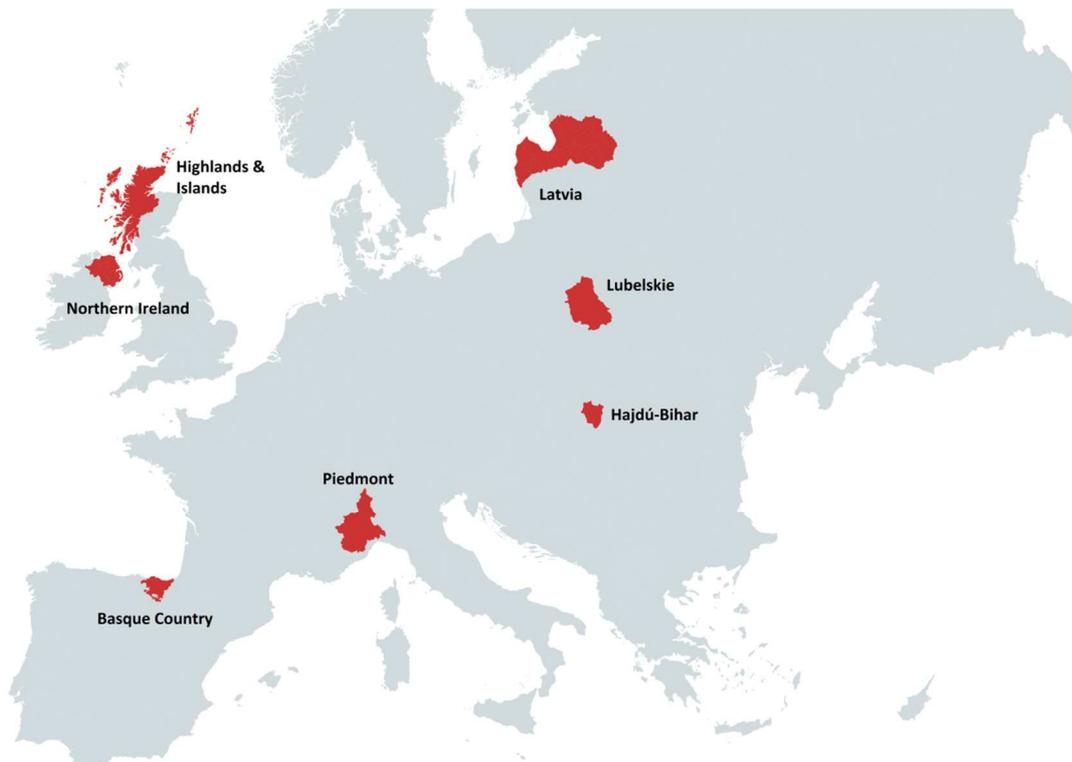


# CLUSTERS3 Leveraging Cluster Policies for Successful Implementation of RIS3

*Policy Learning Document #2*

## *PEER REVIEWS Summary*



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## CLUSTERS3 PROJECT PARTNERSHIP

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Number	Organisation
1-Lead Partner	SPRI - Society for Competitive Transformation (Business Development Agency of the Basque Government) – ES
2-Project Partner	Tecnalia Research & Innovation Foundation – ES
3-Project Partner	Lubelskie Voivodeship – PL
4-Project Partner	Piedmont Region – IT
5-Project Partner	Ministry of Economics of the Republic of Latvia - LV
6-Project Partner	Hajdú-Bihar County Council - HU
7-Project Partner	Highlands and Islands Enterprise - UK
8-Project Partner	Invest Northern Ireland - UK
9-Advisory Partner	TCI Network-The Competitiveness Institute – ES
10-Project Partner	Department for the Economy - UK





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## Introduction

In the framework of the INTERREG project *CLUSTERS3 Leveraging Cluster Policies for Successful Implementation of RIS3*, 9 regional and national authorities have joined forces to learn, understand and share experiences in the design, implementation and monitoring of their cluster policies and smart specialization strategies. They represent considerable diversity of regional contexts and therefore provide an excellent basis for mutual learning. This learning process will lead to the development of action plans and ultimately to the upgrading of cluster policies and to a better RIS3 implementation.

The project is structured in two phases. In the first phase the focus is on exchange of knowledge on cluster policy and RIS3 by means of policy learning events, policy learning documents, identification of good practices and conducting peer reviews. In the second phase action plans will be developed and implemented, leading to the application of learning in real policy settings.

### Peer-reviews

In this context, within the first phase of the project one of the key activities to learn and exchange experiences and knowledge on cluster policy and RIS3 has been “peer-review” exercises. The aim of the peer review exercises was to complement self-assessment processes conducted by partner regions with in-depth peer review visits. The peer review visits (and subsequent report-writing) were conducted during between April and July 2017 in 6 partner regions: Basque Country, Hajdu Bihar, Highlands and Islands, Northern Ireland, Latvia and Lubelskie. Each peer review was conducted by an expert from another partner region alongside two international experts. TCI Network oversaw the selection process of international experts and ensured a consistent methodology aligned with the overall project themes, objectives and earlier documents (in particular the SWOT analysis conducted in the first project policy learning document). Annex 1 contains details of each visit, including the experts involved in each.

### Main objectives

The aim of this second project policy learning document is to synthesise the main findings from the six peer-review exercises, and provide a summary of the main learning points.

### Structure

The policy learning document summarises the main conclusions and recommendations that have been given to the partner regions as a result of the peer-review exercises. These findings are ordered around the four main themes used to structure the SWOT analysis of the first policy learning document:

- I. Cluster Policy Background
- II. Cluster Organization Ecosystem
- III. Cluster Policy Monitoring and Evaluation
- IV. Territorial Regional Smart Specialization Strategies blended with Cluster policy (RIS3 and Cluster policy).

The analysis of this document is organised in two main sections:

**Section 1** provides a general overview on the findings for each of the partner regions. It also includes the direct impressions (in boxes) of the international experts and cluster policy-makers involved in the peer reviews of each of the partner regions.

**Section 2** provides a synthesis of the main recommendations across the peer review exercises.

Key general messages are then drawn out in the **conclusions**.

## 1. General overview: partner regions' specific observations

In this section the aim is to illustrate and summarize the partner regions' specific observations presented in the peer reviews, drawing directly on the reports provided by the international experts following the peer review exercise and following a homogenous structure in line with the first policy learning document.<sup>1</sup>

### Basque Country (BC)

The Basque Country is a highly industrialized European region. Significant advancement in industrial production has been achieved in a range of sectors, including advanced machinery, automotive, aeronautics, energy, and transport (rail) equipment. It is the only Spanish region to figure amongst the strong innovators (a group of 60 regions with performance between 90% and 120% of the EU average) in the Regional Innovation Scoreboard 2017. While it is ahead of all other Spanish regions, the Basque Country's performance is far from the EU's innovation leaders.

The InnoBasque Innovation Report 2016<sup>2</sup> notes that one of the issues hindering the leap towards innovation leaders is a weaker capacity and performance in non-technological innovation (marketing, organisational innovation, design, software and training), and a consequent lower contribution of innovation to productivity. Moreover, there is a possible overemphasis on business co-operation of a scientific-technological nature versus co-operation of a 'doing, using and interacting' type, particularly amongst smaller firms.

Therefore, the Basque economy, while relatively strong, faces several challenges. Central among them the risk of a growing divide between medium-to-large internationally competitive firms and a second tier of small-to-medium lower tech firms, and the need to induce an upward shift in value creation and to improve the relative position of Basque firms in global value chains, have become increasingly pressing priorities.

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<sup>1</sup> The partner regions are presented in the alphabetic order.

<sup>2</sup> <http://www.innobasque.eus/descargas/descargar.php?file=2548>

### ***(i) Cluster Policy Background***

The Basque Country has one of the longest histories of developing, implementing, evaluating and adapting/updating cluster policy in Europe (and, indeed, globally). Cluster policy is overseen by the Basque Government's department of economic development and infrastructures (DEDI) and (since 2013) implemented by SPRI – the Basque Business Development agency which is responsible for day-to-day management of both the cluster programme and several related funding or support (advisory, etc.) measures. The implementation of the cluster policy in the field is done by cluster organizations / cluster associations. These institutions have been gradually established since the beginning of the cluster policy and play a central role in bridging policy and business levels.

At the same time, cluster policy in the Basque Country is only one of many 'vertical' government policies, where cross-policy coordination might have been and will be critical to ensure the overall success of the policy mix. As an example, given the relative lag in non-technological innovation, the support of programmes such as INNOBIDEAK (which is implemented by SPRI) could be expected to play a role in improving strategic management and organisational innovation. Following the peer-reviews it has been stressed that while these programmes in parallel are able to support the cluster organisations in developing joint actions with their members, there is a need for more resources to be provided to cluster policy to directly intervene in support of cluster strategies. This approach is considered to be highly realistic, as in terms of the geographical dimension, the Basque Country's relatively high autonomy means that it has capacity to develop a distinctive policy mix in support of clusters that is ahead of the curve in the Spanish context. Plus, it has been noted that more resources could be provided to cluster policy to directly intervene in support of cluster strategies

Meanwhile, some of the latest challenges are related to the recent push for cross-cluster co-operation and 'scaling-up' of clusters. These are not met with universal enthusiasm, or at least may require an adjustment of practice. According to the peer review cluster managers note that for the smaller and weaker clusters it is not easy to mobilise members to get involved in cross-cluster activities. In this context an option could be to adopt rather, an approach closer related to building a value chain; rather than a 'sectoral cluster' the cluster can represent a group of companies that covers the full range of business service and manufacturing activities.

### ***(ii) Cluster Organization Ecosystem***

The Basque Country has a well-established cluster landscape and a well-balanced regional cluster portfolio. The central instrument for the development of clusters in the Basque Country are cluster organisations / associations, that have been institutionalized and evolved in their organization and operation since the beginning of the cluster policy, rendering them well-embedded in the regional innovation system. There are 17 cluster organizations (dated 2017), and a good interaction between cluster organizations and the cluster policy.

These cluster organizations are not only promoted from the public sector but are accepted as important tools by enterprises. Therefore, cluster organisations can play a dual role of disseminating information on the support available to their members and coordinating joint projects among cluster members.

These cluster organizations have well-formulated organizational structures and a good mix of financial resources. They also offer a range of services that could be further expanded in coming years.

In this frame, the main common forthcoming challenges of Basque cluster organizations are upgrading their management excellence and increasing their international visibility. At the same time there are other challenges that are cluster specific.

### *(iii) Cluster Policy Monitoring and Evaluation*

Monitoring and evaluation has been done in the Basque Country already for several years, recognising its importance as an instrument for learning and adjusting the cluster policy to the territorial conditions. Conducting and performing evaluation and monitoring have been feasible due to internal interest as well as the existence of a good scientific knowledge base, through means of research and academic institutions in the Basque Country.

There is room for improvement in monitoring and evaluation of the cluster policy with regards specific indicators related to RIS3 objectives. Moreover, alongside the medium- and long- term KPIs currently in use, there is potential scope to enhance indicators focused on the day-to-day management of cluster organisations.

### *(iv) RIS3 and Cluster policy*

The Basque Country has a well formulated RIS3 strategy, where cluster policy as well as cluster associations are clearly connected and aligned. The Basque approach to RIS3 has been based on a strong involvement of cluster organisations, notably at the stage of ‘deployment’ of the selected priorities by the involvement of cluster organisations and leading companies in the development of action plans and the identification and design of collaborative projects. Both the cluster policy and the RIS3 are aimed at encouraging economic growth and development. The RIS3 framework seeks to facilitate an ‘entrepreneurial discovery process’ that should optimise ‘related variety’ to generate “transformational change” over time. However, with the cluster policy there is a risk of following existing inertias and generating a ‘lock-in’ trajectory if there is not a continual evaluation and adaptation of the policy to evolving challenges.

However not all RIS3 priorities are as viewed as ‘logical’ nor totally aligned with cluster strategy priorities. According to the peer-review, one issue is how the RIS3 delivers as a policy at the end of the process of development of collaborative projects and initiatives. Beyond that, the need for support for adjusting regulatory or legislative frameworks to help unleash innovation, and the difficulties to develop co-operation on R&D and technological development that allows a ‘value chain’ approach has been illustrated. There is also a question around whether funding instruments are sufficient for the ambition of RIS3 to support longer-term cross-cluster collaboration and to motivate smaller companies to engage, or whether there is a need for more specific instruments either within the cluster policy or innovation policies.

To conclude, it is likely still too early to draw a definitive conclusion on the impact of RIS3 and related cluster policy on cluster organisations. However, it has fostered a shift in cluster managers’ efforts towards a stronger emphasis on collaborative approaches both within the clusters and at a cross-cluster

level. The RIS3 can be viewed as a focusing device that encourages mature clusters to move out of their comfort zones of ‘providing services to members’ and that supports the emergence of new clusters of activities. To this end, there is a need for continual reflection about whether the cluster policy strikes the right balance between the mission of supporting competitiveness through technology, innovation, internationalisation and talent and the more recent prioritisation and strategic cross-clustering issues that are important for an effective RIS3.

## IMPRESSIONS (BASED ON VIDEO INTERVIEWS CONDUCTED DURING THE PEER REVIEW PROCESS)

### International experts:

*Gerd Meier zu Köcker: “During peer-review in the Basque Country we had a number of interesting discussions and learning session. One of the key messages I took with me is that in the Basque Country there is a long and sustainable cluster policy since many years; with clear cluster landscape with good cluster management. The region has a great condition to turn RIS3 of the Basque Country into the practice via adapting the potential of the Basque cluster policy with the upcoming regional challenges. There is a close communication between the policy level, implementation and cluster management and business, which should facilitate this implementation, and we are very confident that is going to succeed in the Basque region”.*

*Alasdair Reid: “It has been very exciting and interesting peer-review visit to the Basque country, where I’ve been able to learn in depth with the potentials of the cluster managers, people from the government, different agencies and companies. We have seen clusters on different levels of their life-cycle, from emerging to already very mature ones. We also looked at how clusters support smart specialization, I think there is several interesting examples, where clusters are well contributing to the policy, but also where the priorities of the smart specialization strategies are helping clusters re-shape the cluster and stimulate the development of the cross-cluster activity to happen. We heard interesting from opportunities in terms of exports and grabbing experience from national, European and international levels. We have given some recommendations, which will feed well into the existing cluster policy”.*

### Policy maker/implementation:

*Juan Domingo Olabarri: “After 25 years of the cluster policy in the Basque Country we are now involved in the revision of the policy. That’s why this peer review exercise exceptionally well fits very well with this policy cycle. Further added value of this exercise is the possibility to put in value the ideas and experiences from the experts in the practice. Beyond that, another value of the peer-review is that international experts have brought us fresh and new ideas from all over the world, which helped to contrast and contribute to our own practices. TCI experience has been very valuable to carry this experience”.*

## Hajdú-Bihar (HB)

Hungary is going through a period of radical political change, which is also impacting a number of regional / industrial / innovation policies. One of the main changes is the absorption of these responsibilities at the regional / county-level.

Hajdú-Bihar is a region with a mix of, on the one side, the relatively large city of Debrecen (2<sup>nd</sup> largest in Hungary) and, on the other side, a rural area that is dominated by agriculture. The region is a “moderate innovator” and the ranking is stable in the Regional Innovation Scoreboard 2017. The main strengths are: exports of medium and high-tech products, non-R&D innovation expenditures, and Business R&D expenditures.

Hajdú-Bihar is in 3<sup>rd</sup> place from the 19 counties in Hungary in terms of R&D expenditures. The number of industrial parks and facilities are underutilized. Facilities around Debrecen are better performing, with high occupancy rate. The currently operating incubators mainly attract start-up enterprises, and on other hand there is a lack of business incubators that could actually support technology transfer processes and help the technology development of small and medium enterprises.

### *(i) Cluster Policy Background*

The current cluster policy is built on previous experience in the design and implementation of cluster policy. Unfortunately, experience with the previous cluster programme is not sufficiently good.

It is considered that the earlier cluster programme (in 2000) was very much public driven, while the latest (in 2014) is more competitive. Both programmes established 3 levels of accreditation of clusters: i) start-up cooperation, ii) developing clusters and iii) accredited clusters. Currently (2017) there are 34 accredited clusters, 7 active developing and non-accredited clusters, and 42 registered start-up co-operations. According to the peer-review in the next years the objective is to make the cluster policy more of a sectoral policy for the state, with some 15-20 large cluster organizations across prioritized sectors. The goal is to gain critical mass in the size of members. Moreover, it is considered that the current cluster policy framework is seen as a good tool for strengthening innovation, and aims to achieve a concentration of accredited clusters by assisting sectoral mergers of clusters, increasing the average number of cluster managers, and supporting clusters through high-level value-added services such as incubation and mentoring.

At present the cluster policy framework is managed by the Cluster Development Office at the Hungarian Ministry for National Economy. Under the New Economic Development Plan for Hungary (Szechenyi 2020) there are three operational programmes that support the implementation of the Hungarian cluster policy: The Economic Development and Innovation Operational Programme (EDIOP), the Competitive Central-Hungary Operational Programme, and the Territorial Operational Programme (TOP).

One of the central challenges is that the county government has no tradition in innovation policy and limited capacities and resources to implement cluster and smart specialization policy. International networking is weak, but the few staff working with these programmes showed very good capacity,

energy and a will for the county government to develop an important role within the new policy-making framework.

### ***(ii) Cluster Organization Ecosystem***

Following the earlier cluster programme, a number of cluster associations have been established, which therefore date back to 2000. This followed the distribution of grants from domestic funds to cluster organizations for their set-up. This continued during the period 2004-2006 with grants from structural funds, which led to the establishment of around 50 clusters by 2007.

During the 2007-2013 EU programming period 2 rounds of calls for cluster proposals were organized, which resulted in formal registration of 177 cluster partnerships receiving start-up financial support, 41 of which reached the Developing status and 34 became formally accredited. There are currently no objectives for re-mapping clusters, but rather to merging them with the purpose of reinforcing industrial strengths.

During 2014-2020 the Government also launched the new cluster policy framework, where financial support is given only to professional clusters (developing and accredited) and start-ups can receive limited mentoring support. Development clusters receive financial support for management activities, while accredited clusters receive support for management, SME development, joint R&D&I, ICT development, and internationalization projects. The call for accreditation includes 16 criteria. The cluster ecosystem is very much under the leadership of the Ministry for National Economy and the implementation of their Industry Strategy for Hungary. 5 clusters in Hajdu-Bihar were included in the European Cluster Excellence Initiative (ECEI) between 2014-2016. These clusters are internationally organized and demonstrate cross-sector cluster cooperation.

All clusters have access to a variety of cluster support instruments, operational at national level, such as Industry 4.0, Supplier and Integrator programmes, R+D+I support, Mentoring, Incubators, Iriny VC Funds. All clusters are also focused on R&D and innovation, but need to step up to commercialization of products and services to spur job creation and growth.

At the same time, according to the peer reviews, there are certain challenges and weaknesses, which can be addressed in order to support cluster development. These include lack of national framework in cluster policy / strategy, expectations of decision-makers not being clearly defined, SMEs having limited participation in the value chain, lack of professional workforce in innovation sectors, lack of trust, lack of engagement, accreditation needs renewal, and lack of cluster management experience.

### ***(iii) Cluster Policy Monitoring and Evaluation***

Monitoring and evaluation are being done in the Hajdu-Bihar. There are 13 evaluation criteria used for monitoring accredited clusters. This is done during their application for re-accreditation. These 13 evaluation criteria range from e.g. management of cluster association, its soft and hard infrastructure, character, membership, to characteristics of projects and proposals in collaboration. Accreditation systems have an impact on how clusters perform and act.

**(iv) RIS3 and Cluster policy**

The Smart specialization strategy has been developed in 2014 with the vision of the development of 19 county micro-regions and a new managing authority at a national level – the foundation of the National Office for Research, Development and Innovation.

The financing for cluster policy and RIS3 takes place under two separate divisions EDI-OP with limited overlap. The co-alignment of RIS3 strategy with the operational programmes is achieved through horizontal–approach measures concerning research, development and innovation. At the moment clusters are playing a limited role in RIS3 as well as in the overall perspective.

Under the RIS3, Hungary has selected 8 prioritized sectors: advanced technologies in the vehicle and other machine industries, ICT and information services, sustainable environment, agriculture innovation, clean and renewable energies, healthy society and wellbeing, inclusive and sustainable society, and healthy local food.

The intersection between the implementation of the Hungarian cluster policy and the RIS3 is only through a small segment of the Economic Development and Innovation Operational Programme (EDIOP) and Competitive Central Hungarian Operational Programme (CCHOP).

Currently cluster associations and cluster managers are not focused on the implementation of any national policies and strategies. Therefore, according to the peer-review it seems that clusters and RIS3 follow different tracks, where cluster policy plays a stronger role.

Overall, there are significant institutional boundaries for the co-alignment of cluster policies and RIS3, and the local actors are following primarily projects and programme funding initiatives. Companies cannot connect directly, only through the regional organizations.

**IMPRESSIONS (BASED ON VIDEO INTERVIEWS CONDUCTED DURING THE PEER REVIEW PROCESS)**

**International experts:**

*Örjan Sölvell: “The peer-review process was very useful and exciting. It is a two-way learning process, rich for both sides. For us – come to a region and learn about its policies and territorial context and from region’s side – to learn from our experience. In this region, we have identified an exciting process of transformation, both - top down force with a new cluster policy from Budapest in moving to fewer but larger clusters and a bottom up process, which is taking place here in the region. The bottom up process is built on the innovation process and a strong role of universities. And it is very nice to see how these two forces, top down and bottom up interlink”.*

*Emanuela Todeva: “Peer review process was a very nice two-way learning process built on a rich discussion. I hope that the experts that took part in the peer-review has also learned a lot from our experience. I think this region is a nice example of a small region in a periphery of Europe, that is now mobilized with young English speaking professionals, especially in the public administrations, motivated to drive the transformation of the region”.*

### Policy maker/implementation:

*Csaba Dobi: “Hosting professionals and colleagues of high expertise was not only an honor, they have motivated many local players to take steps towards smart specialization strategies and cluster based economic development. They have showed us examples that clusters are among the most reliable forms promoting regional development. Based on our discussions and peer-review we have identified analyzed our strong and weak points, evaluated our existent and emerging potentials and formulated potential activities to strengthen our territorial development based on cluster approach. Clusters3 project is an excellent platform to gather international and regional actors together to develop guidelines to evolve towards our vision”.*

### Highlands and Islands (HIE)

Highland in Islands is one of the regions in Scotland. An important feature of the HIE economic and political system is that economic policy is developed at national level. Overall HIE operations are aligned with the Scottish Economic Strategy. According to the Regional Innovation Scoreboard 2017 Highlands and Islands is considered to be a strong innovator.

As the economic policy is developed at a national level, HIE cluster policy has to be seen in the framework of Scottish and UK policy agendas. The Scottish Government set out an economic framework relating to Scotland's Economic Strategy published in March 2015. This framework has 4 thematic areas: investment; innovation; internationalisation; and inclusive growth. In the light of that economic framework HIE's Operating Plan 2017-18 set out four strategic priorities that align with the aforementioned 4 themes adapted from Scottish Government Economic Framework.

#### **(i) Cluster Policy Background**

Inspired by “The Competitive Advantage of Nations” 25 years ago Scotland was one the early movers in exploring Porter's emphasis on cluster development. However, after an early focus on cluster analysis, Scotland subsequently dropped the cluster-based economic development approach and set out an overarching national strategy with two goals of increasing competitiveness and tackling inequality.

Therefore, nowadays, neither in Scotland nor HIE is there a fully-fledged cluster policy reflected in a specific cluster policy programme. Nevertheless, there are a number of activities, policy programmes and initiatives that are in place and carry the main principals of programmes for cluster development, such as e.g. collaboration, vertical sectoral prioritization, cross-industry projects, etc.. As an example, HIE implements a number of programmes and policy tools supporting innovation capacity in SMEs and research-industry collaboration. Specific sectoral support instruments have been introduced, such as a programme for aquaculture companies carrying out innovation projects, launched with a budget of £1 million in May 2017.

#### **(ii) Cluster Organization Ecosystem**

There are a number of natural clusters in HIE, which have been mentioned to peer-reviewers prior and/or during their visit, e.g. marine renewables, including Wave Energy Scotland, seaweed harvesting

and research, adventure tourism. Some of these clusters have grown from servicing local markets to being ‘traded clusters’ - trading outside the home region and thus attracting wealth. With some of HIE’s smaller traded clusters, the economic impact will still be at a very local or regional level. Others are of sufficient scale to make a substantive impact at an international level.

At the same time the mentioned identified clusters are existing connections and co-operations between companies and related institutions rather than formalized and institutionalized organizations, which are specifically targeted towards the development of cluster. Therefore, following the peer-review identified challenges are in the area of supporting further growth and competitiveness of clusters.

First of all, cluster development is suggested as a purposeful intervention. Clusters are open ecosystems, without borders. Therefore, integration of all companies (start-ups, SMEs and multinationals) and support institutions (universities, tech centres) in a cluster initiative will create an ecosystem and take full advantage of any potential. A second focus is on the position/role of cluster organisations and their boards. Concerning cluster formalisation, a cluster organisation is set up with a different positioning, functions and governance than a business organisation. In particular cluster manager capacities can be advanced or strengthened. The cluster manager needs to be a networker, not an analyst. Finally, the two other relevant issues highlighted – measurement & evaluation and linking cluster development and RIS3 – are addressed below.

### *(iii) Cluster Policy Monitoring and Evaluation*

HIE are engaged in monitoring and evaluation, although not explicitly oriented towards strengthening clusters growth. Therefore, according to the peer review this is one of the areas with immediate relevance to HIE.

For example, monitoring and evaluation can start with the pilot clusters and by gathering baseline data on the clusters’ current performance. Some of this data can be cluster specific; other data can be generic, e.g. number of firms in the cluster; total sales and % beyond region; number of employees. Over time, this baseline data will be reviewed. In addition, information will be gathered on the extent to which the clustering initiative is adding value to the clusters’ stakeholders, alongside evidence of behavioural changes.

A logic model is the core of the evaluation and monitoring and needs to be decided at the start of the process, with the main objective of evaluation being getting inputs for strategy redefinition.

### *(iv) RIS3 and Cluster policy*

At the sectoral level, there is a typical generic list of sectors that have been defined by the Scottish Government. This allows a substantial opportunity to support a bottom-up approach in order to build competitiveness within the (already existing) differentiated capabilities across the region. That is why developing and bridging RIS3 and cluster policy is considered to be immediate areas of relevance for economic development by peer-reviewers.

## IMPRESSIONS (BASED ON VIDEO INTERVIEWS CONDUCTED DURING THE PEER REVIEW PROCESS)

### International experts:

*Joan Marti-Estevez: "Peer-review was a great experience, and another confirmation of communalities between different clusters and cluster approach worldwide. We are convinced that successful cluster growth rests on the right leadership, a right criterion for prioritization of clusters and sectors and strong bottom up processes".*

*Ifor Ffowcs-Williams: "During the peer-review we have learnt about the leading developing organization's capacity to really understand, learn and use its strengths. In here there is already a terrific account of management system together with an amazing number of regional offices; those offices can particularly help in identifying the bottom up the nuances across different corners of the region".*

### Policy maker/implementation:

*Ghillean MacLeod: "Peer review process in the region - fantastic couple of days, where we could learn about clusters, cluster initiatives, the importance of having a cluster policy, and the experts have also advised us on the way forward. The experience and knowledge of experts is immense and we are very grateful for the help, which definitely supports our region with the instruments to move forward with Clusters3 project and regional development".*

## Northern Ireland (NI)

Northern Ireland (NI) is a part of the United Kingdom, and the Westminster Parliament is sovereign, with responsibility for a number of 'reserved' matters including defence, immigration, benefits and social security. Economic issues are addressed through 3 main strategies: Draft Programme for Government (2016-2021), Economy 2030: An Industrial Strategy for Northern Ireland and Innovation Strategy, agreed by the Northern Ireland Executive Office and designed to encourage and support a step-change in innovation across the economy. Therefore, all of the above strategies underpin a key government aim of growing jobs. The Department for the Economy (DfE) is responsible for setting economic policy in Northern Ireland, and Invest NI is a key partner for its implementation, an agency that works closely with DfE within Northern Ireland and with the Department for International Trade (DIT) and the Department for Business, Energy and Industrial Strategy (DBEIS) at UK level.

According to the Regional Innovation Scoreboard 2017 NI is a strong innovator, and innovation performance has increased significantly over time. The current objective of the NI government is to get more companies involved in innovation. The economy is largely based on SME and micro companies (+60 000 vat registered companies out of which 800 are SMEs and 295 are deemed to be large companies). Furthermore, geographically speaking, being on an island has made it mandatory for Northern Ireland to import or export goods, making international trade a fundamental aspect of doing business in Northern Ireland for many companies.

According to the peer-reviews there are encouraging signs that a change in attitude to innovation is underway with higher investment in R&D (albeit at an individual company level), an increase in the number of successful applications to the Collaborative Growth Programme (some 630+ separate companies and stakeholders took part in the previous Collaborative Growth Programme, 2011 -2016) and the use of collaborative Innovation Vouchers for RDI (as a service).

### *(i) Cluster Policy Background*

Overall, Northern Ireland was one of the “early adopters” of cluster-based economic development policies (in the mid-90s). Initial efforts (focusing support on selected/prioritised sectors) did not yield desired outcomes, and resulted in a degree of scepticism around the cluster concept.

Therefore, there is currently no official cluster policy in Northern Ireland, but there are clear policy objectives for getting more firms engaged in innovation processes and strengthening collaborative dynamics between different stakeholder groups (industry, academia and the public sector). The Government supports collaborative activity through a range of mechanisms including the Collaborative Growth Programme, Competence Centres, collaborative R&D and Innovation Vouchers. These mirror many of the same objectives and characteristics of ‘modern day’ collaborative support policies.

Within the existing initiatives stimulating collaborative dynamics, the Collaborative Growth Programme (the Programme) is the main intervention examined in the conducted peer review, and is thus has been often equated with “cluster policy”. The current Programme was launched at the end of 2016 (following an evaluation of the previous Collaborative Network Programme) as part of the five-year Programme for Government (2016-2021) and the (Draft) Industrial Strategy (Economy 2030) of the Department for the Economy (DfE).

Institutionally-wise the policymaking and implementing institutions have strong capabilities but a limited resource base. The peer review also reflects a well-functioning relationship between the Department for the Economy and Invest Northern Ireland. These are key strengths that enable ongoing discussions and agile revisions/adaptations to existing policies, or experiments/pilots of new approaches.

Collaborative initiatives are selected primarily based on their alignment with the MATRIX thematic priorities identified in the Programme. The peer review considered the MATRIX an impressive tool and process for foresight and prioritisation of growth areas – informing the strategic direction for research and skills development, and highlighting areas with emerging market potential. Although public institutions use this evidence base (e.g. to guide strategies and set priorities for funding programmes), there is still an expressed need for additional/other approaches to focus efforts and prioritise investments going forward.

Finally, although Northern Ireland has many of the key elements and funding instruments for cluster policy, these are implemented in a somewhat fragmented way, leading to a broad range of initiatives with lower critical mass and shorter-term, project-oriented ambitions (rather than coordinated, collective efforts to fulfil longer-term, strategic aims). There is potential for arranging the pieces to fit together in a more integrated/systemic approach.

### ***(ii) Cluster Organisation Ecosystem***

According to the peer-review it seems that there is no formal agenda or long-term planning to develop the different cluster organisations, with the focus on projects or networking activities. At the same time, considering that there are a number of initiatives facilitating collaboration among companies in specific sectors, in practice cluster development is also implemented/achieved through various instruments. Therefore, Competence Centres (which can be associated with cluster organisations) together with network facilitators (cluster managers) are one of the central instruments in developing clusters.

At the same time these initiatives towards intensifying collaborative dynamics and promoting innovations in SMEs could be further strengthened. According to the peer review this could be achieved via e.g. increased knowledge sharing between cluster facilitators/managers, or between cluster and Competence Centre managers.

Membership of Competence Centres seems to be very hard to sustain in terms of revenue for the operational budget of cluster/network in Northern Ireland. According to peer-reviews all the network facilitators were aligned on this issue. At the same time, networks do not share any human resources for special tasks or administrative services between them like a reception, secretariat, accounting, communication or project management. In addition, there is low alignment of the clusters / network organisations to the Matrix smart specialisation sectors identified for S3.

Overall, it can be perceived from the peer-review that competence centres can be seen as nodes, while the central role in bridging, informing and connecting the regional actors lies with the network facilitators/competence centre facilitators, or in other words cluster managers. These facilitators are very active and engaged, yet face some central challenges whose addressing could support/strengthen cluster development.

On one side to date there has been limited acknowledgement and development of the role of “cluster managers” or “boundary spanners” – mobilising the engagement of different stakeholders, managing the longer-term strategic agenda, coordinating the ‘umbrella’ of collaborative activities over time, and serving as a hub for national and international linkages. Therefore, recognising this role could strengthen their capacities and forces. On the other hand, and is also related to the earlier point, there is limited exchange and sharing of knowledge between network facilitators, as well as between them and competence centres. Specifically, as network facilitators meet only 2 times a year, therefore, the introduction of a more systemic approach would improve these limited cross sectoral connections.

### ***(iii) Cluster Policy Monitoring and Evaluation***

In Northern Ireland similar to many other countries, the monitoring process is framed at the time of application, when networking groups/competence centres seeking funding from Invest NI are required to make a written application in which they provide details of their project, including outlining their objectives and costs. Applications are assessed against Invest NI's intervention principles, and a business case for funding is prepared.

Progress of each collaborative growth initiative is monitored through regular reports – tracking the KPIs set out in their contracts. In addition, regular (programme-level) evaluations are conducted to assess a

range of monetary and non-monetary effects (e.g.: return on investment; value for money; gross value added; additionally; viability; economic efficiency; strategic fit; mobility; knowledge transfer; attitude to risk/innovation; willingness to collaborate etc.).

Peer review interviews highlighted some of the shortcomings, specifically that current monitoring and evaluation practices may not adequately capture – or focus on – the softer aspects (e.g. the cultural change that companies need to undertake) or track the evolution of the collaborative ecosystem over time (e.g. increasing numbers of levels of engagement of stakeholders, new linkages/collaborative actions) – which are the targeted (and more immediate) results of collaborative initiatives.

#### *(iv) RIS3 and Cluster policy*

The Northern Ireland RIS3 Framework is based on market opportunities which have a focus on R&D and Innovation, and wider enabling themes that can help develop R&D, skills enhancement and innovation. The market opportunity areas are high value-added and represent cross sectoral opportunities based on key enabling technologies (KET'S) identified in the Matrix report. The prioritised sectors have great potential growth in the knowledge economy where they are looking for greater impacts.

At the same time, as referred to in the peer-review a translation of RIS3 priorities into a strategic vision or a plan for action after the sector's selection is not evident. That makes it more difficult for cluster initiatives to contribute to the implementation of NI's smart specialisation strategy. As an example, during the discussion, there was no formal link established between the Matrix committee and the clusters / network facilitators, and most of the people present at the meeting have not been part of the RIS3 process.

For the moment, the future of RIS3 and the incorporation of new clusters in NI region is not in the hands of the actual network facilitators, and peer-reviewers did not find evidence of their engagement in the RIS3 process.

## IMPRESSIONS (BASED ON VIDEO INTERVIEWS CONDUCTED DURING THE PEER REVIEW PROCESS)

### International experts:

*Emily Wise: “The value of peer-reviews is in the process, where international/ external experts are able to take a neutral look on what is going in the region by giving some tips and guidelines on the areas of improvement for moving forward with the development agenda”.*

*Vincent Dugré:” The core of the peer-review is to work with the partner region to identify either the best practice that they have developed over the time or the competitiveness gaps that can strengthen their policy agenda, especially regarding the regional smart specialization strategy. While working with different regions we can highlight different best practices that have been developed by sharing implement in others”.*

### Policy maker/implementation:

*Ciaran McGarrity: “The peer-review exercise has been very good for us in order to learn from the best practice from other regions. The experts can share with us the experience of the regions they are coming from and we can use their experience to improve our cluster programme/program in the region”.*

*Joanne McMullan: For us the peer-review process, along with Clusters3 project overall, is a great opportunity to learn from all the partner regions and see what best practice they have, and what learnings we can incorporate into our Programmes. There are two areas that we are particularly interested in focusing on - internationalization, where we are looking at tools and techniques that support and help business to internationalize or explore new markets; and secondly, how best to support businesses to become more innovative.’*

## Latvia (LV)

According to the European Innovation Scoreboard 2017, Latvia became the “fastest growing innovator” and joined the group of moderate innovators. Latvia continues to focus on improving its innovation capacity and performance, transforming traditional industry to higher value-added production, and fostering the emergence of new industries.

These strategies (three key documents such as the National Development Plan (2014-2020), National Industrial Policy of Latvia (2014-2020), and Guidelines for Science, Technology Development and Innovation (2014-2020), which includes the Smart Specialisation Strategy of Latvia) define and share the priorities of: developing human resources; promoting knowledge transfer and entrepreneurship; promoting technology development and production of higher value-added products; and improving cooperation between higher education, science and business sectors (through long-term platforms for cooperation).

According to the peer-review, two main challenges are indicated for Latvia. The first is related to coordination, as the different strategies and corresponding support programmes are developed by different ministries creating complexities in the design and coordination of support programmes. The second one is associated with the structural funds programme, as all support programmes are funded through structural funds creating high thematic and organizational dependency. As an example, the placement of the cluster programme under the thematic priority for “competitiveness of SMEs” has had negative consequences on the composition, size and potential impact of cluster initiatives.

### ***(i) Cluster Policy Background***

The Latvia government, by means of the implementation of a new cluster programme, has demonstrated a clear commitment to long-term cluster support.

In the period 2014-2020 the cluster programme is funded to the amount of 6,2m EUR, from structural funds with implementation resting in the Ministry of Economic Development. The objective of this programme is to encourage businesses and research, education and knowledge transfer organizations and other institutions for cooperation at local and international levels, contributing to the competitiveness of economic operators by increasing export volumes and the share of high value-added products and services in export, as well as innovation and new product development. The programme funds projects in collaboration, and in this programme period 14 cluster projects have been funded (415.000 EUR each for the period 2016-2020; 85% co-funding rate). The projects are presented/submitted with the overall call and are then evaluated according to the criteria. There are cluster organizations/associations, but they are not explicitly funded by the programme.

In the future significant investments in cluster development are anticipated, and cluster organisations are supposed to play an important role in implementing both the cluster policy as well as (parts of) RIS3. Key observations and challenges which have been identified in the peer review are centred around the following areas.

First of all, it has been considered that cluster policy in Latvia currently sets quite ambitious goals (namely from strengthening turnover, exports and productivity, to also promoting innovation and new products, developing human resources, and creating new jobs, etc.). Further to this, the cluster support scheme is not aligned with policy objectives, especially as the goals of the cluster programme are very ambitious. Secondly, cluster priorities and clusters themselves are not aligned neither thematically nor via funding with RIS3 requirements. Finally, cross-sectoral cooperation is high on the agenda, but not incentivized in a structured way.

### ***(ii) Cluster Organization Ecosystem***

Cluster organizations/associations exist in Latvia, and have a good representation of Latvian industry. But this is mainly due to the fact that these “cluster” associations are mostly industry organizations/associations. Cluster initiatives of these associations in the frame of the current cluster programme are viewed as “projects” within industry associations, and not as independent platforms with their own long-term strategy for collaboration. This makes it difficult for cluster organisations to be visible and recognized as independent, neutral platforms for collaboration and legitimate partners for international clusters.

As mentioned the new cluster program supports 14 Latvian cluster initiatives. The total number as well as the technological domains of these cluster initiatives represents Latvian industry well. In addition, there is a good mix of traditional and cross-sectoral topics covered by the cluster initiatives. However, the interplay between cluster initiatives and associations is not fully clear

Overall, in Latvia two kinds of clusters – national and regional – exist, partly covering dedicated sectors, partly operating cross-sectorial. In addition, the cluster landscape in Latvia is characterized by well matured, but also embryonic clusters. All of them are supported by one program with one funding scheme.

Industry associations and cluster initiatives are managed by cluster managers, thus the capacities and variety of cluster management across a range of associations and initiatives vary widely. This is both beneficial and challenging for the success of clusters. Positively this range of experience sets a suitable foundation for mutual learning and experience exchange, which is beneficial for all cluster managers. On other side, it also implies that the development and excellence building of cluster managers and cluster organizations should be more strongly integrated in the cluster programme in the next years.

Therefore, central areas for the further support should address limited international visibility of cluster associations, capacitation of cluster organisations, especially design and implementation of new services and more structured experience and information, and more structured experience and information exchange among cluster managers.

### ***(iii) Cluster Policy Monitoring and Evaluation***

In Latvia monitoring and evaluation of the policies, and especially the cluster programme along with the cluster initiatives/projects is being done. However, monitoring and evaluation is focused on a limited range of indicators. For example, although cluster policy in Latvia sets ambitious goals (see above), in practice the actual support scheme is focused on one actor group (SMEs) and monitors performance based on three key indicators (critical mass/# SMEs supported, turnover, and export), which is not fully aligned with the set goals.

Therefore, one of the main challenges is the lack an overall intervention (or effect) logic for the cluster programme and no monitoring of collaborative dynamics of the broader ecosystem.

### ***(iv) RIS3 and Cluster policy***

RIS3 in Latvia according to the peer-review acknowledges the importance of clusters and cluster initiatives in context and in implementation. This was not always the case in the past, thus this paradigm change will positively impact the role of clusters in the future. Further to this, RIS3 sets principles for the openness of transnational activities. Indeed, compared to most of the other regions in Europe, there are more policy instruments under RIS3 in place that actively facilitate trans-regional cooperation initiated by cluster initiatives.

At the same time, the cluster programme is a “minor part” of the total funding, yet places major expectations on the role of cluster organisations in coordinating skills development, entrepreneurship, knowledge transfer, and innovation activities. That’s why there are some key challenges, whose

addressing would support stronger integration and growth of clusters within RIS3, assuring its achievement as well.

First of all, there is quite low awareness of RIS3 and the potential role of cluster organisations within it. Although clusters are recognized as an important tool in RIS3, they haven't been strongly integrated in its design and neither envisioned to do so in the RIS3 implementation. Secondly, considering the strong ties with neighbouring regions, RIS3 in Latvia is not closely aligned with them. Finally, there is no continuous dialogue among stakeholders around the follow-up of RIS3 implementation and its further development.

#### **IMPRESSIONS (BASED ON VIDEO INTERVIEWS CONDUCTED DURING THE PEER REVIEW PROCESS)**

##### **International experts:**

*Gerd Meier zu Köcker: “One of the dedicate highlights was cluster conference during the first day. We obtained very good insights about the cluster landscape and how clusters work and this is put into agendas. We are very much impressed about the progress done at cluster policy level and cluster management level over the recent past.”*

*Emily Wise: “One thing that impressed me a lot during the peer review was the positive outlook on the potential of cluster policy leveraging clusters and implementing them in Latvia. “*

##### **Policy maker/implementation:**

*Evita Feldberga: “We are very happy, for us it is very important to have experts like these because we are the policy makers and for us it is decisive to have insights that help us to improve our policies and instruments. We look forward to improve our cluster policy”.*

## Lubelskie (LB)

The Lubelskie Voivodeship (Lubelskie), or Lublin Province is located in south-eastern Poland. Lubelskie province is the third largest (25,150 km<sup>2</sup>) and eighth most populated (2.15 million) in Poland. According to Regional Innovation Scoreboard 2017 Lubelskie is a modest + Innovator, and innovation performance has increased over time.

### *(i) Cluster Policy Background*

In Lubelskie there is no specific cluster policy/strategy at regional level. While the central government offers support for key innovative clusters (at present there are 16 Key National Clusters supported), support at the regional level is focused on less developed, emerging initiatives. In this regard clusters are being developed primarily in the framework of the Regional Development Strategy, which includes an objective to support cluster organisations in their early development phases. Their integrated development within the RIS3 is seen as a “next step” in the regional development work.

Funding for clusters has been awarded through national, regional and even local level programmes. Most of the funding goes into supporting the activities of cluster organizations, whose initial establishment was achieved with EU funds from the 2007-2013 Programming Period. The Polish Agency for Enterprise Development (PARP) played a key role in this funding, initially assigning subsidies to cluster organisations that fulfilled the administrative criteria defined based on the EU Commission’s guidelines. Most of the 100+ cluster organisations mapped in 2015 at the national level had been created after 2010, as a result of this programme.

Following the peer-review two main aspects need to be dealt with for strengthening the cluster policy and its impacts in the territory. The first is to set a clear interpretation of different cluster definitions in the region and nationally. The second is to bring across the point that cluster development is not only a trendy notion, reference and financial instrument that can stimulate development; rather it is about natural economic relations, which can benefit companies and members within a certain sectoral agglomeration.

### *(ii) Cluster Organization Ecosystem*

Overall in Poland there are currently 16 key national cluster organizations, 2 of which are from Lubelskie. These key clusters associations need to involve at least 51 members, as well as fulfilling 35 other criteria that have been defined regarding geographical concentration (150km radius), type of activities, managerial capabilities, international cooperation, etc.

The peer review suggests that the key cluster organizations have different development levels. Well-developed cluster associations appear to be up and running, with a clear cluster strategy and functional cooperation between large and small companies, between companies and R&D bodies and between companies and the local/regional and national authorities. These clusters are developed and working in very broad market areas that appear to cover the also broad smart specialisation areas within the RIS3 strategy.

However, some of the so-called cluster organisation do not really correspond to a “natural” cluster but are rather groups of institutions that may have come together in response to a government subsidy. In

addition, most of the cluster organisations in development are still running based on the public sector's involvement and management, with a few exceptions. They are not collecting any service fee or membership fee (which probably explains why some previously existing cluster organisations have ceased to function once they had no more public funding).

Overall, companies and other members of cluster organizations seem not to be interested in the cluster developing processes (redefining products, services or markets, for example) and the result has been more to set up cluster organisations rather than reinforcing cooperative environments around the natural clusters and companies' strategic needs. That is why when self-assessing the results of the cluster organisations' work stakeholders recurrently highlight companies' lack of commitment.

Therefore, most of the attention in the development of clusters should be related to building excellence of the cluster organization and managers, as well as integrating them more strongly into the overall regional development strategy. More specific issues in cluster development could be addressing organizational overload, bureaucratization of programmes, realising "addition" to funds, lacking a value chain orientation, limited impact on connecting small companies with regional research capacities and low level of internationalization of companies.

### *(iii) Cluster Policy Monitoring and Evaluation*

Monitoring and evaluation has been done thus far with limited measurement of the effects of the programmes. Monitoring and evaluation of the impact and advancement of both the RIS3 and the national and/or regional cluster policies appears to be at a very initial stage. Some limited initiatives have been carried out with the aim to measure cluster organizations, but there appears to be limited information as to the impact of the policy support on innovation and competitiveness. At the same time, according to the peer review future monitoring and evaluation will be essential when working with programmes and developing processes, especially when there are so many organisations with different missions and cultures.

### *(iv) RIS3 and Cluster policy*

There are two strategic documents that cover both cluster development and smart specialization in the region, the Development Strategy for the Lubelskie Voivodship 2014-2020 (with a 2030 perspective) and the Regional Innovation Strategy for the Lubelskie Voivodship 2020 (RIS LV 2020). The regional strategy is based on "territorialisation", and outlines the development potential as well as identifying problem areas that need special support.

Regarding the RIS LV 2020, the development model of the Lubelskie region is based on smart specialisation, understood as the development of such areas of research, development and innovation activity that strengthen the endogenous development potentials of the region. The identification of smart specialisation areas was based on a bottom-up entrepreneurial discovery process, with a thorough self-assessment of economic, scientific, technological, educational and institutional potential.

Four broad areas of smart specialisation have been identified: (1) bioeconomy, (2) medicine and health, (3) information technology and automation, and (4) low-carbon emission energy production. According to the peer-review these areas overlap to a certain degree, they are complementary to each other and

cover fields of business activity that are specific for the economic, scientific and technological specialisation of the Lubelskie region. Moreover, these areas have already gained, and may gain in the future, a competitive advantage on a national and/or international scale; there is a certain degree of clustering activity and there is sufficient critical mass of companies to create new paths of development for the region. Indeed, clusters and networks is one of the measures in the RIS, under the horizontal priority of increasing the ability of business entities to create and absorb knowledge and implement innovations.

The RIS LV 2020 mission is in tune with the vision of the strategy, according to which in 2020 the Lubelskie Voivodeship economy should observe a significant increase of innovation potential. As a result, the voivodeship should improve its international position in terms of innovation and should go up in the Regional Innovation Ranking. At the same time, it appears that there have been limited concrete advances in terms of actual implementation and bridging of the priorities established to work towards the regional vision. This could be due to a number of reasons, including the broad definition of the smart specialisation areas, the limited amount of additional EU funds for RIS3 implementation, and the limited contribution to implementation from regional cluster efforts.

## IMPRESSIONS (BASED ON VIDEO INTERVIEWS CONDUCTED DURING THE PEER REVIEW PROCESS)

### International experts:

*Ines Saqrario: " In the region the peer-review exercise has been in the format of a very intensive two days, rich on interactions with people from different levels of governance, from national, to regional and local, as well as cluster organizations, universities, and other supporting institutions. It is a very open and engaged experience, especially sharing on what has and hasn't worked. Clusters as a natural eco-system of companies and institution matter, especially as a tool to drive an intelligent and smart public-private dialogue. Cluster approach allows you to have economies of scale; you can understand the whole process happening in the value chain and how it is being affected by global trends; and increase the capacity to approach a number of companies and significantly impact your economy".*

*Mats Williams: " I have learnt a lot from the peer-review process, especially from a large number of existing cluster initiatives in the region. Clusters matter as you can build a more competitive region by strengthening companies' competences both nationally and internationally".*

### Policy maker/implementation:

*Kinga Gruszecka: We have explored that clusters are very important in the development of many regions, especially in terms of small and medium enterprises. Together companies can strengthen their opportunities in research & development, innovation strategies and cooperation, becoming more competitive and innovative.*

*Dorota Skwarek: I think clusters can play a huge role for regional development, especially in our region, where there is a lot of really small businesses facing various challenges on the global market. Some of the main challenges for SMEs is their lack of knowledge, contacts, scale to think about innovative projects. That's why supporting clusters can help especially small companies to reduce their barriers and challenges. Therefore, the main two reason we care about clusters: 1) they help small and medium enterprises to integrate into the value chains and 2) they enhance their potential to be more innovative, strengthening regional growth.*

## 2. Main recommendations

This section synthesises the main recommendations that were given to partner regions by the peer-reviewers. In line with the first section, and the first policy learning document, these recommendations are structured around the same 4 themes.

As a result of analysis of the recommendations given by the peer-reviewers to the partner regions, a general conclusion is that they coincide strongly with the recommendations emerging from the SWOT analysis carried out in the first policy learning document. The two can therefore be seen as complementary, with the peer-reviews enabling a more in-depth and region-specific view and recommendations.

Although most of the recommendations coincided<sup>3</sup>, some of “new” categories of recommendations have been identified in the peer reviews<sup>4</sup>. Most of the new recommendations are related to the section on the cluster organisation eco-system, which is a natural outcome from the peer-review exercises, given that the peer-reviews were more policy-practice oriented. For example, new categories of recommendations within this section include: recognizing clusters and cluster associations/organizations as an important and even sometimes central actor in the development of the territory; seeing clusters as open and joint platforms for collaboration; and especially the need to build/focus the strengthening of capacities and excellence in cluster management and cluster associations’ performance.

Project-related areas / Recommendations SWOT	Recommendations based on the peer-review	BC	HB	HIE	NI	LV	LB
(i) Cluster Policy Background							
Design and deployment of cluster policy							
1. Cluster diagnosis / re-mapping	<ul style="list-style-type: none"> <li>Strengthen cluster focus by identifying cluster initiatives or specific projects with more probability of success, focus on those and then showcase results to engage further actors and different natural clusters;</li> <li>Adjust selection criteria and conduct mapping of collaborative actors in the eco-system;</li> <li>Select clusters via a process based on 1) open competition and 2) local strengths, with first pilot cluster initiatives to set an example and then scaling</li> </ul>		x	x		x	x

<sup>3</sup> Only 2 recommendations from the SWOT analysis haven’t been directly reflected in the peer reviews, but are indirectly reflected in other recommendations: (i) survey among cluster associations and sharing of good practices, and ii) membership fees.

<sup>4</sup> The new sections with recommendations that were not explicitly mentioned in the earlier SWOT analysis are marked with “\*” in the following tables.

Project-related areas / Recommendations SWOT	Recommendations based on the peer-review	BC	HB	HIE	NI	LV	LB
	<p>these learnings/initiatives via an open call for proposals;</p> <ul style="list-style-type: none"> <li>Identify and focus RIS3 and cluster programme on the areas where there are existing regional skills and industrial strengths, for example according to the cluster observatory.</li> </ul>						
2. Reinforcing industrial strengths	<ul style="list-style-type: none"> <li>Review existing territorial resources &amp; strengths, plus it may be beneficial to undertake a review of the match between available funds and regional business challenges;</li> <li>Strengthen incentives for SMEs to grow (e.g. inward foreign direct investment, or attracting new capital or technology) and focus on company strategic needs (strategic direction), defining appropriate actions and resources;</li> <li>Encourage diversification through developing emerging clusters and cross-cluster interactions, avoiding lock-ins to foster economic renewal.</li> </ul>	x	x	x			x
3. Cluster concept definition	<ul style="list-style-type: none"> <li>Review the concepts of clusters and cluster organizations by going back to basics and revisit the meaning of the different cluster terms so that everyone is on the same page, both regionally as well as in terms of international cooperation efforts;</li> <li>Build leadership and self-confidence in understanding and application of cluster and cluster policy concepts.</li> </ul>		x				x
Implement the policy through specific support instruments and programmes							
1. Task-based policy learning 2. Openness to cluster policy and programme formulation	<ul style="list-style-type: none"> <li>Develop cluster programmes to have “modular” and performance-based funding packages;</li> <li>Work towards a more integrated implementation of the different instruments for collaboration – enabling more ambitious, longer-term efforts and more seamless funding;</li> </ul>				x	x	
3. Synergies and new sources in funding	<ul style="list-style-type: none"> <li>Leverage additional methods to guide RIS3 priorities and catalyse new collaborative efforts;</li> <li>Enlarge support activities for cluster organisations beyond the funding programme;</li> <li>Stronger involvement of cluster organisations in the RIS3 implementation process. There are different options available such as: Technological and market expertise on demand; Membership of strategic boards or task forces.</li> </ul>	x			x	x	

Project-related areas / Recommendations SWOT	Recommendations based on the peer-review	BC	HB	HIE	NI	LV	LB
4. Building hard & soft infrastructure*	<ul style="list-style-type: none"> <li>Strengthen capacity-building activities for policy makers;</li> <li>Develop the specialised physical infrastructure for implementation of cluster programmes.</li> </ul>			X		X	
<b>(ii) Cluster Organisation Ecosystem</b>							
<b>The role of cluster organizations (CO) in territorial ecosystem*</b>							
1. CO as important actor in the system (especially in RIS3)*	<ul style="list-style-type: none"> <li>Acknowledge the role played by network organizations and develop their professional capacity;</li> <li>Recognize and make better use of existing cluster landscape when updating RIS3;</li> <li>Make cluster organisations an even more active partner for the government, regional policy makers and the regional business development agencies by offering dedicated services that are well aligned with the content of RIS3.</li> </ul>	X			X	X	
2. CO/clusters in achieving different territorial goals*	<ul style="list-style-type: none"> <li>Established clusters could be further encouraged to engage in cross-cluster activities or to more directly contribute to meeting specific policy objectives by switching towards a funding model where they are remunerated for their role as 'policy implementing agents'.</li> </ul>	X					
<b>Supra-clusters as open &amp; joint platforms for collaboration*</b>							
1. Collaborative platforms and knowledge sharing*	<ul style="list-style-type: none"> <li>Look out for possibilities for sharing knowledge, human resources and projects between networks/clusters via collaborative platforms;</li> <li>Set up a common platform to present all/related cluster initiatives;</li> <li>Create "virtual clusters" viewed as linking a number of regional clusters and then identifying the common, higher level agendas.</li> </ul>			X	X	X	
2. Targeted support*	<ul style="list-style-type: none"> <li>Create supra networks with the focus on specific objectives;</li> <li>Develop cluster potential based on a more focused and narrower approach;</li> <li>Build exchange experience on very structured information and experience among the cluster organisations.</li> </ul>	X		X			
3. Connecting*	<ul style="list-style-type: none"> <li>Open up cluster association, from being a closed "club" and broaden their activities;</li> <li>Put in place an organisation ecosystem where the individual elements are well connected.</li> </ul>		X	X			

Project-related areas / Recommendations SWOT	Recommendations based on the peer-review	BC	HB	HIE	NI	LV	LB
Internationalization of cluster organizations							
1. Cross-sector cluster cooperation within / between territories	<ul style="list-style-type: none"> <li>Setting up mechanisms and an incentive system to enable cross-clustering in a structured and strategic way;</li> <li>Stimulate cross-cluster knowledge of the cluster instruments across/ with different European level into local context.</li> <li>Increase leverage of network/collaborative initiatives for cross-sectorial and international linkages.</li> </ul>	x		x	x		
2. International cooperation in common RIS3 areas	<ul style="list-style-type: none"> <li>Align and better coordinate RIS3 with neighbouring regions;</li> <li>Explore bi-national cluster opportunities.</li> </ul>				x	x	
Building the capacity of cluster organizations							
1. Cluster associations as a one of many policy tools	<ul style="list-style-type: none"> <li>Understand that at the core of territorial development lies the cluster concept, which could be developed by different policy tools and programmes, such as cluster organization, but also others as well.</li> </ul>			x			
2. Cluster manager unique capacities*	<ul style="list-style-type: none"> <li>Recognize that the cluster manager needs to be a networker, not an analyst, making his prime goal to encourage co-opetition and/or cooperative competition between companies.</li> </ul>			x			
3. Build up cluster associations*	<ul style="list-style-type: none"> <li>Sharpen the profile of cluster initiatives and cluster organisations;</li> <li>Capacitate and label cluster organisations according to certain standards, e.g. the ECEI12 or EFQM13 approach;</li> <li>Strong cluster organisations able to support member companies in developing international investment.</li> </ul>	x				x	
4. Training*	<ul style="list-style-type: none"> <li>Create a network/cluster facilitator training program;</li> <li>Educate and train related to skills experts enabling to upgrade/ integrate cluster associations into global value chains;</li> <li>Train and coach towards professional cluster organisations and the development of new, tailor-made services.</li> </ul>	x			x		x
5. Grow and diversify the services offered*	<ul style="list-style-type: none"> <li>Leverage services towards those that are more attractive for companies in the 'natural' cluster;</li> <li>Implement new services by cluster organisations;</li> <li>Enable and motivate cluster organisations to enlarge their service spectrum.</li> </ul>	x				x	x
(iii) Cluster Policy Monitoring and Evaluation							

Project-related areas / Recommendations SWOT	Recommendations based on the peer-review	BC	HB	HIE	NI	LV	LB
Monitoring and evaluation of cluster performance and cluster programmes							
1. Harmonized and centralized monitoring and evaluation	<ul style="list-style-type: none"> <li>Continue developing efforts for implementation of a standard questionnaire for collaborative growth initiatives in tracking their progress;</li> <li>Develop further the intervention logic – incorporating indicators on intermediate results of collaboration activities;</li> <li>Develop of a more systematic multi-level evaluation approach and revision of the monitoring indicators.</li> </ul>	x	x		x	x	
2. Initiate/ strengthen evaluation*	<ul style="list-style-type: none"> <li>Measure and evaluate on a more regular basis so that effects and ambitions are clarified;</li> <li>Initiate efforts to track the development of collaborative dynamics (within clusters) over time;</li> <li>Gather in the pilot clusters baseline data on the cluster’s current performance needs, which should in particular provide inputs for strategy redefinition.</li> </ul>			x		x	x
3. Engage other local / international institutions*	<ul style="list-style-type: none"> <li>Leverage university researchers/departments in ongoing learning activities.</li> </ul>				x		
(iv) RIS3 and Cluster policy							
Development of cluster policy and alignment with RIS3							
1. Open platforms and spaces	<ul style="list-style-type: none"> <li>Explore bi-national cluster opportunities;</li> <li>Better align and coordinate RIS3 with neighbouring regions;</li> </ul>				x	x	
2. Local actor, especially business, engagement	<ul style="list-style-type: none"> <li>Focus RIS3 and cluster programme on areas where there are existing regional skills and industrial strengths, for example according to the cluster observatory;</li> <li>Stimulate for regional leadership to take on a role of creating bridges (and traffic!) across regional stakeholders;</li> <li>Adopt incentives to the specific business challenges with engagement from different sides.</li> </ul>		x	x			
3. Joint forms of governance	<ul style="list-style-type: none"> <li>Create linkage between the thematic matrix committee and the network entrepreneurial base;</li> <li>Establish a multi-level stakeholder dialogue for implementation and further development of RIS3;</li> <li>Stimulate development of a multidisciplinary profile and bottom-up focus among leading players in entrepreneurial discovery processes leading to new</li> </ul>			x	x	x	

Project-related areas / Recommendations SWOT	Recommendations based on the peer-review	BC	HB	HIE	NI	LV	LB
	specialisations, as they identify and generate projects related to specific topics in the leading sectors.						
Implementation of cluster policy in alignment with RIS3*							
1. Build on multitude of policies/initiatives	<ul style="list-style-type: none"> <li>View RIS3, if it is to be 'transformative', in a more holistic way as a combination or package of several types of instrument (financial, legislative, regulatory, informational, etc.), implying cross-departmental cooperation;</li> <li>Stronger involvement of cluster organisation in the implementation process of RIS3, for example via a structured, regular information exchange; providing access to key industry players; working or discussion papers for selected topics on request, etc.</li> </ul>	x					
2. Narrowing	<ul style="list-style-type: none"> <li>Narrow down RIS3 priority areas and their cluster policy in line with each other's efforts</li> </ul>						x
3. Clusters / RIS3 are central in implementation	<ul style="list-style-type: none"> <li>Make better use of existing cluster landscape when updating RIS3;</li> <li>Place cluster development as a central strategy, where cluster/smart specialisation approach could be introduced as a centre stage strategy and not as "just another project";</li> <li>Translate RIS3 priorities into a strategic vision supported by an action plan;</li> <li>Develop a vision, identify competitive advantage, set strategic priorities and make use of smart policies to maximise the knowledge-based development potential.</li> </ul>			x	x	x	

## Conclusion and key messages

The findings summarised in the previous two sections lead to a set of recommendations for strengthening the opportunities and negating the threats highlighted in the peer-reviews.

The main recommendations and key message are summarised along the four themes below:

- (i) **Cluster Policy Background:** It is important to have shared-understanding of a clear definition of the core concepts used within the territory with respect to “clusters/networks/platforms”. Understanding and having this definition clear among all regional actors assures building trust, cooperative environments and a long-term vision. Based on that cluster policy can be implemented through a wide range of instruments, e.g. from singular cluster programmes to a set of programmes facilitating collaboration across specific economic activities / value chains.
- (ii) **Cluster Organizations Ecosystem:** There is strong consensus that “cluster/network organizations/associations” are and can be important actors in the ecosystem, especially by playing a bridging role between public and private actors and sector/cluster specific knowledge. To play this role more effectively, most of them need further capacitation.
- (iii) **Evaluation and Monitoring:** The activities conducted under monitoring and evaluation are central for understanding and tracking the progress and the invested resources towards achieving set objectives. Yet the way and the form of doing both is also important; it should be structured and harmonized for international benchmarking to maximise learning possibilities.
- (iv) **RIS3 and Cluster Policy:** Both policies/strategies have a number of issues in common, from funding resources, via policy instruments and programmes. Thus, having a coherent and aligned mix of these policies strengthens the achievement of their objectives. Identifying the common sectoral and thematic priorities builds a good basis for developing and applying a matrix of policy initiatives and instruments.

In conclusion, although a set of recommendations have been developed for one or another region with potentially some trends based on the level of the development of clusters and cluster organisations, these trends and patterns are not diversified enough to make them explicit in the conclusion. The tables in the previous section provide more detail on a region-by-region basis.

An overall concluding message to partner regions, and indeed beyond partner regions, regardless of the level and status of clusters and cluster policy development, is that it is essential to realize that the instruments for the development of clusters and cluster policy should be constantly adapted and modified in respect to the latest international, European and territorial developments and strengths. It is a constant learning and adaptation process from analysis of territorial strengths, via concept and policy definition, implementation to monitoring and evaluation and around again to revision and adaptation.

## Explanatory notations

<b>Cluster policy</b>	In this document this term is used in a broad sense, including any policy/programme supporting collaboration across companies and other sector/activity specific institutions (such as research centres, university, state departments, etc.) through instruments such as cluster associations (or collaborative networks) or similar forms of collaboration among businesses in a cluster context.
<b>Cluster policy instrument</b>	In this document this term is used to refer to the activities developed within the framework of cluster policy. There are 3 predominant types of instruments: 1) cluster associations; 2) project based support; and 3) multitude of specific cooperation, network, and business-related services.
<b>Agglomeration</b>	In this document this term is used to refer to the accumulation of sector/industry resources and actors in a specific geographic area.
<b>Cluster (natural)</b>	In this document this term is used to refer to naturally-formed agglomerations of sector/industry resources and actors in a specific geographic area, creating critical mass and showing signs of cooperation and competition between these resources/actors.
<b>Cluster actor</b>	In this document this term is used to refer to all types of organizations related to a specific cluster; namely businesses (from SMEs to large corporations), research institutions, universities, government, business associations, etc.
<b>Cluster associations (or collaborative network)</b>	In this document this term is used to refer to formal and informal association and also other forms of cluster initiatives, collaborative networks, industrial sector groupings, etc. built-up of different cluster actors (see above). In the text the term cluster association is mostly used.
<b>Cluster member</b>	In this document this term refers to the cluster actors, which are formally connected/ belongs (as e.g. via formal membership) to cluster associations.
<b>Cluster manager</b>	In this document this term is used to refer to a physical person in charge of managing/coordinating a cluster managing organization or cluster association.
<b>RIS3 strategic areas</b>	In this document this term refers to the priorities or areas of development that are identified and explored (in a multiple character) within regional/national research and innovation strategies for smart specialization (RIS3).

## Annex 1: Peer Review Exercise Details

REGION	DATE	PEER REVIEWERS TEAMS	
		INTERNATIONAL EXPERTS	REPRESENTING CLUSTERS3 PEER REGION
<b>Northern Ireland</b>	25-26 April 2017	<p>Emily Wise- Consultant and research fellow at Lund University.</p> <p>Vincent Dugré-Consultant and former cluster manager of the ground transportation Cluster of Québec.</p>	Ghillean MacLeod- Highlands and Islands Enterprise
<b>Hajdú-Bihar</b>	25-26 April 2017	<p>Emanuela Todeva-Professor at St. Mary University in London and Senior Consultant</p> <p>Örjan Sölvell-Director of the Center for Strategy &amp; Competitiveness at Stockholm School of Economics</p>	Elwira Rycaj- Department of Economy and Innovation Lubelskie Voivodeship
<b>Basque Country</b>	9-10 May 2017	<p>Gerd Meier zu Köcker- Director General of the Institute for Innovation &amp; Technology in Berlin.</p> <p>Alasdair Reid- Policy Director, European Future Innovation System Centre, Belgium.</p>	Linda Jamison- Invest Northern Ireland
<b>Latvia</b>	24-25 May 2017	<p>Emily Wise- Consultant and research fellow at Lund University</p> <p>Gerd Meier zu Köcker- Director General of the Institute for Innovation &amp; Technology in Berlin</p>	David Fernandez Terreros- SPRI Basque Business Development Agency
<b>Highlands &amp; Islands</b>	24-25 May 2017	<p>Joan Marti-Deputy Director of Cluster Development at Catalan Agency for competitiveness</p> <p>Ifor Ffowcs-Williams- Consultant and TCI founder</p>	Zsolt Poterecki-General Manager at Pharmapolis Innovative food cluster in Hajdu Bihar
<b>Lubelskie</b>	5-6 July 2017	<p>Ines Sagrario-Competitiveness</p> <p>Mats Williams-WilColsunting</p>	Evita Feldberga-Ministry of Economic Affairs of the Republic of Latvia

