

Euregio Rhine-Waal

Final Report

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JOINT ANALYSIS FOR THE PROJECT “KNOWLEDGE AND INNOVATION STRATEGIES INVOLVING SMES” (KISS ME)



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1. INTRODUCTION

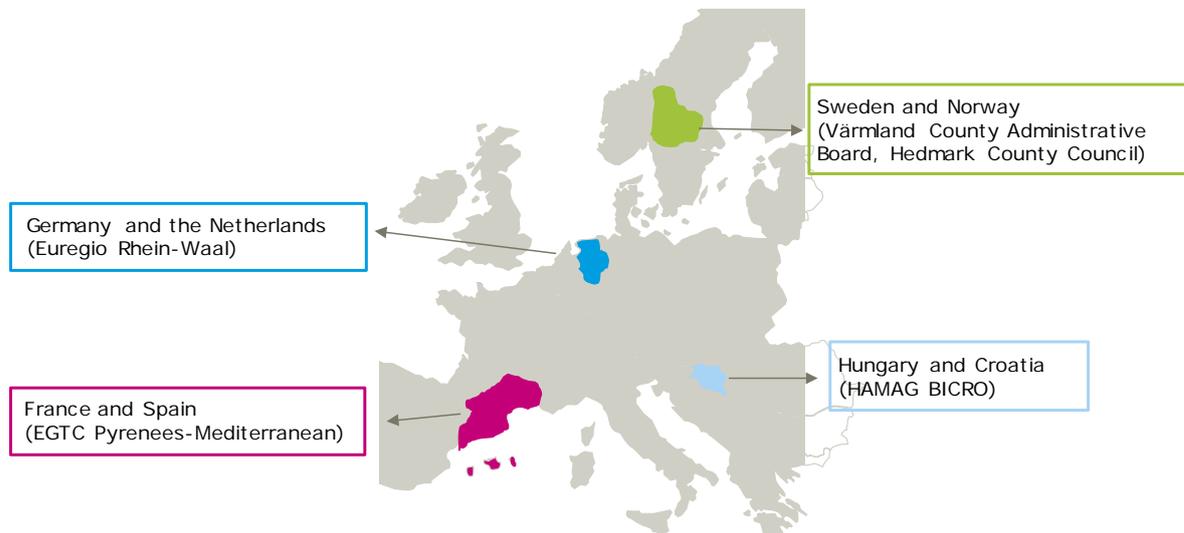
The European Union is built on the objective of ensuring peace through economic integration. In the aftermath of the Second World War, the predecessor of the European Union was founded based on the idea that countries that are economically interdependent are more likely to avoid conflict. The European Union has evolved into a unique economic and political union consisting of 28 European countries. It pursues the goals of - among others - promoting peace, offering freedom, combating social exclusion and enhancing economic cohesion and solidarity among the member states.

The Europe 2020 strategy which has been formally adopted in 2010 is the European Union’s agenda for growth and jobs for the current decade. In the strategy, the European Union committed itself to promoting a more innovative, sustainable and integrative economy. Improving the innovation capacity of small and medium-sized enterprises (SMEs) constitutes one of the most important objectives of the strategy.

Numerous different policy instruments have been established to enhance innovation in SMEs. But it appears to be difficult for them to benefit from these funds – especially in border regions. The economic, social and political framework conditions and the initial situation of border regions within the European Union differ significantly. They nonetheless face common challenges and in many cases, pursue similar goals and objectives when it comes to cross-border innovation activities of SMEs.

The partners of the Interreg Europe project “Knowledge and Innovation Strategies involving SMEs” (KISS ME) set out to benefit from the various experiences by identifying effective ways of enhancing innovation in SMEs. The goal is to share good practices, to learn from each other and to improve the applied policy instruments. Figure 1 visualises the four project partners.

Figure 1: Programme regions of the KISS ME Project



Source: Own presentation by Ramboll Management Consulting

After the project start at the beginning of 2017, a regional analysis has been conducted in each of the four border regions. This joint analysis merges these four regional analyses with the intention to combine and to analyse the main findings and results of the four regional analyses. Commonalities and differences among the programme regions are examined as a next step towards the development of the final product of KISS ME: an action plan for border regions to enhance innovation in SMEs.

The joint analysis is based on the structure of the four regional analyses and comprises the following chapters:

- Chapter 2: General data of the analysed areas
- Chapter 3: Policy Instruments addressed by the KISS ME project
- Chapter 4: Success factors and challenges for innovation activity and cross-border cooperation of SMEs
- Chapter 5: Further available instruments for SMEs
- Chapter 6: Conclusion

2. GENERAL DATA OF THE ANALYSED AREAS

This chapter compares the four programme regions regarding factors that are relevant for the innovation capacity and competitiveness of SMEs. Commonalities and differences among the involved regions are pointed out. Throughout the joint analysis, the current situation and framework conditions in the regions are taken into consideration when examining the available policy instruments, the adopted approaches as well as identified challenges and success factors for innovation activity and cross border cooperation of SMEs.

While the relevant data and information have been presented in detail in the four regional analyses, the purpose of this chapter is to draw concise conclusions about the comparability of the four regions. The regions are compared regarding the following parameters: area and population, economy and innovation.

The comparison shows that for every parameter, considerable differences can be detected among the four programme regions of the KISS ME-project. These differences will be presented and visualised in the following.

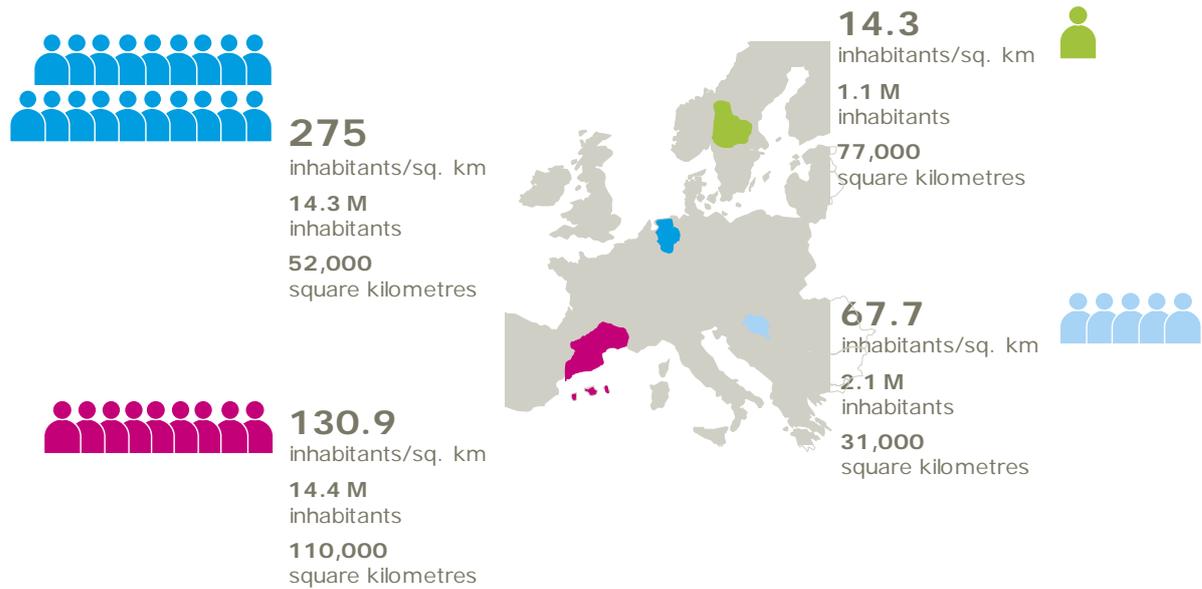
2.1 Area and population

The comparison of the area and the population of the programme regions displays significant differences.

To begin with, the four programme regions vary considerably regarding their **geographic size**. The French-Spanish border region is by far the largest with a total area of almost 110,000 square kilometres. The smallest programme region is the Hungarian-Croatian border region with a total area of 31,000 square kilometres. The two other programme regions have a total area of 52,000 square kilometres (Germany-Netherlands) and 77,000 square kilometres (Sweden-Norway).

Substantial differences can furthermore be detected regarding the **number of inhabitants** in the programme regions. Only 1.1 million people live in the Swedish-Norwegian border region while the French-Spanish as well as the German-Dutch border regions have 14.3 million inhabitants. Consequently, the **population density** differs significantly among the four programme regions. The border region of Germany and the Netherlands is the most densely populated area with 275 inhabitants per square kilometre while the Swedish-Norwegian border region only has 14.3 inhabitants per square kilometre. Figure 2 visualises the significant regional differences concerning area and population.

Figure 2: Population density, number of inhabitants and area of four border regions



Source: Regional analyses. Own presentation by Ramboll Management Consulting.

2.2 Economy

Comparing the economic situation of the four regions, too, significant differences have been detected.

The **GDP per capita** which often serves as key indicator of the economic performance of a region varies considerably among the KISS ME-project regions. While the GDP per capita of the Swedish-Norwegian and the German-Dutch programme region is on a high level, it is especially low in the Hungarian-Croatian programme region.

In the Swedish-Norwegian programme region, the highest GDP per capita can be found among the four programme regions. Also, the differences between the subregions are remarkable (35,000- 50,000 Euro). In the German-Dutch border region, the GDP per capita (2014) was higher than the EU-28 average (27,600 Euro¹) in nearly all subregions. In some subregions, GDP per capita was more than twice of the EU-28 average. In the French-Spanish programme region, the average GDP per capita (26,375 Euro) was slightly lower than in the German-Dutch border region. In the Hungarian-Croatian programme region, the level of GDP per capita is remarkably lower. There, the GDP per capita is below the EU-28 average in all subregions and varies between 5,400 and 16,833 Euro (2014).

Significant differences can further be detected when comparing the **unemployment rate** of the programme regions. The following figure illustrates the unemployment rate of the programme areas and further indicates the respective national unemployment rates.

¹ Eurostat

Figure 3: Unemployment rates in the programme regions and national unemployment rates


Germany-Netherlands (2015)	6.2%
Germany (2015)	4.6%
Netherlands (2015)	6.9%
Sweden-Norway (2015)	n/a ²
Sweden (2015)	7.4%
Norway (2015)	4.5%
Hungary-Croatia (2014)	24.2%
Croatia (2014)	17.2%
Hungary (2014)	7.7%
France-Spain (2015)	13.8%
France (2015)	10.4%
Spain (2015)	22.1%

Source: Regional analyses (data for border regions) and Eurostat (national data). Own presentation by Ramboll Management Consulting.

In the German-Dutch programme area the unemployment rate is on a low level (6.2 percent). Compared to the low rate in the German-Dutch programme region, the unemployment rate in the French-Spanish programme region is significantly higher and amounted to nearly 14 percent in 2015. The highest unemployment rate can be found in the border region of Hungary-Croatia where the average unemployment rate is 24.2 percent and reached up to 36 percent in certain subregions in 2014. Data on the unemployment rate of the Swedish-Norwegian programme region is not available. Regardless of the exact number for the programme region the data for the Swedish regions from 2017 (Värmland: 6.1 percent; Dalarna: 8.9 percent³) and the national rate for both countries (see figure above) as well as the high GDP per capita indicate that the unemployment rate in the region is on a low level.

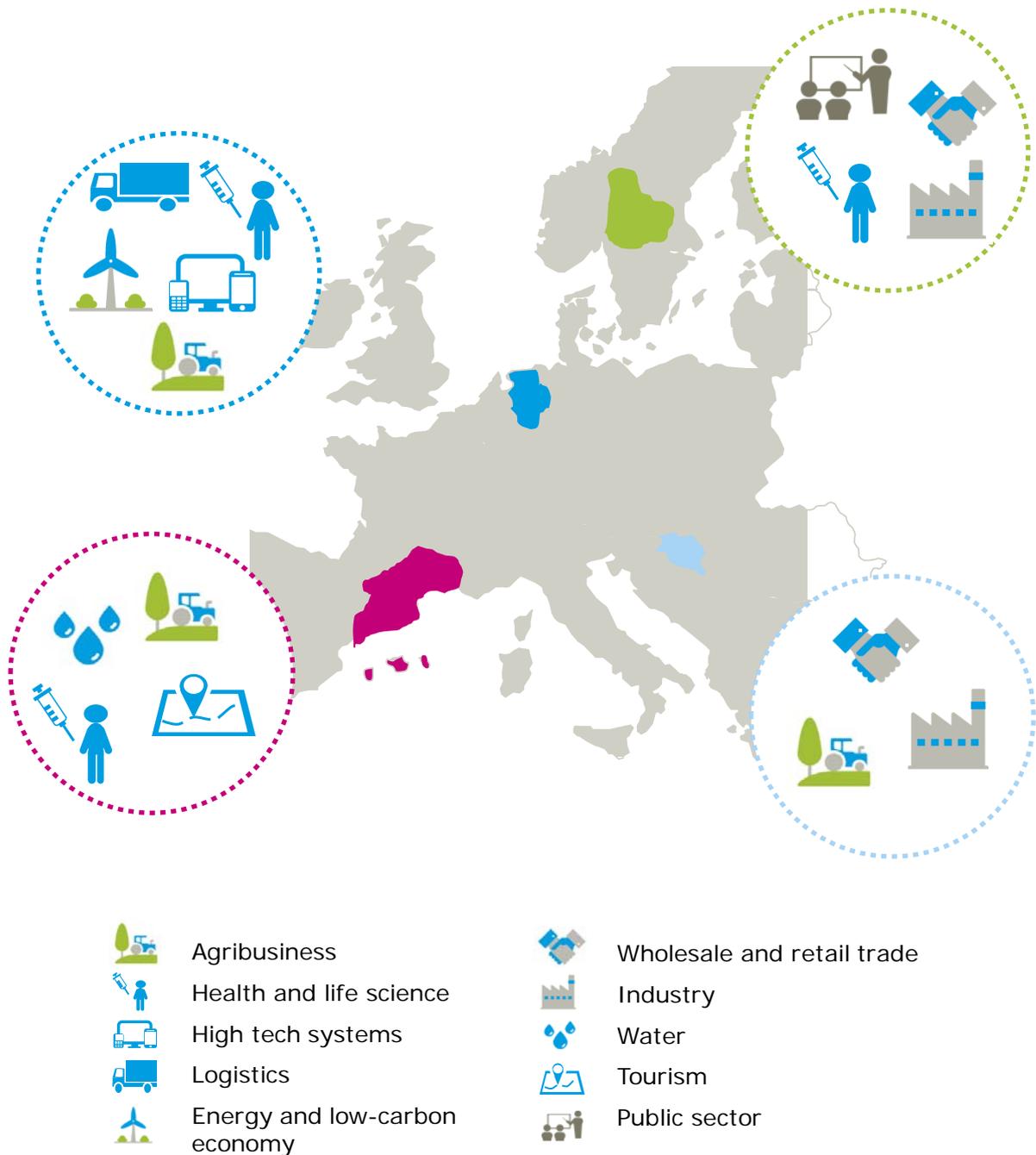
Comparing the unemployment rates in the programme regions with the respective national unemployment rates it becomes apparent the rates in the border region in some cases significantly differ from the national numbers. This is especially the case in the Hungarian-Croatian programme region where the unemployment rate in the border region is significantly higher than the national average in both countries. Compared to the remarkable differences between national average and regional numbers in France-Spain and Hungary-Croatia, the regional and national rates are rather similar in case of the German-Dutch programme region. All in all, the unemployment rates well reflect the different economic situations of the regions.

Beside their economic strength and the level of unemployment, the programme regions further differ regarding the **main economic sectors**. While the regional analyses describe the respective important sectors more detail, this part points at certain differences.

² Data not available for Swedish-Norwegian programme region.

³ See Statistics Sweden: <https://www.scb.se/en/>

Figure 4: Main economic sectors

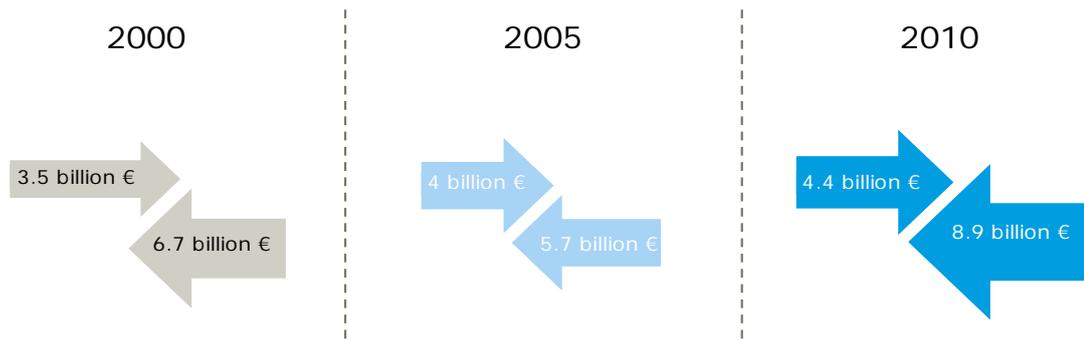


Source: Regional analyses. Own presentation by Ramboll Management Consulting.

While Agribusiness & Food/agriculture are important sectors for the German-Dutch border region, the French-Spanish border region as well as the Hungarian-Croatian border region, these sectors are less important for the Swedish-Norwegian programme region. Wholesale and retail are especially relevant in the Hungarian-Croatian and the Swedish-Norwegian programme area. Health and Life Science constitutes an important economic sector in all programme regions except for Hungary-Croatia. In the Swedish-Norwegian region one third of the employees works within the public sector.

An important aspect representing the linkage between regions are the economic ties. Exports and imports demonstrate how closely regions are intertwined. For the German-Dutch border regions, detailed data is available for the value of exports and imports between the KISS ME-programme regions on NUTS 2 level. The following figure visualises that the economic ties between the sub-regions of the German-Dutch border region are strong and have been growing constantly over the past years. Unfortunately, this data is not available for the other programme regions so that a comparison of economic ties between the regions in the other programme areas is not possible.

Figure 5: Exports from the German to the Dutch programme area and vice versa 2000, 2005 and 2010: Goods to the value of billion euros (NUTS 2)



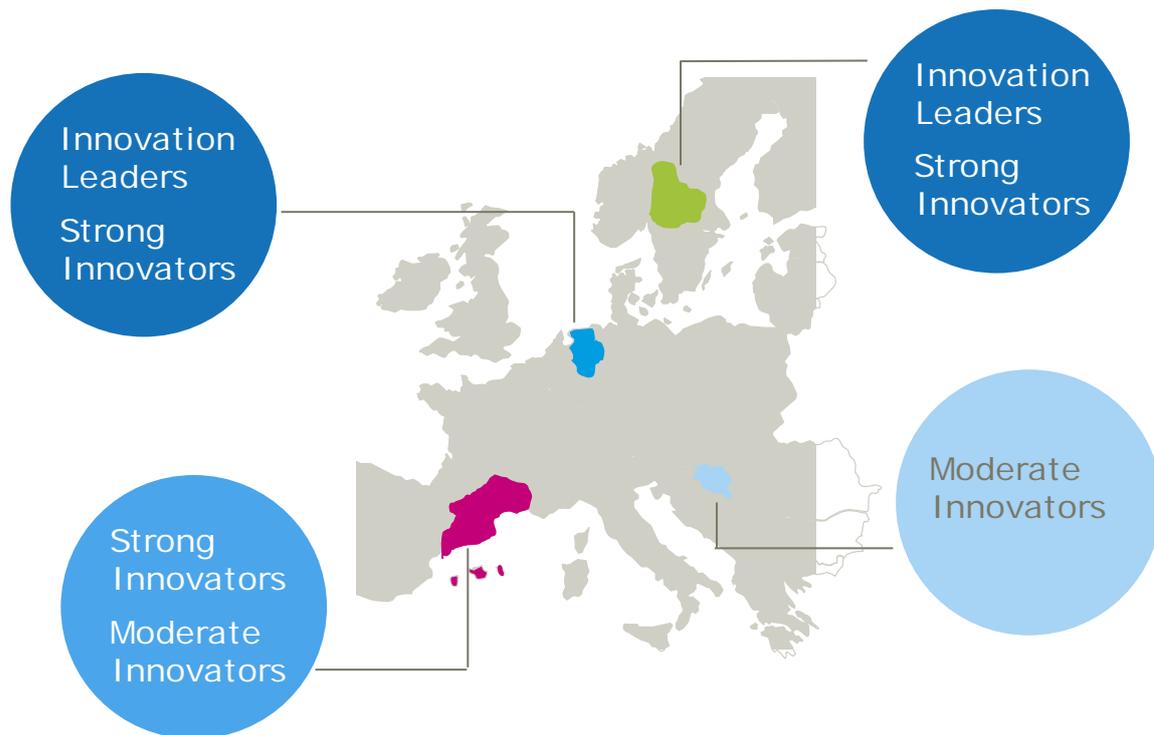
Source: PBL Netherlands Environmental Assessment Agency. Own presentation by Ramboll Management Consulting.

2.3 Innovation

The degree of innovation performance of regions is captured by the European Commission's **Regional Innovation Scoreboard (RIS)**. The RIS allows for the comparison of the performance of innovation systems across the regions of the EU member state. It thus accompanies the European Innovation Scoreboard which provides an assessment of the performance of national innovation systems. The RIS incorporates 27 indicators to assess the regional innovation capacities such as human resources, research systems, R&D spending, employment and sales impacts⁴. Comparing the innovation performance of the four programme regions, considerable differences can be detected.

⁴ European Commission (2017): Regional Innovation Scoreboard 2017. Available from <https://ec.europa.eu/docsroom/documents/23881/attachments/1/translations/en/renditions/native>.

Figure 6: Regional Innovation Scoreboard 2017



Source: Regional Innovation Scoreboard. Own presentation by Ramboll Management Consulting.

All subregions of the German-Dutch and Swedish-Norwegian border regions are rated among the top categories of the RIS: Strong Innovators or Innovation Leaders. The collaboration of innovative SMEs and the number of international scientific and public-private publications is on an especially high level in the Dutch part of the border regions. The German part is characterized by strong product and process innovations. In the Swedish-Norwegian subregions the level of collaboration among innovative SMEs and the number of international scientific publications is very high. Additionally, the non-R&D innovations expenditures are on a high level.

The regions of the French-Spanish border region are Moderate or Strong Innovators. Especially in the French regions, the R&D expenditure in the public sector is on a high level while the number of design applications is rather low. The Spanish subregions show relatively high numbers of trademark applications while the level of collaboration among innovative SMEs as well as R&D expenditures are on a very low level.

All subregions of the Hungarian-Croatian border region are Moderate Innovators. Especially the number of European Patent applications and the number of international scientific co-publications is relatively low. Additionally, business R&D expenditure is on a low level.

Consequently, it can be concluded that the innovation capacity of the regions involved in the KISS ME-project vary considerably.

Due to the considerable differences regarding the innovation capacities of the KISS ME-project regions, differences concerning the **research infrastructure** are to be expected. The comparison of the four regional analyses in fact shows that the number of research institutions and universities located in the KISS ME-programme region varies considerably between the programme partners.

The German-Dutch border region is characterized by a very strong and diverse research infrastructure. Approximately 80 universities and research institutes are located in the German-Dutch

border region. The French-Spanish border region equally disposes of a strong scientific infrastructure: more than 20 universities and numerous research centres (CERCA Centres and CARNOT institutes) are situated in this KISS ME-programme region. In the Swedish-Norwegian programme region on the other hand, only four universities and four research institutes can be found. Regardless of the relatively low number of universities and research institutes, this region is rated as highly innovative. The region's strengths are highly innovative SMEs, international scientific publications as well as effective measure for lifelong learning. However, the number of potential cooperation partners for innovative research projects is limited for the resident SME in the Swedish-Norwegian border region. Compared to the other three regions, the number of research institutes and universities is significantly lower in the Hungarian-Croatian border region⁵.

⁵ See Regional Analysis for the Hungarian-Croatian Programme region. Exact number of research institutes and universities for the Hungarian-Croatian programme region not included in the regional analysis.

3. POLICY INSTRUMENTS ADRESSED BY THE KISS ME PROJECT

This chapter compares and analyses the policy instruments addressed by the KISS ME project in the four programme regions. Commonalities and differences of the relevant policy instruments are presented. The four policy instruments under scrutiny are:

- Interreg V-A Germany-Netherlands
- Interreg V-A Sweden-Norway
- Interreg V-A Hungary-Croatia
- Euroregional Innovation Strategy (France-Spain)⁶

Figure 7 summarizes the relevant information about the four policy instruments addressed by the KISS ME-project. The main goals and objectives, the available budget, as well as the status of implementation are outlined. In case of the French-Spanish border region, the KISS ME-project partner is the EGTC Euroregion Pyrénées-Méditerranée addressing the Euroregional Innovation Strategy of the Euroregion. In the three other regions it is the Interreg V A programme which is being addressed by KISS ME.

The Euroregional Innovation Strategy, as the title suggests, is compared to the Interreg programmes a strategic framework for different regional initiatives and measures in the field of innovation. It is financed by the three regions that form the Euroregion. Yearly, the available budget is approved by the Innovation Commission which is composed of representatives of the regions. In 2018, the available budget amounts to 150,000 Euro. Due to the different composition of the available funds and the considerable differences to the other policy instrument, the Euroregional Innovation Strategy is not equally included in the comparison of the policy instruments in this chapter.

⁶ The policy instrument that is directly addressed by the KISS ME-project in the Euroregion France-Spain is the Euroregional Innovation Strategy. The Interreg V-A France-Spain-Andorra Cross-Border Cooperation Programme 2014-2020 (POCTEFA) is described in more detail in chapter 5.

Figure 7: Comparison of the policy instruments addressed by the KISS ME Project

Interreg V-A Germany/Netherlands	Interreg V-A Sweden/Norway	Interreg V-A Hungary/Croatia	Euroregional Innovation Strategy France/Spain
 Goals and objectives			
<ul style="list-style-type: none"> ➤ Creation of networks, funding of innovation projects ➤ Improve cross-border networking between enterprises and between science and industry ➤ Raise awareness of enterprises and other actors of the possibilities for cross-border innovation activities 	<ul style="list-style-type: none"> ➤ Create the best conditions for a strong economic region with an attractive living environment through cross-border cooperation ➤ Tackle common challenges through cross-border cooperation ➤ Connect regions across the border 	<ul style="list-style-type: none"> ➤ Reinforce and expand existing co-operative networks ➤ Increase the concentration on encouraging sustainable economic co-operation in the region 	<ul style="list-style-type: none"> ➤ Enhance interregional cooperation ➤ Support economic transformation by innovation and knowledge through prioritisation, strengthening competitive advantage, critical mass of resources, collaborative leadership
 Available budget			
443.1 Million Euro (total) 222.2 Million Euro (ERDF)	146.4 Million Euro (total) 47.2 Million Euro (ERDF) 47.2 Million Euro (Sweden, public + private) 52 Million Euro (Norway, public + private)	73.9 Million Euro (total) 60.8 Million Euro (ERDF)	Modes and methods of financing are flexible depending upon the actions. In 2018, the available budget amounts to 150,000 Euro
 Share of funds for priority axes			
<ul style="list-style-type: none"> ➤ 61%: "Enhancing cross-border innovation activities in the programme region" (PA 1) ➤ 31%: "Socio-cultural and territorial cohesion of the programme area" (PA 2) 	<ul style="list-style-type: none"> ➤ 33%: "SME competitiveness" (PA 2) ➤ 29%: "Research and Innovation" (PA 1) ➤ 14%: "Cross-border labour market and employment" (PA 5) 	<ul style="list-style-type: none"> ➤ 16%: "Enhancing the competitiveness of SMEs" (PA 1) ➤ 57%: "Sustainable Use of Natural and Cultural Assets" (PA 2) ➤ 9% "Cooperation" (PA 3) 	Euroregional Innovation Strategy focuses on the three priority sectors for the Euroregion: <ul style="list-style-type: none"> ➤ Water ➤ E-Health/Dependency ➤ Food-processing industry
 Implementation			
<ul style="list-style-type: none"> ➤ Majority of the output indicators demonstrates considerable progress with regard to target achievement ➤ 75 percent of the planned ERDF-resources are tied up (August 2017) 	<ul style="list-style-type: none"> ➤ 60 percent of the budget have already been allocated to 62 projects of which 27 are within the inner Scandinavia programme geography (regional analysis from October 2017) 	<ul style="list-style-type: none"> ➤ 67.7 percent of the total budget have already been allocated (regional analysis from September 2017) 	<ul style="list-style-type: none"> ➤ Adopted by the Euroregion Pyrénées-Méditerranée in 2014
 Main programme management bodies			
<ul style="list-style-type: none"> ➤ Managing Authority: Ministry of Economic Affairs of North Rhine-Westphalia ➤ Joint Secretariat: Euregio Rhein-Waal 	<ul style="list-style-type: none"> ➤ Managing Authority: County Administration Board of Jämtland ➤ Joint Secretariat: County Administration Board of Jämtland 	<ul style="list-style-type: none"> ➤ Managing Authority: Hungarian Prime Minister's Office ➤ Joint Secretary: In Budapest and Pécs (Hungary), hosted by Széchenyi Programme Office Nonprofit Ltd. 	EGTC (European Grouping of Territorial Cooperation) Euroregion Pyrénées-Méditerranée has the ability to act, to manage European projects and to launch joint calls for projects. <ul style="list-style-type: none"> ➤ Main office: Toulouse ➤ General Secretariat: Barcelona

Source: Interreg Deutschland-Niederland Cooperation Programme 2014-2020 and monitoring data (date: 24.08.2017), regional analyses. Own presentation by Ramboll Management Consulting.

When comparing the Interreg programmes in the three regions one must bear in mind that the instruments need to be seen in relation to the size of the programme area, the general level of innovation activity of the SMEs as well as the general standing of cross-border cooperation in the region. While cross-border cooperation is well-established and actively practiced in certain programme areas (such as Germany-Netherlands), it is a rather new phenomenon in other regions

(such as Hungary-Croatia). The level of experience of involved actors as well as the establishment of structures thus need to be considered when analysing and comparing the information provided.

Regarding the **goals and objectives** of the policy instruments, it can be concluded that the relevant policy instruments are very similar. All of them explicitly pursue the target of strengthening the competitiveness of SMEs and of enhancing cross-border cooperation. They seek to tackle common challenges and to raise the awareness of the possibilities for cross-border cooperation among enterprises and other actors. To benefit from common efforts and capabilities, all policy programmes support the establishment of networks and especially the conduct of cross-border cooperation projects.

The **budget** to pursue the goals and objectives however, varies considerably among the Interreg programmes. While the budget for the Interreg Programme Germany-Netherlands is by far the largest (443.1 million Euro total budget), the budget for the Interreg Programme Hungary-Croatia is the smallest (73.9 million Euro total budget). As stated above, the available budget needs to be seen in relation to the specific and very different framework conditions of the regions.

Beside the total available budget, it is important to note that the **share of EU funds** in relation to the total budget varies among the analysed policy instruments as well. The Interreg Programme Hungary-Croatia has the highest share of EU funds: 82 percent of the total budget for the Interreg Programme Hungary-Croatia are financed by the European Union. The relatively low total budget for the Interreg Programme Hungary-Croatia (73.9 million Euro) corresponds to the relatively small programme area and the low population density. The co-financing rate is very high due to the region's difficult economic situation (low GDP per capita, high unemployment, see chapter 2.2) and the fact that Croatia is a very new member of the EU. The budget for the Interreg Programme Germany-Netherlands is relatively high. The region is of considerable size and especially the population density is by far the highest among the KISS ME-project regions. Additionally, cross-border cooperation is already intensely practiced between the two countries and the Interreg programme is well-established and well-used in the region: the current programme is already the fifth Interreg programme since 1991. The co-financing rate of the EU amounts to 50 percent. The total budget for the Interreg Programme Sweden-Norway is larger than the budget for the Hungarian-Croatian Interreg Programme but considerably smaller than the budget for the German-Dutch Interreg Programme. The co-financing rate by the EU amounts to 50 percent of the total Swedish funds (94.4 Mio. Euro). It is important to note that further funding for the Interreg Programme stems from the Norwegian state which is not a member of the EU.

Seeking to assess the relevance of the goals of the KISS ME-project (innovation capacity of SMEs and cross-border cooperation), the share of funds that are intended for the relevant **priority axes** are examined. Supporting cross-border cooperation and enhancing the competitiveness of SMEs constitute a priority in every policy instrument. Especially in the Interreg programmes Germany-Netherlands and Norway-Sweden, considerable shares of the total budget are assigned to these priorities. In the Interreg Programme Hungary-Croatia, the largest share of funds is assigned to measures supporting the sustainable use of natural and cultural assets. However, the Interreg programme entails one priority axis explicitly serving the purpose of enhancing the involvement of more social and institutional actors in cross-border cooperation.

Overall, all Interreg Programmes have made considerable progress regarding the **implementation** and the allocation of the available financial resources. By August 2017, 75 percent of the available financial resources for the Interreg Programme Germany-Netherlands were already allocated to concrete projects. As the regional analysis (September 2017) indicates, two-thirds (67.7%) of the available financial resources for the Interreg programme Hungary-Croatia have been allocated. The Swedish-Norwegian Interreg Programme has made considerable progress as well: as indicated by the regional analyses (October 2017), 60 percent of the available resources have been allocated.

Comparing the organisational structure of the policy instruments and especially the location of the **managing authorities**, differences can be detected among the programme partners. While the managing authority of the Interreg Programme Hungary-Croatia is located directly at the Hungarian Prime Minister's Office, it is placed more decentral in the other two Interreg programmes. In the Interreg Programme Germany-Netherlands, the managing authority is located at the Ministry of Economic Affairs of North Rhine-Westphalia, one of the federal states of Germany. In the Interreg Programme Sweden-Norway, the managing authority is located at the County Administration Board of Jämtland, one of the provinces of Sweden. Each Interreg programme is coordinated by one Joint Secretariat.

4. SUCCESS FACTORS AND CHALLENGES FOR INNOVATION ACTIVITY AND CROSS-BORDER COOPERATION OF SMES

This chapter identifies common success factors and challenges for innovation activity and cross-border cooperation of SMEs that have been singled out by the four regional analyses.

Firstly, the success factors are presented. The four regional analyses identified common as well as specific success factors. The specific success factors can often be connected to the relevant framework conditions for cross-border innovation activities in a region. This becomes obvious in case of the success factors pointed out in the Hungarian-Croatian analysis: they mainly concern prerequisites needed for the establishment of effective cross-border cooperation innovation activities. The focus on prerequisites reflects the young history of cross-border cooperation in the context of Interreg in this region.

Compared to that, the common success factors are more strongly related to the individuals involved in the project and their relationships between each other and underline that their role is, regardless of the framework conditions, always decisive for the success of cross-border innovation.

Secondly, the challenges for the implementation of effective cross-border cooperation that have been identified in the regional analyses are presented.

Even though the success factors pointed out in the Hungarian-Croatian analysis are not specifically mentioned in the other three analyses, experience shows that they can be considered as important prerequisites needed for the establishment of effective cross-border innovation and cooperation in general. For this reason, they are included in this joint analysis.

Prerequisites for the establishment of effective cross-border cooperation

- 
 • Triggering partnership building and networking, **raising awareness**, establishing cooperative attitude and **cross-border co-operative thinking**

- 
 • Establishing a **joint branding** to become a recognizable cross-border destination

- 
 • Supporting knowledge creation and **knowledge diffusion within the region** through an appropriate regional policy

All three prerequisites can be subsumed under the headline "communication". It is necessary to clearly communicate the opportunities stemming from cross-border cooperation and the potential added value of working with partners from the other side of the border. In case of SMEs a target-group-specific language is considered to be very important. The messages need to be clear, easily understandable and applicable to the business of the regional SMEs.

The other regional analyses focus on the success factors of realizing actual cooperation activities and thereby reflect the longer history and experience with cross-border cooperation.

Success factors for the implementation of effective cross-border cooperation

- 
 - Good **level of competence** among partners and experts in surrounding network
 - Involve the right actors to ensure that the **required knowledge** is available and the relevant actors with **decision-making powers** participate

- 
 - Include relevant **experience of using Interreg funding** to facilitate efficient administrative project implementation
 - Install **experienced project managers** as knowledge brokers (development of relationships and networks and producers and users of knowledge)

- 
 - **Strong mutual trust** between key partners of the project, e.g. by regular personal meetings and direct exchange

- 
 - **Sufficient language skills** to effectively communicate with partners from the other side of the border (can be English for all partners or one of the national languages from the participating countries)

- 
 - **Flexibility during project implementation** and possibility to reconsider decisions

The common success factors all strongly relate to the individuals involved in a cross-border innovation project. On the one side the importance of their competence and decision-making power is pointed out. Beside thematic expertise regarding the use of Interreg funding and the professional management of projects is considered highly relevant for successful cross-border cooperation projects.

On the other side the importance of a trustful relationship between the partners is highlighted. Experience shows that trust is built upon previous positive experiences (e.g. from other joint projects) and can additionally be strengthened by regular personal meetings and direct exchange. As communication is key for building trust the importance of sufficient language skills of all actors involved in a project has been pointed out.

Challenges for the implementation of effective cross-border cooperation

In contrast to the common success factors, the challenges commonly identified in the regional analyses concern framework conditions as well as individual factors. The common challenges identified can be grouped under three headlines:

- Legal/administrative challenges
- Cultural challenges
- SME-specific challenges

In the following the common challenges summarized under the three headlines are shortly described:

Legal and administrative challenges

- 
 - Complex and different **legal and administrative systems** on both sides of the border cause uncertainty and require the project partners to adhere to different legal provisions.
 - Particularly **patent law** is very relevant for innovation and differs between European Member States.
 - National **state aid and de minimis regulations** cause significant uncertainty and require specific knowledge which many SME do not have at hand.

Cultural challenges



- Insufficient attention paid to **cultural differences** between partners leads to misunderstandings and hinders cooperation.
- **Language barriers** hamper communication and, again, lead to misunderstandings.

SME-specific challenges



- Enterprises, especially SMEs, have only **limited resources** for activities outside their day-to-day business.
- Often **low priority is given to cross-border cooperation** because the awareness of potential benefits of cooperating with regional knowledge centres/ centres of technology/ technology parks is rather small among SME. This applies especially to newcomers in cross-border cooperation who refrain from initiating or participating in a cooperation.
- A focus on **individual interests** limit the willingness of partners to learn from each other and exchange views.

When assessing the challenges listed above it becomes clear that whereas the first two are directly related to cross-border cooperation, the third is a prominent factor when discussing innovation in SME in general, regardless of its geographical scope.

Limited resources for activities outside the day-to-day business is often a limiting factor for innovation in SME. SME usually do not have a research and development department and cannot afford to employ highly skilled staff exclusively for R&D tasks. Considering these known and often analysed challenges for innovation in SME in general, it can be assumed that they are even more challenging in the field of cross-border cooperation. As the legal/administrative and cultural challenges point out, the framework conditions for SME to cooperate in a cross-border context are even more complex than in a regional or national context (see legal and administrative but also cultural challenges). This leads to the conclusion that SME require specific support tailored to their individual needs to lower the barriers for cross-border innovation activities.

In the regional analyses the following best-practice-projects were used to illustrate the success factors identified in the region and to provide concrete insights on how they were implemented. Further details about the projects can be found in the regional analyses and on the websites of the respective programmes and/or projects.

Figure 8: Selected best-practice-projects from four border regions

<p>Germany-Netherlands</p>	<p>Sweden-Norway</p>
 <p>ZUKUNFTSOFFENSIVE FOOD INDUSTRY</p>	 <p>eco Inner Scandinavia Innovation & Development</p>
<ul style="list-style-type: none"> ➤ Budget: <ul style="list-style-type: none"> ➤ 5.2 million Euro total cost ➤ 2.5 million Euro ERDF ➤ Objectives: <ul style="list-style-type: none"> ➤ Step-by-step development of a model region for a future-oriented food industry ➤ Advancement of the cross-border network of companies and scientific institutions ➤ Activities: <ul style="list-style-type: none"> ➤ Innovation projects ➤ Feasibility studies ➤ Workshops und seminars 	<ul style="list-style-type: none"> ➤ Budget: <ul style="list-style-type: none"> ➤ 4.5 million Euro total cost ➤ 1.2 million Euro ERDF ➤ Objectives: <ul style="list-style-type: none"> ➤ Contribute to Inner Scandinavia as a leading cluster within environmentally driven development ➤ Strengthen the border region's competitive performance by initiating climate driven development, reduce barriers and develop the territorial capital of the border region ➤ Activities: <ul style="list-style-type: none"> ➤ Business support infrastructure, e.g. Living labs ➤ Advisory services ➤ Key stakeholder matching ➤ Financial support for innovation-projects in the solar business / guide to other financial sources
<p>France-Spain</p>	<p>Hungary-Croatia</p>
 <p>LINKS UP - Fostering small and medium enterprises growth in SUDOE space</p>	 <p>B Light – Beneficiary Light Grant Scheme</p>
<ul style="list-style-type: none"> ➤ Budget: <ul style="list-style-type: none"> ➤ 1.0 million Euro total cost ➤ 0.8 million Euro ERDF ➤ Objectives: <ul style="list-style-type: none"> ➤ Stimulate growth and improve the competitiveness of young innovative or start-up firms from the e-tourism and e-health sectors of south-west Europe ➤ Activities: <ul style="list-style-type: none"> ➤ Provide information on financing and main players in the e-sectors and on needs of major companies for which SMEs can provide support ➤ Exchange platform for companies ➤ Programme to facilitate the installation of start-ups 	<ul style="list-style-type: none"> ➤ Budget: <ul style="list-style-type: none"> ➤ 12.5 million Euro total cost ➤ 10 million Euro ERDF ➤ Objectives: <ul style="list-style-type: none"> ➤ Enhancing competitiveness of SMEs ➤ Enhancing capacities for product and service development through the generation of value-added business cooperation between SMEs in Hungary and Croatia ➤ Activities: <ul style="list-style-type: none"> ➤ Financial support for cross-border innovation projects ➤ B2B matching platform

Source. Regional analyses. Own presentation by Ramboll Management Consulting.

5. FURTHER AVAILABLE INSTRUMENTS FOR SMES

This chapter provides an overview of selected funding instruments for SMEs that are available in the four programme areas beside those directly addressed by KISS ME.

The funding instruments underline the **variety of approaches** realized in the four regions and can provide valuable input for the KISS ME-project partners. On a first glance the overview underlines once again that supporting SMEs in their innovation activities is not only of high relevance in a cross-border context but also in a regional and national context. In all eight countries a wide range of funding instruments is in place to support innovation in SMEs.⁷

The main overall difference between the instruments addressed by KISS ME and those presented in this chapter is the **geographical scope**. The instruments addressed by KISS ME focus on cross-border innovation in SMEs. Accordingly, one prerequisite for receiving funding is the participation of at least one partner from each side of the border. The other instruments do not require a cross-border partnership or even the participation of more than one beneficiary. Single projects with only one SME as well as joint projects with several SMES and/or scientific and administrative actors from can be funded.

The **goals and objectives** of the instruments are in many cases similar to those of the instruments addressed by KISS ME. However, the **approaches** chosen to reach those goals are in some cases different to the cross-border instruments. This includes the type of funding, the activities as well as the target groups. For example, some instruments solely support micro and small enterprises by offering low-threshold loans. Other instruments provide tax deductions for costs related to their research and development activities or support SMES in gaining access to financial funding from other sources.

In the following selected regional and national funding instruments for SMEs from the regional analyses are presented. They underline the variety of approaches realized in the four regions and the respective countries and may provide valuable input for the KISS ME-project partners.

⁷ The regional analyses do not necessarily provide a full picture of available funding instruments in the respective regions.

Table 1: Selected national and regional instruments for SMEs

Instrument	Geographical scope	Target group	Type of funding	Particularities
Horizon 2020 – SME Instrument	EU	SME	Feasibility studies and pilot projects: grants Commercialisation: simplified access to financial instruments	Funding in all phases of innovation chain and very high, EU-wide competition for funding
Central Innovation Programme for Medium-Sized Enterprises (ZIM)	Germany	Enterprises up to 499 employees	Grants	Funding of single and joint projects and support of activities in context of market launches
East Netherlands ERDF Operational Programme 2014-2020	East Netherlands	Enterprises, especially SMEs and scientific institutions	Grants	Thematic focus on resource-efficient, low-carbon economy, thematic priorities are updated annually
Research and Development Contracts	Norway	Primarily SME	Grants	Strong application and market orientation through direct cooperation of suppliers and consumers
SkatteFUNN R&D tax incentive scheme	Norway	All enterprises	Tax deduction	SME may receive a tax deduction of up to 20 per cent of the eligible costs related to their R&D activity
Challenge-driven innovation	Sweden	Determined in "Calls for proposals", individuals are excluded	Grants	Co-creation of solutions to societal needs through cross-sector approach and inclusion of users/customers, tough competition for funding
ESIF Micro Loan Program	Croatia	Micro and Small Enterprises	Microloans	Micro enterprises are an explicit target group and are offered low-threshold loans
Portfolio Guarantee	Hungary	SME	Loans and guarantees	Facilitates access to financing for SME by backing credit given to SME by credit institutions
France-Spain-Andorra Cross-Border Cooperation Programme 2014-2020	Border region France-Spain-Andorra	Several	Grants	Typical funding instrument for SME in border regions focusing on mobilisation of resources, cooperation between SME and between SME and research institutions and direct support structures for SME

Source. Regional analyses. Own presentation by Ramboll Management Consulting.

Horizon 2020 – SME Instrument (EU)

Horizon 2020 is the EU Framework Programme for Research and Innovation. It helps to implement the Europe 2020 Strategy by funding products, services and processes which in turn help to drive growth and create jobs.⁸ Horizon 2020 is structured along three priorities, "industrial leadership", "societal challenges" and "excellent science". The funding of innovation in SMEs is an integral part of Horizon 2020. A dedicated "SME Instrument" is explicitly embedded in the priorities "industrial leadership" and "societal challenges".

Central Innovation Programme for Medium-Sized Enterprises (ZIM) (Germany)

The Central Innovation Programme for Medium-Sized Enterprise [Zentrales Innovationsprogramm Mittelstand] (ZIM) is a federal funding programme open to all technologies and sectors.⁹ Its aim is to permanently strengthen the innovative capability and therefore the competitiveness of SMEs, including the craft sector and entrepreneurial self-employed professionals. The ZIM includes the funding of individual R&D projects and R&D cooperation projects undertaken by enterprises or enterprises and research institutes. A cooperation with international partners is also possible. In addition, cooperation networks likewise receive funding from the ZIM, which takes the form of non-repayable grants.

⁸ European Commission (N.N.): Horizon 2020. SME Instrument, available from <https://ec.europa.eu/programmes/horizon2020/en/h2020-section/sme-instrument/>

⁹ BMWi (2015): Impulse für Innovationen – Zentrales Innovationsprogramm Mittelstand, available at: https://www.zim-bmw.de/download/infomaterial/zim-infobroschuere_06-2015.pdf

East Netherlands ERDF Operational Programme 2014-2020 (East Netherlands)

The region of East Netherlands promotes investment in research and development and innovation projects using funds from the European Regional Development Fund (ERDF) with support from public and private co-financing. Its aim is to provide effective support for the transition to a resource-efficient, low-carbon economy through promoting business investment in research and innovation, developing networks and supporting clusters as well as technology transfer and cooperation between enterprises. The programme's target groups are enterprises, especially SMEs, and scientific institutions. Depending on the type of measures involved, individual business investments or cooperation and joint projects receive funding.

Research and Development Contracts (Norway)

The Norwegian financing service of Research and Development (R&D) Contracts by Innovation Norway aims to alleviate risks and encourage start-ups of demanding development projects. It addresses companies that have an innovative project with international potential and want to develop their potential in close cooperation with a customer. The selection criteria are the project's level of innovation, international marketing potential, the economic feasibility, and the ability to carry out the project. It is furthermore required that the cooperation is a real partnership with contributions from both sides. Through this close cooperation, suppliers get a unique insight into the customer's needs.¹⁰

SkatteFUNN R&D tax incentive scheme (Norway)

The SkatteFUNN R&D tax incentive scheme is a Norwegian government programme designed to stimulate research and development in Norwegian trade and industry.¹¹ The scheme is open to all branches of industry and all types of company. Companies need to be incorporated in Norway and pay corporate tax to Norway. They must seek to develop a new or improved product, service or production process through a dedicated R&D project. The R&D project must aim to generate new knowledge, skills and capabilities within the company.

Challenge-driven innovation (Sweden)

Challenge-driven innovation is an initiative funded by Vinnova, Sweden's innovation agency, that aims to solve social challenges. The key requirement to receive funding is the contribution of the project to one or more of the 17 Sustainable development goals laid out in the UN's 2030 Agenda for sustainable development. Projects operating within the programme can tackle everything from climate change and health challenges to problems of inequality and the uneven distribution of resources. Various types of organizations can apply for funding, including SMEs. The project selection is organized in calls for proposals in which the specific eligibility criteria are defined.

ESIF Micro Loan Programme (Croatia)

The European Structural and Investment Funds (ESIF) Micro Loan Programme in Croatia was implemented by the Croatian Agency for SMEs, Innovations and Investments (HAMAG-BICRO). The programme provides micro loans to start-ups, craft businesses, micro- and small businesses. It consists of two products – the ESIF Micro Investment Loans and the ESIF Micro Working Capital Loans.¹² The financial instruments are intended to help mobilise additional public and / or private sources of funding to remedy market failures.¹³ The ESIF Micro Investment Loans Programme

¹⁰ Innovation Norway (N.N.): Research and Development Contracts, available from: <https://www.innovasjon Norge.no/en/startpage/our-services/financial-services/research-and-development-contracts/>; Innovation Norway (N.N.): Industrial Research and Development Cooperation between Norwegian and Foreign Companies, available from: <https://www.innovasjon Norge.no/contentassets/68685a9f5fb6498581893886792951f8/guideline-for-ird-cooperation.pdf>

¹¹ The Research Council of Norway (2014): Funding Opportunities and Eligibility, available from https://www.skattefunn.no/prognett-skattefunn/Funding_Opportunities_and_Eligibility/1254001716647?lang=en

¹² European Commission (N.N.): 2017 SBA Fact Sheet – Croatia, available from: https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&cad=rja&uact=8&ved=0ahUKEwjPz5aGm_baAh-VBoCwKHxrcEcQFgg5MAM&url=https%3A%2F%2Fec.europa.eu%2Fdocsroom%2Fdocuments%2F26562%2Fattach-ments%2F5%2Ftranslations%2Fen%2Frenditions%2Fnative&usq=AOvVaw2dHvMhawTriQjzFz1PV_pI

¹³ HAMAG BICRO (N.N.): ESIF zajmovi, available from: <http://hamagbicro.hr/financijski-instrumenti/kako-do-zajma/>

supports small and micro economic entities with the establishment of companies, the modernisation and expansion of existing business, with self-employment, and with retaining existing and increasing number of new jobs.

Portfolio Guarantee (Hungary)

Portfolio Guarantee from Venture Finance Hungary is a Hungarian guarantee programme that aims to indirectly support SMEs to access finances. The guarantee backs credit given to Hungarian SMEs by credit institutions, primarily commercial banks based in Hungary. The applicants must be SMEs based in Hungary that meet the de minimis state aid rules. The credit needs to target investment, service acquisition, and current asset financing. Its size is determined by the participating providers. The guarantee is capped at HUF 200 million (EUR 691,000) and 80 per cent of the claimed credit.¹⁴

France-Spain-Andorra Cross-Border Cooperation Programme 2014-2020 (France, Spain, Andorra)

The Interreg V-A France-Spain-Andorra Cross-Border Cooperation Programme 2014-2020 (POCTEFA) aims at addressing the most important cross-border challenges linked to the implementation of the Europe 2020 strategy in the Pyrenees border regions. The programme has five priority axes. Axis 1 ("Dynamizing innovation and competitiveness") is specifically aimed at the cooperation between SMEs in the field of innovation in a cross-border context. It entails to promote business investments in R&D and to develop links and synergies between enterprises, research and development centres and the higher education sector. Another objective is to internationally promote joint development actions of the enterprises of the cross-border area, especially SMEs.¹⁵

¹⁴ EY (2014): Member State policies to facilitate access to finance for SMEs – Hungary

¹⁵ European Commission (N.N.): Interreg V-A – Spain-France-Andorra (POCTEFA) – Territorial co-operation, available from: http://ec.europa.eu/regional_policy/en/atlas/programmes/2014-2020/spain/2014tc16rfgb006; Comunidad de Trabajo de los Pirineos (N.N.): Área del Programa, available from: <https://www.poctefa.eu/programa/area-del-programa/>; Comunidad de Trabajo de los Pirineos (N.N.): ¿Qué es POCTEFA?, available from: <https://www.poctefa.eu/programa/que-es-poctefa/>

6. CONCLUSION

The joint analysis underlines the considerable programme regions' differences regarding the framework conditions for cross-border innovation in SMEs. This includes their size and economic strength as well as their history of cross-border cooperation.

Regardless of the different starting points the regions apply similar strategies and instruments to increase cross-border innovation in SMEs. Furthermore, the joint analysis of the success factors and challenges identified in the four regions reflects that cross-border cooperation is always difficult and is highly dependent on the engagement of the individuals involved. These findings are very valuable regarding the objective of the KISS project as it helps to focus on the right aspects for strengthening the innovation capacity of SMEs in border regions in the future.

The findings are supported by other studies and analyses which also point out that the competences and the engagement of individuals is key for effective cross-border innovation activities.

As a result, the following three aspects should be considered when planning and designing funding instruments for cross-border innovation in SMEs in the future:



Target-group-specific information and communication activities

To make SMEs aware of the opportunities of cross-border projects clear and easily understandable messages are needed. The added value of cross-border cooperation for creating innovation should be pointed out by using the language of the SMEs and by providing direct linkages to their daily business. The use of the rather complex wording from EU funding programmes should be minimized. Instead experience shows that success stories from peers are particularly suitable communication measures for reaching SMEs.



Securing basic knowledge and competences needed for cross-border innovation in SMEs

To effectively cooperate with partners from other countries specific knowledge and competences are needed. This includes sufficient language skills and awareness of cultural differences between the partners involved in a project. Without the respective knowledge and competences cross-border cooperation projects are highly unlikely to be successful. Both factors minimize the risk of misunderstandings and support mutual trust between partners. Moreover, competences in project management and administration of funded projects are key competences for effective and efficient realization of cross-border projects.



Awareness of uncertainty regarding laws and regulations

SMEs usually do not have the capacity and the competences to be experts in their own or even other countries' patent law as well as state-aid and de-minimis regulations. This lack of knowledge often causes uncertainty and might refrain SMEs from initiating or participating in cross-border cooperation projects. Targeted and proactive support for these topics might lower the uncertainty and motivate SMEs to get involved in cross-border innovation activities.