Fondation de Coopération Scientifique
Sciences et Technologies pour
l'Aéronautique et l'Espace

Thematic Network for Advanced Research

« Aerospace Sciences & Technologies »

(STAE)

Aveiro

24/11/2011

FOUNDATION FOR SCIENTIFIC COOPERATION

MIXED FINANCING by FOUNDERS :

State (Ministry of Research)

Public organisms (PRES, CNRS, CNES, IRD, ONERA + Météo-France)

Private Association TOMPASSE (AIRBUS, ACTIA, AEROCONSEIL, ASTRIUM, FREESCALE SEMICONDUCTEURS, LATECOERE, LIEBHERR, RATIER FIGEAC, SAFRAN, SIEMENS AUTOMOTIVE, THALES ALENIA SPACE, THALES AVIONICS)

MAIN SCIENTIFIC ACTORS

teams from 25 laboratories of the MiPy region

(~ 1000 persons)

MAIN OBJECTIVES

1. Promoting excellence and multi-disciplinary work in the **Midi-Pyrénées region** for basic research in aeronautics, space and environmental domains

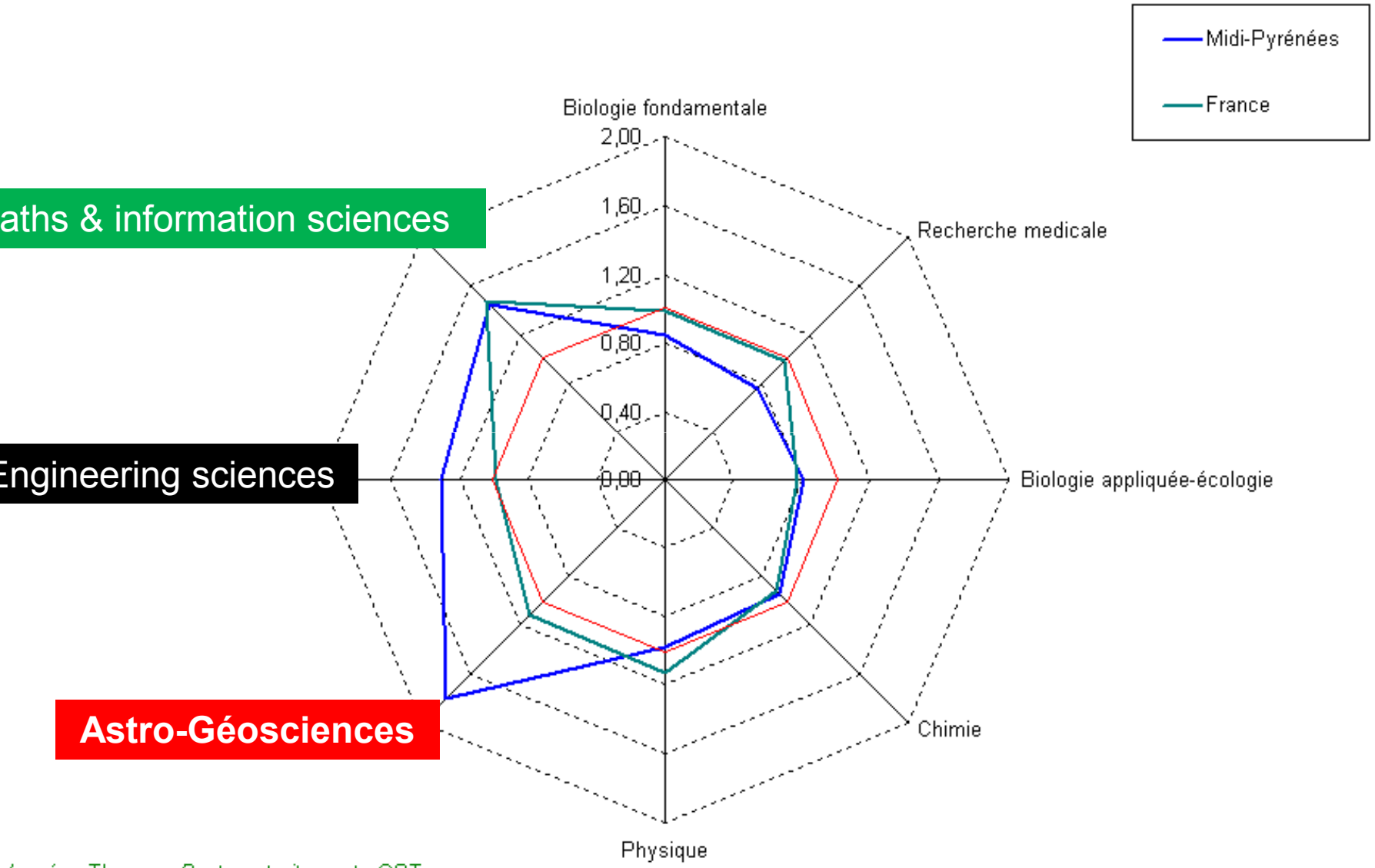
2. Improving the scientific human potential

3. Developing new avenues for innovation and future technology

Maths & information sciences

Engineering sciences

Astro-Géosciences

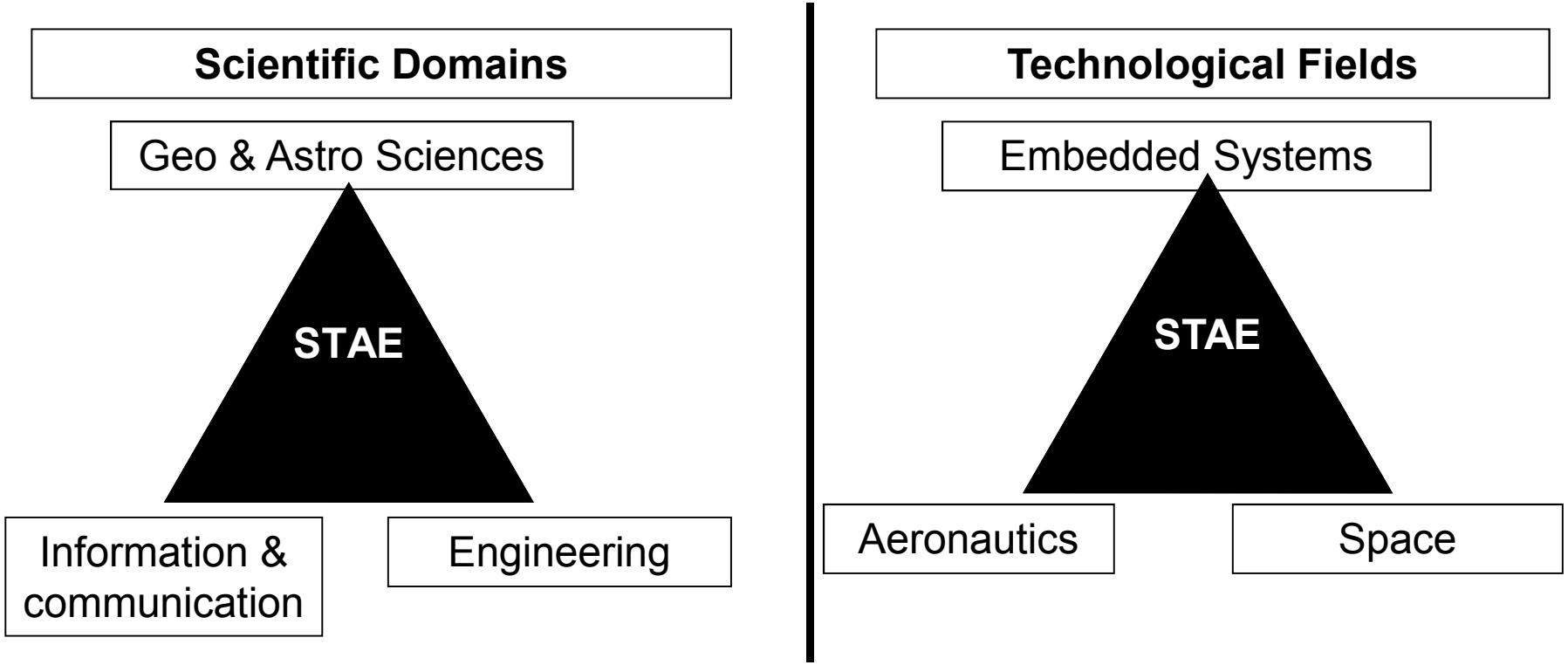


Données Thomson Reuters, traitements OST

Index of specialization of Midi-Pyrenées

3 SCIENTIFIC DOMAINS / 3 TECHNOLOGICAL FIELDS

« TO BUILD A COHERENT STRATEGY OF RESEARCH WITHIN A NETWORK OF LABORATORIES … »



« … IN VIEW OF LONG TERM DEVELOPMENT AND TECHNOLOGOICAL INNOVATIONS »

PRINCIPLES

1. **A common strategy to increase :**
   1. **Networking and scientific interaction belween labs**
   2. **International visibility of the researches (18 nationalities)**
2. **Risky business (TRL<3)**
   1. **Interdisciplinarity**
   2. **Conceptual émergence** (≠ usual funding agencies !)
3. **Annual budget ~ 3 M€** :
   1. **Human Ressources (70%)** : Post-doc, ingénieurs (~ 40 FTE)
   2. **Financial support** (20 %) : équipments, sub - contractor
   3. **Functioning**(10%): staff, Communication,Taxes,…
4. **Minimum technocracy for maximal reactivity**
   1. **Director / Executive committee/ Board of trustees/Scientific council**
   2. **One cheque-book !**

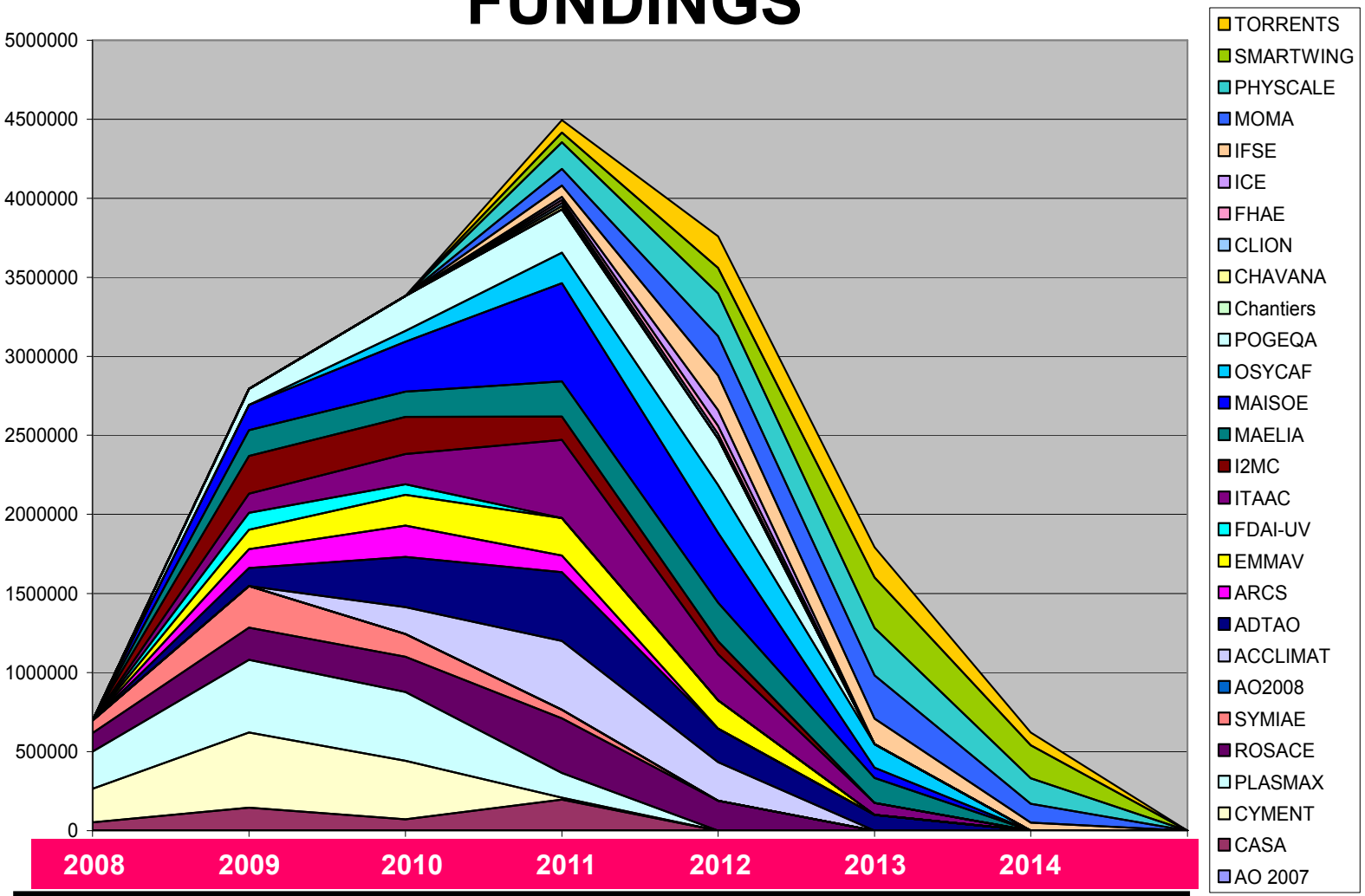
TOP DOWN : « WORKING GROUPS »

- **High Perfomance Calculus**
  - Programing breakthrough : péta to exaflops
  - Toward an « HPC écosystem » in MiPy
- **Environmental space services (GMES)**
  - Management of territories
  - Control of natural resources
- **Processes for new matérials**
  - Airplanes structures
  - Global house keeping & controls

BOTTOM UP : PROJECTS 2007/2008

Environmental observation & modelization	CYMENT : Spatial follow up of water cycle
	POGEQA : Air quality from geostationary orbits
	ITAAC : Climatic impacts of air trafic
	ACCLIMAT : Micro-climatic evolutions of cities
Airplanes sructures & functionalities	PLASMAX : Electromagnetic protection by plasma tools
	EMMAV : Eectro-actifve morphing of airtplane wings
	OSYCAF : Optimisation of the conception of airplane wings
	ARCS : Wear (& tear) of structural materials
	I2MC : Follow-up of constrained composite materials
Instrumentation and embedded systems	SYMIAE : Active Microsystems for embedded antennas
	MAISOE : Micro-laboratories for water quality
	CASA : Low cost electronics for spacs sensors
	FDAI-UV : Diffractive lens for FUV astronomy in space
Simulation of Complex Systems	ADTAO : Data assimilation for Very Complex Systems
	MAELIA : multi-agents modelization of low-water management
	COFFECI : Complete modelization of a turbo motor
	ROSACE : Robotic autonomous system for rescue services

FUNDINGS



Call for projects in 2007, 2008, 2010

Engaged : ~ 20 M€ ; Spent : ~ 10 M€