

ACTION PLAN

INNO INDUSTRY – IMPROVING INNOVATION DELIVERY OF POLICIES
WITHIN 4.0 INDUSTRY IN EUROPE

SLOVENIA
REGIONAL DEVELOPMENT AGENCY POSAVJE

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Part I – General information

Project: **INNO Industry – Improving innovation delivery of policies within 4.0 industry in Europe**

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Part II – Policy context

The Action Plan aims to impact:

- Investment for Growth and Jobs programme
- European Territorial Cooperation programme
- Other regional development policy instrument

Name of the policy instrument addressed:

- Operational Programme for the Implementation of the EU Cohesion Policy in the Period 2014-2020
- Operational Programme for the Implementation of the EU Cohesion Policy in the Period 2021-2027
- Slovenian Industry Strategy 2030

1. 2. Improving innovation delivery policies

Introduction:

The INNO INDUSTRY project aims to increase rate of clusters that develop activities to support the transformation towards Industry 4.0 by 2022 through the improvement of regional and national policies.

In this Action Plan we have planned to address the **Operational Programme for the Implementation of the EU Cohesion Policy in the Period 2014-2020 (OP)** (Government Office for Development and European Cohesion Policy), proposed by the Slovenian Government and confirmed by the European Commission on the 16th December 2014. The OP encompasses all 11 thematic objectives and

corresponding investment priorities, with clear links to the INNO INDUSTRY project. The following priorities of the OP apply most significantly to the INNO INDUSTRY objectives:

- Increasing the international competitiveness of enterprises, particularly of SMEs, to accelerate economic development and the creation of jobs;
- Improving the infrastructure for research and innovation while strengthening its links with enterprises and the higher education sector;
- Developing a high-quality broadband infrastructure and enhancing access to broadband electronic communication services.

The OP plays a decisive role in encouraging economic development and ensuring prosperity for all citizens in Slovenia while taking into account the specific characteristics of the two less developed regions - Western Slovenia and Eastern Slovenia. It contributes to the achievement of the national and Europe 2020 targets for smart, sustainable and inclusive growth. It aims to strengthen efforts particularly in the area of research and development, boosting the innovation potentials of small and medium sized enterprises (SMEs), promoting resource efficiency and reduction of environmental pressures, further developing the sustainable mobility sector, boosting the growth of employment rates and reducing the number of people at risk of poverty and social exclusion.

However, while the described policy document has been at the centre of the INNO INDUSTRY up until now, it should be noted that we are currently at the verge of a new EU financial period 2021-2027. The current OP is at the end of its implementation and the new national Partnership Agreement and Operational Programme are being prepared as we prepare this plan. Thus, we will direct particular attention to the provisions of a new proposal of the OP and also the sectorial strategic document, **the Slovenian Industry Strategy 2030**, the latter being the most important policy document that is to be considered in the new 2021-2027 national industrial policy as well as the second most influential policy document in Slovenia to contribute to the aims of the INNO INDUSTRY project (in addition to the currently developed Partnership Agreement and Operational Programme). By addressing these policy documents, we strive to contribute significantly to the proposed provisions of the new industry policy presented to the European Commission by the Slovenian Government, presumably in the first part of the 2022.

As said, the **Operational Programme for the Implementation of the EU Cohesion Policy in the Period 2021-2027** (the OP 2021-2027), while not yet fully developed, presents one of the most important policy documents that directs the developmental strategies as well as actions on national, regional and local level in Slovenia. Following the EU directions also the OP 2021-2027 addresses the five policy objectives:

- a more competitive and smarter Europe;
- a greener, low-carbon transitioning towards a net zero carbon economy;
- a more connected Europe by enhancing mobility;
- a more social and inclusive Europe;

- Europe closer to citizens by fostering the sustainable and integrated development of all types of territories.

Slovenian OP 2021-2027 also follows these directions, but the preparation of the policy document is still in the developmental phase, now entering first public debates. This situation was also seen as an opportunity for the partners of the INNO INDUSTRY to influence the preparation of suitable developmental goals and initiatives, directed to stimulating also the development of Industry 4.0.

The second relevant policy document is the Slovenian Industry Strategy 2030 (SIS 2030), proposed by the Ministry of economy in technology development on the 16th September 2020 and is in the process of public dialogue at the time of the preparation of this Action Plan. It proposes three distinctive pillars of actions: **green**, **creative** and **smart** industry, the latter being of the most importance to the INNO INDUSTRY goals. The SIS 2030 addresses the following challenges:

- horizontal characteristics of industry and the need to improve basic conditions of business environment;
- the necessary response to society challenges: the need to transit to circular economy, to expand digitalization of the industry and the transition to industry 4.0. that has not be as successful as expected in current programming period;
- strengthening of strategic chains of value, specifically in the areas of Slovenian smart specialization;
- to strengthen the resilience and responsiveness to external factors, brought upon by global megatrends and unexpected disturbances (e. g. black swans).

As is evident, the transition to Industry 4.0. plays an important role in the SIS 2030. The majority of this issue is addressed in the “Smart” section of the SIS 2030, which includes the following subjects:

- enhancement of digitalization and smart solutions creation;
- encouraging research and development in innovation cycles;
- networking and collaboration;
- strengthening and development of new competences, retraining and new forms of jobs;
- internationalization.

These are also some of the subjects that are included in the proposed actions in this Action Plan.

Lastly, the actions proposed in this Action Plan are based on the SWAT analysis, good practices exchange as well as the discussion performed within a Slovenian expert group, invited to participate in the INNO INDUSTRY expert panel. The first panel discussion of experts was organized online on 17th June 2020, emphasizing some of the common realizations on clusters in Slovenia:

- While there are five industry clusters established in the Slovenia for more than 20 years, it is clear that their role is not as significant as primarily foreseen. There are two main reasons for this: (1) unstable financing, clusters are mostly dependant on the membership fees, which are

varying and (2) due to specific characteristics of Slovenian companies (majority micro companies) there is a clear lack of critical mass of companies in Slovenian business environment, interested in joining clusters.

- Moreover, in the last decade there have been several business support instruments established by the Ministry of Economy and Technology Development that encourage clustering of companies, ousting the role of formal clusters: competency centres, so-called SRIPs, SPOTs, SIOs etc. These instruments have been proved successful within the clusters of companies currently participating, which is why the expert group supports the continuance of their activity.
- Despite the success of the mentioned business support instruments and the effect of clustering they have created, the unanswered question remains, what is the Slovenian industry strategy foreseeing in terms of company engagements: how will it address the large gap that has been created between the minority of companies, already showing the success in acknowledgement of new megatrends in economy and the majority of other, predominantly “traditional” companies that account for more than 90 percent of Slovenian companies?

The second experts’ discussion panel has been organized online on 11th December 2020, establishing the following conclusions:

- Clusters are typically developed via bottom-up approach and are based on the benefits that are recognized by companies in relation to participation in clusters. This has not been the case in Slovenia, since clusters have been established top-down and initiated by the relevant decision-makers on national level. Nevertheless, clusters are recognized as a valuable support system that might offer encouragement for industry transformation as well, which is why the participants of the panel discussion have recognized the need to stimulate interest for cluster participation among companies. This needs to be included in the INNO INDUSTRY action plan as well (by building databases, offering transparency of policy development and possibility to participate based on the knowledge value that one might provide etc.).
- While the goal of achieving a successful industry transfer is clear enough, the strategies of how to achieve the latter are often not as distinctive. For this reason it is of utmost importance to achieve as clear understanding of the emphasized areas in the Slovenian industrial Strategy 2030 (green, smart, creative) as possible. This is primarily the task of the government and sectorial ministries, who are also in charge of preparation of policy documents for the 2021-2027 financial EU period.
- While the existing initiatives, supporting the industry transformation have proved as successful, their further development needs to be constantly developed, particularly when establishing their actual effect in relation to industry transformation. Moreover, practices from the past have shown that similar initiatives have oftentimes diminished its efficiency due to bureaucratization and exclusiveness of their structure. This has to be prevented in the future, which is why an implementation of evaluation system is in order.

Several additional discussion will be organized also in the following months, in accordance with a development of the OP 2021-2027 timeline and directed to enhanced participation of selected experts to contribute to the content of the OP 2021-2027, particularly in areas that might enhance the development of Industry 4.0.

ACTION 1: OPTIMIZATION AND COLLABORATION

1. The background

This action is inspired by the good practice example “[The ecosystem approach](#)” from Latvia, which is directing attention to identification of existing value chains/cross-sectoral networks with high competitive advantages to enable cooperation within a whole ecosystem and further raising the awareness of importance of clusters and their activities for performing economies, lack of organised cluster support from government and lack of communication & interaction between the main players as far as clusters’ topics are concerned.

Similar to Slovenian Strategic Research Innovation Partnership (SRIP) Factories of Futures this good practice example is supported by the Ministry of Economy, although the initiative in Latvia has first derived from a private company. Both initiatives, in Slovenia and in Latvia, are undertaking a form of cluster and are directed to industry transformation, bringing industries together for common goals in the field of industry 4.0. The Latvian best practice has introduced some successful solutions for engaging several shareholders in the cluster dedicated activities, thus creating a larger ecosystem that is supporting innovation and consequently industry transformation.

The action 1 proposed by this action plan will capitalize on the following elements from the presented Latvian good practice:

- introducing the importance of raising awareness and educating both private companies and general public on the subject of industry 4.0, thus supporting growth of various stakeholders: young researchers and start-ups, professional, scientific and academic institutions for the needs of the production industry, including also state institutions in the topic;
- increasing the awareness of importance of cooperation and combining public and private efforts;
- increasing the efficiency of existing instruments for support of innovation ecosystem.

Further, increasing the efficiency of existing instruments is closely related to measuring the impact of support innovation ecosystem, which is why the action plan builds on the good practices such as the [Romanian Cluster Competitiveness Platform](#), which provides the basis for building an impact evaluation system of the national innovation ecosystem. This too will offer a foundation for further elaboration in Slovenian context.

The action will influence the OP 2021-2027, particularly in planning phases and in relation to establishing a stronger cooperation network between already existing relevant actors, such as SRIPs,

as a foundation for building a more R&D perspective, directed towards the enhancement of Industry 4.0. In accordance with the conclusions of the aforementioned expert panels, the SRIPs should be closely connected to other actors in Slovenian innovation ecosystem such as competency centres, SPOTs, SIOs and other relevant organizations that directly or indirectly support entrepreneurs and other economic actors in Slovenian national entrepreneurial and innovation ecosystem. By including this notions in the preparation of the OP, the maximum influence is being utilized.

2. Description of Action

The activities within this particular set of action are addressing the need for more profound coordination or optimization and collaboration of existing mechanisms and instruments that have already been established by the Slovenian Ministry of Technology and Economic Development and SPIRIT Slovenia (Public Agency for Entrepreneurship, Internationalization, Foreign Investments and Technology): SPOT – “one-stop-shop” for entrepreneurs, SIO – Slovenian Innovation Ecosystem (incubators, technology parks), SRIP – Slovenian Strategic Research Innovation Partnerships, Slovenian Entrepreneurial Funds, Slovenian Development Funds, Slovenian Digitalization Hub, competency centres etc.).

It is acknowledged by the Slovenian INNO INDUSTRY expert panel that these instruments have contributed to the development of clusters of innovation actors, which have not yet formalized in this form. However, these instruments and in particular, the Slovenian Strategic Research Innovation Partnership are the most relevant to forming the real potential of clustering rather than the existing formally established cluster, who are not completely in line with the strategy for industry 4.0 transformation.

For these reasons the actions proposed are as follows:

- Exploration of an actual state of cooperation between SRIP, SPOT, SIO, DIH, competency centres and formalized clusters in Slovenia and on the basis of this analysis proposing a model of development and collaboration, similar to the best practice example in Latvia.
- Analysis of the existing reports of the impact of these instruments as well as the clustering activities and on the basis of this analysis contributing to establishment of an impact evaluation system on national level.
- Presentation of the proposed model to decision-makers on national level as well as on the level of individual actors of this innovation ecosystem, during the preparation of the OP 2021-2027.

3. Players involved

The players involved in this action are as follows:

- **RDA Posavje** – coordinates the action, provides the initial analysis
- **Experts panel group** – participate as the representatives of different innovation actors and offer expertise, practical experiences and knowledge on the innovation ecosystem
- **Public Agency for Entrepreneurship, Internationalization, Foreign Investments and Technology and Ministry for Technology and Economic Development** – influence the preparation of policy documents on sectorial level and the innovation ecosystem
- **Government Office for Development and European Cohesion Policy** – develops policy documents on national level

4. Timeframe

Action	Timeframe
model of development and collaboration	August 2021 – February 2022
impact evaluation system	January 2022 – June 2022
presentations to decision-makers	May 2022 – November 2022

5. Costs

The estimated cost includes primarily cost of personnel working on the project and amount to cca. 17.500. Experts assistance will be engaged, if necessary.

6. Funding sources:

The action will be funded by own resources of the RDA Posavje and other actors involved in action.

7. Monitoring

Indictor:

- 1 developed model of development and collaboration between the existing innovation ecosystem
- 1 proposition of the impact evaluation system for innovation ecosystem on national level
- Presentation of the model of development as well as the impact evaluation system to decision-makers on national level as well as on the level of individual actors of the innovation ecosystem (at least 10)

ACTION 2: BRINGING IN THE RIGHT KIND OF KNOWLEDGE

1. The background

While the set initiatives to support industry transformation in Slovenia have been proved successful, they have been somewhat exclusive, which is why the transformation is slower than expected. In order to meet the goal of increasing the speed of transformation and simultaneously level up the differences between more and less developed areas in Slovenia, it is of utmost importance to increase the accessibility of knowledge to businesses. At least four good practices presented within the INNO INDUSTRY project have provided a valuable insight into the actions necessary to achieve the goal set:

- [UK Open Data](#): by providing relevant data for uptake of new businesses or business processes that support the notion of 4.0 industry, the Local government in Buckinghamshire stimulated also new public services, benefiting thousands of users and simultaneously offering a business opportunity to local businesses. The good practice provides us with an example of activities that can be utilized. In Slovenia, this possibility is partially considered within the Slovenian Digital Innovation Hub, which continues to grow and requires further elaboration.
- [Smart Arenas](#) presented by Region Gävleborg in Sweden: Similarly to Slovenian Digital Innovation Hub, Smart Arenas are addressing the subject of digitalization. However, Smart Arenas are encouraging the potential of industry 4.0 also by offering business support, which in Slovenia is partially divided between Slovenian Innovation Ecosystem and Digital Innovation Hub. By combining these two initiatives, the effect increases.
- Both, [Kickstart Digitalisation](#) from RISE Research Institute of Sweden and [Habitat 4.0 Project](#) from Spanish AMUEBLA are bringing a valuable emphasis on the understanding of digitalization and possibilities offered by it among companies. Innovation actors, but particularly businesses in Slovenia will benefit from the transfer of these good practices.

2. Description of Action

Action 2 is directed specifically to stimulating business practices rather than influencing policy level:

- Preparation of a proposal for enhancement of cooperation between Digital Innovation Hub, Slovenian innovation ecosystem and Slovenian Strategic Research Innovation Partnerships in the area of awareness of the potentials and possibilities of digitalization for business as well stimulating knowledge transfer from these three innovation actors to wider public and especially Slovenian businesses (for example, by building a knowledge databases, joint awareness strategies etc.).
- Discussion panel with representatives of all three innovation actors.

Further on, there is an increasing need for simulating knowledge transfer among support organizations for entrepreneurs and innovation. Existing actors (SPOTs, SIOs, SRIPs and others) will be engaged in

order to strengthen this kind of cooperation among them, including also the national agencies, supporting these actors (national agency SPIRIT, Ministry for economic development and technology). The proposed model of cooperation will also be included in the preparation of the OP, thus enhancing the knowledge transfer as a foundation for accelerated development of Industry 4.0.

3. Players involved

The players involved in this action are as follows:

- **RDA Posavje** – coordinates the action, provides the proposal for enhancement of cooperation
- **Digital Innovation Hub** – participates in establishing the cooperation between identified innovation actors, includes new instruments and practices in Digital Innovation Hub databases in cooperation with other two innovation actors
- **Slovenian innovation ecosystem** – participates in establishing the cooperation between identified innovation actors, includes new instruments and practices in Slovenian innovation ecosystem databases and practices in cooperation with other two innovation actors
- **Slovenian Strategic Research Innovation Partnerships** – participates in establishing the cooperation between identified innovation actors, offers knowledge for inclusion in databases and practices of the other two innovation actors

4. Timeframe

Action	Timeframe
Proposal for enhancement of cooperation	September 2022 – December 2022
Discussion panel	October 2021 – April 2022

5. Costs

The estimated cost includes primarily cost of personnel working on the project and amount to cca. 17.500. Experts assistance will be engaged, if necessary.

6. Funding sources:

The action will be funded by own resources of the RDA Posavje and other actors involved in action.

7. Monitoring

Indictor:

- 1 proposal for enhancement of cooperation between Digital Innovation Hub, Slovenian innovation ecosystem and Slovenian Strategic Research Innovation Partnerships
- 1 organized discussion panel with representatives of all three innovation actors

Place, date: Krško, 31. 1. 2022

Signature:

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