MERIL

MAPPING OF THE EUROPEAN RESEARCH INFRASTRUCTURE LANDSCAPE

http://portal.meril.eu/

D14R JOINT SERVICE CATALOGUE FOR RESEARCH

MERIL PORTAL: EXPERIENCE IN DATA MODELLING AND FUTURE PLANS

European Science Foundation

29 September, 2016

OUTLINE

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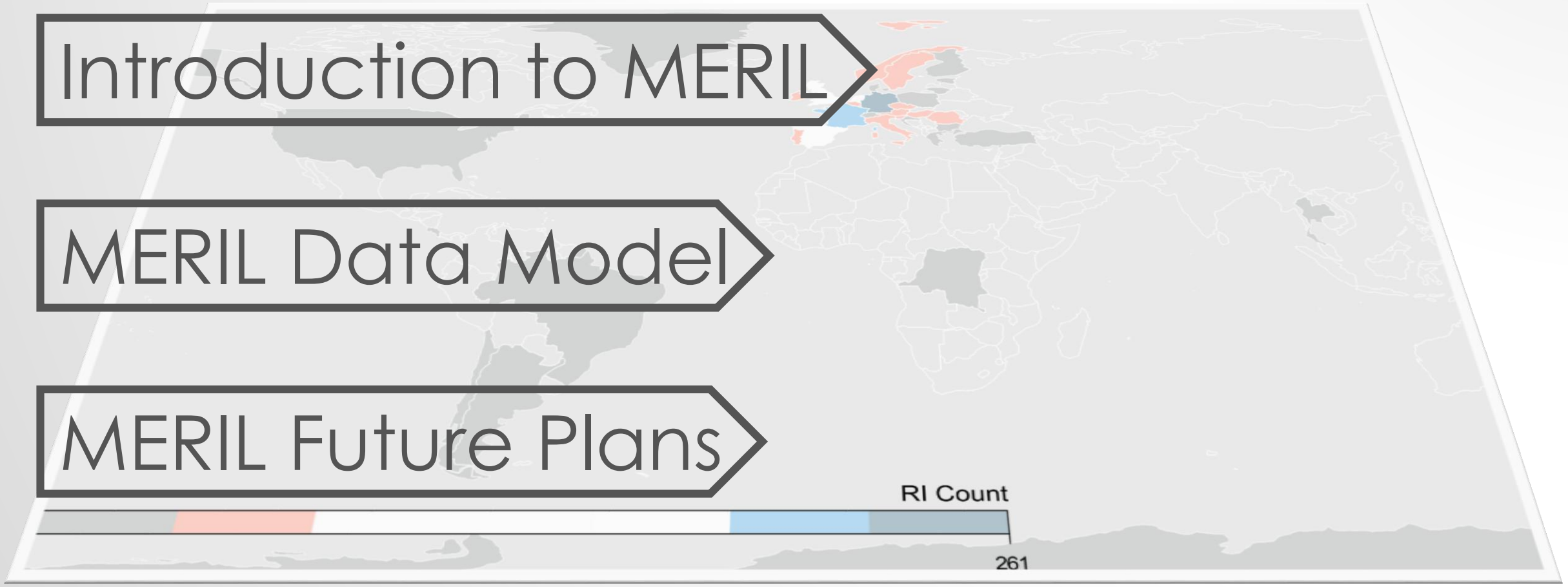
- Introduction to MERIL
- MERIL Data Model
- MERIL Future Plans



VISION

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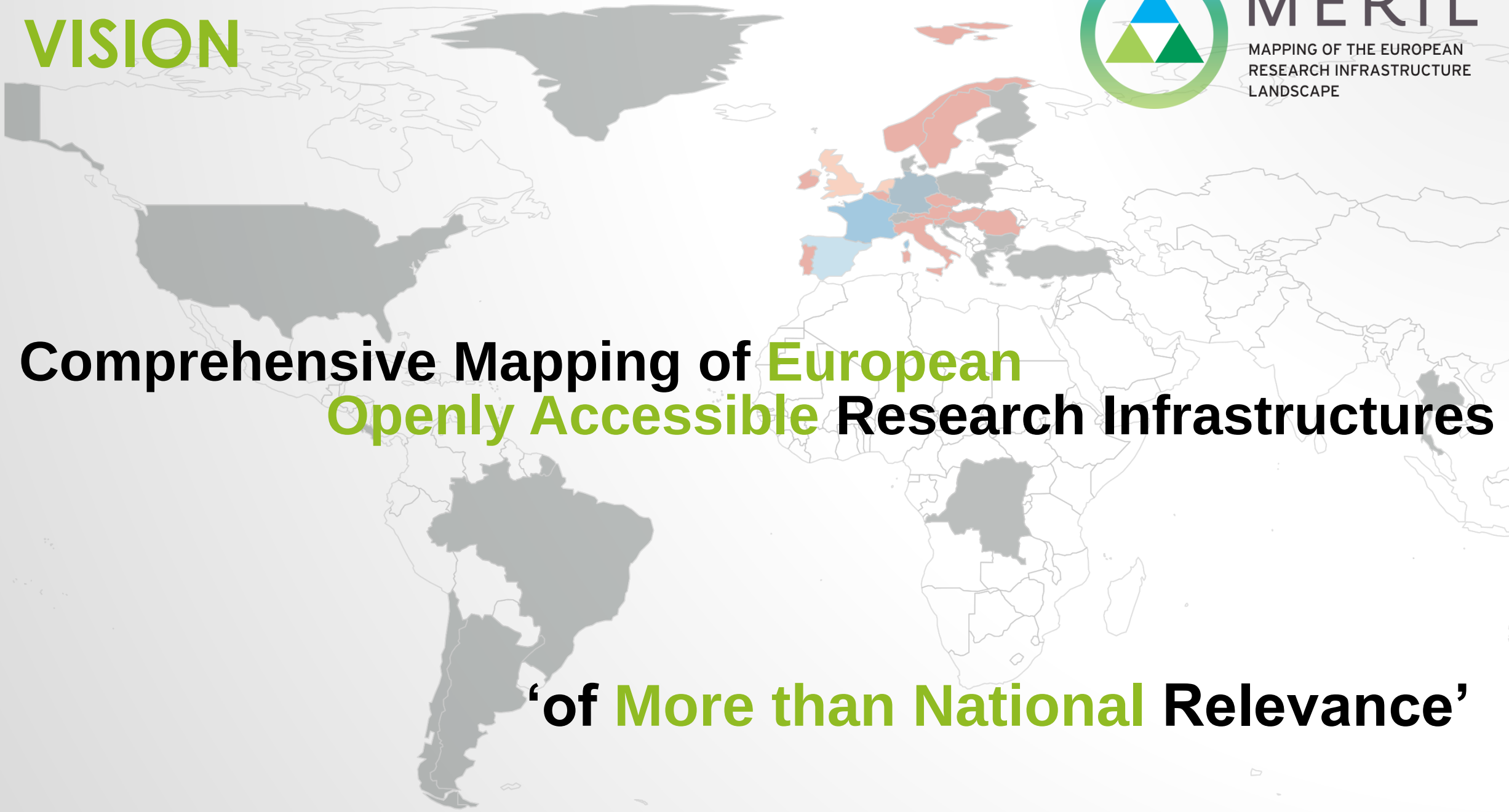

Comprehensive Mapping of European Openly Accessible Research Infrastructures

‘of More than National Relevance’

EC-FUNDED MERIL-2

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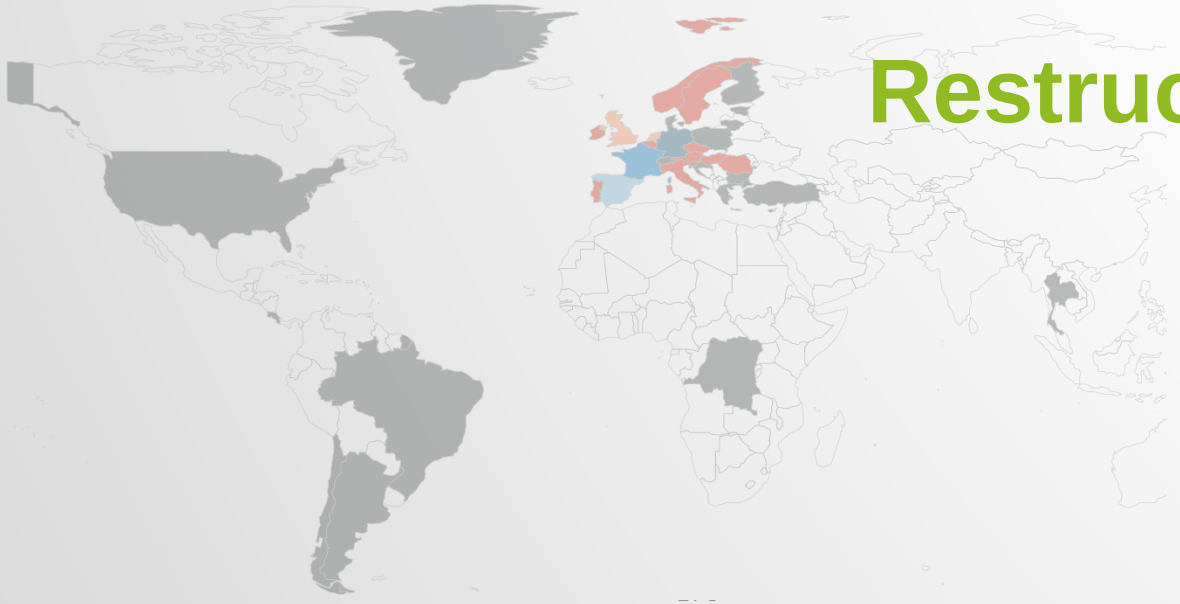
Building on previous efforts initiated by ESF Member Organisations in 2010:



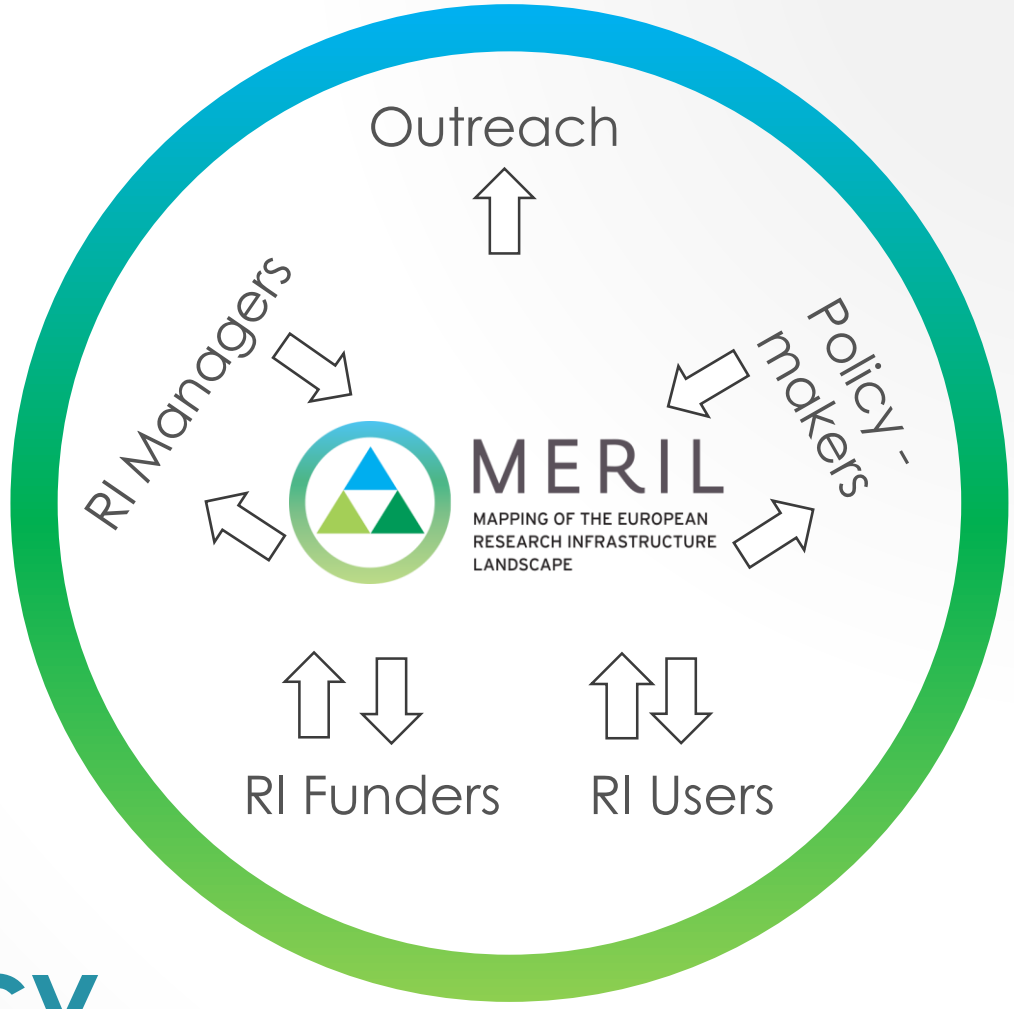
Restructure curent data model & curent portal

& Expand scope

MERIL OBJECTIVES

Serve policy maker needs by:

- Providing data on RIs across European countries and scientific disciplines
- Offering data and tools for RI landscape and gap analysis, benchmarking



SUPPORT FOR:
-Data transparency
-Evidence-based decision making

MERIL-2 CONSORTIUM

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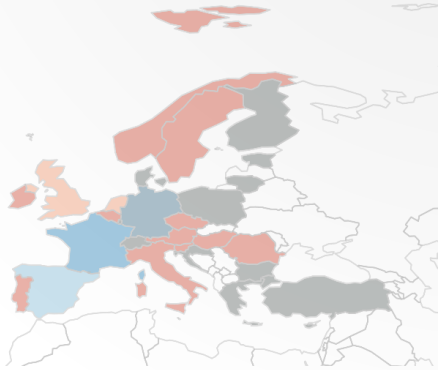

Project Development and Data Management

ESF – European Science Foundation

New MERIL IT Portal Development

EKT - The National Documentation Centre of Greece

RI Stakeholder Consultation

APRE – Agency for the Promotion of European Research

TRENDS

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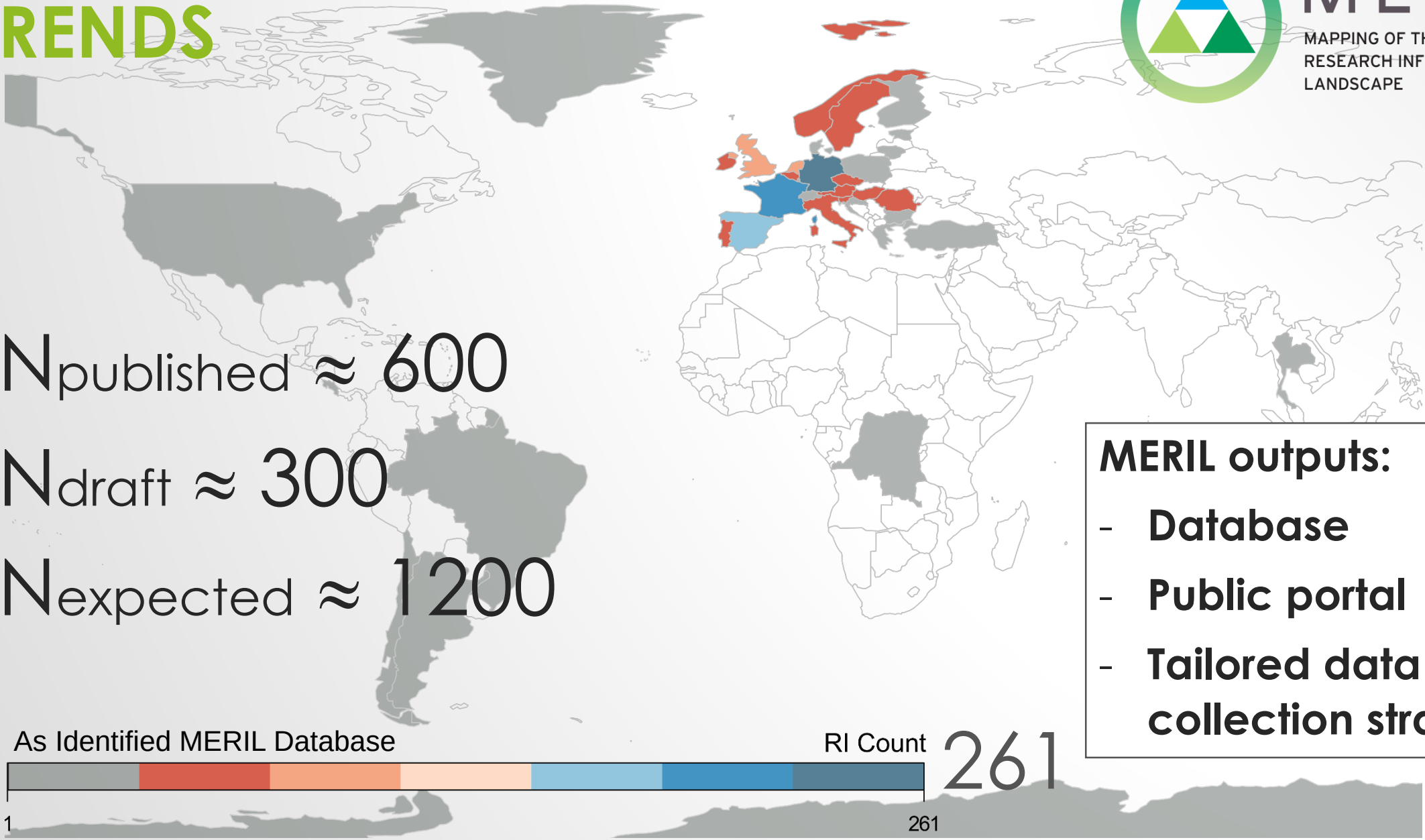

$N_{published} \approx 600$

$N_{draft} \approx 300$

$N_{expected} \approx 1200$

MERIL outputs:

- **Database**
- **Public portal**
- **Tailored data collection strategy**

GEO-COVERAGE: PARTICIPANT COUNTRIES

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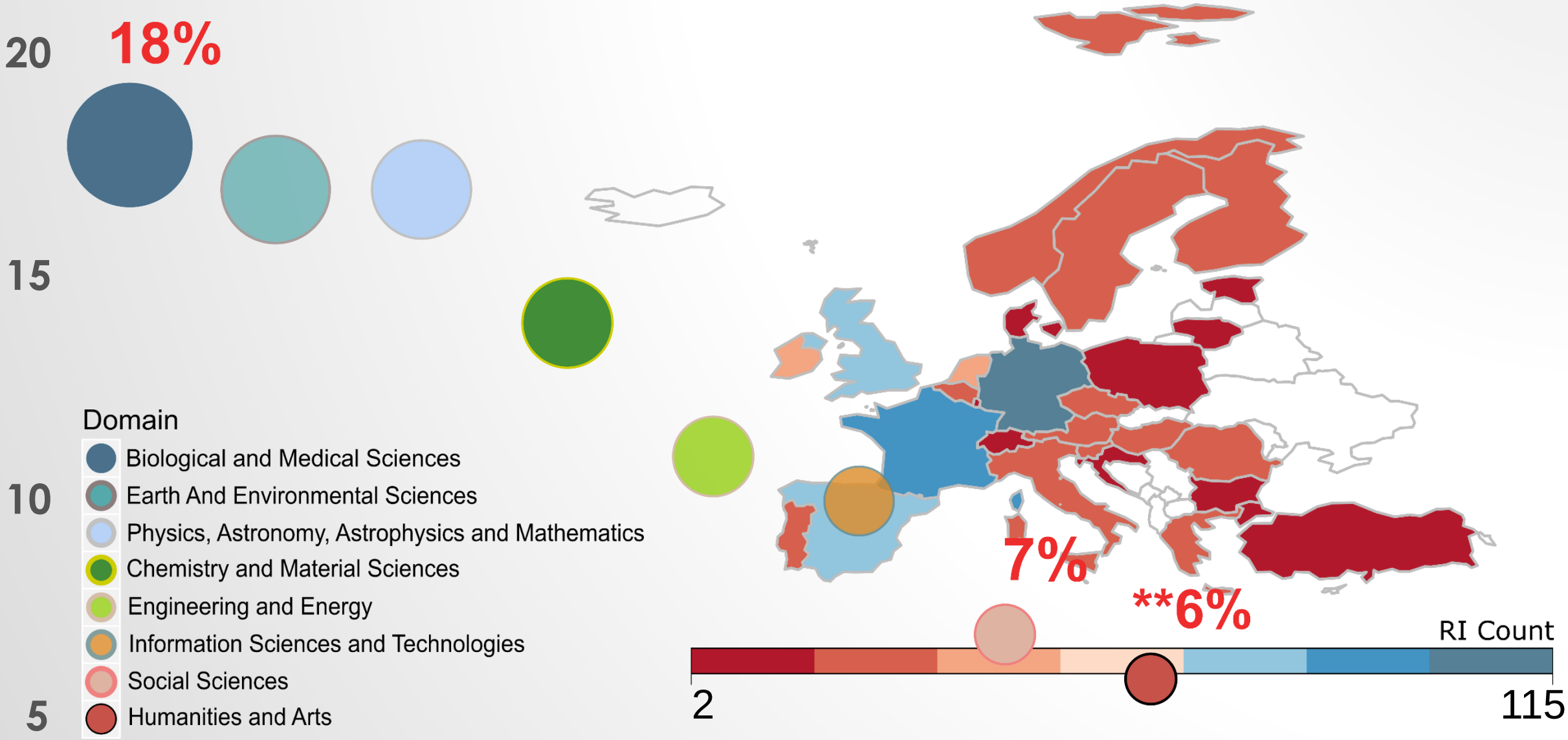
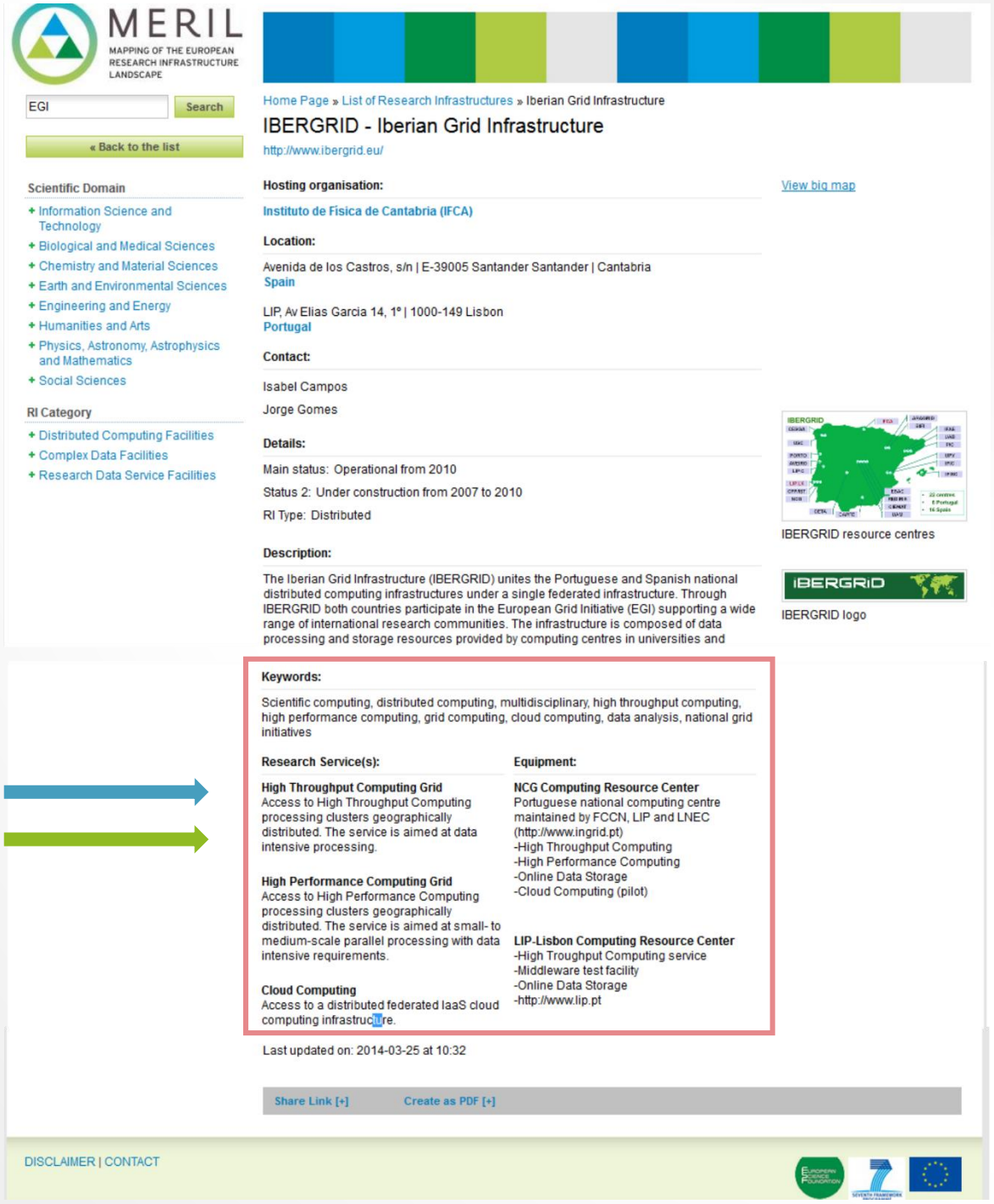


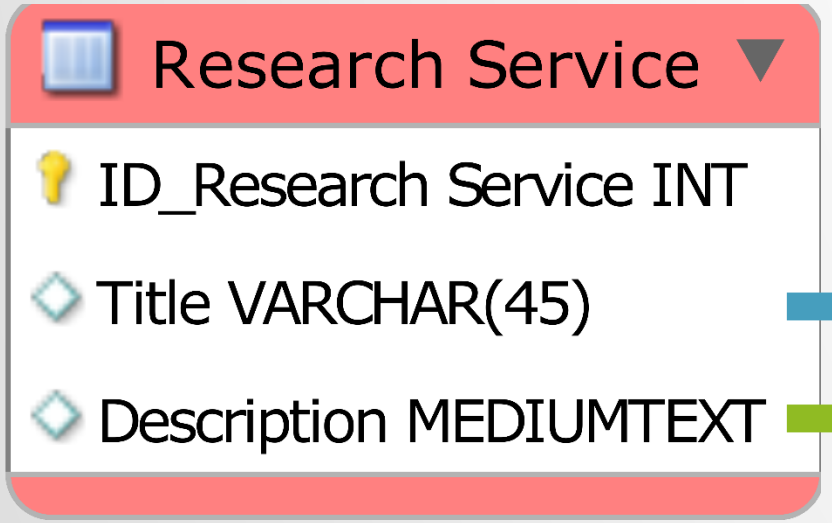
PORTAL PAGE

Research service title

Research service description



RI SERVICES ENTITY



Corresponds with
***Service* entity in CoS**

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Keywords:

Scientific computing, distributed computing, multidisciplinary, high throughput computing, high performance computing, grid computing, cloud computing, data analysis, national grid initiatives

Research Service(s):

High Throughput Computing Grid
Access to High Throughput Computing processing clusters geographically distributed. The service is aimed at data intensive processing.

High Performance Computing Grid
Access to High Performance Computing processing clusters geographically distributed. The service is aimed at small- to medium-scale parallel processing with data intensive requirements.

Cloud Computing
Access to a distributed federated IaaS cloud computing infrastructure.

Equipment:

NCG Computing Resource Center
Portuguese national computing centre maintained by FCCN, LIP and LNEC (http://www.ingrid.pt)
-High Throughput Computing
-High Performance Computing
-Online Data Storage
-Cloud Computing (pilot)

LIP-Lisbon Computing Resource Center
-High Troughput Computing service
-Middleware test facility
-Online Data Storage
-http://www.lip.pt

RESEARCH SERVICES

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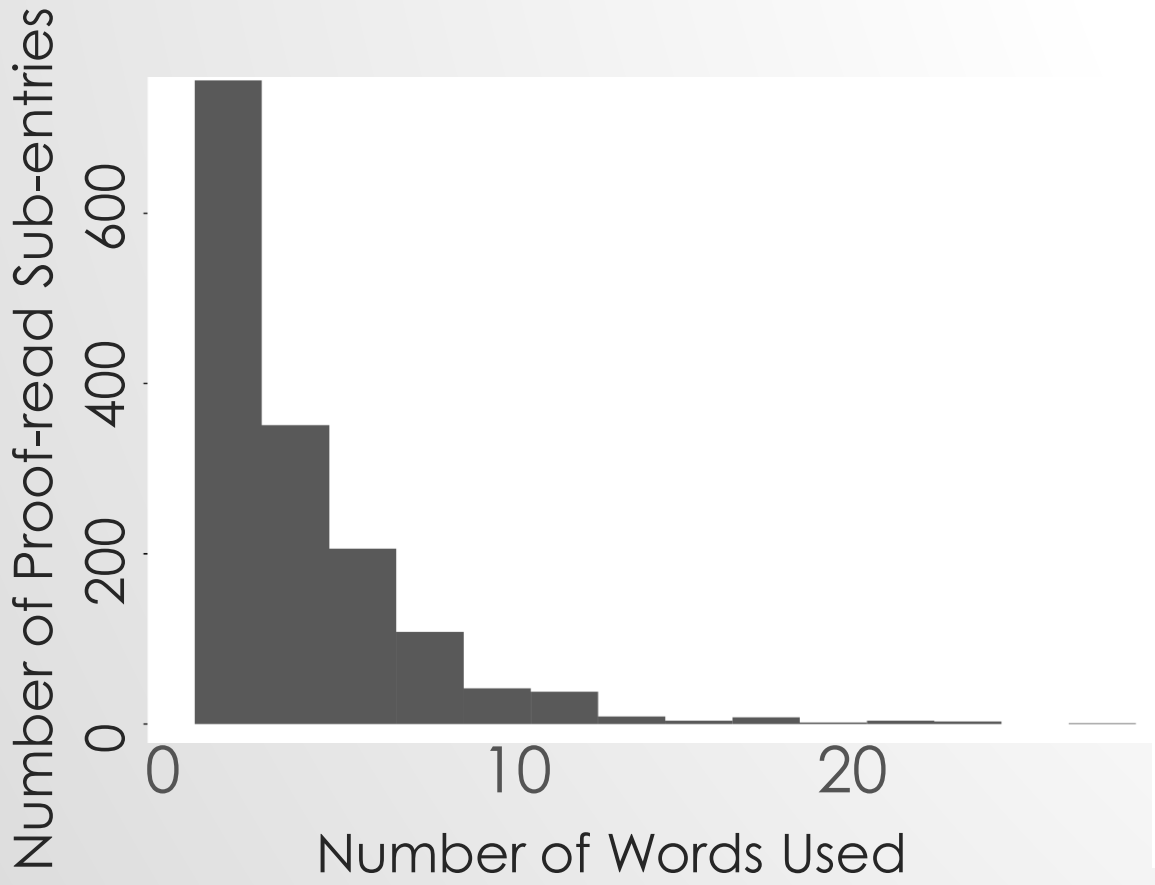
Free text input practices

1615 Research Service entity data patterns analysed



E-RI SERVICE NAME

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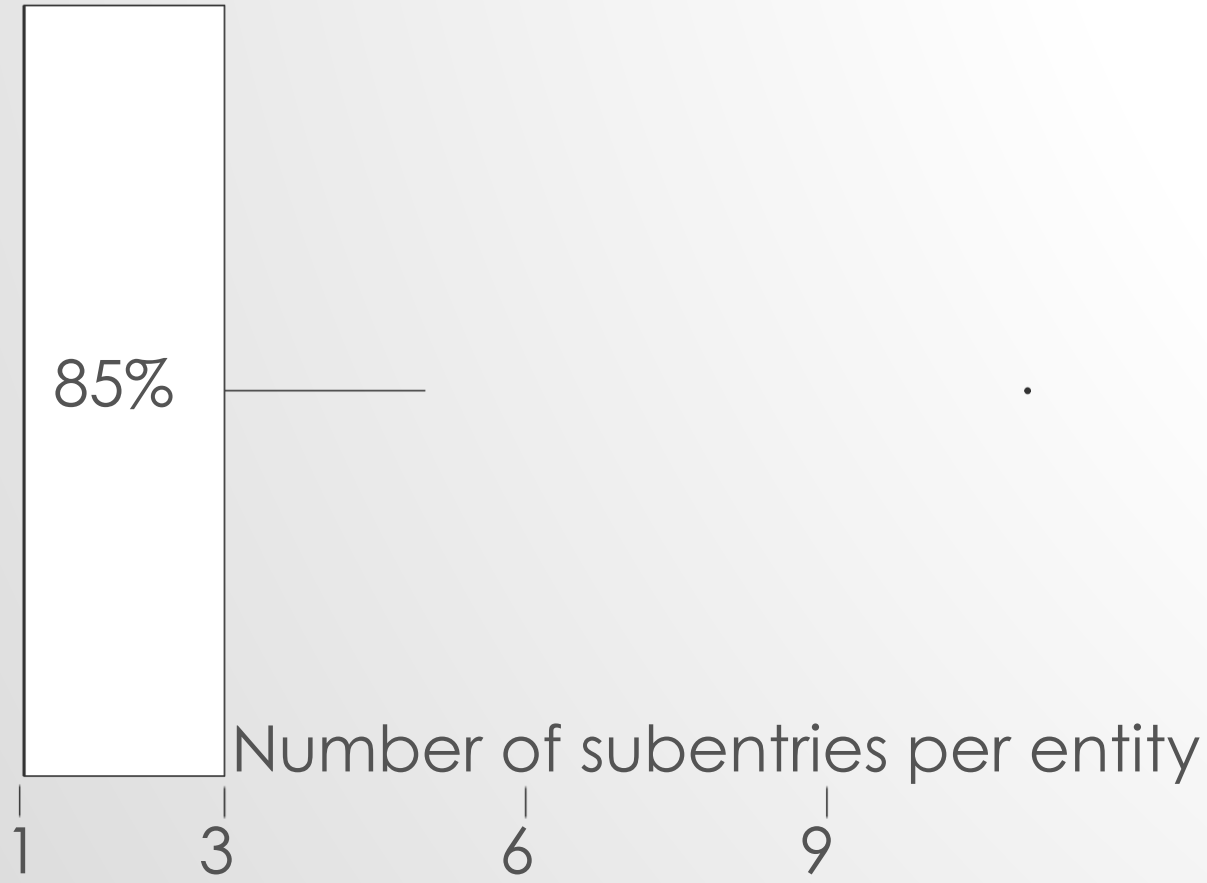
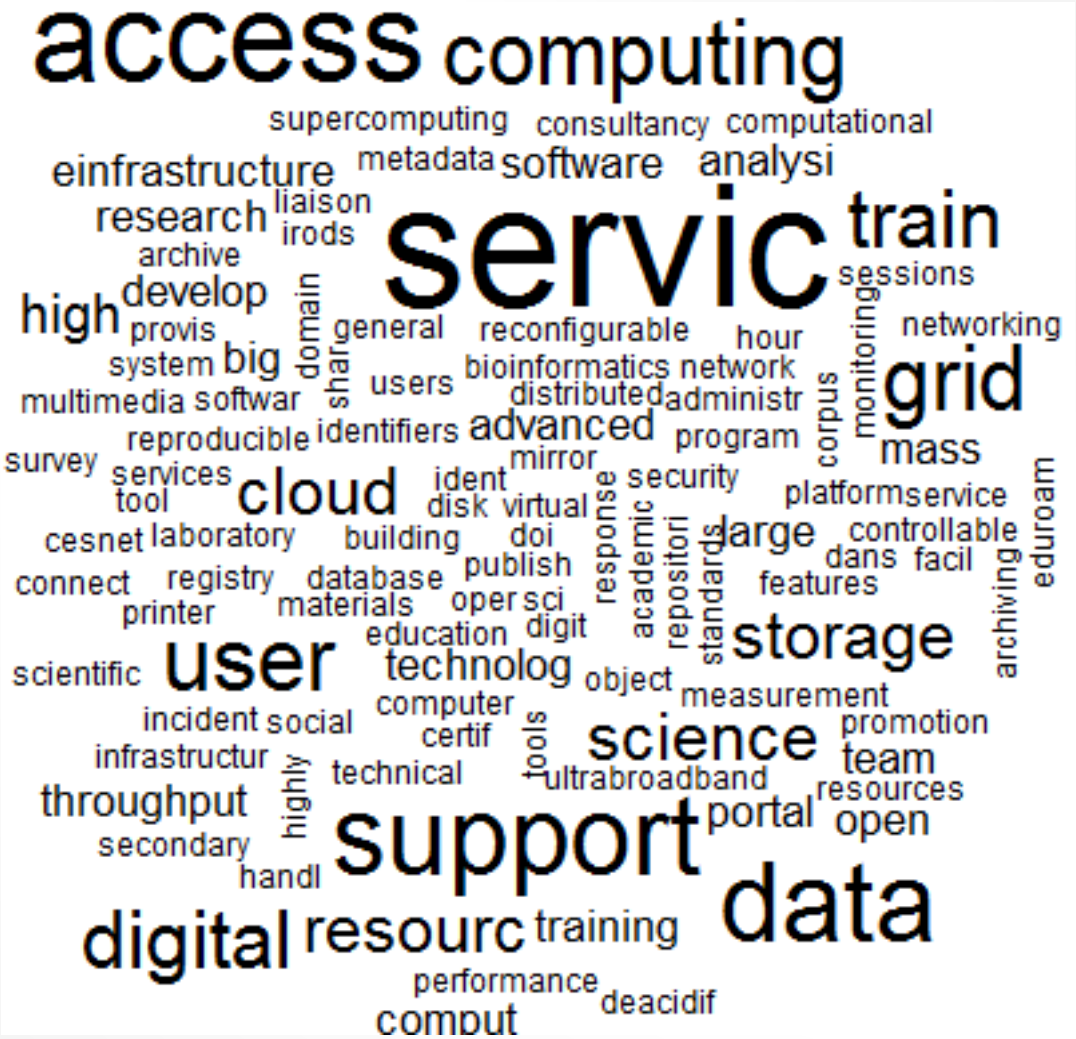
Free text input practices

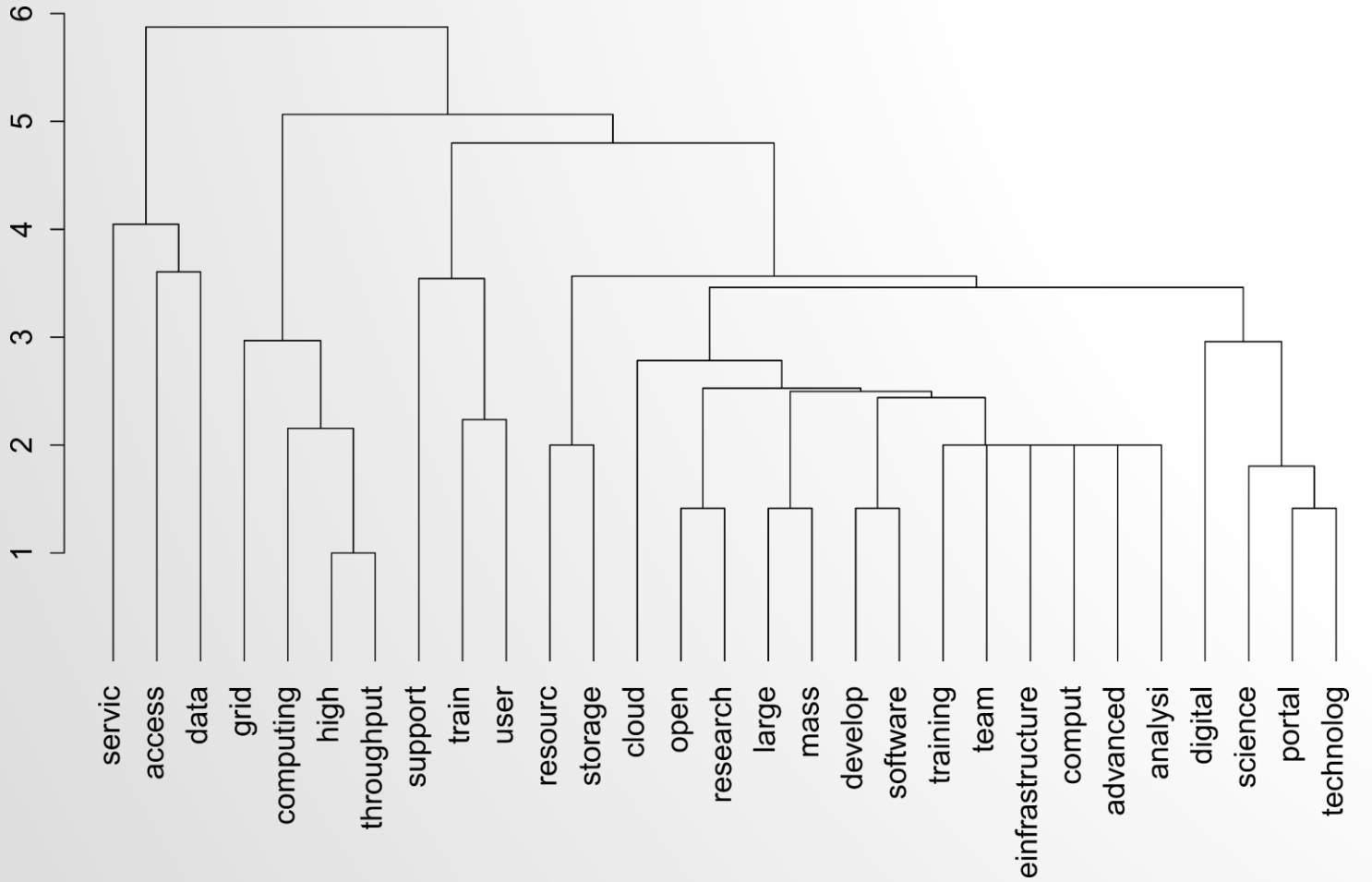
73 RI Service entity data patterns analysed
From **31** RI entries identified as e-infrastructures





E-RI SERVICE NAME

Free text input practices



Formalization needed

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STRUCTURING RESEARCH SERVICES

Proposal

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Construct a dynamic library of *Research Service* titles from a list of ≈1600 entries (not yet de-duplicated/cleaned) + further text mining; manipulated to guide standardized RI research service portfolio documentation.

DATABASE REMODELLING

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Limitations of the first MERIL data model:

- Unstructured free text fields
- Not fully comprehensive meta data (e.g. Definition of users)
- Full CERIF-compliance missing
- Limited scope

Solutions

- Introduce high level of structuring
- Provide comprehensive meta data
- Prepare CERIF-based data model
- Expand the set of variables of interest (e.g. information on access)

DATA STRATEGY

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First module

- **Core data**
  Basic RI-identifying data, including scientific identitifation (Dataset chapters *Identification* and *Scientific discription*)

→ Including *Research Services*

Second module

- **Additional data**
  Other useful data (Dataset chapters *Access and use*, *Scientific activities*, *Collaborations* and *Other activities*)

Third module

- **Advanced data**
  Data useful for the deep analysis of RI activities (Dataset chapters *Human resources and training, Data policies, Impact, Innovation* and *Costs and Funding pilot*)

NEW DATA MODEL: SKETCH

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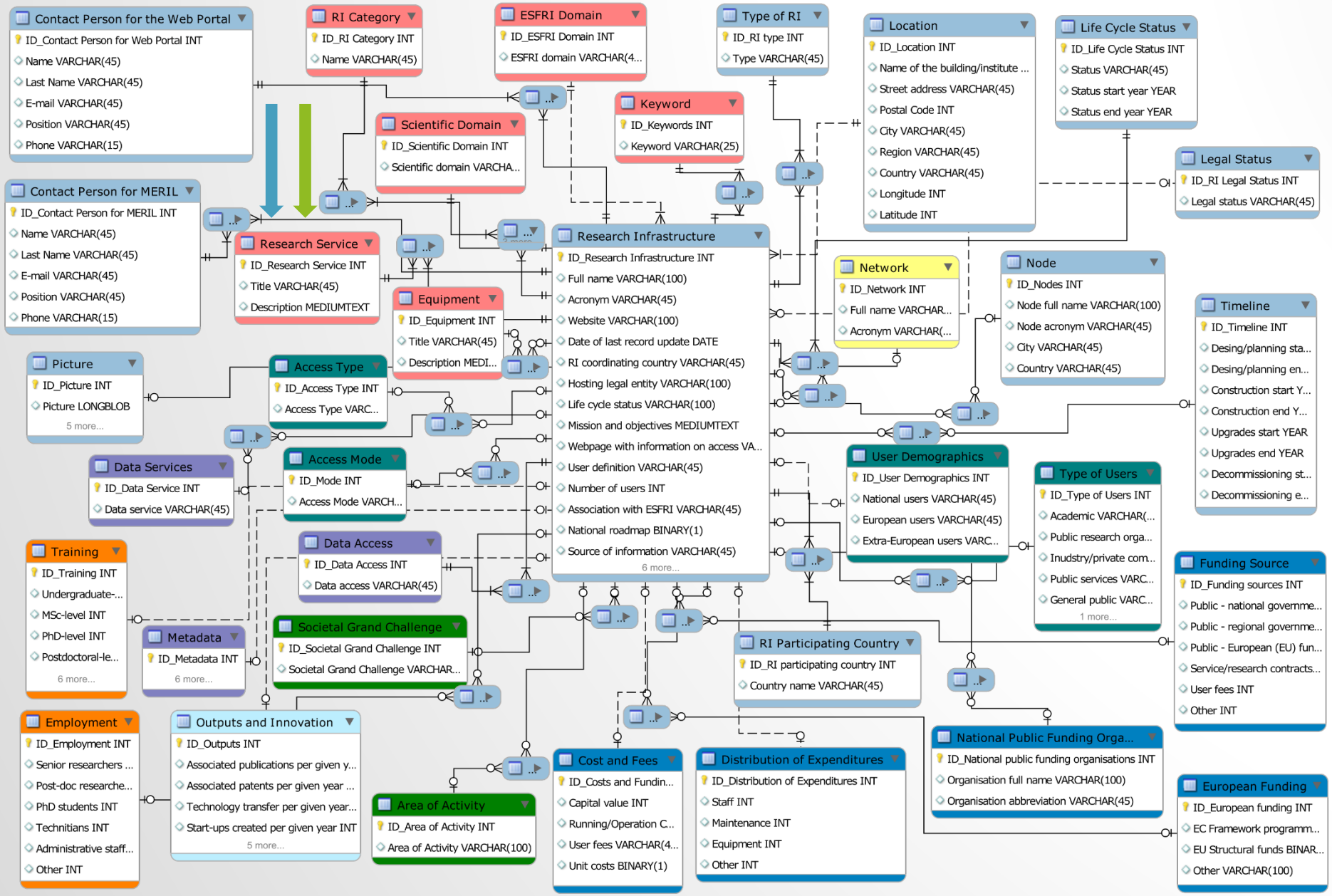

Under translation to fit the CERIF model

- Identification
- Scientific Description
- Access and Use
- Collaborations
- Human Resources and Training
- Data Policies
- Impact
- Outputs and Innovation
- Costs and Funding (pilot)

COMPARING CoS AND MERIL

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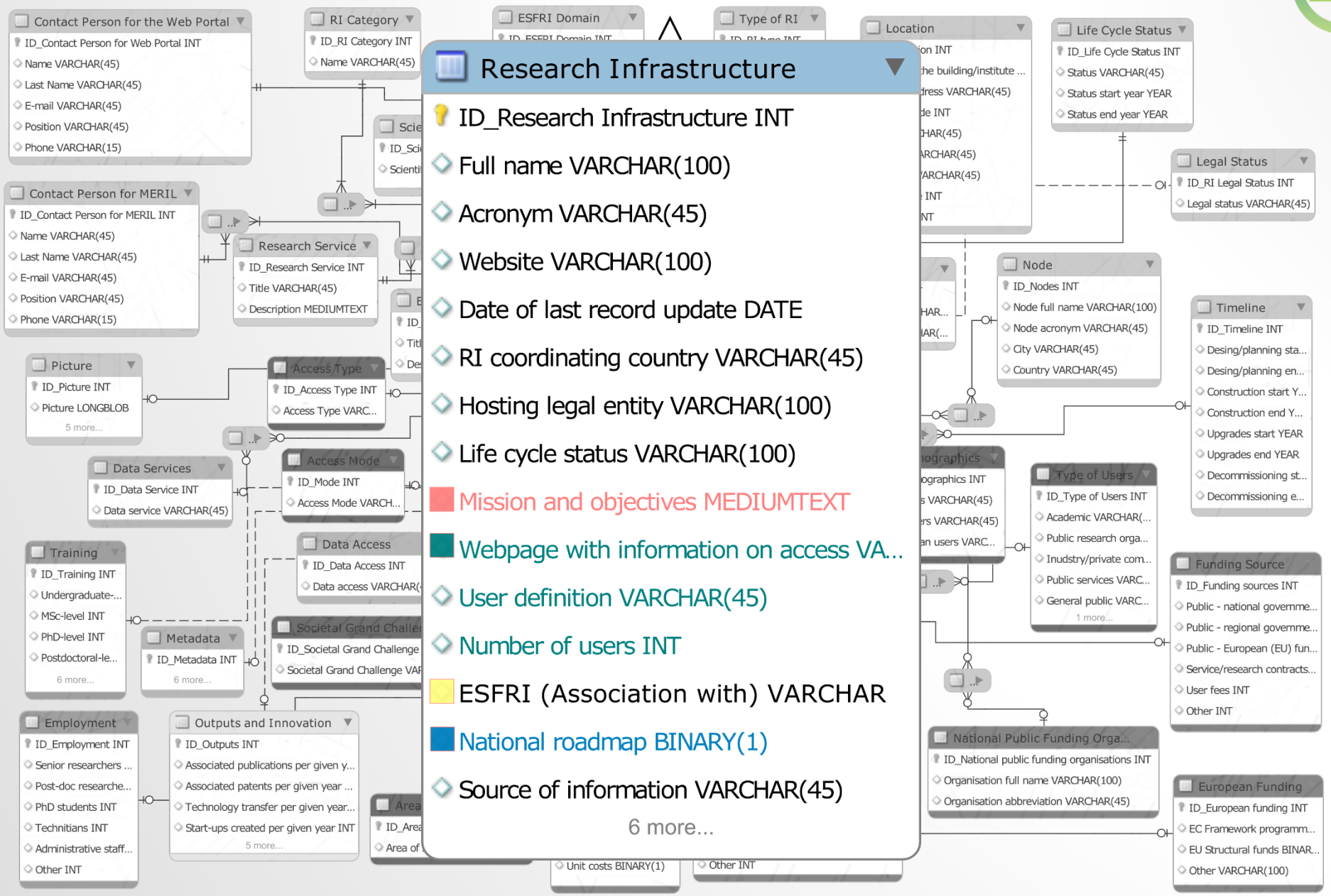
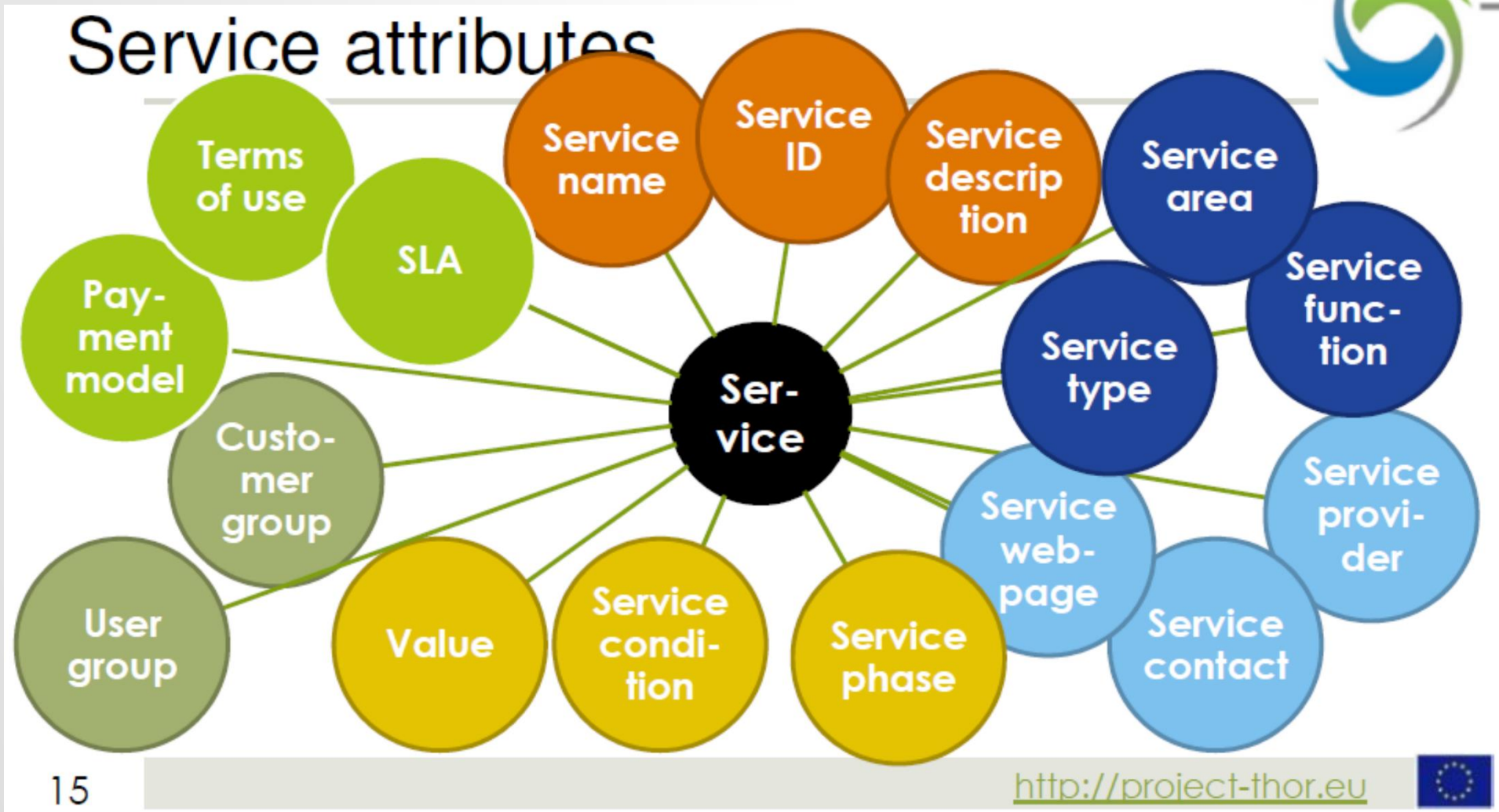


COMPARING CoS AND MERIL



Slide adopted from Dr Angela Dappert's presentation 'Towards a joint service catalogue for e-Infrastructure services' at EGI Conference 2016, April 2016

RI SERVICES AND RELATED ENTITIES

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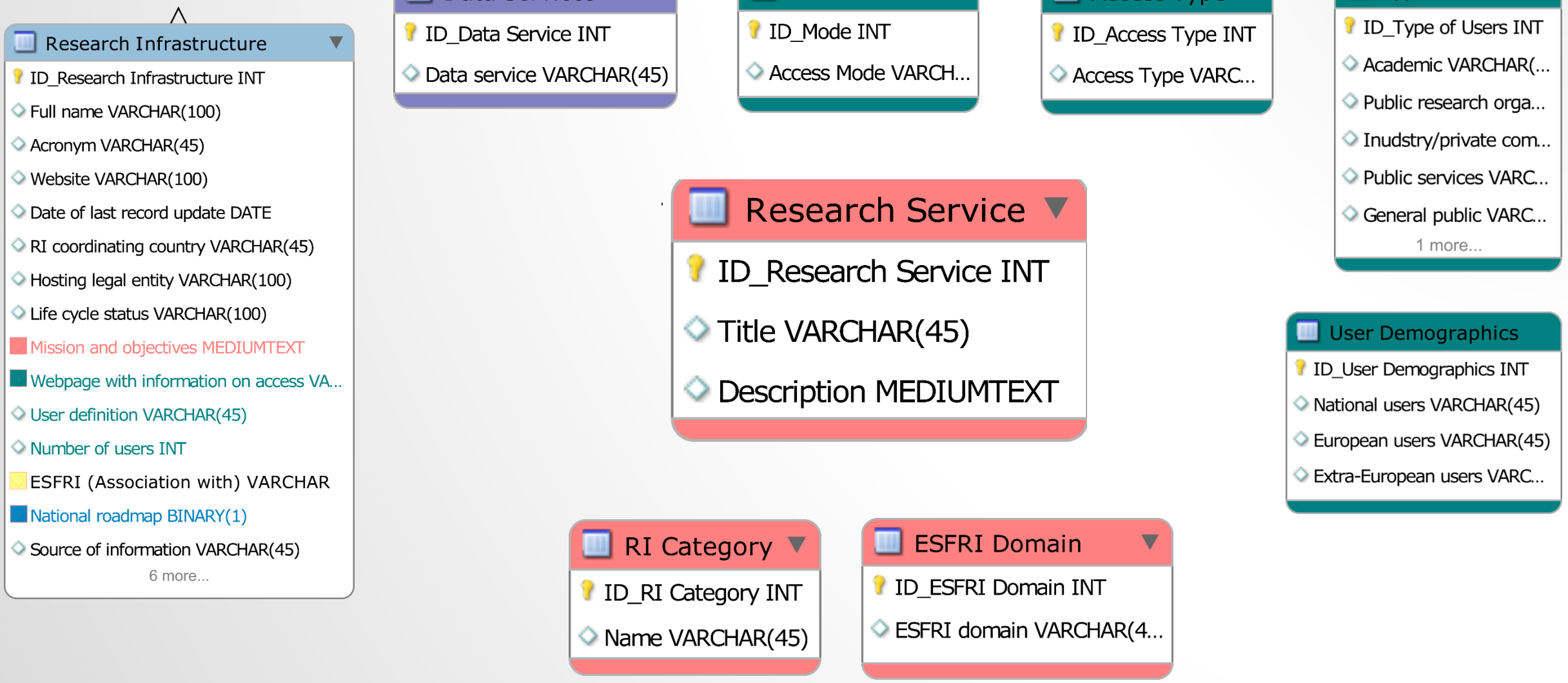

MERIL RI SERVICES AND CoS

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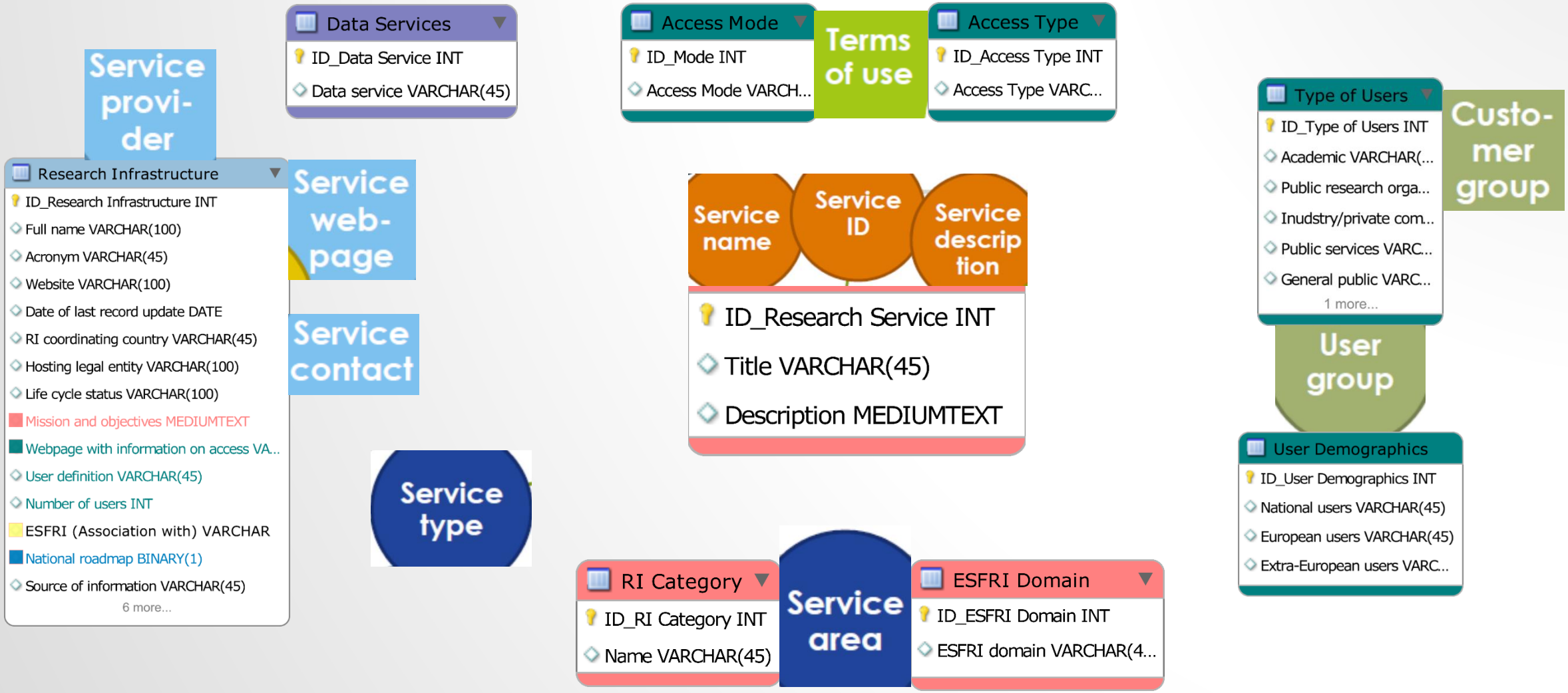

FUTURE: ADDRESSING THE CHALLENGES

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- New means of data harvesting (equipment.data)
- Linking with national RI databases
- Linking with field-specific RI databases (Infect-ERA, EurOcean, RMS Facilities Database, TIARA, DER-lab)
- Learn from procedurally similar initiatives (Global Observatory on Health R&D, CFI Research Facilities Navigator)

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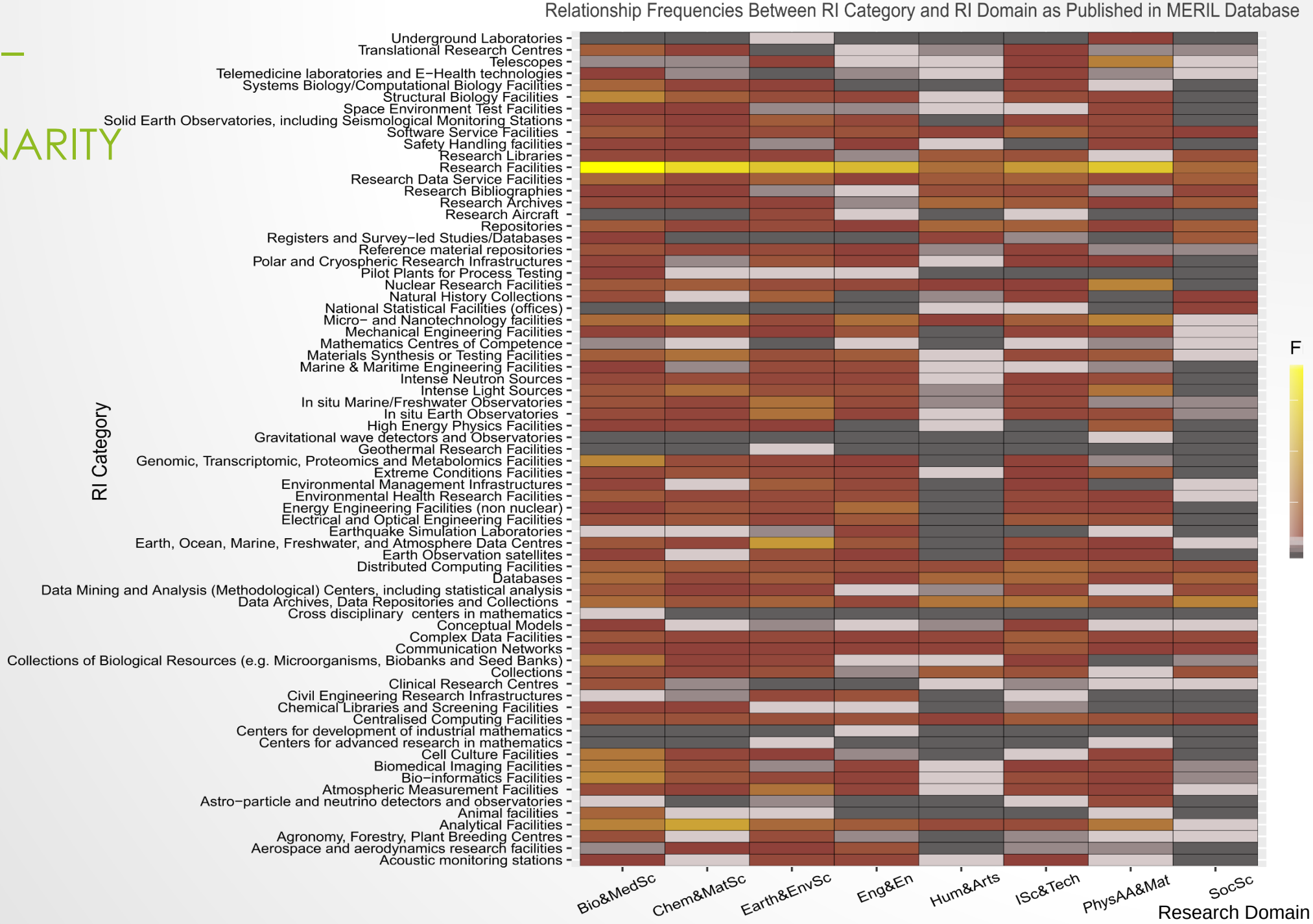
Thank you for your attention

meril@esf.org

http://portal.meril.eu/

EXTRA SLIDES TO FOLLOW

RI CATEGORY – DOMAIN INTERDISCIPLINARITY