

# PLENARY SESSION 4

## Moving global RI forward Summary of Plenary Sessions

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# Plenary Session 1 (I)

## Needs, development and operation of Global RI

- There was substantial recognition of the role of research infrastructures in addressing **global challenges** and in contributing to innovation and economic growth
- There was substantial and high-level interest in building on the experience with ESFRI, as well as national models in other countries, **to work towards a more global framework**
  - for facilitating the emergence of relevant new global RI
  - and for increasing the productivity and value of national and regional capabilities through linkage and coordination

# Plenary Session 1 (II)

## Needs, development and operation of Global RI

- **e-infrastructures** and comprehensive, well structured data infrastructures
  - to ensure the widespread availability of reliable, comprehensible data are an essential part of the fabric of the global research and innovation system
- There is much to be gained by recognising the variety of potentially suitable **governance arrangements and facilitation mechanisms for global collaborations** and sharing best practices and experiences.
- There is **shared valued across countries and regions** in work to promote:
  - better understanding of the particular value of international research cooperation
  - and the way in which this value is gained from investments both within and beyond national boundaries.

# Plenary Session 2 (I)

## Main characteristics of Global RI

- Global infrastructures are needed to perform **frontier research** and produce novel data of great impact on the frontiers of knowledge
  - as well as to collect available knowledge on complex systems, like human health and environment.
- **Data is the currency of science and technology** (the volume of biological and medical data are comparable to particle physics).
  - We should develop the **common and unique currency**

# Plenary Session 2 (II)

## Main characteristics of Global RI

- **Global infrastructures** can develop:
  - by expanding the **international dimension** of very unique and very successful RIs
    - like CERN after the new 2010 status.
  - from an initial **international concept**
    - as EMBL-EBI and the follow up ELIXIR research infrastructure
  - by **integrating observation data**
    - from many existing specialized networks

# Plenary Session 3 (I)

## Data: A common challenge

- As individuals, we have more computing power than the fastest supercomputers once provided to a select few
- With all past and new data and new tools – the **data infrastructure** - we will see **new kinds of innovation**
- **For this we need:**
  - Awareness for restructuring our data cottage industry in the desert into a **data infrastructure**.
  - Guidelines to implement **open access to data**
    - and bring data communities together from science and the public sector
  - The right models to create a market place to foster creativity while exploiting the data infrastructure
    - Services from infrastructure, software-platforms, research platforms

# Plenary Session 3 (II)

## Data: A common challenge

- **Funding bodies** to promote:
  - **sustained (data)** research infrastructures
  - **harmonized and simplified licenses** to facilitate access to data
  - **acknowledgement/credits** for data authors
- Develop an **international authentication mechanism** to overcome technical, organizational and legal obstacles for access to digital services
  - **DAITF = Data Access and Interoperability Task Force**
- Not the hardware or software, but “**humanware**” – the people – is the asset to establish, manage and operate research and data infrastructures.
  - Invest in this community and create a networked labour market.
  - Promote exchange of experiences, best practice and training (RAMIRI.eu)

# Plenary Session 4 (I)

## Moving global RI forward

- Robert-Jan Smits



# Plenary Session 4 (II)

## ESFRI: A European perspective and need for international collaboration

- Beatrix Vierkorn-Rudolph

# Key messages

- As a summary, the Conference has demonstrated the relevance of global research infrastructures if we like to address the "**grand challenges**" by pooling together human and material resources.
- Two **generic main points** emerged from the discussions and presentations:
  - The growing role of **international cooperation in global RI in the knowledge triangle context**
    - interaction with training programmes and the need to support brain circulation by opening the doors on a global scale and the growing involvement of industry
  - The **increased relevance of data**
    - and its consideration as a service which makes e-infrastructures, open access to data and interoperability a crucial factor

# Final Remark

- Research infrastructures are not "**projects**" with a clear beginning and end;
  - they are much more difficult to manage and to fund
- They rely not only in advanced materials, ICT, energy on sophisticated instruments. they rely on talented people,... from everywhere!!