



Lecture No 8.

RESEARCH & TECHNOLOGICAL DEVELOPMENT IN THE EU

ACCESSIBILITY & DISSEMINATION OF PROFESSIONAL KNOWLEDGE - THE ROLE OF UNIVERSITIES

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RECOMMENDED READINGS

- ❖ **European universities in the European Research Area: Building on strengths - EUA 2014 ERA Progress Report. September 2014.**
http://www.eua.be/Libraries/publication/2014_EUA_MoU_report.pdf?sfvrsn=0
- ❖ **Assessment of progress in achieving ERA in Member States and Associated Countries. Final Report to DG Research and Innovation. 8 May 2015.**
http://ec.europa.eu/research/era/pdf/era-communication/era_final_report_2015.pdf
- ❖ **Innovation union: a pocket guide on a Europe 2020 initiative. European Union, Brussels, 2013.**
https://ec.europa.eu/eip/agriculture/sites/agri-eip/files/innovation-pocket-book_en.pdf
- ❖ **European Research Area Progress Report 2014 accompanied by Facts and Figures 2014. European Union, Brussels, September 2014.**
http://ec.europa.eu/research/era/pdf/era_progress_report2014/era_progress-report_150521.pdf



DEFINITIONS

1

❖ *Research:*

- ❖ a detailed study of a subject, especially in order to discover (new) information or reach a (new) understanding

❖ *Research & Development (R&D):*

- ❖ the part of a business that tries to find ways to improve existing products, and/or to develop new ones

❖ *Innovation:*

- ❖ discovering (and introducing, using) a new idea, product or method



DEFINITIONS

2

❖ *Technology:*

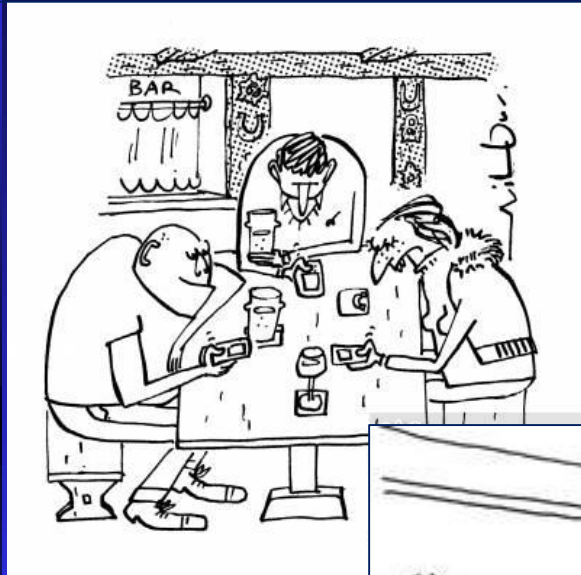
- ❖ The purposeful application of scientific knowledge and information in industry and commerce, i. e. in the design, production and utilization of goods and services and in the organization of human activities

❖ *Technological development (TD):*

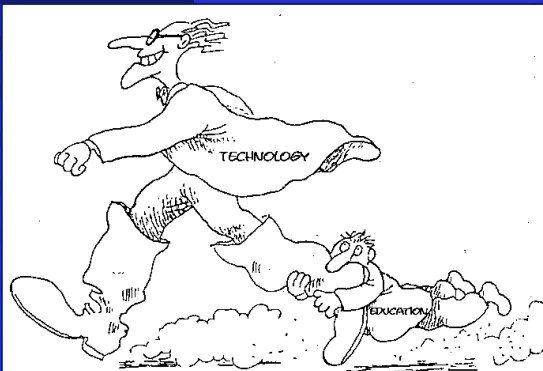
- ❖ The change/modification (improvement, alteration) of a technology
- ❖ In engineering it's common to go through several stages of development before the final variation is decided upon and cleared for production and sale: each stage from start to finish is a development



TIME & TECHNOLOGY



- ❖ With the passage of time, technology has become very vital to human beings and it has gotten to the point where most people fall asleep with their phone or tablet next to them



Timár, 2017





POLICY OBJECTIVES

- ❖ **Conducting European research policies and implementing EU research programmes is a legal and political obligation resulting from the Amsterdam Treaty**
- ❖ **The Treaty include a whole chapter on research and technological development (RTD), so as to underline that RTD is an essential element in the functioning of industrialised countries, such as EU Member States**
- ❖ **Competitiveness of companies and the employment they can provide depend to a great extent on RTD**
- ❖ **RTD is also essential for the support of other policies such as consumer protection of the environment**
- ❖ **The individual and collective wellbeing of citizens depends also on the quality and relevance of RTD**



EU INTERVENTION

- ❖ **The EU must also play an active role in organisation, co-ordination and management of RTD because of a number of developments inherent to the RTD sector itself:**
 - ❖ high level research is increasingly complex and interdisciplinary
 - ❖ high level research is increasingly costly
 - ❖ high level research requests a constantly increasing "critical mass,,
- ❖ **Organising co-operation at different levels, co-ordinating national or European policies, networking teams and increasing the mobility of individuals and ideas is therefore a requirement resulting from the development of modern research in a global environment**



EUROPEAN RESEARCH AREA

- ❖ Taking up this challenge the European Commission, Member States and the European Parliament, the scientific community and industry are now committed to work jointly towards the creation of a "European Research Area" (ERA)
- ❖ The ERA is defined as a unified research area which enables the free circulation of researchers, scientific knowledge and technology
- ❖ It should enable Member States and the EU overall to strengthen its scientific and technological bases, competitiveness and capacity to address great challenges





ERA PRIORITIES

- 1. More effective national research systems**
- 2. Optimal transnational co-operation and competition**
- 3. An open labour market for researchers**
- 4. Gender equality and gender mainstreaming in research**
- 5. Optimal access to and circulation & transfer of scientific knowledge, including via digital ERA**



INTERVENTION LOGIC

ERA PRIORITY 1

(EXAMPLE)

| ERA Priorities (Objectives) | Problem areas | ERA Actions | Activities | Outputs | Outcomes | Impacts |
|---|--|--|---|---|---|--|
| 1. More effective national research systems | <p>Limited public resources for RTD</p> <p>Insufficient competition in national research systems</p> <p>Strong variation in share of competitively allocated funding across EU</p> <p>Little institutional funding based on performance criteria</p> <p>Strong overlap in research profiles of RFOs and RPOs, no specialisation.</p> | 1a. Competitive funding through calls for proposals applying international peer review | MS/AC and RFOs design or amend national research and innovation strategies and funding mechanisms | <p>increased share of competitively allocated funding through RFO in total RTD spending.</p> <p>increased share of RTD budget allocated through peer review</p> | <p>Increased number of high-impact scientific publications</p> <p>Increased social impact of research</p> <p>Increased number of patent applications and co-patents</p> | <p>Improve capacity and efficiency of national research systems</p> <p>Higher degree of specialisation</p> <p>Higher performance in scientific and commercial output</p> <p>Less overlap in research and scientific profiles</p> |
| | | 1b. Institutional funding-based on institutional assessment | MS/AC introduce qualitative performance goals for institutional funding mechanisms | Increases share of institutional funding allocated to RPOs based on institutional assessment and/or evaluation and performance-related indicators. | | |

**RFO – Request for Offer; RPO – Research Protection Office;
MS – Member State; AC – Academic Community**



COORDINATION NEEDED

- ❖ **The crosscutting focus on international cooperation encourages Member States to foster openness for international cooperation to maximise EU research potential**
- ❖ **Most Member States already have national strategies for international cooperation on research and innovation**
- ❖ **National level initiatives could be strengthened through greater coordination between Member States**



ERA PROGRESS REPORTS





ASSESSMENT OF ERA'S PROGRESS

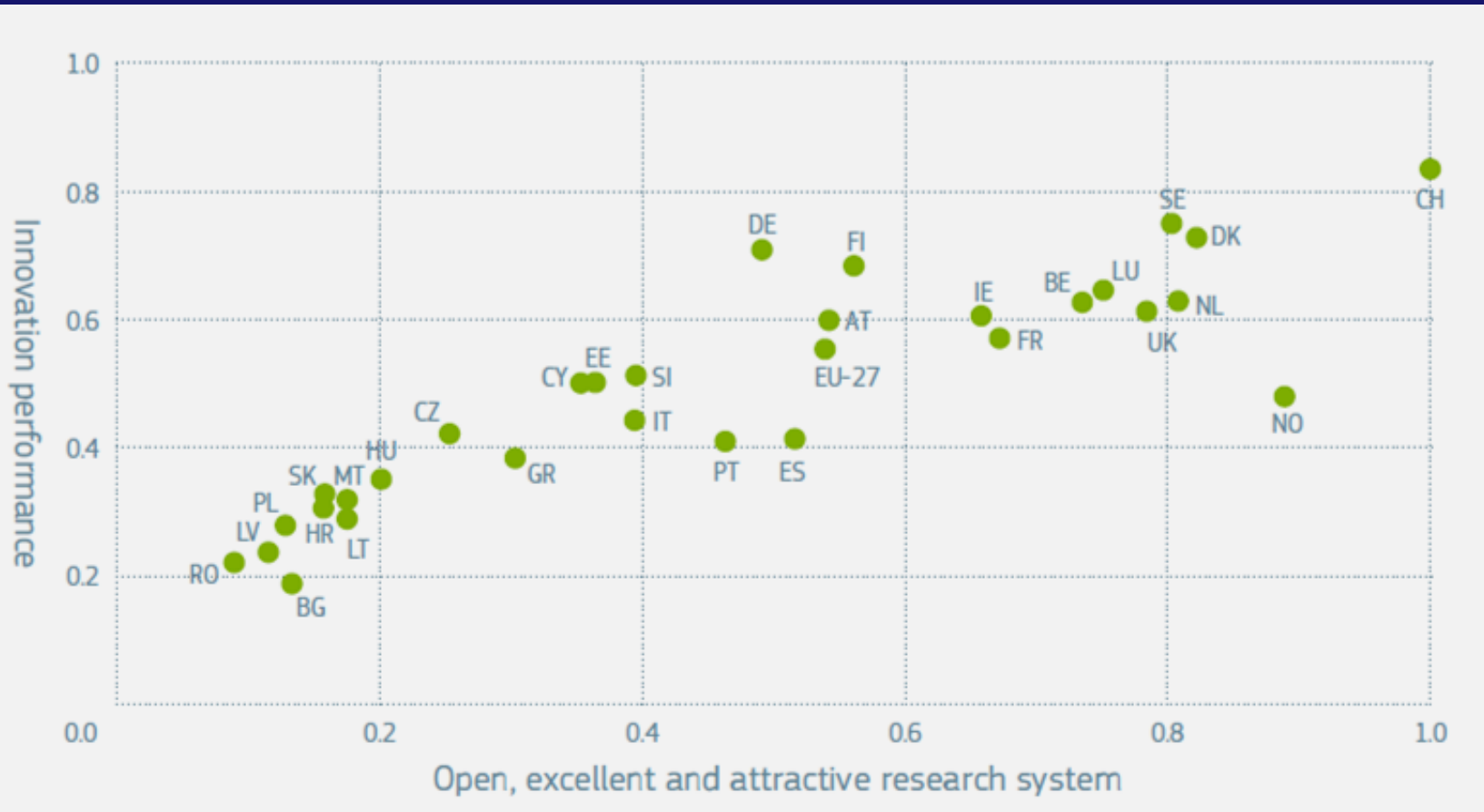


❖ The study was expected to examine whether the measures in place in Member States and Associated Countries had advanced since 2012 and were better aligned with the ERA priorities

❖ Associated countries:
Albania, Bosnia and Herzegovina, Faroe Islands, Macedonia, Iceland, Israel, Lichtenstein, Moldova, Montenegro, Norway, Serbia, Switzerland and Turkey



ERA RESEARCH SYSTEMS & INNOVATION PERFORMANCE (2014)

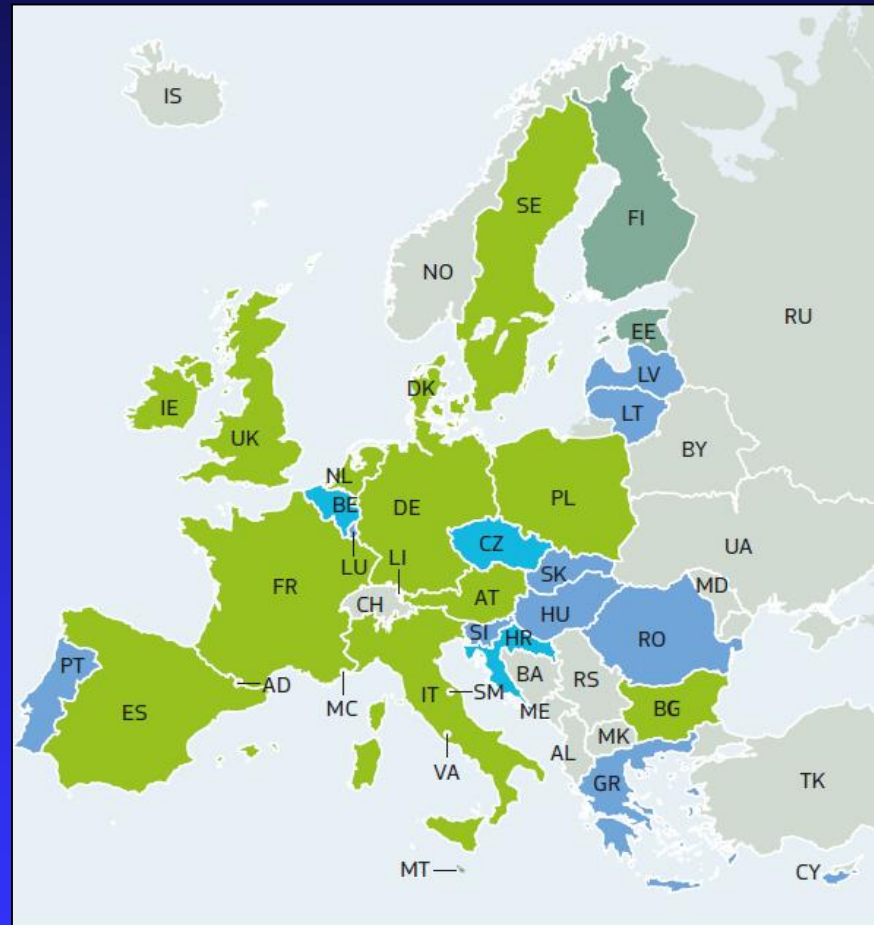


Source: DG Research and Innovation calculations based on Innovation Union Scoreboard 2014



ERA PROGRESS

Classification
of Member
States
according to
their policies in
support of *ERA*



- Top-down
- Bottom-up
- Limited implementation by stakeholders
- Limited measures and limited implementation



ERA PROGRESS REPORT 2015

- ❖ **The report confirms that the ERA partnership has made good progress:**
 - ❖ **Member States increasingly adopt measures in support of ERA, and reflect them in their national reform programmes.**
 - ❖ **The Stakeholder Organisations continuously support the ERA agenda**
 - ❖ **The EU has embedded ERA in the European semester, provides substantial funding for ERA measures and promotes open recruitment, open access to publications and data as well as gender equality through the Horizon 2020**
 - ❖ **A solid monitoring mechanism has been established and is delivering data on levels of progress. It is an essential component in ERA policy-making**



ROLE OF UNIVERSITIES



- ❖ **The European University Association (EUA) is the representative organisation of universities and national rectors' conferences in 47 European countries**
- ❖ **EUA plays a crucial role in influencing EU policies on higher education, research and innovation**
- ❖ **The EUA provides a unique expertise in higher education and research as well as a forum for exchange of ideas and good practice among universities**



EUA'S CONTRIBUTION



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- ❖ **EUA is committed to promote the ERA goals and encourage their respective memberships to carry out actions addressing them**
- ❖ **EUA's commitments included actions in the areas of:**
 - i) **doctoral training, research careers and mobility;**
 - ii) **university-industry collaboration and knowledge transfer;**
 - iii) **research and innovation strategies for smart specialisation and cross-border cooperation;**
 - iv) **open access to publications and data.**



NEW DOCTORAL GRADUATES PER THOUSAND POPULATION AGED 25-34



■ European Union
■ United States
■ Japan



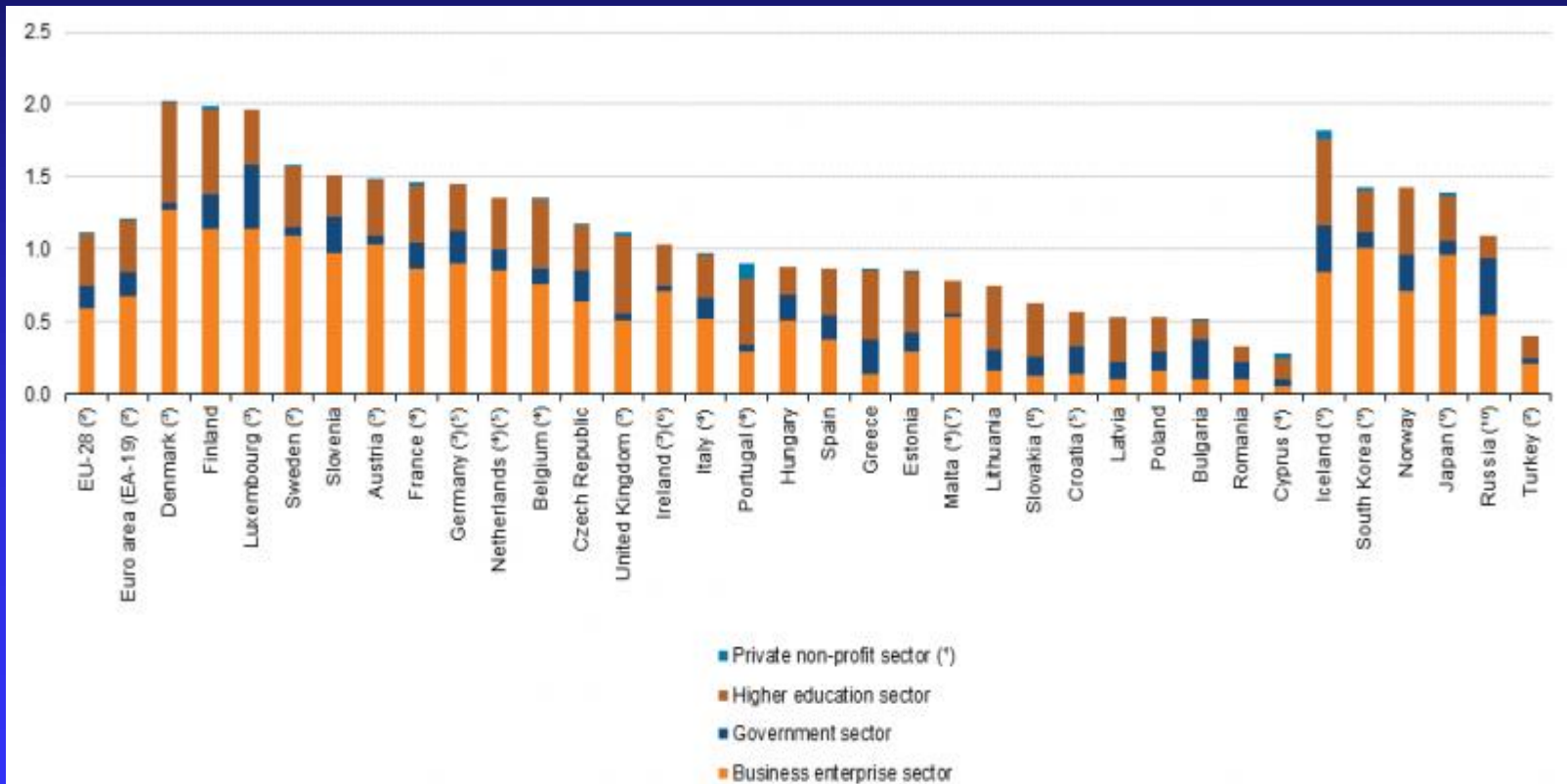
EU R&D POLICY OBJECTIVES

- ❖ **Research is an investment in the future and so put it at the heart of the EU's policy for sustainable growth and job creation**
- ❖ **The goal is to ensure EU produces world-class science, removes barriers to innovation and makes it easier for the public and private sectors to cooperate in delivering innovation**
- ❖ **It will be complemented by further measures, which will aim at breaking down barriers to create a genuine single market for knowledge, research and innovation**



R&D PERSONNEL BY SECTOR

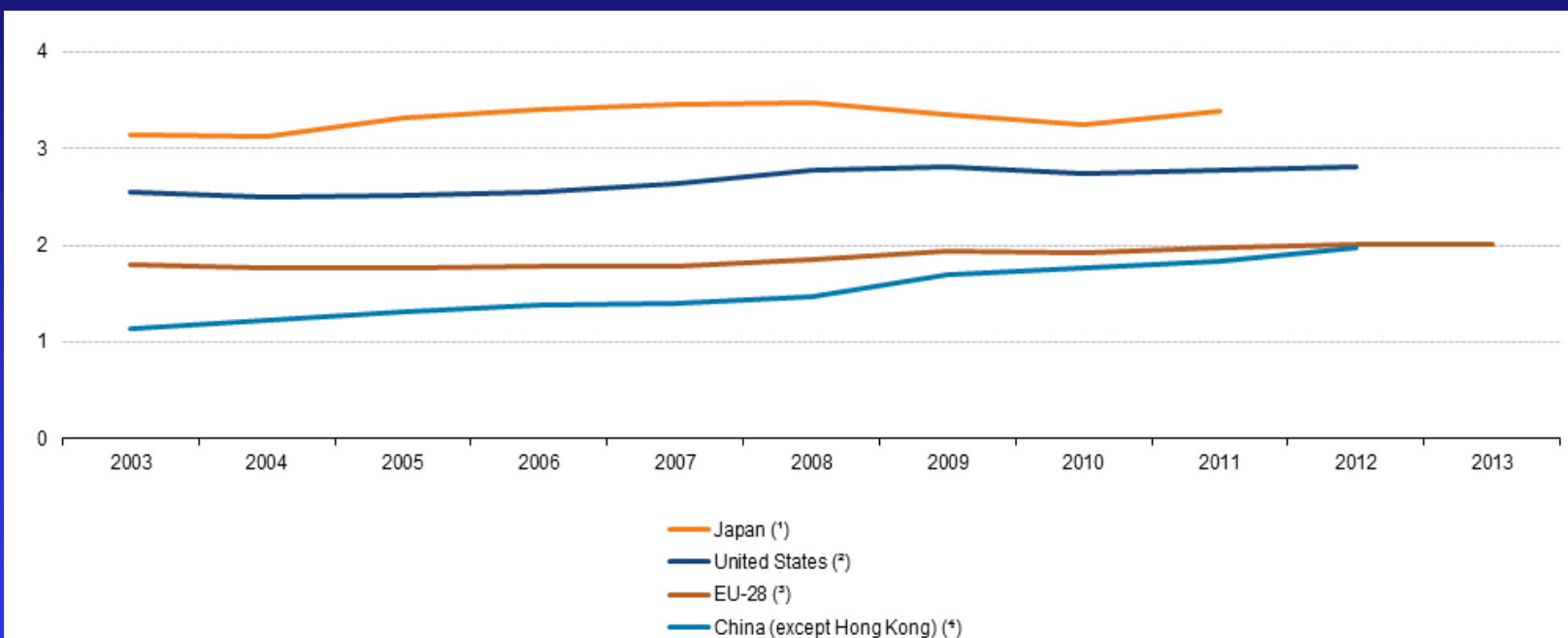
(2013; % OF LABOUR FORCE)



(*) Germany, Ireland, Croatia, Latvia, Lithuania, Hungary, the Netherlands, Norway and Turkey: not available.



GROSS DOMESTIC EXPENDITURE ON R&D (% of GDP)



(*) 2008: break in series.

(*) Excludes most or all capital expenditure. 2012: provisional.

(*) 2003 and 2013: estimates.

(*) 2009: break in series.

Source: Eurostat (online data code: tsc00001)



GROSS DOMESTIC EXPENDITURE ON R&D

(% of GDP)

| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| EU-28 | 1.80 | 1.76 | 1.76 | 1.78 | 1.78 | 1.85 | 1.94 | 1.93 | 1.97 | 2.01 | 2.01 |
| Euro area (EA-19) | 1.81 | 1.78 | 1.78 | 1.80 | 1.81 | 1.89 | 1.99 | 1.99 | 2.04 | 2.09 | 2.09 |
| Belgium | 1.83 | 1.81 | 1.78 | 1.81 | 1.84 | 1.92 | 1.97 | 2.05 | 2.15 | 2.24 | 2.28 |
| Bulgaria | 0.47 | 0.48 | 0.45 | 0.45 | 0.44 | 0.46 | 0.51 | 0.59 | 0.55 | 0.62 | 0.65 |
| Czech Republic | 1.15 | 1.15 | 1.17 | 1.23 | 1.31 | 1.24 | 1.30 | 1.34 | 1.56 | 1.79 | 1.91 |
| Denmark (*) | 2.51 | 2.42 | 2.39 | 2.40 | 2.51 | 2.78 | 3.07 | 2.94 | 2.97 | 3.02 | 3.06 |
| Germany | 2.46 | 2.42 | 2.43 | 2.46 | 2.45 | 2.60 | 2.73 | 2.72 | 2.80 | 2.88 | 2.85 |
| Estonia | 0.77 | 0.85 | 0.92 | 1.12 | 1.07 | 1.26 | 1.40 | 1.58 | 2.34 | 2.16 | 1.74 |
| Ireland | 1.13 | 1.18 | 1.20 | 1.21 | 1.24 | 1.39 | 1.63 | 1.62 | 1.53 | 1.58 | .. |
| Greece (*) | 0.55 | 0.53 | 0.58 | 0.56 | 0.58 | 0.66 | 0.63 | 0.60 | 0.67 | 0.69 | 0.80 |
| Spain | 1.02 | 1.04 | 1.10 | 1.17 | 1.23 | 1.32 | 1.35 | 1.35 | 1.32 | 1.27 | 1.24 |
| France (*) | 2.11 | 2.09 | 2.04 | 2.05 | 2.02 | 2.06 | 2.21 | 2.18 | 2.19 | 2.23 | 2.23 |
| Croatia | 0.95 | 1.03 | 0.86 | 0.74 | 0.79 | 0.88 | 0.84 | 0.74 | 0.75 | 0.75 | 0.81 |
| Italy | 1.06 | 1.05 | 1.05 | 1.09 | 1.13 | 1.16 | 1.22 | 1.22 | 1.21 | 1.27 | 1.26 |
| Cyprus | 0.32 | 0.34 | 0.37 | 0.39 | 0.40 | 0.39 | 0.45 | 0.45 | 0.46 | 0.43 | 0.48 |
| Latvia | 0.36 | 0.40 | 0.53 | 0.65 | 0.56 | 0.58 | 0.45 | 0.60 | 0.70 | 0.66 | 0.60 |
| Lithuania | .. | 0.75 | 0.75 | 0.79 | 0.80 | 0.79 | 0.83 | 0.78 | 0.90 | 0.90 | 0.95 |
| Luxembourg | 1.65 | 1.63 | 1.59 | 1.69 | 1.65 | 1.65 | 1.72 | 1.50 | 1.41 | 1.16 | 1.16 |
| Hungary (*) | 0.92 | 0.87 | 0.93 | 0.99 | 0.97 | 0.99 | 1.14 | 1.15 | 1.20 | 1.27 | 1.41 |
| Malta (*) | 0.24 | 0.49 | 0.53 | 0.58 | 0.55 | 0.53 | 0.52 | 0.64 | 0.70 | 0.86 | 0.85 |
| Netherlands (*) | 1.81 | 1.82 | 1.81 | 1.77 | 1.70 | 1.65 | 1.69 | 1.72 | 1.89 | 1.97 | 1.98 |
| Austria | 2.18 | 2.17 | 2.38 | 2.37 | 2.43 | 2.59 | 2.61 | 2.74 | 2.68 | 2.81 | 2.81 |
| Poland | 0.54 | 0.56 | 0.57 | 0.55 | 0.56 | 0.60 | 0.67 | 0.72 | 0.75 | 0.89 | 0.87 |
| Portugal (*) | 0.70 | 0.73 | 0.76 | 0.95 | 1.12 | 1.45 | 1.58 | 1.53 | 1.46 | 1.37 | 1.36 |
| Romania (*) | 0.38 | 0.38 | 0.41 | 0.45 | 0.52 | 0.57 | 0.46 | 0.45 | 0.49 | 0.48 | 0.39 |
| Slovenia (*) | 1.25 | 1.37 | 1.41 | 1.53 | 1.42 | 1.63 | 1.82 | 2.06 | 2.43 | 2.58 | 2.59 |
| Slovakia | 0.56 | 0.50 | 0.49 | 0.48 | 0.45 | 0.46 | 0.47 | 0.62 | 0.67 | 0.81 | 0.83 |
| Finland | 3.30 | 3.31 | 3.33 | 3.34 | 3.35 | 3.55 | 3.75 | 3.73 | 3.64 | 3.42 | 3.31 |
| Sweden (*) | 3.61 | 3.39 | 3.39 | 3.50 | 3.26 | 3.50 | 3.42 | 3.22 | 3.22 | 3.28 | 3.30 |
| United Kingdom | 1.67 | 1.61 | 1.63 | 1.65 | 1.69 | 1.69 | 1.75 | 1.69 | 1.69 | 1.63 | 1.63 |
| Iceland (*) | 2.73 | .. | 2.69 | 2.91 | 2.58 | 2.53 | 2.86 | .. | 2.49 | .. | .. |
| Norway | 1.68 | 1.55 | 1.48 | 1.46 | 1.56 | 1.56 | 1.72 | 1.65 | 1.63 | 1.62 | 1.66 |
| Switzerland | .. | 2.68 | .. | .. | .. | 2.73 | .. | .. | .. | 2.96 | .. |
| Montenegro | .. | .. | .. | .. | .. | .. | .. | .. | 0.32 | .. | 0.38 |
| Serbia | .. | .. | .. | .. | .. | .. | 0.87 | 0.74 | 0.72 | 0.91 | 0.73 |
| Turkey | 0.48 | 0.52 | 0.59 | 0.58 | 0.72 | 0.73 | 0.85 | 0.84 | 0.86 | 0.92 | 0.95 |
| China (except Hong Kong) (*) | 1.13 | 1.23 | 1.32 | 1.39 | 1.40 | 1.47 | 1.70 | 1.76 | 1.84 | 1.98 | .. |
| Japan (*) | 3.14 | 3.13 | 3.31 | 3.41 | 3.46 | 3.47 | 3.36 | 3.25 | 3.38 | .. | .. |
| Russia | 1.29 | 1.15 | 1.07 | 1.07 | 1.12 | 1.04 | 1.25 | 1.13 | 1.10 | 1.13 | 1.11 |
| South Korea (*) | 2.49 | 2.68 | 2.79 | 3.01 | 3.21 | 3.36 | 3.56 | 3.74 | 4.04 | .. | .. |
| United States (*) | 2.55 | 2.49 | 2.51 | 2.55 | 2.63 | 2.77 | 2.82 | 2.74 | 2.77 | 2.81 | .. |



EXPENDITURE ON R&D BY SOURCE OF FUNDS (2008 & 2013; % of total)

| | Business enterprise sector | | Government sector | | Abroad | |
|----------------------------------|----------------------------|------|-------------------|------|--------|------|
| | 2008 | 2013 | 2008 | 2013 | 2008 | 2013 |
| EU-28 (*) | 54.8 | 55.0 | 33.8 | 32.8 | 8.8 | 9.7 |
| Euro area (EA-19) (*) | 56.3 | 56.9 | 34.6 | 33.4 | 7.2 | 7.8 |
| Belgium (*) | 61.0 | 60.2 | 23.2 | 23.4 | 12.3 | 13.0 |
| Bulgaria | 30.6 | 19.5 | 61.2 | 31.6 | 6.8 | 48.3 |
| Czech Republic | 45.0 | 37.6 | 44.8 | 34.7 | 8.9 | 27.2 |
| Denmark (*) | 62.1 | 59.8 | 26.1 | 29.3 | 8.6 | 7.2 |
| Germany (*) | 67.3 | 66.1 | 28.4 | 29.2 | 4.0 | 4.3 |
| Estonia | 39.8 | 42.1 | 50.0 | 47.2 | 9.4 | 10.3 |
| Ireland (*) | 48.8 | 50.3 | 33.7 | 27.3 | 15.6 | 21.4 |
| Greece | 29.2 | 30.3 | 62.2 | 52.3 | 5.7 | 14.0 |
| Spain | 45.0 | 46.3 | 45.6 | 41.6 | 5.7 | 7.4 |
| France (*) (*) | 50.8 | 55.4 | 38.9 | 35.0 | 8.0 | 7.6 |
| Croatia | 40.8 | 42.8 | 49.3 | 39.7 | 7.9 | 15.5 |
| Italy (*) | 45.9 | 44.3 | 42.0 | 42.5 | 7.9 | 9.5 |
| Cyprus (*) | 17.8 | 10.9 | 64.1 | 66.4 | 14.7 | 17.5 |
| Latvia | 27.0 | 21.8 | 47.3 | 23.9 | 23.1 | 51.6 |
| Lithuania | 29.3 | 27.5 | 54.6 | 34.5 | 15.5 | 37.1 |
| Luxembourg (*) (*) | 70.3 | 47.8 | 24.3 | 30.5 | 5.4 | 20.4 |
| Hungary | 48.3 | 46.8 | 41.8 | 35.9 | 9.3 | 16.6 |
| Malta | 56.5 | 44.3 | 27.4 | 33.9 | 16.0 | 20.3 |
| Netherlands (*) (*) | 45.1 | 47.1 | 40.9 | 34.3 | 10.8 | 14.3 |
| Austria (*) | 46.1 | 44.1 | 37.0 | 39.1 | 16.4 | 16.4 |
| Poland | 30.5 | 37.3 | 59.8 | 47.2 | 5.4 | 13.1 |
| Portugal (*) | 48.1 | 46.0 | 43.7 | 43.1 | 3.0 | 5.2 |
| Romania (*) | 23.3 | 31.0 | 70.1 | 52.3 | 4.0 | 15.5 |
| Slovenia (*) | 62.8 | 63.8 | 31.3 | 26.9 | 5.6 | 8.9 |
| Slovakia | 34.7 | 40.2 | 52.3 | 38.9 | 12.3 | 18.0 |
| Finland (*) | 70.3 | 60.8 | 21.8 | 26.0 | 6.6 | 11.5 |
| Sweden (*) | 59.1 | 61.0 | 27.3 | 28.2 | 10.4 | 6.8 |
| United Kingdom | 45.4 | 46.5 | 30.7 | 27.0 | 17.7 | 20.6 |
| Iceland (*) (*) | 50.4 | 49.8 | 38.8 | 40.0 | 10.0 | 8.2 |
| Norway (*) | 43.6 | 43.1 | 46.8 | 45.8 | 8.2 | 9.5 |
| Switzerland (*) | 68.2 | 60.8 | 22.8 | 25.4 | 6.0 | 12.1 |
| Montenegro | : | 42.3 | : | 31.7 | : | 22.5 |
| Serbia (*) | 8.3 | 7.5 | 62.9 | 59.5 | 7.2 | 7.8 |
| Turkey | 47.3 | 48.9 | 31.6 | 26.6 | 1.3 | 0.8 |
| China (except Hong Kong) (*) (*) | 71.7 | 74.0 | 23.6 | 21.6 | 1.2 | 1.0 |
| Japan (*) (*) | 78.2 | 76.5 | 15.6 | 16.4 | 0.4 | 0.5 |
| Russia | 28.7 | 28.2 | 64.7 | 67.6 | 5.9 | 3.0 |
| South Korea (*) | 72.9 | 73.7 | 25.4 | 24.9 | 0.3 | 0.2 |
| United States (*) (*) | 63.5 | 59.1 | 30.4 | 30.8 | : | 3.8 |



TIMELINE OF EU R&TD FRAMEWORK PROGRAMMES

FP4
1994-1998

FP5
1998-2002

FP6
2002-2006

FP7
2007-2013

FP8
Horizon 2020
2014-2020

Other R&TD programmes



FUNDING OF R&TD FRAMEWORK PROGRAMMES

| FRAMEWORK PROGRAMME | PERIOD | BUDGET (billions of €) |
|-----------------------|-----------|--|
| First | 1984–1987 | 3.8 |
| Second | 1987–1991 | 5.4 |
| Third | 1990–1994 | 6.6 |
| Fourth | 1994–1998 | 13.2 |
| Fifth | 1998–2002 | 15.0 |
| Sixth | 2002–2006 | 17.9 |
| Seventh | 2007–2013 | 50.5 over seven years + 2.7 for EURATOM over five years |
| Horizon 2020 (Eighth) | 2014–2020 | 80 (estimated) |



CHANGING FOCUS

- ❖ **The Framework Programmes are *funding programmes* created by the European Union/European Commission to support and foster research in the European Research Area (ERA)**
- ❖ **The specific objectives and actions vary between funding periods: in FP6 and FP7 focus was still in technological research, in Horizon 2020 the focus is in innovation, accelerating economic growth and delivering solutions to end users that are often governmental agencies**



HISTORY OF HORIZON 2020

- ❖ In 2011 the European Council called on the Commission to bring together all of the previous EU's research and innovation funding under a single common strategic framework
- ❖ The Commission launched a wide-ranging consultation involving all key stakeholders which has led to Horizon 2020
- ❖ Funding opportunities under Horizon 2020 are set out in multiannual work programmes (WP)
- ❖ Horizon 2020 started in 2014; currently WP 2016-2017 is executed, WP 2018-2020 is in preparation



WHAT IS HORIZON 2020?

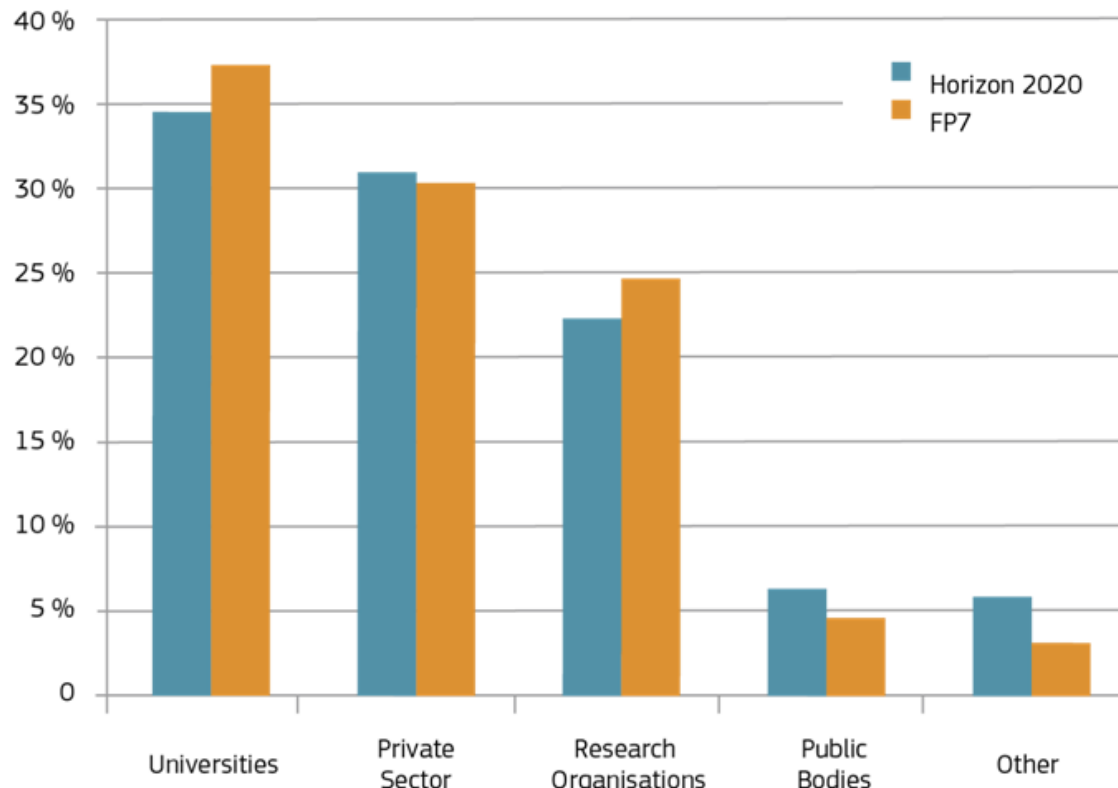
- ❖ ***Horizon 2020*** is the biggest to date EU Research & Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020) – in addition to the private investment that this money will attract
- ❖ It is the financial instrument implementing the *Innovation Union*, a *Europe 2020* flagship initiative aimed at securing Europe's global competitiveness



SOURCES OF CONTRIBUTION

Share of participations in signed grant agreements
per type of organisation:
Horizon 2020 compared with FP7

Horizon 2020 data is for 2014; FP7 data is for 2007-2013.

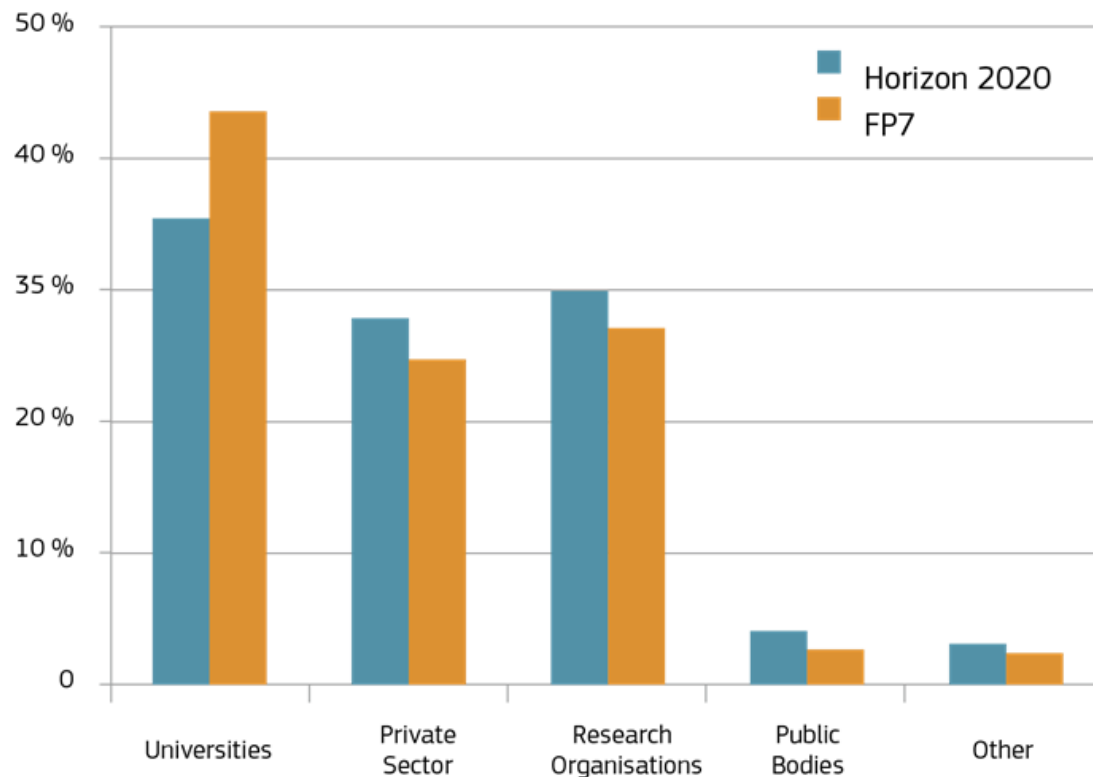




EU CONTRIBUTION

Share of EU financial contribution in signed grant agreements per type of organisation:
Horizon 2020 compared with FP7

.....
Horizon 2020 data is for 2014; FP7 data is for 2007-2013.





TOPICS FOR CONSULTATION IN 2016

- ❖ Future and Emerging Technologies
- ❖ Research Infrastructures, including e-Infrastructures
- ❖ Nanotechnologies, Advanced Materials, Biotechnology, and Advanced Manufacturing and Processing (NMBP)
- ❖ Information and Communication Technologies
- ❖ *Societal Challenge 2* (Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy)
- ❖ *Societal Challenge 4* (Smart, Green and Integrated Transport)
- ❖ *Societal Challenge 5* (Climate Action, Environment, Resource Efficiency and Raw Materials)



INNOVATION UNION

1



- ❖ Europe's future is connected to its power to innovate
- ❖ The *Innovation Union*, an action-packed initiative for an innovation-friendly Europe, is the solution
- ❖ It forms part of the *Europe 2020* strategy that aims to create smart, sustainable and inclusive growth



INNOVATION UNION

2

- ❖ Through *Innovation Union* initiative the European Commission has placed renewed emphasis on the conversion of Europe's scientific expertise into marketable products and services
- ❖ The Europe 2020 strategy includes guidelines to optimise support for R&D and innovation, strengthening the knowledge triangle between research, innovation and education



CORDIS

- ❖ **CORDIS is the *Community Research and Development Information Service*, available at <http://cordis.europa.eu>**
- ❖ **It is the European Commission's primary public repository and portal to disseminate information on all EU-funded research projects and their results**
- ❖ **The website provides also comprehensive links to external sources such as open access publications and websites**
- ❖ **CORDIS website is available in six languages (English-French-German-Italian-Spanish-Polish)**



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Project tweets



SMS
@SMS_EU

.@CAGovernment
@OregonGovBrown @WDFW &
@BCGovNews unite to take
action against
#oceanacidification via
@theifsuite ow.ly/4mTcP1
Ln



MENFI
@MENFI_EU

Participez à notre événement
de mise en réseau sur le #forêt
#médiiterranéenne - le
13/05/2016 Tunis
ow.ly/4mQwWT @processed
Ln



FIWARE
@FIWARE

"Open platforms are fully in line
with the #DigitalSingleMarket
objective" @GettingEU about
#FIWARE & the @DSMeu
bit.ly/1qPMGje

Stay Tuned






CORDIS Archives

CORDIS is the European Commission's primary public repository and portal to disseminate information on all EU-funded research projects and their results in the broadest sense.

Results Packs

CORDIS Results Packs are a new way to bring thematic collections of exploitable research results to specialised audiences, starting with energy efficiency in buildings

New materials: Reducing building's embodied energy



Smart windows: A no-brainer for future buildings



Old meets green: New technologies to retrofit buildings in Europe



Striking a balance between energy efficiency and indoor air quality



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The April newsletter is out and available here: <http://www.transport-research.info/sites/default/files/newsletters/April...> It includes information about TRIP's user survey and the new Urban Mobilit

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1

❖ *Innovative localisation system to save lives at sea*



On a sinking ship, crews need to evacuate passengers quickly - but they may have to find them first. An innovative system based on EU-funded research may soon make this task a great deal easier. On vessels fitted with this system, teams will be able to locate passengers instantly, on board and in the water. (Published: 27.04.2016)

❖ *New solar-powered electric vehicle to lower daily travel costs*



Most vehicles run on petrol or diesel that pollute our cities while emptying our wallets. But this could be about to change. The EU-funded PLUS-MOBY project has developed an electric urban vehicle and mobile fast food van that can be partially solar powered. Soon drivers should be able to charge their vehicle like they charge their phone and use solar power to drive up to 20 km per day. (Published 15.04.2016)



SUCCESS STORIES

2



❖ *Smarter and safer transport in Europe*

Composite materials have become increasingly important in improving our quality of life as they are widely used in flight vehicles, cars, boats, pipelines, buildings, roads, bridges, and dozens of other products. More and more, researchers are finding new ways to improve the numerous qualities of composites so they may be strong, lightweight, durable and cheap to produce. (Published: 02.12.2014)



❖ *Putting smart public transport technology to the test*

An EU-funded project is testing intelligent, energy-efficient and passenger-friendly bus service innovations designed to bring benefits to both commuters and public authorities across 12 cities in Europe. The most effective solutions are expected to create new market opportunities for cutting-edge technology in public transport. (Published: 04.03.2016)



SUCCESS STORIES

3



❖ *Getting rail freight back on track in Europe*

Transportation costs affect the price of any goods we buy, so reducing them could help our pockets. Road transportation is becoming more efficient with constant innovations, but what about the railroads? Rail transport is seen as cheaper and greener than road vehicles when it comes to long distances. It's hoped innovative thinking will put Europe's railroads on track towards a brighter future. (Published: 19.04.2016)



❖ *Containers get a redesign to pack more in: Tellibox*

Used all over the world to ship goods, containers are at the very heart of global trade. They have been around since the 1950s and have revolutionised the way we manufacture, trade and consume goods. The new design of the Tellibox combines elements of various current technologies to give a 100 m³ container that can be loaded from three sides, has a flexible lid and is compatible with the current intermodal transport system. (Published: 26.03.2013)