



Aeronautics, Space, Embedded Systems

AEROSPACE VALLEY

MIDI-PYRENEES & AQUITAINE

WORLD

COMPETITIVENESS

CLUSTER



The French aerospace innovation cluster Aerospace Valley

February 2014



Three aerospace clusters in France



Engines, electronics, etc.



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

The European cluster policy

EC: *“Clusters are seen as an important factor for the explanation of the empirical phenomenon of geographical concentration of economic and innovation activities”.*

→ Cluster Observatory: 2000+ clusters in Europe

The concept of clusters comprises 3 dimensions:

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



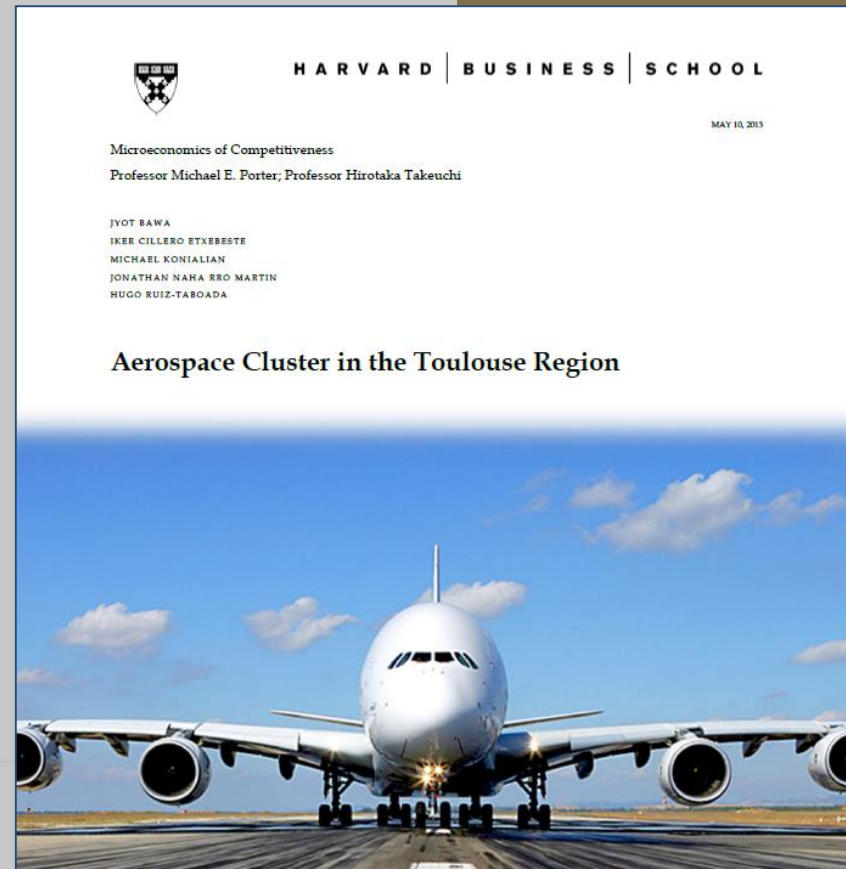
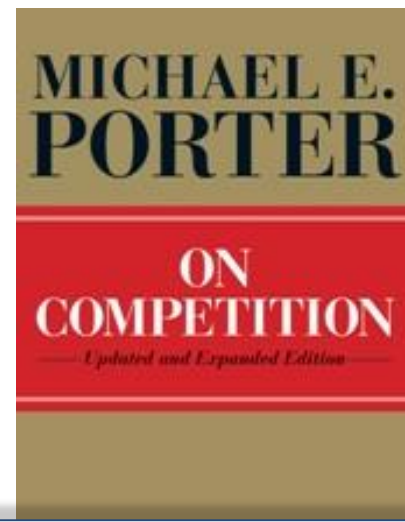
→ « Proximity creates value » (Michel Ktitareff, WDHB Green)

“Cluster” versus “pôle de compétitivité”

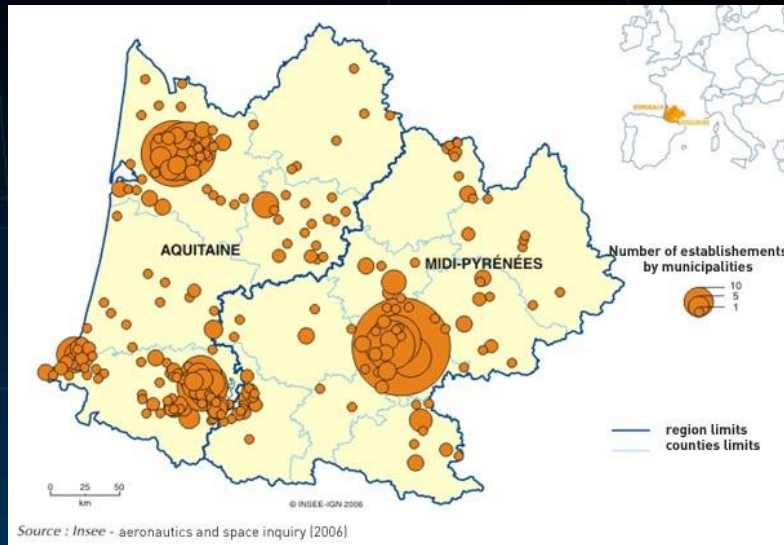
Michael Porter’s definition of cluster as:
“geographically proximate groups of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities”
[Harvard, 1998].

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).



The Aerospace Valley Cluster Association



- Bi-regional aerospace cluster
- Activities: aeronautics, space and embedded systems
- Date of creation: July 2005
- Legal status: non-profit association formed by companies, research centres, training centres and local and regional authorities
- Dec. 2013: **673** members, (382 SME)
- 7 electoral colleges
- Permanent staff: 22 people (+ “volunteers”)
- Budget for running costs: 1.6 M€ / year



6 main objectives for phase 3 (2013-2018)

1st objective

To foster innovation, collaborative projects, networking

2nd objective

To support of SME, accompaniment to the development of their competences, growth and bith national and international competitiveness

3rd objective

To represent à reliable partner of the public stakeholders for the development of our territories, economy and employment

4th objective

To ensure cooperation of the different branches of AV with the other French aerospace innovation clusters, national professional committees, unions, groups,

...

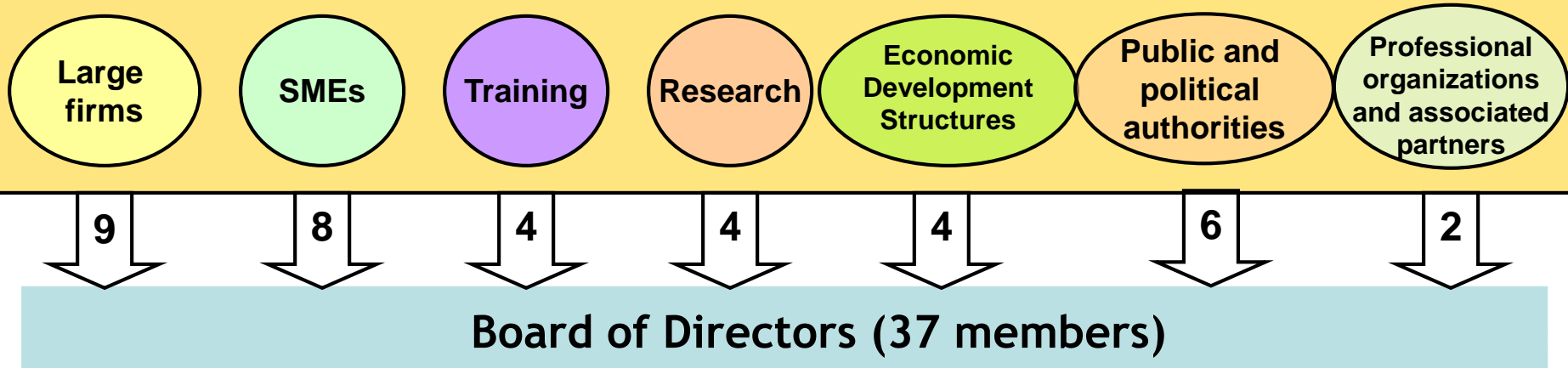
5th objective

To diffuse the technologies of the aeronautics, space and embedded systems sectors towards other branches, in particular via l'interclustering activities

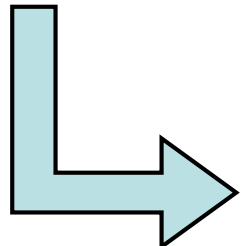
6th objective

To conduct projects and initiatives in a sustainable development framework

General Member Assembly (7 electoral colleges)



Board of Directors (37 members)



Executive Bureau

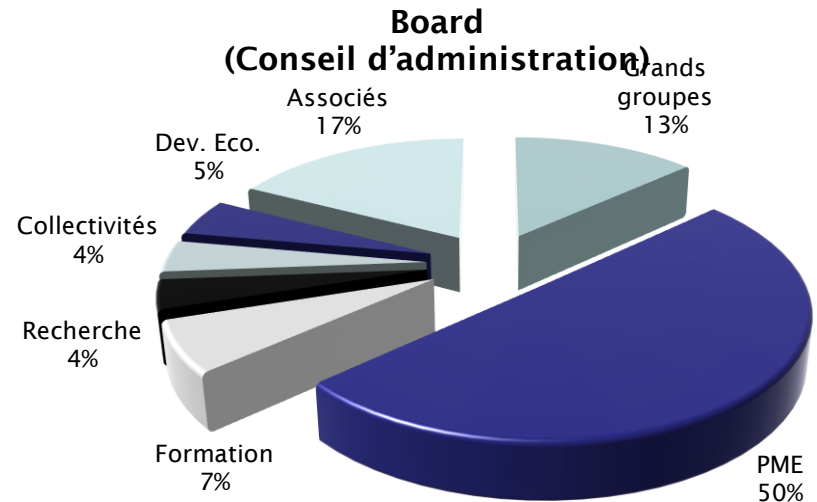
- Président
 - Vice-Président
 - Secrétaire Général
 - Trésorier
 - Trésorier Adjoint
 - Secrétaire
- Elected by college 1 « Large firms »
- Elected by colleges 1-5: Large firms, SMEs, Training, Research, Economic Development Structures



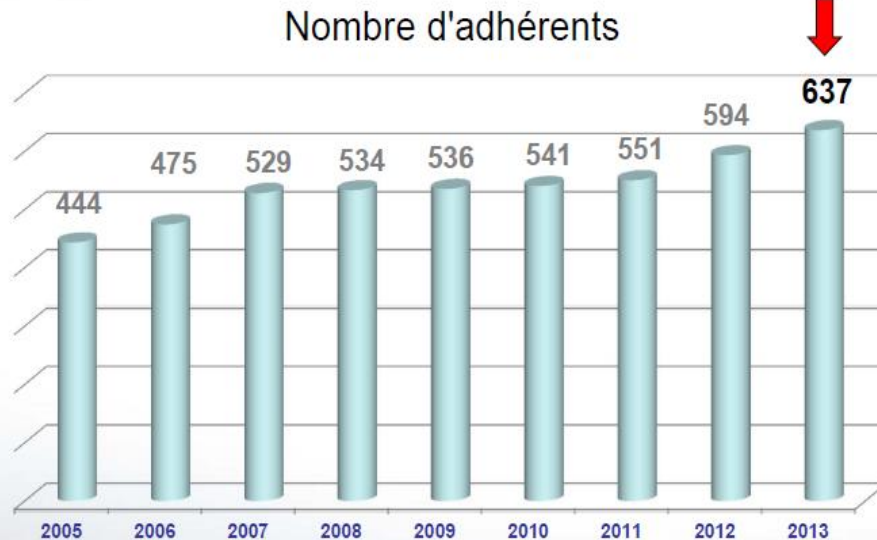
Our members & Board



President: Agnès Paillard
(Airbus Defense & Space Aquitaine)

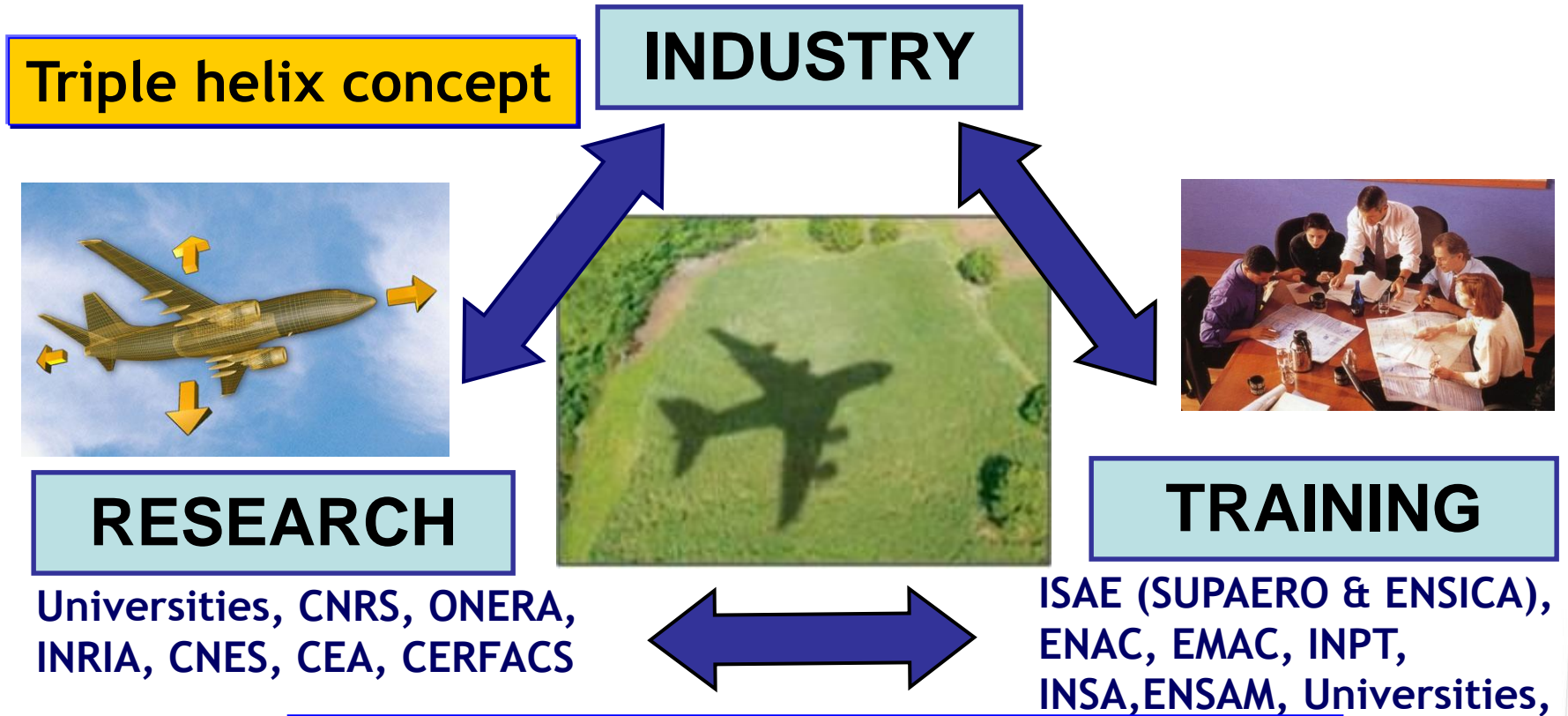


à mi-année
↓



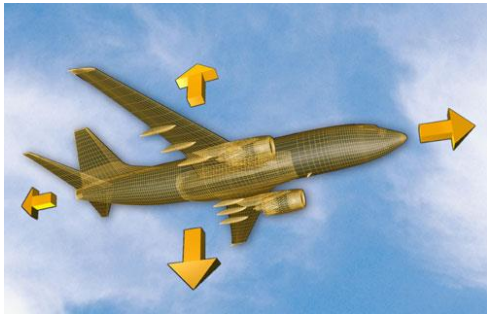
Vice-President: André Benhamou
(Liebherr Aerospace)

Airbus, Latécoère, Dassault-Aviation, Sogerma, ...
Thales Alenia Space, Airbus Defense & Space, SAFRAN Group, ...
Alstom, Continental, Freescale, Thales Avionics, ...



Triple helix concept

INDUSTRY



RESEARCH

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



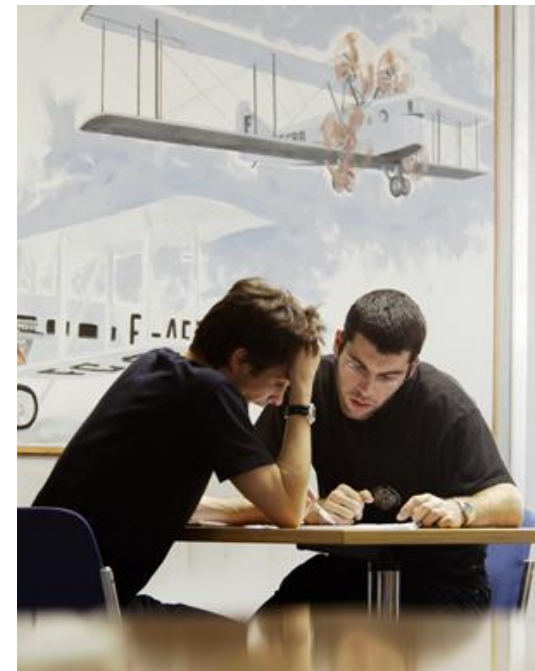
TRAINING

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

Aeronautics, space and embedded systems:
= 120 200 direct jobs in the Midi-Pyrénées and
Aquitaine Regions (Dec 2012, source : INSEE)
= 1/3 of overall French work force in these sectors
Creation of 13 000 jobs in 2005-2009

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, 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
- Training centers & schools : Aerocampus, etc.
- 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



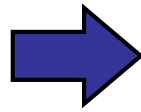
Networking:

- Seminars of the technical DAS
- Conferences, TEA-times
- Annual technical Aerospace Valley Forum
- Information on large R&D programs : H2020, COSME, CORAC, Clean Sky, etc.

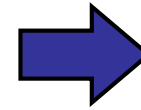
Internationalization:

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

9 « Strategic Business Areas » (DAS)



Federal Programs R&D



R&D Cooperation projects



Structuring projects



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

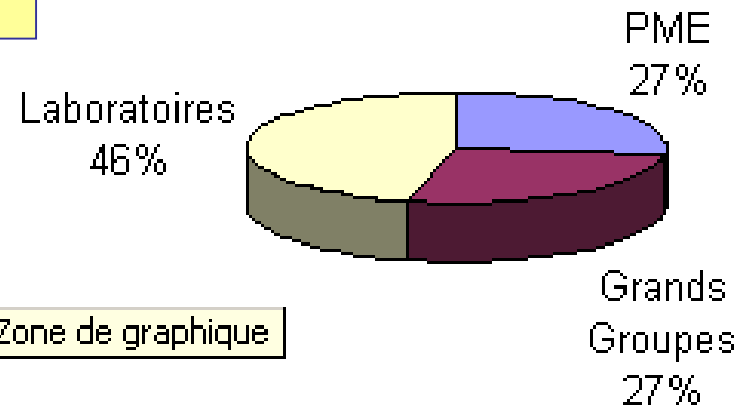
Cooperative projects resulting of nine strategic business areas

- AMP - Aero-mechanics, materials and procedures
- ESE - Energy and electro-mechanical systems
- SSTA - Air transport safety and security
- NPTO - Navigation, positioning, telecommunications, observation
- SE²L - 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 September 2013:

- 679 projects internally approved by Aerospace Valley committee
- 334 projects finally financed with accumulated 1600+ participants



% participation

Zone de graphique

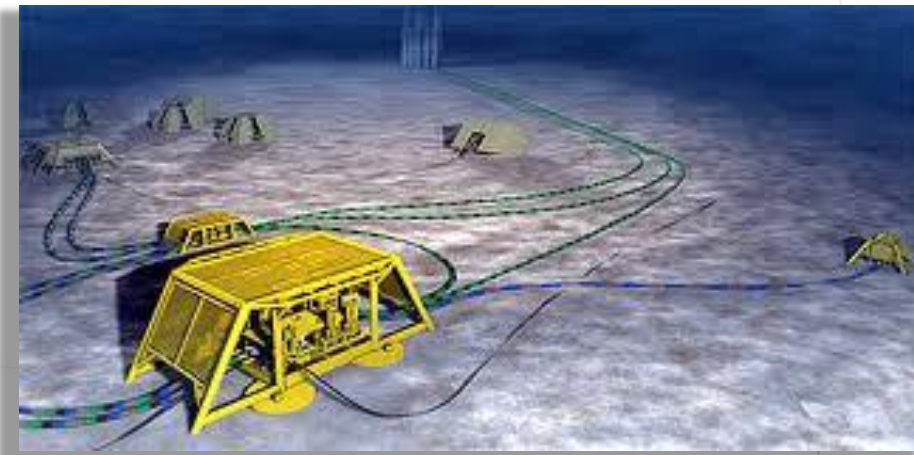
- Total value of financed projects: **888 M€**
- Total amount of private funding: **515 M€**
- Total amount of public funding: **373 M€ (41% of FUI)**
(of which public funding for SMEs: 100 M€)

technology push & market pull

Diversification

With Aerospace Valley entering phase 3.0:

- More focused on market needs and tendencies
- Core markets
 - Aeronautic
 - Space
 - UAV
- Diversification markets
 - E-health
 - Agriculture
 - Energy
 - ITS

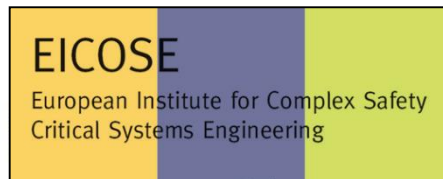


International Cooperation

Target countries



International Cooperation



- Formal agreements signed with AéroMontréal, Skywin Wallonia, HEGAS (ES), Aviation Cluster Hamburg, Farnborough Aerospace Consortium and CECOMPI (BR)
- MoU-agreements with non-cluster organizations: IAS, CCEF, AVSI, ADEC-NS
- Further contacts and informal exchanges with e.g. BavAIRia (DE), Tianjin (CN), etc.
- Forum of exchanges between European aerospace clusters through EACP initiative
- Participation to EC-projects (CSA, Regions of Knowledge)
- Overall international coordination with GIFAS

Upcoming international events in the Aerospace Valley area

- *Toulouse Space Show*: International week on space applications, 30 June - 2 July 2014
- *ADS- and UAV-Show*, Bordeaux Mérignac, 11-13 September 2014
- *ICS - Innovation Connecting Show*, Toulouse, 16-18 September 2014
- *Aeromart Toulouse*, 2-4 December 2014
- *Intelligent Transport Systems World Congress*, Bordeaux, 5-9 October 2015



**Partagez.
Innovez.
Gagnez.**

Merci !

**aerospace
valley**



Le collectif au service du
compétitif

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

23 avenue Edouard Belin
31400 TOULOUSE - FRANCE
Tél. : +33 (0)5 61 14 80 30
Fax : +33 (0)5 62 26 46 25

lattes@aerospace-valley.com

www.aerospace-valley.com

