

The ins and outs of the Vanguard Initiative

A photograph of a person from the neck up, wearing a virtual reality headset and holding a smartphone in their right hand. They are looking down at the phone. The background is a solid red color.

A policy brief from the Policy Learning Platform
on research and innovation

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Introduction

Launched in 2013, the [Vanguard Initiative](#) (for New Growth through Smart Specialisation) is a network of some 30 European regions with high-level political commitment that seek to use their smart specialisation strategy to boost new growth through bottom-up entrepreneurial innovation and industrial renewal in European priority areas. On a policy level, the initiative strives to better position and embed the smart specialisation agenda within the relevant EU policy framework, e.g. through working with DG Regional Policy, DG Grow and DG Research and Innovation.

The Vanguard Initiative seeks to support interregional cooperation notably through industrial clusters and innovation ecosystems creating new competitive advantages for Europe, member states and regions. The initiative intends to demonstrate how its approach can be applied to develop new European or multilevel support mechanisms that can be used by all regions.

Vanguard Initiative regions are committed to internationalise their cluster initiatives, support SMEs, develop joint roadmaps for building critical mass and complementary specialisations in emerging industries, and combine their research and innovation resources with European investments in priority areas through demonstrators and pilots. These and other commitments are set out in the initiative's Milan Declaration, signed by the partner regions.

This policy brief aims to provide a review of some of the Vanguard initiatives to allow the Interreg Europe project community an insight into some of the project implementation experiences and success factors. The thematic or industrial demonstration and pilot project experiences of the Vanguard Initiative are considered to be of particular interest, especially regarding the implementation of interregional innovation projects, their approach regarding smart specialisation policy alignment and the engagement of innovative SMEs and cluster approaches. Indeed, there are already a large number of regions that are both represented in Vanguard Initiative projects and Interreg Europe (TO1) projects thus facilitating policy learning and cooperation, furthermore some previous Interreg Europe IV projects have constructed and developed Interreg Europe V project partnerships based solely on the integration of Vanguard regions/partners.

Vanguard pilot projects

The Vanguard Initiative is currently supporting five close to market industrial domain projects with high commercial potential that aim to engage strongly with the regional research, development and innovation (RDI) ecosystems and SMEs and drive innovation investment across regions. The pilots are led by partner regions of the Vanguard Initiative but participants also include non-partner regions with relevant smart specialisation strategies. The five pilots are:

- Bio-economy – Interregional cooperation based on the innovative use of non-food biomass;
- Efficient and sustainable manufacturing (ESM);
- High performance production through 3D-printing;
- Making the EU the global leader in components for marine renewable and offshore energy applications;



- Project on new nano-enabled products in the fields of energy and printed electronics for example;

In many cases each pilot project includes a number of sub projects focussing on specific industrial sub domains that are led by enabling partners to better target the relevant industrial domain, the research and innovation system actors and the SMEs.

Overview of the Vanguard Initiative methodology:

Learn	Connect	Demonstrate	Commercialise
Creating a shared vision on the future on a particular industry domain, through mapping of emerging value chains, innovation clusters and industries. The mapping also includes regional ambitions and challenges.	Matching value chains of partners across regions which seek to cooperate on a common roadmap, based on complementarities in their respective smart specialisation strategies.	Developing networks of pilots and demonstrators for manufacturing, dependant on co-investment commitments by businesses and public authorities.	Implementing new innovation and industrial investment projects by business actors.

The lessons of the Vanguard network and particularly that derived from the pilot projects experiences can help Interreg Europe project partners enhance their own project implementation approaches in a number of ways, for example:

- The Vanguard Initiative and their associated pilot projects have been able to secure high-level political commitment through the signing of a high-profile declaration and active EU level lobbying and regular project presentations and events linked to the progress of pilot project implementation actions;
- Strong alignment with regional smart specialisation priorities facilitates synergies with innovation ecosystem actors and SMEs and also the synergies with structural funding and other EU sources of funding, notably Horizon 2020 and associated thematic funding sources;
- Good fit with societal challenges and key priorities identified for the future of Horizon 2020;
- Many pilot projects have engaged with SME intermediaries such as clusters and technology transfer agencies to both help identify key businesses and help modernise regional innovation systems and remove bottlenecks linked to technology diffusion or commercialisation actions;
- Vanguard Initiative regions have been active in the various Thematic Smart Specialisation Platforms, notably the one related to Industrial Modernisation, which further illustrates how partnerships can intensify cooperation move towards designing a portfolio of operational investments opportunities;



- The Vanguard Initiative is strongly linked to Key Enabling Technologies (KETs) through its pilots and can help illustrate the policy and industrial support actions necessary to help manage change, especially in regions facing industrial transition challenges;
- The pilot project approach can also help identify and then scale up 'bankable' interregional projects that can create stronger European value chains in priority sectors such as advanced manufacturing;
- New Interreg Europe partnerships can be built up with partners drawn from different Vanguard projects and thus accelerating the learning and knowledge transfer process;
- Experiences and policy learning actions have led to increased interest in the concept of interregional innovation partnerships and how investment across regions can be enhanced and better targeted.

Industrial and thematic links between the Vanguard Initiative and Interreg Europe

The brief summary of the typology of the Vanguard pilots presented above shows that they are almost entirely technology-focused and notwithstanding the fact that the majority of the Interreg Europe TO1 projects are policy-oriented there are some interesting industrial domain and thematic complementarities and synergies that can be identified. Given the different project approaches the matching of TO1 projects with the Vanguard pilot industrial domains/areas should not be seen as an exact process but following an analysis of the 40 projects the section that follows seeks to highlight some of the more likely matches and complementarities that could be explored.

Bio-Economy Pilot area (non-food biomass): There are a good number of TO1 projects with potential linkages with this industrial domain such as RATIO, S3CHEM, SMART PILOTS (see below) and STRING and potentially OSIRIS with its energy focus and RUMORE with its urban-rural innovation focus, with certain partners being interested in bio-economy.

Some other TO1 projects could find synergies both with this category and the ESM pilot action, for example REMIX and its raw materials focus and RESET with its smart textiles focus since they both have a broad thematic/industrial focus.

Efficient and sustainable manufacturing (ESM) pilot area: four TO1 projects present interesting links and complementarities with this domain. They include MARIE, RELOS3 S4GROWTH (see below for more details) and SUPER and most are also closely aligned with the smart specialisation industrial selection processes.

Some other TO1 projects could find synergies with both this category and the nano enabled products pilot area such as NMPREG whilst P2L2 could also find some good synergies with the ESM pilot action area and 3D printing. Additionally, cluster focused projects such as CLUSTERIX 2.0, that adopt a cross sectoral approach can find synergies with various manufacturing sectors such as those tackled in ESM.

High performance production through 3D-printing pilot area: This domain includes a further 7 sub-industrial themes and so it is potentially of interest to a number of the TO1 projects. Although there does not seem to be any direct matches with TO1 project priorities MANUMIX could potentially exploit complementarities with this pilot area as well as the advanced manufacturing (Marine offshore) pilot action. Additionally, INNOINFRA has some potential synergies with this pilot theme as well as the nano enabled products pilot area.



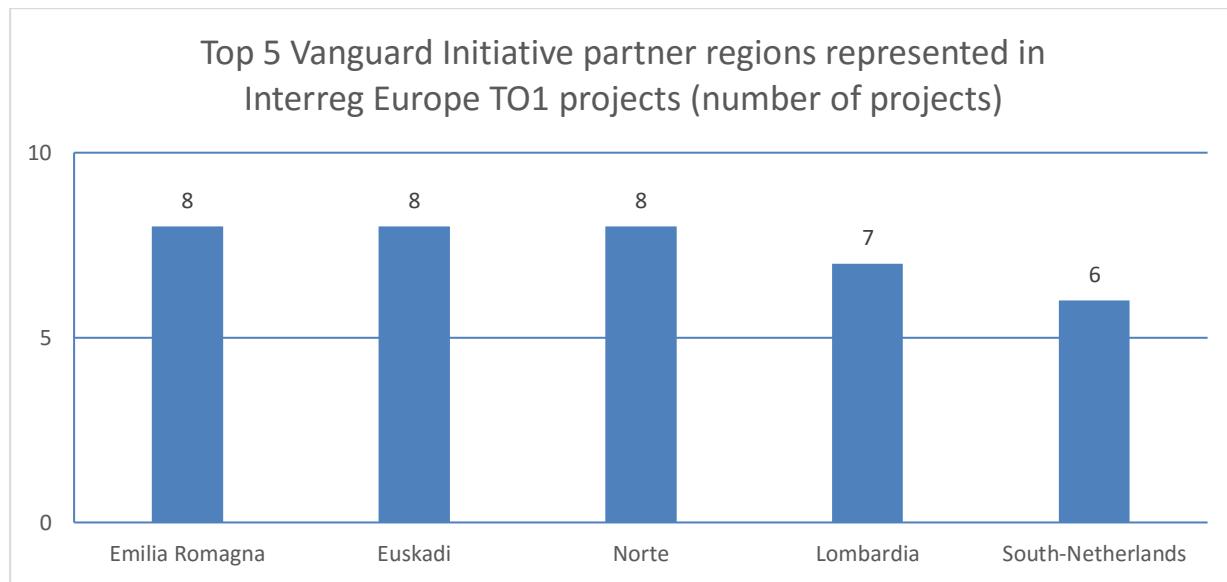
Marine renewables and offshore energy applications pilot area: There do not seem to be any close matches between TO1 projects and this pilot area although CLUSTERFY has potential synergies with both this area and the nano enabled products domain. Furthermore, CLUSTERFY is an example of many TO1 partnerships that specifically mentions the Vanguard partnerships as a possible stakeholder group to be targeted.

Nano enabled product pilot area: This is a cross industrial domain and a number of TO1 projects have already been highlighted as having potential linkages with this thematic area. In addition, STEPHANIE with its focus on photonics is a very good example of a project that could create strong linkages with this Vanguard industrial domain community.

Finally, there are five TO1 projects focused on health (ELISE, HELLIUM, TITTAN, HO-CARE and ITHACA) that, although they do not have any particular thematic link to one of the five Vanguard pilot areas, could find some potential areas for synergies in the 3D printing (existence of a health sub pilot domain) and the new nano enabled products category which has some obvious health applications.

Regional links between the Vanguard Initiative and Interreg Europe

A good fit at the regional partner level can also provide suitable framework conditions for enhanced learning and experience exchanges. Among the partner regions of the Vanguard Initiative, there are several who are also strongly represented the Interreg Europe TO1 community. The top five include two from Italy and one each from Spain, Portugal and the Netherlands.



Further information can be found in the **annex to this policy brief that lists the names of the TO1 Interreg Project Partnerships that are closely related to Vanguard regions and highlights the Vanguard regions that are active in the TO1 project portfolio**. Meanwhile the section below illustrates the type of approaches and processes that are being explored by some of the TO1 projects and that are closely aligned with Vanguard thematic areas or working methodologies.



Some examples of Interreg Europe TO1 projects with Vanguard Initiative pilot area relevance

S34Growth

The S34Growth (Enhancing policies through interregional cooperation: New industrial value chains for growth) project partnership consists of ten regions from eight member states. These **ten regions are all members of the Vanguard Initiative** and the project activities build on the innovative methodology (learn, connect, demonstrate, commercialise) identified within the Vanguard initiative. The regional stakeholders learn from each other, connect organisations and activities, and seek to move on to demonstration projects with the goal of improving commercialisation and product and service development processes.

During the work within the Vanguard Initiative's pilot projects and through the development of the methodology, a number of essential policy development issues regarding the regions' ability to engage in interregional cooperation have been detected, issues which are to be addressed in the S34Growth project. The purpose of the project is to develop and improve existing regional policy mechanisms and instruments to facilitate interregional collaboration which in turn will support the renewal of Europe's industry and enhance innovation investment levels. The project has a particularly good fit with the **ESM Vanguard thematic area**.

SmartPilots

The main objective of the SmartPilots project is to improve regional policies in support of Shared Pilot Facilities to increase their impact on the Key Enabling technology (KET), Industrial Biotech and the bio-economy/chemical sector in general. The project therefore has a good fit with the **Bio Economy Vanguard thematic area**. With the help of bio-economy based solutions, a number of societal challenges (e.g. climate change and energy independence) can be targeted, and shared pilot facilities are open access test sites that will help bring bioeconomy innovations from the laboratory into industrial practice. The SmartPilots project is linked to the **Vanguard Initiative through three of the partnerships' regions (Flanders, Lombardy, Zuid-Holland/Randstad)** who are also involved in the initiative. Lombardy leads the Bio-Economy pilot project developed within the Vanguard Initiative.

Clusterix 2.0

The partners of the Clusterix 2.0 project share the common challenge, namely the under-exploitation of the potential of using clusters in their innovation landscape. The aim of the project is to improve policy instruments related to the delivery of innovation by making better use of clusters to facilitate such processes by focusing on complementary competences, by introducing new models of innovation for the development and operational implementation of strategic cluster partnerships. Four of the Clusterix 2.0 partners (Auvergne-Rhône-Alpes, Flanders, Southern Denmark, Skåne) are also members of the Vanguard Initiative. **Clusterix 2.0** does not have a specific industrial or sectoral focus but the intention is rather to draw on the **Vanguard connection for cross sectoral and interregional policy learning experiences** relevant to the topics addressed by the project, notably the modernisation of their regional innovation systems.

Conclusions and recommendations for possible policy cooperation:



Given the common focus on regional level actors, key industrial sectors, key societal challenges and the role of innovation in driving forward growth and employment there are clear synergies that can be developed between the Vanguard Network experiences and Interreg Europe TO1 project partners. Indeed, where there is already a “partnership or thematic fit” these synergies are currently being exploited, as the above three TO1 project examples show. In some cases, this policy learning will take place “directly” as the regional and innovation policy teams involved are often the same. In other cases, more proactive actions, will need to be implemented to ensure lessons and experiences are shared within regional innovation ecosystems and between policy and operational teams and across industrial and/or thematic areas.

Three concrete recommendations for developing closer policy cooperation and sharing experiences have been identified that could help accelerate and exploit these synergies:

- **Industrial domain led** cooperation can help strengthen regional cooperation and policy development initiatives. The Interreg Europe project partners involved in the Bio-Economy and ESM Vanguard industrial themes have the potential (presence of a high number of TO1 projects) for leading on this activity which could, for example, be developed through a PLP thematic workshop;
- **Cluster led engagement of SMEs** to enhance working with key RDI stakeholders and technology diffusion intermediaries, can help strengthen regional industrial value chains and identify demand led scale-up innovation investment opportunities. A number of TO1 projects have chosen to rely on the cluster approach, such as CLUSTERIX 2.0, CLUSTERS3 and CLUSTERFY and these partnerships could play an active role on exploring actions to strengthen interregional and cross sectoral cooperation.
- **Supporting higher intensity policy cooperation** and joint project investment experiences can represent the logical next step for strengthening interregional cooperation and policy alignment activities. This “seeding” process could lead to the emergence of enhanced industrial cooperation activities, generate new ideas for Industrial Modernisation partnerships, deliver greater cooperation based on RIS3 priorities and move towards the identification of co-investment project scenarios.

A desire for supporting enhanced cooperation actions, based notably on the experience of the industry led pilot projects supported by the Vanguard Partnerships, that combine regional smart specialisation priorities with industry/SME needs, has led the European Commission to launch a series of new large and small-scale pilot actions aimed at strengthening interregional cooperation. These aim to help further smart specialisation based cooperation and increase innovation investment across regions. ([European Commission; see Challenge 2 and the relevant call information at \[http://ec.europa.eu/regional_policy/en/newsroom/funding-opportunities/calls-for-expressions-of-interest\]\(http://ec.europa.eu/regional_policy/en/newsroom/funding-opportunities/calls-for-expressions-of-interest\)](#)).

For further reading:

- [Vanguard Initiative](#)
- [S34Growth Interreg Europe](#)
- [Smart Pilots Interreg Europe](#)



- [Clusterix 2.0 Interreg Europe](#)



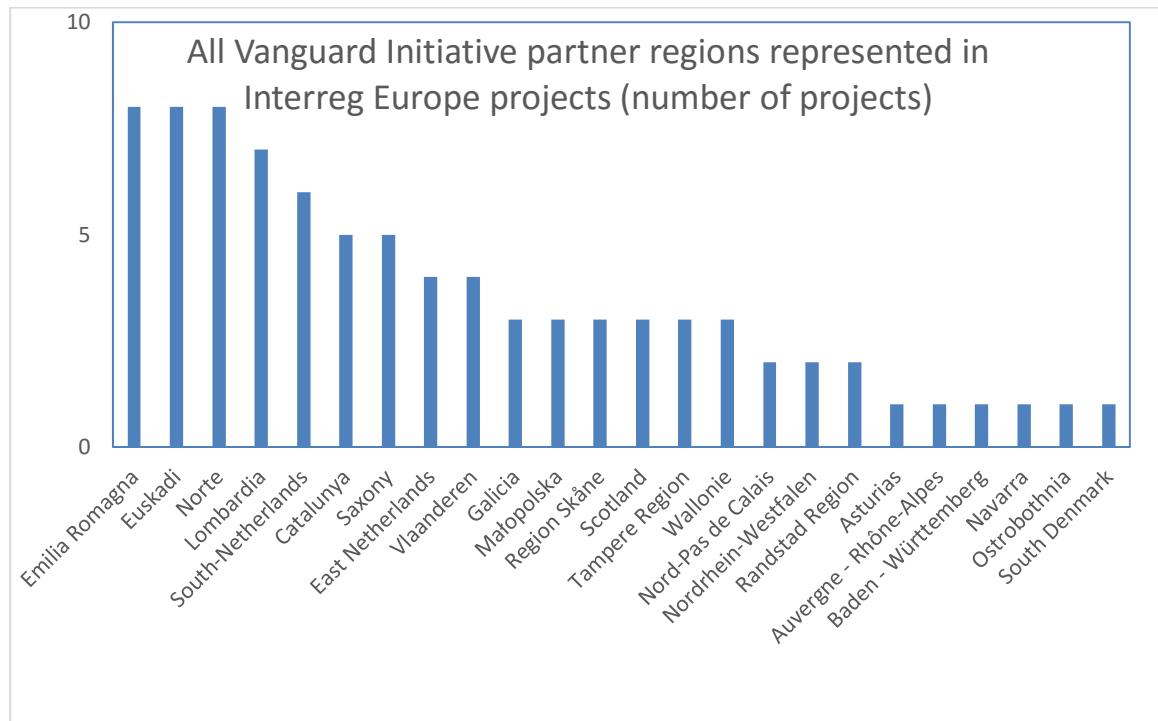
Annex: List of Interreg Europe TO1 projects with Vanguard Initiative partnership regions represented¹

Interreg Europe project	Number of Vanguard Initiative partnership regions represented
S34GROWTH	10
TITTAN	6
S3Chem	5
Clusterix 2.0	4
ITHACA	4
INNO_INFRA_SHARE	4
Clusters3	3
FoodChains 4 Europe	3
NMP-REG	3
CREADIS3	3
MARIE	3
RATIO	3
RESET	3
SmartPilots	3
HELIUM	2
InnoBridge	2
MONITORIS3	2
RELOS3	2
INKCREASE	2
ecoRIS3	2
HIGHER	2
RUMORE	2
STEPHANIE	2
STRING	2
Beyond EDP	1
Urban M	1
OSIRIS	1
P-IRIS	1
ELISE	1
BRIDGES	1
REMIX	1
MANUMIX	1

¹ Here, 'represented' indicates that an agency or other organisation from a Vanguard Initiative partnership region is a partner in an Interreg Europe project. However, it is not necessarily the same agencies/organisations participating in Interreg Europe project and Vanguard Initiative.



In a number of cases Interreg Europe project partnerships have been able to bring together regions from several Vanguard projects, providing an opportunity for accelerated learning processes and access to a range of industry related and cross sectoral innovation experiences. A further indication of the strong links between the Interreg Europe and Vanguard Network is shown in the table below that illustrates those regions that are active in both Interreg Europe projects and the core Vanguard partners.



#VanguardInitiative #SmartSpecialisationStrategies
#InnovationPartnerships #RegionalInnovationSystems #PolicyLearning
#InterregEurope #Regions



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