

# Opportunità di finanziamento: potenzialità per progetti a livello nazionale e internazionale

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# Main Activities at European Level

## 1. European Open Science Cloud (EOSC)

- position EU in a leading role in scientific infrastructure and data environment
- give European Scientists services for storage, management, analysis and re-use of research data
- Pilot call infradev-04-2016, 10 ME (see later)

## 2. European Data Infrastructure

- underpin EOSC
- world-class supercomputing, high-speed connectivity, leading-edge data storage also for other users from industry (including SMEs) and the public sector
- Pilot project: *Important Project of Common European Interest on High Performance Computing and Big Data Enabled Applications*
- Italy participates with the “*The Italian Data Infrastructure*”

## European Open Science Cloud

### Proposal EOSCPilot on European Open Science Cloud for Research, Aim:

“launch of a pilot action that should demonstrate how wide availability of scientific data and data-analysis services for European researchers can be ensured through a cloud infrastructure.”

Budget: ~10M€, INFN: €254.400,00.

Period 24 month

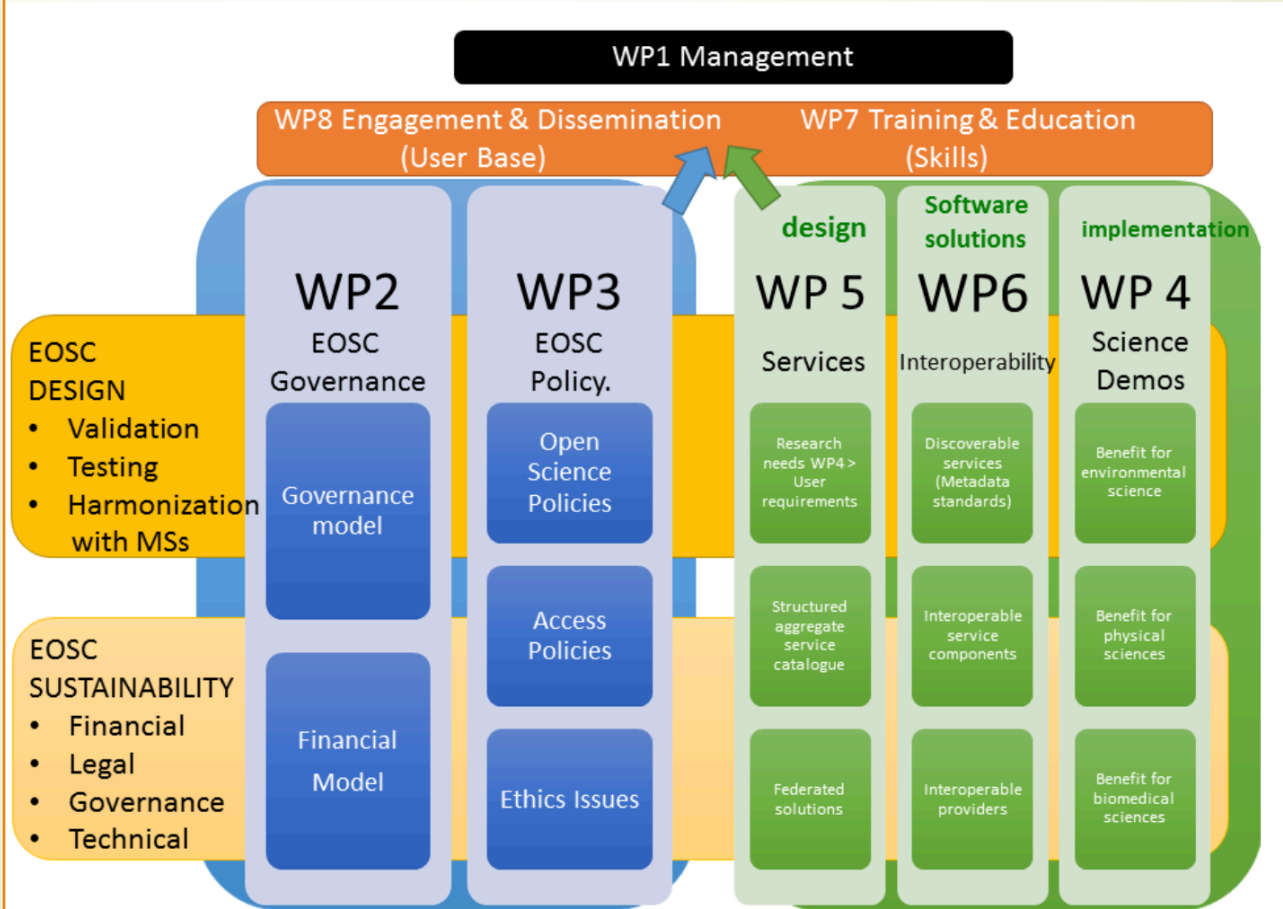
**Consortium: 33** organizations:

**STFC**, CSC, MPG, EMBL, SURF, EGI, CNRS, KIT, U-Edinburgh, LIBER, TRUST-IT, Athena, JISC, PRACE, CNR, INFN, DESY, INGV, BSC, U-Göttingen, KNAW-DANS, ICOS-ERIC, GEANT, INAF, BBMRI-ERIC, ESS-ERIC, NERC, EXFELF, ECRIN, U-Manchester, PIN-Firenze, CEA, CINECA

**Just Funded**

# Infradev-4 Structure

- WP1: management: STFC (UK)
- WP2: governance: CSC (FI)
- WP3: policy: Athena (GR) + JISC (UK)
- WP4: science demonstrators: MPG (DE) + EMBL (DE/UK)
- WP5: service demonstrators: Surfnet (NL) + EGI.eu (NL)
- WP6: interoperability: CNRS (FR) + **INFN** (IT)
- WP7: skills and capacities: DCC (UK) + KIT (DE)
- WP8: community engagement: LIBER (NL) + Trust (UK)



# European Open Science Cloud: Next Projects

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## **E-INFRA12-2017 (a)**

*Data and Distributed Computing e-infrastructures for Open Science*

### **(a) Secure and agile data and distributed computing e-infrastructures**

(in relation to INFRADEV4)

Pillar I : consolidation of services.

Pillar II: platforms for technical integration.

Pillar III: human network.

*Discussion to form a consortium to be led by EGI and/or EUDAT.*

## **E-INFRA21-2017**

*Platform-driven e-infrastructure innovation*

### **(B.2) Computing e-infrastructure with extreme large datasets**

*EU-T0 partners will lead one (or two complementary) proposal(s).*

- a) Develop prototypes and proofs-of-concept which will enable the agile handling of scientific data from future large scale facilities and will allow data centres with massive storage capabilities to participate in a common data backbone into a virtualized data infrastructure able to manage extremely large data sets.
- b) Develop and test services to help users to access large data sets and heterogeneous computing facilities in a coherent and efficient way (also inspired by the indigoDataCloud project)

# European Data Infrastructure

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*Important Project of Common European Interest on High Performance Computing and Big Data Enabled Applications*

## **European exa-scale technology**

prove the capacity of the European industry to answer the challenges of building an exa-scale machine by 2023 via a prototype to be ready by 2020.

## **Large test beds and applications**

Establish Centers of Excellence, starting from research, to develop and test HPC-enabled and big data based applications in specific and strategic sectors at regional, national and pan-European scale;

Deploy application test beds on:

Personalized Medicine,

Smart Space,

Industry 4.0 and Smart Manufacturing,

New advanced Materials,

Fintech,

Smart Agrifood and

Smart City Applications.

**Possible funds in Italy: MISE, MIUR, PON, POR, Regional**



# First National-level Pilot: Emilia Romagna

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Process supported by Regional (EU) funds:

- Survey of:
  - research computing capacities
  - competences in HPC, Big Data and software development
  - research communities
- Design and implementation test bed:
  - Definition of applications domain: Research, PA, Health, education, smart- ....
  - involvement of the partners (i.e. private companies, SMEs)
- Other activities in progress

