



HIGH LEVEL EVENT ON SMART SPECIALISATION PLATFORM ON ENERGY
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When Professor Kevin Morgan came to the Basque Country to make an expert assessment for the definition of the Basque RIS3 on behalf of DG REGIO, he advised us with two to key ingredients of a successful RIS3 recipe: **to become more internally connected and more externally engaged.**

Today, around 6 years later, I have the honor to represent our region in these high level event of the Smart Specialisation Platform on Energy as keynote speaker together with our friend Kevin. I would like to believe that this kind invitation from the Commission is a signal that we have become more externally engaged. I find it a signal too that we have also become more internally connected.

I would like to use this opportunity to share with you some insights on smart specialization strategy deployment, technological and industrial development in energy and interregional collaboration, ideas from the point of view of a strong innovator region that is working hard on its industrial transformation to become an innovator leader.

In May 2015 the Smart Specialisation Platform on Energy was launched with the aim to support the implementation of the Smart Specialisation Strategies of those regions that have chosen energy-related priorities, and to assist them to use Cohesion Policy funding more effectively. At that time the Basque Country had already chosen Energy as one of the three main S3 priority domains, which shape a complementary approach, formed by different specialization areas considering their history, relative strengths and maturity level, focused on present and thinking on future.

The choice of Energy as one of the three main priorities in the Basque Smart Specialisation Strategy was based on the key role the sector plays in the Basque economy, the strength of the sector and its global leading companies, their international presence in global markets and their innovation absorptive capacity.

In fact the Basque energy industry is made up of around 350 companies with a high energy-specialisation profile. Overall turnover comes to over €47 billion, with nearly €15 billion sourced locally, providing over 21,000 local jobs. The industry is backed by a robust technological infrastructure made up of technology centres, universities and company R&D units, with a consolidated presence in different energy fields. **Basque energy companies spend €4,000 million per year on R&D, of which 55% is spent within the region. This compares favourably to the 32% of their turnover which comes from the Basque Country and reflects the fact that they are concentrating activities of greatest added value in the region.**

For emphasizing the competitive advantage of the Energy priority, a specific strategy on technological and industrial development, called Energibasque, has been set up with the ambitious **vision of turning the Basque Country into an international knowledge pole and a reference for industrial development in the energy industry.**

Smart specialisation implies identifying the characteristics and exclusive assets of each region and putting in place mechanisms to enhance them, but also bringing participants together around a **shared vision that can make RIS3 a territorial strategy rather than merely a government strategy.**

For building this shared vision and putting the strategy into practice, the Basque Government is generating distributed leadership by means of **the creation of public-private collaborative spaces, the so-called Steering Groups** for each RIS3 priority, which are responsible for the deployment of the strategy, and has delegated in the Basque Energy Cluster the leading role for the Energy one.

The **Basque Energy Cluster** is an industry driven cluster established in 1997 as a non-for-profit association. It integrates presently 185 members, including leading international companies and highly competitive SMEs that represent in global 80% of the turnover of all energy business activities in the Basque Country, employing 49.000 people worldwide (15.000 in the Basque Country) and making up for 20% of the total exports of the Basque Country. It integrates the main companies in the energy sector value chains located in the Basque Country, including energy operators, component and equipment manufacturers, engineering firms, research entities and public administration bodies with responsibilities in the energy area. The Basque Energy Cluster's mission is to improve global competitiveness of the Basque energy sector companies by facilitating business collaboration along the value chains and seeking public-private partnerships. To achieve these goals, the Basque Energy Cluster offers its value proposition focused in four main fields: R&D projects, international promotion, innovation and training.

The Cluster strategic plan is fully aligned with the Basque cluster policy that tries to give response to the specific challenge of industrial upgrading through cooperation: the perfect framework for putting the Basque Energy Smart Specialization Strategy, Energibasque, into practice.

The Basque Energy Cluster has a sound activity in the organization and coordination of Working Groups between its members and external stakeholders in each of the fields identified as priorities by the energy companies. During 2016 these Working Groups have reunited 234 participants from 136 organisations around a common objective: the definition in detail of technology challenges, dynamisation activities and high impact, collaborative, strategic initiatives which now constitute the basis of the deployment of the Energibasque strategy. Energy companies plus 47 organisation from other cluster associations, research centres, universities, public agencies have together defined these challenges and initiatives for **seven energy value chains: Electricity Transmission and Distribution, Wind Energy, Concentrated Solar Power, Marine energies, Electric Vehicle, Energy Efficiency, Oil&Gas and two enabling technological areas: Energy storage and Power Electronics**

The analysis of the results obtained in these 7 plus 2 areas has allowed to identify synergies between the different areas, showing the possibility of aligning efforts and combining technological solutions from several sectors that can be oriented towards new emergent markets. As a consequence of this analysis, the Energy RIS3 Steering Group has identified 3 new value chains that incorporate the main capabilities in our region, supposes new market opportunities and proposed common technological challenges, following the smart specialisation concepts of prioritisation, alignment, cross-sectorial, cross-technology and effectiveness of investments.

Offshore Energy, Smart Grids and Resource and Efficient Manufacturing, the 3 new value chains, comprise common challenges and technological solutions of some of our consolidated value chains in expensive, risky and knowledge-based businesses which are generally beyond the level of investment and expertise that a single company, let alone an SME, or even a region, can afford. Therefore, we aim to convert this new approach into real global value chains, aiming at opening opportunities and complementary resources for our companies not only at regional level, but also globally.

In the case of **Offshore Energy**, we started the complex task of building a new global value chain in the framework of the **Vanguard Initiative pilot action Advanced Manufacturing in Energy related Applications in Harsh Environments**, pilot action that now constitutes the basis of the **Marine Renewable Energies partnership** in the Smart Specialisation Platform on Energy. 13 regions, coordinated by Scotland and Basque Country, produced a Scoping study which provided an initial basis on which to understand mutual strengths and capacities. The study delivered a database of relevant companies and organisations across the pilot regions – which has grown to over 300 entries. Importantly, the study identified a core group of ‘pivotal companies’, including big Original Equipment Manufacturers (OEMs) of Wind Turbines, as well as SMEs, from across the pilot regions, who have key capabilities and ambitions to significantly influence the direction of the pilot and the future development of a new value chain. This Scoping study also highlighted that **SMEs face critical challenges to take advantage of these opportunities**, which can be summarised as follows:

- **Few established and systematic relationships** exist between companies and organisations across the regions, across sectors and across the market areas analysed.
- **Access to a broad and competitive offer of testing and demonstration infrastructures** available in Europe is complex and difficult, due to limited information, lack of alignment between the industrial needs and the offered services and high prices.
- **Access to key persons at big customers** (facility owners, engineering companies and contractors, developers, OEMs) in order to fully understand their core needs and challenges is difficult and limited in time and subjects, their relationship with SMEs being usually restricted to pricing and contract negotiations.
- The process of **searching well-matched partners outside their home regions** and discussing collaboration agreements is challenging for most companies, and few SMEs are able to invest time and money in these processes without assistance.
- **Information deficiency** acts as a barrier to foster any kind of partnering opportunities.
- There is a **lack of open innovation arenas in an interregional, cross-sectoral perspective**.

The **Marine Renewable Energies partnership** in the Smart Specialisation Platform opens now the scope to connect more regional ecosystems in an **open collaboration space** between the **offshore energy** stakeholders that face similar challenges for becoming competitive suppliers in the international markets of cost-competitive solutions for highly demanding requirements in terms of quality, integrity, efficiency and reliability. **It will hopefully help also to attract the attention of European Commission towards these challenges the European offshore energy is facing and its support.**

Challenges in the other new global value chain we are working for within the Smart Specialisation Platform on Energy , **Smart Grids**, comes mainly from **the development of and transformation towards digital products and services**. The world is facing the transition from the physical to the digital economy. The process of migrating from traditional services to digital ones as well as taking benefit of the value generated from the new virtual world requires significant investments, particularly for SMEs, to step forward in the digital economy.

Electrical grids are increasingly complex systems that have to provide a service to a large number of consumers and need to absorb the production of distributed generation installations. The Basque Country has already **shared a good practice case of implementing smart specialisation strategies** that is published in the Smart Specialisation Platform on Energy website. **Bidelek Sareak** is the name of the initiative, aimed to deploy Smart Grids to increase the security and efficiency of the electric energy supply. Bidelek sareak is a public-private partnership between the Basque Energy Agency, EVE, and the Spanish Distribution System Operator, Iberdrola, to improve the electric distribution grid and customer services by means of the development of advanced Smart Grid technologies and its deployment in cities and towns. Real life project, complying with Smart Grids full functionalities, unique because of its scope, size, technical requirements and innovation, has positioned the Basque Country as one of the most advanced regions in the world in intelligent network infrastructures, both from the energy optics, because of savings and quality of service, and from the business point of view, for its tractor role of the Basque industrial sector which, with a high technological level, is competing in this area In international markets.

From an economic and industrial point of view, this type of project has a very positive impact, not only because of the energy saving produced by better management of the networks, but also generates industrial activity and highly qualified employment.

Hopefully our experience will be useful in the establishment of a fruitful cooperation within the Smart Grids partnership of the Smart Specialisation Platform on Energy that we co-lead together with PACA region in France. We are now defining **the**

second phase of our regional initiative, which is fully aligned with the challenges identified in the partnership: Data & Cybersecurity, e-Mobility, Renewable Energies integration, Storage, Micro-grids and Demand response

To overcome these challenges, interregional cooperation is an opportunity but also a new challenge. Production and innovation capacities are relatively fragmented geographically in Europe as compared to other parts of the world, an observation that provided some of the roots for the initial proposals for smart specialisation strategies as a route to overcoming the EU-US productivity gap. In this respect the need to facilitate scale and critical mass across European regions is also well recognised in **European cluster policy**. Cluster internationalisation and cross-cluster cooperation have been strongly promoted by the European Commission over the last decade as a means to reduce fragmentation and be able to compete better on a global scale. This was initially expressed as concern with generating more 'world class clusters' in Europe, and reflected in the establishment of the **European Cluster Cooperation Platform** alongside various support programmes for cluster cooperation and internationalisation. In the context of smart specialisation strategies it has evolved into today's support for '**European strategic cluster partnerships**' as a useful mechanism to support transnational cluster partnerships to develop and implement joint internationalisation strategies.

Inter-regional cooperation is therefore critical for overcoming fragmentation in innovation efforts and for ensuring that synergies in innovation capabilities and in cross-fertilisation possibilities across sectors and technologies are fully exploited. Such cooperation can play a key role in boosting competitiveness at the regional level and at the European level, which puts a premium on developing effective inter-regional cooperation mechanisms. The **Interreg programme** has for many years played a key role in inter-regional learning and in bringing agents together across regions in search of synergies. Yet more concrete inter-regional innovation policy coordination that is capable of leveraging those synergies, for example through **joint design and implementation of policies**, is a pending challenge, and one that has been pushed up the agenda by Article 70 of the Common Provisions Regulation 2014-2020.

Developing deeper and more sophisticated inter-regional innovation policy cooperation generates new governance challenges. Moreover, these **new governance challenges** sit in an already complex innovation policy governance scenario. Alongside the need for multi-level governance to ensure efficient policy design and implementation across the various administrative levels that impact on a given region, the place-based shift in innovation policy thinking is also associated with an evolution in the actual process of policy-making that implies the integration of new actors.

Indeed, innovation policy is increasingly seen as an outcome of dialogue and decision-making processes among networks of place-based agents, where the boundaries between public policy-makers and private policy-recipients are breaking down.¹

For putting into practice an innovative inter-regional approach, some of the Vanguard Initiative region members are working together in the Interreg Europe project “**Enhancing policies through interregional cooperation: New industrial value chains for growth**” (**S34GROWTH**), that has a main objective to develop and improve existing regional policy instruments to facilitate interregional cooperation, which in turn will support the renewal of Europe’s industry and competitiveness.

The **Vanguard Initiative** is an association, born 4 years ago, of 30 EU-regions stimulating Industrial Modernisation through a more effective deployment of new technologies on the basis of complementarities between their smart specialisation strategies and seeking to implement a common agenda for industrial competitiveness.

Industrial transformation is critical to improve Europe’s competitiveness, and as the EU moves towards negotiations and discussions on a new **Multi-Annual Financial Framework**, this is an opportune time to reflect on the type of instruments at the EU-level which might support these activities. Vanguard is already proposing ideas on **new instruments to support large-impact, inter-regional projects to accelerate Europe’s industrial transformation and the industrial transition of European Regions**.

Evidence from Vanguard Initiative suggests that a **persistent market failure remains at the piloting and demonstration stage of new technologies**, especially when innovation is the result of the integration of complementary regional specialisations. This failure is particularly critical in the phase between piloting and full market uptake. In some strategic technology and industrial areas, SMEs cannot currently count on excellent and open pan-European piloting infrastructure. Only very few advanced Regions have such infrastructures, while they are mostly un-known and thus inaccessible to other Regions. As outlined in the recent **S3 Communication from the Commission “Strengthening Innovation in Europe’s region”**, this is especially the case for less-developed regions in the EU, or those lagging behind their more-industrialised counterparts. Finally, even when infrastructure and capabilities are available, there are barriers for companies to exploit them in a logic of interregional cooperation.

The Vanguard Pilot actions are facing challenges and needs which other inter-regional platforms will also face on the path to investment, most notably the partnerships emerging from the Thematic Smart Specialisation Platforms. Therefore, there is a **clear interest to work at the EU level collectively**, in the context of the current funding programmes and of the future Multi-Annual Financial Framework, to consider how existing instruments might be modified and how new tools may be shaped.

The fact that economic activities do not fit into single administrative boundaries makes really necessary to **work jointly on the development of policies that address inter-regional challenges and opportunities**.

Promoted since 2013 by the European Commission, regional authorities have defined their smart specialization strategies. We consider it necessary to continue deepening in the future in this approach. In any case, interregional cooperation can be a key element for the optimization of these smart specialization strategies in order to foster synergies and maximize the performance of the global effort in innovation. The European Union should promote interregional cooperation and can be inspired by the methodology of Vanguard Initiative, of which Euskadi is a founding member and which brings together 29 European regions committed to overcoming the fragmentation of innovation efforts and investing jointly in pilot plants and demonstrators that allow to accelerate the introduction of new products and services in the market. It is necessary to strengthen the smart specialization platforms.