

# SYNTHESIS OF THE RESEARCH & INNOVATION STRATEGIES FOR SMART SPECIALISATION OF FRENCH REGIONS

KNOWING  
European programmes  
2014-2020

December 2015



## EDITO

Enhance and raise the profile of the French regions' Research & innovation strategy for smart specialisation (RIS3) for the 2014-2020 period, underline the changes compared with the first generation of regional innovation strategies, highlight the progress of French regions in relation to the major principles of smart specialisation advocated by the European Commission and show how these regional strategies combine with other national and European innovation policies: this is the purpose of the study published in the "Knowledge of European programmes" collection supported by the General commission for territorial equality (CGET). This document is intended as a tool for innovative ecosystem stakeholders and public decision-makers to facilitate comparison and cooperation between French regions. It also helps the regions of other member States to identify the French regions' strengths and envisage collaboration.

This study is perfectly consistent with the CGET's range of services for the territories, in the field of research, innovation and transfer development, as part of our mission to coordinate European structural and investment funds for the 2014-2020 period. It follows on from the "Guide for the preparation of the French regions' smart specialisation strategies" and the "Summary of the French regions' regional innovation strategies" (2012, "Europe is committed to France" collection).

### **Innovation is indeed a key lever of the territorial equality policy:**

- **territories foster innovation:** while R&D activities are essentially concentrated in metropolitan areas, the other territories are also places of innovation, be it societal, organisational, frugal ("doing more with less"), in response to the challenges they face (accessibility, access to services, environmental and energy conversion, business attraction, etc.).
- **territories are collective innovation actors:** they are home to territorialised innovation ecosystems (citizens, associations, businesses, laboratories, universities, competitiveness clusters, business hubs, regional clusters, transfer offices, etc.), which make the most of the infrastructures, services and funds of the territory's private and public operators. These innovation ecosystems can also mobilise the population to test the new solutions developed.
- **territories are also beneficiaries of innovation,** as innovation processes have an impact in terms of wealth and job creation, improvement in quality of life, territorial appeal, and deployment of innovative solutions and services.

In response to the European Commission's ambitions, the French regions have committed to mobilising nearly 20% of the ERDF total amount for the first thematic objective concerning research, transfer development and innovation, because innovation and territories are closely linked. While innovation is rooted in the wealth and diversity of territories and their residents, the ability to innovate is a major issue for each territory and a key development and job creation factor.

**Marie-Caroline BONNET-GALZY**

**Commissioner General for Territorial Equality**

# CONTENT

EDITO .....	2
<b>SECTION.1 REGIONAL RESEARCH &amp; INNOVATION STRATEGIES FOR SMART SPECIALISATION (RIS3) AS DEVELOPMENT AND INNOVATION DRIVERS .....</b>	<b>4</b>
<b>SECTION.2 REGIONAL RIS3 DEFINED WITHIN VARIED REGIONAL CONTEXTS.....</b>	<b>8</b>
2.1 REGIONAL ECONOMIES VARIABLY STRUCTURED BY THEIR PRODUCTIVE AND INDUSTRIAL SECTORS .....	8
2.2 A DIVERSE SECTORAL CONCENTRATION OF REGIONAL ECONOMIES .....	8
2.3 DIVERSIFIED ECONOMIC FABRIC WITHIN THE REGIONS.....	9
2.4 UNEQUAL SITUATIONS IN TERMS OF EMPLOYMENT GROWTH, EXACERBATED BY THE ECONOMIC CRISIS.....	9
2.5 REGIONAL ECONOMIES ESSENTIALLY CHARACTERISED BY A DENSE NETWORK OF SMES .....	10
2.6 STRONG GEOGRAPHICAL CONCENTRATION OF INNOVATION STAKEHOLDERS.....	10
2.7 STRONG GEOGRAPHICAL CONCENTRATION OF PATENTS IN A FEW FRENCH REGIONS.....	11
2.8 GEOGRAPHICAL CONTRASTS IN TERMS OF RESEARCH AND DEVELOPMENT EXPENDITURE .....	11
<b>SECTION.3 FRENCH REGIONAL RIS3 WITH REGARD TO THE MAJOR PRINCIPLES OF THE SMART SPECIALISATION CONCEPT.....</b>	<b>16</b>
3.1 "ENTREPRENEURIAL DISCOVERY" CONCEPT GLOBALLY ADOPTED AND PUT INTO PRACTICE.....	16
3.2 REGIONAL STRATEGIES BASED ON A DIAGNOSIS .....	17
3.3 IMPROVED AND REINFORCED INNOVATION GOVERNANCE.....	18
3.4 STRATEGIES WHICH DEFINE SMART SPECIALISATION AREAS AND TRANSVERSE PRIORITIES ON WHICH A SIGNIFICANT PART OF THE REGIONAL PUBLIC INNOVATION ACTION IS FOCUSED .....	18
3.5 ONGOING TRANSFORMATION OF STRATEGIES INTO ROADMAPS AND ACTION PLANS.....	30
3.6 ONGOING DEFINITION OF STRATEGY MONITORING AND ASSESSMENT SYSTEMS.....	30
3.7 STRATEGIES AIMED AT REINFORCING COOPERATION IN RESEARCH & INNOVATION WITH OTHER FRENCH OR EUROPEAN REGIONS.....	35
3.8 NEW STRATEGIES SHAPED BY THE APPROACH INITIATED WITH THE FIRST REGIONAL INNOVATION STRATEGIES, WHICH HOWEVER REPRESENT A NUMBER OF BREAKTHROUGHS.....	36
3.9 STRATEGIES SOMETIMES USED TO CONFIGURE A FINANCIAL ENVIRONMENT CONDUCIVE TO INNOVATION.....	37
<b>SECTION.4 HIGHLIGHTS OF THE FRENCH REGIONS' RIS3 IN TERMS OF INNOVATION AT A NATIONAL LEVEL.....</b>	<b>42</b>
4.1 REGIONAL SPECIALISATIONS RELATIVELY CONCENTRATED ON A FEW TARGET MARKETS .....	42
4.2 INFRA- OR SUPRANATIONAL INTER-REGIONAL COOPERATION, IN A VARIETY OF FORMS, PRIMARILY AT LOCAL LEVEL OR WITH INNOVATION DRIVING TERRITORIES .....	45
<b>SECTION.5 LINKS BETWEEN THE RIS3 AND THE NATIONAL AND EUROPEAN INNOVATION POLICIES .....</b>	<b>50</b>
5.1 LINKS BETWEEN THE RIS3 AND THE ERDF OPERATIONAL PROGRAMMES .....	50
5.2 LINKS BETWEEN THE RIS3, HORIZON 2020 AND COSME .....	50
5.3 LINKS BETWEEN THE RIS3 AND THE INNOVATION UNION.....	57
5.4 THE RIS3 AS A POSSIBLE DRIVER FOR EUROPEAN INNOVATION PROGRAMMES IN RURAL AND COASTAL AREAS .....	57
5.5 STRATEGIC LINKS BETWEEN THE RIS3 AND THE "NEW INDUSTRIAL FRANCE" POLICY.....	59
5.6 LINKS BETWEEN THE RIS3 AND THE "INVESTMENT PROGRAMME FOR THE FUTURE" POLICY.....	59
5.7 LINKS BETWEEN THE RIS3 AND THE "NEW DEAL FOR INNOVATION" POLICY.....	62
5.8 THE STATE-REGION PLANNING CONTRACT: A STRATEGIC FRAMEWORK FOR THE COHERENCE OF INNOVATION POLICIES.....	63
5.9 LINKS BETWEEN THE RIS3 AND THE FRENCH CLUSTER POLICIES : COMPETITIVENESS CLUSTERS, BUSINESS HUBS AND OTHER CLUSTERS.....	63
<b>SECTION.6 CONCLUSION.....</b>	<b>70</b>
6.1 IN BRIEF.....	70
6.2 THE NEXT STAGES FOR A SUCCESSFUL PROCESS.....	70
<b>SECTION.7 ANNEXES .....</b>	<b>74</b>
7.1 TABLE OF ILLUSTRATIONS.....	74
7.2 POSITIONING OF THE REGIONS BY TARGET MARKET.....	75
7.3 SCHEDULE AND METHODOLOGY APPLIED FOR THE SYNTHESIS OF FRENCH REGIONS' RIS3 .....	81
7.4 REGIONAL RIS3 SUMMARY FACT SHEETS .....	82
<b>GLOSSARY .....</b>	<b>110</b>
<b>USEFUL LINKS .....</b>	<b>111</b>

# SECTION 1

---

## REGIONAL RESEARCH & INNOVATION STRATEGIES FOR SMART SPECIALISATION (RIS3) AS DEVELOPMENT AND INNOVATION DRIVERS



In the context of globalisation and strong competition, where the issue of competitiveness has become key, the European Union has decided to create the conditions conducive to a competitive economy via **Europe 2020, the new strategy designed to coordinate the economic policies of the 28 member States**. The purpose of this strategy, launched in June 2010, is to stimulate smart growth, by investing more efficiently in education, research and innovation; sustainable growth, by prioritising a low-carbon economy, and inclusive growth, by clearly focusing on job creation and poverty reduction. This strategy has five objectives in the areas of employment, innovation, education, poverty reduction as well as energy and climate. Consistent with the Lisbon strategy, the national ambition in terms of innovation is to achieve 3% of the GDP invested in R&D.

**The European Commission wants "smart specialisation" to be a major factor in the cohesion policy's contribution to the Europe 2020 strategy.** While this is not a new concept, it is key in the implementation of the new 2014-2020 cohesion policy and was named in the Partnership Agreement as a critical driver to stimulate the French research, development and innovation system. In a context characterised by decentralisation, the Partnership agreement identifies the national and regional political objectives and guarantees that the resources of the different partners are mobilised.

**At regional level, simultaneously with and in addition to the operational programmes of the ERDF and ESF structural and investment funds, the ambition is to define a smart specialisation strategy for research and innovation,** adapted to the territory's strengths and constraints and supporting the European objectives. The definition of a smart specialisation strategy should therefore help prioritise and concentrate the efforts in areas of activity and technological sectors likely to generate innovative activities, thereby giving a competitive edge to the territories within the global economy.

**"Smart specialisation" relies on key concepts and stages:** knowledge of the economic fabric and innovation ecosystem, "entrepreneurial discovery" (close involvement of the private sector), specialisation in specific technological fields or sectors, an associated diversification strategy to ensure a sustainable economic fabric over time, openness to other European regions, definition of an action plan and budget, establishment of a governance and coordination of the innovation ecosystem, implementation of a monitoring and assessment system.

**This document is a synthesis of the French regions' RIS3.** It underlines the diverse nature of the contexts within which the regions have defined their strategy. It highlights the changes between the first generation of regional innovation strategies and this new RIS3 generation, as well as the advancement of French regions with regard to the major principles of smart specialisation defined by the European Commission. It gives an overview of the RIS3s on a national scale and highlights the links between the RIS3s and other European and national policies (investment programme for the future, cluster policies,

new industrial France policy, State-Region planning contract, Horizon 2020, etc.). A brief presentation of the regions' RIS3s can be found in appendix. The methodology and timetable of this RIS3 synthesis approach are also attached to this document.

**The purpose of this document is therefore to support the regions' smart specialisation process** by highlighting interesting practices or advancing the knowledge of other French regions. It also provides innovation stakeholders and public decision-makers with an overview of these regional strategies.

# CONTENTS

---

p 8	2.1	REGIONAL ECONOMIES VARIABLY STRUCTURED BY THEIR PRODUCTIVE AND INDUSTRIAL SECTORS
p 8	2.2	A DIVERSE SECTORAL CONCENTRATION OF REGIONAL ECONOMIES
p 9	2.3	DIVERSIFIED ECONOMIC FABRIC WITHIN THE REGIONS
p 9	2.4	UNEQUAL SITUATIONS IN TERMS OF EMPLOYMENT GROWTH, EXACERBATED BY THE ECONOMIC CRISIS
p 10	2.5	REGIONAL ECONOMIES ESSENTIALLY CHARACTERISED BY A DENSE NETWORK OF SMES
p 10	2.6	STRONG GEOGRAPHICAL CONCENTRATION OF INNOVATION STAKEHOLDERS
p 11	2.7	STRONG GEOGRAPHICAL CONCENTRATION OF PATENTS IN A FEW FRENCH REGIONS
p 11	2.8	GEOGRAPHICAL CONTRASTS IN TERMS OF RESEARCH AND DEVELOPMENT EXPENDITURE

# SECTION 2

---

**REGIONAL RIS3 DEFINED WITHIN  
VARIED REGIONAL CONTEXTS**

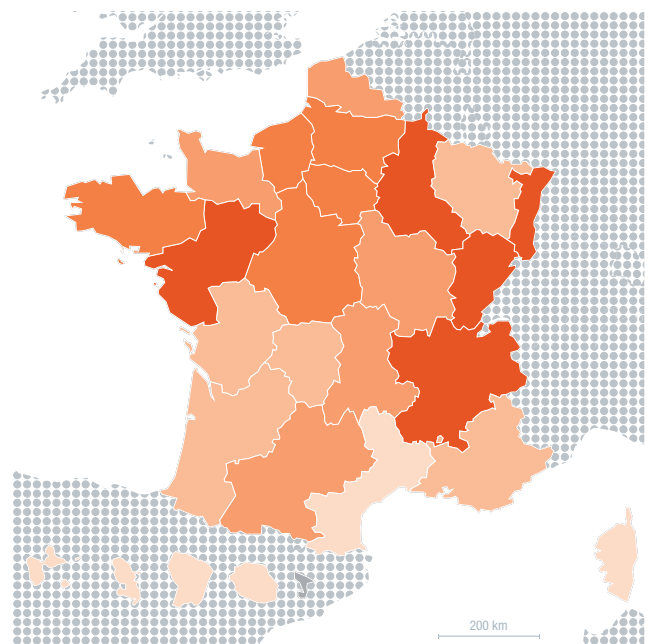
Before compiling a synthesis of the French regions' RIS3, it is worth putting into context the smart specialisation approach adopted by the regions, and examining the innovation dynamic of these regions. Each region is characterised by a specific context relating to unique socio-economic features. These specific characteristics determine their ability to adopt a smart specialisation approach as well as the way they appropriate this concept. These characteristics are therefore decisive in the definition and deployment of the French regions' RIS3. Analysing a number of indicators helps to underline the economic and innovation diversity of the French landscape. It also helps in defining territorial characteristics for the smart specialisation process: the role of employment in the production and industrial sectors, the sectoral concentration of the economic fabric, the employment trend, the size of the businesses, the number of students and researchers, the number of patents and the gross domestic expenditure in research and development.

## 2.1 REGIONAL ECONOMIES VARIABLY STRUCTURED BY THEIR PRODUCTIVE AND INDUSTRIAL SECTORS

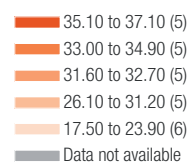
The innovation issues differ depending on whether the region's economic fabric is more productive or residential. The production sector of an economy is oriented towards external markets and is dependent on export. For these activities, the ability to innovate is all the more crucial in a highly competitive environment. For economies relying heavily on productive activities, the issue of innovation is therefore assumed to be of greater importance. The regions in the North of France (with the exception of Lorraine) generally account for a greater share of employment in the productive sector than the Southern regions (outside Rhône-Alpes). For example, Alsace accounts for 37.1% of employment in the productive sector, ahead of Pays-de-la-Loire with 37%. On the other hand, Languedoc-Roussillon is the metropolitan region with the largest share of employment in the residential sector (76.1%). The economy of overseas territories is also largely residential.

The analysis of the employment share in the industry provides additional insight. Industrial activities are generally more R&D and innovation intensive than primary or tertiary activities. Furthermore, the businesses in these sectors are generally better equipped to innovate (presence of an R&D department, etc.). Certain regions marked by productive activities have a large share of industrial employment, as is the case with Alsace (18.8%) and Franche-Comté (21.4%). On the other hand, Île-de-France, despite the importance of its productive sector (34.9%), accounts for a limited share of industrial employment within its economy (8.6%). Languedoc-Roussillon and Provence-Alpes Côte d'Azur are also characterised by a low share of industrial employment in relation to the national average (respectively 8.4% and 8.9%).

Illustration 1: employment share of the productive sectors



Employment share in the productive sector (%) per region



**Productive sectors:** whereas the residential economy includes services to people, the productive sectors are oriented towards foreign markets. The major sectors concerned are industry, energy, business services, freight transport, wholesale trade and part of the real estate business.

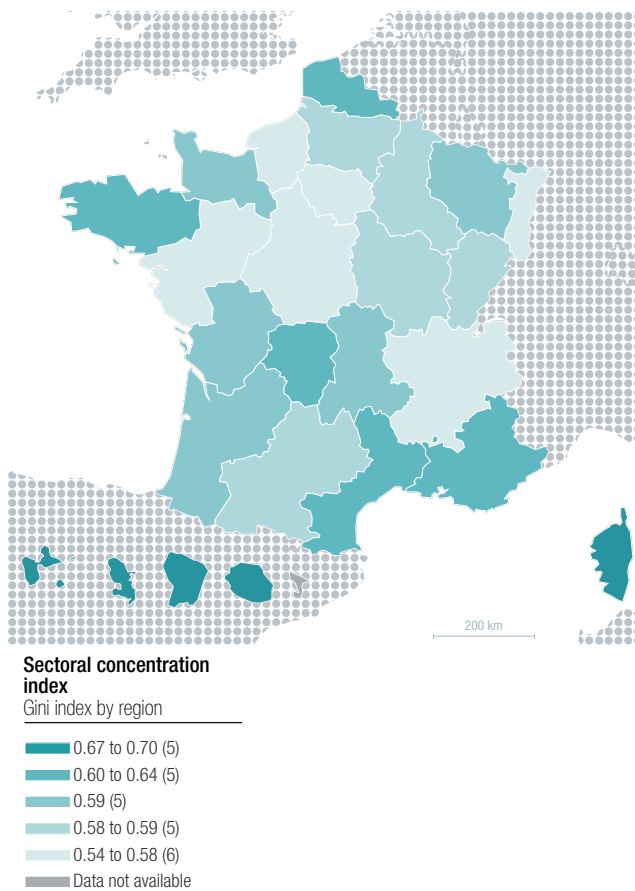
**Calculation method:** Productive employment share of total employment. Unit: %.

**Source:** INSEE, Clap 2011

## 2.2 A DIVERSE SECTORAL CONCENTRATION OF REGIONAL ECONOMIES

The smart specialisation approach requires the definition of smart specialisation areas in which investment must be prioritised and concentrated, to maximise the economic benefits. This prioritisation process is not equally relevant and depends on whether the economy is more concentrated or more diversified. The analysis of the sectoral concentration indicator helps to identify the regions with a more diversified economy, such as Rhône-Alpes, Île-de-France, Pays-de-la-Loire, Centre and Normandie, while Corsica and the overseas territories, along with Bretagne, Nord-Pas de Calais, Provence-Alpes Côte d'Azur, Languedoc-Roussillon and Limousin are characterised by more concentrated economies.

Illustration 2: sectoral concentration index by region



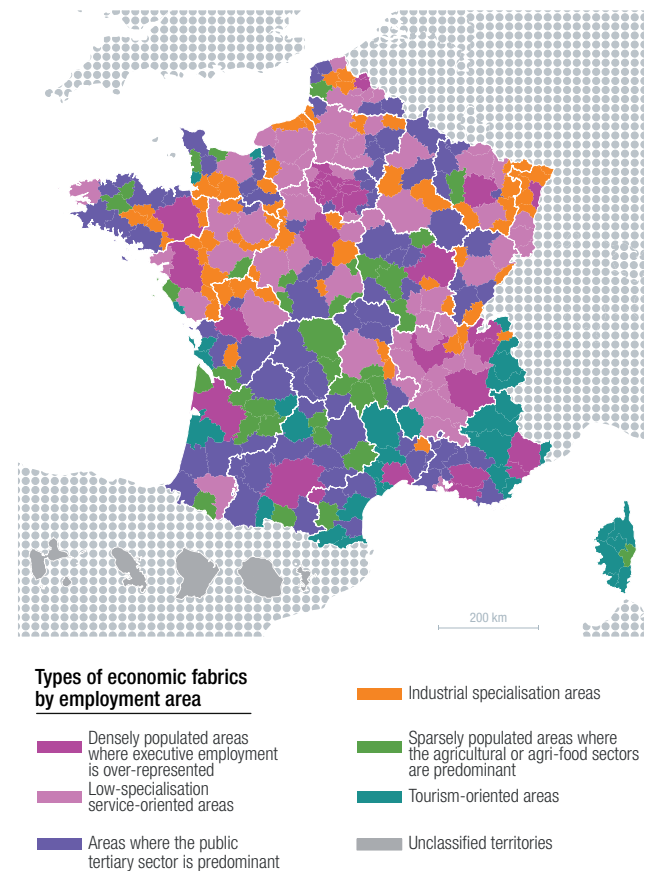
**Definition:** Gini index calculated on the basis of NA38 (INSEE nomenclature) salaried employees, measures the concentration of employment by type of activity. Calculation method: the Gini coefficient is a statistical dispersion measurement of a distribution within a given population. The Gini coefficient is a number ranging from 0 to 1. The closer to 1 the index is, the more uneven the distribution of the working population between the different sectors is. The 1 value indicates that the entire working population is in the same sector.

**Source:** INSEE, Clap 2011

### 2.3 DIVERSIFIED ECONOMIC FABRIC WITHIN THE REGIONS

An analysis of the employment areas puts the diverse characteristics of the regional economic fabric into sharper focus. As an example, the Île-de-France region is characterised by three types of territory: densely populated areas where executive employment is over-represented, low-specialisation service-oriented areas and areas where the public tertiary sector is predominant. The Aquitaine region features five types of employment area. Innovation is therefore a multifaceted issue within the same region. **The definition of a coherent and shared regional innovation strategy, concentrated on a few clearly identified strategic activities, while taking into account the diversity of the economic fabric, can therefore be a complex process.**

Illustration 3: characterisation of the economic fabric by employment area



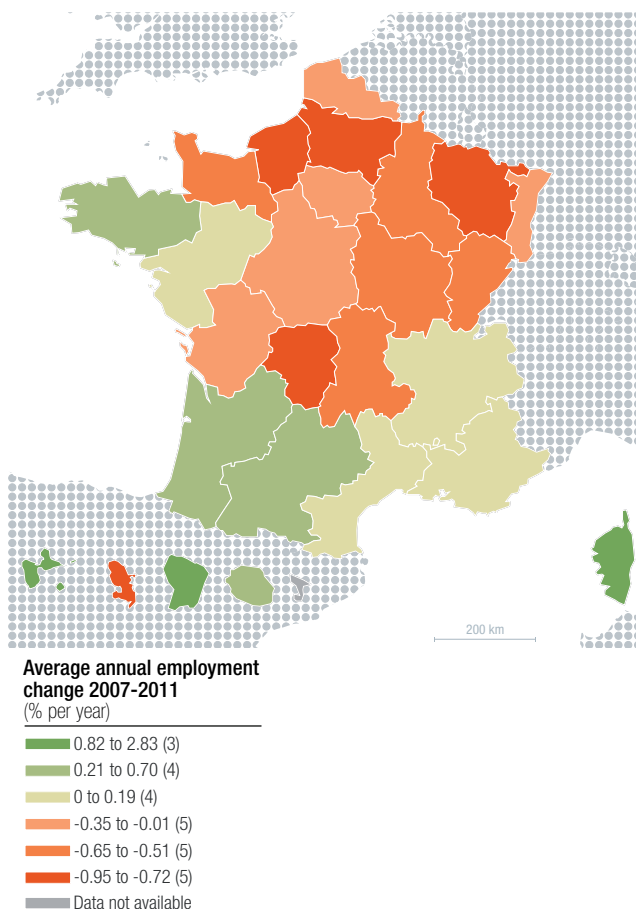
**INSEE definition:** An employment area is a geographical area within which most of the working population lives and works, and where businesses are likely to find most of the labour to fill the available jobs.

**Source:** IAURIF et DATAR, 2011

### 2.4 UNEQUAL SITUATIONS IN TERMS OF EMPLOYMENT GROWTH, EXACERBATED BY THE ECONOMIC CRISIS

The smart specialisation approach encourages territories to focus on dynamic and growing sectors and markets. This process can be more difficult for some regions, affected by economic deterioration and job losses, not only because the number of growing sectors is limited but also because the concentration of resources on a few dynamic sectors may be difficult to justify in a precarious context. The crisis has aggravated this situation: although employment in France rose by 0.47% on average between 2000 and 2011, the average national employment evolution became negative between 2007 and 2011. Some regions, with a general increase in employment over the 2000-2011 period, experienced job losses between 2007 and 2011. The employment situation deteriorated and the average employment trend became negative in the Martinique, Haute-Normandie, Basse-Normandie, Auvergne, Centre, Poitou-Charentes, Nord-Pas de Calais, Alsace and Île-de-France.

**Illustration 4: annual employment evolution  
by region – 2007/2011**



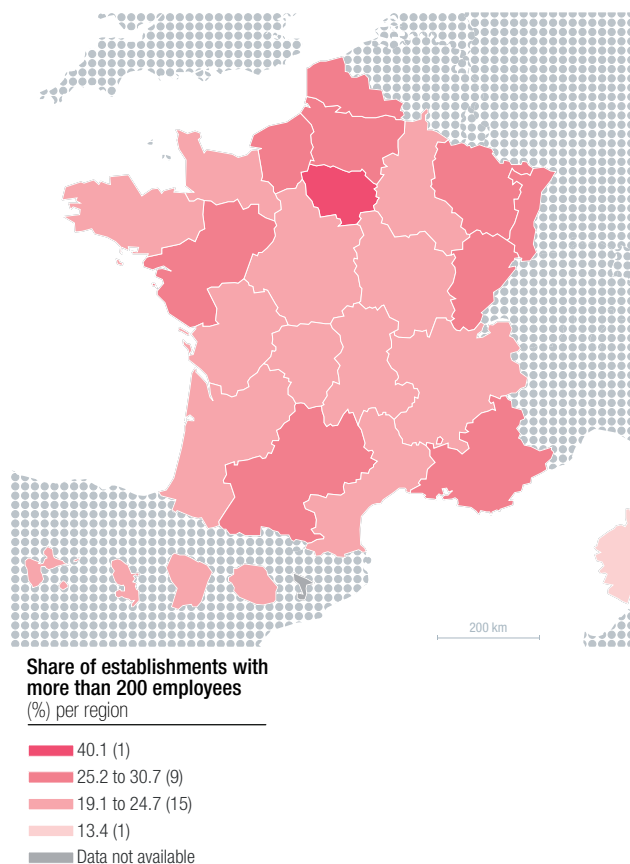
**Definition:** number of salaried employees of the establishments as of 31/12/2011

**Source:** INSEE, Clap 2011

## 2.5 REGIONAL ECONOMIES ESSENTIALLY CHARACTERISED BY A DENSE NETWORK OF SMES

France's economic fabric includes 99% of SMEs. In most regions, the proportion of businesses with less than 10 employees is higher than 20%. In regions such as Corsica, Guadeloupe or Languedoc-Roussillon, the economic fabric includes more than 25% of companies with less than 10 employees. Conversely, regions such as Île-de-France (more than 40% of establishments with more than 200 employees), but also Nord-Pas de Calais and Alsace (more than 30% of businesses with 200 employees) are characterised by a significant proportion of companies with more than 200 employees. **This analysis reveals the importance of taking into account the specific nature of small businesses in the regional innovation strategies.** Small businesses are generally not as well-structured for innovation and have less a reduced access to innovation funds than medium-sized and larger companies.

**Illustration 5: share of establishments with more than 200 employees**



**Source:** INSEE – annual localised job estimates, 2007-2011 data

## 2.6 STRONG GEOGRAPHICAL CONCENTRATION OF INNOVATION STAKEHOLDERS

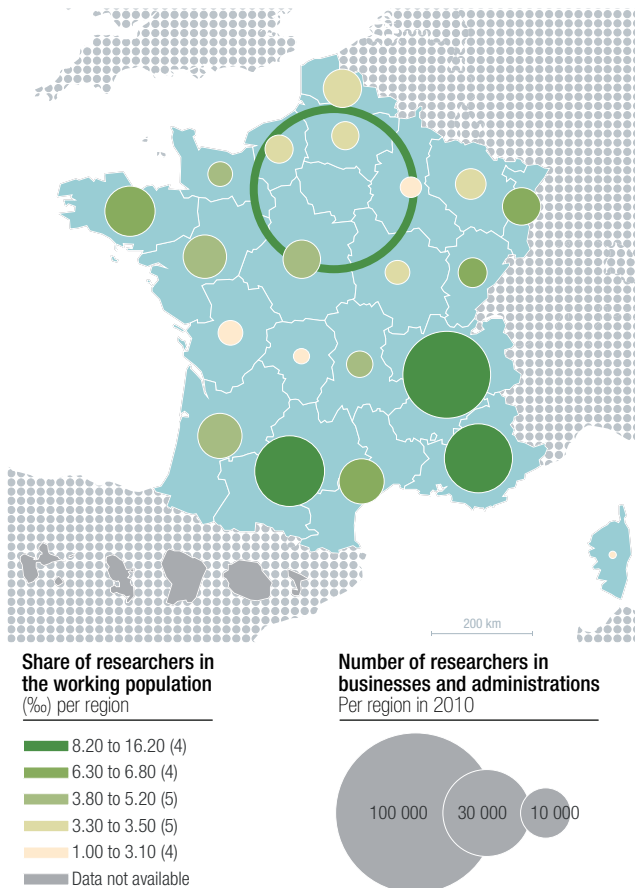
**The density of local innovation ecosystems is important for the smart specialisation approach.** Smart specialisation encourages concentration in areas of activity with a dense fabric of innovation stakeholders. Analysing the distribution of research and higher education stakeholders reveals unequal situations depending on the region.

The Île-de-France region is very distinctive, with a concentration of nearly 20% of metropolitan executive functions (executives or entrepreneurs working in five so-called "metropolitan" functions) in the overall share of employment, 97,858 researchers and 617,300 students. The Rhône-Alpes, Midi-Pyrénées, Provence-Alpes Côte d'Azur regions also account for a significant concentration of innovation stakeholders. These regions benefit from a large pool of human resources for their RIS3.

Conversely, in regions such as Limousin, Champagne-Ardenne, Corsica and overseas regions, the concentration of researchers, students and metropolitan function executives is far more limited.



**Illustration 6: number of administration and business researchers and share of researchers in the working population**



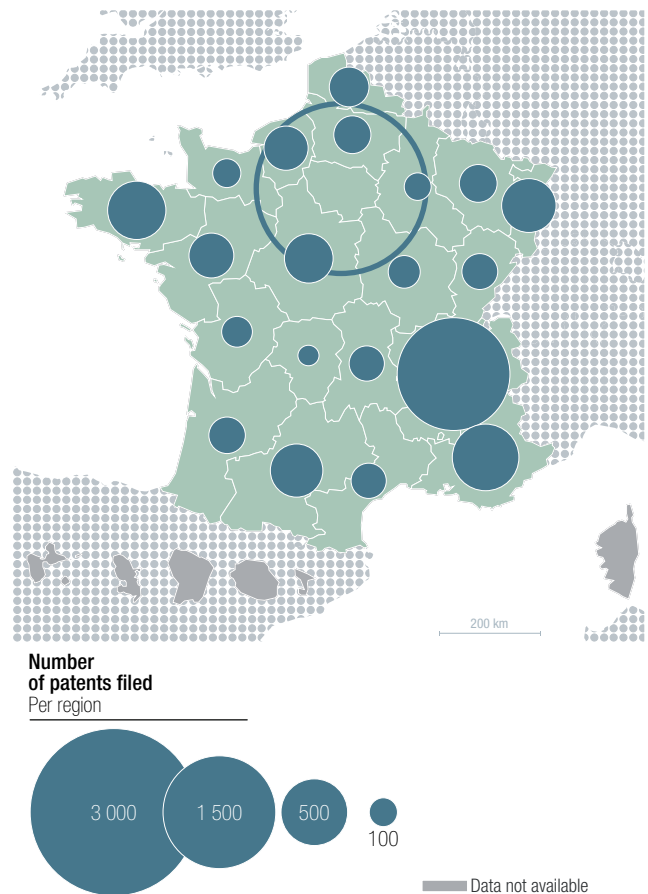
**Definition:** number of researchers in businesses and administrations.  
*Unit: employees in FTE*  
**Source:** MESR, 2010

## 2.7 STRONG GEOGRAPHICAL CONCENTRATION OF PATENTS IN A FEW FRENCH REGIONS

The number of patents filed is a commonly used innovation result indicator. It is only a reflection of technological innovation, whereas the smart specialisation concept considers innovation in the broader sense. However, the location of the patents filed is consistent with the distribution of innovation stakeholders. There is a high concentration of patents filed in the Île-de-France, Rhône-Alpes and Provence-Alpes Côte d'Azur regions. Fewer patents are filed in other territories such as Limousin. **The technological innovation dynamic in France therefore appears to be very concentrated.**

To define their strategies, the regions had to take into account a broad variety of situations: some were able to capitalise on the existing dynamic for technological innovation in their territory, while others had to focus on other types of innovation.

**Illustration 7: number of patents filed, all technological domains combined**



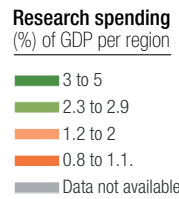
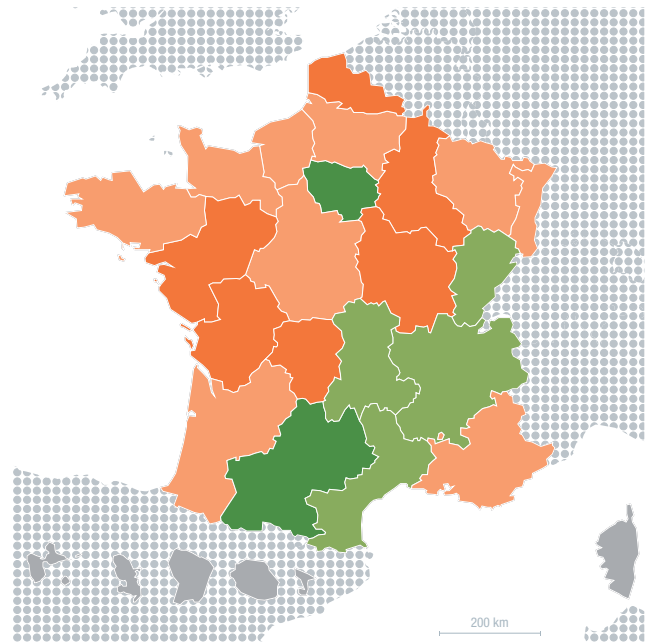
**Definition:** Number of patents filed, all technological domains combined (patents)  
**Calculation method:** patent applications are those filed with the EPO  
**Source:** EPO (Patstat), OECD (Regpat), Eurostat, processed by OECD and OST, 2008 report

## 2.8 GEOGRAPHICAL CONTRASTS IN TERMS OF RESEARCH AND DEVELOPMENT EXPENDITURE

In 2012, R&D expenditure represented 2.08% of the average GDP in Europe, and 2.29% of the average GDP in France. The objective set by the Lisbon strategy and confirmed by the Europe 2020 strategy is to achieve R&D expenditure of 3% of the national GDP. Although this is a nationwide objective, it is worth noting that some French regions such as Île-de-France and Midi-Pyrénées go beyond this threshold: Midi-Pyrénées largely exceeds it, dedicating 5% of its GDP to R&D. A few regions come relatively close to this threshold, such as Rhône-Alpes, Franche-Comté and Languedoc-Roussillon. Other regions however are far from this level: In Champagne-Ardenne, Poitou-Charentes, Limousin and Nord-Pas de Calais, the percentage of GDP dedicated to R&D is below 1%. **As a result, the effort required varies significantly depending on the region, and the leverage effect expected of the smart specialisation strategies is all the more significant in regions far below this level.**

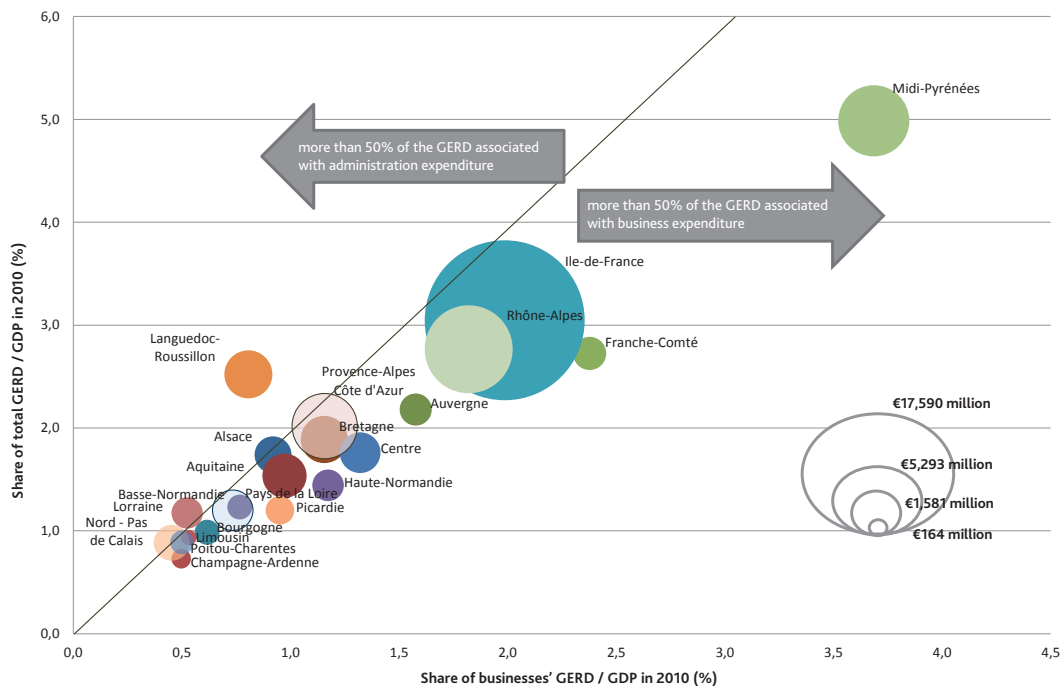
Analysing the share and distribution of total R&D expenditure (businesses and administrations), which does not constitute regional innovation performance assessment, helps refine the observed diversity in regional situations. While in certain territories such as Franche-Comté (87% of the BERD), Midi-Pyrénées (74% of the BERD) and Ile-de-France (66% of the BERD), R&D expenditure is strongly driven by businesses, others like Languedoc-Roussillon are strongly characterised by the significant role of the administrations' expenditure. Most regions are characterised by an R&D expenditure profile, depending equally on business and administration spending.

Illustration 8: share of R&D expenditure in percentage of GDP



Source: MESR, 2011

Illustration 9: share and distribution of R&D expenditure by region, in 2010



Source: ESR, 2010, CGET dataprocessing





# CONTENTS

---

p 16	.....	<b>3.1</b>	<b>“ENTREPRENEURIAL DISCOVERY” CONCEPT GLOBALLY ADOPTED AND PUT INTO PRACTICE</b>
p 17	.....	<b>3.2</b>	<b>REGIONAL STRATEGIES BASED ON A DIAGNOSIS</b>
p 18	.....	<b>3.3</b>	<b>IMPROVED AND REINFORCED INNOVATION GOVERNANCE</b>
p 18	.....	<b>3.4</b>	<b>STRATEGIES WHICH DEFINE SMART SPECIALISATION AREAS AND TRANSVERSE PRIORITIES ON WHICH A SIGNIFICANT PART OF THE REGIONAL PUBLIC INNOVATION ACTION IS FOCUSED</b>
p 30	.....	<b>3.5</b>	<b>ONGOING TRANSFORMATION OF STRATEGIES INTO ROADMAPS AND ACTION PLANS</b>
p 30	.....	<b>3.6</b>	<b>ONGOING DEFINITION OF STRATEGY MONITORING AND ASSESSMENT SYSTEMS</b>
p 35	.....	<b>3.7</b>	<b>STRATEGIES AIMED AT REINFORCING COOPERATION IN RESEARCH &amp; INNOVATION WITH OTHER FRENCH OR EUROPEAN REGIONS</b>
p 36	.....	<b>3.8</b>	<b>NEW STRATEGIES SHAPED BY THE APPROACH INITIATED WITH THE FIRST REGIONAL INNOVATION STRATEGIES, WHICH HOWEVER REPRESENT A NUMBER OF BREAKTHROUGHS</b>
p 37	.....	<b>3.9</b>	<b>STRATEGIES SOMETIMES USED TO CONFIGURE A FINANCIAL ENVIRONMENT CONDUCIVE TO INNOVATION</b>

# SECTION 3

---

**FRENCH REGIONAL RIS3 WITH REGARD  
TO THE MAJOR PRINCIPLES OF  
THE SMART SPECIALISATION CONCEPT**

The "Smart specialisation" approach is based on several key aspects: knowledge of the economic fabric and innovation ecosystem (diagnosis, SWOT), "entrepreneurial discovery", close involvement of the private sector, specialisation in strong technological fields or sectors, an associated diversification strategy designed to guarantee a sustainable economic fabric, openness to other European regions (cooperation, benchmark), definition of an action plan and budget, establishment of a governance and coordination of the innovation ecosystem, implementation of a monitoring and assessment system.

Smart specialisation is envisaged as a process: once defined, the strategies are deployed, then assessed and modified, throughout the new contracting period. The strategies can be reviewed, notably to include developments in the smart specialisation areas and take into account the changes in the regional innovation ecosystem. In this context, it is worth making an initial assessment of the RIS3, to underline the changes compared with the first generation of regional innovation strategies, highlight the progress of these RIS3 in relation to the major principles of smart specialisation and identify the potential room for improvement in the application of the smart specialisation principles. Finally, this analysis can highlight certain practices which could be of interest to other territories for their smart specialisation approach.

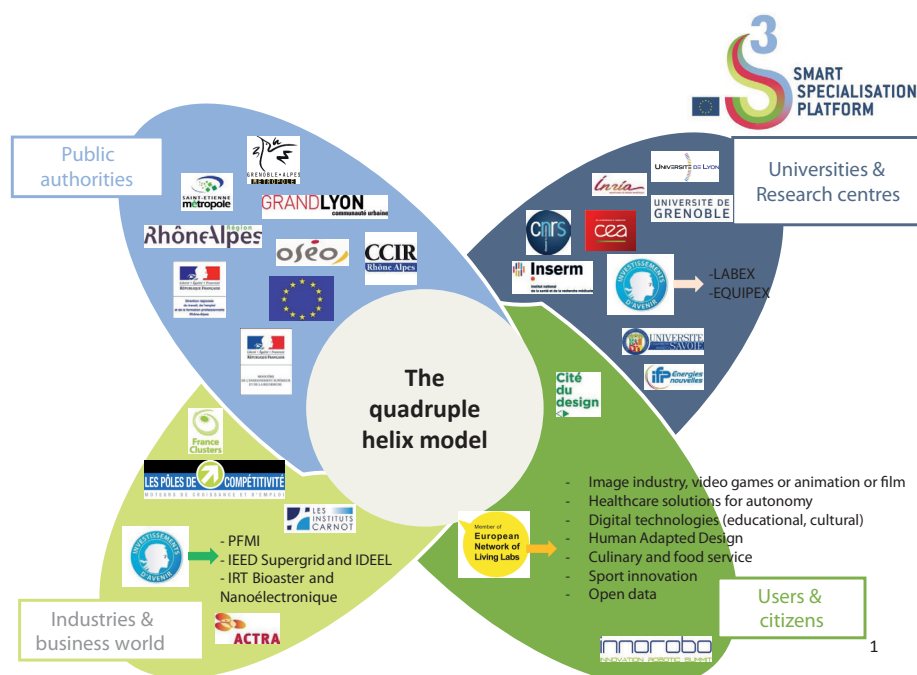
### 3.1 "ENTREPRENEURIAL DISCOVERY" CONCEPT GLOBALLY ADOPTED AND PUT INTO PRACTICE

Entrepreneurial discovery is a key aspect of smart specialisation: it consists of involving the key stakeholders and businesses in terms of innovation. Far from being a top-down

strategy, smart specialisation focuses on collaboration between businesses, research centres and universities, in order to identify the most promising areas of specialisation in a territory, as well as the obstacles to innovation. The concept of entrepreneurial discovery is a collaborative approach focused on the search for consensus based on a shared vision of the region's opportunities and future, with support from the regional political authorities. Regional authorities are expected to initiate and oversee this entrepreneurial discovery process by putting in place incentive and collaborative actions involving all economic and social players.

The entrepreneurial discovery approach was taken into account by all French regions for the definition of their innovation strategies. The regions' economic fabric and innovative ecosystems (businesses, chambers of commerce and industry, laboratories, university, competitiveness clusters, hubs, regional clusters, etc.) were involved in the definition of regional strategies. Every region defined its own method to guarantee the commitment of innovation stakeholders involved. The regions essentially used similar tools for the consultation process: information meetings, workshops, interviews, online questionnaire, dedicated website, etc. The Bretagne region, for example, organised three creativity days involving researchers, entrepreneurs and consultants in an effort to identify its smart specialisation areas. There were however notable differences in the scope of stakeholders, the level of their involvement and the consultation periods. For example, certain regions chose to extensively involve civil society (associations, etc.), which is not the case for most regions. Significant differences are also observed in when the stakeholder were involved: some regions involved innovation stakeholders from the diagnosis phase, others when defining the smart specialisation areas.

Illustration 10: the quadruple innovation helix highlighted in certain RIS3



Source: Rhone-Alpes, Peer-review Workshop presentation. –S3 Platform Europa.eu

Certain regions also referred to existing partnership dynamic, on which they could build on. For example, some collaboration dynamics were created at the time of the definition of the first regional innovation strategy: by way of illustration, the Nord-Pas de Calais strategy stipulates that the partnership arrangements initiated in 2007 were decisive (notably via the mobilisation of the regional innovation and research promotion platform). It was backed by the dynamic of the Observatoire des marchés du futur (Observatory of future markets), created in 2012, a collaborative and prospective reflection unit for regional businesses on the markets corresponding with the strategy's specialisation areas.

For the vast majority of regions, entrepreneurial discovery has also shaped the governance bodies: for example by entrusting businesses to coordinate smart specialisation areas (e.g. Auvergne) or involving innovation stakeholders in the different strategic and/or operational committees, or within an innovation advisory board (in Alsace for example) or a regional conference on innovation (Île-de-France and Centre regions), which ensures the consultation process during the deployment of the RIS3.

For some regions, the entrepreneurial discovery process implemented during the definition of the RIS3 is regarded as a first step to identify an initial circle of innovation stakeholders, which will be reinforced throughout the deployment of the strategy in order to create a genuine knock-on effect in the territory: this is the case in Alsace.

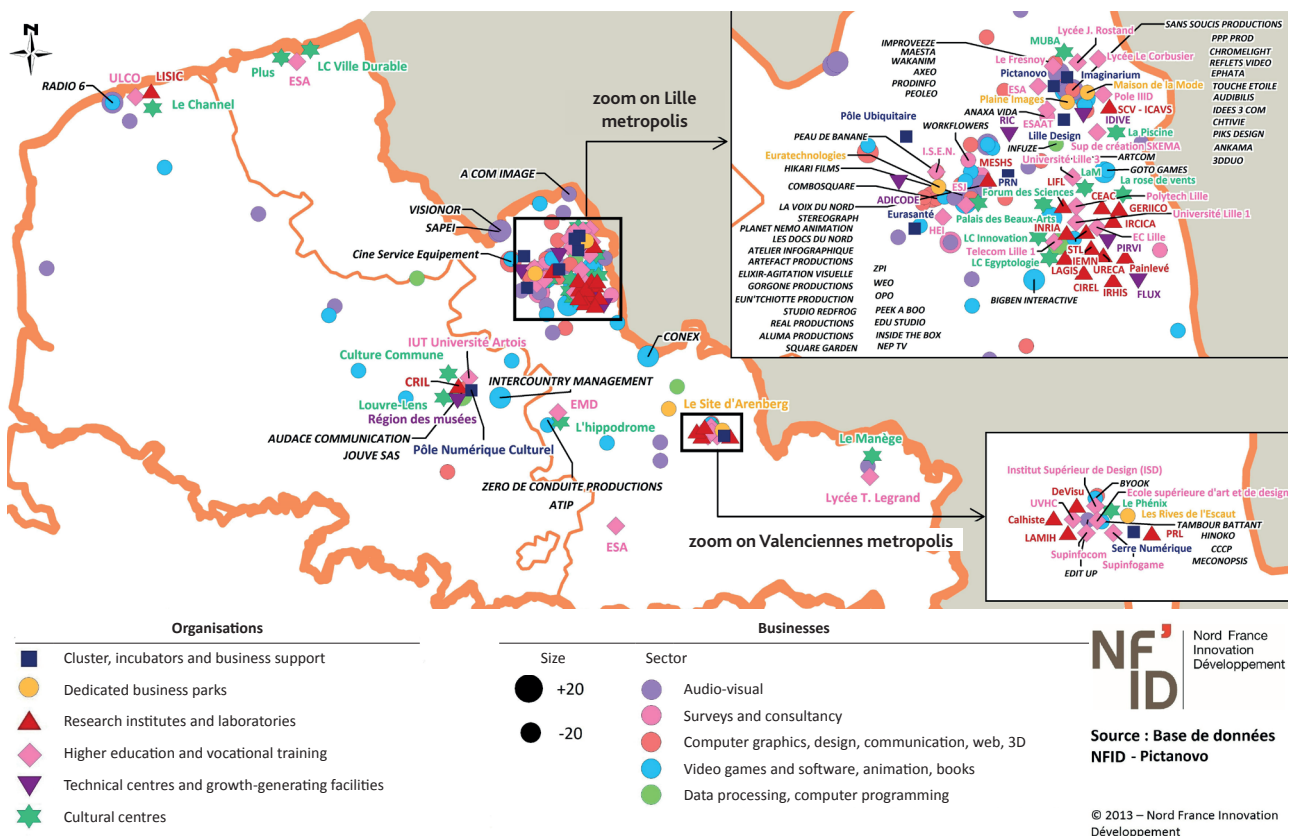
### 3.2 REGIONAL STRATEGIES BASED ON A DIAGNOSIS

In order to be relevant, the RIS3 strategy must rely on a territorial innovation diagnosis. This diagnosis has already been produced by numerous regions when defining their regional innovation strategy, but required updating to take into account the latest developments in research and innovation.

The vast majority of French regions highlight the territorial innovation diagnosis in their RIS3. The diagnoses carried out vary considerably and can include: a territorial and socio-economic diagnosis, an innovation ecosystem diagnosis (including financial support schemes in some cases), SWOT analyses of the ecosystem or by smart specialisation area (as is the case in Alsace and Aquitaine for example).

Some regions relied on an assessment of their regional innovation strategy to conduct this diagnosis (e.g. Midi-Pyrénées, Île-de-France, Guyanne and Réunion). In most cases, these diagnoses rely on quantitative and qualitative data, with the exception of overseas territories, which lack quantitative data. These diagnoses are sometimes territorialised, notably in the form of maps by key sector: this is the case with the Nord-Pas de Calais and Pays-de-la-Loire regions.

Illustration 11: map of existing assets on the "creative industries and images" market



Source: Nord-Pas de Calais' RIS3

### 3.3 IMPROVED AND REINFORCED INNOVATION GOVERNANCE

The development and implementation of the RIS3 require political involvement and institutional stability with regard to innovation issues. **Adapted governance is therefore a success factor for the RIS3** and, more generally, for the reinforcement of the regional innovation ecosystem.

**The implementation of innovation governance features in detail in the RIS3 of all French regions.** For some regions, implementation is still in progress. **Many regions stress that the governance in place relies on the governance developed for the RIS3**, which was adjusted to take into account new expectations in terms of smart specialisation (including openness to other stakeholders). **Innovation governance is essentially defined by the implementation of two levels of governance:**

- **the strategic level** (e.g. in the form of a regional strategic innovation committee or a steering committee, generally meeting once or twice a year) plays a decision-making role and determines the region's strategic guidelines. It is generally co-chaired by the President of the region and the Regional Prefect and primarily involves representatives of innovation stakeholders (chambers of commerce and industry, financial stakeholders, higher education and research stakeholders, competitiveness clusters, businesses, etc.) as well as territorial representatives (local authorities, departments). The number of stakeholders varies depending on the region: some prefer a limited circle while others involve a large proportion of economic and innovation stakeholders.
- **the operational level** (in the form of an operational committee or technical committee for example), meeting regularly (often once a month), organises, coordinates and monitors the deployment of the strategy. Its composition varies depending on the region: it essentially consists of the Regional Council services, State services in the region, financial stakeholders (BPIFrance, etc.), representatives of the universities, businesses, research and innovation stakeholders, etc.

**Some regions, which opted for relatively restricted strategic and operational bodies, decided to create an advisory body within the governance system**, in the form of a regional conference on innovation or an advisory board for innovation for example (e.g. Île-de-France, Centre, Alsace and Midi-Pyrénées).

**The regional innovation agency helps oversee the approach in certain regions**, notably by acting as the committees' secretariat, organising and participating in the coordination of smart specialisation areas: this is the case in regions like Haute-Normandie, Basse-Normandie, Rhône-Alpes, Bretagne and Nord-Pas de Calais. In Poitou-Charentes, a regional innovation Agency was created to coordinate and monitor the RIS3. The coordination of smart specialisation areas generally involves working groups, frequently steered by an expert in the domain (business, competitiveness cluster, etc.) and/or the regional innovation agency.

**In some cases, the governance is shared with other political bodies to guarantee better coherence:** the governance implemented in Lorraine is shared with that of the PACTE Lorraine; the governance implemented in Nord-Pas de Calais is integrated into the governance of the regional economic development plan and the regional higher education, research and innovation plan. In other cases, the coherence between the RIS3, the ERDF and the regional economic development plan is ensured by interconnecting governance processes (notably in Basse-Normandie and Champagne-Ardenne).

### 3.4 STRATEGIES WHICH DEFINE SMART SPECIALISATION AREAS AND TRANSVERSE PRIORITIES ON WHICH A SIGNIFICANT PART OF THE REGIONAL PUBLIC INNOVATION ACTION IS FOCUSED

Smart specialisation involves supporting a limited number of high-potential sectoral and technological domains, and concentrating resources on investments with a strong leverage effect for the regional economy. **The definition of smart specialisation areas and transverse priorities (facilitating the dissemination of key technologies, social and organisational innovation or the emergence of new sectors, etc.) is therefore a decisive phase in the smart specialisation process.**

The European Commission's Directorate General for Regional Policy summarises that the process of the smart specialisation strategy is based on "4Cs": identify a comparative advantage; make choices and aim for critical mass; develop cooperation and clusters; cultivate collaborative leadership.

**While certain regions have clearly identified the use of these criteria in their approaches, this tends to be more implicit for others.** Generally speaking, a variety of methods were used to analyse the specialisation themes resulting, in some cases, in the development of refined analysis techniques. Certain regions implemented a smart specialisation area selection approach using analytical grids to ensure the accurate definition of smart specialisation areas, based on the following criteria: make choices; rely on a comparative advantage; choose areas of critical mass; target one or several markets; choose areas engaged in the pre-commercial phase; ensure the convergence of the means and resources towards the selected areas; support areas with growth prospects.

This type of analytical grid has been used to various extents by the following regions:

For example, the Lorraine region defined its smart specialisation areas using a matrix of smart specialisation criteria (7C) which is clearly presented in the RIS3.

The Aquitaine region, on the other hand, integrated a 7C grid into a stakeholder questionnaire for self-assessment purposes. This grid was also used by assessment teams for the different themes proposed. Furthermore, a 51X47 matrix (based on the

proceedings of the European Commission on Key Enabling Technologies (KET) and the Directorate General for competitiveness, industry and services) was introduced, cross-referencing market sectors and technological sectors to reveal the region's potential specialisations, identify enabling technologies and detect those resulting from entrepreneurial discovery.

Languedoc-Roussillon also implemented an analysis of 40 strategic areas of activity in the form of a matrix consisting of 40 lines and 23 columns. This methodological approach involved a multivariate statistical analysis known as principal component analysis, in conjunction with researchers. This was completed by a qualitative analysis (more than 125 online interviews and consultations with entrepreneurs).

Illustration 12: the 7C grid

ONE FILTER FOR ALL PROJECTS		
SPECIALISED	MARKET-ORIENTED	LEVERAGE EFFECT
1 – TARGETED theme	4 – Be involved in a pre-COMMERCIAL phase	6 – Ensure businesses have ACCESS to resources and funding
2 – CRITICAL size		
3 – Develop a COMPARATIVE advantage	5 – Have GROWTH prospects	7 – Make CHOICES
Guided by the businesses		

Source: Aquitaine's RIS3

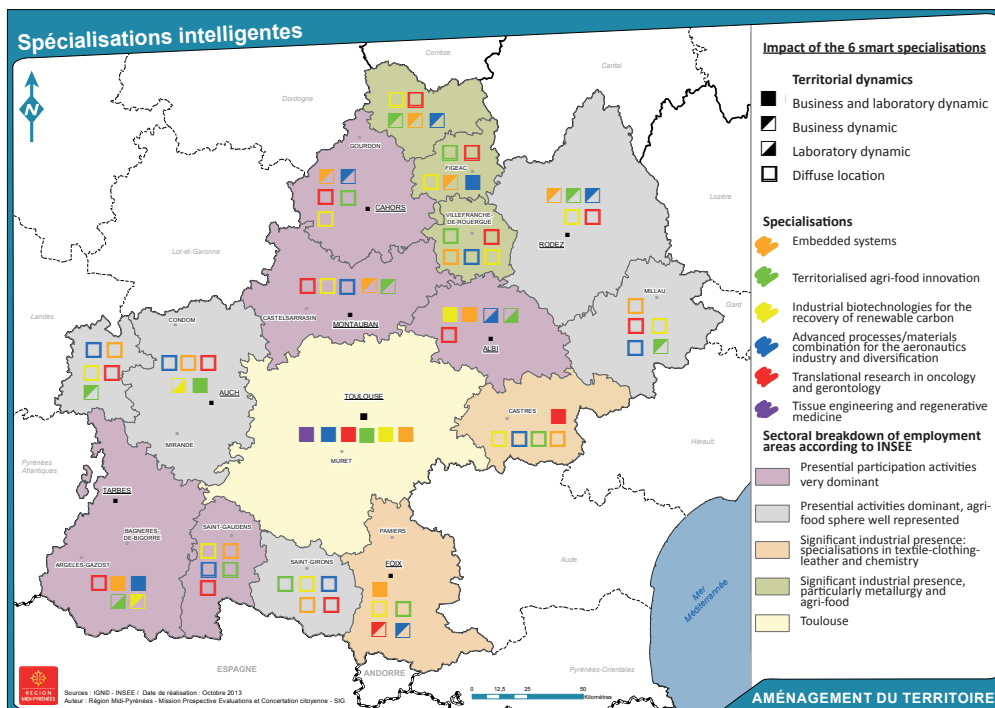
**Smart specialisation areas exist in a variety of forms.** The scope, number (2 for Corsica, 3 for Réunion, 5 for Île-de-France, 10 for Guyanne and 11 for Aquitaine) and maturity of the selected areas vary depending on the region. Certain regions decided to define relatively broad specialisation themes and to break them down into sub-themes: this is the case for Bretagne, Picardie, Basse-Normandie and Nord-Pas de Calais for example. Some regions deliberately focus on areas of different maturity levels and adapt their support to the maturing process of these areas (e.g. Basse-Normandie and Picardie).

The Île-de-France region, despite the abundance of areas of excellence, managed to select 5 smart specialisation areas, applying a selection methodology to major economic activities, based on the use of quantitative and qualitative data. This selection process was implemented on a European scale based on criteria such as: configuration of the sectors, existence of dynamic markets, ability to respond to territorial issues and challenges, ability to mobilise other funding sources, potential hybridisation and diversification of the theme, production of patents, scientific publications, etc..

**Several regions specify the territorialisation of their smart specialisation areas.** This territorialisation enables the regions to involve the entire territory in the approach by identifying the existing assets within the territories.

Midi-Pyrénées proposes a map of specialisation areas by employment area. The Picardie region proposes a map by smart specialisation area.

Illustration 13: smart specialisations by employment zone



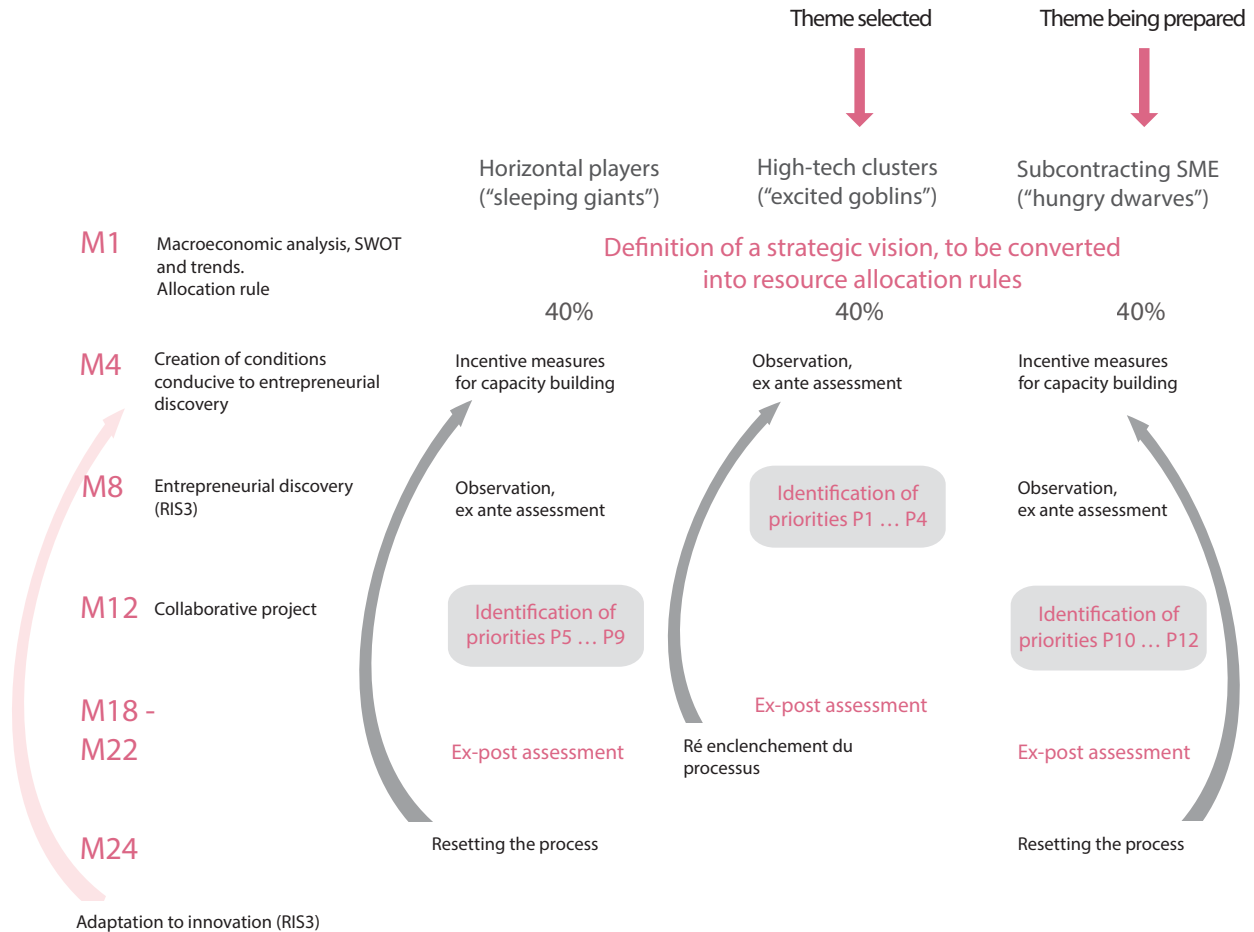
Source: Midi-Pyrénées' RIS3



**Certain regions have anticipated the renewal of smart specialisation areas in their RIS3.**

For example, the Aquitaine region defines the smart specialisation area renewal procedures via the constant monitoring of the themes, an assessment of the effect of the funding selected and the permanent co-existence between the selected themes and the new proposed themes.

**Illustration 14: cyclical process applied to the RIS3 with a view to its renewal**



Source: Aquitaine's RIS3

**In addition to their actions to support smart specialisation areas, the vast majority of regions have defined transverse themes based on which they plan to support innovation.** These transverse themes are considered complementary to the smart specialisation areas, supporting the global dynamic of regional innovation and economic ecosystems (especially the SMEs), the dissemination of innovations across the territory or the renewal of the ecosystem according to economic developments over time.

**Many regions highlight transverse themes aimed at encouraging the emergence of an ecosystem conducive to innovation** (human capital reinforcement, research promotion and transfer, cooperation with other regions and globalisation, support for entrepreneurship and the innovation culture, support for the growth of micro-businesses/SMEs and intermediate-size

companies, innovation funding, increased territorial appeal): Centre, Bretagne, Haute-Normandie and Pays-de-la-Loire focused on these aspects.

**Some regions** (including Lorraine and Midi-Pyrénées) **defined transverse themes relating to the configuration of the smart specialisation approach:** reinforced governance, deployment of a monitoring/assessment system, smart specialisation support, assistance with specialisation theme renewal and revitalisation, communication on the RIS3, etc.

**A significant number of regions chose to support innovation in the broader sense, notably social innovation, in their transverse themes,** such as Rhône-Alpes, Champagne-Ardenne, Lorraine, Limousin and Poitou-Charentes.



**Key enabling technologies (KET) and societal challenges defined in Horizon 2020 also gave rise to transverse themes in certain regions.**

By way of illustration, the **Rhône-Alpes** region identified "technological innovation, transfer and KETs" and "Businesses and the environmental transition of the economy", as well as "H2020 positioning and European projects" as horizontal themes.

Île-de-France identified "optics and photonics" as a transverse theme.

Bourgogne underlines the importance of disseminating key technologies in one of its transverse themes.

Finally, Picardie highlights the societal challenges of Horizon 2020 in its own transverse themes: "integrate the control of chronic and accidental risks, as well as their environmental impact, into all specialisation areas" and "promote humanities and social sciences in the interdisciplinary approach to major societal challenges".

**The Horizon 2020 societal challenge most cited in the transverse themes relates to climate change and the management of resources:** the Rhône-Alpes and Nord Pas-de-Calais regions, for example, take this into account in their transverse themes.

**Finally, a significant number of regions stress the importance of digital technologies as a transverse issue:** Alsace, Aquitaine, Bourgogne, Champagne-Ardenne, Limousin, Lorraine, Picardie, Poitou-Charentes and Corsica, for example, decided to showcase the digital issue in one of the transverse themes of their RIS3.

- *For more details on how the RIS3 combine with Horizon 2020, key enabling technologies and societal challenges, please refer to the "Links between the RIS3, Horizon 2020 and COSME" section p. 40.*

Illustration 15: map of smart specialisation areas of the French regions' RIS3 (1/2)

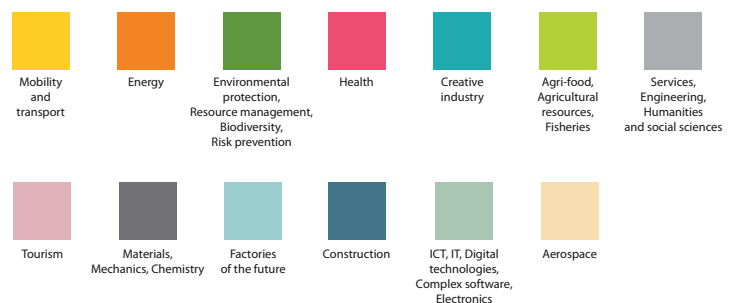


Champagne-Ardenne	Corse	Franche-Comté	Guadeloupe	Guyane	Haute-Normandie	Île-de-France
Creation of a range of treatments and services for vulnerable or dependent people to support the ageing process in the territories	Energy production, distribution and management in an insular environment	Energy systems integration and efficiency	Promotion of the diversity of insular resources	Tropical health and emerging diseases	New technologies in chemistry and biology applied to health and well-being	Medical devices
Support for RDI initiatives, projects and experimentations with a view to implementing smart energy management solutions	Promotion of natural and cultural resources	Micro-systems	Risk management and prevention in a Caribbean environment	Active molecules	Efficiency of energy and propulsion systems	Engineering of complex systems and software
Optimisation of the performance, processing and use of materials		Use of information and communication technologies in response to societal issues	Promotion of creative industries	Remote applications	Wind energy	Carbon-free and smart vehicles
Development of bio-economy based on a territorialised bio-refinery combined with adapted and sustainable agricultural and wine growing practices		Communicating vehicles, automated driving and mobility services		Management and use of biomass	Reliability of systems and components in embedded systems	Eco-construction and high environmental performance districts
		Resource efficient vehicles		Development of marine resources and primary resources	Multimodality and logistical performance	Digital creation
		Luxury markets and micro-techniques (jewellery, eyewear, leather goods, watchmaking, etc.)		Agriculture and agro-processing	Ageing and performance of materials	
		Sustainable local food products		Development of forestry resources		
				Environmental management and monitoring		
				Eco-construction		
				Tourism and eco-tourism		

Illustration 16: map of smart specialisation areas of the French regions' RIS3 (2/2)



Legend:



Pays-de-la-Loire	Picardie	Poitou-Charentes	Provence-Alpes Côte-d'Azur	La Réunion	Rhône-Alpes
Future therapies and health	Reconstructive surgery and health/ technologies	Health, Environment, food quality	Health – Nutrition	Agile platform to facilitate the transition to a digital knowledge and carbon-free economy	Personalised health and infectious & chronic diseases
Maritime industries: shipbuilding; civil, coastal and marine engineering; and new energy sources	Bio-economy and territorialised refinery	Digital technologies in education and the cultural industry	Energy transition – Energy efficiency	Stimulation of emotions in experiential eco-tourism	Energy storage networks
IT and professional electronics: skills and solutions for a digital economy and society	Mobility and "urbanicity"	High-performance transport: low environmental footprint, sustainable materials, eco-mobility	Smart and sustainable mobility	Production of solutions in a tropical bio-economy to benefit the economy of the living world	Digital technologies and caring systems
Food and bio-resources: from consumer expectations to agricultural production systems	Smart vehicles and mobility of passengers and freight	Green chemistry, sustainable resources	Risks – security – safety		Smart mobility uses, technologies and systems
Emergence and dissemination of advanced production technologies for industrial transformation	Social innovation	Sustainable buildings, energy	Tourism – cultural industries and digital content		Smart, high energy efficiency buildings
Design and cultural and creative industries in order to gather creation and innovation					Industrial processes and eco-efficient factories
					Mountain sports, safety and infrastructures

Illustration 17: diagram of the transverse intervention themes defined in the French regions' RIS3 (1/2)

Alsace	Aquitaine	Auvergne	Basse-Normandie	Bourgogne	Bretagne	Centre
Social and inclusive economy	Aquitaine's regional digital development strategy	Implementation of specific, flexible and adapted organisation and a call for projects for the resourcing of smart specialisation areas	Support innovation within businesses as part of a project-oriented approach, from detection to marketing	New behaviours, new economies	Reinforce the innovation and entrepreneurial culture	Develop innovation in businesses
Digital economy	Reduce the different asymmetries and prevent the exclusion of certain types of businesses or territories from the innovation dynamic		Ensure that public research and training mechanisms as well as the result exploitation and technology transfer system effectively contribute to the development of innovative projects and the creation of innovative businesses in Basse-Normandie	Skills development and networking to benefit competitiveness	Improve the transformation of the research and innovation potential in the economy	Reinforce the human capital
Creative industries	Guarantee the renewal and revitalisation of smart specialisation themes		Help improving skills and adapting businesses' human resources	Dissemination of key technologies, digital engineering, entrepreneurship culture and scientific, technical and industrial culture	Interconnect sectors and technologies	Reinforce the potential of public and private research
	Contribute to reinforcing the overall performance of the regional innovation system		Use the territory's areas of excellence to enhance visibility and attractiveness		Configure a regional innovation system: from an ecosystem to a "system"	Cooperation and internationalisation

Legend:

- Support for innovation in all its forms, including social and organisational innovation
- Societal challenges and KETs of Horizon 2020
- Configuration of the smart specialisation approach
- Support for the emergence of an ecosystem conducive to innovation
- Digital technologies/ ICT

Champagne Ardenne	Corse	Franche-Comté	Guadeloupe	Guyane	Haute-Normandie	Île-de-France
Support innovation in businesses, notably SMEs, via an efficient regional ecosystem for innovation	ICT	Reinforce the human capital	ICT	Develop social innovation by supporting social & inclusive economy (SIE) stakeholders	Stimulate research result exploitation to generate more added value in the territory	Optics/Photonics
Stimulate social innovation to ensure the development of our territories		Generate new activities through innovation and entrepreneurship			Use the innovation lever to address the issue of passing size threshold for Haute-Normandie businesses	Robotics
Transform Champagne-Ardenne into a digital territory		Encourage partnerships and cooperation			Promote trans-disciplinary research and sectors to stimulate innovation	
		Disseminate the innovation culture			Transform widespread innovation (technological and non-technological) into action	
		Capitalise on the "border" effect			Help improve human resource skills in businesses	
		Improve the effectiveness of the public innovation support system			Enhance the appeal of the Haute-Normandie territory based on its themes of excellence	

Illustration 18: diagram of the transverse intervention themes defined in the French regions' RIS3 (2/2)

Languedoc Roussillon	Limousin	Lorraine	Martinique	Mayotte	Midi-Pyrénées	Nord Pas-de-Calais
Entrepreneurship and innovation	Innovation dissemination throughout the economy: agri-food industry, metallurgy/mechanics, paper mills/printing	Networking of stakeholders to encourage the emergence of projects and the visibility of SMEs	Develop the innovation culture	Information and telecommunication technologies	Initiate a rational specialisation in Midi-Pyrénées	Facilitate the transition of regional practices towards increased entrepreneurship and initiatives
	Digitisation of services in rural areas and associated infrastructures	Reinforce mechanisms in favour of differentiation and innovation to benefit businesses in the Lorraine region	Support innovative projects	Mobility, logistical services associated with transport issues	Encourage collaborative innovation	Integrate the issue of sustainable development and the need for a new development model into the debate, at the earliest possible stage
		Transform digital technologies into a development and innovation driver	Continue building the innovation ecosystem		Promote all forms of innovation across the regional territory	Innovate via and for services
		Develop financial engineering to promote innovation and the development of SMEs	Implement efficient governance and communication with regard to the RIS3		Intensify the exploitation of public research results in the territory, drive the transfer of technology	Attract "technology intensive" investments, change the image of the region
		Select distinctive specialisation areas for the territory			Communicate on an RIS3 offer developed in conjunction with innovation stakeholders	Improve the support and funding of innovation, notably by supporting the development of sectoral strategies and project engineering
		Implement and prepare future specialisation areas			Adapt governance to new challenges	Reinforce public and private research potential, as well as result exploitation and transfer practices
		Develop social innovation, notably via social & inclusive economy stakeholders				Reinforce partnerships with the resources of excellence of other European regions
		Develop collaborative innovation				
		Develop innovation, entrepreneurship and internationalisation culture and capacity				
		Establish extended, participatory and efficient governance				
		Implement a surveillance, monitoring and assessment system				

Legend:

- Support for innovation in all its forms, including social and organisational innovation
- Societal challenges and KETs of Horizon 2020
- Configuration of the smart specialisation approach
- Support for the emergence of an ecosystem conducive to innovation
- Digital technologies/ ICT



Pays de la Loire	Picardie	Poitou-Charentes	Provence Alpes-Côte-d'Azur	La Réunion	Rhône-Alpes
Promote a collective vision for a shared roadmap	Integrate the control of chronic and accidental risks, as well as their environmental impact, into all specialisation areas	Innovation development and culture in businesses (incubation of innovative projects, support for SMEs, networking)	Create value and employment through strategic areas of activity	Develop and mobilise territorial talent	Technological innovation, transfer and KETs
Increase the openness of the Pays de la Loire to the world	Develop new digital tools and standardise their use. Control the systems of systems	Development of social innovation and the human capital	Support business growth via a regional ecosystem	Reinforce proximity to develop ideas and projects: the issue of territorial intelligence	Entrepreneurship and innovation
Encourage collective approaches	Promote humanities and social sciences as part of an interdisciplinary approach to major societal challenges	Use of digital tools to benefit innovation		Facilitate and improve procedures for project initiators through open, differentiated and integrated support	Support the growth of micro-businesses, SMEs and intermediate-sized businesses
Promote the construction of an innovation policy accessible to all	Embody the ambition of excellence with regard to markets and territories: Picardie Technopôle				Positioning with regard to Horizon 2020 and European projects
Support education, research and technological development to make up for the structural weaknesses of Pays de la Loire	Reinforce the mechanisms in favour of differentiation and innovation				Innovation through usage and experimentation territories
Create and amplify the conditions for a creative, experimental and enterprising territory	Facilitate business development: from entrepreneurial discovery to internationalisation				Social innovation
Transition from know-how to recognised expertise in the management of European funds					Businesses and environmental transition of the economy
Mobilise European funds to benefit projects in the Loire region					Innovative public procurement
Targeted involvement within European networks					
Inter-regional cooperation in need of reinforcement and development					
Improve the coordination of the Bretagne and Pays de la Loire regions' approach to research and innovation					

### 3.5 ONGOING TRANSFORMATION OF STRATEGIES INTO ROADMAPS AND ACTION PLANS

**Among the key RIS3 preparation stages, the European Commission<sup>3</sup> stresses how important it is for the regions to define a coherent policy-mix, a roadmap and an action plan.** The definition of an action plan is the final stage of the RIS3 definition process. Formalising the action plan helps implement the innovation strategy and make it operational. The European Commission stipulates the need to define an action plan as part of the RIS3 development process, which indicates the target groups, objectives, timetable, indicators, funding and budgets.

**The analysis of the strategies shows that, in most cases, the definition of the policy-mix, roadmap and action plan is underway.** Only the Midi-Pyrénées, Corsica, Réunion and Guyanne regions integrated a relatively mature action plan into their RIS3. These action plans are structured based on transverse strategic themes and/or smart specialisation areas.

**Some of these regions specified the link between the territorial diagnosis and the proposed action plan by clarifying the territory's challenges and ambitions in terms of innovation.** This link helps ensure that the action plan is consistent with the identified needs of the territory.

The Midi-Pyrénées region, for example, stipulated its ambitions looking forward 10 years. It defined flagship projects and actions for each smart specialisation area.

Faced with the issues identified in the territorial diagnosis, the Réunion's RIS3 specified the ambitions to be fulfilled via this strategy to mobilise the territory's driving forces: "build a local economy which successfully completes its ecological transition towards a carbon-free, less vulnerable economy, while adopting a development model based on competitiveness, differentiation and innovation". The RIS3 is therefore designed as a driver of spatial differentiation and development, supporting in-depth territorial transformation in accordance with a long-term ambition, and reinforcing three major areas and their competitive advantages. For each smart specialisation area, the RIS3 presents the purposes and objectives of innovation. It defines a number of transverse actions designed to turn the Réunion Island into a flexible "learning region", capable of anticipating and making the most of ongoing changes, producing and assimilating knowledge and skills and mobilising them to create new activities, a source of renewed prosperity". Finally, it stipulates sectoral actions via a task sheet for each smart specialisation area, broken down into sub-sectors with a description of the context, objectives and actions, the resources mobilised, the Horizon 2020 calls for projects concerned, the players involved as well as monitoring indicators.

Guyanne identified strategic innovation themes and transformed them into action plans. A table summarises the first elements of the action plan: the different actions, the link to the operational programmes concerned, the action's priority level,

the action's leader and the main partners involved, the estimated cost of the action as well as the possible funding sources. This action plan and policy mix project will be refined once the new governance has been implemented. These first elements also include a preliminary analysis of the links between the RIS3 and all the operational programmes for Guyanne.

**In some regions, the action plans are differentiated according to the maturity of the smart specialisation areas.** This is the case for Alsace, where a wave of acceleration programmes will be launched according to the maturity of the areas.

### 3.6 ONGOING DEFINITION OF STRATEGY MONITORING AND ASSESSMENT SYSTEMS

**Identified as an improvement point<sup>4</sup> of the first generation of regional innovation strategies and a key aspect of the smart specialisation approach, the implementation of a system to ensure continuous monitoring and assessment of the strategy is of critical importance as it allows the territories to update their strategy and account for the results of its deployment.** As the smart specialisation strategy is a dynamic, continuous improvement process, which adapts to change and risks, a monitoring and assessment system is even more necessary. The guide for the preparation of the French regions' smart specialisation strategies also stipulates that the integration of monitoring and assessment mechanisms involves: anticipating in RIS3 the provision of follow-up tools to monitor the implementation of actions and assessment instruments, to verify if and how the strategic objectives have been achieved; defining, from an early stage, measurable targets as well as implementation and performance indicators; completing the self-assessment approach with peer review processes; ensuring that the RIS3 is part of a continuous learning process to adjust and update the strategy<sup>5</sup>.

**Certain regions have capitalised on existing monitoring and assessment tools,** used in particular to monitor their first regional innovation strategies, as it is the case for example in Bretagne, Champagne-Ardenne, Franche-Comté, Haute Normandie and Martinique. **Most French regions are in the process of implementing a monitoring and assessment system.** The RIS3 helped establish the principles and outlines of these systems, specifying however the need for further investigation, for example by defining impact indicators. The regions traditionally schedule mid-term and end-of-programme assessments. Some of them performed a preliminary assessment of their strategy (Picardie and Aquitaine for example) or rely on the ex-post assessment of the regional innovation strategy (as it is the case with Pays-de-la-Loire). Several regions interlink the RIS3 assessment system with that of the ERDF operational programme, using the same performance and implementation indicators: These include Corsica, Réunion, Pays-de-la-Loire and Bourgogne. A significant part of the regions want to introduce an annual monitoring procedure. The governance bodies implemented are responsible for monitoring and assessing the RIS3. Some regions

<sup>3</sup> The European Commission presents these stages in the following document: "ANNEX III: A PRACTICAL APPROACH TO RIS3 AND ITS (SELF-) ASSESSMENT", May 2013

<sup>4</sup> Guide for the preparation of the French regions' smart specialisation strategies, p. 27

<sup>5</sup> Guide for the preparation of the French regions' smart specialisation strategies, p. 30 and 32

rely on their partners for the monitoring and assessment of their strategy: such as the regional innovation agencies (notably in Poitou-Charentes), the innovation observatories (for example in Provence-Alpes Côte d'Azur or Haute-Normandie), an incubator for innovative businesses (for example in Champagne-Ardenne) or a research laboratory (as in the case of the Franche-Comté region via IRTES-RECITS (UTBM)).

**Some regions have however made significant progress in defining their monitoring and assessment system,** described in detail in the RIS3:

The Aquitaine region envisages assessment as a way to guarantee the renewal of the smart specialisation areas. After a preliminary assessment to identify its specialisation areas, several resources will be implemented to ensure that the specialisation themes are constantly renewed: the constant monitoring of the themes selected, making it possible to adjust funding; an assessment designed to measure the effects of funding on the theme and its impact on the markets; a selection of "alternative" themes. The first review should be organised within 2 years of the first regional programming committee, during which structural funds are allocated to one or more of the 11 initial themes. The monitoring of smart specialisation areas is based on an overall objective to reach for each smart specialisation area, on operational objectives specific to each area and three basic objectives common to all areas. The indicators selected must be documented as part of the selection process of the projects and compiled in a RIS3 monitoring chart, to renew the themes if relevant.

**Illustration 19: objectives and assessment indicators common to all smart specialisation areas in the RIS3 of the Aquitaine region**

<b>Objective 1</b> Demonstrate the specific dynamic of the theme	Indicator	Number of projects
<b>Objective 2</b> Assess the potential links with other themes or other sectors	Indicator	Number of projects where another theme or sector is involved
<b>Objective 3</b> Develop the industrialisation of businesses	Indicator	Number of projects including: •Sharing, •Key recruitment, •Training plan, •Collaborative projects (between businesses and/or resources centres) •Patents, •Robotisation.

Source: *Aquitaine's RIS3*

**Illustration 20: objectives and assessment indicators selected for the "Mobilisation of biomass and bio-refineries for the industrial sector" theme in the RIS3 of the Aquitaine region**

Theme	Mobilisation of biomass and bio-refineries for the industrial sector	
<b>Overall Objective (Vision)</b>	Accelerate the independence of industrial sectors vis-à-vis the currently predominant petrochemical industry, through the development of sustainable bio-sourced chemistry.	
<b>Thematics' Operational objectives</b>		
<b>Operational objective 1</b> Configure an ecosystem in the Aquitaine region integrating the entire value chain, from upstream to downstream.	Indicator 1	•Number of collaborative projects involving agri-food (or cooperatives), chemical and user industries.
<b>Operational objective 2</b> Configure the biomass production and processing sectors.	Indicator 1	•Number of projects designed to study the mobilisation and/or recovery of existing or potential biomass.
	Indicator 2	•Number of projects explicitly integrating the issue of access to biomass.
<b>Operational objective 3</b> Enhance the control of processes (bio-refineries and processing techniques).	Indicator 1	•Number of projects integrating the development of bio-refinery processes.
	Indicator 2	•Number of projects addressing the processing of bio-refinery products.
<b>Operational objective 4</b> Increase the integration of bio-sourced solutions into industrial companies' products or production processes.	Indicator 1	•Number of projects designed to adapt production equipment and/or the (re)design of products.
	Indicator 2	•Number of market access study projects.
<b>Operational objective 5</b> Control the environmental impact of bio-sourced solutions.	Indicator 1	•Number of projects integrating the assessment of process eco-efficiency and/or the use of life cycle analysis tools.

Source: *Aquitaine's RIS3*

The Picardie region has planned an ex-ante evaluation of its envisaged RIS3 to identify existing resources, the expected impact of the RIS3, the strategic and operational objectives and the indicators to be deployed to enable the regular monitoring of the strategy.

This monitoring will relate to the results achieved and the levers contributing to the achievement of these results (financial commitment, coordination of the stakeholders, organisation, etc.).

An initial set of indicators was identified, relating to each priority theme. This will be completed by general positioning indicators relating to the research and innovation process (GERD, AGERD, scientific production, patents, etc.).

These indicators will be provided to the Steering Committee as an annual monitoring chart.

A mid-term assessment and a final assessment in 2020 will help monitor the programmes, projects and their impact. An ex-post evaluation will ultimately include specific assessments of each RIS3 action and tool and a systematic assessment to help evaluate the pertinence, coherence, effectiveness, efficiency and impact of the strategy. The results of the systematic monitoring and specific and systemic assessments will be communicated to the governance body at least once a year. They will be used to revisit the RIS3 and, if necessary, to refocus the smart specialisation areas as well as the instruments and mechanisms deployed.

**Illustration 21: list of assessment indicators by objectives in the RIS3 of the Picardie region**

Objectives	Themes	Indicators
<b>Objective 1</b>  Develop governance and steering instruments	<b>Theme 1:</b> Establish expanded, participatory and efficient governance	<ul style="list-style-type: none"> <li>Balanced shares between three entities: businesses, public authorities, academic community.</li> </ul>
	<b>Theme 2:</b> Implement a surveillance, monitoring and assessment system	<ul style="list-style-type: none"> <li>Number of prospective studies conducted concerning the domain of specialisation and transverse actions,</li> <li>Number of public action assessments conducted in these domains.</li> </ul>
<b>Objective 2</b>  Focus actions on competitive specialisation themes	<b>Theme 3:</b> Select competitive specialisation themes facilitating the transition to a carbon-free economy	<ul style="list-style-type: none"> <li>Number of research projects funded which led to commercialisation within 36 months,</li> <li>Number of collaborative RDI projects funded which led to commercialisation within 36 months,</li> <li>Number of innovation projects supported within the businesses.</li> </ul>
	<b>Theme 4:</b> Maintain and develop tomorrow's differentiation	<ul style="list-style-type: none"> <li>Number of researchers working on these themes,</li> <li>Number of research projects in these areas.</li> </ul>
	<b>Theme 5:</b> Support innovation and specialisation through transverse approaches	<ul style="list-style-type: none"> <li>Number of research projects supported which integrate these approaches,</li> <li>Number of collaborative RDI projects supported in the businesses which integrate these approaches,</li> <li>Number of innovation projects supported in the businesses which integrate these approaches.</li> </ul>
<b>Objective 3</b>  Configure a differentiating and innovative environment	<b>Theme 6:</b> Symbolise the ambition of excellence with regard to markets and territories	<ul style="list-style-type: none"> <li>Number of sites with the "Picardie technopôle" accreditation</li> </ul>
	<b>Theme 7:</b> Reinforce mechanisms in favour of differentiation and innovation	<ul style="list-style-type: none"> <li>Number of RDI projects directly linked to growth-generating projects including investment programme for the future (ITE, IRT, Labex, Equipex, PFM, IndustriLAB, etc.)</li> <li>Number of new mechanisms implemented (PSPC, PFMI, PIA, demonstrators, Living Labs, etc.).</li> </ul>
	<b>Theme 8:</b> Facilitate business development: from entrepreneurial discovery to internationalisation	<ul style="list-style-type: none"> <li>Number of project initiators supported during the maturation/incubation phase</li> <li>Number of innovative business creations supported,</li> <li>Number of international projects involving partners from the Picardie region.</li> </ul>

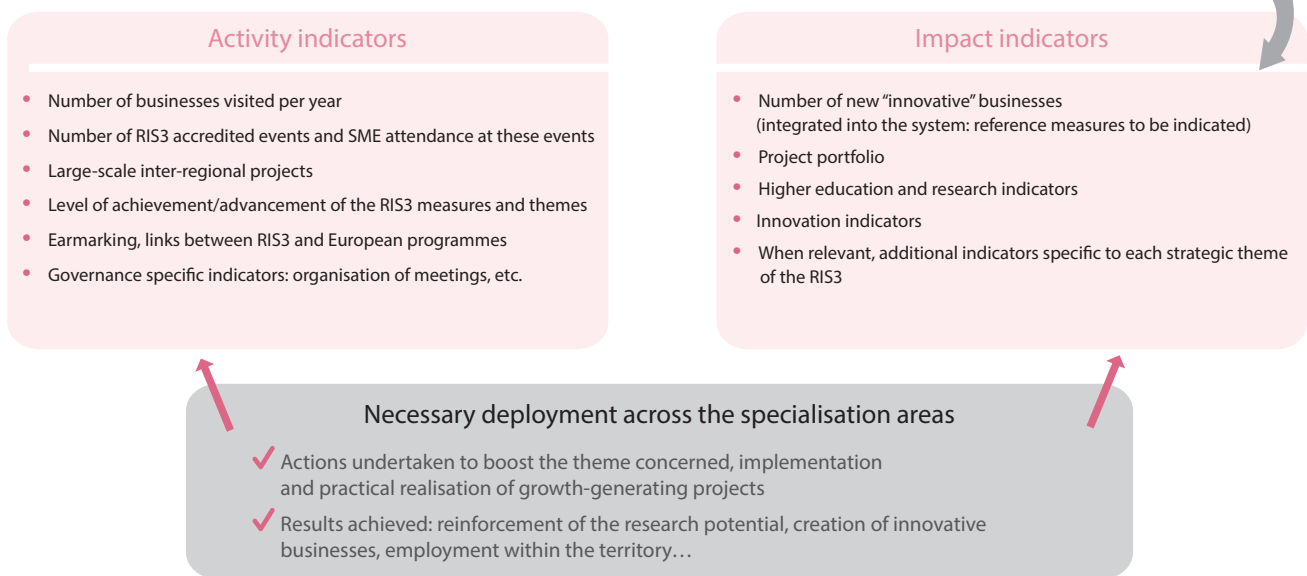
Source: Picardie's RIS3

In the RIS3 where they are featured, most indicators highlighted are implementation or performance indicators. Impact assessment remains a difficult topic to deal with and is rarely addressed.

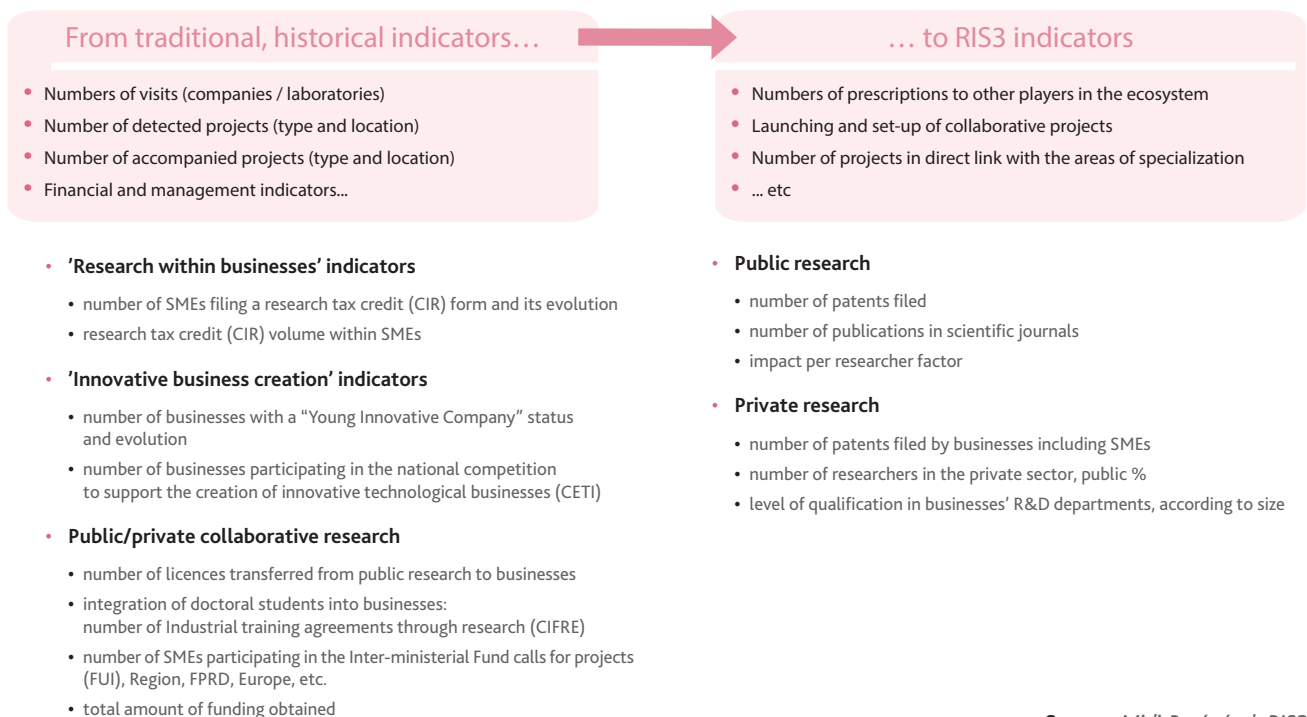
The RIS3 of the Midi-Pyrénées region, like that of Martinique, underlines the combination of the different types of indicator which will be put in place for its strategy monitoring. It also combines overall activity and impact indicators for the steering of the RIS3 with monitoring indicators for every player involved in the innovation ecosystem.

### Illustration 22: combination of assessment indicators in the Midi-Pyrénées region's RIS3

#### ► RIS3 key steering indicators



#### ► ... in connection with the indicators specific to each innovation ecosystem stakeholder



The Centre region's RIS3 also details the list of implementation and performance indicators by objective and by smart specialisation area.

Illustration 23: extract from the monitoring table of the Centre region's RIS3

Measures		Objectives		Implementation indicators	Result indicators	Long-term result indicators
N°	Intitulé	N°	Intitulé			
2	Reinforcement of the human capital	2.1	<ul style="list-style-type: none"> <li>Promote the SMEs' internal innovation capacity to develop innovation approaches and adapt to evolving markets, notably in potential specialisation areas</li> </ul>	<ul style="list-style-type: none"> <li>Number of businesses that benefited from a DICC (Innovation Growth Diagnosis for the Centre region) or HR diagnosis</li> <li>Number of continuing education salaried trainees</li> <li>Number of GPEC (jobs and skills management planning) awareness meetings organised</li> <li>Number of VAE applications (<i>Validation des Acquis de l'Expérience</i> or validation of acquired experience)</li> </ul>	<ul style="list-style-type: none"> <li>Number of ARDAN (regional aid for the development of a new activity) agreements signed</li> <li>Number of CIFRE agreements signed</li> <li>Number of continuing education diplomas awarded by type of course</li> <li>Number of complete VAE certifications</li> </ul>	<p><u>Macro:</u></p> <ul style="list-style-type: none"> <li>Participation in the education and training of adults aged 25 to 64</li> </ul>
		2.2	<ul style="list-style-type: none"> <li>Reinforce the regional population's skills and attract new talent to develop innovation approaches and adapt to evolving markets, notably in potential specialisation areas</li> </ul>	<ul style="list-style-type: none"> <li>Breakdown of students enrolled in initial vocational education, academic route, by diploma</li> </ul>	<ul style="list-style-type: none"> <li>Success rate in initial vocational education, by diploma</li> <li>Employment tension rate by area of activity</li> </ul>	<p><u>Macro:</u></p> <ul style="list-style-type: none"> <li>Evolution of the higher level of education for the 25-64 age category</li> </ul>
3	Reinforce the public and private research potential	3.1	<ul style="list-style-type: none"> <li>Encourage links between sciences and industries to disseminate knowledge among businesses</li> </ul>	<ul style="list-style-type: none"> <li>Number of CIFRE agreements signed with regional businesses</li> <li>Number of foreign researchers hosted in the Centre region</li> <li>Number of Pierre &amp; Marie Curie scholarships granted</li> </ul>	<ul style="list-style-type: none"> <li>Number of industrial PhDs awarded</li> <li>Number of public researchers posted in the businesses of the Centre region</li> <li>Number of collaboration agreements signed as a result of the hosting of foreign researchers within the Studium</li> </ul>	<p><u>Micro:</u></p> <ul style="list-style-type: none"> <li>Number of patents promoted among businesses by the territory's competence centres</li> <li>Number of partnership agreements signed</li> </ul>
		3.2	<ul style="list-style-type: none"> <li>Promote the transfer and utilisation of technologies to businesses to generate industrial applications</li> </ul>	<ul style="list-style-type: none"> <li>Number of support initiatives for the preparation of collaborative projects undertaken by the competitiveness clusters and exploitation units</li> <li>Number of funding applications as part of collaborative research</li> <li>Number of technical platforms and mixed public/private platforms created</li> </ul>	<ul style="list-style-type: none"> <li>Number of collaborative research projects</li> <li>Number of collaboration agreements signed between the businesses of the Centre region and the territory's research institutes</li> <li>Number of funding applications granted as part of collaborative research</li> <li>Number of agreements signed between the technical platforms, the mixed platforms and the businesses (including SMEs)</li> <li>Average utilisation rate of technical and mixed platforms by the businesses (including SMEs)</li> </ul>	<p><u>Micro:</u></p> <ul style="list-style-type: none"> <li>Number of patents filed as part of collaborative research</li> <li>Number of patents exploited by the territory's public research centres</li> <li>Amount generated by the exploitation of patents by the territory's public research centres</li> </ul>
		3.3	<ul style="list-style-type: none"> <li>Assist the region's public research with its participation in Horizon 2020</li> </ul>	<ul style="list-style-type: none"> <li>Number of laboratories assisted with their application to a Horizon 2020 project</li> <li>Number of contacts made between laboratories and businesses (including SMEs)</li> </ul>	<ul style="list-style-type: none"> <li>Number of applications submitted for a Horizon 2020 call for projects (consortium leader, consortium participants)</li> <li>Number of Horizon 2020 projects funded and funding amount</li> </ul>	

Source : Centre's RIS3



The Provence-Alpes Côte d'Azur region plans to set up an innovation observatory, for continuous monitoring and assessment, based on multiple indicators.

Illustration 24: extract from the assessment indicators table of the RIS3 of the Provence-Alpes Côte d'Azur region

Guideline and macro-objectives	Specific objectives	Indicators-title	2022 target	Source	Update frequency	2010	2011	2012	2013	
<b>Guideline 1: create value and employment through strategic areas of activity</b>										
Upstream revitalisation	1. Prepare the strategic areas of activities of the future	National share in publications (%)	+7.6%	OST	Biennial	7.6% (2008)				Availability to be verified
		Evolution in the number of business participations in FPRD/Horizon 2020	200	Regional Innovation Observatory	Quadrennial			163 (2007-2011)		
		Number of patent applications by resident inventors	900	INPI – Reg. Innov. Obs.	Annual		723			
		Proportion of innovative SMEs dedicating more than 5% of their turnover to R&D	70%	Reg. Innov. Obs.	Biennial		50%			
		Position of the region in the national rankings in terms of proportion of international researchers	12th	OST	Biennial		17th			
		Number of public regional laboratory participations in European research programmes (Univ. + labs)	210	Reg. Innov. Obs.	Quadrennial				191 (2007-2011)	
Energy transition and efficiency	1. Develop a range of global services on thermal renovation in a Mediterranean climate	Number of businesses supported as part of a meta-project that launched new products and services (including SMEs)	160	Activity reports	Annual					
		Percentage of innovative businesses participating in meta-projects with a proportion of turnover dedicated to R&D expenditure exceeding 5%	50%	Reg. Innov. Obs.	Biennial		33%			
	2. Promote the management and securing of smart power grids	Job creations in strategic areas of activities and key enabling technologies (KET)	2,000	Reg. Innov. Obs.	Annual					
		Number of creations within the scope of strategic areas of activities and KETs	40	Reg. Innov. Obs.	Annual					
	3. Develop the production of renewable energy	New installations	80-3,200	AFIL	Annual					
Risk, security and safety	1. Promote global environmental monitoring and crisis management solutions	Number of businesses supported as part of a meta-project that launched new products and services (including SMEs)	160	Activity reports	Annual	-	-	-	-	
		Percentage of innovative businesses participating in meta-projects with a proportion of turnover dedicated to R&D expenditure exceeding 5%	50%	Reg. Innov. Obs.	Biennial		33%			
		Job creations in strategic areas of activities and key enabling technologies (KET)	1,800	Reg. Innov. Obs.	Annual	-	-	-	-	
		Number of creations within the scope of strategic areas of activities and KETs	20	Reg. Innov. Obs.	Annual	-	-	-	-	
		New installations	80-3,200	AFIL	Annual					

Source: Provence-Alpes Côte d'Azurs RIS3

### 3.7 STRATEGIES AIMED AT REINFORCING COOPERATION IN RESEARCH & INNOVATION WITH OTHER FRENCH OR EUROPEAN REGIONS

The concept of smart specialisation emphasises the need for each region to find its own place within its national and European environment: not only to identify its strengths (benchmarking logic) and therefore avoid adopting a specialisation already largely dominated by others; but also to position itself using these

strengths in relation to other regions with a view to building links with the European regions that produce the required enabling technologies if they are not produced locally, or with regions with complementary competences to facilitate co-inventions (cooperation logic). The guide for the preparation of the French regions' smart specialisation strategies specifies: "The development of cooperation and knowledge and innovation exchange networks between regions sharing the same specialisations is crucial for the functioning of the RIS3 and their integration into the European research area. (...) Cooperation does not eliminate competition between regions and it is the responsibility of the regional authorities to ensure that regional businesses and players are the priority recip-

ients of the benefits of innovations designed in their territories<sup>6</sup>". This means that the regions must seize the opportunity offered by the RIS3 to set a benchmark and reinforce their cooperation in research and innovation with other European regions.

**The benchmarking approach has been unevenly applied.** Some regions such as Rhône-Alpes, Île-de-France, Midi-Pyrénées, Haute-Normandie, Basse-Normandie, Languedoc-Roussillon, Picardie and Bretagne carried out a systematic benchmark. Certain regions have adopted innovation performance indicators in relation to other, comparable European regions, such as Rhône-Alpes for example. Other regions set a European benchmark for each smart specialisation area selected to identify the competing regions and potential partners: the Île-de-France and Midi-Pyrénées regions for example.

**The Languedoc-Roussillon region** combined several approaches, setting a benchmark for three French regions – Nord-Pas de Calais, Rhône-Alpes and Midi-Pyrénées, to identify good governance practices. It also carried out extensive benchmarking work to support the definition of smart specialisation areas. The first benchmarking stage consisted of a "benchmark flash" on 50 European regions to identify the possible inter-regional competition and synergy and validate the smart specialisation choices. The second part of the benchmark helped define the 13 value chains of the 6 areas, identify 3 to 4 key European regions per area with regard to 4 criteria (existence of clusters, presence of stakeholders who participated in a European Technological Platform or in the Research and Development Framework Programme, analysis of the competences featured on the Seville platform, specialisation in an area of activity). Interviews were conducted with a key stakeholder from every region and 10 in-depth case studies were performed.

**A vast majority of French regions analysed the cooperation between French regions and the regions of other Member States.** This analysis was generally carried out by smart specialisation area. Every region identified the existing cooperation and generally the cooperation to be developed.

The Nord-Pas de Calais region for example planned on setting up a European roadmap for each smart specialisation area, to identify potential European partnership projects, notably with neighbouring regions (Wallonia, Flanders and Kent).

### 3.8 NEW STRATEGIES SHAPED BY THE APPROACH INITIATED WITH THE FIRST REGIONAL INNOVATION STRATEGIES, WHICH HOWEVER REPRESENT A NUMBER OF BREAKTHROUGHS

**The French regions' regional innovation strategies represent a good starting point for designing smart specialisation strategies.** However, while the results of the process helped the regions anticipate many issues which can be faced in designing a smart specialisation strategy, very few regional innovation strategies were in line with the concept of smart specialisation. In addition, **several fundamental aspects for an integrated innovation strategy had not really been addressed by the regional innovation strategies and generally had to be further explored to**

**design the smart specialisation strategy.** The perfectibility of the regional innovation strategies was also the consequence of the flexibility of these documents adopted by the French regions, with often heterogeneous formats and strategic ambitions, designed with flexible methodology proposed to regional stakeholders by the national level. The regional innovation strategies had been designed as living documents, likely to be constantly adapted.

**Several areas of further investigation had been identified in the guide for the preparation of the French regions' smart specialisation strategies:**

- **"aspects relating to employment, initial and continuing education;**
- **inter-fund approach,** which requires the strategic reflection to be consistent with a transverse and integrated approach, from a thematic and territorial perspective, to research and innovation interventions;
- **partnerships,** aiming for the constant involvement of businesses and financial partners as part of the "entrepreneurial discovery" logic;
- **cooperation** between territories as part of an inter-regional and cross-border dimension;
- **territorial governance,** focusing on enhancing the involvement of all those active in the regional innovation system (...);
- **monitoring and assessment tools,** necessary for the smooth implementation of the RIS3 and the adjustment of the strategy;
- **smart specialisation:** (...) while the vast majority of those involved in the regional innovation strategies approach recognised that it was in the best interest of the regions to promote their assets and focus on their actual strengths, not many regional innovation strategies took this to its logical conclusion which consists of prioritising the innovative domains or areas of activity with strong growth potential, based on the accurate identification of their comparative advantages, and concentrating their resources and efforts with a view to differentiation and excellence."<sup>7</sup>

**The analysis of the RIS3 reveals the decisive importance of the first regional innovation strategies in the development of the RIS3, for several reasons:**

- Following the same logic as the first regional innovation strategies, **innovation is considered in the broader sense** in the RIS3. A large number of strategies mention this broader sense of the term "innovation" (beyond technological innovation) in their introductory sections. Others integrate social innovation, innovation through services or innovation in all its forms (not just technological) into their transverse themes. Finally, certain regions opted for smart specialisation areas which cover types of innovation other than technological innova-



tion: Bretagne for example, has focused on “Social and citizen innovations for an open and creative society”. Picardie has also focused on “social innovation”. Mayotte’s RIS3 promotes a “social and inclusive economy (SIE) and personal services”. Other regions like Centre, Martinique and Provence-Alpes Côte d’Azur are positioned on specialisation areas at the crossroads between ICT and tourism/culture which notably involve innovation through services.

- The experience of the regional innovation strategies, which gave the regions a significant boost in the field of innovation, was initially **an asset when defining the methodology and driving the approach** aimed at defining a smart specialisation strategy.
- The diagnoses carried out in the RIS3 are largely based on **those established as part of the first regional innovation strategy**. A large proportion of the regions completed an **evaluation report on the regional innovation strategies**, which was used as a basis for the smart specialisation approach and strategy definition.
- The regions relied on the **governance system defined to steer the regional innovation strategies**, and adjusted it to take into account the need to implement an entrepreneurial discovery process and therefore extend the integration of those active in the regional innovation ecosystem.
- **The modes of action envisaged in the RIS3 are generally consistent with the actions and mechanisms deployed for the first regional innovation strategy**. These tools were adjusted and completed to factor in the changes in the regional ecosystem and strategic framework.

Nevertheless, the RIS3 represent a significant evolution, notably for certain issues identified as areas for further investigation:

- **The RIS3 were based on an entrepreneurial discovery process** which stimulated the involvement of those active in the regional innovation ecosystem, with varying levels of intensity.
- **The smart specialisation process helped clarify** existing cooperation as well as agreements to be developed, **in research and innovation**.
- **The RIS3 were an opportunity for regions to embrace a smart specialisation logic**. For most regions, this process made it possible to upgrade, or even refocus and refine the strategic areas identified in the regional innovation strategies. For other regions such as Bourgogne, Aquitaine and Bretagne, the RIS3 helped define priority areas which did not feature in the regional innovation strategies.
- **The RIS3 addressed the issues relating to the implementation of the required monitoring and assessment tools**. In most cases however, these issues will be further developed during the implementation of the RIS3.
- **The dissemination of an innovation culture**, which appears to be a key issue to support innovation, has only been inte-

grated into the RIS3 as a transverse intervention theme by less than half of the regions. This dimension is not always explicit and is generally mainly considered as a topic for companies, not for individuals. For example, the **Bretagne** region clearly stipulated “reinforce the innovation and entrepreneurial culture” as a transverse theme, which is also the case for the **Martinique** region, which established “develop the innovation culture” as a transverse theme. The **Pays-de-la-Loire** region emphasised a transverse theme called “promote the construction of an innovation policy accessible to all”. In some cases, **entrepreneurship support** is also promoted, along with the dissemination of an innovation culture, as it is the case with Bretagne and Rhône-Alpes for example.

- **Several regions have integrated issues relating to employment, training and human capital into their RIS3**, notably via their transverse themes: this applies to Centre, Haute-Normandie, Franche-Comté, Pays-de-la-Loire, Bourgogne, Basse-Normandie and Réunion.

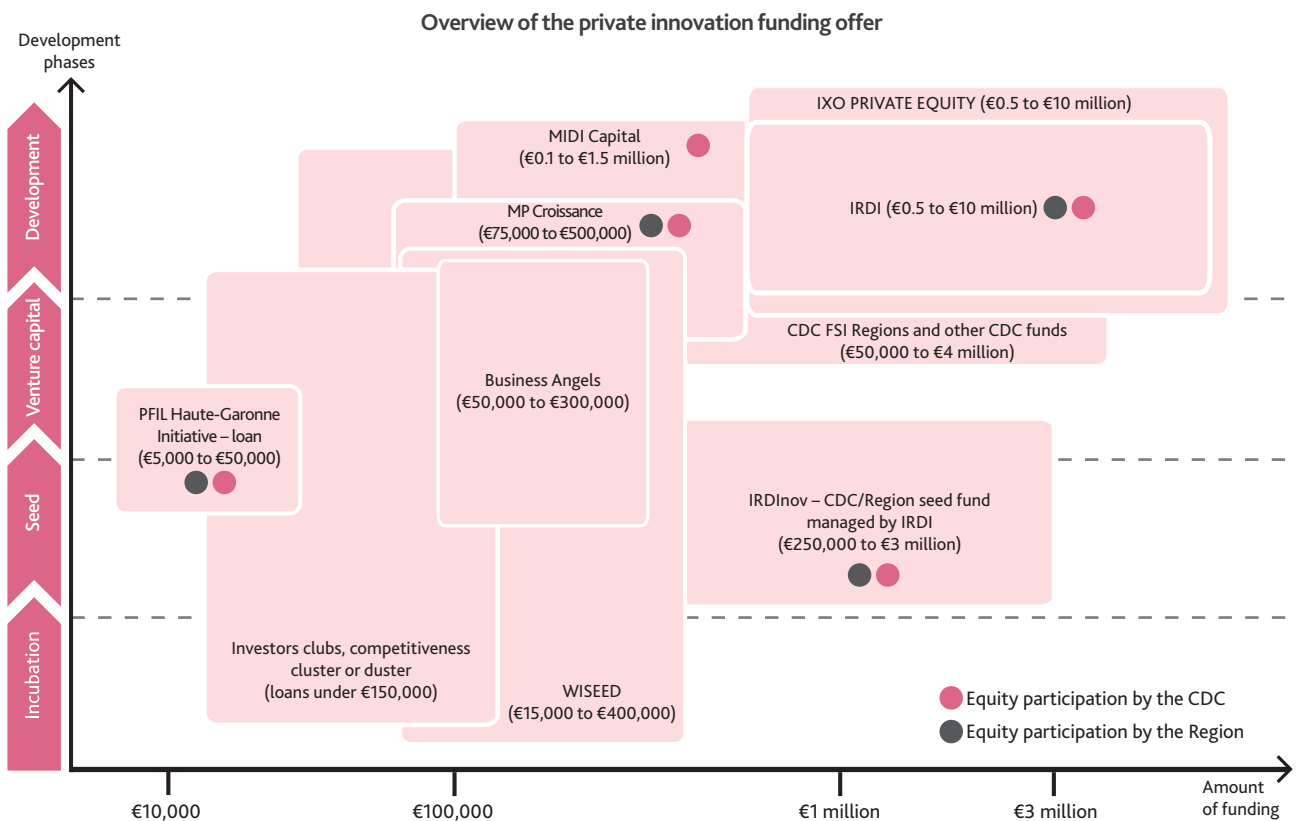
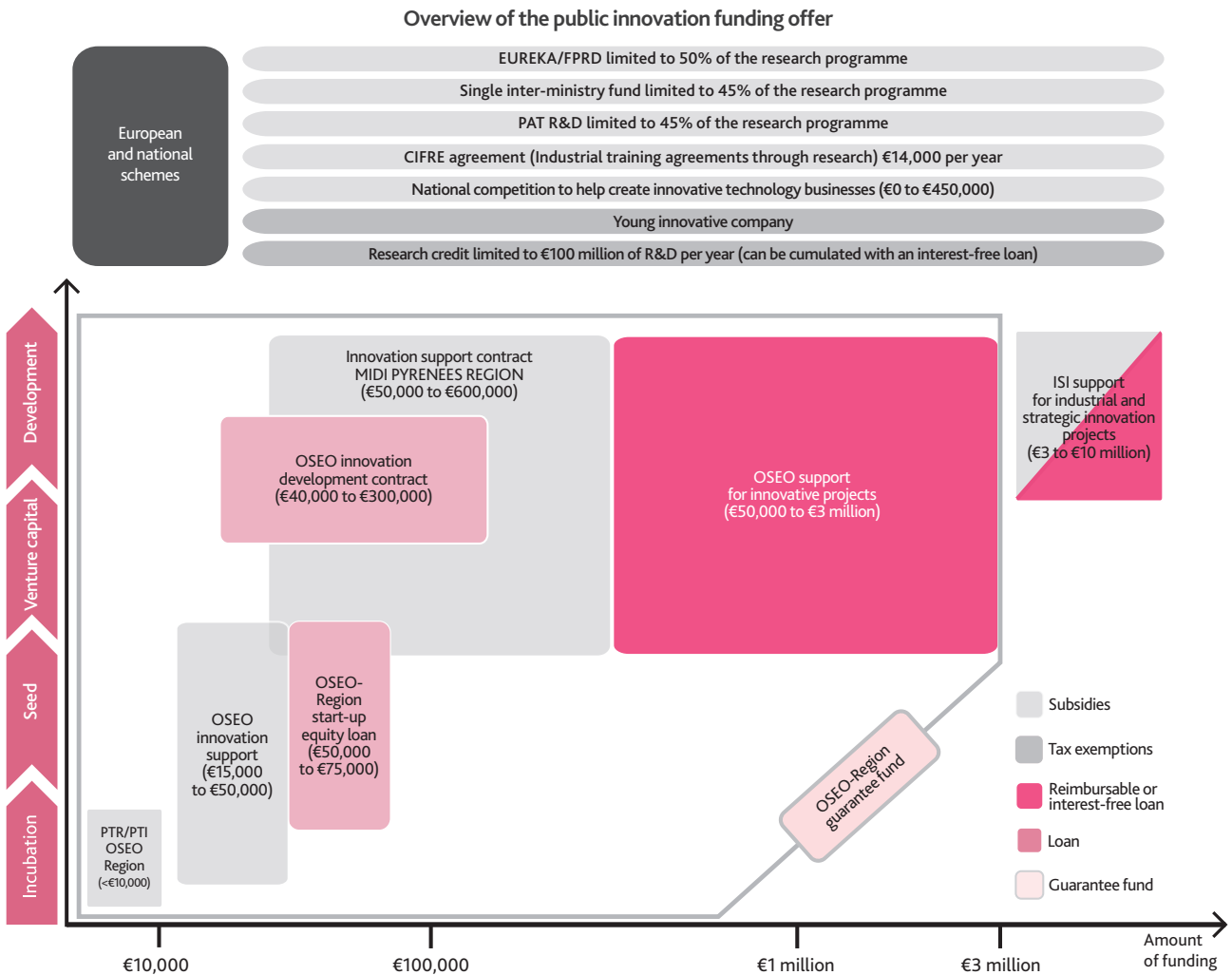
### 3.9 STRATEGIES SOMETIMES USED TO CONFIGURE A FINANCIAL ENVIRONMENT CONDUCIVE TO INNOVATION

**Numerous innovation diagnoses carried out in France highlight funding as a barrier to innovation.** The RIS3 can help reinforce and improve innovation funding legibility and efficiency. This issue is all the more critical in light of the limited financial resources of the dense network of French micro-businesses/SMEs. This dimension, which was not a specific pre-requisite for the smart specialisation approach, was unevenly addressed by the different regions. On the whole, the analysis of the RIS3 reveals the regions’ interest in the issue of innovation funding and their willingness to develop and encourage the implementation of reinforced and improved funding mechanisms. However, the way this willingness is formalised in the strategies varies somewhat. Some addressed this issue by describing the funding tools available in the diagnosis. Others considered this a transverse priority for the development of the innovation ecosystem. Finally, certain regions did not address this theme, which can be dealt with elsewhere (Region-BPI-France framework agreement, CPER, ERDF and ESF operational programmes, etc.). Venture capital funding and the funding of SME/intermediate-size businesses are the most cited issues.

For example, the Nord-Pas de Calais, Pays-de-la-Loire and Lorraine regions formalised the issue of innovation funding as a transverse theme. On the other hand, the Rhône-Alpes region defined an “innovative public procurement” transverse theme as a way to leverage innovation funding. The Pays-de-la-Loire region identified the need to “mobilise European funds to benefit projects in the Loire region” as a transverse theme.

Like Poitou-Charentes, the Midi-Pyrénées region dealt with this topic in its diagnosis. It highlighted a complete range of public and private funding (SIF, Capitole Angels network, investment funds), while stressing the limitations of this funding system, particularly in terms of venture and seed capital for small-scale projects and problems relating to the visibility and understanding of the funding offer.

Illustration 25: private and public innovation funding – Midi-Pyrénées



The Bourgogne region underscored the largely untapped potential of private investment such as Business Angel venture capital in France. The region ascribed this situation to a lack of competence in the search for funding sources as well as the entrepreneurs' reluctance to open their capital to external investors. To remedy this lack of funds, the region integrated the desire to create a crowdfunding platform into a transverse theme of its strategy to allow development projects to raise the funds they need for their prototyping.

In the RIS3 of the Centre region, the innovation funding dimension is addressed via an integrated approach throughout the strategy. A SWOT analysis for each smart specialisation area deals with this issue and defines the funding needs and objectives.

Finally, the RIS3 of the Auvergne region underlines how all innovation financial stakeholders and backers are grouped together within the Maison Innovergne, a one-stop stakeholder consultation location for the coordination of the regional funding of innovative projects. These nine partners (State, Auvergne Regional Council, CCI Auvergne, Clermont Communauté, Clermont-Université, BUSI incubator, GIP GITTA, INPI, BPIFrance) formalised their collaboration by signing a partnership agreement which lists the mechanisms and services proposed as part of a commitment to sharing, simplifying and professionalising the mentoring of innovative projects in Auvergne. This mechanism helps clarify the regional innovation system, facilitate funding channels for project initiators and optimise the coordination of the financial stakeholders (similar level of information, projects assessed based on common criteria, common project monitoring timetable, funding duplication limitation, etc.).

**Illustration 26: Illustration of the one-stop portal for the support and funding of innovation projects – Maison Innovergne**



Source : <http://www.innovergne.fr/>

# CONTENTS

---

- p 42 .....**4.1 REGIONAL SPECIALISATIONS RELATIVELY CONCENTRATED ON A FEW TARGET MARKETS**
- p 45 .....**4.2 INFRA- OR SUPRANATIONAL INTER-REGIONAL COOPERATION, IN A VARIETY OF FORMS, PRIMARILY AT LOCAL LEVEL OR WITH INNOVATION DRIVING TERRITORIES**

# SECTION 4

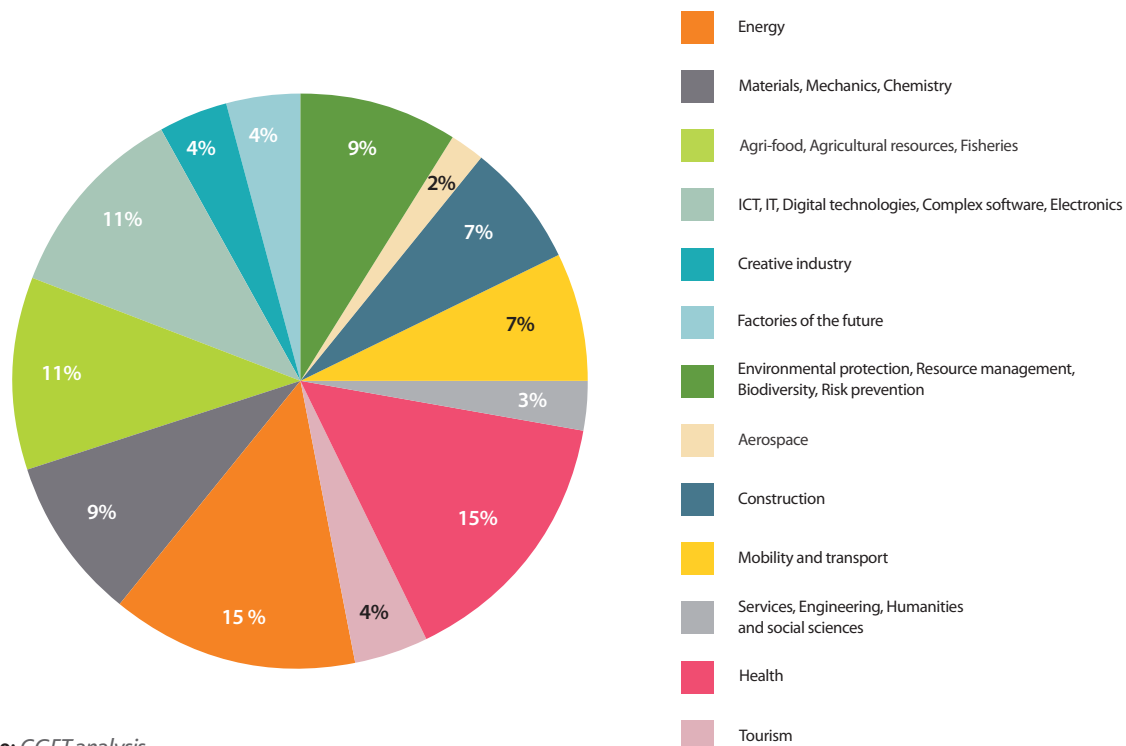
---

## HIGHLIGHTS OF THE FRENCH REGIONS' RIS3 IN TERMS OF INNOVATION AT A NATIONAL LEVEL

The cross-analysis of the French regions' RIS3 helps detect a few major trends on a national scale and give a consolidated view of the regional innovation ecosystems. It provides a regional positioning diagram for every major target market, which can facilitate the identification of potential cooperation for the territories. It also sheds light on the major emerging trends in terms of inter-regional cooperation on a national and European scale.

#### 4.1 REGIONAL SPECIALISATIONS RELATIVELY CONCENTRATED ON A FEW TARGET MARKETS...

Illustration 27: breakdown of the smart specialisation areas of the French regions' RIS3 by target market<sup>8</sup>



Source: CGET analysis

Certain central themes in terms of innovation in France emerge from the analysis of these specialisation areas:

- **Health** is the object of at least one smart specialisation area for all the French regions with the exception of Corsica, Mayotte and Franche-Comté. In some regions like Alsace, Aquitaine and Midi-Pyrénées, it is covered by several smart specialisation areas. Some regions focus on sub-markets such as biotechnologies, medical devices and medicinal products, while others have adopted a broader approach to health. Île-de-France for example focuses on medical devices.
- **Energy** is also a central theme for all regions except for Auvergne, Bourgogne and Martinique.
- 20 regions are positioned on the market of **agri-food, agricultural resources and fisheries**. In some cases, the agri-food, agricultural resources and fisheries sectors cover several specialisation areas, as in the case of Limousin, Bretagne, Mayotte, Guyanne and Languedoc-Roussillon.

- **ICT, digital technologies, IT, complex software and electronics** represent smart specialisation fields for 17 regions. In certain regions, this sector is the object of several smart specialisation areas (for example Aquitaine, Auvergne, Bretagne, Île-de-France and Franche-Comté).
- 16 regions are positioned in the **materials, mechanics and chemistry** sectors.
- **Environmental protection, resource management, biodiversity and risk prevention** as well as construction are smart specialisation fields for 15 regions.
- 14 regions are positioned in the **mobility and transport** sectors.

Markets such as aerospace industry; services, engineering, humanities and social sciences; tourism; creative industry and factories of the future are the least represented. Only Midi-Pyrénées, Aquitaine, Guyanne and Haute-Normandie are

<sup>8</sup> This analysis is based on the classification of the RIS3 smart specialisation areas by target market. A smart specialisation area can therefore address several markets and a market can be concerned by several smart specialisation areas within the same region. This does not involve analysing the breakdown of the amounts allocated by the regions to support innovation by sector under the RIS3, as this information is not yet available.

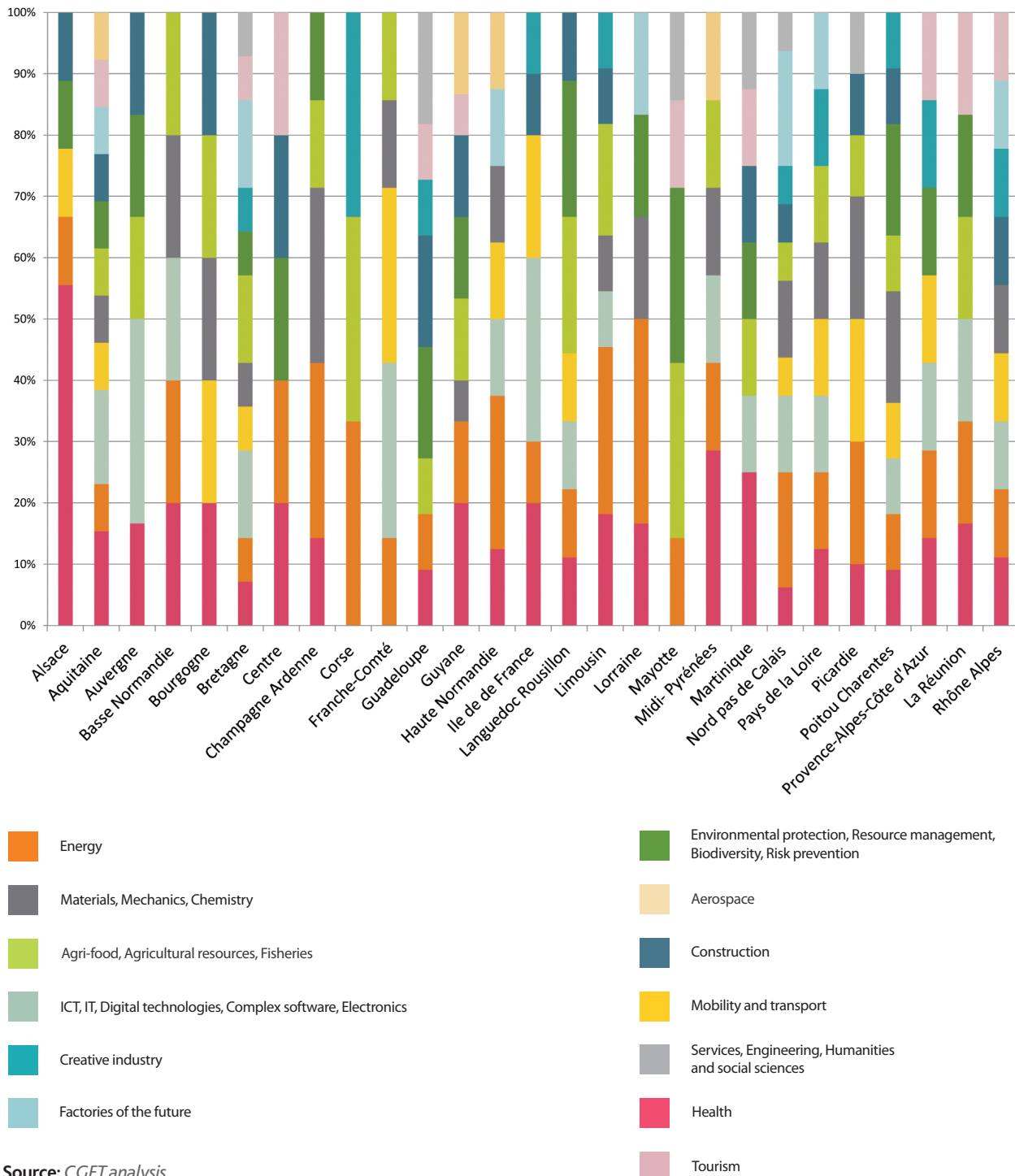
positioned in the aerospace sectors. Factories of the future is a new field in the RIS3 which did not feature in the regional innovation strategies, which may be due to its integration into the new industrial France policy.

Moreover, smart specialisation areas on environmental protection, resource management, biodiversity and risk prevention, but also construction; mobility and transport, energy; agri-food, agricultural resources and fisheries, are strongly

characterised by their sustainable nature. All regions take sustainable development into account in the definition of their smart specialisation areas. Smart specialisation areas in the fields of materials, mechanics and chemistry, as well as factories of the future, significantly integrate **eco-innovation issues**.

To put this into perspective on a European scale, the health and ICT sectors appear to be the main markets targeted by the European regions' RIS3<sup>9</sup>.

Illustration 28: smart specialisation area distribution pattern by target market in each region



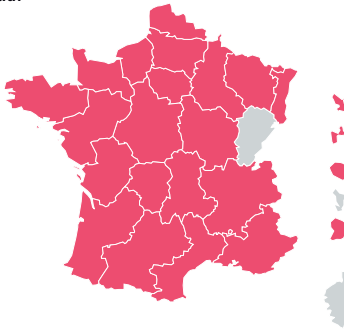
Source: CGET analysis

<sup>9</sup> Smart Specialisation Strategies and Regional Operational Programmes and Linkages with Key Enabling Technologies, DG Research and Innovation (Inno-Group, SQZ and Innova), September 2014

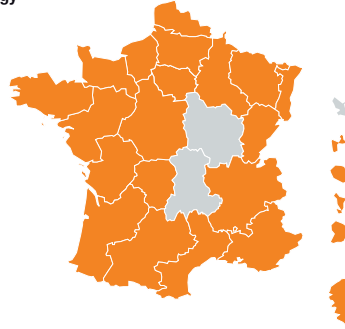


Illustration 29: regional positioning diagram in the RIS3 by target market

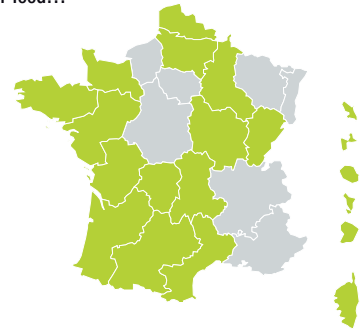
Health



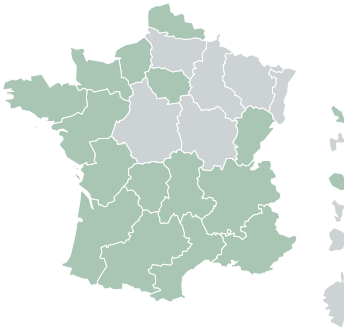
Energy



Agri-food...



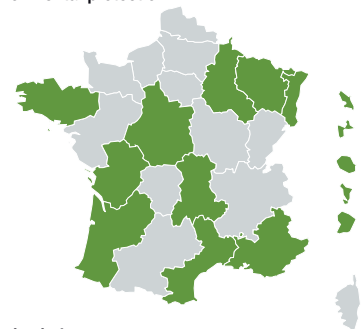
ICT, IT...



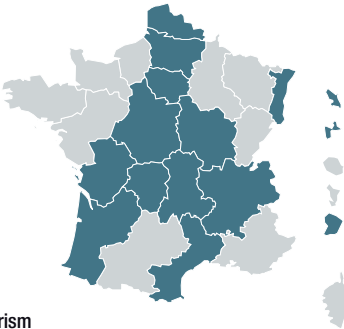
Materials, Mechanics, Chemistry



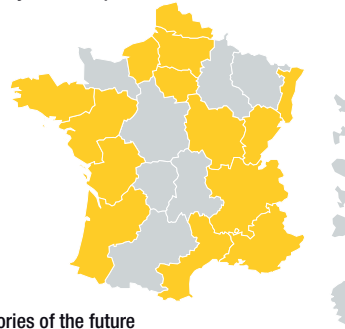
Environmental protection...



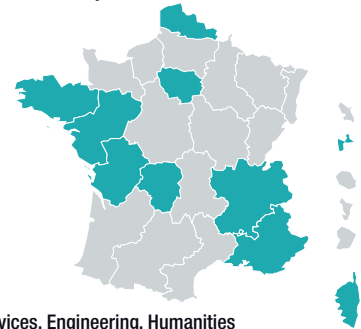
Construction



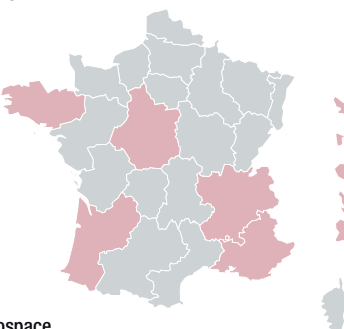
Mobility and transport



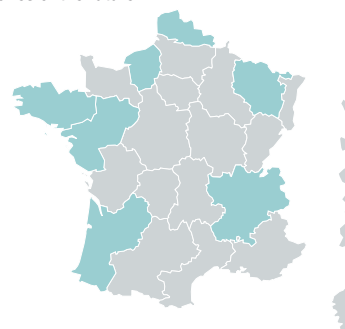
Creative industry



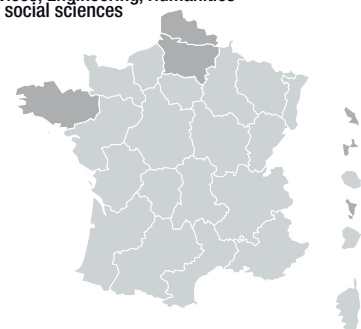
Tourism



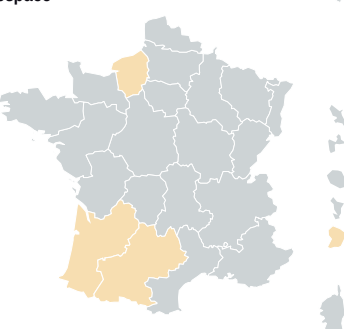
Factories of the future



Services, Engineering, Humanities and social sciences



Aerospace



These maps are a representation of the regions' positioning, presented in their RIS3, therefore they do not reflect the regional economic fabric in its entirety. For example, some sectors supported as part of the regional economic development, innovation and internationalisation strategy may not be supported under the RIS3.



For more information on smart specialisation areas, see above for the map of smart specialisation areas.

Source: CGET analysis

## 4.2 INFRA- OR SUPRANATIONAL INTER-REGIONAL COOPERATION, IN A VARIETY OF FORMS, PRIMARILY AT LOCAL LEVEL OR WITH INNOVATION DRIVING TERRITORIES...

**The inter-regional cooperation promoted in the RIS3 was unevenly defined according to the region.** In certain RIS3, this definition was very detailed for each smart specialisation area. In other regions, this definition is far less specific. Some of the regional reflections on cooperation will be refined when the strategy is deployed. In addition, certain regions only promoted existing cooperation while others focused more on projects. Finally, in some cases, the cooperation showcased tends to be of an institutional nature, while in others it tends to be long-term cooperation between the innovation ecosystem stakeholders, or sometimes within the framework of projects. Despite the diversity of approaches adopted, a number of trends can be identified.

### 4.2.1 Regional disparities in the geography of inter-regional cooperation

**The vast majority of regions are involved in inter-regional cooperation on a European or international scale, albeit to varying extents.** This international cooperation primarily concerns France's neighbouring countries, essentially Germany, Benelux, the UK but also Spain, Italy and Switzerland. Some of this collaboration targets more distant partners such as Scandinavian countries, the USA, Canada or China.

Some regions like Nord-Pas-de-Calais or Franche-Comté are primarily involved in cross-border cooperation, which is consistent with their border location.

In overseas regions, cooperation concerns the neighbouring regions, notably the Antilles, but also focuses on international relations (Caribbean and the USA for the Antilles, Madagascar or countries from the Common Market for Eastern and Southern Africa – COMESA – for La Réunion).

**It should however be noted that most of the inter-regional cooperation on the mainland is with neighbouring regions.** This is notably the case with the regions of Western France (Bretagne, Haute-Normandie, Basse-Normandie and Pays de la Loire), as well as the centre of France (Bourgogne, Limousin), generally engaged in extensive cooperation with their neighbouring regions in their RIS3.

Certain regions build preferential cooperative relationships with one or two regions in a variety of domains, as in the case of Haute-Normandie and Basse-Normandie, as well as Bretagne and Pays de la Loire.

Other regions are extremely dynamic in terms of cooperation with numerous regions, on a selected number of themes for each partner region: this applies to Bourgogne, which cooperates with Franche-Comté, Champagne-Ardenne, Alsace, Rhône-Alpes and Centre; or Alsace, in cooperation with Franche-Comté, Provence-Alpes-Côte d'Azur, Languedoc-Roussillon, Île-de-France, Basse-Normandie, Rhône-Alpes, Pays-de-la-

Loire, Midi-Pyrénées, Nord-Pas de Calais, Centre, Lorraine and Haute-Normandie.

**Certain regions collaborate with more distant French regions** (e.g.: Île-de-France with Rhône-Alpes, Lorraine with Pays de la Loire). These more distant collaborations strongly focus on regions where innovation is particularly dynamic, such as Île-de-France and Rhône-Alpes, which is in keeping with the dissemination of innovations across the territories expected of a smart specialisation logic.

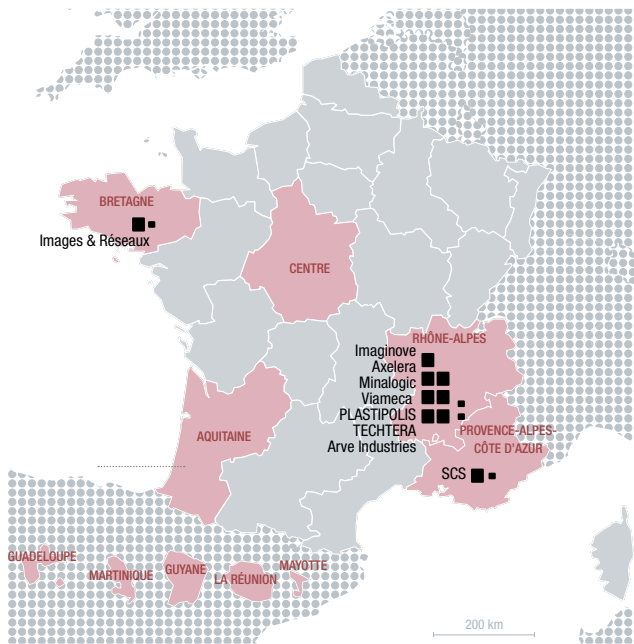
### 4.2.2 A level of inter-regional cooperation which is to be assessed with regard to the concentration or diversity of the smart specialisation areas at the centre of these collaborations

**Certain regions cooperate on each of their smart specialisation areas,** (for example Bourgogne, Midi-Pyrénées, Haute-Normandie, Basse-Normandie, Corsica and Bretagne). **Other regions have not attempted to be comprehensive and focus on cooperation on certain smart specialisation areas,** like Alsace, Provence-Alpes-Côte d'Azur, Pays de la Loire, Picardie and Limousin. **Finally, some regions embrace cooperation in research and innovation as a whole** (for example Franche-Comté and Nord-Pas de Calais).

**Analysing the geographical breakdown of the smart specialisation areas by target market will also enable the regions to envisage new forms of cooperation** (see the diagram and map of smart specialisation areas: illustrations 15, 16 and 29). The health and energy sectors featured in most regions could be effective fields of cooperation.

By way of illustration, in terms of tourism, certain regions essentially focus on the link between tourism and the digital sector, like Martinique, while others prefer emphasising heritage tourism and eco-tourism, like Mayotte, Réunion and Guyanne; others yet place primary emphasis on tourism and creative industries like Guadeloupe. The Rhône-Alpes region stands out with its positioning on tourism and sport. The analysis of these specific positioning characteristics in the field of tourism can serve as a basis for reflection on possible inter-regional cooperation in these fields.

**Illustration 30: regional positioning in the field of tourism**



- Competitiveness cluster in the specialisation area, highlighted in the RIS3
- Business hub in the specialisation area, highlighted in the RIS3

Sub-markets	Regions	Smart Specialisation Areas
Tourism and digital technologies	Aquitaine	Embedded software and connected objects
	Centre	ICT and services for national heritage tourism
	Martinique	Production of digital and software services and applications
	Provence-Alpes-Côte d'Azur	Tourism – cultural industries and digital content
Eco-tourism and cultural tourism	Centre	ICT and services for heritage tourism
	Mayotte	Enhancement of the natural and cultural heritage
	Réunion	Production of emotions in experiential eco-tourism
	Guyane	Tourism and eco-tourism
Tourism and creative industries	Provence-Alpes-Côte d'Azur	Tourism – cultural industries and digital content
	Guadeloupe	Promotion of creative industries
	Bretagne	Social and citizen innovations for an open and creative society

Source: CGET analysis

#### 4.2.3 Inter-regional cooperation practices which come in a variety of forms

The cooperation mentioned, whether existing or to be created, results in partnerships between regions (notably via Inter-reg cooperation, participation in thematic European networks, etc.), in cooperation within or between competitiveness and other clusters, and structures created thanks to the investment programme for the future (Labex, Equipex, IRT, etc.), or in collaborations between innovation ecosystem stakeholders (laboratories, transfer centres, universities, businesses, etc.).

This cooperation can result in institutional cooperation, specific projects (notably European projects, the joint filing of patents, etc.) or cooperation based on common equipment (partnerships between or within Equipex for example).

It should be noted that, out of the 71 competitiveness clusters, 33 have a multi-regional dimension. The inter-regional dimension essentially involves 2 adjacent regions (22 out of 33 clusters). Competitiveness clusters appear to be natural drivers of inter-regional cooperation in terms of innovation in the RIS3.



# CONTENTS

---

p 50	<b>5.1</b>	<b>LINKS BETWEEN THE RIS3 AND THE ERDF OPERATIONAL PROGRAMMES</b>
p 50	<b>5.2</b>	<b>LINKS BETWEEN THE RIS3, HORIZON 2020 AND COSME</b>
p 57	<b>5.3</b>	<b>LINKS BETWEEN THE RIS3 AND THE INNOVATION UNION</b>
p 57	<b>5.4</b>	<b>THE RIS3 AS A POSSIBLE DRIVER FOR EUROPEAN INNOVATION PROGRAMMES IN RURAL AND COASTAL AREAS</b>
p 59	<b>5.5</b>	<b>STRATEGIC LINKS BETWEEN THE RIS3 AND THE "NEW INDUSTRIAL FRANCE" POLICY</b>
p 61	<b>5.6</b>	<b>LINKS BETWEEN THE RIS3 AND THE "INVESTMENT PROGRAMME FOR THE FUTURE" POLICY</b>
p 62	<b>5.7</b>	<b>LINKS BETWEEN THE RIS3 AND THE "NEW DEAL FOR INNOVATION" POLICY</b>
p 63	<b>5.8</b>	<b>THE STATE-REGION PLANNING CONTRACT: A STRATEGIC FRAMEWORK FOR THE COHERENCE OF INNOVATION POLICIES</b>
p 63	<b>5.9</b>	<b>LINKS BETWEEN THE RIS3 AND THE FRENCH CLUSTER POLICIES: COMPETITIVENESS CLUSTERS, BUSINESS HUBS AND OTHER CLUSTERS</b>

# SECTION 5

---

## **LINKS BETWEEN THE RIS3 AND THE NATIONAL AND EUROPEAN INNOVATION POLICIES**

**With a view to maximising the leverage effect of the collective effort in the territories and improving European competitiveness, the linkage and consistency of the innovation support schemes are crucial.** The purpose of this section is therefore to set out the links between the RIS3 and the European innovation policies (operational programme, Horizon 2020, COSME, Innovation Union, etc.) as well as the coherence between the RIS3 and the national policies such as the Investment programme for the future, the new industrial France (34 industrial revival plans), the State-Region planning contracts, the competitiveness cluster and business hub support policies and the new deal for innovation.

## 5.1 LINKS BETWEEN THE RIS3 AND THE ERDF OPERATIONAL PROGRAMMES

Regional research and innovation strategies for smart specialisation are an ex-ante condition of the ERDF operational programmes and, as such, must relate to these documents.

In France, for the 2014-2020 period, the European regional development fund (ERDF) has been allocated €8.4 billion under the “investment in growth and employment” objective and €1.1 billion under the “European territorial cooperation” objective. As an instrument of the European economic, social and territorial cohesion policy, the purpose of the ERDF is to reinforce economic and social cohesion within the European Union by correcting imbalances between EU regions.

For this new programming period, the European Commission requires that the programmes concentrate a substantial amount of their budget on a limited number of themes depending on the fund, which is referred to as thematic concentration. The purpose of this thematic concentration is to maximise the leverage of European funds. For the ERDF, this concerns thematic objectives 1 to 4 (out of the 11 thematic objectives which guide the deployment of the European structural and investment funds):

- reinforce research, technological development and innovation,
- reinforce the accessibility, use and quality of information and communication technologies (ICT),
- reinforce SMEs’ competitiveness,
- support the transition to a low-carbon economy in all sectors.

The importance of thematic objective 1 is therefore underlined through this thematic concentration obligation. This is reflected in the total amount of the ERDF dedicated to this thematic objective for France: €1.54 billion is allocated to this objective out of a total allocation of €8.4 billion. Only thematic objectives 4 (energy transition) and 3 (SMEs) fare slightly better, with ERDF allocations for France ranging from €1.6 billion to €1.7 billion.

In specific terms, all ERDF operational programmes of the French regions integrate all or part of the regional RIS3. The majority of regions explicitly referred to the regional RIS3 in the main document of the operational programmes (in addition to the appendices). Some took it a step further by clearly detailing the links between the operational programme and the regional RIS3: the Martinique and Midi-Pyrénées regions, for example, clearly outlined these links.

## 5.2 LINKS BETWEEN THE RIS3, HORIZON 2020 AND COSME

**COSME is the new European programme for the competitiveness of enterprises and SMEs, launched in 2014. It has been allocated a €2.3 billion budget for the 2014-2020 period. Its purpose is to:**

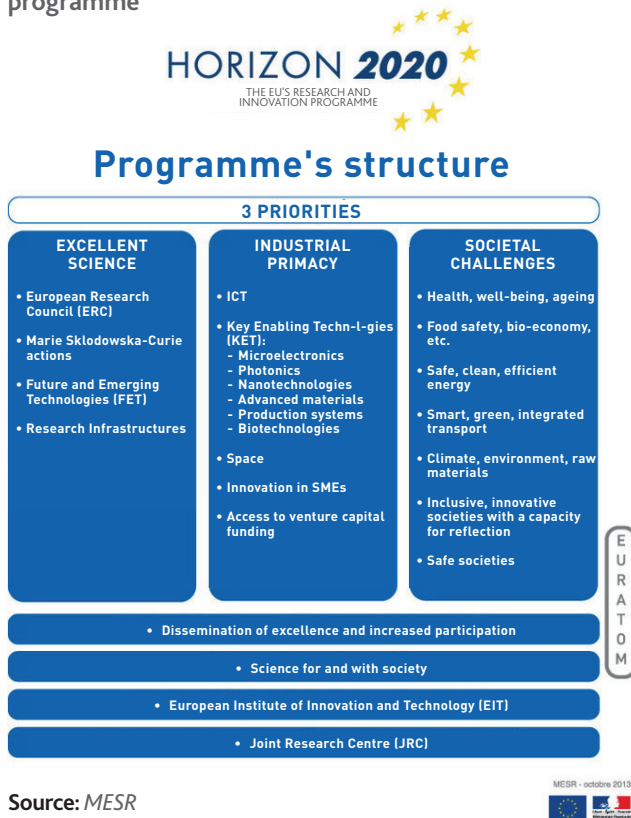
- make it easier for SMEs to access funding,
- create an environment conducive to the creation and growth of businesses,
- encourage entrepreneurship in Europe,
- reinforce the sustainable competitiveness of European businesses,
- help the SMEs operate outside their country of origin and improve their access to the markets.

**In addition to COSME, HORIZON 2020 is the European Union’s new research and innovation funding programme for the 2014-2020 period.** It combines the European Union’s research and innovation funding mechanisms, which amount to a total of €79 billion. Its purpose is to:

- reinforce the European Union’s worldwide position in research, innovation and technological domains,
- guarantee Europe’s competitiveness by investing in technologies and professions of the future, with a view to “smart, sustainable and inclusive growth”,
- reinforce the appeal of the ‘Europe of research’,
- address people’s concerns (health, environment, clean energy, etc.) and provide tentative responses to societal challenges.



Illustration 31: architecture of the Horizon 2020 programme



The budget dedicated to these two programmes (more than €81 billion including €79 billion for Horizon 2020), is a crucial funding source for regional economic actors.

Smart specialisation should help optimise the impact of the structural funds for research and development, innovation and the competitiveness of businesses, while increasing the synergy between the cohesion policy and the research framework programme – Horizon 2020. While the cohesion policy is designed to act in close coordination with the "COSME" business competitiveness and innovation framework programme and the "Horizon 2020" research framework programme, the tasks assigned to these programmes remain distinct. COSME and Horizon 2020 focus on supporting excellence, mutual learning cooperation between researchers and businesses. At the same time, the cohesion policy supports the reinforcement of the regions' ability to innovate as part of a progression up the "stairway to excellence", the promotion of a specific knowledge base in every region, skills for innovation and the local development of innovative applications, derived from enabling technologies designed by leading regions, for critical activity specified by territory. It is therefore worth examining the nature of the links between the RIS3 and Horizon 2020 observed in the RIS3. The principal links observed in the RIS3 are the key enabling technologies (KET), ICT, societal challenges and innovation within the SMEs.

It should be noted that only three regions (Bretagne, Midi-Pyrénées and Rhône-Alpes) mention European Innovation Partnerships (EIP) in their strategy. EIPs are bodies involved in the coordination of existing policies and programmes at European, national and regional level. In a given field, they aim at mobilising public and private European, national and regional stakeholders, throughout the research and innovation chain, around common objectives to address societal challenges; promote R&D and innovation; coordinate investments; accelerate the definition of standards and stimulate demand.

### 5.2.1 Consideration of key enabling technologies (KET) in the French regions' RIS3

The development of key enabling technologies is a central thread of the smart specialisation concept insofar as they set the boundary between the leading regions and those less advanced. The central role played by enabling technologies is also acknowledged by Horizon 2020, which identifies six key technologies, from amongst all the enabling technologies, whereby Europe intends to recapture global industrial primacy: **nanotechnologies, microelectronics, biotechnology, photonics, advanced materials and advanced production/manufacturing systems**. For the Commission and the advocates of smart specialisation, as not everything can be achieved everywhere, while the leading regions are investing in the invention of key enabling technologies (biotechnologies, ICT) or the combination of various key enabling technologies

### It is based on three core priorities:

- The "scientific excellence" priority involves the promotion of basic research, to open up new future and emerging technology possibilities, by supporting collaborative, interdisciplinary research and adopting innovative ways of thinking, providing Europe with world-class research infrastructures accessible to all researchers from Europe and elsewhere, and ultimately supporting the mobility of researchers from Europe and other countries towards and outside Europe.
- The "industrial primacy" priority means more support for innovation, improved assistance for innovative SMEs, easier access to venture capital funding and a focus on public-private partnerships in terms of ICT, nanotechnologies, biotechnologies, etc. This priority therefore covers: ICT; space; innovation in SMEs; access to venture capital funding and key enabling technologies – KET (microelectronics, photonics, nanotechnologies, advanced materials, production systems, biotechnologies).
- The "addressing societal challenges" priority translated into support for interdisciplinary projects in response to major challenges (health, sustainable farming, climate, transport, clean energy, etc.) facing Europe and that no Member State can tackle alone.

(bioinformatics), it would be in the interest of the “follower” regions to invest in the “joint invention of actual technological applications” derived from enabling technologies in one or more areas of the regional economy, in cooperation with the innovative regions. Therefore the smart specialisation strategy would be less about technological invention and more about the absorption of knowledge and its applications, because, for regions and businesses alike, competitiveness is less dependent on their R&D efforts and more so on knowledge absorption (education and training, advanced services) and dissemination (transfer of technology, ICT, entrepreneurship) within a regional innovation system.

**74% of the regions (i.e. 20 regions) integrate the issue of key enabling technologies into their RIS3 approaches.** Some territories are a notable exception, including certain overseas territories. On a European scale, two thirds of the regions took KETs into account in their RIS3<sup>10</sup>. Certain regions clearly set out the issues relating to European policies, including the consideration of KETs. In some cases, the regions integrated the issue of KETs into their diagnosis and into the choice of smart specialisation areas. The consideration of KETs is more implicit for other regions, as some of their specialisation areas cover some KETs. Other regions decided to dedicate one or more transverse themes to KETs, as in the case with the Bourgogne, Rhône-Alpes and Île-de-France regions. Out of the 20 regions that integrate KETs into their RIS3, 19 feature them in the definition of their smart specialisation areas, and 3 also dedicate one or several transverse themes to them.

The Aquitaine region took the issue of KETs into account explicitly. The matrix used by the region to define the smart specialisation areas helps cross-reference market sectors and technological sectors with a view to revealing the region’s potential specialisations. This matrix was built based on the European Commission’s proceedings on KETs. Most of the smart specialisation areas defined in Aquitaine integrate one or several KETs.

The Haute-Normandie region developed a specialisation area analysis grid to clarify the level of relevance of the potential smart specialisations identified. This analysis grid contains 9 criteria, including “Proximity with KETs”.

The Rhône-Alpes region, which could claim a leadership position in a number of KETs, explicitly underlined the coherence of its approach with European policies, notably in terms of KETs. Its strategy includes analysing the issues relating to KETs, the economic impact of KETs and the region’s positioning for every KET at European level. Smart specialisation areas also cover some KETs. The region decided to define a transverse theme dedicated to supporting KETs: “technological innovation, transfer and KETs”.

The Provence-Alpes Côte d’Azur region integrated the need to consolidate key enabling technologies into the “create value and employment through smart specialisation areas” transverse theme. The region was therefore positioned on every technology in accordance with several criteria: position of excellence,

critical mass of skills, etc. The region also strived to highlight the links with key technologies when defining its smart specialisation areas. The assessment and monitoring of the RIS3 include a “number of job creations within the scope of smart specialisation areas and KET” indicator.

The Limousin region included a section on the “consideration of KETs” in its RIS3, which stressed the links between the region’s differentiating and excellence themes and key enabling technologies. The strength of these links justified the region’s choices of smart specialisation areas. The region also promoted key technologies in the presentation of the smart specialisation areas.

The Midi-Pyrénées region also showed the links between the specialisation areas and the key enabling technologies defined in H2020.

The Bourgogne region defined a transverse theme dealing with the dissemination of key technologies. It also analysed smart specialisation areas by explicitly underscoring their links with key technologies.

**More generally, most KETs (advanced materials, photonics, nanotechnology, nano-electronics, biotechnology) were taken into account, roughly to the same extent.** The “Advanced materials” KET is slightly more often integrated into the French RIS3 than the other KETs. “Advanced production systems” is slightly less emphasised in RIS3. Compared with the European level<sup>11</sup>, the key technologies which feature most prominently in other European RIS3 are advanced materials, advanced industrial production systems and industrial biotechnologies. nanotechnology, micro and nano-electronics and photonics are less emphasised.

<sup>10</sup> M. Catinat – head of Unit KET, DG Enterprise and Industry, EC. Toulouse economic forum. 17/09/2014

<sup>11</sup> Smart Specialisation Strategies and Regional Operational Programmes and Linkages with Key Enabling Technologies, September 2014, Directorate-General for “Research and Innovation” of the European Commission

Illustration 32: consideration of key enabling technologies in Aquitaine's RIS3

Key enabling technologies	ICT	Nanotechnologies	Micro and nano-electronics	Biotechnology	Photonics	Advanced materials	Advanced production/manufacturing systems for the creation of cutting-edge technology components, involving one or several KETs
	<b>Transverse themes</b>						
Aquitaine's regional digital development strategy	X						
Reduce the different asymmetries and prevent the exclusion of certain types of businesses or territories from the innovation dynamic							
Guarantee the renewal and revitalisation of smart specialisation themes							
<b>Smart specialisation areas</b>							
Smart delivery of active ingredients for well-being and health							
Integrated healthcare circuit and patient assistance techniques			X				
Mobilisation of biomass and bio-refineries for industry							
Embedded software and connected objects			X				
Laser systems, photonics and imaging					X		
Green and smart mobility							
Chemistry and industrialisation of materials			X			X	
Precision agriculture and agri-food eco-efficiency				X			
Geosciences, metrology/monitoring for the sustainable management of natural resources							X
Timber-based eco-construction and energy efficiency of buildings							X
Competitive factories focused on the human factor							

Source: CGET analysis

### 5.2.2 Integration of digital issues into the RIS3

Information and communication technologies (ICTs) are highlighted within the "industrial primacy" priority of Horizon 2020. The purpose of the "Information and communication technologies" programme is to support the European ICT industry throughout its value chain and to enable European citizens, scientists and businesses to seize the opportunities offered by these technologies.

The existence of a strategic digital growth framework is also a precondition for eligibility for ERDF funding under thematic objective 2: "Improve access to, use and quality of information and communication technologies". The French regions defined a Stratégie de Cohérence Régionale d'Aménagement Numérique (SCoRAN or Regional Coherence Strategy for Digital Development), which constitutes this strategic framework.

Digital technologies stands out as a decisive feature of the French regions' RIS3. 23 French regions identified digital technologies as an innovation driver and as a key issue for the territory. 16 French regions defined at least one smart specialisation area directly linked to the digital market. In addition, 10 regions defined one or more transverse themes focused on the development and dissemination of digital technologies. The Poitou-Charentes, Limousin and Aquitaine regions identified digital technologies in both smart specialisation areas and transverse themes.

Alsace highlighted "digital economy" as a transverse theme.

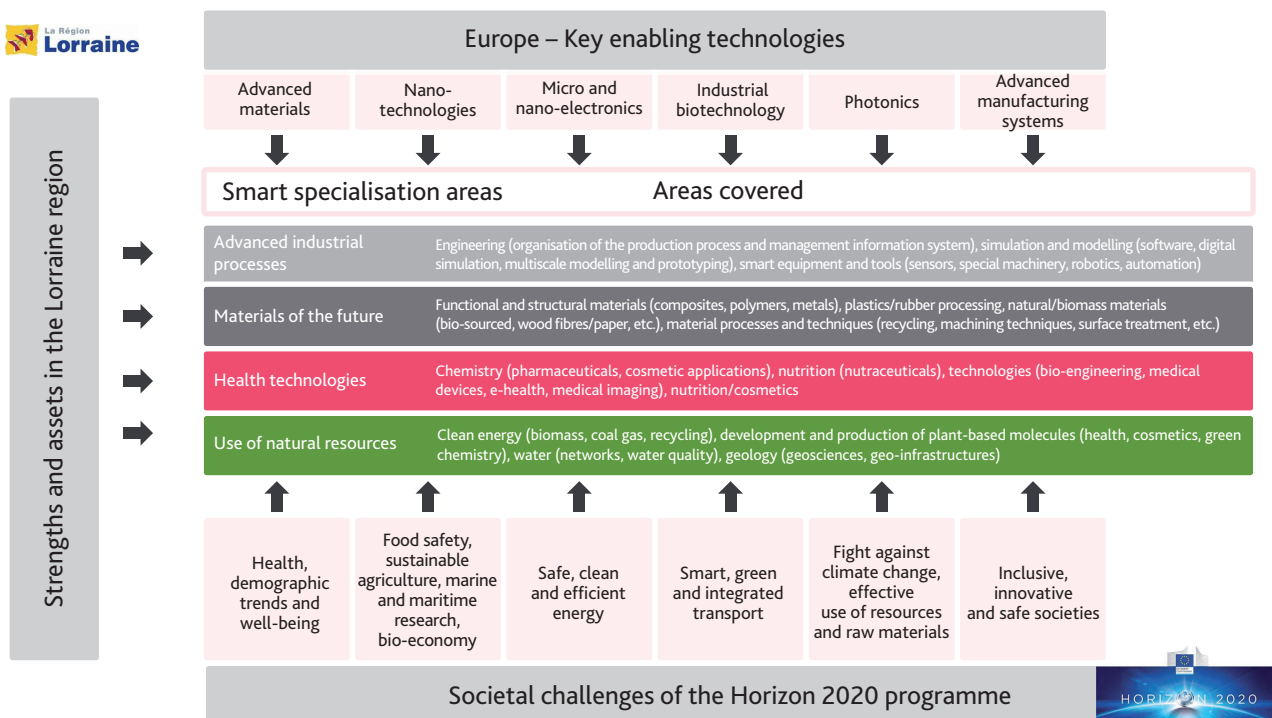
Bourgogne defined a transverse theme focused on "dissemination of key digital engineering technologies". Lorraine planned on "transforming digital technologies into a development and innovation driver". Champagne-Ardenne aimed at "transforming Champagne-Ardenne into a digital territory". Aquitaine highlighted "Aquitaine's regional digital development strategy". Picardie sought to "develop new digital tools and standardise their use". Limousin focused on the "digitisation of services in a rural environment and associated infrastructures". Poitou-Charentes highlighted the "digital tools to benefit innovation". Corsica and Guadeloupe underlined the development of ICT as a transverse intervention theme.

### 5.2.3 Links between the RIS3 and societal challenges

This third priority of the Horizon 2020 programme incorporates the following societal challenges: health/well-being/ageing; food safety/bio-economy; safe, clean and efficient energy; green and integrated smart transport; climate/environment/raw materials; inclusive, innovative societies with a capacity for reflection, and safe societies.

Overall, the regions defined their smart specialisation areas by taking societal challenges into account more or less explicitly. A lot of them addressed societal challenges explicitly in their introduction, specifying that the specialisation areas defined respond to these challenges. For other regions, smart specialisation areas covered societal challenges, particularly that of health/well-being/ageing, safe, clean and efficient en-

Illustration 33: Integration of societal challenges into Lorraine's RIS3



Source: Lorraine's RIS3

ergy, green and integrated smart transport, climate/environment/raw materials, food safety/bio-economy, as mentioned formerly, in section 3.

The Bourgogne region stands out with the promotion of key technologies as well as societal challenges in its RIS3 approach. For each specialisation area, the region clarified the link with the societal challenges.

The Lorraine region has also adopted this method, analysing every specialisation area with regard to societal challenges.

Other regions chose to integrate the reflection on societal challenges from the smart specialisation area definition phase. For example, the Bretagne region defined societal challenges as one of the criteria of the smart specialisation areas' selection framework.

A few regions decided to introduce the societal challenges in their transverse themes. 'Climate, environment and raw materials' is the predominant challenge in these transverse themes.

Mayotte stands out by defining in its action plan an intervention area directly linked to societal challenges: "Promote and

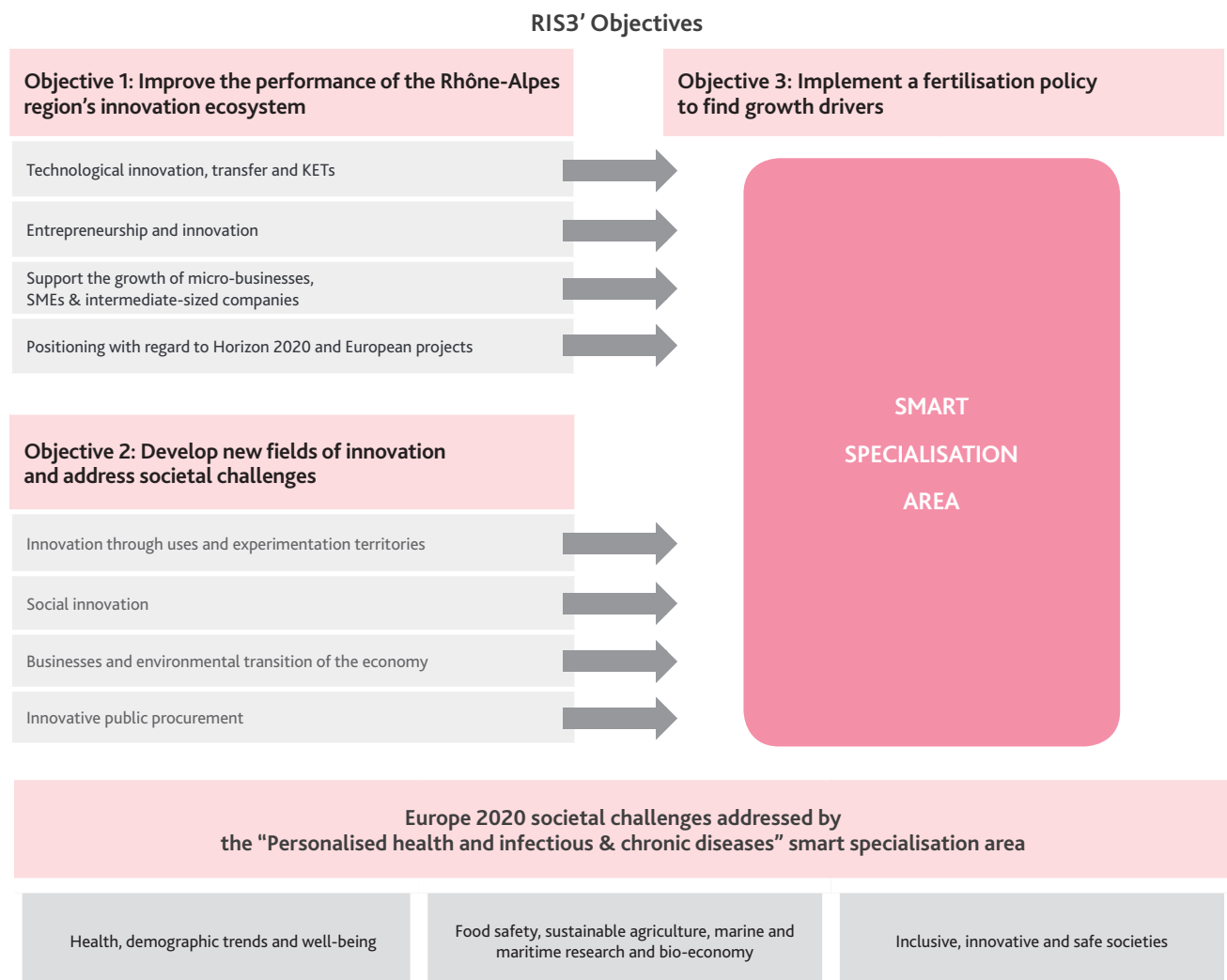
stimulate social and organisational innovations to respond to societal challenges".

The Picardie region focused on "Promoting humanities and social sciences as part of the inter-disciplinary approach to major societal challenges".

The Nord-Pas de Calais region defined a transverse theme aimed at "integrating the issue of sustainable development and the need for a new development model into the debate, at the earliest possible stage".

In Rhône-Alpes, the issue of societal challenges is integrated into the diagnosis. The methodological approach was to cross-reference, from the start, the societal challenges and resulting application markets with the territory's areas of technological excellence in order to identify the smart specialisation areas. Societal challenges are also a strategic objective of the RIS3 which aims at "developing new fields of innovation and respond to societal challenges". Societal challenges are covered in the following transverse themes: "social innovation", "Horizon 2020 positioning and European projects" and "businesses and environmental transition of the economy".

Illustration 34: integration of societal challenges into the RIS3 of the Rhône-Alpes region



Source: Rhône-Alpes' RIS3

Illustration 35: analysis of the links between societal challenges and the specialisation areas of the Rhône-Alpes region

Societal challenges	Societal challenges	Health	Bio-economy	Energy	Transport	Climate change and resources	Inclusive societies	Safety
<b>Transverse themes</b>								
Technological innovation, transfer and KETs								
Entrepreneurship and innovation								
Support the growth of micro-businesses, SMEs and intermediate-sized businesses								
Positioning with regard to Horizon 2020 and European projects								
Innovation through uses and experimentation territories								
Social innovation								
Businesses and environmental transition of the economy								
Innovative public procurement								
<b>Smart specialisation areas</b>								
Personalised health and infectious & chronic diseases	X	X					X	X
Energy storage networks	X			X	X	X	X	
Digital technologies and caring systems	X	X		X	X	X	X	
Smart mobility uses, technologies and systems	X	X		X	X	X	X	
Smart, high energy efficiency buildings	X	X		X		X	X	
Industrial processes and eco-efficient factories	X	X	X	X		X	X	
Mountain sports, safety and infrastructures	X	X		X	X	X	X	

Source: CGET analysis



### 5.3 LINKS BETWEEN THE RIS3 AND THE INNOVATION UNION

The Innovation Union is one of the seven flagship initiatives of the "Europe 2020" strategy. This initiative intends to transform Europe into a territory conducive to innovation, as innovation is considered key for sustainable growth and for a fairer and greener society. This initiative includes an action plan featuring more than thirty measures. The key elements of the Innovation Union are as follows:

- promote excellence in education and skills development,
- create the European Research Area (ERA),
- focus European financial instruments on the Innovation Union's priorities,
- promote the European Institute of Innovation and Technology (EIT) as a governance model in Europe,
- improve access to funding for innovative businesses (European financial tools, funding of SMEs and State aid),
- create a single innovation market (including innovation in public procurement),
- promote openness and capitalise on Europe's creative potential (European Design Leadership Board / European Design Excellence Label),
- spread the benefits of innovation across Europe (structural funding),
- increase social benefits (social innovation and public sector research, European social fund),
- join forces to achieve progress via European innovation partnerships,
- capitalise on our policies by seeking external help (attracting talent, standardisation, intellectual property),
- reform research and innovation systems,
- assess progress (innovation monitoring chart).

The French regions' RIS3 are coherent with a number of these priorities. The RIS3 represent a strategic framework which should help **focus financial instruments designed to support innovation on the smart specialisation areas** of every territory. Moreover, many RIS3 emphasise the need to **improve access to funding for innovative businesses and mainly for innovative SMEs. Openness and reinforced cooperation with other French and European regions** are also key in the RIS3. **Social innovation** also stands out as a specific focal point for many regions. The issue of procurement and public innovative contracting is more rarely addressed. Finally, the need to evaluate

the territories' progress via the establishment of a **monitoring and assessment system** is integrated into the French regions' RIS3, although the definition and implementation of these systems are not yet completed in many regions.

### 5.4 THE RIS3 AS A POSSIBLE DRIVER FOR EUROPEAN INNOVATION PROGRAMMES IN RURAL AND COASTAL AREAS

The purpose of the RIS3 is to support growth and the creations of jobs based on knowledge and innovation, in territories with strong research and innovation capacity as well as in rural and coastal areas with more limited research and innovation capacity. **Innovation in rural and coastal environments, for example in the agricultural, aquacultural, maritime and marine sectors, can benefit from the mobilisation of different European funds, notably as part of the RIS3. Smart specialisation, which is consistent with an integrated actions logic in favour of innovation, and therefore does not solely concern the ERDF, can act as a lever to combine the European funds dedicated to innovation and knowledge transfer in rural and coastal areas (EAFRD, EMFF, Horizon 2020).**

The **European maritime and fisheries fund (EMFF)** has been allocated a €588 million budget under the common fisheries policy. The ambition of the EMFF is to guarantee that fishing and aquaculture activities are sustainable in the long term from an environmental perspective while yielding economic benefits. One of the EMFF's priorities is to encourage innovative, competitive and knowledge-based fishing and aquaculture (including the associated processing), by reinforcing technological development, innovation and knowledge transfer. In France, the EMFF will make a balanced contribution to the thematic objective for the "reinforcement of SME competitiveness in the fisheries and aquaculture sector and onshore activities relating to fishing" and "preservation and protection of the environment by encouraging the rational use of resources". In this context, actions can be envisaged to support innovative businesses.

The **European Agricultural Fund for Rural Development (EAFRD)** which supports rural development as part of the common agricultural policy, has been allocated €11.4 billion. The EAFRD's action should contribute to the development of rural territories and a more balanced, climate-friendly agricultural sector, more resilient to climate change, more competitive and innovative. The EAFRD's interventions are based on 6 priorities, one of which "notably encourages the transfer of knowledge and innovation" for and by those involved in these fields and in rural areas. It encourages cooperation between field players and research and development stakeholders. In France, the strategic objectives selected concern, among other things, innovation support as a way to improve competitiveness.

**Horizon 2020 also emphasises the bio-economy as a societal challenges:** food safety, sustainable agriculture and forestry, marine and maritime research and research on inland waterways.



The RIS3 allows the different EU funds to act in a complementary manner to reinforce innovation and the transfer of knowledge in the agricultural, agri-food, aquacultural and forestry sectors and in rural and coastal areas. The RIS3 is an opportunity to take into account the link between sectors and transverse issues such as water, energy for example, between rural or coastal territories and the innovation ecosystems, and the territorialisation of strategic innovation domains (ICT, sustainable mobility, etc.) in rural and coastal territories.

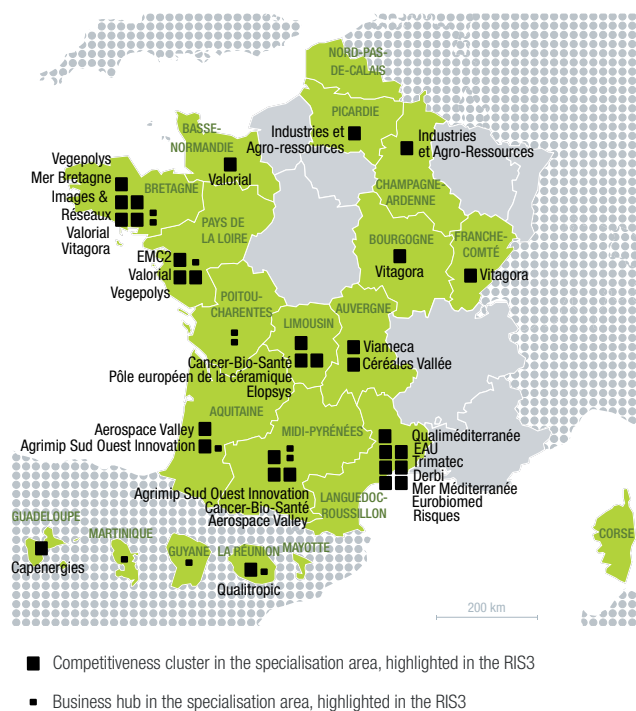
The mobilisation of the EAFRD and EMFF is not really emphasised in the RIS3. Only a few regions refer to this fund in their RIS3:

The RIS3 of the Bretagne region mentions the need to coordinate with the EMFF, highlights the participation in the European innovation partnership as part of the EAFRD and asserts the region's desire to reinforce this involvement as part of its action to support its smart specialisation area in "sustainable agri-food chain for quality food".

The Guyane, Picardie and Pays-de-la-Loire regions underline the need for coherence between the RIS3 and the EAFRD and aim at mobilising the EAFRD for some smart specialisation areas.

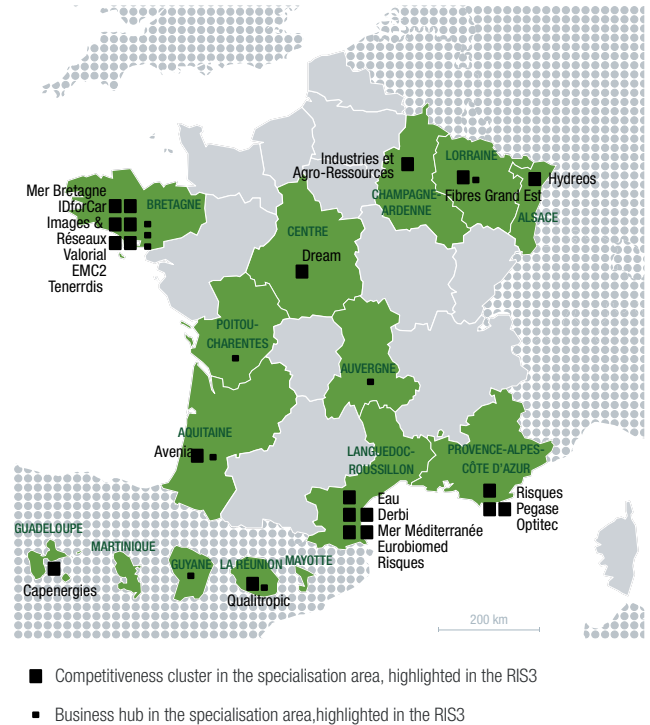
The RIS3 of the Midi-Pyrénées region highlights the integration of the EAFRD into the process and clarifies the link between the horizontal themes and the EAFRD.

Illustration 36: location of the regions with specialisation areas focusing on agri-food, agricultural resources and fisheries



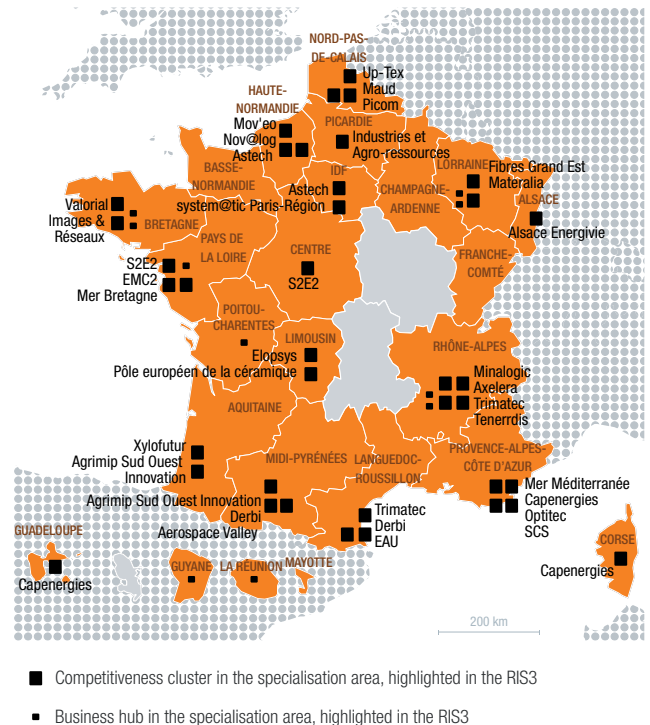
Source: CGET analysis

Illustration 37: location of the regions with specialisation areas in the "environmental protection, resource management, biodiversity and risk prevention" sector



Source: CGET analysis

Illustration 38: location of the regions with specialisation areas in the "energy" sector



Source: CGET analysis

La Réunion sets out the resources mobilised for each smart specialisation area selected and points out its ambition to mobilise the EAFRD in its action plan for the “Production of solutions in a tropical bio-economy to benefit the economy of the living world” area.

**However, many regions promote specialisation areas focused on agri-food, agricultural resources, fisheries, environmental protection, resource management, biodiversity, risk prevention or energy.**

**Certain regions highlight smart specialisation areas linked to the coastal nature of their territory, without however mentioning EMFF funding.**

The RIS3 of the Guyanne region underscores a smart specialisation area focusing on the “development of marine resources and primary resources”.

Mayotte chooses to focus its action on the “sustainable use of the sea and development of maritime activities” area.

The Pays-de-la-Loire region highlights a smart specialisation in “maritime industries: new constructions and energies”.

Finally, the Bretagne region, which identifies “blue growth” as one of the seven objectives of Bretagne 2014-2020, integrates this issue into the “maritime activities to promote blue growth” smart specialisation area. The emphasis on this smart specialisation area is indicative of the Bretagne economy’s strong maritime commitment. The region wants to reinforce its position by becoming a major world region for blue growth. The region also underlines how this smart specialisation area is coherent with national and European policies: an action plan for a maritime strategy in the Atlantic region was completed in 2013, as a result of the Atlantic strategy adopted by the European Commission in 2011. This action plan contributes to the implementation of the EU’s “blue growth” strategy.

## 5.5 STRATEGIC LINKS BETWEEN THE RIS3 AND THE “NEW INDUSTRIAL FRANCE” POLICY

**The new industrial France policy, launched in 2013, is the result of a strategic reflection designed to determine the priorities of the French industrial policy. It identifies 34 industrial plans to define the future of France’s industry.** After this policy was launched, the French regions were invited to adopt 10 plans, 5 of which were identified as 1st choice and 5 as 2nd choice. This policy was launched simultaneously with the RIS3 approach and the regions were able to adopt 10 of the 34 plans based on their reflection on smart specialisation areas. The analysis presented herewith relates to the links between the regions’ choice of specialisation areas and the adoption of 10 industrial plans per region. The operational links have yet to be developed.

**There are fairly strong strategic links between these policies.** Smart specialisation areas enabled the regions to justify their choice of 10 plans from amongst the 34 industrial plans. Certain regions explicitly clarified the links between these policies in the RIS3.

For example, Poitou-Charentes clarified the link between its smart specialisation areas and the five priority future-oriented sectors selected from amongst the 34 industrial plans.

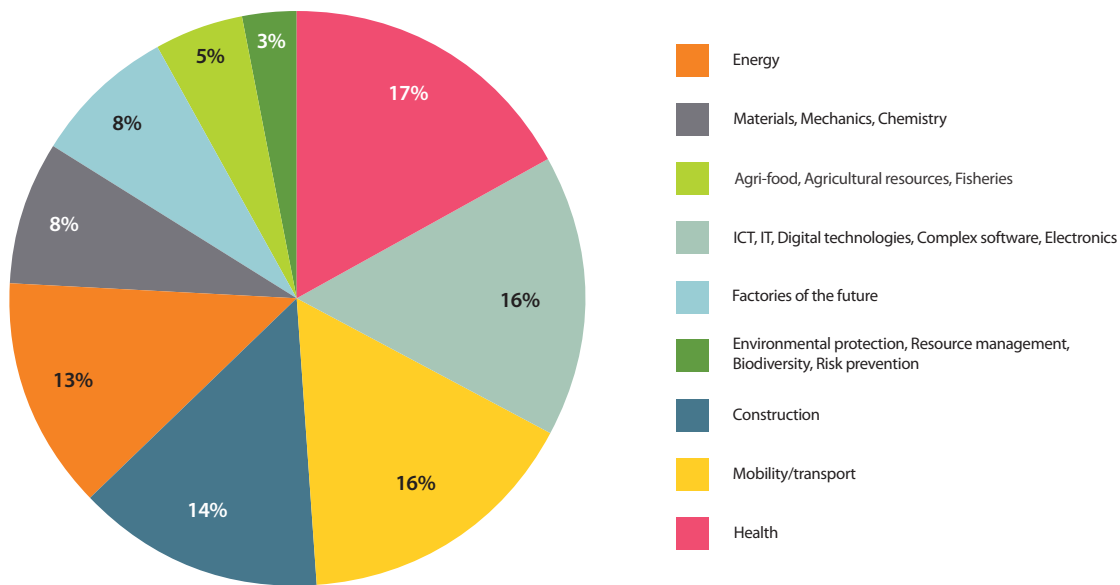
Auvergne developed a coherent economic development policy based on 5 themes identified as part of its smart specialisation approach, with similar themes observed in the 10 industrial plans selected for Auvergne. For the implementation of its strategy, a specific organisation was established, similar to that initiated for the new industrial France: businesses at the heart of the process, and the region and public authorities in general playing the role of development accelerators and facilitators.

**The regions’ positioning with regard to the industrial plans is generally consistent with the smart specialisation areas selected.** More than half of the industrial plans adopted are coherent with the smart specialisation areas selected (coherence ranges vary from 50% to 100%).

For example, all the industrial plans chosen by the **Picardie** region are coherent with the smart specialisation areas defined.



Illustration 40: breakdown of industrial plans prioritised by the regions, by market



Source: CGET analysis

## 5.6 LINKS BETWEEN THE RI3 AND THE "INVESTMENT PROGRAMME FOR THE FUTURE" POLICY

Launched in 2010, the ambition of the investment programme for the future was to address the major challenges facing France, by investing in higher education and vocational training, in research, industry and SMEs, in sustainable development and in all promising sectors such as the digital, biotechnology or nuclear industries. The objective was to encourage research and innovation while facilitating France's transition to the knowledge society, to return to strong and sustainable growth.

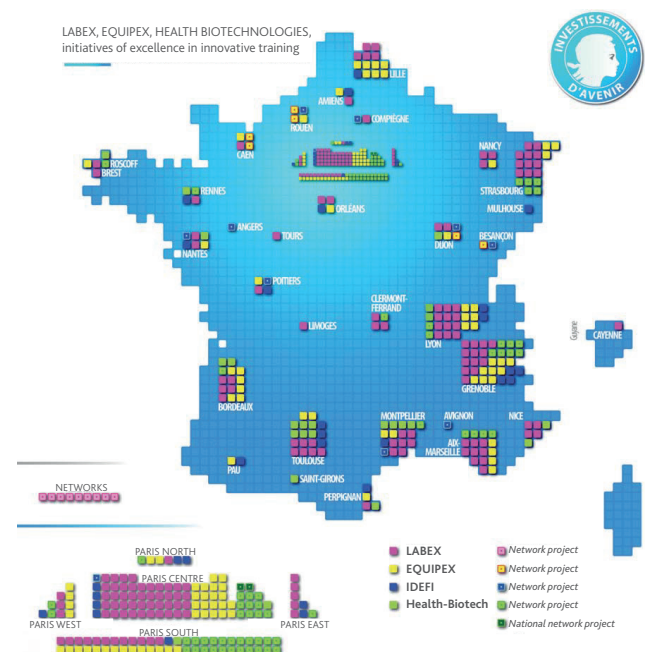
The logic behind the Investments for the Future is to concentrate the resources available on projects of excellence without taking into account any land use planning logic. By encouraging stakeholders to group together to raise their profile and leverage their assets, the investment programme for the future aims at reinforcing the strengths and potential of research and industry, against a backdrop of increasing competition which requires the configuration of innovative ecosystems consistent with a decompartmentalised international economy.

Investments for the Future is an ambitious €35 billion programme, €22 billion of which is dedicated to higher education and research. After the completion of 25 calls for projects, the results are positive with 14 research programmes implemented, 1,400 projects submitted, more than 400 projects selected by an independent international jury, 30,000 researchers involved in more than 100 cities.

The vast majority of regional diagnoses performed two and a half years after the launch of the investment programme for the future reveal that the investment programme for the future has created genuine territorial dynamism by encouraging local stakeholders to make the most of their complementarity

with a view to increasing their visibility and effectiveness. These diagnoses highlight the growth-generating effect of the **investment programme for the future**, which exceeds the circle of accredited dossiers. The calls for projects have encouraged the stakeholders as well as the regions to group together to create synergies and reach a critical size so that they can leverage their assets.

Illustration 41: location of the projects financed under the investment programme for the future



Source: Investment programme for the future – added value for the territories (summary of the investment programme for the future's territorial diagnoses), CGI-2013

The RIS3 approach encourages the territories to rely on and promote existing local strengths. The accredited projects financed under the investment programme for the future are a natural foundation on which the regions can configure their smart specialisation areas. Nearly 50% of the smart specialisation areas promoted in the RIS3 are based on a project financed with the investment programme for the future.

The Rhône-Alpes region emphasised projects financed by the investment programme for the future for each of its smart specialisation areas.

The Midi-Pyrénées region also highlighted initiatives of excellence financed under the investment programme for the future for each of the region's smart specialisation areas.

The Aquitaine region added an assessment of its successes under the investment programme for the future in appendix to its strategy.

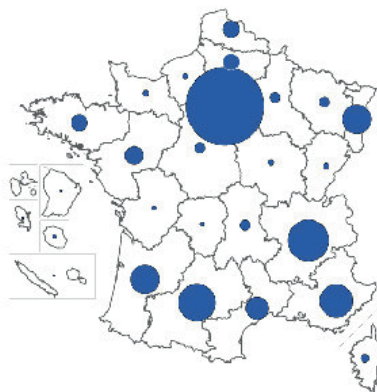
## 5.7 LINKS BETWEEN THE RIS3 AND THE "NEW DEAL FOR INNOVATION" POLICY

The new deal for innovation, launched in 2013, completes and reinforces the sectoral approach of the new industrial France and the 7 ambitions of the "Innovation 2030" commission. The new deal for innovation has a global ambition: transform France into a land of innovation, via four strategic pillars:

- **Innovation for all:** it aims at mobilising all forms of innovation, every talent in French society, by acting on cultural obstacles and the promotion of equal opportunities, by encouraging initiative, creativity, project work, a taste for industry and entrepreneurship, at all training stages and across society.
- **Open innovation:** the objective is to support the dynamism of ecosystems, the transfer of knowledge and technologies between research and businesses, and interaction between major corporations and SMEs in our territories.

Illustration 42: breakdown of the funding obtained by region upon completion of phases 1 and 2 of the investment programme for the future

Breakdown of the funding obtained by region upon completion of phases 1 and 2 of the investments for the future

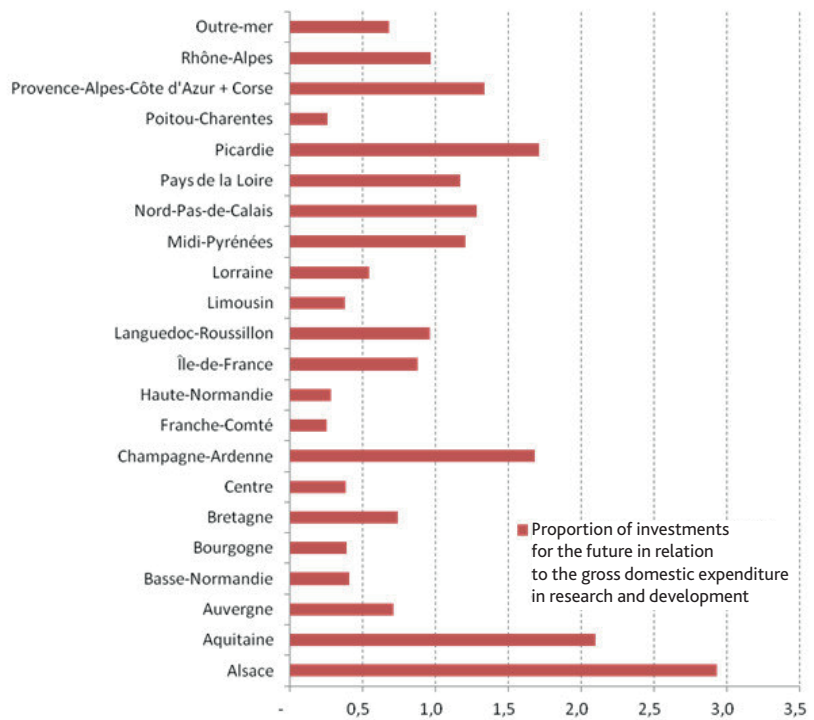


Funding allocated by region in € million



Proportion of investments for the future in relation to the research potential of each region

As far as research potential is concerned, the way the regions perform at the PIA programme affects their ranking



Interpretation example: Picardie receives 70% more than its own weight in French research potential

Source: French Ministry of National Education, Higher Education and Research



- **Innovation for growth:** the goal is to stimulate innovative businesses and create an environment conducive to their growth so that they can become tomorrow's champions.
- **Public innovation:** the ambition is to pursue a coordinated, coherent and effective public innovation policy, and to open public policies to innovation which benefits citizens.

**It sets out 40 transverse measures, organised around 4 operational objectives:**

- organise and evaluate public innovation policies,
- develop the culture of entrepreneurship and innovation,
- enhance the economic impact of public research through transfer,
- support the growth of businesses through innovation.

**These measures and strategic themes are consistent with the European Commission's expectations in terms of smart specialisation strategy (innovation in the broader sense, open innovation, coordination of innovation policies, policy assessment and monitoring, etc.) and feature in the regions' RIS3.** They also feature prominently in the horizontal themes of the regional strategies. All French regions have identified transverse themes linked to at least one strategic theme of the new deal for innovation. For example, a large number of regions have identified the development of the entrepreneurship and innovation culture and the improvement in the impact of public research through transfer as a transverse theme.

## 5.8 THE STATE-REGION PLANNING CONTRACT: A STRATEGIC FRAMEWORK FOR THE COHERENCE OF INNOVATION POLICIES

**The 2015-2020 State-Region planning contract is based on the following 5 priority themes:**

- higher education, research and innovation,
- innovation, future-oriented sectors and factories of the future,
- very high-speed broadband territorial coverage and development of digital uses,
- ecological and energy transition,
- multimodal mobility.

**The "innovation, future-oriented sectors and factories of the future" theme has several objectives:**

- implement a policy of territorialised sectors in synergy with the new industrial France,

- accompany the development of the factories of the future,
- support innovation within businesses,
- encourage the dissemination of the innovation culture,
- support the funding of SMEs and intermediate-sized businesses,
- anticipate the businesses' changing needs in terms of employment and skills,
- encourage the 'Territories as catalysts for innovation' initiatives, which aims at delivering full-scale demonstrators for innovative products or solutions.

**This theme has been designed as a strategic framework to ensure the coherence of the RIS3 with national innovation policies.** It was expected that the territories, by relying heavily on the RIS3, would generate a diagnosis and shared innovation strategy, resulting in the identification of decisive projects in these fields. Consequently, this process encouraged the consistency and links between the smart specialisation strategies and national innovation support policies, such as the new industrial France and the investment programme for the future for example.

**Generally speaking, the vast majority of territories (nearly 90%) relied heavily on their RIS3 to draft the "innovation, future-oriented sectors and factories of the future" theme of the State-Region planning contract.** The territories' smart specialisation areas are almost always listed. For the overseas territories, the proposed framework for the State-Region planning contract was organised differently. The RIS3 were therefore less decisive for some of these territories.

As this theme does not benefit from new funding in addition to existing sources (investment programme for the future), the links remain mainly strategic.

## 5.9 LINKS BETWEEN THE RIS3 AND THE FRENCH CLUSTER POLICIES: COMPETITIVENESS CLUSTERS, BUSINESS HUBS AND OTHER CLUSTERS

**In 2004, in the context of an increasingly competitive global economy, France launched the competitiveness clusters policy, which resulted in the accreditation of 71 competitiveness clusters.** These clusters were created to mobilise key competitiveness factors, with innovation capacity featuring prominently, and to develop growth and employment in buoyant markets. The objective of the third phase of this policy, which covers the 2013-2018 period, is to focus the action of competitiveness clusters on bringing innovative products and services to the market. The idea is to enhance the clusters' economic impact to boost business growth and employment. To implement this new ambition, the State manages this policy in conjunction with the regions. The objective is to increase the effectiveness of public action by establishing a closer partnership.

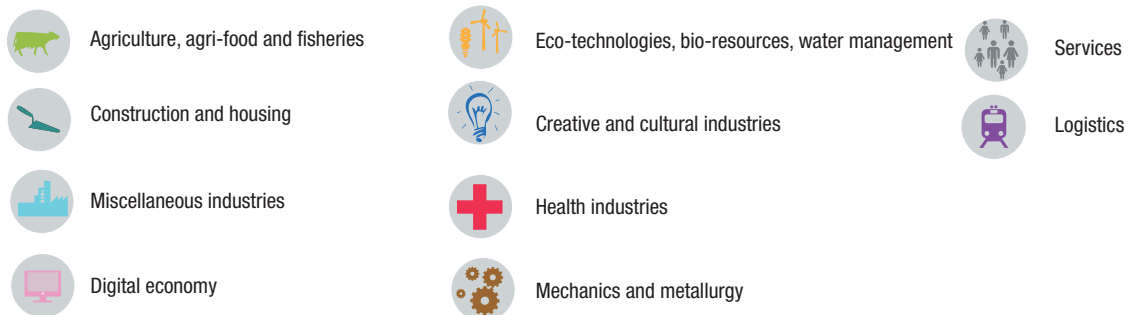




Illustration 44: map of the 121 business hubs in 2014



**Business hubs according to their area of activity**



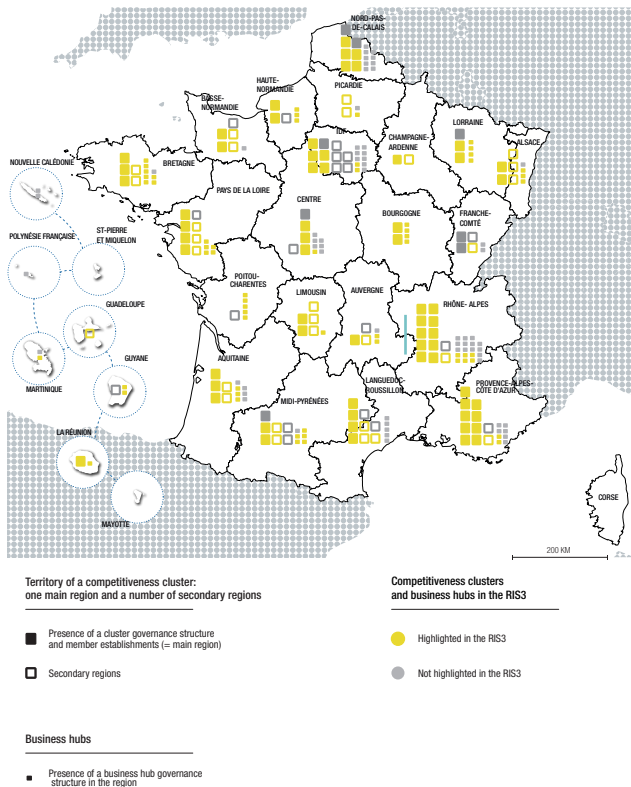
Source: CGET

While competitiveness clusters initially focus on the development of R&D and technological innovation, business hubs are positioned on the development of innovation in all its forms as well as actions closer to the market for businesses.

Certain regions simultaneously initiated their own clusters support policy. These include the Provence-Alpes Côte d'Azur region, with its regional innovation and inclusive economic development clusters (PRIDES) or the Nord-Pas de Calais region with its clusters of economic excellence and competitiveness.

These cluster policies have been key in the definition of smart specialisation areas. More than 60% of the smart specialisation areas are configured around at least one competitiveness cluster. Practically all the regions which host competitiveness clusters promoted them as a decisive aspect of the smart specialisation area. Nearly 60% of the smart specialisation areas revolve around a cluster, be it a regional cluster or a business hub. When considering only the business hubs, nearly 30% of the smart specialisation areas are structured around at least one business hub. Generally speaking, among the 23 regions hosting at least one business hub in their territory, 83% promoted at least one in their strategy. Furthermore, the 2014 assessment of the business hubs policy (Erdyn and Technopolis) revealed that the hubs mentioned in the RIS3 are more likely than others to generate innovations which, at national level, demonstrates the relevance of the choice of the hubs highlighted in relation to the objectives of the RIS3.

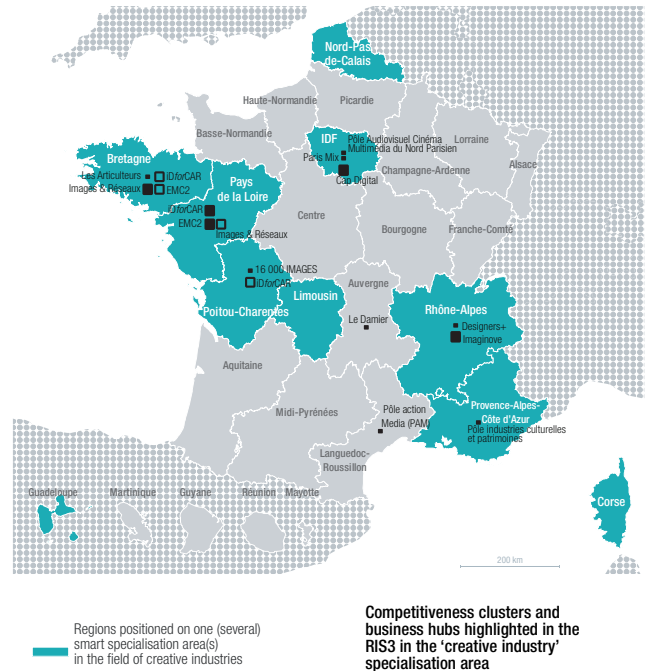
Illustration 45: competitiveness clusters and business hubs promoted in the regional RIS3



Source: CGET analysis

By way of illustration, there is a very close link between the location of the clusters and hubs in the creative industry and the regions' smart specialisations on this theme.

Illustration 46: location of the competitiveness clusters and business hubs and regions' choice of smart specialisation in the creative industry



Source: CGET analysis



# CONTENTS

---

p 70 .....**6.1 IN BRIEF**

p 70 .....**6.2 THE NEXT STAGES FOR A SUCCESSFUL PROCESS**

# SECTION 6

---

## CONCLUSION

## 6.1 IN BRIEF...

**These Regional RIS3 were defined by the French regions in very different contexts.** Certain French regions have well-developed research, development and innovation capacities and belong to the regions identified as Europe's leaders. Other regions are characterised by an economic fabric less inclined to innovate. Therefore the methods used to appropriate and locally translate the smart specialisation concept varied considerably in nature. **However, this process gave every region an opportunity to set out and clarify its specific characteristics, assets and positioning in terms of innovation while adopting an entrepreneurial discovery approach which mobilises the region's innovation ecosystem, based on a strategy prepared, backed and deployed in a shared manner.**

**These strategies constitute a new strategic framework to maximise the leverage effect of innovation support in the territories,** generate more innovation, bring more innovative products and solutions to the market, maximise and diffuse their effects, **at a turning point when the regions' competences in terms of economic development are being reinforced.**

In addition, this process was conducted at a time when the national and European strategic framework for research and innovation was in the midst of significant change (new cohesion policy, Horizon 2020, new industrial France, new deal for innovation, investment programme for the future). **This approach was a first step in addressing the need for coherence, coordination and visibility of innovation policies on the different regional, national and European scales, expressed by innovation stakeholders.**

**In France, the definition of the RIS3 was facilitated by the recent experience in the definition and implementation of the Regional Innovation Strategies,** initiated during the 2007-2013 contracting period. Further investigation was of course required to integrate the concept of smart specialisation: consideration and implementation of the entrepreneurial discovery principle, reinforced configuration of the regional innovation governance, identification of more specific smart specialisation areas based on the territory's assets and driving forces, integration of the principle of openness and collaboration into the RIS3, etc. The required action plans along with the monitoring and assessment systems have yet to be finalised.

A number of central themes emerge from the French regions' RIS3 in terms of innovation on a national scale:

- **Health** is a specialisation area for nearly all French regions.
- **Energy, as well as agri-food, agricultural resources and fisheries,** are core themes for a vast majority of regions.
- **ICT; materials, mechanics and chemistry, environmental protection, resource management, biodiversity and risk prevention; as well as mobility and transports,** are specialisation domains for more than half of the regions.

**Aerospace industry; services, engineering, humanities and social sciences; but also tourism, creative industry and factories of the future** are the least represented markets. Factories of the future are a new sector in the RIS3 compared with the regional innovation strategies, which may be explained by its integration into the new industrial France as an industrial plan.

**Smart specialisation areas focusing on construction; mobility and transport; energy as well as agri-food, agricultural resources and fisheries, are strongly characterised by their sustainable nature.** All regions take **sustainable development** into account in the definition of their smart specialisation areas. **Eco-innovation issues** are very much integrated into smart specialisation areas in the fields of materials, mechanics and chemistry, as well as factories of the future.

## 6.2 THE NEXT STAGES FOR A SUCCESSFUL PROCESS...

**Defining a strategy is only the first stage of the smart specialisation process which will extend to the entire 2014-2020 contracting period.** The RIS3 will now give rise to action plans and will be implemented, monitored, assessed, adjusted, notably according to the development of the economic fabric and regional innovation ecosystem. Smart specialisation areas may therefore be altered.

**The definition and smooth implementation of action plans consistent with the strategic ambitions identified in the RIS3 is a crucial stage** to ensure that the objectives determined by the territories are achieved. Ensuring that the needs of the territory and the diagnosis performed match the definition and subsequent implementation of the action plan is a key requirement for satisfying the expectations of the regional innovation ecosystems. This matching process is all the more important as it will be carried out in consecutive stages, potentially by different stakeholders and structures.

**The implementation of a high-performance monitoring and assessment system is a key stage in the deployment of the strategies,** insofar as this system will help monitor the progress of the territories with regard to the objectives determined, while informing the territories of the required strategic developments over time.

**The success of these strategies will depend on the territories' ability to mobilise and concentrate the resources on action plans designed to support their strategic objectives and activities.** One of the issues is the ability to maximise the funding packages available, notably by implementing an inter-fund logic, for example by optimising the synergy with the Horizon 2020 funding packages. This means that the territories should have sufficient knowledge of the projects funded by Horizon 2020, so that they can view the European structural and investment funds (ERDF, etc.) as tools to be mobilised, for example, upstream and downstream of the projects funded by the Horizon 2020 programme, to improve the skills of the ecosystem,

assist with the development of excellence projects, as well as reap the benefits of the projects funded by Horizon 2020 at territorial level.

**The success of this process will also depend on the ability to coordinate the approach over time**, to support an entrepreneurial discovery process involving the regional innovative ecosystem in the long term, based on the defined strategy, to coordinate with other French and European regions with a view to optimising the benefits of the transfer of skills, knowledge and technologies in the territories, etc.

**All these challenges could benefit from the exchange of good practices and inter-territorial cooperation. In addition to this analysis, other studies conducted in particular by the General Commission for territorial equality support this sharing of good practices:** "From regional innovation strategies to smart specialisation strategies: good practices identified in eight French regions", "Study on innovation in low population density territories", "Guide for the preparation of the French regions' smart specialisation strategies" (see list of useful links).

**Further investigation would enable the French territories to consolidate their smart specialisation approach. The extension to European level of this national analysis of the RIS3** would facilitate the French regions' effort to establish reinforced cooperation with other European regions. The definition of a shared methodology transferable to all member States is a prerequisite (definition of a reference nomenclature, etc.).

As the RIS3 are part of a broader framework of regional public policies which includes the regional economic development, innovation and internationalisation strategy and the regional higher education, research and innovation plans, **it would be valuable to highlight the nature of the links with these other regional policies and enhance the positioning of the French regions presented herewith.**

As this regional positioning is likely to change over time, and as action plans have not yet been finalised and deployed, **this analysis should be kept up to date.**



# CONTENTS

---

p 74	<b>7.1</b>	<b>TABLE OF ILLUSTRATIONS</b>
p 75	<b>7.2</b>	<b>POSITIONING OF THE REGIONS BY TARGET MARKET</b>
p 81	<b>7.3</b>	<b>SCHEDULE AND METHODOLOGY APPLIED FOR THE SYNTHESIS OF FRENCH REGIONS' RIS3</b>
p 82	<b>7.4</b>	<b>RIS3 SUMMARY REGIONAL FACT SHEETS</b>

# SECTION 7

---

**ANNEXES**

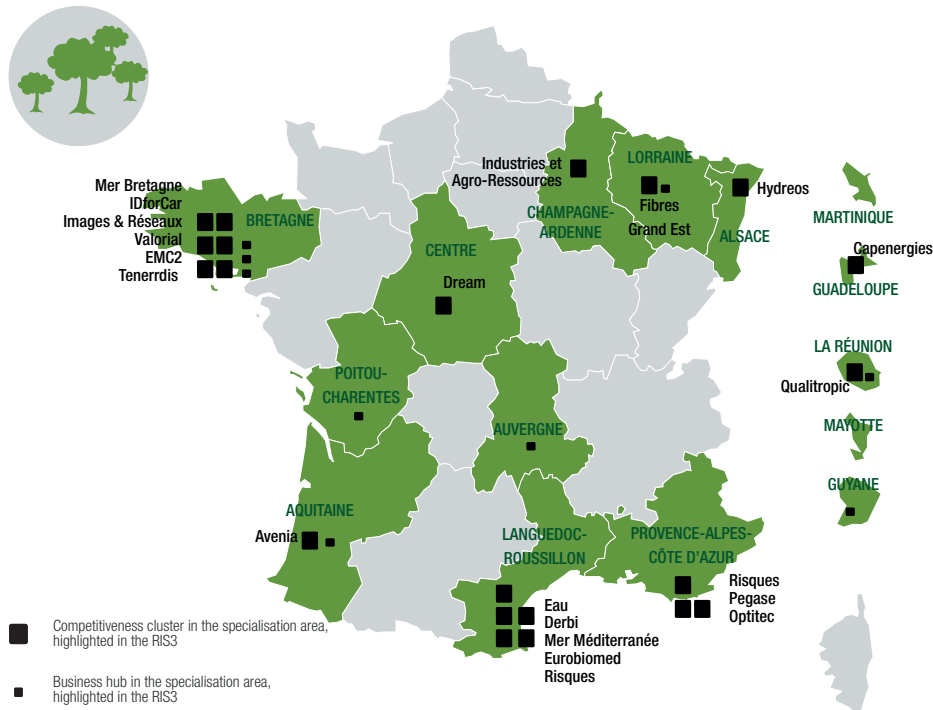
## 7.1 ANNEXE 1 - TABLE OF ILLUSTRATIONS

<b>Illustration 1:</b> employment share of the productive sectors.....	8
<b>Illustration 2:</b> sectoral concentration index by region.....	9
<b>Illustration 3:</b> characterisation of the economic fabric by employment area.....	9
<b>Illustration 4:</b> annual employment evolution by region – 2007/2011.....	10
<b>Illustration 5:</b> share of establishments with more than 200 employees.....	10
<b>Illustration 6:</b> number of administration and business researchers and share of researchers in the working population.....	11
<b>Illustration 7:</b> number of patents filed, all technological domains combined.....	11
<b>Illustration 8:</b> share of R&D expenditure in percentage of GDP.....	12
<b>Illustration 9:</b> share and distribution of R&D expenditure by region, in 2010.....	12
<b>Illustration 10:</b> the quadruple innovation helix highlighted in certain RIS3.....	16
<b>Illustration 11:</b> map of existing assets on the “creative industries and images” market.....	17
<b>Illustration 12:</b> the 7C grid.....	19
<b>Illustration 13:</b> smart specialisations by employment zone.....	19
<b>Illustration 14:</b> cyclical process applied to the RIS3 with a view to its renewal.....	20
<b>Illustrations 15 et 16:</b> map of smart specialisation areas of the French regions’ RIS3.....	22
<b>Illustrations 17 et 18:</b> diagram of the transverse intervention themes defined in the French regions’ RIS3.....	26
<b>Illustration 19:</b> objectives and assessment indicators common to all smart specialisation areas in the RIS3 of the Aquitaine region.....	31
<b>Illustration 20:</b> objectives and assessment indicators selected for the “Mobilisation of biomass and bio-refineries for the industrial sector” theme in the RIS3 of the Aquitaine region.....	31
<b>Illustration 21:</b> list of assessment indicators by objectives in the RIS3 of the Picardie region.....	32
<b>Illustration 22:</b> combination of assessment indicators in the Midi-Pyrénées region’s RIS3.....	33
<b>Illustration 23:</b> extract from the monitoring table of the Centre region’s RIS3.....	34
<b>Illustration 24:</b> extract from the assessment indicators table of the RIS3 of the Provence-Alpes Côte d’Azur region.....	35
<b>Illustration 25:</b> private and public innovation funding – Midi-Pyrénées.....	38
<b>Illustration 26:</b> illustration of the one-stop portal for the support and funding of innovation projects – Maison Innovergne.....	39
<b>Illustration 27:</b> breakdown of the smart specialisation areas of the French regions’ RIS3 by target market.....	42
<b>Illustration 28:</b> smart specialisation area distribution pattern by target market in each region.....	43
<b>Illustration 29:</b> regional positioning diagram in the RIS3 by target market.....	44
<b>Illustration 30:</b> regional positioning in the field of tourism.....	46
<b>Illustration 31:</b> architecture of the Horizon 2020 programme.....	51
<b>Illustration 32:</b> consideration of key enabling technologies in Aquitaine’s RIS3.....	53
<b>Illustration 33:</b> integration of societal challenges into Lorraine’s RIS3.....	54
<b>Illustration 34:</b> integration of societal challenges into the RIS3 of the Rhône-Alpes region.....	55
<b>Illustration 35:</b> analysis of the links between societal challenges and the specialisation areas of the Rhône-Alpes region.....	56
<b>Illustration 36:</b> location of the regions with specialisation areas focusing on agri-food, agricultural resources and fisheries.....	58
<b>Illustration 37:</b> location of the regions with specialisation areas in the “environmental protection, resource management, biodiversity and risk prevention” sector.....	58
<b>Illustration 38:</b> location of the regions with specialisation areas in the “energy” sector.....	58
<b>Illustration 39:</b> links between smart specialisation areas and industrial plans for the Picardie region.....	60
<b>Illustration 40:</b> breakdown of industrial plans prioritised by the regions, by market.....	61
<b>Illustration 41:</b> Location of the projects financed under the investment programme for the future.....	61
<b>Illustration 42:</b> breakdown of the funding obtained by region upon completion of phases 1 and 2 of the investment programme for the future.....	62
<b>Illustration 43:</b> map of the 71 competitiveness clusters.....	64
<b>Illustration 44:</b> map of the 121 business hubs in 2014.....	65
<b>Illustration 45:</b> competitiveness clusters and business hubs promoted in the regional RIS3.....	66
<b>Illustration 46:</b> location of the competitiveness clusters and business hubs and regions’ choice of smart specialisation in the creative industry.....	66

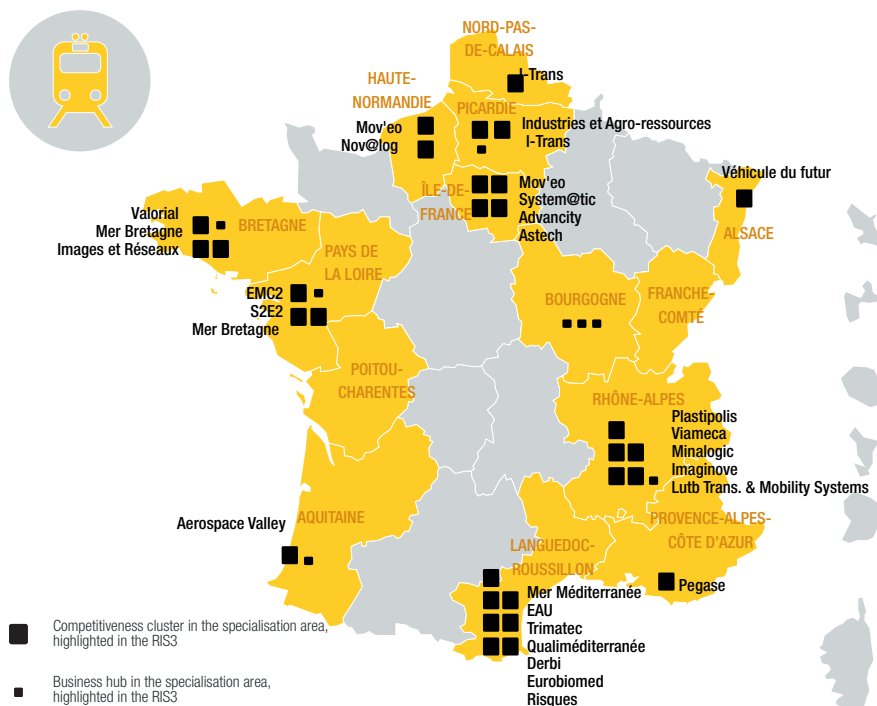
## 7.2 ANNEXE 2 - POSITIONING OF THE REGIONS BY TARGET MARKET

Interpretation advice: The competitiveness clusters and business hubs represented below are those highlighted in the RIS3's smart specialisation areas, classified by target market. Some clusters are not directly positioned in the specialisation domain advocated in the RIS3, but can provide skills useful in developing the specialisation area. They have therefore been showcased as a major asset of the territory for this smart specialisation area.

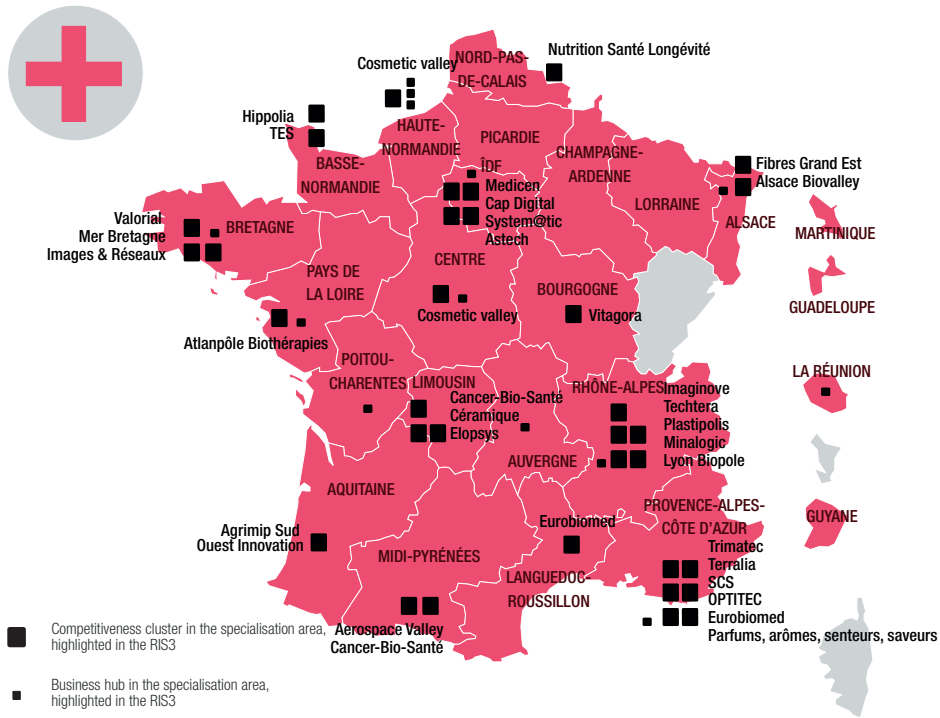
Regions positioned on one (several) smart specialisation area(s) in the field of environmental protection, resource management, biodiversity, risk prevention



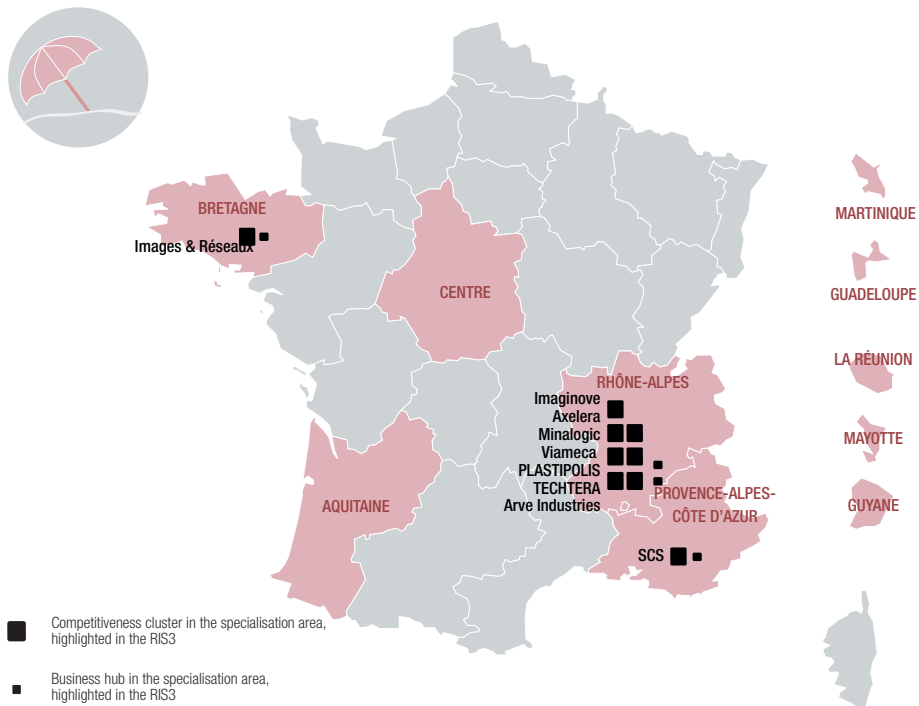
Regions positioned on one (several) smart specialisation area(s) in the field of mobility and transport



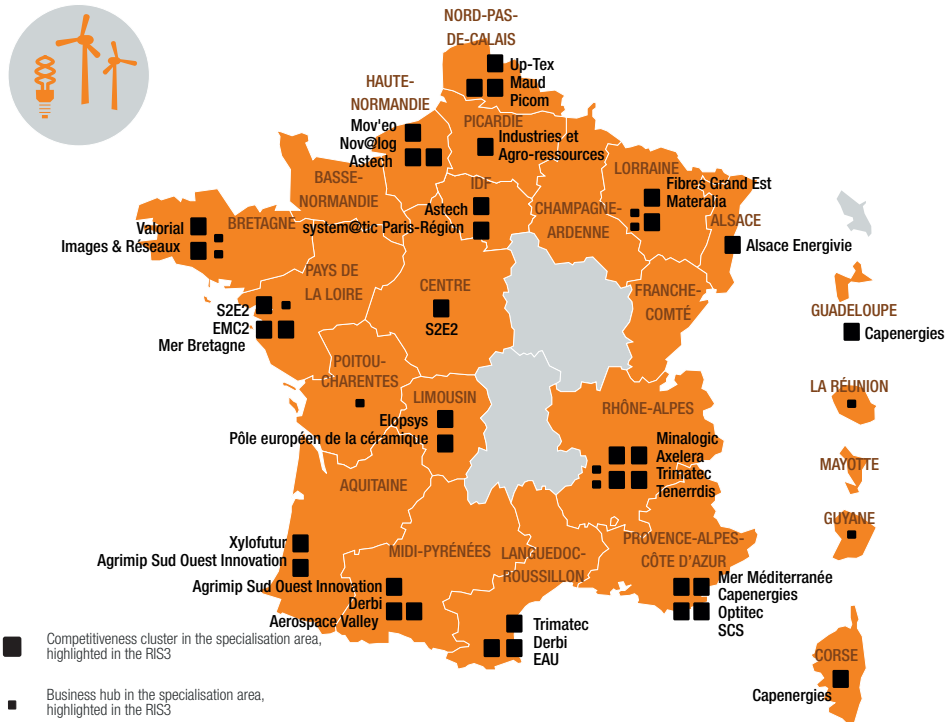
Regions positioned on one (several) smart specialisation area(s) in the field of health



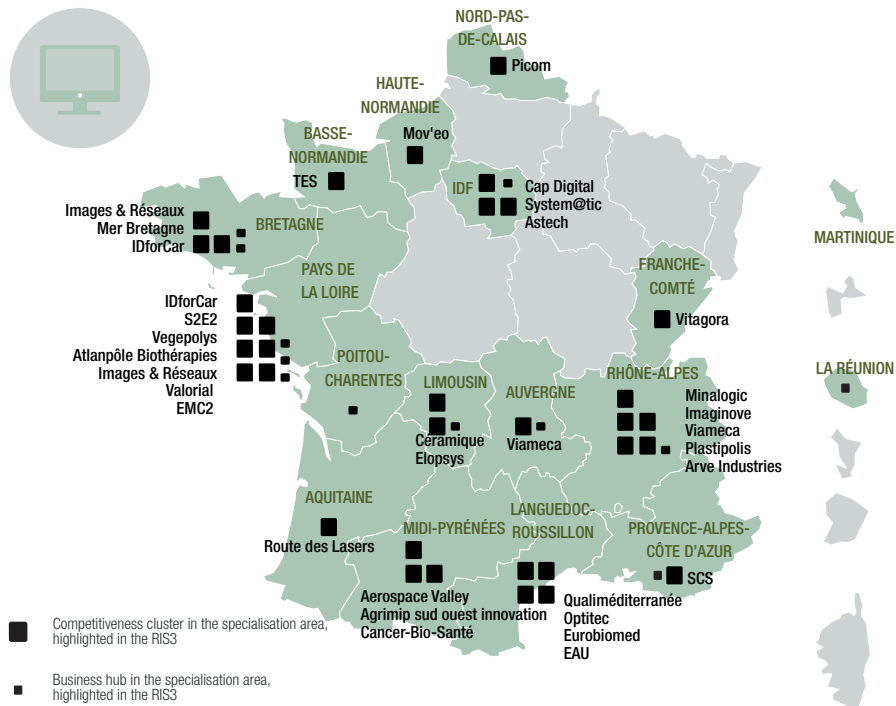
Regions positioned on one (several) smart specialisation area(s) in the field of tourism



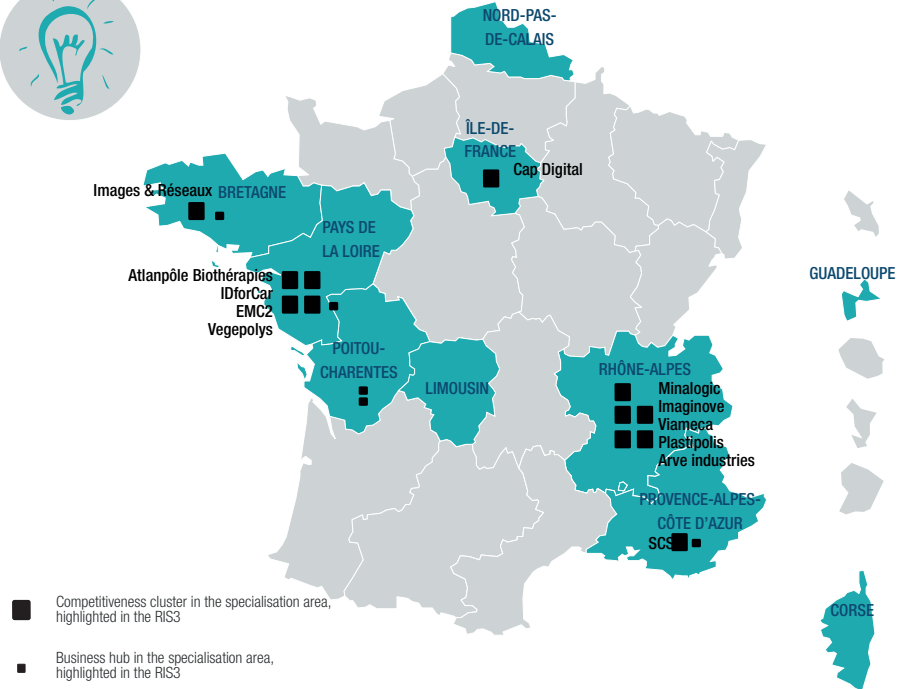
Regions positioned on one (several) smart specialisation area(s)  
in the field of energy



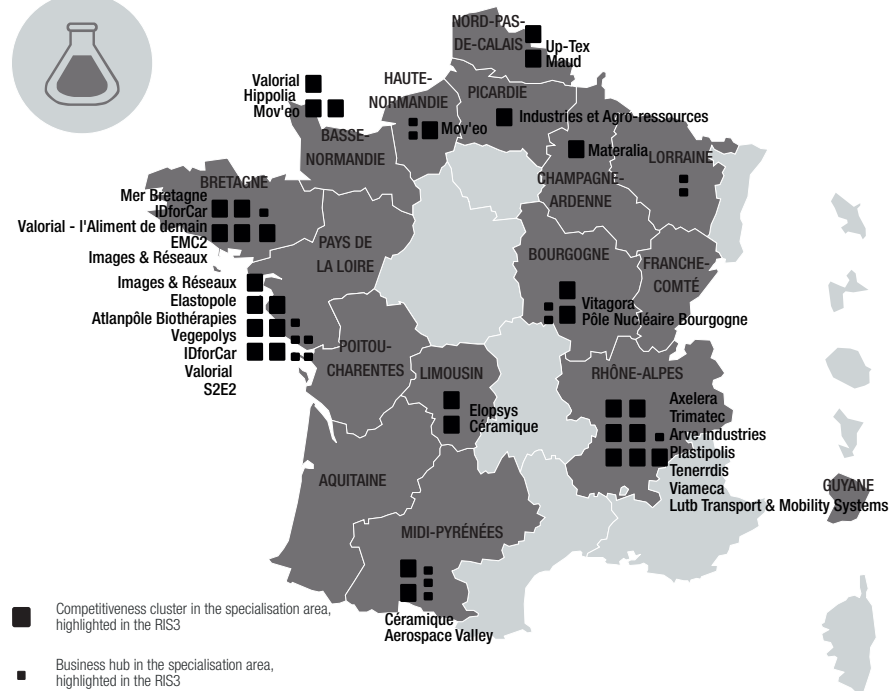
Regions positioned on one (several) smart specialisation area(s)  
in the field of ICT, IT, digital technologies, complex software



Regions positioned on one (several) smart specialisation area(s)  
in the field of creative industry

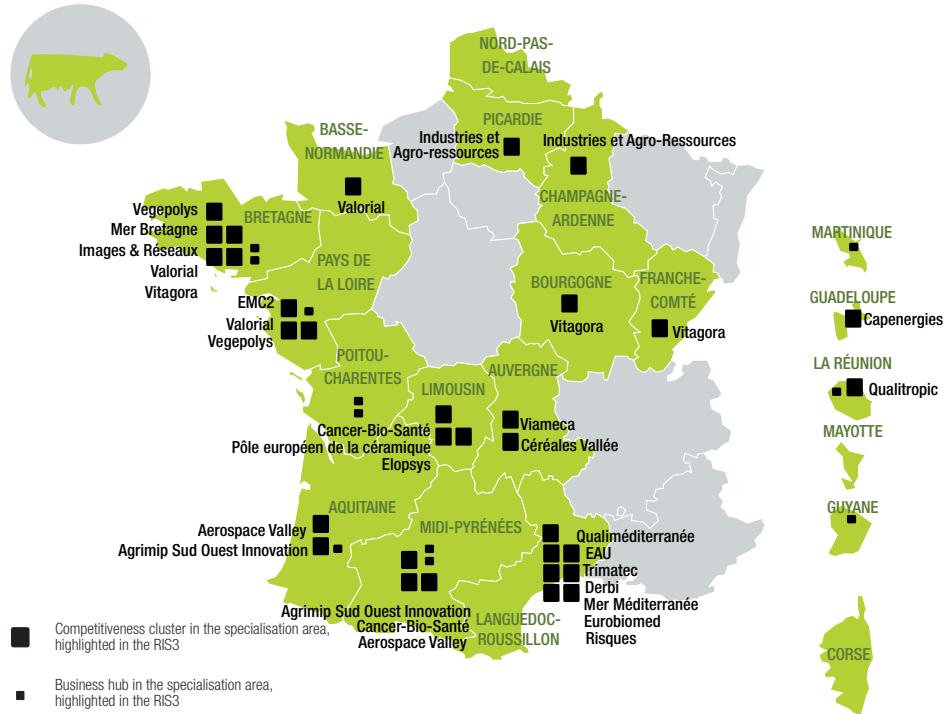


Regions positioned on one (several) smart specialisation area(s)  
in the field of materials, mechanics, chemistry

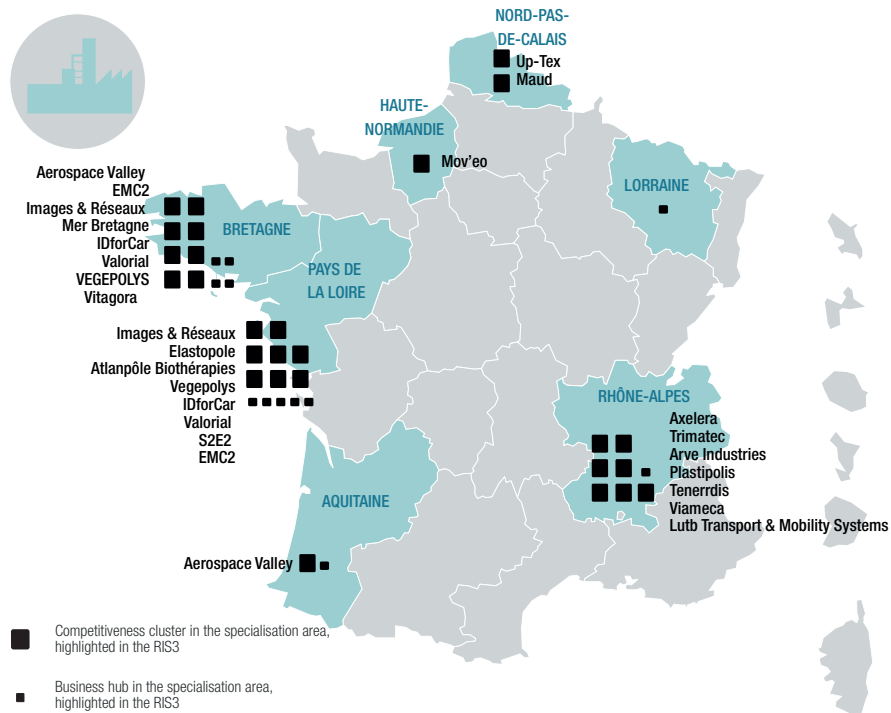




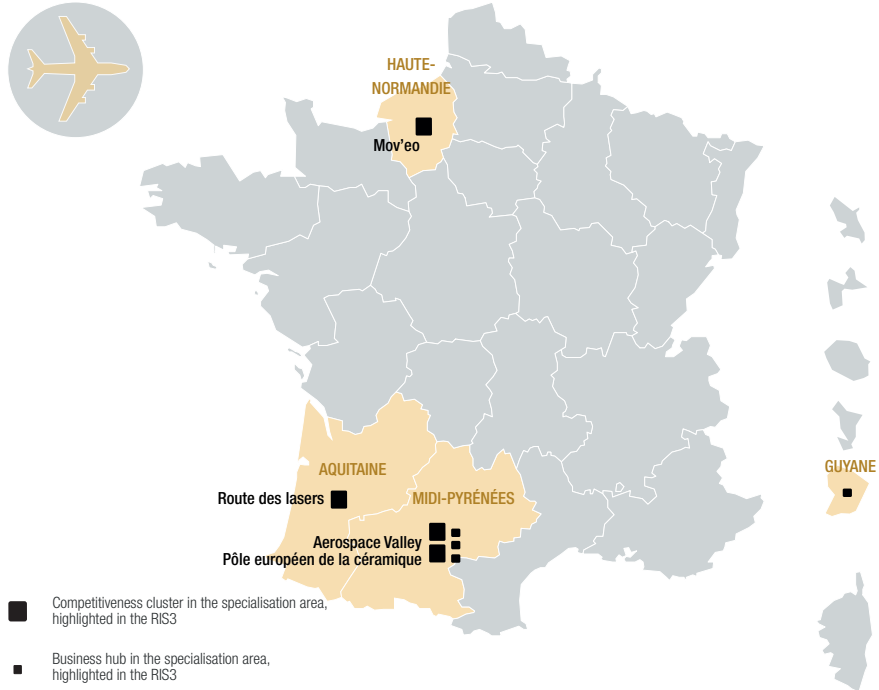
Regions positioned on one (several) smart specialisation area(s)  
in the field of agri-food, agricultural resources, fisheries



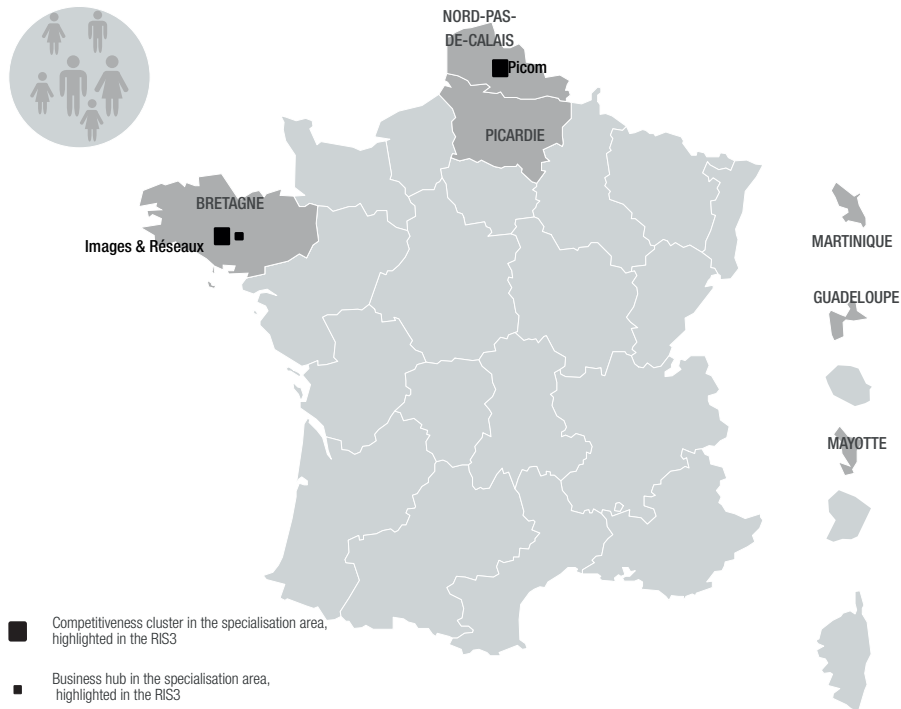
Regions positioned on one (several) smart specialisation area(s)  
in the field of factories of the future



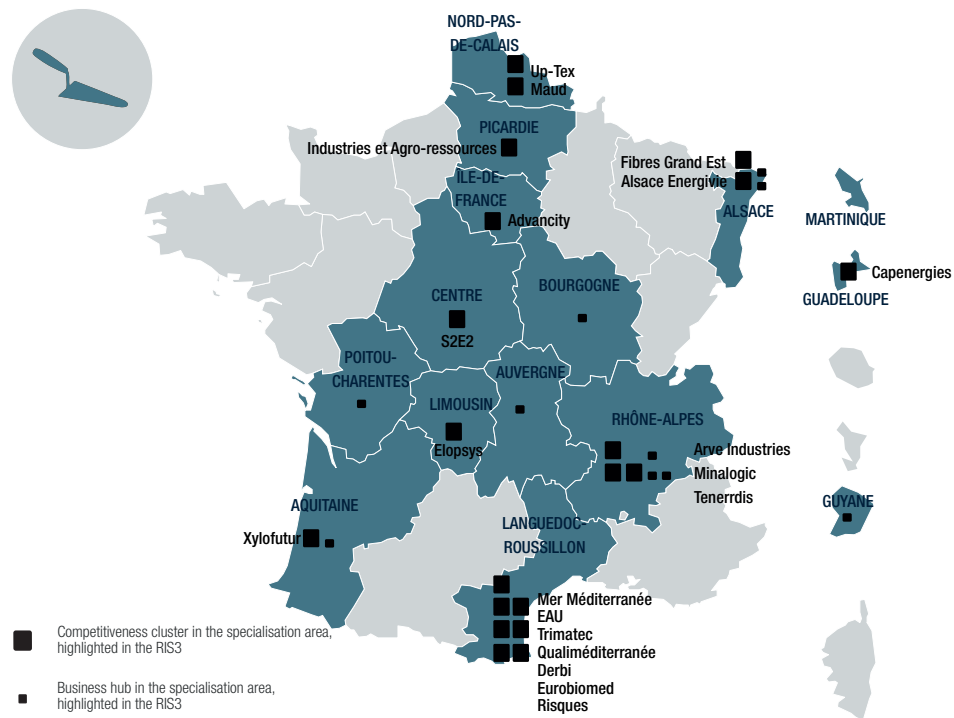
**Regions positioned on one (several) smart specialisation area(s)  
in the field of aerospace**



**Regions positioned on one (several) smart specialisation area(s) in the field of services,  
engineering, humanities and social sciences**



Regions positioned on one (several) smart specialisation area(s) in the field of construction



7.3 ANNEXE 3 - SCHEDULE AND METHODOLOGY APPLIED FOR THE SYNTHESIS OF FRENCH REGIONS' RIS3

09/2013 10/2013 11/2013 12/2013 01/2014 02/2014 03/2014 04/2014 05/2014 06/2014 07/2014 08/2014 09/2014 10/2014

Analysis framework

- production of an analytical grid
- internal working group
- exchanges between the Association of French Regions and the ministries concerned
- consolidation of the analytical grid
- construction of databases

SRI-SI analysis

- collection and analysis of the RIS3
- completion databases
- collection of data and analysis of coherence with other policies

28 RIS3 analysed,  
several databases completed

Report preparation

- production and validation of the regional fact sheets
- preparation of the study
- internal and ministry validation
- study validation of the Association of French regions and the Regions

## 7.4 ANNEXE 4 - SUMMARY OF THE REGIONAL INNOVATION STRATEGIES FOR THE SMART SPECIALISATION OF FRENCH REGIONS

The purpose of this document is to present, in summary form, the Regional research and innovation strategies for Smart Specialisation of French regions. It includes an overview of the strengths and weaknesses of the economic fabric and innovation ecosystems of each region, as well as of the smart specialisation areas and transverse themes supported in the regional strategies. These elements are taken from the regional RIS3.

The key figures presented for each region are taken from the databases of the Observatory of territories (CGET) for 2010 and 2011.

The smart specialisation areas were classified into main categories according to the target market. The following colour codes were used to classify the smart specialisation areas:

Health
Energy
ICT, IT, Digital technologies, Complex software, Electronics
Mobility and Transport
Materials, Mechanics, Chemistry
Agri-food, Agricultural resources, Fisheries
Environmental protection, Resource management, Biodiversity, Risk prevention
Construction
Tourism
Innovation through services, Engineering, Humanities and social sciences
Creative industry
Factories of the future
Aerospace

**The information presented is exclusively taken from the territorial diagnoses featured in the SRI-SIs.** The success results of the Programme Investissement d'avenir (Investment programme for the future) and competitiveness clusters are those highlighted in the territorial diagnoses of the RIS3.

To guarantee consistency throughout this document, only the PRESs (Research and Higher Education Hubs) were selected at the expense of the COMUEs (Community of Universities and Institutions), even if certain PRESs may have been transformed into COMUEs. Similarly, although the term ITE (Institute for energy transition) replaced that of IEED (Institute of excellence in carbon-free energy), both terms were used in the document in accordance with the territorial diagnoses of the RIS3.



## ALSACE

ALSACE			
Key figures <sup>1</sup>	GERD: €933.919 million (10th in the country)	GERD/GDP ratio: 1.7% (10th in the country)	BERD/GDP ratio: 0.9% (12th in the country)
	Number of researchers: 5,677 (10th in the country)	European patent applications: 322 (5th in the country)	Business creation rate: 15.3% (12th in the country)
Strength		Weaknesses	
<ul style="list-style-type: none"> <li>• <b>Strategic geographical location</b> within the Upper Rhine area, facilitating regular collaboration with cross-border regions</li> <li>• <b>Young population</b> and sustained demographic growth</li> <li>• <b>2nd in the country in terms of regional GDP</b></li> <li>• <b>Large and diversified industry</b> (France's 3rd most industrialised region in 2011), with three predominant sectors: electrical, electronic and IT equipment; transport equipment; agri-food industry</li> <li>• <b>Considerable expansion</b> of the social and inclusive economy and arts and crafts which accounted for 10.2% of regional jobs in 2011</li> <li>• 8th in the country in terms of <b>public GERD</b> in 2011</li> <li>• Importance of SMEs in regional private research (30% of private GERD)</li> <li>• <b>Strong training potential</b> within Alsace's universities and schools (3rd in the country for the French scientific hub)</li> <li>• <b>Intensive and world-class public research:</b> CNRS (French national scientific research centre), Universities, INRA (French National Institute For Agricultural Research), INSERM (French Institute of Health and Medical Research), etc.</li> <li>• 5th in the country in terms of <b>patents filed</b> and 1st in the country in terms of <b>publication visibility</b></li> <li>• <b>Dynamic of the innovation ecosystem:</b> 5 competitiveness clusters (Alsace Biovalley, Alsace EnergiVie, Fibres, Véhicule du futur and Hydreos), 2 Carnot Institutes, one of which (MICA) is supported by Alsace, including 6 CRT accredited regional Innovation and Technology Transfer Centres (MENESR), many other clusters and business hubs</li> <li>• <b>Success at the investment programme</b> for the future: Labex (4), Equipex (1), SATT (1), IHU (1)</li> </ul>		<ul style="list-style-type: none"> <li>• <b>High unemployment rate</b> linked to downsizing in the industrial sector</li> <li>• Alsace's <b>industrial specialisation</b> makes it vulnerable to the economic downturns which affect its specialisation sectors</li> <li>• Alsace's establishments are heavily dependent on national and even international industrial groups</li> <li>• Limited presence of high technology businesses.</li> <li>• <b>Insufficient qualification of high-level human resources</b> in businesses and <b>exodus of young executives and engineers</b></li> <li>• Low private GERD (1.74% of the GDP in 2010)</li> <li>• Low publication rate for Alsace's researchers: <b>3.4%</b> of the national share</li> <li>• <b>Fragmented innovation system:</b> limited collaboration between SMEs and public research, underdeveloped culture of partnership and low capacity in terms of the absorption of public research results by businesses, well-structured and high-level public research which however remains inaccessible for businesses, and active in fields insufficiently covered by regional businesses.</li> </ul>	
<b>Transverse Themes</b>			
Social and inclusive economy			
Digital economy			
Creative industries			
<b>Smart specialisation areas</b>			
Assist individuals on a daily basis using e-health to improve well-being and the ageing process			
Discover new medicinal products and new administration methods combining chemistry and biology			
Develop a range of robotic services to help with technical medical and surgical procedures, from the design to the marketing stage			
Develop diagnosis and procedure aid tools, based on medical imaging			
Develop new breakthrough medical devices, from the design to marketing stage, including the sterilisation issue			
Develop renewable energy in Alsace, with technologies that can be exported			
Develop sustainable transport and mobility services			
Measure water to facilitate its management			
Develop energy-efficient, sustainable, healthy buildings with low environmental impact			

<sup>1</sup> Date of data 2010/2011

# AQUITAINE





Key figures	GERD: €1,345.385 million (7th in the country)	GERD/GDP ratio: 1.5% (11th in the country)	BERD/GDP ratio: 1% (10th in the country)
	Number of researchers: 7,813 (6th in the country)	European patent applications: 150 (13th in the country)	Business creation rate: 16% (8th in the country)

Strength	Weaknesses	SSA/Transverse themes
<ul style="list-style-type: none"> <li>Demographic dynamics</li> <li>7th in the country in terms of GDP per job</li> <li>France's 2nd largest agricultural region, no. 1 region in terms of agricultural exports</li> <li>3 types of sector: traditional (aerospace and defence, agri-food, wine, forestry-timber, construction), intermediate (health and digital technologies) and emerging sectors (nautical tourism, sliding sports, balneotherapy, renewable energy)</li> <li>Dynamic cutting-edge industry</li> <li>Involvement of SMEs in European framework programmes</li> <li>Proactive policy: Aquitaine Regional dedicated by the Council: No. 1 in the country in terms of RDI budget</li> <li>High R&amp;D potential (mostly private)</li> <li>Research excellence in certain sectors: laser materials, etc.</li> <li>Higher education appeal (8th in the country in terms of student population)</li> <li>Diversified range of equity investment funds: 14 funds amounting to €440 million in 2007</li> <li>Developed culture of technological and non-technological innovation</li> <li>Ongoing configuration of the innovation ecosystem: creation of the Aquitaine Développement Innovation agency, Aquitaine's network of incubators, "Invest in Aquitaine" network, creation of a PRES (University of Bordeaux), 8 CRTs (technological resources centres) and 2 PFTs (technological platforms), etc.</li> <li>27 clusters including 4 competitiveness clusters (Xylofutur, Route des lasers, Avenia and Aerospace Valley) and 7 business hubs</li> <li>Success at the investment programme for the future: Equipex (4) Labex (2), IEED Bordeaux, IHU LYRIC</li> </ul>	<ul style="list-style-type: none"> <li>Insufficient number of students in engineer schools despite a certain appeal</li> <li>Poorly structured SMEs in traditional sectors dominated by major groups. Too few intermediate-sized businesses</li> <li>Relatively low impact of industry on the regional economy: 50% of the jobs concentrated in 4 sectors (agri-food, timber-paper, aerospace and chemicals-pharmaceuticals industry)</li> <li>Difficult configuration of intermediate sectors (health and digital technologies)</li> <li>Private R&amp;D essentially concentrated in large businesses</li> <li>R&amp;D heavily concentrated in high technology and businesses with more than 1,000 employees (aerospace, chemical industry and health)</li> <li>65% of low technology businesses with low propensity to file patents in 2007</li> <li>Imbalance of the research and training potential between Bordeaux and the Southern Aquitaine area</li> <li>Difficult dissemination of innovation, although it is necessary to make up for the SMEs' low level of technology</li> <li>Poor visibility of the innovation system: many stakeholders but lack of visibility; limited project flows; inadequacies in the innovation chain (maturation and results exploitation)</li> </ul>	<p><b>Transverse Themes</b></p> <p>Aquitaine's regional digital development strategy</p> <p>Reduce the different asymmetries and prevent the exclusion of certain typologies or territories from the innovation dynamic</p> <p>Guarantee the renewal and revitalisation of smart specialisation themes</p> <p>Improve the regional system's performance</p> <p><b>SSA</b></p> <p>Smart delivery of active ingredients for well-being and health</p> <p>Integrated healthcare circuit and patient assistance techniques</p> <p>Mobilisation of biomass and bio-refineries for industry</p> <p>Embedded software and connected objects</p> <p>Laser systems, photonics and imaging</p> <p>Systems and data for green and smart mobility</p> <p>Chemistry and industrialisation of materials</p> <p>Precision agriculture and agri-food eco-efficiency</p> <p>Geosciences, metrology/monitoring for the sustainable management of natural resources</p> <p>Timber-based eco-construction and energy efficiency of buildings</p> <p>Competitive factories focused on the human factor</p>

AUVERGNE			
Key figures	GERD: €705.257 million (13th in the country)	GERD/GDP ratio: 2.2% (6th in the country)	BERD/GDP ratio: 1.6% (5th in the country)
	Number of researchers: 2,738 (16th in the country)	European patent applications: 134 (16th in the country)	Business creation rate: 12.6% (25th in the country)
Strength		Weaknesses	
<ul style="list-style-type: none"> <li>Rich and well-preserved natural sites</li> <li>Differentiating, quality-oriented tourist facilities</li> <li>Dynamic and diversified agricultural sector</li> <li>Strong industrial tradition in key areas of activity: aeronautics, plastics processing, mechanics, timber, agri-food, automotive, tyre industry</li> <li>Development of emerging sectors based on biotechnology hubs: digital technologies, well-being, health, eco-industry (timber and geothermal energy)</li> <li>Financially healthier businesses and more sustainable business creations than the national average</li> <li>Unemployment rate lower than the national average</li> <li>Recognised as "Innovation Leader" by the 2012 European scoreboard: presence of Michelin's global headquarters, level of SME intra-firm innovation higher than the national average.</li> <li>Strong involvement of public decision-makers, comprehensive and varied range of public aid for innovation</li> <li>Recent simplification and coordination of the innovation ecosystem: Inter-regional SATT (technology transfer acceleration company), creation of the Maison Innovergne, Innovergne Committee and COSIA (Comité d'orientation stratégique de l'innovation en Auvergne or Strategic orientation committee for innovation in Auvergne) and technical support centres for businesses (ADIV, CNEP, etc.)</li> <li>Centre of higher education configured around 2 universities, 4 engineer schools, 2 IUTs (University Institutes of Technology) and 1 business school</li> <li>Diversified academic laboratories and recognised scientific base (volcanology, mobility, materials, life sciences, genomics, health biotechnology, etc.)</li> <li>Pioneer region in the implementation of the JEREMIE initiative (European initiative for access to funding for SMEs)</li> <li>3 competitiveness clusters (Céréales Vallées, Viameca and Elastopole), 9 other clusters and 2 business hubs</li> <li>Success at the investment programme for the future: Equipex (1) and Labex (3)</li> </ul>		<ul style="list-style-type: none"> <li>Ageing of the workforce higher than the national average</li> <li>False image of the territory</li> <li>Regional GDP growth remains limited (20th metropolitan region in terms of GDP/job)</li> <li>Dense network of micro-businesses (90%), poorly structured, family-owned, with limited exports, lacking the resources to innovate (CIR – research tax credit scheme: 15th in France), with low propensity for collective practices</li> <li>Mature leading industrial sectors, with low job creation, fragmented over multiple areas, with no innovation culture, low export rates and limited collective practices</li> <li>Insufficient structuring and clarity of higher education and research</li> <li>Limited budgets allocated to research and innovation</li> <li>Difficulty in exploiting the results of public research and innovation within the SMEs</li> <li>Innovative businesses creating less jobs than the national average</li> <li>Limited use of private consultancies</li> <li>Limited use of industrial property</li> </ul>	
SSA/Transverse themes			
Transverse Themes			
Implementation of a specific, flexible and adapted organisation and a call for projects for the resourcing of smart specialisation areas			
SSA			
		Prevention & health and living comfort	
		Physical and digital traceability	
		Smart and high-performance systems	
		Sustainable agricultural systems	
		Sustainable living spaces	



BASSE-NORMANDIE					
Key figures	GERD: €427.063 million (18th in the country)	GERD/GDP ratio: 1.2% (13th in the country)	BERD/GDP ratio: 0.8% (14th in the country)		
	Number of researchers: 2,540 (17th in the country)	European patent applications: 93 (19th in the country)	Taux de création d'entreprise : 13.7% (22nd in the country)		
Strength		Weaknesses	SSA/Transverse themes		
<ul style="list-style-type: none"> <li>• <b>Long-standing collaboration with neighbouring territories</b> (Haute-Normandie, Bretagne, Pays de la Loire, Île-de-France and Great Britain)</li> <li>• <b>Diversified economic fabric dominated by agriculture and industry</b> (automotive, nuclear sector, electronics)</li> <li>• <b>Expansion of the tertiary sector</b> (dynamism of the residential and presential economy)</li> <li>• <b>Configuration of the training offer</b> in conjunction with growth-generating projects (Development of the SRESR (<i>Schéma régional de l'Enseignement Supérieur et de la Recherche</i> or regional higher education and research plan) and Normandie Université PRES)</li> <li>• <b>High-quality scientific production</b></li> <li>• <b>Large number of support players</b> to assist with the projects throughout the innovation value chain: INPI branch (French National Institute of Industrial Property)</li> <li>• <b>Increasing level of innovation in businesses</b> (IDEIS project) and development of formalised result tools to support result exploitation</li> <li>• <b>Efficient operation of Normandie Incubation</b></li> <li>• <b>High impact of the major research equipment and platforms</b> (GANIL, CYCERON, MRSH, UMS CNRT Matériaux, CIRIAM, ADRIA Normandie, ISPA+ CORRODYS)</li> <li>• <b>6 competitiveness clusters</b>: TES, Hippo-lia, Mov'eo, Valorial, Nov@log and Pôle Mer Bretagne</li> <li>• <b>Success at the investment programme for the future</b>: Labex (4), Equipex (5), 1 initiative of excellence in innovative training, 1 biotechnologies-bioresources project, 2 nationwide infrastructures in biology-health and 1 project for the development of scientific and technical culture and equal opportunities</li> </ul>		<ul style="list-style-type: none"> <li>• <b>Limited number of business headquarters</b> which means reduced decision-making capacity</li> <li>• <b>Low rate of young people moving on to higher education</b> (drop in the number of students enrolled in higher education in 2011-2012)</li> <li>• <b>Difficulty in recruiting qualified workforce</b> (senior level jobs, highly qualified industrial professions)</li> <li>• <b>Behind in terms of business services</b></li> <li>• 20th in the country in terms of <b>number of CIR beneficiaries</b></li> <li>• <b>Public research partly disconnected from the territorial economy</b></li> <li>• <b>Relative opacity of the innovation ecosystem</b>, lack of network coordination and supervision (disappearance of the technological development network, absence of SATT)</li> <li>• <b>Limited presence of private funding structures</b></li> <li>• <b>Lack of financing</b> for the maturation of young businesses and the equity financing of SMEs</li> <li>• <b>Lack of funding for non-technological innovations</b></li> </ul>	Transverse Themes		
					Support innovation within businesses as part of a project-oriented approach, from detection to marketing
					Ensure that public research and training mechanisms as well as the result exploitation and technology transfer system effectively contribute to the development of innovative projects and the creation of innovative businesses in Basse-Normandie
					Help improving skills and adapting human resources of businesses
					Use the territory's areas of excellence to enhance visibility and appeal
					SSA
					Innovations in biomedical sciences and technologies
		Energy Transition			
		Digital technologies and society			
		Sustainable and smart materials			
		Safe, healthy and sustainable food and resources			

<b>BOURGOGNE</b>					
<b>Key figures</b>	GERD: €429.592 million (17th in the country)	GERD/GDP ratio: 1% (17th in the country)	BERD/GDP ratio: 0.6% (16th in the country)		
	Number of researchers: 2,441 (18th in the country)	European patent applications: 117 (17th in the country)	Business creation rate: 13.9% (21st in the country)		
<b>Strength</b>		<b>Weaknesses</b>		<b>SSA/Transverse themes</b>	
<ul style="list-style-type: none"> <li>• <b>Unemployment rate</b> below the national average</li> <li>• <b>France's 2nd largest agricultural region</b>, with internationally recognised vineyards</li> <li>• <b>Substantial industrial fabric with territorial coverage made up of SMEs</b>: historic expertise in metal working</li> <li>• <b>Good export capability</b> (the region has improved its competitive positioning in terms of "overseas exports")</li> <li>• <b>Innovation dynamic in high-tech activities driven by start-ups and spin-offs</b></li> <li>• <b>Creation of the Bourgogne Franche-Comté PRES</b></li> <li>• <b>Creation of the <i>Espace régional de l'Innovation et de l'Entrepreneuriat</i></b> (ERIE or Regional innovation and entrepreneurship centre) which includes the <i>Maison régionale de l'Innovation</i>, approximately twenty structures specialising in transfer, exploitation of research results and support of innovative businesses</li> <li>• <b>Grand Campus strategy</b> configured around 6 themes (Food and environment, Vine and wine, Health and molecular engineering, Photonics and materials, Health and learning, National Heritage and territories)</li> <li>• <b>Creation of an agri-environment technology hub</b>: high environmental value agriculture</li> <li>• <b>Support for the financial structuring of seed businesses</b>: participation in Alsace Capital (FNA)</li> <li>• <b>System for the exploitation of public research results initiated as part of a shared logic and backed by a network of stakeholders contributing to exchanges between researchers and businesses</b> (Academic incubator, ARTS, 2 Carnot Institutes, Nicéphore Cité, GIE Pharmimage, Gérontopôle, etc.)</li> <li>• <b>4 Scientific clusters</b>: Physical sciences and technology, Food Sciences and Agri-Environment, Health/ICST and Humanities and Social Sciences</li> <li>• <b>2 competitiveness clusters</b> (VITAGORA and Bourgogne Nuclear cluster) and 4 business hubs</li> <li>• <b>Success at the investment programme for the future</b>: Labex (2), Equipex (1), SATT (1)</li> </ul>		<ul style="list-style-type: none"> <li>• <b>Over-represented SMEs/micro-businesses (notably as subcontractors)</b></li> <li>• <b>Under-represented major groups and decision-making centres</b> (SME dependency)</li> <li>• <b>Organised sectors</b> (agri-food industry, mechanics, plastics processing, stone, timber, construction and NICT) not dynamic enough in terms of innovation (with the exception of plastics processing)</li> <li>• <b>GERD in the lower half of the national average</b></li> <li>• <b>Lack of cooperation between stakeholders in the innovation process</b>: lack of relationships between businesses, research and transfer centres; poor knowledge of the mechanism for the exploitation of public research results by laboratories</li> <li>• <b>Lack of coordination and supervision of the innovation ecosystem</b></li> <li>• <b>Insufficient openness of research and businesses to international markets</b></li> <li>• <b>Low level of involvement of businesses and laboratories in European projects</b></li> <li>• <b>Lack of financing for non-technological innovations</b></li> </ul>		<b>Transverse Themes</b>	
				New behaviours, new economies	
				Skills development and networking to benefit competitiveness	
				Dissemination of key technologies, digital engineering, entrepreneurship culture and scientific, technical and industrial culture	
				<b>SSA</b>	
				Integration of biomedical solutions for individuals in terms of prevention, diagnosis and therapy	
				Innovative and alternative mobility and transport technologies	
Advanced materials and processes for secure applications					
Environmental, food and diet quality to benefit the consumers' well-being					
Eco-design, eco-construction, bio-sourced materials					



# BRETAGNE

<b>Key figures</b>	<b>GERD:</b> €1,529.103 million (6th in the country)	<b>GERD/GDP ratio:</b> 1.9% (8th in the country)	<b>Rapport DIRDE/PIB :</b> 1.2% (9th in the country)
	<b>Number of researchers:</b> 9,868 (5th in the country)	<b>European patent applications:</b> 376 (4th in the country)	<b>Business creation rate:</b> 13.4% (23rd in the country)

Strength	Weaknesses	SSA/Transverse themes
----------	------------	-----------------------

- **Overall and female employment rate** higher than the national and EU average
- **Excellence of certain sectors:** France's number one maritime region and second largest ICT sector
- **One of the top 6 French regions in terms of innovation** with regard to the GERD, employees, publications, patents filed, CIR amount and beneficiaries; 5th in the country in terms of **R&D installation projects by foreign investors** in 2010, etc.
- **Strong presence of most national research bodies**, internationally recognised themes of excellence
- **Cooperation and coherence between the innovation ecosystem stakeholders**
- **Innovation rate higher than the national average** for all types of innovation (2010 CIS survey)
- **Substantial investments in R&D and innovation support by territorial authorities**
- **Substantial and increasing public R&D investments** (+32% GERDA since 2003, 6th in the country in terms of public R&D expenditure)
- **Shared research dynamic initiated with the PRES**
- **New funding mechanisms** (seed, maturation)
- **Network of innovation support stakeholders well spread across the territory:** CIT, technology hubs, clusters
- **Bretagne Innovation coordinating the innovation system;** solid networking organisation, notably for the technological aspects: local support and good territorial coverage
- **Strong dynamism of social innovation players** and social & inclusive economy sectors
- **4 competitiveness clusters** (Image et réseaux, Valorial, Pôle Mer Bretagne and ID-4car) with **SMEs and intermediate-sized businesses strongly involved in these clusters**
- **Success at the investment programme for the future:** Equipex and Labex (7), IRT (1), IEED (1), SATT (1)

- **Difficulty in translating the research potential** into wealth and job creation, notably in medium-high and high-technology industrial sectors
- **Strong decline in private R&D investments** in 2009
- **Disappointing research intensity** (GERD/GDP) **relative to the potential**
- **Low level of SME participation** in European projects
- **Difficult integration of young graduates** and postgraduates
- **Disaffection of scientific and industrial sectors**
- **Risk of academic and business worlds drifting apart**
- **Link between training and innovation support stakeholders insufficiently developed**
- **Difficulty for project initiators** in downstream market placement, marketing and commercialisation phases
- **Need to reinforce the innovation system:** diversified yet opaque range of support services, particularly for non-specialists; poor coordination and complementarity between the 90 existing structures, who all compete for the "promising projects"
- **Inappropriate funding system:** limited private resources dedicated to venture and seed capital; lack of legibility and clarity of the aid available; inappropriate forms and amounts of aid; preference for technological and patentable products; shortage of seed capital; lack of *Business Angels*

**SSA/Transverse themes**

**Transverse Themes**

- Reinforce the innovation and entrepreneurial culture
- Improve the transformation of the research and innovation potential in the economy
- Interconnect sectors and technologies
- Configure a regional innovation system: from an ecosystem to a "system"

**SSA**

- Health and well-being for a better quality of life
- Maritime activities for blue growth
- Technologies for the digital society
- Cutting-edge technologies for industrial applications
- Sustainable agri-food chain for quality food
- Ecological and energy observation and engineering for environmental protection
- Social and citizen innovations for an open and creative society

## CENTRE



Key figures	GERD: €1,143.176 million (8th in the country)	GERD/GDP ratio: 1.8% (9th in the country)	BERD/GDP ratio: 1.3% (6th in the country)
	Number of researchers: 5,584 (11th in the country)	European patent applications: 266 (7th in the country)	Business creation rate: 15.1% (13th in the country)

Strength	Weaknesses	SSA/Transverse themes
----------	------------	-----------------------

- **At the intersection of several exchange and cooperation dynamics**, on the frontier between development hubs and more peripheral areas
- 4th in the country in terms of **standard of living** (household disposable income/consumption unit)
- **Urban fabric consisting of many cities**, driving employment within the regional territory
- **An economy becoming increasingly tertiary** under the impetus of market services
- **Diversified tourist potential** via different sectors, accessible to all types of customer
- **Driving role of industry in the development of the regional economy**: France's 6th largest industrial region in terms of industrial workforce and 6th largest in terms of industrial added value
- **Diversified industrial fabric including leading industries**: pharmaceuticals and perfumes-cosmetics (1st), industrial rubber (1st), tyre industry (3rd), electricity production (2nd), plastic packaging (3rd), industrial subcontracting (3rd)
- **Business creation dynamic for the past 10 years**
- **Dense and diversified public research**: two universities (Orléans, Tours); 9 research institutions (INRA, INSERM, CEMAGREF, CEA, BRGM, etc.)
- **"Networking region" at European level**, networking with recognised scientific regions to facilitate innovation
- **Better sectoral configuration based on 4 competitiveness clusters** (CosmeticValley, Elastopole, Dream, S2E2) **but also growth generating projects for the territory** (Pole Pharma, Aérocentre, Shop expert Valley, etc.)
- **Success at the investment programme for the future**: Equipex and Labex (4)

- **Economic development marked by the proximity to Paris and the Île-de-France region**: competition between territories, risk of relocation
- **Absence of a strong agri-food industry** (11th in terms of workforce), shortage of added value creation relating to processing activities and poorly organised sector
- **Low level of education for young people over 17 and lack of training course appeal**: increasing problem to recruit executives and technicians
- **Limited innovation capacity of small and medium-sized businesses and industries**
- **Research diversification**: delicate balance between concentration of research resources and response to territorial needs in terms of higher education, innovation and development
- **Lack of visibility of research activities at European level**
- **Absence of private consulting services for innovative businesses and lack of seed funds**

SSA/Transverse themes
<b>Transverse Themes</b>
Development of innovation in businesses
Reinforcement of the human capital
Reinforcement of the potential of public and private research
Cooperation and internationalisation
<b>SSA</b>
Biotechnologies and services applied to health and cosmetics
Design of energy storage systems
Environmental engineering and metrology for natural resource intensive activities
Energy efficiency technologies for building constructions and renovations
ICT and services for national heritage tourism

# CHAMPAGNE-ARDENNE



Key figures	GERD: €264.508 million (20th in the country)	GERD/GDP ratio: 0.7% (21st in the country)	BERD/GDP ratio: 0.5% (20th in the country)
	Number of researchers: 1,650 (20th in the country)	European patent applications: 81 (20th in the country)	Business creation rate: 14.7% (15th in the country)
Strength	Weaknesses	SSA/Transverse themes	
<ul style="list-style-type: none"> <li>• <b>Strategic location</b> at the intersection of several large areas</li> <li>• <b>Productive fabric characterised by a powerful agricultural sector</b></li> <li>• <b>Export-oriented economy</b> (Champagne)</li> <li>• <b>Entrepreneurial dynamic</b>: high business creation growth rate for the past few years</li> <li>• <b>Proactive policy</b> to support the arrival of new education institutions: ECP, AgroParis-Tech, EPF, IEP.</li> <li>• <b>Steadily increasing public GERD</b> (+5%/year)</li> <li>• <b>Private research</b> stronger than the national average</li> <li>• <b>Defining research guidelines</b> (promotion of agricultural resources, nanotechnologies, security and imaging ICT) <b>based on 2 inter-regional competitiveness clusters</b>: IAR and MATERIALIA</li> <li>• <b>Research activities in association with the economic fabric in the process of conversion</b> (cutlery and orthopaedic industry) and cutting-edge sectors (ICT security)</li> <li>• <b>Quality of the research results</b> and their exploitation (transfer patents) with regard to the existing scientific potential</li> <li>• <b>1 FabLab</b> (Smart Materials)</li> <li>• <b>Success at the investment programme for the future</b>: Equipex (1), IRT (1)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Demographic downturn</b>: net migration loss and significant ageing of the population</li> <li>• <b>Worrying job losses</b> and high unemployment rate</li> <li>• <b>Shortage of qualified human resources</b></li> <li>• <b>Unattractive education offer</b></li> <li>• <b>Predominance of traditional sectors</b> (agriculture), regional industry subject to strong competitive pressure</li> <li>• <b>Under-represented Tertiary sectors and high-technology services</b></li> <li>• <b>Over-represented micro-businesses/SMEs</b></li> <li>• <b>Limited domestic expenditure in R&amp;D</b></li> <li>• <b>Low concentration of researchers</b>, in particular low numbers in the major research institutions present in the region</li> <li>• <b>Lack of cooperation</b> and coordination between stakeholders</li> <li>• <b>Innovation ecosystem insufficiently structured</b></li> <li>• <b>Difficulty in attracting or creating innovative businesses</b></li> <li>• Insufficient number of <b>technological transfer</b> initiatives towards industry</li> </ul>	<b>Transverse Themes</b> Support innovation in businesses , notably SMEs, via an efficient regional ecosystem for innovation  Stimulate social innovation to ensure the development of our territories  Transform Champagne-Ardenne into a digital territory	
		<b>SSA</b>	
		Creation of a range of treatments and services for vulnerable or dependent people to support the ageing process in the territories	
		Support for RDI initiatives , projects and experimentations with a view to implementing smart energy management solutions	
		Optimisation of the performance, processing and use of materials	
		Development of bio-economy based on a territorialised bio-refinery combined with adapted and sustainable agricultural and wine growing practices	

CORSE			
Key figures	<b>GERD:</b> €19 million (22nd in the national rankings)	<b>Number of researchers:</b> 138 (22nd in the country)	<b>Business creation rate:</b> 14.3% (19th in the country)
Strength	Weaknesses	SSA/Transverse themes	
<ul style="list-style-type: none"> <li>• <b>Activities concentrated in commercial activities, services and public works</b></li> <li>• <b>Reduction in the number of business failures and sustained business creation dynamic</b></li> <li>• <b>Good territorial coverage in terms of broadband (97%)</b></li> <li>• <b>Relatively dense network of organisations involved in research:</b> University of Corsica, INRA, CIRAD, ENSAM, IFREMER, BRGM, INSERM, CNAM, CEA-INES subdivision and STARESO</li> <li>• <b>Improved structuring of the public research</b></li> <li>• <b>Sharp increase in R&amp;D expenditure</b></li> <li>• <b>Improved appeal of the University of Corsica</b> (Euro Méditerranée PRES and RETI)</li> <li>• <b>Dynamic collaboration between laboratories and businesses:</b> Vignola platform, Stella Mare platform and two R&amp;D platforms (Corsic'Agropole and PCE)</li> <li>• <b>Technological and non-technological innovation dynamic</b></li> <li>• <b>Proactive dissemination of the innovation culture</b></li> <li>• <b>Presence of several innovation stakeholders/tools:</b> one ADEC (regional development agency), one incubator, one South East SATT, regional financial tools (creation of Corse Financement), one competitiveness cluster (CAPENERGIE, clustering of businesses in the aeronautics sector (Centre of Aeronautics Industries of Corsica-PIAC)), centres of excellence, etc.</li> <li>• <b>Success at the investment programme for the future:</b> PACA-Corsica SATT</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Territorial insularity:</b> limited domestic market, costly transport, difficulty in implementing collective initiatives with partners outside the region, low appeal and difficult recruitment</li> <li>• <b>Fragmented production facilities</b> (68% of the businesses had no employees in 2010)</li> <li>• <b>Absence of agglomeration effects</b></li> <li>• <b>Predominance of the tertiary sector:</b> tourism (25% of the added value), managed services (31%) and construction (10%), weakness of the industrial sector (6%), low territorial specialisation; limited export volumes (0.2% of the GDP) focusing on traditional productions</li> <li>• <b>Drop in the number of business creations</b></li> <li>• <b>Ageing of the executive and entrepreneur population</b> and inconsistency between the supply and demand of labour</li> <li>• Classified as <b>"Innovation follower"</b> by the European Commission</li> <li>• <b>Fragmentation and lack of collaboration</b> between innovation stakeholders</li> <li>• <b>Low GERD</b> (0.21% of the regional GDP), notably private research</li> <li>• <b>Low number of patents filed</b></li> <li>• <b>Insufficient use of external players to support innovation projects</b></li> <li>• <b>Underdeveloped innovation culture</b></li> <li>• <b>Lack of involvement of private stakeholders in collective initiatives</b></li> <li>• <b>Limited network of innovation stakeholders, lacking in critical mass:</b> Corsican fund for innovation; Corsica's Territorial Incubator, Technological Development Network</li> </ul>	<b>Transverse Themes</b>	
		ICT	
		<b>SSA</b>	
		Energy production, distribution and management in an insular environment	
Promotion of natural and cultural resources			

## FRANCHE COMTE



Key figures	GERD: €761.374 million (12th in the country)	GERD/GDP ratio: 2.7% (4th in the country)	BERD/GDP ratio: : 2.2% (2nd in the country)
	Number of researchers: 3,446 (13th in the country)	European patent applications: 147 (14th in the country)	Business creation rate: 14.1% (20th in the country)
Strength		Weaknesses	
<ul style="list-style-type: none"> <li>• <b>Importance of the cross-border aspect</b></li> <li>• <b>Historically strong industrial base, presence of major industrial groups</b> (GE, Alstom, PSA, Solvay)</li> <li>• <b>Leadership</b> (national or European) <b>in the following sectors:</b> automotive (the region's largest employer) and microtechnologies (watch making, eyewear, etc.)</li> <li>• <b>Qualified workforce</b>, education centre of excellence in engineering science and attractive technological training programmes</li> <li>• <b>France's 3rd region in terms of research effort</b> (private expenditure to GDP ratio)</li> <li>• <b>Innovation capacity</b> in the fields of energy, digital technologies and agriculture</li> <li>• <b>Cooperation dynamic</b> of higher education institutions between Franche-Comté and Bourgogne</li> <li>• <b>Existing collaboration</b> between public, private and industrial research centres</li> <li>• <b>4 competitiveness clusters</b> (Pôle des Microtechniques, Pôle Véhicule du futur, Plastiopolis, Vitagora) in cooperation with Alsace, Bourgogne, Rhône-Alpes and Switzerland</li> <li>• <b>Success at the investment programme for the future:</b> microtechnologies, metrology, health and environment</li> </ul>		<ul style="list-style-type: none"> <li>• <b>Lower level of education</b> than the national average</li> <li>• <b>Difficulty in retaining young graduates</b> within the regional territory</li> <li>• <b>Insufficient number</b> of tertiary economic activities</li> <li>• <b>Lack of appeal</b> of industrial professions</li> <li>• <b>Limited presence of large corporations' decision-making centres</b></li> <li>• <b>Absence of a leading group</b> in the emblematic microtechnologies</li> <li>• <b>Multiplicity of stakeholders</b> and need to improve innovation governance by the public authorities</li> <li>• <b>Low concentration of public innovation interventions</b></li> <li>• <b>Small proportion of researchers</b> working for national institutions in Franche-Comté</li> <li>• <b>Weakness of public R&amp;D</b></li> <li>• <b>Difficulty in building bridges</b> between research and businesses and <b>insufficient dissemination of private research</b> among the SMEs</li> <li>• <b>Insufficiently advanced restructuring</b> of Humanities and Social Sciences</li> <li>• <b>Lack of innovating SMEs</b></li> </ul>	
SSA/Transverse themes			
Transverse Themes			
Reinforce the human capital			
Generate new activities through innovation and entrepreneurship			
Encourage partnerships and cooperation			
Disseminate the innovation culture			
Capitalise on the "border" effect			
Improve the effectiveness of the public innovation support system			
SSA			
Energy systems integration and efficiency			
Micro-systems			
Use of information and communication technologies in response to societal issues			
Communicating vehicles, automated driving and mobility services			
Resource efficient vehicles			
Luxury markets and microtechnology (jewellery, eyewear, leather goods , watchmaking, etc.)			
Sustainable local food products			




# GUADELOUPE



## Key figures

**Business creation rate:** 14.4% (16th in the national rankings)

Strength	Weaknesses	SSA/Transverse themes
<ul style="list-style-type: none"> <li>• <b>Designated natural areas</b>, classified at international level</li> <li>• <b>Dynamic ICT sector</b> with a large number of stakeholders and infrastructures relative to the size of the territory</li> <li>• Good <b>business creation dynamic</b></li> <li>• <b>Quality vocational courses</b> leading to a qualification</li> <li>• Creation of <b>new engineering degrees</b> and vocational <i>licences</i> (bachelor's degrees)</li> <li>• <b>Significant public research</b> facilities compared with other French Overseas territories</li> <li>• <b>Level of business innovation</b> equivalent to that of mainland France (2012 CIS – INSEE survey of businesses with 10 to 250 employees)</li> <li>• Implementation of a <b>technical unit to support innovative projects</b> (Regional Council, DRRT, DIECCTE, AFD/OSEO)</li> <li>• <b>Young researchers increasingly open to partnerships</b> with businesses</li> <li>• Presence of a <b>university</b></li> <li>• <b>Structures dedicated to innovation:</b> 2 institutes of agricultural technology, 1 'energy and materials in an insular tropical environment' hub backed by the Capénergies (Synergile) competitiveness cluster, <i>réseau d'innovation et de transfert agricole</i> (RITA or innovation and agricultural transfer network), agency for the exploitation of research results, technology hub project and business incubator creation project</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Outermost region suffering from insularity</b>, dependent on fossil fuel and relatively exposed to the consequences of climate change, restricted market</li> <li>• <b>Low GDP per capita</b> and <b>low rate of employment</b>, slowly approaching the EU-27 average</li> <li>• Predominance of the <b>tertiary sector</b> (84.9% in 2010)</li> <li>• <b>Economic fabric characterised by a high proportion of micro-businesses</b> with inadequate financial resources and lacking visibility</li> <li>• <b>Absence of major players (notably industrial)</b> to play a stimulating role</li> <li>• <b>Territorial biodiversity</b> insufficiently promoted</li> <li>• <b>Lack of local opportunities</b> for certain diplomas, <b>brain drain</b></li> <li>• <b>Relatively weak technological innovation</b>, small number of patents filed</li> <li>• <b>Limited interaction</b> between research/education/businesses</li> <li>• <b>Cluster dynamic in its infancy</b></li> <li>• <b>Innovation ecosystem in the process of configuration</b> and small-sized research teams</li> <li>• <b>Relative opacity of exploitable research results for businesses</b></li> <li>• <b>Relative opacity of innovation policies</b></li> <li>• <b>Lack of visibility of the support mechanisms</b> for project initiators, limited methodological support for innovation</li> <li>• <b>Limited mobilisation of national financial tools for innovation:</b> JEI, CIR, AAP funding, etc.</li> <li>• <b>Private financial partners</b> insufficiently involved in innovative projects, <b>venture capital almost non-existent</b></li> <li>• <b>Lack of entrepreneurship culture</b> in young graduates</li> <li>• Weakness of the <b>structures designed to disseminate the innovation culture</b>, limited dissemination of innovations</li> </ul>	<p style="text-align: center;"><b>Transverse Themes</b></p> <p style="text-align: center;">ICT</p> <p style="text-align: center;"><b>SSA</b></p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="background-color: #4CAF50; width: 20px; height: 20px;"></div> <div style="background-color: #8BC34A; width: 20px; height: 20px;"></div> <div style="background-color: #FF9800; width: 20px; height: 20px;"></div> <div style="background-color: #0070C0; width: 20px; height: 20px;"></div> </div> <p style="text-align: center;">Promoting the diversity of insular resources</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="background-color: #4CAF50; width: 20px; height: 20px;"></div> <div style="background-color: #E91E63; width: 20px; height: 20px;"></div> <div style="background-color: #0070C0; width: 20px; height: 20px;"></div> <div style="background-color: #9E9E9E; width: 20px; height: 20px;"></div> </div> <p style="text-align: center;">Risk management and prevention in a Caribbean environment</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="background-color: #00BFC4; width: 20px; height: 20px;"></div> <div style="background-color: #9E9E9E; width: 20px; height: 20px;"></div> <div style="background-color: #E91E63; width: 20px; height: 20px;"></div> </div> <p style="text-align: center;">Promotion of creative industries</p>

GUYANE					
<b>Key figures</b>	Business creation rate: : 19.25% (1st in the national rankings)				
	Number of researchers: 100				
Strength	Weaknesses	SSA/Transverse themes			
<ul style="list-style-type: none"> <li>• <b>Demographic boom:</b> sharp rise in the demand of the domestic market with a young and dynamic population</li> <li>• <b>Strategic geographical location:</b> the only French and European region in South America and the Amazon region</li> <li>• <b>Abundance and variety of natural resources</b> (forest, mines, fishing resources, biodiversity)</li> <li>• <b>Dynamic economic fabric</b></li> <li>• <b>Space activity driving the high technology and associated services sectors</b></li> <li>• <b>Very high technology businesses</b> relating to the <i>Centre spatial guyanais</i> (CSG or Guiana Space Centre) and the presence of subsidiaries of major groups (construction, electricity, freight)</li> <li>• Good configuration and recognition of <b>Guiana's research excellence</b></li> <li>• Creation of a <b>new university</b></li> <li>• Creation of the <b>Guyane Développement Innovation</b> regional development and innovation agency</li> <li>• Important involvement of <b>Guyane Développement Innovation</b> and the <b>University of Guiana</b></li> <li>• Focus on <b>non-technological innovation (strong potential in terms of social innovation initiatives)</b></li> <li>• <b>Success at the investment programme for the future:</b> Labex (1)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Exponential demographics</b> requiring additional infrastructures and basic services: 43% of the population is under 20</li> <li>• <b>Absence of a communication</b> platform on innovation funds and how to apply for them</li> <li>• <b>Lack of qualified labour</b></li> <li>• <b>Insufficient networking</b> (absence of clusters), poorly structured economic activity sectors and lack of collaboration</li> <li>• <b>Insufficient international openness</b> (strong competition with neighbouring countries and change of scale issue for businesses)</li> <li>• <b>Poor local industrial fabric</b> essentially made up of micro-businesses with limited investment and innovation capacity: agriculture, public works, tourism, space, gold mining craft activity (in decline), logging, fishing (poorly structured)</li> <li>• <b>Isolated research sector, lacking appeal:</b> small number of researchers, insufficient links between public research and private businesses</li> <li>• <b>Higher education</b> primarily focused on teaching (limited resources for teacher-researchers)</li> <li>• <b>Lack of private innovation support:</b> assistance, coordination, financing, technical or technological aid</li> <li>• <b>Difficulty in mobilising innovation tools</b> and lack of awareness of these tools</li> <li>• <b>Lack of scientific and technical culture</b></li> <li>• Limited transfer of technology and innovation projects; insufficient exploitation of research results</li> </ul>	<b>Transverse Themes</b>			
		Develop social innovation by supporting the stakeholders of social & inclusive economy		<b>SSA</b>	
				Tropical health and emerging diseases	
				Active molecules	
				Remote applications	
				Management and use of biomass	
				Development of marine resources and primary resources	
				Agriculture and agro-processing	
				Development of forestry resources	
				Environmental management and monitoring	
				Eco-construction	
		Tourism and eco-tourism			

# HAUTE-NORMANDIE




<b>Chiffres Clés</b>	<b>GERD:</b> €679.232 million (14th in the country)	<b>GERD/GDP ratio:</b> 1.4% (12th in the country)	<b>BERD/GDP ratio:</b> 1.2% (7th in the country)
	<b>Number of researchers:</b> 2,997 (14th in the country)	<b>European patent applications:</b> 214 (9th in the country)	<b>Business creation rate:</b> 15.1% (14th in the country)

Strength	Weaknesses	SSA/Transverse themes
----------	------------	-----------------------

- **Proximity to the Île-de-France region:** markets, decision-making centres and skills
- **Numerous historical partnerships with adjacent territories** (Basse-Normandie, Île-de-France, Great Britain and Arc Manche)
- **Europe's 4th largest port complex**
- **Large-scale projects in the territory:** Development of the Seine waterway and offshore wind turbines
- **France's 3rd largest industrial region, highly diversified:** automotive, chemicals and plastics processing, extractive industries, pharmaceuticals, electrical equipment, mineral and metal-based products, making the most of the presence of several major corporations
- **France's no. 1 energy region in terms of jobs and resources**
- **National outreach in terms of education** via its universities and 7 engineering schools: PRES (University of Caen, Rouen and Le Havre, ENSI-CAEN and INSA)
- **Research configuration well underway** (major research networks, PRES), which increases research visibility
- **Significant private research** supported by a few large companies
- Creation of "Normandie Valorisation" supported by ComUE to make up for the absence of a SATT
- **Innovation support stakeholders** throughout the value chain, coordinated and supervised by SEINARI
- **Very comprehensive range of financial support** for innovation, which helps assist project initiators at all stages (seed capital, result exploitation, maturation and well-structured network of business angels)
- **Presence of 3 competitiveness clusters** (Mov'éo, Novalog and Cosmetic Valley) **4 accredited transfer structures**, **2 CRITTs (Regional innovation and technology transfer centres)** and **1 technological platform**
- **Success at the investment programme for the future:** Equipex (2) Labex (2), IDEFI (2)

- **Unemployment rate higher** than the national unemployment rate (notably in Le Havre)
- **Lack of territorial appeal** with a net migration loss
- **Young and poorly qualified population**
- **Economic fabric** consisting of **traditional** activities, essentially **SMEs** (98% in 2009), a lot of subcontractors
- **SMEs unwilling to innovate** and lack of qualified human resources
- **R&D funding** largely borne by private research
- **Very low number of JElS (young innovative companies)**
- **21st in the country in terms of CIR**
- **Limited research, relatively disconnected from the territory**, insufficient exploitation of research results and technology transfer: absence of a SATT and 3 result exploitation units with limited resources
- Ecosystem generating a **small number of innovation projects**
- **Investment programme for the future with little impact on the region**, 20th in the country in terms of funding received

SSA/Transverse themes
<b>Transverse Themes</b>
Stimulate result exploitation to generate more added value in the territory
Use the innovation lever to address the issue of passing the threshold for Haute-Normandie businesses
Promote trans-disciplinary research and sectors to stimulate innovation
Transform widespread innovation (technological and non-technological) into action
Help improve human resource skills in businesses
Enhance the appeal of the Haute-Normandie territory based on its themes of excellence
<b>SSA</b>
New technologies in chemistry and biology applied to health and well-being
Efficiency of energy and propulsion systems
Wind energy
Reliability of systems and components in embedded systems
Multimodality and logistical performance
Ageing and performance of materials

ÎLE-DE-FRANCE			
<b>Key figures</b>	<b>GERD:</b> €17,590.094 million (1st in the country)	<b>GERD/GDP ratio:</b> 3% (2nd in the country)	<b>BERD/GDP ratio:</b> 2% (3rd in the country)
	<b>Number of researchers:</b> 97,858 (1st in the country)	<b>European patent applications:</b> 3113 (1st in the country)	<b>TBusiness creation rate:</b> 16.3% (6th in the country)
Strength	Weaknesses	SSA/Transverse themes	
<ul style="list-style-type: none"> <li>• Large population (12 million) with challenges like ageing, health and a better standard of living</li> <li>• 70 schools and universities providing <b>IT and telecom courses</b> and representing 39% of the number of French researchers and teacher/researchers in France</li> <li>• <b>Europe's no. 1 cluster in NICT</b> (24,000 businesses and 423,000 jobs) ahead of the London, Dublin, Barcelona and Munich regions</li> <li>• <b>1st in Europe in terms of publications</b></li> <li>• <b>Leading scientific position in Europe in the field of medical technologies</b></li> <li>• <b>Presence of many innovation stakeholders in the territory; 45% of the creative industry jobs are concentrated in the region</b></li> <li>• <b>High success at the PIA:</b> Equipex (1), IRT (1), IEED (2) and SATT (2)</li> </ul>	<ul style="list-style-type: none"> <li>• Strong <b>geographical disparities</b> of the territories</li> <li>• <b>Small number of innovation stakeholders</b> in relation to the importance of the region in the mobility/transport sector</li> <li>• <b>Stall</b> in the fields of <b>agri-food and agricultural resources</b> compared to the rest of Europe</li> <li>• Complex Île-de-France's higher education, research &amp; innovation landscape , with little international recognition</li> <li>• R&amp;D insufficiently structured and underdeveloped in SMEs</li> <li>• <b>Seed and venture capital funding insufficiently developed</b> compared with the London, Oxford, Cambridge or San Francisco regions</li> <li>• <b>Low rate of</b> technological start-up creation in relation to Île-de-France's high research potential</li> </ul>	<b>Transverse Themes</b>	
		Optics/Photonics	
		Robotics	
		<b>SSA</b>	
		Medical devices	
		Engineering of complex systems and software	
		Carbon-free and smart vehicles	
		Eco-construction and high environmental performance districts	
		Digital creation	

## LANGUEDOC-ROUSSILON<sup>3</sup>



Key figures	GERD: €1,580.885 million (5th in the country)	GERD/GDP ratio: 2.5% (5th in the country)	BERD/GDP ratio: 0.8% (13th in the country)
	Number of researchers: 7734 (7th in the country)	European patent applications: 139 (15th in the country)	Business creation rate: 17.8% (2nd in the country)
Strength		Weaknesses	
<ul style="list-style-type: none"> <li>• <b>Strong scientific potential in public research</b> with a strong presence of research institutions alongside the universities and schools</li> <li>• First-rate scientific production in <b>applied biology-ecology and fundamental biology</b></li> <li>• Focus on <b>inter-disciplinary research</b></li> <li>• <b>High-quality scientific education environment</b> in Montpellier</li> <li>• Participation in the FIGURE network and strong mobilisation for <b>Master's in Engineering Programme (CMI)</b> accreditations</li> <li>• University of Perpignan well recognised in two sectors: <b>solar energy</b> (CNRS) and <b>marine environments</b> (Banyuls Ocean Observatory)</li> <li>• <b>High profile on the international stage</b>, notably with southern countries; appeal of licence and master courses for foreign students</li> <li>• <b>Good regional business creation support mechanism</b></li> </ul>		<ul style="list-style-type: none"> <li>• History marked by the juxtaposition of <b>numerous stakeholders'</b> policies with no real common strategy</li> <li>• Certain organisations have opted for a national configuration</li> <li>• <b>Insufficient recognition of</b> universities in scientific multi-partnerships</li> <li>• <b>Humanities and Social sciences insufficiently taken into account</b> when configuring research</li> <li>• <b>Limited openness to the business community</b> and universities struggling to act as local economic development players</li> <li>• <b>Behind in terms of technological production</b> (European patent applications)</li> <li>• <b>Private R&amp;D primarily concentrated in large companies</b></li> <li>• <b>Campus Operation</b> without impact on regional configuration</li> </ul>	
<b>SSA/Transverse themes</b>			
<b>Transverse Themes</b>			
Entrepreneurship and innovation			
<b>SSA</b>			
Innovative and targeted therapies, diagnosis (notably applied to chronic diseases and ageing)			
Industrial and energy transition			
Data acquisition, Digital data processing and visualisation			
Innovative and sustainable production and promotion of Mediterranean and tropical crops			
H2O: (Large and small water cycle, solutions for the identification and concerted management of resources, waterreuse)			
Coastal economy			

<sup>2</sup> Source: Languedoc-Roussillon DRRT (Délégation régionale à la recherche et à la technologie or regional research and technology delegation) (insufficient information in the SRI-SI's diagnosis)

# LIMOUSIN



<b>Key figures</b>	<b>GERD:</b> €164.019 million (21st in the country)	<b>GERD/GDP ratio:</b> 0.9% (18th in the country)	<b>BERD/GDP ratio:</b> 0.5% (17th in the country)
	<b>Number of researchers:</b> : 992 (21st in the country)	<b>European patent applications:</b> 49 (21st in the country)	<b>Business creation rate:</b> 12.9% (24th in the country)

Strength	Weaknesses	SSA/Transverse themes
----------	------------	-----------------------

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• <b>Recognised quality of life</b> (1st in the country in terms of health &amp; social indicator and 8th in terms of human development)</li> <li>• <b>The agri-food sector</b> is the largest industrial sector in terms of employment</li> <li>• Considerable forestry resources (Douglas)</li> <li>• Implementation of <b>unique breeding conditions</b> in France conducive to the protection of the environment and biodiversity while respecting high-quality production (red label)</li> <li>• <b>High potential in the Silver Economy sector</b> (experimental territory, 1st prize at the 2007 "Senaer" for best practices in improving the well-being of senior citizens, ENOLL Living Lab certification)</li> <li>• <b>Recognised expertise in the field of ceramic techniques and technologies (notably fine ceramics on the luxury market)</b> and high concentration of stakeholders (approximately 20% of national fine ceramics companies in 2009, competitiveness cluster, training offer unique in Europe (ENSCI))</li> <li>• <b>Research and training excellence</b> in the field of high electronic and photonic technologies, and powerful innovation dynamic. (2nd in the country in terms of patent applications in electronics/electricity)</li> <li>• National, European and international recognition of <b>academic research in biotechnologies</b></li> <li>• <b>Unrivalled "animal genetics" expertise</b> in France</li> <li>• Creation of the <b>Limousin-Poitou-Charentes PRES</b></li> <li>• <b>Competitiveness clusters:</b> Elopsys, Ceramique, Viameca, Cancer Biosanté and S2E2</li> <li>• <b>Success at the PIA:</b> Labex (1), IRT M2P, ICARE project and IMODI project</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Low standard of living of the population</b> (19th French region in terms of GDP per capita)</li> <li>• <b>Rural population</b> (38% of the population live in rural areas), resulting in difficult access to services and digital technologies (notably due to the high-speed broadband deployment cost)</li> <li>• <b>Importance of certain sectors in relation to the regional economy:</b> Agriculture, agri-food, Arts and Crafts, Construction, Electrical/Electronic and Timber industry</li> <li>• <b>Agriculture and agri-food</b> are losing ground in the Limousin region</li> <li>• Small number of intermediate-sized and large companies in the Limousin region</li> <li>• <b>Fragmented education courses</b></li> <li>• <b>Lack of innovation in local businesses</b> in traditional sectors (agri-food)</li> <li>• Lack of visibility of the training offer at national and international level in certain areas</li> <li>• <b>Limited vocational integration of young graduates</b> in the Limousin region despite a quality offer</li> <li>• <b>Lack of collaborative dynamism</b> between innovation stakeholders in certain sectors or domains (e.g. animal genetics)</li> <li>• <b>Strong competition in key innovation domains:</b> eco-construction, high electronic and photonic technologies</li> </ul> |
|--|---|

SSA/Transverse themes	
Transverse Themes	
Innovation dissemination throughout the economy: agri-food industry, metallurgy/mechanics, paper mills/printing	
Digitisation of services in rural areas and associated infrastructures	
SSA	
Biotechnologies for human and animal health	
Ageing well economy	
Electronic and photonic technologies and their applications	
Ceramic techniques and technologies and their applications	
Animal genetics, breeding and processed products	
Smart, adaptable buildings and development of natural resources	
Creative economy	

LORRAINE			
Key figures	GERD: €671.791 million (15th in the country)	GERD/GDP ratio: 1.2% (15th in the country)	BERD/GDP ratio: 0.5% (18th in the country)
	Number of researchers: 3858 (12th in the country)	European patent applications: 155 (12th in the country)	Business creation rate: 15.9% (12th in the country)
Strength		Weaknesses	
<ul style="list-style-type: none"> <li>• <b>Importance of the cross-border aspect</b> and cooperation dynamism on the scale of the "Greater Region" (Saarland, Luxembourg, Wallonia and Rhineland-Palatinate)</li> <li>• <b>Strategic location</b> at the intersection of major roadways</li> <li>• <b>Strong industrial activity</b> and historical expertise in the engineering industry</li> <li>• 10th <b>exporting region</b>, thanks notably to the presence of foreign capital groups. (3rd region in terms of trade surplus, with Germany as the number one trade partner)</li> <li>• <b>Recognised scientific production:</b> engineering sciences, materials and polymers, energy, chemical and industrial engineering, solid-state physics, bio-engineering</li> <li>• <b>Strong expertise in fundamental research</b>, clinical research and resources (state-of-the-art specific equipment and cohorts) in the health sector (internationally recognised research teams)</li> <li>• <b>Numerous technology transfer aid tools</b> (IRT M2P, CEA Tech, INORI innovation platform, Lafayette Institute, CRT, CRITT, RDI, etc.)</li> <li>• <b>Range of innovation funding instruments</b>, specific to the region (from maturation to industrial development)</li> <li>• <b>Network of Business Angels</b> generating growth in the "Greater Region"</li> <li>• <b>Creation of an inter-regional seed fund</b> (Nord-Pas-De-Calais, Picardie and Champagne-Ardenne)</li> <li>• 3 bi-regional <b>competitiveness clusters</b>, 4 business hubs and 12 regional strategic sectors</li> <li>• <b>1 ENoLL certified Living Lab</b>, 7 FabLab project applications</li> <li>• <b>Success at the PIA:</b> Labex (3), SATT (1), IRT (1), ARI (1)</li> </ul>		<ul style="list-style-type: none"> <li>• <b>Lorraine's position as a border region</b> is under-exploited</li> <li>• <b>Ageing population</b></li> <li>• Industrial fabric largely composed of <b>micro-businesses and SMEs</b></li> <li>• <b>Dropped 2 places</b> in the ranking of <b>exporting regions</b></li> <li>• More than <b>80% of the exports are within Europe</b> (Euro Zone and outside the Euro Zone)</li> <li>• <b>Low business creation rate</b></li> <li>• High density of innovation stakeholders but <b>absence of a well-structured creation support chain</b>, not many European projects at the 7th FPRD</li> <li>• <b>Insufficient private R&amp;D expenditure</b></li> <li>• <b>Difficulty in mobilising SMEs</b> under the FUI (Single Inter-ministry Fund)</li> <li>• Insufficient <b>exploitation of public research results</b></li> <li>• <b>Shortage of long-term partnerships</b> between businesses and with laboratories</li> </ul>	
SSA/Transverse themes			
<b>Transverse Themes</b>			
Networking of stakeholders to encourage legibility, the emergence of projects and the visibility of SMEs			
Reinforce mechanisms in favour of differentiation and innovation to benefit businesses in the Lorraine region			
Transform digital technologies into a development and innovation driver			
Develop financial engineering to promote innovation and the development of SMEs			
Implement and prepare future specialisations			
Develop social innovation, notably via SIE stakeholders			
Develop collaborative innovation			
Develop innovation, entrepreneurship and internationalisation culture and capacity			
Establish extended, participatory and efficient governance			
Implement a surveillance, monitoring and assessment system			
<b>SSA</b>			
Develop a chain of activities in the health sector integrating prevention, early diagnosis and treatment, involving the stakeholders, technologies and systems			
Enhance industrial tools, power plants and special infrastructures during or at the end of their life			
Promote the detection, extraction, use, recovery and recycling of natural resources by developing sustainable energy management			
Design and propose advanced materials and processes for mass production industries			
Accelerate the commercialisation of products and services designed to improve competitiveness, quality and safety of industrial production equipment and knowledge processing			



# MARTINIQUE



## Key figures

**Business creation rate:** 11.4% (26th in the national rankings)

### Strength

- **Innovation processes largely relating to incremental innovation** (product tropicalisation, etc.)
- **Presence of a higher education and research centre: UAG (University of Antilles and Guiana) with 6 research laboratories primarily involved in humanities and social sciences and focusing on the development of societal innovation**, SUP INFO engineering school, business school, Martinique University Hospital, Major institutions (BRGM, INRA, IFREMER, CIRAD, IRD, IRSTEA), Paris Earth Physics Institute, Météo France, etc.
- **Presence of multi-disciplinary research teams**
- **Centres of excellence** in agri-environment, agricultural transfer, natural risks and sustainable energy
- **European level laboratory facilities** within a Caribbean environment
- **Stakeholders working towards technology transfer and innovation development:** CACEM technology hub, Caribbean agri-environmental campus, chambers of commerce and industry, science and business park project, experimental stations, plan to create a Regional Innovation Agency
- **Recent and increasing network configuration**
- **Numerous partnerships** between Martinique teams and national and international teams
- **Scientific interest Group (PRAM)** involving several organisations
- **2 business hubs** (Performance SAP, Inovagro) and **1 cluster** in the fields of logistics, agri-food and homecare services

### Weaknesses

- **Territorial constraints are an obstacle to development:** insularity, remoteness from mainland France and Europe, small surface area, difficult climate, dependence on imports
- **Worrying socio-demographic situation:** unemployment rate in excess of 20%, ageing population, etc.
- **Predominance of the tertiary sector** (74.7% of the jobs in 2010) and **over-representation of the public administration and agriculture sectors**
- **Under-representation of the industrial sector and decreasing proportion of industrial jobs**
- **Micro-businesses predominance in the territory:** 99.5% of the businesses have less than 50 employees
- **Economic fabric reluctant to innovate** (relatively low density of innovation stakeholders, weak productive base, no competitiveness clusters, no SATT, no Carnot Institute, etc.), **low GERD/GDP ratio** (0.83% in 2006 and 2011), **small share of private research, small number of patents, limited success in national and European calls for projects**
- **Little visibility of research activities** at local and national level
- **Absence of academic and research exploitation structures**
- **Insufficient connections and collaboration** between the scientific community and the economic fabric, despite recent efforts
- **Insufficient range of innovation support mechanisms:** property market in decline, lack of professional assistance for project initiators, insufficient project funding and equity financing

### SSA/Transverse themes

#### Transverse Themes

Develop the innovation culture

Support innovative projects

Continue building the innovation ecosystem

Implement efficient governance and communication with regard to the RIS3

#### SSA

Economic exploitation of the products generated by endogenous resources and integrated processes

Economic exploitation of experience in the management and prevention of major risks

Methods and tools to regulate social relations

Production of digital and software services and applications

<h1>MAYOTTE</h1>		
		
Strength	Weaknesses	SSA/Transverse themes
<ul style="list-style-type: none"> <li>• <b>Wealth of natural resources:</b> lagoon, forest, high rate of sunshine, etc.</li> <li>• <b>Strategic geographical location</b> within the Mozambique Channel</li> <li>• <b>Diversified infrastructures,</b> port facilities</li> <li>• <b>Tourism potential</b></li> <li>• <b>Sustained economic growth</b></li> <li>• <b>Business creation dynamic</b></li> <li>• <b>Transport sector</b> driven by the development of motor traffic</li> <li>• <b>Presence of research stakeholders:</b> Ifremer, BRGM, Ademe, RITA Mayotte, CIRAD, university centre and association of doctoral students</li> <li>• <b>Innovative projects</b> based on <b>renewable energy</b></li> <li>• Project for a <b>Centre of rural excellence</b> (research, innovation, marketing, tourism)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Small territory,</b> small population (220,000), remoteness from Europe</li> <li>• <b>Restricted local market</b></li> <li>• <b>Incomplete basic infrastructures</b></li> <li>• <b>Low level of qualification</b> and shortage of local workforce in terms of innovation</li> <li>• <b>Underdeveloped industrial</b> and arts and crafts fabric</li> <li>• <b>Economic dependence</b> on public procurement</li> <li>• Predominance of <b>micro-businesses</b> in the local economic fabric</li> <li>• <b>Indirect presence of public and private research institutions,</b> absence of any innovation transfer, interface or support agency, small research teams, most of whom are based on the Réunion Island</li> <li>• <b>Absence of support structures</b> involved in the major processes of the innovation chain: result exploitation, technology transfer</li> <li>• <b>Limited cooperation</b> between the innovation ecosystem stakeholders</li> <li>• <b>Lack of innovation strategy</b> and vision in leading sectors and lack of business innovation support</li> <li>• <b>Innovation with low technological content</b></li> </ul>	<b>Transverse Themes</b>
		Information and telecommunication technologies
		Mobility, logistical services as associated with transport issues
		<b>SSA</b>
		Sustainable sea exploitation and development of mari time activities
		Agriculture and agro-processing
		Energy production and efficiency
		Enhancement of the natural and cultural heritage
		Development of primary resources
		Social and inclusive economy and personal services

# MIDI-PYRÉNÉES



<b>Key figures</b>	<b>GERD:</b> €3,483.223 million (3rd in the country)	<b>GERD/GDP ratio:</b> 5% (1st in the country)	<b>BERD/GDP ratio:</b> 3.7% (1st in the country)
	<b>Number of researchers:</b> 18792 (3rd in the country)	<b>European patent applications:</b> 306 (6th in the country)	<b>Business creation rate:</b> 15.5% (11th in the country)

Strength	Weaknesses	SSA/Transverse themes
----------	------------	-----------------------

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• <b>High demographic growth:</b> with a high proportion of economically active population</li> <li>• 1st French region in terms of <b>GDP growth</b> over the 2000-2010 period</li> <li>• <b>Profound changes in the economic fabric</b> towards higher value-added activities</li> <li>• <b>Productive system configured</b> into three sectors, benefiting from the presence of major world leaders in aerospace, ICT and agri-business</li> <li>• <b>International dynamic:</b> 4th French region for international investments in 2011</li> <li>• <b>"Medium High"</b> on the European scale of the Regional Innovation Scoreboard</li> <li>• 6th in the country in terms of <b>the number of Young Innovative Businesses</b> in 2011</li> <li>• <b>Research excellence in Midi-Pyrénées:</b> 110 research structures, 4th in the country in terms of patents filed, decisive support from the ANR, significant share of private research</li> <li>• <b>Ambitious innovation policy, combined</b> with support mechanisms which cover all stages of the projects' life cycle and a broad range of financial support for innovative projects</li> <li>• <b>Dense network of transfer and support structures</b> (University of Toulouse PRES, IRT-AESE, Toulouse Tech Transfert SATT, etc.)</li> <li>• <b>Integration into European RDI networks</b></li> <li>• <b>8 competitiveness clusters</b> (Aerospace Valley, Cancer Bio Santé, Agrimip Innovation, Eau, Elopsys, DERBY, European centre of ceramics, Viaméca), dynamic business hubs (6) and other clusters</li> <li>• <b>Success at the PIA:</b> Equipex (7), Labex (11) and IRT (1), Midi-Pyrénées SATT</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Drop in the number of business creations:</b> -14% compared with 2010</li> <li>• <b>Concentration of skills</b> in the Toulouse agglomeration</li> <li>• Difficulty in <b>matching supply with demand</b> in terms of vocational training</li> <li>• Many <b>SMEs on the fringes of innovation</b> and with limited international openness (modest participation in European projects such as FPRD) due to the <b>SMEs' lack of knowledge</b> in innovation management and the running of innovative projects</li> <li>• <b>Coordination of transfer structures to be reinforced</b></li> <li>• <b>Ongoing homogenisation of the innovation support mechanism</b></li> <li>• <b>Network effect and professionalisation</b> of innovation "facilitators" to be reinforced</li> </ul> |
|---|---|

SSA/Transverse themes
<b>Transverse Themes</b>
Initiate a balanced specialisation in Midi-Pyrénées
Encourage collaborative innovation
Promote all forms of innovation across the regional territory
Intensify the exploitation of public research results in the territory, drive the transfer of technology
Communicate on a RIS3 offer developed in conjunction with innovations takeholders
Adapt governance to the new challenges
<b>SSA</b>
Translational research in oncology and gerontology
Cellular engineering and regenerative medicine
Industrial biotechnologies for renewable carbon recovery
Embedded systems
Innovation of the territorialised agri-food chain
Advanced materials and processes for aeronautics and diversification

# NORD - PAS-DE-CALAIS



<b>Key figures</b>	<b>GERD:</b> €882.897 million (11th in the country)	<b>GERD/GDP ratio:</b> 0.9% (20th in the country)	<b>BERD/GDP ratio:</b> 0.5% (21st in the country)
	<b>Number of researchers:</b> 5919 (9th in the country)	<b>European patent applications:</b> 176 (10th in the country)	<b>Business creation rate:</b> 16.7% (4th in the country)

Strength	Weaknesses	SSA/Transverse themes
----------	------------	-----------------------

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• <b>Advantageous geographical location</b>, at the heart of Europe's decision-making processes</li> <li>• <b>EER accreditation</b> (European Entrepreneurial Region) for its regional entrepreneurship and innovation strategy in 2013</li> <li>• France's 4th <b>exporting and importing region</b></li> <li>• <b>Significant education hub:</b> 6 universities, 16 engineering schools, 8 business, management and journalism schools and one Institute of Political Studies</li> <li>• <b>Implementation of the future-oriented and strategic higher education centre and the 'knowledge parliament' in 2013</b></li> <li>• <b>Innovation potential:</b> 5th in the country in the field of ICT (workforce and number of businesses) and 4th in terms of business services (5% of the French jobs)</li> <li>• <b>Increasing R&amp;D expenditure</b>, (+2 places in the GERD ranking in 5 years)</li> <li>• <b>High-level scientific production in a number of areas of excellence:</b> biology, health, physics, mathematics, transport, chemistry of materials, catalysis, nanotechnologies and photonics, atmospheric chemistry and physics.</li> <li>• <b>8th in the country in terms of public researchers</b></li> <li>• <b>Renewed entrepreneurial dynamic</b> as attested by the growing number of business creations</li> <li>• <b>Innovation steering mechanism</b> initiated in 2007 with Jinnove.com and intensified in 2011 via the establishment of a regional innovation steering committee</li> <li>• <b>Dense innovation system:</b> support, transfer and result exploitation structures (70 operators)</li> <li>• <b>7 competitiveness clusters</b> (Aquimer, MAUD, Retail industries, Nutrition health longevity, Up-Tex, I-Trans and Team<sup>2</sup>), 1 of which has global ambitions</li> <li>• <b>31 projects accredited under the PIA:</b> Equipex (10), Labex (7), innovative training initiative projects, IRT (1), IEED (1)</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Poor image of the economic fabric</b>, social situation and quality of life</li> <li>• <b>Unemployment rate</b> higher than the national average</li> <li>• <b>Significant education hub</b> (7.3% of French engineers are educated in the region and only 3.3% work in the Nord-Pas de Calais region) with low impact on the territory</li> <li>• <b>Economic fabric largely driven by SMEs</b> in medium or low-technology sectors, with limited propensity to innovate</li> <li>• <b>Attractive region for foreign investments</b>, for production, assembly and logistics projects, but less so for R&amp;D or "technology-intensive" projects</li> <li>• <b>Limited R&amp;D effort in large companies</b> (with the exception of a few industrial "gems")</li> <li>• <b>13th in the country in terms of scientific density and limited presence of EPSTs</b> (Public Scientific and Technical Establishments, e.g. CNRS) and EPICs (Public Industrial and Commercial Establishment, e.g. CNES or CEA)</li> <li>• <b>Implementation of non-technological innovation funding mechanisms in its early stages</b></li> <li>• <b>Poor coordination between businesses and researchers and deficiencies in innovation culture and management tools</b></li> </ul> |
|---|--|

Transverse Themes	
Facilitate the transition of regional practices towards increased entrepreneurship and initiatives	
Integrate the issue of sustainable development and the need for a new development model into the debate, at the earliest possible stage	
Innovate via and for services	
Attract "technology intensive" investments, change the image of the region	
Improve the support and funding of innovation, notably by supporting the development of sectoral strategies and project engineering	
Reinforce public and private research potential, as well as result exploitation and transfer practices	
Reinforce partnerships with the resources of excellence of other European regions	
SSA	
Health and nutrition	
Energy	
Transport and eco-mobility	
Chemistry, materials and recycling	
Ubiquity and Internet of things	
Digital images and creative industries	

## PAYS DE LA LOIRE



Key figures	GERD: €1,125.284 million (9th in the country)	GERD/GDP ratio: 1.2% (16th in the country)	BERD/GDP ratio: 0.7% (15th in the country)
	Number of researchers: 7209 (8th in the country)	European patent applications: 229 (8th in the country)	Business creation rate: 16% (18th in the country)
Strength		Weaknesses	
<ul style="list-style-type: none"> <li>• <b>Significant demographic</b> growth</li> <li>• Good territorial <b>appeal</b></li> <li>• 5th in the country in terms of <b>GDP</b> (2010)</li> <li>• 2nd in the country in terms of <b>employment rate</b> (2010)</li> <li>• <b>Diversified production facilities</b>: 78.5% of the jobs in the tertiary sector and 19.7% in the industrial sector</li> <li>• France's 3rd <b>industrial region</b></li> <li>• <b>Diversified economy</b> with three types of sector: <b>leading sectors</b> (Biotherapies, Ecotechnologies, IT); <b>traditional sectors</b> (agri-food, habitat/construction, plants, fashion); <b>heterogeneous sectors</b> (electronics, timber, child care services)</li> <li>• Development model based on the <b>networking and collective performance</b> of SMEs and collaborative initiatives:</li> <li>• 3rd in the country in terms of the number of businesses that benefited from the <b>research tax credit scheme</b></li> <li>• Dense and diversified network of <b>higher education institutions</b></li> <li>• <b>+50% in GERD</b> between 2003 and 2009, +35% in the number of international publications between 2008 and 2013</li> <li>• +40% in <b>GERDA</b> between 2004 and 2010 (compared with 25% at national level)</li> <li>• 150 research laboratories, 4 technology hubs, more than 40 Regional Innovation Platforms and promotion of the Design tool for innovation (canteen, digital incubators, collaborative digital production workshop), 1 Living Lab, Regional Design Innovation Platform</li> <li>• <b>9 competitiveness clusters</b> (Images et Réseaux, Végépolys, Atlanpole Biothérapies, Elastopole, EMC2, iDforCAR, Valorial, S2E2, Pôle Mer Bretagne), 3 with global ambitions</li> <li>• <b>Success at the investment programme for the future</b>: Labex (1), Equipex (1), IRT (12), IEED(1), and IDEFI (2)</li> </ul>		<ul style="list-style-type: none"> <li>• <b>Numerous SMEs</b> with limited R&amp;D investment capacity</li> <li>• <b>Disappointing research mechanisms</b> relative to the region's economic impact</li> <li>• <b>Innovation system in need of reinforcement</b>: complementarity between stakeholders to be improved within a dense system; fragmented result exploitation structures; absence of technical platforms in certain areas (agri-food, IT, etc.), insufficient and poorly structured private consultancy services, with limited focus on innovation</li> <li>• <b>Behind in terms of research</b>: limited presence of national public research institutions</li> <li>• <b>Limited use of measures in favour of young graduates' integration</b> into businesses' R&amp;D</li> <li>• <b>Fragile and relatively recent collective dynamics</b></li> </ul>	
SSA/Transverse themes			
Transverse Themes			
Promote a collective vision for a shared roadmap			
Increase the openness of the Pays de la Loire to the world			
Encourage collective approaches			
Promote the construction of an innovation policy accessible to all			
Support education, research and technological development to make up for the structural changes for underdevelopment of Pays de la Loire			
Create and amplify the conditions for a creative, experimental and enterprising territory			
Transition from know-how to recognised expertise in the management of European funds			
Mobilise European funds to benefit projects in the Loire region			
Targeted involvement within European networks			
Inter-regional cooperation in need of reinforcement and construction			
Improve the coordination of the Bretagne and Pays de la Loire regions' approach to research and innovation			
SSA			
Future therapies and health			
Maritime industries: new constructions and energy sources			
IT and professional electronics: skills and solutions for a digital economy and society			
Food and bio-resources: from consumer expectations to agricultural production systems			
Emergence and dissemination of Advanced Production Technologies for industrial transformation			
Design and cultural and creative industries to reconcile creation and innovation			



## PICARDIE

PICARDIE			
<b>Key figures</b>	<b>GERD:</b> €554.475 million (16th in the country)	<b>GERD/GDP ratio:</b> 1.2% (14th in the country)	<b>BERD/GDP ratio:</b> 1% (11th in the country)
	<b>Number of researchers:</b> 2968 (15th in the country)	<b>European patent applications:</b> 158 (11th in the country)	<b>Business creation rate:</b> 16% (7th in the country)
Strength		Weaknesses	
<ul style="list-style-type: none"> <li>• <b>Strategic location</b> in the heart of Europe</li> <li>• <b>Young population</b></li> <li>• Improvement in the <b>training offer</b></li> <li>• <b>Importance of the industrial sector:</b> recognised industrial expertise, 20% of industrial jobs, Industry driven by international trade</li> <li>• <b>Specialised and competitive agriculture</b> characterised by organised sectors and well-trained farmers</li> <li>• <b>Innovative economic sectors</b> relying on powerful private R&amp;D</li> <li>• Policy of <b>niches and areas of excellence</b> in terms of innovation (plant bio-refinery and chemistry, energy storage, etc.)</li> <li>• 4th in the country <b>in terms of research and technology transfer efforts</b> (Regional Council)</li> <li>• <b>Network of stakeholders</b> focusing on the RIS3 priority themes: 1 digital university, 1 PEPITE (Student centre for innovation, transfer and entrepreneurship), technical units (CE-TIM, CVG, Agro-transfert, CRITT-polymères, CoDEM) and 1 nationwide EPIC (INERIS)</li> <li>• <b>2 competitiveness clusters</b> (IAR and I Trans), 3 business hubs</li> <li>• <b>Success at the PIA:</b> Labex (2), Equipex (2), IRT (1) IEED (1), Shared innovation platform (1) (IMPROVE)</li> </ul>		<ul style="list-style-type: none"> <li>• <b>Rural region</b> suffering from poor accessibility (broadband coverage, etc.)</li> <li>• <b>Low level of employee skills</b>, education and qualification</li> <li>• <b>Large-scale student migration</b> towards adjacent regions</li> <li>• <b>Lack of appeal and large dependence</b> of the economic fabric on the outside world</li> <li>• <b>Vulnerability of the economic fabric</b> based on a large volume of small subcontractors and businesses with a high failure rate</li> <li>• <b>Segmented agricultural and industrial sectors</b>, which increases vulnerability to the vagaries of the economic situation</li> <li>• Limited development of the <b>tourism economy</b></li> <li>• <b>Few high-technology businesses</b></li> <li>• Limited <b>public research</b></li> <li>• <b>Insufficient</b> result exploitation/incubation mechanisms</li> <li>• <b>Lack of coordination</b> and efficiency of the innovation ecosystem: few businesses visited, small number of Network Technological services prescribed and limited feedback on projects</li> <li>• Lack of <b>innovation</b> and entrepreneurship culture</li> </ul>	
SSA/Transverse themes			
Transverse Themes			
Integrate the control of chronic and accidental risks , as well as their environmental impact, into all specialisation areas			
Develop new digital tools and standardise their use. Control the systems of systems			
Promote humanities and social sciences as part of an inter-disciplinary approach to major societal challenges			
Symbolise the ambition of excellence with regard to markets and territories: Picardie Technopôle			
Reinforce the mechanisms in favour of differentiation and innovation			
Facilitate business development: from entrepreneurial discovery to internationalisation			
SSA			
Reconstructive surgery and health/technologies			
Bio-economy and territorialised refinery			
Mobility and "urbanicity"			
Smart vehicles and mobility of passengers and freight			
Social innovation			



## POITOU-CHARENTES

<b>Key figures</b>	<b>GERD:</b> €386.972 million (19th in the country)	<b>GERD/GDP ratio:</b> : 0.9% (19th in the country)	<b>BERD/GDP ratio:</b> : 0.5% (19th in the country)
	<b>Number of researchers:</b> 2315 (19th in the country)	<b>European patent applications:</b> 104 (18th in the country)	<b>Business creation rate:</b> 16% (19th in the country)

Strength	Weaknesses	SSA/Transverse themes
<ul style="list-style-type: none"> <li>15th region in terms of GDP</li> <li><b>Diversity of the economic fabric</b> made up of many subsidiaries of major groups</li> <li><b>Scientific potential</b> in engineering science, geosciences, environmental and transport sciences</li> <li><b>Well-configured Higher Education and Research</b> system thanks to the PRES</li> <li>Large number of CRITTs (7)</li> <li><b>Dynamic regional incubator</b> and good relationships with the academic community</li> <li><b>Configuration into clusters/business hubs</b> for almost all key sectors</li> <li><b>Innovative SMEs</b> in automotive, aeronautics, rail and nautical industries</li> <li>Initiative to support <b>non-technological innovation</b> (design approach)</li> <li><b>Existing ecosystem of digital technologies and the cultural industry:</b> 2 business hubs, CRITT, one cluster, one internationally recognised laboratory, existing schools (ENJMIN, EESI)</li> <li><b>Success at the PIA:</b> SATT (1) Labex (1) Equipex (2)</li> </ul>	<ul style="list-style-type: none"> <li><b>Weakness of the GDP/capita</b> (18th in the country)</li> <li><b>Lack of innovation in micro-businesses/SMEs</b> (93% of businesses)</li> <li><b>Low business creation rate</b></li> <li><b>Lack of appeal</b>, limited foreign direct investment and recruitment difficulties</li> <li>Strong <b>presence of traditional industries</b></li> <li><b>Remoteness from major decision-makers</b>, lack of headquarters</li> <li>Weakness of GERD and private GERD</li> <li>Classified as <b>"moderately innovative"</b> on the European scale</li> <li><b>Limited presence of</b> innovation stakeholders</li> <li><b>Poorly structured innovation ecosystem:</b> fragmentation, absence of technological platforms, lack of coherence between scientific themes/flagship economic sectors, weak collective strategy, and uncoordinated innovation efforts</li> <li><b>Behind in terms of international development</b> and participation in European projects</li> <li><b>Results</b> insufficiently exploited within the local economic fabric</li> <li><b>Absence of competitiveness clusters</b> and the market/innovation dimension in the existing clusters needs reinforcement</li> </ul>	<p><b>Transverse Themes</b></p> <ul style="list-style-type: none"> <li>Innovation development and culture in businesses (incubation of innovative projects, support for SMEs, networking)</li> <li>Development of social innovation and the human capital</li> <li>Use of digital tools to benefit innovation</li> </ul> <p><b>SSA</b></p> <ul style="list-style-type: none"> <li>Health, Environment, and food quality</li> <li>Digital technologies in education and the cultural industry</li> <li>High-performance transport: reducing the environmental footprint, sustainable materials, eco-mobility</li> <li>Green chemistry, sustainable resources</li> <li>Sustainable buildings, energy</li> </ul>



## PROVENCE - ALPES - CÔTE D'AZUR

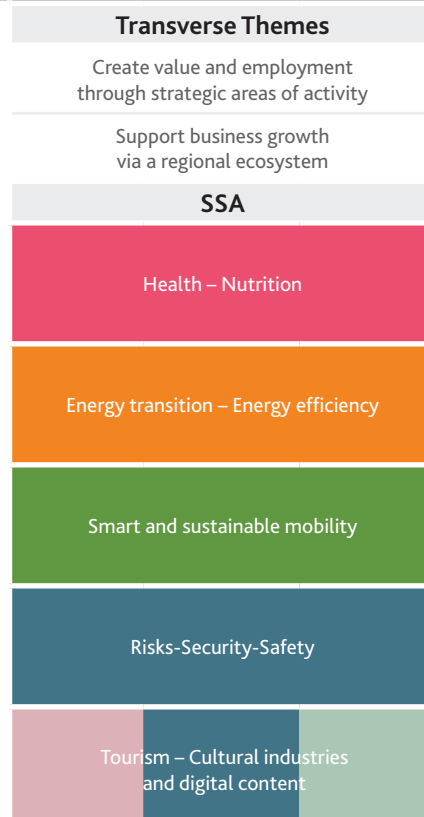


<b>Key figures</b>	<b>GERD:</b> €2,915 million (4th in the country)	<b>GERD/GDP ratio:</b> 2% (7th in the country)	<b>BERD/GDP ratio:</b> : 1.2% (8th in the country)
	<b>Number of researchers:</b> 17904 (4th in the country)	<b>European patent applications:</b> 489 (3rd in the country)	<b>Business creation rate:</b> 16.6% (5th in the country)

Strength	Weaknesses	SSA/Transverse themes
----------	------------	-----------------------

- **Regional appeal** and regional integration into the Mediterranean Basin
- 2nd French region in terms of **business creation**
- **Versatile profile** (absence of specialisation) with transverse skills to help withstand exogenous shocks
- Prime position for **emerging industries** at European level (eco-industries, creative industries, maritime industries, etc.)
- Strong **tertiary sector**
- **Substantial role of the social & inclusive economy** (13.6% of the private workforce)
- 3RD French region in terms of **student population**
- Presence of **large-scale high-growth projects** (ITER)
- 3 times more **start-ups and young innovating companies** than the national average, positioned on emerging industries
- **Internationally recognised scientific excellence**
- **General higher education curriculum** specialising in law, political sciences, economics, health-medicine-pharmacy, commerce, ICST and dentistry
- **Broad range of innovation services**
- Initiation of the **"market" approach through uses**
- **Networking logic: 11 competitiveness clusters** (Optitec, SCS, Pôle Mer Méditerranée, Pegase, Capénergies, Eurobiomed, Pôle Risques, PASS, Trimatec, Eau and Terralia) and 5 non-cluster PRIDES (GREEN, Novachim, Home Care Services cluster, PRIMI (Multimedia Image and internet) and Business and Congress Tourism) in domains exceeding technological innovation (export, uses of ICT, HR, corporate social and environmental responsibility)
- **Success at the PIA:** IEED (1), SATT (1)

- **Shortage of public infrastructures** (strong land-related constraints), insufficient public transport, road congestion, insecurity affecting certain areas of activity
- **Fragmented economic fabric** consisting of small businesses with few intermediate-sized companies
- **Recruitment difficulties** in certain professions requiring a high level of qualification
- **Shortage of engineering courses** and BTS level technicians (advanced technician diploma)
- **Low impact of industry** while services account for 80% of the jobs and added value
- **Concentration of innovation activities** around the major urban areas: Aix-Marseille, Nice-Sophia-Antipolis and Toulon
- **Structural under-capitalisation of the businesses**
- **Scientific excellence** insufficiently exploited
- **Broad range of support services** which however remains too opaque for businesses and insufficiently coordinated with the private sector
- **Lack of innovation tools** to support the downstream phase and the placing on the market



# RÉUNION



## Key figures

**Business creation rate:** 17.48% (3rd in the national rankings)

### Strength

- **Public and national research centres:** CIRAD, IRD, IFREMER, BRGM branch, CRVOI (emerging diseases)
- **World-class observation and research facilities**
- **Flagship research areas:** ecology, biodiversity, energy, health, humanities and social sciences
- **Interaction dynamics** between ecosystem stakeholders
- Extensive **support mechanism** for project initiators
- 1 **competitiveness cluster** (QUALITROPIC) and 6 other clusters
- **Success at the PIA:** ITE (1)

### Weaknesses

- **Young population** but share of over 60 population steadily increasing
- **Predominance of services** (81%), agriculture (2%), Industry and construction (17%)
- **Low employment rate** (43% compared with 63% for the national average)
- **GDP/capita** 30% lower than the national average
- **Broad network of micro-businesses** (85% including 66% of self-employed workers without employees) with limited innovation culture
- **Relatively new RDI ecosystem**
- **Relative opacity** and complexity of the innovation system
- **Insufficient innovation dynamic** and low rate of technical innovations
- **Essentially public R&D** (1,400 FTE researchers, 3 times less than the national average) and almost non-existent private R&D
- **Significant needs in terms of innovative project support** and monitoring
- **Poorly structured innovation ecosystem** despite the presence of a multitude of structures

### SSA/Transverse themes

#### Transverse Themes

Develop and mobilise territorial talents

Reinforce proximity to develop ideas and projects: the issue of territorial intelligence


Facilitate and improve procedures for project initiators through open, differentiated and integrated support

#### SSA

Agile platform to facilitate the transition to a digital knowledge and carbon-free economy

Stimulation of emotions in experiential eco-tourism

Production of solutions in a tropical bio-economy to benefit the economy of the living world

RHÔNE-ALPES			
Key figures	GERD: €5,293.232 million (2nd in the country)	GERD/GDP ratio: : 2.8% (3rd in the country)	BERD/GDP ratio: 1.8% (4th in the country)
	Number of researchers: 29597 (2nd in the country)	European patent applications: 1,400 (2nd in the country)	Business creation rate: 15.6% (10th in the country)
Strength		Weaknesses	
<ul style="list-style-type: none"> <li>• <b>Significant urban networks</b> connecting 8 conurbations and a powerful academic community with major research laboratories</li> <li>• <b>Varied economic fabric including specialised territories</b> (Oyonnax, Arve Valley) and an <b>industrial fabric making the most of the stimulating effect of world leaders in several industrial sectors</b> (health, energy, transport, electronics, chemistry and environment, tourism and leisure)</li> <li>• <b>18% of the national industry is based in Rhône Alpes</b></li> <li>• <b>2nd French region in terms of export</b> (12% of the national exports)</li> <li>• <b>A leading European region for innovation</b> (2012 <i>Regional Innovation Scoreboard</i>)</li> <li>• <b>Europe's 5th region in terms of scientific activity and the amount of R&amp;D expenditure, and 4th in terms of R&amp;D workforce</b></li> <li>• <b>2nd French region in terms of publications and patents as well as the creation of innovative businesses, between 1998 and 2007</b> (12%) and <b>young innovative companies</b> (12%)</li> <li>• <b>Substantial R&amp;D investments in high-tech and traditional sectors</b></li> <li>• <b>Numerous innovation funding mechanisms and configuration of business angel networks in a number of territories</b></li> <li>• <b>Investment in social innovation as well as in the protection of professions</b></li> <li>• <b>Dense innovation ecosystem made up of a multitude of structures:</b> regional development &amp; innovation agency (ARDI), Universities, technological platforms, technical and research centres, PRES, Carnot Institutes, regional technical centres, Innovation Accelerator (GRAVIT) and Living Labs</li> <li>• <b>Numerous skills and genuine ability to work together: 12 competitiveness clusters</b> (Imaginove, LUBT, Techtera, Lyon Biopole, Axelera, Manalogic, Tenerrdis, Arve Industries, Viameca, Plastipolis, Terralia and Trimatec), 12 other clusters, hubs, foundations resulting from RTRAs (advanced research thematic networks) and RTRs (research and healthcare thematic networks)</li> <li>• <b>Much success at the PIA:</b> Equipex (9), Labex (11), IRT (2), IEED (2) and highly-rated regional research teams</li> </ul>		<ul style="list-style-type: none"> <li>• Industrial fabric largely consisting of <b>SMEs and micro-businesses</b></li> <li>• <b>Traditional sectors</b> facing competition from low-cost countries (automotive, plastics processing, etc.)</li> <li>• 50% of the regional innovative businesses fail to go beyond the <b>status of micro-business after 8 years in operation</b></li> <li>• <b>Strong innovation potential</b> but slow dynamic compared with the best performing European regions</li> <li>• <b>Insufficient R&amp;D expenditure</b>, not yet compliant with the Lisbon objectives (3%) and low expenditure in private research</li> <li>• 10th in Europe in terms of <b>patents filed</b></li> <li>• Not enough <b>innovative businesses in the public research sector</b></li> <li>• Only 6% of <b>venture capital funds</b> and 8.4% of <b>equity investment funds</b> at national level; small number of private funds; public and private funds too modest for the region</li> <li>• <b>Poorly coordinated support mechanisms;</b> innovation stakeholders fragmented across the different conurbations and limited synergy between research laboratories, universities and businesses</li> <li>• <b>Difficult configuration of academic centres</b> and lack of international visibility for scientific production</li> <li>• Disappointing results in terms of <b>European projects</b> (FPRD)</li> </ul>	
		SSA/Transverse themes	
		Transverse Themes	
		Technological innovation, transfer and KETs	
		Entrepreneurship and innovation	
		Support the growth of micro-businesses, SMEs and intermediate-sized companies	
		Positioning with regard to Horizon 2020 and European projects	
		Innovation through usage and experimentation territories	
		Social innovation	
		Businesses and environmental transition of the economy	
Innovative public procurement			
SSA			
Personalised health and infectious & chronic diseases			
Energy storage networks			
Digital technologies and caring systems			
Smart mobility uses, technologies and systems			
Smart, high energy efficiency buildings			
Industrial processes and eco-efficient factories			
Mountain sports, safety and infrastructures			

## GLOSSARY

**SWOT:** strengths weaknesses opportunities threats

**BPIFrance:** French Public Investment Bank

**COSME:** European programme for the competitiveness of Enterprises and SMEs

**CPER:** contrat de plan Etat-Région (State-Region planning contract)

**GERD:** gross domestic expenditure in research and development

**AGERD:** administrations' gross domestic expenditure in research and development

**BERD:** business expenditure in research and development

**SSA:** smart specialisation area

**ERDF:** European regional development fund

**EAFRD:** European agricultural fund for rural development

**EMFF:** European maritime and fisheries fund

**SIF:** Strategic Investment Fund

**Horizon 2020:** European research and innovation programme

**Innovation:** implementation of a new or significantly improved product or process, a new marketing or organisation method in business practices, workplace organisation or external relations. (source: Oslo Manual)

**Social innovation:** development of new solutions to respond to new or inadequately satisfied social needs under current market conditions and social policies, involving the participation and cooperation of those concerned (users, consumers, etc.). These innovations concern products or services as well as the mode of organisation or distribution, in areas such as ageing, early childhood, health, fight against poverty, etc. (source: social and inclusive economy development portal)

**INPI:** institut national de la propriété industrielle (French national institute of industrial property)

**IRT:** institut de recherche technologique (technological research institute)

**KET:** key enabling technology

**SRDE:** schéma régional de développement économique (regional economic development plan)

**SRDEII:** stratégie régionale de développement économique, d'innovation et d'internationalisation (regional economic development, innovation and internationalisation strategy)

**SRESRI:** schéma régional de l'enseignement supérieur, de la recherche et de l'innovation (regional higher education, research and innovation plan)

**EIP:** European innovation partnerships

**PIA:** programme des investissements d'avenir (investment programme for the future)

## USEFUL LINKS

### **FRENCH PARTNERSHIP AGREEMENT:**

<http://www.europe-en-france.gouv.fr/L-Europe-s-engage/Accord-de-partenariat>

### **SMART SPECIALISATION STRATEGIES:**

#### **TERRITORIAL INTELLIGENCE AND ROLE OF THE COMPETITIVENESS CLUSTERS-CMI/DATAR – JUNE 2013:**

<http://www.cries-idf.fr/docs/diaporamas%20Innovation/CMI.pdf>:

### **SEVILLE PLATFORM – SMART SPECIALISATION PLATFORM:**

<http://s3platform.jrc.ec.europa.eu/home;jsessionid=8TwcJn8SmGmL4pRgpbCnhGCHkbVsfntnDbnc1qp55z4v6F2vM-mYk!1650341192!1412349138983>:

### **GUIDE FOR THE PREPARATION OF THE FRENCH REGIONS' SMART SPECIALISATION STRATEGIES – DATAR – NOVEMBER 2012:**

<http://www.europe-en-france.gouv.fr/Centre-de-ressources/Etudes-rapports-et-documentation/Guide-pour-la-preparation-des-strategies-de-specialisation-intelligente-des-regions-francaises>

### **NATIONAL/REGIONAL RESEARCH & INNOVATION STRATEGIES FOR SMART SPECIALISATION (RIS3) – MARCH 2014:**

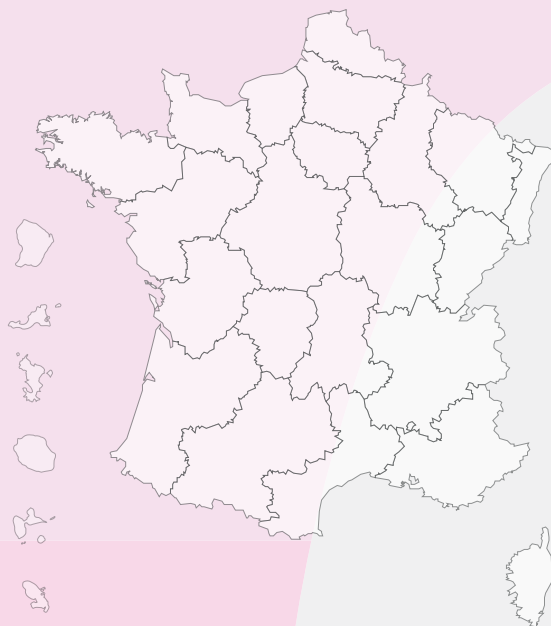
[http://ec.europa.eu/regional\\_policy/sources/docgener/informat/2014/smart\\_specialisation\\_fr.pdf](http://ec.europa.eu/regional_policy/sources/docgener/informat/2014/smart_specialisation_fr.pdf)

### **SUMMARY OF THE FRENCH REGIONS' REGIONAL INNOVATION STRATEGIES – DATAR – JANUARY 2012:**

[http://www.datar.gouv.fr/sites/default/files/120211\\_datar\\_sri\\_plaquette.pdf](http://www.datar.gouv.fr/sites/default/files/120211_datar_sri_plaquette.pdf):

In addition to the Seville platform, the CGET promotes a platform on its Intranet site, allowing the regional R-RIS3 coordinators to exchange and post their strategies while being kept informed of the initiatives undertaken, notably by the CGET. If you wish to register, please contact [maud.pelletier@cget.gouv.fr](mailto:maud.pelletier@cget.gouv.fr)

**KNOWING european programmes** is a collection initiated by the EuroP'Act European technical support and coordination programme. This collection is designed to provide the stakeholders of the European cohesion policy in France with elements to reflect upon with a view to reinforcing and improving the monitoring and steering of European programmes. It includes several types of support such as survey summaries, analytical tools and conceptual frameworks.



## Contacts

General commission for territorial equality

[www.cget.gouv.fr](http://www.cget.gouv.fr)

Direction du développement des capacités des territoires :

Maud Pelletier - [maud.pelletier@cget.gouv.fr](mailto:maud.pelletier@cget.gouv.fr)

[www.europe-en-france.gouv.fr](http://www.europe-en-france.gouv.fr)

december 2015