

Main challenges in the development of National Roadmaps of Research Infrastructures

the case of Italy

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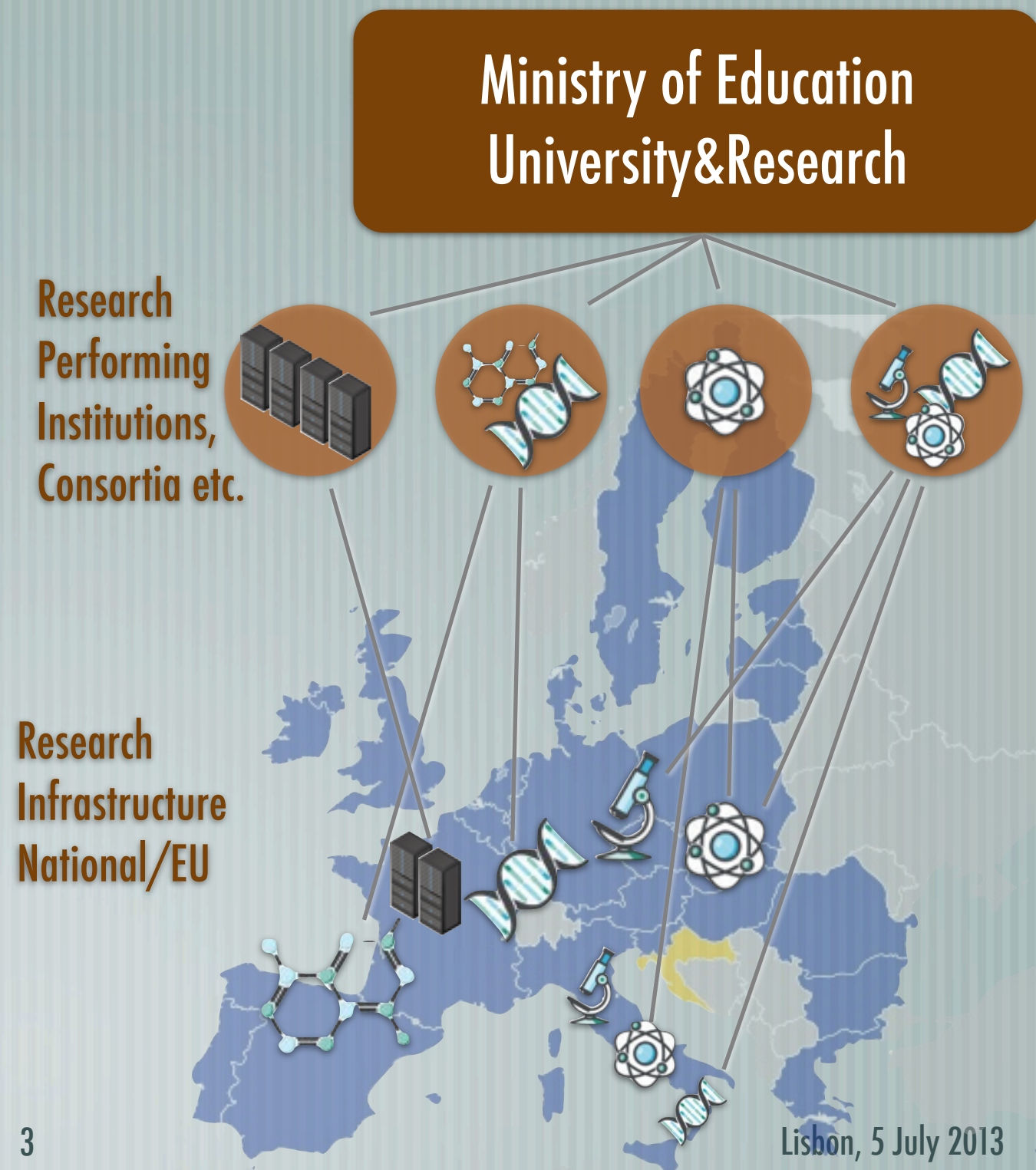
Italy & RI - snapshot 2010

- founding member of main **EIRO-Forum** research infrastructure (CERN, ESA, ESO, ESRF, ILL, EMBL, EFDA-JET)
- participates to global and European RIs such as ITER and XFEL
- contributes 20 ESFRI Preparatory Phase projects

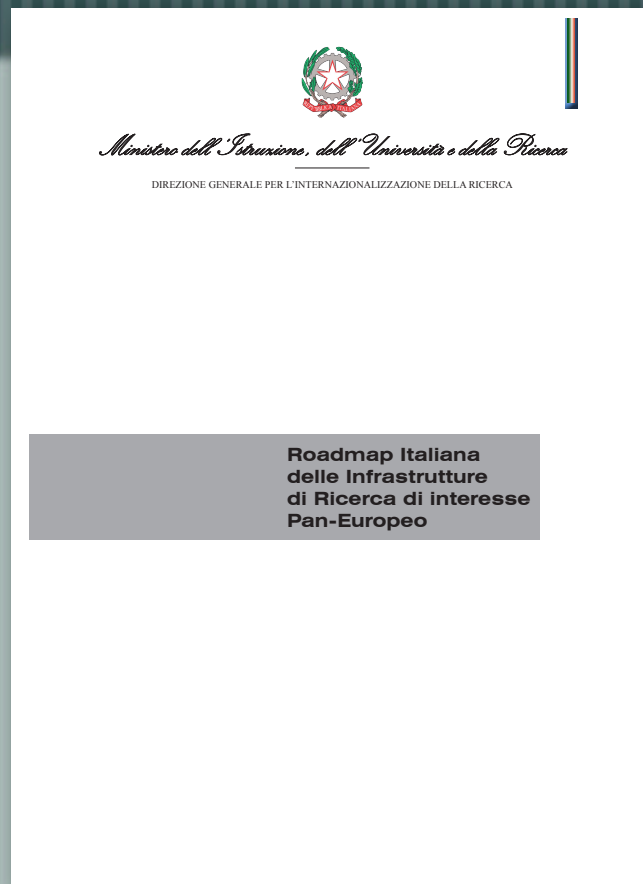


Italy & RI - snapshot 2010

- RIs are **owned&managed**, or directly participated, by Research Performing Institutions
- RPIs, funded by MIUR on yearly basis, present to the MIUR their strategic multiannual plans, including RIs
- periodic evaluations of whole research system provide feedback by measuring effectiveness and scientific productivity



National Roadmap 2010



- **bottom-up** process: survey involved RPI, Universities, Consortia and individuals
- **220 projects** have been mapped
- Working Group included Heads of main national RPIs and Representatives of other involved Ministries

- analysis of proposals: → pan-european RI
- complementary to PNR2010-13 (National Research Plan)
- to be **updated periodically**

mapping results (NR2010)

Italy: >50 RIs open to international access

- 40 existing RIs (Ita:9) participating to FP7-I3 (Integrated Infrastructure Initiatives)
- 33 RIs (Ita:2) participating to ESFRI Prep.-Phase
- 10 RIs (Ita:3) participating to FP7-Design Study
- 38 RIs (Ita:7) participating to e-Infrastructure

(Ita:#)=italian coordination

updating the roadmap now!



methodology guide lines

middle/long-term
strategic framework
for convergence
towards the objectives
of Horizon 2020



innovation

"The cutting-edge scientific research and innovation capacity require high quality and adequate size RIs, open to the business system, providing researchers from the private and public sector with the possibility of accessing their resources and services. This is of greater importance for the scientific community and the productive system; both stakeholders perceives the reinforcement of RIs as a priority"

pushing and pulling innovation

training

"Recognize the capacity of providing advanced training for young researchers as one of the criteria for the identification of RIs functional to the national strategy"

stimulating training and mobility

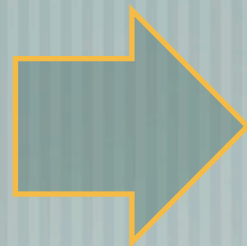
governance

"...the urgent need to optimize, also for the RIs, the logic behind the governance by developing new ways for regulating and implementing the strategies defined for R&I to maximise the coherency with the rest of the EU"

contribute to strategy and governance

actions

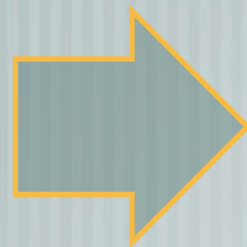
evaluation of relevance and overall impact of RIs and priority list



starting from the **Roadmap 2010** and the **ESFRI** roadmap, RPIs have been asked to select top-priorities among their Research Infrastructures

Heads of main national RPIs have been involved in the analysis of proposals

a **dedicated budget** for RIs in the national research fund (+50% in 2013)



upgrading of existing RIs, so that they can **qualify** as RIs of **European level**

realization of new RIs, in **agreement** with the **ESFRI** roadmap

support mobility of researchers towards European RIs

analysis & evaluation

overall scientific and
socio-economic impact



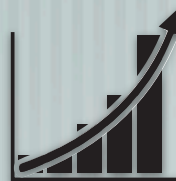
Size and quality of the scientific community, potential for aggregation /structuring of new communities
attractiveness towards the location in Italy (main site for European coordination/infrastructure site)

opportunities for
national industries



fallout in the construction phase
stimulus to market/economy during operation
effective access to international markets

strategic relevance



national assets in EU/global negotiations
increased competitiveness and innovation for businesses
effect of attracting the best researchers
enhancement of previous investments

synergies with other
funding sources



involvement of more RPI (supervised by MIUR) and/or other Ministries
involvement of regions/other government departments (Structural/Competitiveness Funds)
rationalization of the national scientific network
profit from financial instruments/PPP (RSFF, EIB, project bonds, etc.).

results

**results from
impact analysis**

46 Research Infrastructures selected

**sustainability of the long term commitment
(incl. operation phase) has been evaluated**

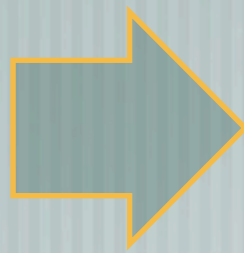
three years foresight + long term vision



**internationalization of national infrastructures
(e.g. European Underground Lab. → ERIC)**

more actions

(re)define governance
and mission of RIs



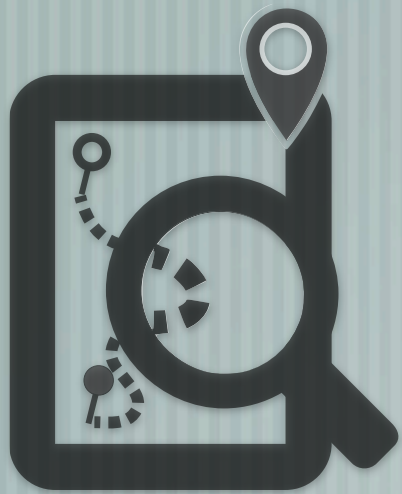
synergies between national, regional and local governing bodies

central Government (Ministries, Agencies)
providing strategies and guidance

coordination of funds contributed by various
bodies, earmarked to RIs of interest

a coordinated contribution to transnational
initiatives

work in progress for the roadmap 2014



evolutionary roadmap: open and adaptable

complement selection of RIs priorities with the future National Research Program 2014-17

contribution from main actors: MIUR, PRI, Industries Organisations, Universities, Regional Governments (Clusters)

include RIs in the coordination with Min. of Economic Develop.

“Gap Analysis” to achieve a full deployment of potential

evaluation in itinere: define key performance indicators

conclusions

the evaluation of main RIs in terms of relevance and overall impact has been completed → focus on strategic Research Infrastructures

funds allocated for these infrastructure has been increased by 50% in 2013

preparation of the new Research Infrastructures Roadmap to be completed by end of 2013 and supported by the National Research Program 2014-17