Clusters and cluster strategies: the ICT pole of competitiveness ‘Secured Communicating Solutions’

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Clusters and cluster strategies

• « Pôles de Compétitivité »: French dangerous obsession?

• New industrial policy
  – ‘from top-down to bottom-up’
  – ‘from industrial sectors to knowledge bases’
  – ‘from firms to clusters’
Clusters and cluster strategies

• Definitions and key issues
• Results: map of the poles of competitiveness
• Results: case study
  – Pole “Secure Communication Solutions”
  – PACA: Sophia Antipolis (Nice) and Rousset (Marseille)
• Conclusion
New industrial (regional) policy

Innovation key word

Local knowledge, local capabilities embedded in territories are basic for knowledge creation and innovation as such. Innovation cannot be thought out of local dimension

Poles of competitiveness ~ Lisbon strategy, knowledge based economy ~ Bottom-up, projects governed by firms

Territory as project
Territory is defined with the project of development. Endogenous – bottom up – process of definition, but policy incentives. Exogenous – endogenous mix policy.
Poles of competitiveness

14 September 2004: the National Spatial Planning and Development Council (CIADT now CIACT) issue a call for projects for first competitiveness poles. Call: not specific and limited focus, leave a maximum of initiatives to the potential respondents.

“A pole of competitiveness is the combination on a given geographic space of firms, training institutions and public or private research centers engaged to generate synergies in the execution of shared innovative projects. The partnerships can be organized towards a market or a scientific and technological domain”

Four key criteria detailed in the call for projects

- *a development strategy* that remains consistent with the economic development of the local area; the territory related to the pole is endogenously defined by the project, and not given a priori according administrative definition; a critical mass is necessary;
- *a sufficient international visibility*, in terms of industry and/or technology;
- *a partnership* between the different actors of the project and a structured, operational mode of governance;
- *the capacity to generate synergies in R&D*, resulting in the creation of new wealth with high added value.
Poles of competitiveness

Clusters ~ Cluster strategy
existing occurrences vs. public policies

The poles of competitiveness: combination of exogenous and endogenous processes. The government defines the incentive processes, the ‘top-down pressures’ to trigger projects and carries out the process of selection of the projects considered viable and potentially performing. The territories, mainly the firms located in the area, define and run the projects.

A pole of competitiveness is a selected project. The local areas, the clusters, are existing occurrences; the poles of competitiveness are public policy constructed models, aiming at increasing the innovative performance, the emergence and realization of a collective project of development.
Actors of the French Industrial R&D Policy

Ministries:
- Agriculture
- Defence
- Education, higher education, research

Economy, Finance, Industry
- Interior, Regional planning

Ministry of industry:
- Fonds de Compétitivité des Entreprises (FCE)
  - FUI

Poles of competitiveness

Public research

Towards basic research

Towards market
## Sources of financing

<table>
<thead>
<tr>
<th>Subsidies for R&amp;D projects</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Central Government (FUI)</td>
<td>720 M€</td>
</tr>
<tr>
<td>Tax incentives</td>
<td>160 M€</td>
</tr>
<tr>
<td>Innovation agencies (ANR, OSEO, AII)</td>
<td>587 M€</td>
</tr>
<tr>
<td><strong>Total for R&amp;D</strong></td>
<td><strong>1467 M€</strong></td>
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<thead>
<tr>
<th>Support for the management of the pôles</th>
<th></th>
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<tbody>
<tr>
<td>Central Government</td>
<td>33 M€</td>
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</table>

| **Grand Total**                                                                           | **1500+ M€**|

*(3 years)*

+ local authorities financing  
+ central government subsidies for others projects (e.g. HR)  
(Source: DGE)
Success:

12 July 2005: 66 poles out of 105 applications
5 July 2007: 5 new poles out of 18 applications

Different types of poles (global, global vocation, national)
Success ??:

18 June 2008:
- 39 poles reached their objectives
- 19 partially reached their objectives
- 13 need deep reconfiguraton (BCG, CM Inter)
2010
- 6 out 6 in
Permanent call of projects: two steps process for financial support

**Poles call**

- Call of projects « Pôles de compétitivité »
- Projects of pole
- Selection Process
- Pole Label from CIADT « R&D zone »

**Projects call**

- Proposal of R&D project(s) build inside each pole
- Process of selection in relation with the Ministry related to the project
- Validation of the selected R&D projects by the different ministries and financial support

Financial support through R&D projects: long process

- For the firms located in « R&D zone » only:
  - Tax breaks
  - Social security contributions relief
- Possibly, R&D subsidies from the related ministry

Poles of competitiveness policy
Implementation of the financial supports
Permanent call of projects: two steps process for financial support

Poles call

Poles of competitiveness policy

Endogenous definition of the « territory »

~

‘project’
Permanent call of projects: two steps process for financial support

Aerospace Valley
Permanent call of projects: two steps process for financial support
Permanent call of projects: two steps process for financial support

Poles call

Solutions communicantes sécurisées [3718]
Permanent call of projects: two steps process for financial support

Poles call

- Call of projects « Pôles de compétitivité »
- Projects of pole
- Selection Process
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Poles of competitiveness policy

Stage I. Process of labellisation poles

No Financial Support
Permanent call of projects: two steps process for financial support

Poles of competitiveness policy
Implementation of the financial supports

R&D projects as ‘core business’

Governance of the pole (association: firms)

- Thematic commission
- Project commission

Proposal of R&D project(s) build inside each pole

Only the R&D projects with a label given by its pole can apply to the call of projects organized though the interministerial fund. Label important for ANR, region

- Help to complete the projects (FUI, ANR, Region…)
- Evaluation
- Selection: label ‘Pole’
Permanent call of projects: two steps process for financial support

**Poles call**

1. Call of projects « Pôles de compétitivité »
   - Projects of pole
   - Selection Process
   - Pole Label from CIADT « R&D zone »

**Projects call**

1. Proposal of R&D project(s) build inside each pole
   - Process of selection in relation with the Ministry related to the project
   - Validation of the selected R&D projects by the different ministries and financial support

**Financial support through R&D projects: some poles could have NO financial support at all**
Total of the financial support over the period 2005-2007
64 Pôles have been financed

- Share of the 5 first pôles: 47.8%
- Share of the 10 first pôles: 66.4%
- Share of the 15 first pôles: 74.5%
- Share of the 20 first pôles: 80.7%
Poles of competitiveness case study

• Secured Communicating Solution pole
  – ‘from silicon to uses’
• Characteristics in terms of related clusters
• R&D project database: results
Secured Communicating Solution pole
Secured Communicating Solution pole

• **SCS interesting case**
  – Based on two clusters which have grown independently, but the two clusters result from the French industrial and regional traditional policies, driven by exogenous centralized processes

• **SCS, ‘from silicon to uses’,** intends to federate the complementarities throughout the added value chain of microelectronics to address the markets
Marseille cluster: born from voluntarist policy – typical of French industrial policies – aiming at developing the microelectronic industry. ‘National champions’ requested (St Gobain, Thomson), creation of a firm, *Eurotechnique*, with a US partner. Merger of these activities with Italian group, creation of ST Microelectronics, then spin-offs, Gemplus, Atmel. Leaders of microchip fabrication, cards, digital security activities. Leadership built from innovation, endogenously emerged from the original public investment, based on common knowledge base. Important networks of SMEs.
Secured Communicating Solution pole

Sophia Antipolis cluster: technopolis created to attract high value added activities, new local development strategy (traditional French regional policy), without any precise technological project. Accumulation of exogenous resources in vacant space, from decentralization of large French firms, and attraction of multinational (US) firms.

**Reverse technopolis**
General advantages, huge investment in telecommunication and Pierre Laffitte.
From ‘exogenous’ to ‘endogenous’ in the nineties, mobile technologies, specific local competences, knowledge bases
Secured Communicating Solution pole

‘from silicium to uses’
Pole SCS

- Database of R&D projects labelled
  - DGE
  - ANR
  - Region (PACA)
R&D projects

- 215 projects, 1125 partnerships
# R&D projects

<table>
<thead>
<tr>
<th>Académiques</th>
<th>Projets</th>
<th>Partenariats</th>
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<tbody>
<tr>
<td>Eurecom [06]</td>
<td>12</td>
<td>47</td>
</tr>
<tr>
<td>IM2NP [13]</td>
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<td>30</td>
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<td>INRIA [06]</td>
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<td>CMP [13]</td>
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<table>
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<th>Industriels</th>
<th>Projets</th>
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<tr>
<td>Gemalto [13]</td>
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<td>Orange Labs [06]</td>
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<td>ST Microelectronics [13]</td>
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<td>3ROAM [06]</td>
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<td>IBM [06]</td>
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<tr>
<td>Thales Communication</td>
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<tr>
<td>NXP [06]</td>
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<tr>
<td>Atmel [13]</td>
<td>1</td>
<td>11</td>
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</tbody>
</table>
R&D projects

Cluster [6]

Cluster [13]
Financed R&D projects

• 83 projects, 479 partners
Financed R&D projects
Network R&D projects
R&D projects 13
R&D projects 06
Conclusion:

• Poles: new synergies, interactions
  – projects

• SCS : aiming at
  – merge two clusters
  – ‘merge’ different technologies : from silicium to uses
  – solve organisational and cognitive distances
  • Results ?

  – ‘different ‘ cultures: ST vs. IBM, SMEs