



**EXPERT EVALUATION NETWORK
DELIVERING POLICY ANALYSIS ON THE
PERFORMANCE OF COHESION POLICY 2007–2013**

TASK 1: POLICY PAPER ON INNOVATION

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ACRONYMS

ERDF:	European Regional Development Fund
RTI:	Research and Technological Innovation
OP:	Operational Programme
NSRF:	National Strategic Reference Framework
CPER:	Contrat de Projet Etat–Région
R&TD:	Research and Technological Development
SME:	Small and Medium–size Enterprise
SRI:	Regional Innovation Strategies (Stratégies régionales d'innovation)
SNRI:	National Research & Innovation Strategy (Stratégie nationale de recherche et d'innovation)
RTDI:	Research, Technological Development and Innovation
AERES:	Agence d'Évaluation de la Recherche et de l'Enseignement supérieur
PTR:	Prestation Technologique Réseau
SPL:	Systèmes Productifs Locaux
PRIDES:	Pôles Régionaux d'Innovation et de Développement Economique Solidaire
DATAR:	Délégation interministérielle à l'aménagement du territoire et à l'attractivité régionale
AIR:	Annual Implementation Report
FOI:	Field of Intervention
SWOT:	Strengths, Weaknesses, Opportunities, and Threats
SGAR:	Secrétariat Général aux Affaires Régionales
DRIRE:	Direction Régionale de l'Industrie, de la Recherche et de l'Environnement
ESF:	European Social Fund
SRDE:	Schémas Régionaux de Développement Economique
MESR:	Ministère de l'Enseignement supérieur et de la Recherche
CRITT:	Regional Innovation and Technology Transfer Centres
INSERM:	Institut National de la Santé et de la Recherche Médicale
PRES:	Pôles de Recherche et d'Enseignement Supérieur
INSEE:	National Institute of Statistics and Economic Studies
LOLF:	Loi Organique Relative aux Lois de Finances
ARF:	Association des Régions Françaises
AVAMIP:	Agency for Commercialisation of Research Midi Pyrénées
IPR:	Intellectual Property Rights
ARDI:	Regional Development and Innovation Agency Rhône–Alpes
FP:	EU Framework Programme for Research & Development

1 EXECUTIVE SUMMARY

The French national innovation policy mix relies on: a National Strategy for Research & Innovation based on scientific priorities; the catching up of universities and the opening up of universities and research to business and society; innovation-driven clusters (*Pôles de compétitivité*); a shift toward competitive and collaborative research; last but not least, a tax break (*crédit impôt recherche*) favouring business R&D expenditure. This policy mix (with the exception of the tax break) is translated into policy at regional level through co-funding programmes (CPER: State/Regions – ERDF OPs: ERDF/State/regions); very few measures are funded by Regions alone.

Compared to the ERDF in the 2000–2006 programming period¹, ear-marking and the end of zoning have completely modified the framework in which ERDF is operating. The level of ear-marking is over 75%. On the whole, ERDF co-funding of R&TD infrastructures and equipment remain relatively important in proportion of total ERDF funding – and probably easier to spend (while helping some regions to catch up). However, ear-marking has allowed Regions to dedicate a larger amount of ERDF funding to ‘soft’ measures (collaborative research, incubation services, innovation financing, networking of technology transfer organisations...), and the end of zoning facilitates the implementation of such measures. Territorial cooperation OPs reinforce the importance of ‘soft’ measures (collaborative research and networks, innovation poles and clusters).

In Convergence Regions, 40% of ERDF contribution fund “Innovation friendly environment” (more than half for advanced support services for firms and groups of firms). 36% fund “Boosting applied research” (divided in roughly equal parts into assistance to SMEs in the broadest sense and R&TD activities in research centres). About 24% fund “Knowledge transfer and support to innovation poles and clusters” (more than half for R&TD infrastructures and about a third for technology transfer and cooperation networks).

In Competitiveness & Employment Regions, 40% of ERDF contribution goes to “Knowledge transfer and support to innovation poles and clusters” (mainly to R&TD infrastructures, followed by technology transfer and cooperation networks), 33% goes to “Boosting applied research” (divided in equal parts to R&TD activities in research centres and other measures to stimulate research and innovation and entrepreneurship in SMEs), and 28% of ERDF contribution is dedicated to “Innovation friendly environment” (of which almost 60% for ICT-related measures, and slightly less than 40% for advanced support services for firms and groups of firms). Globally, ERDF contribution

¹ Strategic evaluation on innovation and the knowledge based economy in relation to the Structural and Cohesion Funds for the programming period 2007–2013, France Report, Study carried out by Lacave Allemand & Associés for DG REGIO, pp. 23s.

to 'soft' measures has increased significantly in volume due to ear-marking and the end of zoning, but funding of infrastructures and equipment remains important.

The main output so far of ERDF contribution is constituted by the Regional Innovation Strategies (SRI) carried out in all Regions according to a common methodology at the request of the Commission. SRIs are in general considered successful and fruitful, in particular in terms of improved awareness of the innovation stake and of governance of the regional innovation system. Other outputs and results are expected to emerge concerning collaborative research and networks through *Pôles de compétitivité* and regional *filières*, poles and clusters (and at interregional level with Territorial Cooperation), and R&TD infrastructures. ERDF significantly contributes to funding collaborative research and supporting *Pôles de compétitivité*. It also helps to maintain regional sectoral priorities (*filières*, poles, clusters), which may or may not coincide with region-based *Pôles de compétitivité*. It has thus an important sectoral dimension, which, compared to the 2000–2006 programming period, is much more innovation-oriented.

Main challenges for the future are: the effective implementation of the SRIs and their priorities; coherence between national and regional priorities (as defined in the SRIs); the streamlining and 'mutualisation' of services among universities, technology transfer and innovation support organisations; the capacity of innovation support policies to enlarge the number of innovative SMEs and to support not only the creation, but also the growth of start-ups and spin-offs.

2 NATIONAL AND REGIONAL INNOVATION POLICY AND THE CONTRIBUTION OF ERDF

2.1 NATIONAL AND REGIONAL INNOVATION POLICY

R&D expenditure amounted to 2,07% of GDP in 2008 and has declined since 2002 (2,24%).

A national research & innovation strategy (SNRI) was established for the first time in France in 2009² with a focus on 3 thematic priorities: 1) Health, well-being, food/nutrition, and biotechnologies; 2) Environmental sciences and technologies; 3) Information, communication and nanotechnologies³. However, the SNRI is mainly focused on research ('supply-side' in terms of

² *Stratégie nationale de recherche et d'innovation, Rapport général, Ministère de l'enseignement supérieur et de la recherche, 2009.*

³ The SNRI and its implementation are based on a process of *concertation* (dialogue) through thematic and 'transversal' working groups. This process is expected to make the SNRI evolutive.

innovation), with a clarification of the levels of governance⁴, and does not provide an overview of French innovation policies. It is thus necessary to take a broader view⁵.

The present policy mix is the result of ten years of reforms⁶ and its main objectives are:

- Opening up universities and research to business and society: support to academic spin-offs, development of industry–research partnerships (e.g.: “*Instituts Carnot*”), etc;
- Improving the taxation environment: tax break on RTDI business expenditure (“*crédit impôt recherche*”) – its benefit was significantly extended in 2008;
- Supporting innovation–driven clusters: national programme “*Pôles de compétitivité*”
- Giving priority to funding research on a project basis: calls for proposals of *Agence Nationale de la Recherche* and *Fonds unique interministériel* (collaborative – industry–research – applied research projects);
- Catching up with the best university systems: larger autonomy for universities, and reorganisation of their governance system, development of evaluation (creation of AERES⁷).

With respect to the policy area “Innovation friendly environment”, the most recent trends concern the reorganisation of French universities⁸ and regulatory improvements⁹; with respect to “Knowledge transfer and innovation poles”, they concern the “*Pôles de compétitivité*” and the increased funding of university and research infrastructures¹⁰; and with respect to “Boosting applied research”, a shift toward funding research on a project basis.

The instrument “Infrastructures and facilities” mainly benefit and will benefit universities in the coming years. The role of “*crédit impôt recherche*” is predominant within the instrument “aid schemes” to the benefit of enterprises, and especially SMEs¹¹; grants, repayable advances and guarantees¹², and venture capital¹³ come far behind, including grants for projects from “*Pôles de compétitivité*” which benefit networks. The instrument “Education and training” is currently boosted by increased State funding to universities.

⁴ The strategic level (orientations/objectives) is the responsibility of the government; the programming level that of agencies and “alliances” of research organisations; the implementation level that of financing bodies and beneficiaries.

⁵ Using in particular : *Recherche et développement, Innovations et partenariats*, Ministère de l’enseignement supérieur et de la recherche, 2008 ; *Rapport de suivi du Programme national de réforme 2008–2010*, 2009.

⁶ *Loi sur l’innovation et la recherche*, 1999 ; *Plan Innovation*, 2003 ; *Pacte pour la Recherche* and *Loi de programmation pour la recherche*, 2006 ; *Programme « Pôles de compétitivité »*, 2005 ; *Loi sur les libertés et responsabilités universitaires*, 2007 ; *Plan Campus*, 2008.

⁷ *Agence d’Evaluation de la recherche et de l’enseignement supérieur*.

⁸ *Lois sur les libertés et responsabilités universitaires (LRU)*, 2007.

⁹ *Rapport de suivi du Programme national de réforme 2008–2010*, 2009.

¹⁰ In particular with the *Plan Campus* (2008) and funding through the *Grand Emprunt* (Great Loan, 2010).

¹¹ The 2008 reform seems to have changed the trend in favour of large enterprises and the service sector.

¹² Granted by OSEO Innovation, which acts as a national innovation agency.

¹³ *Activités d’investissement des FCPI dans les entreprises innovantes 1997–2007*, OSEO–AFIC, 2009.

The national policy, as presented above, is mainly translated into policy at regional level through *Contrats de projet Etat-Région* (CPER), i.e. programming agreements between the national and regional authorities, and ERDF OPs within which the French Regions are co-funding projects and measures¹⁴. CPERs are often complemented by a partnership between OSEO¹⁵ and Regions (in particular regarding access of businesses to technological services¹⁶).

A summary review of CPERs shows that, in Competitiveness & Employment Regions:

- support to universities, research and technology transfer, through co-funding infrastructures, facilities and equipments, is general and represents a major part of CPERs financing; this form of support often increases the attractiveness of the regional higher education and research system;
- practically all CPERs have a “sectoral dimension’ through support to poles of excellence (higher education and research), *pôles de compétitivité, filières*, clusters¹⁷ (co-funding of infrastructures and aid schemes) – CPERs take into account the specificities of each region’s economic and research fabric; support to applied research is channelled through the ‘sectoral dimension’;
- ICT have a significant place within innovation support measures in about half of the regions, through co-funding of either infrastructures or uses/services;
- education and training have a very minor place.

The policy area “Knowledge transfer and support to innovation poles and clusters” is thus the most important in the CPERs, and the instrument “Infrastructures and facilities” benefit universities and research. Aid schemes support networks (cooperation between businesses, cooperation between research, universities and businesses) on a sectoral basis.

In the Convergence Regions, the support to infrastructures to the benefit of universities and research is overwhelming with the exception of La Réunion where aid schemes to SMEs and networks are implemented to a minor extent. The ‘sectoral dimension’ is present, in particular in La Réunion, but much less so than in Competitiveness & Employment Regions. ICT have a significant place in Guyane and Martinique.

The financial resources that the Competitiveness & Employment Regions dedicate to research and technology from their own budgets¹⁸ vary significantly (2007), from 0,3% in Corsica to over 5% in

¹⁴ CPER and OP ERDF have the same programming period: 2007–2013. The NSRF does not play a direct role in translating the national policy at regional level; it only defines priorities (e.g. for Competitiveness & Employment Regions: Supporting innovation and the knowledge economy) and stresses that regional innovation strategies must be in coherence with Regional Strategies for Economic Development (SRDE).

¹⁵ OSEO Innovation acts as a national innovation agency.

¹⁶ *Prestation technologique Réseau (PTR)*.

¹⁷ Or “*Systèmes productifs locaux*” (SPL).

¹⁸ *Rapport sur les politiques nationales de recherche et de formations supérieures, PLF 2010*.

Bretagne (5,3%) and Aquitaine (5,8%); over half the Regions (12/22) are within 2%–4%. The average amount of regional R&T expenditure per capita amounts to 9,9 EUR¹⁹, from 0,2 EUR in Corsica to 18,6 EUR in Picardie; 6 Regions spend over 12 EUR per capita (Picardie, Aquitaine, Pays de la Loire, Basse-Normandie, Bourgogne, Midi-Pyrénées).

A few policy measures are exclusively regional, i.e. not co-funded, since co-funding from central and regional authorities (including the State) is common practice in France. Where there are regional innovation agencies²⁰, Regions fund (or co-fund) their operating costs. They may also fund specific measures supporting Ph.D students and postdocs, scientific conferences and events, and innovative and interdisciplinary research programmes ('triggering' funding²¹).

The general 'co-funding practice' fosters a general consistency between innovation policies carried out at regional level and the national innovation policy. However, three issues have to be mentioned:

- the "*crédit impôt recherche*", a tax allowance, is a fully national measure and as such 'blind' with respect to the various regional contexts, but in financial terms by far the most important measure supporting innovation (4 billion €);
- Regions are increasingly questioning the national priorities of OSEO Innovation, which privilege 'breakthrough' innovation and enterprises with more than 50 employees to the detriment of incremental innovation and smaller companies;
- the 2009 Regional Innovation Strategies (SRI) co-funded by ERDF may be in a collision course with the SNRI published in November 2009 since there was no coordination between the two exercises (see *infra* §3), but recent State initiatives could mitigate this risk.

Role of ERDF

The percentage of ERDF resources allocated to innovation policy in Competitiveness & Employment Regions varies significantly with a minimum of 36,7% in Bourgogne and a maximum of 62,6% in Corsica²². 13 out of 22 Regions are within a 45–55% range. The differences are even larger in the Convergence Regions with a minimum of 9,9% (La Réunion) and a maximum of 22,7% (Guyane), the two other Regions being around 15%.

- *Convergence Regions*

The main initiatives regard 'soft' actions and target firms and partnerships between firms and public-funded research, which means that the French Convergence Regions have started to depart

¹⁹ The Association of French Regions (*L'impact financier des politiques des regions, 2009*) calculated 15,81 EUR per capita for the expenditure dedicated to research, innovation and higher education.

²⁰ Which in some regions happen to be at the same time innovation and economic development agencies.

²¹ E.g.: Region Basse-Normandie.

²² Interestingly, Bourgogne dedicates one of the highest amounts per capita to R&T, while Corsica dedicates the smallest part of its budget to R&T.

from a model principally concentrated on infrastructures: the creation of an investment fund and the support to a guarantee fund in Guadeloupe; the follow-up of and support to young businesses in order to improve their survival rate in Martinique; collective actions aimed at supporting partnerships and the creation of an innovation pole in La Réunion. This first group of initiatives is followed by R&TD infrastructures and activities in research centres (Guyane: *Pôle universitaire guyanais* in connection with the *Schéma régional de la Recherche et de l'Enseignement supérieur*). Convergence Regions intend to strengthen both their entrepreneurial fabric and their research potential, while supporting effective relationships between business and research (which is brand new for them).

- *Competitiveness and Employment Regions*

ERDF plays a key role in the implementation of the national programme “*Pôles de compétitivité*” – which has accredited 71 poles across all French Regions – as well as regional ‘cluster’ or *filière* programmes²³ through support to technology transfer and improvement of cooperation networks (research–businesses and between businesses)²⁴.

ERDF also plays an important role in R&TD infrastructures and equipments²⁵, which come first in nine regions. In these regions, the objectives are either to catch up with regions with a larger research base (e.g.: Pays de la Loire, Corsica) or to strengthen the research base in relation with regional priorities generally linked with the *Pôles de compétitivité* present in the region (e.g.: Bretagne, Franche-Comté).

The other initiatives include advanced services for firms and groups of firms and other measures aimed at stimulating research, innovation and entrepreneurship in SMEs (e.g.: support to participation to the FP, structuring of networks of consultants, economic intelligence), together with R&TD activities in research centres²⁶ (linked in general, as in Champagne-Ardenne, to *Pôles de compétitivité* and regional *filières*).

The relative weight of the main initiatives significantly varies among the Regions. Bretagne and Pays de la Loire have heavily concentrated ERDF resources (more than 40%) and this concentration benefits R&TD infrastructures. Regions like Limousin, Lorraine and Nord Pas de Calais have preferred to spread ERDF resources over a larger number of initiatives²⁷.

In practice, the main actions planned – apart from research infrastructures *stricto sensu* – support: collaborative R&D projects; technological platforms (which help to generate collaborative projects); the networking of R&D technology transfer and innovation support organisations and the

²³ E.g.: Rhône-Alpes (‘research clusters’, ‘industrial clusters’), Basse-Normandie (*filières*), Provence Alpes Côte d’Azur (PRIDES).

²⁴ These initiatives are ranked first in 6 regions, second in 4 regions, and third in 8 regions.

²⁵ These initiatives are ranked first in 9 regions, second in 3 regions, and third in 3 regions.

²⁶ These initiatives are encountered about ten times in the three first ranks.

²⁷ In these regions, the main initiatives concentrate only around 15% of ERDF resources

‘mutualisation’ of their interventions. The objectives are: first to bridge the gap between research and business, and make the regional innovation system more effective and efficient; second to rationalise, update and upgrade the ‘system’ of technology transfer set up between the mid-1980’s to the mid-1990’s which do not address adequately the needs of firms²⁸.

2.2 ERDF CONTRIBUTION ACROSS POLICY AREAS

Convergence Regions

ERDF resources dedicated to innovation in the policy area “Innovation friendly environment” amount to about 40%, in “Boosting applied research” 36%, and finally in “Knowledge transfer and support to innovation poles and clusters” (c. 24%).

The **policy area “Innovation friendly environment”** is based on funding for advanced support services for firms” with 55,5% of the resources; the rest of ERDF funding goes to ICT-oriented measures (mainly TEN-ICT and services and applications for citizens). Within the **policy area “Boosting applied research”**, R&TD activities in research centres (c. 45%) are roughly the same as measures targeting SMEs (assistance to SMEs for the promotion of environment-friendly products and processes, and other measures stimulating research and innovation and entrepreneurship) which total 50% – investment in firms linked to research and innovation only amounting to slightly more than 5%. Within the **policy area “Knowledge transfer and support to innovation poles and clusters”**, R&TD infrastructures come first with 54%, followed by technology transfer and improvement of cooperation networks (31%) and assistance to R&TD particularly in SMEs (including access to R&TD in research centres) (15%).

There is a shift toward ‘soft’ policy and measures in the Convergence Regions, as illustrated by the relative importance of ERDF funding for advanced services to firms and groups of firms in the policy area “Innovation friendly environment”; Guadeloupe for instance gives a significant place to financial engineering. The relative importance of R&TD activities within the policy area “Boosting applied research” corresponds to a catching up process and reflects the strategic importance given to strengthening research activities in the regions (Caribbean, Indian Ocean).

The weakness of ERDF funding for investment in firms linked to research and innovation comes from the fact that only a very few enterprises have the capacities to carry out research and develop innovative projects.

Finally, initiatives and measures related to the policy area “Knowledge transfer and innovation poles and clusters” are hampered by: the quasi-absence or weakness of intermediary organisations, and in some cases, the failure of past attempts to set up such organisations; the difficulty to implement a cluster policy due to the characteristics of the regional economic fabric.

²⁸ As illustrated in various evaluation studies of CRITTs (*Centres régionaux d’innovation et de transfert de technologie*).

However, ERDF contributes to structuring some poles of excellence or *Pôles de compétitivité* (La Réunion).

Competitiveness & Employment Regions

Nearly 40% of ERDF resources go to “**Knowledge transfer and innovation poles and clusters**” and, within this policy area, 45% of ERDF funding is dedicated to R&TD infrastructures and centres of competences in a specific technology, while 35% is dedicated to technology transfer and improvement of cooperation networks and 20% to assistance to R&TD particularly in SMEs (including access to R&TD services in research centres).

The **policy area “Boosting applied research”** benefits from about 33% of ERDF funding allocated to innovation, with a) R&TD activities in research centres and b) other measures to stimulate research and innovation and entrepreneurship in SMEs, representing each around 32% of ERDF within this policy area. Investment in firms directly linked to research and innovation amount to 22%, followed by assistance to SMEs for the promotion of environment–friendly products and processes (14%).

Only 28% of ERDF resources dedicated to innovation regard “**Innovation friendly environment**”. Within this area 38,5% of ERDF resources go to advanced support services for firms and groups of firms followed by two ICT–oriented groups of measures (services and applications for citizens with 21% and ICT/access, security, interoperability, research, innovation with about 15%). However, the total ICT–oriented measures amount to near 60% of the policy area, i.e. more than advanced support services. Resources dedicated to developing human potential are limited to c. 3% of the policy area.

Globally, ERDF contribution to ‘soft’ measures has become more important than in the 2000–2006 programming period, in particular due to the shift toward collaborative R&D projects (in relation to policies supporting poles & clusters), financial engineering, ICT services and applications..., and due to a major focus on the role and professionalization of intermediary organisations. However, ERDF contribution to R&TD infrastructures remains significant at national level, and is particularly important in some regions. This is related to a catching up policy: catching up with the best universities in the world; in some regions, catching up with other regions which benefit from a more developed research and higher education potential²⁹.

ERDF funding remains limited for investments in firms directly linked to research and innovation – but this can be explained by the importance of “*crédit impôt recherche*” – and weak for human potential in research & innovation.

Territorial Cooperation

²⁹ E.g.: Regions Pays de la Loire has research and higher education resources and potential which are much lower than its weight in the French GDP.

The main planned initiatives support a) cooperation networks between university/research and the productive sector and between businesses, and b) innovation in clusters, niches, poles of excellence... followed by initiatives supporting entrepreneurship and creation and development of SMEs, and knowledge and technology transfer. Finally, a few initiatives support territorial cooperation focused on innovation policies and actions.

ERDF contribution is thus mainly focused on the policy area “Knowledge transfer and innovation poles and clusters” with the main objective of developing interregional R&TD collaborative projects and creating innovative business opportunities among poles/clusters. Policy-framing and policy-making in the field of innovation support is a minor objective and targets institutions and policy-makers. Although minor, its presence in the OPs opens the door to an interesting approach that may encourage benchmarking and exchange of experience.

3 EVIDENCE AVAILABLE ON THE PERFORMANCE OF INNOVATION MEASURES CO-FINANCED BY ERDF

According to DATAR, innovation measures are those first which have started first to be implemented in the ERDF Operational Programmes 2007–2013, which signals that State and regional administrations have developed an innovation-oriented culture. This statement is globally confirmed by the data available in the AIRs which show that as of 31 December 2008 c. 55% of programmed ERDF funding concerns innovation support measures (see Table 2 in Annex D)³⁰.

An effort was made for an effective monitoring of the implementation of innovation measures with the 2009 Implementation Report of the National Reform Programme 2008–2010³¹ and the recommendations formulated by the Thematic Group “Innovation” to the *Groupe de suivi* of the National Strategic Reference Framework (January 2010)³².

In the French 2008 AIRs, there is in general no strict correspondence between the measures – and corresponding initiatives carried out as implementing the measures – and FOI codes; this implies that we have distributed the policy initiatives among the three policy areas, at least in part, on the basis of our own expertise and of common sense.

The degree of precision of the AIRs concerning the measures and initiatives programmed and/or implemented is rather variable.

It is too early to assess outcomes and results through the 2008 AIRs. However, it is possible to use available evaluation studies to get a vision of outcomes and results of policy initiatives³³ that have been co-financed by ERDF (included prior to 2007). Among the most interesting ones are the

³⁰ Aquitaine, Ile de France and Haute-Normandie are outstanding Regions with over 90%.

³¹ *Rapport de suivi pour 2009, Programme National de Réforme 2008–2010*, 15 Oct. 2009.

³² *Projets de recommandations du groupe thématique « Innovation » au Groupe de suivi du CRSN en vue d'améliorer les résultats de la programmation FEDER et FSE, Groupe de suivi du CRSN*, 21 Jan. 2010.

³³ Which of course excludes the *Crédit impôt recherche*.

national evaluation of the *poles de compétitivité*³⁴ and a study on the concepts of innovation and sustainable development in the ERDF OPs and in the *Contrats de Projet Etat-Région*³⁵; however, the latter has mainly a methodological interest for subsequent evaluations and does not pretend to present outcomes and results. Other evaluations carried out in specific regions have focused on collaborative research projects, support to participation to FP, and innovation networks³⁶. In addition, Regional Innovation Strategies (SRI) generally include an assessment of the regional innovation system and of its achievements during the years prior to 2009.

Regional Innovation Strategies (SRI) co-financed by ERDF were carried out in all regions in 2009 following a demand by the Commission and are now practically completed.

The methodology of the SRI exercise was established at national level³⁷, with specific adaptations to the conditions prevailing in the French Overseas Regions (Convergence).

SRI constitute an important achievement as of April 2010. An evaluation of the overall process is currently being realised by ADE, a Belgian consultancy, which will deliver its final report by June 2010³⁸.

There was initially some resentment in a number of Regions which considered the exercise as a sort of 'punishment'; in addition, the distribution of roles between the State and regional authorities became a source of conflict in some Regions. The situation improved significantly when SRIs started to be carried out. In many cases, the process was co-steered by the State administration; in some cases, the regional authorities took the lead in practice.

³⁴ *L'évaluation des pôles de compétitivité 2005-2008, Evaluation réalisée par CM International en association avec BCG, DIACT, La documentation française, 2008.*

³⁵ *Etude sur les conceptions de l'innovation et du développement durable, Synthèse, 30 juin 2009, DIACT-ARF (pour le compte de l'Instance Nationale d'Evaluation (Edater, CM International, Planète Publique, CEMAGREF Grenoble).*

³⁶ The evaluation of collaborative projects may be carried out as such (*Haute-Normandie: Evaluation de projets collaboratifs de recherche entre organismes de recherche et entreprises pour une meilleure prise en compte du Programme Opérationnel Régional et du Contrat de Projet Etat-Région*, March 2010) or through the regional evaluation of poles and filières (*Basse-Normandie: Les pôles de compétitivité et les filières dans la stratégie régionale de développement économique - Evaluation de sa pertinence dans un contexte de bilan du schéma régional de développement économique et de la stratégie régionale d'innovation. Bretagne: Evaluation de la politique régionale d'appui aux pôles de compétitivité*, 2009. *Provence-Alpes-Côte-d'Azur: Evaluation des Pôles régionaux d'innovation et de développement économique et solidaire - PRIDES -*, 2010). An example of the evaluation of support policies to participation to FP is the evaluation carried out by the Region Pays de la Loire: *Evaluation du dispositif régional pour l'Europe de la recherche et de l'innovation*, 2009-10 (realised by ITD-Eu and Amnyos). Concerning innovation networks, we can cite Limousin (*Evaluation en continu du cadre de référence de l'innovation*, Jan. 2009) and Basse-Normandie again (*Evaluation des Centres régionaux d'innovation et de transfert de technologie - CRITT - 2008*).

³⁷ *Méthode de diagnostic du système d'innovation dans les régions françaises*, ADIT, 2008.

³⁸ This information relies on interviews with: ADE; a representative of the *Association des Régions de France* (ARF); representatives of DATAR; representatives of the *Ministère de l'Enseignement supérieur et de la Recherche*, DGR; representatives of the *Ministère de l'Economie, des Finances et de l'Emploi*, DGCIS; representatives of regional authorities (see details in Annex). In addition, it relies on our direct knowledge of 8 RIS (6 in Competitiveness & Employment Regions, 2 in Convergence Regions) in which our consultancy company was involved.

The contribution of universities was in general poor, due to the time-consuming reform process started in 2007³⁹, while the participation of enterprises, in particular innovative ones, was significantly better (however, the crisis did not help).

The major outcomes across the various regions (Competitiveness & Employment and Convergence) can be summarised as follows:

a) With respect to governance and organisation of the regional innovation system:

- the regional diagnostic and SWOT analysis regarding innovation were updated and enriched;
- governance was clarified: at strategic level, the dialogue State–Region improved in a majority of cases with a concentration of decision-making in the so-called “gang of four” (Region, SGAR, DRIRE, OSEO); at operational level, coordination of main actors went a step further (sometimes under regional innovation agencies);
- the necessity for ‘mutualisation’ (agreements, ‘charters’) and improved professionalism of technology transfer and innovation support organisations was affirmed;

b) With respect to the strategic and operational priorities, emphasis was put on:

- a more demand-oriented strategy;
- supporting innovation in businesses according to a project-based approach (as opposed to a ‘window-based’ one) and providing a complete range of innovation support services;
- paying more attention to supporting non-technological innovation and innovation in services (although this second point was often stated more as a principle than as entailing specific actions);
- financial engineering (seed money, addressing the ‘death valley’ moment of the financing cycle of start-ups / spin-offs);
- better coordination and complementarities between ERDF and ESF interventions;
- addressing the sectoral dimension, i.e., in a number of regions, questioning the *filières* supported according to the Schémas régionaux de Développement Economique (SRDE)⁴⁰ and re-orienting strategy and actions toward innovation-driven clusters – though prioritising often appeared difficult.

Globally, the SRI exercise can be considered fruitful and successful. This is clearly the opinion of a majority of the State as well as regional actors involved in the process. Apart from the above-mentioned outcomes, SRIs have helped to ‘homogenise’ the interest of Regions in innovation and

³⁹ LRU 2007 and *Grand Emprunt*.

⁴⁰ All Regions had established SRDE prior to SRI, as a consequence of a 2004 Law enlarging their competences.

have gone well beyond the objective of improving the ERDF OPs in terms of support to innovation. Some actors consider that they will have an impact on SRDE and *Schémas régionaux de l'Enseignement supérieur et de la Recherche* and that they will have to be updated periodically.

However, two issues remain open at the moment. The first one regards the coherence between the national research & innovation strategy (SNRI) and the SRIs with respect to priority fields; in April 2010 the *Ministère de l'Enseignement supérieur et de la Recherche* (MESR) started the STRATER (STRATOM for Overseas Regions) exercise⁴¹ aimed at establishing regional diagnostics together with regional actors; this exercise should help solve the problem. The second issue regards the future implementation of the SRIs; it is generally expected that the regional authorities will play a leading role, while the State administration will only provide expertise and support.

3.1 ACHIEVEMENTS UNDER THE CONVERGENCE OBJECTIVE

The initiatives under the **policy area “Boosting applied research”** are the first and most important which have been programmed and have started with mainly R&D projects (agriculture and forest, agro–food, health), followed by some projects regarding the diffusion of a scientific and technical culture, and one project of sensitization of industry to REACH (Guadeloupe).

The initiatives related to the **policy area “Knowledge transfer and support to innovation poles and clusters”** are relatively important and are mainly concentrated on scientific equipment (e.g.: cyclotron in La Réunion, chemical analysis in Guyane), followed by support to business–research partnerships related to *Pôles de compétitivité* (Guadeloupe, La Réunion) and technology transfer (CRITT in La Réunion).

Initiatives in the **policy area “Innovation friendly environment”** are much less important and are concentrated on support to start–ups/spin–offs (Guyane, La Réunion)⁴².

All these initiatives are coherent with the national policy mix (see above § 2.1)⁴³, in particular as regards ‘project–based’ (competitive) research, *Pôles de compétitivité* and the strengthening of universities (equipment).

The AIRs 2008 do not provide information on the first outputs. However, from other sources⁴⁴ it appears that in La Réunion there are some outputs in terms of R&D (health/medical, agro–nutrition) and business creation.

⁴¹ Interview with Sophie Cluet, MESR, in charge of the SNRI.

⁴² It must be noted that compared to the mainland the rate of creation of new enterprises is in general very high in the French Overseas Regions.

⁴³ Except for the *Crédit impôt recherche*, which are used very badly in the French Outermost Regions.

⁴⁴ The author of the present report, due to a mission for DG REGIO, visited La Réunion during the first week of May. See also: *Qualitropic. Feuille de route stratégique. Contrat de performance 2009–2011*.

3.2 ACHIEVEMENTS UNDER THE COMPETITIVENESS OBJECTIVE

Initiatives regarding R&TD infrastructures and equipments have been programmed and/or have started in 15 Regions (out of 22) and are the most important in terms of financial amounts as pointed out by DATAR and as results from AIRs 2008. Some are research infrastructures and scientific equipment and benefit universities, so contributing to a recent key element of the national policy mix, i.e. the catching up of universities. Others are technology transfer infrastructures and equipment (technological platforms, *plateaux techniques*) which are in general sector-focused (e.g.: solar energy platform in Corsica; *canceropôle* and aerospace campus in Midi-Pyrénées; water resources in Pays de la Loire), and benefit technology transfer and innovation support organisations (including business-research partnerships), and in some cases universities and research organisations. Some initiatives concern incubator infrastructures and equipment (e.g.: Aquitaine, Languedoc-Roussillon, Haute-Normandie). A small number of all these initiatives can be considered a continuation of initiatives co-financed by ERDF 2000-2006.

In 15 Regions, initiatives concerning technology transfer and cooperation networks have been programmed and/or started. A significant number can be considered an extension of initiatives co-financed by ERDF 2000-2006. These initiatives are very often targeted at specific *filières* or sectors, in some cases at craftsmanship, for instance in Midi-Pyrénées (regional *filières* of excellence), Pays de la Loire (biopolymers), Haute-Normandie (electronics, automotive sector), Languedoc-Roussillon (innovation in craftsmanship), etc.

In accordance with the national policy priorities⁴⁵ 12 Regions have programmed or started to implement initiatives supporting the *Pôles de compétitivité*. These initiatives are highly versatile: they may involve support to the governance and *animation* of the poles, technology transfer and cooperation networks, R&TD infrastructures and equipment related to the poles (e.g.: Limousin/Elopsys), and in some cases investment in firms linked to research and innovation. They are new with respect to the former ERDF programming period, since the national programme *Pôles de compétitivité* was launched in 2005.

Interestingly, the initiatives programmed or started in 15 Regions concerning technology transfer and cooperation networks allow the Regions to keep their own priorities in terms of regional *filières*, poles or clusters, beside the 'new' *Pôles de compétitivité*. As already stressed (above § 3.1), the SRIs often questioned the 'traditional' regional policy toward *filières*⁴⁶, and this could have an impact on the mid-term revision of OPs.

⁴⁵ To be precise, 12 Regions explicitly mention initiatives concerning *Pôles de compétitivité* in their AIR.

⁴⁶ Basse-Normandie is currently assessing its policy of *filières*, and Provence-Alpes-Côte d'Azur carried out in 2009 an evaluation of its PRIDES (*Pôles régionaux d'innovation et de développement économique solidaire*).

The three types of initiatives examined above are all related to the **policy area “Knowledge transfer and support to innovation poles and clusters”**⁴⁷, and according to 2008 AIRs most initiatives appear to have been programmed or started in this policy area. 21 Regions (out of 22) have programmed or started such initiatives which amount to about 80 MEUR⁴⁸.

Much fewer initiatives have been programmed or started within the **policy area “Boosting applied research”**, only 12 Regions are involved. However, the total programmed amount is about 80 MEUR⁴⁹.

The initiatives mainly concern collaborative research (university/research–business), related in a number of cases to *Pôles de compétitivité* (e.g.: in Rhône–Alpes for the pole Minalogic) and to regional *filières*, poles or clusters (e.g.: chemistry and biology–health in Champagne–Ardenne; ‘regional clusters’ in Rhône–Alpes). They may also concern R&TD activities carried out by research organisations alone (e.g.: INSERM research project in Corsica) and investments in firms directly linked to research and innovation benefiting specific *filières* (Aquitaine), and in some cases a single enterprise (Centre, Midi–Pyrénées). One initiative in Auvergne supports an international research partnership with China⁵⁰.

Two regions only have programmed or started initiatives related to the promotion of environment friendly products and production processes: Picardie and Rhône–Alpes (with a project assisting the implementation of REACH).

Globally, ERDF has contributed to the national policy of *Pôles de compétitivité* through the two policy areas “Knowledge transfer and support to innovation poles and clusters” and “Boosting applied research”, included to some extent at the end of the programming period 2000–2006. It is thus important to refer to the results of this national policy.

As mentioned above, a national evaluation of both the programme *Pôles de compétitivité* and of the 71 *Pôles* was carried out for the period 2005–2008. Its main conclusions are as follows. The involvement and partnership of key actors (research, business, regional development and innovation agencies) have started positive dynamics; the number of collaborative projects submitted for funding grew significantly in a first phase, and the involvement of SMEs in the projects is high. However, in 2008 there was a pause in the growth of the projects submitted, which requires efforts for generating new projects; there is a great diversity of projects, but few regard sustainable development; the involvement of training and private innovation funding organisations remains limited. The individual evaluation of *Pôles* shows that 39 of them have fully achieved the objectives of the programme, 19 have only achieved them partially (and should in

⁴⁷ With the exception of some initiatives regarding *Pôles de compétitivités* which may be under FOI codes 05 and 07.

⁴⁸ The imprecision comes mainly from the presentation given in the AIR of Provence–Alpes–Côte d’Azur and Rhône–Alpes.

⁴⁹ Id.

⁵⁰ Region Auvergne has been supporting for years scientific partnerships with Chinese universities and scientific organisations.

particular redefine their strategy and/or their governance model), while 13 have to be drastically re-organised. Among the 71 *Pôles*, the 16 most active each received more than 30 M€ for their collaborative R&D projects (2005–2007).

The **policy area “Innovation friendly environment”** comprises highly diverse programmed and/or started initiatives amounting to about 40 MEUR, well below the two other policy areas; nearly all Regions have programmed/started such initiatives.

The most frequent regard ICT (16 Regions), ranging from infrastructures (high speed and very high speed telecommunications) in Bretagne to e-citizen applications (Nord Pas-de-Calais), telemedicine applications (Basse-Normandie, Languedoc-Roussillon), research and experimentation on new uses (Aquitaine, Provence-Alpes-Côte d’Azur, Ile-de-France), and setting up of ‘digital public places’ (e.g.: Rhône-Alpes: *pôle numérique de la Drôme*).

Initiatives supporting advanced support services (almost as frequent), have been programmed or started in 15 Regions; half of them regard incubation services and support to start-ups⁵¹ (Bourgogne, Champagne-Ardenne, Ile-de-France, Pays de la Loire, Poitou-Charentes, Basse-Normandie, Limousin, Nord Pas-de-Calais). The others are about sensitisation of SMEs to innovation, meetings and seminars, and an economic observatory (Corsica).

A very specific type of initiatives in line with a national policy concern and SRIs, i.e. the rationalisation and streamlining of technology transfer organisations has been programmed or started in 6 Regions (e.g.: SYNERJINOV in Bourgogne).

5 Regions (Bourgogne, Corsica, Languedoc-Roussillon, Midi-Pyrénées, Basse-Normandie) have programmed or started projects related to innovation financing and financial engineering⁵², an issue often addressed in SRIs, such as loans on trust (*prêts d’honneur*) in Bourgogne, ‘financing platform’ in Corsica⁵³, creation of a fund of funds relying on a JEREMIE agreement in Languedoc-Roussillon.

Finally, only 4 Regions (Limousin, Nord Pas-de-Calais, Poitou-Charentes, Provence-Alpes-Côte d’Azur) have programmed or started projects regarding human potential in the field of research and innovation, two of them related to ICT, another one to a regional innovation network, and one to Ph.D grants.

⁵¹ A few initiatives are funded under FOI Code 03, while the majority is funded under FOI Code 05.

⁵² These initiatives are in general under FOI Code 09 (and sometimes under 07).

⁵³ A platform gathering all financing institutions.

4 CONCLUSION: MAIN CHALLENGES FACED BY COHESION POLICY PROGRAMMES

We need to stress first that the French innovation 'landscape' and framework have significantly changed in the last 10 years. The culture of innovation has made enormous progress among the State administrations, the expertise of which has been strengthened (in particular regarding ICT and financial engineering). A large majority of regional policy-makers now considers research and innovation a priority, even in regions which retain an important rural dimension.

The most recent key national policy initiatives concern the setting up of *Pôles de compétitivité* (2005–2006), the reform of universities tending towards a limited number of world-class universities (from 2007), and the enlargement of the benefit of the tax break *Crédit impôt recherche* (from 2008). The *Pôles de compétitivité* have played a key role in developing practices of collaborative research (university/research – industry) that the tax break has facilitated since its first reform in 2004. It is of course too early to assess the results of the reform of universities; however, the new autonomy from which they benefit and the mutualisation of some services, among which commercialisation of research, through *Pôles de recherche et d'enseignement supérieur* (PRES), is undoubtedly changing their management culture.

Compared to the ERDF in the 2000–2006 programming period⁵⁴, ear-marking and the end of zoning have completely modified the framework in which ERDF is operating. The level of ear-marking is over 75%.

ERDF significantly contributes to funding collaborative research and supporting *Pôles de compétitivité*. It also helps to maintain regional sectoral priorities (*filières*, poles, clusters), which may or may not coincide with region-based *Pôles de compétitivité*. It has thus an important sectoral dimension, which, compared to the 2000–2006 programming period, is much more innovation-oriented.

On the whole, ERDF co-funding of R&TD infrastructures and equipment remain relatively important in proportion of total ERDF funding – and probably easier to spend (while helping some regions to catch up). However, ear-marking has allowed Regions to dedicate a larger amount of ERDF funding to 'soft' measures (collaborative research, incubation services, innovation financing, networking of technology transfer organisations...), and the end of zoning facilitates the implementation of such measures. For the moment, universities do not yet mobilise ERDF funding other than in infrastructures and equipments, but the current reform is expected to give rise to a

⁵⁴ Strategic evaluation on innovation and the knowledge based economy in relation to the Structural and Cohesion Funds for the programming period 2007–2013, France Report, Study carried out by Lacave Allemand & Associés for DG REGIO, pp. 23s.

different approach⁵⁵. Territorial cooperation OPs reinforce the importance of ‘soft’ measures (collaborative research and networks, innovation poles and clusters).

At the same time, evaluation practices and studies⁵⁶ are acquiring ever increasing importance at national as well as regional level.

The MESR set up an evaluation agency, AERES⁵⁷, in 2007. MESR carried out evaluation studies regarding the measures in favour of start-ups and spin-offs⁵⁸ and the impact of *Crédit impôt recherche* (2006). In 2008 it published a document detailing the measures supporting R&D and innovation and their results⁵⁹. A 2009 Report on national higher education and research policies provides the latest available information⁶⁰. The Ministry of Economy and Finance publishes an Innovation Scoreboard⁶¹ annually. DATAR carried out an evaluation of the first results of *Pôles de compétitivité* (2008), which showed that a majority of them had complied with their main objectives.

DATAR has started three initiatives that can be considered examples of best practices. First, the ‘innovation dimension’ is ear-marked as a criterion of assessment and selection of all projects to be funded by CPER and OP. Second, a strategic study has been launched to assess to what extent ERDF OPs contribute to the NSRF objectives in each region⁶². Thirdly, DATAR is working with INSEE on a detailed identification of the beneficiaries of OPs⁶³.

Since 2005 a number of regions have carried out evaluation studies at regional level regarding in particular: the regional technology transfer instruments with the objective of rationalisation and streamlining (e.g.: Basse-Normandie); their policies regarding *filières*, poles and clusters (Basse-Normandie, Provence-Alpes-Côte d’Azur, Auvergne) and in some cases their specific policy supporting region-based *Pôles de compétitivité* (Bretagne); measures aimed at involving regional actors in EU programmes, especially FP6 and FP7 (Pays de la Loire). The most recent evaluations carried out at regional level focus on collaborative research projects, but their results are not yet available.

⁵⁵ The situation is different with respect to university research teams which are encouraged to apply for EU funding whatever the programmes.

⁵⁶ The LOLF (*Loi organique relative aux lois de finances*) of 1 August 2001 created a compulsory framework with respect to evaluation.

⁵⁷ *Agence d’évaluation de l’enseignement supérieur et de la recherche*.

⁵⁸ *Jeunes entreprises innovantes*.

⁵⁹ *Recherche et développement, Innovation et partenariats 2008*.

⁶⁰ *Rapport sur les politiques nationales de recherche et des formations supérieures, Annexe au projet de loi de finances pour 2010*, 2009.

⁶¹ *Tableau de bord de l’innovation*, 1 July 2009.

⁶² *Etude sur les conceptions de l’innovation et du développement durable, Synthèse, 30 juin 2009, DICT-ARF (pour le compte de l’Instance Nationale d’Evaluation)* (Edater, CM International, Planète Publique, CEMAGREF Grenoble).

⁶³ We have been given access to the corresponding database in August 2010, thanks to DATAR.

As already stated, so far the main output of ERDF contribution is constituted by the Regional Innovation Strategies (SRIs) which are globally considered as useful and fruitful⁶⁴. They have in general built up a consensus on the regional diagnostic with respect to innovation and helped to strengthen the perception of innovation as a key factor of regional development and probably led regional actors to believe that the change should be accelerated, in particular concerning the governance of the regional innovation system. They also stress the need to improve coherence between national and regional priorities.

We can only cite probable other outputs, mainly: strengthening of collaborative research and networks through the channel of *Pôles de compétitivité* and regional *filières*, poles and clusters; strengthening of the R&TD and technology transfer potential through funding of infrastructures and equipment.

The innovation policy followed and the focus of ERDF support can in general be considered appropriate to the context of the different regions. However, the Regional Innovation Strategies carried out in 2009 usefully underlined some shortcomings such as: insufficient support to non-technological innovation and to innovation in services; lack of coordination among innovation-support and technology transfer organisations; insufficient attention paid to the demand from businesses. These issues should be taken into consideration with the mid-term revision of the OPs.

Major challenges for the future regard:

- the effective implementation of SRIs and of their priorities, and in a first phase, possibly through the revision of the OPs – keeping in mind that the regional authorities will be responsible for this implementation, the State administration should limit its role to providing expertise when necessary;
- the coherence between national priorities (SNRI research priorities, thematic priorities of the ‘world-level’ 65 *Pôles de compétitivité* on which State intervention will increasingly focus, OSEO priorities in terms of types of enterprises supported) and regional priorities (regional *filières*, poles, clusters);
- the grouping, streamlining, networking, ‘mutualisation’ of services, among universities, technology transfer and innovation support organisations (as opposed to multiplication and dispersion) which is widely expected but has not really been achieved as yet;
- the capacity of innovation support policies to: a) enlarge the group of ‘innovative SMEs’ (which are currently the main beneficiaries, with large companies, of *Pôles de*

⁶⁴ Through the diagnostics they carried out, SRIs have often provided an evaluation of innovation support measures.

⁶⁵ The *Pôles de compétitivité* are distributed in 3 groups : world-level, potentially world-level, national.

compétitivité); b) focus on the growth phase of start-ups and spin-offs (and not only on the creation of new companies).

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ANNEX A – BACKGROUND DATA ON EU COHESION POLICY SUPPORT TO INNOVATION

The main problem encountered concerning FOI codes regard code 09 (Other measures to stimulate research and innovation and entrepreneurship) which is under the policy area “Boosting applied research and product development”). It appears that a majority of measures funded under code OP regard innovation financing and financial engineering which are considered part of the policy area “Innovation friendly environment” (see Annex B). There are some minor problems concerning code 07.

After consultation with the core team it was decided not to adjust the coverage in order to ensure comparability (no comments from other experts), and because the financial amounts concerned are very small.

Table 1 – Total ERDF resources allocated per programme (2007–2013)

FRANCE						
Programme	Total ERDF resources for innovation	Total ERDF	Innovation support as % of total ERDF	Main initiatives planned/to be undertaken	Examples taken in the main initiatives on the base of FOI codes ranked first in the Ops	
Euroimpact		39 154 226	0,0%			
Total Objective 0		39 154 226	0,0%			
Programme opérationnel FEDER Guyane	69 200 000	305 158 669	22,7%	R&TD infrastructures	Guyane carried out a Regional Scheme for Research and Higher Education: Developing the <i>Pôle Universitaire Guyanaïis</i> (scientific equipment; incubator linked to higher education and research, etc)	
Programme opérationnel FEDER Guadeloupe	80 131 441	542 701 534	14,8%	Advanced support services for firms and groups of firms	Creation of an investment fund and support to guaranteee fund	
Programme opérationnel FEDER Martinique	64 000 000	417 155 833	15,3%	Measures to stimulate research and innovation and entrepreneurship in SMEs	Network for following-up and supporting young businesses in order to improve their survival rate after 5 years of existence	
Programme opérationnel FEDER Réunion	100 255 071	1 014 291 774	9,9%	Advanced support services for firms and groups of firms	Preparing a pole of innovation, research and diffusion of scientific and technical culture at regional level (Indian Ocean) – Collective actions aimed at supporting partnerships	
Total Objective 1	313 586 512	2 279 307 810	13,8%	Advanced support services for firms and groups of firms – R&TD infrastructures and activities in research centres		
Programme opérationnel FEDER AQUITAINE	223 904 546	392 371 063	57,1%	R&TD infrastructures	Investments in research organisations (e.g. Instituts Carnot) and technical centres – Investments in technology transfer organisations, incubators and technopoles for young innovative enterprises	
Programme opérationnel FEDER CENTRE	110 810 000	196 185 531	56,5%	R&TD activities in research centres	Mutualisation of research instruments and resources to benefit businesses, in particular SMEs – Projects aimed at developing research structures common to public research and enterprises	

Programme opérationnel FEDER ALSACE	36 000 000	75 924 973	47,4%	Technology transfer and improvement of cooperation networks	Calls for proposals for the development of public-private partnerships – Support to strengthening of regional innovation and technology transfer centres (CRITT) through improved relationship with public research
Programme opérationnel FEDER AUVERGNE	99 000 459	206 790 459	47,9%	Advanced support services for firms and groups of firms	Support services to technology transfer, internationalisation, search for partners, use of ICT – Support to <i>filiales</i> and groupings of businesses
Programme opérationnel FEDER BASSE-NORMANDIE	92 500 000	181 354 410	51,0%	Assistance to R&TD, particularly in SMEs (including access to R&TD services in research centres)	Support to global R&D projects in businesses with a focus on SMEs and young innovative companies – Enlarge use of incubation services
Programme opérationnel FEDER BOURGOGNE	68 200 000	185 580 603	36,7%	Technology transfer and improvement of cooperation networks	Support to CRITT and technological platforms – Support to innovative project in SMEs and "engineering of technological partnership"
Programme opérationnel FEDER BRETAGNE	127 450 000	301 693 854	42,2%	R&TD infrastructures	Physical infrastructures (real estate and buildings) and scientific equipment (ICT, Sea Sciences, Health / Life Sciences / Agricultural research)
Programme opérationnel FEDER CHAMPAGNE- ARDENNE	87 000 000	185 580 603	46,9%	R&TD activities in research centres	Support to large research projects in: agro-resources and sustainable development of agriculture; advanced materials and innovative mechanical processes; ICT; health (cancer treatment)
Programme opérationnel FEDER CORSICA	94 150 000	150 465 376	62,6%	R&TD infrastructures	Investments in solar energy facilities (<i>Plate-forme de Vignola</i>) – Investment for a school of engineers
Programme opérationnel FEDER FRANCHE-COMTE	72 940 000	146 789 783	49,7%	R&TD infrastructures	Support regional research priorities (micro-techniques and nanotechnologies; automotive; plastyurgy; agrofood; wood) through investment in equipment; concentration of the technological part of the university on the technopole
Programme opérationnel FEDER HAUTE-NORMANDIE	111 221 261	219 311 261	50,7%	R&TD infrastructures	Investments in research infrastructures and equipment in relation to <i>Pôles de compétitivité</i>
Programme opérationnel FEDER ILE-DE-FRANCE	76 120 000	151 466 770	50,3%	Assistance to R&TD, particularly in SMEs (including access to R&TD services in research centres)	Collective innovative actions adapted to each <i>filiale</i> , including economic intelligence – Project engineering for SMEs aimed at favouring their participation in European projects – Support to commercialisation of research and incubation
Programme opérationnel FEDER LANGUEDOC- ROUSSILLON	114 000 000	270 420 027	42,2%	Technology transfer and improvement of cooperation networks	Support collaborative research projects between research and businesses, and between businesses

Programme opérationnel FEDER LIMOUSIN	51 000 000	127 259 135	40,1%	Technology transfer and improvement of cooperation networks	Support collaborative research between research centres and businesses within the framework of <i>Pôles de compétitivité</i> – Support technology transfer organisations (ceramics, advanced surface treatment, ...)
Programme opérationnel FEDER LORRAINE	175 145 000	329 406 415	53,2%	R&TD infrastructures	Development of research labs
Programme opérationnel FEDER PAYS DE LA LOIRE	155 005 666	302 234 812	51,3%	R&TD infrastructures	Investments in R&TD infrastructures, in general linked to clusters and <i>Pôles de compétitivité</i> (<i>Atlantic Biothérapies, Institut du Végétal, IUT Génie Civil,...</i>) – The objective is catching up in terms of research potential with other same size regions
Programme opérationnel FEDER NORD PAS-DE-CALAIS	317 754 854	700 953 570	45,3%	Investment in firms directly linked to research and innovation	Favour the location of 'strategic' knowledge-based companies and R&D centres
Programme opérationnel FEDER PICARDIE	113 500 000	201 493 631	56,3%	R&TD infrastructures	Strengthen R&D potential: scientific equipment – Support the creation or extension of public research centres and of technology transfer centres – Favour the location of private research centres
Programme opérationnel FEDER POITOU-CHARENTES	87 000 000	201 493 631	43,2%	Technology transfer and improvement of cooperation networks	Support cooperation between businesses, research centres and technology transfer organisations – Support <i>Pôles de compétitivité</i> and other regional poles of excellence
Programme opérationnel FEDER PROVENCE ALPES COTE D'AZUR	166 000 000	302 234 812	54,9%	R&TD infrastructures	Fund the investment in research labs in order to attract industry partners, address their needs for expertise and experimentation, strengthen existing partnerships and develop new ones
Programme opérationnel FEDER MIDI-PYRENEES	197 213 219	430 023 629	45,9%	Technology transfer and improvement of cooperation networks	Strengthen the AVAMIP (Agency for commercialisation of research), in particular concerning IPR – Support the incubator for innovative enterprises – Support Foundations of Scientific Cooperation – Support the emergence of specialised technological clusters (in frontier fields) grouping businesses and research
Programme opérationnel FEDER RHONE-ALPES	161 500 000	334 049 596	48,3%	Advanced support services for firms and groups of firms	Support SMEs in their projects of innovation and their participation to EU FP – Structur a network of consultants specialised in eco-development managed by ARDI, the regional development and innovation agency

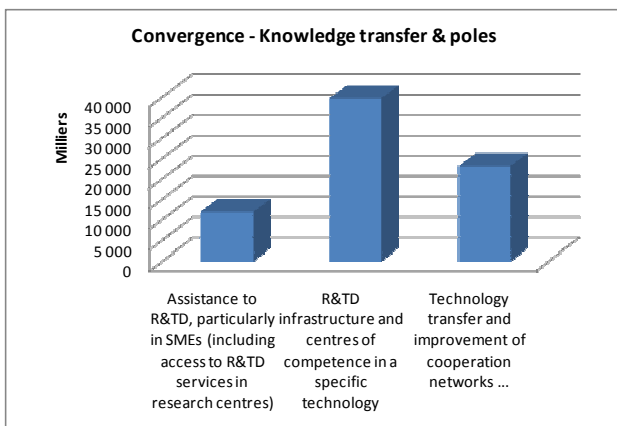
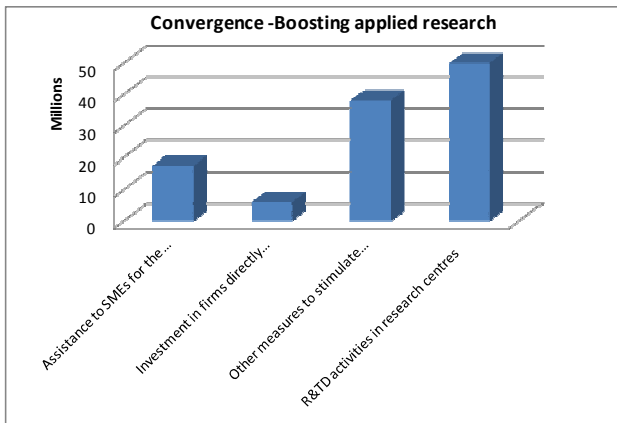
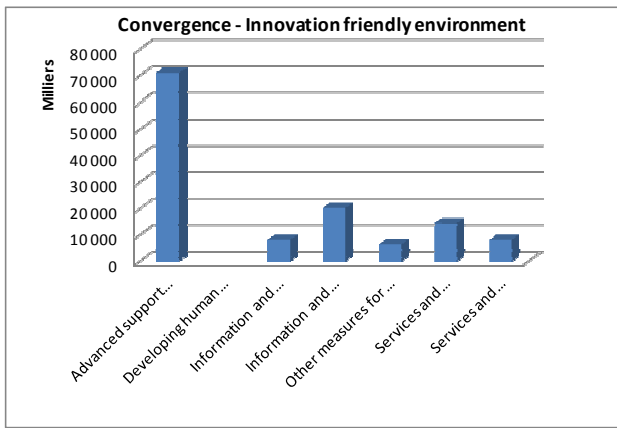
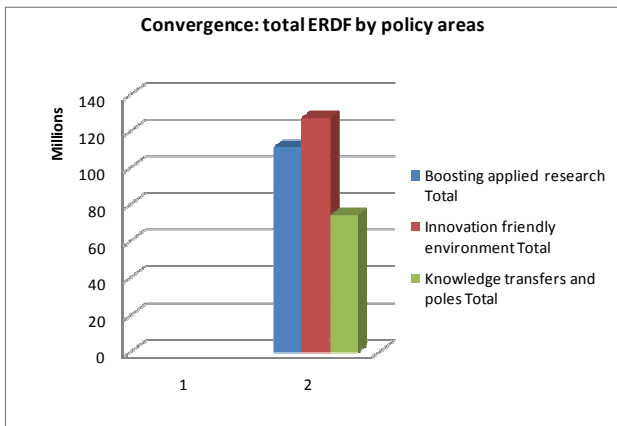
Programme opérationnel plurirégional FEDER ALPES	11 850 000	34 936 532	33,9%	Technology transfer and improvement of cooperation networks
Programme opérationnel plurirégional FEDER LOIRE	21 863 750	33 809 546	64,7%	Advanced support services for firms and groups of firms
Programme opérationnel plurirégional FEDER MASSIF CENTRAL	18 000 000	40 571 457	44,4%	Advanced support services for firms and groups of firms
Programme opérationnel plurirégional FEDER RHONE	20 331 923	33 809 546	60,1%	ICT (TEN-ICT)
Total Objective 2	2 809 460 678	5 736 211 025	49,0%	Technology transfer and improvement of cooperation networks – R&TD infrastructures
Overall total	3 123 047 190	8 054 673 061	38,8%	Technology transfer and improvement of cooperation networks – R&TD infrastructures – Advanced support services for firms and groups of firms

Table 2 – ERDF contribution to innovation by policy area (2007–2013)

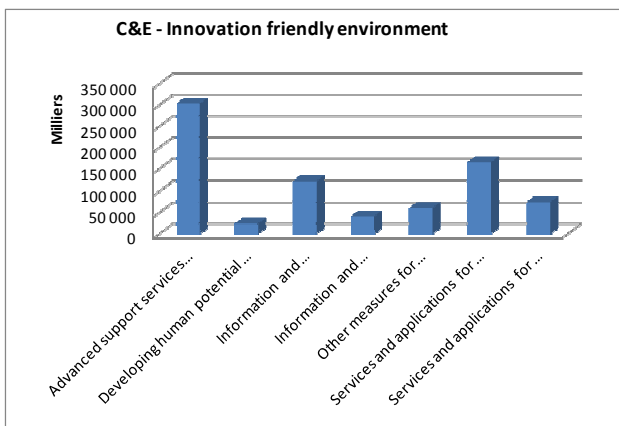
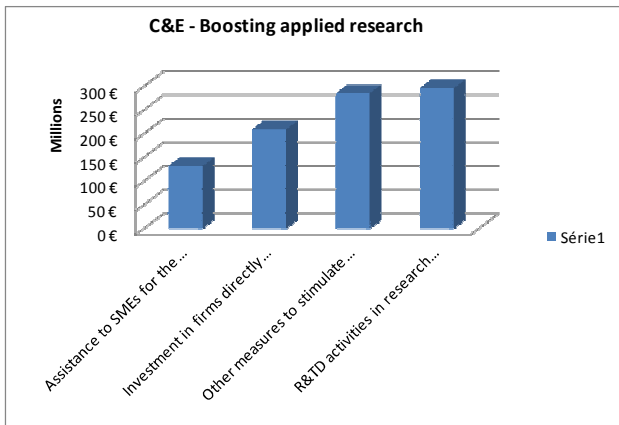
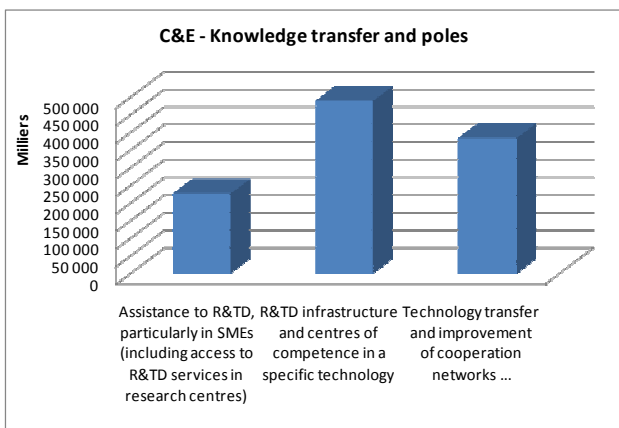
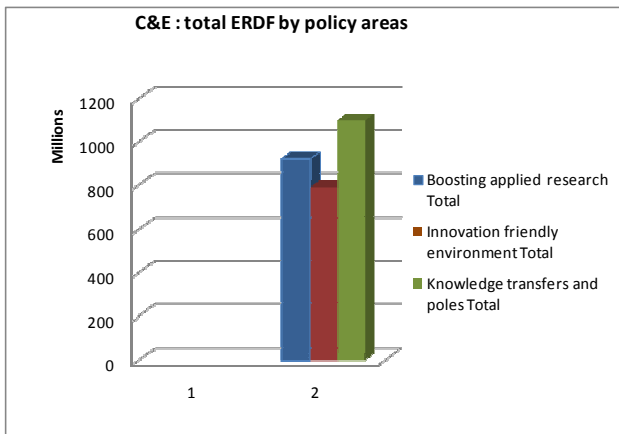
FRANCE				
Policy Area	Categorisation of Expenditure (FOI codes)	Total ERDF	%	
			National share	Regional share
Objective 1				
Assistance to SMEs for the promotion of environmentally-friendly products and production processes (...)	06	7 500 000	0,0%	100,0%
Investment in firms directly linked to research and innovation (...)	07	6 000 000	0,0%	100,0%
Other measures to stimulate research and innovation and entrepreneurship in SMEs	09	38 100 000	0,0%	100,0%
R&TD activities in research centres	01	50 000 000	0,0%	100,0%
Boosting applied research Total		111 600 000	0,0%	100,0%
Advanced support services for firms and groups of firms	05	70 936 512	0,0%	100,0%
Developing human potential in the field of research and innovation, in particular through post-graduate studies ...	74			
Information and communication technologies (...)	11	8 000 000	0,0%	100,0%
Information and communication technologies (TEN-ICT)	12	20 100 000	0,0%	100,0%
Other measures for improving access to and efficient use of ICT by SMEs	15	6 300 000	0,0%	100,0%
Services and applications for citizens (e-health, e-government, e-learning, e-inclusion, etc.)	13	14 250 000	0,0%	100,0%
Services and applications for SMEs (e-commerce, education and training, networking, etc.)	14	8 000 000	0,0%	100,0%
Innovation friendly environment Total		127 586 512	0,0%	100,0%
Assistance to R&TD, particularly in SMEs (including access to R&TD services in research centres)	04	11800 000	0,0%	100,0%
R&TD infrastructure and centres of competence in a specific technology	02	39 600 000	0,0%	100,0%
Technology transfer and improvement of cooperation networks ...	03	23 000 000	0,0%	100,0%
Knowledge transfers and poles Total		74 400 000	0,0%	100,0%
Total Objective 1		313 586 512	0,0%	100,0%
Objective 2				
Assistance to SMEs for the promotion of environmentally-friendly products and production processes (...)	06	13152 300	0,1%	99,9%
Investment in firms directly linked to research and innovation (...)	07	208 800 560	0,0%	100,0%
Other measures to stimulate research and innovation and entrepreneurship in SMEs	09	285 022 741	0,8%	99,2%
R&TD activities in research centres	01	295 838 967	2,3%	97,7%
Boosting applied research Total		921 014 568	10%	99,0%
Advanced support services for firms and groups of firms	05	302 851 542	5,7%	94,3%
Developing human potential in the field of research and innovation, in particular through post-graduate studies ...	74	23 996 466	4,2%	95,8%
Information and communication technologies (...)	11	121473 132	2,4%	97,6%
Information and communication technologies (TEN-ICT)	12	41086 777	36,0%	64,0%
Other measures for improving access to and efficient use of ICT by SMEs	15	60 412 762	0,2%	99,8%
Services and applications for citizens (e-health, e-government, e-learning, e-inclusion, etc.)	13	165 589 382	4,5%	95,5%
Services and applications for SMEs (e-commerce, education and training, networking, etc.)	14	73 877 762	16%	98,4%
Innovation friendly environment Total		789 287 823	5,7%	94,3%
Assistance to R&TD, particularly in SMEs (including access to R&TD services in research centres)	04	226 666 223	0,4%	99,6%
R&TD infrastructure and centres of competence in a specific technology	02	489 027 466	0,2%	99,8%
Technology transfer and improvement of cooperation networks ...	03	383 464 598	4,3%	95,7%
Knowledge transfers and poles Total		1 099 158 287	1,7%	98,3%
Total Objective 2		2 809 460 678	2,6%	97,4%

Source: core team on EC data.

Convergence Objective



Competitiveness & Employment Objective



ANNEX B – CLASSIFICATION OF INNOVATION POLICY AREAS, INSTRUMENTS AND BENEFICIARIES

Policy area	Short description
Innovation friendly environment	<p>This category covers actions which seek to improve the overall environment in which enterprises innovate, notably three sub groups:</p> <ul style="list-style-type: none"> • innovation financing (in terms of establishing financial engineering schemes, etc.); • regulatory improvements and innovative approaches to public services and procurement (this category could capture certain e-government investments related to the provision of services to enterprises); • Developing human capital for the knowledge economy. This category will be limited to projects in higher education aimed at developing industry orientated courses and post-graduate courses; training of researchers in enterprises or research centres. <p>The category also covers initiatives geared towards improving governance capacities for innovation and knowledge policies (e.g. specific technical assistance funding, support for regional foresight)</p>
Knowledge transfer and support to innovation poles and clusters	<p>Direct or indirect support for knowledge and technology transfer:</p> <ul style="list-style-type: none"> • direct support: aid scheme for utilising technology-related services or for implementing technology transfer projects, mainly environmentally friendly technologies and ITC; • indirect support: delivered through funding of infrastructure and services of technology parks, innovation centres, university liaison and transfer offices, etc. <p>Direct or indirect support for creation of poles (involving public and non-profit organisations as well as enterprises) and clusters of companies</p> <ul style="list-style-type: none"> • direct support: funding for enterprise level cluster activities, etc. • indirect support through funding for regrouping R&D infrastructure in poles, infrastructure for clusters, etc.
Boosting applied research and product development	<p>Funding of “Pre-competitive development” and “Industrial research” projects and related infrastructure. Policy instruments include:</p> <ul style="list-style-type: none"> • aid schemes for single beneficiaries or groups of beneficiaries (including IPR protection and exploitation); • research infrastructures for non-profit/public organisations and higher education sector directly related to universities. <p>Any direct or indirect support for the creation of innovative enterprises (spin-offs)</p>

	and start-ups)
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Instruments	Short description
Infrastructures and facilities	Building and equipment for laboratories or facilities for university or research centres, Telecommunication infrastructures, Building and equipment for incubators and parks for innovative enterprises
Aid schemes	Grants and loans for RTDI projects Innovative finance (venture capital, equity finance, special bonds, etc.) for innovative enterprises
Education and training	Graduate and post-graduate University courses Training of researchers

Beneficiaries	Short description
Public sectors	Universities National research institutions and other national and local public bodies (innovation agencies, BIC, Chambers of Commerce, etc..) Public companies
Private sectors	Enterprises Private research centres
Others	NGOs
Networks	cooperation between research, universities and businesses cooperation between businesses (clusters of SMEs) other forms of cooperation among different actors

ANNEX C – CATEGORISATION OF EXPENDITURE TO BE USED FOR CALCULATING EU COHESION POLICY RESOURCES DEVOTED TO INNOVATION

FOI Code	Priority Theme
	Research and technological development (RTD), innovation and entrepreneurship
01	R&TD activities in research centres
02	R&TD infrastructure (including physical plant, instrumentation and high-speed computer networks)

	linking research centres) and centres of competence in a specific technology
03	Technology transfer and improvement of cooperation networks between small businesses (SMEs), between these and other businesses and universities, postsecondary education establishments of all kinds, regional authorities, research centres and scientific and technological poles (scientific and technological parks, technopoles, etc.)
04	Assistance to R&TD, particularly in SMEs (including access to R&TD services in research centres)
05	Advanced support services for firms and groups of firms
06	Assistance to SMEs for the promotion of environmentally-friendly products and production processes (introduction of effective environment managing system, adoption and use of pollution prevention technologies, integration of clean technologies into firm production)
07	Investment in firms directly linked to research and innovation (innovative technologies, establishment of new firms by universities, existing R&TD centres and firms, etc.)
09	Other measures to stimulate research and innovation and entrepreneurship in SMEs
	Information society
11	Information and communication technologies (access, security, interoperability, risk-prevention, research, innovation, e-content, etc.)
12	Information and communication technologies (TEN-ICT)
13	Services and applications for the citizen (e-health, e-government, e-learning, e-inclusion, etc.)
14	Services and applications for SMEs (e-commerce, education and training, networking, etc.)
15	Other measures for improving access to and efficient use of ICT by SMEs
	Human capital
74	Developing human potential in the field of research and innovation, in particular through post-graduate studies and training of researchers, and networking activities between universities, research centres and businesses

ANNEX D – OTHER TABLES

Table 1 – Innovation support as % of total ERDF (ranking *per OP*)

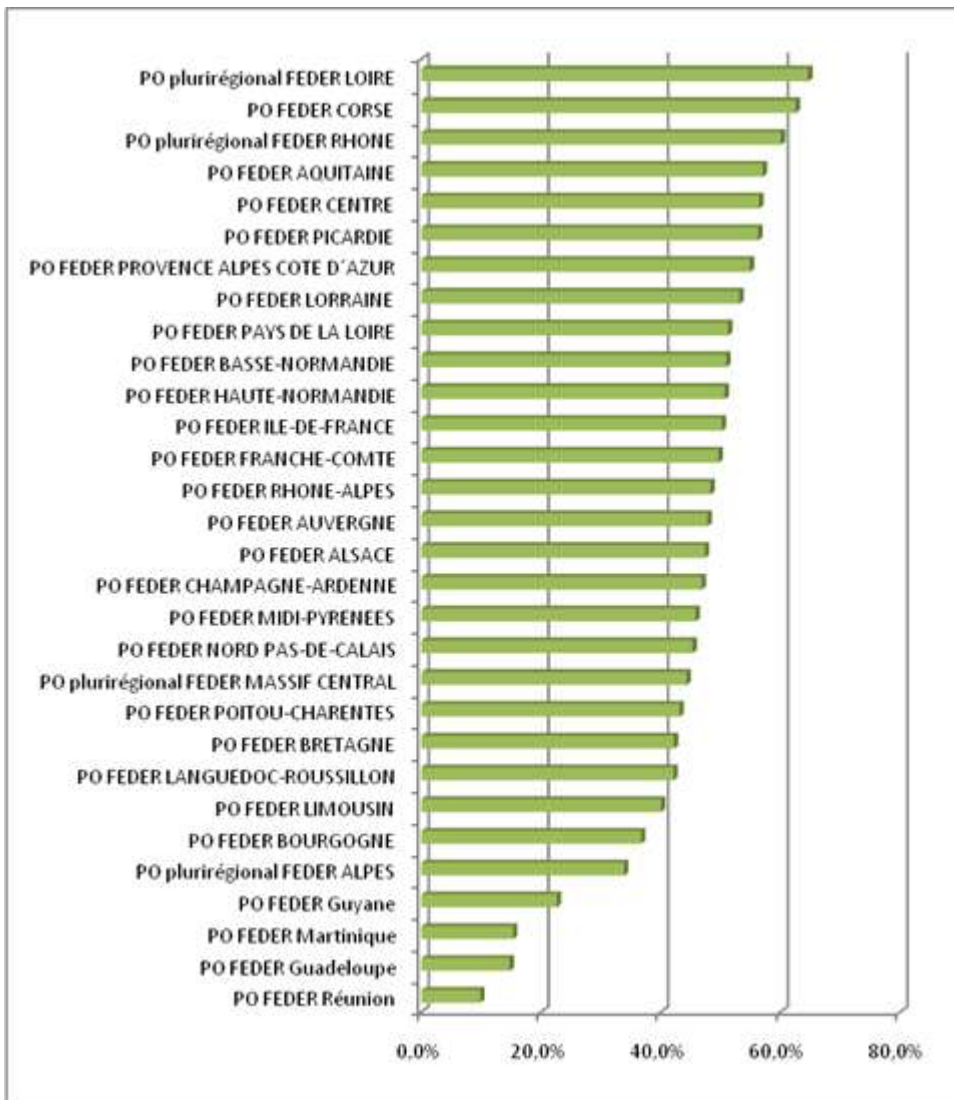


Table 2 – Share of innovation measures in ERDF funds programmed as of 31.12.2008

