The French aerospace innovation cluster Aerospace Valley

Coordinated by The Ministry of Defence

January 2013

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Le collectif qui rend **compétitif**

Pôle de compétitivité mondial

Aéronautique, Espace, Systèmes Embarqués

Midi-Pyrénées & Aquitaine

MINISTÈRE DE LA DÉFENSE ET DES ANCIENS COMBATTANTS

RÉGION MIDI-PYRÉNÉES

RÉGION AQUITAINE

Grand Toulouse COMMUNAUTÉ URBAINE

LACUB

LES PÔLES DE COMPÉTITIVITÉ

Presentation of the bi-regional dimension and impacts

International cooperation will be presented by Thilo Schoenfeld

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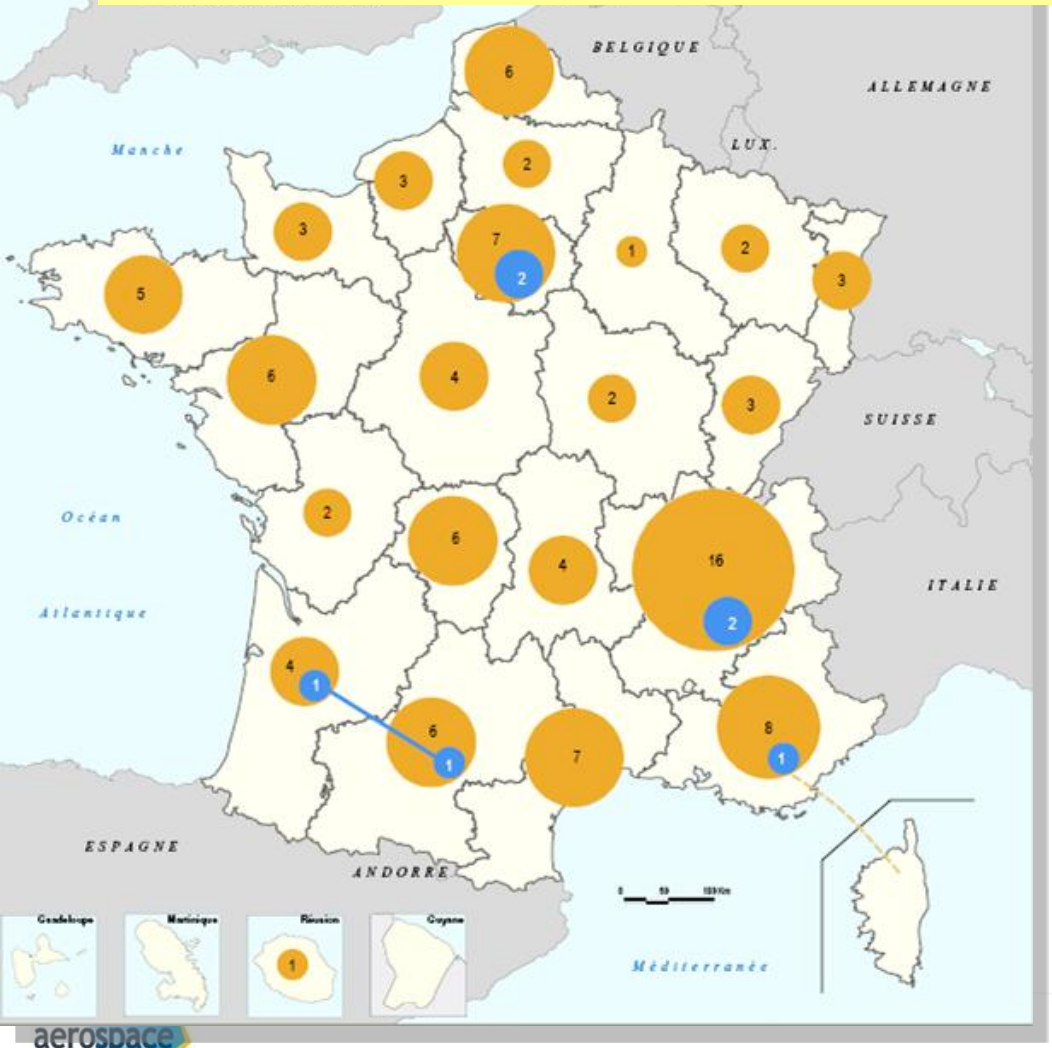
LES PÔLES DE COMPÉTITIVITÉ

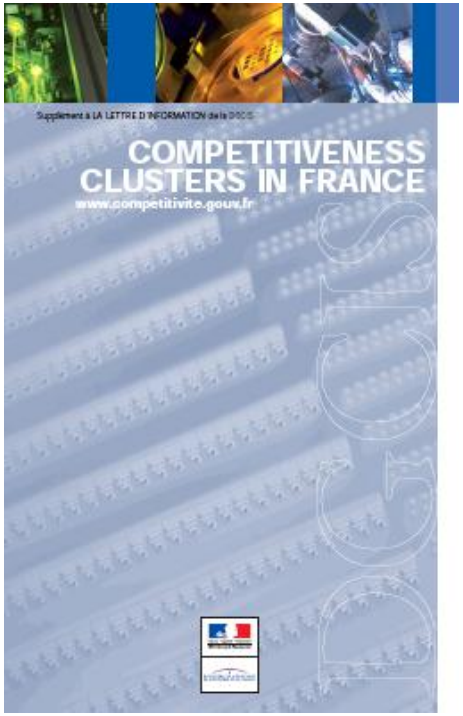
Overall context - Launch of French “clusters”

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



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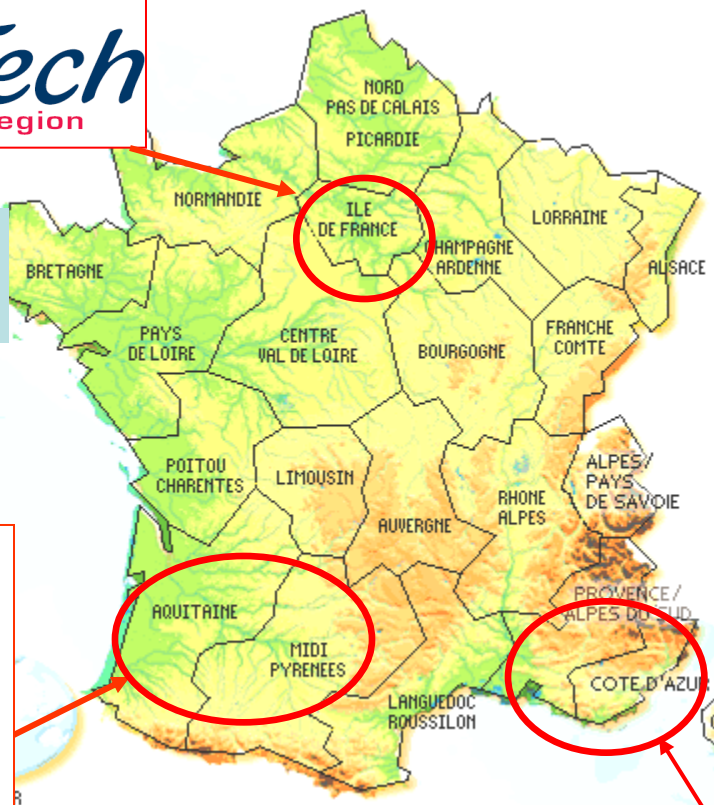
Three aerospace clusters in France

ASTech Paris Region

Engines, electronics, etc.



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PEGASE

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

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The European cluster policy: 2000+ clusters in Europe

EC: "*Clusters are seen as an important factor for geographical concentration of economic and innovation activities*".

The concept of clusters comprises 3 dimensions:

1. Cluster firm benefit from an "agglomeration effect"
2. Clusters facilitate competition *and* cooperation ➔ "co-opetition"
3. Clusters are characterised by a "social glue" that hold different actors together

the regional french "pôles de compétitivité" are mainly technology oriented "think tanks" aiming at stimulating innovation and cooperation between industry, research and training

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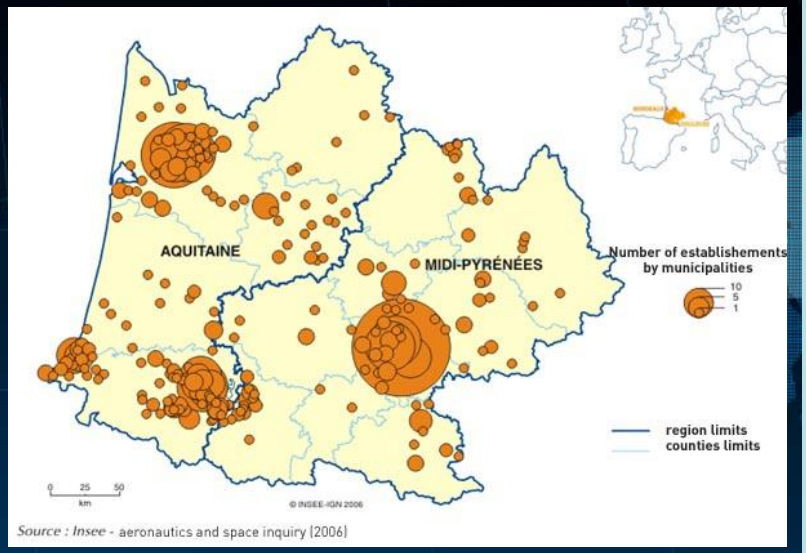
The Aerospace Valley Cluster Association



- Bi-regional aerospace cluster
- Activities: aeronautics, space and embedded systems
- Date of creation: July 2005
- Legal status: Association formed by companies, research centres, training centres and local and regional authorities
- Oct. 2012: 580 members, of which 283 SMEs
- 7 electoral colleges
- President: Agnès Paillard, EADS
- Permanent staff: 19 people (+ “volunteers”)
- Budget for running costs: 1.6 M€ / year

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Liberté • Égalité • Fraternité
MINISTÈRE DE LA DÉFENSE

RÉGION AQUITAINE

RÉGION MIDI-PYRÉNÉES

COMMUNAUTÉ URBAINE DE BORDEAUX
LACUB

le Grand Toulouse
communauté urbaine

LES PÔLES DE COMPÉTITIVITÉ
MOTEURS DE CROISSANCE ET D'EMPLOI

The mission - 8 main objectives

Market

- **Objective 1**: To preserve a leading global position in **civil/military aeronautics**
- **Objective 2**: To foster a leading position in Europe in the **space sector**
- **Objective 3**: To strengthen its position in the field of **embedded systems** (including ground transportation modes: automotive and rail)

Eco-system

- **Objective 4**: To be confirmed as a global reference in the field of **training and R&D**
- **Objective 5**: To moderate and to coordinate the network of French aerospace "pôles"
- **Objective 6**: **To valorize the innovation potential of SME** and start-ups in aeronautics, space and embedded systems
- **Objective 7**: To constitute an obstacle against potential threats by adapting to globalization constraints while **preserving a solid technological foundation in France**
- **Objective 8**: To promote a sound sustainable development policy.

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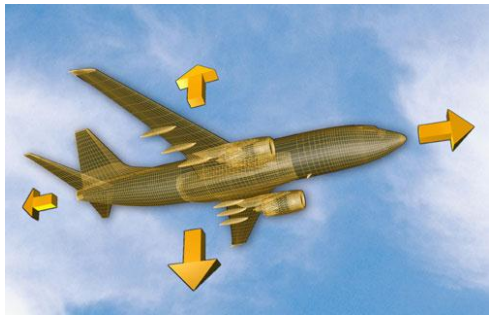
EADS-Airbus, Latécoère, Dassault-Aviation, Sogerma, …
Thales Alenia Space, EADS-Astrium, EADS IW, SAFRAN, …
Alstom, Freescale, Continental, Thales Avionics, …

Triple helix concept

INDUSTRY



RESEARCH

Universities, CNRS, ONERA, INRIA, CNES, CEA, CERFACS

TRAINING

ISAE (SUPAERO & ENSICA), ENAC, EMAC, INPT, ENSAM, Universities, ENSEIRB, …

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 and 45 000 foreseen in the next 20 years

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A wide range of services offered to SME members

- Access to **loans at privileged rates negotiated** by Aerospace Valley to co-finance RDI projects

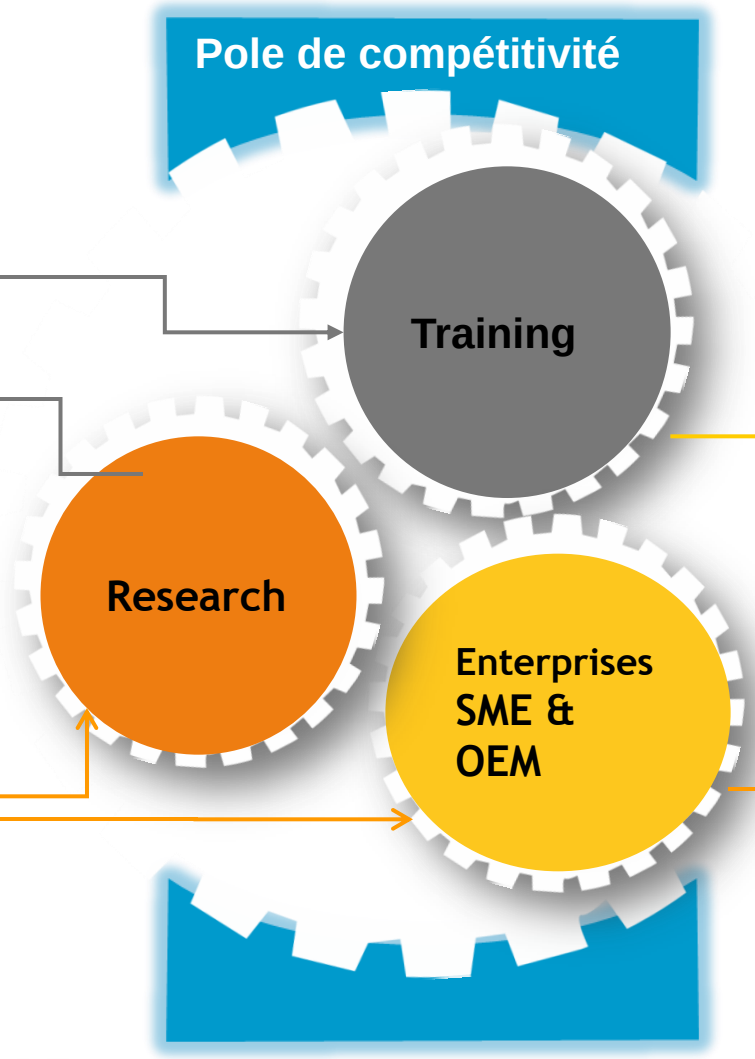
- Assistance to **financial engineering** of SMEs

- Privileged access **to "Club d'Investisseurs"**

- **Collaborative projects:**
  - ➢ Matchmaking SME - OEMs – Research and training organizations
  - ➢ Accompaniment of project coordinators

- Orientation on IPR issues

- Shared space for documentations, etc.



- **Networking and strategic visions:**
  - ➢ Seminars of the technical DAS
  - ➢ Initiation of projects
  - ➢ Conferences
  - ➢ Annual technical Aerospace Valley Forum
  - ➢ Information on large R&D programs : FP7, CORAC, Clean Sky, etc.

- **Valorization of projects** and industrial development of SME,…

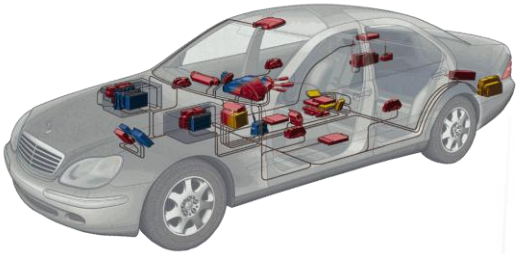
- **International relations of/between SMEs** and organizations

- **Interactive directory** on training activities

9 « Strategic Business Areas » (DAS)

Federal Programs R&D

R&D Cooperation projects



3 Transversal Activity Domaines (DAT)

Pivotal Projects

- Infrastructure/territorial
- Economic development & inward investment
- Training, Education, job & skills needs analysis

Cooperative projects resulting of nine strategic business areas ("think tanks")

1. Aero-mechanics, materials, structures
2. Energy, propulsion, engines and access to space
3. Air transport safety and security
4. Living Earth and space
5. Navigation, positioning, telecommunications
6. Embedded systems
7. General engineering and collaborative automated production
8. Maintenance, services, training
9. Autonomous aerospace systems

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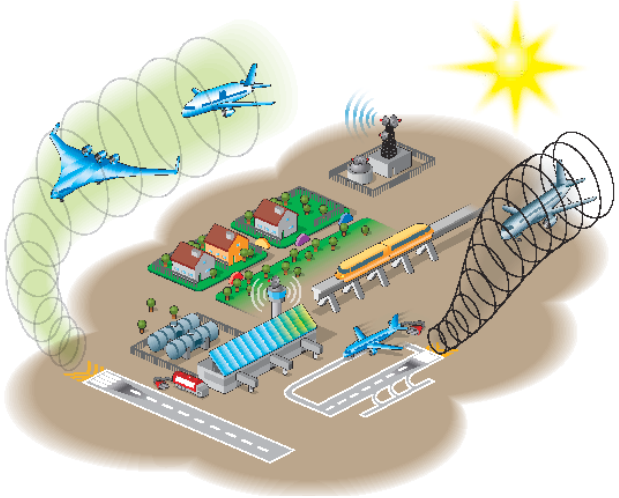
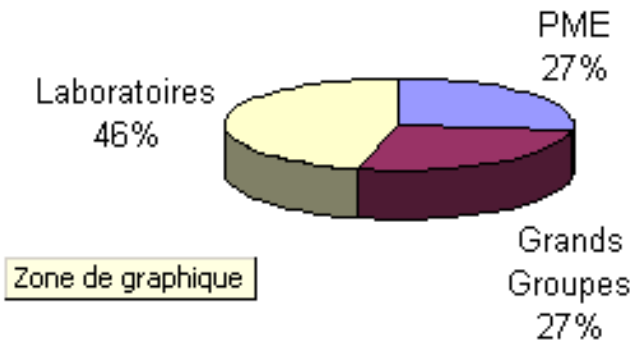
R&D Funding mechanisms



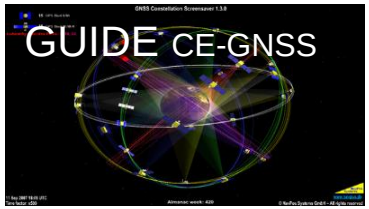
Status january 2013:
499 projects + 46 structuring projects approved by Aerospace Valley
276 projects finally financed
accumulated 1900 participants

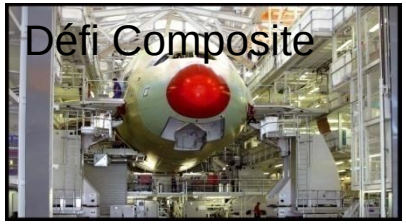


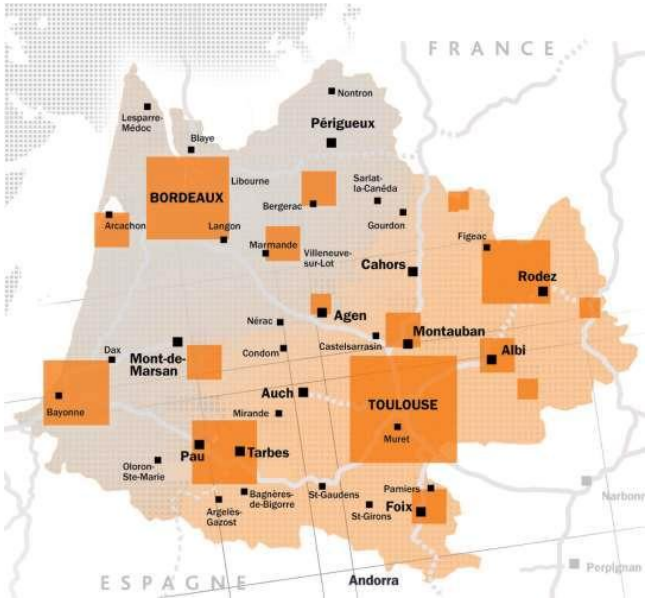
% participation

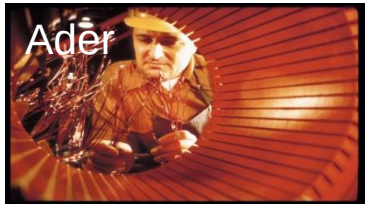
- Total budget of financed projects: **742 M€**
- Total amount of private funding: **426 M€**
- Total amount of public funding: **316 M€** (45% of FUI)
  (public funding for SMEs: 80 M€)

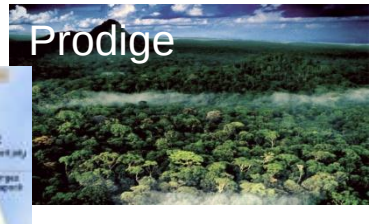
Structuring dual Projects – full geographical coverage











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Some economic impacts (INSEE 2012) and proposals

- The french institution for statistics , INSEE ,has decided in its biregional annual report, to measure some economic impacts issued by the Defence actor
- Globally 50% of the companies generating aerospace activities benefit from Defence orders in the 2 Regions .Their turnover with Defence is mainly concentrated in large or mid size companies
- However,several hundred SMEs, often subcontractors, realise a part of their turnover in military activities (between 5% and 25%)
- The most dedicated sectors represent a wide range of high technologies of dual use, as ICT, electronics (embedded systems) and optics, chemistry,materials,Aeromechanics,structures,enginering
- Undoubtedly, Aerospace Valley, through defence oriented activities, creates a synergy between the different actors and contributes to research enhancement and qualified job creation.
- For the future there is a reflection about the settlement in the 2 regions of a «platform» of private and public investors,from national or regional origin,to finance equities, loans,and guarantees for R&D and innovative products,as implemented in other european clusters.The french Dga develops a specific policy towards SMEs and mid cap companies (ETI) encouraging them to regroup and to ameliorate their financial capacities
- It could be useful in the new european budget to reinforce the RSFF program and to use with more flexibility the structural funds, giving them a real ability to finance innovation with a leverage effect.

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