

# The European Innovation Scoreboards



*Daniel W. BLOEMERS, European Commission, GROW.F1  
JRC CopCOIN meeting – Indices and Scoreboards on Innovation  
Ispra, 9 November 2017*

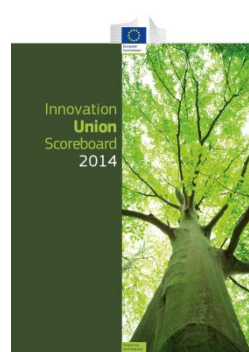
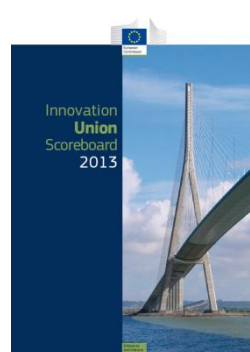
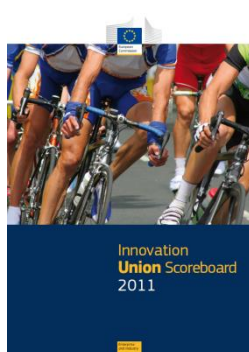
# European Innovation Scoreboard & Regional Innovation Scoreboard



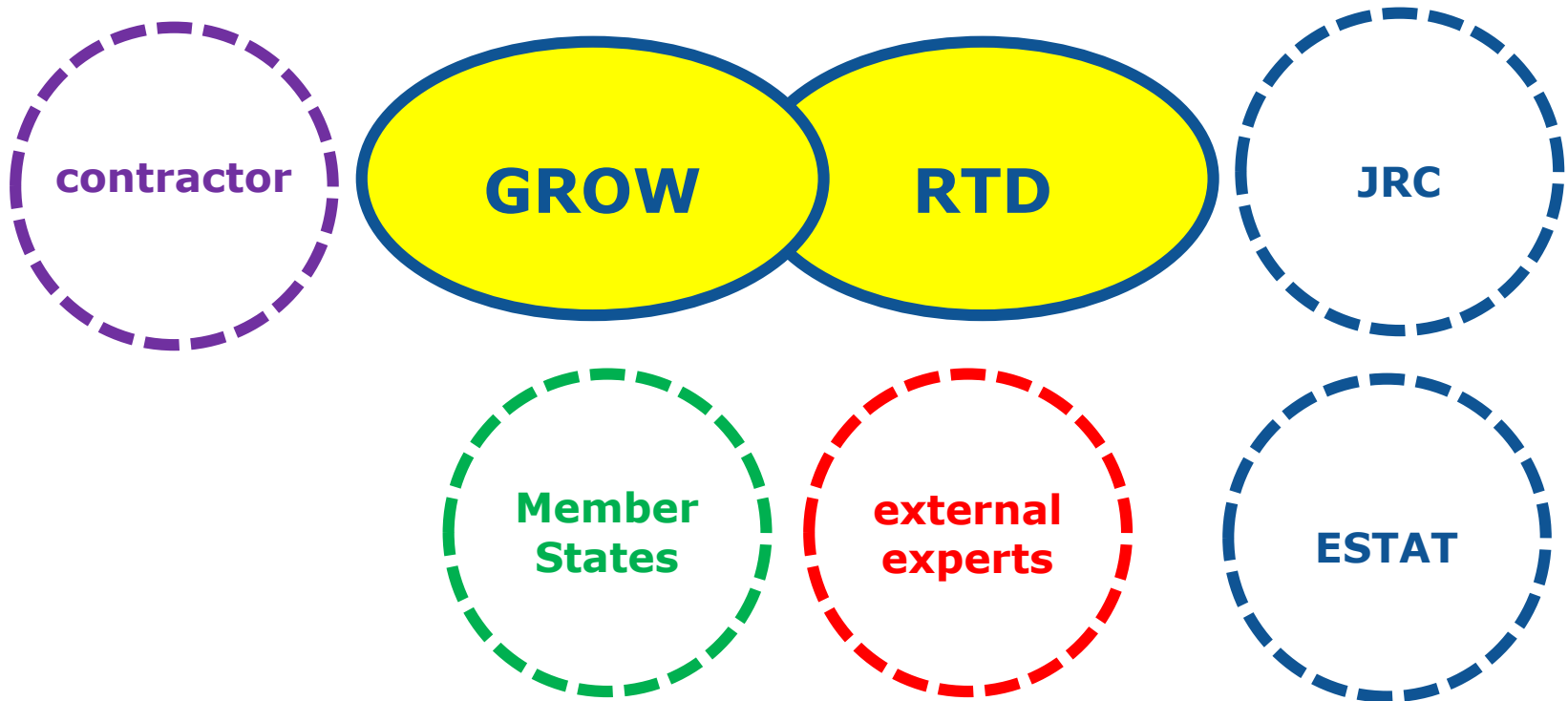
- What? Why? How? For whom?
- 2017 measurement framework
- Selected results
- Complementary resources and policy use
- The road ahead

# European Innovation Scoreboard

- Comparative assessment of EU innovation performance
- Member States, regional neighbours, global benchmarks
- Published annually since 2001, refined in 2017:
  - Investments, skills, digital readiness, entrepreneurship, public-private coop.
  - Contextual indicators (structural differences between territories)
- Reference for European Semester and national policies



# Joint effort



# Indicator selection criteria

- **Relevance for policy-making**

Rapidly changing innovation megatrends, practices, and framework conditions

- **Quality**

- Analytical soundness
- Reliability
- Transparency
- Comparability
  - Between countries
  - Over time
- Timeliness



# EIS 2017: performance indicators

## FRAMEWORK CONDITIONS

### Human resources

- 1.1.1 New doctorate graduates
- 1.1.2 Population completed tertiary education
- 1.1.3 Lifelong learning

### Attractive research systems

- 1.2.1 International scientific co-publications
- 1.2.2 Scientific publications among top 10% most cited
- 1.2.3 Foreign doctorate students

### Innovation-friendly environment

- 1.3.1 Broadband penetration
- 1.3.2 Opportunity-driven entrepreneurship

## INVESTMENTS

### Finance and support

- 2.1.1 R&D expenditure in the public sector
- 2.1.2 Venture capital investments

### Firm investments

- 2.2.1 R&D expenditure in the business sector
- 2.2.2 Non-R&D innovation expenditure
- 2.2.3 Enterprises providing ICT training

## INNOVATION ACTIVITIES

### Innovators

- 3.1.1 SMEs with product or process innovations
- 3.1.2 SMEs with marketing or organisational innovations
- 3.1.3 SMEs innovating in-house

### Linkages

- 3.2.1 Innovative SMEs collaborating with others
- 3.2.2 Public-private co-publications
- 3.2.3 Private co-funding of public R&D expenditures

### Intellectual assets

- 3.3.1 PCT patent applications
- 3.3.2 Trademark applications
- 3.3.3 Design applications

## IMPACTS

### Employment impacts

- 4.1.1 Employment in knowledge-intensive activities
- 4.1.2 Employment fast-growing firms innovative sectors

### Economic effects

- 4.2.1 Medium & high tech product exports
- 4.2.2 Knowledge-intensive services exports
- 4.2.3 Sales of new-to-market/new-to-firm innovations

# CIS-based indicators

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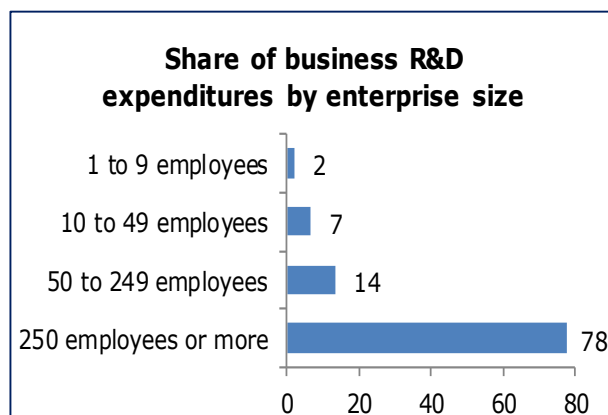
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# EIS 2017: contextual indicators

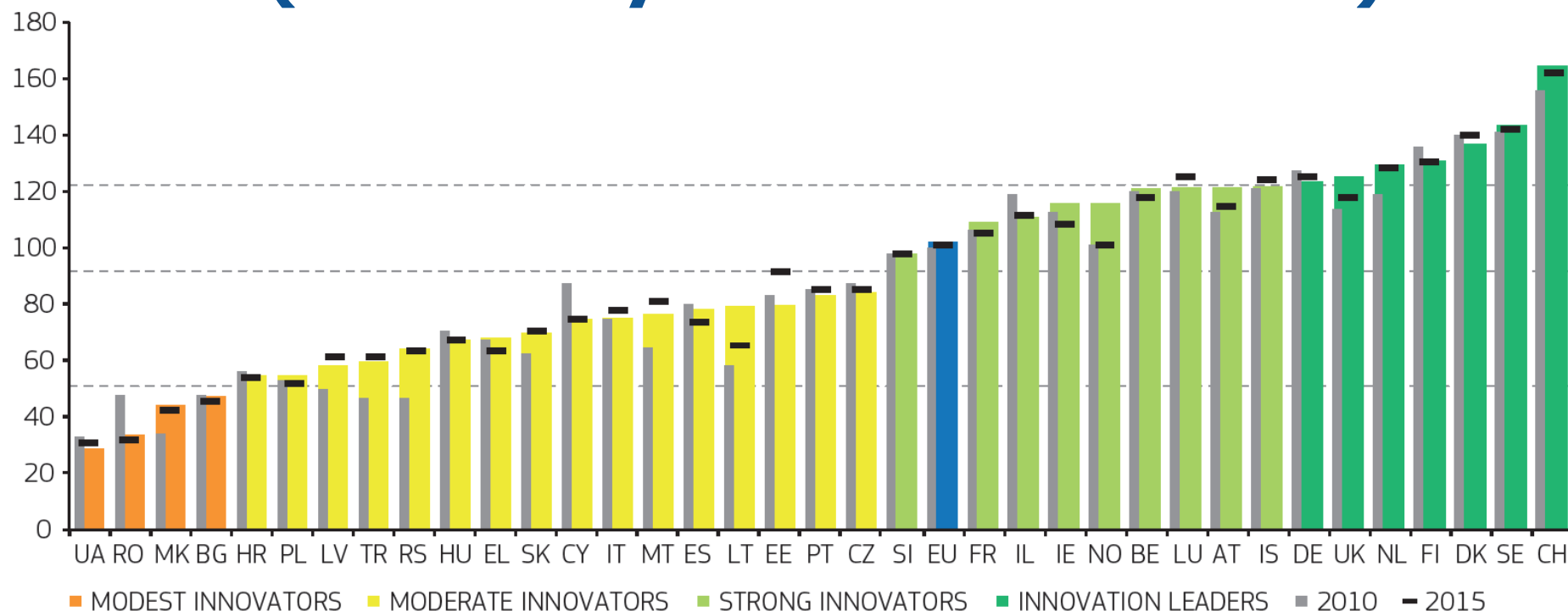
23 indicators for comparison of European and neighbouring countries



	EU
<b>Structure of the economy</b>	
Composition of employment, average 2011-15	
- Agriculture & Mining (NACE A-B) (%)	5.1
- Manufacturing (NACE C) (%)	15.6
<i>of which High and Medium high-tech (%)</i>	36.4
- Utilities and Construction (NACE D-F) (%)	8.6
- Services (NACE G-N) (%)	63.6
<i>of which Knowledge-intensive services (%)</i>	58.0
- Public administration, etc. (NACE O-U) (%)	7.1
<b>Business indicators</b>	
Composition of turnover, average 2011-2014	
- Micro enterprises (0-9 employees) (%)	17.3
- SMEs (10-249 employees) (%)	38.0
- Large enterprises (250+ employees) (%)	44.1
Share of foreign controlled enterprises, 2014 (%)	1.18
Top 1000 R&D spending enterprises	
- average number per 10 mln population, 2011-15	29.9
- average R&D spending, mln Euros, 2011-15	165.8
Enterprise births (10+ empl.) (%), avg 2012-14	1.5
Buyer sophistication 1-7 (best), 2013-14	3.6
Ease of starting a business, DB2017	76.5
<b>Socio-demographic indicators</b>	
GDP per capita, PPS, avg 2011-13	25400
Change in GDP between 2010 and 2015, (%)	5.4
Population size, avg 2011-15 (millions)	505.5
Change in population between 2010 and 2015 (%)	1.1
Population aged 15-64, avg 2011-2015 (%)	66.1
Population density, average 2011-15	116.4
Degree of urbanisation, average 2011-15 (%)	74.4



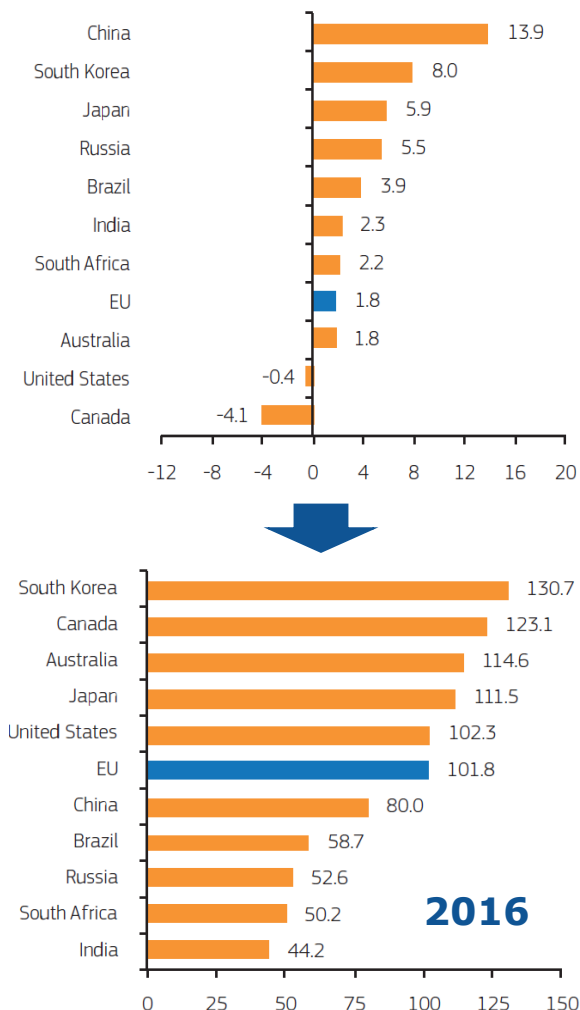
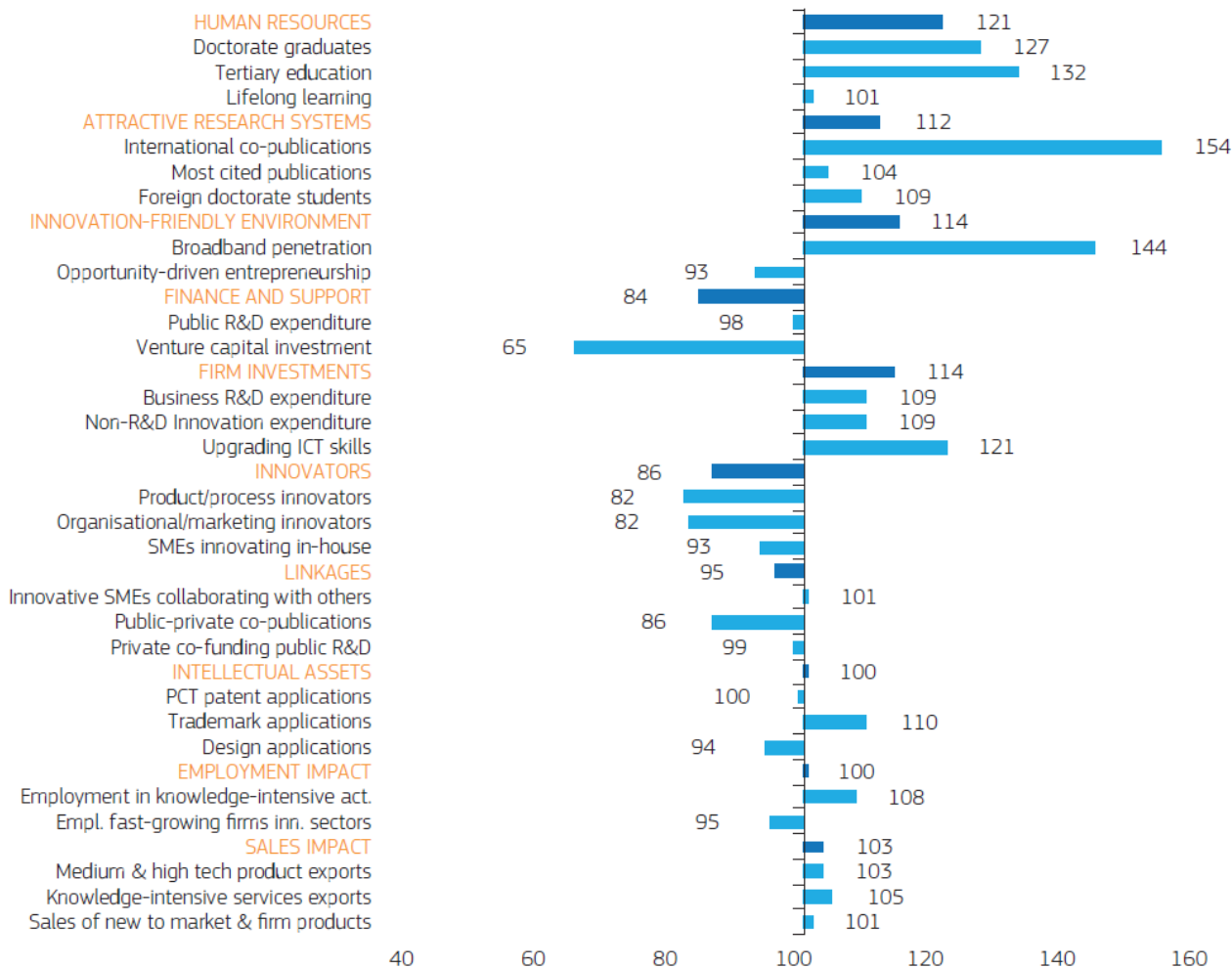
# EIS 2017 country ranking (Summary Innovation Index)



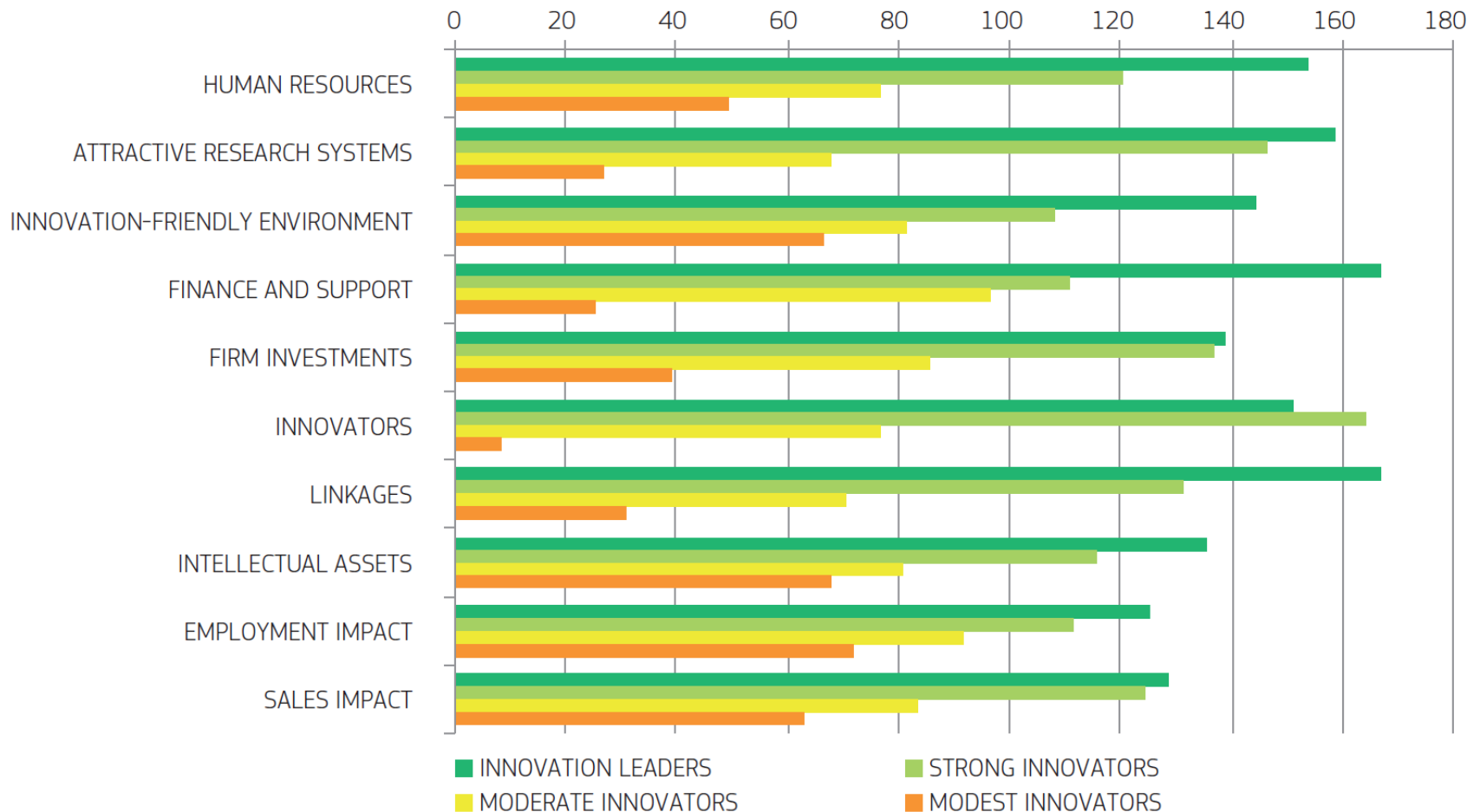
Since 2010: EU +2.0% (15 MS ↑, 13 MS ↓)

LT +21.0%, MT +12.2%, UK +11.7%, NL +10.4%, AT +8.9%, LV +8.5%, SK +8.0%  
 RO -14.1%, CY -12.7%, FI -5.1%, DE -3.7%, EE -3.6%, CZ -3.5%, HU -3.5%

# EU performance change 2010-16

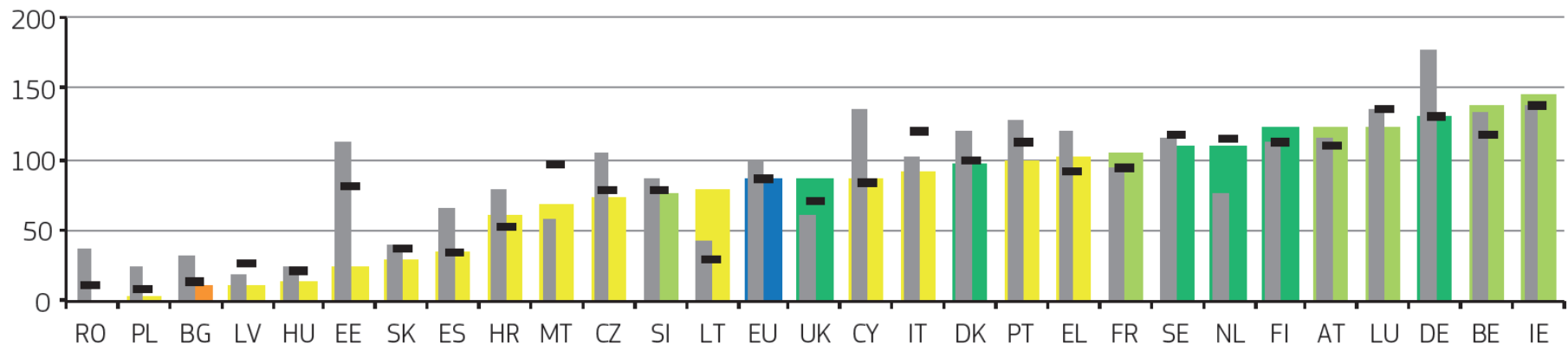


# Performance analysis by dimension

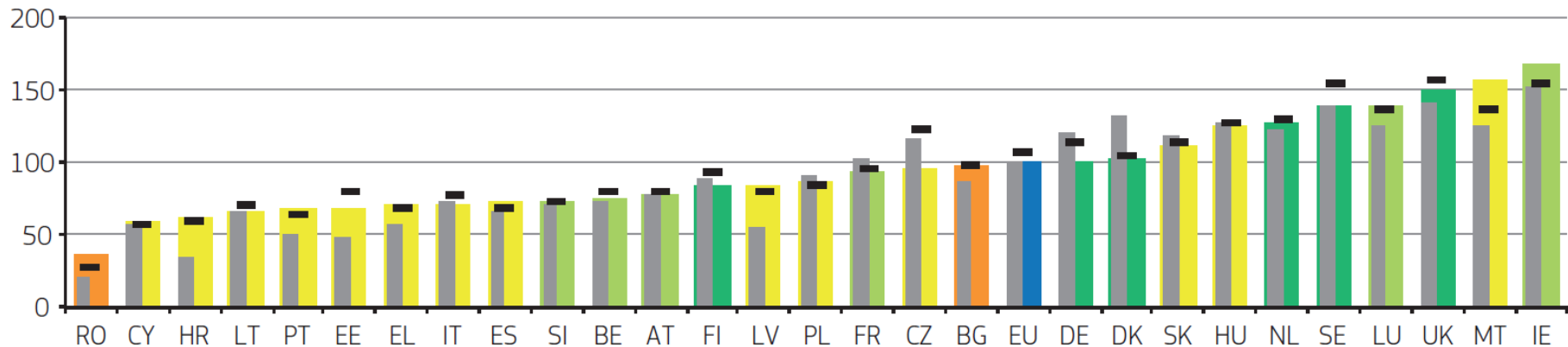


# Performance analysis by dimension

## Innovators

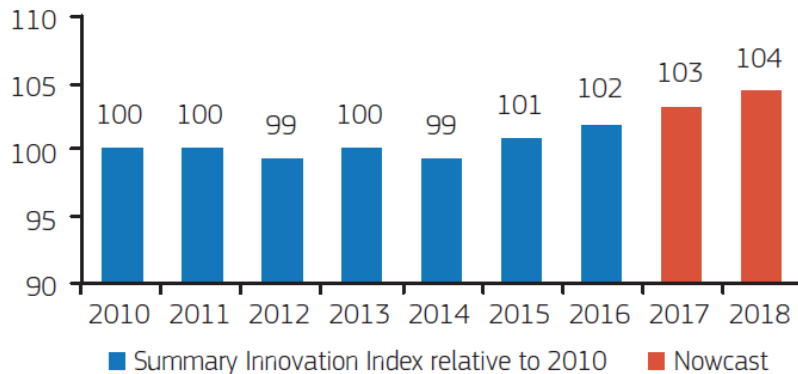


## Employment impacts

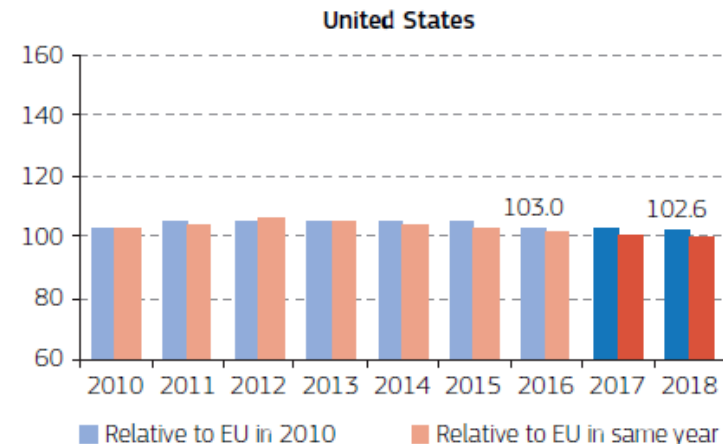
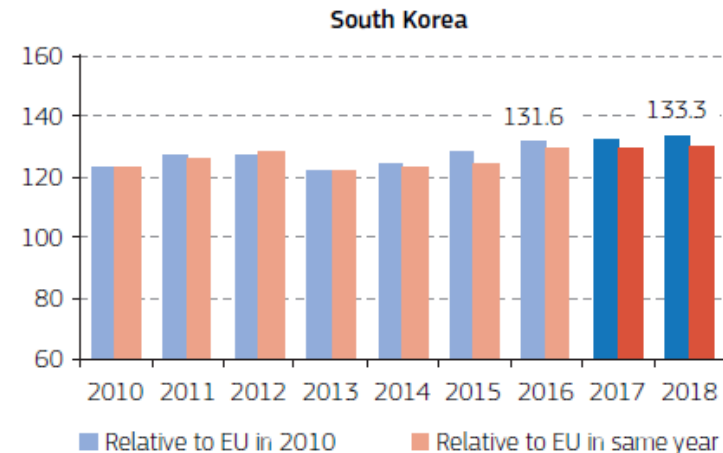


# Forward-looking analysis

Figure 15: Expected EU innovation performance



- Linear regression
- Trend extrapolation
- More recent data





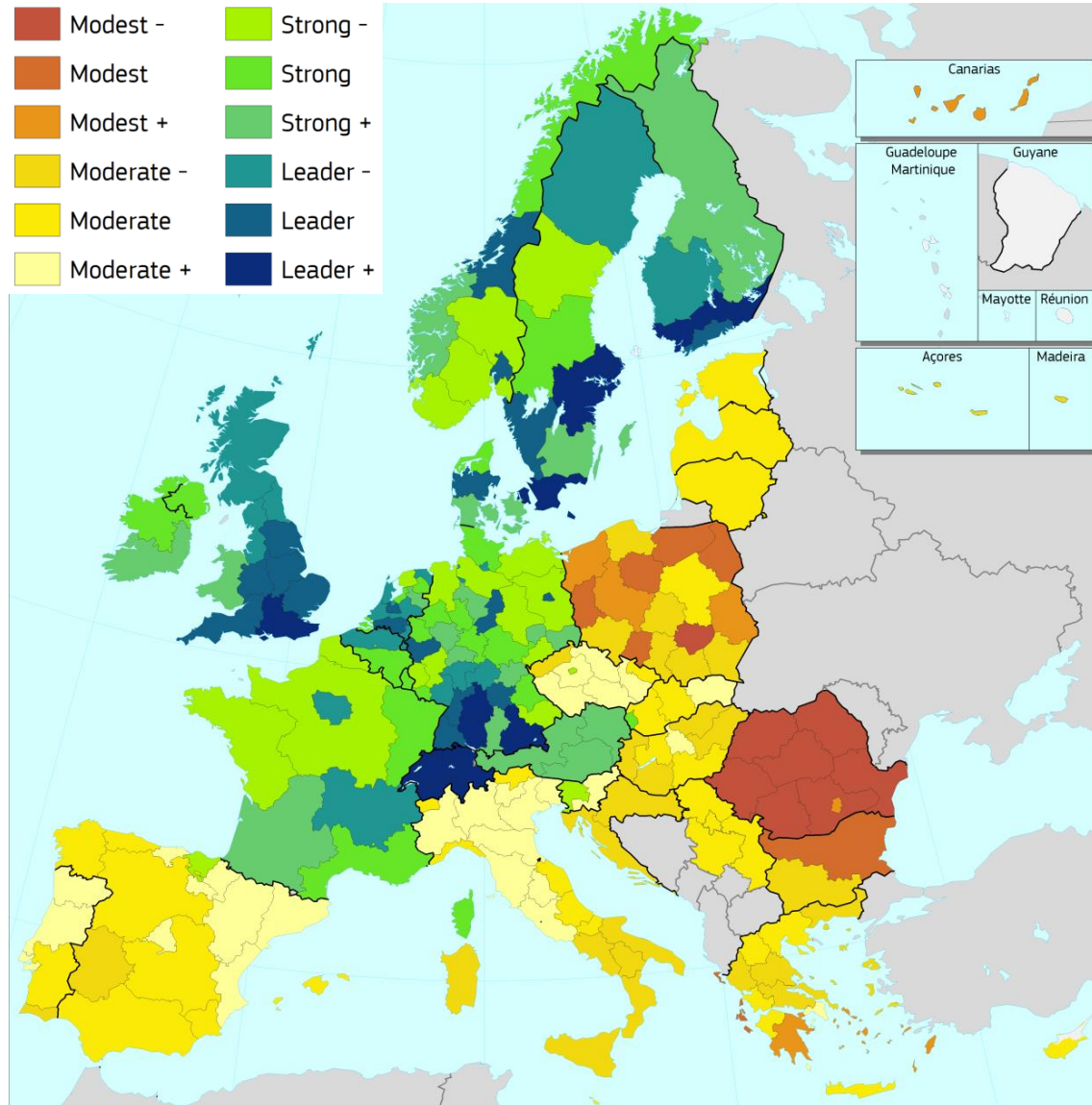
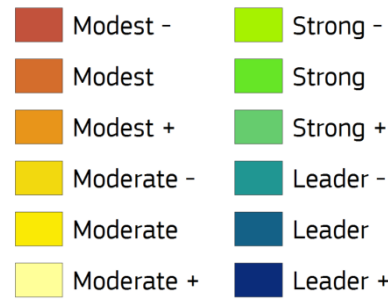
# Regional Innovation Scoreboard

18 of 27 EIS indicators

220 regions in 22 MS  
+ NO, RS, CH

Most innovative  
EU regions:  
Stockholm (SE),  
Hovedstaden (DK),  
South East (UK)

Since 2011:  
128 regions ↑, 88 regions ↓





# Regional differences within countries



ITALY

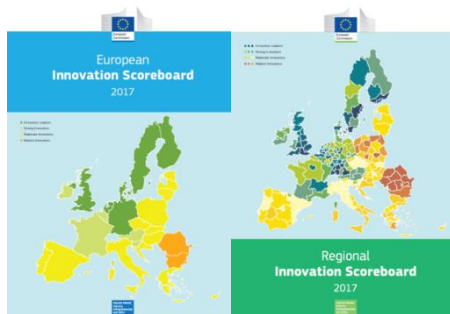


NUTS	Region	RII 2017	Rank	Group	Change
ITC1	Piemonte	79.8	125	Moderate +	0.6
ITC2	Valle d'Aosta/ Vallée d'Aoste	59.0	168	Moderate	-1.3
ITC3	Liguria	69.6	145	Moderate	4.1
ITC4	Lombardia	79.6	127	Moderate +	-0.8
ITH1	Provincia Autonoma Bolzano/ Bozen	69.4	147	Moderate	2.6
ITH2	Provincia Autonoma Trento	78.4	129	Moderate +	1.3
ITH3	Veneto	79.4	128	Moderate +	0.2
ITH4	Friuli-Venezia Giulia	87.8	117	Moderate +	3.6
ITH5	Emilia-Romagna	79.9	124	Moderate +	-1.6
ITI1	Toscana	75.5	133	Moderate +	6.6
ITI2	Umbria	74.3	137	Moderate +	5.7
ITI3	Marche	69.4	148	Moderate	0.8
ITI4	Lazio	73.6	138	Moderate +	-2.9
ITF1	Abruzzo	64.5	158	Moderate	3.2
ITF2	Molise	61.0	164	Moderate	4.9
ITF3	Campania	57.8	173	Moderate -	-1.5
ITF4	Puglia	58.5	170	Moderate -	-0.6
ITF5	Basilicata	57.9	172	Moderate -	0.0
ITF6	Calabria	57.8	174	Moderate -	7.7
ITG1	Sicilia	51.3	194	Moderate -	-1.9
ITG2	Sardegna	52.4	190	Moderate -	-1.1

RII 2017 shows performance in 2017 relative to that of the EU in 2011. Rank shows the rank performance in 2017 across all regions. Group shows the respective performance group. Change shows the performance change over time calculated as the difference between the performance in 2017 (RII 2017) relative to that of the EU in 2011 and performance in 2011 (RII 2011) relative to that of the EU in 2011.



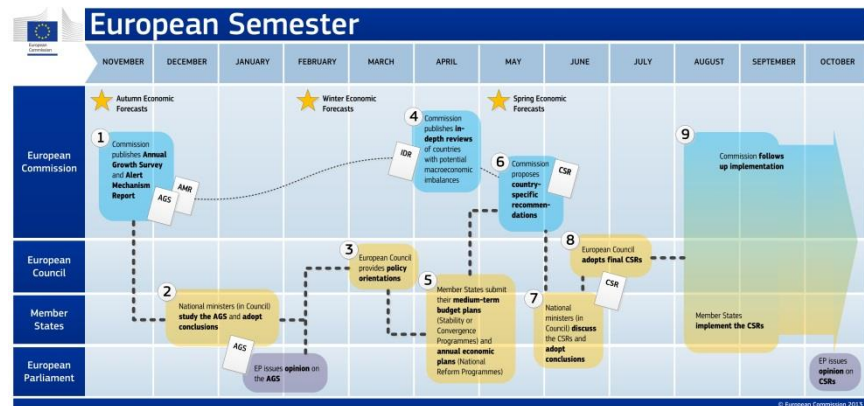
# European Semester



complementary resources,  
e.g. Research and Innovation  
Observatory (RIO) country reports

→ Country reports

→ Country-specific recommendations



# Policy use of EIS/RIS results



- **EU:** performance benchmarking, progress tracking, country-specific recommendations



- **Austria:** STI Strategy 'Innovation Leader' (2011)



- **Lithuania:** FDI promotion (Invest Lithuania)



- **Malta:** key source for the country



- **Sweden:** relating inputs to outputs



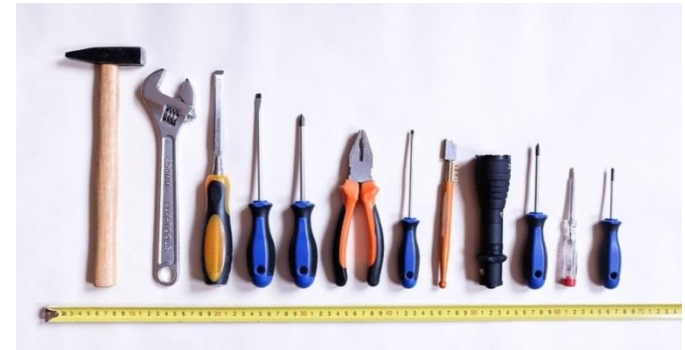
- **Saxony (DE):** using RIS to promote region



- **China:** inspiration for developing own scoreboard

# The road ahead

- New service contract (September 2017-2019)
- Consortium:
  - MERIT Maastricht University
  - Deloitte Belgium
  - European Future Innovation System Centre
  - NESTA
  - Sociedade Portuguesa da Inovacao
- Continuity, fresh ideas, and further improvement



# The road ahead

- EIS 2018, EIS 2019, RIS 2019:
  - **Performance indicators: no replacement but fine-tuning**
  - **Contextualisation: review of indicators + qualitative data**
  - **Forward-looking EIS section: exploration of Big data**
  - **Improved Interactive Online Tool**
- EIS 2020: complete review of measurement framework
  - **New policy priorities of 2019-24 Commission**
  - **Results of methodological work, possibly including Big data-based indicators**
  - **Community Innovation Survey 2018 data**
- RIS 2021: regionalisation of EIS 2020 methodology

# Thank you for your attention!



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