

CRUSOE: Development Plan

2012-2015

This document is intended to provide the current available key elements and patterns to design a roadmap for implementing the CRUSOE's Development Plan. It is based in official macroeconomic indicators and introduces a preliminary selection of six innovation programmes, including transversal Business Lines and links to the forthcoming European policies related to regional RDI specialisation.

Towards a
European
Smart
Specialisation

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THE SMART SPECIALISATION IN EU REGIONS

The CRUSOE's Development Plan is intended to merge with the ongoing working groups dealing with Smart Specialisation (SS) at the European Commission, particularly the Knowledge for Growth expert group (K4G) advising the Commissioner for Research, Janez Potočnik from 2010.

Addressing the issue of specialisation in the research, development and innovation (RDI) chain is particularly crucial for regions that are currently working to become leaders in some of the major science or technology domains.

The smart specialisation at CRUSOE is supported by the recent working documents produced at the DG Research and Innovation (EU Commission) from 2010 on, which are supposed to define potential solutions to problems of research fragmentation and imitation of research patterns, as specialisation strategies means competitive advantages; facilitate repositioning strategies and underpin answers to severe global risks for instance, the energy shortage and climate change.

It should be understood from the top that the idea of smart specialisation does not call for imposing specialisation through some form of "top-down" industrial policy that is directed in accord with a pre-conceived "*Grand Plan*". The concept of smart specialisation should be understood as a dynamic process of finding the right areas to focus on.

It requires an entrepreneurial process of discovery involving all stakeholders to identify and retrieve what a country or region does best in terms of science and technology, and where it can be expected to excel. This process of discovery needs to be attached to broader political goals and must identify governance mechanisms and criteria to guide choices.

The process is no exempt form risk consisting in to derive in a "picking up loser process", being driven to technological locking strategies and refusing RDI policies and strategies, in order to privilege other ones.

The beneficiaries could be researchers, international stakeholders, national enterprises, entrepreneurs, policymakers and decision leaders, as well as universities and vocational and education institutes.

The core objectives of the CRUSOE's Development Plan are to support regional innovation agencies, as well as regional decision-makers in the process leading to the definition of those specialisation programmes that can foster innovation-driven growth. By selecting specific areas to concentrate resources around specific goals, the advanced technology developments and the innovation on the scientific results of many different and *a priori* unrelated disciplines will identify competitive strengths in different scientific and technological fields in means of excellence.

The CRUSOE's Development Plan aims at focusing on a set of Milestones from 2012 to 2015: introducing tasks (by means of deliverables and deadlines) and measuring the impact, according to outputs driven within forthcoming trends in compliance with the European Broad Lines from the "Horizon 2020" preliminary draft.

Each sectorial programme ("P") is reported to previous Strategic Mainstreams ("SM") and includes a set of quantifiable, measurable and objective Key Performance Indicators ("KPI").

With reference to precedent studies on EU regional performance indicators, a SWOT analysis has been drawn up introducing a starting point related to European regions knowledge-based economies and current innovation-driven policies aiming at discussing about some recommendations targeting at public authorities, industry stakeholders and universities.

STRENGTHS	WEAKNESS
<ol style="list-style-type: none"> 1. Increasing intensity between academia, industry and companies 2. High-quality and operational capacity of the regional RDI structure (universities, institutes and technology centres) 3. Emerging ventures incubating a new generation of social entrepreneurs 4. Company success stories and in-house talent development 	<ol style="list-style-type: none"> 1. Lack of a common trans-regional strategic framework 2. Low level of technology development in regional SMEs 3. Foreseen problems in achieving EU convergence indicators 4. Absence of marketable RDI outcomes at universities
OPPORTUNITIES	THREATS
<ol style="list-style-type: none"> 1. Existing high-tech market niches in the global economy 2. Potential of the regional accumulated scientific knowledge 3. European smart specialisation requirements 4. Regional lobbying possibilities (introducing 14 universities and 4 institutes: over 500,000 clients with a "drag and drop" effect) 	<ol style="list-style-type: none"> 1. Relatively low level of RDI investment (-1.6% EU-27) 2. Aggressive global competition 3. Lack of national smart specialisation policies 4. Public administration without a market oriented culture

RECOMMENDATIONS

TO PUBLIC AUTHORITIES

1. To promote and encourage a greater interchange between academia and industry
2. To lead driven RDI investment for supporting companies in their internal research effort
3. To orient strategically public funding instruments for selective RDI programmes
4. To align, at the regional level, public incentives with selective RDI programmes

TO INDUSTRY STAKEHOLDERS

1. To improve the qualification level of the RDI human resources
2. To introduce quality standards and efficiency in regional SMEs
3. To steer value-added product management strategies to attempt market niches
4. To change the rationale of competitiveness, from labour to knowledge

TO UNIVERSITIES

1. To draw up more selective research and education programmes (aligned to regional strategies)
2. To commit and reward researchers according to the success of their work
3. To improve the information channels in order to get a better knowledge of the market needs in terms of qualification profiles
4. To enhance international cooperation with the support of European co-funding instruments

A MULTIDISCIPLINAR ANSWER TO EU CHALLENGES

Strategic Mainstreams (SM) are the pillars of the CRUSOE's Development Plan. They lead the innovation sectorial programmes, as shown in the figure:

SM1: High-Tech regional industry development excellence	SM2: Strengthen synergies between RDI and industry	SM3: Leading innovative activities to the market- place ("Innovation Ecosystem Strategy")	SM4: Talent Management
<i>To complement national investment in research infrastructure</i>	<i>To support RDI actors through International Knowledge Alliances</i>	<i>To link academia, industry and enterprise</i>	<i>To support the Regional Innovation Agencies, when implementing talent management policies</i>
<i>To participate in co-funded programmes for the constitution of trans-regional competitiveness poles</i>	<i>To lead RDI clusters when trading with products and services</i>	<i>To promote knowledge transfer within a Business Development Services approach</i>	<i>To promote trans-regional and international mobility programmes</i>
<i>To foster public and private partnerships to develop high-tech products</i>	<i>To promote innovation in services</i>	<i>To invest in the implementation of new convergent technologies</i>	<i>To contribute to permanent qualification and company on-site training</i>
<i>To develop 2nd and 3rd generation of incubators ("Business Accelerator")</i>	<i>To diversify the competences promoted by the technopark's portfolio</i>	<i>To reinforce innovative process for start-ups and spin-offs constitution</i>	<i>To create professional accreditation centres</i>
<i>To stimulate entrepreneurship product & services packaging</i>	<i>To identify potential innovation vouchers</i>	<i>To expand the cluster's science production and technology development</i>	<i>To design training programmes supporting innovation management</i>
<i>To attract and retain global talent in convergent targeted sectors</i>	<i>To integrate a branding strategy within innovation policies</i>	<i>To support innovative public procurement</i>	<i>To identify international alliances for CSR cooperation</i>

P1: HEALTH

P2: FOOD, FORESTRY & FISHERIES

P3: WATER

P4: LANGUAGE & CULTURE HERITAGE

P5: GREEN ENERGY

P6: CO-DEVELOPMENT

NUTS II	DEGREE OF REGIONAL RDI EUROPEAN POLICY COMPETENCES		
	LOW	MEDIUM	HIGH
			X
Knowledge & technology hubs <i>Leading science and technology regions</i>	SM1: HIGH-TECH REGIONAL INDUSTRY DEVELOPMENT		
	P1. To complement national investment in research infrastructure		KPI 1.1
	P2. To participate in co-funded programmes for the constitution of trans-regional competitiveness poles		KPI 1.2
	P3. To foster public and private partnerships to develop high-tech products		KPI 1.3
	P4. To develop 2nd and 3rd generation of incubators (<i>"Business Accelerator"</i>)		KPI 1.4
	P5. To stimulate entrepreneurship product & services packaging		KPI 1.5
	P6. To attract and retain global talent in convergent targeted sectors		KPI 1.6

NUTS II	DEGREE OF REGIONAL RDI EUROPEAN POLICY COMPETENCES		
	LOW	MEDIUM	HIGH
	X		
S&T intensive production regions <i>Industrial production regions in knowledge-intensive economies</i>	SM2: STRENGTHEN SYNERGIES BETWEEN RDI AND INDUSTRY		
	P1. To support RDI actors through International Knowledge Alliances		KPI 2.1
	P2. To lead RDI clusters when trading with products and services		KPI 2.2
	P3. To promote innovation in services		KPI 2.3
	P4. To diversify the competences promoted by the technopark's portfolio		KPI 2.4
	P5. To identify potential innovation vouchers		KPI 2.5
	P6. To integrate a branding strategy within innovation policies		KPI 2.6

NUTS II	DEGREE OF REGIONAL RDI EUROPEAN POLICY COMPETENCES		
	LOW	MEDIUM	HIGH
		X	
Medium Tech manufacturing and services providers <i>Industrial production regions with high knowledge absorptive capacities</i>	SM3: LEADING INNOVATIVE ACTIVITIES TO THE MARKET PLACE (“INNOVATION ECOSYSTEM STRATEGY”)		
	P1. To link academia, industry and enterprise		KPI 3.1
	P2. To promote knowledge transfer within a Business Development Services approach		KPI 3.2
	P3. To invest in the implementation of new convergent technologies		KPI 3.3
	P4. To reinforce innovative process for start-ups and spin-offs constitution		KPI 3.4
	P5. To expand the cluster’s science production and technology development		KPI 3.5
	P6. To support innovative public procurement		KPI 3.6

NUTS II	DEGREE OF REGIONAL RDI EUROPEAN POLICY COMPETENCES		
	LOW	MEDIUM	HIGH
			X
Specialised Human Resources <i>Human Capital in convergent regions</i>	SM4: TALENT MANAGEMENT		
	P1. To support the Regional Innovation Agencies, when implementing talent management policies		KPI 4.1
	P2. To promote trans-regional and international mobility programmes		KPI 4.2
	P3. To contribute to permanent qualification and company on-site training		KPI 4.3
	P4. To create professional accreditation centres		KPI 4.4
	P5. To design training programmes supporting innovation management ("Innovation Intermediary", "Business Development Support")		KPI 4.5
	P6. To identify international alliances for CSR cooperation		KPI 4.6

INNOVATION PROGRAMMES

BUSINESS LINES

HEALTH

Pharma & chemical synthesis, genetic diagnosis & testing, marine organic chemistry, biotechnologies, quality pharma processes

FOOD, FORESTRY & FISHERIES

Secure & sustainable food chain, spatial development, environmental risk management, Biodiversity & Bioeconomy

WATER

Water life-cycle management, wastewater treatment, clean-tech, sustainable management of water resources, habitat

LANGUAGE & CULTURE HERITAGE

Secure Internet, preservation technologies, cultural e-services, digital document, convergence in libraries & Arts

GREEN ENERGY

Alternative energy, waste treatment & pollution, green supply chain management, green cars, solar power, smart cities

CO-DEVELOPMENT

Corporate Social Responsibility (CSR), territorial planning, inter-cities networks, urban development, Human Capital

BACKGROUND

Today's healthcare systems are facing multiple grand challenges which include for instance, the arise of chronic diseases, rising risks of pandemics, the ageing population and increasing healthcare expenditures. All these challenges are interrelated and innovation providers are asked to identify those areas where key enabling technologies or methods could be applied.

The EU funding programme "Horizon 2020" highlights how the cost of Union health and social care systems is rising with care and prevention measures in all ages. The number of Europeans aged over 65 is expected to nearly double from 85 million in 2008 to 151 million by 2060 and those over 80 to rise from 22 to 61 million in the same period.

To improve lifelong health and wellbeing of European citizens, it is necessary to promote high-quality and economically sustainable health-care systems. Research, development and innovation measures can translate challenges into opportunities, by focusing on cross and cutting-competences form transversal sectors like Biomedicine and Bioeconomy.

The innovation programme "Healt" aims at fostering research and innovation for the creation, optimisation and implementation of basic and applied knowledge, technology-enhanced products and advanced services and solutions for better healthcare and wellbeing.

TARGET

1. Final or intermediary beneficiaries: citizens, patients and patient organisations, healthcare professionals and healthcare providers, hospitals, laboratories and medical centres, social security and health insurances, medical device manufacturers, pharmaceutical companies, Campus of International Excellence
2. Technology and service providers: small and medium-sized high-tech enterprises, integrated BioBanks, universities, public and private technology centres
3. Policymakers: the relevant ministries (Economy, Health & Social Security), as well as the Directorate-General for Health and Consumers (DG SANCO) and the World Health Organisation (WHO), regional governments and municipalities
4. Operational and support actors: regulatory authorities, notified bodies & certified test houses

KEY PERFORMANCE INDICATORS

1. KPI 1.1: N° of published noticeboards / N° of media publishers
2. KPI 2.1: Annual sales / Annual turnover
3. KPI 3.1: Total annual licensing income / N° of annual licensing patents
4. KPI 4.1: N° employees / N° of new qualifying internal cycles

NUTS II	P1: HEALTH		
AIMS	DELIVERABLE	OUTPUT DRIVEN	SUSTAINABILITY
<i>SM1: To complement national investment in research infrastructure</i>	Awareness programme: web 3.0, on-site visits, Media Plan	Productivity driven growth	Campus of International Excellence (" <i>Campus Vida</i> " & "E3: <i>Envejecimiento</i> ")
<i>SM2: To support regional RDI actors through International Knowledge Alliances</i>	Cluster Roadmap: legal entity, governance, "lobbying"	Development of "Key Enabling Technologies"	Biomed & Biotech Cluster
<i>SM3: To link academia, industry and enterprise</i>	Business Services Catalogue (UNE 166002)	IPR value assessment processes	Internationalisation
<i>SM4: To support the Regional Innovation Agencies, when implementing talent management policies for attracting RDI HR</i>	New lifelong learning patterns: coaching, mentoring, business cases	European Qualification Framework (EQF) within lifelong learning programmes	International certifying and accreditation models

BACKGROUND

Agriculture, forestry, fisheries and aquaculture require several essential and limited resources. These include land, sea space, fertile and functioning soils; water and healthy ecosystems, but also resources such as minerals and energy for the production of fertilisers. As primary sector needs to produce "more with less", it has become more relevant for regions to cooperate through the development of smart sustainable farming, fisheries and aquaculture.

The EU funding programme "Horizon 2020" outlines how a 70 % increase of the world food supply is estimated to be required to feed the 9 billion global populations by 2050. Agriculture accounts for about 10 % of Union greenhouse gases emissions and global emissions from forestry and fisheries are projected to increase up to 20 % by 2030.

To use primary sector resources in a much sustainable and efficient way, it is urgent a transition towards sustainable commodities processing systems leading by research, development and innovation.

The innovation programme "Food, Forestry & Fisheries" will deal with the EU Bioeconomy principles, including best practice guidance, information provision, as well as action to support a simplification of inter-regional legislation, improving information flow to legislators.

TARGET

1. Final or intermediary beneficiaries: citizens, food, forestry and maritime organisations; food, forestry and maritime professionals and providers, Campus of International Excellence
2. Supply chain actors: shippers, handling agents, carriers, feeders and consignees
3. Policymakers: the relevant ministries (Sustainable Development and Environment, Infrastructures, Economy and Competitiveness, Research and Innovation) regional governments and municipalities
4. Operational actors providing RDI services: small and medium-sized high-tech enterprises, start-ups and spin-offs, universities, public and private technology centres

KEY PERFORMANCE INDICATORS

1. KPI 1.2: N° of annual published newsletters / N° of annual subscripts
2. KPI 2.2: N° of new brands / N° of years
3. KPI 3.2: N° of annual distributed catalogues / N° of annual subscripts
4. KPI 4.2: N° of employees / N° of annual mobility programmes

NUTS II	P2: FOOD, FORESTRY & FISHERIES		
AIMS	<i>DELIVERABLE</i>	<i>OUTPUT DRIVEN</i>	<i>SUSTAINABILITY</i>
<i>SM1: To participate in co-funded programmes for the constitution trans-regional competitiveness poles</i>	Technology Sectorial Watch Model	Soft commodities export: agriculture, food, forestry & marine resources	Campus of International Excellence (" <i>Campus do Mar</i> ")
<i>SM2: To lead RDI clusters when trading with their own products and services programmes</i>	Marketing Mix (branding, cross-branding, pricing)	Strategic Knowledge Alliances ("lobbying")	Clustering RDI sectorial platforms
<i>SM3: To promote knowledge transfer within a Business Development Services approach</i>	Sectorial product & services portfolio	Innovation Management Office (IMO)	Co-licensing
<i>SM4: To promote trans-regional and international mobility programmes</i>	International RDI HR Mobility Programmes	Human Capital leadership	RDI HR continuous qualification

BACKGROUND

New water management technologies must compete on cost and reliability against highly optimized systems. Research and innovation are essential to make these new, cleaner and more efficient processes commercially attractive at an international level.

The processes related to water life-cycle are expanding rapidly, attending growth rates of 5 to 10 % annually and almost 100 % overall growth anticipated by 2020. The volume of the worldwide market in clean technologies is currently in the order of EUR 1,000 billion.

To create opportunities for ecotechnologies and to support SMEs to become or remain more competitive worldwide, research and innovation are pillars for attracting the willingness of investors to release capital for projects with long-term value and relevant market shares.

The innovation programme "Water" will focus on processes with regard to those issues, with real added value in terms of mission-based assistance, idea generation, creative thinking and validation, as well as secure intellectual property generation.

TARGET

1. Final or intermediary beneficiaries: citizens, water organisations; water professionals and providers. Campus of International Excellence
2. Water life-cycle administrators: local, regional, national and European agencies
3. Policymakers: the relevant ministries (Sustainable Development and Environment, Economy and Competitiveness, Research and Innovation) regional governments and municipalities
4. The operational actors providing water supply chain services: mainly infrastructure relay, intermediate distributors, freight and logistics

KEY PERFORMANCE INDICATORS

1. KPI 1.3: Total funding of RTD projects income / N° accepted projects
2. KPI 2.3: Total RTD contracts income / N° of RTD contracts
3. KPI 3.3: N° of new start-ups and spin-offs / N° of years
4. KPI 4.3: N° of new organised lifelong learning activities / N° of attendees

NUTS II	P3: WATER		
AIMS	DELIVERABLE	OUTPUT DRIVEN	SUSTAINABILITY
<i>SM1: To foster public and private partnerships to develop high-tech products</i>	Business Chambers membership	Innovative funding schemes ("Joint Undertaking", "KICs")	Campus of International Excellence (" <i>Campus do Mar</i> ")
<i>SM2: To promote innovation in services</i>	Project Brief in clean-tech	Business Development Outsourcing Process	Green-tech incubators
<i>SM3: To invest in the implementation of new convergent technologies</i>	Business Plan and financial assumptions	Sponsorship: green spin-offs and start-ups	Inter-regional Transfer Fund
<i>SM4: To contribute to permanent qualification and company on-site training</i>	Continuous training catalogue	Innovation through lifelong learning products and services	<i>"The Innovation Academy"</i> (centre for lifelong learning excellence)

BACKGROUND

There is a growing of the importance of the cultural dimension for external relations and regional policy development. It is already recognised that social development requires the appropriation of cultural identity as a preliminary condition for opening minds to dialogue, citizenship and social responsibility; but when culture heritage broads ICT services, we are talking about convergence...

The EU funding programme "Horizon 2020" shows how Information and Communication Technologies represent the world's largest economy and the largest share of the world's ICT market today at more than EUR 2,600 billion.

To drive technological culture heritage leadership challenges and cover ICT research and innovation agendas, particularly in content technologies and information management, it is necessary to design high-tech and convergent cultural products and services, in order to tackle major regional societal challenges.

The innovation programme "Language & Culture Heritage" is intended to introduce ICT in advanced culture research and therefore, to include infrastructure, e-learning tools, support services, prototyping and content management.

TARGET

1. Final or intermediate beneficiaries: citizens, museums, universities, technology centres, cultural associations, data centres, fundraisers, Campus of International Excellence
2. ICT lobbying actors: regulating agencies, RTD clusters, infrastructure, hardware and software constructors and manufacturers
3. Policymakers: the relevant ministries (Culture, Education, Economy and Competitiveness, Research and Innovation), regional governments and municipalities
4. The operational actors providing ICT services: high-tech small and medium enterprises, content producers, security and systems architects

KEY PERFORMANCE INDICATORS

1. KPI 1.4: Total generated services income / N° customers
2. KPI 2.4: N° of requests / N° of customers
3. KPI 3.4: N° of new business plans / N° of years
4. KPI 4.4: N° of employees / N° of professional accreditations

NUTS II	P4: LANGUAGE & CULTURE HERITAGE		
AIMS	<i>DELIVERABLE</i>	<i>OUTPUT DRIVEN</i>	<i>SUSTAINABILITY</i>
SM1: To develop 2nd and 3rd generation of incubators ("Business Accelerator")	Business Model	Convergence of cultural and ICT activities	Campus of International Excellence (" <i>Studii Salamantini</i> " & "E3: <i>Evolución Humana</i> ")
SM2: To diversify the competences promoted by the technopark's portfolio	Innovation Help-Desk (ITIL v3)	Cross-cutting competences management	Matching of spin-offs & start-ups
SM3: To reinforce innovative process for start-ups and spin-offs constitution	Fundraising scheme	European trans-border entrepreneurship networks	Virtual cultural industries security and protection
SM4: To create professional accreditation centres	Certification and accreditation patterns	Innovation in training products and services	Introduction of soft skills and attitudes in RDI HR continuous training

BACKGROUND

Research and innovation, backed up by regulations, are driving the “green revolution”. The EU Strategic Energy Technology Plan (SET Plan) provides a long term agenda to reduce greenhouse gas emissions by 20 % levels by 2020, with a further reduction to 80-95 % by 2050. In addition, it commits renewables for 20 % of final energy consumption in 2020, coupled with a 20 % energy efficiency target.

The EU funding programme “Horizon 2020” shows, nevertheless, why Europe is currently far from this overall goal: 80 % of the European energy system still relies on fossil fuels; every year 2.5 % of the Union's Gross Domestic Product (GDP) is spent on energy imports, which means a huge dependence on oil and gas imports until 2050.

To achieve these goals, significant investments need to be made in research, technology development and demonstration activities, in order to connect both, supply and demands requirements.

The innovation programme “Green Energy” aims at supporting technology-based companies to strengthen research outcomes for improving the market conditions, by combining innovation, intellectual property, standards and regulations, business surveys and analysis to support knowledge-intensive products and services.

TARGET

1. Final or intermediate beneficiaries: citizens, universities, technology centres, industrial associations, entrepreneurs, network alliances, RTD clusters, Campus of International Excellence
2. Energy suppliers: regulating energy agencies, energy producers, distributors and vouchers
3. Policymakers: the relevant ministries (Sustainable Development and Environment, Economy and Competitiveness, Research and Innovation), regional governments and municipalities
4. The operational actors providing cooperation services and support: mainly multinational companies and fairly high-tech SMEs and spin-offs

KEY PERFORMANCE INDICATORS

1. KPI 1.5: N° of supported entrepreneurs / N° of years
2. KPI 2.5: Total public purchase income / N° of contracting public bodies
3. KPI 3.5: N° of contractual RTD activities / N° of forward and reverse missions
4. KPI 4.5: N° of organised executive training activities * N° of attendees

NUTS II	P5: GREEN ENERGY		
AIMS	DELIVERABLE	OUTPUT DRIVEN	SUSTAINABILITY
SM1: <i>To stimulate entrepreneurship product & services packaging</i>	Convergence of cultural and ICT activities	Pre-incubation facilities for trans-border networking	Campus of International Excellence: CIE-E3 ("Ecomovilidad") & CIE-UDC ("Tecnologías para la sostenibilidad económica, social y ambiental")
SM2: <i>To identify potential innovation vouchers</i>	Guidelines for improving public purchasing	Innovation-based societies inclusive growth	"Living-Labs"
SM3: <i>To identify potential innovation vouchers</i>	Forward & reverse missions	International Think-Tank in Eco innovation	EU Smart cities policies
SM4: <i>To design training programmes supporting innovation management</i>	Executive programmes	Product Management in VE and training	Strategic stakeholders for e-learning patterns

BACKGROUND

Human resources development is vital for economic and social progress. To attempt real cohesion and to foster human capital within third countries' emerging economies, it is crucial to share innovation and social responsibility models through technical support and mobility, rather than financial assistance.

The EU funding programme "Horizon 2020" introduces major societal challenges consisting in to enhance solidarity as well as social, economic and political inclusion and positive inter cultural dynamics in Europe through cutting-edge science, technological advances and organisational innovations within the 2020 Strategy framework.

To support policymakers in combatting poverty and preventing the development of various forms of inequalities and discriminations in European societies and abroad, specific measures shall be taken, in order to foster excellence in less developed regions and countries.

The innovation programme "Co-Development" explores new forms of innovation, including creativity, societal engagement in research and technology development and proper cooperation with third countries.

TARGET

1. Final or intermediate beneficiaries: citizens, universities, technology centres, non-government organisations (NGOs), fundraisers, entrepreneurs, volunteers, Campus of International Excellence
2. Cooperation chain: international offices, embassies and consular services, missions
3. Policymakers: the relevant ministries (Foreign Affairs, Sustainable Development and Environment, Economy and Competitiveness, Research and Innovation), regional governments and municipalities
4. The operational actors providing social development services and support

KEY PERFORMANCE INDICATORS

1. KPI 1.6: N° of new consortia agreements / N° of total consortia agreements
2. KPI 2.6: N° of co-brands / N° of years
3. KPI 3.6: N° of products and services transferred to third countries * N° of years
4. KPI 4.6: N° of internal training sessions * N° of hours

NUTS II	P6: CO-DEVELOPMENT		
AIMS	DELIVERABLE	OUTPUT DRIVEN	SUSTAINABILITY
SM1: To attract and retain global talent in convergent targeted sectors	RDI Consortia agreements	Talent management based-organisations	Campus of International Excellence (“ <i>Campus do Mar</i> ”, “ <i>Campus Vida</i> ”, “ <i>E3</i> ”, “ <i>Studii Salamantini</i> ”, “ <i>Tecnologias sostenibles</i> ”)
SM2: To integrate a branding strategy within innovation policies	Co-branding strategy	Innovation-driven economy	European label for IPR
SM3: To support innovative public procurement	Knowledge Transfer Partnership (KTP)	Business acceleration services	European public procurement policies
SM4: To identify international alliances for CSR cooperation	Corporate Social Responsibility Chart	Intensive social welfare policies	CSR professional accreditation

GOVERNANCE & ROADMAP

In terms of governance, the smart specialisation model includes a set of analyses, pilot-experiences, working groups and decision-taking sessions, with wide participation of public officers and experts from within, but also from outside the region. This needs to be communicated, understood and acknowledged.

The most important types of organisation that need to be involved in the smart specialisation process are public authorities, universities and other knowledge-based institutions; investors and enterprises; civil society actors and international experts who can offer benchmarking and peer review services.

THE SMART SPECIALISATION ACTORS

<p>PUBLIC AUTHORITIES:</p> <ul style="list-style-type: none"> Regional Development Agency Regional Innovation Agency City Region Regional Energy Environment Agency Public Investment Fund Technoparks Incubators Regional Employment Agency 	<p>INVESTORS:</p> <ul style="list-style-type: none"> Banks Business angels Venture capitalists See fund Fundraisers Crow funding Micro-credit University transfer fund Corporate venturing Guarantees Export credit Investment consultants Real estate development 	<p>ENTERPRISES:</p> <ul style="list-style-type: none"> Start-ups Multinationals Entrepreneurial growth companies ("gazelles") Newly-developed companies Spins-outs, spin-offs Micro-business and craft companies Subcontractors Phoenix enterprises Social enterprises
<p>INTERNATIONAL EXPERTS:</p> <ul style="list-style-type: none"> Peer reviewers Prospective officers Benchmarking officers Regional officers abroad Expert advisors Consultants 	<p>ACTORS OF KNOWLEDGE:</p> <ul style="list-style-type: none"> Schools Universities Research centres Technology centres TTOs and IPRs centres Centre of professional education Observatory of professional qualifications Proof-of-concept advisors Consultants Living lab managers Clusters innovation managers 	<p>CIVIL SOCIETY:</p> <ul style="list-style-type: none"> Associations Qualified people Trade unions Political parties Regional banks Regional foundations

GOVERNANCE

The governance system in the smart specialisation process must be led by regional authorities and their executive agencies with the support of the three following structures:

THE STEERING COMMITTEE (ST)

It is responsible for the successful achievement of the process and it is driven by the regional government representatives, including members of the business community and key innovation actors (mainly Rectors of regional universities and fairly managers of RDI clusters).

The main tasks of the SC are: to foster regional consensus around the process, to validate consensual decisions, to sign consortia agreements and overall contractual engagements. The size of the SG should be carefully considered: normally, no less than five and no more than ten members should be represented.

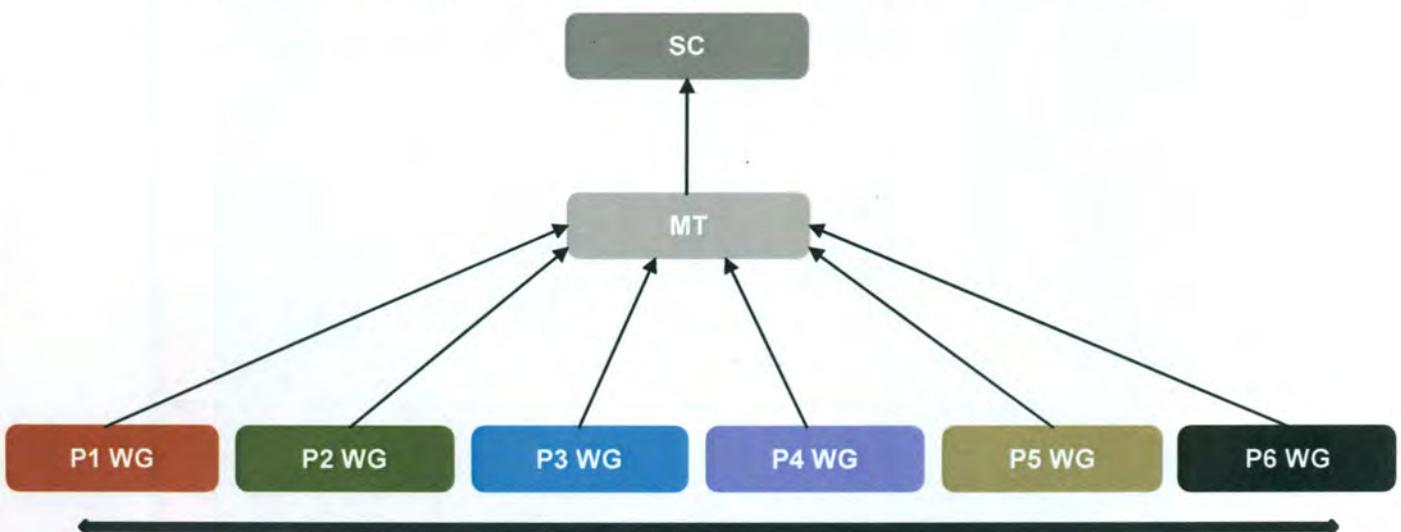
THE MANAGEMENT TEAM (MT)

It is responsible for implementing the smart specialisation process at a regional level under the general guidance of the SG. The composition of the MT varied a lot between the regions. Normally, all regions had a Project Manager supported by a small team of up to three people.

The main tasks of the MT are: to report to the EC regular KPIs, to keep the formal secretariat to the SG, to upgrade regular progress of the smart specialisation process, to foster regional consensus around the process, to become the single-point-of contact for networking with other regions. The MT needs to have a physically and legal location.

THE WORKING GROUPS (WG)

They are responsible to build regional consensus for the RDI strategies throughout the region and they provide an engagement to the business community, especially if the WGs are sectorial and leading through innovation programmes. WGs are particularly relevant when defining deliverables, milestones and accurate timetable for the implementation of the Development Plan. The conclusions of the different WGs (with the same number that the innovation programmes) are intended to be completed and to guide the SC decision-taking flow.



BOTTOM UP INFORMATION FLOW

ROADMAP

P1: HEALTH						
AIMS	ACTION		IMPACT		TREND	
	DELIVERABLE	DEADLINE	OUTPUT DRIVEN	PHASING	EU BROAD LINES	KPI
SM1	Awareness Programme: web, on-site visits, Media Plan	2012 December	Productivity driven growth	1	III.1.2. Health, Demographic Change an Wellbeing	1.1
SM2	Cluster Roadmap: legal entity, governance, "lobbying"	2013 December	Development of "Key Enabling Technologies"	2	III.1.2. Health, Demographic Change an Wellbeing	2.1
SM3	Business Services Catalogue (UNE 166002)	2014 March	IPR value assessment processes	3	III.1.2. Health, Demographic Change an Wellbeing	3.1
SM4	New lifelong learning patterns: coaching, mentoring, business cases	2015 March	European Qualification Framework (EQF) within lifelong learning programmes	4	V.1.2. Development of talented, skilled and entrepreneurial people with education and training	4.1

P2: FOOD, FORESTRY & FISHERIES

AIMS	ACTION		IMPACT		TREND	
	<i>DELIVERABLE</i>	<i>DEADLINE</i>	<i>OUTPUT DRIVEN</i>	<i>PHASING</i>	<i>EU BROAD LINES</i>	<i>KPI</i>
SM1	Technology Sectorial Watch Model	2012 September	Soft commodities export: agriculture, food, forestry & marine resources	1	III.2.3.b. Sustainable and competitive agri-food sector	1.2
SM2	Marketing Mix (branding, cross-branding, pricing)	2013 March	Strategic Knowledge Alliances ("lobbying")	2	III.2.3.c. Sustainable and competitive bio-based industries	2.2
SM3	Sectorial product & services portfolio	2015 September	Innovation Management Office (IMO)	4	III.2.3.a. Sustainable agriculture and forestry	3.2
SM4	International RDI HR Mobility Programmes	2014 March	Human Capital leadership	3	V.3.d. Dissemination of best practices and systemic knowledge-sharing	4.2

P3: WATER

AIMS	ACTION		IMPACT		TREND	
	DELIVERABLE	DEADLINE	OUTPUT DRIVEN	PHASING	EU BROAD LINES	KPI
SM1	Business Chambers membership	2012 December	Innovative funding schemes ("Joint Undertaking", "KICs")	1	III.6.3.1.a. Promotion of smart, sustainable and inclusive growth	1.3
SM2	Project Brief in clean-tech	2013 January	Business Development Outsourcing Process	2	III.5.3.d. Transition towards a green economy through eco-innovation	2.3
SM3	Business Plan and financial assumptions	2014 January	Sponsorship: green spin-offs and start-ups	3	II.3.3.d. Supporting market-driven innovation	3.3
SM4	Continuous training catalogue	2014 September	Innovation through lifelong learning products and services	3	III.6.3.2.c Societal engagement in research and innovation	4.3

P4: LANGUAGE & CULTURE HERITAGE

AIMS	ACTION		IMPACT		TREND	
	<i>DELIVERABLE</i>	<i>DEADLINE</i>	<i>OUTPUT DRIVEN</i>	<i>PHASING</i>	<i>EU BROAD LINES</i>	<i>KPI</i>
SM1	Business Model	2013 January	Convergence of cultural and ICT activities	2	II.1.1.3.c. Future Internet: Infrastructures, technologies and services	1.4
SM2	Innovation Help-Desk (ITIL v3)	2015 December	Cross-cutting competences management	4	II.1.1.3.d. Content technologies and information management	2.4
SM3	Fundraising scheme	2014 January	European trans-border entrepreneurship networks	3	V.3.g. Linking regional development to European opportunities	3.4
SM4	Certification and accreditation patterns	2015 September	Innovation in service management	4	V.3.c Development of talented, skilled and entrepreneurial people with the aid of education & training	4.4

P5: GREEN ENERGY

AIMS	ACTION		IMPACT		TREND	
	DELIVERABLE	DEADLINE	OUTPUT DRIVEN	PHASING	EU BROAD LINES	KPI
SM1	Entrepreneur's Toolbox	2012 September	Pre-incubation facilities for trans-border networking	1	III.6.3.2.b. New forms of innovation, including social innovation and creativity	1.5
SM2	Guidelines for improving public purchasing	2013 March	Innovation-based societies inclusive growth	2	III.6.3.2.a. Strengthen for the Innovation Union and ERA	2.5
SM3	Forward & reverse missions	2015 December	International Think-Tank in Eco-Innovation	4	V.3.e. International dimension	3.5
SM4	Executive programmes	2014 September	Product Management in VE and training	3	V.3.c Development of talented, skilled and entrepreneurial people with the aid of education & training	4.5

BY FUNDING YOUR CLIMATE HERITAGE

P6: CO-DEVELOPMENT

AIMS	ACTION		IMPACT		TREND	
	<i>DELIVERABLE</i>	<i>DEADLINE</i>	<i>OUTPUT DRIVEN</i>	<i>PHASING</i>	<i>EU BROAD LINES</i>	<i>KPI</i>
SM1	RDI Consortia agreements	2013 March	Talent management based-organisations	2	V.3.c Development of talented, skilled and entrepreneurial people with the aid of education & training	1.6
SM2	Co-branding strategy	2014 December	Innovation-driven economies	3	III.6.3.1.d. Close the research and innovation in Europe	2.6
SM3	Knowledge Transfer Partnership (KTP)	2015 March	Business acceleration services	4	III.6.3.1.c. Strengthen Europe's role as a global actor	3.6
SM4	Corporate Social Responsibility Chart	2012 September	Intensive social welfare policies	1	III.6.3.1.b. Build resilient and inclusive societies in Europe	4.6

BREAKDOWN ACTIVITIES

To be dealt with. Ongoing negotiation

	<i>DELIVERABLE</i>	<i>DEADLINE</i>	<i>KPI</i>	<i>SM</i>
1	Technology Sectorial Watch Model	2012 September	1.2	1
	Entrepreneur's Toolbox	2012 September	1.5	1
	Corporate Social Responsibility Chart	2012 September	4.6	4
	Business Chambers membership	2012 December	1.3	1
	Awareness programme: web 3.0, on-site visits, Media Plan	2012 December	1.1	1
2	Project Brief in clean-tech	2013 January	2.3	3
	Business Model	2013 January	1.4	1
	Guidelines for improving public purchasing	2013 March	2.5	2
	RDI Consortia agreements	2013 March	1.6	2
	Marketing Mix (branding, cross-branding, pricing)	2013 March	2.2	2
	Cluster Roadmap: legal entity, governance, "lobbying"	2013 December	2.1	2
	Business Plan and financial assumptions	2014 January	3.3	3

3	Fundraising scheme	2014 January	3.4	3
	Business Services Catalogue (UNE 166002)	2014 March	3.1	3
	International RDI HR Mobility programmes	2014 March	4.2	4
	Executive programmes	2014 September	4.5	4
	Continuous training catalogue	2014 September	4.3	4
	Co-branding strategy	2014 December	2.6	2
4	Knowledge Transfer Partnership (KTP)	2015 March	3.6	3
	New lifelong learning patterns: coaching, mentoring, business cases	2015 March	4.1	4
	Sectorial product & services portfolio	2015 September	3.2	3
	Certification and accreditation patterns	2015 September	4.4	4
	Forward & reverse missions	2015 December	3.5	3
	Innovation Help-Desk (ITIL v3)	2015 December	2.4	2