

# EOSC-Ireland: a national position paper



# Background

- In late 2023 the EC started procurement of first EOSC infrastructure, called EOSC-EU node
  - Operational since October 2024
  - Currently, stand-alone node
  - More national / thematic nodes being connected in 2025, to develop the EOSC federation

# What does it do ?

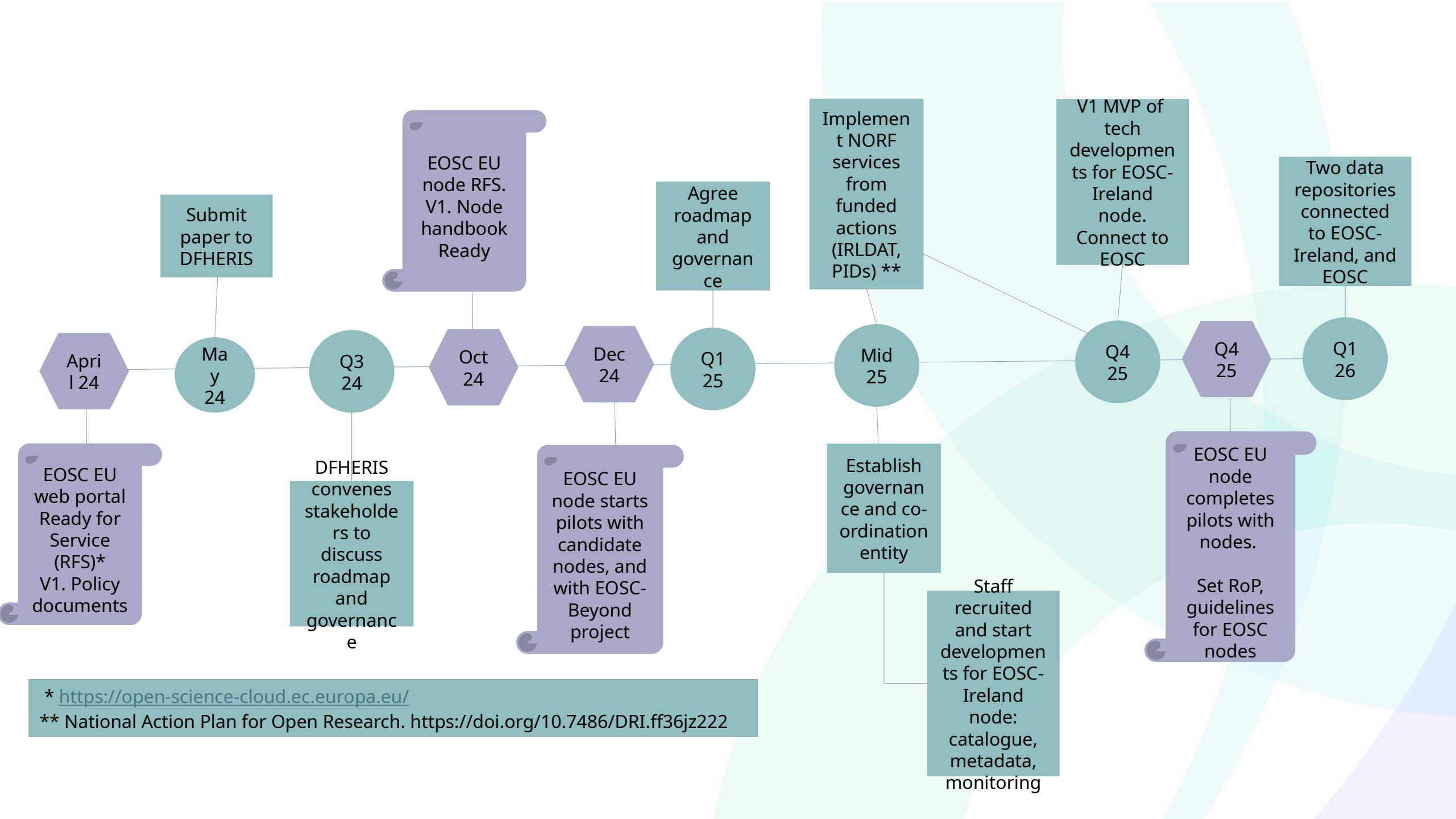
- A user can:
  - Log in using their institutional credentials
  - Search for a dataset, access the data repository and download the data onto storage provided by the EOSC-EU node
  - Run an algorithm on the data, on compute infrastructure provided by the EOSC-EU node (VMs, Jupyter note books)
  - Store results in a repository
  - Make the algorithm available for others to re-use, by storing it in an “app resource” hosted by the EOSC-EU node
  - Pay for resources used (currently via credits)
- <https://open-science-cloud.ec.europa.eu/>

# And Ireland ?

- In 2024 HEAnet developed – an ask from DFHERIS - a position paper on how Ireland should contribute to the development of the European-wide EOSC federation
- Paper submitted to DFHERIS in April 2024

# Key points from HEAnet paper

- Proposes the implementation of an EOSC-Ireland node
  - To serve Ireland's Open Research agenda
  - Compatible with the EOSC-EU node
- Recommends the development of a **national** position paper, by consulting with the broader stakeholders in Ireland
  - Supported/sponsored by DFHERIS
- Recommends funding of ~ 3FTE from mid-2025 to start implementing an EOSC-Ireland node



\* <https://open-science-cloud.ec.europa.eu/>  
\*\* National Action Plan for Open Research. <https://doi.org/10.7486/DRI.ff36jz222>

# Current state

- Consultation to develop a national position paper started in December 2024.
- Contributors: ATU, TUDublin, UCD, RCSI, DCU, GDI-IE (UL, RCSI), DARIAH(TCD), ICHEC, NORF, RIA, TUS
- V1 now available
- To be shared for consultation more broadly and develop final version

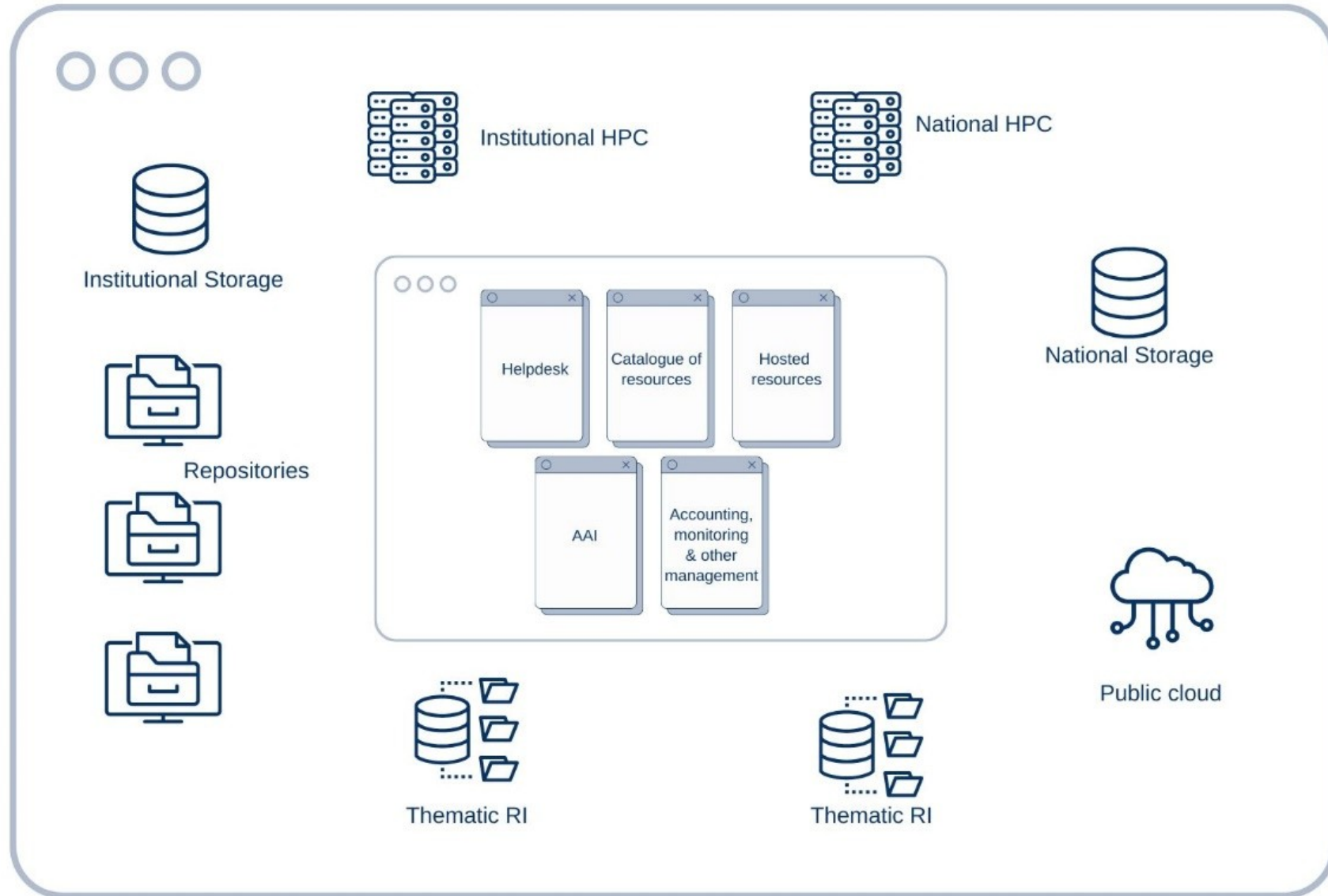
<https://zenodo.org/records/15261566>

# Contents

- Motivation and Vision
- National Landscape
- Synergies with other national activities
- Recommended actions

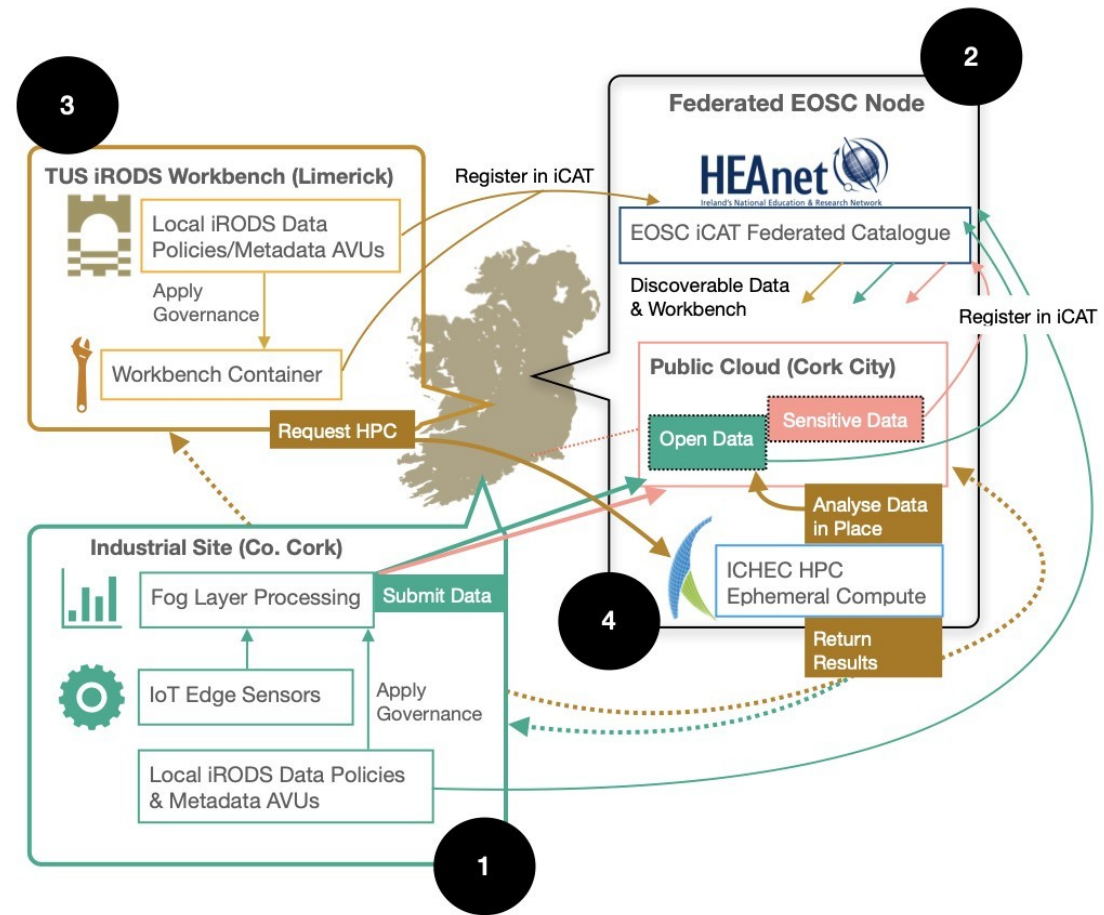


# Vision

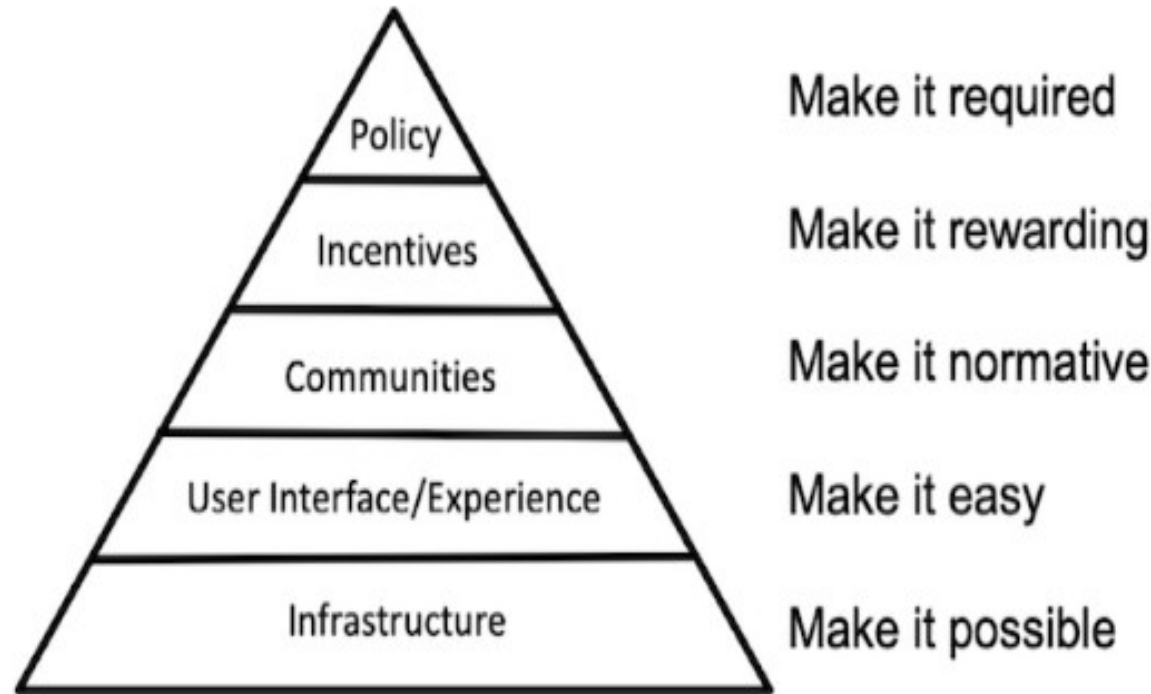


# QuarryLink: Federated edge-to-cloud data pathway

1. Edge to Fog Data collections
2. Data Transfer to public cloud resources in EOSC-Ireland
3. Collaborative Open Toolchain development via TUS
4. In Place federated compute via ICHEC
  1. Results published as Open Data via EOSC-Ireland
  2. Shared with industrial partner



# Open Research Landscape in Ireland



Center for Open Science Strategy for Culture Change  
<https://www.cos.io/blog/strategy-for-culture-change>

## NORF NAP projects + networks.

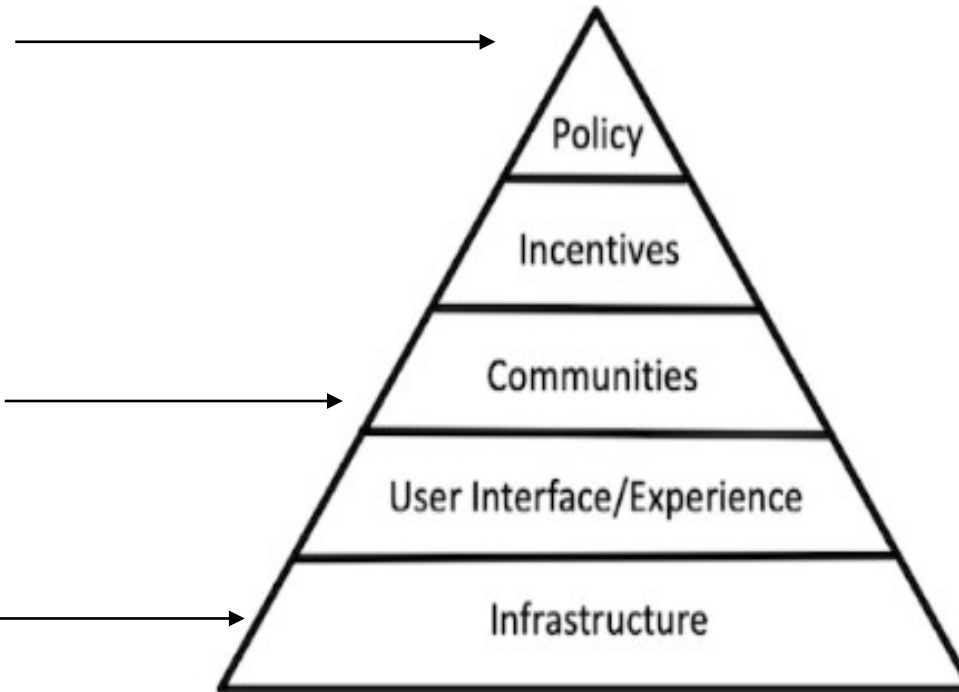
SCOIR, MOSSi, iFRAME,  
PID Roadmap

Sonraí, TROPIC,  
PublishOA, CORD,...

Open Access Repository  
Assessment and  
Alignment

National Open Access  
Monitor, IRLDAT

...



Make it required

Make it rewarding

Make it normative

Make it easy

Make it possible

## NORF NAP projects + networks.

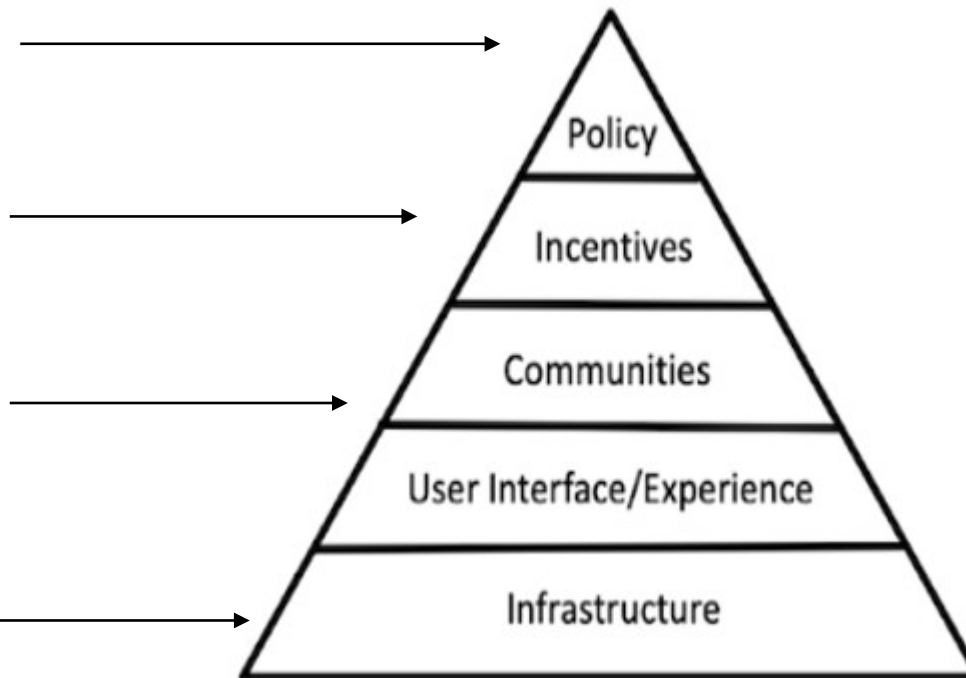
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IRLDAT

SSO

National HPC

National Production Services

## NORF NAP projects + networks.

SCOIR, MOSSi, iFRAME,  
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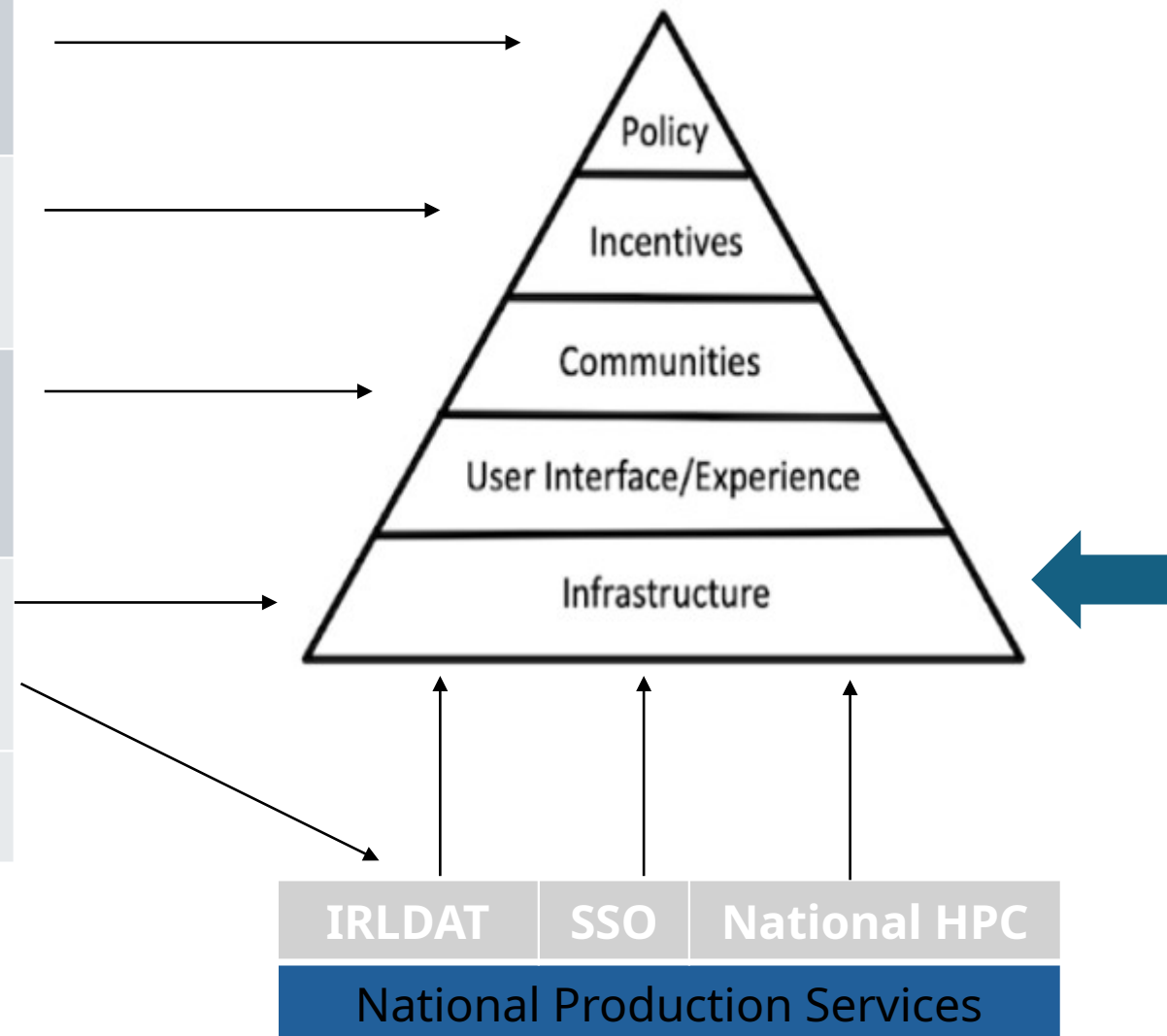
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- Connected initiatives
- **Disconnected** Infrastructures



## Siloed, inconsistent resources

Data Repositories

Institutional HPC

Thematic RIs ( GDI,  
ELIXIR, ISSDA...)

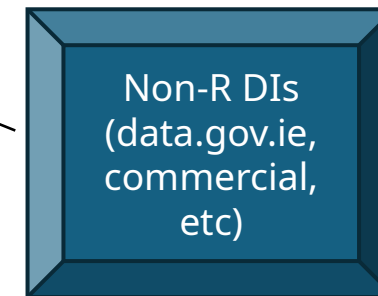
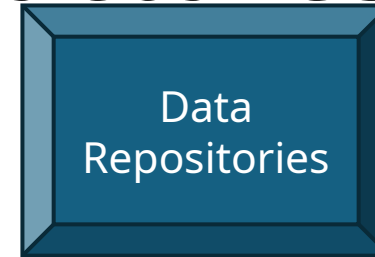
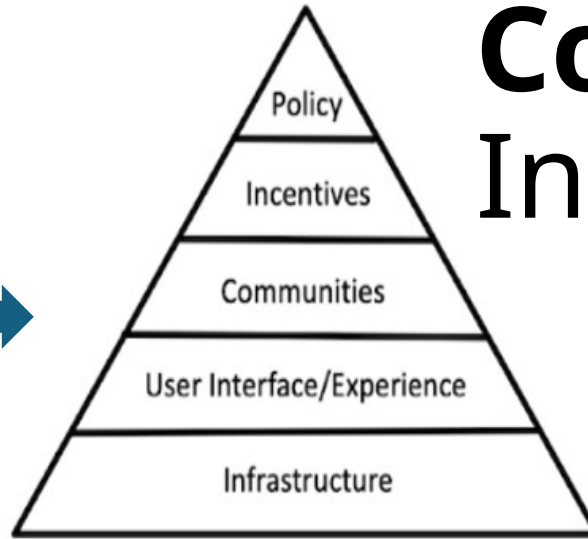
Non-Research DI  
(data.gov.ie,  
commercial,...)

...

# Connected initiatives

## Connected Infrastructures

NORF NAP projects + networks.
SCOIR, MOSSI, iFRAME, PID Roadmap
Sonraí, TROPIC, PublishOA, CORD,...
Open Access Repository Assessment and Alignment
National Open Access Monitor, IRLDAT
...



Opportunities for synergies

# International context, EOSC federation

- Currently 1 EOSC EU node: storage, compute, workflow management, applications, access to OpenAire KG
- A user can:
  - log-in, search for a data set. Download it into storage.
  - Run an application/algorithm on compute infrastructure.
  - Store the results in a repository.
  - Add algorithm into the app catalogue.
  - Pay for the resources used (currently via credits)
- By end 2025/early 2026 up to 13 more nodes



Organisation	Offering	Oragnisation	Offering
CSC (Finland)	General Repository, Competence centre. Thematic repositories onboarded in stages. Chipster: SW to analyse genomic data	ESRF/PaNosc	Infrastructure, VREs
CNR BlueCloud (Italy)	Thematic RI for marine research. Data sets and VRE	EUDAT	RDM services
NCN (Poland)	Generic national. Repos and infrastructure	NFDI (DE)	Federated Repositories and associated services.
BBMI ERIC	Thematic node, Datasets and resources, notebooks	CNRS/ Dataterra	Thematic RI
CERN	“Onboarding” zenodo, Inspire, Indico, HepData, SW analysis workflow (reana)	ICSC	Generic infrastructure, thematic and academic repositories. Sensitive data
SURF (NL)	Aggregates resources from institutes, infra and repos. Sensitive data	CVTI (SK)	Generic national
LSRN (Elixir, EMBL, Instruct, Bioimanging)	Infrastructure and data resources		

# Recommendations

- Detailed planning of an EOSC-Ireland node to occur via a CSA (Co-ordination and Support Action)
- Followed by implementation
- DFHERIS to:
  - Appoint co-Ordinator of the CSA
  - Establish Working Groups, with ToRs and project charter
  - Provide financial support
  - Recognise results

# Proposed WGs

- WG1: technical architecture, including to analyse the synergies with other national initiatives and determine how to leverage them for a MVP for EOSC-Ireland. Develop a technical roadmap for EOSC-Ireland. Target date 12/2025
- WG2: to conduct technical trials/PoCs of relevant technologies, such as ResearchCloud and any other deemed relevant. Target date 10/2025
- WG3: to determine the organisational structure for the day to day operations of EOSC-Ireland and its governance. Determine its funding model and the associated costs. To take into account also if a new legal entity needs to be setup, as it is a requirement for joining the EOSC-federation. Target date 12/2025
- WG4: Technical planning for joining the EOSC Federation. Target date 4/2026
- WG5: Analysis and trials on how to incorporate services for handling sensitive data. Target date end 2026

# Next Steps

- Your feedback
- Participation in a workshop to finalise the document
  - End May / early June
- Indicate which activities you can contribute to
  - Expertise
  - Funding

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Thank You