaboration in university curricula, and create joint innovation funds.
- **Expected Impact:** Increased commercialization of academic research, better alignment of university programs with industry needs, and enhanced employability of graduates.

✓ ***Fostering education in entrepreneurship and innovation***

Innovation-driven economies require a workforce with strong entrepreneurial and technical skills. Current education systems often lack practical courses in business innovation and sustainability. Education systems must equip students with entrepreneurial and sustainability-oriented skills to prepare them for the future workforce. Universities and vocational schools should integrate hands-on training in entrepreneurship, sustainability, and emerging technologies into their programs. Governments should establish collaborative training programs between businesses and academic institutions, ensuring that students gain direct industry experience. Additionally, education systems should foster interdisciplinary learning, combining business, technology, and environmental sciences to develop well-rounded innovators.

- **Recommended actions:** Revise curricula to emphasize entrepreneurship, sustainability, and innovation; create structured internship and industry collaboration programs.
- **Expected impact:** A more skilled workforce, higher rates of entrepreneurship, and stronger industry-academia alignment.

✓ ***Strengthening measurement of impact assessment***

Evaluating the effectiveness of innovation projects is essential for ongoing enhancement. Currently, many incubators and accelerators lack standardized impact assessment frameworks. Governments should introduce standardized KPIs to measure the success of innovation policies, tracking start-up survival rates, industry-academia collaborations, and sustainability impact metrics. Publicly funded



innovation programs should require performance tracking and impact reporting to ensure efficient resource allocation. To enhance data-driven policymaking, governments should implement real-time impact assessments and establish feedback mechanisms to refine innovation policy according to empirical evidence.

- **Recommended actions:** Develop standardized impact metrics, mandate performance tracking for public innovation programs, and integrate data-driven policy adjustments.
- **Expected impact:** More effective policy interventions, better resource allocation, and increased transparency in innovation outcomes.

The proposed policy recommendations provide a strategic roadmap for fostering sustainable and responsible innovation through academia-business collaboration, thereby securing long-term economic stability, advancing technological development, and enhancing environmental sustainability.



CONCLUSION

Innovation is a critical driver of economic progress and societal development. For policymakers, fostering an environment conducive to innovation requires addressing several key areas: **soft skills, sustainability, technology transfer, and responsible innovation management**. By implementing these guidelines, policymakers can create a thriving innovation ecosystem that empowers businesses, accelerates the development of sustainable solutions, facilitates the commercialization of research, and ensures that innovation is managed effectively at every stage, by taking care of all stakeholders of the innovation ecosystem.

Bearing in mind the specific challenges of Western Balkan countries involved in the research, policymakers can rearrange recommendations in order to make them serve better the entrepreneurial ecosystem in each country. In doing so, policymakers should facilitate cooperation with the academic and business sectors, thus creating an efficient and positive triple-helix environment. The research findings emphasize the importance of bridging the gap between academic institutions and industry. Strengthening academia-business collaboration through research and innovation centers, technology transfer initiatives, and curriculum reforms will help align academic outputs with industry needs. Additionally, fostering interdisciplinary education and hands-on entrepreneurial training will equip young professionals with the skills needed to navigate a rapidly evolving market.

A key component of policymakers' support is enabling the way towards responsible innovation business practices. Encouraging ESG compliance, facilitating access to funding for green technologies, and promoting sustainability reporting will drive businesses towards environmentally and socially responsible innovation. The policymakers' role can be observed in all four field of research conducted under the USE IPM project. It is seen in creating a digital platform for the development of soft skills, but also in synchronizing sustainable finance initiatives across Western Balkan economies to avoid duplication and ensure cohesive efforts. Additionally, business representatives find very important role of policymakers in modernizing intellectual property protection (IPP) legislation and establishing clearer policies for intellectual property and technology transfer. This can be provided by creating offices dedicated to supporting responsible innovation and advising on tax credits, grants, and low-interest loans for sustainable innovation projects.

For the Western Balkans, targeted policy adjustments are necessary to address region-specific challenges. Fostering a culture of continuous innovation and collaboration will ensure technological advancement with environmental sustainability. Through well-structured policies, Western Balkan countries can position themselves as leaders in sustainable entrepreneurship, leveraging innovation as a catalyst for progress and prosperity.



ANNEX

Reviews of the D1.4 Guidelines for policy makers

Review 1	
Reviewer Name:	Panayiotis Kontakos, SAB member
Date of review:	25/02/2025
Reviewer opinion: (150 words)	The deliverable “Guidelines for policy makers” is in the line with the Grant Agreement for the project No. 101120390. It translates research findings into actionable recommendations for entrepreneurial ecosystems in widening countries. The document is well-structured, clearly communicating objectives and offering valuable insights to policymakers. There is no need for further improvements of the deliverable by writer and other partners of the USE IPM consortium. General opinion: accepted; Comments: No
Review 2	
Reviewer Name:	Sandra Milanovic Zbiljic, FEUN
Date of review:	18/02/2025
Reviewer opinion: (150 words)	The deliverable named “Guidelines for policy makers” is in the line with the Grant Agreement for the project No. 101120390. This document will serve as strong anchor for policy makers in Western Balkan countries. Therefore, the quality of this deliverable is acceptable to be further processed to the European Union through SyGMa platform. There is no need for further improvements of the deliverable by writer and other partners of the USE IPM consortium. General opinion: Accepted; Comments: No