

The French aerospace innovation cluster Aerospace Valley

May 2013

aerospace valley
Le collectif qui rend compétitif

Pôle de compétitivité mondial
Aéronautique, Espace, Systèmes Embarqués
Midi-Pyrénées & Aquitaine

Overall context - Launch of French “clusters”

In July 2005 in total 67 clusters were approved by the French government, 6 of them designated as “global”

LES PÔLES DE COMPÉTITIVITÉ
MOTEURS DE CROISSANCE ET D'EMPLOI

Supplément à la Lettre de l'Observatoire de l'Industrie
COMPETITIVENESS CLUSTERS IN FRANCE
www.polesdecompetitivite.fr

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Three aerospace clusters in France



Engines, electronics, etc.



Helicopters, lighter-than-air, UAV, etc.












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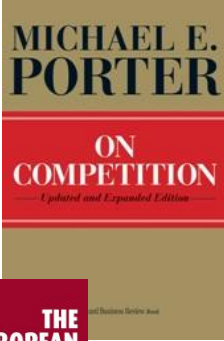

“Cluster” versus “pôle de compétitivité”

Michael Porter’s definition of cluster as:
“geographically proximate groups of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities”
 [Harvard, 1998].

Our interpretation:

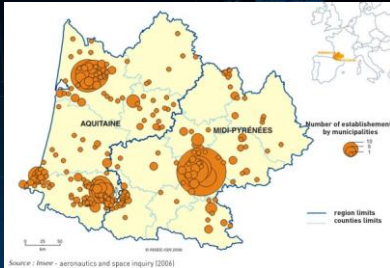
- a market oriented “cluster” focuses primarily on SMEs and the entire supply chain
- the regional “pôle de compétitivité” à la française are mainly technology oriented “think tanks” aiming at stimulating innovation and cooperation between industry, research and training (TRL 3-6).



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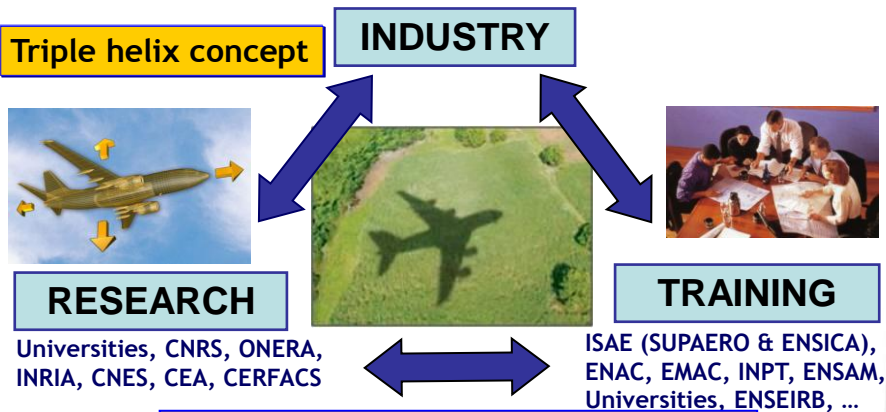
The Aerospace Valley Cluster Association



- Bi-regional aerospace cluster
- Activities: aeronautics, space and embedded systems
- Date of creation: July 2005
- Legal status: Association
- 625 members, of which 320 SMEs
- 7 electoral colleges
- President: Agnès Paillard, EADS
- Permanent staff: 22 people (+ “volunteers”)
- Budget for running costs: 1.6 M€ / year



EADS-Airbus, Latécoère, Dassault-Aviation, Sogerma, ...
 Thales Alenia Space, EADS-Astrium, EADS IW, SAFRAN, ...
 Alstom, Freescale, Continental, Thales Avionics, ...



Aeronautics, space and embedded systems:
 = 120 200 direct jobs in the Midi-Pyrénées and Aquitaine Regions (Dec 2010, source : INSEE)
 = 1/3 of overall French work force in these sectors
 Creation of 13 000 jobs in 2005-2009



• Product portfolio:

- Civil and regional aviation
- Business aviation
- Military aviation
- Turbo-engines
- Cockpits
- Land gear equipments, aero structures, etc
- Satellites
- Launchers, propulsion and atmospheric re-entry
- Space services
- Automotive and railway electronics

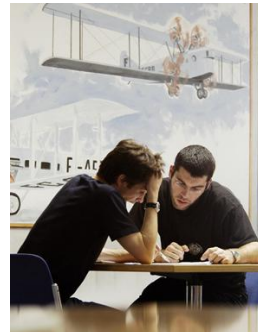


1500 industrial establishments
= 10 billion € annual turnover
= 80% of industrial work force member of Aerospace Valley



A European reference for research & training

- 8500+ researchers in public and private labs
- Over 80 specialized, public research centres
- 45% of the R&D potential in the aeronautics, space and embedded systems sectors
- High-level research centres:
 - CEA/CESTA, CNES, CNRM, INRIA, ONERA, CERFACS
 - CNRS laboratories, universities and major schools
- 2 of 3 major engineering schools in France:
 - ISAE (merger of Supaero & ENSICA)
 - ENAC
- 13 aerospace doctoral schools
- 6 universities and 12 "Grandes Ecoles" engineering schools offering education and training in the sectors of aeronautics, space and embedded systems.



A wide range of services offered to SME members

Financial engineering:

- assistance of SMEs
- access to loans at privileged rates
- Privileged access to "Club d'investisseurs"

Collaborative R&D projects:

- Matchmaking SME – large firms – Research and training organizations
- Orientation on IPR issues
- Shared space for documentations, etc.
- Valorization of projects and "bring to market" actions

Pole de compétitivité



Networking:

- Seminars of the technical DAS
- Conferences, TEA-times
- Annual technical Aerospace Valley Forum
- Information on large R&D programs : FP7, CORAC, Clean Sky, etc.

Internationalization:

- Organization of matchmaking events
- Paris Airshow
- Participation to international events (shows, b2b-events, Innovation Fora, ...)
- V.I.E



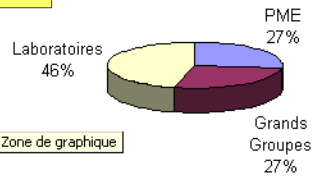
Cooperative projects resulting of nine strategic business areas

- AMP - Aero-mechanics, materials and procedures
- ESE - Energy and electro-mechanical systems
- SSTA - Air transport safety and security
- NPTO - Navigation, positioning, telecommunications, observations
- SEL - Electronic and software intensive Systems
- IHS - Human-system interface
- GMMCO - MRO, Maintenance Engineering and in-service support
- UF - Factories of the future
- SCI - Complex systems and integration



R&D Funding mechanisms

Status December 2012:
560 projects approved by Aerospace Valley
300 projects finally financed with
accumulated 1600+ participants



- Total value of financed projects: **833 M€**
- Total amount of private funding: **480 M€**
- Total amount of public funding: **353 M€ (41% of FUI)**
(public funding for SMEs: 100 M€)

Technology transfer challenges for AV

- How to facilitate the transfer of research results to the SMEs ?
- How to facilitate the transfer of technology from research to SMEs ?
- How to stimulate the creation of new companies from the research results ?
- How to improve the number of laboratories involved in collaborative projects ?