

ACTION PLAN

INNO Industry - Improving innovation delivery of policies within 4.0 industry in Europe.

Slovakia

Slovak Business Agency

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Part I – General information

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

Partner organisation: **Slovak Business Agency (SBA)**

Country: **Slovakia**

NUTS2 region:

Contact person: **Petra Pazerini**

Email address: **pazerini@sbagency.sk**

Phone number: **+421 2 203 63 373**

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(s) addressed: **Operational Program Integrated Infrastructure** (merged with former Operational Program Research and Innovation on 11 December 2019) further as OP II.

OP II represents a joint program document of the Ministry of Education, Science, Research and Sports of the SR & the Ministry of Economy of the SR (MoE) and Ministry of transportation for the granting of support from ESIF during the period 2014–2020. It's main objective is to create a stable innovation-friendly environment & to promote the efficiency & performance of the system of R&D&I as a basic pillar for reinforcing competitiveness, sustainable economic growth & employment.

Thematic objective 1 (Strengthening research, technological development and innovation) will be achieved by means of actions performed under Priority Axis 1 "Supporting R&D&I" and Priority Axis 2 "Supporting R&D&I in the Bratislava Region".

One of the key infrastructure needs is the support of various forms of inter-sectoral partnerships/clustering/technology platforms. Slovakia, similarly to majority of European countries is lagging behind the world innovation leaders in transferring the knowledge from academia to industry. Partnerships and joint activities among the stakeholders (STI institutions and industry as well as, clusters with their triple helix principles) is therefore the utmost important and OP is dealing with it. Moreover, the role of clusters has long been undervalued in the economic development of the SR. Several cluster organizations were created in the past as a result of bottom-up activities without any systemic support. OP II aims to support clusters as such, cluster organizations & their activities leading to innovation in line with the smart specialization strategy.

Further details on the policy context and the way the action plan should contribute to improve the policy instruments:

Implementation of the actions envisaged in this Action Plan - the improvement of the existing policy instruments is expected to be approved and will result in improving the governance level, especially in the field of monitoring & evaluating the actions supported within the frames of the future OP (programming period 2021-2027). Since beginning of the implementation of OP the typical KPIs were number of jobs created and number of entities supported and number of innovations launched.

These indicators are not providing sufficiently the so much needed information on efficiency and effectiveness of the sources invested

INNO INDUSTRY, via transnational collaboration, sharing experience and peer learning will contribute to develop a sustainable and acceptable method to monitor and evaluate the effectiveness of specific actions. At the national level, stakeholder group will be created in order to involve relevant stakeholders representing the policy-maker level, R&D institutions, clusters, supporting organizations, as well as representatives of selected industry sectors to ensure expertise, as well as access to qualitative & quantitative data.

In addition, the project results will be reflected in the preparation of new Policy Instrument for the following period, esp. new projects to be supported.

According to the results of the European Innovation Scoreboard 2017, Slovakia belongs to the group of Moderate Innovators. Among the main R&I challenges, the Research and Innovation Observatory Country Report 2017 reports the following: insufficient coordination and co-operation between ministries & their agencies; fragmentation of resources for building R&I infrastructures; the Slovak SMEs invest little in R&D intensive innovations & generate below-average R&D based commercial outputs; co-operation between the industry and academia is the 'Achilles heel' of the Slovak R&I system & these 2 sectors still remain largely isolated; the issue of clusters and cooperation of entities associated in clusters is currently underdeveloped.

With regard to the Industry 4.0, the results of a survey carried out in 2017, the majority of Slovak companies has been developing their Industry 4.0 by themselves and has not started implementing strategies. In order to support the application of Industry 4.0 in the Slovak companies, it would be desired to organise the measures in specific areas around Industry 4.0 and clusters or cross-sectoral/cross-cluster domains.

Implementation of Industry 4.0 is the subject of a strategic document and the actions are to be financed via the OP R&I.

Currently, the evaluation of the support provided is based solely on the number of organizations supported. INNO INDUSTRY will contribute to the design of specific measures to evaluate the impact and thus improve the governance of the OP.

The analysis will facilitate better understanding of the evaluation measures, mutual sharing of experience will provide deep insights and best practices of monitoring and evaluation methods. Development of an action plan, based on close cooperation of relevant stakeholders will provide recommendations to improve the monitoring and evaluation of OP R&I impact, but also prepare new projects and/or modify the thematic objectives for the following period.

SBA established cooperation with various stakeholders (Regional Stakeholders Working Group) to identify best practices and challenges that contributed to development of action plan. The 3rd regional stakeholder workshop was held on 9th December 2020 at SBA premises in Bratislava. The aim of the meeting was a discussion on the preparation of an Action plan as the main output of the project that is going to be implemented within 2021 in the area of supporting partnership in R&I, cluster organization development with underlined focus on I4.0. A couple of scenarios of supporting measurements were presented by the SBA team to stakeholders that can be implemented on the basis of discussions, progress, and best practices within the project. Participants from the Ministry of Economy of the SR, Slovak Innovation and Energy Agency, Union of Clusters of Slovakia, and Slovak Business Agency discussed proposed measurements and other possibilities too.

As the conclusion of in-depth discussions is the identification of 2 actions for Slovakia.

The first one is focused on supporting digital transformation of SMEs via voucher scheme. This action was inspired by examples of several INNO INDUSTRY partners who implemented relevant schemes.

The second one is focused on better monitoring of the KPIs set for cluster organization support policies and was inspired by the best practice from Austria – Lower Austrian Cluster Program and from Hungary.

Rationale for Action Plan - Slovakia

Action 1

The Action plan – Action 1 aims to improve existing support scheme - **State Aid Scheme de minimis no. DM 15/2017 for Support of Collaboration between entrepreneurs and STI entities**, provided by Ministry of Economy of the Slovak Republic (last time the call was opened in 2020 with allocation of 300,000 €).

Innovation vouchers have three main objectives

- To stimulate the introduction of product, process, organizational or service innovation in SMEs, which tend to lack leading-edge knowledge compared to large companies or innovative start-ups.
- To promote science-industry collaboration and stimulate knowledge transfer.
- To foster the formation of networks between SMEs and other academic, research and private partners.

Innovation vouchers can be used to attract SMEs newcomers and connecting them with service providers of innovation (Science, Technology and Innovation entities – STI) thus developing the competitiveness of the regional innovation ecosystem. Innovation vouchers must be administratively simple, fast and light, responsive, and address place-based research and innovation weaknesses.

Slovakia has recognized importance of the innovation vouchers a long time ago, but since beginning has been struggling with the availability of funding and its predictability, administrative burden and long approval process requiring two independent assessors to validate the content of the applicant's intention. The scope of activities was very wide and demand regularly exceeded the available funding (typically up to 300.000 € of funding per year and 5.000 € per voucher, with change in 2020 when 10.000 € ceiling was introduced).

In our SWOT analysis, presented at the end of 2019 the following expectations were formulated (What we want to improve):

- Awareness improvement of the I4.0 stakeholders on the key urgent topics, e.g. security, societal impact of I4.0, **need of networking**
- Public **awareness and acceptance of I4.0** as a main driver for future prosperity of open and industrial economy of the Slovak Republic
- Increase the awareness of R&I importance even in the times of growth as well in the times of downturn among entrepreneurs, mainly SMEs (sharing with them what top companies do differently to stay competitive)
- **Increase stakeholders' participation** in drafting both RIS3 for the next years and new programming period key topics: priorities that will be supported and implementation manual dramatic change to make things smoother and more flexible

- Introduce basic models capable of **monitoring efficiency of the support** provided on long term basis

When translated in detailed analysis of the existing policy measures, we see following main problems linked with the Scheme DM 15/2017 that is intended to provide innovation vouchers (industry focused)

- a) Availability of funding
- b) Overall administrative burden on both sides – applicants as well as provider
- c) Closed calls resulting in long approval process: two independent assessors and final committee (set up by Minister) approval of selected applications (those that received highest evaluation). Typical duration of the particular steps: up to 30 days after the close of the call administrative check was finished, then assessment by assessors – 30 days and Committee approval next up to 30 days. The contracts for approved applicants can take additional 5 to 10 days. Altogether the process could be up to 130 days long)
- d) Aid amount of 5.000 € perceived as insufficient and limiting more demanding projects

. Our SWOT analysis has identified following weaknesses in cluster support policies:

- **Unpredictability of support** (it used to be highly irregular regarding the timing of the calls, sometimes not even open, etc.)
- Over reliance on European structural funds (ERDF etc.) resulting in lower than optimum level of investments from state budget
- **High bureaucracy** in administering the support schemes and measures, especially when from ERDF
- It takes **enormous time between the call announcement and granting** financial resources (regularly up to 12 months)
- **Monitoring system** is in place, but it is not based on econometric models and other advanced economic modelling tools, but rather only check out approach
- **Structure of domestic industry** is mostly focused on major companies, so it hinders growth of small and medium companies
- Lack of guidelines about product and service standards

Activities during preparatory stage of Action 1

- a) Stakeholders (Ministry of Economy, managing authority for ESIF OP II; Industry representatives, INNO Industry partners, Slovak start-up ecosystem representatives - accelerators) involvement in design of the new, improved policy based upon various inputs, including best practice from Lower Austria, Hungary and other sources - available at Interreg policy learning platform), meeting and open discussion on how the new policy should be improved
- b) Drafting the programs
- c) Drafting the processes and tools to be implemented
- d) and EC

- e) Presentations of the new improved performance assessment and monitoring system for industrial clusters and joint discussions on how to proceed with implementation
- f) Approval/Endorsement by Ministry of Economy, Department of Competitiveness.

Endorsement for Action 1

Ministry of Economy of the Slovak Republic, department of support programs as intermediate body for ERDF OP Integrated Infrastructure in Slovakia, and department of competitiveness, policy maker in charge of the Slovak Cluster Program, were intensively involved in the interregional learning process as well as in the regional interaction among all stakeholders.

The Ministry of Economy endorses the INNO Industry Action Plan and

- **already approved implementation of the learnings from the INNO Industry project in 2 new calls for innovation vouchers launched in 2021 (Action 1).**

Action 2

The Action plan – Action 2 is focusing on cluster support programs and their efficiency in providing the financial grants according the real performance of clusters at the early stage of industrial cluster life.

Action 2 is driven by the limitations of state aid regulations as well as demand for evidence-based policymaking, there is increasing focus on results/impacts and a desire to tie public support (and funding) to performance.

As cluster policies enter second (and third) decades of existence, it is important for policymakers to follow-up on initial objectives/effect logics and communicate the progress that has been made in order to motivate continued investment in this policy approach. In Slovakia ESIF resources are heavily used to support cohesion policies and increase the competitiveness of national economies, therefore continued support to cluster initiatives must be very selective and evidence based. This would require a set of performance criteria to be developed and used in a flexible manner – and most suitable for the policy aims. Currently this set is missing. The only criteria used for assessing effectiveness is number of newly created jobs and ESCA re-certification (Scheme DM 3/2020, Calls OPII-MH/DP/2020/9.5-28 and OPII-MH/DP/2020/10.3-29). There are no efficiency measures set up for the scheme DM 13/2017

In Slovakia there is in place a state aid scheme de Minimis no. DM 13/2017 that is focusing on

- a) support for the establishment and development of industrial clusters at regional and supra-regional level as a tool for developing the competitiveness of the economy and economic growth,
- b) developing competitive advantage by improving the links between research, academia and business and

- c) supporting the increase of competitiveness of members of industrial clusters by making their cooperation more effective as well as strengthening their position industrial clusters on an international scale.

Other policy measure is funded from the ERDF and is provided only to the clusters that have already achieved at least the lowest level of cluster certification by ESCA (Bronze Label). Therefore, this policy measure is not suitable for recently established clusters.

Main problems linked with the Scheme DM 13/2017 and findings in our SWOT analysis in 2019:

- a) **State aid scheme for cluster support is unpredictable** (both amount of the available funds – allocation and timing)
- b) **Clusters are not widely recognized as a lever** suitable to increase the innovation performance of national economy by increasing the R&I output and motivate local stakeholders for better and more efficient networking
- c) **Clusters are still less recognizable partner for policy makers** in strategies drafting and their implementation
- d) **Subsidy in the calls opened since commencement of this policy measure** were oriented on points b) and c) and where personal costs are excluded. Grant (subsidy) must be used latest within 4-6 months after subsidy is granted (therefore **only short time window is available for implementation of activities planned**).
- e) **No support for newly established clusters** that would need a special attention and specific support
- f) **Overall administrative burden** on both sides – applicants as well as provider – process was very similar to that applied for innovation vouchers
- g) Aid amount of up to 50.000 € perceived as acceptable but time to be implemented is too short
- h) **Missing monitoring** linked to the economic development of the region and clusters as well

Activities during preparatory stage of Action 2

- a) Stakeholders (Ministry of Economy, Managing authority for ESIF OP II; Industry representatives, INNO Industry partners, Slovak start-up ecosystem representatives - accelerators) involvement in design of the new, improved policy based upon various inputs, including best practice from Portugal and Slovenia, Lower Austria, Hungary and other sources (available at Interreg policy learning platform), World Bank and Banská Bystrica self-governing region representatives) meeting and open discussion on how the new policy should be improved
- b) Drafting the programs
- c) Drafting the processes and tools to be implemented
- d) Preparing the calls (Action 1) with all relevant documentations
- e) Starting the pilot call for region of Banská Bystrica under the Catching-Up Regions initiative of the World Bank and EC

- f) Presentations of the new improved performance assessment and monitoring system for industrial clusters and joint discussions on how to proceed with implementation (Action 2)
- g) Approval/Endorsement by Ministry of Economy, Department of Competitiveness.

Endorsement for Activity 2

Ministry of Economy of the Slovak Republic, Department of Support Programs as intermediate body for ERDF OP Integrated Infrastructure in Slovakia, and Department of Competitiveness, policy maker in charge of the Slovak Cluster Program, were intensively involved in the interregional learning process as well as in the regional interaction among all stakeholders.

The Ministry of Economy endorses the INNO Industry Action Plan and

- **Encourages the SIEA to further design proposal of new concept and tools for better assessment of clusters 'performance with the aim to provide differentiated financial support based on this assessment and monitoring of the activities during implementation and post-implementation period (action 2).**

Part III

Details of the Actions envisaged

Action 1

Innovation vouchers provided by the project Let's Innovate (SIEA) and improvement of the policy measure DM 15/2017 (innovation vouchers provided by Ministry of Economy).

Relevance to the project

The Slovak Innovation and Energy Agency (SIEA) is running a so-called National Project Let's Innovate! With overall budget of 32 Mio. € (for period of 2016-2023). The project aims to improve the innovation performance of the Slovak economy. The project envisages several type of activities, among them providing direct and indirect financial support for companies, communication activities, analytical and policy improvement activities. One of the most important financial supports are so called **innovation vouchers** that are small lines of credit, usually ranging from **€2,000 to €20,000** provided by regional or national governments to Small- and Medium-sized Enterprises (SMEs) to purchase services from knowledge providers such as universities, research centres, or consulting firms with a view to introducing new products, processes, or services in their business operations. Under Horizon 2020 SME innovation vouchers up to **60,000€** were available for SMEs through cascade funding type projects.

SIEA has been involved in the project INNO Industry since early stage, participating and **synchronizing activities of two Interreg Europe programs: ClusterFY project and INNO Industry Project** and participating at various project events (e.g. in Košice in September 2019 – ClusterFY project meeting and conference, and on all Regional Stakeholders Meetings of INNO Industry etc.)

SIEA's National project has identified, that existing policy measure would needs several distinctive improvements and extensive work started already in 2019 with support from INNO Industry project (see below) to develop a new scheme, design activities, processes and tools supporting the innovation vouchers application.

Later, at the beginning of 2020, Ministry of Economy – Managing Authority and SIEA jointly agreed that SIEA and Let's Innovate! will join the forces with EC and World Bank and will support the Catching Up Regions Initiative (CURI) with regionally focused pilot call for innovation vouchers for applicants from this region. Total allocation was set at the level of 2 Mio. €.

After the study visits in Krems/AT (2020/03), SIEA exchanged experience with INNO Industry partners about relevant funding instruments, such as digitalization vouchers and other support schemes available and collected additional info in bilateral communication via email. Main source of inspiration came from the Good Practices:

- Portugal (PP5): [Industry 4.0 Voucher](#) (Vale Indústria 4.0)
- Slovenia (LP): [SMALL-SCALE INCENTIVES FOR SMEs - VOUCHERS](#)

Other sources of best practices were available on the Policy learning platform of Interreg, where we have selected **Best practice from Finland: Tampere Region Innovation Voucher**¹ that is a market-driven digitalized platform for companies to apply for support to growth, innovation and internationalization.

In June 2020 SIEA drafted the new policy tool State Aid Scheme de Minimis with aim to launch innovation vouchers for Banská Bystrica and Slovakia in the second half of 2020.

Due to the unexpected spread of COVID-19 and strong anti-pandemic measures applied, the process of approval of the scheme was dramatically postponed (other short-term initiatives were prioritized higher) and that allowed more profound preparation of the program and **integrate several specific improvements inspired by the learnings from INNO Industry partners:**

- a) Paper work – SIEA has underwent long internal discussion how it would be possible to run the paperless application process, as far as it is well-known problem of Slovakia that every kind of state subsidy is accompanying with enormous documentation. It was beneficial for the whole project, that anti-pandemic measures have decreased overall number of required document typical prior the COVID and allowed at the same time to implement web-based access of the applicants. Applicant can provide all documents in e-format, including the contract for voucher itself. Overall administrative burden on both sides – applicants as well as provider are thus minimized to the level unseen in Slovakia before.
- b) Open calls – SIEA has agreed after several discussions with relevant stakeholders on various occasions (including Regional Stakeholder Workshop on Dec. 2019 and March 2020 that the calls will be on the basis of first in – first out (open call). This has been possible due to the available resources that are twentyfold higher than any previously run schemes on innovation vouchers in Slovakia.
- c) Acceleration of the approval process – due to the nature of innovation calls – small lines of credit in this case up to 15,000 € the overall assessment of the scope of activities has been simplified and in-depth assessment will be based on random samples after submission of the request for payment by applicant. That allowed to accelerate the approval process on less than 5 working days, comparing to previously used model of 40 working days.

¹<https://www.interregeurope.eu/policylearning/good-practices/item/550/tampere-region-innovation-voucher/>

- d) Aid amount was set after several discussion to be up to the 15,000 € in case of pilot call for Banská Bystrica Region with state aid intensity of 85%. This will allow to run more complex projects for mainly SMEs without exposure by high cost on their side.
- e) Scope of activities was extended on topics, that were inspired by the Best Practice from Portugal (PP5): [Industry 4.0 Voucher](#) (Vale Indústria 4.0) and in some cases by Best Practice from Slovenia (LP): [SMALL-SCALE INCENTIVES FOR SMEs - VOUCHERS](#)

Nature of the action

Innovation vouchers need to have a clear objective, in this case it was **improving innovation potential of the region Banská Bystrica**. This region has been identified by several studies as one of two regions in Slovakia (other one is Prešov) with lowest innovation potential.² SIEA together with World Bank and EC (project CURI), and supported by the Ministry of Economy have developed a measure that is addressing the need of the region and would support increase of the innovation potential as well as other initiatives that are planned by regional government. Innovation vouchers are thus part of the regional policy-mix and the regional development strategy (Social and Economic Development Plan).

During 2020 and 2021 beside Regional Stakeholders Workshops within INNO Industry project, there were a series of meetings among WB, BB regional government, SIEA and MoE with the aim to make the policy measure successful and able to address the needs of the region. to discuss details of the measure.

Based on the preparatory work on this pilot scheme, SIEA has prepared other scheme that will be addressing the needs across the whole Slovakia (except Banská Bystrica), with main focus on **digital transition and resiliency of SMEs**. The allocation for this scheme is 2 Mio. € and the call is planned to be open in August 2021. The scope of the activities is inspired by Portugal (PP5): [Industry 4.0 Voucher](#) (Vale Indústria 4.0). This is a policy instrument to promote digital transformation in SMEs through the adoption of technologies and business models adaptation. Most SMEs willing to promote digital transformation are lacking resources and specific know-how to adopt the suitable technologies that might contribute for disruptive business model innovations.

The Industry 4.0 Voucher policy instrument is implemented through a financial voucher of 7,500 € that allow SMEs to fund the acquisition of consultancy services for diagnosis of suitable strategies for the organization leading to the adoption of **technologies and processes associated with Industry 4.0**: digital channels for managing markets, channels, products, customer segments; UX; CRM and E-Commerce; electronic marketplaces; SEO; Social Media Marketing; Content Marketing; Display Advertising; Mobile Marketing; Web Analytics; interconnection systems; Sensors; big data; Augmented reality; additive manufacturing; IoT; Cloud; machine learning; IA; Cyber-physical systems; solutions for connectivity. SMEs must apply for the voucher with a project where they specify their needs and business goals that consultants must take in consideration when designing digital transformation strategy.

² SIEA: Innovation Potential of Slovak Regions. Let's Innovate!, 2019

Stakeholders Involved

- Ministry of Economy of the Slovak Republic in the position of Managing Authority
- World Bank in the position of project manager for Catching Up Regions Initiative (CURI)
- Association of Chemical Industry
- Club 500 (the biggest 500 employers in Slovakia)
- SBA
- SIEA
- Crowdberry (operator of start-up accelerator and VCF)
- Ministry of Economy of the Slovak Republic – department of competitiveness, that operates the State Aid Scheme that is in place and needs improvements

Timeframe

2019, Sept-Nov.	Idea generation and first discussions, available best practice collection and analysis
2019, December	INNO Industry Regional Stakeholders Workshop (Dec.11): Setting the ideas and team composition
2020, January	First meeting with World Bank on CURI
2020, March	INNO Industry Regional Stakeholders Workshop (March 9): Discussion on the actual development of the policy measure, barriers etc.
2020, March	INNO Industry Interregional Study Visit – online (march, 3-5) - Krems
2020, April	Analysis of best practices provided by INNO Industry Validation of the activities with industry stakeholders
2020, June	Drafting the State Aid Scheme de Minimis
2020, December	INNO Industry Regional Stakeholders Workshop (Dec. 9): Update on current development, preparation of the topics to be supported via the policy instrument
2021, April	Approval of the State Aid Scheme by relevant Authority (Antimonopoly Office of the SR) No.DM 10/2017, amendment No.4
2021, May	INNO Industry Regional Stakeholders Meeting (May 31)
2021, May	Financial allocation for the program approved (7,5 mil €)

2021, June	INNO Industry Regional Stakeholders Workshop (June 25): announcement of the policy measure and first pilot call and discussion about the second Action Plan Item
2021, July	First Call opened for Banská Bystrica region, followed by Second Call for restricted number of applicants to support IPCEI projects
2021, August	Third Call opened (under preparation) for the rest of the Slovak region (Under preparation)
2021, December	Fourth call for supporting start-up eco-system (Under preparation)
2022, mid-year	Fifth Call focused on I 4.0 solutions (Under preparation)

Costs

The total funding budget for direct financial support via “Let’s Innovate!” is € 7,5 Mio. However, the funding influenced by INNO Industry through the enlarged activities and improved process is the share of the budget assigned to pilot call (First Call) with allocation of 2 Mio. €, and partly to the call focused on Industry 4.0 – allocation of 2 Mio. €.

Funding Sources

ERDF, OP Integrated Infrastructure via National Project Let’s Innovate!

Monitoring and indicators

KPI were set as:

- number of SMEs supported with the call – goal 133 companies
- Internal performance indicators:
 - type (industry) of companies supported – at least 30% I4.0 companies
 - type of supported activities (3 optional types according the call) – at least 30% focused on digital transformation and 30% - new products, new business models and new skills, rest – various R&D activities

Monitoring is planned during the call and final one after 6 months from the date of the last voucher is granted and payment is approved.

Action 2

Monitoring and Evaluation of the effectiveness and efficiency of the financial non-refundable grants for clusters in the early stage of development (improvement of the policy measure Scheme DM 13/2017 and Scheme for support for clustering of enterprises no. DM - 3/2020)

Relevance to the project

Today's economic map of the world is dominated by what is called *clusters* critical masses—in one place—of unusual competitive success in particular fields. Clusters are a striking feature of virtually every national, regional, state, and even metropolitan economy, especially in more economically advanced nations.³

Clusters affect competition in three broad ways: first, by increasing the productivity of companies based in the area; second, by driving the direction and pace of innovation, which underpins future productivity growth; and third, by stimulating the formation of new businesses, which expands and strengthens the cluster itself. A cluster allows each member to benefit *as if* it had greater scale or *as if* it had joined with others formally—without requiring it to sacrifice its flexibility.⁴

It is worth to note that EC has launched many initiatives to support clusters, such as the European observatory for clusters and industrial change, Cluster excellence, Cluster internationalization, Clusters and industrial value chains, and the European cluster collaboration platform (ECCP), the main hub facilitating cluster cooperation within the EU and beyond. In the European Union, there are around 3000 specialized clusters, accounting for 54 million jobs (European Commission). In Slovakia these numbers are monitored by the Slovak Cluster Monitor and recent data are pointing at 165 597 employees employed at industrial clusters 'member organizations across Slovakia'⁵

Slovakia has realized importance of clusters over a decade ago, only, and Slovak Innovation and Energy Agency had been at the forefront of the initiatives aiming at building awareness and creating an ecosystem that would support establishment and functioning of the industrial clusters.⁶

Since 2007 SIEA was involved in several projects funded from EU programs (CENTRAMO 2011-2013, Cluster Coop 2011-2014, ACE – Achieving Cluster Excellence 2014-2016) that brought to Slovakia for the first time ever assessment of clusters. It was certification of clusters according ESCA methodology.

But beside the certification process there was no other tool to assess the performance of clusters and their contribution to the local, regional or national economy growth in place. Moreover, ESCA model is primarily focused on quality of cluster management. So, with

³ Porter, M.: HBR 1998

⁴ Porter

⁵ <https://www.inovujme.sk/sk/slovensky-klastrovy-monitor>

⁶ Balog, M.: Klastrová politika v podmienkach Slovenska. SIEA 2015, ISBN 978-80-88823-61-2

growing demand for more transparent use of public funding (including ESIF) and its clear value added for economic growth the need for monitoring and assessment has appeared.

Within various discussions and stakeholder's workshops either under INNO Industry project or ClusterFY project since 2019 it was jointly agreed that monitoring should be based on the principle "You get what you measure" and should also be in line with the overall smart specialization strategy for research and innovations for Slovakia (RIS3 SVK) for 2021-2027.

Due to the spread of COVID-19 and strong anti-pandemic measures applied, the process of development of the tool was postponed similarly to development of RIS3 SVK. Action 2 integrates **several specific improvements (in depth described in the paragraph Nature of the action) inspired by the learnings from INNO Industry partners:**

Ecoplus - The Business Agency of Lower Austria Monitoring of the Lower Austria Cluster Programme

West-Pannon Regional and Economic Development (Hungary) – Certification scheme for Hungarian clusters

Other sources:

Other sources of best practices were available on the Policy learning platform of Interreg Europe, where we have been following: **Best practice from Latvia: Cluster Policy in Latvia⁷** and **Clusters and KETs in Changing a Landscape. Joint Policy Recommendations from the ClusterFY Project.⁸**

Another important source and inspiration were a document produced by EC: **Smart guide to cluster policy.⁹**

Nature of the action

As described already in the Policy context part, the need to follow-up on initial objectives/effect logics and communicate the progress that has been made in order to motivate continued investment in this type of policy approach we need to develop very selective and evidence based future cluster initiatives.

Therefore, a set of performance criteria has to be developed and used in a flexible manner – and most suitable for the policy aims. To achieve this goal, a task force led by SIEA with support of Ministry of Economy, SBA and Union of Slovak Clusters, has been established and in mid-2021 presented first idea and draft of the assessment and monitoring tool that could be used for this purpose on the INNO Industry Regional Stakeholders Workshop (June 25, 2021). In this first draft the Task force focused on support for so called "early-stage clusters", in general

⁷https://www.interregeurope.eu/fileadmin/user_upload/tx_tevprojects/library/file_1540371665.pdf

⁸ https://www.interregeurope.eu/fileadmin/user_upload/tx_tevprojects/library/file_1576074328.pdf

⁹<https://op.europa.eu/en/publication-detail/-/publication/e1fb9f84-2ba9-11e6-b616-01aa75ed71a1>

those clusters, that has only recently formalized its joint activities and established a new cluster management organization. The early stage could last from up to 24 months, during which clusters would not be able (exemptions are possible, of course) to apply for the support by non-refundable grants from ESIF, but will be supported by state budget with the main aim to reinforce the cluster management capabilities and assure the joint cluster initiatives take off. At the end of early stage, the cluster organization should be ready for ESCA certification after completion of this step could apply for other kind of financial support that will be more extended and sophisticated.

Although during 2021 only early-stage cluster assessment and monitoring tool is going to be developed, similar approach will be implemented in development of the tool for mature clusters and excellent clusters (second and third level).

In general, the tool will be structured around three main areas and in two time periods (before = assessment and after support funding = monitoring): **What** (are we going to monitor) – **Who** (will make assessment) – **Why** (it is important). Joint stakeholders' discussions led to agreement about following:

What is going to be assessed and monitored?

Assessment: **Strategy of cluster** organization and its interlinkage with **RIS3 SVK** and key EU initiatives – **Green Transition, Digital Transition and Resilience**

Monitoring (and **KPIs**): the list of criteria is very wide and differ according the cluster maturity (different for early stage, mature and excellent cluster organizations)

Who will assess and monitor?

2 external and independent assessors – identification the maturity of the cluster organization on basis of regular dialogues with cluster managers, at least once per year

Why it is important?

The RIS3 SVK substitutes the missing national strategy for economic development and therefore it is important to anchor RIS3 SVK into the strategic document of cluster.

Main EU initiatives (Green and Digital transition as well as Resilience) were well described by relevant Slovak stakeholders in the document of SIEA¹⁰. This guide for cluster managers and policy makers provides a good basis to develop not only ad-hoc initiatives, but as well as a basis for medium to long term strategy of the cluster development.

¹⁰ Recommendations for Clusters and Policy Makers: Slovakia. SIEA 2021. in preparation

Stakeholders Involved

- Ministry of Economy of the Slovak Republic in the position of Managing Authority
- SBA – INNO Industry
- Ministry of Economy of the Slovak Republic – department of competitiveness, that operates the State Aid Scheme that is in place and needs improvements
- SIEA – National Project Let's Innovate! activity no.3 – analysis
- Union of Slovak Clusters (The Union of Slovak Clusters is an association established in 2010 to initiate and support the development of clusters and cluster policy in Slovakia)

Timeframe

2019, September	First ideas how to better monitor and assess the performance and impact of cluster programs were initiated
2019, December	INNO Industry Regional Stakeholders Workshop (Dec.11): Setting the ideas and team composition for Action 2
2020, January-December	Description and first drafts of the assessment and monitoring model (Action 2) prepared
2021, January – May	Discussion with clusters
2021, June	INNO Industry Regional Stakeholders Workshop (June 25): discussion about the s Action 2 of the Action Plan, contributions from the MoE ; Regional Stakeholders Workshop, 25.06. 2021 with ECO PLUS – Lower Austria – description of activities in Lower Austria on Monitoring of the LA Cluster Programme
2021, August	Inputs from Hungarian Ministry of Finance, responsible for performance assessment and monitoring of Hungarian clusters received and analysed
2021, September	Endorsement of the key policy maker

Costs

Costs are related only to personal costs of the team working on the development of the assessment and monitoring tool. The overall assignment is approximately 6 man-months, and the work is executed by 3 consultants (each in average 2 months)

Funding Sources

ERDF, OP Integrated Infrastructure via National Project Let's Innovate!

Monitoring and indicators

KPI:

- a) Assessment tool accepted, approved and in place (2021)
- b) New policy measures will be providing funding according the results of this assessment (earliest 2022-2023)

Annex: Letter of Endorsement

Place, Date: Bratislava, 26th November 2021

Name of the organisation: Slovak Business Agency

Signature and stamp of the organization:



Mgr. Martin Holák, PhD.
Director General





MINISTRY OF ECONOMY
OF THE SLOVAK REPUBLIC

January 10, 2022

Letter of Endorsement

To: Whom it may concern

Subject: **Endorsement for Action Plan INNO Industry - Improving innovation delivery of policies within 4.0 industry in Europe**

In my capacity as director of the Department of Innovation, Section of Competitiveness of the Ministry of Economy of the Slovak Republic, I confirm that the above national Action plan is in accordance with the government's national priorities in implementing goals for wider penetration and acceptance of Smart Industry (I4.0).

Accordingly, I am pleased to endorse the Action plan with support from the Interreg Europe program. I am confident that SBA will implement the Action plan in coordination with all relevant stakeholders in Slovakia for improvement of the Smart industry ecosystem.

Sincerely,



Martin Svoboda
Director

Department of Innovation