Regional Innovation Monitor

Regional Innovation Report Rhône-Alpes

To the European Commission
Enterprise and Industry Directorate-General
Directorate D – Industrial Innovation and Mobility Industries

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The Regional Innovation Monitor (RIM - http://www.rim-europa.eu) is an initiative of the European Commission's Directorate General for Enterprise and Industry, which has the objective to describe and analyse innovation policy trends across EU regions. RIM analysis is based on methodologies developed in the context of the INNO-Policy Trendchart which covers innovation policies at national level as part of the PRO INNO Europe initiative.

The overarching objective of this project is to enhance the competitiveness of European regions through increasing the effectiveness of their innovation policies and strategies. The specific objective of the RIM is to enhance the scope and quality of policy assessment by providing policy-makers, other innovation stakeholders with the analytical framework and tools for evaluating the strengths and weaknesses of regional policies and regional innovation systems.

RIM covers EU-20 Member States: Austria, Belgium, Bulgaria, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, the Netherlands, Poland, Portugal, Romania, Slovakia, Spain, Sweden and the United Kingdom.

This means that RIM will not concentrate on Member States where the Nomenclature of territorial units for statistics NUTS 1 and 2 levels are identical with the entire country (Estonia, Latvia, and Lithuania), Malta which only has NUTS 3 regions, Slovenia which has a national innovation policy or Cyprus and Luxembourg which are countries without NUTS regions.

The main aim of 50 regional reports is to provide a description and analysis of contemporary developments of regional innovation policy, taking into account the specific context of the region as well as general trends. All regional innovation reports are produced in a standardised way using a common methodological and conceptual framework, in order to allow for horizontal analysis, with a view to preparing the Annual EU Regional Innovation Monitor reports.

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Executive Summary

1. Introduction: Main recent trends in the Regional Innovation System

Between 2000 and 2008, Rhône-Alpes registered a 4.1% average annual growth rate. It is the second most important contributor to the French GDP with 9.2% after the capital region Ile de France (27.2%). It is also the second French region in terms of population (9.4% in 2008) and employment (2000-08: 10% of total employment). The unemployment rate is lower than the national rate and has been declining until 2008. The service sector is the main employer (69% of jobs, 50% of the gross added value). Since 2004 however, the industrial sector has been particularly affected by job destruction, including as a result of relocation outside the EU (2004-2010: -13%).

Rhône-Alpes ranks second among the French regions in terms of R&D expenditure, again behind the capital region. It benefits from the presence of two R&D strongholds with its two major metropolitan areas, Lyon and Grenoble. Between 2000 and 2008, the region dedicated on average 2.5% of its GDP to GERD (France: 2.1%); the regional BERD represents 1.7% of the GDP (France: 1.3%). The regional contribution to the national GERD and BERD are respectively 11.4% and 10.5%. Regional expenditure in GERD and BERD was characterised by an important annual growth during the period 2000-2008 (respectively 4.7% and 4.6%, higher than the national average.

Among EU regions, Rhône-Alpes ranks 8th for scientific publications and 10th for patents. It is also performing better than the average EU regions for GERD, BERD and higher education expenditure. However, in the last past years, there came a feeling among the regional policy-makers and innovation stakeholders that the region faced the risk of falling behind the best performing European regions.

2. Major innovation challenges and policy responses

Challenge 1: Streamlining and opening up clusters and ‘pôles de compétitivité’ for orienting them towards ‘lead markets’

The Rhône-Alpes RTDI policy has been at least from 2004 strongly focused on the support to ‘pôles de compétitivité’ and to regional ‘economic’ and ‘research’ clusters. This support has recently been confirmed in the SRI. Policy makers consider in general that there are too many of them (about 40) even if this reflects the diversity of the regional economic fabric and that they must not become ‘institutionalised’. ‘Cross-fertilisation’ between them has to be supported to orientate them towards frontier research and/or emerging lead markets.

Challenge 2: Ensuring an appropriate territorial balance for the innovation policy

Rhône-Alpes is geographically diversified with two major cities – Lyon, the regional capital city, an industrial, banking and services centre with large universities; Grenoble, a public-private R&D stronghold – and mid-size cities with smaller universities with some specialisations. While smart specialisation seems relatively easy in Grenoble (micro and nanotechnologies; software with applications to biotech, medicine and health), it is less clear in Lyon (in spite of good capacities in health and biotech, clean tech, chemistry).

Mid-size cities have to find their own fields of specialisation which they do with some reluctance. There is however some trends towards specialisation: solar energy in Chambéry; plastics in Oyonnax; design and optics in Saint-Etienne, ...

Challenge 3: Strengthening support to non-technological innovation
If technological innovation is to stay as a strategic objective, it is necessary to pay much more attention to non-technological innovation than in the past. The challenge represented by non-technological innovation appears to be focused in particular on: design (in particular for ‘traditional’ industries); ‘territorial’ innovation; ‘sociétale’ innovation, i.e. innovation addressing the needs of the society and relying on the mobilisation of social sciences, through analysing the uses of new technologies and innovative products and services with living labs.

3. Innovation policy governance

The innovation policy governance is characterised as in all French regions by a joint designing of the innovation strategy, and a joint steering, implementation and co-funding by the regional authorities and the State administration in the region, which are reflected in two major policy and programming documents: the ‘Contrat de Plan Etat-Région’ (hereafter: CPER) and the ERDF Operational Programme (hereafter: OP). A third actor also plays a key role in each region, the national public innovation agency OSEO Innovation. However, there may be some differences across the French regions, as revealed through the SRI exercise that all French regions had to carry out in 2009.

Since 2004, the French regions are competent for regional economic development which resulted in particular in the drafting of Regional Economic Development Schemes (SRDE). Rhône-Alpes is currently preparing its new Regional Economic Development and Innovation Strategy (SRDEI) as well as its Regional Higher Education Research and Innovation Strategy (SRESRI) which will be available in 2011. The innovation governance system is dominated at strategic level by the State-Region partnership. A ‘Comité stratégique de l’innovation en Rhône-Alpes’ (COSIRA), representing innovation stakeholders, was created within the framework of the ERDF OP. It met only once since 2007 and has not been effective. At operational/management level, the regional innovation and development agency ARDI was created in 2008. ARDI is a non-profit organisation, based on a partnership between the Region, the State and OSEO. It is expected to simplify the regional innovation system by coordinating the actions of the multiple intermediary organisations and by strengthening the interrelations between the thematic of the different poles and clusters.

Rhône-Alpes is currently facing three innovation governance challenges: involving stakeholders in an efficient and effective way (which the COSIRA failed to achieve); rationalising the innovation support system (which ARDI is expected to do); managing the relationship between Lyon and Grenoble (the competition between the two RTDI strongholds had softened, but was recently reactivated by State nationwide calls for proposals in the field of universities and research).

4. Conclusions: future actions and opportunities for innovation policy

Rhône-Alpes has had for years a strongly sector-oriented innovation policy with about 40 competitiveness poles and clusters, plus 21 technological platforms, which, while gathering interdisciplinary competences, are notwithstanding clearly sector-focused. In addition, recent national policy orientations play in favour of ‘critical masses’ in some fields as health or micro and nanotechnologies.

At the same time, ARDI (2008) and the SRI (2009) are emphasising the importance of taking account of needs and demand of businesses in terms of innovation and the necessity of having horizontal support measures allowing the regional industry to be present on the ‘lead markets’.

The two approaches are more complementary than contradictory. However, can they be financed in the mid-term in a context of budgetary constraints?
There are accordingly opportunities for streamlining and rationalising the regional innovation policy through: concentrating the poles and clusters policy on sectors/fields with a strong critical mass and developing ‘interfaces’; strongly supporting the market orientation of the poles and clusters, beyond the mantra of ‘lead markets’; confirming the role of ARDI in establishing diagnostics of enterprises and detecting innovative projects; setting up fully-fledged policy intelligence tools, which are today clearly lacking (strategic intelligence, foresight studies, and of course evaluation studies).
1. Main Trends and Challenges in the Regional Innovation System

1.1 Recent trends in regional economic performance

Between 2000 and 2008, Rhône-Alpes registered a 4.1% average annual growth rate (Eurostat). The region is the most important contributor to the national GDP with 9.2%, after Ile de France, the capital region, (27.2% of the GDP).

Second French region in terms of economic and geographic size, Rhône-Alpes is also the second region in terms of population; it hosts approximately 9.4% of the French population (2008 figures) and concentrates about 10% of the total employment between 2000 and 2008. Lower than the national rate (7.4% against 9% at the national level), the unemployment rate is declining since 2000 (-2.5% on average). Since 2008, this decline has stopped, in a context of global economic crisis.

In 2008, as at national level, the service sector in Rhône-Alpes is the main employer, with 69% of the labour force, within which 17.8% in financial intermediation and business activities, 48.7% in public services and 33.4% in retail. The service sector contributes to more than 50% of the regional gross value-added. The industrial sector, including construction, concentrates 28.3% of the regional employment, and contributes to 27% of the gross value-added. Since 2004, the regional industrial sector has been particularly affected by job destructions, including as a result of relocation outside the EU (-13% between 2004 and 2010).

The agricultural sector contributes to less than 3% of the regional employment, below the national level of 4% (2008 figures). This share strongly decreased over the period 2000-2008, to the benefit of the construction and the service sectors (respectively +3.7% and +2.6% on annual average from 2000 to 2008).

According to the French national statistical institute (INSEE), the region is characterised by a strong presence of SMEs (0-50 employees), which represent 98.7% of local enterprises (of which 92.4% have less than 10 employees). The failures of companies have been particularly important in the last past years.

Moreover, despite its national leadership in tourism, transports and logistics, iron and steel industries, mechanical equipment, energy, plastics, chemistry, textile and sports industry, the traditional industries hardly face international competitiveness. The new regional plan for economic development (SRDE 2011-2015), which is not still approved, will expectedly focus on growth sectors in Rhône-Alpes (clean tech, creative industries) and the anticipation of sectoral changes.

1.2 Recent trends in regional innovation performance

Rhône-Alpes overall stands at a rather important level in terms of investment in research and innovation in comparison with the French average. It benefits from the presence of two R&D strongholds with its two major metropolitan areas, Lyon and Grenoble, where the main (sectoral/technology) focus is........

Regarding the GERD (global) and the BERD (business), the share of investment in research and innovation was maintained over the last years. Between 2000 and 2008 (Eurostat):

- The region dedicated on average 2.5% of its GDP to GERD, above the national level of 2.1%;
- The regional BERD represents 1.7% of the GDP, which is higher than the national average (1.3%), and reflects for a significant part the presence in the region of large industrial groups (pharmaceuticals, software and micro-electronics, ...) as well as a significant number of innovative SMEs often linked to R&D
concentrations (as in Grenoble with the CEA, Commissariat à l’Energie atomique).

It remains however under the 3 % Barcelona objective.

Rhône-Alpes ranks second among the French regions in terms of R&D expenditure (again behind the capital region, Ile de France): the regional contribution to the national GERD and BERD are respectively 11.4 % and 10.5 %, this lies above the regional contribution to the national GDP of 9.5 % in 2009. Regional expenditure in GERD and BERD was characterised by an important annual growth during the period 2000-2008 (respectively 4.7% and 4.6%, while the national annual growth over the period was 3.1% and 3.2%), due both to the strengthening of public research and to strong industrial research (micro-electronics, micro and nanotechnologies, chemicals, pharmaceutical industry).

Globally, the French Southern regions have benefited along the last 20 years from the transfer of a number of research centres and teams from the capital region, corresponding to a decentralisation policy in the field of research. Within this picture, the historical development of Rhône-Alpes with respect to the others (especially Midi-Pyrénées, Languedoc-Roussillon, Provence-Alpes-Côte d’Azur) is that it has had for two centuries a strong industrial base allowing for collaboration to develop between research and industry, a situation which is not common in France.

Regional businesses contributed to 68.1 % of regional gross expenditure on R&D between 2000 and 2008, thanks to the density of the industrial fabric in the region and expenditure incurred by SMEs (20.7 % of the regional GERD in 2007).

Although the level of employment in high-tech industries and knowledge-intensive services is a little higher in the region than at national level, (5.6 % against 5.3% in the French average), it fell during the period 2000-2008 (-1.2 % on annual average).

Rhône-Alpes is an important European region in terms of research and innovation investment. It ranks 8th for publications and 10th for patents. However, in recent years, the regional policy-makers and innovation stakeholders began to realise that the region faced the risk of falling behind the best performing European regions (risk that available statistics do not properly measure). This realisation explains in part why particular attention was paid by regional policy-makers to the diagnostic and comparative analysis with other EU regions carried out at the beginning of the regional innovation strategy (SRI) exercise.

Regional skills are concentrated in five broad research areas:

• digital technologies, nanotechnologies, materials,
• management, organisation, production,
• chemistry, energy, transport,
• biotech and health,
• lifestyle, culture, science and society.

In order to make research and cooperation between private and public sectors efficient, ‘intermediary’ organisations in charge of supporting technology transfer and innovation are well spread over the regional territory.

The region hosts:

• 10 pôles de compétitivité (sectors concerned: biotechnologies and health; bio-resources; chemicals; micro and nanotechnologies; mechanical engineering; ICT and image processing; materials; agrofood; energy and environment);

1 Regional actors also participate in 3 poles based in other regions
• 14 regional ‘research’ clusters (fields concerned: micro and nanotechnologies; computer science and embedded software; materials; production engineering; chemistry; environmental technologies; renewable energies and energy efficiency; transport; agricultural research (plants); infectiology; neurosciences; management of territories; culture and heritage; scientific, technological culture);

• 12 regional ‘economic’ clusters (sectors concerned: aerospace; automotive industry; biological products; renewable energies and energy efficiency; image processing and software editing; ‘mountain industries’; sport, leisure and outdoor industries; helath-related technologies; logistics; agrofood; lighting innovative technologies);

• 13 Carnot Institutes (linking industry and research).

As it can easily be seen, there are quite a lot of sectors/fields which are common to the different poles and clusters, entailing interrelations between them.

In the field of research, it hosts 2 PRES, Higher Education and Research Poles, which are groupings of universities (Lyon-Saint-Etienne and Grenoble), 3 RTRA (“Réseaux Thématiques de Recherche Avancée”) and 3 RTRS (“Réseaux Thématiques de Recherche et de Soins”), and thematic research consortia (Minatec, INES, NanoBio, CLEA, Canceropole CLARA, Consortium Alliance PV, etc.).

Figure 1-1 Economic and innovation performance indicators for Rhône-Alpes

Source: Eurostat.

1.3 Identified challenges

The Regional Innovation Strategy (hereafter: SRI) presents the Rhône-Alpes strengths and weaknesses as viewed by the leading regional actors, and in particular public authorities (regional and State administration in the region). Rhône-Alpes is still an industrial/manufacturing region with ‘traditional’ sectors, some of them, as the automotive industry and plastics, being strongly affected by competition from countries with low labour costs. It benefits from the presence of large research centres, linked or not to universities, some of them world-class, but which do not deliver sufficient innovation. There is a rather strong networking culture between research centres and large-scale businesses. However, SMEs are not much prone to innovate (BERD is concentrated in large businesses and a few high tech SMEs). There are a large number of ‘intermediary’ organisations and agencies supporting innovation and technology transfer (more than 100) which can be complementary to some extent, but are often too small and competing.
Challenge 1: Streamlining and opening up clusters and ‘pôles de compétitivité’ for orienting them towards ‘lead markets’

The Rhône-Alpes RTDI policy has been at least from 2004 strongly focused on the support to ‘pôles de compétitivité’ (identified at national level) and to regional ‘economic’ and ‘research’ clusters. This support has recently been confirmed in the SRI.

However, there is a consensus on the following points: there are too many poles and clusters in Rhône-Alpes (about 40) even if this reflects the diversity of the regional economic fabric; they must not become ‘institutionalised’ and remain ‘frozen’ while research and markets are evolving; as a consequence, it is very important to support ‘cross-fertilisation’ between them in order to develop interfaces and orientate them towards frontier research and/or emerging lead markets.

Foresight and strategic intelligence are required for taking such a move, but they have been so far poorly developed and a lack of capacity exists in this regard, which may hamper future smart specialisation strategies.

Challenge 2: Ensuring an appropriate territorial balance for the innovation policy

Besides having a highly diverse regional economic fabric, Rhône-Alpes is geographically diversified with two major cities – Lyon, the regional capital city, an industrial, banking and services centre with large universities; Grenoble, a public-private R&D stronghold, rather specialised – and a series of mid-size cities with smaller universities with some specialisations.

The respective positions of Lyon and Grenoble widely differ. While smart specialisation seems relatively easy in Grenoble – such as: micro and nanotechnologies; software in particular with applications to biotech, medicine and health – this is much less clear in Lyon where there are good capacities in health and biotech, clean tech, chemistry, but without a level of concentration of skills and specialisation as sharp as exists in Grenoble.

Moreover, the competition between the two metropolitan areas, which had softened, has been recently reactivated with the competition for getting State money for RTDI through the ‘Great Loan’ (Grand Emprunt allocating €11b to supporting higher education and research, in particular with the ‘Initiatives of Excellence’ aimed at raising some French universities to world class level).

Mid-size cities have to find their own fields of specialisation which they sometimes do with some reluctance. There is however some trends towards specialisation (such as: solar energy in Chambéry; plastics in Oyonnax; design and optics in Saint-Etienne, ...) through combining national and regional policies supporting poles and clusters, and recent higher education initiatives.

Designing a RTDI policy able to take account of these differences is surely one of the key challenges of Rhône-Alpes.

Challenge 3: Strengthening support to non-technological innovation

There is a consensus on the idea that, if technological innovation is here to stay as a strategic objective, it is necessary to pay much more attention to non-technological innovation than in the past. This is a sort of mantra in all French SRI, however the challenge represented by non-technological innovation appears to a little bit more precise and focused in particular on: design (in particular for ‘traditional’ industries); ‘territorial’ innovation; societal innovation, i.e. innovation addressing the needs of the society and relying on the mobilisation of social sciences, through analysing the uses of new technologies and innovative products and services with living labs.
2. Innovation Policy Governance

The innovation policy governance is characterised as in all French regions by a joint designing of the innovation strategy, and a joint steering and implementation by the regional authorities and the State administration in the region, which are reflected in two major policy and programming documents: the ‘Contrat de Plan Etat-Région’ (hereafter: CPER) and the ERDF Operational Programme (hereafter: OP). A third actor also plays a key role in each region, the national public innovation agency OSEO Innovation.

However, in spite of this common pattern, there may be some differences across the French regions, as revealed through the SRI exercise that all French regions had to carry out in 2009.

2.1 Degree of institutional autonomy

All French regions have a general competence regarding the regional interests, a competence which is shared with the State and with other local authorities in so far as their territory is concerned.

Since 2004, they are competent for regional economic development which entails at least two specific competences: the drafting of a Regional Economic Development Scheme (hereafter: SRDE); public grants (direct or indirect) to enterprises (in compliance with EU Competition Law). The General Code for Regional and Local Authorities indicates that “the Region is associated with the framing and application of the national research and technology policy” (Article L4252-1).

Their budgetary autonomy vis-à-vis the central government is rather limited, since they collect very few taxes (and have in general little autonomy in determining their amount) and are heavily dependent on State transfers and subsidies. The role of ERDF funding is relatively important in the field of RTDI through the OPs (and is considered in general by regional policy-makers as strategically important).

In 2008, the French regions have spent €769.2m for RTDI, which represented an increase of €59.6m compared with 2003 (2.8% of their total budget in 2008 as in 2003); the same year, regions expenditure represented 2/3 of the total expenditure dedicated to RTDI by all French local authorities. Even if comparability is difficult, GOVERD amounted to €14.6b the same year.

Regional innovation policies are jointly designed by the State administration in the region (Regional Secretariat for Regional Affairs – SGAR, Regional Delegate to Research and Technology – DRRT, Regional Directorate for Industry – DIECCTE) and the regional authorities. They are embodied in the above mentioned policy and programming documents CPER and ERDF OP. Co-funding is the rule, but a very limited number of measures happens to be funded by the region alone (and for low amounts).

The autonomy of the regions is reflected in two policy (and not programming documents) which are relevant for innovation policies: the already cited SRDE and, in some regions as Rhône-Alpes, by the Regional Scheme for Higher Education and Research (SRESR). Both documents indicate policy orientations, but need in general State co-funding to have the orientations translated into concrete actions.

On the whole, the need to implement proactive research and innovation policies in regions has progressively arisen during the past two decades. Awareness of the importance of RTD policies has increased in parallel with the growing power given to the regional authorities as regards economic development.
2.2 Institutional-set up, co-ordination and implementation mechanisms

The key institutions supporting innovation in Rhône-Alpes since 2000 are four, as in all French regions: the State administration representing the ministry in charge of research (DRRT), and the ministry in charge of industry (DRIRE which became DIRECCTE in 2010); the regional authorities; OSEO innovation. The system is so general that it was known as ‘the gang of four’.

These institutions are working together through the implementation of the CPER and ERDF OP.

The Rhône-Alpes regional authorities have some autonomy in so far as they manage some actions and measures through ERDF global grants, e.g.: technological platforms, collaborative projects of regional clusters, collective actions in the field of eco-products and eco-services, structuring of a network of environmental advisers, etc. But OSEO Innovation is also managing measures and actions through a global grant (accompanying SMEs and micro-enterprises toward innovation) and specific agreements with the Region.

Form the mid-2000s, this governance system has been criticised across French regions² both:

- at strategic level: because it remains very centralised and does not significantly involve stakeholders;
- and at operational/management level: because it has led in general, under the joint umbrella of the State and the Region, to the proliferation of intermediary RTDI organisations.

Rhône-Alpes has tried to address these issues, at strategic level by the creation of a ‘Comité stratégique de l’innovation en Rhône-Alpes’ (COSIRA) within the framework of the ERDF OP, in charge of “contributing to the steering of Axis 1” (Innovation and the Knowledge Economy) and acting as an expert group for “optimising” the carrying out of ERDF measures and actions. It was expected to be composed of about 20 people representing the key actors of innovation in the region, appointed by the Préfet de Région, in agreement with the President of the Regional Council. In fact, it seems that COSIRA had only one meeting since 2007 and has not been effective.

At operational/management level, the regional agency ARDI was created in 2008. ARDI is a non-profit organisation, based on a partnership between the Region, the State and OSEO. It is expected to simplify the regional innovation system by coordinating the actions of the multiple intermediary organisations and by strengthening the interrelations between the themes of the different poles and clusters.

The SRI exercise was carried out in 2009. After some initial conflicting views between the State and the Region concerning the diagnostic, a global agreement appears to have been reached on the key points of the SRI, even if there has not been so far a formal validation of the SRI by the newly elected (2010) Regional Council. Concerning governance, the SRI indicates that the governance system will rely at strategic level on the State-Region partnership (both of them being the funding institutions), and confirms the implementation of the SRI will rely on ARDI as a cornerstone with respect to its missions (economic intelligence, engineering of individual and collective projects, networking). It is expected that State-Region partnership will be implemented through a ‘convention d’objectifs’ (instead of a contract based on subsidies).

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² DG REGIO, Strategic Evaluation on innovation and the knowledge based economy in relation to the Structural and Cohesion Funds, for programming period 2007-2013, Report France, 2006
The absence of a formal validation of the SRI by the Regional Council is not considered by the key actors as a real problem. The first reason is that, as previously said, the Region and the State agree on all key issues (including governance). The second reason, specific to the regional authorities, is that the regional authorities are preparing to update their two policy documents, SRDE and SRESR, with the drafting of a SRDEI3 and a SRESRI (with I for innovation, and S for Strategy instead of Scheme), integrating in 2011 the elements of the SRI into these two documents. Therefore, the SRI will be indirectly validated through the validation of both documents.

2.3 Availability and use of policy intelligence tools

ARDI, the Regional Development and Innovation Agency, has recently set up an internal group of about 10 people in charge of technological watch, economic and strategic intelligence, and foresight studies. However, it has not yet set up thematic groups of stakeholders, and is mainly working through desk research and queries of relevant sources. The SRI had no foresight dimension, even in its annexes dedicated to two specific sectors, textile and health (they were more about mapping).

However, some innovation policy-makers consider that technological watch as well as strategic intelligence are surely important, but that it is necessary to focus on specific topics and targets, and to be sure that enterprises will really benefit from them. Is there a real appetite of enterprises in this field? Strategic information is useful only for actors which have themselves a strategy.

The regional authorities intend to set up within the governance innovation system a working group dedicated to foresight, concerning in particular smart specialisation. This would be useful to establish a link between foresight activities carried out by ARDI and the policy-making level (a critical issue).

There are only a few relevant evaluation studies available at regional level. We can mention a mid-term evaluation of the multi-annual contracts for the diffusion of the scientific, technical and industrial culture carried out on behalf of the Region and the DRRT (April 2009) and an evaluation of the contrat d’objectif for the textile sector. In addition, there was an ‘audit’ of the regional IDéclic measures, but the reports have not been made public.

The regional authorities are performing a monitoring exercise of the implementation of the Regional Scheme for Higher Education and Research. They are also planning for spring 2011 an evaluation study of clusters and pôles de compétitivité. This evaluation should be strategically important due to the place given to poles and clusters in the Regional Innovation Strategy (SRI) and to the political will expressed by the regional administration to promote some streamlining in this field.

In addition, the SRI requires that the actions deriving from its strategic axes will be accompanied by performance indicators allowing for a monitoring and evaluation of their implementation by the various operators.

3 A preliminary draft is already available (Nov. 2010): Une nouvelle étape pour la Stratégie régionale de développement économique – SRDE 2011-2015: de nouveaux défis, de nouvelles opportunités
2.4 Key challenges and opportunities

Rhône-Alpes is facing three governance challenges which are presented hereafter.

This is probably a proper time for addressing them successfully for at least two reasons: the newly elected (2010) Regional Council is preparing two updated policy documents, SRDEI and SRESRI (as mentioned above); the State and the Region agree on the key conclusions of the SRI.

**Governance challenge 1: Involving stakeholders in an efficient and effective way**

The SRI does not really address the issue of the involvement of stakeholders at a strategic level: the governance model remains based on the partnership between the two funding institutions, the State and the Region.

COSIRA, which was intended to represent the different categories of stakeholders and to have a steering role with respect to Axis 1 of ERDF OP, is not effective.

Thus, the question of the involvement of stakeholders at some stage in the design of innovation policies remains open. This is all the more important since it is pointed in a study carried out in 2010 on the French SRI on behalf of DG REGIO that the ‘transversal’ needs of SMEs are not really taken into account; the involvement of representatives of the business community could be useful in this perspective. In fact, it is ARDI which, at operational level, is in charge of addressing this issue.

**Governance challenge 2: Rationalising the innovation support system**

As already stated, there are more than 100 intermediary organisations which are expected to support technology transfer, technology development and innovation. Such a situation reflects once again the diversity of the regional economic fabric and

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4 Étude sur l'évolution des diagnostics et des stratégies régionales d'innovation dans les régions françaises dans le cadre des PO FEDER 2007-2013, ADE / LLA, 2010
the complex geographic pattern. Everybody reckons that there are too many and the regional innovation system has to be simplified and rationalised, in particular because public authorities will not be able to pay for all of them in the future.

The regional development and innovation agency, ARDI, created in 2008, is intended to simplify the regional innovation system. The regional authorities have concentrated subsidies on it (4 MEUR in 2010) and they expect that it will bring to the system visibility and accountability to the benefit of businesses, in particular SMEs. ARDI has in particular to translate the needs of SMEs into effective demand, to direct enterprises towards relevant existing RTDI organisations, and to develop services that are not yet available or satisfactory.

ARDI provides a real opportunity for rationalising and streamlining the innovation system. However, it is still too early to assess its achievements in this field.

**Governance challenge 3: Managing the relationship Lyon-Grenoble**

The Region is facing the presence of two metropolitan areas with strong RTDI potential even if they significantly differ as previously stated. The recent State initiatives in favour of research have re-animated the competition between the two areas. As a consequence, the Region and the State policy-makers have to manage this complex situation through existing governance arrangements.
3. Innovation Policy Instruments and Orientations

3.1 The regional innovation policy mix

A huge majority of measures are co-funded by the Region and the State through the CPER and/or co-funded by the Region, the State and the EU through the ERDF OP. Measures related to access to finance (in particular guarantees) are co-funded by OSEO through specific agreements with the Region. Only a very few measures are funded by the Region alone.

The governance measures have already been mentioned. We must only add that ARDI, co-funded by the Region and the State, plays a key role for implementing (and coordinating the implementation of) horizontal measures (see hereafter) through its main missions: providing diagnostics to enterprises; orientating enterprises towards the relevant RTDI service providers; providing services itself in the field of project engineering (including EU-funded projects: FP7, CIP, ...); delivering information; and carrying out economic and technological intelligence studies. Besides ARDI, the Chambers of Commerce and Industry of Rhône-Alpes also deliver information and provide project engineering services through their “Espaces Innovation”.

Horizontal measures concern: studies of comparative analysis and economic intelligence; detecting projects with a potential for commercialisation, and accompanying them until they are technologically mature; support to collective actions of enterprises (including in the field of sub-contracting); management of IPR; support to the structuring by ARDI of a network of ‘environmental advisors’ designed to encourage eco-development; and, in some highly specific cases, individual grants to businesses.

Research and Technologies measures are the most important with a strong emphasis on support to “poles de compétitivité” and regional clusters, R&D collaborative projects coming out of the poles and clusters, and technological platforms.

There are 10 “poles de compétitivité” based in Rhône-Alpes, plus 5 in which Rhône-Alpes actors are participating, which have been identified at national level (2005-2006). In addition, the Region has initiated from 2002 about twelve “Clusters Rhône-Alpes”, a few of them being related to the national poles, and, from the 2005 SRESR, 14 regional "Research Clusters" (network of research centres and labs working together on a common scientific programme). The Region, the State and ERDF are supporting 21 technological platforms benefiting from investment in equipment.

The State and the Region (and ERDF to a minor level) also support strongly the strengthening of the supply of R&D and higher education through investing in equipment and facilities for universities (with the PRES, Pôles de recherche et d’enseignement supérieur, which are groupings of universities), thematic research networks (RTRA), and regional “Research Clusters”.

In the particular field of sustainable development, the ERDF OP is supporting a measure aimed at identifying clean technologies and contributing to their diffusion through resources centres.

One measure only supports Human Resources in the field of RTDI: a Region-funded research grant for Ph.D students preparing their thesis in a Rhône-Alpes research lab in collaboration with an industrial actor located in the region.

Regarding the creation and growth of innovative enterprises, there are three measures. The first one is supporting incubator and post-incubating facilities, the second access to finance in particular through support to seed-capital funds, and they are funded though the OP. The third couple of measures – Idéclic Potentiel, Idéclic Potentiel + and Idéclic Access to Market – is funded by the Region alone for the first one, and with support from OSEO for the other two. It is helping young companies in
their start-up phase for supporting initial investment and mobilising finance before the first call for investors.

Finally, there are some measures concerning **markets and innovation culture**: measures aimed at accompanying SMEs and micro-enterprises in their process of innovation pre-market entry, in particular for 'eco-products' and 'eco-services'; and measures aimed at fostering a culture of innovation and entrepreneurship.

The innovation policy mix has been mainly focused until now on:

- strengthening the supply of R&D – and higher education – more than taking account of the needs of enterprises;
- developing a cluster approach through “pôles de compétitivité” and regional clusters (economic, research).

The most recent and important shifts regarding the creation of ARDI in 2008 result from the consequences of the 2007 Law on Universities. ARDI, through its diagnostic activities, has started to contribute to a more horizontal and more demand-oriented approach of innovation, which is implemented through the development of collective actions. However, at the same time the reform of the higher education system and more State funding for universities and public research through the ‘Great Loan’ and ‘Initiatives of Excellence’ are leading to an increasing pressure on the Region for co-funding new higher education and research equipment and facilities, since State funding does not cover 100%. Of course, these two shifts are contradictory.

For the time being, the new importance given in the SRI to non-technological innovation, economic and strategic intelligence, and foresight studies has not yet been really translated in the ERDF OP.

It is worth stressing what are the target groups of the two organisations which are in charge of implementing a large part of the innovation measures directed to SMEs, namely ARDI and OSEO.

“Innovative SMEs” constitute the first target of ARDI: less than 250 employees, annual turnover not exceeding €50m, already beneficiaries of OSEO support or tax break (credit impôt recherche) or Fonds unique interministériel (the fund which supports collaborative projects within pôles de compétitivité, plus some past experience in innovation. Other targets are young innovative businesses and large scale enterprises.

OSEO is mainly targeting through the ERDF global grant small businesses with ambitious innovative projects in relation to sustainable development (this last criterion may be relatively formal).

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5 Loi sur les libertés et responsabilités universitaires
Table 3-1 Existing regional innovation support measures

<table>
<thead>
<tr>
<th>Title</th>
<th>Duration</th>
<th>Policy priorities</th>
<th>Budget</th>
<th>Organisation responsible</th>
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<td>4.2.1 Support to innovation management and advisory services</td>
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<td>4.2.2 Support to organisational innovation</td>
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<tr>
<td>‘Innovation Areas’</td>
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<td>5.1.1 Support to the creation of favourable innovation climate</td>
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<td>Chambers of Commerce and Industry</td>
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<td>4.2.1 Support to innovation management and advisory services</td>
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<tr>
<td><strong>Studies of comparative analysis and economic intelligence</strong></td>
<td>2007-2013</td>
<td>1.1.3 Policy advisory services</td>
<td>ERDF</td>
<td>DRIRE (DIRECCTE)</td>
<td><a href="http://www.rhone-alpes.travail.gouv.fr/">www.rhone-alpes.travail.gouv.fr/</a></td>
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<td>1.2.2 Innovation strategies</td>
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<td>1.3.1 Cluster framework policies</td>
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<td><strong>Detecting projects with a potential for commercialisation and accompanying them</strong></td>
<td>2007-2013</td>
<td>4.3.1 Support to innovative start-ups</td>
<td>ERDF</td>
<td>DRRT</td>
<td><a href="http://www.drrt-rhone-alpes.fr">www.drrt-rhone-alpes.fr</a></td>
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<td>1.3.3 Other horizontal policies</td>
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<td><strong>Management of IPR</strong></td>
<td>2007-2013</td>
<td>5.3.1 Measures to raise awareness and provide general information on IPR</td>
<td>ERDF</td>
<td>DRRT</td>
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<td>5.3.2 Consultancy and financial</td>
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<td>Funding Measure</td>
<td>Time Period</td>
<td>Description</td>
<td>Fund Source</td>
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<td>Support to the structuring by ARDI of a network of ‘environmental advisors’</td>
<td>2007-2013</td>
<td>incentives to the use of IPR</td>
<td>ERDF</td>
<td>Region / ARDI</td>
<td><a href="http://www.rhonealpes.fr">www.rhonealpes.fr</a></td>
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<td>4.2.1 Support to innovation management and advisory services</td>
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<td><a href="http://www.ardi-rhonealpes.fr">www.ardi-rhonealpes.fr</a></td>
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<td>5.2.1 Funding for the diffusion of innovative technologies, products and services</td>
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<td>5.2.2 Support and guidelines on innovative Green Procurement</td>
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<td>Individual grants to businesses</td>
<td>2007-2013</td>
<td>2.3.1 Direct support of business R&amp;D</td>
<td>ERDF</td>
<td>DRIRE (DIRECCTE)</td>
<td><a href="http://www.rhone-alpes.travail.gouv.fr/">www.rhone-alpes.travail.gouv.fr/</a></td>
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<td>€7m (collective actions CPER) + ERDF</td>
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<td>Support to poles and clusters</td>
<td>2007-2013</td>
<td>1.3.1 Cluster framework policies</td>
<td>CPER + ERDF</td>
<td>Region</td>
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<td>2.2.1 R&amp;D cooperation</td>
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<td>4.1.1 Support to sectoral innovation in manufacturing</td>
<td>ERDF</td>
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<tr>
<td>Technological platforms</td>
<td>2007-2013</td>
<td>2.1.3 Research and Technology Organisation</td>
<td>CPER + ERDF</td>
<td>Region</td>
<td><a href="http://www.rhonealpes.fr">www.rhonealpes.fr</a></td>
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<td>2.2.3 R&amp;D cooperation</td>
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<td>4.1.1 Support to sectoral innovation in manufacturing</td>
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<tr>
<td>Equipment and facilities for universities and research organisations</td>
<td>2007-2013</td>
<td>2.1.4 Research infrastructures</td>
<td>C216.8m (CPER)</td>
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<td><a href="http://www.drrt-rhone-alpes.fr">www.drrt-rhone-alpes.fr</a></td>
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<td>2.2.1 Support infrastructure</td>
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<td>Identifying clean technologies and contributing to their diffusion</td>
<td>2007-2013</td>
<td>1.2.2 Innovation strategies</td>
<td>ERDF</td>
<td>Region</td>
<td><a href="http://www.rhonealpes.fr">www.rhonealpes.fr</a></td>
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<td>5.2.1 Funding for the diffusion of innovative technologies,</td>
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<td>through resources centres</td>
<td>Research grants for Ph.D students</td>
<td>Support to incubator and post-incubating facilities</td>
<td>Access to finance for the creation and development of SMEs</td>
<td>IDélic Potentiel</td>
<td>IDélic Potentiel+</td>
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<td>3.1.3 Stimulation of PhDs</td>
<td>4.3.1 Support to innovative start-ups</td>
<td>1.3.2 Horizontal measures in support of financing</td>
<td>4.3.1 Support to innovative start-ups</td>
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<td>Region</td>
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**Note:**
- **Research grants for Ph.D students:**
  - 3.1.3 Stimulation of PhDs
- **Support to incubator and post-incubating facilities:**
  - 4.3.1 Support to innovative start-ups
- **Access to finance for the creation and development of SMEs:**
  - 1.3.2 Horizontal measures in support of financing
  - 4.3.2 Support to risk capital
- **IDélic Potentiel:**
  - 4.3.1 Support to innovative start-ups
  - 1.3.2 Horizontal measures in support of financing
- **IDélic Potentiel+**
- **IDélic Access to Market**
- **Accompanying SMEs and micro-enterprises:**
  - 4.2.1 Support to innovation management and advisory services
  - 4.2.2 Support to organisational innovation
  - 2.2.3 R&D cooperation
- **Collective actions allowing transfer of innovation and the development of a market for:**
  - 1.3.3 Other horizontal policies
  - 5.2.1 Funding for the diffusion of innovative technologies, products and services
<table>
<thead>
<tr>
<th>eco-products and eco-services (including information and sensitisation of consumers)</th>
<th>5.2.2 Support and guidelines on innovative Green Procurement</th>
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<tr>
<td>Organisation of events and debates aimed at developing the knowledge of innovation and entrepreneurship</td>
<td>2007-2013</td>
<td>5.1.1 Support to the creation of favourable innovation climate</td>
<td>ERDF DRRT <a href="http://www.drrt-rhone-alpes.fr">www.drrt-rhone-alpes.fr</a></td>
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<td>Conception and realisation of tools for sensitisation, networking and training in favour of a culture of innovation and entrepreneurship</td>
<td>2007-2013</td>
<td>5.1.1 Support to the creation of favourable innovation climate</td>
<td>ERDF DRRT <a href="http://www.drrt-rhone-alpes.fr">www.drrt-rhone-alpes.fr</a></td>
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</table>
We consider that the three most important regional innovation policy measures are the measures which support poles and clusters, the support given to the regional innovation ARDI and to the services it is delivering, and the technological platforms.

The measures funding investments in R&D equipment and facilities for universities and research organisations are very important in terms of financial weight, but they are focused on strengthening the supply of R&D and do not address (at least directly) the key challenges that have been previously highlighted.

Measures supporting poles and clusters come first for various reasons: they reflect a clear national (pôles de compétitivité) as well as a regional (poles again, ‘economic’ and ‘research’ regional clusters) priority; they contribute to addressing the challenge of ensuring a territorial balance for the innovation policy since they cover a wide range of sectors and RTDI fields which, in spite of a strong concentration of resources in Lyon and Grenoble, are of interest for a large variety of geographical areas in the region. Moreover, with respect to the future, it is expected that the State will concentrate its funding on the world-class pôles de compétitivité, which means that the Region will have to contribute more to the others and to streamline its cluster policy, while pursuing smart specialisation in particular at the crossroads between different poles and clusters (‘cross-fertilisation’).

Support to ARDI and ARDI-delivered services comes second. As already stated, the creation of ARDI was intended to simplify and coordinate the regional innovation system, characterised by more than 100 RTDI organisations. At the same time, ARDI is developing horizontal services which have been deemed as necessary in the SRI: diagnostics for better identifying the needs of SMEs, collective actions including in the field of non-technological innovation, strategic intelligence and foresight,...

We rank third the support to the 21 technological platforms which are generally considered as very useful instruments to the benefit of SMEs and are again covering various geographic areas in the region.

3.2 Appraisal of regional innovation policies

Apart from the final evaluation of the Rhône-Alpes SPD 2000-2006, there are very few, if any, relevant evaluations available, which could allow for assessing the effectiveness of the regional innovation policy mix. However, we already mentioned that the Region intends to carry out in 2011 an evaluation of its cluster policy.

ARDI is undertaking an annual ‘client survey’ focused on awareness and satisfaction and is currently setting up an annual scoreboard with 3 categories of indicators related to: activities implemented; awareness/satisfaction; impact of activities.

The 2010 study on the evolution of diagnostics and regional innovation strategies in the French regions within the framework of ERDF Operational Programmes 2007-2013 provides a critical view of both the ERDF OP and the SRI.

What can be said is that Rhône-Alpes is probably at a turning point concerning its innovation policy mix, according to the interviews with the main regional policymakers. The innovation policy mix is still dominated, as it comes out of a review of the CPER and ERDF OP, by a ‘supply approach’ characterised by the importance given to the funding of research infrastructures, equipment and facilities. However, ARDI is expected to balance this approach by paying much stronger attention to the needs and demands of businesses, and to horizontal services. On the other hand, the innovation policy mix is also characterised by a strong focus on poles and clusters which is

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6 Étude sur l'évolution des diagnostics et des stratégies régionales d'innovation dans les régions françaises dans le cadre des PO FEDER 2007-2013, ADE and LLA, July 2010, carried out on behalf of the European Commission, DG REGIO. See Vol. 2, Fiches de synthèse régionales
expected to be balanced by their opening-up in a perspective of cross-fertilisation and orientation towards lead markets.

It is too early to judge the effectiveness of these two shifts, which are emphasised by regional policy-makers.

There is notwithstanding a factor which could hinder the concretisation of these shifts. Within the framework of the national policy aiming at strengthening French universities and stimulating the emergence of some world-class higher education and research poles, the State has launched a series of calls (Plan Campus, ‘Initiatives of excellence’ through the ‘Great Loan’) for which Rhône-Alpes institutions made proposals, some of which have been selected – or are expected to be selected. As the State never funds the corresponding projects at 100%, the higher education institutions turn to the Region to get co-funding, which, in a period of budgetary constraints, could affect the new innovation policy.

3.3 Good practice case

Once again, the lack of evaluation studies and the novelty of the surveys carried out by ARDI do not allow for an evidence-based approach of good practices on the medium-term.

We consider however, ex ante to some extent, that a good practice case is offered by the creation of ARDI, the role it plays and the services it is delivering. The first annual ‘client surveys’ show a progress on awareness (2010 against 2009) and a generally high level of satisfaction with the services (86%) – slightly higher in the large enterprises (91%).

ARDI was created in 2008 as a result of an initiative jointly taken by the State and the Region. The different documents accompanying its creation emphasise the necessity of: adopting a global approach to innovation (including non-technological) across specific sectors/fields; relating effectively the needs and demand of enterprises in terms of innovation with R&D supply; having a ‘pivot’ or coordinating body in the regional system of innovation. These three points were in 2008 clearly innovative with respect to the regional innovation system and policy. They are quite coherent with the orientations of the SRI and, at national level, with the strategic orientations of OSEO Innovation.

While ARDI can be considered in itself as a ‘good practice’ due to its coordinating role, the most interesting service it has started to provide consists in carrying out diagnostics of the needs of regional enterprises in terms of innovation (including non-technological) in order to reformulate these needs, identify the actions that could address them, orientate the enterprises towards the relevant resources centres, and accompanying them in the innovation process. ARDI has set up its own methodological tools for establishing diagnostics (DiagARDI™) and relating demand to supply (with examples in the textile sector in relation to the pôle de compétitivité “Techtera”.

The enterprises targeted are those which have already some experience and practice of the innovation process (about 2500 in Rhône-Alpes: young innovative enterprises, innovative SMEs, large-scale enterprises), and about 10% of the 10000 which are considered as potentially innovative.

Moreover, while the COSI had not proved effective for involving stakeholders in the innovation governance system at a strategic level, the membership of ARDI, according to its statutes, includes all categories of stakeholders distributed in the following groupings: public authorities and agencies (OSEO); ‘intermediary’ organisations; centres of competences; enterprises. However, the State and the Region retain a special role as ‘founding’ members, the others being ‘associate’ members.

It is worth noting that some policy-makers would prefer emphasising as a good practice the measures supporting poles and clusters, because their longevity could be
considered as a testimony of success and because they cover a large variety of sectors/fields, and therefore provide a geographical balance to the innovation policy within the region.

3.4 Portfolio of innovation support measures

In a country which remains rather centralised as is France, the national innovation policy mix has necessarily a strong influence on the innovation public policy carried out at regional level.

The present French national policy mix is the result of about ten years of reforms and its main objectives are:

- improving the taxation environment: tax break on RTDI business expenditure (CIR: *credit impôt recherche*);
- supporting innovation-driven clusters with the national programme “*Pôles de compétitivité*”;
- giving priority to funding research on a project basis (calls for proposals of the National Research Agency and *Fonds unique interministériel* (FUI), the latter for collaborative R&D projects coming out from poles);
- opening up universities and research to business and society with support to academic spin-offs, development of industry-research partnerships, etc.;
- catching up with the best university systems: larger autonomy for universities and reorganisation of their governance system, development of evaluation tools, introduction of competition.

The national policy is mainly ‘translated’ into policy at regional level through the multi-annual programming agreements between the State and the Region (CPER), and the ERDF OPs which are based on co-funding. CPERs are often complemented by a partnership between OSEO and the Region, in particular regarding access of businesses to innovation support services and access to finance (guarantees).

Because of the general ‘co-funding’ practice, there is a rather general consistency between the innovation policies carried out at regional level and the national innovation policy. However, this consistency can be questioned with respect to three issues:

- the CIR, as a tax break, is a fully national measure and as such ‘blind’ with respect to the various regional contexts, while being in financial terms by far the most important innovation support measure (€4b per year);
- regions may have some problems with the national priorities of OSEO Innovation, which are often considered by French regional policy-makers as privileging ‘breakthrough’ innovation and enterprises with more than 50 employees to the detriment of incremental innovation and smaller companies;
- the 2009 SRI co-funded by ERDF may be on a collision course with the National Research & Innovation Strategy (SNRI), in fact mainly focused on defining research priorities, published in November 2009, since there was no coordination between the two exercises; however, recent State initiatives intend to mitigate the risk.

Complementarities and synergies are clear between the national and regional policies with respect to all State objectives except the taxation environment. The opinion among Rhône-Alpes regional policy-makers is that they have few data on the real impact of the CIR. The national policy of *pôles de compétitivité* is positively assessed, but they fear to have to pay for a majority of them if the State, as they expect, concentrates its funding on the world-class poles. They also fear that the national policy aimed at the catching up of universities will fuel intra-regional competition.
The State and the Region are co-funding ARDI and higher education and research infrastructures. ERDF, the State and the Region are co-funding all other measures, except the grants for PhD students and minor measures for supporting innovative projects that are funded by the Region alone.

The total financial allocation of the Axis 1 of ERDF OP (Innovation and the Knowledge Economy) amounts to €266.65m, of which €120m come from ERDF (45%), €117.6m from the State and the Region (and some other local authorities), and €29.05m from private co-funding. There is no EIB funding.

3.5 Towards smart specialisation policies

As it was already pointed out, support to pôles de compétitivité and regional clusters – ‘economic’ and ‘research’ – is a key part of the regional innovation policy mix, and of its synergies with the national innovation policy. As a matter of principle, the national poles, which result from a national selection, reflect to some extent a smart specialisation. The regional research clusters reflect the existence of a research potential. As underlined in various Commission documents, “clusters are an important component of regional smart specialisation strategies, since they offer policy-makers the opportunity to better streamline different policies towards the objective of stimulating growth through innovation”.

However, in Rhône-Alpes, poles and clusters are covering all together a wide range of sectors or fields, from micro and nanotechnologies, image processing and health/biotechnologies to mechanical engineering, automotive industry, renewable energies, etc. As a consequence, there is no strong specialisation at the overall regional level, even if there are strong ‘peaks’ in major cities.

From the process which led to the creation of ARDI, there has been a debate among innovation policy-makers in the region about the risk of ‘freezing’ the fields in which poles and clusters are operating. One of the rationales of ARDI’s creation was to lower or remove the barriers between the different poles and clusters. The SRI has emphasised the necessity of ‘cross-fertilisation’ and ‘transversality’, making reference to the necessity of ‘decompartmentalizing’ research themes and favouring interactions between them, and developing interdisciplinary technology platforms of a critical size.

Regional policy-makers are even clearer today on the eve of the elaboration of the new Regional Economic Development and Innovation Strategy (SRDEI) and Strategy for Higher Education Research and innovation (SRESRI). They talk of supporting promising ‘interfaces’ allowing for being present on future ‘lead markets’ (while being careful with respect to the linkage ‘economic development – excellence’).

At the same time, they are aware that such a move requires a significant effort in terms of strategic intelligence and foresight, a domain that ARDI is just entering, and that is currently absent at strategic governance level.

Regional policy-makers also signalled that, with respect to the ‘opening up’ of poles and clusters and strategic intelligence, regional stakeholders were involved in recent years in two ‘Regions of Knowledge’ projects, PITER® and CLUSTERPLAST, which contributed to widen the approach of the pôles de compétitivité Tenerrdis and Plastipolis.

Beside the emphasis on the ‘opening up’, the policy-makers we have interviewed agree on a short, but not always sufficiently precise, list of sectors/fields for which they consider that the regional actors (research and/or industry) have a level of excellence – and which, not surprisingly, generally coincide with the sectors/fields covered by the

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7 European Cluster Memorandum; European Commission SEC 2008 (2637), « Towards world-class clusters in the European Union: Implementing the broad-based innovation strategy »
8 PITER®: Platform for Integration of Transregional Energy R&D
poles and clusters. This coincidence should be confirmed, or not, by the evaluation of
poles and clusters which is being planned for 2011. The list is as follows:
biootechnologies / biomedicine / medical devices; health / oncology; clean
technologies; chemistry; micro and nanotechnologies; software in relation to
health/medicine and to image processing (video games).

Moreover, the SRI dedicated case studies to two sectors, health and textile, in order to
test the new ‘transversal’ approaches. Whilst the case studies are mainly focused on
establishing a diagnostic, they notwithstanding define some priorities:

• **Health:**
  – Mapping of domains (associating scientific research, clinical research and
    industry) and specialities – already recognised at national level (neurology,
    oncology, etc.) or with promising future developments (medical technologies).
    Mapping is intended to allow for a better visibility of the competences of
    regional research, a better attractiveness and larger opportunities for
    commercialisation of R&D
  – Carrying out actions aimed at making scientists more familiar with business
    (project of MBA with Boston University, internships in companies)

• **Textile:**
  – Developing ‘transversal’ relations and ‘interfacing’ between the pôle de
    compétitivité Techtera and other regional poles (Plastipolis, Axelera,
    Minalogic) with support from ARDI through its ‘Materials’ Department
  – Creation of a master degree “Textile for Technical Uses” and actions aimed at
    attracting high level competences
  – Connecting better to national and international networks, mutualising
    resources (prototyping, access to public and private finance), improving
    commercialisation of R&D

3.6 Possible future orientations and opportunities

There has been for years in Rhône-Alpes a strong policy in favour of competitiveness
poles and clusters with the result of having about 40 of them across the regional
territory, with however a concentration in the metropolitan areas of Lyon and
Grenoble. This sectoral policy has been reinforced by the support to 21 technological
platforms, which, while gathering interdisciplinary competences, are notwithstanding
clearly sector-focused.

Recent national policy orientations (National Strategy for Research & Innovation,
support to the emergence of world-class universities) currently play in favour of
‘critical mass’ in some fields as health with an impact on a region like Rhône-Alpes.
For instance, the competitiveness Lyon Biopôle is now in competition with Medicen,
an Ile de France pole, for hosting a national Institute of Technological Research (IRT)
for health).

Then came ARDI (2008) and the SRI (2009) which emphasised the importance of
taking account of needs and demand of businesses in terms of innovation and the
necessity of having horizontal support measures allowing the regional industry to be
present on the ‘lead markets’.

As explained in some ARDI documents⁹, the two approaches are surely more
complementary than contradictory. However, the key question is: can the two
approaches be financed in the mid-term in a context of budgetary constraints? The

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⁹ E.g.: ARDI General presentation, a very recent PowerPoint document presented in Brussels (20.01.2011)
ARDI budget alone amounts to €7m per year. Moreover, it is widely expected (and feared by regional authorities) that the State will reduce its financial contribution to competitiveness poles (except the world-class ones – there are 3 of them in Rhône-Alpes: Lyon Biopôle, Axelera and Minalogic).

As a consequence, there are opportunities for streamlining and rationalising the regional innovation policy through:

- concentrating the poles and clusters policy on sectors/fields with a strong critical mass (or a critical mass that could reasonably be achieved in the future), while playing on the ‘interfaces’ (see: example of textile above § 3.5);
- strongly supporting the market orientation of the poles and clusters, going beyond the mantra of ‘lead markets’;
- confirming the role of ARDI in establishing diagnostics of enterprises and detecting innovative projects;
- setting up fully-fledged policy intelligence tools (which are today clearly lacking): strategic intelligence, foresight studies, and of course evaluation studies – the planned (2011) evaluation of the poles and clusters support policy will be surely welcome after years of this policy; an evaluation of ARDI’s actions in the field of diagnostics and putting in relation demand with supply will soon be very useful.
Appendix A Bibliography

Reports:
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Appendix B Stakeholders consulted

1. Frédéric Gaffiot, Regional Council, Director, Higher Education, Research, Innovation, and Social and Sanitary Training (DEFI3S) (19.01.2011)

2. Bruno Ragué, Director, Regional Agency for Development and Innovation (ARDI) (21.01.2011)

3. Henri Montès, Ministry of Research, Regional Delegate to Research & Technology (24.01.2011)


5. Claude Sabatin, OSEO Rhône-Alpes (1.02.2011)
Appendix C RIM Repository information
Baseline regional profile

- FRANCE
- CENTRE-EST
- Region Rhône-Alpes
- NUTS Code FR71

Regional Profile

Introduction

Rhône-Alpes region is located at the eastern part of France. The montainous region is neighbor of Switzerland and Italy. The region is also bordered by five French regions (Franche-Comté, Bourgogne, Auvergne, Languedoc-Roussillon and Provence-Alpes-Côte-d'Azur). There are 6.16m of inhabitants, the total surface and density are 43.698 km² and 69 hab./km².

Repository

Support measures

- Crealys
- CIBLE-“White Projects”
- Technological platforms Rhône-Alpes (PFT)

Policy documents

- Regional Plan for High Education and Research
- Regional Economic Development Plan
- ERDF Operational Programme 2007-2013

Organisations

- Regional Council of Rhône-Alpes
- OSEO – Grand Rhône Regional Directorate
- ARDI – Regional Development and Innovation Agency

Economy

Between 2000 and 2008, Rhône-Alpes registered a 4.1% average annual growth rate (Eurostat). Accounting for 9.2% of the national GDP, the region is the most important contributor, after Ile de France Region (27.2% of the GDP).

Second French region in terms of economic and geographic size, Rhône-Alpes is also the second region in terms of population; it hosts approximately 9.4% of the French population (2008) and concentrates about 10% of the total employment between 2000 and 2008. Lower than the national rate (7.4% against 9% at the national level), the unemployment rate is declining since 2000 (-2.5% on average) (Eurostat).

The services sector is the main employer, with 69% of the labour force, of which 17.8% in financial intermediation and business activities, 48.7 % in public services and 33.4% in retail. It participates to more than 50% of the regional gross value-added. The industrial sector remains important; including construction, it concentrates 28.3% of the regional employment, and contributes to 27% of the gross value-added.

The agricultural sector hosts less than 3% of the regional employment, below the national average (4%). This share strongly decreased over the period 2000-2008, to the benefit of the construction and the services sectors (respectively +3.7% and +2.6% on annual average from 2000 to 2008).

According to the French national statistical institute (INSEE- http://www.insee.fr/fr/regions/rhone-alpes/), the region is characterised by the strong presence of SMEs (0-50 employees), which represent 98.7% of the enterprises (within 92.4% are less than 10 employees). Because of their size, SMEs face difficulties to invest in R&D and to develop new technologies.

Moreover, despite its national leadership in tourism, transports and logistics, iron and steel industries, mechanical equipments, energy, plastics, chemistry, textile and sports industry, these traditional industries hardly face international competitiveness.

Research, Development & Innovation

Rhone-Alpes is the second French region in terms of R&D investment:

- Between 2000 and 2008 the region dedicated on average 2.5% of its GDP to Gross expenditure on research and development GERD, above the national average of 2.1% (Eurostat).

It remains however under the 3% objective of the Lisbon Strategy. Moreover, the annual average rate growth was very low (0.9% of annual growth vs. 3.1% at the national level).

- The regional BERD (business) represents 1.7% of the GDP, which is higher than the national average (1.3%). But its growth over the period 2000-2008 is stable (0.9%).

- Expenditures in GERD and BERD knew an important annual growth during the period 2000-2008 (respectively 4.7% and 4.6%, while the national annual growth over the period was 3.1% and 3.2%).

- Private investments in R&D are important. The regional businesses contributed to 68.1% of regional gross expenditure on R&D between 2000 and 2008, thanks to the density of the regional industrial fabric in the region.

- Altogether, the regional contribution to the national GERD and BERD are important in the total French expenditure, respectively 11.4% and 10.5%, above the regional contribution to the national GDP of 4.1%.

- Although the level of employment in high-tech industries and knowledge-intensive services is in the region than the national level, 5.6 % against 5.3% in the...
French average), it decreased during the period 2000-2008 (-1.2 % on annual average). In terms of publications and patents, Rhone-Alpes is ranking respectively 8th and 10th at the European level.

The region is traditionally specialised in physics, electronics, chemistry, energy and transports research. The region is also oriented on key domains such as life sciences and environment. The network of regional innovation stakeholders is really dense and is covering these main thematic, encouraging the public-private research collaborations. poles of competitiveness, eight regional clusters, Carnot Institutes, two Research and high-education poles (PRES), three RTRA (Advanced Research Thematic Network) and three RTRS (Research and Health Thematic Network), a number of technological platform and tech transfer organisations (Minatec, INES, NanoBio, CLEA, Cancercopole CLARA, Consortium Alliance PV).

**Governance**

There are two types of innovation policies at the regional scale:
- Policies designed and implemented at regional level
- Policies designed at national level and implemented both at regional and national level, but having great influence on funding and support provided to the regional innovation system (Poles of competitiveness, Corporate tax credit for research incentives to name the most important one)

The **Regional Council**, together with OSEO regional directorate, are the main providers of funding and support for innovation activities in the region. The regional prefecture (State) is the managing authority for the ERDF 2007-2013 operational program, then managing the ERDF funds related to innovation.

The Regional Council and the State administration are the main contributors to the definition of the so called policy document "regional innovation strategy" (SRI) - which is not yet published - that also involved the main innovation stakeholders in the region and the consultation of entrepreneurs.

**French central State is represented through**

- The Regional directorate for research and technology transfer (DRRT) of the Ministry for research and higher education, in charge of the implementation of the National Strategy for Research and Innovation (2009) and national policies fostering innovation at the regional level.
- The DIRECCTE, the regional directorate representing the Ministry of Industry, in charge of the implementation of the industry policy, namely for what regards the poles of competitiveness.

The **Operational Program 2007-2013 has set up guidelines for the regional innovation governance**, based on a State/Region partnership:

- At the management level, the enhancement of the role of the Regional Agency for Development and Innovation (ARDI) for coordinating, animating and marketing the regional innovation network
- At the implementation level, the support to cooperation, synergies and mutualisation, between the poles of competitiveness, the tech-transfer organisations and the organisations in charge of the valorisation of the public research.

**Policy**

Existing policies implemented within the region are mainly oriented towards the support to research efforts, both in the public and private sectors, through

- Direct support to business R&D through direct grants or loans (OSEO schemes, Regional Innovation Fund) and indirect support (credit tax for young innovative enterprises)
- Collaborative R&D projects (poles of competitiveness, regional calls for proposals on collaborative projects)
- Support technology transfer and valorisation of public research results (CRITT, Maturation Fund, etc.)

-Support to the creation and growth of innovative enterprises is the second main policy area, providing direct support (e.g. incubators CREALYS and G.R.A.IN, GRAVIT, centre of research valorisation "Lyon Science Transfert" - University of Lyon) and indirect support (risk and seed capital) to start-ups, namely in the sector of eco-industries.

The evaluation of the regional innovation system underlined regional objectives (see [http://deliberations.rhonealpes.fr/RecueilsPDF/2010/avis%20du%20cesr%202007%20accent%20sur%20des%20initiatives%20qui%20vise%20la%20valorisation%20des%20innovations%20en%20Rh%C3%A8ne-Alpes.PDF](http://deliberations.rhonealpes.fr/RecueilsPDF/2010/avis%20du%20cesr%202007%20accent%20sur%20des%20initiatives%20qui%20vise%20la%20valorisation%20des%20innovations%20en%20Rh%C3%A8ne-Alpes.PDF)). The main focus are the promotion and development of poles of excellence through the support to research networks and public-private research collaborations; the enhancement of the innovation capacities of regional enterprises and their increase participation to EU innovation programmes ; the structuring of the regional research valorisation system; the enhancement of the workforce qualification for innovation.

In this context, the ERDF Operational Program 2007-2013 provides support on 6 policy measures and objectives:

- Support technological partnerships in research and innovation;
- Enhance technology transfer and incubation;
- Bring SMEs to innovation;
- Develop a friendly environment for innovation and entrepreneurship;
- Create a framework for SMEs bringing to long term development;
- Give financial support to SMEs.

**Support measure**

- FRANCE CENTRE-EST
- Region Rhône-Alpes
- NUTS Code FR7
Title of measure
Crealys

Full title
Crealys

Duration
From: 1999
To: No fixed end date

Policy objectives
- 4.3.1. Support to innovative start ups incl Gazelles

Presentation of the measure
CREALYS is an academic incubator encouraging creation and assisting academic spin-offs from the regional public research centers and higher education institutions. Its funders are the Regional Council of Rhône-Alpes and the Ministry of higher education and research. Crealys was created in 1999 with no fixed end date. Crealys has an annual average budget of €1m. The portfolio of services includes:

- 1st contact: a meeting with a Crealys consultant to present the start-up project;
- Executive committee: a monthly executive committee (composed of Crealys partners) to validate the project with a public research laboratory, and to take the decision on the incubation of the start-up project;
- Inception phase: collaboration contract with the laboratory;
- Commitment committee: composed of industrialists, investors, researchers and public agencies, the committee validates the economic viability of the project;
- Project's engineering: CREALYS provides a personalised support to the researchers, namely for what regards: legal issues, management, business plan, market studies. The services can be financed through reimbursable advances or loans.
- Technological collaboration: CREALYS develops networking activities for building technology collaborations between the start-ups and technology transfer organisations, enterprises or research organisations.
- Training: Seminars and trainings are organised during the whole incubation phase of the project.

Keywords
- Gazelles
- Incubators/science parks

Budget, source and type of funding
Source of funding 2010
- National public funds 1,000,000
- Regional public funds
- EU Structural funds
- Private funds
- Other

Form of funding provided
- Other

Policy learning
Extent the measure can be considered as a success and worthy of policy learning
The measure has achieved its intended targets in terms of results (e.g. number of enterprises investing in innovative projects, people trained)

Evidence of outcomes based on evaluation and other evidence

Despite the economic context, in 2009 Crealys supported 25 projects. 13 new innovative businesses in 2009 emerged, confirming the efficiency of the collaboration between public research organisations and the regional innovation stakeholders. In 10 years, CREALYS became the 1st French incubator in terms of number of academic spin-offs created (119, of which 96 are still in activity). 36.1% concern life sciences domain, 34.5% Engineering sciences and cleantechnologies, 26.9% concern ICT, and 2.5% concern human sciences. More than 700 jobs have been created in these 119 businesses

Do's and Don'ts
Crealys gathers all the major regional partners: Universities and engineering schools, industrial networks, management and business schools, Chamber of Commerce and Industry, local governmental agencies in charge of economic affairs (Oséo, ARIST, ARDI and its network of specialised agencies, Lyon Science Transfert, INPI, poles of competitiveness)

This measure is recommended as an example of regional good practice to policy-makers from other regions:
Yes

Organisation(s) responsible
- ARDI – Regional Development and Innovation Agency

Support measure

- FRANCE
- CENTRE-EST
- Region Rhône-Alpes
- NUTS Code FR71

Support Measure

Title of measure
CIBLE “White Projects”

Full title
Projets Blancs - CIBLE

Duration
From: 2005
To: 2010

Policy objectives
- 2.2.3. R&D cooperation

Presentation of the measure

The programme CIBLE is a call for projects for regional public research centres. In the framework of the Regional Plan for Higher Education and Research (SRESR), the Regional Council aims at improving and developing creativity and new areas of research addressing the regional economic needs and broader societal goals in Rhône-Alpes. In that perspective, the Regional Council is supporting "white research projects" (e.g. outside the 14 thematic research clusters defined in the SRESR) of international excellence, fundamental or applied research with the aim to enhance the development of organisational, social and technological innovations.

Though this type of project, the Regional Council is financing the part of the risk related to the research projects.

The public targeted by the measure is universities, higher education institutions (public or private) and research centres. The projects may concern any research topics, namely social and human sciences (SHS), life sciences, health, physics, maths, ICT, chemistry, engineering sciences, biology and geology sciences.

For the 2010 call for projects, the regional funding is €25,000 per selected project.

Keywords
- Universities

Budget, source and type of funding

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Form of funding provided
- Grants

Policy learning

Extent the measure can be considered as a success and worthy of policy learning

There has been a positive response by beneficiaries to the measure (e.g. over-subscribed in terms of requested versus available budget) but it is too early to judge results or impact

Evidence of outcomes based on evaluation and other evidence

The measure was created in 2006. There is no evaluation of the policy measure. However, the policy measure is quite relevant and clearly consistent with the regional strategy of enhancing the international scientific and academic attractiveness of the region. The "Projets Blancs - CIBLE" are innovative and original projects in terms of objectives, sectoral impacts, and technologies developed, and have to give a competitive advantage and a higher visibility of the region.
Do's and Don'ts

Not available

This measure is recommended as an example of regional good practice to policy-makers from other regions:

Yes

Organisation(s) responsible
- Regional Council of Rhône-Alpes

Support measure

- FRANCE
- CENTRE-EST
- Region Rhône-Alpes
- NUTS Code FR71

Support Measure

Title of measure
Technological platforms Rhône-Alpes (PFT)

Full title
Plateformes technologiques Rhône-Alpes (PFT)

Duration
From: 2007
To: 2013

Policy objectives
- 2.2.1. TT Support infrastructure

Presentation of the measure

PTF are essential for innovation in Rhône-Alpes. They offer to the regional SMEs and very small enterprises a large panel of competences and technological resources over the period 2007-2013, with the total amount of €30m. They are located in high-schools and higher education organisations (universities, vocational schools, technological, and agricultural high-schools…

The main objectives of PFT are to:
- support SMEs (maintain and develop their innovation capacities through technology transfer);
- contribute to reinforce and enhance the regional employment;
- develop the innovation culture among the young population.

The PFT's staff are in charge of:
- the evaluation of innovation needs in enterprises (diagnostics);
- the mobilisation of the scientific and technological resources (equipments and competencies) within high schools and higher education institutions;
- the establishment of collaboration partnership with the enterprises and research organisations;
- the support to the implementation of the innovation project in the enterprises through personalised services;

The PFTs are co-financed by the regional ERDF 2007-2013.

Keywords
- Small and medium-sized enterprises
- Knowledge transfer
- Public-private partnership

Budget, source and type of funding
Form of funding provided
- Grants
- Other

Policy learning
Extent the measure can be considered as a success and worthy of policy learning

There has been a positive response by beneficiaries to the measure (e.g. over-subscribed in terms of requested versus available budget) but it is too early to judge results or impact

Evidence of outcomes based on evaluation and other evidence

The question of the evaluation of the PFTs is recent in the region (cf. the document "Accent sur les initiatives en Rhône-Alpes à la suite des EGI • CESR Rhône-Alpes • 21 mai 2010 »).

This document calls for an evaluation of the PFT, that would have three objectives: provide an assessment of the creation of value added in enterprises (analysis of the financial efforts in research and innovation compared to the economic results; impact of the PFTs contribution to businesses' strategy (market positioning, access to new markets, development of new products…); and review and assessment of the PFTs capacities to offer a better portfolio of services to the enterprise, namely in terms of technological and market watch or intellectual property rights support.

Do's and Don'ts

Not available

This measure is recommended as an example of regional good practice to policy-makers from other regions:

Yes

Organisation(s) responsible

- Regional Council of Rhône-Alpes

Policy document

Policy Document

Regional Plan for High Education and Research
Schéma régional de l’enseignement supérieur et de la recherche (SRESR)

Organisation responsible

Regional Council of Rhône-Alpes

Content

The Regional Plan for Higher Education and Research (SRESR) aims at creating a favorable environment for research in Rhône-Alpes region.

The SRESR covers four domains:

- **Higher education**: aiming at strengthening the offer of training and the number of young people in higher education. A strong focus is also put on the strengthening of the international attractiveness of the training offer (namely at masters level);
- **Research**: aiming at supporting academic research in priority sectors (14 research clusters have been defined) and building research partnerships both at the regional level (between research organisations on cross cutting areas) and at the international level (scientific attractiveness);
- **Technology transfer, valorization and innovation**: aiming at developing valorization and technology transfer platforms, strengthening the entrepreneurship culture among researchers, and supporting the private research (establishing links with research organisations);
- **Scientific, technical and industrial culture**: aiming at sensitizing the public to research activities and the promotion of research among students.

Year of publication

2005

Link to website

Policy Document

Regional Economic Development Plan
SRDE - Schéma régional de Développement Economique Rhône-Alpes

Organisation responsible
Regional Council of Rhône-Alpes

Content

The SRDE conducts the region in the way of a long term development for the period 2005-2010. Based on a regional economic diagnostic, the SRDE is defining four main strategic fields of intervention:

- Increasing employment by up-grading the qualification of the workforce
- Enhancing the region's attractiveness, at the national and the international level, namely the academic and scientific attractiveness of the region;
- Building the economic fabric all over the territory, by focusing its effort on the support to poles of competitiveness and clusters and investments in key sectors (ICT, biotechnology, nanotechnology ...).
- Increasing the regional performance, including:
  - the optimisation of efforts in research and innovation,
  - the development of an innovation and creativity culture,
  - the support to the implementation of projects outside the larger regional metropolitan areas (Lyon, Grenoble) the support to businesses international development.

Year of publication
2005

Link to website
Link: http://www.rhonealpes.fr/
The Innovation and Knowledge Economy priority represents 38% of the total investment (€266.6m) focusing on two objectives:

- support technological innovation to the benefit of enterprises by increasing the share of private R&D investments, by supporting the valorisation of public research and technology transfer, by improving the access of small and medium-sized enterprises (SMEs) to research and innovation and by fostering the SMEs collaboration and research-SMEs collaboration through the support to collective actions and clusters initiatives in key economic sectors.

- anticipate the changes through providing support for SMEs and very small businesses, namely through direct investments.

Year of publication

2007

Link to website

Link: [http://www.rhone.gouv.fr/automne_modules_files/standard/public/p190_ffd0f08a8a9b74a116e3953c6eced74aPO_Adoption_CE_14_Aout_2007.pdf](http://www.rhone.gouv.fr/automne_modules_files/standard/public/p190_ffd0f08a8a9b74a116e3953c6eced74aPO_Adoption_CE_14_Aout_2007.pdf)

Organisation

Regional Council of Rhône-Alpes
Conseil régional de Rhône-Alpes
78 route de Paris - BP 19
Charbonnières-les-Bains Cedex, 69751

Mission

The mission of the Delegate-Directorate is to implement and monitor the regional policy for research, innovation and to support to the relationships between research and industry. The Delegate-Directorate is the main and the central interlocutor for businesses, providing them tools to enhance their development projects and their innovation ability. In charge of the strategic follow up and monitoring of all regional actions supporting innovation, the Directorate is also in charge of the technical relations with the ARDI, the Regional Development and Innovation Agency.

Activities

With respect to the regional policy for research, the Delegate-Directorate is in charge of:

- examining and selecting the research projects that can be funded by the Region;
- implementing and following up the relevant measures of the Contrat de Plan Etat-Région;
- organising and managing the Regional plan for research and high education (SRESR);
- coordinating the evaluations of regional policy supporting research.

With respect to the regional policy for innovation and technology transfer, it is in charge of examining and selecting:

- the innovative projects submitted by enterprises to the regional authorities within the framework of the Pôles de compétitivité and of the partnership OSEO-Region;
- the applications for a grant for technology transfer (co-funded by ERDF).

The directorate is in charge of the implementation of the Regional Innovation Strategy.

It participates to the actions of valorisation of research, follows up at strategic level the activities of the two regional incubators (Crealys and Grain), and manages strategic projects of the regional tech transfer centres (CRITT).

It is in charge of the promotion and the communication activities concerning regional research and innovation.

Organisation
Organisation

OSEO – Grand Rhône Regional Directorate
OSEO – Direction Régionale Grand Rhône

Link: http://www.oseo.fr/notre_mission/nos_equipes_en_region/rhone_alpes

Immeuble Le 6e Sens – 186 avenue Thiers
Lyon Cedex 06, 69465

Mission

The OSEO Rhône-Alpes regional directorate is the regional office of OSEO, placed under the supervision of the ministry in charge of industry, the ministry in charge of SMEs and the ministry in charge of research. OSEO group, created in 2005, has five main fields of activity including innovation, enterprise growth, internationalisation, enterprise creation and enterprise transmission. In the field of innovation, OSEO is one of the main actors providing financing opportunities and support, as well as technical, financial and marketing support to enterprises carrying out innovative projects. The agency provides assistance by sharing the financial risks generated by such projects with enterprises, through different types of aid schemes: grants, loans and guarantee schemes. OSEO aid schemes provide support throughout the whole innovation cycle of the projects, from the feasibility study to the commercialisation stages.

Activities

OSEO's innovation support mechanisms can be grouped into three categories:

- Financial support includes all mechanisms for innovation aimed at sharing the risks generated by R&D projects and improving SME access to private financing. This usually comes under the form of direct grants. Examples include support mechanisms for R&D collaborative projects within poles of competitiveness, the creation of innovative businesses, strategic industrial innovation projects, technology transfer projects.

- Bank financing instruments aim at improving access to bank loans in order to finance the production cycles, to increase the cash flow and to guarantee the risks taken by banking and financial partners. Examples include innovation development contracts (guarantee-free loans in order to finance intangible assets needed for an innovation project), innovation guarantee funds, and biotech guarantees aimed at improving SME access to biotechnology.

- Support services aim at providing technical assistance and expertise to SMEs for carrying out an innovation project. Assistance is provided in order to find the necessary partners to build transnational technological projects, carry out certification procedures to improve access to public funds and networking among potential project partners.

There is a strong collaboration with the Regional Council namely for the management of the policy measure "IDeclic Potentiel": This measure is addressed to SMEs with a high innovation potential, by providing loans (between €75,000 - €150,000).

Organisation

ARDI – Regional Development and Innovation Agency
ARDI – Agence Régionale du Développement et de l’Innovation

Link: http://www.ardi-rhonealpes.fr/

41 rue de Garibaldi
Lyon, 69 006

Mission

The Regional Development and Innovation Agency is an association founded in 2007 by the Regional Council of Rhone-Alpes in association with the regional based State administration. It contributes to the development of the competitiveness of regional entreprises, namely through supporting the innovation processes within enterprises, according to the regional innovation strategy (not yet published).

Its main missions are as follows:

(i) supporting the development of innovation and technology transfer in entreprises,
(ii) management of the "collective actions" (clusters initiatives)
(iii) animation of the regional scheme supporting the "creation of innovative businesses",
(iv) reinforce the regional attractiveness at the national and international level.

Activities

The agency provides expertise and consulting services; and financial assistance through national, regional, European and OSEO's funds.

ARDI support mechanisms are organised into three batch of actions:

- Short term actions, including collective actions, animation of innovation networks and organisation of workshops and seminars on innovation issues.
- **Middle term actions**, including support to collaborative innovation projects and technology transfer between laboratories, public and private research centers and enterprises.

- **Long term actions** including support to the valorisation and exploitation of public research results through creation of academic spin-offs, creation of innovative enterprises, and development of "gazelles" (SMEs with a high potential of growth).

ARDI is also directly providing technological services (e.g. testing, prototyping, analysis, etc.) to SMEs, on 7 technological thematics: design, high-performance materials, ICT, logistics (supply chain, management...), health, electronic systems.

Since its creation, the agency supported 3,000 enterprises in their innovation process, of which 200 national or international large companies in high value-added sectors, 2,500 SMEs and 300 young innovative enterprises.
Appendix D Explanation of factors of Innovation Performance, Governance and Policy

D.1 Innovation Performance Factors

After having normalised all indicators to a common range of 0 to 1, a factor analysis or principle component analysis has been used to identify the main patterns, reducing the eight indicators into three main factors or components of innovation performance. The resulting factors can also be seen as composite or summary indicators.

<table>
<thead>
<tr>
<th>Innovation performance factors</th>
<th>Innovative entrepreneurship</th>
<th>Technological innovation</th>
<th>Public knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-technological innovators</td>
<td>0.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technological innovators</td>
<td>0.86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher education R&amp;D</td>
<td>0.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-R&amp;D innovation expenditure</td>
<td>-0.84</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business R&amp;D</td>
<td>0.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patents</td>
<td>0.71</td>
<td></td>
<td>0.89</td>
</tr>
<tr>
<td>Government R&amp;D</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tertiary educated</td>
<td></td>
<td></td>
<td>0.64</td>
</tr>
</tbody>
</table>

The first factor can be labelled as ‘Innovators or Innovative entrepreneurship’. It is mostly based on a high score on the share of both non-technological innovators (those introducing market- and or organisational innovations) as well as technological innovators (product and or process innovations) among SME’s in the region. This factor therefore identifies those regions where a large share of all SME’s are innovators.

The second factor is labelled ‘Technological innovation’ because it mostly refers to patent generating business R&D with relative low score on non-R&D innovation expenditures as share of their turnover. In regions where this factor shows a high score, technology generating firms are well represented.

The third factor is labelled ‘Public knowledge’. This component of innovation performance is based on the co-location of R&D expenditures at government research institutes and to a lesser extent on the share of population with tertiary education.

D.2 Governance Factors

The first distinctive governance characteristic is labelled ‘Autonomy’. For regions where the regional innovation strategy is politically binding and containing fixed targets, we also find the highest degree of both general institutional autonomy as well as autonomy regarding innovation policy. In essence, formalisation contributes to the autonomy factor and autonomy is associated with an assessment of innovation policy as effective.

The second distinctive characteristic is named: ‘Relying on Structural Funds’. It is based on the similarity in the answers regarding the strategic relevance and significance in terms of funding of EU Structural Funds for regional innovation policy. At the same time these regions report a low level of cooperation with other regions and the innovation system can be characterised as more public-driven.

A third distinctive factor is made up of the similar answers to the two other questions on coordination, namely the existence of vertical and horizontal coordination mechanisms. Finally, a fourth factor is labelled ‘Central, top-down’ because they combine a centralised policy delivery and top-down approach in policy design.
D.3 Policy Factors

The first distinctive factor regarding the innovation policies is labelled ‘Public innovation policies’. A high contribution to this factor comes from the survey questions regarding: policies for public sector innovation, for open innovation, public procurement, and theme based policies aiming at societal goals.

The second policy factor is labelled: ‘Demand & service innovation policy’ because of the co-existence of demand-side policies and service innovation policies.

The third policy factor is named: ‘Cluster & S-I partnership policy’ since it is based on the frequent combination of Cluster policies and policies promoting new forms of public-private-partnerships for Science-Industry (S-I) co-operation and in addition the implementation of eco-innovation policies contributes to this factor.

The fourth factor is labelled ‘Research supply policy’ because it is based on the positive answers to the question on supporting research efforts (the supply side), in combination with an opposite negative answer to the question on ‘market and innovation culture (which is more on the demand side).

‘Policy making support’ is the name we have given to the fifth policy, similar to the main indicator. The last policy factor is ‘HR, creation & growth innovators’

<table>
<thead>
<tr>
<th>Governance Factors</th>
<th>Autonomy</th>
<th>Relying on Structural Funds</th>
<th>Coordination mechanisms</th>
<th>Central, top-down</th>
</tr>
</thead>
<tbody>
<tr>
<td>- How formally binding is the regional innovation strategy document on the regional public authorities?</td>
<td>.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- The general degree of institutional autonomy of the regional authorities in the region</td>
<td>.73</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- To what degree is priority setting, design and monitoring of innovation policy subject to the design and of formalisation of the general set-up of institutions tasked with the development of innovation policy in your region (1=informal, 3= formal)</td>
<td>.68</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Degree of institutional autonomy of regional authorities in your region with regard to the design and implementation of regional innovation policies</td>
<td>.68</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- How effective is the regional governance process?</td>
<td>.58</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- The relevance of the EU Structural Funds for regional innovation policy, for strategy development</td>
<td></td>
<td></td>
<td></td>
<td>.79</td>
</tr>
<tr>
<td>- The significance of the EU Structural Funds for regional innovation policy, in terms of funding</td>
<td></td>
<td></td>
<td></td>
<td>.70</td>
</tr>
<tr>
<td>- Inter-regional co-ordination projects and mechanisms (e.g. co-operation between agencies in different regions)</td>
<td></td>
<td></td>
<td></td>
<td>-.68</td>
</tr>
<tr>
<td>- Characterise the regional innovation system according to key drivers of innovative activities (1=private, 2=different, 3=public)</td>
<td></td>
<td></td>
<td></td>
<td>.68</td>
</tr>
<tr>
<td>- Horizontal co-ordination projects and mechanisms between regional players (e.g. inter-departmental working groups, council or multi-sector platforms)</td>
<td></td>
<td></td>
<td></td>
<td>.80</td>
</tr>
<tr>
<td>- Vertical co-ordination projects and mechanisms between local, regional, national and European authorities involved in designing or implementing innovation policy</td>
<td></td>
<td></td>
<td></td>
<td>.73</td>
</tr>
<tr>
<td>- Regional system of policy delivery is centralised (3), mixed (2), or de-centralised (1)</td>
<td></td>
<td></td>
<td></td>
<td>.81</td>
</tr>
<tr>
<td>- Design of regional innovation policies follows a top-down approach (as opposed to bottom-up)</td>
<td></td>
<td></td>
<td></td>
<td>.80</td>
</tr>
</tbody>
</table>
which combines human capital development with policy aimed at creation and growth of innovative firms.

<table>
<thead>
<tr>
<th>Innovation Policy factors</th>
<th>Public innovation policies</th>
<th>Demand &amp; service innovation policy</th>
<th>Cluster &amp; S-I partnership policy</th>
<th>Research supply policy</th>
<th>Policy making support</th>
<th>HR, creation &amp; growth innovators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policies for public sector innovation</td>
<td>.72</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Policies for open innovation</td>
<td>.66</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public procurement policies</td>
<td>.64</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theme-based policies aimed at broader societal goals</td>
<td>.62</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demand-side policies</td>
<td></td>
<td>.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Policies for innovation in services</td>
<td></td>
<td>.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support for the internationalisation of innovation policy</td>
<td></td>
<td>.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cluster policies</td>
<td></td>
<td></td>
<td>.70</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Policies promoting new forms of public-private-partnerships for science-industry co-operation</td>
<td></td>
<td></td>
<td>.61</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eco-innovation policies</td>
<td></td>
<td></td>
<td></td>
<td>.58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovation related tax policies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.57</td>
<td></td>
</tr>
<tr>
<td>Support research efforts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.74</td>
<td></td>
</tr>
<tr>
<td>Market and innovation culture policies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.62</td>
<td></td>
</tr>
<tr>
<td>Support to policy making and horizontal policies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.79</td>
</tr>
<tr>
<td>Support human capital development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.82</td>
</tr>
<tr>
<td>Support creation and growth of innovative enterprises</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.67</td>
</tr>
</tbody>
</table>
## Appendix E Statistical data

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Rhône-Alpes (2000)</th>
<th>Rhône-Alpes (2008 or most recent)</th>
<th>EU 27 (2008 or most recent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita GDP (in Current EUR)</td>
<td>24,207.7</td>
<td>29,078.4 (2006)</td>
<td>25,131.9</td>
</tr>
<tr>
<td>Growth of Regional per Capita GDP (in %)</td>
<td>4.6</td>
<td>4.8</td>
<td>0.7</td>
</tr>
<tr>
<td>Unemployment Rate (in %)</td>
<td>8.1</td>
<td>6.6</td>
<td>7</td>
</tr>
<tr>
<td>Gross Expenditure on R&amp;D (GERD; in current EUR)</td>
<td>3,281</td>
<td>N/A</td>
<td>237,000.2</td>
</tr>
<tr>
<td>Share of Business Expenditure on R&amp;D in GERD (in %)</td>
<td>67.2</td>
<td>N/A</td>
<td>63.9</td>
</tr>
<tr>
<td>Share of Population Involved in Life-long Learning (in %)</td>
<td>2.6</td>
<td>7.35</td>
<td>9.34</td>
</tr>
<tr>
<td>Non-R&amp;D innovation expenditures of all enterprises as a percentage of turnover (normalised scores within a 0 (lowest) to 1 (highest) range)</td>
<td>N/A</td>
<td>N/A</td>
<td>0.41 (2006)</td>
</tr>
</tbody>
</table>

Source: Eurostat and Community Innovation Survey
Appendix F RIM survey responses
Please indicate the governance level that is most important for the design and implementation of innovation policy in the region (1 = regional level, 2 = national level, 3 = sub-regional level)
Rhône-Alpes (FR71)

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governance</td>
<td></td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1.52</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50% 48% 2%</td>
</tr>
</tbody>
</table>

Please assess the general degree of institutional autonomy of the regional authorities in the region (1 = regional authority is an administrative appointee of the national government, 2 = regional authority including elected council but no legislative powers and no or minor tax raising powers, 3 = federated entity with legislative power in some but not all fields, limited or no tax raising powers)

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>2.11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>23% 43% 34%</td>
</tr>
</tbody>
</table>

The design of regional innovation policies follows a (1 = bottom-up approach, 2 = input from both sides, 3 = top-down approach, 4 = strong top-down approach)

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>2.25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11% 57% 28% 4%</td>
</tr>
</tbody>
</table>

To what degree is priority setting, design and monitoring of innovation policy subject to the design and of formalisation of the general set-up of institutions tasked with the development of innovation policy in your region (1 = informal, 2 = mixed, 3 = formal)

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>2.19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18% 45% 37%</td>
</tr>
</tbody>
</table>

Is there a regional innovation strategy in the form of a published document (1 = yes, 2 = no)

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>1.34</td>
</tr>
<tr>
<td></td>
<td></td>
<td>66% 34%</td>
</tr>
</tbody>
</table>

How formally binding is this document on the regional public authorities (1 = own initiative document of a non-public body or partnership with no binding constraints on regional authorities, 2 = a ‘pact’ signed by a broad-based public-private partnership, 3 = a politically binding policy containing fixed targets)

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>2.21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25% 29% 46%</td>
</tr>
</tbody>
</table>

Please indicate if there are horizontal coordination projects and mechanisms between regional players (e.g. inter-departmental working groups, council or platforms with actors from different sectors) (1 = not yet very developed, 2 = somewhat developed, 3 = quite well developed)

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>2.26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13% 49% 39%</td>
</tr>
</tbody>
</table>

Please indicate if there are inter-regional co-ordination projects and mechanisms (e.g. co-operation between agencies in different regions) (1 = not yet very developed, 2 = somewhat developed, 3 = quite well developed)

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>2.39</td>
</tr>
<tr>
<td></td>
<td></td>
<td>27% 59% 14%</td>
</tr>
</tbody>
</table>

Please indicate if there are vertical co-ordination projects and mechanisms between local, regional, national and European authorities involved in designing or implementing innovation policy (1 = not yet very developed, 2 = somewhat developed, 3 = quite well developed)

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>2.02</td>
</tr>
<tr>
<td></td>
<td></td>
<td>30% 58% 22%</td>
</tr>
</tbody>
</table>

Please characterise the regional innovation system according to key drivers of innovative activities (1 = private-driven, 2 = mixed, 3 = public-driven)

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>2.26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12% 50% 38%</td>
</tr>
</tbody>
</table>

Please indicate if the regional system of policy delivery is centralised or de-centralised (1 = rather decentralised, 2 = mixed form, 3 = rather centralised)

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>2.47</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5% 42% 52%</td>
</tr>
</tbody>
</table>

Please indicate the significance of the EU Structural Funds for regional innovation policy, in terms of funding (1 = <10%, 2 = 11‐24%, 3 = 25‐49%, 4 = 50‐75%, 5 = >75%)

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>2.96</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14% 30% 19% 19% 18%</td>
</tr>
</tbody>
</table>

Please indicate the relevance of the EU Structural Funds for regional innovation policy, for strategy development (1 = very low, 2 = low, 3 = average, 4 = high, 5 = very high)

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
<td>3.27</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11% 17% 25% 28% 19%</td>
</tr>
</tbody>
</table>

Is there a specific Structural Funds regional operational programme for the region (1 = yes, 2 = no)

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1.10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>90% 10%</td>
</tr>
</tbody>
</table>

If 1, is this Structural Funds ROP administered at the regional level (1 = yes, 2 = no)

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1.12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>48% 12%</td>
</tr>
</tbody>
</table>

Support for the internationalisation of innovation policy:

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>1.09</td>
</tr>
<tr>
<td></td>
<td></td>
<td>34% 24% 43%</td>
</tr>
</tbody>
</table>

Cluster policies

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>1.28</td>
</tr>
<tr>
<td></td>
<td></td>
<td>31% 10% 59%</td>
</tr>
</tbody>
</table>

Policies promoting new forms of public-private-partnerships for science-industry co-operation

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>1.21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>28% 22% 50%</td>
</tr>
</tbody>
</table>

Policies for open innovation

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0.68</td>
</tr>
<tr>
<td></td>
<td></td>
<td>58% 15% 27%</td>
</tr>
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</table>

Demand-side policies

<table>
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<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
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<tbody>
<tr>
<td></td>
<td>0</td>
<td>0.55</td>
</tr>
<tr>
<td></td>
<td></td>
<td>64% 18% 18%</td>
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</tbody>
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Policies for innovation in services

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0.72</td>
</tr>
<tr>
<td></td>
<td></td>
<td>52% 10% 29%</td>
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</table>

Policies for public sector innovation

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0.64</td>
</tr>
<tr>
<td></td>
<td></td>
<td>60% 17% 24%</td>
</tr>
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</table>

Public procurement policies

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0.39</td>
</tr>
<tr>
<td></td>
<td></td>
<td>72% 17% 11%</td>
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</table>

Innovation related tax policies

<table>
<thead>
<tr>
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<th>Average</th>
<th>Categories</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0.37</td>
</tr>
<tr>
<td></td>
<td></td>
<td>77% 9% 14%</td>
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</table>

Eco-innovation policies

<table>
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<tr>
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<tr>
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<td>2</td>
<td>0.80</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50% 19% 30%</td>
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</table>

Theme-based policies aimed at broader societal goals

<table>
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<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0.72</td>
</tr>
<tr>
<td></td>
<td></td>
<td>53% 22% 25%</td>
</tr>
</tbody>
</table>

Priorities on which regional innovation policy is most strongly focused (1 = very low, 2 = low, 3 = average, 4 = high, 5 = very high)

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
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<tr>
<td></td>
<td>5</td>
<td>2.71</td>
</tr>
<tr>
<td></td>
<td></td>
<td>21% 24% 32% 12% 12%</td>
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</table>

Support to policy making and horizontal policies

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>3.94</td>
</tr>
<tr>
<td></td>
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<td>1% 12% 20% 25% 42%</td>
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Support research efforts

<table>
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<th>Average</th>
<th>Categories</th>
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<tr>
<td></td>
<td>5</td>
<td>3.41</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3% 17% 20% 39% 12%</td>
</tr>
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</table>

Support human capital development

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
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</thead>
<tbody>
<tr>
<td></td>
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<td>3.85</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2% 9% 23% 37% 30%</td>
</tr>
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</table>

Support creation and growth of innovative enterprises

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Average</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>2.84</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13% 24% 37% 16% 10%</td>
</tr>
</tbody>
</table>

Market and innovation culture