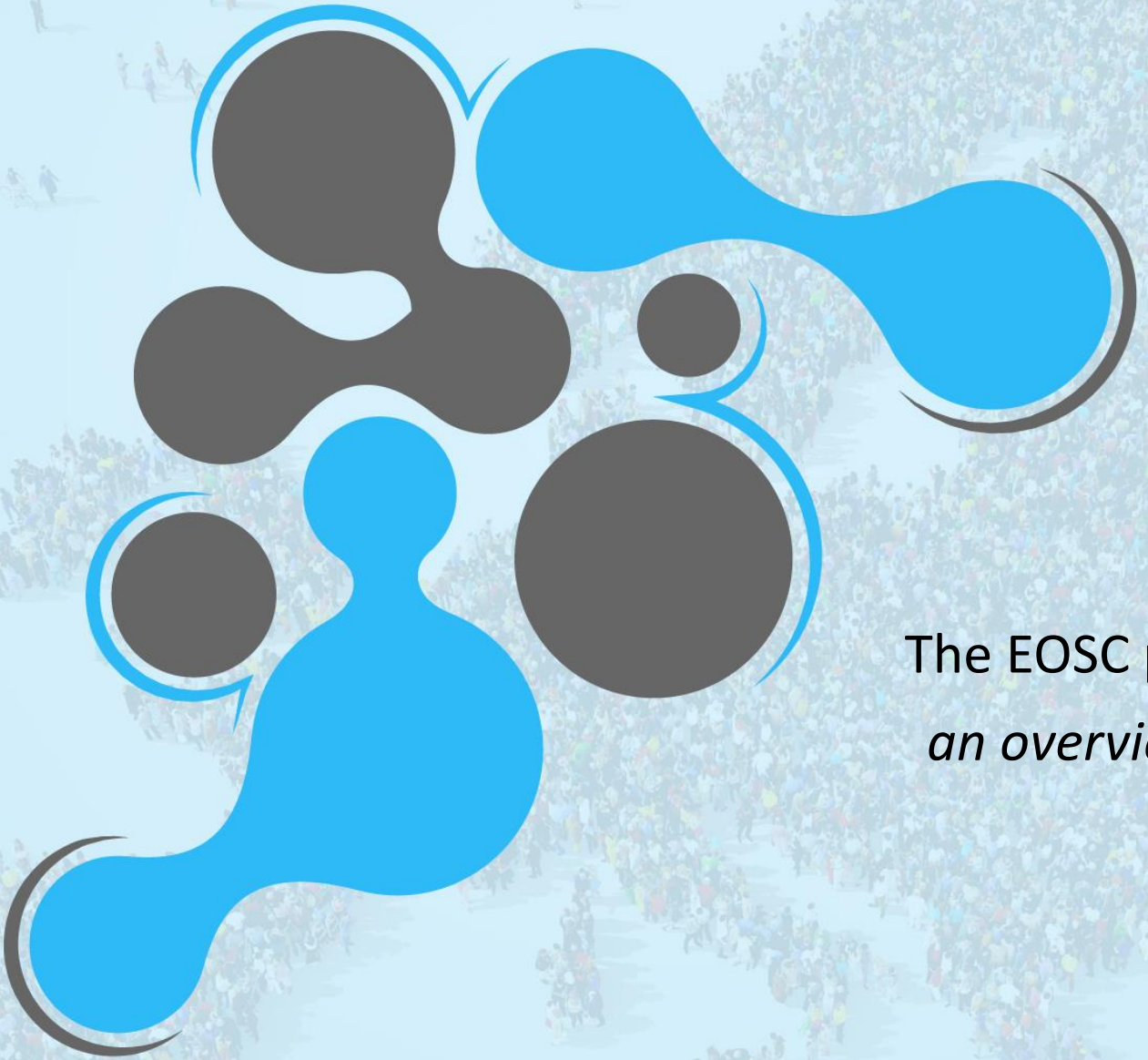


The EOSC pilot project

an overview of EOSC

EOSCpilot

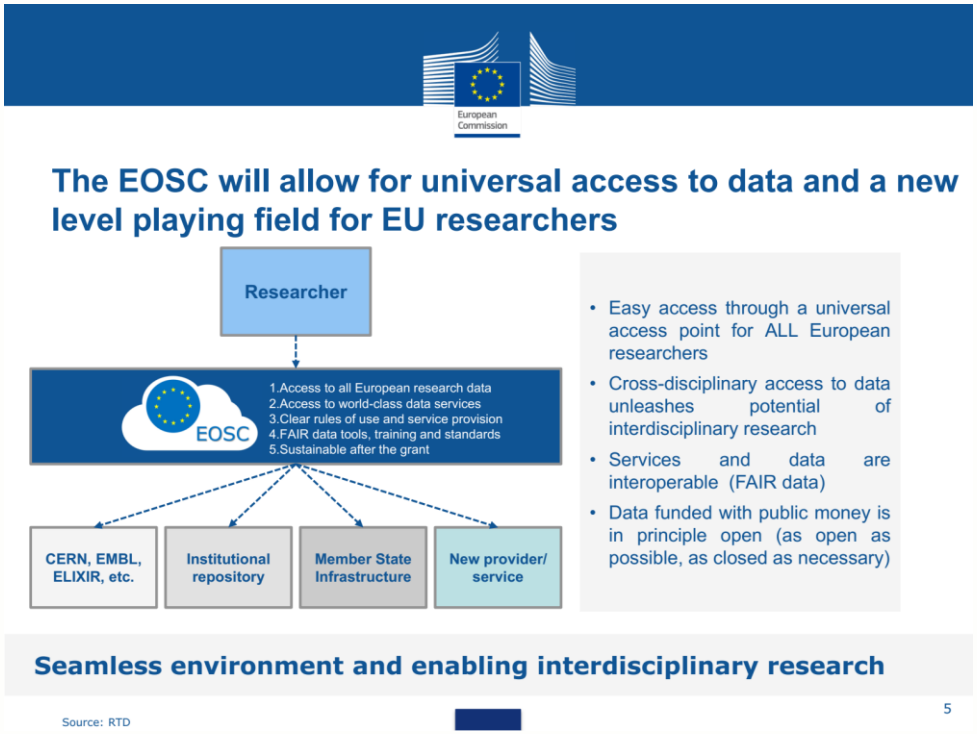
The European Open Science Cloud for Research Pilot Project

www.eoscpilot.eu

EOSC Vision

- An open environment to store, share, analyse and re-use scientific data
- The gateway to interdisciplinary research
- Sharing data cross border and community, enforcing FAIR principles
- Easy access and user friendly (match user requirements)
- Bridge infrastructure fragments (geographic, thematic, technological, governance)

- EOSC is process not a project (p1 of the EOSC declaration)



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EOSCpilot factsheet

- 33 partners (STFC, CSC, MPG, EMBL, SURFsara, EGI-eu, CNRS, KIT, Univ. of Edinburgh, LIBER, TRUST-IT, ATHENA-RC, JISC, PRACE, CNR, INFN, DESY, INGV, BSC, Univ. Goettingen, KNAW, ICOS ERIC, GEANT, INAF, BBMRI ERIC, ESS, NERC, European XFEL, ECRIN, Univ. Manchester, Univ. di Firenze, CEA, CINECA), and another ~15 linked TP.
- 9.9 m euro in 8 workpackages
- 1 Jan 2017 – 31 Dec 2018 (planned extension of 3 months)
- Goals: Governance framework, Science demonstrators, Services management framework, Interoperability, Identification of skills and training needs, Engagement for different stakeholders

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EOSC pilot to kickstart EOSC

- Design the governance structure
  - rules of participation, business plan
- Establish policies to operate and use
  - rules of participation, services and portfolio management, data policies
- Evaluating feasibilities through Science Demonstrators
  - high profile service pilots that will show benefits, possibilities, limitations
- Develop interoperability requirements and measure openness and FAIRness
  - standards for interoperability for scientific data
  - open science toolkit and monitor
- Engage with stakeholders
  - seek active engagement, build trust and skills required for adoption of an open science approach and use of federated infrastructures, collect requirements
- Platform and support for the HLEG
- EOSCpilot is data and IT infrastructure oriented

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Governance layers

EOSC Governance Board

EOSC Executive Board

Measuring Results (+ identifying)

1. **Institutional,** including EU Member States and European Commission

Strategic

Getting things done

2. **Executive/Operational,** (3 independant experts and 8 organisations), implementation and work plans, rules of participation, recommendations

Executive

Engaging community

3. **Advisory,** (stakeholders at large)

Steering

EOSC Stakeholders forum

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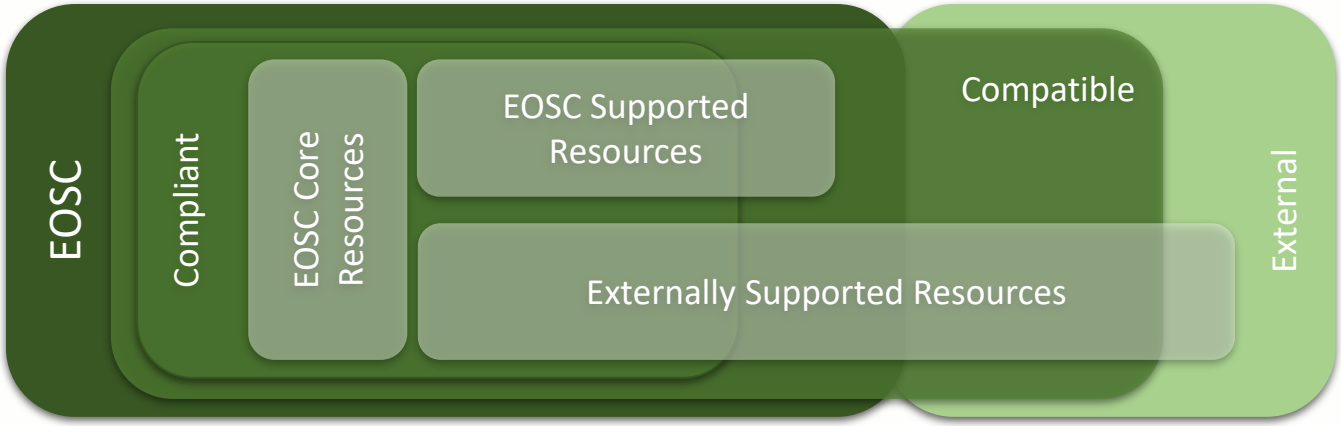
Rules of participation

Importance criteria for uptake in catalog availability, functionality, maturity, support, terms of use, contractual framework, properties of the service (quality, performance etc.)



Compliant Most of the resources within EOSC fully compliant with the Principles of Engagement

Compatible Not fully compliant (yet), technically compatible with the EOSC, of value to EOSC Consumers

External Resources outside of EOSC, of value to EOSC consumers, may or not be technically compatible with EOSC resources, “non-EOSC approved players are free to explore any role in the Open Science ecosystem they wish, even if they do not adhere to the RoP”

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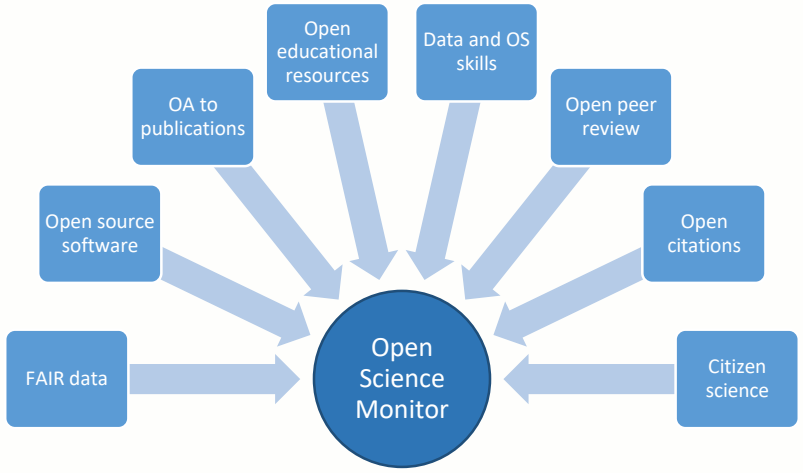
On data policies and Open Science

- Develop and Align EOSC with GDPR, Patents, IPR, Licensing, Ethics etc, .
- Policy toolkit: collection of **resources, tools, and approaches,** supporting the management of various policy issues
- Determine and monitor openness and FAIRness



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On Interoperability

- **Infrastructure interoperability:**

  facilitate the most adequate infrastructures for the treatment of extensive amounts of data. Demonstrate with multi-infrastructure, multi-community pilots with science demonstrators

- **Research and Data Interoperability:**

  FAIR Data & services

- **Testbeds for interoperability:**

  Analysis of Science Demonstrator results

- **Key Output:**

  *The design of a future EOSC based on **federated interoperable services**.*

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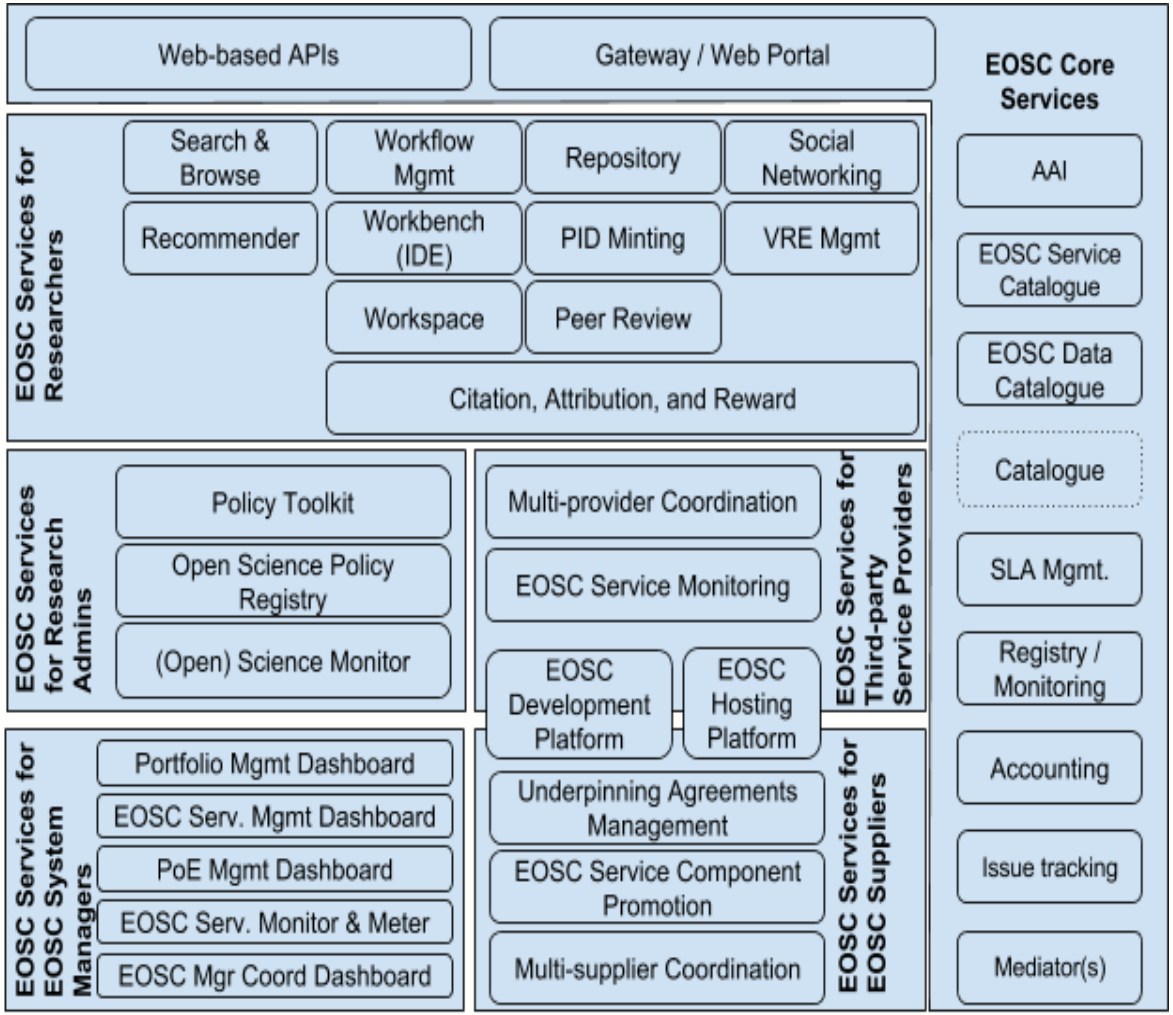
Services and their management

- A multitude of services must be approved, managed, ordered, offered, validated, monitored, accounted
- With different levels of maturity, different providers in different countries
- EOSCpilot delivers drafts on Architecture, Portfolio Management and (Federated) Service management



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Science Demonstrators (exrpt)

- ENVRI: Integrate heterogeneous climatology data sources
- High energy physics: preserve data (CERN)
- Life Sciences: (PanCancer) analysis of genomes across clouds
- Photon-Neutron: harmonize cloud (DESY)
- Earth Sciences: (EPOS/VERCE) virtual earthquake
- Life Sciences: updating and standardising datasets, workflows, imaging (EMBL)
- Physics/Astronomy: easy access to LOFAR data
- Social Sciences and Humanities: VisualMedia, Textcrowd
- Earth Sciences: eWaterCycle
- Astrophysics: (VisIVO) Data Knowledge Visual Analytics Framework
- Generic technology: Frictionless Data Exchange Across Research Data, Software and Scientific Paper Repositories

Science demonstrators are a key concept in EOSCpilot. They provide requirements and evaluate existing services and interact with, and on every activity in EOSCpilot. As such the Demonstrators form the early consultation group.

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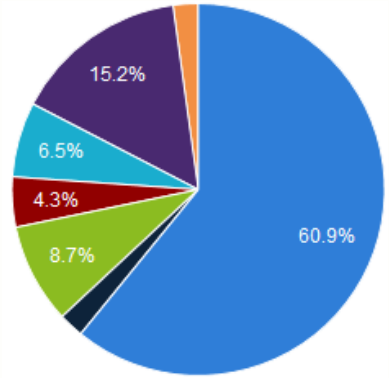
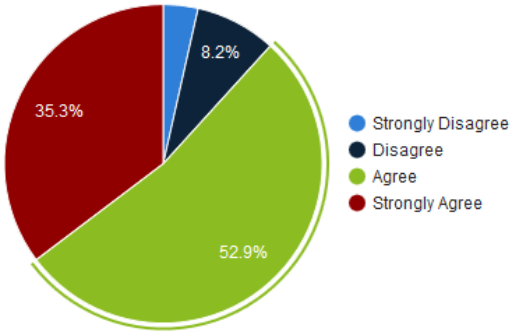
Engagement

- Workshops, conferences, and stakeholders consultation (eg. via the work of the HLEG)
- Open 'comments' on the EOSCpilot web side
- Open Survey on rules of participation
- Open Survey with questions on the implementation of the EOSC (closed)
  - participants (Citizen Scientists & Public Engagement Organisations (60,9%), Enterprise (2,2%), General Public (8,7%), Publishers (4,3%), Research Funding Bodies (6,5%), Research Infrastructures (15,2%), SME (2,2%)



- e.g. Define an EOSC Quality of Service (QoS) standards, separate for all elements of the ecosystem (data, data access services, software, etc.), to develop a trustable ecosystem.



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Impact of EOSCpilot

- Ideas and concepts for governance and business in an federated and heterogeneous service landscape
- Ideas and concepts for services management in federated services frameworks
- Comprehensive overview of policies to enhance and monitor open science and FAIRness
- *EOSCpilot* feeds into other future EOSC. Input to various EINFRA-EOSC solicited projects from H2020 and most notably EOSC – hub, OpenAire advance, Freya, eInfra Central

- Upcoming events:
  - Digital Infrastructures for Research (https://www.digitalinfrastructures.eu/), 9-11 October, Lisbon
  - Second EOSC stakeholders Forum: (https://eoscpilot.eu/events/second-eoscpilot-stakeholders-forum), 21-22 November, Vienna

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EOSC roadmap

- *Infrastructure - Architecture / EOSC-hub, OpenAIRE advance, FREYA, EOSCpilot, INFRASUPP-1 b3*
  Develop the EOSC federating core and shared resources (2018 - 2019)
  Develop catalog of (interested and eligible) data infrastructures (2019)
  Connect ESFRI infrastructures (2018 - 2020)
- *FAIR Data uptake and compliance / FAIR data expert group, RDA Europe, FREYA, INFRAEOSC-05 b*
  Prepare FAIR data action plan (Q3 2018, intermediate plan publ.)
  Define a EU framework for FAIR data (2018 - Q2 2019)
  Define Persistant ID policy for FAIR data (2018 - Q4 2019)
  Develop FAIR data accreditation/certifications scheme for repos (2018 - Q4 2019)
  Develop initial catalogue of services to be provided 2018 - Q4 2019
- *Services / EOSC-hub, eInfraCentral, OpenAIRE, INFRAEOSC*
  Initial catalog of services to be provided, define delivery model, acessible portal (2018 - Q4 2018)
  Update of EOSC catalog and portal (Q4 2019)
  Initial catalog of data sets (2018 - Q2 2019)
- *Governance / EC with support of EOSCpilot, HLEG, OSPP*
  Setup Governance framework (2018 - Q4 2018)
  Prepare 2nd implementation phase
- *Rules of participation / DG RDT, EOSCpilot, EOSC-hub, HLEG, INFRAEOCS-5 a*
  Rules of participation consultation with stakeholders . Initial (2018 - Q1 2019)
  Final EOSC rules of participation (Q4 2019)

For details refer to: Commission Staff working document, “Implementation Roadmap for the European Open Science Cloud”, SWD(2018) 83

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	Before EOSC Governance			Under EOSC Governance framework								
Actions	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020
Stakeholder consultation on RoP												
FAIR data Action Plan												
Initial EOSC Catalogue of services												
Prototype of EOSC Portal												
EOSC Governance												
1st annual work plan (Governance structure)												
Initial EOSC Rules of Participation												
European framework for FAIR research data												
Initial EOSC catalogue of datasets												
Final EOSC Rules of Participation												
FAIR Persistent Unique Identifier policy												
FAIR Certification Scheme												
Initial registry of data infrastructures												
Initial EOSC federating core												
Updated EOSC catalogue of services & EOSC portal												
Preliminary connection of most data infrastructures and services												
Recommendations on the post-2020 set-up												

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Thank you for your interest

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