

The European Commission's science and knowledge service Joint Research Centre

The Role of JRC in supporting research & innovation policies in the EU

Maive Rute, Deputy Director-General

Structure

- **JRC - the European Commission's science and knowledge service**
- **JRC in Horizon Europe**
- **Support to R&I policies in the EU**

JRC's Mission

“ As the science and knowledge service of the Commission our mission is to support EU policies with independent evidence throughout the whole policy cycle ”



JRC Role: facts & figures

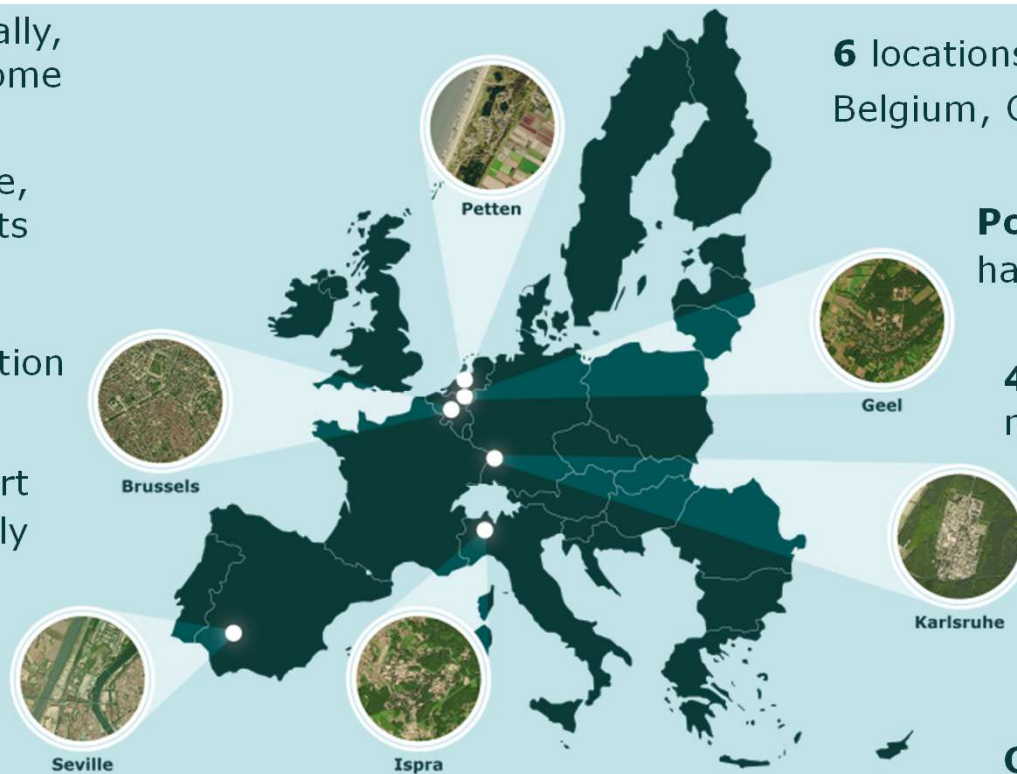
€ 386 million Budget annually,
plus € 62 million earned income

Independent of private,
commercial or national interests

30% of activities in policy
preparation, **70%** in implementation

125 instances of support
to the EU policy-maker annually

More than **100** economic,
bio-physical and nuclear models



6 locations in 5 Member States: Italy,
Belgium, Germany, The Netherlands, Spain

Policy neutral:
has no policy agenda of its own

42 large scale research facilities,
more than 110 online databases

83% of core research staff
with PhD's

Over 1,400
scientific publications per year

Focus on political priorities



JRC in Horizon Europe

Specific objectives of the Programme

Support the creation and diffusion of high-quality knowledge

Strengthen the impact of R&I in supporting EU policies

Foster all forms of innovation and strengthen market deployment

Optimise the Programme's delivery for impact in a strengthened ERA



Pillar 1 Open Science

European Research Council

Marie Skłodowska-Curie Actions

Infrastructures



Pillar 2 Global Challenges and Industrial Competitiveness

Clusters

- Health
- Inclusive and Secure Society
- Digital and Industry
- Climate, Energy and Mobility
- Food and natural resources

Joint Research Centre



Pillar 3 Open Innovation

European Innovation Council

European innovation ecosystems

European Institute of Innovation and Technology

Strengthening the European Research Area

Sharing excellence

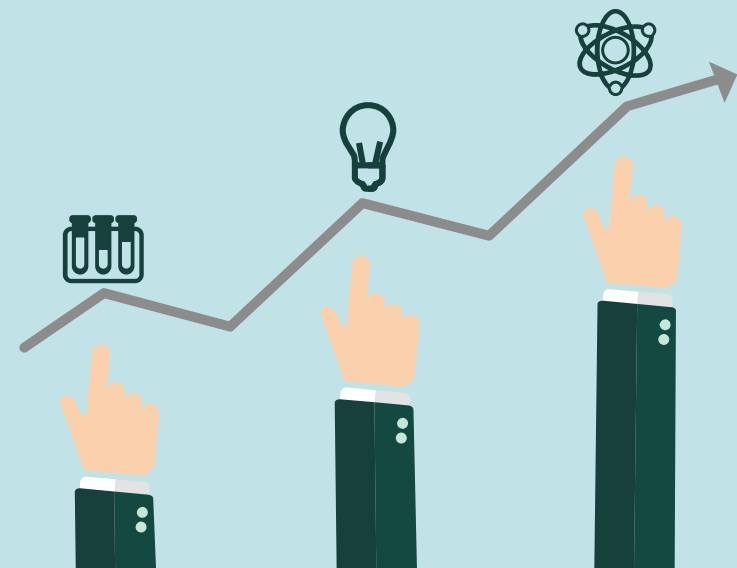
Reforming and Enhancing the European R&I system

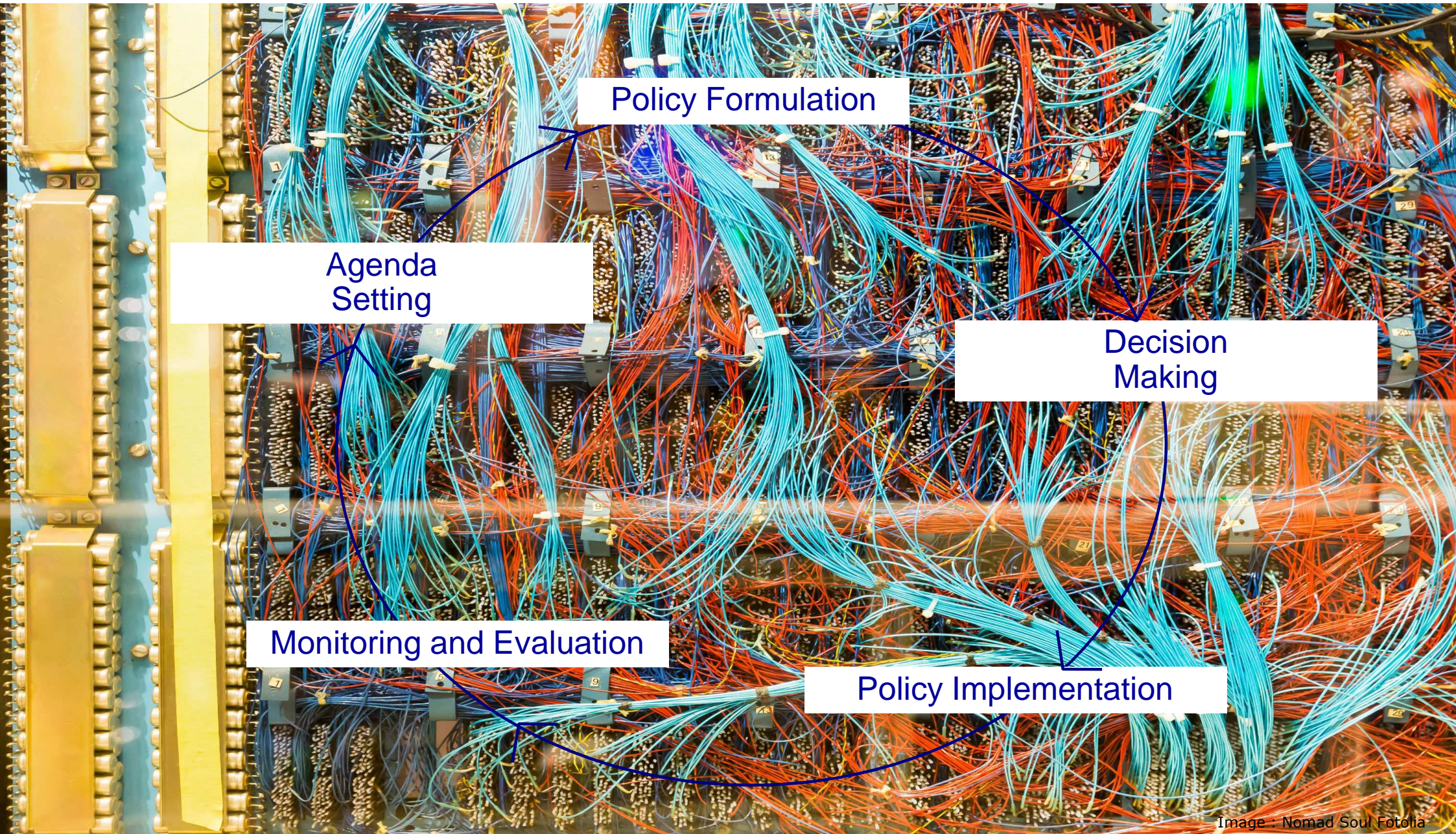
JRC in Horizon Europe

- **Providing the cross-sectoral support that policymakers need to tackle increasingly complex societal challenges**
- **Capacity to respond rapidly to policy needs**
- **Activities complementary with indirect actions aiming at supporting longer term policy objectives**
- **Excellent and multi-disciplinary science; independent of national, private and other external interests**
- **Synergies with Member States' research**

JRC in Horizon Europe

- **Strengthening the knowledge base for policy making**
- **Scientific excellence and extensive collaboration with top level research institutions worldwide**
- **Research in emerging fields of science and technology**
- **Promoting open science and open data and knowledge transfer**
- **Access to JRC research infrastructures**
- **Training of scientists and experts**





Policy Formulation

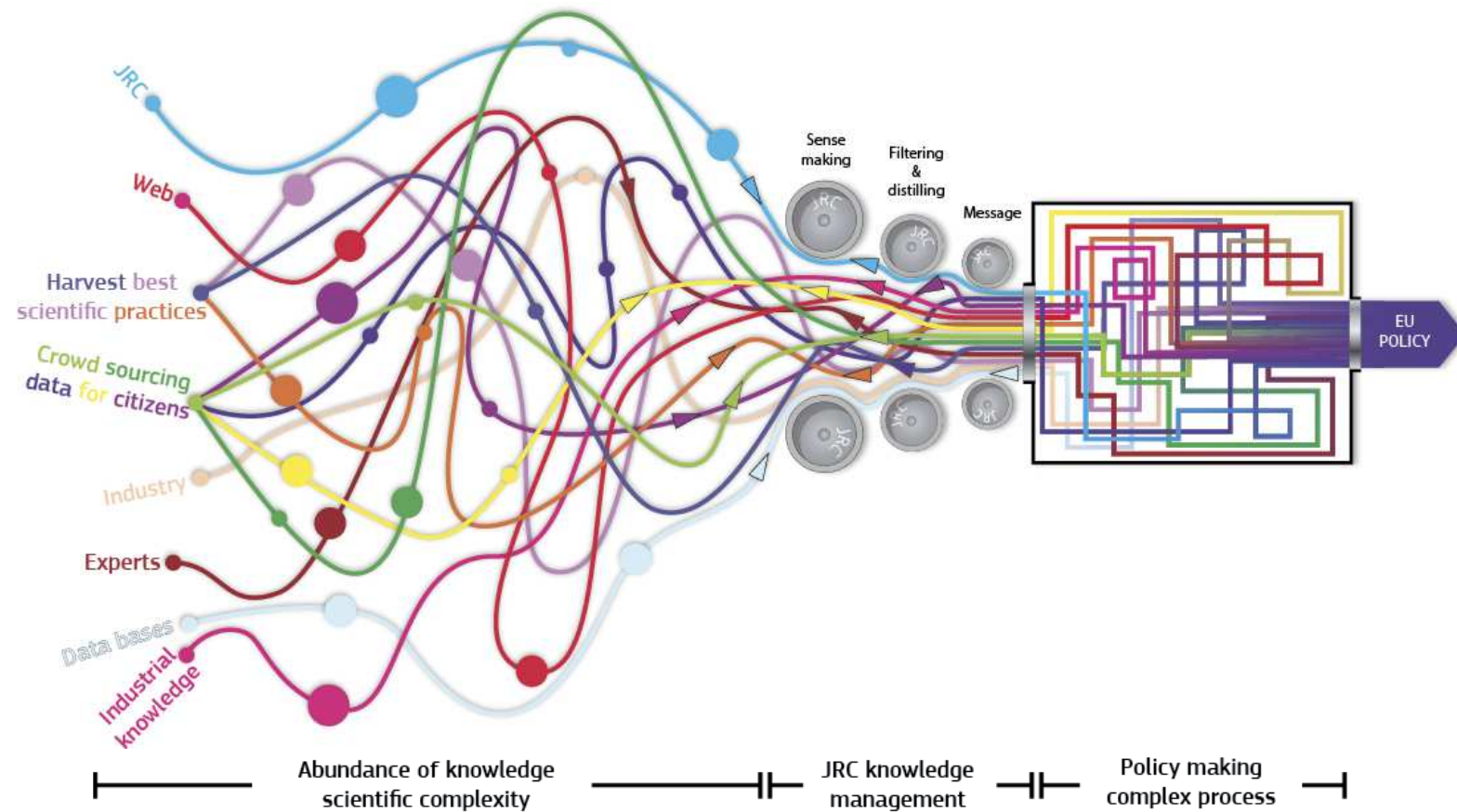
Agenda
Setting

Decision
Making

Monitoring and Evaluation

Policy Implementation

Dealing with the information overload



Knowledge Centres

**Disaster Risk
Management
Knowledge
Centre**



**Knowledge
Centre on
Migration and
Demography**



**Knowledge
Centre for
Territorial
Policies**




**Knowledge
Centre on
Bioeconomy**




**Knowledge
Centre for
Food Fraud
and Quality**

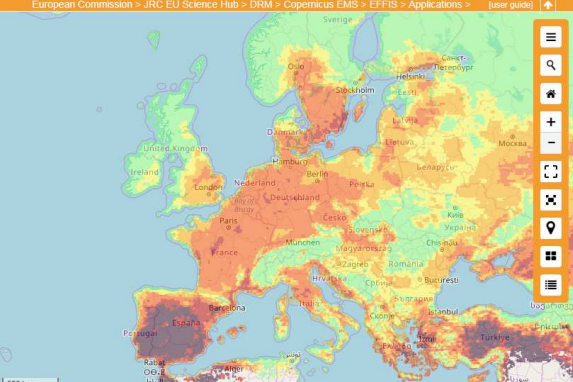




 **COPERNICUS**
Emergency Management Service

 Copernicus
Europe's eye on Earth

European Commission > JRC EU Science Hub > DRM > Copernicus EMS > EFFIS > Applications > [User guide](#)



500 km

Competence Centres

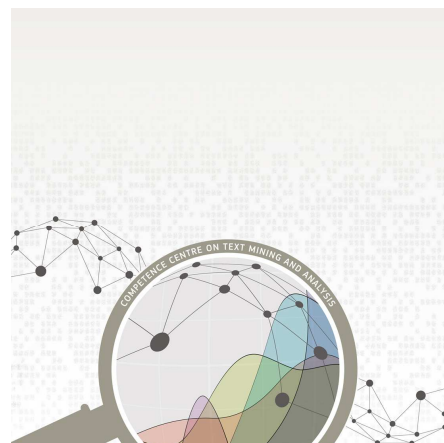
**Competence
Centre on
Composite
Indicators and
Scoreboards**



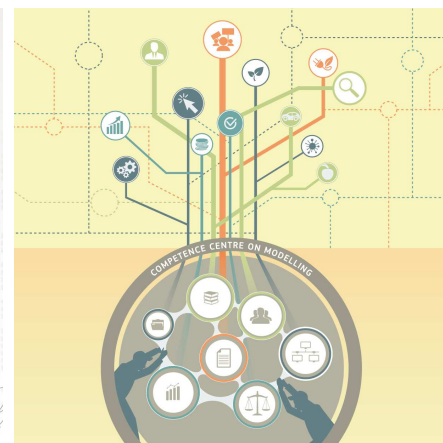
**Competence
Centre on
Microeconomic
Evaluation**



**Competence
Centre on
Text Mining
and Analysis**

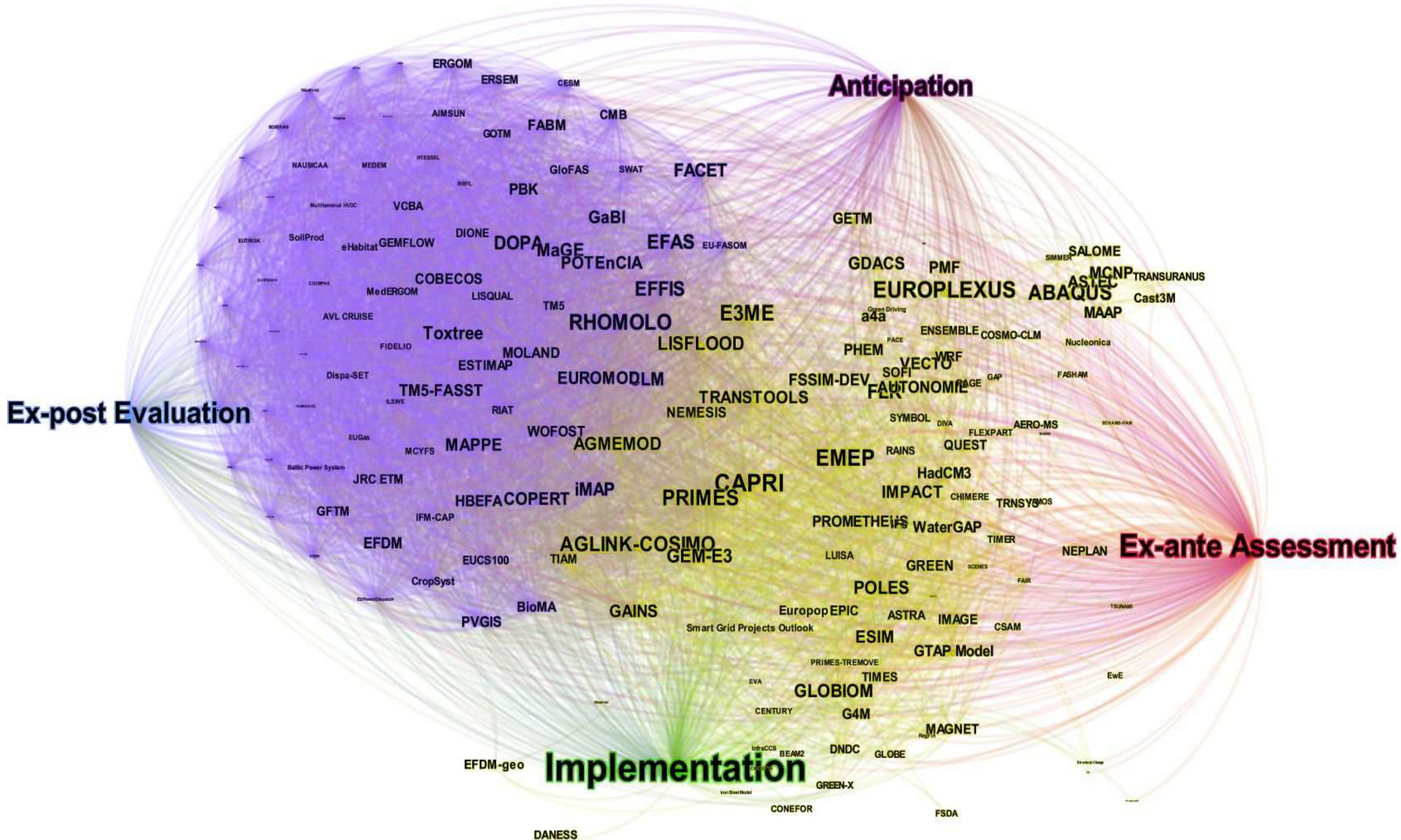


**Competence
Centre on
Modelling**

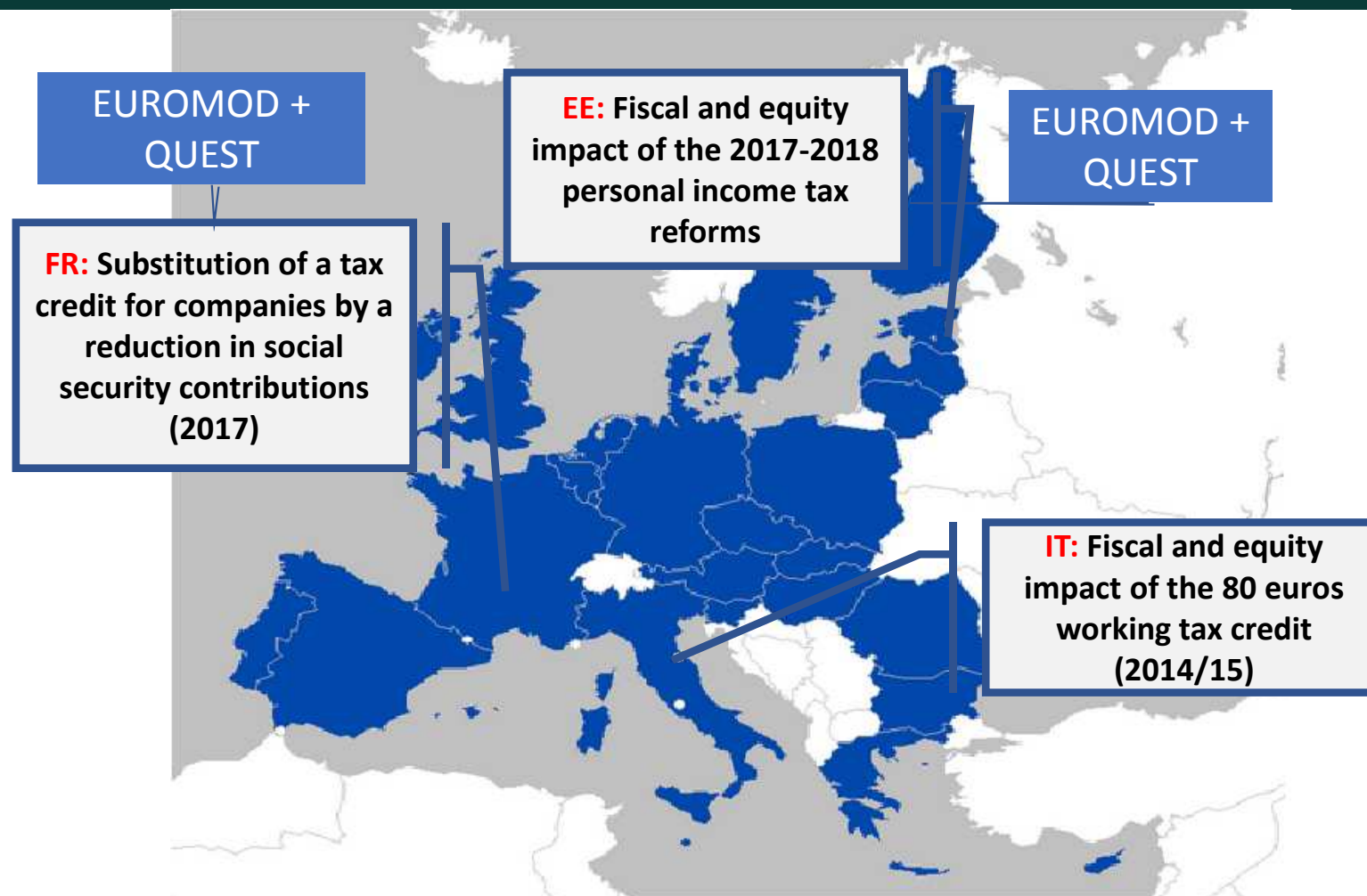


**Competence
Centre on
Foresight**





Examples of EUROMOD analyses for the European Semester



Competence Centre for Technology Transfer

to be launched in November



ACTIVITY AREAS

TT PRACTICES & CAPACITY BUILDING

- Expertise in R&D commercialisation
- Host know-how & tools generated by FP
- Support capacity building
- Share best practices
- Develop community of practitioners
- Link to S3 and RIO

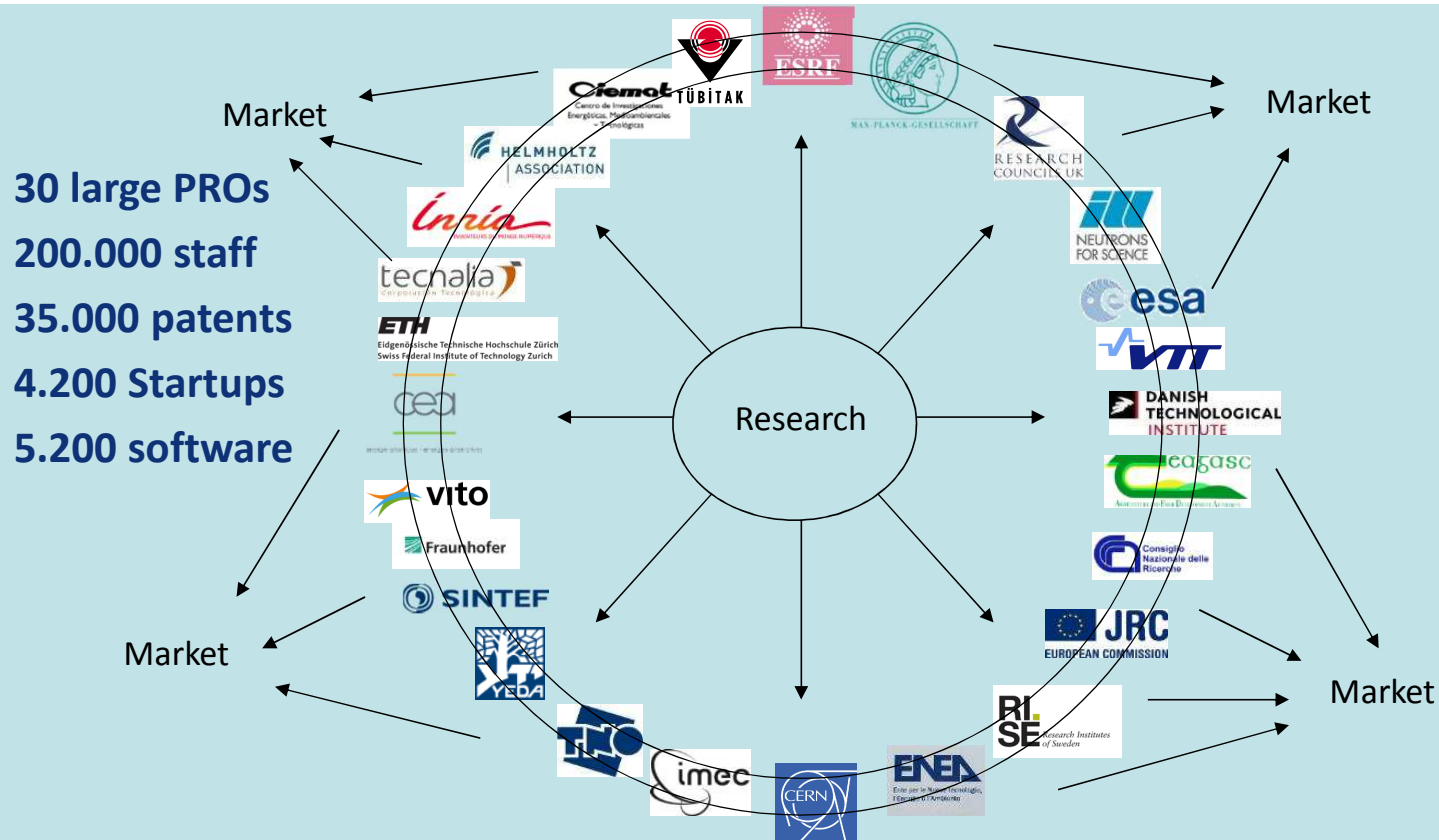
FINANCIAL INSTRUMENTS FOR INNOVATION

- Expertise on financial instruments
- Proof of Concept
- Innovation loans, equity & guarantees
- Research on IP collateralisation, securitisation, royalty buyouts, etc.

INNOVATION ECOSYSTEMS AND CLUSTERS

- Expertise on science and technology parks
- incubators and accelerators
- University and RTO technology transfer offices
- Private/Public/PPP/Concessions and leases
- Share best practices
- Diagnostics and evaluation

European TTO Circle



JRC support to Research & Innovation policies



Global Industrial Research Dynamics: the company perspective



Best viewed in Firefox and Chrome

STIPCOMPASS
INTERNATIONAL DATABASE ON STI POLICIES

HOME ABOUT INTERACTIVE DASHBOARDS POLICY EXPLORER

A simple yet powerful tool to support policy analysis and discovery for better decision-making

The STIP Compass is an initiative of the European Commission and the OECD to collect together in one place quantitative and qualitative data on national trends in science, technology and innovation (STI) policy. The portal supports the continuous monitoring and analysis of countries' STI policies and aims to become a central platform for policy research and advice supporting government officials, analysts and scholars. Data is freely accessible following the FAIR principles (Findable, Accessible, Interoperable, and Re-usable). The STIP Compass incorporates more than 500 interactive dashboards and provides a sophisticated search tool with smart filtering that facilitates policy discovery. These interfaces allow users to seamlessly query the database to identify country policies on a wide range of STI policy issues.

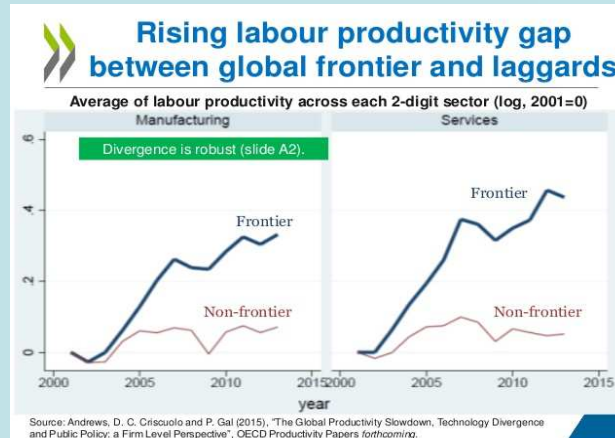
[See the infographics](#) | [Read more](#)

Explore by:

INTERACTIVE DASHBOARDS POLICY EXPLORER

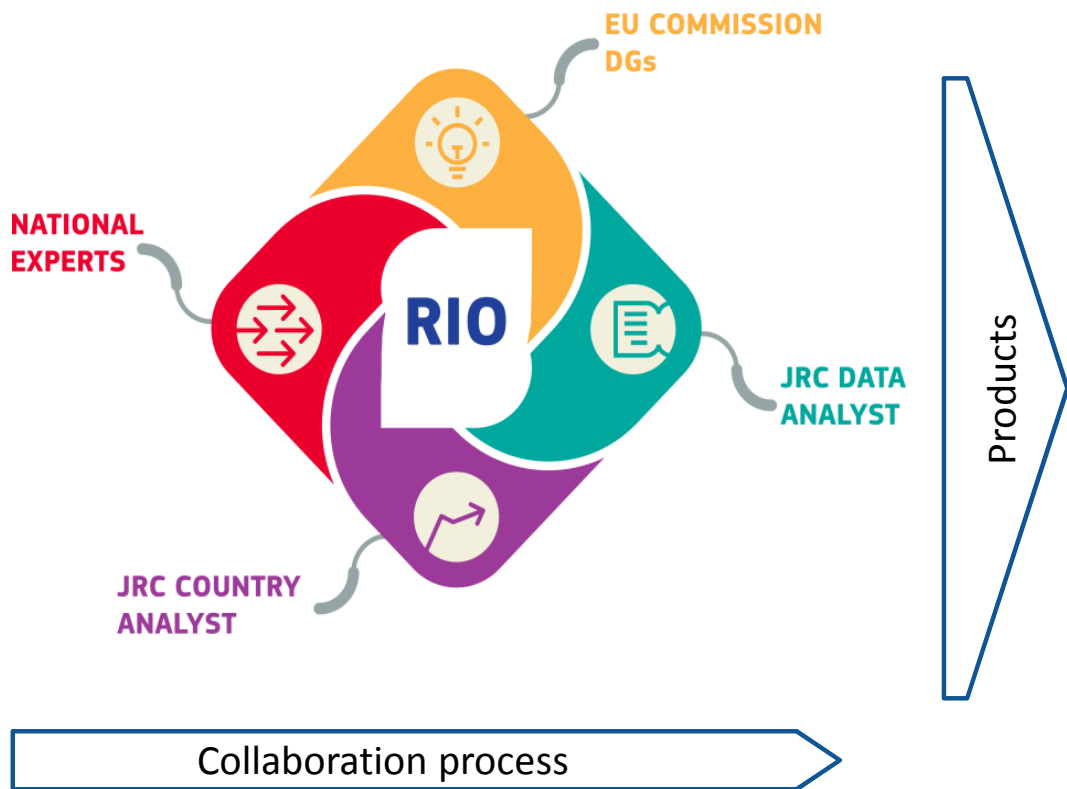
Quick access to the territory dashboards:

European Conference on Corporate R&D and Innovation (CONCORDi)



Research and Innovation Observatory (RIO) 1/2

Reliable data sources + Collaboration



- Analysis and Assessment of R&I policy in EU 28 MS: the "RIO Country Report"
- Key Indicators per Country
- **Cross-Country** analysis of specific themes
- Policy documents Repository

Research and Innovation Observatory (RIO) 2/2

All published on the [RIO website](#)

The screenshot shows the RIO website interface. At the top, there is a navigation bar with 'RESEARCH & INNOVATION' and 'Research and Innovation Observatory - Horizon 2020 Policy Support Facility'. Below this, there are tabs for 'Country analysis', 'Policy Support Facility', 'Library', 'Statistics', and 'Thematic Analysis'. The main content area is titled 'Italy - Country analysis' and includes a brief description: 'This section provides information on R&I policies and performances for Italy.' Below this, there are six informational boxes: 'RIO Country Report', 'European Semester', 'Key indicators', 'ERA Progress', 'Library', and 'Organisations', each with a small icon and a brief description of its content.

Info for:

- Policy makers
- Early input to the [European Semester](#)
- Researchers
- General public

This block contains three overlapping images of RIO publications. The largest image is the cover of the 'RIO Country Report 2015: Germany', which features the European Union flag and the title 'RIO COUNTRY REPORT 2015: Germany' by Wolfgang Bofka and Werner Spranger. To its right is the cover of a 'JRC SCIENCE FOR POLICY REPORT' titled 'Research Performance Based Funding Systems: a Comparative Assessment' by Alan Jenkins & Thomas Zachmann. In the foreground, partially overlapping the other two, is a 'RIO Factsheet' which is a data table with columns for years (2008-2014) and various indicators such as 'GDP per capita (2014=100)', 'R&D intensity (%)', and 'Innovation in services (%)'. Below the factsheet is a bar chart showing 'R&D intensity (2014=100)' for various countries from 2008 to 2014, with Germany highlighted in blue.

Regional Innovation Impact Assessment Framework

Provision of leadership

Knowledge infrastructure

Social environment

Indicator portfolio

Regional orientation, strategic development and knowledge infrastructure

Tailor made RIA profile could feed into a university level case study: a "narrative with numbers"

Capital investment

Human capital creation

Entrepreneurship and support to enterprise development

Education and human capital development

Regional development level

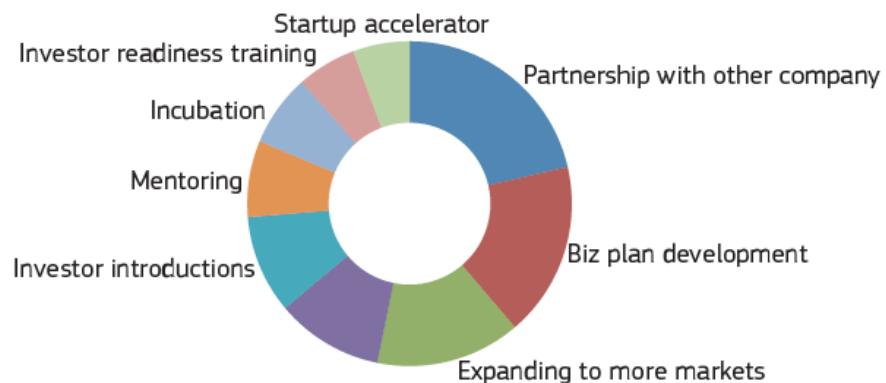


Innovation Radar 1/2

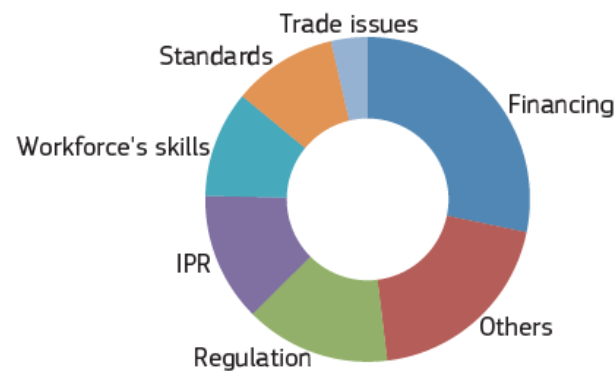
- Since 2014, using **JRC methodology**, the **Innovation Radar** has identified over 3000 innovations in FP7 and H2020 projects
- Additional information on innovators' needs helps to support the innovators by suggesting a range of targeted actions that can assist them in fulfilling their potential in the market place

The Challenge of Getting to the Market

Innovators' needs to fulfil the market potential of their innovations



External bottlenecks that compromise the ability of project partners to exploit innovations





Innovation Radar 2/2

European Commission

English EN

European Commission > Horizon 2020 > Innovation Radar >

Discover great EU-funded Innovations

The Innovation Radar is a European Commission initiative to identify high potential innovations and innovators in EU-funded research and innovation framework programmes ([more details](#))

Search for innovations related to: [Add filters](#)

3016 Innovations found!
(developed by 1903 Innovator organisations)

Country	Number of Innovations
Ireland	141
United Kingdom	445
France	1660
Portugal	389
Spain	93
Malta	3
Netherlands	234
Germany	743
Austria	467
Italy	664
Slovenia	4
Croatia	5
Serbia	146
Greece	272
Turkey	4
Hungary	20
Poland	36
Slovakia	14
Denmark	234
Lithuania	20

- Easy online access to innovations supported by EU funding and the innovators behind them
- Innovation Radar Declaration signed by 19 EU countries to foster a dynamic ecosystem around EU research and innovation funding
- The use of the Innovation Radar will continue during the Horizon Europe programme

The 2017 EU R&D SCOREBOARD 1/3

Understanding the scale and dynamics of industrial R&D at the firm level

Since 2004



Top R&D investors, in 2017:

World-2500; €742bn

Focus on EU-1000: €193bn

Sources

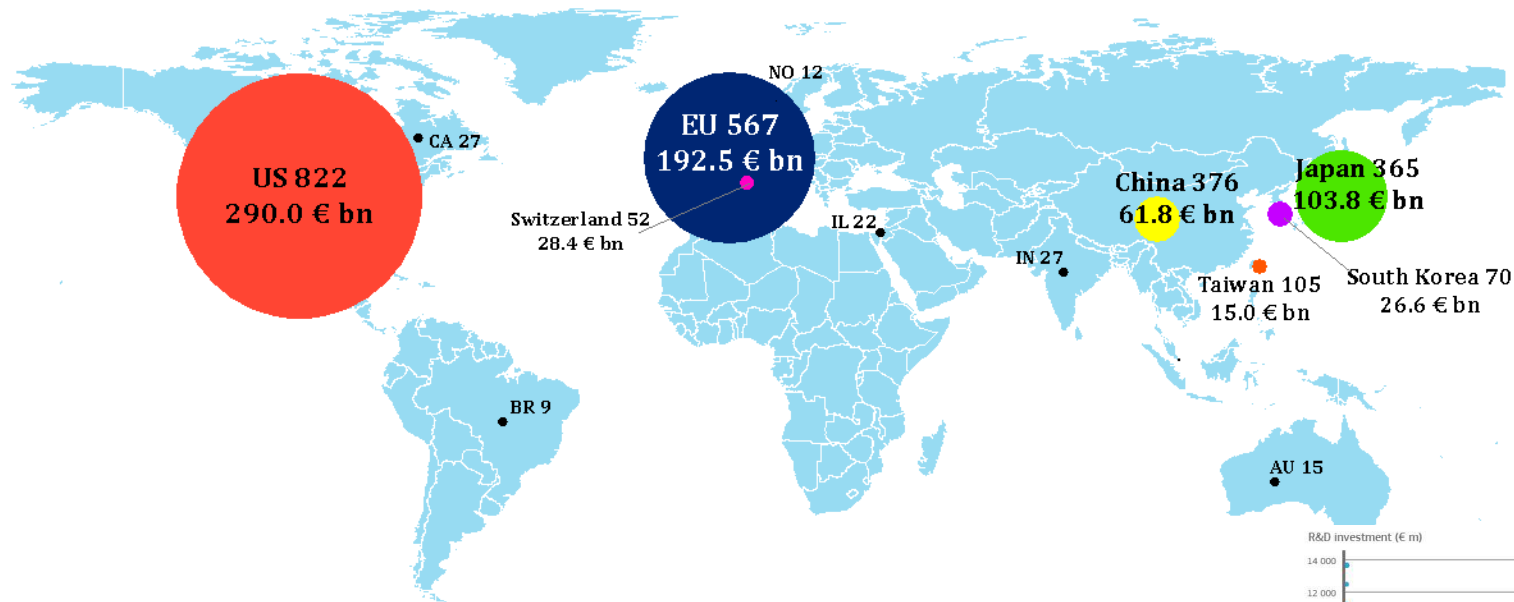
R&D and financial indicators from audited company accounts

Data items

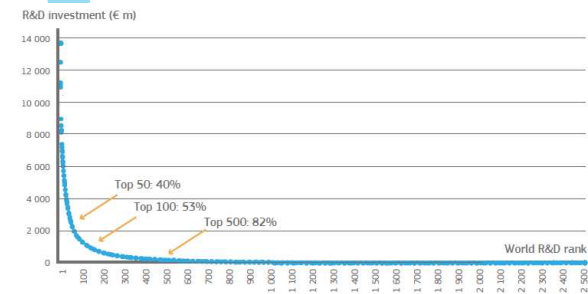
R&D, net sales, profits, capex, employees market cap and ownership structure, patent portfolio

The 2017 EU R&D SCOREBOARD 2/3

Number of companies and R&D by country/world region



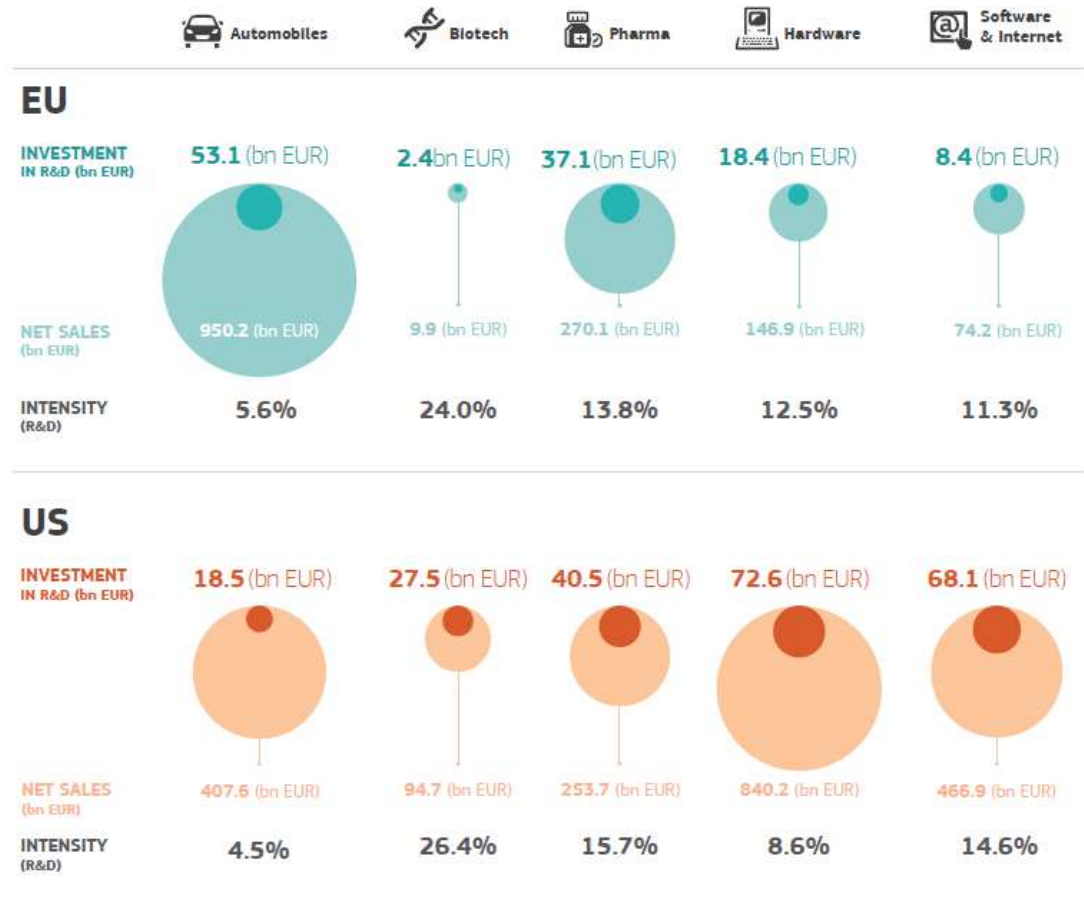
R&D highly concentrated by company



The 2017 EU R&D SCOREBOARD 3/3

The EU/US
R&D
intensity
gap in the
business
sector

R&D INVESTMENT, NET SALES AND R&D INTENSITY (KEY SECTORS)



Source: *The 2017 EU Industrial R&D Investment Scoreboard*

Thank you!



<https://ec.europa.eu/jrc/en>



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EU Science Hub - Joint Research Centre



Joint Research Centre



EU Science Hub

Carreer opportunities:

<https://ec.europa.eu/jrc/en/working-with-us/jobs>

EPSO: <https://epso.europa.eu>

ESRA: <https://recruitment.jrc.ec.europa.eu>