POLICY ANSWERS

TvinTek Konekt 2025 Communiqué

Advancing innovation, technology transfer and collaboration for a resilient ecosystem

Main authors: Gabriela Kostovska Bogoeska, Mia Botinova Dimitrova

Responsible organisation: Foundation for Management and Industrial Research (MIR)

Date: 27 July 2025

https://www.facebook.com/WBInfoHub

https://x.com/wbinfohub

https://www.linkedin.com/company/wbinfohub/

www.westernbalkans-infohub.eu

POLICY ANSWERS is funded by the European Commission through the Horizon Europe project "R&I POLICY making, implementation ANd Support in the WEsteRn BalkanS", Grant Agreement N° 101058873.

Funded by the European Union

Contributing author	Emilija Andonova (MIR)
Work Package 3	Capacity building
Submission date	27 July 2025
Dissemination level	Public
doi	n.a.

Disclaimer

POLICY ANSWERS is funded by the European Commission through the Horizon Europe project "R&I policy making, implementation and support in the Western Balkans", Grant Agreement N° 101058873. Views and opinions expressed are, however, those of the author(s) only and do not necessarily reflect those of the European Union (EU) or the European Commission (EC). Neither the EU nor the EC can be held responsible for them. For further information regarding POLICY ANSWERS visit www.westernbalkans-infohub.eu

Introduction

Recognising the rapid evolution of technology, the TvinTek Konekt 2025 conference, held on 28 May 2025 in Skopje, brought together diverse stakeholders from North Macedonia's innovation ecosystem, including academia, industry, government, civil society and research institutions. The event aimed at fostering dialogue, sharing practical insights and addressing key challenges in advancing sustainable, inclusive economic growth.

Throughout the conference, participants engaged in dynamic World Café discussions and panels, focused on themes such as digital transformation, circular economy, innovation culture and technology transfer. These discussions underscored the country's ambitious goals and momentum towards a greener, more innovative future.

A recurring theme across discussions was the need to establish lasting mechanisms that bridge the gap between research, business and policy, thus creating an ecosystem that is both resilient and future-ready. This demands not just technological progress, but shared leadership, strategic alignment and investment in human and institutional capacity.

This communiqué outlines the conclusions and recommendations which emphasise the need for strategic coordination and collective action to strengthen the country's resilience and innovation capacity.

The participants acknowledged that:

1. Human capital remains a core strength particularly within academic and technical institutions, but existing talent is often underutilised due to weak linkages between research, industry and policy makers.
2. Promising initiatives are emerging across digitalisation, the circular economy and innovation, but many remain isolated, short-term or overly reliant on individual leadership, rather than embedded in coordinated, long-term strategies.
3. Entrepreneurial creativity and drive are present, yet access to finance, support mechanisms and limited market demand for innovation continue to constrain the growth of start-ups and early-stage ventures.
4. Policy frameworks exist, but are frequently undercut by a lack of implementation mechanisms, coordination and monitoring, resulting in a disconnect between strategic vision and actual impact.
5. Technology transfer is gaining traction, but this remains an emerging area requiring stronger infrastructure, trust-building and sustained cross-sector collaboration.

Despite these ongoing barriers, participants noted a growing sense of momentum. Pilot projects, grassroots efforts and institutional reforms are laying the groundwork for broader systemic change. Moving forward, deliberate investment in collaboration and long-term alignment across all sectors will be essential. This shared understanding shaped the insights and recommendations that follow - not as one-size-fits-all solutions, but as building blocks towards a more inclusive and innovation-driven future.

POLICY ANSWERS, "R&I POLICY making, implementation ANd Support in the WEsteRn BalkanS", is a Horizon Europe project funded by the European Commission, Grant Agreement N° 101058873.

Key thematic insights

Bridging academia and industry: The role of technology transfer

Effective technology transfer hinges on a combination of specialised skills, institutional support and a well-aligned innovation ecosystem. Recognising this, the conference highlighted the essential capacities required to build a sustainable and functional technology transfer environment. Central to this is a well-rounded skillset that integrates technical expertise, commercial acumen and regulatory understanding. Five core skill areas stand out as critical for effective technology transfer: innovation management, communication between academia and industry, intellectual property (IP) knowledge, commercial negotiation and policy literacy. These skills are fundamental to building sustainable, productive partnerships across sectors. Moreover, trust, continuous communication and regular knowledge-sharing are vital enablers of successful collaboration.

Encouragingly, institutional support for developing these skills is growing. Various national organisations and European networks - including MIR[1], FITD[2] and EEN[3] - are already contributing through training programmes, financial tools and international networking opportunities that strengthen capacity for technology transfer. At the same time, academic institutions are increasingly embedding innovation into education. Interdisciplinary programmes connecting engineering, economics and innovation management are equipping students with the diverse skills needed in today's knowledge economy. Alongside curriculum reforms, dedicated initiatives such as start-up centres and applied research institutes are fostering entrepreneurial mind-sets and creating environments that nurture innovation.

Key takeaways

- Collaboration is fundamental. Effective technology transfer depends on ongoing coordination between universities, businesses, support organisations and international partners.
- Practical models inspire. Sharing successful transfer cases is essential to demonstrate that these processes can thrive in local contexts.
- Strategic alignment is crucial. The upcoming National SME Strategy (2025-2030) offers a timely opportunity to integrate technology transfer skills into broader economic development plans.
- A holistic ecosystem approach should be pursued. Skills development must be aligned with regulatory frameworks, financing mechanisms, and infrastructure to ensure lasting impact.

Recommended follow-up actions

- Launch targeted workshops for students, early-stage researchers and start-ups, focusing on the key skills needed for technology transfer.
- Promote successful transfer stories through media and public events to raise awareness and encourage collaboration between academia and industry.
- Support the establishment of a National Technology Transfer Office as envisioned in emerging policy frameworks to coordinate and sustain long-term efforts.

Fostering a culture of innovation through inclusive ecosystem building

At TvinTek Konekt 2025, participants emphasised that the future of innovation in the country hinges on strengthening the capacities of people, institutions and systems. Building a thriving ecosystem depends not only on financial or technical inputs, but on developing the skills, infrastructure and networks that allow innovation to take root and grow.

Participants identified building the next generation of innovators as a core priority. They highlighted the need to strengthen capacity across the entire education system - from embedding

[1] Foundation for Management and Industrial Research, https://mir.org.mk/en/
[2] Fund for Innovation and Technology Development, https://fitr.mk/?lang=en/
[3] Enterprise Europe Network, https://een.ec.europa.eu/

POLICY ANSWERS, "R&I POLICY making, implementation ANd Support in the WEsteRn BalkanS", is a Horizon Europe project funded by the European Commission, Grant Agreement N° 101058873.

innovation and entrepreneurship in primary schools to providing university graduates, especially from technical departments, with practical experience, mentoring and access to resources.

Fostering a diverse and adaptive ecosystem also means ensuring that women and youth – particularly in science, technology, engineering, and mathematics (STEM) and leadership roles – a re equipped and supported to contribute meaningfully. This was framed not only as a matter of equity, but as an economic imperative.

Finally, participants underscored the need to modernise physical and digital infrastructure to support learning, collaboration and experimentation. Initiatives like DigitMak[4] were noted as promising for improving institutional coordination, while early-stage start-ups require tailored financing, stronger mentoring and access to European innovation networks to build their capacity and scale.

Key takeaways

- Strengthening education and investing in human capital across all levels is essential for cultivating innovation skills and future-ready talent.
- Strengthened collaboration among academia, industry and support organisations will improve knowledge transfer and innovation capacity.
- Systematic engagement and targeted support for women, youth and young professionals boost diversity and talent utilisation.
- Tailored programmes and financial tools are needed to support start up growth, mentoring and internationalisation.
- Continuous modernisation of physical and digital infrastructure supports experimentation, collaboration and scaling up.

Recommended follow-up actions

- Implement and regularly monitor national innovation strategies, supported by clear communication and centralised information platforms.
- Expand entrepreneurship education at the primary level and promote practical training and start-up support for young professionals.
- Enhance outreach, mentoring and funding opportunities for women and youth, particularly in STEM and leadership roles.
- Develop flexible financial instruments and targeted support programmes to help start-ups navigate early growth and internationalisation.
- Ensure sustained investment in modernising laboratories and innovation centres accessible to start-ups and researchers.
- Strengthen institutional coordination and knowledge-sharing across sectors to ensure more efficient use of resources and improved collaboration.

Bridging the digital divide: accelerating the shift to Industry 4.0

Digital transformation emerged as a critical enabler of competitiveness and sustainable growth. Yet across sectors, the pace and depth of adoption remain uneven. While some industries are already embedding advanced technologies such as AI, IoT and automation into core operations, others face structural and cultural challenges that hold back progress.

Participants stressed that digital transformation must be understood not as a one off upgrade, but as a long-term strategic shift. Misaligned priorities, outdated processes and deep-seated fears, particularly around automation, often undermine efforts before they can gain momentum.

A more coordinated national approach was seen as essential. This includes aligning the public and private sectors, investing in workforce capabilities and establishing the digital infrastructure needed to scale innovation.

[4] Digital Innovation Hub – DigitMak, https://digitmak.mk/

POLICY ANSWERS, "R&I POLICY making, implementation ANd Support in the WEsteRn BalkanS", is a Horizon Europe project funded by the European Commission, Grant Agreement N° 101058873.

Key takeaways

- There is a growing disparity in digital maturity between tech-forward companies and more traditional industries.
- Cultural resistance, regulatory rigidity and lack of strategic direction continue to stall digital efforts.
- Many organisations underestimate the organisational transformation required-viewing digital tools as short-term fixes rather than long-term enablers.
- Skills shortages persist, particularly in advanced digital competencies.
- Public sector processes often lag behind, creating friction in government-business interactions.
- Stronger collaboration across sectors is needed to accelerate learning, share risks and build trust in digital transformation.

Recommended follow-up actions

- Strengthen cross-sector coordination by establishing shared platforms and mechanisms for aligning digital priorities across government, business and education.
- Invest in digital talent development at all levels-from technical upskilling to executive education to ensure that organisations are equipped to lead and sustain transformation.
- Modernise institutional processes by adopting digital-first approaches within public services and regulatory frameworks to reduce friction and build public trust.
- Build shared digital infrastructure to support data-driven decision-making, innovation pilots and cross-industry learning.
- Address public perception and awareness by communicating real-world impact stories and challenging common misconceptions about automation and job displacement.
- Foster a culture of innovation and adaptability within organisational structures to support continuous transformation rather than isolated initiatives.

Building the circular future: 3Ps - Policy, Practice, & Partnership

Discussions highlighted a vibrant landscape of local initiatives, many of which creatively transform waste into new value. However, participants noted that these efforts are often fragmented and remain on the margins of mainstream economic and policy systems.

The conversation emphasised the importance of moving from scattered experimentation to coordinated action. A successful transition to circularity depends not just on technical solutions, but on building shared infrastructure, fostering cross-sectoral partnerships and embedding circular principles into regulation, education and procurement. The challenge is not a lack of momentum, but the absence of mechanisms to connect, replicate and scale what already exists.

Key takeaways

- Most circular initiatives operate in silos, lacking systemic support and visibility.
- Regulatory misalignment and infrastructure gaps (e.g., recycling and reverse logistics) hinder scaling.
- Access to funding, materials and market demand for circular products remains limited.
- There is a shortage of skills in areas such as circular design, repair and systems thinking.
- Existing EU and regional platforms offer valuable support but need stronger local integration.

Recommended follow-up actions

- Develop training and mentoring programmes that go beyond technical skills to include business modelling, market understanding, and systems thinking.
- Establish a centralised digital platform for tools, case studies and resource-sharing across sectors.
- Launch collaborative pilot projects that integrate education, co-creation and material reuse across industries.
- Engage policy makers in a structured dialogue with circular practitioners to co-create enabling regulation and incentives.

POLICY ANSWERS, "R&I POLICY making, implementation ANd Support in the WEsteRn BalkanS", is a Horizon Europe project funded by the European Commission, Grant Agreement N° 101058873.

- Incorporate circular principles into public procurement to create market pull and signal long-term commitment.

Cross-cutting recommendations

While each thematic area presented distinct challenges and opportunities, participants consistently highlighted the need for deeper collaboration, long-term thinking and practical support across sectors. Drawing from all thematic discussions, the following cross-cutting recommendations were identified:

1 - Policy and advocacy

- Support the development of national frameworks that ensure long-term coordination for innovation, technology transfer and digital transformation.
- Integrate innovation, digitalisation and circular economy principles into broader economic, SME and public procurement policies.

2 - Capacity building

- Invest in the development of future-focused skills, including innovation management, digital literacy, entrepreneurship and systems thinking across education, research and public institutions.
- Promote mentoring, applied learning and interdisciplinary programmes that connect academia with real-world industry challenges.

3 - Infrastructure and access

- Ensure sustained investment in physical and digital infrastructure that supports experimentation, collaboration and access to innovation facilities for start-ups, researchers and educators.
- Establish centralised digital platforms to connect stakeholders, share knowledge and support cross-sector coordination.

4 - Inclusive innovation

- Expand outreach, training and support programmes for underrepresented groups, particularly women and youth in STEM and entrepreneurship.
- Create public programmes and funding opportunities that actively empower underrepresented groups to engage in innovation.

5 - Collaboration and partnerships

- Strengthen partnerships among government, academia, private sector and civil society to align efforts and share resources across the ecosystem.
- Facilitate international cooperation and participation in European and regional innovation networks.

6 - Visibility and knowledge sharing

- Highlight successful local practices, pilot projects and technology transfer stories to inspire replication and build trust.
- Encourage open exchange of experiences and lessons learned to accelerate mutual learning across sectors.

POLICY ANSWERS, "R&I POLICY making, implementation ANd Support in the WEsteRn BalkanS", is a Horizon Europe project funded by the European Commission, Grant Agreement N° 101058873.

POLICY ANSWERS

ABOUT POLICY ANSWERS

POLICY ANSWERS (R&I POLICY making, implementation ANd Support in the WEsteRn BalkanS) supports policy coordination in the Western Balkans and with the EC and the EU. 14 partner organisations, representing network nodes in the region and EU expert organisations, support policy dialogue through formal meetings (such as ministerial and steering platform and ad-hoc policy meetings), monitoring and agenda setting, capacity building and implementation of the EU's Western Balkan Agenda, as well as the alignment of thematic priorities. The project implements regional pilot activities and offers an information hub based on the westernbalkans-infohub.eu online information platform. The partners provide analytical evidence via monitoring and mapping activities of the stakeholder ecosystem, of the implementation of the Western Balkans Agenda and of the Western Balkans' integration into the European Research Area as well as via strategic foresight. POLICY ANSWERS also allows for tailored and targeted capacity building activities in the Western Balkans as well as regional alignment of priorities in relation to the digital transformation, the green agenda and towards healthy societies. Pilot activities provide learning opportunities on policy and programme level and reach out to final beneficiaries related to improved academia-industry cooperation, researcher mobility, inclusion of youth in policy processes, promotion of research infrastructures and increased innovation skills in all areas.

POLICY ANSWERS is funded by the European Commission through the Horizon Europe project "R&I POLICY making, implementation ANd Support in the WEsteRn BalkanS", Grant Agreement N° 101058873.

Funded by the European Union