

Industry and academia collaboration in France outlook and promotion policy

Jean-Jacques GAGNEPAIN

President of ANR
(National agency for scientific research)

Modes of collaboration between industry and academia

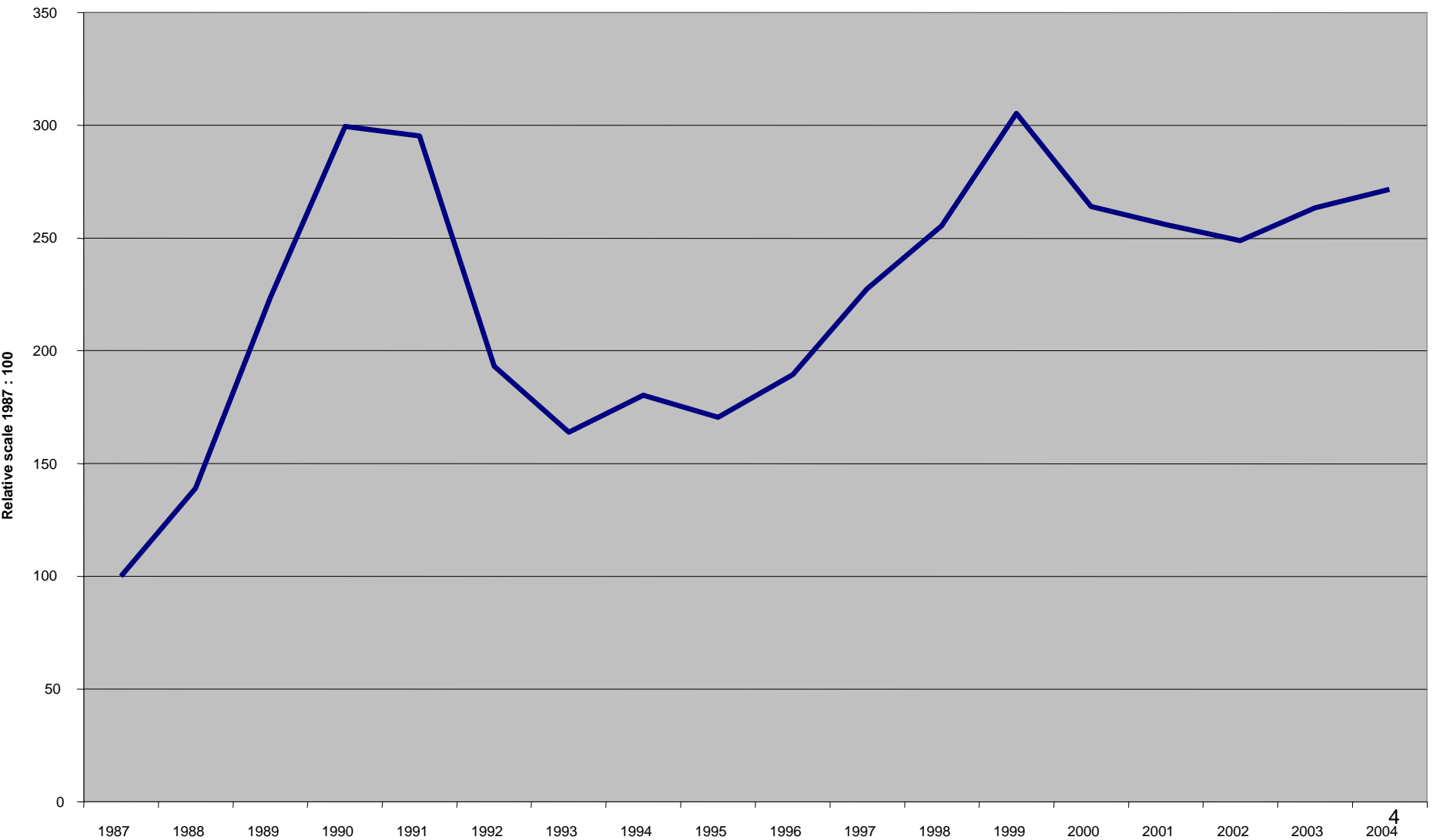
Three modes

- Joint contractual research
- Intellectual property and licensing
- Creation of innovative start-ups

Evolution of public/private collaboration

- Joint contractual research (1987-2003)
The example of CNRS

Research contracts signed by CNRS



Evolution of public/private collaboration

- Joint contractual research (1987-2003)
 - The example of CNRS
- Intellectual property
 - During the same period of time, different IP policies were experienced
- Start-up creation
 - Innovative companies were created from laboratories without public support until 1999
 - Since 1999, they have benefited from a specific policy

Current situation of public civil research and higher education in France

- 85 universities (all public)
- 252 various schools : engineering, professional and higher schools...
- 20 national research institutions
 - CNRS and CEA are the two mains institutions
- Faculty, research, staff (permanent) : 133 000
- PhD students : 30 000 with a fellowship
- Total budget : 12,9 billions €

Current situation of R&D in France

(in billion €- 2003)

Total : 34,5

| | Public | Private |
|--------------|------------|------------|
| Funding | 15,9 (46%) | 18,6 (54%) |
| Expenditures | 12,9 (37%) | 21,6 (63%) |

R&D investment amounts 2,2 % of GDP

around 1 % public

1,2 % entreprises

Comparison with other countries (expenditures ; % of GDP in 2003)

| | |
|--------------------------|-------------|
| Japon | 3,15 |
| USA | 2,60 |
| Germany | 2,55 |
| UK | 1,89 |
| Finland | 3,49 |
| Sweden | 4,27 (2001) |
| Europe (average of EU15) | 1,94 |
| France | 2,2 |

The European and French targets : 3% of GDP by 2010

Policy for the creation of new innovative companies

1. Law for innovation (1999)

Aim : to allow scientists working in public institutions (civil servants) to have relations with companies which use their research work

- To create and manage a new start-up
- To be an advisor in a company
- To be a member of the board of a company
- To take equity in a company (up to 49% since 2006)

Since 1999, 533 scientists have received an agreement, including more than 132 to create and manage their own company

Policy for the creation of new innovative companies

2. The annual contest « Creation of innovative technology companies »

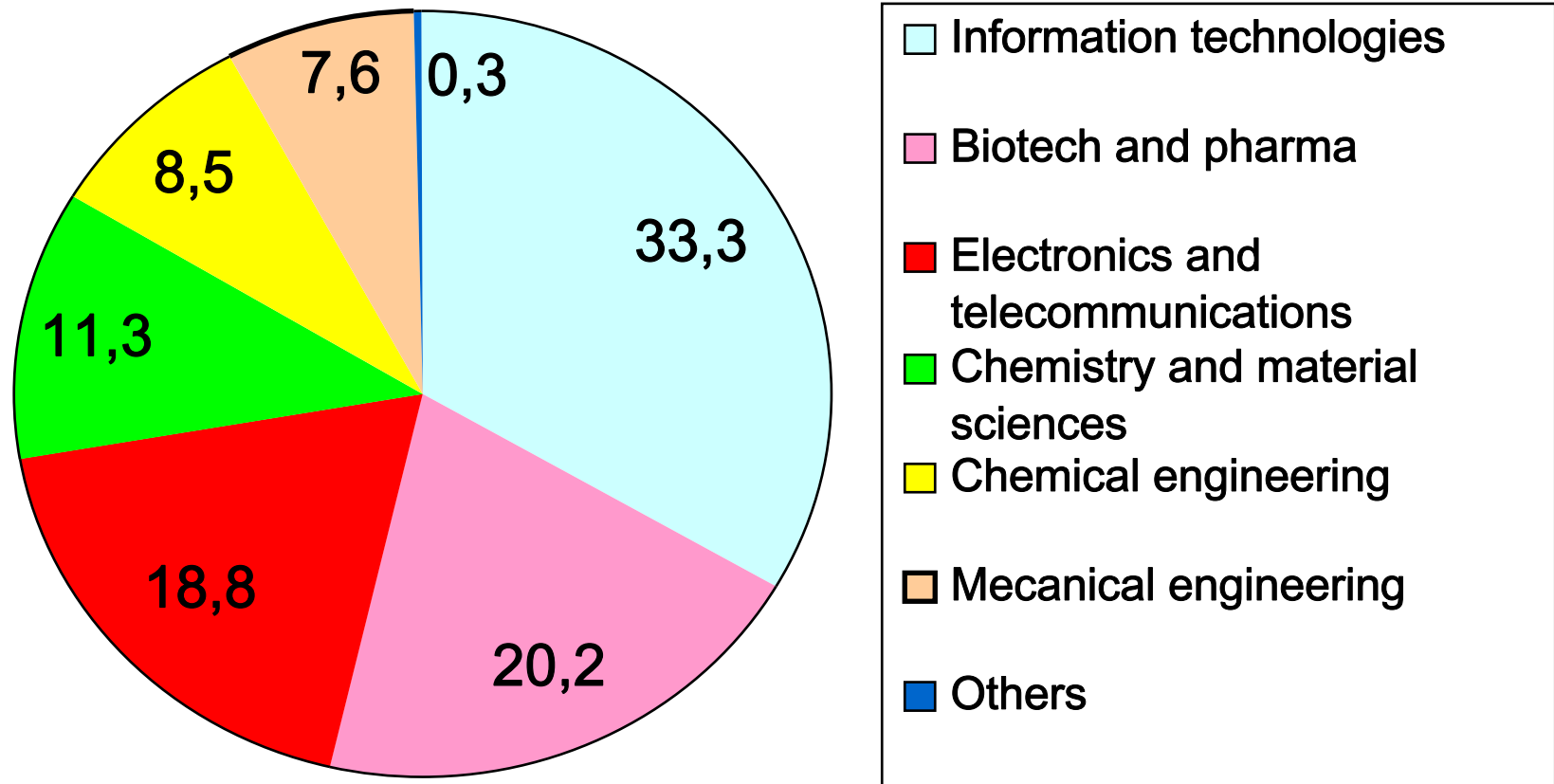
- Selecting and coaching the best projects
- Since 1999, 7 contests have taken place
- 10 625 applications
- 1 555 projects supported
- 800 companies set up
- almost 5 000 jobs created

Policy for the creation of new innovative companies

3. Public incubation programme (1999-2006)

- Promoting the creation of innovative start-ups
- Partnership with universities and other research institutions
- Close relationships with seed capital funds
- At the end of 2005
 - 28 incubators selected and operating for 5 to 6 years of activity experience
 - 1 400 projects in incubation
 - 850 companies set up
 - 3 560 jobs created

Policy for the creation of new innovative companies



Intellectual property 1997-2005

- 700 priority patent applications/year
- 70 M€ of licensing revenues/year
- Distribution of these revenues to the scientists : 50% for the inventors (2001)
- Bonus for patent application (2005)
- Bonus for licensing (2005)
- National campaigns for patenting (2003-2005)

The new law for research

- Two aims
 - Higher efficiency of public research
 - Higher funding of research by the private sector
- Funding
 - Increase of 20 billions € in public budget appropriation from 2005 to 2010
- By means of
 - a change in the organisation of higher education
 - a consistent evaluation of teaching and research activities
 - a development of industry/academia partnerships
 - an enhancement of innovation dynamics

Funding project-based research

Creation of ANR (National Agency for scientific Research)

- From basic research to research oriented through partnerships
- 800 M€ in 2006
- 30 programmes
 - life sciences
 - new technologies for energy
 - information and communication technologies
 - environment and sustainable development
 - nanotechnologies
 - safety
- 5 400 research proposals in 2005
- 1 200 projects supported

Funding industrial research and development

Creation of All (Agency for industrial innovation)

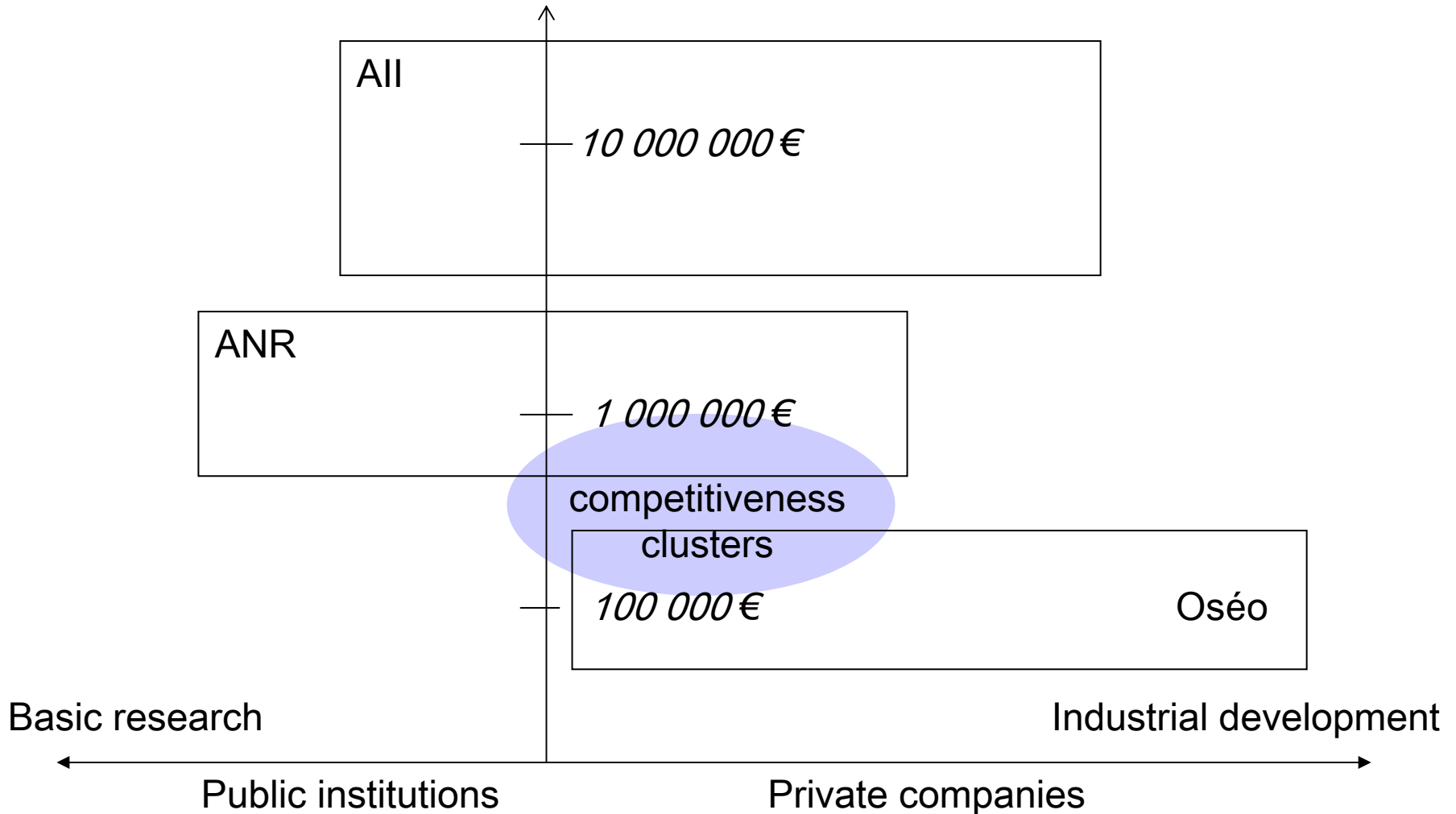
- Large industrial R&D programmes
- 1,7 billion € in 2006
- 6 programmes already selected
 - biotechnology and agri-ressources
 - automatic public transportation system
 - automobile : diesel electric hybrid car
 - mobile television
 - Internet search engine
 - home energy conservation

Funding industrial projects research in SME's

Creation of Oséo

- Merging of :
 - Anvar (national agency for innovation)
 - BDPME (Public national bank for SMEs)
- Budget appropriation for Oséo in 2006 : € 320 millions
 - Including € 120 millions for Oséo Anvar
- Supporting innovative projects in SMEs
 - More than 3000 projects supported in 2004

Project costs (€)



Public/private partnerships

- Technological research and innovation networks
 - Funded by ANR
 - Joint projects with public research and companies
 - Leverage : for 1 public €, 1,4 private €
 - 240 millions € in 2005
- Carnot Institutes
 - 20 labels in 2006
 - Bonus proportional to sponsored research contracts 40 millions € in 2006
- Competitiveness clusters
 - 66 clusters labelled in 2005, including 15 international clusters
- Integration of graduate students in companies
 - CIFRE (Fellowship shared by public labs and private industries)
 - 1 100 new CIFRE in 2005 ; target : 2000 new CIFRE in 2010
- Research Foundations
 - Tax breaks on gifts to foundations

Other measures for innovation

Scientists

- Bonus for research contracts signed with companies

Universities

- Joint offices for technology transfer and licensing

Companies

- Research tax credit, close to
 - 500 millions € in 2003
 - 1 billion € since 2004
 - 1,5 billion € since 2006
- Legal position of young innovative companies for 8 years, with :
 - Fiscal exemption
 - Social benefits paid by the government