

European Computer Science Summit 2016

*"Informatics Driving the Digital World"*



# The role of Informatics societies in contributing to the scientific, social and economic growth in Europe

25 October 2016, Budapest, Hungary

Domenico Laforenza

ERCIM AISBL President



# The ERCIM 'founding fathers' – 1989

Gerhard Seegmüller (GMD), Alain Bensoussan (INRIA) and Cor Baayen (CWI)

Photo: INRIA



# Pisa, ERCIM 25th Anniversary – 23 October 2014

Domenico  
Laforenza

Alain  
Bensoussan

Cor Baayen

Keith Jeffery

Michel Cosnard



# 21 October 2005 - "1st European Computer Science Summit"

## Informatics Europe

We represent over 100 university departments and research institutes to set the pace for Informatics research and education in Europe.

Join us

Informatics Europe represents the academic and research community in Information and Computer Sciences in Europe. Bringing together university departments and research laboratories, it creates a strong common voice to safeguard and shape quality research and education in Information and Computer Sciences in Europe. With over 100 member institutions across 25 countries, Informatics Europe promotes common positions and acts on common priorities. Here is a [snapshot overview](#) of what we do and what we stand for.

### Latest News



#### More New Members for Informatics Europe

13 October 2016

Informatics Europe is pleased to welcome eight new members, helping us surpass the 100 member milestone!



#### Informatics Europe welcomes new members

13 September 2016

Informatics Europe is pleased to welcome six new members, making us an even stronger community and widening the depth and breadth of our members' exchange.



#### Informatics Europe at womENcourage 2016

25 August 2016

Informatics Europe President Lynda Hardman will be a keynote speaker at the upcoming womENcourage 2016 in Linz, Austria, September 12-13. Informatics Europe also sponsors the

### Informatics Jobs



#### Chair in semantic systems

Alpen-Adria-Universität Klagenfurt, Austria, posted on 21 October 2016

#### tenure track or tenured full time academic position in Large scale and cloud computing

Institute of Information and Communication Technologies, Electronics and Applied Mathematics (ICTEAM), Université catholique de Louvain, posted on 21 October 2016

1989



2005



## ACM Europe

[Home](#) | [Council Members](#) | [EUACM](#) | [CECL and Chapters](#) | [Conferences](#) | [Advanced Member Grades](#) | [ACM-W Europe](#) | [Newsletters: MemberNet Europe](#) | [EUACM](#)



The ACM Europe Council was created by ACM to recognize and support European ACM members and activities.

### About the ACM Europe Council

The **ACM Europe Council** aims to increase the level and visibility of ACM activities across Europe. The Council is comprised of European computer scientists committed to fostering the visibility and relevance of ACM in Europe, and is focused on a wide range of European ACM activities, from high-quality ACM conferences in Europe, to expanding ACM chapters, to encouraging greater participation of Europeans in all dimensions of ACM.

### Goals

- Join with other computing and scientific organizations in Europe to offer new programs and activities
- Encourage nominations of ACM European members for the advanced member grades of Senior Member, Distinguished Member, and Fellow
- Work with ACM SIGs to increase the number of ACM conferences in Europe
- Increase the number of ACM chapters and level of chapter activity in Europe

### News from ACM Europe

- [ACM Europe Helps Guide Elements of Horizon 2020](#)
- [ACM Europe 2014 activities to promote the visibility and relevance of ACM in Europe](#)
- [Heidelberg Laureate Forum to Inspire Future Researchers](#)

### Council Members

**Chair:** Wendy Hall, University of Southampton, UK | [Author profile](#)

**Vice Chair:** Matthias Kaiserswerth, Hasler Foundation, Bern, Switzerland | [Author profile](#)

.....I can jump to the  
**CONCLUSIONS**

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The role of Informatics societies in contributing to the scientific, social and economic growth in Europe **IS VERY IMPORTANT AND STRATEGIC**

## KPIs:

- High-level Education
- High-quality Research
  - Publications, H-Indexes, Citations, Impact,....
- Awards, Patents, Startups, Spinoffs,.....
- Collaborations between industry and academic partners
  - creating a beneficial network of contacts
- .....

.....I can jump to the  
**CONCLUSIONS**

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**Thank You for Your  
Attention!**



# What I will talk about.....

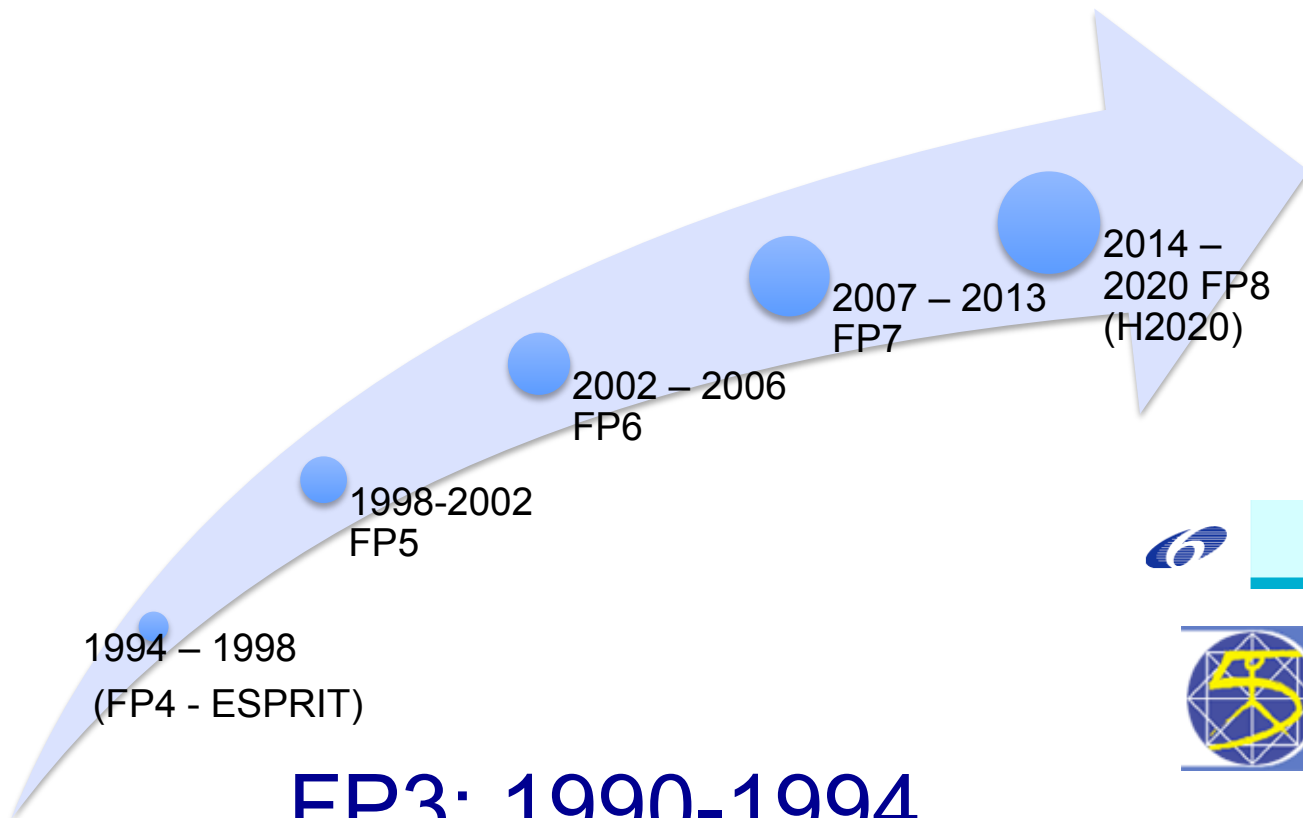
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European Commission instruments and investments devoted to support ICT R&D

- Q1** – Are they appropriate to the expectations of the European Informatics stakeholders?
- Q2** – How is the level of involvement of the Academia (HES) and Research Organisations (REC) in the ICT-related decision-making process for the definition of EU programmes and strategies ?
- Q3** Can a closer cooperation between ERCIM and IE to improve the capacity of the European computer scientists to proactively contribute to the scientific, social and economic growth in Europe?

# 27 YEARS.....

## Some milestones



**FP3: 1990-1994**

**ERCIM 1989** **FP2: 1987-1990**

**FP1: 1984-1987**





# The world has changed...

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ERCIM

European Research Consortium  
for Informatics and Mathematics

- Il mondo è cambiato
- Le monde a changé
- El mundo ha cambiado
- Die Welt verändert hat
- Świat się zmienił
- Мир изменился
- दुनिया बदल गई
- 世界已經改變



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# The world has changed...

....from the technology viewpoint....

1989 ERCIM Creation

1991 First Web Site (CERN)

1992 Mosaic

1993 WWW (HTML, HTTP, ...)

1994 Netscape

1997 Blog

1997 Google

1999 MySpace

2001 Wikipedia

2004 Web 2.0

2004 Facebook

2005 YouTube

2006 Twitter

2010 Internet of Things, Cyber-Physical Systems, Cloud Computing, ...

2011 Smart Cities

2016 Quantum Computing, Cybersecurity, Industry 4.0, ....



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# The world is changing...

....and from the geopolitical viewpoint too!





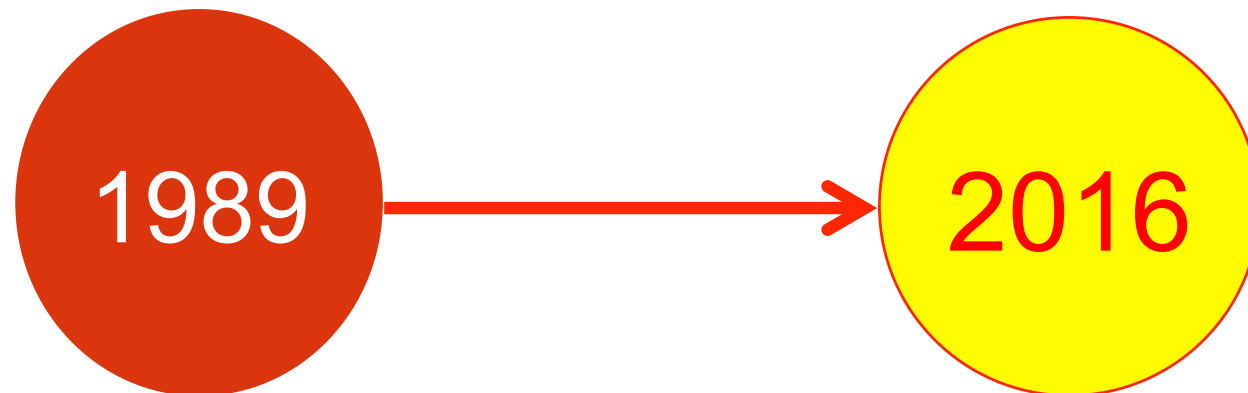
**ERCIM**

European Research Consortium  
for Informatics and Mathematics

# 27 YEARS.....

## What about ERCIM since 1989

- The world has changed out there!
- **We are not alone in the world!**
- What was happening at “our” (at the large, IC”S”T) scientific community ?
- Maybe it's time to start thinking about a new strategic alliances? If so, with whom?
- .....

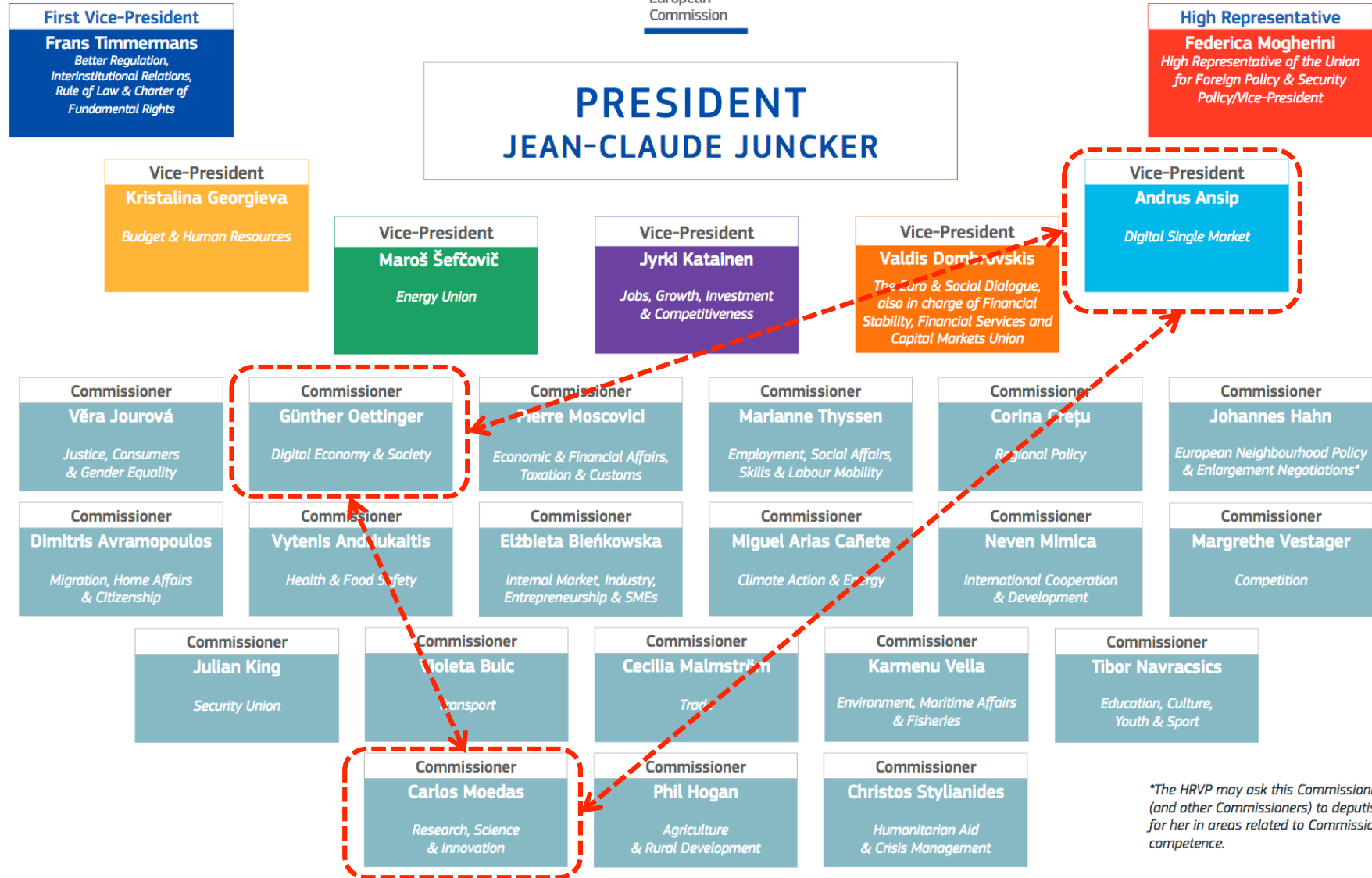




# EU ICT R&D: Where Are You?



European Commission





# European instruments and investments in R&D

## ERCIM

European Research Consortium  
for Informatics and Mathematics

Horizon 2020 is the biggest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020) – in addition to the private investment that this money will attract. It promises more breakthroughs, discoveries and world-firsts by taking great ideas from the lab to the market.



## • Excellent Science

- European Research Council (ERC)
- Future and Emerging Technologies (FET)
- Marie Skłodowska-Curie Actions
- Research infrastructure

## • Industrial Leadership

- Leadership in Enabling and Industrial Technologies (LEIT)
  - Nanotechnologies, Advanced Materials, Advanced Manufacturing and Processing, and Biotechnology
  - Information and Communication Technologies
  - Space (LEIT)
- Access to risk finance
- Innovation in SMEs

## • Societal Challenges

- Health, Demographic Change and Wellbeing
- Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy
- Secure, Clean and Efficient Energy
- Smart, Green and Integrated Transport
- Climate Action, Environment, Resource Efficiency and Raw Materials
- Europe in a changing world - Inclusive, innovative and reflective societies
- Secure societies – Protecting freedom and security of Europe and its citizens

# The different programme areas of Horizon 2020



Source: : DLR Project Management Agency

- (11) Horizon 2020 focuses on three priorities, namely generating excellent science in order to strengthen the Union's world-class excellence in science, fostering industrial leadership to support business, including micro, small and medium-sized enterprises (SMEs) and innovation, and tackling societal challenges, in order to respond directly to the challenges identified in the Europe 2020 strategy by supporting activities covering the entire spectrum from research to market. Horizon 2020 should support all stages in the research and innovation chain, including non-technological and social innovation and activities that are closer to the market, with innovation and research actions having a different funding rate based on the principle that the closer to the market the supported activity is, the larger the additional funding from other sources should be. Activities closer to the market include innovative financial instruments, and they aim to satisfy the needs of a broad spectrum of

M  
A  
R  
K  
E  
T



- (36) The implementation of Horizon 2020 may give rise to supplementary programmes involving the participation of certain Member States only, the participation of the Union in programmes undertaken by several Member States, or the setting up of joint undertakings or other arrangements within the meaning of Articles 184, 185 and 187 TFEU. Such supplementary programmes should be identified and implemented in an open, transparent and efficient way.

- (38) The implementation of Horizon 2020 should recognise the unique role that universities play within the scientific and technological base of the Union as institutions of excellence in higher education, research and innovation, with an essential role in linking the European Higher Education Area and the ERA.

- (39) With the aim of achieving the greatest possible impact of Union funding, Horizon 2020 should develop closer synergies, which may also take the form of public-public partnerships, with international, national and regional programmes that support research and innovation. In this context, Horizon 2020 should encourage the optimal use of resources and avoid unnecessary duplication.



## TITLE I

### GENERAL PROVISIONS

#### *Article 1*

#### **Subject matter**

This Regulation establishes Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020) ("Horizon 2020") and determines the framework governing Union support to research and innovation activities, thereby strengthening the European scientific and technological base and fostering benefits for society as well as better exploitation of the economic and industrial potential of policies of innovation, research and technological development.

## Article 12

### **External advice and societal engagement**

1. For the implementation of Horizon 2020, account shall be taken of advice and inputs provided by independent advisory groups of high level experts set up by the Commission from a broad constituency of stakeholders, including research, industry and civil society, to provide the necessary inter-disciplinary and cross-sectoral perspectives, taking account of relevant existing initiatives at Union, national and regional level. Other inputs will be provided from dialogue structures created under international science and technology agreements; forward-looking activities; targeted public consultations, including, where appropriate, consultations of national and regional authorities or stakeholders; and transparent and interactive processes that ensure that responsible research and innovation is supported.

## *Article 13*

### **Synergies with national programmes and joint programming**

1. For the implementation of Horizon 2020, account shall be taken of the need to build appropriate synergies and complementarities between national and European research and innovation programmes, for example in areas where coordination efforts are made through the Joint Programming Initiatives.



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# Information & Communication Technologies in Horizon 2020



*Cooperating for Excellence in Research*



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# ICT: Who Are You ?

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## The ICT sector:

- represents 4.8% of the European economy
- generates 25% of total business expenditure in Research and Development (R&D)
- investments in ICT account for 50% of all European productivity growth
- EU investments in ICTs are due to increase by about 25% under Horizon 2020 compared to FP7
  - will support the whole chain from basic research to innovation that can deliver new business breakthroughs, often on the basis of emerging technologies



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# Information & Communication Technologies in Horizon 2020

## Where are You ?



*Cooperating for Excellence in Research*



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# ICT in H2020: Where are you?

No ICT ? →

**Excellent Science**

- Frontier Research (ERC)
- Future & Emerging Technologies (FET) **ICT**
- Skills & career development (Marie Skłodowska-Curie)
- Research Infrastructures **ICT**

**Industrial Leadership**

Leadership in enabling & industrial technologies **LEITs**

- ICT **ICT**
- Nanotech., Materials, Manuf. & Processing **ICT**
- Biotechnology
- Space
- Access to risk finance
- Innovation in SMEs **ICT**

**Societal Challenges**

- Health, demographic change & wellbeing **ICT**
- Food security, sustainable agriculture, & the bio-based economy **ICT**
- Secure, clean & efficient energy **ICT**
- Smart, green & integrated transport **ICT**
- Climate action, resource efficiency, & raw materials **ICT**
- Inclusive, innovative & reflective societies **ICT**
- Secure societies **ICT**



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# ICT: Where are you?

▶ Spreading Excellence and Widening Participation

▶ Science with and for Society

▶ Cross-cutting activities (focus areas)

▶ Fast Track to Innovation Pilot

▶ European Institute of Innovation and Technology (EIT)

EIT  
Digital

▶ Euratom

▶ Smart Cyber-Physical Systems

Internet  
of  
Things

*Cooperating for Excellence in Research*

## EXCELLENT SCIENCE



### 1. European Research Council (ERC)

#### 1.1. *Specific objective*

European Research Council  
Established by the European Commission

The specific objective is to reinforce the excellence, dynamism and creativity of European research.

Europe has set out its ambition to move to a new economic model based on smart, sustainable and inclusive growth. This type of transformation will need more than incremental improvements to current technologies and knowledge. It will require much higher capacity for basic research and science-based innovation fuelled by radical new knowledge, allowing Europe to take a leading role in creating the scientific and technological paradigm shifts which will be the key drivers of productivity growth, competitiveness, wealth, sustainable development and social progress in the future industries and sectors. Such paradigm shifts have historically tended to originate from the public-sector science base before going on to lay the foundations for whole new industries and sectors.

World-leading innovation is closely associated with excellent science. Once the undisputed leader, Europe has fallen behind in the race to produce the very best cutting-edge science and has played a secondary role to the United States in the major post-war technological advances. Although the Union remains the largest producer of scientific publications in the world, the United States produces twice as many of the most influential papers (the top 1 % by citation count). Similarly, international university rankings show that US universities dominate the top places. In addition, 70 % of the world's Nobel Prize winners are based in the United States.

# ERC Work Programme

2017

ICT: where are you?



**European Research Council**

Established by the European Commission

*(European Commission C(2016) 4616 of 25 July 2016)*

## Annex 1

### Primary panel structure and description

#### *Physical Sciences & Engineering*

**PE1 Mathematics**

All areas of mathematics, pure and applied, plus mathematical foundations of computer science, mathematical physics and statistics.

**PE2 Fundamental Constituents of Matter**

Particle, nuclear, plasma, atomic, molecular, gas, and optical physics.

**PE3 Condensed Matter Physics**

Structure, electronic properties, fluids, nanosciences, biophysics.

**PE4 Physical and Analytical Chemical Sciences**

Analytical chemistry, chemical theory, physical chemistry/chemical physics.

**PE5 Synthetic Chemistry and Materials**

Materials synthesis, structure-properties relations, functional and advanced materials, molecular architecture, organic chemistry.

**PE6 Computer Science and Informatics**

Informatics and information systems, computer science, scientific computing, intelligent systems.

**PE7 Systems and Communication Engineering**

Electrical, electronic, communication, optical and systems engineering.

**PE8 Products and Processes Engineering**

Product design, process design and control, construction methods, civil engineering, energy processes, material engineering.

**PE9 Universe Sciences**

Astro-physics/chemistry/biology; solar system; stellar, galactic and extragalactic astronomy, planetary systems, cosmology, space science, instrumentation.

**PE10 Earth System Science**

Physical geography, geology, geophysics, atmospheric sciences, oceanography, climatology, cryology, ecology, global environmental change, biogeochemical cycles, natural resources management.

home

Teaching tips  
Teacher's blog

## Computing or ICT: which would serve our pupils better?

Should we welcome computing with open arms or mourn the demise of ICT? **Miles Berry** and **Chris Leach** debate the Gove's changes to the national curriculum

Miles Berry and Chris Leach

Monday 12 August 2013 10.33 BST



Shares 87 Comments 21

Save for later



Computing or ICT? Miles Berry and Chris Leach debate the issues surrounding the new curriculum. Photograph: Alamy

Cast your mind back to January 2012. In one of his many overhauls, education secretary, [Michael Gove](#), announced his attention to scrap the ICT curriculum in favour of computing. The idea behind it? To revive the legacy of wartime hero Alan Turing and create "a generation of young people able to work at the forefront of technological change."

## 12 August 2013

### Most popular



If Brangelina broke up over marijuana, what could it mean for their divorce?



OECD in Brexit warning U-turn as it revises UK growth forecast



China's Tiangong-1 space station 'out of control' and will crash to Earth



Trump's plan to seize Iraq's oil: 'It's not stealing, we're reimbursing ourselves'



Russian planes dropped bombs that destroyed UN aid convoy, US officials say

# Michael Gove to scrap 'boring' IT lessons

Schools to be given freedom to run cutting-edge computer classes under plans for open source curriculum



Ministers are keen to see universities and businesses creating a new computer science GCSE. Photograph: Frank Baron

The teaching of computer science in school is to be dramatically overhauled, with the existing programme of study scrapped to make way for new lessons designed by industry and universities, [Michael Gove](#) will announce on Wednesday.

In a speech, the education secretary will say the existing curriculum in Information and Communication Technology (ICT) has left children "bored out of their minds being taught how to use Word and Excel by bored teachers".

Instead he will, in effect, create an "open source" curriculum in computer science by giving schools the freedom to use teaching resources designed with input from leading employers and academics, in changes that will come into effect this September.

The image shows the cover of a report. At the top, there is a stylized graphic of a circuit board or a grid of components in shades of blue and yellow. Below this, the title 'Shut down or restart?' is written in a large, white, sans-serif font. Underneath the title, the subtitle 'The way forward for computing in UK schools' is written in a smaller, white, sans-serif font. Further down, the text 'Executive summary' and 'January 2012' is displayed in a smaller white font. On the left side, there is a logo for 'EXCELLENCE IN SCIENCE' with a stylized 'Se' symbol. On the right side, the text 'THE ROYAL SOCIETY' is written in a white, sans-serif font. At the bottom left, there is a logo for 'The Royal Academy of Engineering' featuring a stylized blue and white shape.

...Curriculum in Computer Science designed with the input of leading employers and academics...

# The use of computers, .....

## Terminology used in this report (see also Chapter 2):

### Computing

The broad subject area; roughly equivalent to what is called ICT in schools and IT in industry, as the term is generally used.

### ICT

The school subject defined in the current National Curriculum.

### Computer Science

The rigorous academic discipline, encompassing programming languages, data structures, algorithms, etc.

### Information Technology

The use of computers, in industry, commerce, the arts and elsewhere, including aspects of IT systems architecture, human factors, project management, etc. (Note that this is narrower than the use in industry, which generally encompasses Computer Science as well.)

### Digital literacy

The general ability to use computers. This will be written in lower case to emphasize that it is a set of skills rather than a subject in its own right.

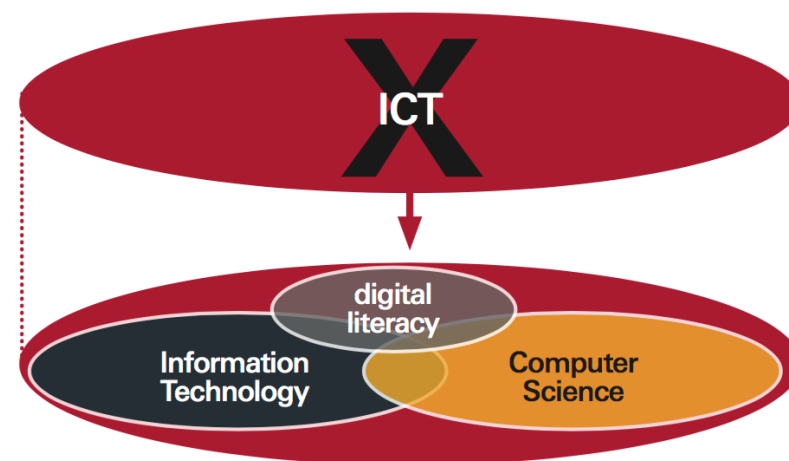


### Recommendation 1 (see Chapter 2)

The term ICT as a brand should be reviewed and the possibility considered of disaggregating this into clearly defined areas such as digital literacy, Information Technology and Computer Science. There is an analogy here with how English is structured at school, with reading and writing (basic literacy), English Language (how the language works) and English Literature (how it is used).

The term 'ICT' should no longer be used as it has attracted too many negative connotations.

#### Suggested terminological reform



# EC investments devoted to support ICT R&D



Are they appropriate to the expectations of the European Informatics stakeholders?



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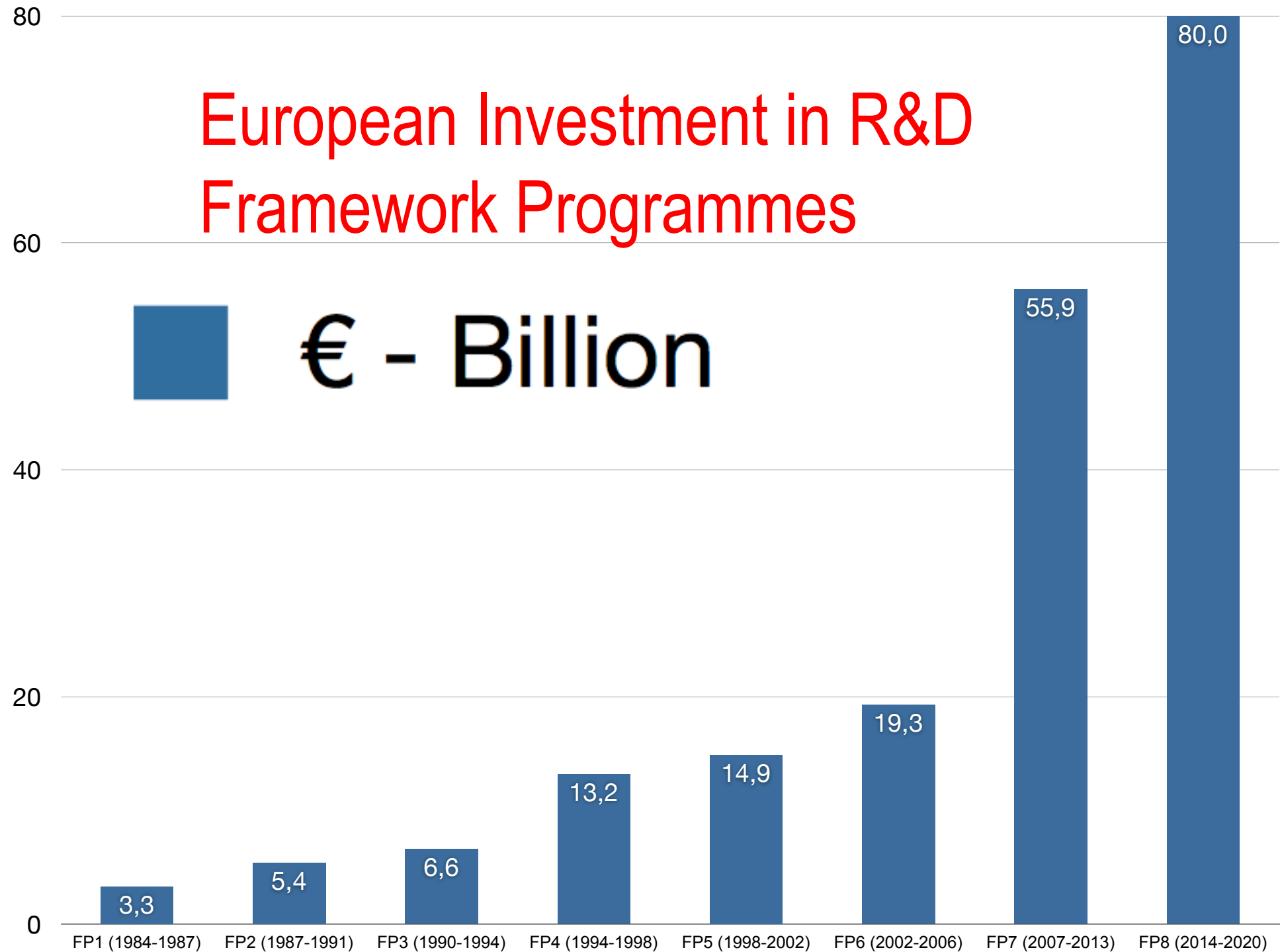


## OVERVIEW

# MILESTONES



# European Investment in R&D Framework Programmes



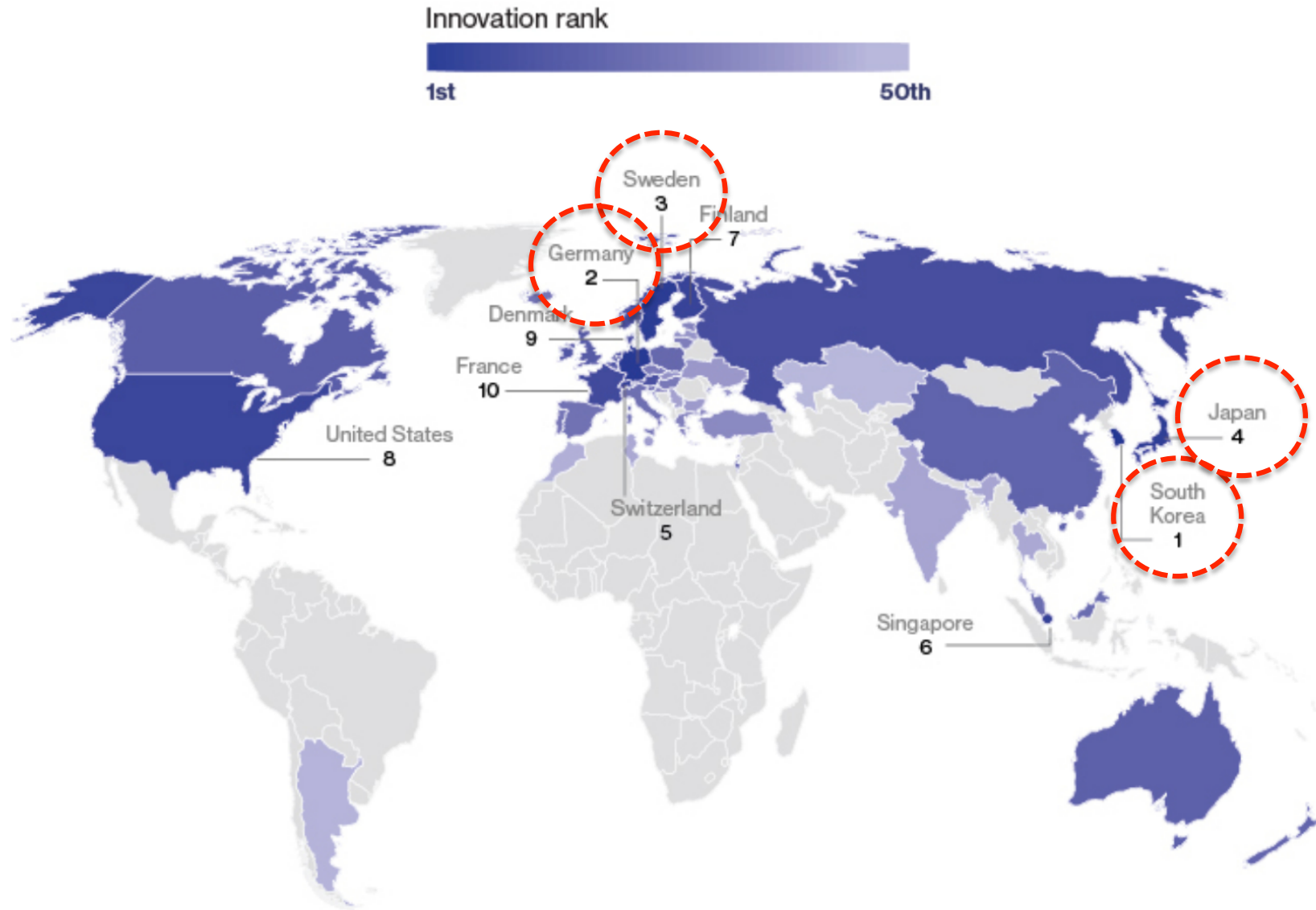
<http://www.bloomberg.com/graphics/2015-innovative-countries/>

# THE BLOOMBERG INNOVATION INDEX



# Fifty Most Innovative Economies

South Korea has the most innovative economy, the U.S. ranks 8th



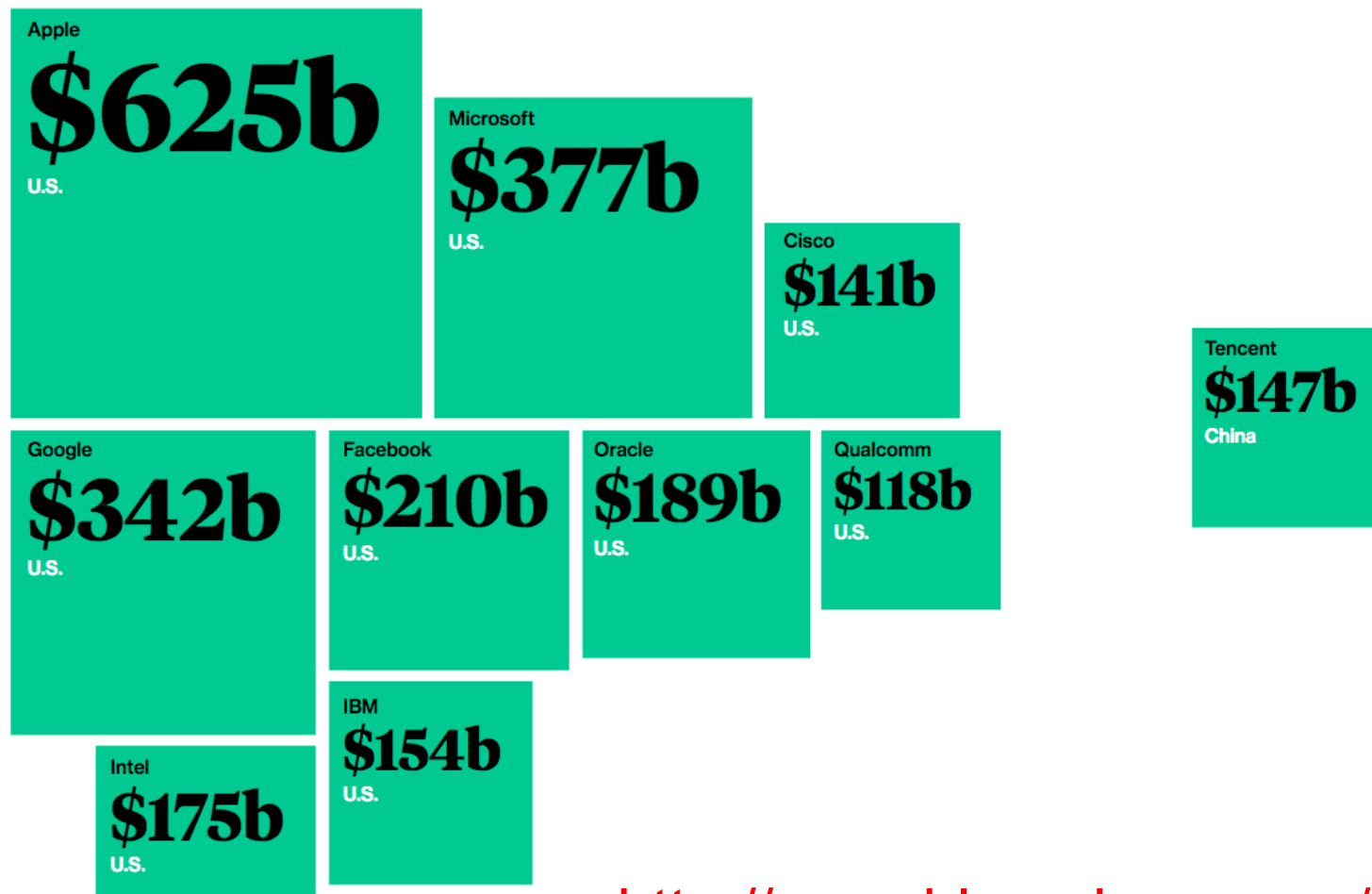
Sources: Bloomberg, International Monetary Fund, World Bank, Organization for Economic Cooperation and Development, World Intellectual Property Organization, United Nations.

# High-Tech Companies

Top 5
United States
China
Japan
South Korea
Canada

This is the one category in the ranking that isn't adjusted for the size of the economy or population, so it's no surprise that the U.S. finishes way ahead of all other countries, substantially boosting its overall ranking. You can argue that this factor is unfair to small nations. But there is something to be said for the sheer innovative power of America's huge high-tech sector, which ranges from Google to Lockheed Martin to Monsanto. As the aphorism, sometimes attributed to Josef Stalin, has it: Quantity has a quality all its own.

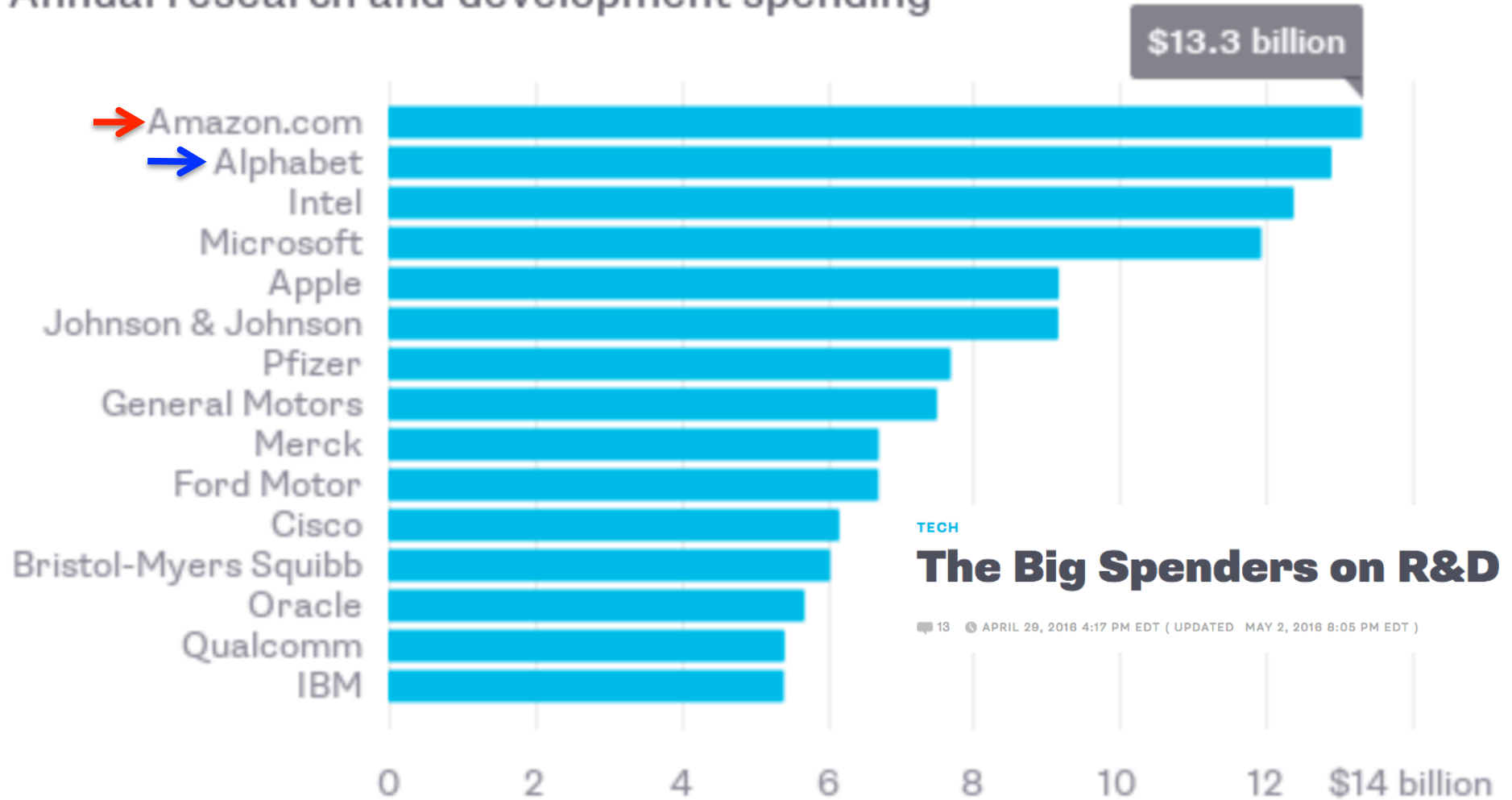
Ten largest tech companies, by market capitalization (as of Jan. 16)



<http://www.bloomberg.com/graphics/>

# Investing in the Future

Annual research and development spending\*



2015

Source: Bloomberg

\*Trailing 12 months, or last fiscal year if quarterly data not available

BloombergView

R&D -- which measures spending on discovering new knowledge and developing new products, including the salaries and benefits of those doing the work



BlackBerry Outsourcing Handset Business



Gogo to Speed Up In-Flight Internet Service...in 2018



Bitmoji, Kimoji? A Guide to the Digital Sticker Craze



American Airlines Faces Next IT Hurdle



Wal-Mart Talks to Flipkart



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TECH

## Alphabet Signals More Restraint on R&D Spending

Research and development is one of Alphabet's largest expenses



Eric Schmidt, chairman of Alphabet, speaks during an event at Google's tech campus in Seoul Thursday. Google parent Alphabet signed a deal to work with three Indonesian telecommunications firms to test its Internet-beaming balloons across the country, part of an effort to get more of the world online to broaden the audience for Google's services. PHOTO: BLOOMBERG NEWS

Anyone can talk about 5G. We're creating it.

QUALCOMM Why Wait

Explore

- Transportation in 5G**  
Read More
- Cities in 5G**  
Read More
- Nina in 5G**  
Read More
- Entertainment in 5G**  
Read More

# A SEC filing is a financial statement document submitted to the U.S. Securities and Exchange Commission (SEC).

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UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

Form 10-K

(Mark One)

- ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended September 26, 2015
- or
- TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the transition period from \_\_\_\_\_ to \_\_\_\_\_  
Commission File Number: 001-36743



**Apple Inc.**

(Exact name of Registrant as specified in its charter)

**California**  
(State or other jurisdiction of incorporation or organization)

**94-2404110**  
(I.R.S. Employer Identification No.)

**1 Infinite Loop**  
**Cupertino, California**  
(Address of principal executive offices)

**95014**  
(Zip Code)

**(408) 996-1010**  
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

**Common Stock, \$0.00001 par value per share**

**1.000% Notes due 2022**  
**1.625% Notes due 2026**  
**3.05% Notes due 2029**  
**3.60% Notes due 2042**  
**1.375% Notes due 2024**  
**2.000% Notes due 2027**

(Title of class)

**The NASDAQ Stock Market LLC**  
**New York Stock Exchange LLC**  
**New York Stock Exchange LLC**  
**New York Stock Exchange LLC**  
**New York Stock Exchange LLC**  
**New York Stock Exchange LLC**  
**New York Stock Exchange LLC**

(Name of exchange on which registered)

Securities registered pursuant to Section 12(g) of the Act: None

Apple is now on track to spend more than \$10 billion on R&D in 2016

## Operating Expenses

Operating expenses for 2015, 2014 and 2013 are as follows (dollars in millions):

	2015	Change	2014	Change	2013
Research and development	\$ 8,067	34%	\$ 6,041	35%	\$ 4,475
Percentage of total net sales	3%		3%		3%
Selling, general and administrative	\$ 14,329	19%	\$ 11,993	11%	\$ 10,830
Percentage of total net sales	6%		7%		6%
Total operating expenses	\$ 22,396	24%	\$ 18,034	18%	\$ 15,305
Percentage of total net sales	10%		10%		9%

**\$8bl**

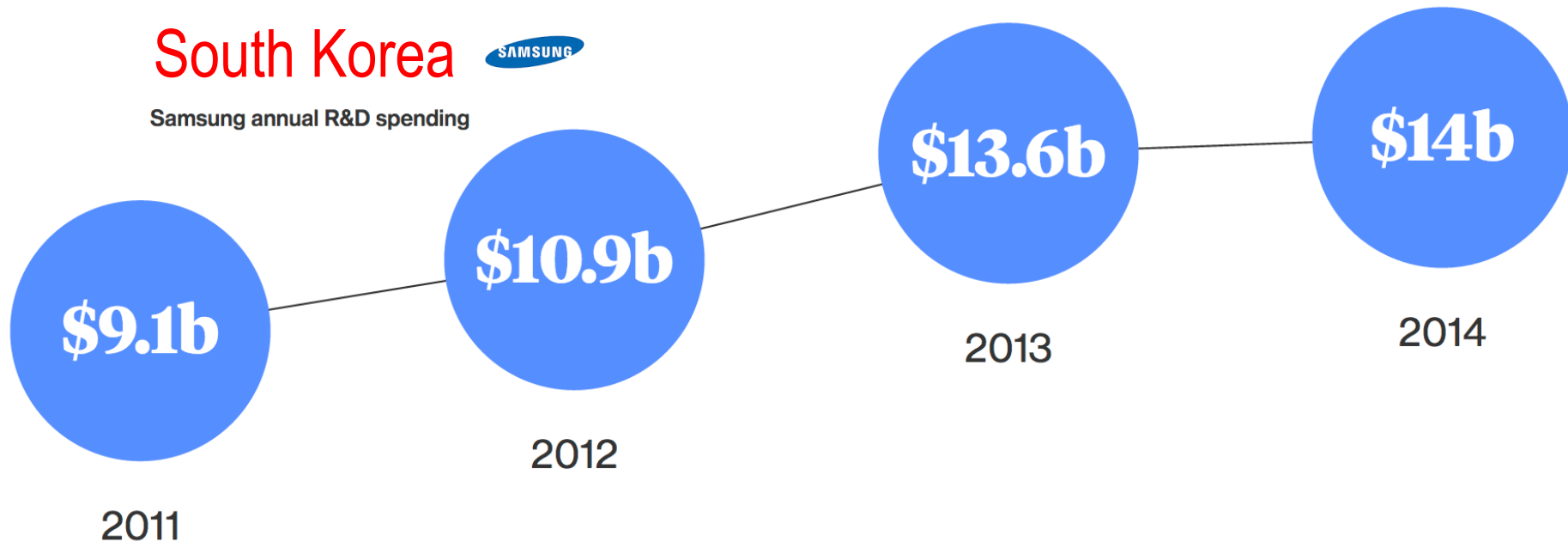


<http://www.bloomberg.com/graphics/>

## Research & Development

Top 5
South Korea
Israel
Finland
Sweden
Japan

South Korea, No. 1 in this category, is proof that countries can lift themselves up by their bootstraps through a combination of government support and private enterprise. In 1957, not long after the Korean War, the nation's GDP per capita was on the same level as Ghana's. But R&D doesn't do much good if it stays bottled up in the lab. In many countries, such as France, scientists who are government employees working in prestigious institutes have little incentive to commercialize their work, so the public is slow to benefit, says Bronwyn Hall, a professor emerita of economics at the University of California-Berkeley. Hall says a more efficient tech-transfer model is America's National Science Foundation, which makes 94 percent of its research grants to people in university labs and companies. It's not just governments that are doing the heavy lifting. In South Korea, research-intensive companies, led by Samsung, have modernized the whole economy.



# <http://www.bloomberg.com/graphics/2015-innovative-countries/>

## Research Personnel

Top 5
Finland
Iceland
Denmark
Israel
Singapore

Finland is No. 1 in this category. After Nokia's fall from grace in mobile phones, the Finns vowed to diversify and make better use of their engineering talent. The hottest new sector is gaming, exemplified by Angry Birds. Iceland, Denmark, Israel, and Singapore--all smallish, prosperous nations--fill out the top five. Smaller countries tend to have more open economies, which means they both export and import more goods. Free trade allows them to carve out a niche as centers of brain power. Iceland is a leader in genomics, Denmark in pharmaceuticals, Israel in software, and Singapore in electronics. For less-developed countries, innovation takes the form of smart adoption and adaptation of technologies developed elsewhere.

Professionals working in R&D per 1 million population



Finland



U.S.



Thailand

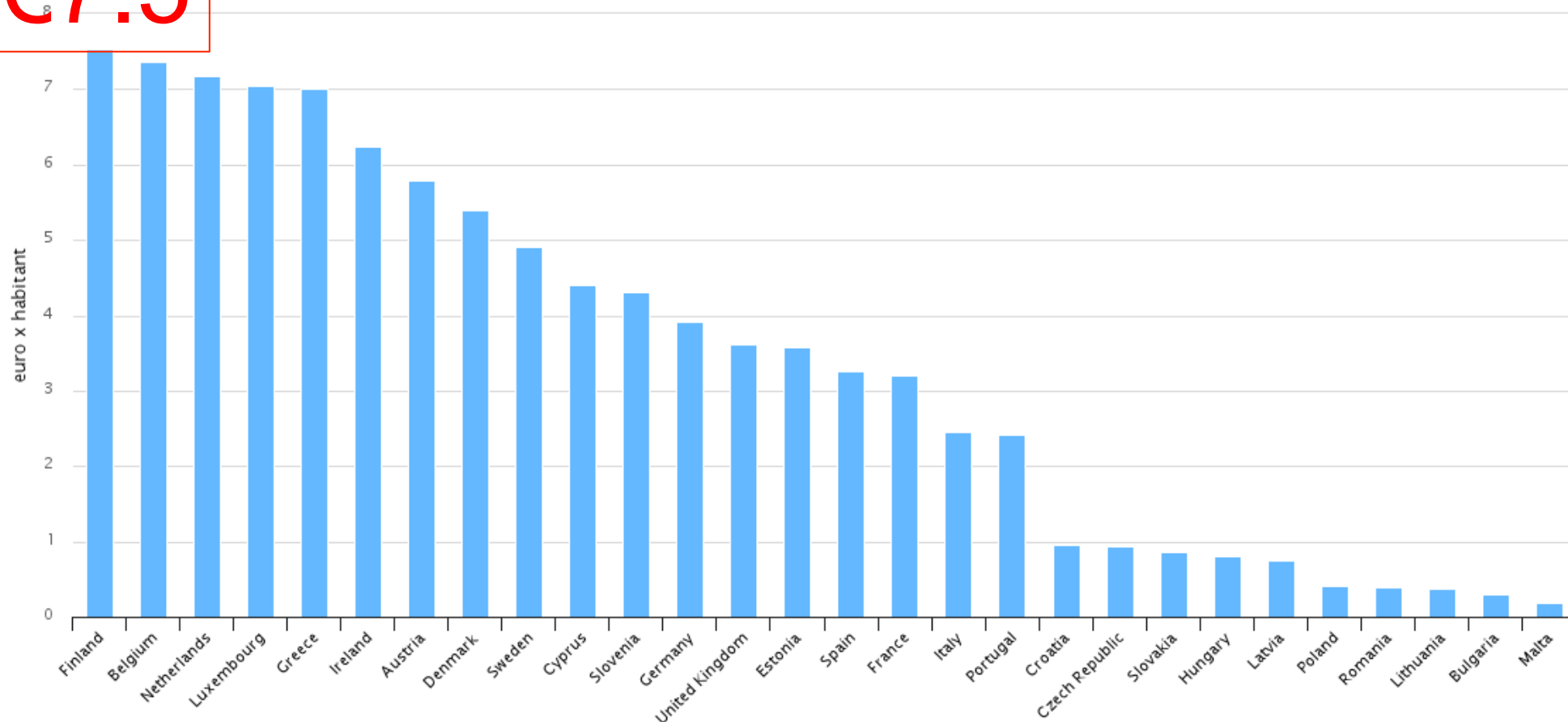
Professionals working in R&D per 1 million population

Value of European Commission funding committed through grant agreements signed, during the reference year, with participants in ICT research projects under Horizon 2020 (LEIT ICT, Excellent Science, Societal Challenges 1, 6 and 7). Projects under negotiation are not included.

€7.5

Total EC funding to participants in H2020 ICT projects

Year:2015



European Commission, Digital Scoreboard

[http://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards\\_it](http://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards_it)

# <http://www.bloomberg.com/graphics/2015-innovative-countries/>

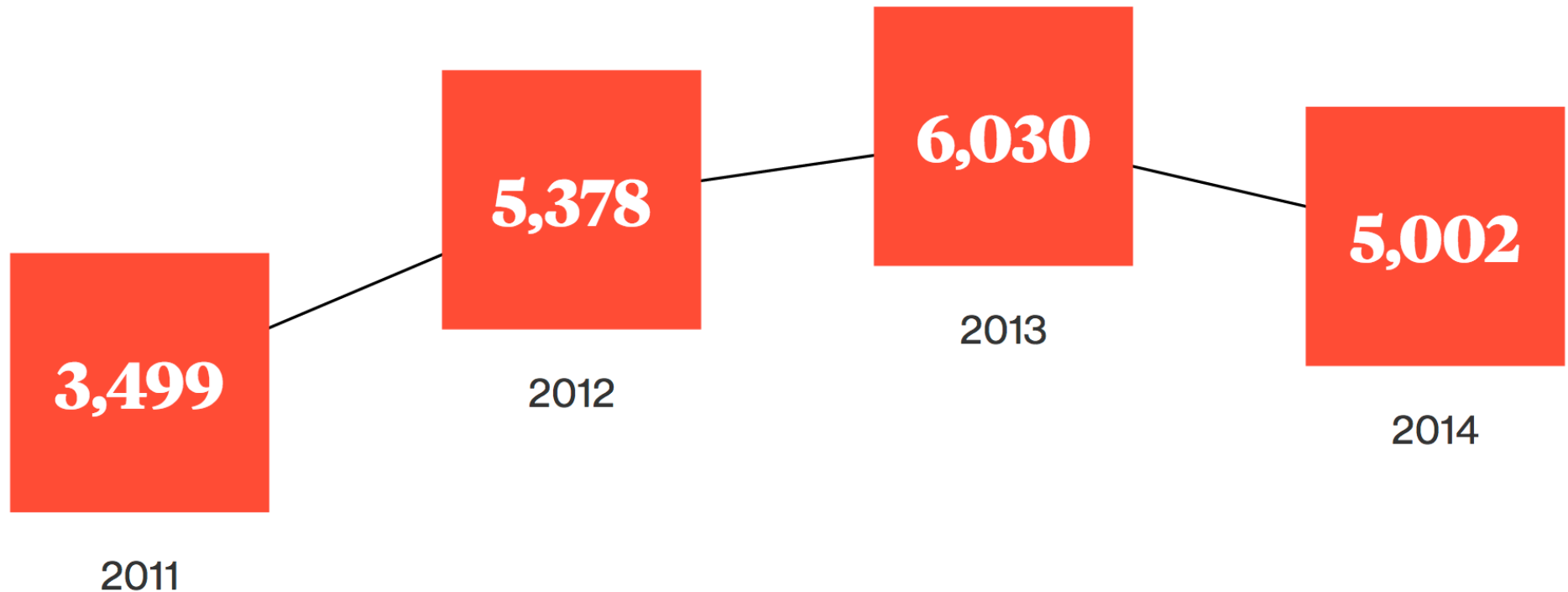
1. South Korea
2. Japan
3. China
4. United States
5. Germany

## Patents

Top 5
South Korea
Japan
China
United States
Germany

Patents are a mixed blessing. They protect and encourage inventiveness by allowing patent holders to exclude others from pilfering their ideas. But when used as a weapon they can squelch invention by blocking the ability of new inventors to build upon existing technologies. Countries whose residents earn a lot of patents (and attract patent lawsuits) tend to be those at the frontiers of science and technology. South Korea, thanks in large part to Samsung, again finishes first in this metric.

Number of patent lawsuits filed in U.S. courts



# Who are the drivers?

## The DG CONNECT Organization



### Management

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[Andrus Ansip](#)  
Vice-President of the  
European Commission



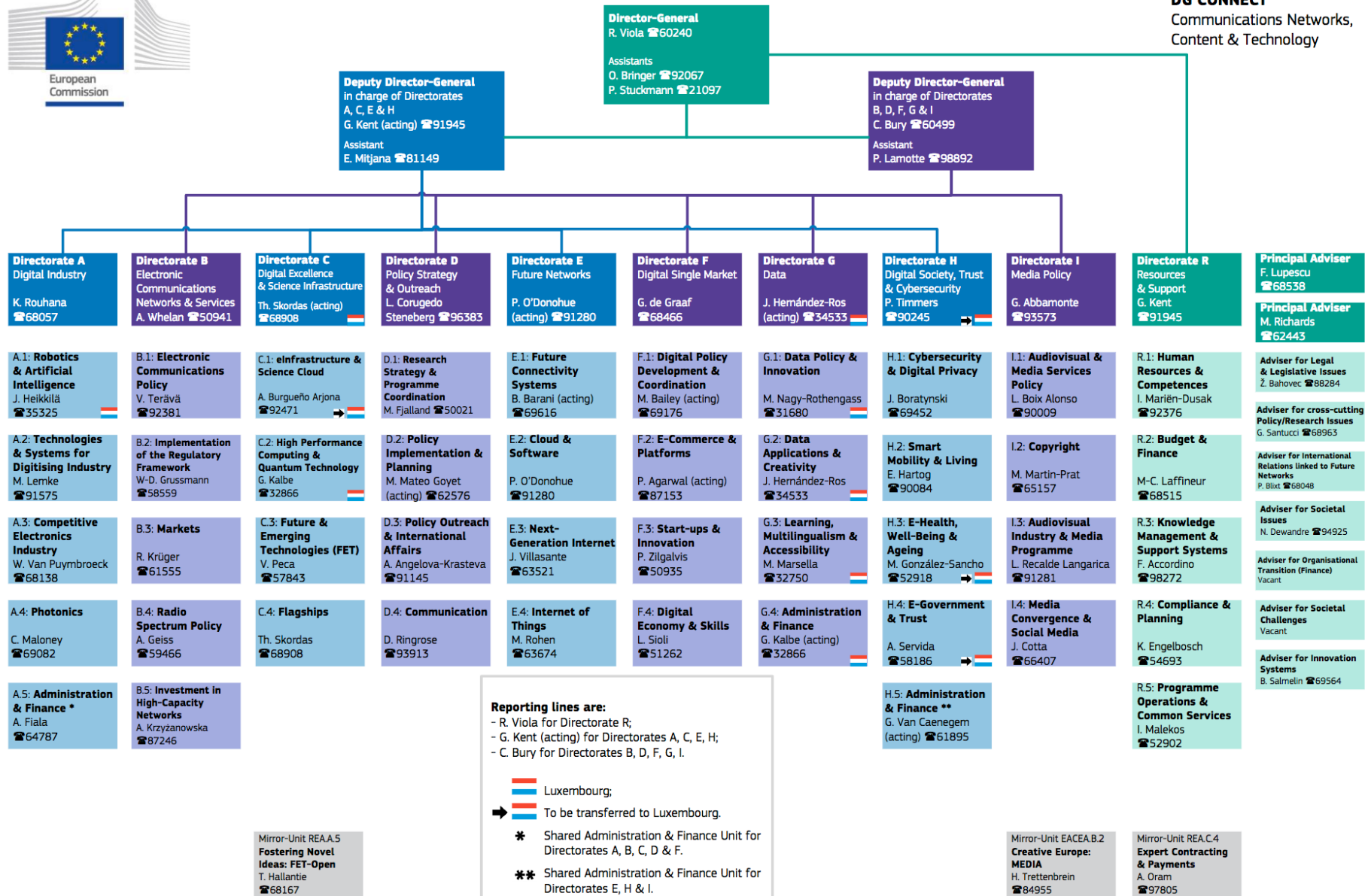
[Günther H. Oettinger](#)  
Member of the European  
Commission



[Roberto Viola](#)  
Director General of the  
DG Connect



**DG CONNECT**  
Communications Networks,  
Content & Technology



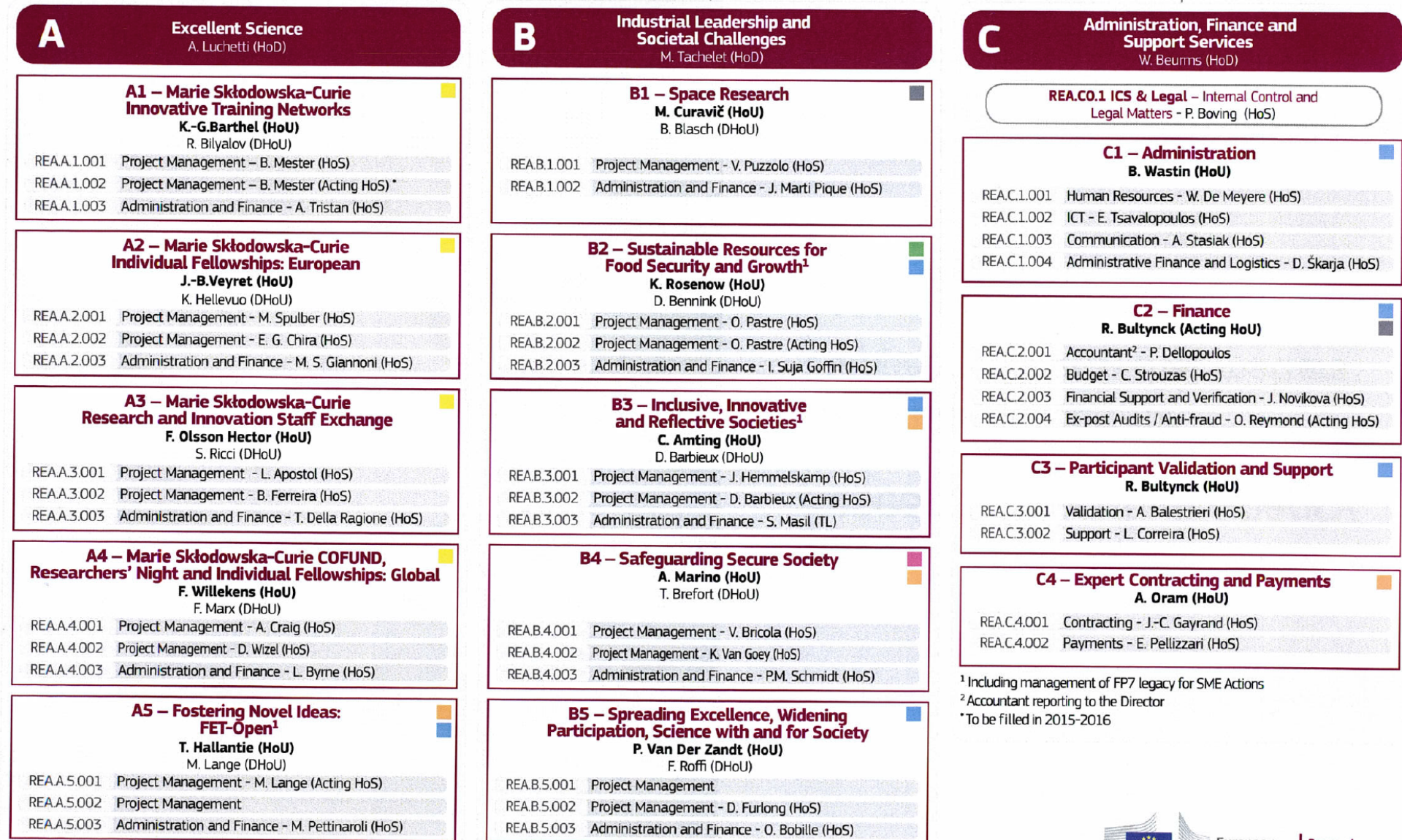
# Who are the drivers?

**REA - Director**  
G. Gascard

# Research Executive Agency

DG delegating programme implementation tasks:

- RTD
- CNECT
- GROW
- EAC
- AGRI
- HOME



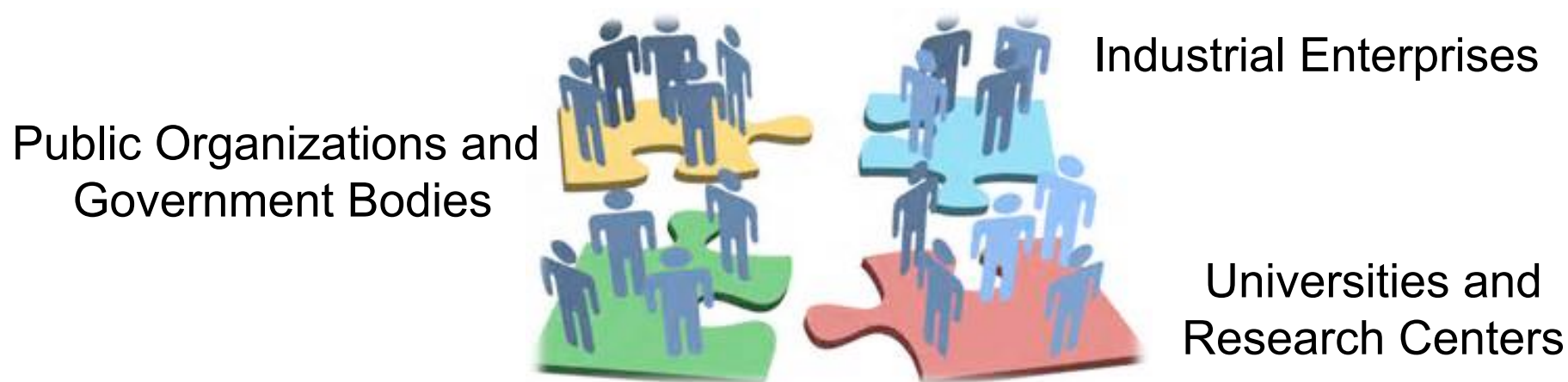
<sup>1</sup> Including management of FP7 legacy for SME Actions  
<sup>2</sup> Accountant reporting to the Director  
 \* To be filled in 2015-2016

# Who are the controllers?

How is the level of involvement of the Academia (HES) and Research Organisations (REC) in the ICT-related decision-making process for the definition of EU programmes and strategies ?



# Main stakeholders involved in the H2020 decision-making process



## #14 Program Committees for Implementing Horizon 2020

1. Strategic Configuration
2. European Research Council, Marie Skłodowska-Curie Actions, Future and Emerging Technologies
3. Research Infrastructures
4. Information and Communication Technologies
5. Nanotechnologies, Advanced Materials, Biotechnology, Advanced Manufacturing and Processing
6. Space
7. Innovation in Small & Medium Enterprises and Access to Risk Finance
8. Health, Demographic Change and Well-being
9. Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research, and the Bioeconomy
10. Secure, Clean and Efficient Energy
11. Smart, Green and Integrated Transport
12. Climate Action, Environment, Resource Efficiency and Raw Materials
13. Europe in a Changing World - Inclusive, Innovative and Reflective Societies
14. Secure Societies – Protecting Freedom and Security of Europe and its Citizens

The members of Programme Committees are delegates and experts of national governments

## 19 Advisory Groups

1. Access to risk finance (debt and equity financing)
2. Climate action, environment, resource efficiency and raw materials
3. European research infrastructures including eInfrastructures
4. Europe in a changing world – inclusive, innovative and reflective societies
5. Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy and biotechnology
6. Future and Emerging Technologies (FET)
7. Gender
8. Health, demographic change and wellbeing
9. Innovation in small and medium-sized enterprises (SMEs)
10. International cooperation
11. The Marie Skłodowska-Curie actions on skills, training and career development
12. Nanotechnologies, advanced materials and advanced manufacturing and processing
13. Science with and for Society
14. Secure, clean and efficient energy and Euratom
15. Secure societies – protecting freedom and security of Europe and its citizens
16. Smart, green and integrated transport
17. Space
18. Spreading excellence and widening participation
19. CONNECT Advisory Forum for ICT Research and Innovation (CAF)

# DG CONNECT - Advisors



- Digital Single Market Strategic Group (DSM SG)
  - High-level officials from national administrations in charge of ICT policy
- Digital Champions
  - Ambassadors for the Digital Agenda, appointed by their Members States to help every European become digital
- Leaders Club
  - An independent group of (startup) founders in the field of tech entrepreneurship
- CONNECT Advisory Forum
  - Leading personalities of the European ICT industry, large public research organisations and academics addressing not only the scientific and technological aspects of ICT but also the economic and societal impacts of new developments
- Future & Emerging Technologies Advisory Group (FETAG)
  - Advisory to ensure that the Commission receives consistent and consolidated advice during the preparation of the Horizon 2020 work programmes, with respect to the Future and Emerging Technologies



## Register of Commission expert groups and other similar entities

# CAF - 28 members

### Commission Expert Group

**Name:** CONNECT Advisory Forum for Research and Innovation in ICT in Horizon 2020 (E02887)  
(Active - Group which operates on a permanent basis)

**Abbreviation:** CAF

**Policy Area:** Research and Innovation

**Lead DG:** CNECT - DG Communications Networks, Content and Technology

**Type:** Informal, Temporary

**Scope:** Limited

**Mission:** The CONNECT Advisory Forum (CAF) will be part of the Advisory Groups put in place to provide advice to the Commission on the implementation for framework programme for research and innovation Horizon 2020. The group should take into account both the overarching H2020 challenges (innovation, societal challenges, responsible innovation, etc.) and the broader policy context within which the implementation of Horizon 2020 will be taking place, notably for DG CONNECT – Europe 2020 goals, Innovation Europe and the EU policy framework for Information and Communication Technologies – the Digital Agenda for Europe. .

**Task:** Assist the Commission in the preparation of legislative proposals and policy initiatives

**Contact:** cnect-caf@ec.europa.eu

**Publication in RegExp:** 08 Mar 2013

**Link to Website:** <http://ec.europa.eu/digital-agenda/en/connect-advisory-forum>

**Last updated:** 27 Nov 2015

## Members

CAF: 28 members

### Type A - Individual expert appointed in his/her personal capacity

Name	Nationality	Professional Title	Membership Status
Ariane KOEK	United Kingdom		Member

### Type C - Organisation

Name of Organisation	Category	Countries/Areas represented	Membership Status
Aarhus University / Alexandra Institute	Academia, Research Institute and Think Tanks	Denmark	Member
Alcatel Lucent Bell Labs	Companies/Groups	France	Member
APS "Se Non Ora Quando"	NGOs	Italy	Member
ARM	Companies/Groups	United Kingdom	Member
Bruegel		Belgium	Member
CNR – ISTI / Software Engineering and Dependable Computing Lab	Academia, Research Institute and Think Tanks	Italy	Member
DAS Photonics	Companies/Groups	Spain	Member
Eggsplore	Companies/Groups	Belgium	Member
EIT Digital Finland		Finland	Member
France Telecom - Orange	Companies/Groups	France	Member
Fraunhofer ICT		Germany	Member
Imperial College London / Imperial College Business School	Academia, Research Institute and Think Tanks	France United Kingdom	Member
Infineon Technologies Austria AG	Companies/Groups	Austria	Member
Intel Labs	Companies/Groups	Ireland	Member
Knowledge Technologies Institute of the Technical University of Graz		Austria	Member

RURobots Ltd.	Companies/Groups	United Kingdom	Member
Sciences Po - Master of Public Affairs	Academia, Research Institute and Think Tanks	France	Member
SIDNFonds	Companies/Groups	Netherlands	Member
Siemens AG	Companies/Groups	Germany	Member
Stromatolite LTD	Companies/Groups	United Kingdom	Member
SURF		Netherlands	Member
Universität Stuttgart / Institut für industrielle Fertigung und Fabrikbetrieb	Academia, Research Institute and Think Tanks	Germany	Member
University of Amsterdam / Institute for Information Law	Academia, Research Institute and Think Tanks	Netherlands	Member
University of Manchester / School of Computer Science / Advanced Processor Technologies Group	Academia, Research Institute and Think Tanks	United Kingdom	Member
University of Oslo (Dept.of Media and Communication)	Academia, Research Institute and Think Tanks	Norway	Member
University of Oxford / Department of Politics and International Relations	Academia, Research Institute and Think Tanks	Estonia United Kingdom	Member
University of Warsaw / Faculty of Physics / Institute of Theoretical Physics	Academia, Research Institute and Think Tanks	Poland	Member



# ERCIM

European Research Consortium  
for Informatics and Mathematics

## “H2020 ICT R&D&I beyond 2015”

CAF – CONNECT Advisory Forum

Position paper reflecting the advice provided by the CONNECT Advisory Forum on the orientations for ICT research and innovation in the Horizon2020 for the programming cycle starting in 2016

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# THE FUTURE OF FET:

A possible nucleus for  
the European Innovation Council



## **Ideas for a European Innovation Council**

Summary of a validation workshop with stakeholders  
held on 13 July 2016

### **EUROPEAN COMMISSION**

Directorate-General for Research and Innovation  
Directorate B — Open Innovation and Open Science  
Unit B.1 — Open Innovation

*Contact:* Petra Sarapatkova  
Koen de Pater

*E-mail:* [EC-EIC-IDEAS@ec.europa.eu](mailto:EC-EIC-IDEAS@ec.europa.eu)  
[RTD-PUBLICATIONS@ec.europa.eu](mailto:RTD-PUBLICATIONS@ec.europa.eu)

*European Commission*  
*B-1049 Brussels*



# RESEARCH & INNOVATION

European Commission > Research & Innovation > Consultations > List

[Home](#) | [List of Consultations](#)

## Consultations

### List of Consultations

- **Open Consultations:** give us your opinion by taking part in an open consultation
- **Closed Consultations:** find out about the results of consultations that have closed
- **Archive:** find out about the results of older consultations

### Open consultations

	Title and description	Policy activity	Target Group	Closing date
*	Public consultation regarding the implementation of the Second European and Developing Countries Clinical Trials Partnership Programme (EDCTP2) during the period 2014-2016.	Research & Technological Development.	All citizens and organisations are welcome to contribute. However, contributions from stakeholders and experts active in the field of clinical trials in developing countries are particularly sought after.	15.10.2016

### Closed consultations

	Title and description	Policy activity	Closing date	Results and follow-up
*	Public consultation on Horizon 2020 'Food Security, sustainable agriculture and forestry, marine and maritime and inland water	Research and innovation	28.08.2016	





# YOUR VOICE IN EUROPE

European Commission > Your Voice in Europe > Consultations

## Open Consultations



See also:

- [Closed consultations](#)
- [Consultations by policy area](#)
- [Planned Consultations](#)   
(191 kB) 

### Consultations

### Other feedback opportunities

*Environment:*

[Public consultation as part of the REFIT evaluation of the Zoos Directive \(Council Directive 1999/22/EC relating to the keeping of wild animals in zoos\)](#)

15.09.2016 – 08.12.2016

*Transport:*

[Public consultation on the enhancement of the social legislation in road transport](#)

05.09.2016 – 11.12.2016

*Research and Technology, Public Health, Environment, Enterprise, Energy, Education, Communications Networks - Content & Technology, Climate Action, Internal Market, Information Society:*

[Public Consultation: Interim evaluation of the European Institute of Innovation and Technology](#)

26.08.2016 – 20.11.2016

*Transport:*

[Review of Directive 2006/1/EC on the use of hired vehicles for the carriage of goods by road](#)

11.08.2016 – 04.11.2016

*Energy:*

[Public consultation on the Evaluation of Directive 2009/119/EC imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products](#)

10.08.2016 – 11.11.2016

*Internal Market:*

[Public Consultation on Single Market Information Tool](#)

02.08.2016 – 07.11.2016

*Banking and Finance:*

[Review of the EU Macro-prudential policy framework](#)

01.08.2016 – 24.10.2016

*Transport, Consumers:*

[Public consultation on the evaluation of Regulation 392/2009 on the Liability of Carriers of Passengers by Sea in the Event of Accidents](#)

29.07.2016 – 31.10.2016

*Public Health, Internal Market:*

[Public consultation on the implementation of an EU system for traceability and security features pursuant to Articles 15 and 16 of the Tobacco Products Directive 2014/40/EU](#)

29.07.2016 – 04.11.2016

*Public Health:*

[Similarity in the context of the orphan legislation: adaptation to technical progress](#)

29.07.2016 – 04.11.2016

*Banking and Finance:*

[Capital markets union: action on a potential EU personal pension framework](#)

27.07.2016 – 31.10.2016

*Internal Market:*

[Single Digital Gateway](#)

26.07.2016 – 21.11.2016

.....but the decision-making is driven also by the  
“EXPERTS”

7



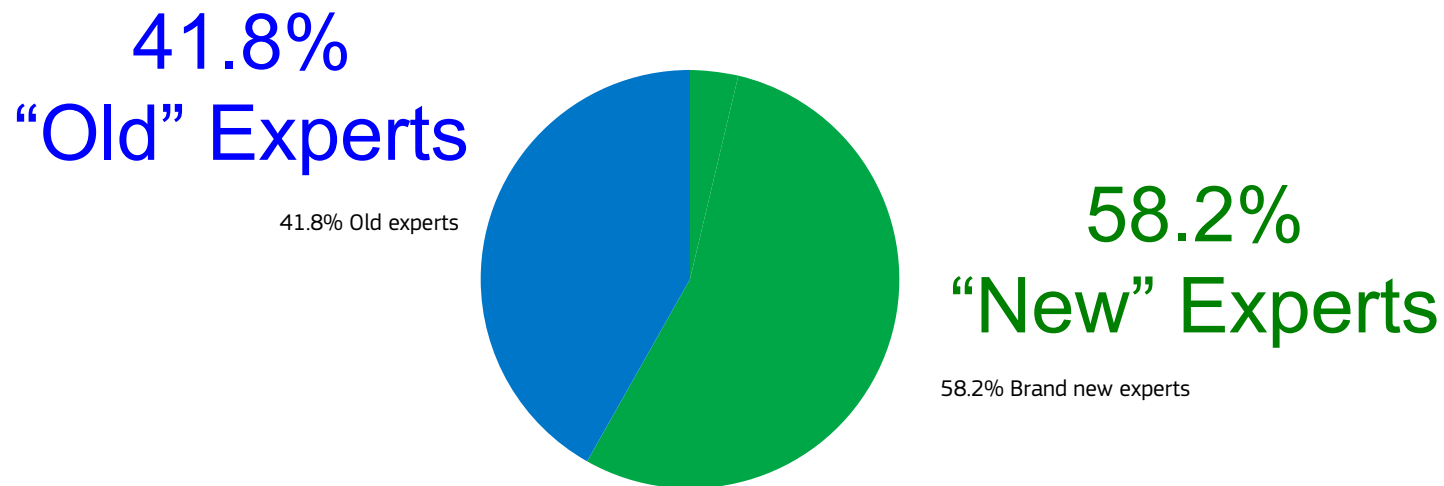
.....

**EXPERTS**

# But the decision-making is driven also by the “EXPERTS”

33

How many experts have evaluated proposals?



In 2014, a pool of 77 506 evaluators were registered in a central database as available to evaluate proposals to Horizon 2020. A total of 9 325 contracts for evaluation have been made with experts, however some experts may have been contracted more than once to participate in different evaluations. Over half of the contracts for expert evaluators were given to newcomers. It is important to ensure that the pool from which experts are selected is constantly expanded and renewed, to ensure expertise in new areas of science and technology, and to ensure that the pool is representative of different sectors, including public and private, and industrial and academic.

*Note: Data for 2014*

## 9,325 contracts for evaluation



## European Research Council

Established by the European Commission

An autonomous science-led funding body consisting of an independent Scientific Council supported by a lean and cost-effective dedicated implementation structure (the European Research Council Executive Agency).

**erc**  
European Research Council  
Established by the European Commission

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**ideas**  
ERC newsletter - Summer issue

ERC - Bringing great ideas to life

How I got my ERC grant - Dr Ágnes Melinda Kovács

Step by step to ERC Grants

Open also to non-European researchers

**ERC News**

- 08.09.16 ERC Starting Grants: €485 million to 325 top researchers across Europe
- 01.09.16 Fellowships launched to encourage potential ERC grantees
- 09.08.16 New ERC Scientific Council members appointed
- 26.07.16 New report on impact of ERC projects
- 26.07.16 ERC at ESOF 2016: New report reveals impact of ERC research
- 25.07.16 ERC to invest record budget in 2017
- 22.07.16 The summer issue of the ERC newsletter is out
- 04.07.16 ERC awards 44 Proof of Concept grants

**Funding Opportunities**

What's new: [Calendar of upcoming calls](#)

**OPEN CALLS:**

ERC Starting Grant | [ERC-2017-StG Information for applicants](#)  
Deadline: 18 Oct 2016

ERC Proof of Concept Grant | [ERC-2016-PoC Information for applicants](#)  
[FAQs](#)  
Deadline: 4 Oct 2016

[Click here](#) for status of ongoing evaluations

[Find out here](#) how to prepare your proposal

[Find your National Contact Point](#)

The official deadlines are only those indicated on the Participant Portal

Tweets by @ERC\_Research

ERC Europe Retweeted

**Horizon Magazine**  
@HorizonMagEU

The end of that humming sound from the fridge – soon solids will replace refrigerant liquids  
[bit.ly/HSolCool](http://bit.ly/HSolCool)

Embed View on Twitter



## European Research Council

Established by the European Commission



- Mission
- Organisation and Working Groups
- Scientific Council
- Executive Agency
- Standing Committees
- Working Groups
- History
- Reviews and Development
- Facts and Figures
- Job Opportunities
- Calls for Tender
- Useful links

## Organisation and Working Groups

The European Research Council (ERC) consists of a Scientific Council and an Executive Agency.

The Scientific Council (ScC) is the decision making body of the ERC and sets the ERC's scientific funding strategy.

The ERC Executive Agency (ERCEA), implements the ERC strategy as set by the Scientific Council, and is in charge of the day to day grant administration. The ERC operates with autonomy and integrity guaranteed by the European Commission, to which it is accountable.

### Scientific Council

Find out more about the composition and role of the Scientific Council, as well as the meeting planning and minutes.

### Executive Agency

Find out more about the activities of the Executive Agency and its composition.

### Scientific Council Standing Committees

The ERC Scientific Council has established two Standing Committees: one deals with conflict of interest issues, the other oversees the selection of reviewers and panel lists.

### Scientific Council Working Groups

The ERC Scientific Council has established several Working Groups; on Open Access, Gender Balance, Innovation and Industry, Internationalisation, KPIs.

- Conflict of interest issues
- Selection of reviewers
- Panel lists

### ERC President



BOURGUIGNON Jean-Pierre

### Vice-Presidents



BOCK Klaus



SAARMA Mart



SEBASTIAN GALLES Núria  
ERC Executive Agency Director

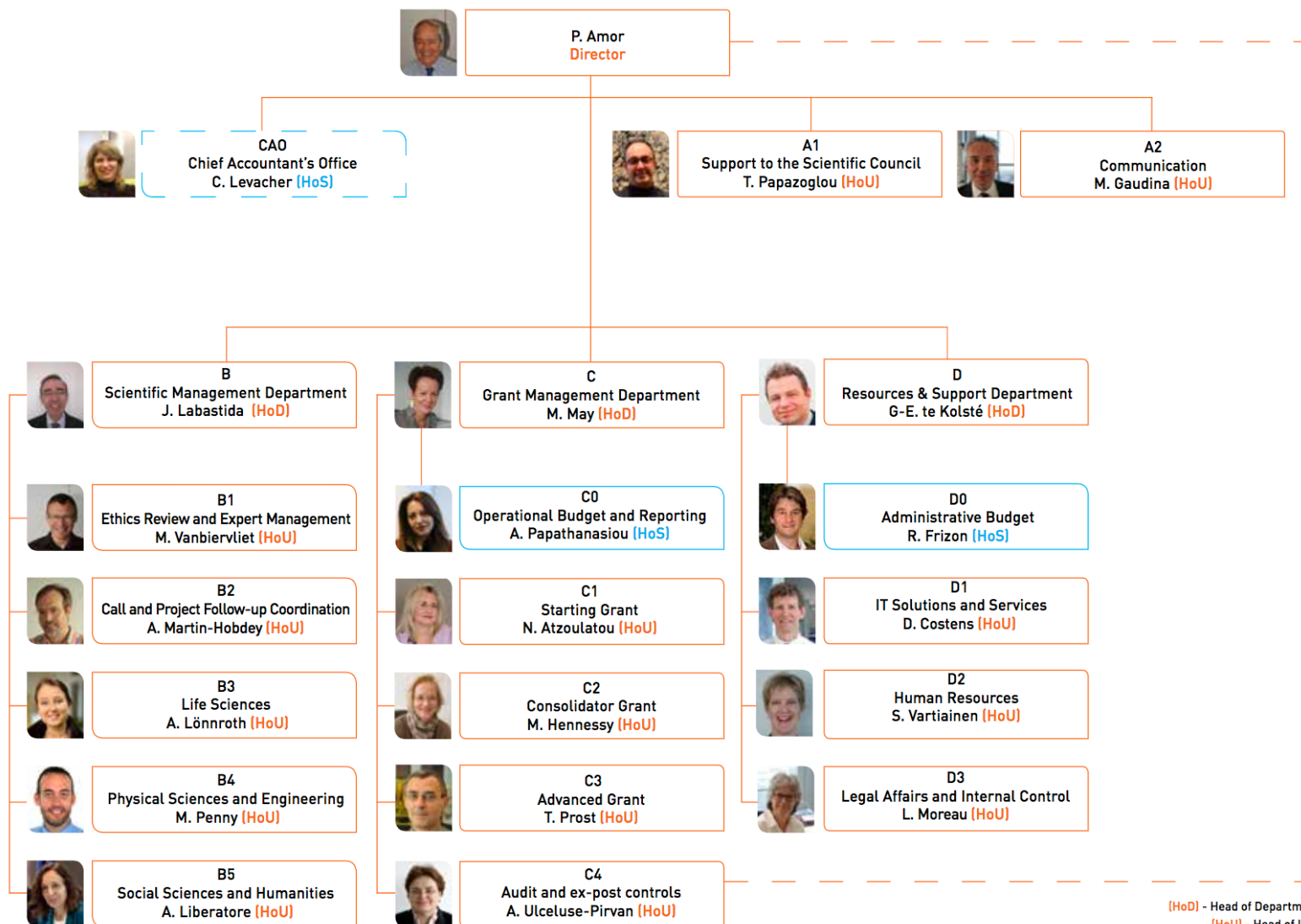


Pablo Amor

### Members of the Scientific Council



# The ERC Executive Agency (ERCEA) implements and manages ERC



(HoD) - Head of Department  
(HoU) - Head of Unit  
(HoS) - Head of Sector



European Research Council  
Executive Agency  
Established by the European Commission

ERCCEA organigramme



Horizon 2020  
European Union Funding  
For Research & Innovation

# Standing Identification Committee for the selection of members of the Scientific Council of the European Research Council

---

19 July 2016

Professor Sir Leszek Borysiewicz (Chair) - Vice-Chancellor, University of Cambridge, UK

Professor Alice Dautry – Institut Pasteur, France

Professor Hans-Joachim Freund – Director, Fritz Haber Institute, Germany

Professor Louise Gunning-Schepers – University of Amsterdam, the Netherlands

Professor Xavier Vives – Academic Director, IESE Business School, Spain

Professor Joseph Weiler – President, European University Institute, Italy

Professor Agnieszka Zalewska – European Organization for Nuclear Research, Switzerland

Former European Commissioner for Research, Innovation and Science, Máire Geoghegan-Quinn appointed on 27 May 2014 a standing Identification Committee consisting of seven high-level scientists to identify and propose candidates for the ERC Scientific Council's renewals. The legal provisions for the identification of the Scientific Council members are set out in the Council Decision establishing the specific programme implementing Horizon 2020 - the Framework programme for Research and Innovation (2014-2020) of 3 December 2013 (2013/743/EU), article 7.1 and section 1.3 of Part I of Annex I.

The present report summarises the process and outcomes of the Identification Committee's work in preparing the renewal of the ERC Scientific Council on the expiry of the terms of office of some of its members in January 2015 and January 2017 and following the resignation of three of its members in October 2014 and June 2015.

## Context

The European Research Council operates as an autonomous science-led funding body consisting of an independent Scientific Council supported by a lean and cost-effective dedicated implementation structure (the European Research Council Executive Agency). The Scientific Council is composed of the president of the ERC and 21 other members.

## ERC Identification Committee's Statement on methodology

### Introduction

The members of the ERC Scientific Council are appointed by the European Commission on the basis of a search process carried out by an independent Committee, including a consultation of the scientific community, according to the provisions of the Horizon 2020 Specific Programme<sup>1</sup>. The Identification Committee carries out its work independently and transparently.

The current identification process intends to further extend the pool of candidates for future Scientific Council membership, including those who will be appointed in January 2017, at the end of term of some of the existing members. The consultation methodology follows closely the approach observed on previous occasions. The pool of possible candidates aims to cover all fields of science and scholarship.

### Consultation of the research community

The Identification Committee considers it should actively consult the main organisations representative of the various segments of the research community at European level. The consultation will be done by means of a letter from the Chairman of the Committee to the President of each organisation.

The consultation will not necessarily be the exclusive source of candidates. Candidates put forward during previous consultation exercises will also be reconsidered and it will be open to other representative organisations and the members of the Identification Committee themselves. However, self-nominations will not be considered. All candidates, regardless of source of nomination, would be considered by the Committee using the same process as described in section Methodology below.

## **Main representative organisations to be consulted**

- **Academia Europaea**
- **ALLEA** (European Federation of Academies of Sciences and Humanities)
- **BUSINESSEUROPE**
- **CESAER** (Conference of European Schools for Advanced Engineering Education and Research)
- **EARTO** (European Association of Research and Technology Organisations)
- **EASAC** (European Academies Science Advisory Council)
- **EIRMA** (European Industrial Research Management Association)
- **ESF** (European Science Foundation)
- **EUA** (European University Association)
- **Euro-CASE** (European Council of Academies of Applied Sciences, Technologies and Engineering)
- **LERU** (League of European Research Universities)
- **Science Europe** (Association of European Research Funding Organisation and Research Performing Organisations)

## **List of organisations that provided nominations for members of the Scientific Council**

### **Organisations directly consulted:**

1. Academia Europaea
2. European Federation of Academies of Sciences and Humanities (ALLEA)
3. Conference of European Schools for Advanced Engineering Education and Research
4. European Association of Research and Technology Organisations (EARTO)
5. European University Association (EUA)
6. European Council of Academies of Applied Sciences, Technologies and Engineering
7. League of European Research Universities (LERU)
8. Science Europe

## **Organisations that responded to the general invitation:**

---

1. Academy of Finland
2. Aristotle University of Thessaloniki (AUTH)
3. Bangor University
4. British Academy
5. Center for Research and Technology Hellas – CERTH
6. European Academy of Sciences
7. EU-LIFE
8. Istituto Nazionale di Alta Matematica "Francesco Severi"
9. Ministry of Education, Research and Religious Affairs
10. Piraeus University of Applied Sciences
11. Research Foundation - Flanders (FWO)
12. Research Promotion Foundation
13. Royal Netherlands Academy of Arts and Sciences

14. Swiss National Science Foundation

15. Technical University of Munich (TUM)

16. Universidad Católica de Valencia “San Vicente Mártir”

17. Universities Austria

18. Universities Denmark

19. Universities UK



European Research Council  
Established by the European Commission

## Qualitative Evaluation of completed projects funded by the European Research Council

July 2016



Table 1: The ERC panel structure

Panel	Panel title
<b>Life Sciences</b>	
LS1	Molecular and Structural Biology and Biochemistry
LS2	Genetics, Genomics, Bioinformatics and Systems Biology
LS3	Cellular and Developmental Biology
LS4	Physiology, Pathophysiology and Endocrinology
LS5	Neurosciences and Neural Disorders
LS6	Immunity and Infection
LS7	Diagnostic Tools, Therapies and Public Health
LS8	Evolutionary, Population and Environmental Biology
LS9	Applied Life Sciences and Non-Medical Biotechnology
<b>Physical Sciences and Engineering</b>	
PE1	Mathematics
PE2	Fundamental Constituents of Matter
PE3	Condensed Matter Physics
PE4	Physical and Analytical Chemical Sciences
PE5	Synthetic Chemistry and Materials
PE6	Computer Science and Informatics
PE7	Systems and Communication Engineering
PE8	Products and Processes Engineering
PE9	Universe Sciences
PE10	Earth System Science
<b>Social Sciences and Humanities</b>	

<sup>2</sup> [https://erc.europa.eu/sites/default/files/document/file/ERC\\_Work\\_Programme\\_2015.pdf](https://erc.europa.eu/sites/default/files/document/file/ERC_Work_Programme_2015.pdf)

2

SH1	Individuals, Institutions and Markets
SH2	Institutions, Values, Beliefs and Behaviour
SH3	Environment, Space and Population
SH4	The Human Mind and Its Complexity
SH5	Cultures and Cultural Production
SH6	The Study of the Human Past

# EIT - Making innovation happen

## 2016 Call for KICs →

Find the latest information about the 2016 Call

## Climate-KIC →

Climate change mitigation and adaptation

## EIT Digital →

Future Information and Communication Technologies

## EIT Health →

Healthy living and active ageing

## EIT Raw Materials →

Sustainable exploration, extraction, processing, recycling and substitution

## KIC InnoEnergy →

Sustainable energy



## New opportunities for innovation and research with the EU's science and knowledge service

22/09/2016

The EIT and the European Commission's Joint Research Centre (JRC) strengthened cooperation by signing a Memorandum of Understanding (MoU) today at the EIT Headquarters in Budapest. Tibor Navracsics, European Commissioner for Education, Culture, Youth and Sport, responsible for both the EIT...



New opportunities for innovation and research with the EU's science and knowledge service

Ten teams hone their healthcare startup business plans through EIT Health LaunchLab

EIT Digital's SecurityMatters raises funding from Robert Bosch Venture Capital and three other...

Have your say on the EIT: public consultation

EIT Raw Materials Business Ideas Competition



Explore the EIT Community  
Infographics

## WHAT'S IN IT FOR YOU

Information for...



**BUSINESS**  
Be part of the movement that creates tomorrow's entrepreneurs. Find opportunities to access exceptional talent, innovation know-how and new market opportunities.



**ENTREPRENEURS**  
Start a new venture, improve your competitiveness, and find commercial success. Find opportunities to access support and finance.



**PUBLIC AUTHORITIES**  
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- [EIT Governing Board](#) →
- [EIT Headquarters](#) →
- [EIT Legal framework](#) →
- [EIT in Europe - Map](#)
- [EIT Alumni](#) →
- Climate-KIC**
- EIT Digital**
- [EIT Health](#)
- [EIT Raw Materials](#)

**EIT Digital**

**EIT Digital is a leading European open innovation organisation**

The mission of EIT Digital is to foster digital technology innovation and entrepreneurial talent for economic growth and quality of life in Europe. EIT Digital brings together entrepreneurs from a partnership of over 130 top European corporations, SMEs, start-ups, universities and research institutes in the following locations:

- Brussels Head Office
- Berlin Node
- Eindhoven Node
- Helsinki Node
- London Node
- Paris Node
- Stockholm Node
- Trento Node
- Budapest APG (Associate Partner Group)
- Madrid APG
- Silicon Valley hub

- Head Office
- Node
- Satellite
- Associate Partner





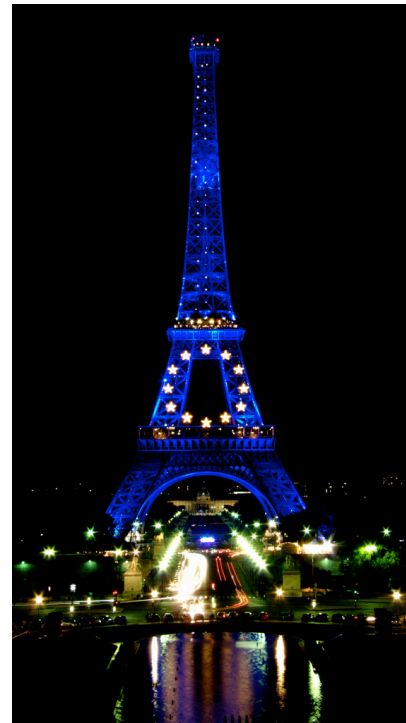
**ERCIM**

European Research Consortium  
for Informatics and Mathematics

# Final Considerations (I)

The EC “decision-making system” is:

- Structured and consolidated
- There are several bodies acting in the scene



*Cooperating for Excellence in Research*

A closer collaboration among the decision-makers and the scientific community would benefit the process and quality of the final decisions

- Associations and Organizations representing scientists should:
  - be encouraged to share their key findings with the European Commission at the political levels
  - furnish inputs to the EU policy-makers



# Final Considerations (III)

ERCIM

European Research Consortium  
for Informatics and Mathematics

Moreover:

- the EU decision-making process remains a highly political phenomenon
  - Very sensible to:
    - the political context
    - topics and wishes of the citizens

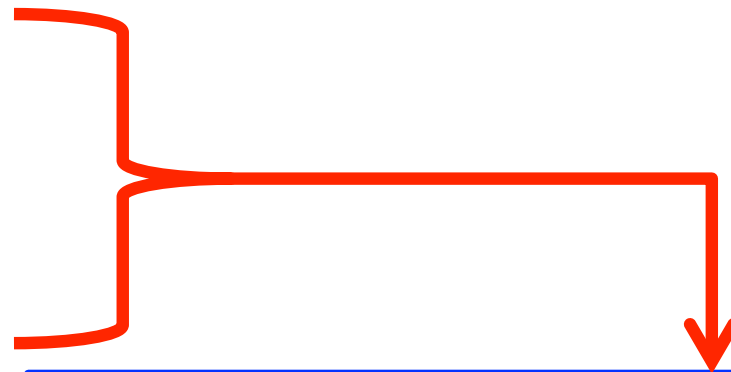




# Final Considerations (IV)

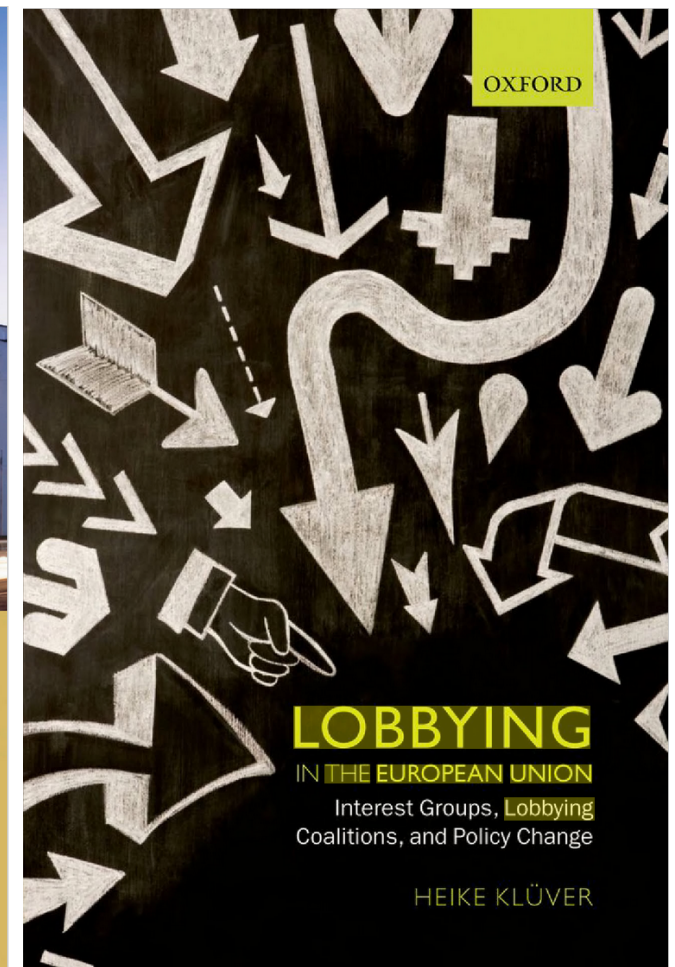
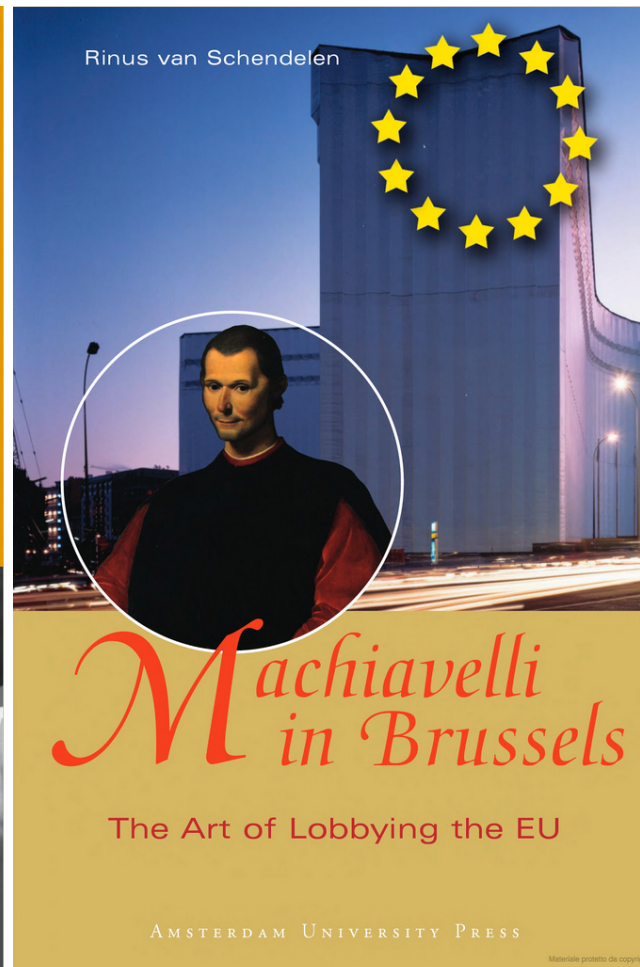
So, in order to better contribute to the scientific, social and economic growth in Europe, our scientific community should be more:

- Credible
- Visible
- Influential
- .....



**Should be able to enhance  
the lobbying capacity**

# How can we enhance our lobbying capacity?



# Learning from the mistakes

Just an example.....

# European Forum for ICST

Platform for Information and Communication Science and Technology  
in Europe

*Blueprint – July 18, 2011*

**Task Group:** V. Baltac/F. Fanning (CEPIS), B. Bigalke (EAI), Chr. Choppy (Informatics Europe), K. Jeffery (ERCIM), M. Shapiro (ACM Europe), P. van Roy (EAPLS), and J. van Leeuwen (Informatics Europe and EATCS, moderator).

**Summary.** *A platform organization is described for the cooperation between ICST societies in Europe. The Task group recommends that the Extended Panel moves to establish the platform following a scenario from Section 7, and to create the platform in initial form as outlined in Section 8.*

ACM Europe



Consorzio Interuniversitario Nazionale per l'Informatica (CINI)



European Association for Programming Languages and Systems (EAPLS)



European Association of Software Science and Technology (EASST)



European Association for Theoretical Computer Science (EATCS)



European Coordinating Committee for Artificial Intelligence (ECCAI)



European Research Consortium for Informatics and Mathematics (ERCIM)



INFORMATICS Europe (Informatics Europe)



Société Informatique de France (SIF)





*The development of common viewpoints and strategies for ICST in Europe and, whenever appropriate or needed, a common representation of these viewpoints and strategies at the international level.*

- act as a platform for cooperation and joint action,
- be a political factor by acting jointly,
- represent joint perspectives on the development of ICST,
- promote research and education in ICST,
- stimulate the valorisation of ICST results and insights, and
- balance the influence of industry.



The world's largest educational and scientific computing society, delivers resources that advance computing as a science and a profession. ACM provides the computing field's premier Digital Library and serves its members and the computing profession with leading-edge publications, conferences, and career resources.



To improve and promote a high standard among informatics professionals in recognition of the impact that Informatics has on employment, business and society.



To stimulate research in the area of programming languages and systems.

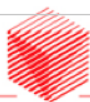


Aims at promoting research, development and applications in the area of systematic and rigorous engineering of software and systems.



European Association for Theoretical Computer Science

To facilitate the exchange of ideas and results among theoretical computer scientists, to stimulate cooperation between the theoretical and the practical community in computer science.

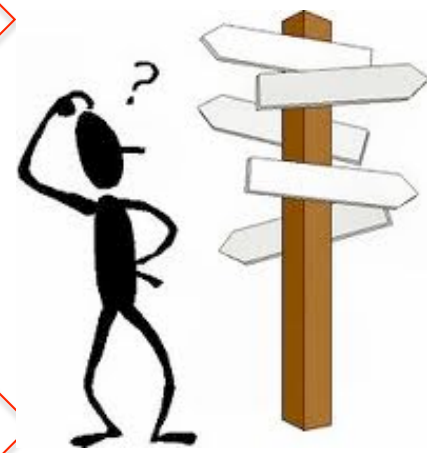


ERCIM  
European Research Consortium for Informatics and Mathematics

Aims to foster collaborative work within the European research community and to increase co-operation with European industry. Leading research institutes from European countries are members of ERCIM.



The association of computer science departments and research laboratories in Europe and neighbouring areas.





**A tentative mapping of the European ICST Societies on the Horizon 2020 Pillars**

# European Forum for ICST

The platform of the European Societies in Information and Communication Sciences and Technologies

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<a href="#">European Research Consortium for Informatics and Mathematics (ERCIM)</a>	
<a href="#">INFORMATICS Europe (Informatics Europe)</a>	
<a href="#">Société Informatique de France (SIF)</a>	

Societies/associations wishing to join the Forum are kindly invited to contact the Executive Board.

See also the [list of ICT societies in Europe and national societies](#).

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## Coordinating committee & Executive board

### Coordinating committee:

*L. Aceto* (EATCS), *M. Cosnard* (ERCIM), *C. de la Higuera* (SIF), *P. Doherty* (ECCAI), *K. Jeffery* (ERCIM), *F. Gagliardi* (ACM Europe), *C. Ghezzi* (Informatics Europe), *D. Laforenza* (president, ERCIM), *T. Margaria* (EASST), *P. Prinetto* (CINI), *M. Shapiro* (ACM Europe), *P. Spirakis* (EATCS, ACM Europe), *M. van den Brand* (EAPLS), *Jan van Leeuwen* (Informatics Europe), *P. van Roy* (EAPLS).

### Executive board:

*D. Laforenza* (president), *K. Jeffery* (vice-president), *P. Spirakis* (vice-president).

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## Past events & Documents

- **Next Forum, February 24, 2014.**
  - Details for members, see under 'Upcoming Events and Working Documents'.
- **Forum, October 22, 2013 - Paris** (Université Pierre et Marie Curie).
  - Endorsed: (to follow).
  - New members:
    - [CINI - Consorzio Interuniversitario Nazionale per l'Informatica](#),
    - [SIF - la Société informatique de France](#).
- **Forum, June 10, 2013 - Potsdam** (Uni Potsdam - Institut für Informatik)
  - President 2013- 2015: **Domenico Laforenza**.
  - Endorsed: [Informatics education: Europe cannot afford to miss the boat](#) (Informatics Europe & ACM Europe)
- **Forum, February 12, 2013 - Paris** (INRIA)
  - Endorsed: [Strategy 2013-2015](#) (European Forum for ICST)
- **Forum, October 26, 2012 - Sophia Antipolis**(INRIA SA Méditerranée)
  - Endorsed: [Software Technologies - The Missing Key Enabling Technology](#) (ISTAG).
  - New member:
    - [ECCAI - European Coordinating Committee for Artificial Intelligence](#).
- **Forum, May 9/May 10, 2012 - Pisa** (CNR - IIT)
  - New website: [www.eficst.eu](http://www.eficst.eu), also [www.eficst.org](http://www.eficst.org)
- **Forum, February 2, 2012 - Paris**(INRIA)
  - Constituting meeting.
- **Forum, November 7, 2011 - Milano** (ECSS 2011)
  - President 2011-2013: **Jan van Leeuwen**.
  - [Milan agreement](#).
- **Extended Panel, Task Group 2011**
  - [Task Group report](#) (2011)
- **Extended Panel, March 17, 2011 - Brussels** (CEPIS)
  - [Panel report](#)
- **Project SMART 2009/0061 - ASM Market Research and Analysis / Apintech Ltd** (Role & Impact of Professional & Scientific Societies in ICT Research, Education and Innovation)
  - [ICT professional societies in Europe](#) (project home)
  - [Survey](#) (ASM/Apintech, 2011)
  - [Strategic options - position document](#) (ASM/Apintech, 2011)
  - [Workshop report](#) (ASM/Apintech, 2011)
- **ECSS 2010 - Prague**
  - [Panel report](#) (J. van Leeuwen/C. Pereira, 2010)
  - [Digital science and its impact on scientific societies](#) (Accordino, 2010)
  - [The role of learned societies in the digital age](#) (Hall, 2010)
- **EC Report 2008**
  - [ICT scientific societies at the dawn of the 21st century: which opportunities for Europe](#) (2008)

We met several times....

2010, 2011,  
2012, 2013,  
2014....

We prepared two position papers....

# QUESTION

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Can a closer cooperation between ERCIM and IE to improve the capacity of the European computer scientists to proactively contribute to the scientific, social and economic growth in Europe?



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for Informatics and Mathematics

Said differently.....

What's better?



**Bellum omnium contra omnes**  
(The war of all against all)

**Unitas est fortitudo**  
(Unity is strength)



**ERCIM**

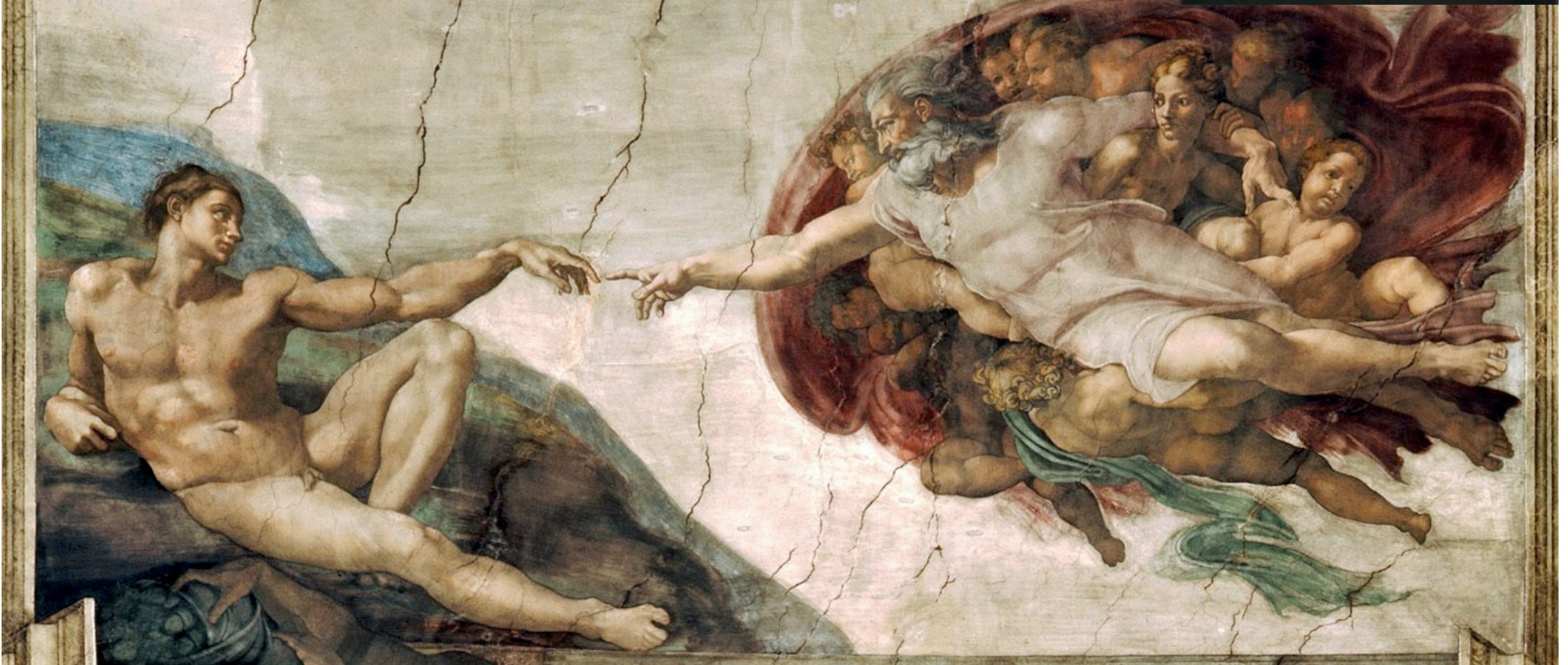
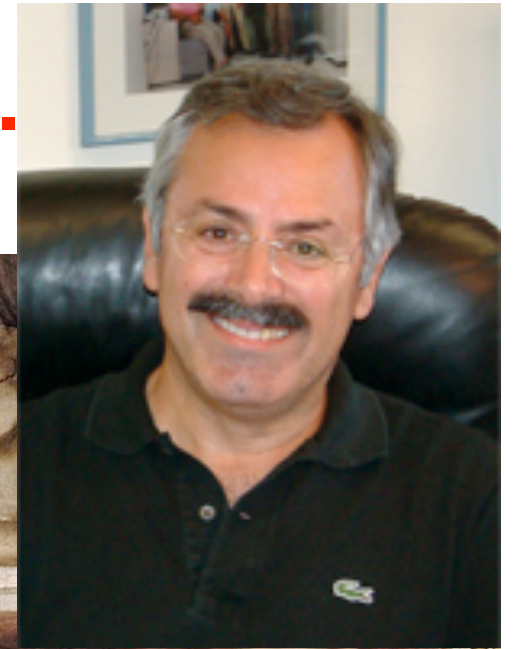
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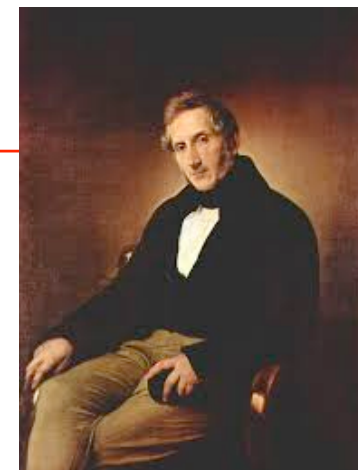


INFORMATICS  
EUROPE

*Cooperating for Excellence in Research*

We are trying.....





*«...Ai posteri l'ardua sentenza...»*

**Il cinque maggio**

di Alessandro Manzoni (17 luglio 1821)



*«...Posterity will judge...»*

**The Fifth of May**

by Alessandro Manzoni (17 July 1821)



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# Thanks for your attention

[domenico.laforenza@iit.cnr.it](mailto:domenico.laforenza@iit.cnr.it)