

# European Observatory for Clusters and Industrial Change



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## Selection as of 10 regions in industrial transition

The customised advice on modern cluster policy in support of industrial modernisation provided to the 10 regions in industrial transition is funded by the Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW), as part of the European Observatory for Clusters and Industrial Change (EOCIC). The regions were selected as a result of an open call for expression of interest, published and assessed by the Commission services. The Commission launched a first call for expression of interest on 29 September 2017 and, as a result of demand from regions, a second call was launched on 14 December 2017.<sup>1</sup>

The following regions were selected<sup>2</sup>:

- Cantabria (Spain)
- Centre Val de Loire (France)
- East & North Finland
- Hauts-de-France (France)
- Lithuania
- North-Middle Sweden
- Piemonte (Italy)
- Saxony (Germany)
- **Slovenia**
- Wallonia (Belgium)



The aim of the work being provided by the EOCIC to 10 regions in industrial transition is to define a set of actions in the form of a comprehensive strategy to foster regional economic transformation, identify collaboration and funding opportunities and connect with other regions in regional and cluster partnerships.

This pilot will help test new approaches to industrial transition and provide the European Commission with evidence to strengthen post-2020 policies and programmes.

The output of the first phase of the EOCIC advisory services was an assessment report, which summarises the key challenges of industrial modernisation for the region and the potential policy directions. The second phase of the EOCIC advisory services will build on this report to develop concrete policy proposals for each industrial transition region. DG GROW and the EOCIC are working closely with the Directorate-General for Regional and Urban Policy (DG REGIO) and the OECD to provide advice services for the pilot regions.

More information on the activities carried out by the EOCIC is available at the end of this report.

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<sup>1</sup> Details on the selection procedure are available at:

[https://ec.europa.eu/regional\\_policy/en/policy/themes/industrial-transition/](https://ec.europa.eu/regional_policy/en/policy/themes/industrial-transition/)

<sup>2</sup> 12 regions were initially selected for the overall process of the project on pilot regions in industrial transition, of which 10 then engaged with the project through to the final stages of the work carried out by the EOCIC.

# 1. Introduction

## 1.1. Aims and objectives of the exercise

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The aim of the work in Slovenia is to **support the national authority and stakeholders in defining actions that facilitate the industrial transformation of Slovenia through clusters**. In the case of Slovenia, the Slovenia S3 strategy<sup>3</sup> (also referred to as S4) with the nine SRIPs (Strategic Research and Innovation Partnerships)<sup>4</sup> is currently being implemented as the strategy for industrial transformation. SRIPs are at the core of the S3 strategy, and as national clusters and cluster policy they are instrumental in the country's industrial transformation<sup>5</sup>. As identified in the assessment report implementation of strategies can be seen as a weakness of the past. New strategies and policy measures have been developed replacing old ones, before these previous strategies and measures had been properly implemented and evaluated. The SRIP policy is deliberately addressing this vulnerability, since it is not a short-term support. It is investing in SRIPs as institutional and governance structures and it emphasises the importance of learning with, for instance, actions on cluster management skills development and monitoring of SRIPs. As relatively young clusters,<sup>6</sup> SRIPs (established in 2017) will also serve to steer the transformation process, and initiate and implement new strategies and actions after the support or programming period. The needs expressed by Slovenia in its application as a pilot region therefore did not refer to the development of a new strategy, but rather to more concrete actions supporting the implementation of the current strategy and structures. The EOCIC work was carried out in cooperation with the AMI<sup>7</sup> expert who was also funded by the European Commission.

This policy brief provides input into a “**managed industrial transition**” (Zuleeg et al, 2018)<sup>8</sup> through clusters, based on the insight that different clusters, regions and Member States across Europe are characterised by different assets, strengths and weaknesses, and that they face different obstacles and threats that need to be overcome. We therefore adopt a tailored approach that builds on existing resources and we place considerable emphasis on co-design and commitment from the variety of relevant stakeholders in the transition concerned.

This document builds on the assessment report to summarise the challenges, barriers and drivers to industrial modernisation in Slovenia, before outlining a set of actions to support the managed industrial transformation.

The report is based on extensive desk research, a number of face-to-face interviews, a study visit in Ljubljana (June 2018), a policy review meeting (November 2018) and insights from participating in a capacity building workshop for Slovenian Clusters/SRIPs (November 2018).

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<sup>3</sup> [http://www.svrk.gov.si/en/areas\\_of\\_work/slovenian\\_smart\\_specialisation\\_strategy\\_s4/](http://www.svrk.gov.si/en/areas_of_work/slovenian_smart_specialisation_strategy_s4/)

<sup>4</sup> [http://www.svrk.gov.si/en/areas\\_of\\_work/slovenian\\_smart\\_specialisation\\_strategy\\_s4/strategic\\_research\\_and\\_innovation\\_partnerships\\_srip\\_in\\_detail/](http://www.svrk.gov.si/en/areas_of_work/slovenian_smart_specialisation_strategy_s4/strategic_research_and_innovation_partnerships_srip_in_detail/)

<sup>5</sup> SRIPs are the new national clusters that will interchangeably be referred to as ‘SRIPs’ or ‘SRIP clusters’

<sup>6</sup> See the output paper of the 1<sup>st</sup> European Cluster Policy Forum where Member States representatives described the maturity of their cluster organisations and national cluster policy programmes.

<sup>7</sup> External experts contracted by DG REGIO to provide support to the pilot region. s in industrial transition.

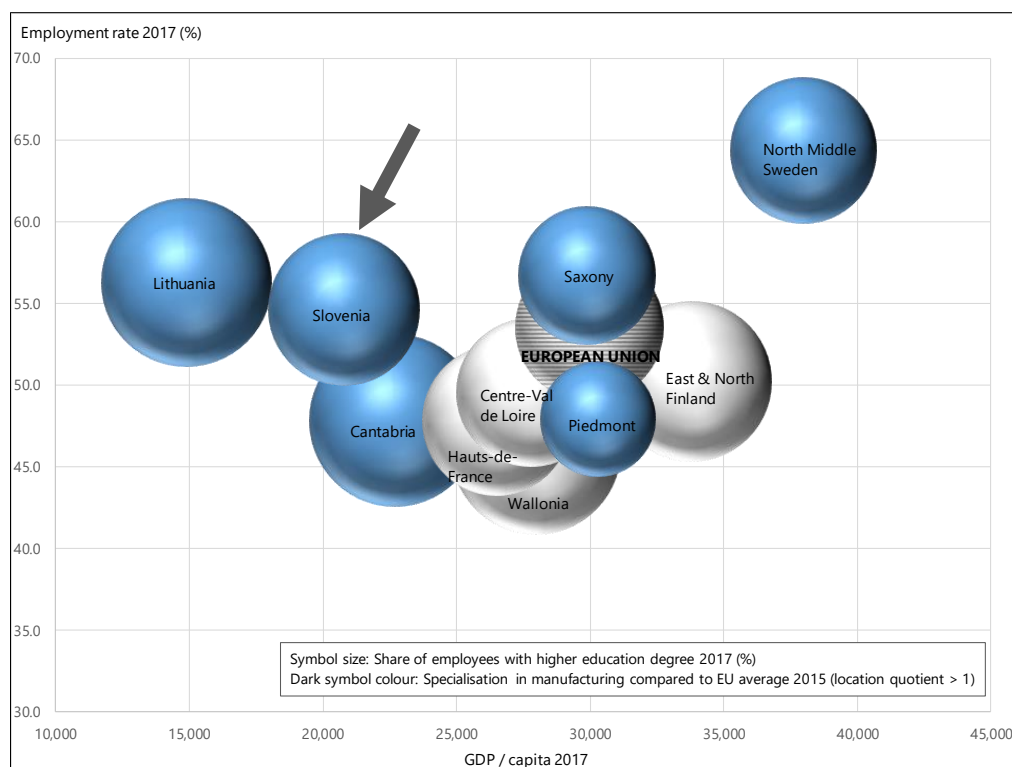
<sup>8</sup> See: Huguenot-Noël, R., Hunter, A., Pilati, M., Zuleeg (2018). *How do industrial transitions succeed? Transatlantic considerations on drivers for economic development*. European Policy Centre.  
[http://www.epc.eu/pub\\_details.php?cat\\_id=3&pub\\_id=8924](http://www.epc.eu/pub_details.php?cat_id=3&pub_id=8924)

## 1.2. Key economic and innovation indicators for the pilot region

In 2017, Slovenia had a gross domestic product (GDP) of EUR 20,800 per capita, which is below the EU level of EUR 30,000. Slovenia ranks ninth on this indicator among the pilot regions.

Figure 1 combines selected economic indicators for the ten pilot regions. It shows Slovenia's comparatively good position in terms of its employment rate; here, the pilot region ranks fourth behind North Middle Sweden, Saxony and Lithuania. With 35.7% of employees with a higher education degree, Slovenia ranks fifth among the pilot regions and has an above-average level of highly educated employees compared to the EU average (34.4%). In relation to the European Union, Slovenia is specialised in manufacturing and displays the highest location quotient of the pilot regions (1.4391).

*Figure 1: Selected economic data for the 10 pilot regions: GDP/ capita, Employment rate, Share of employees with higher education degree and Specialisation in manufacturing*

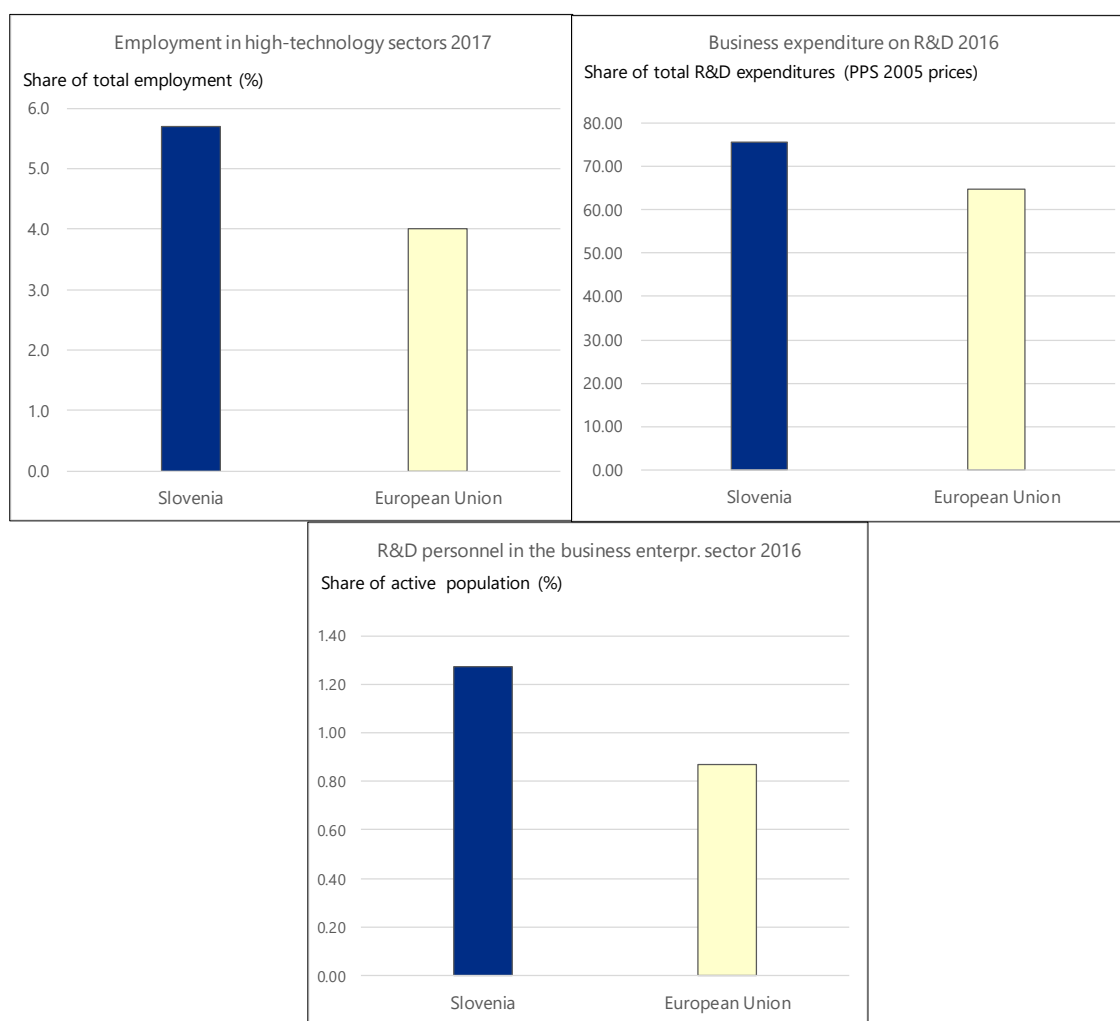


*Source: EOCIC, based on Eurostat data and own calculations*

Slovenia's share of employment in high-technology sectors (high-technology manufacturing and knowledge-intensive high-technology services) exceeds the European average, and the Slovenian business enterprise sector spends a higher percentage of total business expenditure on research and development activities than enterprises in the European Union as a whole. In addition, Slovenia's share of R&D personnel in the business sector exceeds the EU figure (figure 2).



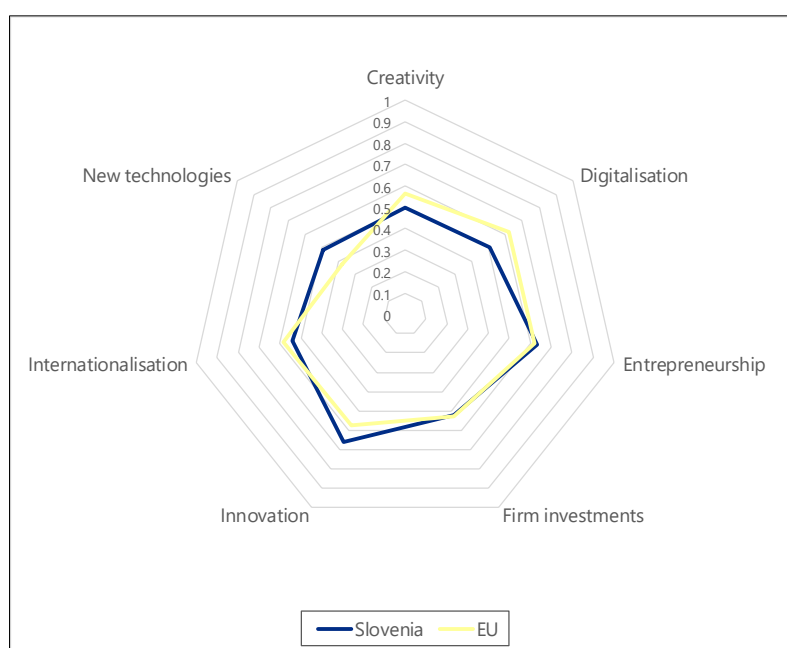
*Figure 2: Selected technological indicators for Slovenia*



*Source: EOCIC, based on Eurostat data and own calculations*

In order to provide insights into industrial modernisation, the European Observatory for Clusters and Industrial Change (EOCIC) provides composite indicators on seven dimensions: Evolution towards a more innovative regional economy; New and emerging technologies; Digitalisation; Firm investments; Internationalisation; Creativity; and Entrepreneurship. Each dimension is represented by a set of specific indicators, which are condensed to a composite indicator. Figure 3 presents the results for those seven dimensions in Slovenia. Slovenia achieves its highest scores on the innovation and entrepreneurship dimensions. The lowest score is displayed for new and emerging technologies, but the individual scores on the seven dimensions do not differ very much. Slovenia exceeds the EU scores on three dimensions: innovation, entrepreneurship and new technologies, and remains below the EU figure with respect to digitalisation, creativity, internationalisation – and, to a small extent, firm investments.

*Figure 3: Composite indicators for Industrial Change: Slovenia*

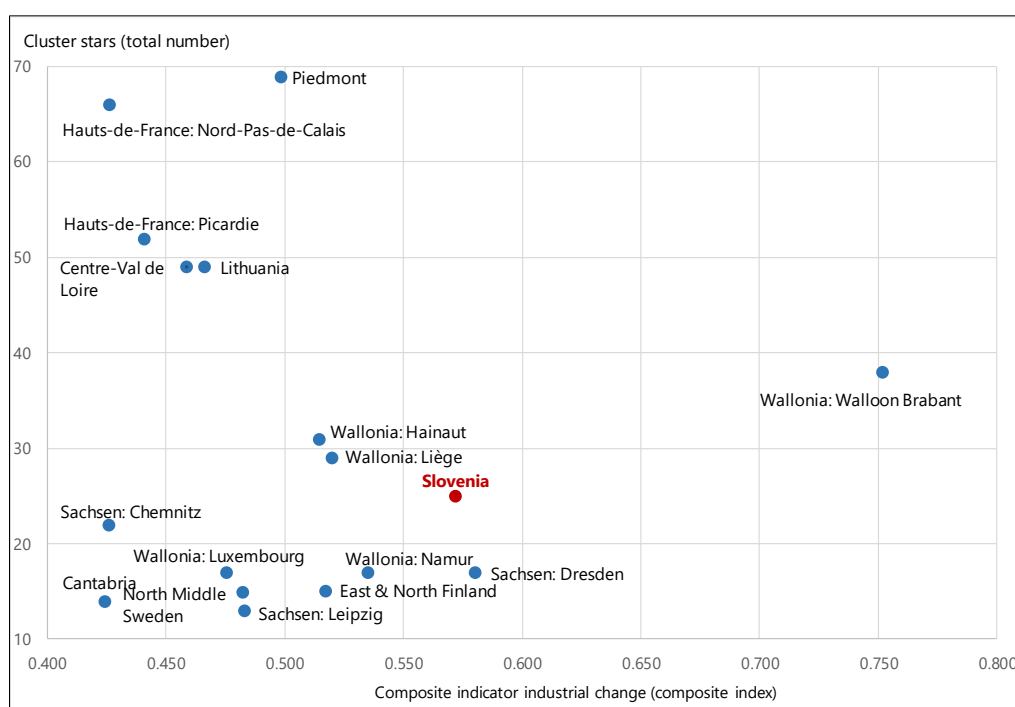


*Source: EOCIC, based on various data sources and own calculations*

Figure 4 shows the most recent total composite indices for industrial change and the total number of clusters stars in the pilot regions (NUTS2 level). The composite indices show industrial change in a range between 0.4 and 0.8, and the total number of cluster stars in a range between 10 and 70 in the 10 pilot regions. Five NUTS 2 regions have 45 or more cluster stars. Piemonte is the clear leader (69 stars). By contrast, various regions have 20 or fewer cluster stars – among them North-Middle Sweden (15 stars). Figure 4 also shows that the industrial change ranking is led by Walloon Brabant: on a scale of 0 to 1, this NUTS 2 region has a score of 0.751.

Mapping the pilot regions' industrial change and cluster stars reveals three different types of region: (1) high number of cluster stars, but moderate composite index of industrial change (below 0.5) (Piemonte, Nord-Pas-de-Calais, Picardie, Centre-Val de Loire, Lithuania), (2) regions with moderate figures for both indicators (below 35 cluster stars and composite indexes of industrial change below 0.6) (Hainaut, Liège, Slovenia, Dresden, Namur, East & North Finland, Leipzig, Luxembourg, North Middle Sweden, Cantabria, Chemnitz), and (3) Walloon Brabant (composite index of 0.75). In the second group, Hainaut, Liège and Slovenia stand out from the other regions due to the higher numbers of cluster stars. In part, this is also the case for Chemnitz, but it has a lower index for industrial change.

Figure 4: Composite indicator industrial change (total index) and cluster stars (total) for pilot regions



Source: EOCIC, based on various data sources and own calculations

## 2. Key challenges, barriers, and drivers of industrial modernisation in Slovenia

This chapter summarises the political, economic, socio-cultural and technological framework conditions in Slovenia that were set out in detail in the assessment report. The chapter then presents the key strengths, weaknesses, opportunities and threats that need to be considered in the development of strategic actions in Chapter 3. Clusters can play an important role in achieving a broad range of public policy and private (business) policy objectives. We focus on those that relate to industrial transformation and modernisation. We therefore also address the question: what challenges, barriers and drivers do Strategic Research and Innovation Partnerships (SRIPs), as the national clusters in Slovenia, face in industrial modernisation?

Slovenia's research and innovation governance framework and strategy has been addressed by the (S4) Slovenia Smart Specialisation Strategy<sup>9</sup>. At its core is a EUR 10 million programme 'SRIP – Strategic Research and Innovative Partnership'<sup>10</sup>. Each of the nine S4 priority domains had established a partnership by the end of 2016 following a spontaneous, not policy-driven, bottom-up initiative, recognising the need for cooperation and integration. This joint strategy building process in Slovenia was identified as one of Europe's best entrepreneurial discovery practices. The initiative also included an agreement on SRIP coordinators. The mission of S4 and the nine SRIP clusters is to facilitate Slovenia's transformation from a follower to a co-creator of global trends in identified niche areas. The SRIPs represent a modern triple helix governance model aimed at synergies among R&D, innovation and industrial modernisation initiatives. The governance of smart specialisation is entrusted to around 500 non-governmental stakeholders, thereby effectively empowering and strengthening Slovenia's innovation ecosystem.

The Assessment Report showed that the nine SRIP clusters have initiated an increase in cooperation among the members of these partnerships. This has resulted in many new initiatives and inter-cluster dynamics. Practical challenges at the current stage of implementation of this cluster policy framework include the skills and educational system, the cluster services development/business model, monitoring of SRIPs, and the assessment and training in management competences of what is recently assigned cluster management.

SRIPs are currently at the implementation phase. Action plans were agreed in the summer of 2017. Representatives of SRIPS (25 in total), academia, and the policy landscape attended the policy review meeting organised by the EOCIC in November 2018. The morning session centred on a peer review of how SRIPs should be monitored. The second part of the policy review meeting included a presentation by the EOCIC on the first conclusions from the Assessment Report, showing the current and potential development of S4 and its SRIP cluster policy for the industrial transition process of Slovenia. The focus in the afternoon meeting was on cluster management skills and training. The participants worked on potential solutions for tackling the major challenges for clusters in Slovenia during this implementation

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<sup>9</sup> [http://www.svrk.gov.si/en/areas\\_of\\_work/slovenian\\_smart\\_specialisation\\_strategy\\_s4/](http://www.svrk.gov.si/en/areas_of_work/slovenian_smart_specialisation_strategy_s4/)

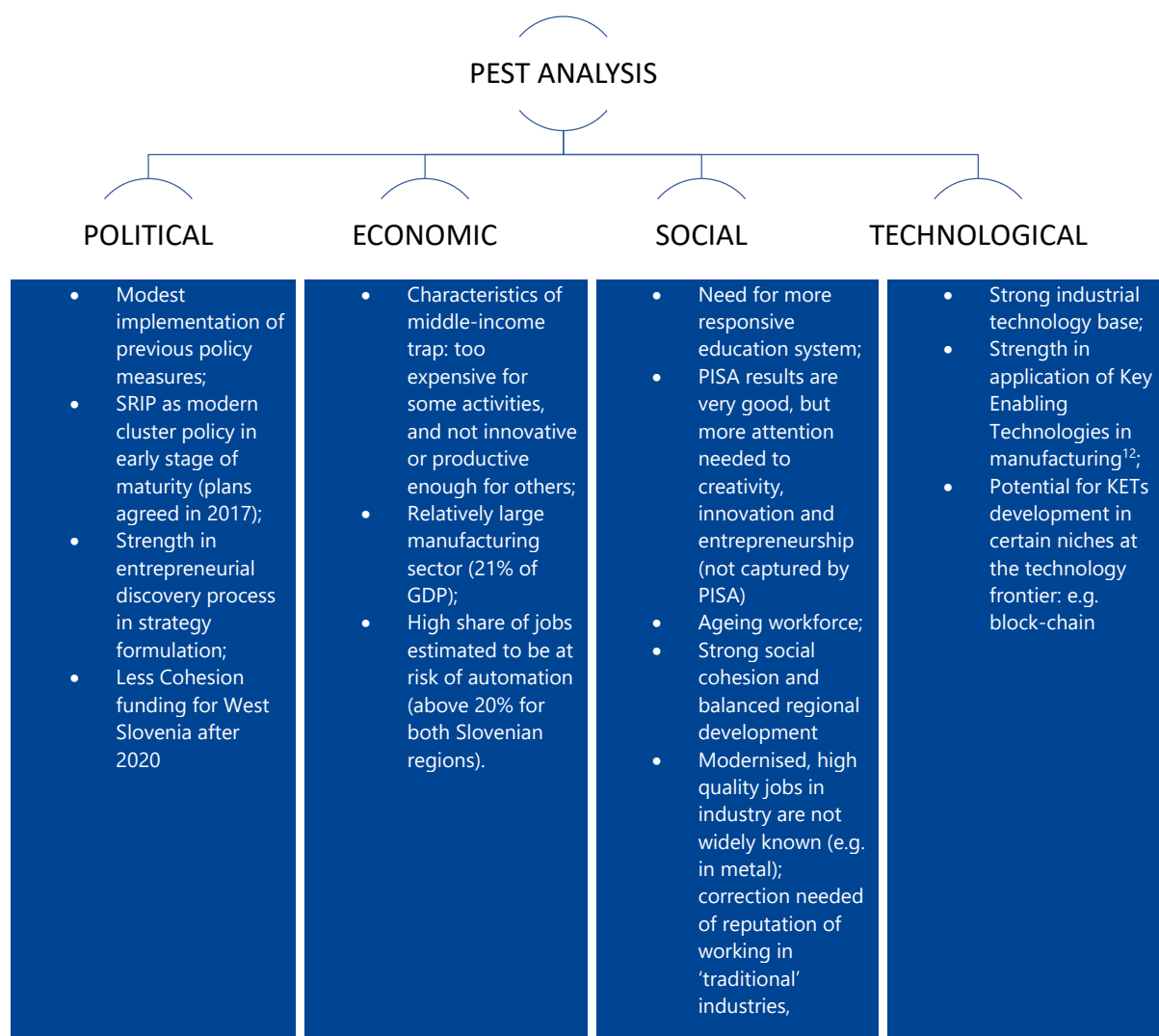
<sup>10</sup>

[http://www.svrk.gov.si/en/areas\\_of\\_work/slovenian\\_smart\\_specialisation\\_strategy\\_s4/strategic\\_research\\_and\\_innovation\\_partnerships\\_srip\\_in\\_detail/](http://www.svrk.gov.si/en/areas_of_work/slovenian_smart_specialisation_strategy_s4/strategic_research_and_innovation_partnerships_srip_in_detail/)

phase that resulted from the preliminary Assessment Report findings: namely, monitoring and evaluation (M&E), and competence training of SRIP cluster managers. Although the SRIPs are national partnerships, most cluster organisations are based in West Slovenia.

Figure 5 summarises the key **political, economic, socio-cultural and technological features, conditions and challenges of Slovenia**, as detailed in the assessment report. Many of the region's PEST (Political, Economic, Socio-cultural and Technological) features relate to the position of Slovenia as a country in a 'middle-income-trap' situation<sup>11</sup>, with an economic structure that has a relatively large share of manufacturing industries.

*Figure 5: The regional ecosystem and framework conditions of Slovenia (PEST analysis)*



<sup>11</sup> "being too expensive for some activities but not innovative or productive enough for others" (Iammarino et al. 2017, p.3);

[https://ec.europa.eu/regional\\_policy/sources/docgener/work/201707\\_regional\\_development\\_matters.pdf](https://ec.europa.eu/regional_policy/sources/docgener/work/201707_regional_development_matters.pdf).

<sup>12</sup> European Commission (2016) *An analysis of drivers, barriers and readiness factors of EU companies for adopting advanced manufacturing products and technologies*. Catalogue Number, ET-07-16-158-EN-N, European Commission, Brussels.

Table 1 details<sup>13</sup> the **strengths, weaknesses, opportunities and threats of industrial transition in Slovenia**. The country's strengths lie in a strong, stable innovation performance based on business R&D and application of technology in manufacturing. Opportunities for managed industrial transition are based on the emerging dynamics induced by the recently formed SRIP clusters.

*Table 1: Strengths, Weaknesses, Opportunities and Threats of industrial transition in Slovenia*

Strengths	Opportunities
<ul style="list-style-type: none"> <li>• Strong and stable innovation performance especially compared to other 'New Member States'</li> <li>• Strength in applying new technology in manufacturing</li> <li>• Sectoral strengths in nine domains of Slovenian S3 on which SRIPs have been organised</li> <li>• Improved coordination between government and other stakeholders</li> <li>• Promising first effects of SRIP on cooperation, trust and joint initiatives</li> <li>• Strength of West Slovenia in terms of concentration of public R&amp;D</li> <li>• Resilience in East Slovenia in terms of statistical clusters; start-ups and scale-ups</li> <li>• Early attention to monitoring of SRIPs</li> </ul>	<ul style="list-style-type: none"> <li>• In all domains of Slovenian S3</li> <li>• Cross-sector and cross-regional dynamics through collaboration across SRIPs</li> <li>• Improved international value chain positions</li> <li>• Overcoming investment barriers and infrastructure gaps with joint pilot and demonstration initiatives</li> <li>• Cross-regional (and international) strategic partnerships across the 4-Helix to overcome limitations of local demand and access to infrastructure and equipment which are lacking in one or both regions of Slovenia</li> <li>• On-the-job improvement of cluster management skills from SRIP-induced dynamics</li> <li>• Skills development through collaboration between SRIPs and Competence Centres for HR Development and the Career Platforms</li> </ul>
Weaknesses	Threats
<ul style="list-style-type: none"> <li>• Modest productivity</li> <li>• Modest position in KET patents</li> <li>• Growth held back by lack of investments</li> <li>• Limited local spillovers from public R&amp;D</li> <li>• Limited public budget to increase public R&amp;D investments</li> <li>• Sub-optimal funding landscape for pilot and demonstration initiatives for Industry 4.0 and industrial modernisation</li> <li>• Challenging reform of education system</li> <li>• Limited experience and training in cluster management skills</li> </ul>	<ul style="list-style-type: none"> <li>• Ageing population</li> <li>• Shortages of skilled labour in certain areas</li> <li>• Jobs at risk of automation</li> <li>• Less Cohesion policy funding for West Slovenia after 2020, which will be challenging for the industrial transformation</li> <li>• Development of new strategies before former strategies have been implemented</li> </ul>

**The SWOT and PEST analyses led to the formulation of three main challenges that need to be addressed:**

1. Improve policy learning at the implementation phase;
2. Development of skills, notably cluster management skills;

<sup>13</sup> For more quantitative support for the qualitative summary: see the assessment report.

3. Promote productivity, enhancing pilot and demonstration initiatives and infrastructures.

The next chapter outlines how these challenges can be addressed in a systemic, holistic way.

### 3. Proposed strategic actions to address the challenges

Addressing challenges in a systemic, holistic way, implies that actions or policy measures never only target single objectives with isolated instruments that are dedicated to merely one mode of industrial transformation or benefit merely one type of industrial transformation stakeholder. The good practice followed in Slovenia's entrepreneurial discovery process during the development stage of the current S4 strategy should inspire the search for synergies between initiatives in the current implementation phase, based on a similar entrepreneurial discovery involving relevant stakeholders (rather than scientific discovery).

In line with the new orientation of EU cluster policy towards partnerships among relevant programmes and policy measures that promote the use of clusters<sup>14</sup>, the next orientation after the implementation of the SRIP partnerships could be one of partnership among programmes aiming for tailored synergies among policy instruments, e.g. between instruments focussed on aspects such as internationalisation, skills development, research and innovation, entrepreneurship, and up-take of KETs. When clusters and cluster policy are used in this way, they contribute to improved working as a system of broad-based innovation and industrial modernisation at multiple levels of territorial, industrial, technological and societal challenges.

Figure 6 maps the proposed actions to promote industrial transformation through SRIPs against the challenges identified in the previous chapter. The main challenge for Slovenia's economy lies in enhancing the country's relatively moderate productivity. The general objective discussed in this briefing is industrial transformation through clusters. The characteristics of a 'middle income trap'<sup>15</sup>, together with the relatively large share of manufacturing industries, make it very relevant for Slovenia to increase its productivity by better, more intensive, and more widely diffused usage of existing technologies in existing industries. Leapfrogging to a situation at the technological frontier by getting rid of old industries and a quick-fix replacement with more productive industries emerging from new patents is not very realistic. Transformation takes time.

As modern cluster organisations, SRIP partnerships are set up with public support as organisations that play a key role in the strategy for industrial change, which aims at improving productivity (and the circular economy). As instruments for industrial transformation the nine SRIPs are in the implementation phase; they are maturing, gaining experience, and learning from it. Slovenia's policy makers also have to learn from this policy experiment, since cluster excellence and relevance can be neither designed behind the desk of a policy maker, nor discovered by a scientific experiment, nor copy-pasted from elsewhere. Monitoring and evaluation serves this policy learning and the policy intelligence gained can be used to steer the maturing process.

It is also difficult to tell in advance which cluster management skills are needed and which are lacking. Some general skills can be developed and taught in a classroom setting, but others will have to be

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<sup>14</sup> See the discussions at the European Cluster Policy Forum, e.g. the 3<sup>rd</sup> meeting:

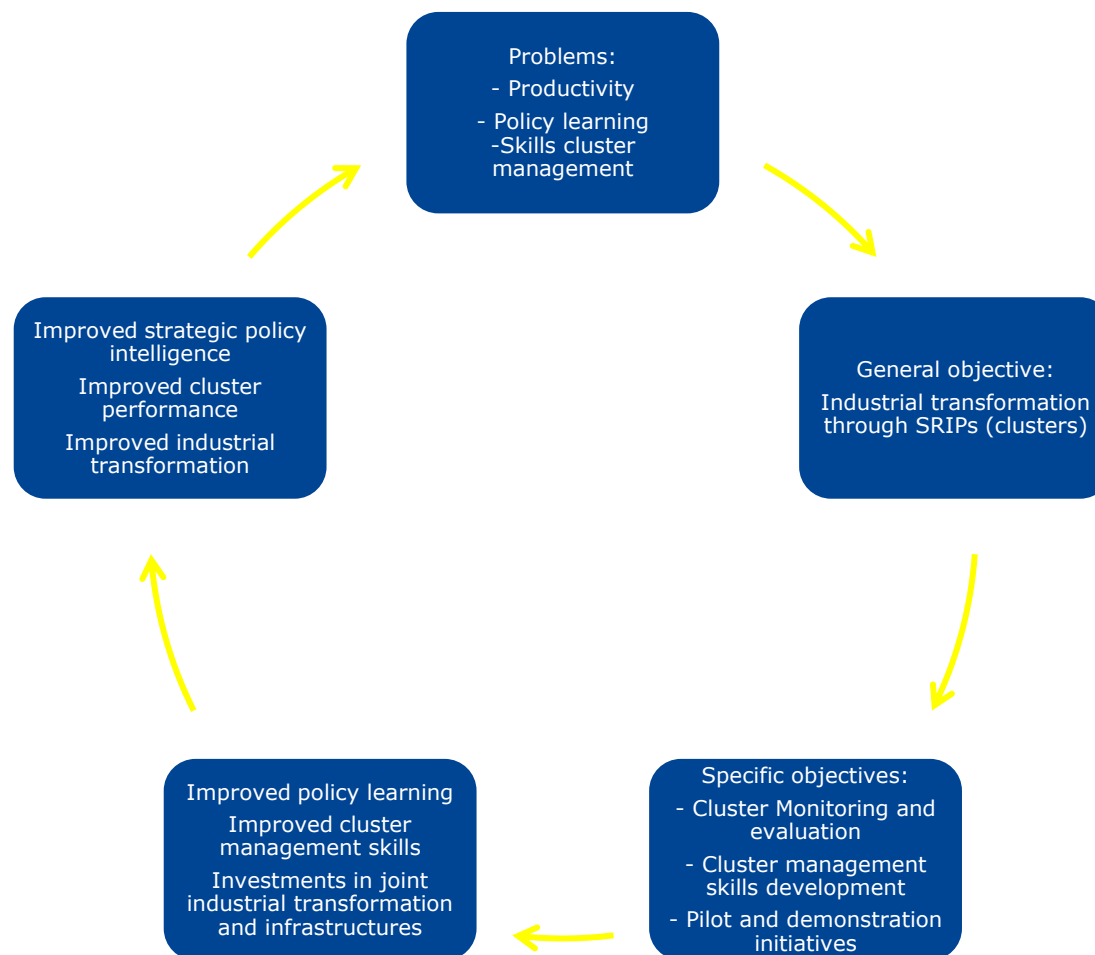
[http://ec.europa.eu/growth/content/third-european-cluster-policy-forum-improving-linkages-and-synergies-cluster-policy\\_en](http://ec.europa.eu/growth/content/third-european-cluster-policy-forum-improving-linkages-and-synergies-cluster-policy_en)

<sup>15</sup> "being too expensive for some activities but not innovative or productive enough for others." (Iamarino, Rodrigues-Pose & Storper 2017; p.3)



learned in practice. The need for some skills can be assessed ex-ante; others will emerge as the cluster organisations and industrial transformation (and the relevant strategies) evolve.

Figure 6: Overview of the actions promoting industrial modernisation through Slovenian SRIPs (clusters)



Source: EOCIC

The creation of modern clusters (supported by modern cluster policy) cuts across all dimensions of industrial transformation and **SRIPs, as modern clusters, will therefore be the key delivery mechanism for the strategy as a whole.**

Since co-design of joint initiatives is essential, the next chapter provides concrete, tailored actions to come to such co-designed initiatives.

Based on the literature and desk research by the EOCIC, a framework has been developed for assessing and addressing the need for cluster management competences based on good practices. In a study of approaches to improving the performance of cluster management organisations, Kergel et al. (2014, p.12) conclude that a focus on the specific needs of cluster management organisations is more important than a standardised assessment of existing competences. The following **success factors** have been identified for effective support services or training activities for cluster managers and staff:

- **High demand orientation:** the focus should be directly on what cluster management regards as a high need. This ensures active, motivated participation in the training and that the competences are applied directly to solving issues in daily operations.
- **Practice-oriented:** a practical rather than general, theoretical approach ensures that the training fits the actual demands of the management and cluster at large.
- **Training combined with experience exchange and networking:** training should offer the possibility of exchanging experiences with other clusters and cluster managers. In this way, the training also serves other networking activities and future opportunities for co-operation on other topics.
- **Communication principles:** the communication between the agency (that assesses training needs and implements the training) and cluster management (staff) should be based on a sufficient level of trust, openness and commitment from both sides, e.g. cluster management should not feel afraid or embarrassed to discuss their competence gaps/needs.

- **High demand orientation**

- **Practice-oriented**

- **Training combined with experience exchange and networking**

- **Communication principles**

## 4. Specific recommendations for policy intervention

### 4.1. Assess needs, and develop training and mentoring action for SRIPs management

#### 4.1.1. Description

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*Box-1 The Career Platform concept of the Competence Centres for HR Development*

**To simplify the underlying project idea:**

- companies from a specific sector establish a **partnership** managed by a project team, develop a **competency model**, identify the **skills gaps** and develop and implement **training programmes**.
- These programmes take the form either of **in-company training**, or of **external training** or are organized specifically for the partnership bringing together participants of the same profile from different companies of the partnership (e.g. technologists, managers, marketing specialists, etc.).

There are already institutions in Slovenia for developing and updating human resource competence in firms and sectors. The Competence Centres for Human Resource Development<sup>16</sup> have developed an approach called 'Career Platforms' (Box-1)<sup>17</sup>. Companies from a specific sector discuss and identify skills gaps and these are addressed by in-company and external training. A similar approach could be adapted to the development of cluster management skills: addressing 'the career of cluster managers' by first discussing among cluster managers which skills are needed and then addressing the gaps identified with training for cluster management. The approach is in line with the best practices described by Kergel (2014)<sup>18</sup>, which start by discussing training topics in the form of workshops, starting first with more general workshops with a broader range of participants.

It may be possible to address some skills gaps by drawing on the capabilities of specific partners in the relevant SRIP, e.g. a company, or expert from a university, institute, or government/agency. Other SRIPs might be good sources

to fill the gap as well. If Slovenia lacks the relevant competences or expertise, international partners may fulfil a role in 'external' training (e.g. partners in Vanguard initiatives<sup>19</sup> or relationships in Bavaria or other partners in the S3-4AlpsClusters<sup>20</sup>). A need for training may also call for a search for new international partnerships, and if the skill relates to a long-term need, it could be relevant to include the skill in the Slovenian education system curricula.

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<sup>16</sup> Most SRIPs include a Competence Centre that aims to develop the human resources relevant for the industries involved. See: <http://www.sklad-kadri.si/en/human-resources-development/competence-centers-for-human-resources-development/>

<sup>17</sup> Presentation by Gorazd Jenko on Human Resources for S4 and Industrial transformation at OECD workshop, Brussels, 15-16 May 2018

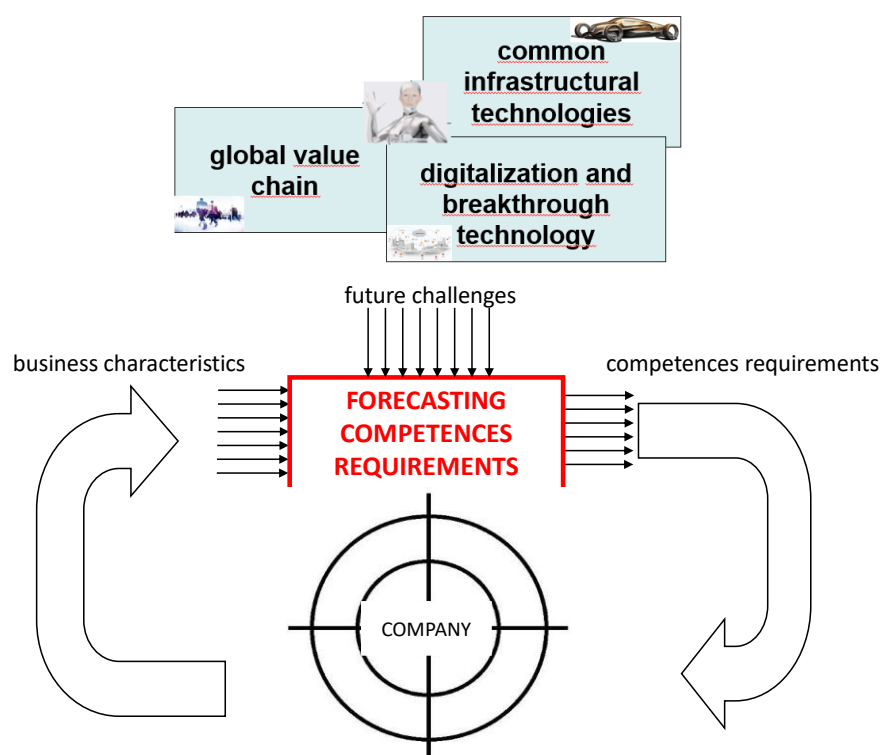
<sup>18</sup> Kergel, H., Köcker, G., & Nerger, M. (2014). *New approaches to improve the performance of cluster management organisations in Europe*. European Secretariat for Cluster Analysis (ESCA), Berlin.

<sup>19</sup> Slovenia has become partner in the S3 Vanguard Initiative. See: <https://www.s3vanguardinitiative.eu/>

<sup>20</sup> Slovenia and Bavaria have found and developed common interests during the S3-4AlpClusters project. See: <https://www.alpine-space.eu/projects/s3-4alpclusters/project-results/publication/s3-4alpclusters-final-publication---interactive.pdf>

The framework used to forecast workforce competence requirements for companies (Figure 7) can be applied to the competence requirements of the SRIP management organisations (Figure 8). The current characteristics and the future challenges of SRIPs define the competence requirements and need for training (including training in promotion of collaboration, in developing cluster services/infrastructures and business models, in international cooperation, and in working with competence centres for HR in developing training for companies' workforce). Some training needs may exist for all SRIP managers, but there will also be more SRIP-specific and individual needs. Both these needs will have to be identified ex-ante or 'discovered' (not through a scientific but an entrepreneurial discovery process).

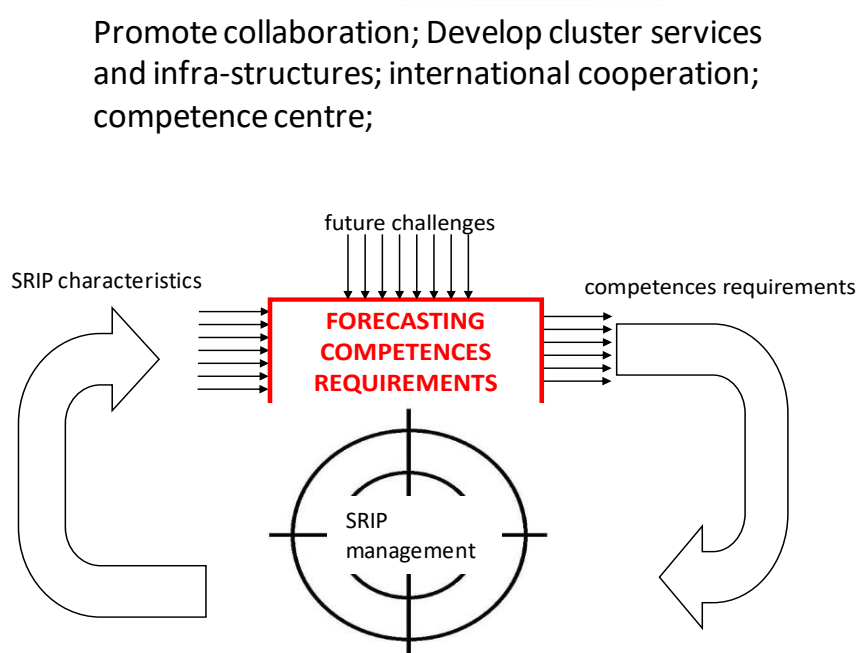
*Figure 7: Framework used to forecast competence requirements in general for S4 and industrial transformation*



*Source: Slide from presentation by Gorazd Jenko on Human Resources for S4 and Industrial transformation at OECD workshop, Brussels 15-16 May 2018*

Future challenges for cluster management not only come from trends in technological change, but from institutional and organisation changes as well. The main tasks and challenges for SRIP cluster managers are to promote collaboration and to develop cluster services (Figure 8).

Figure 8: Proposed application of framework to assess competence requirements for SRIP management



*Source: adapted from slide from presentation by Gorazd Jenko on Human Resources for S4 and Industrial transformation at OECD workshop, Brussels 15-16 May 2018*

From the literature, as well as the SRIP agreements, the EOCIC report identified the following broad main categories of competence needs (for either more basic or very specific training): Management; Marketing and communication; Business models; Collaboration for innovation; Future challenges (Table 2).

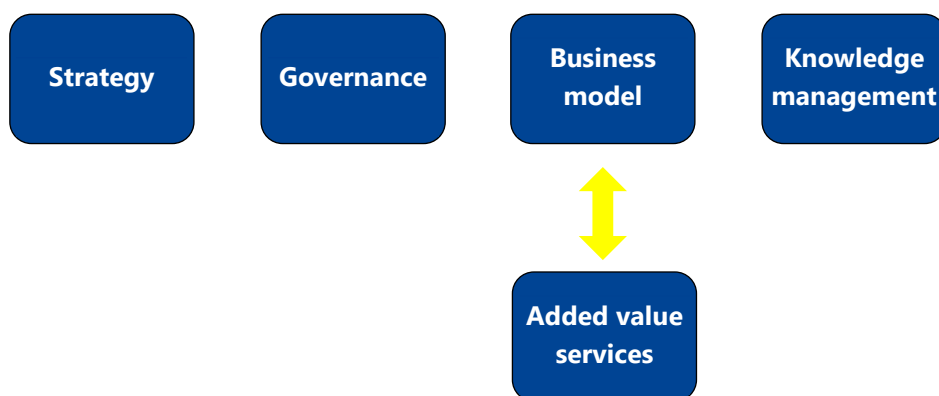
Table 2: Categories of competence needs, identified from literature

	Cluster Management	Cluster Marketing & Communication	Cluster Business Model	Cluster Collaboration for Innovation	Future Cluster Challenges
SRIPx					
SRIPy					
SRIPz					

*Source: Wintjes, R. (2018) SRIPs' cluster management competences; towards excellence. Document supporting Slovenia pilot on industrial transition. European Observatory for Clusters and Industrial Change.*  
[http://pmis.ijs.si/wp-content/uploads/2018/11/cluster-management-staff-capabilities-gap\\_6oct2018.docx](http://pmis.ijs.si/wp-content/uploads/2018/11/cluster-management-staff-capabilities-gap_6oct2018.docx).

At the policy review meeting the session by Professor Alain Tubiana, as an invited independent expert, identified skills for developing a cluster business model as the main priority for training cluster management. The business model is also the priority topic in the SRIP agreements and the priority objective to be monitored according to the Slovenian draft methodology.

Figure 9: Main cluster management issues for SRIPs



*Source: policy review meeting, November 2018*

One of the ideas emerging from the policy review meeting was to develop a mentoring scheme, in addition to training for cluster management.

The actual competence needs assessment of the SRIPs 'management started at the policy review meeting and continued at the 2<sup>nd</sup> training workshop 'Capacity Building for Slovenian Clusters/SRIPs' provided by i-perform from Norway<sup>21</sup>. The assessment of training needs was discussed during the joint peer review workshop in Turin. The suggestion was made of involving both Alain Tubiana and the Norwegian trainers in developing a mentoring scheme for SRIPs. The recommendation was also made of building on the results of the S3-4AlpsClusters experience and foreseen follow-up; for example, SRIPs' management could be mentored in developing new initiatives with the partners they have successfully worked with during this cross-regional cluster project, or in implementing services that were piloted within S3-4AlpsClusters.

#### 4.1.2. Benefits and Costs

The essence of clusters and cluster policy initiatives is searching for synergies and organising for complementarities. These situations of mutual benefit increase the complexity of modern clusters and partnerships, because it is not about a simplistic situation with two actors, or merely two types of stakeholder (e.g. public and private). The diversity in the type of benefits and costs makes it even more complex. The question of the costs to be met by relevant organisations' in-kind contributions and which costs could be covered by existing project funds or initiatives are a matter for discussion at the co-design workshop. In terms of benefits and costs, synergies must be considered between policy instruments and initiatives. This is in line with the recent orientation at EU level to promote partnerships between programmes in future Joint Cluster Initiatives in the next multiannual period, and it fits the Slovenian practice of developing complementarities in the use of ERDF funding (e.g. for SRIPs) and ESF funding (e.g. for the related Competence Centres for Human Resource Development). Several policy objectives and cluster initiatives can be combined, and designed and implemented, with potential synergies in mind.

The Innovation Express presented at the second European Cluster Policy Forum<sup>22</sup> is a good practice policy instrument in this respect. Training and mentoring by peers were part of the package, although

<sup>21</sup> Training workshop, 23 November 2018, see: <http://www.i-perform.no/cluster-training-slovenia/>

<sup>22</sup> [https://ec.europa.eu/growth/content/second-european-cluster-policy-forum-outcomes-future-cluster-labelling-cluster-mobility\\_en](https://ec.europa.eu/growth/content/second-european-cluster-policy-forum-outcomes-future-cluster-labelling-cluster-mobility_en)

the original priority was to promote internationalisation. Amongst others, it also served to develop cluster management skills. Drawing on such lessons, mentoring could be designed as a complementary element in other existing cluster initiatives: e.g. peers in the existing partnerships with foreign clusters could serve as mentors, or they could suggest cluster management trainers in the regions concerned. Training or mentoring could then take place as part of visits already planned. The benefits of 'mentoring-on-the-job' will likely include immediate benefits for the practical challenges the cluster managers are currently facing.

Although there may be benefits from cluster management training for any cluster at any time, the logic of the cost-benefit ratio mostly favours investment in training at an early phase in the life, or career, of a cluster manager. Since the SRIP clusters and cluster managers are at an early phase, the moment is right.

The intended benefits of training and mentoring SRIP cluster management staff consists of better and more sustainable cluster management, and subsequently in higher cluster performance. In more concrete terms, a sustainable business model is developed for the cluster organisation, which then generates wider benefits in terms of productivity in the cluster and region concerned.

The idea is that training comes first, and that mentoring serves to ensure that what has been taught is sustained over time and used in practice. Moreover, mentoring also serves to become more specific and to address individual needs in a tailor-made approach.

In terms of actual costs, it is difficult at this stage (before the needs are agreed and the instrument co-designed) to estimate the budget needed. However, a 'back-of-the-envelope' calculation for training on developing cluster services and business models for all nine clusters, assuming that two expert trainers provide a course of four times one full day of training, would cost up to EUR 25,000.

#### 4.1.3. Risks, obstacles and challenges

In terms of risks and challenges in the development and implementation of the cluster management training, the following are worth highlighting:

1. **Differences among SRIPs:** There are many differences among SRIPs. This means that not all SRIPs have the same need for capacity building. An important difference is in the maturity of the SRIPs. Some general training topics are likely to be relevant for all nine SRIPs. The plenary training sessions in 2018 in which all SRIPs participated<sup>23</sup> indeed showed that many topics are relevant for all. The topics covered in the assessment of ESCA cluster excellence labels (bronze, silver, gold)<sup>24</sup> as addressed at the relevant training workshops are an example. The commonalities can be addressed in training for several SRIPs at the same time. A difficulty arises in assessing and admitting where management of an individual SRIP needs more, and more specific, training. To mitigate the risk of overlooking such needs, it is important to have openness in communication (as underlined in section 3) and to have meetings with individual SRIPs. A mentoring scheme would appear to be the most relevant for going into greater depth on specific topics.
2. **Boundaries of policy domains between related organisations and programmes:** For example, the Career Platform concept developed by the Competence Centres for HR is relevant

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<sup>23</sup> Training workshop of 23rd November 2018, see: <http://www.i-perform.no/cluster-training-slovenia/>

<sup>24</sup> ESCA (2013) The Quality Label for Cluster Organisations (Cluster Management Excellence Label GOLD – Proven for Cluster Excellence) Criteria, Processes, Framework of Implementation. <https://www.cluster-analysis.org/gold-label-new>



for SRIPs, but the cooperation between these centres and SRIPs cuts across the domains of the relevant government organisations and ministries.

## 4.2. Develop Monitoring and Evaluation partnerships

### 4.2.1. Description

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The draft SRIP monitoring methodology was peer reviewed at the first session of the policy review meeting. It is suggested that further partnerships in monitoring and evaluation be developed in order to improve policy learning.

1. **Involve SRIP management in monitoring and evaluation of SRIPs:** In the next phases of the monitoring activities performed by the evaluation team, participation of the SRIPs themselves would strengthen the monitoring and evaluation activities. Participation of the SRIPs in monitoring and evaluation would better serve the SRIPs and their members in drawing lessons from the past. Moreover, participation of SRIPs in the monitoring activities would benefit the evaluation team in collecting relevant indicator data. For example, the SRIP clusters are engaging in evaluation of cluster management excellence in order to obtain a bronze, silver or gold label. The indicator information used by ESCA (2013) to assess the quality of the applying SRIPs would also be interesting for the monitoring of SRIPs by the Slovenian evaluation team. The monitoring and evaluation activities (of both the SRIP management and the evaluation team) would also benefit from satisfaction surveys amongst the members of the SRIPs.
2. **Continuation of international peer review with other countries and regions in industrial transition:** This could not only improve the monitoring and evaluation methods, but in addition promote cross-border policy learning from practices elsewhere. For example, inviting a peer reviewer from a partner region with similar challenges in industrial transition could promote the exchange of relevant good policy practices between the regions concerned.
3. **Extend the monitoring and evaluation of SRIPS to the S3 strategy:** Peer regions or countries with a similar interest in monitoring and evaluation could be interesting partners in this respect. The S3-Innovation Model developed and tested during Slovenia's involvement in S3-4AlpClusters<sup>25</sup> would provide a valuable basis for extending the evaluation of SRIPs to the evaluation of Slovenia's S3 strategy.

### 4.2.2. Benefits and Costs

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The more inclusive the M&E (Monitoring & Evaluation) activities, the more the benefits in terms of policy learning for the stakeholders and the less the joint costs. As argued at the peer review of the draft methodology for monitoring SRIP clusters, monitoring and evaluation can serve more purposes than merely the justification of government funding. The insights gained from joint monitoring and evaluation can also benefit others involved in the partnerships, such as SRIP management and SRIP members. In terms of costs, the administrative burden imposed on SRIPs and cluster members in providing indicator information should also be considered. This is another argument for involving SRIPs' management in the design and implementation of monitoring and evaluation of SRIPs.

A similar cost-benefit argument applies to the proposed continuation of international peer review. Combining existing or planned international visits to international partner clusters and regions international peer review could not only save travel costs, but could also promote cross-border policy

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<sup>25</sup><https://www.alpine-space.eu/projects/s3-4alpclusters/project-results/publication/s3-4alpclusters-final-publication---interactive.pdf>

learning. The review and policy learning is likely to be more relevant where a peer reviewer comes from an international partner region or cluster than if a peer-review partner is chosen randomly. Moreover, investments in previous networking are also likely to reduce the costs of continued networking. Thus, working with partners from the S3-4AlpClusters would reduce the costs.

The practical cost of the proposed international S3 Monitoring and Evaluation partnership (or rather the estimated costs of kick-starting the envisaged development) involves the costs of organising meetings between a selection of Slovenian and foreign M&E experts, and government experts. Three one-day meetings involving experts from three countries is estimated to cost EUR 15,000.

#### 4.2.3. Risks, obstacles and challenges

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Key risks and obstacles in widening the monitoring and evaluation activities relate to the differences in the perspective of the additional actors included. Partnership with a totally different region, with a totally different S3 strategy and transition challenge, can be costly and these differences can also the potential benefits being realised. As with other international cluster partnerships, selecting appropriate partners is an important challenge.

An additional risk relates to the purpose of monitoring and evaluation. For instance, politicians and policy makers may not really be interested in policy learning from previous policy actions, or from involving peers from other countries. Therefore, an important challenge in monitoring and evaluation partnerships is to develop openness and trust before partners can serve as a 'critical friend' to each other.

## 5. Roadmap and action plan with activities, timeframe and actors

The table below summarises the actions, their timing and the relevant action owner.

*Table 3: Action plan*

Action	Timing of the action	Owner of the action
<b>Develop cluster management training and mentoring</b>		
Ideas from existing practices, literature review <sup>26</sup>	October 2018	EOCIC, report diffused together with policy review invitation
Assessment of training needs at policy review meeting	November 2018	EOCIC
Training SRIPs, Workshop 1 & 2 (attended by EOCIC) <sup>27</sup>	October and November 2018	<a href="http://www.i-perform.no">www.i-perform.no</a>
Co-design mentoring scheme at workshop with stakeholders and experts	To be decided	GODCP <sup>28</sup>
<b>Monitoring and Evaluation partnership</b>		
Peer review of draft monitoring methodology at policy review meeting	November 2019	EOCIC
Search for S3 and cluster M&E peers	April 2019 (at joint peer review Turin)	GODCP and evaluation team
Exchange between evaluation teams	To be decided	Slovenian evaluation team
International peer reviews, invited evaluators	To be decided	Slovenian evaluation team
<b>Kick-starting high impact pilot and demonstration initiative (detailed by AMI expert)</b>		

<sup>26</sup> Wintjes, R. (2018) SRIP's cluster management competences; towards excellence. Document supporting Slovenia pilot on industrial transition. European Observatory for Clusters and Industrial Change. [http://pmis.ijs.si/wp-content/uploads/2018/11/cluster-management-staff-capabilities-gap\\_6oct2018.docx](http://pmis.ijs.si/wp-content/uploads/2018/11/cluster-management-staff-capabilities-gap_6oct2018.docx).

<sup>27</sup> <http://www.i-perform.no/cluster-training-slovenia/>

<sup>28</sup> Government Office for Development and European Cohesion Policy

# European Observatory for Clusters and Industrial Change

The European Observatory for Clusters and Industrial Change (#EOCIC) is an initiative of the European Commission's Internal Market, Industry, Entrepreneurship and SMEs Directorate-General. The Observatory provides a single access point for statistical information, analysis and mapping of clusters and cluster policy in Europe, aimed at European, national, regional and local policy-makers, as well as cluster managers and representatives of SME intermediaries.



The aim of the Observatory is to help Europe's regions and countries design better and more evidence-based cluster policies and initiatives that help countries participating in the COSME programme to:

- develop world-class clusters with competitive industrial value chains that cut across sectors;
- support Industrial modernisation;
- foster Entrepreneurship in emerging industries with growth potential;
- improve SMEs' access to clusters and internationalisation activities; and
- enable more strategic inter-regional collaboration and investments in the implementation of smart specialisation strategies.

In order to address these goals, the Observatory provides a Europe-wide comparative cluster mapping with sectoral and cross-sectoral statistical analysis of the geographical concentration of economic activities and performance, made available on the website of the European Cluster Collaboration Platform (ECCP)<sup>29</sup>. The Observatory provides the following

services:

- **Bi-annual "European Panorama of Clusters and Industrial Change"** that analyses cluster strengths and development trends across 51 cluster sectors and 10 emerging industries, and investigates the linkages between clusters and industrial change, entrepreneurship, growth, innovation, internationalisation and economic development;
- **"Cluster and Industrial Transformation Trends Report"** which investigates the transformation of clusters, new specialisation patterns and emerging industries;
- **Cluster policy mapping** in European countries and regions as well as in selected non-European countries;
- **"Regional Innovation system Scoreboard for Clusters and Industrial Change"** that identifies and captures favourable framework conditions for industrial change, innovation, entrepreneurship and cluster development;

<sup>29</sup> European Cluster Collaboration Platform, *Official Website*. Available at: <https://www.clustercollaboration.eu/>.

- **Updated European Service Innovation Scoreboard**<sup>30</sup>, that provides scorecards on service innovation for European regions;
- **"European Stress Test for Cluster Policy"**, including a self-assessment tool targeted at cross-sectoral collaboration, innovation and entrepreneurship with a view to boosting industrial change;
- **Customised advisory support services** to twelve selected model demonstrator regions, including expert analysis, regional survey and benchmarking report, peer-review meeting, and policy briefings in support of industrial modernisation;
- **Advisory support service to European Strategic Cluster Partnerships**, in order to support networking between the partnerships and to support exchanges of successful practices for cross-regional collaborations and joint innovation investments;
- **Smart Guides** for cluster policy monitoring and evaluation, and for entrepreneurship support through clusters that provide guidance for policy-makers; and
- **Brings together Europe's cluster policy-makers and stakeholders** at four European Cluster Policy Forum events, European Cluster Days, and at the European Cluster Conference in 2019 in order to facilitate high-level cluster policy dialogues, exchanges with experts and mutual cluster policy learning. Two European Cluster Policy Forums took place in February and April 2018, and the European Cluster Conference is scheduled for 14 to 16 May 2019 in Bucharest (Romania).
- Online presentations and publications, discussion papers, newsletters, videos and further promotional material accompany and support information exchanges and policy learning on cluster development, cluster policies and industrial change.

More information about the European Observatory for Clusters and Industrial Change is available at: <https://www.clustercollaboration.eu/eu-initiatives/european-cluster-observatory>.

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<sup>30</sup> Previous versions for 2014 and 2015 were developed by the European Service Innovation Centre (ESIC), see [http://ec.europa.eu/growth/tools-databases/esic/index\\_en.htm](http://ec.europa.eu/growth/tools-databases/esic/index_en.htm).

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