



European Cluster Policy Forum

Towards modern cluster policy for industrial change and growth

22 February 2018



Input paper 1st meeting

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1 Introduction

The aim of European cluster policy is to promote the development of world-class clusters with competitive industrial value chains that cut across sectors, similar to the "European Silicon Valleys" referred to in the White Paper on the Future of Europe¹. To this end, EU cluster policy brings together several policy domains and policy levels. Cluster policy is not only a tool for the EU industrial policy strategy, but foremost for regional and national innovation strategies. EU cluster policy functions as a sort of unifying catalyst to regional and innovation policies by addressing EU value-chains and respective positioning in global value-chains. Cluster policies also channel support to SMEs, including start-ups and scale-ups; serve the implementation of smart specialization strategies; and promote cooperation across regions, countries and sectors. Consequently, the renewed EU Industrial Policy², the EU Strategy for Strengthening Innovation in Europe's Region³ and the EU Strategy for Start-up and Scale up⁴ are laying out the EU policy framework for the design of modern cluster policies are: (Figure 1).

Figure 1: EU Policy Framework for Clusters



¹ https://ec.europa.eu/commission/sites/beta-political/files/white_paper_on_the_future_of_europe_en.pdf

² EC (2017a) Investing in a smart, innovative and sustainable industry; A renewed EU Industrial Policy Strategy <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52017DC0479>

³ EC (2017b), Strengthening Innovation in Europe's regions: strategies for resilient, inclusive and sustainable growth. http://ec.europa.eu/regional_policy/en/information/publications/communications/2017/strengthening-innovation-in-europe-s-regions-strategies-for-resilient-inclusive-and-sustainable-growth

⁴ EC (2016), Europe's next leaders: the Start-up and Scale-up Initiative. <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016DC0733&from=EN>

In the renewed EU Industrial Policy Strategy, the European Cluster Policy Forum is identified as one of the key actions for a smart, innovative and sustainable industry. The aim of the Forum is to establish a platform to discuss and improve the design and implementation of cluster initiatives in Member States. The Forum also intends to increase awareness about the results of European cluster initiatives and of the many opportunities available at the European level for supporting cluster development and stimulate linkages between the value chains. Within the broader EU policies framework for clusters, five priority areas of intervention for cluster initiatives can be identified. These are:

- industrial modernisation and value chain linkages;
- smart specialisation investments;
- entrepreneurship (start-ups and scale ups), SME growth and acceleration ;
- interregional, international and cross-sector collaboration;
- excellence in cluster management for better SME support.

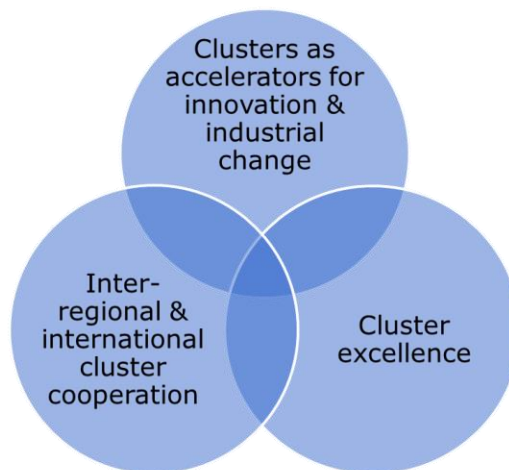
This first meeting of the European Cluster Policy Forum serves to open up a discussion on how cluster policies can effectively support industrial modernization and growth in Europe, to identify challenges ahead at European, national and regional level, and outline where participants see needs for policy action. It is set to let the participants of the Forum have a better understanding of the opportunities and constraints policy makers in Europe face while designing and implementing their cluster policies. This first meeting will be an opportunity to focus the discussion on topics that are most relevant to Member States, and set the direction of the future meetings of the Forum. The outcomes of this discussion will then be integrated in a finalised version of this paper.

2 EU cluster support initiatives

Compared to regional and national cluster policy, EU cluster policy is still relatively young, but has much potential for expansion. Differently from the traditional, merely inward-looking promotion of interlinkages between similar firms within closed, narrowly defined geographical, technological and sectoral boundaries, modern EU cluster policy promotes broad-based innovation that is open to entrepreneurial opportunities provided by linkages across regions, technologies, sectors and across innovation policy purposes.

EU cluster policy is based on inputs from multiple policy domains and levels, and also serves multiple policy goals. In this respect cluster policy is a 'policy mix'. Modernising cluster policy can be seen as a complex dynamic process of coming to 'new combinations', new configurations of various public and private policies including: innovation policy, regional development policy, entrepreneurship and SME policy, industrial and internationalisation policy.

Figure 2: European cluster strategy for growth



The European cluster approach for growth is based on three main pillars: clusters as accelerators for innovation and industrial change, inter-regional and international cluster cooperation, and cluster excellence (Figure 2 and 3). The European Commission provides – through the European Observatory for Clusters and Industrial Change – statistical and trend analysis of clusters to capture value chains, gazelles, start-ups and scale-ups, cluster policy advice and learning, as well as support for strategic interregional cluster partnerships.



Figure 3: EU Cluster Initiatives

EU cluster policy is implemented through concrete EU initiatives launched under EU's financial programmes, mainly COSME⁵ (e.g. cluster internationalisation and Cluster Excellence with a budget circa EUR 40 million) and Horizon-2020 (INNOSUP-1 cluster facilitated projects for new industrial value chains- budget EUR 130 million). They are closely linked to smart specialisation strategies that guide about EUR 121 billion of European Structural and Investment Funds allocated to innovate investments⁶ and INTERREG⁷. The European Structural and Investment Funds (ESIF) also use several measures to support the development of regional clusters that foresee EUR 2.32 million of funds for cluster support and business networks primarily benefiting SMEs⁸.

2.1 Invest in cluster excellence

High quality cluster management is a key element of successful world-class clusters. Strong management capabilities and skills are crucial for cluster organisations to provide professional services to cluster firms, to assist companies accessing global markets successfully and to raise the innovation capacity and competitiveness of cluster firms. Numerous factors interact in cluster eco-systems, both technological and market-wise, and cluster managers must be able to skilfully provide SMEs with unique support. The EU initiatives to invest in cluster excellence are based on cluster labelling and capacity building.

⁵ See: Interim evaluation of the programme for the competitiveness of enterprises and small and medium-sized enterprises (COSME) (2014-2020) Available at: https://ec.europa.eu/info/consultations/interim-evaluation-programme-competitiveness-enterprises-and-small-and-medium-sized-enterprises-cosme-2014-2020_en

⁶ See the Smart Guide to Cluster Policy, available at <http://ec.europa.eu/growth/smes/business-friendly-environment/regional-policies>

⁷ Examples of such programmes include **CLUSTERIX 2.0**, an initiative financed by the INTERREG Europe programme with a total budget of EUR 2.126.574 that addresses the improvement of regional innovation policies by making better use of clusters. <https://www.interregeurope.eu/clusterix2/>

⁸ Regional data on the cluster support by ESIF is available <http://s3platform.jrc.ec.europa.eu/esif-viewer>

The **European Cluster Excellence Initiative**, launched in 2009, was created to support the establishment of more world-class clusters across the EU by strengthening cluster excellence. It is based on the principle of promoting the professionalization of cluster management

through benchmarking of cluster organisations. The **Cluster Labelling Scheme**, managed by the European Secretariat for Cluster Analysis and Regional Development (ESCARD), was developed within the framework of this initiative. The scheme typically serves as a main entry point for cluster organisations to begin a process of qualitative improvement in support of cluster companies as well as a driver for internationalisation and investment by better exploiting regional innovation eco-systems. The Bronze/Silver/Gold labels are recognised nowadays as a credible “European standard for cluster management” which addresses domains for self and collective improvement as high-value support services are key for SMEs competitiveness, investment, job creation and growth.

The labels can be used by policy-makers and programme owners in two ways:

- First, by encouraging cluster management organisations to obtain the label (e.g. by providing financial support for the assessment procedure), they can assist cluster organisations in their efforts to develop more efficient and effective institutional structures, processes and services.
- Second, as the label reflects different levels of cluster management excellence, it provides guidance for decisions as to which cluster should be supported by cluster programmes.

So far 2 CIP and 2 COSME calls for proposals have been launched to support 19 projects on cluster excellence. In the 2014-2015 COSME calls: 11 projects, 57 clusters organisations and 83 cluster managers have been involved for the benefit of almost 11.000 SMEs. The objectives were to strengthen cluster management excellence, to foster cluster cross-border collaboration, to provide top professional services to SMEs through consortia participating in benchmarking activities, in strategic partnerships, and in trainings/mentoring activities.

Until today nearly 1,000 cluster organisations from more than 40 countries have received a Bronze Label of Cluster Management Excellence, 93 cluster organisations received a Silver Label and 90 clusters a Gold Label, but with an uneven geographical distribution across the EU, relatively few silver and gold labels, and a lack of renewals.

The European Commission considers that there is a need to consolidate and to improve the cluster labelling system at European and international level to the benefit of SMEs. The new labelling system would also clarify the respective role of the different actors involved to continue to raise its quality and attractiveness across the EU. In this context, an ad-hoc grant was published early 2017 to launch the phase II of the European Cluster Excellence Initiative to consolidate and improve the European cluster labelling system:

- increasing the Europeanisation of the labelling system on transparent basis;
- reinforcing Cluster Management Excellence expertise at European level;
- building up a sustainable “management structure” for the labelling process.

The challenge is clearly to increase added-value of the European labelling system with support from policy makers at regional and national level. Therefore, the European Commission asked the European Secretariat for Cluster Analysis (ESCA), as "independent manager" of the 1st phase of the European cluster excellence Initiative to set-up a new consortium with at least 16 COSME participating countries (at the end 25 organisations from 20 countries are committed to contribute in phase II). The cluster excellence is in a transition period to explore the possible next steps with all options open as the European cluster labelling process is a tool to be integrated in modern industrial policies to add value for SMEs at European and international level.

Knowledge and Innovation Communities (EIT)⁹ are partnerships that bring together businesses, research centres and universities to find solutions to major societal challenges in areas with high innovation potential. The Innovation Communities follow a cluster logic in bringing together knowledge and innovation community to and entrepreneurship with a budget of EUR 2.7 billion. Since 2010, the European Commission has launched six Innovation Communities in the following areas: EIT Climate-KIC, EIT Digital, EIT InnoEnergy, EIT Health, EIT Raw Materials, and EIT Food. Within these domains the established Innovation Communities carry out activities that cover the entire innovation chain: training and education programmes, reinforcing the journey from research to the market, innovation projects, as well as business incubators and accelerators. Each Innovation Community has been set up as a legal entity and has appointed a CEO to run its operations.

2.2 Promote cluster collaboration within and beyond Europe

The European Commission's White Paper on the Future of Europe and its Start-up and Scale-up Initiative outlined the need for more industrial cooperation and strategic connections between regional and local eco-systems. It's recent communications on 'Strengthening Innovation in Europe's Regions' and the renewed EU Industrial Policy Strategy also calls for stronger strategic inter-regional cooperation, sustainable linkages and investments. It is also recognized that European enterprises, and especially SMEs, need to be able to confront increasing competition from developed and emerging economies and to plug into new opportunities these countries provide. Clusters can help SMEs by acting as "springboards" for getting access to global value chains and developing long-term strategic partnerships. SMEs benefit from specialised business support services of cluster organisations, which enable them to find international partners, identify growth opportunities worldwide and raise overall competitiveness.



The European Cluster Collaboration Platform¹⁰ is an action of the Cluster Internationalisation Programme for SMEs, funded under COSME and launched by DG GROW in 2016. The Platform provides networking and information support for clusters and their members aiming to improve their performance

⁹ <https://eit.europa.eu/activities/innovation-communities>

¹⁰ <https://www.clustercollaboration.eu/>

and increase their competitiveness through trans-national and international cooperation. The services include:

- a dynamic mapping of more than 750 profiled cluster organisations worldwide,
- the largest information hub for clusters offering latest news/events/open calls to a broad community, with more than 5,000 subscribers to its Weekly Digest,
- matchmaking events supporting the development of cooperation between clusters in Europe and beyond,
- a unique database on regional, national, international and sectoral cluster networks, including profiled cluster-related projects developed under various European programmes
- detailed information on the European Strategic Cluster Partnerships with a “partner search” facility, where cluster organisations can exchange their offers and demands,
- dedicated pages supporting international cooperation including profiles of selected countries of strategic interest and related European international support services,

The Platform addresses primarily the needs of cluster managers, but a rich content is useful for both the SME cluster members and for the cluster policy makers at regional, national or international level.



International Cluster Matchmaking Events are organized within the framework of the Platform. These events gather representatives from cluster organisations for participating in cross-sectorial meetings and identify potential international partners. One of such event will be organized within the Second European Industry Day on 22 February 2018 in Brussels. Examples of future planned events are in Kiev (Ukraine) in March 2018 and in Taipei (Taiwan) in June 2018. All upcoming events, along with detailed information and guidelines about the type of support provided, eligibility criteria and application templates and deadlines are advertised on the web site of the Platform ¹¹.

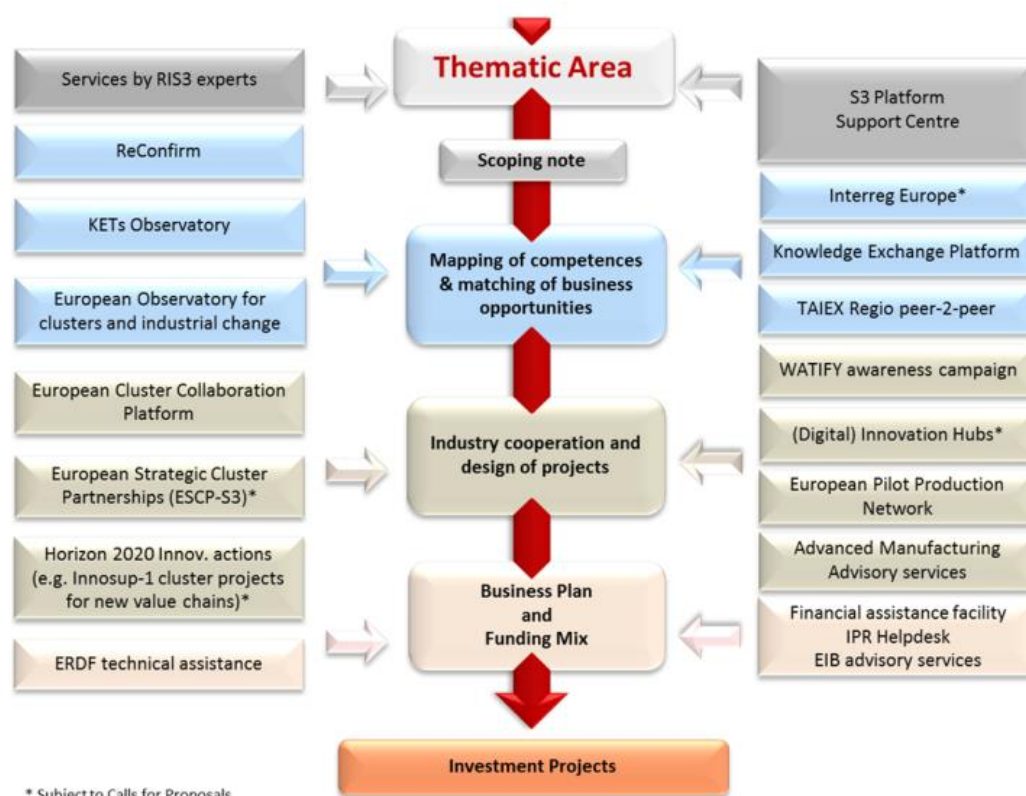


The European Strategic Cluster Partnerships for Smart Specialisation Investments (ESCP-S3)¹², is a new action (EUR 2,8 million) under the COSME programme that is set to foster the collaboration of cluster organisations and their enterprises, especially SMEs, as well as their interaction with technology centres both within the cluster and across regional and sectoral silos. The aim is to ***generate joint actions and investment projects in common smart specialisation priority areas linked to industrial modernisation*** and to help improving their business environment. The action aims to support 8 partnerships (deadline for submission is 8 March 2018) that bring together cluster organisations, business networks, technology centres and science parks to work on a specific smart specialisation priority area related to industrial modernisation to also support the efforts of the Thematic smart Specialisation Platform for Industrial Modernisation. To prepare for the call, partnership offers have been posted on the

¹¹ <https://www.clustercollaboration.eu/event-calendar/eccp-matchmaking>

¹² <https://ec.europa.eu/easme/en/cos-clustpartn-2017-3-02-european-strategic-cluster-partnerships-smart-specialisation-investments>

website of the EU Cluster Collaboration Platform¹³. These partnerships are expected to: develop a joint cluster partnership strategy, identify collaboration and investment opportunities, draft a roadmap of such joint activities, mobilise interregional collaboration and investments of industry actors, provide services for the preparation, and implement joint innovation and investments projects. The **Smart Specialisation Platform for Industrial Modernisation**¹⁴ (S3P-Industry) aims to support EU regions committed to generate a pipeline of industrial investment projects following a bottom-up approach - implemented through interregional cooperation, cluster participation and industry involvement. More than 64 regions are involved in 11 thematic areas¹⁵ under the S3 Platform for industrial modernisation. A wide range of support is provided for the platform (Figure 4).



¹³ <https://www.clustercollaboration.eu/partner-search>

¹⁵ Thematic areas are: advanced manufacturing, textile Innovation, medical technology, sport innovation; nano-enabled products, 3D printing, innovative use of non-food biomass, efficient and sustainable manufacturing, photonics, digitalisation and safety for tourism and Industry 4.0.

actions (i.e. business missions, cooperation agreements, gateway services, or export consortia) to strengthen European SMEs access to specific third markets and establishing a long-term cooperation agenda with strategic partners in third countries. The Partnerships are expected to develop a joint European strategic vision with a global perspective and common goals towards specific third markets. The first generation of calls (2016-2017) co-funded 15 partnerships, while other 10 partnerships were established on voluntary basis. The involved 25 European Strategic Cluster Partnerships (ESCPs) represent 145 cluster organisations across 23 European countries and more than 17,000 European SMEs. The COSME Interim Evaluation Report¹⁷ therefore concluded that the Clusters Go International action succeeded in involving a high number of clusters (reaching out to circa 3800 SMEs) some even at a voluntary level, testifying the high interest in this action in the EU cluster community. Moreover, it concluded that the action shows good potential to lead to an improved strategic position in global value chains but flagged out the limited budget as a significant hurdle. The second generation of calls (2018-2019) are set to co-fund 23, including 2 partnerships on earth observation data application.

EU's **Low-Carbon Business Actions (LCBAs)** in Brazil and Mexico¹⁸, supported through the EU Foreign Partnership Instrument are a natural extension of the objectives of the cluster internationalisation activities. European clusters are key intermediaries that can help define priority target markets taking into account the business interest portfolio identified through European Strategic Cluster Partnerships. Clusters can also play a major role to facilitate the recruitment of the most relevant European SMEs across regional industrial ecosystems to enter into joint business projects with partners in third countries. In Mexico, at least 50% of European participants were informed about the LCBA project through cluster organisations; 90% of those clusters were members of the European Cluster Collaboration Platform (ECCP).

The report on the Implementation of **Free Trade Agreements (FTAs)** published in November 2017¹⁹ concludes that EU businesses could use much more the tariff preferences which an EU FTA offers them. The report points out that SMEs underutilise the opportunities offered by EU FTAs. Overall, EU agreements are shown to lead to more EU exports and growth, with major **export increases** to for example: Mexico (+ 416% since 2000), Chile (+ 170% since 2003), South Korea (+ 59% since 2011), Serbia (+ 62% since 2013).

¹⁷ https://ec.europa.eu/info/consultations/interim-evaluation-programme-competitiveness-enterprises-and-small-and-medium-sized-enterprises-cosme-2014-2020_en

¹⁸ <http://www.lowcarbonbrazil.com/index>, <http://www.lowcarbon.mx/>

¹⁹ COM (2017) 654, available at: <http://ec.europa.eu/trade/policy/countries-and-regions/negotiations-and-agreements/>

2.3 Support cross-sectoral linkages and EU industrial value chains through clusters

The EU supports the development of industrial clusters and value chains, as they will provide the growth and employment of the future. The reindustrialisation of the EU's industrial base and the development of new industrial value chains call for the collaboration and integration of different innovation actors, including large enterprises and especially SMEs, across different sectors towards the implementation of a joint vision. SMEs need help to generate, take up and better capitalise on all forms of knowledge, creativity, craftsmanship and innovation. The potential of clusters –that represent favourable ecosystems for innovation and entrepreneurship– need to be better exploited in this respect.

Cluster facilitated projects for new industrial value chains (Innosup-1 under H2020)²⁰ aims at supporting cross-border and cross-sectoral collaboration, innovation and entrepreneurship across different regions and value chains putting cluster organisations in the driver seat. The initiative is financed under Horizon 2020 with a total budget of EUR 130 million for 2015-2020. Each selected project gets a maximum amount of EUR 5 million, and 75% of the budget must be dedicated to supporting innovation in SMEs. So far, 9 projects have been launched that reached out to over 3000 SMEs and we are supporting nearly 500 SMEs directly (e.g. through innovation vouchers). By its end, the initiative aims to support over 2000 SMEs. This initiative is a clear example of the shift from supporting clusters towards supporting SMEs through clusters.



Grow Your Region²¹ is a joint initiative of DG REGIO and DG GROWTH to share regions' smart specialisation and cluster experiences and practices, exchange ideas about future actions for smart interregional collaboration and learn about novel ways of supporting innovation and accelerating industrial modernisation and SME growth. The first Grow your Region conference was held in Brussels in 2015, while a second event followed in Valencia in November 2017. The conferences addressed national and regional authorities managing ESIF and INTERREG projects, the business community and cluster stakeholders engaged in European cluster partnerships and cluster projects to discuss new ways to boost smart interregional collaboration through clusters towards more European "Silicon Valleys" and value chain linkages that bring benefits to regions and cities across Europe.

²⁰ <http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/innosup-01-2018-2020.html>

²¹ http://ec.europa.eu/growth/content/grow-your-region-conference-set-8-9-november-2017-boosting-smart-interregional-collaboration_en



The European Observatory for Clusters and Industrial Change (EOCIC) was launched in October 2017 and is the successor of the European Cluster Observatory²² The aim of the European Observatory for Clusters and Industrial Change is to help Europe's regions and countries in designing better and more evidence-based cluster policies and initiatives. The Observatory supports: i) industrial modernisation; ii) entrepreneurship in emerging industries with growth potential; iii) SMEs' access to clusters and internationalisation

activities; and iv) more strategic inter-regional collaboration and investments in the implementation of smart specialisation strategies. The Observatory will, amongst other things:

- provide statistical and trend analyses of clusters by updating and extending the existing **European Cluster Database**, in particular in relation to **industrial change and entrepreneurship**, and preparing new reports on cluster trends in Europe²³;
- identify favourable framework conditions and bottlenecks for the development of clusters and industrial modernisation by providing a **Regional Eco-system Scoreboard for clusters and industrial change** and upgrading the **European Service Innovation Scoreboard**;
- provide **customised policy advice to 12 selected regions** to create a showcase for modern cluster policies in relation to their capacity to support innovation and entrepreneurship;
- provide advisory support services to European Strategic Cluster Partnerships, including a **Smart Guide for European Strategic Cluster Partnerships** and
- support mutual cluster policy learning and transnational cooperation, by updating the existing **mapping of cluster programmes across the EU**²⁴, facilitating the exchange of experiences and mutual policy learning through the organisation of four **European Cluster Policy Forum** meetings, prepare for possible future the **European Cluster Days** and a **Cluster Conference (2019)**, and the preparation of two **smart guides**: one on **cluster monitoring and evaluation** and another on **entrepreneurship support through clusters**.

²² https://ec.europa.eu/growth/industry/policy/clusters/observatory_en

²³ Similar reports prepared by the past EOCIC programme include the European Cluster Panorama 2016 (<http://ec.europa.eu/DocsRoom/documents/20381>) and The European Cluster Trend 2014 (<http://ec.europa.eu/DocsRoom/documents/10690/attachments/1/translations>).

²⁴ Cluster Programmes in Europe 2014 (<http://www.sgg.si/wp-content/uploads/2015/12/Cluster-Programmes-in-Europe.pdf>).

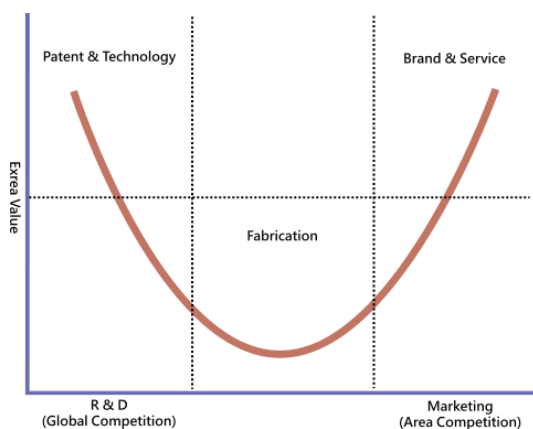
3 Cluster policy challenges and emerging directions

This section highlights some challenges and emerging cluster policy directions. It will be complemented at a later stage with the challenges and new orientations that will be put forward by the participants at the 1st meeting of the European Cluster Policy Forum on 22nd February.

3.1 Foster industrial modernisation through cluster policy

A new role for clusters and cluster policy that has emerged (or has been re-discovered) over the last decade concerns industrial modernisation. The policy focus of the past on the pre-competitive (R&D) part of value-chains has broadened by integrating the closer-to-market, competitive parts with more emphasis on the wider uptake of technology and innovations, a

Figure 4: The smiley curve of value-added along the value chain



particular problem for SMEs; e.g. also including the modernisation of traditional industries, and promoting export. What once was referred to as the 'smiley curve' of value added (Figure 5), had under-estimated the loss of important back-ward and forward learning effects between the various activities in the value chain. Manufacturing has often followed market locations and lately R&D seems to follow manufacturing locations. This perspective translated the 'smiley-curve' into many sad faces. With a more integrated and strategic view on value-chains: *"the EU therefore aims to increase the exploitation of technology*

and innovations in Europe and improve our position in global value-chains, as this will stimulate growth and jobs²⁵".

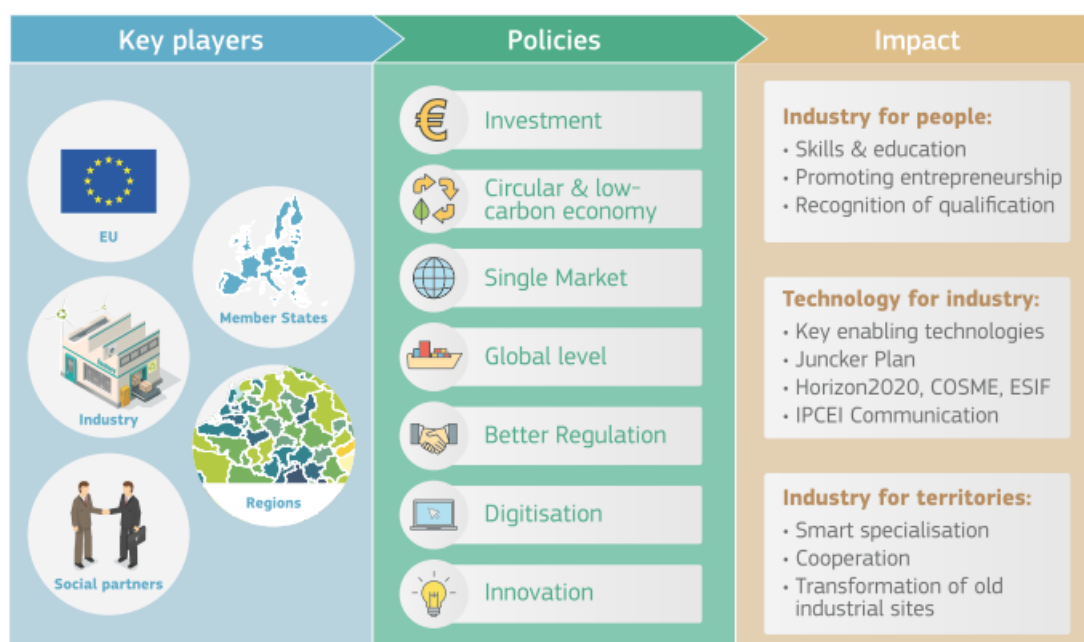
Many Member States have developed strategies for industrial transformation, of which the German strategy 'Industry 4.0' is perhaps the most well-known. The renewed EU Industrial Policy Strategy²⁶ addresses many of the common issues related to industrial renaissance in a holistic vision based upon industry ecosystems and value-chains that bring together various

²⁵ EC 2017 Factsheet 'Making Europe's Industry stronger', p.4

²⁶ EC (2017) Investing in a smart, innovative and sustainable industry; A renewed EU Industrial Policy Strategy Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52017DC0479>

public and private partners and policy domains to reach out to several impact areas (Figure 6).

Figure 5: Industry ecosystem



In order to drive industrial transformation, the new EU Industrial Strategy states that *“Europe needs to stimulate more capital investment, facilitate the uptake of promising innovation and provide a favourable environment for the scale-up of dynamic SMEs”*²⁷. The modernisation challenge requires: *“embracing digitisation and technological change, integrated products and services, the development of less polluting and less energy-intensive technologies, the reduction of waste and investments in a workforce with the right skills”*²⁸.

Clusters can be a strong policy tool to achieve that. For example, the Walloon cluster policy aims both at transforming (through innovation, creativity, digitisation, greening) the industries lying at the core of the economic fabric (mechanical engineering, chemistry, agri-food industry, transport and logistics, aerospace, life science) and at supporting the emergence of new specialisation niches. The current ‘Competitive Clusters’ have been selected top-down, but the private sector is in the driving seat for defining the development strategy of the cluster and selecting niches for the future. The integrated policy mix includes: support to RDI, investment, training, attraction of FDI and support to export.

The challenge of industrial modernisation is also taken up by technology centres across Europe that promote the up-take of technology and innovations in manufacturing and often take part in regional and national cluster initiatives. A remaining challenge is to increase

²⁷ EC (2017) A renewed EU Industrial Policy Strategy. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52017DC0479>

²⁸ EC 2017, Factsheet on A holistic strategy and a strong partnership in a new industrial age

inter-action of these centres (e.g.: KETs centres²⁹ and Digital Innovation Hubs³⁰) with SMEs in clusters, in particular to provide open and wide access for SMEs to the best expertise and knowledge across EU regions, countries and sectors. This calls for scaling-up services provided by these centres, a sustained revenue model, and international collaboration. The various European Cluster Collaboration Platform activities evidence the new direction towards international cluster collaboration in addressing the industrial policy challenges. The Vanguard Initiative³¹ has in this respect paved the way for the S3 Platform for industrial modernisation³² as the new European approach for developing EU networks of regional pilots and demonstrators in key EU industrial priorities. It has however identified challenges in the financing and networking of relevant facilities in centres and hubs.

3.2 Inducing smart specialisation investments through cluster policy

In 2010 the Commission called on national and regional governments to develop smart specialisation strategies (RIS3) for research and innovation (R&I) to encourage all European regions to discover their competitive advantage. The past view on policy learning was one of competing policy practices, diffusing of ‘best practices’, which would converge into a single EU best practice policy mix. The RIS3 approach is rather aimed at diversification of strategies, but not in isolation from other regions. The role of EU industrial cluster policy is to support scaling-up and linking-up regional segments into EU value-chains. Clusters bring together different stakeholders along value chains, and can foster innovative interactions between technologies, sectors, regions and policy tools. In many regions RIS3 strategies have been built upon clusters policies. For instance, in Wallonia, clusters lie at the heart of the regional smart specialisation strategy and are the main tool for industrial transformation.

The communication ‘Strengthening Innovation in Europe's Regions: Towards resilient, inclusive and sustainable growth’³³ describes the first results. The RIS3 logic has indeed facilitated a reflection on the economic transformation in a wide range of regions. Four remaining challenges are identified:

- further reform of the regional and innovation systems;
- increase cooperation in innovation investment across regions;
- leverage research and innovation in less developed and industrial transition regions;
- harness synergies and complementarities between EU policies and instruments.

²⁹ <https://ec.europa.eu/growth/tools-databases/kets-tools/kets-observatory>

³⁰ See: <https://ec.europa.eu/digital-single-market/en/digital-innovation-hubs>; and for an online catalogue:

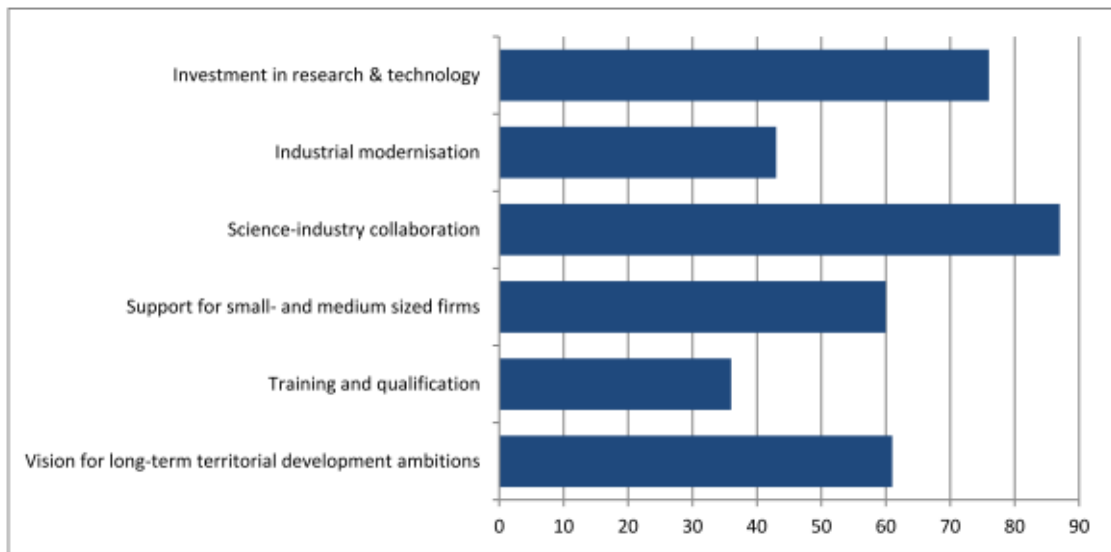
<http://s3platform.jrc.ec.europa.eu/digital-innovation-hubs>

³¹ <http://www.s3vanguardinitiative.eu/>. See also VI position paper: http://www.s3vanguardinitiative.eu/sites/default/files/contact/image/vi_position_paper_post2020_final_7nov2016.pdf

³² <http://s3platform.jrc.ec.europa.eu/industrial-modernisation>

³³ EC (2017b) Strengthening Innovation in Europe's Regions: Strategies for resilient, inclusive and sustainable growth. Available at: http://ec.europa.eu/regional_policy/en/information/publications/communications/2017/strengthening-innovation-in-europe-s-regions-strategies-for-resilient-inclusive-and-sustainable-growth

Figure 6: Areas in which regions expect future benefit from RIS3 activities



Source: Fraunhofer RIS3 annual survey 2016 (Kroll 2016); N=179 (113 fully completed)

Kroll (2016)³⁴ shows in which areas regions expect future benefit from RIS3 activities (Figure 7). ‘Science-industry collaboration’ and ‘Investments in research & technology’ have remained the areas with the highest expectations. Lower expectations were reported for the areas of ‘Support to SMEs’ and ‘Industrial Modernisation’. With regard to the aim of economic transformation this could be worrying, and indeed seems to call for further reform, and for EU industrial and cluster policy topping-up regional and innovation policy towards competitive value-chains. Also the second point (the need to increase cooperation across regions) is confirmed by the same survey in the sense that more than 80% of the regions see high to very high potential benefits of interregional cooperation. In other surveys, linked to the European Strategic Cluster Partnership, clusters are identified as key internationalisation facilitators for both SMEs and other innovation actors.

The GROW your REGION conference of 2015 inspired the European Cluster Observatory (2016) in the Smart guide to Cluster Policy³⁵ to reflect on the do’s and don’ts of modern cluster policy (Table 1). The change in principles concerning cluster policy shows that cluster policy and regional innovation policy have co-evolved in the same modern direction of Smart Specialisation, whereby an ecosystem organises an entrepreneurial process to discover what it does best. The GROW your REGION conference of 2017 in Valencia³⁶ brought together 315 stakeholders from 25 countries concluded that:

- interregional collaboration through clusters is a key tool for supporting innovation, industrial modernisation and the scaling up of SMEs;

³⁴ Kroll (2016) Fraunhofer RIS3 annual survey 2016

³⁵ https://ec.europa.eu/growth/content/smart-guide-cluster-policy-published-0_nl

³⁶ See: https://europa.eu/newsroom/events/grow-your-region-conference-boosting-smart-interregional-collaboration-through-clusters_en

- the right partners – policy-makers, SME intermediaries and industry – need to be involved;
- dedicated support, new initiatives and sustainable partnerships are needed to advance collaboration in specialised themes.

Table 1: Do's and Don'ts of modern cluster policy

Don'ts	Do's
Support individual specialised firms	Support new activities, in particular those being undertaken by groups or networks of related industries
Create clusters from scratch (i.e. implementing 'wishful thinking' of policy-makers)	Facilitate the growth of clusters by building upon existing strengths (i.e. implementing evidence-based policy by building upon a comparative analysis of regional strengths and 'entrepreneurial discovery')
Fund large numbers of widely varied clusters	Fund strategic cluster initiatives that focus on promoting the strengths, linkages and emerging competences and which are in line with the aims of national/regional smart specialisation strategies
Follow growth trends without reflection	Capitalise upon regional competences to diversify into new activity areas and to develop emerging industries
Follow a narrow sectoral cluster approach	Follow a systemic cluster approach focusing on related industries by capturing cross-sectoral linkages
Develop and implement cluster policy in isolation from other policy areas	Adopt an inclusive and participatory cluster approach (i.e. involving businesses, investors, academics and policy-makers, and making links with related policy themes such as R&D, innovation, entrepreneurship, access to finance, SME internationalisation etc.)
Support cluster initiatives that are only inward looking	Support cluster initiatives that have an international perspective on the positioning of the cluster in international value chains
Focus exclusively on strengthening regional partnerships	Build regional partnerships as a basis for joining European Strategic Cluster Partnerships

Source: Smart Guide to Cluster Policy (European Cluster Observatory 2016)

3.3 Promote entrepreneurship through cluster policy

Evidence shows that clusters are fertile ecosystems for setting up new companies because of the presence of agglomeration economies (e.g. proximity of suppliers and users). At the same time, in areas where entrepreneurial culture is strong, clusters are more easily established. This complexity and systemic nature of the relations are addressed in the concept of ecosystems. Stam & Spigel³⁷ define the entrepreneurial ecosystem as: *"a set of interdependent actors and factors coordinated in such a way that they enable productive*

³⁷ Stam, F. C., & Spigel, B. (2016). Entrepreneurial ecosystems. USE Discussion paper series, 16(13).

entrepreneurship within a particular territory". They stress the importance of individual entrepreneurs and entrepreneurial capabilities (next to technological and market insights), which add another dimension to the allied concepts of 'industrial districts', cluster and regional innovation systems for explaining patterns of start-ups and scale-ups.

Information on the performance of start-up and scale-up in terms of job creation in the regions and clusters of Europe is scarce, which is a barrier to learning how to improve policies and programmes for these enterprises³⁸. The Regional Ecosystems Scoreboard is one of few exceptions. The European Observatory for Clusters and Industrial Change will for the first time address this challenge by systematically collecting information on start-ups and scale-ups in Europe. Its current survey on national cluster programmes³⁹ is also taking stock of cluster programmes that have specific start-up and scale-up provisions. This will further help identify examples of how modern cluster policies and programmes can contribute to entrepreneurship development and the scaling up of innovative and young enterprises. The survey also extends to countries beyond the EU, where further lessons can be learnt on how to leverage the existing entrepreneurial culture within clusters.

Acknowledging that Europe has not yet been able yet to create a favourable environment for scale ups, a number of EU initiatives were put in place to address key constraints to start up and scale ups (i.e. regulatory and administrative barriers, access to sizeable risk funding, incompleteness of the single market). But the direct linkages between cluster policies/programmes and public support for entrepreneurship are often less clear. A cluster programme mapping exercise carried out by the previous Cluster Observatory, showed that cluster organisations have little focus on entrepreneurship, as their services are mostly set to support existing enterprises⁴⁰, which provide membership fees. As a matter of fact, some of the key determinants of an environment that is favourable to start and scale ups, such as the broader country/regional regulatory framework, are beyond the area of competencies of cluster organisations. Anyway, cluster organisations can be important players in setting the industrialization and modernization agenda of a country/region and can collaborate with other relevant organisations for designing and delivering services for would-be-entrepreneurs and fast-growing enterprises (e.g. born global, gazelles). One of the deficiencies identified⁴¹ concerns linking start-ups with business partners and connect regional eco-systems. As illustrated by the European Cluster Panorama (2016), gazelles in strong clusters employ 35 staff compared to 24 elsewhere. Cluster organisations can help connect newly established firms with potential suppliers or users in regional or international value chains by relying on their consolidated network. To this end, some cluster organisations have integrated incubator and accelerator services into their wider mix of

³⁸ EC (2016a), Europe's next leaders: the start-up and scale-up initiative

³⁹ National representatives invited to participate in the ECPF have received a survey before the meeting in order to up-date the current overview of cluster programmes in Europe.

⁴⁰ ECO (2016b) Clusters and Entrepreneurship in Emerging Industries. European Cluster Observatory Discussion Paper

⁴¹ EC (2016) Europe's next leaders: the Start-up and Scale-up Initiative. Available at: <http://ec.europa.eu/DocsRoom/documents/20262>.

activities. Within consolidated clusters, cluster organisations could thus be at the centre of a more coordinated support for both start up and scale up initiatives, establishing themselves as knowledge brokers between the industry, scientific and political communities. Yet this is unlikely to happen without the support from regional and national authorities as they are the owners of this challenge.

EU entrepreneurship and SMEs scale-up policies relate to value-chain policies. Designing policies from the standpoint of positioning EU value-chains in global value-chains remains a challenge. The COSME scheme on European Strategic Partnerships for smart specialisation strategy –potentially addressing not only ESIF but also EFSI- and for EU clusters going international illustrates the emerging orientation of EU clusters policy.

The public consultation referred to in the Start-up and Scale-up Initiative⁴² concluded that start-ups and scale-ups would benefit from more coordinated support with respect to:

- “a critical mass of effectively interconnected EU-wide clusters and ecosystems;
- better use of accelerators and incubators;
- an EU wide platform to connect start-ups with potential partners (alongside existing public and private platforms).”

The Start-up and Scale-up Initiative therefore calls for actions to *“connect clusters and ecosystems across Europe, as well as bring stronger coherence between the different EU initiatives in particular by linking up national and regional Ministries, innovation agencies and other stakeholders and ecosystems”*.

3.4 Facilitating interregional, international and cross-sector collaboration through cluster policy

Concerning the previous roles of cluster policy (in relation to industrial policy, regional innovation policy and entrepreneurship policy) a common challenge and emerging orientation was identified in promoting international cluster collaboration and developing a European ecosystem. Besides the current EU cluster policy initiatives mentioned in the previous sections, such as the European Strategic Cluster Partnerships for smart specialisation investments (ESCP-S3), H2020 INNOSUP projects, and European Strategic Cluster Partnerships for Going International (ESCP-4i), the challenge to promote international cluster collaboration is also taken-up by other initiatives.

For example INTERREG Europe⁴³ is also promoting the use of clusters for cooperation across borders concerning: research and innovation, SME competitiveness, low-carbon economy, and environment and resource efficiency. Together with the European Commission and the Lapland region, INTERREG Europe will for instance organise an event in April 2018 to discuss

⁴² European Commission (2016), Europe’s next leaders: the start-up and scale-up initiative, p.3, <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016DC0733&from=EN>

⁴³ <https://www.interregeurope.eu/about-us/>

possible synergies and complementarities between INTERREG Europe projects and the regional RIS3 partnerships for the Thematic Smart Specialisation Platform for industrial modernisation. INTERREG Europe identified 19 projects with regions involved in the Smart Specialisation Platform for Industrial Modernisation. A bottleneck is that the focus lies foremost on policy learning and not on supporting the implementation of actions.

Figure 8: Selection of cluster networks

International cluster networks	   
National cluster networks	   
Regional cluster networks	    

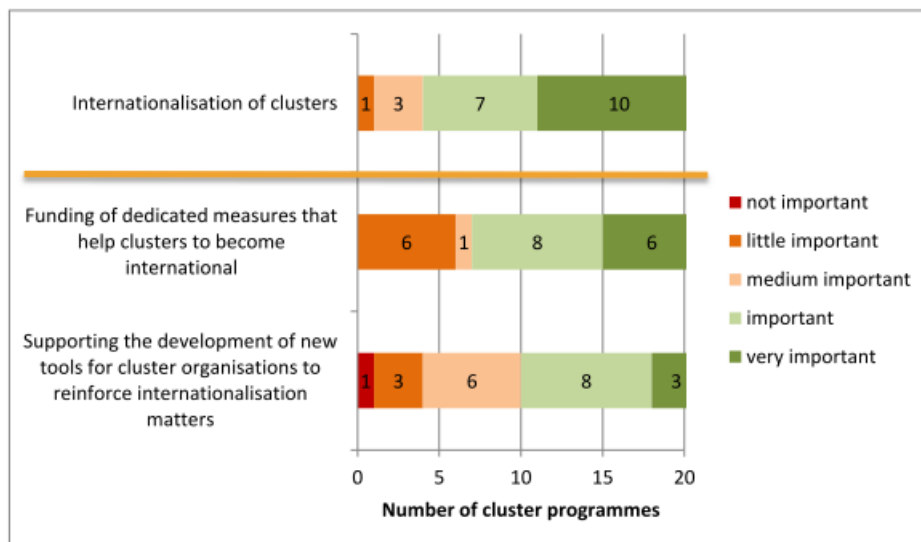
Cluster organisations have a growing need to network themselves with peers. Whether at regional, national, trans-national, international or sectoral level, such exchanges bring in new knowledge, useful contacts and many opportunities for the members of each cluster. The ECCP provides an overview of such cluster networks and META clusters (Figure 8). The development of these networks of clusters is another way to seek for synergies between clusters in different regions, countries and sectors.

Internationalisation is not only an aim of many EU level initiatives, but also of many national and regional cluster programmes (Figure 9)⁴⁴. In this respect, the first of nine points of the

⁴⁴ European Cluster Observatory (2015) Cluster policies in Europe, <http://ec.europa.eu/DocsRoom/documents/12925>

“Declaration on a Pan-European Ecosystem for Innovation & entrepreneurship”⁴⁵ presented at Davos in 2018 is perhaps the most important: “Switch from a local to a pan-European approach”.

Figure 9: Importance of internationalisation (and related support tools) for clusters in Europe



Source: European Cluster Observatory (2015, p. 26)

Including an EU dimension to smart specialisation seems a necessity if regions want to be really specialised and complementary to other regions specialisations. In Wallonia, for example, it was felt that pushing clusters towards EU collaboration is a strong lever for a better focus of the regional strategy, allowing to discover real strengths and complementarities. They firmly believe that building on cluster collaboration at the EU level can be a central element of the EU industrial policy as it can catalyse the creation and development of EU industrial and innovative value chains, able to compete globally. This is why Wallonia joined the Vanguard Initiative and collaborates with clusters for developing interregional collaboration. Some Walloon clusters are involved in partnerships under the thematic S3 platform (Wagralim for Agri-food, MECATEC and Biowin on the MEDTECH partnership). They have also pursued a continuous dialogue with our clusters to foster and facilitate their participation in EU projects. Walloon clusters are quite well involved in COSME cluster go international partnerships, and one cluster is part of an INNOSUP project on IoT4 industry (MECATECH).

⁴⁵ <http://bit.ly/2DBriWd>

3.5 Simplifying the State aid regime related to clusters

While the last revision of the General block exemption Regulation (GBER) improved the text concerning the description of operation aid for innovation clusters (Article 27) and extended duration limit from 5 to 10 years, it brought an unfavourable change with regards to the aid intensity. While it was possible under article 5.8 of the old R&D&I state aid framework (2006/C 323/01) to either apply a digressive aid intensity (from 100% in the first year to 0% in the last) or a linear aid intensity of 50%, this was unfortunately fixed to solely linear aid intensity 50% in Annex II in relation to point 12 (e) and 15 (s) of the last revision (2014/C 198/01). This worsened the problem notably for the possibilities of regional authorities to support the establishment of new cluster organisations, when SMEs wonder about whether it is worth paying membership fees before the cluster organisations is able to show its support services are worth it.

Feed-back from stakeholders stresses that Art 27 of the GBER is not enough to cover for support for the cluster organisation and support for the cluster firms. Therefore, an alternative and simplified approach should be pursued. This approach could include:

- Introduction of an annual ceiling for aid for innovation clusters of EUR 750,000 for which no notification is needed.

This figures is calculated by taking the current notification threshold for aid for innovation clusters of EUR 7.5 million per clusters as indicated in article 4 (k) of the GBER as a guidance and spreading this over the maximum aid duration of 10 years indicated in Article 27 under point 7. For shorter aid duration, the annual ceiling should be even be allowed to be increased as long as the overall limits of 7.5 million over 10 years are not met (consequently also reintroducing indirectly the digressive aid intensity logic).

- Introduction of base level of 25% of aid intensity being also allowed beyond 10 years of duration.

4 Conclusions

To conclude, the orientation of EU cluster policies has shifted towards facilitating industrial change and accelerating SME growth by

- Connecting specialised eco-systems and clusters across Europe to boost industrial modernisation with a value chain focus;
- Providing dedicated support for more strategic and sustainable inter-regional collaboration related to specialisation priorities of regions;
- Using SME intermediaries to channel scale-up support to groups of SMEs and mobilise joint smart specialisation investments across regional, sectoral and technological boundaries; and
- Helping to professionalise SME support that covers not only innovation but also general business development & skills, advanced manufacturing and technologies, digital, resource-efficiency, internationalisation.

During the discussions of the first meeting of the European Cluster Policy Forum Participants, participants will be asked to

- present their view on EU cluster policy and initiatives and outline where they see a need for action;
- share their experiences, good practices and obstacles with their national and regional cluster policies,
- Jointly set the topics for future three meetings of the European Cluster Policy Forum and indicate possible experts to be invited.

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