



**Pilot Action Plan**  
**Implementing region: *Lorraine***

***New regional policy objectives for S&T intermediation system***  
***“Bringing S&T intermediaries towards best efforts obligation”***

**Executive Summary**

<b>Main objective</b>	Improve and simplify the regional intermediation system and render it more accessible and useful to SMEs
<b>Main activities</b>	<ul style="list-style-type: none"> <li>• Re-define actions of TIs according to the segmentation of SMEs’ needs;</li> <li>• Re-define financial support of TIs;</li> <li>• Integrate intermediation system into the global regional innovation system;</li> <li>• Measure/evaluate outputs and impacts of this measure (first step of the regional innovation dashboard)</li> </ul>
<b>Expected results and outcomes</b>	<ul style="list-style-type: none"> <li>• Enhance competitiveness of enterprises within innovation development (creation of value-added and jobs);</li> <li>• Increase collaborative research by improving processes of technological transfer;</li> <li>• Initiate new research projects within the two poles of competitiveness;</li> <li>• Simplify functioning and financing of technological intermediation system;</li> <li>• Improve the clarity and efficiency of the regional intermediation system.</li> </ul>
<b>Direct and indirect beneficiaries</b>	<p>Direct beneficiaries : technological intermediaries</p> <p>Indirect beneficiaries : regional enterprises, especially SMEs</p>
<b>Implementing organization</b>	Regional Council of Lorraine
<b>Partner(s)</b>	State and national innovation agency (OSEO); the actors implied in innovation development at regional level
<b>Duration</b>	3 years (2008 -2010)
<b>Estimated budget</b>	2 000 000€ per year

# 1. Problem identification

## 1.1. Introduction

Current state of S&T intermediation system<sup>1</sup>:

1. Different types of Technological intermediaries (TIs): TIs were created by the French Ministry of Research in partnership with regional authorities at the beginning of the eighties. They aimed to enhance relationship between research laboratories and SMEs in order to increase their technological level. However, the impact of TIs action was not straightforward since their activity focused on regional research offer (competencies of public research laboratories and higher education institutions in Lorraine) and not on the needs of SMEs.
2. Targets of TIs: On the summary report on the regional intermediation system, we can see that a large part of customers of sectoral intermediaries (CRITT; CRT) is recurrent clients. Even if this indicator shows that the quality of services is high, it also means that target is rather narrow. However it is necessary to stimulate innovation development towards a large number of enterprises (SME). In Lorraine, only a small fraction of SMEs is considered as research-intensive SMEs. But on the panel of low-technological SMEs (the majority of SMEs in Lorraine), a share of these SMEs can potentially initiate an innovation process.
3. Operation and financing of the S&T intermediation system applied at the “State-Region Planning Contract 2000-2006”: The first objective mentioned on this Contract was to develop actions aiming at matching offer and demand of technology and the second one was to develop the function of “interface” or “intermediary”. The majority of actions supporting innovation of SMEs was based on IT services offer, which was itself based on public research offer. These actions took the format of “collective actions<sup>2</sup>” provided and carried out individually by each TI. In the framework of this “State-Region Planning Contract 2000-2006”, the Regional Council of Lorraine (with OSEO and the State) focused on internal operation of TI with an approach of “obligation of means” without a clear identification of SMEs’ needs (due to a lack of clear detection of SMEs’ needs). At the end of this period 2000-2006, the main conclusion is our difficulty to evaluate the impacts of public innovation support

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<sup>1</sup> These comments result from the SUPER-SME survey implemented during the first stage of the project towards 17 S&T intermediaries (CRITT Bois ; CRITT METALL 2T ; PPE ; CRITT TJFU ; APOLLOR ; NANCIE ; CIRTES ; CLTS ; Agria-lorraine ; CRITT TTI ; university interface units from University of Metz and from INPL – National polytechnic school of Lorraine ; BICs - Promotech and Synergie ; University Incubator ; Regional Chamber of Commerce ; INPI – National Institute for industrial property –regional representative) and 12 research-intensive SMEs.

<sup>2</sup> Collective actions are defined in this part of this report: Collection actions decided by the Regional Council of Lorraine (often in dialogue with the State) finance actions which contribute to the reinforcement of regional industrial business/regional economic development/innovation development. Collective actions target projects carried by one TI.

actions implemented to the “State-Region Planning Contract 2000-2006” on regional economy and especially on SMEs.

4. During the first stage of the SUPER-SME project (WP2: survey of technological intermediaries’ services), we included also on the SUPER-SME survey other actors, called generic intermediaries such as the two university interface units (INPL and University of Metz); BICs and university incubator. These actors play a role in the field of “valorization of research”<sup>3</sup>. Several weaknesses were identified :
  - Fragmentation of “the regional service of valorization” due to the four universities located in Lorraine with their own university interface units. The CERES project (project of mutualization of the four university interface units) does not give convincing results today.
  - Valorization of research can be also carried out by the upstream definition of potential commercial value of a research, being able to protect its IP. However universities encounter difficulties in identifying and quantifying industrial and commercial potential of public research. University is an excellent place of knowledge production but not of know-how production.

## 1.2. Pilot project focus

In the framework of its innovation policy, the Regional Council of Lorraine implements two types of support actions:

- direct actions toward enterprises projects (individual or collective projects);
- indirect actions in order to create economic environment supporting and enhancing innovation, creation of innovative enterprises (such as research-intensive SMEs) and creation of new activities by the valorization of public research.

These two types of actions must contribute to place durably Lorraine region in knowledge society and to reinforce innovation capacities of regional enterprises so that they can create high value-added and highly qualified and sustainable jobs.

We focus our pilot project on indirect actions supporting innovation. To increase innovation capacities of enterprises, the Regional Council of Lorraine supports and finances technological transfer system, which is mainly formed by TIs. Pilot action project is more focused on “sectoral and technological intermediaries” (CRITT, CRT and PFT), key actors of technological transfer.

During the previous planned period 2000-2006 (State-Region Planning Contract 2000-2006), which was set, should it be underlined, before the elaboration of the European Lisbon strategy, the TIs were on the centre of our RIS (Regional innovation system), such as a “gear-train” to reconcile technological offer and demand. The objective was to strengthen and professionalize these organisms by reinforcing their resources (human, financial,

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<sup>3</sup> Valorisation of research is defined in this report, as partnership and contractual relationship between one public research unit/laboratory and one industrialist on a specific topic often proposed by the industrialist and seldom by the scientist.

competencies) so that they can be able to provide quality and performing services to a large number of enterprises (technological diffusion).

Lorraine has numerous technological intermediaries (CRITT, CRT – Technological resources centers; PFT – Technological platforms). This diversity is a wealth for the Region, but the cost is also high. At the time of public action assessment (due to the implementation of the new “State-Region Project Contract 2007-2013”), the results of their actions are complex to evaluate and the coordination of their actions (RDT Network) is not obvious.

These TIs cover several main regional sectors (advanced materials; mechanical engineering; wood industry, agro-food industry, textile industry, water treatment and environment, health technologies). However their results are very different in terms of quality and range of services provided by each TI, but also in terms of competencies to support collaborative research (technological transfer application).

The new State-Region Project Planning 2007-2013 has introduced a new concept based on project with “best efforts obligation”. In the framework of this new contract, the Regional Council has re-defined the actions plan of these TIs. In other words, it has to re-define more sustainable and performing types of intervention of TIs which prove and enhance competitiveness of enterprises.

## **2. Pilot action specification**

### 2.1. Objective and purpose

The objective of this pilot action plan is to suggest new tools in the framework of this new regional policy.

- General objectives:
  - Enhance competitiveness of enterprises through innovation development (creation of value-added and jobs);
  - Lead/support enterprises to innovate;
  - Increase collaborative research by improving processes of technological transfer;
  - Initiate research projects within the poles of competitiveness (MIPI and Fiber).
  
- Specific objectives:
  - Simplify functioning and financing of technological intermediaries (CRITT; CRT and PFT);
  - Improve the clarity and efficiency of our regional intermediation system towards beneficiaries (especially SMEs);
  - Enhance governance of TIs at regional level with clear annual objectives and definition of indicators in order to follow and control outputs/results/impacts on TIs activities (indicators should be included on regional innovation dashboard).

### 2.2. Approach: tools and methods

In order to implement these new objectives, the Regional Council of Lorraine should change the ways of intervention with a new approach of “best efforts obligation”: enterprises must be able to consolidate their activities and their jobs/employments thanks to their innovation projects.

In the previous programme, the Regional Council of Lorraine financed regional TIs via “collective actions” provided and carried out individually by each TI. This type of financing took the form of investment and functioning grants, which explains our difficulties to evaluate impacts of this measure on SMEs.

To solve this problem, we suggest re-defining actions of TIs by focusing on two main missions:

- Mission of public interest : heighten awareness of innovation to as much enterprises as possible (from low-tech SMEs to high-tech SMEs);
- Mission in competitive field: to incite TIs to work as “service providers” by developing competitive services.

To adapt our tools, a new segmentation of the activities of TIs in line with the identified enterprises’ segmentation can be applied to:

- a. Services individually delivered (and invoiced) to enterprises within or outside Lorraine area;
- b. Participation to collective projects within the two poles of competitiveness or clusters;
- c. “Collective actions” dedicated to initiate new projects within the poles of competitiveness or clusters;
- d. Mission of public interest in order to first allow awareness of innovation benefits to low-technological SMEs (this mission is currently implementing by the RDT network) and secondly to detect SMEs and assist them to define their own innovation projects, which could be financed either by regional funds for innovation or within the national financing framework of the poles of competitiveness.

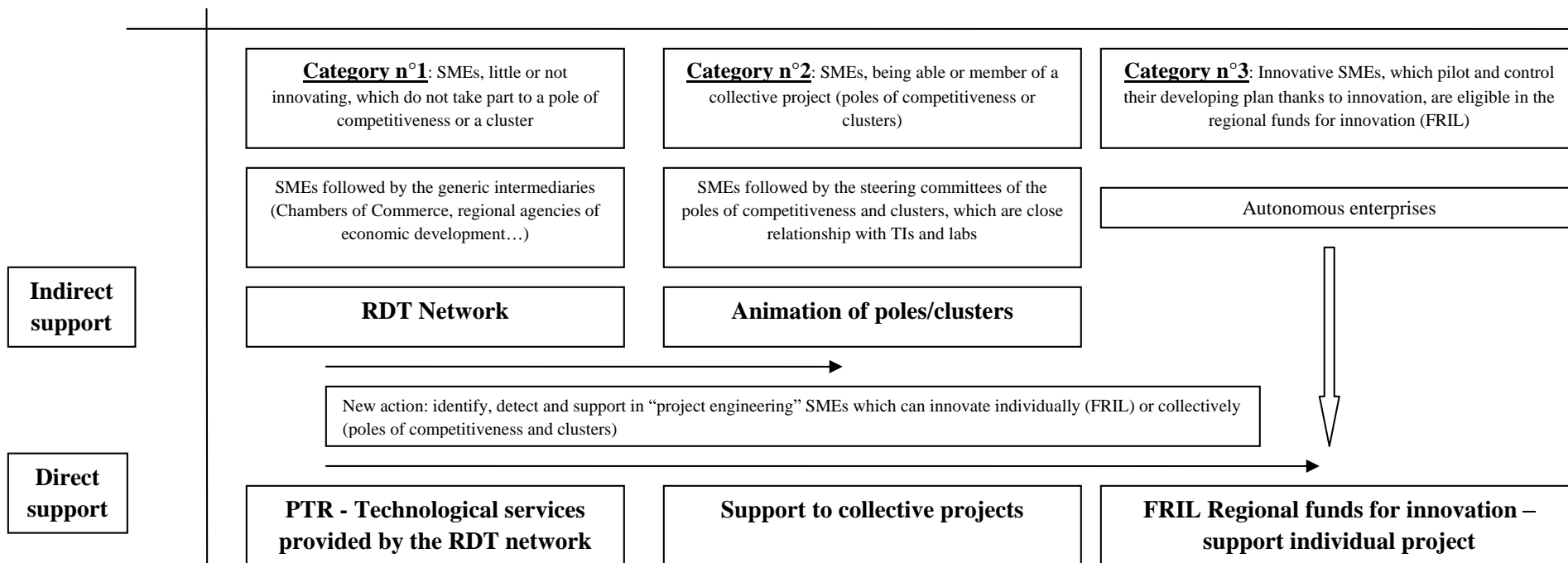
The financing of the TIs should be defined according to this segmentation of activities:

- a. A grant of 20% of the last annual turnover (services invoiced to regional SMEs) of each TI. This grant would be intended to support their internal R&D and their level of technology;
- b. A direct support in complement of financing obtained from the State (for the poles of competitiveness measures);
- c. A support of maximum 80% for collective actions decided by the Regional Council of Lorraine in cooperation with the State and in coordination with the executive committees of the two poles of competitiveness;
- d. A support to a total value of 100% of committed expenditures within the RDT network (in parity with the State or by a call for tenders). In practice, this type of grant finances a number of worked days per enterprises with a best efforts obligation.

The following exhibit (exhibit n°1) summarizes and illustrates the overall logic and approach of the Lorraine innovation system.

In reference to the concept of “subcontractor” (TIs should evolve and become the subcontractors of SMEs for technological transfer and contractual research), the LEITAT in Catalonia region is a good example illustrating this concept. Founded by local textile industries, LEITAT technological centre is a private technological centre financed mainly by companies. Its purpose is to transfer technologies to enterprises, to develop new products and materials for enterprises especially on textile and clothing sector.

**Exhibit n°1: Regional innovation system: reinforce the capacity of innovation of SMEs**



### 2.3. Target groups and beneficiaries

The direct beneficiaries of this regional policy plan are the regional technological intermediaries. Their customers, i.e. enterprises, are the indirect and final beneficiaries.

Analysis<sup>4</sup> indicated that the main weakness of the regional intermediation system is its capacity to detect and inventory specific needs of SMEs. SMEs innovate in many fields, but they have some difficulties to precise clearly their technological or non-technological needs. The first mission of TIs (to support in project engineering SMEs which can innovate) should contribute to extend the target of TIs.

Moreover the second weakness of regional intermediation system is the process of functioning of TIs. Their services' offer is based on regional research offer and not on the needs of SMEs. The second mission in competitive field (to incite TIs to work as "service providers" by developing competitive services) should contribute to make services more competitive and nearer to the needs of SMEs.

The main risks can be an embrittlement of certain TIs, more especially organisms which are more dependent of public financing.

### 2.4. Implementing body and partnership

This new policy in the field of intermediation system will be piloted by the Regional Council of Lorraine. All TIs, generic and sectoral, will be involved in the implementation of this action plan.

For the implementation of the action "c" (collective actions dedicated to initiate new projects within the two poles of competitiveness and clusters) and "d" (mission of public interest of the RDT network), the Regional Council of Lorraine will define action in cooperation and collaboration with the State (especially with the DRIRE – Regional representative of the French Ministry of Industry).

Moreover, others institutions take part to the governance of these TIs, such as business people, or local elected officials or regional Trade chambers. Consequently it is important to start a communication campaign in order to explain the new objectives and their types of intervention.

### 2.5. Monitoring and evaluation system

The regional intermediation system supports the regional innovation system, as introduced to the exhibit n°1 "the regional innovation system". Some output indicators will be established thanks to the monitoring of the new financing of TIs (such as global annual turnovers of TIs or number of collective projects financed by the Regional Council of Lorraine).

The following table (Exhibit n°2) suggests some indicators at three levels: outputs, results, impacts. This table is based on the three SMEs target groups introduced on the regional innovation system (Exhibit n°1). This table is the first step of a kind of "regional innovation dashboard". Additional studies should be realized to define clearly the links between output/results indicators and impact indicators and also to define goals of each indicator at middle or long terms.

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<sup>4</sup> SUPER-SME survey

Category n°1 - RDT		Category n°2 -poles/clusters		Category n°3 - FRIL	
Indicators	Source	Indicators	Source	Indicators	Source
<b>OUTPUTS</b>					
Number of enterprises financially supported by a PTR	OSEO/3iLorraine	Total turnover of the TIs	CRL	Total Turnover of the TIs	CRL
Type of services financed by the PTR	OSEO/3iLorraine	Number of collective projects financed by the Regional Council within the poles/clusters (budget; number of firms, number of TIs involved on collective projects)	CRL	Number of enterprises financially supported within the FRIL	CRL/OSEO
Number of visited enterprises	OSEO/3iLorraine	in which Fibers pole	CRL	in which recruitment for innovation (Phd; engineers)	CRL/OSEO
		in which MIPI pole	CRL	in which "innovation contest"	CRL/OSEO
		Average of subsidy per project (MIPI and Fibers)	CRL	in which "industrial research projects"	CRL/OSEO
				in which "feasibility projects"	CRL/OSEO
				in which "development projects"	CRL/OSEO
				Average of subsidy or refundable loan per enterprise and per type of subsidy	CRL/OSEO
				Number of new enterprises financially supported by the FRIL compared to the year n-1	CRL/OSEO
				Number of enterprises financially supported by the FRIL and having been financially supported by the poles of competitiveness	CRL/OSEO
<b>RESULTS</b>					
		Classification of the Lorraine poles at national level	French Ministry of Research	Overall spending on business innovation – R&D appropriation by the Regional Council of Lorraine	CRL
				Creation of new jobs linked to the FRIL financing	CRL
<b>IMPACTS</b>					
<b>Indicators</b>			<b>Source</b>		
Regional R&D spending as a percentage of GDP			French Ministry of Research		
R&D spending by private sector enterprises as a percentage of GDP			French Ministry of Research		
R&D spending by public sector as a percentage of GDP			French Ministry of Research		
Number of patents registered at the European Patent office			INPI Lorraine		
Number of new jobs created			INSEE Lorraine		
Number of spin-offs/start-ups created			INSEE Lorraine		

### 3. Management and human resources

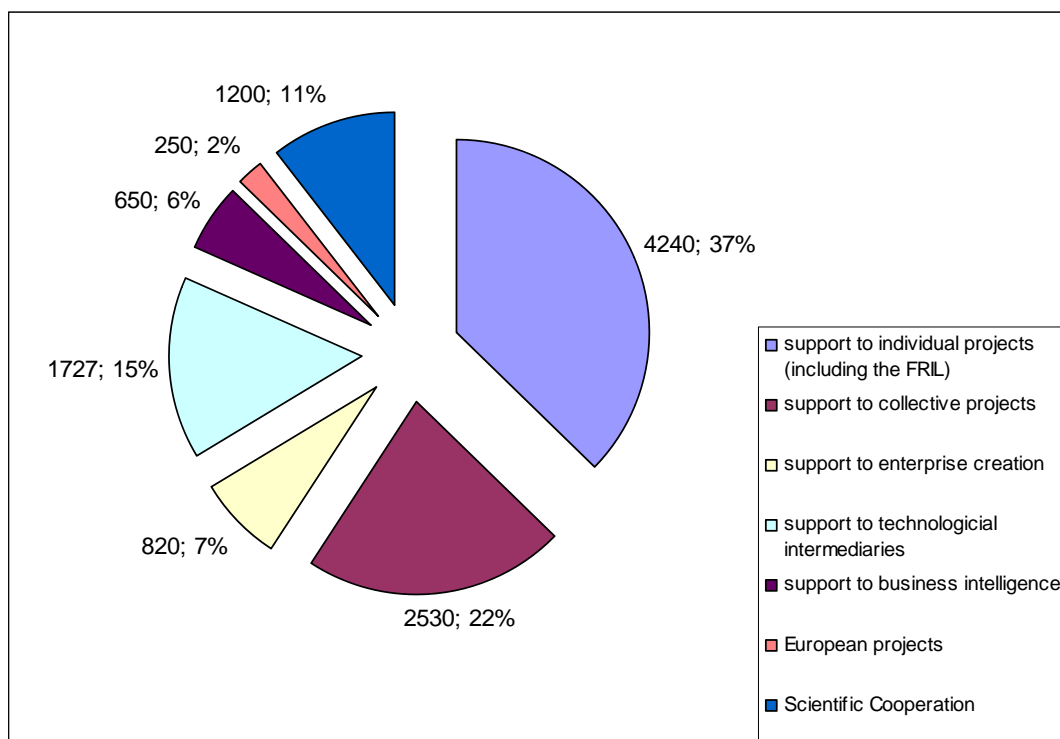
The Regional Council of Lorraine will be in charge of the implementation of the new action plan. The Innovation and technological transfer team is currently formed by one director, one project officer (engineer) specialized on advanced materials and mechanical engineering, one project officer on health sector and two European project officers. Three full time employers are needed to implement this measure.

At networking level three jobs are especially necessary for the management of the regional intermediation system: the coordinator of the RDT network and the two directors of the poles of competitiveness.

### 4. Budget and sustainability

The global budget for 2007 of the innovation and technological transfer department is 11 417 000€. The following exhibit illustrates the distribution of the total budget of Innovation and technological transfer Department.

This graphic shows that 15% of the global budget is dedicated to the regional intermediation system. Direct support (support to individual and collective projects) accounts for 59% of the total budget of the department. Indirect support gathers all measures supporting creation of enterprise, technological transfer, business intelligence, scientific cooperation and European projects. With constant budget the share of direct support increases compared to the last year.



*Exhibit n°3: Distribution of the budget of the innovation and technological transfer department (in kilo euros)*

## **5. Dissemination**

For the dissemination activities, the following tools could be used:

- The Regional Council of Lorraine was committed to set up and to finance a portal to promote the regional system and regional competencies at three levels: higher education institutes; research institutions and innovation actors. This portal will be launched in April 2008. Its aim is to make more attractive the regional higher education institution, research and innovation systems. This tool will also promote the regional intermediation system by making more accessible and the competencies and missions of TIs.
- At political level, communication actions will have to be undertaken at the beginning of the next year towards other local elected officials, entrepreneurs and chambers of Commerce (introductions of the President and Vices-President of the Regional Council of Lorraine to regional workshops and conferences, such as the final conference of the SUPER-SME project; press articles);
- Annual monitoring report on regional innovation system which reflects measurable outputs (share of R&D in the enterprise' turnovers; turnovers of TIs; R&D investment; jobs created, R&D appropriation by the Regional Council of Lorraine).

## **6. Sustainability and follow on**

The objective of this measure is to simplify the implementation of the regional innovation policy. This measure will be applied this year (at each renewal agreement between TI and the Regional Council of Lorraine). This measure will be applied from 2007 to 2010 with a final objective of budgetary optimisation and efficiency approach.