



# Clear strategies



cea

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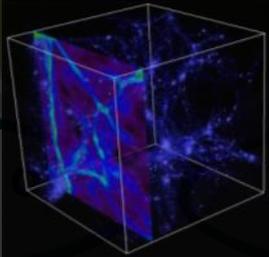
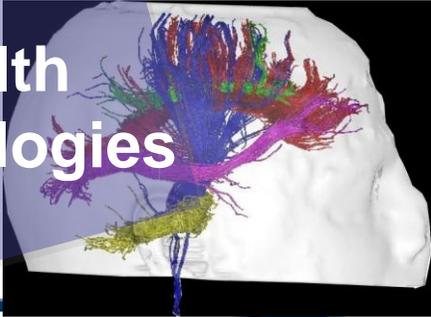
**Defense**

**Energy**

**Technologies  
for  
Information**

**Fundamental  
research**

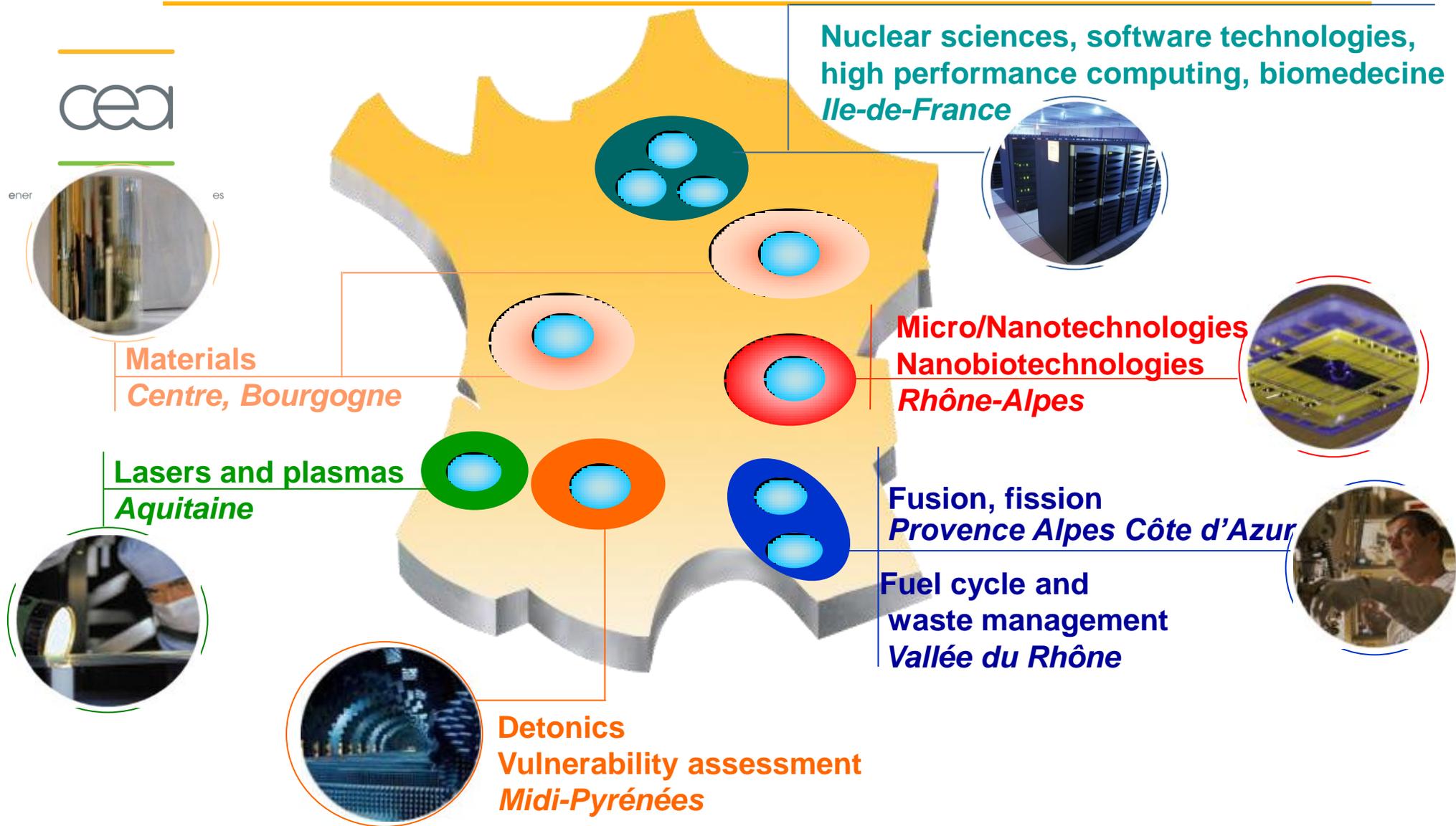
**Health  
Technologies**



**Training and dissemination  
knowledge**

**Technology development and  
transfer**

# 10 Research Centres in France



# CEA activities : key figures



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- 15 582 employees
- Budget : € 3,5 BN, including € 2,3BN in subsidies

3 834 • Scientific **publications** (in 2007 ISI base)

1 234 • **PhD students**

2 852 • Delivered priority **patents** in portfolio

526 • Delivered priority patents deposited

196 • Active partnership **agreements** with industries

390 • Current licence agreements

109 • Spin-off **start-ups** created from the CEA since 1984

51 • Joint research groups

*key figures 2008*

# Non-greenhouse gas emitting energy



## Nuclear Energy

- Industrial Systems
- Optimisation of industrial use
- Large tools for development



## New technologies for energy

- Hydrogen and fuel cells
- Photovoltaic cells, energy storage and energy efficiency
- Gasification of biomass



## Fundamental Research in energy

- Controlled nuclear fusion, climate environment sciences
- Chemistry and radiation-matter interactions



## Large Infrastructures for Fundamental Research

- Sciences of matter, Cryotechnologies



## Radiobiology - Toxicology

- Radiobiology – Radiopathology
- Nuclear toxicology



# Technologies for information and health



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## Micro & nanotechnologies

- Microelectronics
- Microsystems
- Biology and health systems
- Telecoms and communicating objects
- Valorization and Technology Transfer



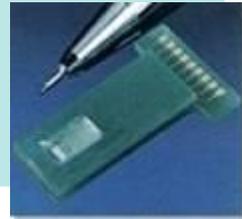
## Digital system technologies

- On-board and interactive systems
- Captors and signal processing



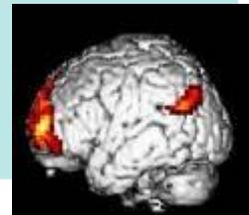
## Fundamental Research for health and information technologies

- Nanosciences
- Material sciences and complex systems



## Technologies for health and environment

- Labeling, Bio-molecules, biotechnologies
- Biomedical Imaging (in vivo), genomic



# CEA specificities : a corporate culture of project management

Expertise built upon 50 years of experience

- 400 project managers listed
- Specific training programs to lead projects



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**HPC Hardware**



**LMJ**



**Atalante**



**Minatec**



**Neurospin**



# CEA specificities : a dynamic policy of technology transfer

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➤ **Prior Partnerships** with industries, large groups (EdF, Areva, STM, Philips, etc.), as well as with SMEs : **196 partnerships ongoing**

➤ CEA is involved in more than **415 FP7 projects** (20 ERC grants, 44 Marie Curie actions, 2 Knowledge and Innovation Communities, etc.)

➤ **Patents : 526 in 2009**

incentives for patent applications :

- ✓ **licensing** of CEA-developed know-how to industries
- ✓ **extended incentives** including labs and developers
- ✓ new technology **transfer modes** (co-ownership, patent-pooling, etc.)  
ex : infra-red detectors, SOI, flat screens, etc.

➤ **Start-ups** in strategic technologies, **109 companies set up since 1984** :

- **Support for Start-ups:** CEA-Investment  
(current investment in 12 companies)
- **Support to Spin-offs:** specific provisions since 1999  
(incubation, training, right of return, etc.)

# CEA specificities : Education and training

## CEA is strongly involved in education and training



**Staff intensively involved in teaching within higher education schools and Universities : 1 500p, 23 000 h, 2/3 in nuclear and related topics**

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- **INSTN created in 1956 jointly with the French Ministry of research and higher education:**
  - Master degrees in cooperation with universities and «grandes écoles»
  - Training courses « on the job »
  - Seminars and Summer schools
  - Doctoral courses program
  - International cooperation
  - European projects and initiatives, Presidency of ENEN
  
- **CEA/INSTN is a key actor in coordination committee of French teaching programs in nuclear engineering**
  - English Master of nuclear engineering since September 2008
  - Supporting research skills and infrastructures
  - Internships, PhDs, teacher training
  - European and international involvement





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Ready to write the future with us ?

# You wish to join us :

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- **For an internship:**



[http://www.cea.fr/ressources\\_humaines/stages\\_et\\_formation\\_en\\_alternance](http://www.cea.fr/ressources_humaines/stages_et_formation_en_alternance)

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[stages@cea.fr](mailto:stages@cea.fr)

- **For a thesis:**

<http://www-instn.cea.fr>

- **For a job:**

[http://www.cea.fr/ressources\\_humaines/le\\_recrutement\\_au\\_cea](http://www.cea.fr/ressources_humaines/le_recrutement_au_cea)

<http://eurotalents.cea.fr>

