



European
Commission

SMART STORIES

Implementing
Smart Specialisation
across Europe

3

SMART STORIES

The opinions expressed do not imply a policy position of the European Commission. Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use which might be made of this publication.

Edited by John Edwards and Fatime Barbara Hegyi

Smart Specialisation Platform

European Commission, Joint Research Centre, Institute for Prospective Technological Studies,

Calle Inca Garcilaso, 3 - 41092 Seville, SPAIN

jrc-ipts-s3platform@ec.europa.eu

+34 954 48 8318

JRC Science Hub

<https://ec.europa.eu/jrc>

JRC101314

EUR 27891 EN

PDF	ISBN 978-92-79-57983-7	ISSN 1831-9424	doi:10.2791/29325	LF-NA-27891-EN-N
Print	ISBN 978-92-79-57982-0	ISSN 1018-5593	doi:10.2791/79450	LF-NA-27891-EN-C

© European Union, 2016

Reproduction is authorised provided the source is acknowledged.

Printed in Spain

How to cite: European Commission; SMART STORIES; EUR 27891 EN; doi:10.2791/29325

All images © European Union 2016, except: see photo credits page

SMART STORIES

Implementing
Smart Specialisation
across Europe

Preface

Smart Specialisation is a bold new approach to regional policy. Innovation, economic progress and social development — they all happen at the local and regional level. That is why it is only natural for Europe's regions to drive these processes themselves. Smart Specialisation therefore puts those located there in control: public authorities, educational and research institutions, businesses and civil society organisations.

This new approach not only helps regions boost economic growth, job creation and community building. It also enables us to get a better “return on investment” in EU cohesion policy, in line with the European Commission's goal of achieving even better results with the money we spend.

As regions across Europe start to implement Smart Specialisation, it is clear that more work is still ahead of us. To ensure that regional innovation ecosystems grow more efficient,

Smart Specialisation should become a permanent feature of the mechanisms governing public investment policies. This long-term approach should also help to mobilise more and more investment partnerships across Europe.

All European territories can play a distinctive and important role in the European Union's efforts to secure sustainable economic growth, competitiveness and progress. We are looking forward to seeing where their creativity and determination lead them.



Corina Crețu

*European Commissioner for
Regional Policy*



Tibor Navracsics

*European Commissioner for
Education, Culture, Youth and Sport*

S3 Overview

Conceived by the scientific community and incorporated into the reformed Cohesion Policy of the European Union (EU), Smart Specialisation is a place-based policy concept promoting regional economic transformation and investment through innovative activities in selected domains.

The Smart Specialisation approach is characterised by the identification of strategic priority areas for policy support, based on both the analysis of the strengths and potential of the economy, and an entrepreneurial discovery process engaging wide stakeholder communities in decision-making processes. It embraces a broad view of innovation that goes beyond research-oriented and technology-based activities, and requires a sound logic of intervention supported by effective monitoring mechanisms.

In recent years, over 100 Smart Specialisation Strategies (S3) have been developed, mostly at regional level, across the Union. On the initiative of the European Commission's Directorate-General for Regional and Urban Policy, the Smart Specialisation Platform (S3 Platform) was established at the Joint Research Centre with the main objective of providing science-based policy advice to regional and national authorities.

The insights from this booklet — thanks to the valuable contributions of national and regional authorities — show that Smart Specialisation has gone far beyond the mere fulfilment of the ex-ante conditionality criteria linked to Cohesion Policy allocations. It has triggered a change in the way innovation-driven regional development policies are dealt with across Europe, confirmed by the outcome of a number of recent surveys.

These “Smart Stories” will take you through the features of Smart Specialisation as it has been applied in a number of EU countries and regions, letting you further explore the concept and its policy implications, and identify complementarities and potential for mutual learning and collaboration. The period of strategy development has in one sense finished; however, the process of implementing and monitoring S3 will hopefully lead to many more “Smart Stories” to be shared across all territories of the EU.

Notes

These stories are based on information provided by national and regional authorities.

The images in the stories are for illustrative purposes and do not always reflect the S3 process itself.

This collection is also available online. More stories will be added over time: <http://s3platform.jrc.ec.europa.eu/smart-stories>

Score card method of monitoring Smart Specialisation

In designing and implementing the S3 for Lower Austria, we have built on our experience with regional innovation strategies dating back to 1997. The strength of the Smart Specialisation concept is its focus on cross-sectoral innovation discoveries and we have therefore designed our strategy, including the monitoring mechanism, to fully exploit this. More specifically, we have sought to foster interactions on two levels: instruments, meaning the coherence and synergies between programmes in the policy mix, underpinned by greater inter-institutional collaboration; and technologies, referring to prioritised support to activities that cross sectors and disciplines.

Implementing Smart Specialisation is difficult without an appropriate monitoring system. As they say, “You get what you measure!” and it also helps to “fine tune” the strategy. Our programmes are monitored by a balanced score card method, learning from its use in previous innovation strategies. This includes perfor-

mance data such as publications, critical size and collaborative projects. With S3 new indicators have been added to reflect the cross-instrument and cross-technological emphasis. This in turn has led to initiatives that reflect the indicators.

As an illustration, we now measure the impact of inter-institutional collaboration on the related instruments and programmes, including the targets and focus of the programme managers. This has led to an intensification of collaboration between clusters and technopoles, fostering diversification of technological know-how and promotion of further regional specialisation — for example, the food cluster and Technopole Tulln have assembled a large consortium called FoQQSI where academia and companies work together with public agencies on food safety challenges.



“Our programmes are monitored by a balanced score card method, learning from its use in previous innovation strategies”

Integrating policies around S3 priorities

The preparation of our S3 has resulted in the integration of industrial R&D and innovation policies with clusters acting as the central node. Furthermore, the specialisation niches (smart combinations of markets and technologies) emerging from the clusters (which mix enterprises, universities, research centres and training centres) are now more widely considered as core priorities for the region overall. The S3 has become the main reference for all related policy tools at regional level — and not only for the ESI funds — allowing greater coherence and synergies.

The strategy identifies four mutually reinforcing axes to deepen Smart Specialisation: Fostering innovation along the whole cycle, Involving innovative SMEs, Internationalisation, and Circular economy and resource efficiency. The objectives are to stimulate a continuous renewal of innovation dynamics, reveal and consolidate the most relevant specialisation niches and innovative value chains, so as to drive econom-

ic renewal and transformation of the regional economy in a globalised context.

With regard to internationalisation, we have opened a dialogue to map regional priorities in the context of European programmes, allowing us to act on a coordinated basis with stakeholders. This approach has already borne fruit: Firstly, a stronger collaboration has developed between cluster organisations and the regional contact point for identifying opportunities in Horizon 2020. Secondly, we have strengthened our involvement in European networks such as the Vanguard Initiative, European Chemical Regions Network and Bio-Industry Consortium, with collaboration of regional stakeholders. Concrete projects are already emerging from these activities, especially around the themes of additive manufacturing and the bio-based economy.



"The objectives are to stimulate a continuous renewal of innovation dynamics"

Smart Specialisation as a vehicle for stakeholder engagement

Smart Specialisation and its requirement for an entrepreneurial discovery process has been a trigger for widespread stakeholder participation in Bulgaria, presenting us with a real opportunity to engage constructively with all actors of the innovation system.

Over 1000 participants in 20 events from academia, NGOs, regional authorities, companies with high innovation potential, innovation leaders, individual entrepreneurs, and citizens have come together to select four thematic areas of specialisation:

- Informatics and ICT,
- Mechatronics and clean technologies,
- Industry for a healthy life and biotechnologies, and
- New technologies in creative and recreational industries.

With all four thematic areas being based on the ambitions, proven excellence, and objective needs of business, we now hope and expect

great success.

A new governance structure involving the quadruple helix has been established. It involves entrepreneurs and business at each hierarchical level for the very first time. With the chance to directly influence the process of decision-making, participants view the achievement of objectives as a mutual responsibility.

The process has demonstrated that what we need is an innovation process driven by business, which itself is best placed to tell the government about its needs. It is up to scientific discovery to respond to these demands. In addition, each planning region of the country and each municipality should find their place in the process, thus developing competitive advantages of their own. That's the only way we can implement innovation that adds value to our economy and achieve sustainable growth in the long run.



“With the chance to directly influence the process of decision-making, participants view the achievement of objectives as a mutual responsibility”

Czech Republic

Moravian-Silesian Region



Moravian-Silesian Regional Government
www.msk.cz

Innovation Platforms fostering cooperation

We consider our S3 not just as a document, but as a constantly evolving process. It enables us to activate and facilitate cooperation among key partners, supported by constant monitoring and analysis of the innovation system. Its vision draws from the region's strong industrial tradition and points the way forward to new directions for development. Focusing on high-potential strategic areas, the Regional Development Agency (RDA) has created Innovation Platforms based on the strategy's priority areas.

The RDA identified 10-15 members from the region for each Platform, including representatives of companies (some with R&D programmes), universities and research institutions that are open and willing to cooperate. The RDA acts as facilitator and mediator, but discussion topics are proposed by members themselves to ensure a bottom up process. In the past, companies and other key players operated largely in isolation from each other, often with a strong rivalry. This has changed

entirely with S3, and the Platforms have already given rise to a number of joint projects, including on the reuse of waste heat from large production facilities for households (Modern Energy Production and Waste Processing Platform), and on surface processing of materials (Advanced Materials Platform).

Besides meetings within the Platforms, the RDA also organizes events on the latest trends in research, development and innovation. For example, we recently took part in an exchange visit with the Fraunhofer IMWS research institute in Linz, Austria which specialises in the intelligent use of materials. This external dimension is very useful, because it allows us to benchmark internationally and facilitate joint projects.



President of the Moravian-Silesian Region Miroslav Novák

"S3 enables us to build on the positive legacy of our industrial tradition [...] maximize this huge potential by focusing our efforts on developing modern, innovative areas such as biotechnology"

Consensus finding between regions and national level

In Denmark we have been following the main principles of Smart Specialisation for quite some time.

Since 2006, the key actors in this process have been six regional growth fora, and at national level the Danish Growth Council. The growth fora meet four times a year and consist of regional political leaders, mayors, trade unions and employer associations. Usually, they are headed by the political leader of the respective region who is also a member of the national Growth Council. The other Council members include representatives of firms, knowledge institutions, and local authorities.

The national Growth Council essentially has two tasks: to think strategically by providing advice through joint statements (one to two themes per year, e.g. future needs for qualified labour) and to ensure an effective and continuous coordination process with regions. It is based at the Ministry for Business and Growth,

enjoys political support and promotes the coordination between the national growth strategy and the regional S3.

Publicly available regional partnership agreements define common objectives and activities. While neither legally binding nor supported by funding, they embody the overall agreement between regions and the national government. The secretariat of the Growth Council monitors the progress of these agreements in a simple dashboard that is shared internally. Smart Specialisation has further institutionalised this process by making it more structured, highlighting the need to concentrate, prioritise and think bigger in terms of future R&I domains.



“Smart Specialisation [...] has highlighted the need to concentrate, prioritise and think bigger in terms of future R&I domains”

Smart use of Arctic Natural Resources and Conditions

As the northernmost region of Finland, and one of the most sparsely populated regions in the EU, Lapland is a mixture of abundant natural resources, strong Arctic expertise and unique nature. There is a constant need to balance in a sustainable way the business interests with the preservation of its unique nature and style of living.

From the very beginning, Smart Specialisation has been seen in Lapland as a very practical concept, bringing new insights into regional development. The approach has been used in Lapland to become recognised as an attractive and knowledgeable partner in EU. Smart Specialisation has helped us find new ways of working together, to think “outside the box”, to develop common approaches towards regional development and to be active in seeking international collaboration. We have also developed a special Arctic Smartness “step-by-step” regional development approach.

The vision of Lapland’s S3 is to develop our leading position in exploiting and commercialising Arctic natural resources and conditions while maintaining balanced sustainable development.

We are working towards our vision of promoting regional clusters and ecosystems of emerging industries that focus on refining natural resources throughout value chains. In addition to our strong traditional sectors, Smart Specialisation focuses on cross-cutting interventions. With the modern clusters of Arctic industry-Circular economy, Arctic Smart Rural Communities, Arctic Design, Arctic Safety & Security and Arctic Development Environments, we are looking beyond the boundaries, promoting cross-fertilisation, the best use of the regional expertise and strategic networking outside the region.



“We are working towards our vision of promoting regional clusters and ecosystems of emerging industries that focus on refining natural resources throughout value chains”

A learning curve in setting the agenda

When we heard about Smart Specialisation our first reaction was “What’s new about this?” Innovation had for a long time been part of the development rhetoric and Finland has pursued a decentralised university system with the very purpose of stimulating regional development. Our region had access to both regional, national and EU policy instruments all with funds set aside for innovation.

In fact we were surrounded with numerous development ideas and instruments. However, instead of providing a return on investment we found that they actually caused fragmentation, duplication of effort and in some case even rivalry. The S3 process has helped us to address this. It is gradually gaining more momentum and we are also seeking to deepen our cooperation with European partners facing similar challenges.

It would be incorrect to say that Smart Specialisation has removed our challenges; but it has

provided us with a “tool-box” of core principles and a framework for European partnership. Focusing on issues driving innovation has also brought us closer to the partners within the business and research worlds.

We believe that the best route to economic development is through innovation. But at the end of the day it is very difficult or even impossible to foresee or coordinate the process. All we can do therefore is to wear the “spectacles” of different actors so we can understand how they see the world. This will provide a reference point for talking about innovation and allow people to tell us what we have not yet considered.



“Although what we can do is to set the spectacles on different actors through which they see the world”

Innovative public procurement for implementation of S3

In the Auvergne-Rhône-Alpes region, we have integrated innovative public procurement as a horizontal approach of our S3 policy mix. The objective is to use public procurement as a lever to boost innovation in order to maximise public services dedicated to citizens, foster the emergence of innovative solutions, and reinforce access to public procurement for SMEs. It has been facilitated by a new legal framework, which following the European Directive establishing the Innovation Partnership in 2014, the French state now dedicates 2% of state procurement to innovation.

We were not very familiar with innovative public procurement until our participation in the "Alcotra Innovation" INTERREG project in 2011-2013, which inspired us to learn more. We have also drawn lessons from two successful examples from within our region: the European project SYNCRO involves cross border innovation procurement related to intelligent roads, improving traffic management through increased

information to road users. Secondly, the Robot for Students project allows students temporarily away from school to maintain links with their class and follow courses.

As part of the S3 policy mix, an action plan builds awareness of innovative public procurement, identifies territorial needs, facilitates meetings between buyers and suppliers, and finances studies into innovative procurement projects. A dedicated governance structure brings together the key stakeholders with support of a collaborative online platform. We have already moved from strategy to action: Financed through the regional OP, a call for expression of interest named Innov'HA was launched in early 2016 that will fund feasibility and opportunity studies as well as legal assistance.



"A dedicated governance structure brings together the key stakeholders with support of a collaborative online platform"

Selection process of specialisation domains

The significant changes to R&I funding in our region were made possible through the relevancy and legitimacy of the selected S3 priorities. The five specialisation domains which have arisen are much more precise than those of previous RIS, such as “system design for energy storage” instead of “energy efficiency”. This was a result of the methods we adopted and support from the S3 Platform. In particular, four factors were instrumental:

- The highest political authorities were involved from the beginning
- The choice of the priorities was based on very clear and agreed criteria
- The Entrepreneurial Discovery Process (EDP) only involved entrepreneurs who had a vision for the future of their company and, more largely, of the emerging value chains
- A genuine dialogue was established with stakeholders and not just a formal consultation

The process allowed us to more easily change and focus the policy mix. For example, since the adoption of our S3 a new tool has been designed: “Ambition R&D 2020” grants which fund projects clearly connected to a S3 priority and are worth up to €10M instead of €200K for similar projects before. Thus the legitimacy of the specialisation domains has allowed us to dedicate the largest part of ERDF to R&I.

We have already approved five major projects linked to S3 priorities, which are based on their ability to generate socio-economic impact. They relate to energy storage (Lavoisier), biopharmaceuticals (Biomédicaments), cosmetics (CosmetoSciences), environmental engineering (Pivots), and tourist heritage (Intelligence des patrimoines). These projects illustrate the concrete implementation of S3 on the ground.



Daniel Pierre, Directeur, Pôle Scientifique et Technique Antea Group, France

“Beyond the historical location of Antea Group in Centre Val de Loire, the S3 process was a determining factor in choosing to locate its European research center in the region”

A multi-level dialogue to foster synergies between Horizon 2020 and ESI Funds

Coordinating R&I policies and programmes is embedded in the concept of Smart Specialisation, which gave impetus to the creation of a new national-regional dialogue for synergies between Horizon 2020 and the European Structural and Investment (ESI) Funds in Germany. The dialogue was launched in 2014, piloting a tailor-made multi-level governance model across policies, programmes and projects spanning different research fields, economic sectors and societal challenges. It aspires to drive “entrepreneurial discovery” by better managing information flows; supporting the strategic use of EU funds; and adapting applicant support services (e.g. towards integrated counselling formats).

Led by the Federal Ministry of Education and Research, the dialogue aims to involve all federal and regional (Länder) authorities responsible for Cohesion Policy and R&I. It provides a communication space for Managing Authorities, H2020 Programme Committees and NCPs,

advice services including the Enterprise Europe Network (EEN), key stakeholders and potential applicants. Results of the dialogue are fed back into the national policy arenas to kick-start new activities and maximise the impact of activities.

This structured and open dialogue fosters the commitment of key actors by concretely addressing societal challenges, specific instruments like public procurement for innovation, or key target groups such as higher education institutions. Thus, the German synergies dialogue has the potential of carrying forward R&I topics of common political interest in Germany at national and Länder level to and from the European policy arena. Yet, its success depends on the readiness of all actors to take new paths.



“The German synergies dialogue pilots a new form of multi-level governance across policies, programmes and projects”



Joint efforts to tackle challenges

Since the 1990s the states of Berlin and Brandenburg developed their own separate innovation strategies. However we soon realised that we faced very similar challenges and problems in knowledge transfer activities. Therefore in 2007, both our governments decided on five "Future Fields of Excellence" in joint working groups, leading to nine pilot projects with "cross-border commitments" for joint RTD financing schemes. This process, which reflected closely the thinking on Smart Specialisation, resulted in regional clusters for each "future field", culminating in the joint innovation strategy innoBB of 2011. Institutional structures were designed to support the selected R&I priorities. Clusters implement innoBB through Master Plans, based on sectoral SWOT analyses which are up-dated regularly to ensure flexibility.

The S3 process naturally built on our experience with innoBB. It made us face up to new challenges: a lack of resources (esp. funding

and reduction of ESIF), fine-tuning the governance structure and low private R&D activities/better involvement of SMEs. Up-dating the Master Plans that implement innoBB will focus on the right mix of different instruments, which need not be sector-specific; a key lesson we drew from Smart Specialisation.

What distinguishes our story is the close cooperation between two political-administrative regions that have come together to develop a joint R&I strategy. Based on the understanding that functional regions and their complex interdependencies do not stop at regional borders, innoBB covers both federal states Berlin and Brandenburg. An important lesson is that such a comprehensive process takes time, trust and confidence to find acceptable solutions for issues that arise along the way.



"A comprehensive process takes time, trust and confidence"



Greece

E. Macedonia and Thrace

European Parliament Preparatory Action to help build regional capacity

When the S3 process began, we had limited experience in the design and delivery of regional innovation policies. However, we have subsequently benefited from dedicated support in following the S3 methodology provided by the Joint Research Centre (JRC) through a preparatory action of the European Parliament (EP).

Before the preparatory action began, we did have a draft strategy with priorities based on a detailed analysis carried out with the support of local experts. A key contribution of the JRC was to catalyse and sustain an entrepreneurial process of discovery to refine the selected priorities and move towards implementation, including the launch of pilot calls. We also needed to reflect on an appropriate governance structure, how to integrate the regional and national S3 and understand some of the more complex issues around implementation, such as state aid policies.

A core activity was the establishment of EDP

focus groups, bringing together stakeholders from the quadruple helix to work together using participatory approaches. Subsequent project development workshops and online consultations were designed to take the most promising ideas forward.

The most important result of this project was that we got to grips with S3 methods, and adopted new ways of thinking, behaving and working. In particular, stakeholders were brought together in new formats and challenged to develop feasible R&I ideas within — and even across — the priority areas. The EDP focus group approach has since been adopted by other regions in Greece, with strong interest also from Bulgaria and Turkey in holding similar events.



George Pavlides, Governor, Region of Eastern Macedonia and Thrace

"The innovative methodology applied to the project, already forms the basis for consultation of the new national legislation regarding the management of ERDF funds, and will be replicated by all regions across Greece"

Ensuring an ongoing Entrepreneurial Process of Discovery

In Epirus, one of our region's goals for 2014-20 is to gather the entrepreneurial community around a common vision for innovation, new forms of entrepreneurship and attraction of investments. In line with the Smart Specialisation concept, the region will promote those key elements that highlight and exploit its competitive advantages. According to our S3, Epirus has potential for development in four key areas: Primary sector and food industry, Experience industry including tourism and creative industries, ICT & new entrepreneurship, and Health & wellness. However, efficient governance of an ongoing entrepreneurial discovery process is essential and structures were carefully designed with this in mind.

These efforts allowed the mobilisation of public bodies, academic institutions, representatives of the business community and citizens. As a result, besides many individual meetings with key local actors and potential investors, two workshops were held on: "Pilot action to devel-

op innovative projects in the field of health & wellness" and "Business process discovery for the promotion of innovative projects in the areas of specialisation".

Last June we established the Regional Research and Innovation Council (PSEK) and four working groups relevant to the areas of specialisation. The region has also set up a "Secretariat for entrepreneurial discovery and investments" to support continuous identification of new ideas. Based on the results of an entrepreneurial discovery process we published a revised and more effective version of our S3 in March 2016. We have also developed a "Manual for entrepreneurial discovery" presenting the concept and our regional needs in non-technical language.



"Efficient governance of an ongoing entrepreneurial discovery process is essential and structures were carefully designed with this in mind"

Policy mix - Institutional renewal of programme planning by S3

The Hungarian R&I system has historically been fragmented and disconnected from our economy, with overlapping mandates of public agencies, a bias towards basic research and limited consideration of industrial innovation. Smart Specialisation has led to a strategic approach of reconsidering vision, objectives and institutional control of our R&I system. Policy making has become more integrated, now covering the full spectrum of the innovation chain from exploration to commercial application.

A new R&I upgrading programme is more focused on regional objectives. It is being supported by a new institution, the National Research Development and Innovation Office which coordinates and controls funding. It has also been given responsibility to run an S3 Consultation Platform that will monitor the implementation process and encourage feedback.

In developing our S3 we collected many opinions on how to make the knowledge economy

more sustainable, and how to achieve the highest levels of societal benefits through leverage effects. Moreover, we identified discrepancies between market demand for research, development and innovation and current capabilities at universities, research institutions, knowledge transfer bodies and business R&D units. The consultation programme included an online survey on priorities and planning (with almost 700 questionnaires). Strategy documents have been available for online consultation and comments that resulted in more than 3400 registered users. In fact, the S3 website has become an information hub for R&I actors.

Finally, a series of workshops have been held in 19 counties involving almost 1300 participants, who have worked together in order to define regional specialisation goals and emerging R&I opportunities.



"In developing our S3 we collected many opinions on how to make the knowledge economy more sustainable, and how to achieve the highest levels of societal benefits through leverage effects"

Regional engagement and new clusters connected to regional specialisation areas

S3 has resulted in a more positive engagement between the authorities and innovation actors within our region. In particular, links with local universities and business communities have been strengthened. For example, the University of Trieste mapped the skills and enabling technologies within its various departments against regional S3 priorities. Similarly, the University of Udine has produced an overview of the skills existing within their institution and its potential contribution to training, research and technology transfer. Finally, the International School for Advanced Studies has offered support with a focus on “Strategic supply chains” and “Smart health”.

Our efforts to foster cooperation between research and business and align government intervention with territorial dynamics have resulted in the identification of five new regional clusters, generating a driver for change.

The process has been particularly successful

in the field of Maritime Technologies. Actors related to the theme “Sea” where among the most active in the entrepreneurial process of discovery. This was based on the institutional environment built by previous programmes, especially the establishment of the Naval and Yachting Technology District — DITENAVE and the related Sea Training Center, both focused on maritime technologies and the related human capital development.

Cooperation with the regional government has triggered an enlargement of the district’s role to other areas such as offshore and specialised supply chains, transport, logistics, and services for navigation and yachting. Its mission has also become more externally orientated, renaming the District as the Maritime Technology Cluster FVG — MareTC FVG, and this has already attracted new companies and representatives from research and industry associations.



“Our efforts to foster cooperation between research and business and align government intervention with territorial dynamics have resulted in the identification of five new regional clusters, generating a driver for change”

Regional engagement for social innovation and new models of governance

Our S3 process began with a competition to describe a vision for the region. It was won by Cristiano Longo, whose quote is on the home page of Sicily's S3 website: "Innovation in Sicily in 2020 promotes an encounter between those who are able to produce knowledge and those who have ideas on how put it to good use."

We have actively engaged with the territory since starting our S3 journey, looking for new players, trying to understand social innovation, and uncovering a rich fabric of innovators ready to meet the challenges of change. Young people and their ideas, motivation and activism have emerged; or were already there, they have simply been publicly recognised during a process of listening. The different ideas have been enlightening: from responding to vulnerable groups and social needs that are normally ignored by the market to institutional change and transformation in relationships between stakeholders. Testimonies showed that "Social innovation in Sicily already exists, and young

people are already working to reinvent their future."

However, innovators have pointed out that most ideas have often failed to get off the ground because they did not pass funding eligibility thresholds. On these and other aspects we have recognised the need for a different governance model. A new cross-departmental structure will coordinate analysis, planning, guidance, and monitoring of S3. This is complemented by permanent thematic groupings that include international partners. The Regional Government has approved Sicily's Smart Specialisation Strategy in February 2015.



"Social innovation in Sicily already exists, and young people are already working to reinvent their future"

Two regional identities reinforcing each other through S3

The core of Tuscany's S3 is based on the two elements of our regional identity: on the one hand a popular image of Tuscany as rich in natural and cultural heritage; on the other a strong manufacturing base with world leading brands, cutting edge research and hi-tech solutions. The vision promoted by the Tuscany S3 is that both identities not only live together, but feed and enhance one another.

The entrepreneurial discovery process has been conducted in difficult economic times, mainly caused by external factors, and has focused our attention on the international demand for innovation and how to make our research and productive assets globally competitive. This process, supported by a team of 12 external experts, involved the participation of 450 institutions, the elaboration of strategic roadmaps by 13 technological districts, ten thematic workshops attracting over 2000 participants and an intensive communications campaign. Three technological priorities have been selec-

ted and oriented to place-based applications, such as Optronics for cultural heritage, Biobotics for medical devices and Nanotechnology for environment protection.

In terms of tools S3 has led to important changes in our regional innovation policies. A new strategic approach aims to foster "backward linkages", between more internationally competitive firms and those less successful, but still crucial to regional cohesion. A smart policy mix has been introduced, addressing different types of innovations and their levels of technological intensity. Finally, we focused on integrated approaches to territorial needs, such as the requalification of the steel industry to adopt alternative technological solutions, while improving the environment and reducing energy consumption.



"S3 has led to important changes in our regional innovation policies"

Combining capacity building measures with specialised knowledge domains to transform the national economy

The Latvian S3 was developed in 2014 to concentrate public R&D investment in programmes that create future domestic capability and interregional comparative advantage. It aims to introduce change and growth in the production and export structure of traditional industries, in sectors which show the potential for products and services of high added value, and in activities with significant horizontal impact and which contribute to transforming the national economy.

The strategy has two main elements: Investment priorities build our innovation capabilities from a productive innovation system to modern education and polycentric spatial development; and five specialisation areas have been selected in specific knowledge domains, including knowledge-intensive bio-economics, biomedicine, medical technologies, bio-pharmacy and biotechnologies, smart materials, technologies and engineering systems; smart energetics; and information and communica-

tion technologies.

For implementation we have defined three core criteria for the allocation of public resources: Growth of human capital for R&I (knowledge and networks), expressed as increased competence of individuals; Scientific excellence, characterised by the level of usefulness of new knowledge for future or present economic and societal challenges; and Net economic value, financial opportunities and social benefits.

In 2015 descriptions of the ecosystems surrounding each specialisation were elaborated, to introduce actors in the quadruple helix to the context in which knowledge is created including the scale of each area, core challenges, public funds and regulations. In 2016 a three-level monitoring system was launched to monitor the impact of public investment through S3, which by 2020 will amount to more than a billion euros.



“The Latvian S3 aims to introduce change and growth [...] in activities with significant horizontal impact and which contribute to transforming the national economy”

Governing EDP in S3 priority setting

We have regarded Smart Specialisation as a game-changing opportunity for Lithuania. Being a small country, we have developed S3 at national level and prioritisation has not been easy. Collectively our mode of thinking had to change from “everything is a priority” to “priority is the creation of new technologies by business and science in the high potential sectors based on R&I capabilities”.

A well institutionalised governance structure that includes the Prime Minister’s Office has helped to achieve consensus and identify concrete technologies, resulting in 20 specific priorities within six thematic priority areas. Expert teams in each of the six areas proposed the priority technologies. They were made up of representatives of research, businesses, the non-governmental sector and the Ministry. Discussions around prioritisation sometimes brought unexpected but positive results: For example, based on our strong research profile, established businesses in the field and potential for

future development, the energy team agreed that solar panels should become a priority technology. At this point representatives from the marine sector, which had not been prioritised by the S3, suggested putting solar panels on ships!

Throughout this process there were naturally many different opinions and interests and sometimes even complaints on the table of the Prime Minister, but eventually everything worked out well and it was a great exercise for better and closer collaboration between our stakeholders. The final decisions on S3 priorities and the framework for implementation were taken at the highest political level to avoid the risk of diverging interests and questioning of priorities during implementation.



“We have regarded Smart Specialisation as a game-changing opportunity for Lithuania”

Learning together in a spirit of open dialogue

In Malta, putting the entrepreneurial discovery process into practice has given rise to a wide representation of interests and knowledge sharing by an unprecedented array of stakeholders. We took particular care to involve the private sector and social partners, in addition to public administration and academia. This process required all parties to “charter into unknown territories” and learn together in a spirit of open dialogue. It is safe to say that the design of S3 involved one of the largest exercises of engagement with stakeholders in our history of R&I policy.

Starting with a blank slate, without preconceived ideas of Malta’s specialisations, initial desk based research provided statistical trends in various economic sectors, employment trends and R&I funding. All major stakeholders were then interviewed individually using a set of open, general questions to unearth individual knowledge and expertise “on the ground”. A workshop organised for the private sector

analysed and validated the initial findings, recommending areas for further consideration.

This work led to the creation of dedicated thematic focus groups which helped draft a first version of the S3. After a formal consultation, the new R&I Strategy 2020, including Malta’s S3 areas was adopted in 2014. However, this is not the end of the journey. We know that entrepreneurial discovery needs to remain an ongoing process underpinned by a strong governance mechanism. The Core Group and the Steering Group provide invaluable political and technical direction to the process and ensure that all major players remain engaged and supportive of the S3 process and its implementation.



“This process required all parties to “charter into unknown territories” and learn together in a spirit of open dialogue”

Innovation monitoring system based on Specialised Observatories and Smart Indexes

In developing our S3 we have attached high importance to monitoring trends in the selected priority domains of Energy, Medicine and ICTs. Thanks to the project Network of Regional Specialisation Observatories, supported by the Marshal Office of the Śląskie Voivodeship, we are able to monitor, measure, support and anticipate market trends in the three priority domains as well as eight enabling technologies of the related Technology Development Plan.

During the preparation of the 2014-2020 programming period, following the process of identifying the most promising areas on which the region can build its competitive advantages, we became aware of our limited capacity to monitor and analyse these areas of specialisation. The Network of Regional Specialisation Observatories includes partners from the S3 priority domains who are responsible for diagnosing and reporting regional trends. As for now there are five observatories operating for energy, medicine, ICT, environmental protection

and nanotechnology. We may also establish observatories for three other areas: materials, transport and engineering.

Another interesting feature of our new S3 monitoring framework is the use of "Smart Indexes". They are based firstly on three sub-indexes for the domains of regional specialisation, and secondly on horizontal indicators including the Knowledge Index, Human Capital Index and Innovation Index. One of the greatest challenges is to identify the source of reliable data. However, by monitoring the processes, while taking into account our specific regional context, we will be able observe trends and draw solid conclusions and recommendations for the region.



"By monitoring the processes we will be able observe trends and draw solid conclusions and recommendations for the region"

Diversification from a dominant industry

When we first came across Smart Specialisation we were rather concerned. The biggest problem in our region has been over, and not under specialisation. With many natural advantages, Algarve is Portugal's main tourism destination and has witnessed an explosion of infrastructure in the sector over recent decades. However, when the global economic crisis hit, it became clear that reliance on "Sun and Sea" tourism was precarious, since it suffers from large fluctuations in demand, depending on the season and global trends. Moreover it is a brand of tourism that can be replicated by lower cost competitors around the world.

Yet when we explored what Smart Specialisation was all about, we learned that it meant concentrating resources in domains of R&I, rather than single sectors like tourism. Applying these domains could result in two transformative effects in our economy: One is the development of niche products within tourism, to create products that are harder to imitate and

which create demand outside our traditional high season. Another is to build on links between tourism and other sectors to create new economic activities. An example is to respond to a big societal challenge; ageing, by integrating the different services required to care for the elderly and establishing Algarve as a leader in their delivery and export.

The challenge is substantial, but embracing experimentation and novelty is what we need. If the process of strategy formation can be followed with concrete implementation, Smart Specialisation could transform Algarve's economy into one based on knowledge, competitiveness and resilience.



"Smart Specialisation could transform Algarve's economy into one based on knowledge, competitiveness and resilience"

S3 creates regional innovation hubs

The design of our S3 has increased the level of participation in policy making. Instrumental to this was its integration with wider reflections on a new regional action plan that underpins the ESIF Operational Programme. Together the package is known as CRER2020, an acronym that includes competitiveness and resilience, and translates as “believe” in English. This regional vision was built through brain storming sessions with more than 700 people and 300 entities. It was articulated into a “Regional Wikipedia” made up of 42 sections on different social and economic themes.

The S3 exercise emerged naturally from this wider process, with innovation actors becoming part of a governance structure that includes a coordination council, a management team, an expert advisory board and a regional forum. In Centro we recognise that stimulating fertile platforms of related variety, governance and monitoring are the main factors that will influence the success of our S3.

Centro’s S3 priorities are built around four innovation hubs: Sustainable industrial solutions, Valorisation and efficient use of natural endogenous resources, Technologies for the quality of life and Territorial innovation. The latter was a natural outcome of the strong participation of territorial interests, including Local Action Groups that follow the Leader approach. Furthermore, these hubs overlap with the most important regional clusters.

Participation in strategy design is spilling over into the implementation phase. The S3 hubs, which are coordinated by well-known personalities can bring people together and foster cooperation. These are the leaders and protagonists that are driving our S3 from the bottom up.



“Governance and monitoring are the main factors that will influence the success of our S3”

A triangular methodological framework for priority setting

During the elaboration of Norte S3, one of our main concerns was to establish a conceptual framework that, through the methodology proposed by the European Commission, would allow a comprehensive engagement of regional stakeholders in the identification and characterisation of the priority domains for Smart Specialisation. This allowed us to construct a framework for identifying domains based around three corners of a triangle, with public policy in the middle to coordinate the process.

The first corner corresponds to resources and assets of the region, in particular those that are not easily imitated or transferred, but upon which tradable goods and services could be created on a global scale. Importantly, they may be technological (analytical and synthetic knowledge) or non-technological (for example, symbolic capital), which we measured in different ways. The second corner of our triangular model is the entrepreneurial base that integrates and gives focus to the resources

and assets. Nodal points were identified which demonstrated the greatest potential articulation between these two corners, which in turn were analysed quantitatively to establish the level of technological and entrepreneurial relatedness.

Finally, the third corner incorporates advanced users of innovation which are companies and other institutions that produce goods and services to meet demand (both domestic and international, including public procurement). Evaluating their needs is fundamental to the viability of S3 domains and also serves to inform policies that promote structural changes in the regional economy. Following this analytical model we pre-identified eight priority domains categorised as nuclear (proven), emerging or “wild card”, which were then fully discussed by stakeholders of the quadruple helix to refine and integrate into our S3.



“The construction of an analytical model from the concept of S3 is crucial for the engagement of the stakeholders in the identification and characterisation of the priority domains”

Romania, Netherlands

N.E. Romania, N. Provinces Alliance



N.E. Romania RDA / N. Provinces Alliance
www.admordest.ro / www.snn.eu/en

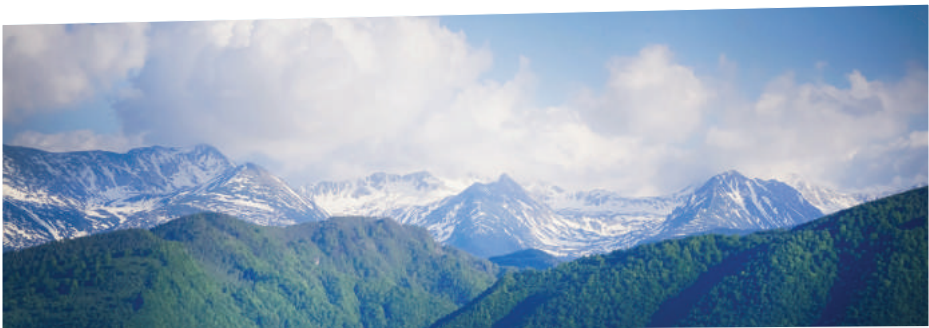
Strategic Cooperation with North Netherlands

Without formally devolved competences for R&I, designing a regional S3 and bringing together all the relevant stakeholders has not been easy. Nevertheless, through our own initiative we have developed a strategy and consulted over 250 representatives of institutions from the “quadruple helix”. It was approved by our Regional Development Board in December 2014 and gained national recognition in the Regional Development Plan 2014-2020. Furthermore, the number of regional innovative projects financed by EU funds has grown by 80% between 2013 and 2015, amounting to €342.64M.

We still have many challenges, but have found inspiration through international cooperation, including the S3 Platform peer review. One outcome is a bilateral agreement with the Alliance of Northern Netherlands Provinces (SNN). Starting in 2015, it aims to jointly address societal challenges and bolster economic growth in both regions. This will be achieved

through newly created regional innovation incubators and living labs, tools that can drive S3 implementation by giving space for companies to share ideas, innovate and receive support to solve their problems.

We have worked intensively with experts from SNN, receiving support from local stakeholders and the European Commission’s Regions Peer to Peer TAIEX programme. Results are already visible: Potential common priorities (agro food, waste, water, new materials and energy) have been mapped based on value chain principles. A governance and coordination system is being constructed with widespread stakeholder participation, and sources of finance have been identified. Perhaps most importantly, lessons have been learned on how to understand each other’s development needs and how to approach intercultural communication.



“We still have many challenges, but have found inspiration through international cooperation, including the S3 Platform peer review”

Co-creation of global trends

We were still in a learning stage when we started to prepare our S3. Although we understood the entrepreneurial discovery approach it was not easy to carry out. Participation from the “quadruple helix” was limited and business in particular lacked incentives to dedicate valuable time and resources. But a new hands-on approach led to a decisive shift in policy making.

It started with background analysis that defined three large areas where Slovenia could have a competitive advantage due to critical mass. But most important was what followed: A drive to change the mind-set and perceptions of key stakeholders including business and researchers. After many networking events, promotional activities and consultations, stakeholders no longer looked at the process from afar and with an overly critical view of government policies. Instead they began to form the policies.

We have set up informal groups of innovation

actors called Strategic Partnerships which have begun to prepare business plans and project proposals and visions around specific value chains with potential. We have aimed to systematically take on their ideas, knowledge and expertise.

Today the S3 has clearly defined areas of investment and priority domains. But the main result is without doubt the change in policy making, since the new collaborative approach continues. Above all we have realised the value of these stakeholder groups, which will now govern the implementation of the priority domains. They will play key roles in further defining niche areas of intervention, helping to monitor progress, serve as consultants in preparation of roadmaps and most importantly, ensure the continuation of networking and collaboration.



“The main result is without doubt the change in policy making, since the new collaborative approach continues”

Energising innovation policy through dual use and sustainable construction

S3 has provided a real boost to our regional innovation policy, in particular by discovering the potential of Dual Use Technologies and by developing an Action Plan for Sustainable Construction.

The Entrepreneurial Discovery Process allowed us to discover transversal opportunities in several of our innovative domains. By looking inside the region we began to appreciate the extent of assets and economic activities related to naval, aerospace, defence, transport and logistics, including all the enterprises, researchers, knowledge, and capabilities working in these fields. A series of workshops showed the potential duality of these activities which could be vehicles for strategic diversification. Yet we also realised that many of the actors working in dual use are international which led to a new exercise of “looking beyond our regional boundaries”, including benchmarking and network building. This culminated in the organisation of an international conference last October

on Dual “Use Technologies in the framework of S3”, and a set of recommendations in the Seville Declaration.

Secondly, after prioritising sustainable construction we have an Action Plan with a much more coherent policy mix and a budget of €529 million. This plan aims to make Andalusia an international reference in this area by providing innovative solutions for the global value chain. The Action Plan has also adopted S3 methods including participatory governance, a shared vision, sub-priorities and a monitoring mechanism. We already tasted success last year, being awarded a RegioStar Award for sustainable development, convening an international conference, and participating in the launch of the European Commission’s Smart Specialisation Platform for Energy.



“The Entrepreneurial Discovery Process allowed us to discover transversal opportunities in several of our innovative domains”

New regional structures created by S3 process

The process of design, validation and implementation of our S3 has followed a novel approach to increase participation. It centres on the involvement of all regional innovation actors (social, technological, political and entrepreneurial) in a new governance system for evaluation and monitoring of the strategy. Specifically, two new structures have been created:

The Regional Innovation Commission is the executive body responsible for the promotion, planning, coordination and monitoring of all regional R&I activities. This body is presided over by the President of the Regional Government which provides an important element of political leadership. Its Vice President is the Regional Minister of Innovation and also includes Managing Directors with competences for Industry and Innovation, Education, Research and Development, Information Technologies, Communications, Health, Employment Policies and Local Treasury. The design of the Commission will hopefully bring about a more integrated policy

mix, an important principle promoted in the S3 methodology.

The Regional Innovation Forum is a participatory space for all actors and members of the innovation ecosystem. Its composition has been purposefully designed to create a dynamic mix of participants from local and regional levels, research centres, universities, technology hubs, regional clusters and entrepreneurial organisations.

The main aim of our governance mechanism is to strengthen the feedback and learning process through full involvement of key innovation stakeholders. This is a challenging and difficult process but we see public sector innovation as a critical tool in the implementation of S3.



“The main aim of our governance mechanism is to strengthen the feedback and learning process through full involvement of key innovation stakeholders”

A territorial perspective on Smart Specialisation

In our region, Smart Specialisation has been embraced at more than one territorial level. Building on key features of S3 (including a vision, competitive advantages, multi-actor partnerships and differentiating assets), the TAGUS Local Action Group for rural development together with the Association of Municipalities TAJO-SALOR have developed a new governance model based on participation, co-responsibility and co-leadership. This initiative, which has been called “Smart LEADER”, combines two different perspectives: Diversification, according to the EU wide LEADER programme and Specialisation taking inspiration from S3.

The new approach has identified a local comparative advantage: “La torta del Casar”, a distinctive cheese which is becoming the economic catalyst for the Tajo-Salor-Almonte territory. This strategy also aims to collectively address a main weakness of the territorial production system: Weak capacity to incorporate knowledge-based innovation. The results so far show

promising advances in the areas of reinforced innovation at local level and support for a more rounded perspective on rural development.

A first project, currently ongoing, is the Farmers School of XXI that emerged from a “grass-roots” initiative during interactions within the TAGUS Innovation Ecosystem promoted by the Smart LEADER process and involving all actors of the Quadruple Helix Model, citizens included. The knowledge institutions participating in the Shepherding School project are the Faculty of Veterinary Medicine at the University of Extremadura (Caceres) and CYCITEX, the Centre for Scientific and Technological Research of Extremadura (Merida). The Shepherding School aims to become a valuable resource for training highly professional shepherds embracing ICT and latest technological advances in the field.



“The results so far show promising advances in the areas of reinforced innovation at local level and support for a more rounded perspective on rural development”

Harnessing knowledge resources through a grouping of regional actors

Our approach to S3, and the starting point for Dalarna's overall development strategy, is not to rely on regional commodities but to grow the economy through human knowledge of how to process them. Smart Specialisation has led to a new way of harnessing knowledge resources with four thematic groupings of regional actors based on the S3 priorities: Energy efficient society, health and welfare, innovative experience production, and advanced industry. Importantly, these thematic groupings have been politically endorsed, providing motivation and momentum.

Each knowledge area gathers intermediaries and a process leader from Dalarna University or an industrial cluster. The regional authority launches pilot studies that examine entrepreneurial potential and capacity to attract international partners. They also define a roadmap, which more clearly delimits the given area. The pilot studies are externally analysed by a regional partnership for innovation consisting of

the main stakeholders. This partnership also facilitates and coordinates the different area specific processes to ensure transfers of knowledge and practices.

The initial selection of rather broad priorities sets the basis for cross-fertilisation between differently driven and perceived areas. The results of the pilot studies are leading to further prioritisation and are accompanied by practical pilot projects to test if there are indeed niche strengths. The major change of Smart Specialisation has thus not been a pre-selection of priorities, but rather in the process established to continue prioritisation through analysis and experimentation.

Region Dalarna's membership in the Vanguard Initiative has also strengthened the strategy's external dimension. Smart Specialisation has thus brought about an ongoing learning process which is both inward- and outward-looking.



"S3 is a new way for us to develop Dalarna as a region. We are using knowledge from our industrial history and from other sectors as tourism and digitalisation and are finding new ways to exploit these competences"

Value creating services supporting Smart Specialisation

In designing our S3 we have adopted the approach to innovation advocated by former CEO of Apple, Steve Jobs: we start with customer experiences and then go back towards technology, and not the other way around. This builds on our region's strong research capabilities related to service innovation, service design and servitisation.

Servitisation is a process aimed at gaining new insights into users and how to best support their value-creation processes. Radically new services possess a transformational power to convert value chains. This requires deep insights into the behaviour and values of the users, as well as the situations in which they live and act.

Several examples of servitisation show that it cuts across Värmland's S3 priorities:

- "Digitalisation of Welfare Services": The Service Research Centre at Karlstad University plays a key role in disseminating

knowledge on user needs, customised services and the streamlining of services with higher quality.

- Primary health services: Experio Lab involves staff, patients and families to work together with service designers to create value in people's everyday lives.
- "Forest Based Bioeconomy": The SP research institute is forming a service innovation lab for companies to develop new business models and other service innovations for bio based products.

To sum up, our S3 was formed in accordance with a service design methodology. During the process it was clear that there was a demand within all areas of specialisation for developing new business models, service innovations and ultimately customer values. Therefore service innovation has become a horizontal, enabling S3 priority in Värmland.



Tomas Riste, Regional Commissioner

"The line between production of services and goods disappears slowly but surely out and create the need for new knowledge and new ways of thinking in organizations and companies"

Smart Specialisation Advisory Hub for England

Our S3 process has led to the formation of an innovative capacity building and advice facility called the Smart Specialisation Hub. This resulted from a process where newly established Local Enterprise Partnerships (LEPs) have been tasked with the delivery of Smart Specialisation, within the framework of nationally defined priorities.

At national level, “Smart Specialisation in England” includes a number of broad priorities based on two strategic documents; the National Innovation and Research Strategy for Growth (2011) and the National Industrial Strategy (2013), the latter focussing on eleven industrial sectors and eight “Great Technologies”.

At the same time, we have mobilised the LEPs as strategic local actors to stimulate Smart Specialisation. The UK government has taken the radical step of de facto devolution of over 96% of the entire allocation of ERDF and ESF to these local partnerships. They are currently

refining their own priorities, with many establishing “innovation boards” involving local universities.

Despite their relative infancy some LEPs have developed fully fledged strategies and took part in the S3 Platform peer review workshops (e.g. Manchester and Cornwall). Nevertheless, we recognised their need for more support. Taking inspiration from the S3 Platform, we have used ERDF technical assistance to set up the Smart Specialisation Hub, directed by a specific sub-committee of the ESIF PMC. The experience of LEPs and the Hub so far is that the real benefits of Smart Specialisation cannot be felt only through written strategies, but that the concept must continue to change the way people think and act.



“The real benefits of Smart Specialisation cannot be felt only through written strategies, but that the concept must continue to change the way people think and act”

Changing the innovation and entrepreneurship mind-set to implement Smart Specialisation

A key part of the Scottish S3 framework is to build a community of innovation and entrepreneurship practitioners and supporters. We therefore launched Scotland Can Do as a banner under which public, private, third sector, co-operatives, educational organisations and investors can find new and better ways to support a greater entrepreneurial and innovative mind-set amongst Scotland's businesses, communities and citizens; it's about being Capable, Ambitious, Networked, addressing Demand and supporting Opportunity — the Can Do approach.

A Statement of Intent is supported by an Action Framework that describes how and where we are working with partners. A dedicated website hosts a Dashboard of indicators that measures progress. Partners include Chambers of Commerce and Federation of Small Businesses, financial institutions including venture capital and start-up investors; social and third sector enterprises; youth and community or-

ganisations and national agencies. The Can Do concept has generated a number of new initiatives, including an innovation forum to monitor progress in policy delivery, support services for start-ups as well as more established entrepreneurs, and a scheme to transform town centres into opportunities for enterprise and local communities to flourish.

Scotland Can Do helps to implement some of the main features of our S3 framework: Supporting scientific and technological R&D; high-growth companies with ambition to internationalise; self-starters, fledgling businesses and start-ups; the next generation of Scottish entrepreneurs; communities and individuals. It's about supporting the whole ecosystem, and when linked with the vertical priorities identified by our S3, we believe this can have a positive impact on the Scottish economy.



"Scotland Can Do helps to implement some of the main features of our S3 framework"

Our experience with semiconductors is an “early win” for the S3

In developing our S3 called Innovation Wales, we wanted to balance top-down identification of broad challenges aligned with EU policies, and a bottom-up approach of listening to our industrial clusters that show genuine strength or potential. It recommended developing a small number of research centres of excellence with clear comparative strength and market opportunity. They would aim explicitly to commercialise knowledge and create wealth, and to work with others to support cluster development.

One of these centres is set to become Europe's fifth semiconductor cluster and the only one focused on compound semiconductors. Based on a vision from within the industry, Wales aims to be the leader in compound semiconductors, which will drive technological advances from wireless devices to transport and health-care. The European Commission had already identified it as a Key Enabling Technology to drive re-industrialisation. Thus, a bottom-up

approach was matched with a top-down challenge.

The ability of the Welsh Government to act as an enabler was important. Brokering links between local industry and the university base, an integrated support package was developed, considering strengths and potential weaknesses along the value chain. So far the investment has re-affirmed our decision. An initial contribution of €5.2m has leveraged more than €127m of additional investment. The long-term economic impact is predicted to be 2,500-5,000 new jobs in 10 years and 25-50 new companies.

Adopting a Smart Specialisation approach has guided Welsh Government investment and our experience with semiconductors is an “early win” for the S3, one which promises to benefit the economy and people for many years to come.



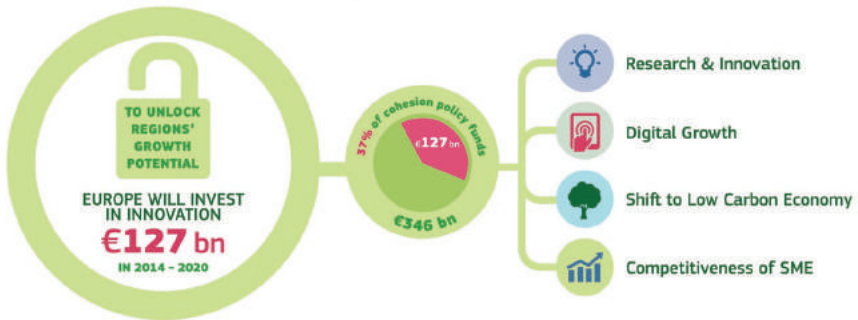
“The ability of the Welsh Government to act as an enabler was important”

THE SMART SPECIALISATION PLATFORM

Infographics

- Why it was created —
- How it helps regions —
- What is happening —

Why it was created



BUT

In the past these investments have not always been successful

WHY?



Fragmentation of R+I investments



Financing projects indiscriminately



"One-size-fits-all" approach (different regions = different needs/potentials)

REGIONS HAVE TO BE Sx3



How to focus R+I investments on few strategic priorities?



How to deliver more targeted innovation funds?



How to harness the real growth potential of a specific EU region?



SMART

Identify the region's own strength, potential and competitive advantages.



SPECIALISED

Boost existing and emerging regional strengths through research and innovation efforts.

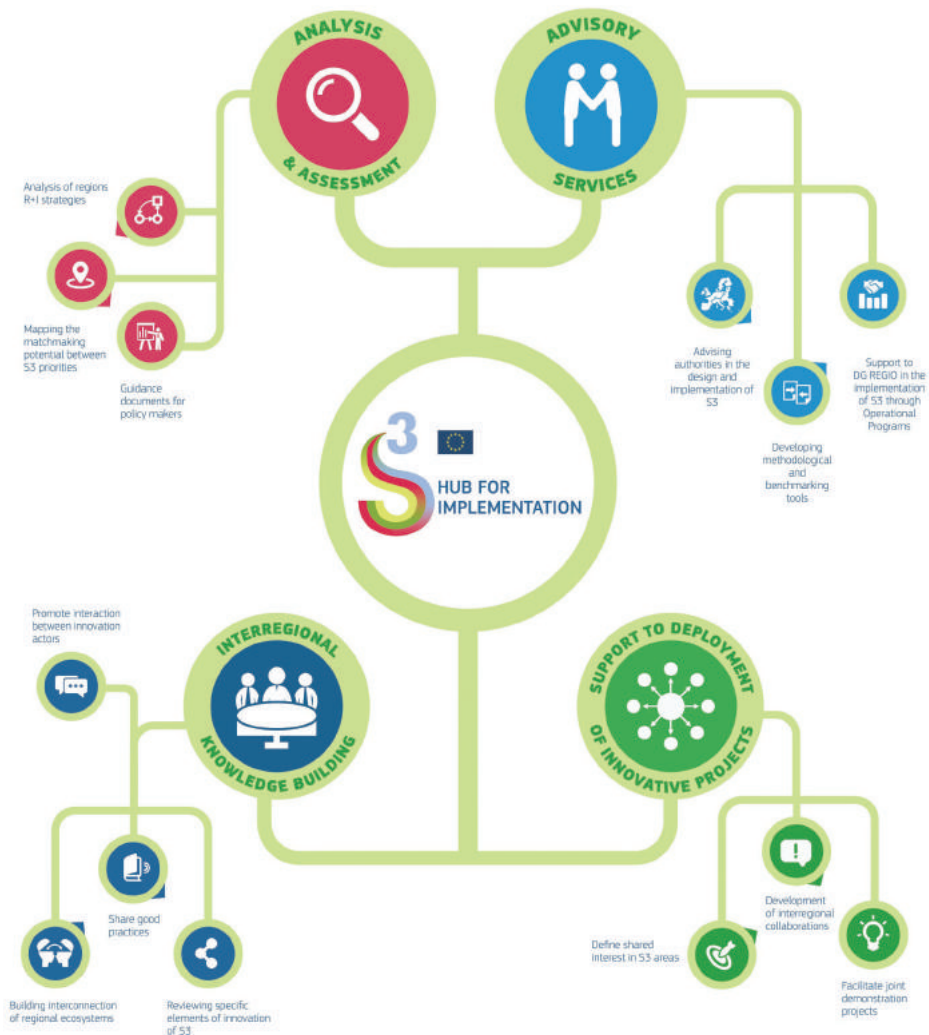


STRATEGIC

Define smart specialisation strategy together with entrepreneurs and partners, prioritising R+I investments in key domains.



How it helps regions



What is happening



- "EU Regions and Countries" and "Non EU regions" registered in S3P
- Peer Reviewed Regions and Countries



Impact

40%

More than 40% of policy makers have introduced substantial adaptations to their existing set of innovation policies.

60%

More than 60% of policy makers have modified the process of involving stakeholders.

80%

More than 80% of policy makers have introduced changes to their R+I strategies after the S3 Platform peer review.

Web tools

s3platform.jrc.ec.europa.eu

[@S3Platform](https://twitter.com/S3Platform)

EYE@RIS3

Regional data on R+I investment priorities.

ICT MONITORING

European Structural and investment Funds data on planned ICT investments.

R+I TOP PRIORITIES IN EU



REGIONAL TRADE & COMPETITION

Identification of regional competitors and trade partners in specific areas.

REGIONAL BENCHMARKING

Finding reference regions based on structural similarities.

Table of contents

PREFACE	7
S3 OVERVIEW	9
AUSTRIA, Lower Austria	11
BELGIUM, Wallonia	12
BULGARIA	13
CZECH REPUBLIC, Moravian-Silesian Region	14
DENMARK	15
FINLAND, Lapland	16
FINLAND, Ostrobothnia	17
FRANCE, Auvergne-Rhône-Alpes	18
FRANCE, Centre Val de Loire	19
GERMANY	20
GERMANY, BerlinBrandenburg	21
GREECE, Eastern Macedonia and Thrace	22
GREECE, Epirus	23
HUNGARY	24
ITALY, Friuli Venezia Giulia	25
ITALY, Sicily	26
ITALY, Tuscany	27
LATVIA	28
LITHUANIA	29
MALTA	30
POLAND, Śląskie Voivodeship	31
PORTUGAL, Algarve	32
PORTUGAL, Centro	33
PORTUGAL, Norte	34
ROMANIA, NETHERLANDS, North East Romania, Northern Netherlands Provinces Alliance	35
SLOVENIA	36
SPAIN, Andalusia	37
SPAIN, Cantabria	38
SPAIN, Extremadura	39
SWEDEN, Dalarna	40
SWEDEN, Värmland	41
UK, England	42
UK, Scotland	43
UK, Wales	44
INFOGRAPHICS	45

Photo credits

AUSTRIA, Lower Austria

(Fotolia.com ©Creativemarc)

BELGIUM, Wallonia

(Fotolia.com ©Henryk Sadura)

BULGARIA

(Fotolia.com ©Bulgarian Ministry of Economy)

CZECH REPUBLIC, Moravia Silesia

(Fotolia.com ©whitelook)

DENMARK

(Fotolia.com ©Oleksiy Mark)

FINLAND, Ostrobothnia

(Fotolia.com ©Andrey Shevchenko)

FINLAND, Lapland

(©Material Bank, visitRovaniemi)

FRANCE, Centre Val de Loire

(Fotolia.com ©Punto Studio Foto)

FRANCE, Rhone alps

(©Franck Trabouillet)

GERMANY

(Fotolia.com ©philipus)

GERMANY, BerlinBrandenburg

(Fotolia.com ©TTstudio)

GREECE, Remth

(©Region of Eastern Macedonia and Thrace)

GREECE, Epirus

(Fotolia.com ©G.Foukas)

HUNGARY

(Fotolia.com ©Noppasinw)

ITALY, Friuli Venezia Giulia

(Fotolia.com ©morfeo86ts12)

ITALY, Sicily

(Fotolia.com ©kwamer)

ITALY, Tuscany

(Fotolia.com ©sborisov)

LATVIA

(Fotolia.com ©Malyshchyts Viktor)

LITHUANIA

(Fotolia.com ©r_andrei)

MALTA

(Fotolia.com ©Elena Petrova)

POLAND, Slaskie

(Fotolia.com ©Artur Henryk)

PORTUGAL, Algarve

(Fotolia.com ©Mauro Rodrigues)

PORTUGAL, Centro

(Fotolia.com ©Nickolay Khoroshkov)

PORTUGAL, Norte

(©CCDR, NEgídio Santos)

ROMANIA,NETHERLANDS, North East Romania, Northern Netherlands Provinces

(Fotolia.com ©alexionas)

SLOVENIA

(Fotolia.com ©Mike Mareen)

SPAIN, Andalusia

(Fotolia.com ©ATLANTISMEDIA)

SPAIN, Cantabria

(Fotolia.com ©JackF)

SPAIN, Extremadura

(Fotolia.com ©Olexandr)

SWEDEN, Dalarna

(Fotolia.com ©rolf_52)

SWEDEN, Värmland

(Fotolia.com ©Valmet)

UK, England

(Fotolia.com ©hessbeck)

UK, Scotland

(Fotolia.com ©tollanc)

UK, Wales

(Fotolia.com ©smartin69)

JRC Mission

As the Commission's in-house science service, the Joint Research Centre's mission is to provide EU policies with independent, evidence-based scientific and technical support throughout the whole policy cycle.

Working in close cooperation with policy Directorates-General, the JRC addresses key societal challenges while stimulating innovation through developing new methods, tools and standards, and sharing its know-how with the Member States, the scientific community and international partners.

*Serving society
Stimulating innovation
Supporting legislation*

