

**Regional Foresights and RIS Processes
The study of two French regions:
Lorraine and Auvergne**

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The views expressed in this paper are personal and may not reflect those of the Regional Councils of Lorraine or Auvergne.

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EXECUTIVE SUMMARY

This paper describes the RIS exercises in Lorraine and Auvergne.

These exercises were supported by both regional councils but when Lorraine directly took charge the management of the project, Auvergne asked one of its leading technological intermediaries to implement it on its behalf.

The effects of these decisions not only influenced the consensus building during the process itself but has important consequences in the follow-up of both exercises.

In Lorraine, the question of the development of the decisional environment of the enterprises has been put at the heart of the regional policy related to the economic development of the SME fabric and the most visible result was the launching of a huge programme of economic intelligence: DECILOR (Decision making In Lorraine).

In Auvergne, the follow-up of the RIS exercise was not used explicitly as the input of the regional policy, but its recommendations were more or less taken into account.

In both exercises, one can consider that the question of the territorial and industrial strategies gained importance for the SMEs bosses' attitudes as well as in the policy makers road books.

On the other hand, although both exercises has been technology oriented, TA/TF did not represent their main recommendations. The orientations proposed consist of improving globally the situation of the enterprises specially on the technology accompanying conditions of the development of the projects in the enterprises: projects management, team training, financing facilitations, information management, administrative conditions...

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Contribution to: Mobilising the regional foresight potential

REGIONAL FORESIGHTS AND RIS PROCESSES

The cases study of two French regions: Lorraine and Auvergne

Pierre BOURGOGNE

Foreword The purpose of this document is to provide concrete evidence gathered from two different experiences of regional strategy exercises created in the framework of the European Commission. Lorraine was selected as a pioneer region for RTP (Regional Technology Plan) and Auvergne was designated a region for RIS (Regional Innovation Strategy).

One must underline that the situation in France is rather peculiar. "Regions" are new institutions (early 1980's) and even if they progressively become mature, the guidance of the state is very present. In spite of decentralization, the French regions are not very autonomous and therefore, are unable to develop specific policies in their territories. The basic principle to respect is the building of a partnership between the central state and the region. This partnership is realized in the State-Regional Contract (SRP), periodically negotiated by the two institutional levels. The negotiation implies that the partner state is a key player in the development of the regional policy, in this case, the Innovation Policy.

This situation reinforces the absolute necessity of both a permanent dialogue between the policymakers at the regional level and the representatives of the state based in their region, and research for the best consensus of the political options taken by the two levels of decision makers.

Regional profiles, 2001 indicators *(to be completed and actualized)*

LORRAINE

2.3 million inhabitants
23,500 km²
25% of the population under age 20
822,000 jobs (563,000 in the tertiary sector),
186 senior high schools for 107,000 pupils
77,000 students
7.7 % unemployment
88,000 cross-border daily commuters to Luxembourg (3/4) and Saarland
48 billion kWh/y (10% of the French electricity production)
3.8 million m³ of timber/y (French N°2)
1.4 million head of cattle
72% of French coal production (to be terminated in 2006)
75,000 companies (285 with more than 200 on staff)
annual exports : 18 billions of euros
foreign trade coverage ratio 123%
14% of job creation by foreign companies
France's leading producer of cotton, mirabelle plums
France's N°2 for steel production
France's N°3 for oilseed, beer and cow milk cheese

AUVERGNE

1.3 million inhabitants
26,000 Km²
21,5% of the population under age 20
497,000 jobs (320,000 in the tertiary sector),
111 senior high schools for 57,000 pupils
42,000 students
8.6%unemployment

58,000 companies (100 with more than 200 on staff)
annual exports : 4.5 billions of euros
foreign trade coverage ratio 135%
75 % of the French cutlery
25,000 jobs in tyre manufacturing industry (Michelin, world N°1 and other)

LORRAINE

For many centuries, the economy in Lorraine was based on trade and farming. In the 19th century, the Industrial Revolution turned Lorraine into one of the key areas for development in France. Its mines provided the coal and iron that were required for the growth of industry as a whole. Mining and industries such as metalworking, textiles, chemicals etc. proved to be an outstanding driving force behind Lorraine's prosperity for nearly a century.

However, in the 1980's, Lorraine was faced with a decline in its traditional areas of employment. Conversion and redeployment were undertaken with pragmatic determination bringing success back to Lorraine.

Today, Lorraine's economy is more diversified, based on traditional sectors such as farming and forestry, as well as on food-processing, industry (Saint-Gobain-Canalisations etc.), chemicals (Solvay, Rhône-Poulenc etc.), car manufacturing (Smart plant in Hambach – Daimler-Chrysler group) and outsourcing for the automobile industry.

Other activities have also developed, linked mainly to the region's geographical position, among them logistics and service companies (Ikea Distribution France, Bertelsmann, DHL etc.) or services for businesses or private individuals (call centers, etc.). They strengthen the renewed dynamism of a region that is determined and resolutely European in its outlook.

AUVERGNE

Crafts and commerce constitute important economic sectors in Auvergne. The number of crafts businesses per population in Auvergne is among the highest in France with 180 firms for 10,000 inhabitants, the national average being around 150. The crafts sector remains strong with 23,000 active firms. Nearly 40% of them are private firms (excluding agriculture) employing 32,000 people full-time and 25,500 part-time, resulting in a total of nearly 58,000 jobs representing 12% of employment in Auvergne.

With an industrial employment ratio above the national average and with the benefit of favourable surroundings, companies find in Auvergne an economic and technological environment that supports their expansion.

Auvergne includes many companies that have become leaders on the French, European and world markets due to the skills that they have developed in diverse activities: tires, plastic and composite materials, aeronautic metals and materials, pharmaceutical-chemistry, and the agrofood industry. The best known examples are Michelin, Limagrain and the Delbard nurseries.

1 – DESCRIPTION OF THE EXERCISES

1.1 – REGIONAL TECHNOLOGY PLAN IN LORRAINE (RIS/RTP)

Scheduled to last 2 years from mid-1994 to mid 1995, the exercise finally ended in mid-1996. The total cost of the RIS/RTP was 438k €

Lessons from the past

- As early as 1984, due to the industrial crisis which began in the early 1980's, the regional players in Lorraine (state bodies, region, universities and schools of engineering and enterprises) decided to associate themselves with ATTELOR (Association for Technology Transfer in Lorraine).
- In 1989, the French ministries in charge of research and industry took into account the first results of ATTELOR and proposed a new kind of network in Lorraine to facilitate the direct relationships between the specialists of technology clinics and the regional SMEs. ATTELOR was created as a support to one of the first regional Technology Development Networks (TDN) in France and gathered 30 partners (12 regional centers for innovation and technology transfer, 12 technical centers, and 6 consular bodies – chambers of commerce and industry and chambers of crafts).
- In 1993, in the framework of the STRIDE program, 65 different projects were constructed by regional players and after evaluation, only 19 were accepted in 3 different groups : i) general programs on 10 employment basins; ii) specific programs on specific basins; and iii) technology-oriented programs. STRIDE assisted the transfer structure to obtain innovation-management techniques and, more precisely, technology audit methods for SMEs.
- In 1994, thanks to the previous initiatives, the policymakers and the economic fabric became aware of the potential of technological resource centers. The State-Region Contract decided to launch the program *Lorraine-Technologie* to help the development of innovation management techniques and reinforce the territorial technology coherence with the evolution of global strategies by the SMEs in Lorraine. In 5 years time, this intermediary of the TDN would visit 1,400 enterprises in Lorraine and would operate 500 technology clinics.

But, despite these efforts, this organization i) had difficulties in meeting all the SMEs and assisted only the spontaneously innovating SMEs, ii) dealt only with technological innovation, and iii) did not have influence on the creation of activity.

INTRODUCING RIS/RTP-LORRAINE

Two other industrial regions in Europe (Limburg – NL and Wales – UK) have addressed the same question via different methods:

How does one improve the ability of the regional players to develop a technology-diffusion policy which takes into account the actual needs of the productive sector as well as the strengths and weaknesses of a region with regards to technological innovation ?

To answer to the above question, the RIS/RTP exercise in Lorraine tends to build a consensus between all players as far as the priorities and the action plan are

concerned. This process is based on a detailed analysis of the needs of the enterprises (and the SMEs in particular) in terms of technology and an evaluation of its coherence to the technological offering available to them.

For Lorraine, the action plan validated by the EC was as follows:

- elaboration of a **regional consensus**;
- precise analysis of the **demands of the enterprises**;
- precise analysis of the **regional R & D offer**;
- identification of the **industrial and technological general trends**.

REGIONAL CONSENSUS

In the French context, 4 institutions centralized the leadership of the means and of the management of public tools used for the development of R & D in the territory: the Regional Council, the national innovation agency (ANVAR), the regional ministry of industry (DRIRE) and the regional ministry of research (DRRT). The acceptance by these groups of the necessity of a regional policy assures a permanent dynamics between them. This became the **Direction Committee (DC)**.

As soon as the DC had reached its own consensus on the objectives, the next step was to obtain a regional consensus of all the concerned players (legitimate or not). This led to the **Steering Committee (SC)**.

The SC was progressively constituted by co-optation. At the beginning, the usual players of innovation development were members of institutions which were directly involved in innovation and technology transfer and at the end of the process, it integrated other members such as SMEs and other institutional partners of the “second circle”. Large companies preferred to participate punctually in the works and the universities chose to be represented on an institutional level rather than fully committing.

A reference consultant (RIDER) was hired as an external referent. This consultant led 15 regional expert meetings, brought in 3 specialized experts and recorded ideas and offered propositions.

At this stage, the observations were as follows:

- the process is largely influenced by the rhythm of the regional-state exchanges (French situation);
- the introduction to the SC of non-traditional players of technological development allowed for “bottom up” consensus building;
- the past experience of the players influence the consensus building (the more experienced, the more difficult);
- building the consensus is really the first compulsory step before undertaking any other.

Demand Analysis

An external consultant performed interviews of companies (592) using a technology audit questionnaire.

The demands were as follows:

□ Characterization
<ul style="list-style-type: none">• demand for the introduction of new processes and new materials;• research and setting up of new products;• optimisation of production;• computer-aided production and automation.
□ Quality of the regional answers
<ul style="list-style-type: none">• the regional offering does not provide relevant answers to the companies needs.

These results demonstrated the importance of having a transversal approach to innovation needs and processes.

Offering Analysis

Three methods of investigation were chosen:

- study of the regional system of innovation (RIDER) via analysis and synthesis of the previous different studies and interviews with the RTP players;
- systematic analysis of the offer structure by visits and the constitution of a database;
- attempt to define the R & D program in order to reinforce the Lorraine industrial fabric (Bertin);

The results were as follows:

<ul style="list-style-type: none">• 1st method: confirmed the difficulty to lead a basic analysis of the scientific offering;• 2nd method: the visits provided information on the scientific relevance but did not give correct answers on how to meet the demands of enterprises, of their participation to the emergence of the such demands; and lastly, the laboratories were in need of intermediaries between them and the demand in development;• 3rd method: the laboratories visited, even if industrial research oriented, could not meet the actual industrial demand of incremental innovation but proposed only rupture innovations to the SMEs.
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R & D situation in Lorraine¹

Strengths

- The high-level academic R & D is well developed around national research organizations. Globally, the potential of research is well-positioned in fundamental research and corresponds to the regional economic and industrial sectors (materials, mechanics, chemical engineering), or can be applied to new sectors (chemistry, physics, and biotechnologies).
- There are many interfaces and transfer bodies that cover a large range and are interconnected in a regional and national network.
- Lorraine has an actual base of innovating companies (including SMEs) which represents a good medium to disseminate a culture of innovation for sustainable development.

Weaknesses

- The research potential is more fundamentally oriented than pre-competitive oriented. Finalized public research in Lorraine represents only 0.9% of the national research when the public research as a whole represents 3.9% of the national effort.
- Industrial R & D is at a low level compared to the national one. Moreover, it is too concentrated as far as the sectors are concerned (traditional: iron and cast iron) and who the players are (large plants) (0.1% of the national volume).
- The higher level of education, well developed in Lorraine, appears to be disconnected from a great part of the industrial fabric: the SMEs have difficulty in hiring skilled employees.
- As a whole, the management of innovation by the SMEs seems to be its weakest aspect. The integration of innovation faces more serious difficulties than just technical: financing, management, market approach, flexibility, and human resources.

¹ From SRI publications (French Ministry in charge of Industry)

Notable Industrial Trends (in Lorraine)²

The industry was still dominated by larger companies. They represented more or less 70% of the employment (payroll) and 80% of turnover. The SMEs represented 35% of the added value (8 points below the national average) and moreover, some of them, such as subcontractors, are only remote production workshops of these larger groups. **The industry of Lorraine was widely oriented towards the production of intermediate goods.** This affected the added value and confirmed the all-too-partial effort of economic restructuring.

4 dominant identified sectors with contrasted evolutions:

- Metal work (80,000 employees, 40% of the industry in Lorraine). It remained the main bastion of industry in Lorraine and needed to be consolidated and developed as a priority. It was in this sector that the needs of modernization were surfacing. The rubber and the plastics industry faced more or less the same problems.
- Agrofood (22,000 employees, 12% of the regional industry). With 22,000 employees, 12% of the regional industry was still too oriented towards intermediate products and did not explore all the potential of the products with high added value, in spite of the growth of investments and innovation.
- Wood working (20,000 employees) This sector downstreaming from forest management includes sawing, wood for building construction, furniture, and paper cardboard. Lorraine exports a far too much important ratio of rough wood.
- Textile and clothing (14,000 employees). Until recently, this sector resisted quite well to foreign competition, even if the disintegration of jobs was constant. But times had changed, and cost-cutting was not sufficient any more. This profession evolved towards commercial or technological niches in a difficult social context.

Under-developed tertiary sector

The tertiary activities integrated in the enterprises represented 30% of the total jobs (2% below the national average, with the exception of Ile-de-France/Paris). The strategic functions – administration and management, commerce, studies-methods – represented 9%, 4% and 3% respectively of these jobs. **Lorraine was a production platform.**

However, this situation is in constant evolution since 1980 (between 1980 and 1990, the “studies, council and assistance” grew 65%).

Full expansion of immaterial investment

In spite of the weakness of the tertiary sector, Lorraine enterprises became conscious of the importance of immaterial investment. This was favoured by the public bodies policies. The trends of the preceding period showed a trend to the optimisation of the production tool and the research of new markets, vital priorities for a period of economic restructuring. For example, in 1992, Lorraine was ranked the 3rd region in France in terms of number of the projects supported by ANVAR.

² These elements are those of were published in 1996.

Propositions

Mechanical construction

Public investments have been made to create an environment that assists technological innovation in the SMEs. These companies could set up new processes and integrate new technologies as 72% of them are innovative. This sector must be supported.

Metal transformation

Too oriented towards sub-contracting with a narrow range of customers, these enterprises could not influence the evolution of techniques and of the markets. Introduction of quality and diversification via new products and productivity was considered highly relevant.

Automotive manufacturing

Quality and innovation in cost-cutting should follow manufacturers' policies. In particular, a technology watch should be developed to anticipate the evolution of materials. Materials recycling was also underlined

Agrofood

This sector needed global financial resources in order to be encouraged to innovate.

Wood

Vocational training and renewing methods of production along with co-operation between companies were considered as factors of progress.

High tech

The high tech sectors were not largely developed in Lorraine.

Sharing the fundamentals

Seeking convergence of the current works and of the opinion of the regional players, it was decided to create **working groups** and to try to perpetuate a **steering structure**.

To reach these objectives, a limited number of working groups were led within the Steering Committee. Their roles were to prepare concrete propositions in identified themes which were priorities for all players of the exercise.

4 themes had been selected :

- Improvement of innovation management in the SMEs;
- Reinforcement of the action and of the identification of the TDN ATTELOR.
- Definition of the role of education and training sectors as disseminators of innovation;
- Extension of the possibilities of innovation financing.

Each group met 2 or 3 times under the chair of a member of the SC. French and European experts were hired to give their external expertise.

PROPOSITION OF A GLOBAL INNOVATION POLICY

Quantitative objectives

4 functions have been identified as related to the development of innovation in the SMEs:

a) distribution functions: optimisation of the support through an administrative platform.

Research of convergence of the different tools and procedures of the state and of the region.

These co-ordinated actions are:

- quick exchange of information between the different institutions on their actions;
- same appreciation of the selection criteria;
- simplification of the form to fill in.

At the end, the goal is to present an actual unity of action to the SMEs (repartition of the grants, common records, and management).

b) financing functions: Innovative Financiers Network (IFN) and specific measures

IFN: The aim of the IFN is to build a real financial partnership of innovation via a permanent association of public bodies and other players in order to develop a confident climate favourable for investments thanks to plausible risk assessment.

Specific measures: reinforcing the proper funds of the enterprises thanks to the support of the risk capital group (creation of a Risk Capital Society, RCS) and partly public funded on innovation projects supported by the RCS.

Guarantee: sharing the risk helps the financial partners (use of the French institution, Sofaris).

c) economic, technologic and project watches:

Creation of resources for an innovation centre;

Data processing;

Information dissemination.

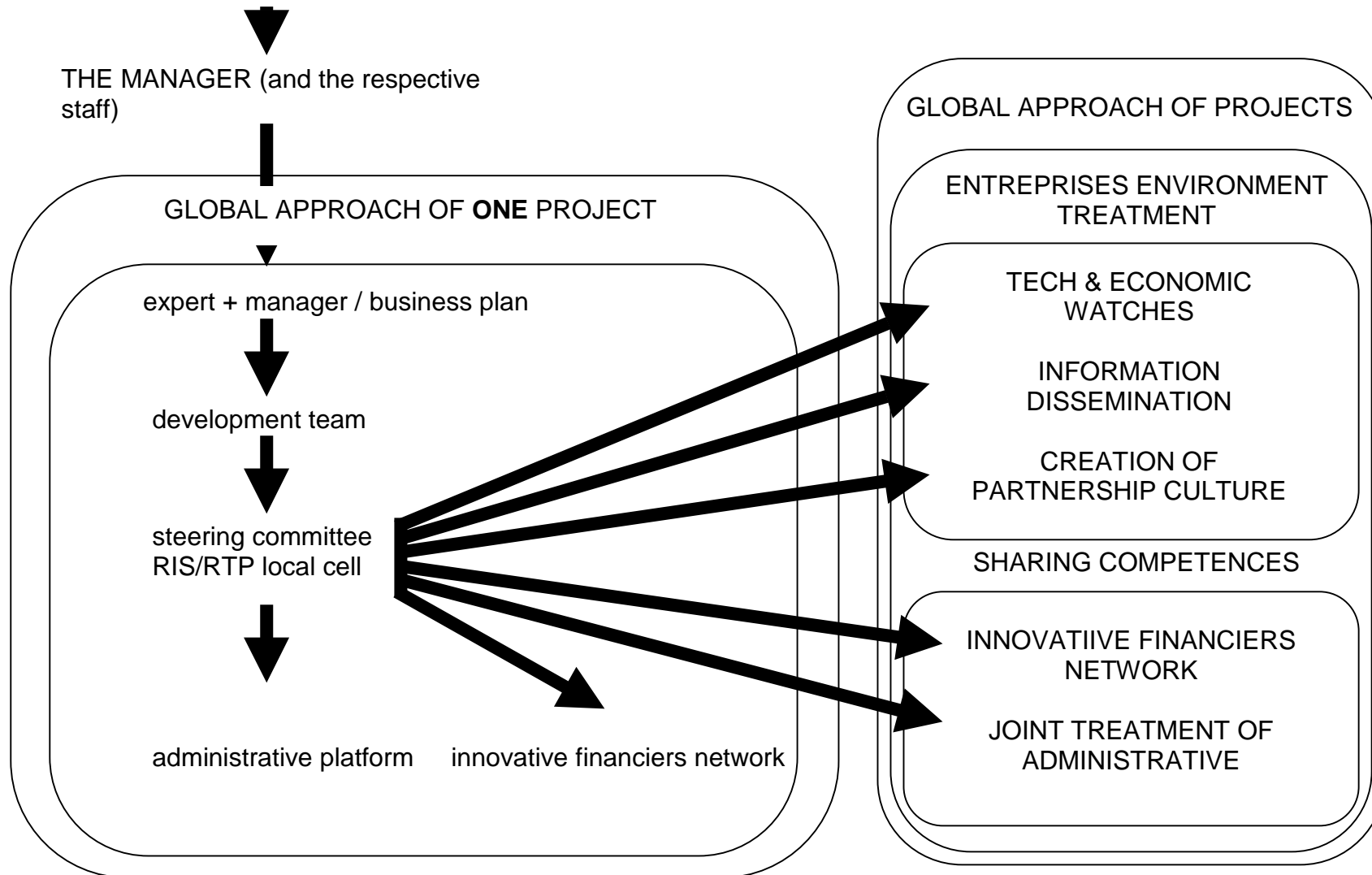
d) dissemination of the partnership culture:

Development of clusters.

These works, validated along with the whole RIS/RTP process, are represented in the following chart:

GLOBAL INNOVATION POLICY

THE ENTERPRISE/ONE INNOVATION PROJECT



FOLLOW-UP

The RIS/RTP process came to an end in 1996 and the situation of support for innovation has changed.

Though the RIS/RTP Steering Committee with its 31 members is not operational anymore, the Direction Committee still exists 6 years later and operates effectively with a monthly meeting (G4)

What were the most important steps of this evolution ?

- 1996: signature of the Regional Innovation Charter by a large number of the intermediaries. This charter plans.....
- 1999-2000 restructuring of ATTELOR.....
- 1998-1999 elaboration of the Lorraine Plan.....
- 1999, new negotiation of the SRC.....
- 2000, new DOCUP.....
- 2001 start of the DECILOR-Decision making in Lorraine (Strategic intelligence programme)-2 M€ from 2001 to 2003.....
- 2002 start of the Innovative actions programme (~5.5 M€ on Economic Intelligence and implementation of the regional policy of ICT) + 2 M€ for 2002-2003 on Economic Intelligence.....
- 2002 creation of the first Lorraine cluster in aeronautics and space manufacturers...
- ...

1.2 – REGIONAL INNOVATION STRATEGY IN AUVERGNE

This exercise lasted from November 1996 to March 1999 (4 months late). The total cost of the RIS was 494 k€.

SITUATION PRIOR TO THE RIS EXERCISE

- The support to the SMEs in Auvergne began as soon as 1981. The first Technology Development Adviser (TDA) was hired to help the enterprises of the plastics sector of Auvergne. This specialist with an academic background was based in a school of engineering.
- In 1986, the Technological Pole of Auvergne (CASIMIR) was created via a joint decision of the regional and the state authorities.
- In 1992, CASIMIR created a laboratory to solve problems the market could not solve due to a high level of investment. Because of this, CASIMIR became the reference support of the enterprises based in Auvergne. Progressively, the number of employees grew to 20 in 1995 and to 25 in 2000.
- In 1996, CASIMIR was asked to lead the TDN of Auvergne. This TDN, in addition to the TDA of CASIMIR (9 people), gathered 30 people stemming from all intermediaries (chambers of commerce, chambers of crafts, Association for the industrialisation of the Central Massif...).
- The same year, CASIMIR launched its first initiatives in Economic Intelligence for a club of biomedical engineering device manufacturers followed by, in 2000, other sectors such as agrofood/nutraceuticals and advanced materials.

REGIONAL CONSENSUS

When the call for action by the state of the EC reached the regional officer in charge of implementation of innovation in Auvergne, he proposed to CASIMIR to take charge of this action. "Naturally" CASIMIR became the champion of this action. The board of CASIMIR prefigured the SC of the RIS exercise and only a few new members were associated with the SC.

The action plan for Auvergne, accepted by the EC was as follows:

• Phase 0:
Analysis of the situation; Collection of existing information and data, analysis of this material; Enterprises segmentation and definition of the target.
• Phase 1:
Collection and analysis of the needs of 200 enterprises; State of the art regional offering in technology transfer (universities, public research bodies...) Tentative matching of both these approaches.
• Phase 2:
Elaboration of an action plan to be as complete as possible; Launching of new projects; Analysis and validation of pilot projects.

Needs analysis

The needs analysis were performed by TDA of CASIMIR associated with a member of the TDN. The guide for interviewing was prepared with the help of three external consultants: Novoxel (a reference consultant), Formica (a strategic consultant), and Reverdy (an accompanying consultant). These interviews lasted at least 3 hours and the interviewers had been trained to use this specific guide. The data collected were traditionally quantitatively treated but methods of data mining were used as well (factorial analysis...) in order to get qualitative information.

Globally, the enterprises expressed the need to integrate innovating process to ensure their future but they had to face a lack of information susceptible to supporting a whole innovation strategy. They appeared more interested by the question of information management (commercial aspects) than by technological assistance. They especially demanded services able to help them in finding new markets and financing which accompanies technological innovation. On the other hand, they suffered a lack of financial and human resources able to master innovation as a whole. The interviews showed that 2/3 of the failures in integrating new technologies were the results of a lack of adapted commercialisation means, especially for too narrow or non-existent markets. Pure technological problems were responsible for 1/3 of the remaining failures. They needed support in appreciating potential markets, identifying niches, and commercial practices.

These needs generated a certain necessity to use external experts and services. But the companies that were approached rarely used these services and did not know their regional resources. Moreover, they had tendencies to try to isolate their innovation projects. Their behaviour demonstrated a very weak co-operative effort.

In summary, the appeal of the SMEs for innovation support was relatively weak, but the potential demand for external support, especially for the upstream phase of a project (opportunity studies), presented itself as a general tendency by the companies interviewed.

From the qualitative analysis, it appeared that it was possible to split the population of the SMEs (or at least the sample) into two typical families :

<p>PROCESS-ORIENTED COMPANIES Voluntary commitment to develop its skills, tendency towards specialisation</p> <p>DEVELOPMENT FACTORS THE KNOWLEDGE Stay on top of skills, master quality, be flexible (order charts).</p> <p>PARTNERSHIPS Stay grouped around commercial objectives:</p> <p>DEVELOPMENTAL LEVERS Demand of the customer Pressure on passing orders</p> <p>BRAKES ON DEVELOPMENT Few financial means Uncertainty of the markets Lack of skilled employees</p> <p>OPINION ON GRANTS No initiative Not known, incomprehensible, Difficult to access, Unfair criteria</p> <p>NEEDS FOR SUPPORT Support in strategic reflection and decision-making</p>	<p>MARKET-DRIVEN COMPANIES Voluntary commitment to be open to new horizons, tendency towards diversification</p> <p>DEVELOPMENT FACTORS THE OPPORTUNITIES New reachable skills, prospecting new horizons, development of commercial potential, ensure the creativity of its staff.</p> <p>PARTNERSHIPS Network, benchmarking, research of complementarities, technical as well as commercial objectives</p> <p>DEVELOPMENTAL LEVERS Competitive pressure, industrial and technical environment</p> <p>BRAKES ON DEVELOPMENT Insufficient knowledge of the markets, administrative weight, lack of R & D means.</p> <p>OPINION ON GRANTS Weight, complexity, delays, uncertain incomprehensible</p> <p>NEEDS FOR SUPPORT Support in projects elaboration, diversification, and partnerships</p>
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Regional offering analysis

The universities and the renowned research institutes had weak relationships with the traditional SMEs. This is because of:

- Ignorance of the needs from one side;
- Ignorance of the potential of the other side for the SMEs
- Weak means used by specific interface networks for the valorising these institutes;
- Difficulties to perform services or even consultancy activities in a continuous and structured way.

The technology transfer only occurred on high tech fields when the SMEs looked for more traditional supports (adaptation and up dating of their production means).

One must say that it was very difficult to get relevant objective information from the different institutions (actual figures on financial aspects, segmentation of the customers, kind of actions...). This was not due to a reluctance to release information, but rather the fact that these indicators did not exist.

Considering these results, it was decided to analyse other public institutions such as the **lycées** (more or less “high schools”) and **University Technology Institutes** where the SMEs found interlocutors among the staff which were more close to the enterprises in terms of distance and in terms of level of education.

The results (from 6 interviews) are as follows:

- The time of the exchange is very much long (1 year);
- The opportunities of exchange are not systematically researched by both sides;
- The financial incentive of the exchange is not exploited;
- The value of the exchange is far superior to the contractual flow;
- The exchange leads to neither a capitalisation from both sides nor a technology transfer.

Another study has been made in order to consider the role of the regional private services to industry.

28 **consultant agencies** were visited. These agencies worked in various fields of activity (technical expertises, regulation assistance, industrial property agencies, quality, technico-economic studies, diversification and new products, information, technology and competitive watches, vocational long life training, recruiting, communication..).

The results were as follows:

- Curiously, it was rather difficult to get precise quantitative information on the size, the turnover, customer repartition, etc. This was not due to professional secrecy, but rather the fact that the entrepreneurs did not have a piloting system of their own businesses.
- The key success factors for this population were:
 - Long life training;
 - Recruitment and human resources management;
 - Software development;
 - Design of special machines.

The companies of these sectors were the only ones which had an explicit offensive strategy oriented towards new services and development targets in or out of the region. These companies also had a good growth during the preceding years. They know their customer portfolio (or profile?) and the direction to go to make it grow.

One of the recommendations was to perform a more important inquiry on this sector which was not well known by the industrial companies and is, yet, considered very strategic by the institutional players.

Lastly, it was also decided to try to analyse the **role of the large private and public companies** in the dissemination of progress factors in the SMEs.

17 large private companies and 4 public companies were interviewed.

The conclusions were as follows:

- The degrees of implication with the local SMEs are very much different from one company to another. The position evolved from the large company, “big brother,” of some SMEs to the complete ignorance that some SMEs even existed.
- The large companies were ready, if necessary, to participate to pilot actions in order to help the development of the regional economic activity which could improve the quality of services, develop new products, and increase the expertise and the know-how of the SMEs.
- A large majority of those responsible for the regional industrial plants said they were interested by the improvement of the regional environment. They were ready to be open to smaller economic players. Nevertheless, they considered a push from the public institutions necessary.

PROPOSITION FOR A FRAMEWORK OF DETAILING PRIORITY ACTIONS

1 – Companies suffer a global lack of support for their strategic management. These inadequacies slowed down the various dimensions of the innovation process:

- *development of a support to strategic thinking, to internal analysis*

2 – Companies valorised an approach which was strongly oriented towards the development of the market. This needed to be accompanied by market identification, market niches, and information on existing technologies, transferable in the different productive sectors on which they were positioned. The Technology Transfer Dimension and its effects on the development of markets did not represent a central preoccupation in their opinion of innovation. They placed stronger emphasis on purely commercial stakes:

- rising awareness, information and accompanying measures under the technical and commercial angles of innovation management – technical assistance for the valorisation of adaptative technologies answering to the needs of the market and incorporating high added-value innovation – development of a regional reservoir of innovating project holders.

3 – The SMEs did not incorporate many externalisation methods very easily. The question was to encourage the use of existing expertise potential in the region with the technology transfer approach:

- *valorisation of the regional technology offering – improvement of the interfaces actions and of the structure of technology transfer.*

4 – The SMEs had an individual behaviour that was strongly predominant. It was the matter of driving methods encouraging inter-enterprise co-operations to sensitise entrepreneurs to the opportunities in the value chain (co-operative relationships) that was in question. Moreover, the question was to favour collaboration with foreign enterprises in the framework of shared innovating projects:

- *favour the different initiatives and practices of grouping – awareness rising from European technological partnerships.*

5 – The SMEs suffered from a lack of skilled staff:

- *help with identification of existing competencies on the job market and support for vocational training.*

6 – The SMEs faced an under capitalisation and weak financial resources to devote to R & D operations and/or strategic watch:

- initiatives on financial support for innovating projects.

CASIMIR on behalf of the Region Auvergne submitted a proposal to the RIS PLUS Call for Proposals of the EC and succeeded.

But due to changes of the policymakers people and regional competition between players, the final contract was not signed.

FOLLOW-UP

Several actions have been made in Auvergne, after the end of the RIS exercise. Not all of them are related to the results of the RIS exercise but one can say that they do not contradict the recommendations of the RIS exercise:

- creation of the technological platform Mec@Prod;
- creation of a new structure to support the creation of enterprises or activity in the world of advanced materials;
- creation of industrial clusters (in French SPL: Locally Productive Systems) in cutlery, plasturgy, mecatronics;
- implementation of an already-existing cluster (aeronautics);
- implementation of high-tech enterprise incubators for academic spin-offs;
- ...

The following lines describe the two first actions.

Mec@Prod offers both sharp competencies and performing means:

- feasibility studies for the setting-up of new manufacturing tools and decision-making for investments;
- tests and pre-series for optimisation of the performances of the machines and improvement of the quality of the products;
- improvement and development of the process in order to reduce costs and delays;
- rapid prototyping, quality control, supervision and monitoring of production.

Seven academic sites participated in the services offered by Mec@Prod . Their expertise ranges from cutting, hig- speed manufacturing, electro-erosion, to casting

and platurgy. Competencies in CAD and CAM, digitalisation, technical data processing and quality complete the panel and the whole constitutes a good tool devoted to the technological development of the regional enterprises.

The support of the development of the advanced materials world is represented by the creation of a Local Initiative Platforms (PFIL) which is a French system to help the creation of enterprises or activities in France. Actually, these materials already represent a first rank activity in Auvergne.

The modes of intervention of this structure are of three levels:

- financial support, honour loans to help in the constitution of proper funds of the enterprise under creation;
- assistance during the first three years of the activity (commercial support, management support, technical support) via a partners' network: municipalities, financial organisations, industrial clusters, chambers of commerce and of industry, technical centres, research centres...
- tutorship of a business boss to transfer experience, gives moral warrant...

2 – COMMENTS

COMMENTS ON THE SITUATION IN LORRAINE

1 – Although the whole exercise had been technologically-oriented (composition of the DC and SC, demand analysis/technology audit, offering analysis/laboratories expertise...), TF/TA did not represent the heart of the proposals. The orientations proposed consist of improving globally the situation of the enterprises not only on the questions of technology but especially on the technology-accompanying conditions of the development of projects in the enterprises: projects management, team training, financing facilitations, information management, administrative conditions, etc.

2 – Thanks to a precautionary attention paid to the consensus elaboration, the follow up of the RIS/RTP was relatively easy to implement. Almost all the proposals dealing with the long term have been implemented in one way or another.

The exercise itself is not the current explicit reference of the policymakers of innovation (G4) but the remnants of work collectively done. It is still alive even for those who were not involved in the RIS/RTP exercise. The Charter of Innovation, the SRC, and the DECILOR programme, are all imbued with the results of this exercise.

3 – Thanks to a large dissemination of the results and of the analysis completed by all the institutional or professional relays, the companies, as a large majority, have accepted the diagnosis.

The progressive evolution from direct grants to improvements in the decision-making environment of the enterprises is well accepted by all the policymakers and the politicians (they voted to accept the Lorraine Plan and the SRC) The companies are fully aware of this choice. There is no apparent disagreement on this subject.

4 – As one can note above, almost all the proposals of the RIS/RTO exercise have been taken into account. Some of them started only recently (e.g.: Economic Intelligence) while others which began just after the exercise have already been deemed less efficient (e.g.: IFN) and must be updated as far as their objectives and their functioning are concerned.

COMMENTS ON THE SITUATION IN AUVERGNE

1 – At the beginning, the situation was almost ideal. The 4 main players (the G4), were in a co-operative process concerning what they had chosen as the holder of the RIS exercise. This choice was natural for them for they had decided in 1995 to restructure CASIMIR and make it the “champion” of the innovation policy in Auvergne.

But after 2-3 years, the situation had changed. The initiators of the restructuring of Auvergne changed and were replaced by new civil servants who wanted to put their stamp on the regional innovation system. What had been made by their predecessors was not relevant anymore and competition between organisations, people, the region, and the state became totally unfavourable to the implementation of the RIS and to the development of the RIS PLUS.

2 – However, even if these difficulties did not occur, it is not sure that at the end, the implementation of the different phases of the work plan would have been made. Actually, with the choice of an intermediary, CASIMIR, as the leader of the RIS exercise, the G4 chose the easiest way to escape a true confrontation on consensus building. CASIMIR masked the differences of an appreciation of the situation.

The regional politicians were not involved enough in the process. They did not really understand what the actual stakes of this experiment were. The regional structures also did not favour their implication. Years ago, the Regional Council had delegated to the Regional Development Agency (RDA) the charge to set up their political decision. But this situation created a competition between civil servants at the regional council level and the people in the RDA. This conflicting situation made the debate very complicated particularly when questions of action plans and implementation emerged.

3 – In spite of these difficulties, if one looks to the results of the analysis made during this operation, one can summarise the proposals made in 4 tasks:

- To develop the innovation spirit
 - Construction of a guide for auto-diagnosis of innovating projects by the SMEs;

- Training of the members of the TDN for analysis of innovating projects;
- To develop industrial networks
 - Systemic analysis of the existing networks and clusters in and out of the region;
 - Appreciation of the opportunity to create new networks or clusters;
 - Building of a pilot network and analysis of the experimentation
- To open SMEs to foreign partnerships
 - Census of the regional operators and analysis of their performances;
- To develop the regional potential of initiators and managers of innovating projects.

This confirms that the question of technology is not central in the difficulties of the SMEs to improve their economic efficiency and profitability.

3 – CONCLUSIONS

Due to the differences of the institutional situations in both regions, each chose different ways to implement their RIS follow-ups.

In Lorraine, the evolution of the policies took into account the shared results of the RIS exercise. Progressively, things were put in place in the framework of the consensual work plan. As the world was changing, the permanent exchanges between the different levels of institutions in charge of innovation implementation allowed also a permanent adaptation to the evolution of the techniques, knowledge and objective situation (e.g.: new key technologies at national and regional level exercises in 2000 – horizon 2005, new national policy for the implication of a technical high school in the process of technological support of SME, via proximity,??? emergence of a regional policy of supporting clusters, implantation in Lorraine of a deep underground laboratory for nuclear wastes, etc....).

In Auvergne, due to the situation explained above, one can say that the added value of the RIS exercise regarding its implementation was rather low. However, the initiatives (especially those presented in the last paragraph of the preceding chapter) taken in Auvergne to help the integration of innovation in the region as an economic development tool were in line with the results and the proposal of the RIS exercise. These ideas were already “in the air” during the RIS phase and, thanks to it, the consensus was easier to reach. But one cannot say that the region of Auvergne has developed a global regional innovation policy thanks to the RIS exercise. The only objective with an actual direct follow-up was the successful proposition of a TRIP project to the European Commission on economic intelligence. But the development of a global policy sustaining the creation of clusters, proximity??? supports to SMEs and the creation of academic spin-offs, even if they are not officially related to the RIS exercise, are not contradictory with the RIS exercise recommendations.

Globally speaking, one can say that Lorraine and Auvergne have decided to address with the management of the regional industrial fabric the central question of long term STRATEGY, even if for a SME the strategy is a question of middle term (5 years).

GLOSSARY

ANVAR: French National Agency for Innovation

ATTELOR: Lorraine Association for Technology Transfer

DRIRE: Regional Direction for Industry, Research and Environment (in Lorraine, also represents the Ministry in charge of Industry)

DRRT: Regional Delegation for Research and Technology (in Lorraine, also represents the Ministry in charge of Research)

G4: Group of 4 (Regional Council, DRIRE, DRRT, ANVAR)

IFN: Innovative Financiers Network

PFIL: (*Plate-Forme d'Initiative Locale*): Local initiative platform

SPL (*Système de Production Localise*): Localised production system

RDA: Regional Development Agency

RIS: Regional Innovation Strategy

RTP: Regional Technology Plan

SME: Small and Medium-Sized Enterprises

SRP: State-Regional Contract

TDA: Technology Development Advisor

TDN : Technology Development Network