**Towards Excellent Research**

The French research and innovation system has undergone profound reforms: improved coherency of the current systems, reinforcement of public and private partnerships, and optimisation of the use of human and financial resources. Objective: increase the performance, visibility and international influence of French research.

**Independent, high-performance universities**

The law of 10 August 2007 regarding the liberties and responsibilities of universities reinforces the initiative abilities of universities in terms of education and research, and improves their visibility on the international scene.

**Innovative cooperation instruments**

Research and higher education centres (PRES, 15 in total at the end of 2009), advanced research thematic networks (RTRA, 13) and thematic research and health care centres (CTRS, 9) are in full expansion. Their vocation: to bring together the public research players and mutualise research and resources, particularly around themes with important scientific interest.

**Project Financing**

The National Research Agency is at the centre of the French research system. Its mission: to finance the research projects selected based on excellent international criteria. The agency functions essentially on requests for proposals: it invested nearly €4 billion in four years.

**Major international distinctions in 2007-2010**

- Nobel Prize in physics to Albert Fert
- Turing Award (computers) to Joseph Sitoskas
- Abel Prize in mathematics to Jacques Tits
- Wolf Prize in physics to Alain Aspect
- Nobel Prize in physiology and medicine to Françoise Barré-Sinoussi and Luc Montagnier
- Nobel Prize in physics to Albert Fert
- Nobel Prize in chemistry to Albert Fert
- Nobel Prize in physics to Alain Aspect

**French Research Figures**

- 2.08% percentage of GDP dedicated to research and development
- 38.7 billion euros: internal R&D spending
- 97,000 researchers and research teaching staff (full time) in the public research field
- 456,000 people (full time) participate in an activity related to research: 44% in the public sector, 56% in companies (2009)
- 80,000 PhD students in doctoral schools
- 14,000 new doctors each year
- 4 billion euros of research tax credit (2008)
- 1,200 agreements for PhD students in companies (2008)
- 200 innovative companies created each year
- 33 Carnot Institutes
- 71 competitiveness clusters, including 17 with international dimensions

**Increased support for R&D of companies and innovation**

The R&D departments of companies, public-private partnerships, creation and development of innovative companies are powerful engines of competitiveness and development.

**Strengthen R&D and innovation in companies**

- Simplification and increase of research tax credit
- Increased OSEO support for SMEs

**Encourage public-private partnerships**

- Attribute Carnot Institute labels and encourage contractual research
- Assist in technology transfer
- Support joint research
- Support competitiveness clusters
- Increase the number of industrial agreements to train PhD students in companies
- Tax exemption of patronage to finance doctorates

**Support the creation and development of companies with research potential**

- Grants for public research related business incubators
- National startup competition
- Status of young innovative companies and young university company

**Research and Innovation in France**

www.enseignementsup-recherche.gouv.fr
Les quatre piliers de la recherche

- Strong, independent universities
- High-performance research organisations
- Financing for project research
- Innovation

L’Espace européen de la recherche (EER)

- The ERA came into being in 2000 with the adoption of the Lisbon Strategy. It aims at making the European Union “the most competitive knowledge economy in the world by 2010”, thanks to the implementation of a European research policy which is coherent, concerted and founded on scientific excellence, competitiveness and innovation.

- The Ljubljana process, launched 15 April 2008, in Brdo (Slovenia), has given new impetus to the ERA. The ambition is to improve the efficiency of European research. This requires increased attractiveness, developing researchers’ careers, protecting research results, efficient management of large infrastructures, greater international opening and reinforced cooperation.

- During the Presidency of the European Union, from July to December 2008, France has devoted itself to helping advance the construction of the ERA and facilitating innovation in Europe. The central theme of the French presidency: “Science serving society”.

Research and higher education: Priorities within an international framework

France is pursuing a voluntarist policy in terms of research, scientific employment and higher education. What are the stakes? To reinforce the position of French research on the international scene, increase competitiveness and effectively meet the societal challenges of the 21st century, France’s ambition is also to actively participate in building the European research area and accept the challenges of science, the economy and society with its international partners.

Two laws to stimulate French research

- The programme law of 18 April 2006 for research, the legal translation of the “Pact for Research” between the State and the citizens
- The law of 10 August 2007 relating to the liberties and responsibilities of universities

Research and higher education:

- Research and higher education:
  - High-performance, innovative and attractive research
  - Strong, independent universities
  - High-performance research organisations
  - Financing for project research
  - Innovation

High-performance, innovative and attractive research

The French research policy is lead by the Ministry of Higher Education and Research. Research activities are carried out in research organisations, higher education establishments and companies. In total, 456,000 people are employed in this sector.

Who steers and defines the research policy?

The High Council for Science and Technology (HCST), placed under the authority of the Prime minister, advises on decisions in terms of research and innovation policies. The research tendencies, priorities and budgets are then defined by the government.

The priority fields as defined in the National research and innovation strategy:
- health, well-being, food and biotechnologies
- environmental emergency and eco-technologies
- information, communication and nanotechnologies
- nuclear technologies and the atomic industry

The ministry of Higher Education and Research devises, elaborates and implements the national research and innovation policy.

Where does the financing come from?

National spending in R&D is divided among administrations (€17.6 billion, 0.93% of the GDP) and companies (€21 billion, 1.15%).

- Public research laboratories are partly financed by university budget allocations, public research organisations and financing agencies, including the National Research Agency (ANR). They benefit from other subsidies from French Regions, charities, industries and Europe.
- As regards private research, the State, via the public establishment OSEO and the research tax credit, supports innovation programmes created by SMEs. France’s international appeal and its readiness to welcome foreign companies contribute to financing industrial research.

Who carries out research activities?

- Public research is lead mainly within the 83 universities, approximately 100 prestigious higher education institutions, about thirty multidisciplinary (CNRS) or targeted (Inserm, Inra, Inria, CEA, CNES, Ifremer) research organisations, and two foundations (Pasteur and Curie Institutes).

France employs 162,000 people (full-time) in the public research field, including 97,000 researchers.

- Private research employs 213,000 people. It is focused on four industrial branches: electronics, automotive, computer services and pharmaceutics.

Who does the evaluating?

The research and higher education evaluation Agency (AERES) independently evaluates the organisations and establishments of higher education and research, research activities and higher training courses.

The ministry in charge of research implements evaluation procedures of the performance and effectiveness of the national research and innovation system.