

REGIONAL ACTION PLAN CLUSTERFY

Part I – General information

Project:	ClusterFY
Partner organization:	Municipality of Hudiksvall
Country:	Sweden
NUTS2 region:	North Middle Sweden, SE31
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Part II – Policy context

The Action Plan aims to impact:	<input checked="" type="checkbox"/>	Investment for Growth and Jobs programme
	<input type="checkbox"/>	European Territorial Cooperation programme
	<input type="checkbox"/>	Other regional development policy instrument
Name of the policy instrument addressed: The Operational Programme for the North middle Sweden for the period 2014-2020. Priority axe 1: Innovation.		

Part III – Details of the actions envisaged

ACTION: The creation of a call for focusing on societal challenges for the region including KETs as enablers and capacity builders.

1. The background

The Policy instrument addressed is the Operational Programme for the North middle Sweden for the period 2014-2020. Priority axe 1: Innovation.

Key Findings of the ClusterFY Project in North Middle Sweden Region

ClusterFY aims to improve regional and national policy instruments seeking to intensify Key Enabling Technologies (KET's)-related clusterization processes, as well as foster interregional cooperation between and among clusters and business networks. These developments advance the implementation of regional innovation strategies.

In close cooperation with regional stakeholders from the quadruple helix (Q4) and the eight European partner regions/countries of ClusterFY, Municipality of Hudiksvall in close cooperation with the Region of Gävleborg aim to develop recommendations on the improvement of regional policy ERDF, operational program (Partnership of North Middle Sweden, 2014-2023) Priority axis 1: Strengthening research, technological development and innovation Europe 2020 and national guidelines as well as priority axis 3: Enhancing the competitiveness of SMEs.

In the regional analysis done by the ERDF partnership (Partnership of North Middle Sweden, 2014-2023) it is shown that the challenge for North Middle Sweden is low growth, low R&D intensity, sparsely populated region with long distances, low access to broadband, which means worse conditions for enterprise in sparsely populated areas and high youth unemployment. There are strengths such as strong export companies with top-level skills and world-class industrial knowhow. There are universities with their own research. There are five strong national recognized clusters in the region, part of the Vinnova program at Vinnova. They are acting in the field of bioeconomy, (Paper Province), digitalization of health, (Digitalwell), advanced manufacturing and advanced materials (Triple Steelix), digitalisation of public sector using geospatial data (Geolife region, FPX) and digitalisation and photonic industry (Fiber Optic Valley). The region of Gävleborg also initiated regional arenas as innovation hubs focusing on the strongholds in each geography. These innovation hubs are co-financed by ERDF as well as many of the clusters in the region. In the region there are also local and regional clusters some mature and some newly started. The smart specialisation strategy S3 is well developed but in the policy study done by (Ardenfors, 2018) there were no active policy recommendation connecting KETS technology and the competence around these areas in the region with the smart specialisation strategy (S3).

General Observation in North Middle Sweden

In order to deepen the understanding of the region and the different actors, the following observations have been made both in the policy study (Ardenfors, 2018) and during the follow-up discussions and workshops:

- There are **weak links** between different types of actors such as business to business, university to university, business to municipality and cluster to cluster.
- There is a **Gap between regional test infrastructure and the involvement of SME** in these structures. If supported both with people with competence and money the testbeds could

REGIONAL ACTION PLAN CLUSTERFY

be utilized as a good vehicle for innovation and product development.

- **The connection between smart specialisation strategies and KETs development is not addressed** in the regional policy documents. Smart specialization strategies establish the policy frame for leveraging and building on related strengths. National and Regional smart specialization strategies establish main challenges and priorities for action, as well as policies and instruments that can be used to address regional development challenges. Cluster initiatives and other types of collaborative innovation platforms are part of the regional innovation system and represent the industrial sectors and technological strengths of the region. They are also leveraged as one of the policy instruments that regions use to build new areas of strength. It is important that there is coherence between regional S3 and its clusters and KET platforms, and that regions pursue “smart related development” – building connections between sectors, technologies and (international) geographies.
- There are **many societal challenges in the area** (elderly population, divide cities and rural areas, low educational level, energy efficiency etc.) that are not connected to the different KETs that might be able to solve these societal challenges. There are many well established innovations intermediaries, clusters, testbeds and research institutes that are not fully used to facilitate and explore the potential of KETs. Research institutes in the region are examples of knowledge hubs that could be used to explore the potential of KETS in SMEs and in the public organisations to fulfill societal needs.
- **The Competence level** in the region is not fulfilling the demands of the highly specialised industry and the societal challenges for the future. There is a need to find incentives for the local universities and higher education institutions to cooperate and find the specific education, cross sectorial that support the smart specialisation and KETs competence of the region.
- **The SME are in need to be more global**, to connect with the right competence in Europe and elsewhere in order to increase their market, get access to the best knowledge available. To reach SMEs, understand their needs and engage them in innovation processes, it is important to have a proactive and neutral intermediary organization with a mandate, skilled staff and other resources to fulfill this function. Cluster organisations, as well as other types of innovation platforms, living labs, and (applied) research institutes fulfill this role in North Middle Sweden region. Yet there is a need for increased acknowledgement, strengthened mandates and resourcing, and more focused efforts on SME and broader stakeholder engagement.
- Being part of and acting within an innovation ecosystem is a first step to address complex challenges. Individual organisations across regions everywhere experience constrained resources while needing to address more complex challenges. It is increasingly necessary to adopt the principles of **open innovation** – looking outside of one’s own organizational boundaries and areas of expertise to find and apply related knowledge and technological capacities, and pooling efforts towards common goals. Cluster initiatives are part of an innovation eco-system and have a responsibility not only to further the competitiveness of their participating actors, but also to facilitate action to address the challenges of the territorial system in which they exist.
 - Individual level - people

Building on these key findings, and the ClusterFy good practices from especially Northern Netherlands and their open call, project partner no 6 in Castilla la Mancha and their use of KETs as enabler for regionals and cluster development and the Polish support for KETs technology in Earsaw, their photonic cluster especially, the ClusterFY partner Municipality of Hudiksvall in cooperation with regional stakeholders propose four policy actions for the future. They are:

1. Develop Instruments to enable Use and Services of KETs

REGIONAL ACTION PLAN CLUSTERFY

2. Leverage Innovation Platforms to address societal challenges and missions
3. Develop instruments and incentives for increased skills, competences and capacities in societal challenges, missions and KETS for individuals attending vocational training, higher education and research schools matching the needs defined in the regional smart specialisation strategies
4. Increase use of clusters in support of SME internationalization

The Actions suggested for 2020-2021 is built on the suggested action no 1

1. DEVELOP INSTRUMENTS TO ENABLE USE and SERVICES OF KETs

What are the issues? Why is this theme important?

ClusterFY study visits and stakeholder meetings have highlighted several examples of KETs 'embodied' as applied research centers and/or innovation platforms

- Conducting applied research
- Test/demo capabilities
- Providing services to 3rd parties (e.g. education/training, technical skills, R&D projects building, access to financing) to multiple sectors

KET platforms work to develop innovation eco-systems...building new chains/coalitions of people, trying to involve different actors, integrating possibilities for test/demo, and 'translating' KETs into use (for both industry and society). It has been confirmed¹ that regions investing resources in fields with high technological opportunities are able to exploit their advantage in terms of advanced innovation performance. KET's have systematic relevance as they enable development of new products and services and processes needed to modernize EU industry, strengthen the research, development and innovation base of EU regions and facilitating regional cohesion. In North Middle Sweden there are fiberoptic research center in Hudiksvall, advanced material -steel manufacturing in Sandviken/Dalarna, Biotechnology/ Digital research facilities and testbeds in Värmland to mention some.

However, there are gaps between the availability of test infrastructure (and other KET platform services) and their use – particularly by SMEs.² Digital Innovation Hubs (promoted by the Digitising European Industry initiative³) and the Swedish program "Kick Start Go"⁴ are a good example of expanded efforts to communicate the presence, develop the capacities and services offered, and foster SMEs' access and use of such KET platforms across Europe. Similar efforts could be made in other KET areas to establish networks between (currently fragmented) regional KET platforms and develop stronger expertise and services to meet SME needs in these areas.

Although the European Commission and Members States have recognized these issues and taken action to facilitate pan-European access of SMEs to KETs technology infrastructures⁵, more can be done to accelerate both an awareness of the value of KETs and their application. In the region of North Middle Sweden, the connections between smart specialisation strategies and KETS needs to be highlighted.

What specific actions are recommended?

During 2020 Tillväxtverket in cooperation with the North Middle Sweden partnership will launch a call for seed money were the actors will be encouraged to use KETs as enablers to fulfill the strategies of the smart specialisation of the region

¹http://publications.jrc.ec.europa.eu/repository/bitstream/JRC98111/jrc98111_regions%20kets%20and%20ofgt%20-%20technical%20report%20-%20final.pdf

² See EU COM(2014) 14 final *For a European Industrial Renaissance*, as well as ClusterFY partner policy study: *KETs in North Middle Sweden by Ardenfors et al.*

³ See <https://ec.europa.eu/digital-single-market/en/digital-innovation-hubs>

⁴ See <https://www.interregeurope.eu/policylearning/good-practices/item/2690/fiber-optic-valley-a-regional-innovation-node-for-digital-transition-in-the-industry/>

⁵ See: https://ec.europa.eu/growth/industry/policy/key-enabling-technologies/eu-actions/help-smes-access_en

REGIONAL ACTION PLAN CLUSTERFY

Activities that are eligible for the seed funding could be:

- support links to create national and international networks of KETs (like European network of Digital Innovation Hubs – in other KET areas) enabling both mutual learning/knowledge exchange and the possibility to address SME needs (through referrals and connections within the network).
- Support training and mentoring programs between KET network nodes
- Support new initiatives to link SMEs to existing KET platforms and encourage SMEs to employ KETs in developing and using new technologies, products, services
- Leverage funding instruments (ERDF funds) to foster collaboration between KET platforms and cluster initiatives (strengthening cross-sectoral collaboration).
- Create a supportive environment so companies, researchers and users dare to take risk. Support seed funding to find new ways of integrating KETs into new businesses and services. If the KETS is not addressed by policy and prioritized in both EU, national and regional programs there is a risk that KETS might not develop as fast as it could. Developing KETS technology takes time.
- The MA, Tilväxtverket in cooperation with PP3 Municipality of Hudiksvall will work on strengthen communication and awareness raising on possibilities of KETs' applications, in order to get good applicants. They will prepare the criteria for the call during the spring of 2020 and during that time develop models of how projects could be set up in order to get the best results. The public organizations as well as SME and large companies need to understand in what way the new technology can be used in their ordinary activities and how technology can contribute to solve the societal challenge they are set to solve. They must be given tools to purchase and experiment with new technologies, new products and ideas

Source of inspiration from the ClusterFY project are the programs supporting photonic cluster in Warsaw, Poland and the test facilities in PP6 Castilla de la Mancha in Spain. SNN in northern Netherland is examining how to create and maintain fertile ground on which partners can continuously meet, interact, collaborate, come up with ideas and start initiating explorative activities using open calls to reach their smart specialisation goals

During the exchange of experience activities between ClusterFY partner regions, Municipality of Hudiksvall has seen a diversity of experience with cluster policies. Although many cluster initiatives are focusing on innovation and growth in firms, we also saw a lot of cluster policies aiming at influencing the system: bringing together triple helix actors to address broader regional and national aims for skills development, entrepreneurship, digitalization, industrial modernization, internationalization and sustainable development. In the case for municipality of Hudiksvall this where the most important experiences, leading to the conclusion that cooperation with Northern Netherland would be the right action to undertake in the second stage of the ClusterFY project. This conclusion is also in line with one of the main policy actions of the project no 2: **“LEVERAGE INNOVATION PLATFORMS (e.g. Clusters and KETs) across Europe TO ADDRESS SOCIETAL CHALLENGES and MISSIONS”**.

Especially in the exchange of experience with **1) SNN** and **2) PP6 (Castilla La Mancha)** important elements for this action plan where found.

- 1) During the meeting in Groningen the good practice: Open innovation call.

Take up: This model is very inspiring for North middle Sweden and could be a role model for future calls trying to utilize KETs platforms to enable the region to reach its smart specialisation goals. The main novelty of the open call is that it is directive not in terms of activities and actions but objectives. The logic starts with a strict objective, crucial is that it is the consortia to define the

REGIONAL ACTION PLAN CLUSTERFY

initiative. All actions or activities which form an indispensable element of the project is eligible We would like to add this element into the action plan , to understand how to phrase the call we would like to make.

- 2) The partner meeting in Castilla-La Mancha was focused on interregional cooperation and highlighted the use of KETS platform in strengthen European interregional cooperation, EU cluster policy instruments, tools to promote clusters at regional level and the study of regional networks and roles within the cluster ecosystem. During the visit we've picked up the use of KETs platforms as an enabler for cluster cooperation

Take up: MH identified the KETs platforms in the region and their importance for regional development and their importance as enablers for solving societal challenges, a good practice example is their event bringing different Key actors together to promote regional cooperation⁶

Preparation during first stage:

In the fourth reporting period, an analysis was set up and reported ⁷ (Ardenfors et al). In the sixth semester this analyze was discussed with MA in bilateral meetings and with stakeholders in a workshop meeting (as reported). After that a report was made that was the starting point of the Regional Action Plan.

The main conclusions of the report are in line with the expectations of MH and the North Middle Sweden stakeholder, Gävleborg region and Tillväxtverket. There is a need for a new approach, including KETs platforms as enablers of innovation and growth in a much more systemic way than earlier, also include them in the cooperation and communication between clusters that exists in the region. There is a need for stimulation of cross-over collaboration and coherence between clusters/SME and KETs institutes.

The end result will be that the usage and effectivity of the policy instrument will be approved through removal of barriers and lowering of obstacles and facilitation of KETs in cooperation with clusters and SME's to collaborate with other businesses and knowledge institutes, especially cross sector and cross border.

2. Players involved

- Cluster organizations
- KET institutions
- (Innovation) Networks
- Innovation) environments
- Business support & business development agencies
- Regional Development Agency, region of Gävleborg, Dalarna and Värmland
- University of Karlstad and Gävle
- Research institute Rise
- Municipality of Hudiksvall
- Tillväxtverket

⁶ (<https://www.interregeurope.eu/policylearning/good-practices/item/2160/r-d-i-industrial-meeting-to-promote-regional-cooperation-and-clusterization-processes/regional>)

⁷ See EU COM(2014) 14 final *For a European Industrial Renaissance*, as well as ClusterFY partner policy study: *KETs in North Middle Sweden by Ardenfors et al.*



REGIONAL ACTION PLAN CLUSTERFY
