

Quel avenir pour la recherche fondamentale européenne ?

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vice-president of the
European Research Council



Sauvons l'Europe
Paris, 26 novembre 2008

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Europe and Pioneering Research



- an essential part of the European culture
- Galileo, Newton, Gauss, Darwin, Watt, Pasteur, Maxwell, Freud, Planck, Einstein, Watson & Crick, ...?

- the root of the industrial development

• Steam power, chemistry, electricity,
radio, aircrafts, communications,...

A new idea (?):

Europe can only compete through knowledge
by investing in excellent research

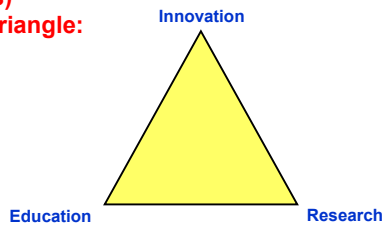
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A new paradigm: The knowledge society



the (virtuous)
knowledge triangle:



a successful wave coming from North Europe

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ERC : a Major European Initiative



European Research Area now well established
*but basic research funded only through
cooperation or "R&D" programs*

ERC: A mandatory revolution for

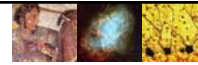
*direct funding of basic research
in all fields*

A visionary idea whose
time has come

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Major steps in building the ERC



mobilization of the Scientific Community:
EMBO, EMBL, FEBS, numerous scientific societies,
ISE Stockholm Meeting (Royal Academy)

Positive Political Context:

P. Busquin & ERA; J. M. Gago & Lisbon & A. Mitsos:

added value argument: *Competition for Excellence at European Level*

- **12/2003:** ERC Expert Group established by Danish EU Presidency argues for ERC (F. Mayor, R. Sykes, ISE manifesto)
- **03/2004:** European Summit **unanimous** for funding basic research
- **04/2005:** European Commission proposes an ERC (FP7, prog. "IDEAS")
- **07/2005:** Patten Committee proposes 22 scientists for the ERC Scientific Council
- **10/2005:** ERC Scientific Council meets for the first time, and meets Commissioner Potočník
- **2006:** Adoption FP7 (18/12/06) & Specific Programme "Ideas" (19/12/06)
EC decision establishing ERC (02/02/07); 7.51b€ for 2007-2013

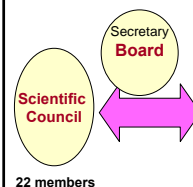
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ERC structure: Executive Agency of DG Research

Steering
committee

programme
committee



22 members

ERC Executive Agency

- Strategy, policy
- Call procedures
- Evaluation procedures
procedures, panels
- Resources

- Operations:
Calls, posting,
evaluation,
Finances: grants

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The ERC Board Linking strategy and operations

Prof. Fotis Kafatos
President of the ERC



Prof. Ernst-Ludwig Winnacker
ERC Secretary-General



Jack Metthey
Director of ERCEA



Prof. Helga Nowotny
Daniel Esteve
Vice-Presidents of the ERC

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ERC launch strategy



- 2 funding streams operating on bottom-up basis
- Simple application procedures, simple reporting
- Flexibility to adjust mechanisms and scientific strategies
- complement existing European research initiatives

- ➔ ERC Starting Independent Researcher Grant scheme (ERC Starting Grant)
- ➔ first call in 2007, second call now evaluated
- ➔ ERC Advanced Investigator Researcher Grant scheme (ERC Advanced Grant)
- ➔ First call in 2008
- ➔ support excellent investigator-initiated research projects by established investigators

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Prospective schedule: call publication and budget 2006–2011



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A broad panel structure

Life Sciences

- LS1 Molecular & Structural Biology & Biochemistry
- LS2 Genetics, Genomics, Bioinformatics & Systems Biology
- LS3 Cellular and Developmental Biology
- LS4 Physiology, Pathophysiology & Endocrinology
- LS5 Neurosciences & neural disorders
- LS6 Immunity & infection
- LS7 Diagnostic tools, therapies & public health
- LS8 Evolutionary, population & environmental biology
- LS9 Applied life sciences & biotechnology

Social Sciences and Humanities

- SH1 Individuals, institutions & markets
- SH2 Institutions, values, beliefs and behaviour
- SH3 Environment & society
- SH4 The Human Mind and its complexity
- SH5 Cultures & cultural production
- SH6 The study of the human past

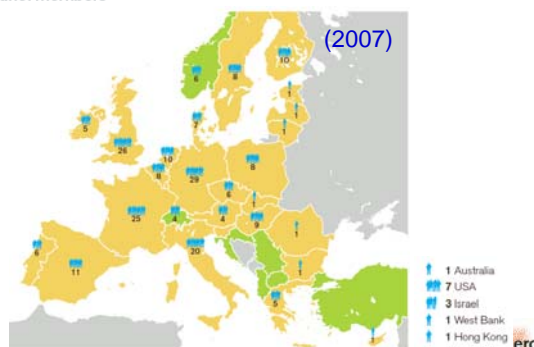
Physical Sciences & Engineering

- PE1 Mathematical foundations
- PE2 Fundamental constituents of matter
- PE3 Condensed matter physics
- PE4 Physical & Analytical Chemical sciences
- PE5 Materials & Synthesis
- PE6 Computer science & informatics
- PE7 Systems & communication engineering
- PE8 Products & process engineering
- PE9 Universe sciences
- PE10 Earth system science

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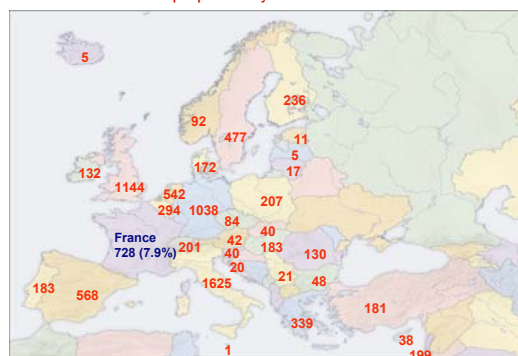
Starting Grant peer review: panel members



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Starting Grants: 2007 call Number of submitted proposals by host countries



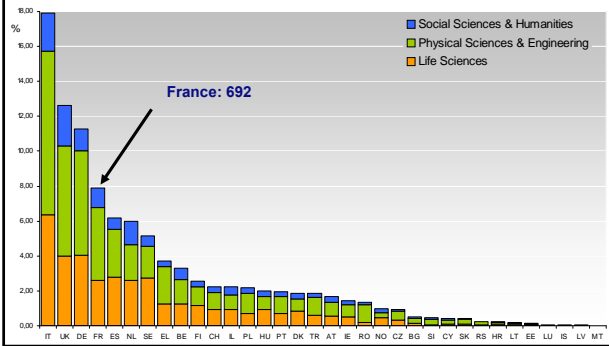
Source: All submissions (9167)

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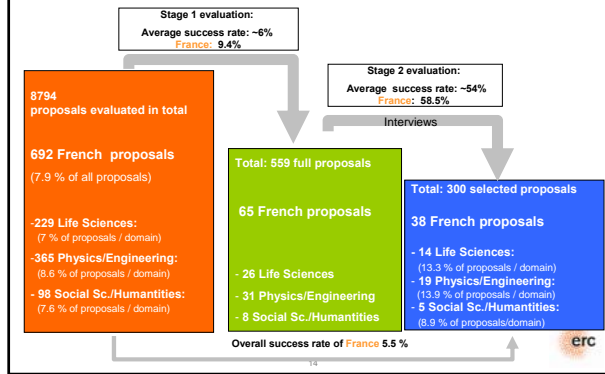
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ERC Starting Grant: 2007 call
Country of host institution

Source: 8794 evaluated proposals

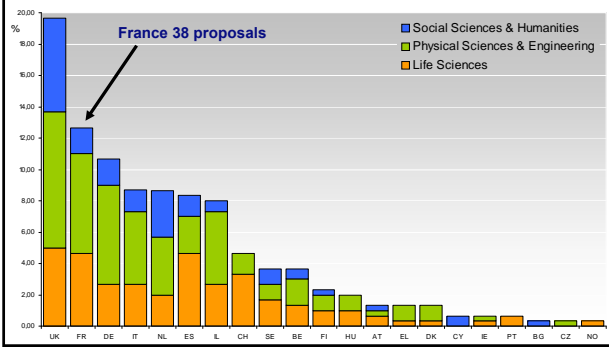


Starting Grant call 2007
with France detailed

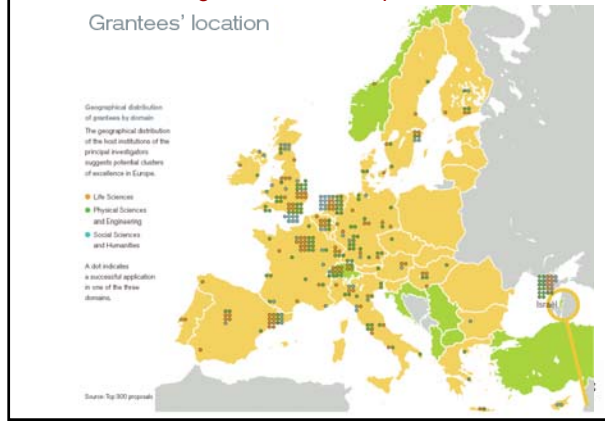


ERC Starting Grant: 2007 call
Percentage of grants by host country

Source: 300 selected proposals (July 2008)



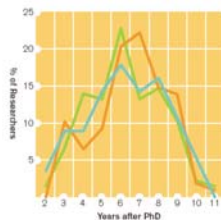
300 grantees after step 2
Grantees' location



statistics and analysis

Grantees' profile:
years after PhD and domain

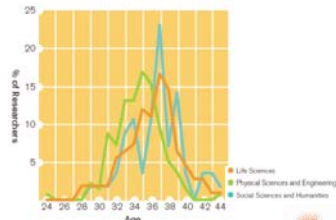
The greatest number of principal investigators completed their PhD studies between 5 to 8 years before applying for a starting grant, irrespective of the domain.



Source: Top 300 proposals

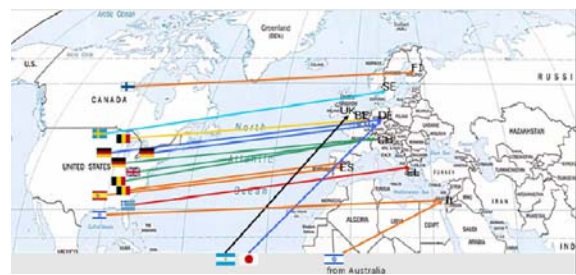
Grantees' profile:
age and domain

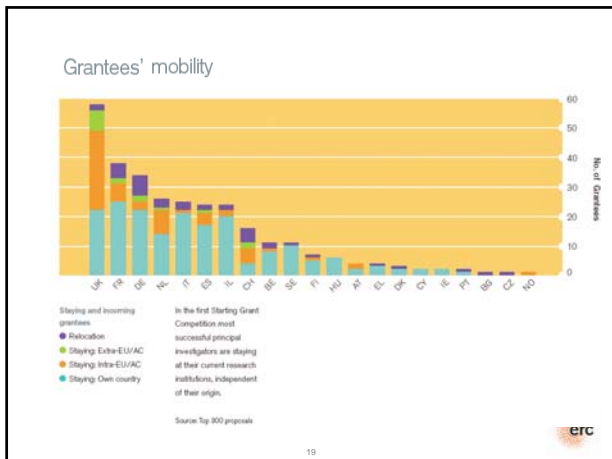
The average age of the principal investigators varies across the domains: Physical Sciences and Engineering (34.5 years); Life Sciences (36 years); Social Sciences and Humanities (36.5 years).



Source: Top 300 proposals

2007 Starting Grants
Repatriation and Recruitment to Europe (5%)





France: successful host institutions

38 grantees for Fr host institutions

Life Sciences

- Centre Europeen de Recherche en Biologie et Medecine Gie (1)
- Centre National de la Recherche Scientifique (6)
- Institut Curie (2)
- Institut National de la Santé et de la Recherche Médicale (4)
- Institut Pasteur (1)

Physical and Engineering Sciences

- Centre National de la Recherche Scientifique (8)
- Commissariat à l'Energie Atomique (2)
- Ecole Normale Supérieure (1)
- Ecole Polytechnique (1)
- Institut de Physique du Globe de Paris (1)
- Institut National de Recherche en Informatique et Automatique (2)
- Université Bordeaux (1)
- Université Joseph Fourier Grenoble (1)
- Université Louis Pasteur Strasbourg (1)
- Université Pierre et Marie Curie – Paris (1)

Social Sciences

- Fondation Jean-Jacques Laffont, Toulouse Sciences Economiques (1)
- Centre National de la Recherche Scientifique (3)
- Muséum national d'Histoire naturelle (1)

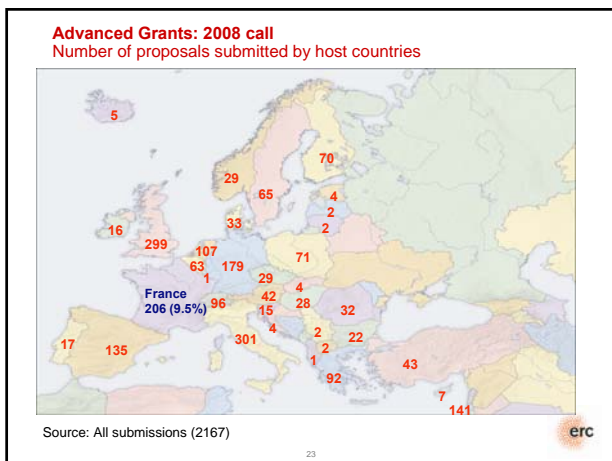
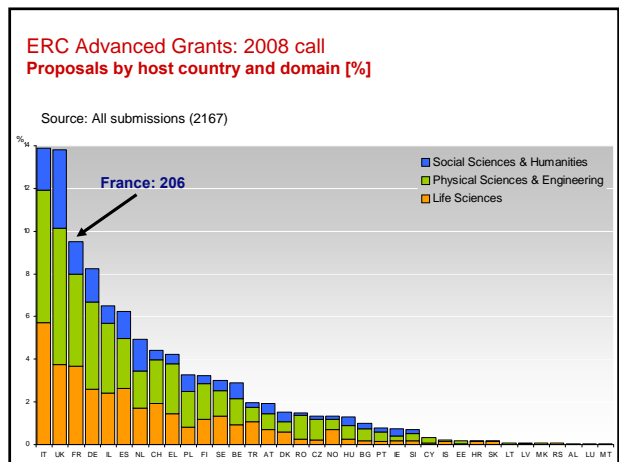
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ERC Advanced Grants: 2008 call

Submitted proposals by domain

Domain	Number of proposals	Percentage
Life Sciences (LS)	766	35.4%
Physical Sciences & Engineering (PE)	997	46.0%
Social Sciences & Humanities (SH)	404	18,6%
Total	2167	

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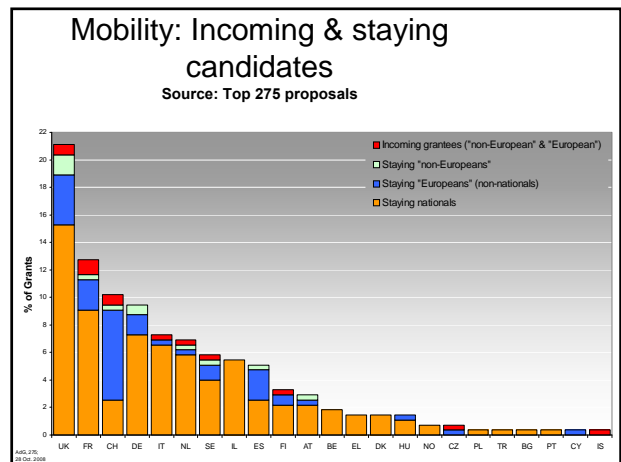
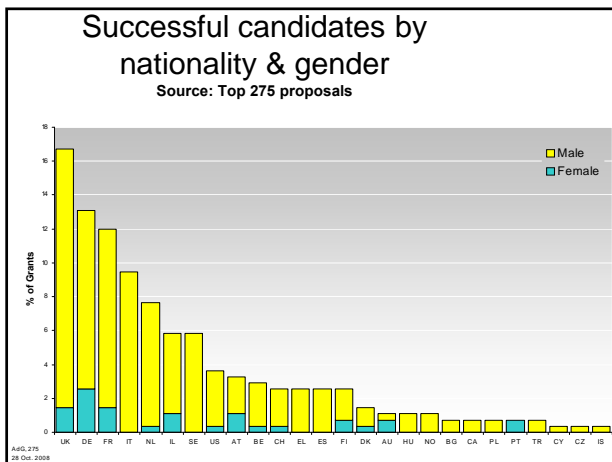
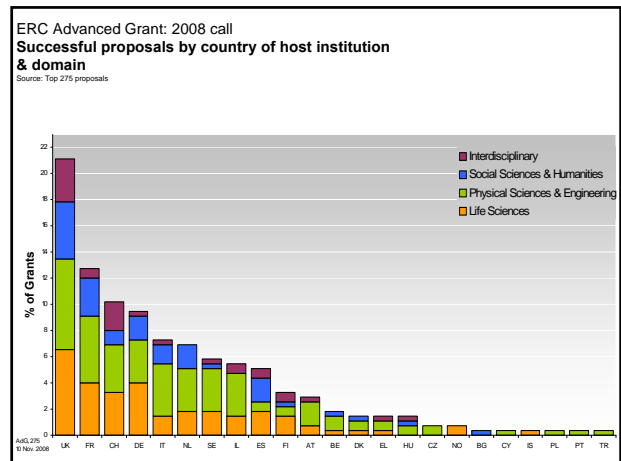
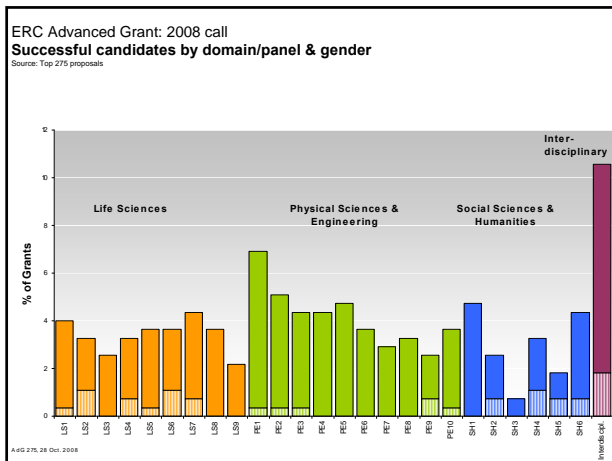


Number of successful proposals by domain

Source: Top 275 proposals

Domain	Number of proposals	Percentage
Life Sciences	84	30.5%
Physical Sciences & Engineering	114	41.5%
Social Sciences & Humanities	48	17.5%
Interdisciplinary Research	29	10.5%
Total	275	

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The ERC: an opportunity and a challenge

- to researchers
 - better funding principles,
 - global competition
 - Peer-review system
- to research institutions
 - From individual to institutional excellence:
 - huge leverage of ERC for more efficient research structures
- to Regions and Countries
 - no borders for knowledge
 - global competition

TOWARDS A BETTER FUNDING SYSTEM FOR BASIC RESEARCH