



# R&D from official statistics: trends and prospects

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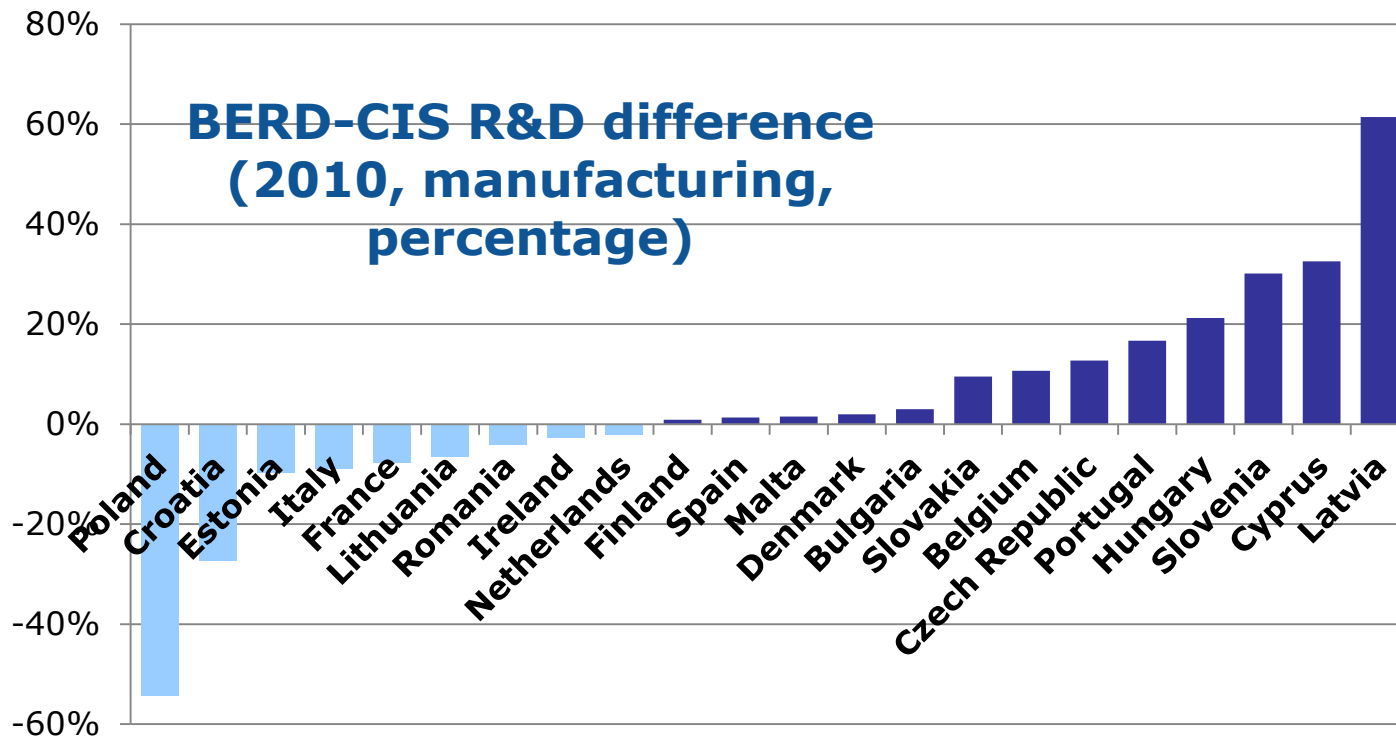
# Outline

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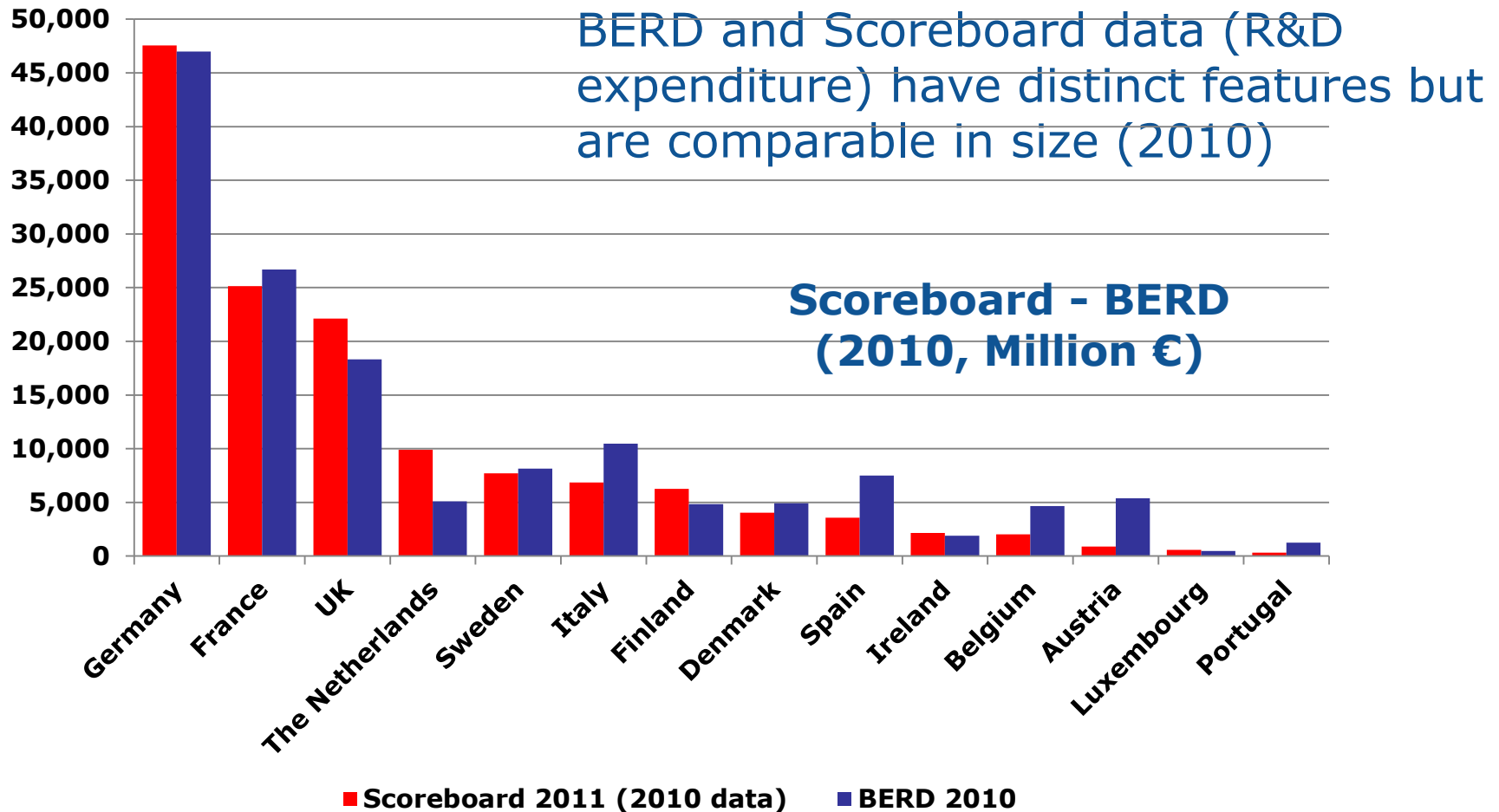
1. R&D statistics: sources and comparability issues
2. Re-engineering and synchronisation
3. The Frascati Manual 7.0
4. The capitalisation of R&D
5. R&D as an intangible asset

# R&D statistics: sources

- **BERD** (Frascati), Annual, all NACE industries, no size threshold
- **CIS** (Oslo), selected NACE industries, 10 employees or more, sample



# R&D statistics: sources

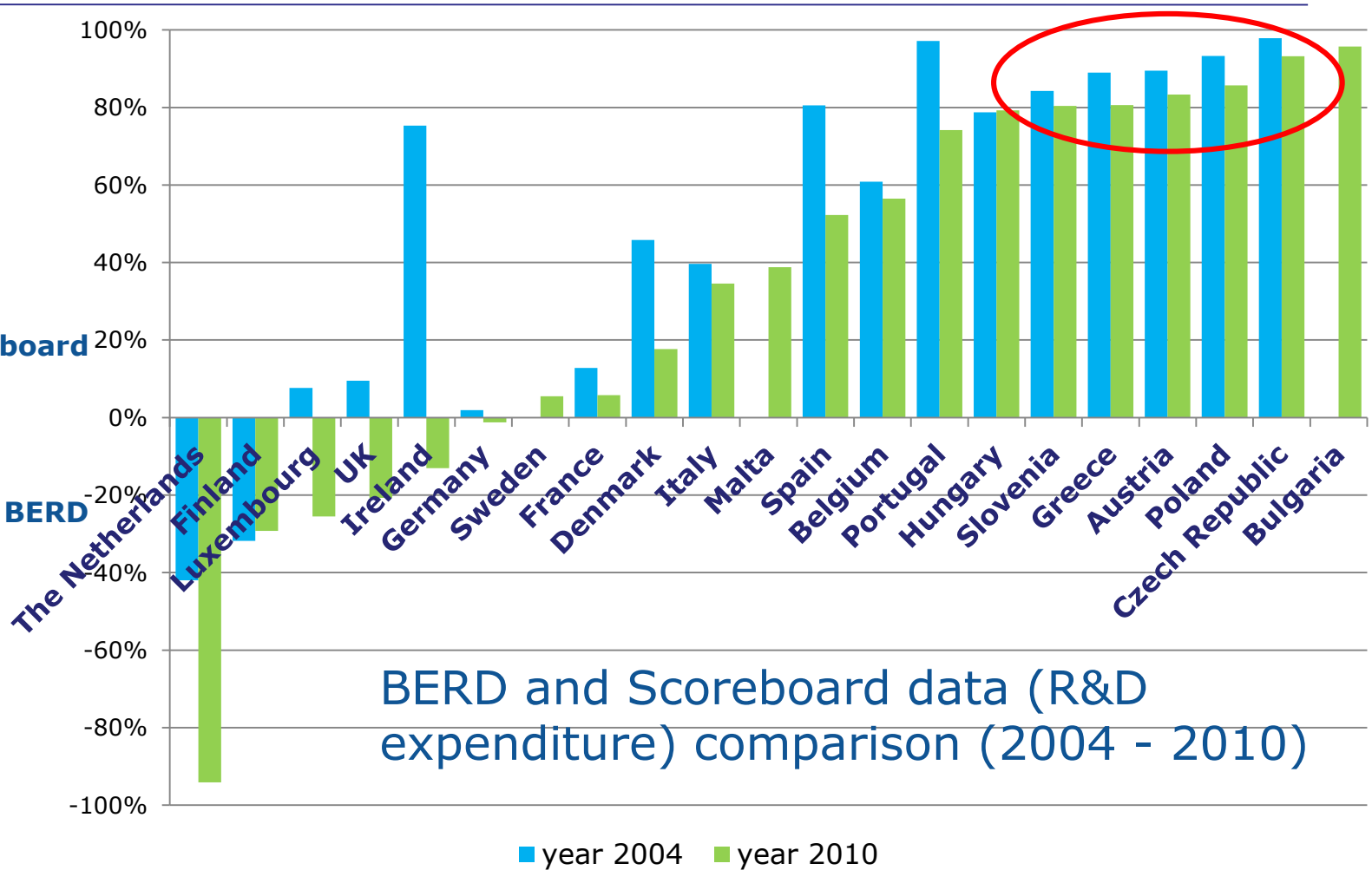


# R&D statistics: sources



BERD > Scoreboard

Scoreboard > BERD



## R&D statistics: the comparability issue

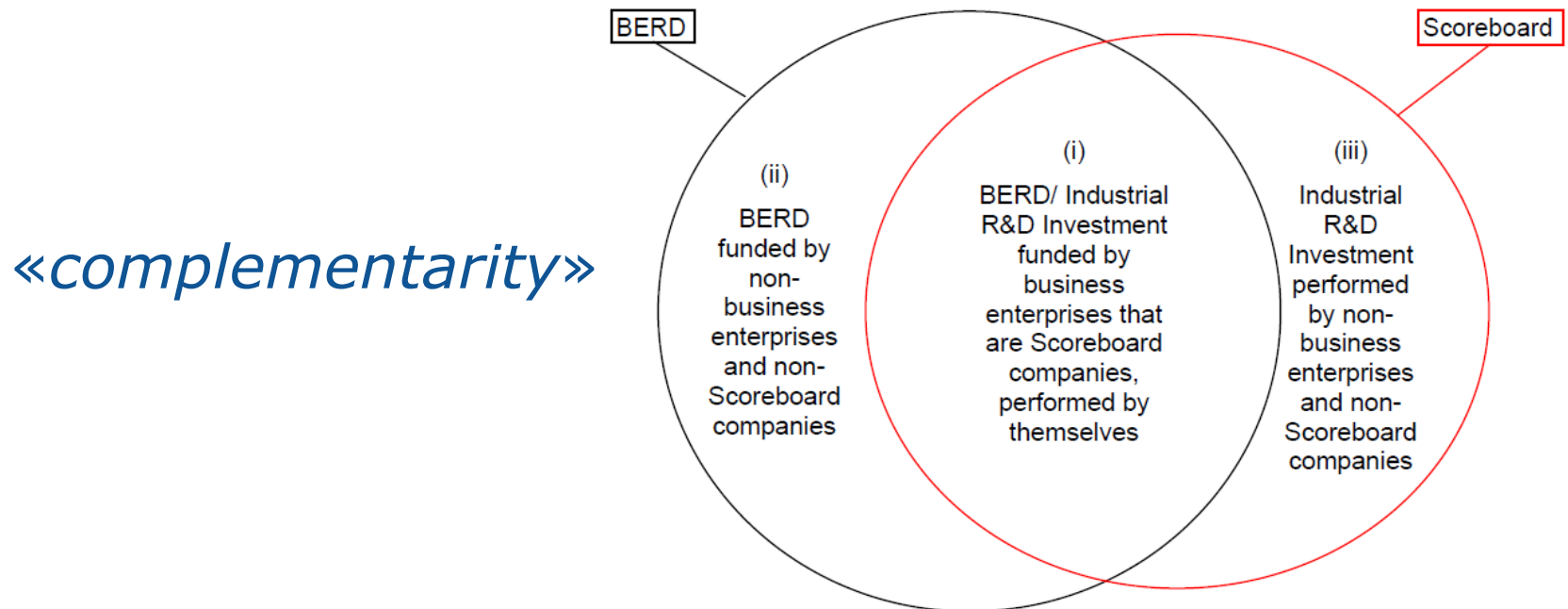
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*Azagra Caro, J.M. and A. Grablowitz (2008), "Data on Business R&D: Comparing BERD and the Scoreboard", EC, DG Research, JRC/IPTS:*

- (i) *a direct comparison is not appropriate, and*
- (ii) *BERD and Scoreboard have been designed for different uses and any comparison between them requires careful interpretation.*

# R&D statistics: the comparability issue

*Azagra Caro, J.M. and A. Grablowitz (2008), "Data on Business R&D: Comparing BERD and the Scoreboard", EC, DG Research, JRC/IPTS:*



## **R&D statistics: the comparability issue**

### ***Factors affecting R&D data consistency:***

- Nature of the data («company R&D», usually includes both «intra-» and «extra-mural» R&D but could exclude Gov-funded R&D)
- Identification of the «reporting unit» (group /corporate, enterprise, establishment, etc.)
- Identification of the reference population and selection of the relevant units (census, sample, panel) and potential selection bias (e.g. only listed companies)
- Data collection approach (surveys, administrative data, open data, etc.).



# R&D statistics: challenges ahead

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Re-engineering and  
synchronisation of  
business surveys  
**ESS**

**Surveying of  
«intangibles»,  
and  
administrative  
sources**

Revision of the  
Frascati Manual  
**OECD**

Capitalisation of  
R&D in the SNA  
**UN/OECD/ESS**

## Re-engineering and synchronisation (1)

- The ESS strategy: an integrated legal framework for business statistics. Implementation expected 2017-2018.

- **FRAMEWORK REGULATION INTEGRATING BUSINESS STATISTICS (FRIBS)**
  - Key issues:
    - Role of business registers
    - *to establish a common legal framework for the systematic collection, compilation, transmission and dissemination of*
    - A single statistical unit
    - NACE and CPA as reference classifications (common denominator)
    - *European statistics related with the structure, economic activity, competitiveness, global transactions and performance of the business sector*
    - Consistent data requirements and methodologies
  - Access to administrative records
  - Exchange of micro-data

## **Re-engineering and synchronisation (2)**

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- Less methodological harmonisation («output», rather than «input» approach)
- Merging of surveys will be encouraged: SBS+R&D, CIS+R&D, multi-purpose surveys, etc..
- Adoption of the business registers as a legal requirement (no clear how to deal with public/non profit units).
- Statistical units: Enterprise as a rule, but «matching issues» with SBS (LUs) data or AFA/FATS (MNEs) data not yet settled.
- Less flexibility allowed to use specific units / classifications.

## Frascati Manual 7.0 (methodology)

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- ***2013-2014 revision process still under development.***
- Definition of R&D: the criteria to be used to discriminate R&D from non-R&D activities and to split-up R&D into basic, applied research and experimental development will be simplified and made explicit.
- Harmonised approach to identify the R&D-performing units (statistical units) but some flexibility allowed (registers not available in all countries).
- Use of administrative data acknowledged but not recommended.
- Merging of R&D surveys with other surveys not recommended.

## Frascati Manual 7.0 (globalisation)

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- Conceptual evolution from «R&D internationalisation» to «R&D globalisation» (transfer of funds, goods and services and «control» relationships in both an «inward» and «outward» perspective)
- Beyond the monitoring of trans-national R&D flows, MNEs' research activities (as R&D inputs) should have been targeted as such.
- Integration of existing methodologies to measure globalisation phenomena (IPP, HEGI, FATS, etc.).
- Potential integration of national R&D statistics (even at micro level).
- Use of administrative data to be explored.

## R&D capitalisation

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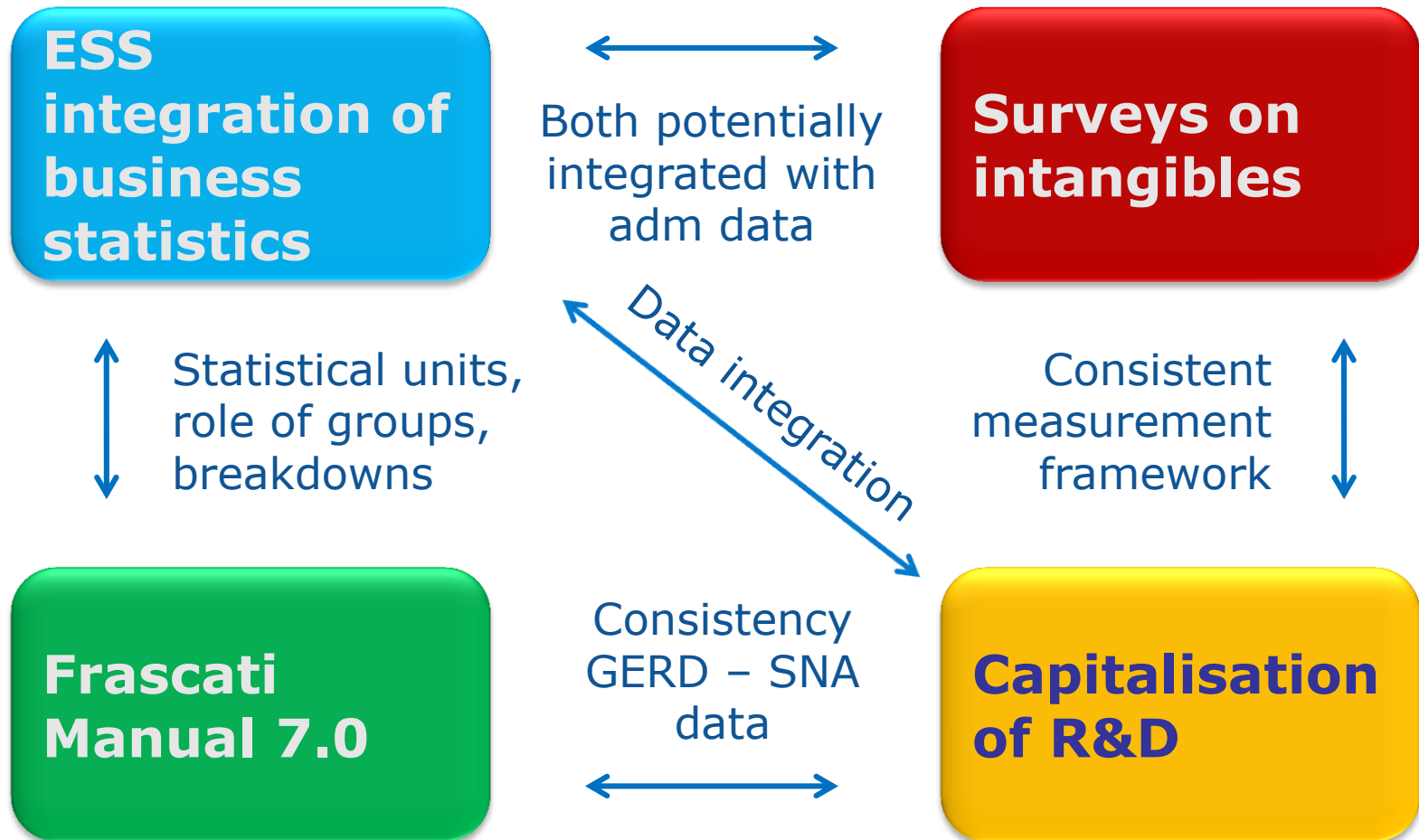
- SNAs as «users» of R&D statistics.
- In order to «capitalise» R&D in the NAs more details on the «R&D output» have to be made available by Frascati's surveys.
- Looking at «own account» R&D output by enterprises (R&D results not to be sold at market prices).  
Implications for «intra-group» R&D funding.
- Beyond the R&D performance, the «use» (and the «users») of R&D will have to be evaluated:
  - Customers, parents, etc.
  - Use for production (investments), input for further R&D (intermediate consumption), etc.

## R&D as an intangible asset

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- New surveys on «intangible assets»: UK, Italy, Innobarometer 2013.
- R&D no longer measured in isolation but as a component of a strategy of «knowledge management» (with a broader perspective than just «innovation projects»).
- Apparently, R&D still retains its role as a main component of the firms' knowledge base and a key driver of innovation (mostly for large and high-tech firms). R&D management in groups to be clarified.
- Poor evidence of R&D capitalisation at firm level.

# An evolving measurement framework





## Conclusions

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- R&D statistics as a catalyst of some innovative processes in the measurement of the conceptual link **knowledge – innovation – growth.**
- Traditional Frascati approach challenged by the rationalisation of the statistical systems, as well as by the increasing demand of data on R&D performers and processes.
- Emerging needs: monitoring global processes, understanding input-output relationship, matching funding and service flows, profiling performers.
- How to fully exploit (and match) all available sources of data an issue still open.