FAIR EOSC

Ado2019 : journée thématique sur les autorités de données

8 avril 2019 Toulouse (France)

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Acting on behalf of PRACE within EOSCpilot project
WARNING: views expressed within this presentation are not official position of GENCI, nor PRACE, nor EOSCpilot, nor EC
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FAIR EOSC Presentation

Outline

- EOSC overview
- EOSC avancement
- EOSC gouvernance
- FAIR EOSC
- EOSC future
  - Science ouverte et reproductible

EOSC overview

Digital Single Market roots

Un nuage qui arrive du Luxembourg...

« Digital technologies are going into every aspect of life.
All they require is access to high speed internet.
We need to be connected,
our economy needs it,
people need it. »

Jean-Claude Juncker,
State of the Union Address,
European Parliament, 14 Sept. 2016

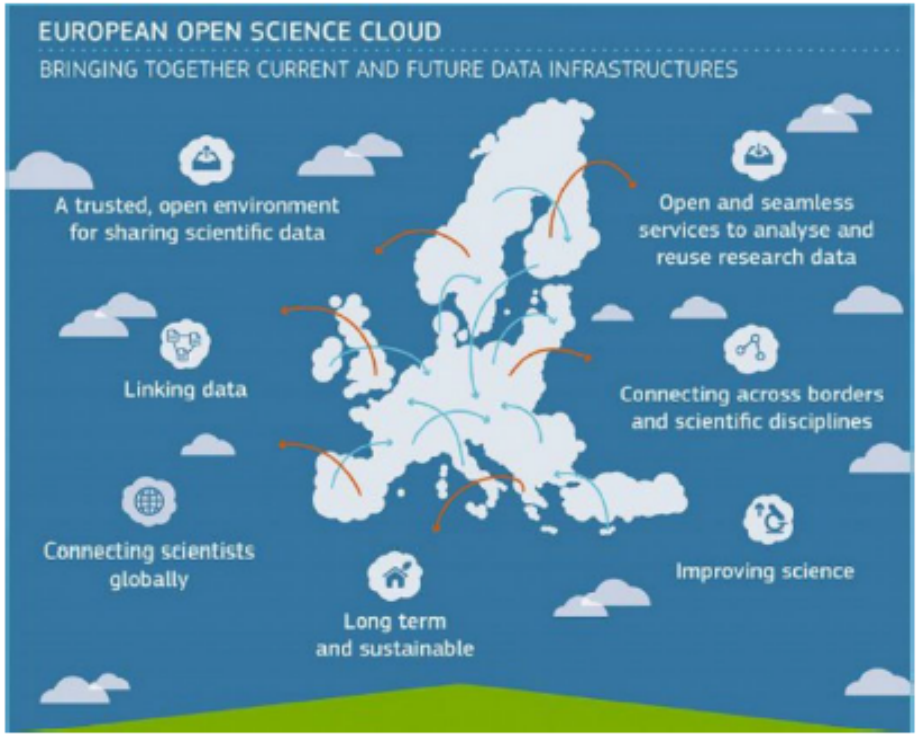
European Open Science Cloud

European Commission

Une vision pan-européenne

A Cloud for research data in Europe

- **Vision** -" EOSC will provide 1.7m EU researchers an environment with free, open services for data storage, management, analysis and re-use across disciplines"
- **Roadmap** for implementation (6 pillars: architecture, data, services, access&interface, rules, governance - March 2018)
- **Funding** (EU and MSs investment)
- **Member States support** (Council Conclusions May 2018)
- **Governance framework**: Executive Board, Governing Board and Stakeholders Forum -November 2018
- A framework of **Commons** to organize a consistent system of **RIs and e-Infrastructures**



EOSC Objectives Overview

- EOSC aims to support three objectives:

1. to increase value of scientific data assets by making them easily available to a greater number of researchers, across disciplines (interdisciplinarity) and borders (EU added value) and
2. to reduce the costs of scientific data management, while
3. ensuring adequate protection of information/personal data according to applicable EU rules (e.g., REGULATION (EU) 2016/679).

EOSC Vision overview

Un environnement virtuel

- Doté de services:
  - pour le stockage, la gestion, l'analyse, la réutilisation des données de recherche
  - au-delà des frontières et des disciplines scientifiques
- En fédérant les infrastructures de données scientifiques existantes
  - actuellement dispersées entre disciplines et pays

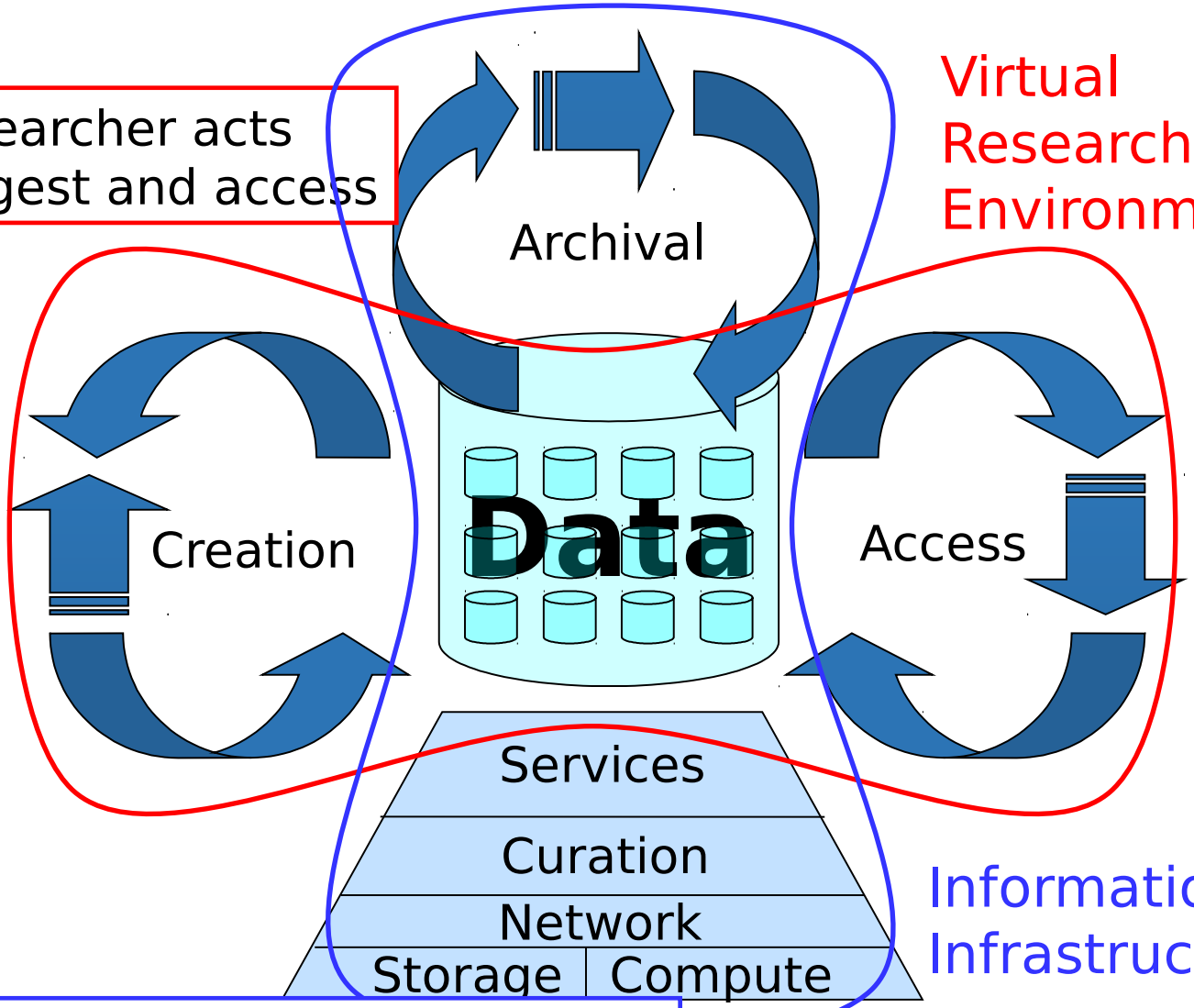
Un système décentralisé de systèmes (SdS)

- Basé sur la collaboration et la coordination:
  - de composantes fournies et gérées indépendamment
  - par des organisations locales, régionales, nationales / internationales
- EOSC démontrera:
  - l'utilisation des infrastructures numériques existantes d'une manière combinée,
  - au-delà des disciplines et des frontières,
  - afin de réaliser les objectifs des principes de FAIR pour le partage des données
- EOSC déterminera l'interopérabilité nécessaire à l'utilisation efficace des services et équipements informatiques, ainsi que des données scientifiques

EOSC overview

a Data-centric view

the researcher acts through ingest and access



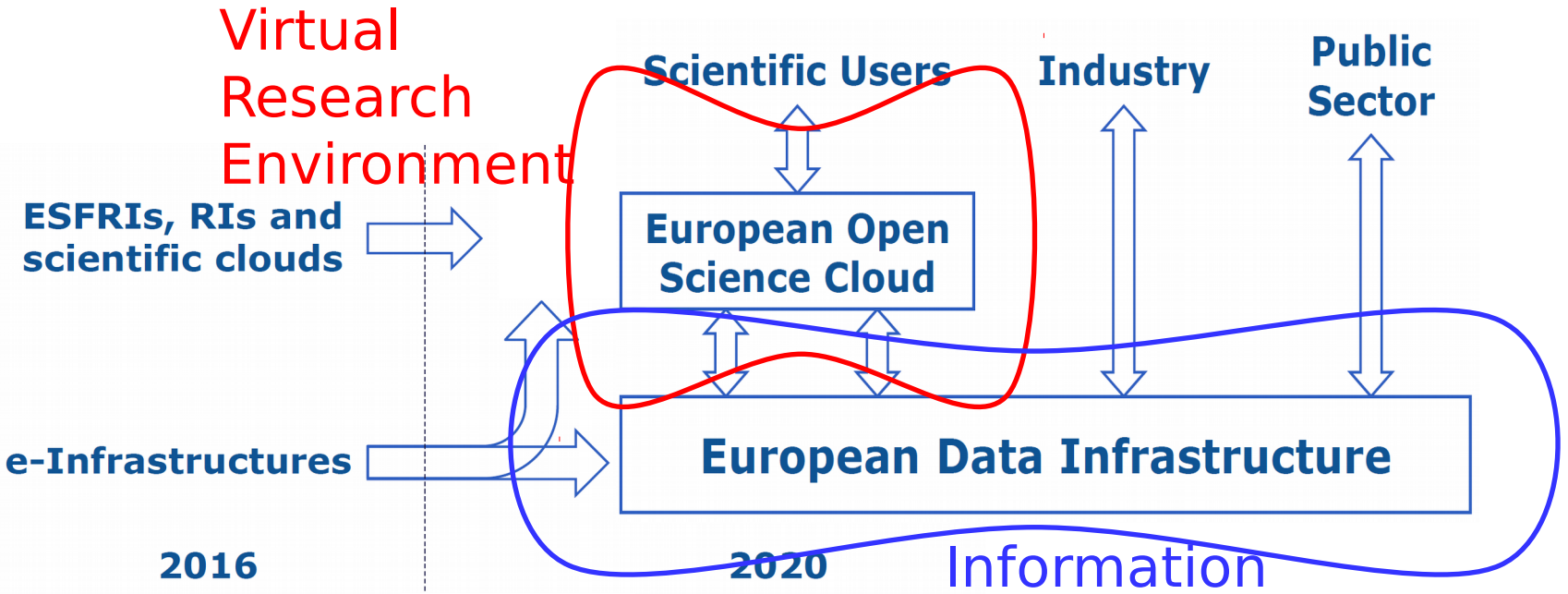
Virtual Research Environment

Information Infrastructure

the researcher shouldn't have to worry about the information infrastructure

EOSC overview

Evolution of infrastructure



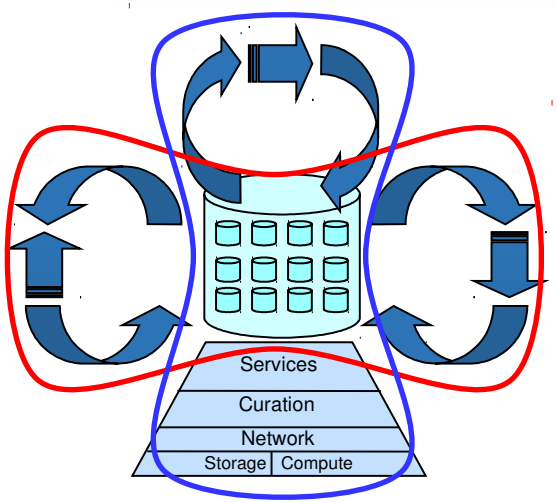
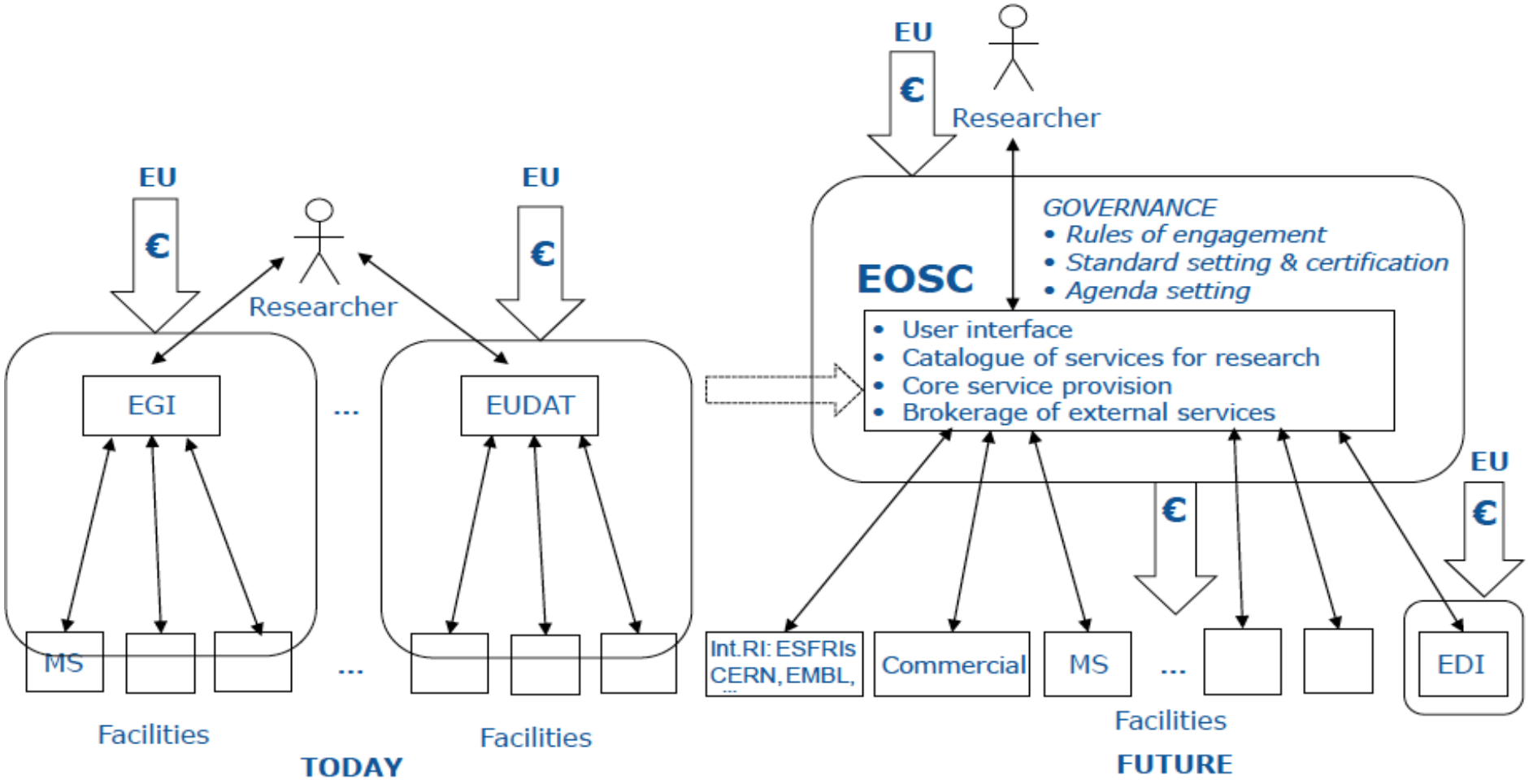


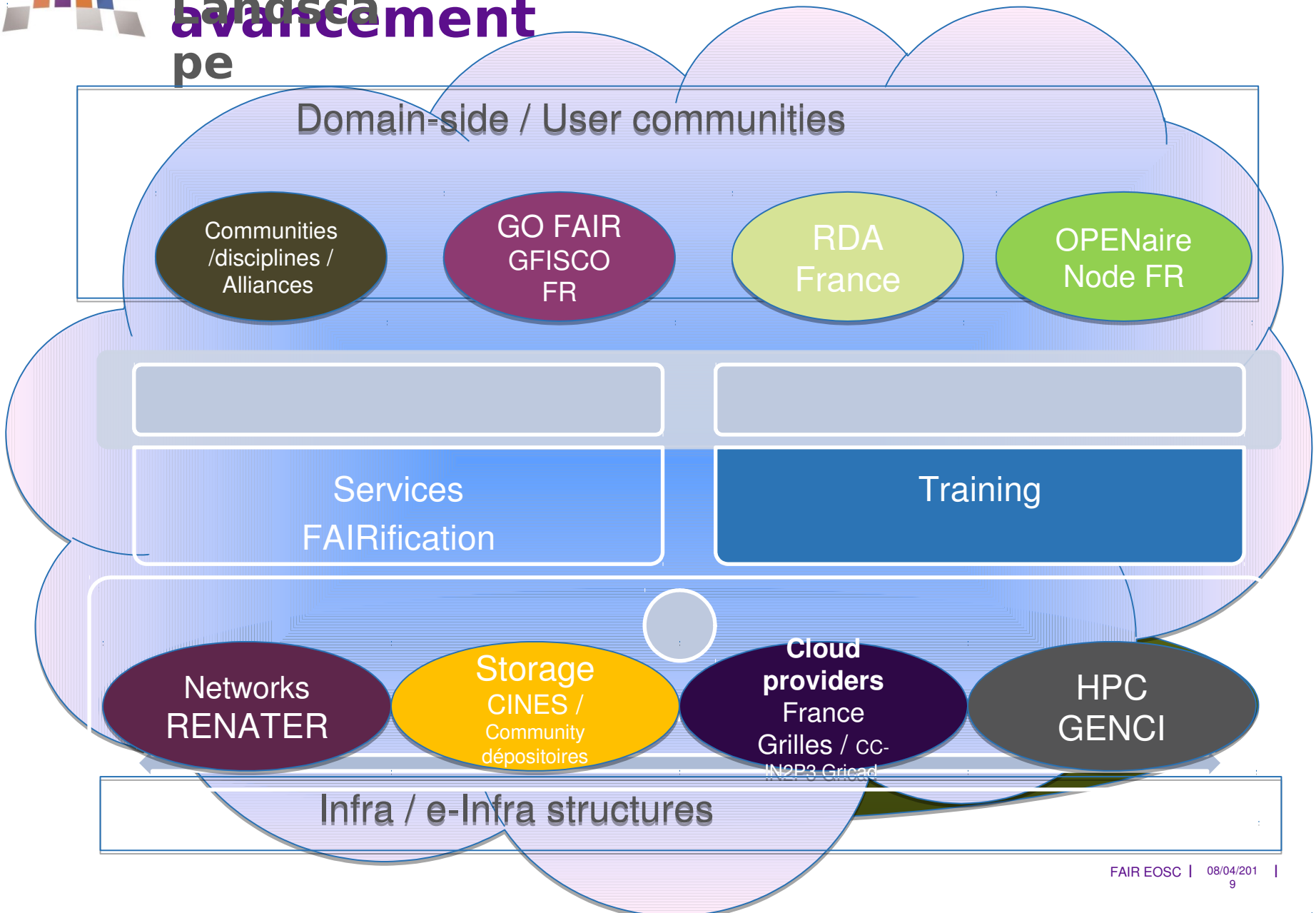
Diagram: Augusto BURGUEÑO ARJONA

EOSC overview

Evolution from a user perspective



EOSC landscape avancement



EOSC avancement

Work in progress (1/2)

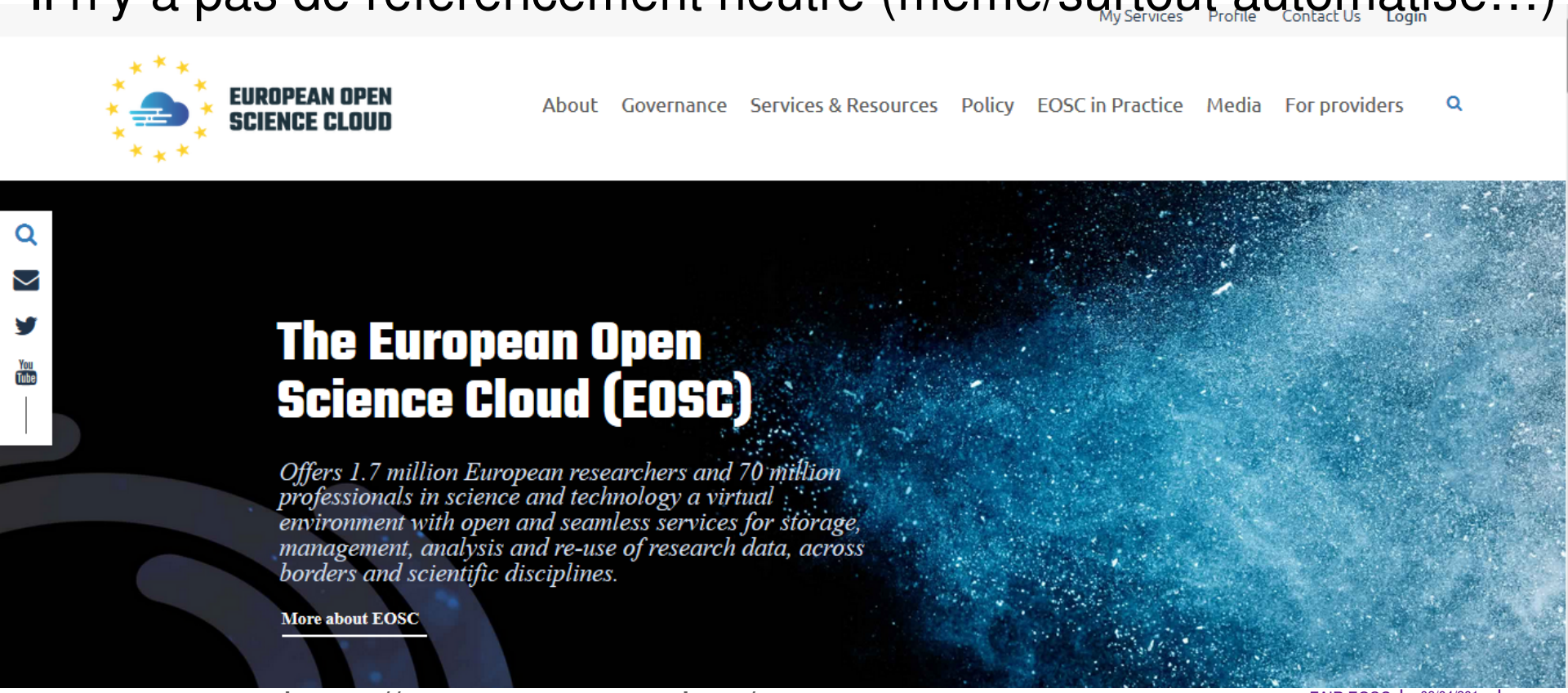
EOSC avancement

Work in progress (2/2)

EOSC Signatories

EOSC
EOSC portal – avancement pilot

Un portail, qui pointe vers des services (référencés).
On accède à des données via un service (pas d'interface télépathiques)
Référencés dans un catalogue de service (eInfraCentral) !
Il n'y a pas de référencement neutre (même/surtout automatisé…)



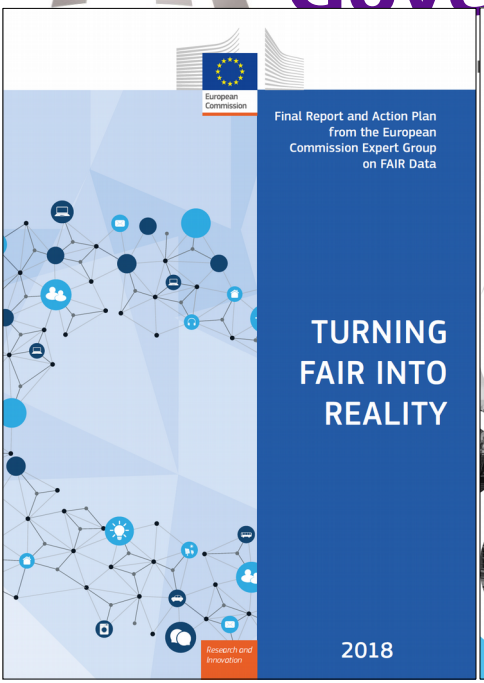
https://www.eosc-portal.eu/

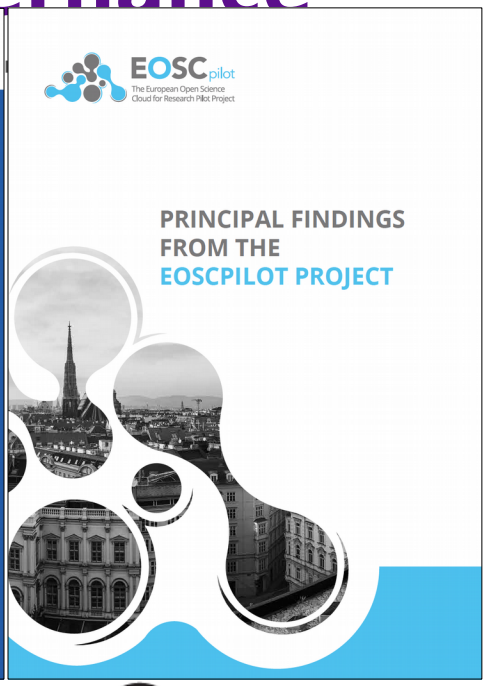
EOSC Service Governance Portfolio

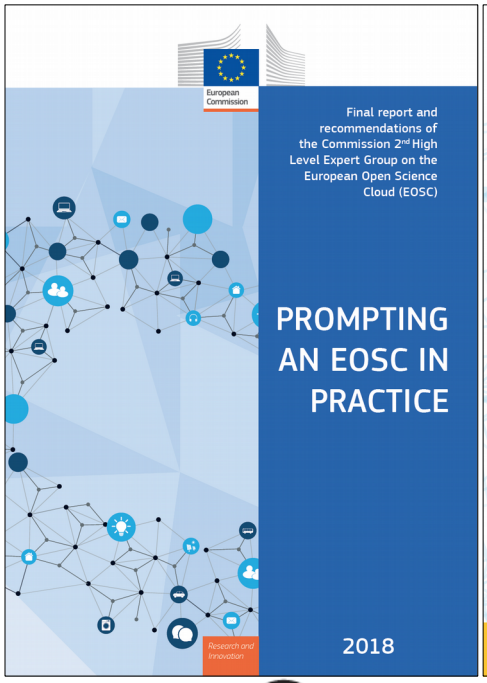
Rule(s) of participation (core services):

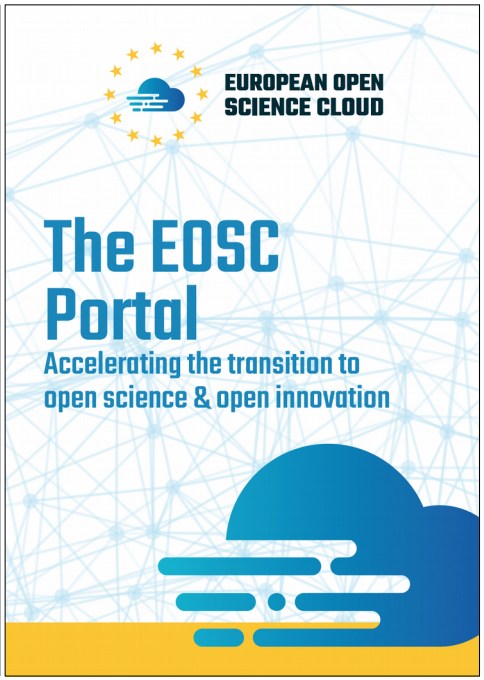
appartenance à un catalogue de service !

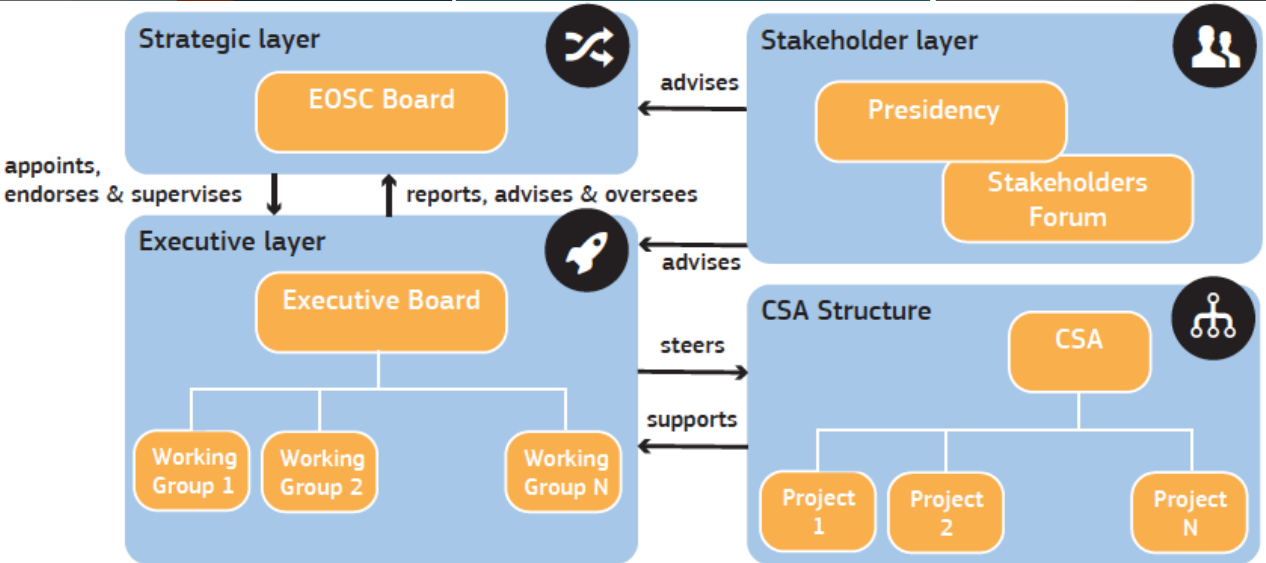
EOSC Must Governance



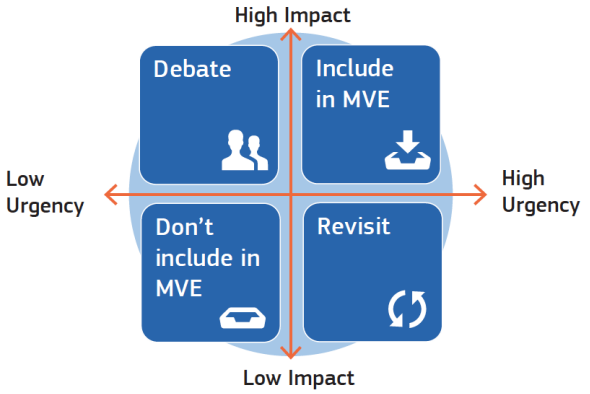






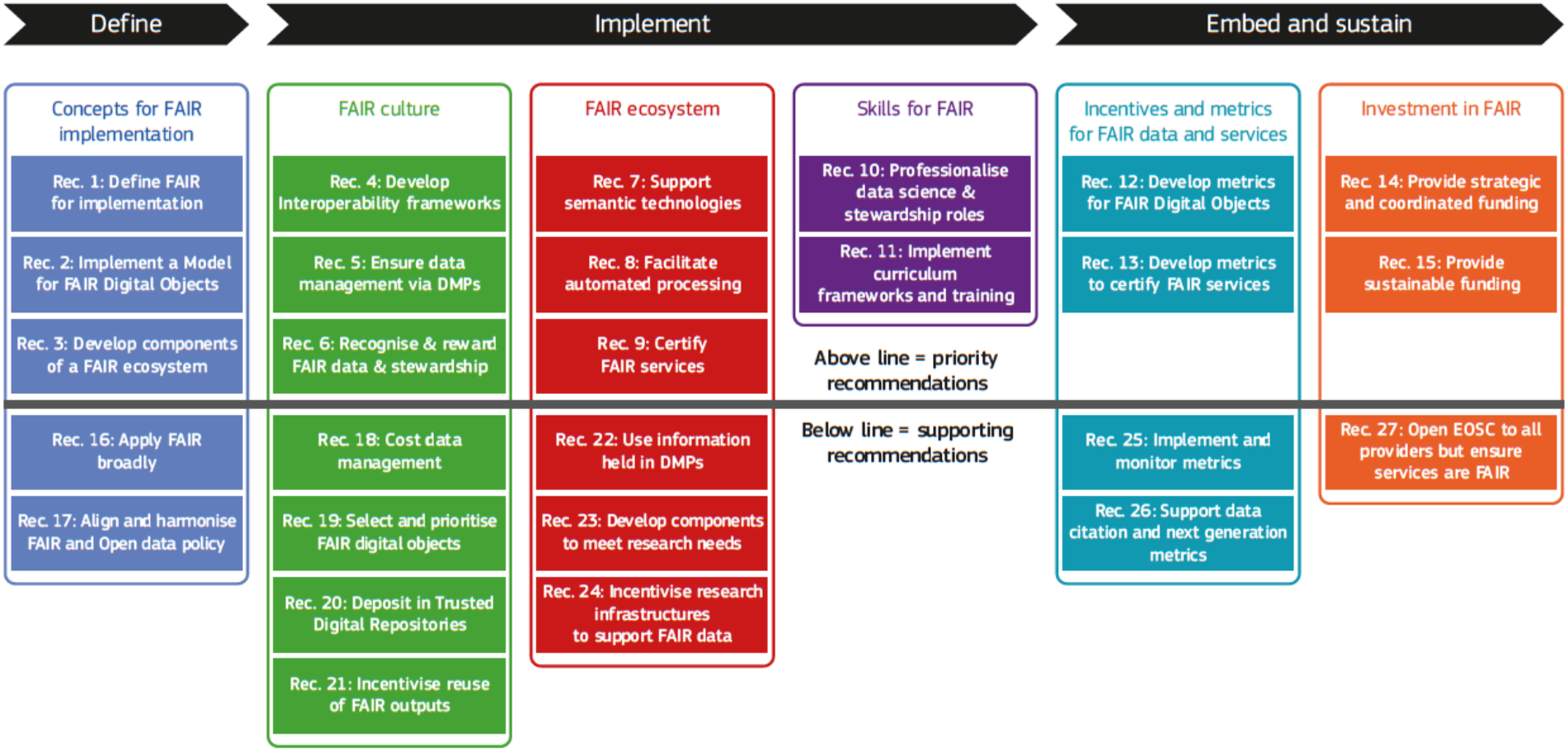


Minimum Viable Ecosystem



FAIR EOSC Recommendations

Prégnance des “bonnes pratiques” FAIR (indépendamment d’EOSC)
Data déluge… Importance des catalogues de services et des méta-données.
Nécessaire au traitement « machine ». **ENJEUX DE STANDARDISATION**



EOSC future

which priority beyond FAIR implementation ?

EOSC priority (KPI) for Open Science reproductibility

- Technical KPI (interoperability / security / ITIL)
- Political KPI (delivered in due time of H2020 / compete in the global (HPC/IA/…) competition / ideological / inspired)
- Economical KPI (Business Model Long Term Sustainability / most cheaper TCO / most job creation)
- User driven KPI to address (need of *most* people / need of *all* people / need of *most demanding* people / need of *best organized* people / need of *real* peoples (citizen sciences or society driven demand…)

➔ Depend on stakeholder (1st sponsor EC) expressed view

➔ Depend on stakeholder adoption / usage *ad-hoc* standard

➔ Depend on external *de-facto* standard (GAFA weight…)

➔ Depend on incentive / constraint (DMP, FAIR, etc…) / market offers

H2020
INFRAEOSC Calls
> 250 Mio €

EOSC dedicated activities to build a European FAIR ecosystem

Portal development

INFRAEOSC-06-2019
Enhancing the user experience

INFRAEOSC-03-2020
Portal integration & consolidation

New services new users

INFRAEOSC-01-2018
Access to commercial services

INFRAEOSC-04-2018
Connecting ESFRI infrastructures

INFRAEOSC-05-b-2018-2019
Coordination of national initiatives

INFRAEOSC-02-2019
Prototyping new services for new users

INFRAEOSC-07-2020
Increasing the service offer

Governance and policy

INFRAEOSC-05-a-c-2018
- EOSC coordination structure
- **FAIR Data uptake** and compliance

EOSC future

There is some other alternatives...

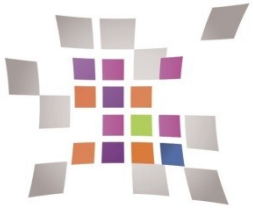
<< Join Ralf Herbrich Amazon's Director of Machine Learning Science on May 16 at The Square, Brussels

The next Brussels Amazon Academy will have a strong scientific focus built around the theme "Europe's next generation of innovation: How to enable individual scientists and researchers.">>

FAIR EOSC

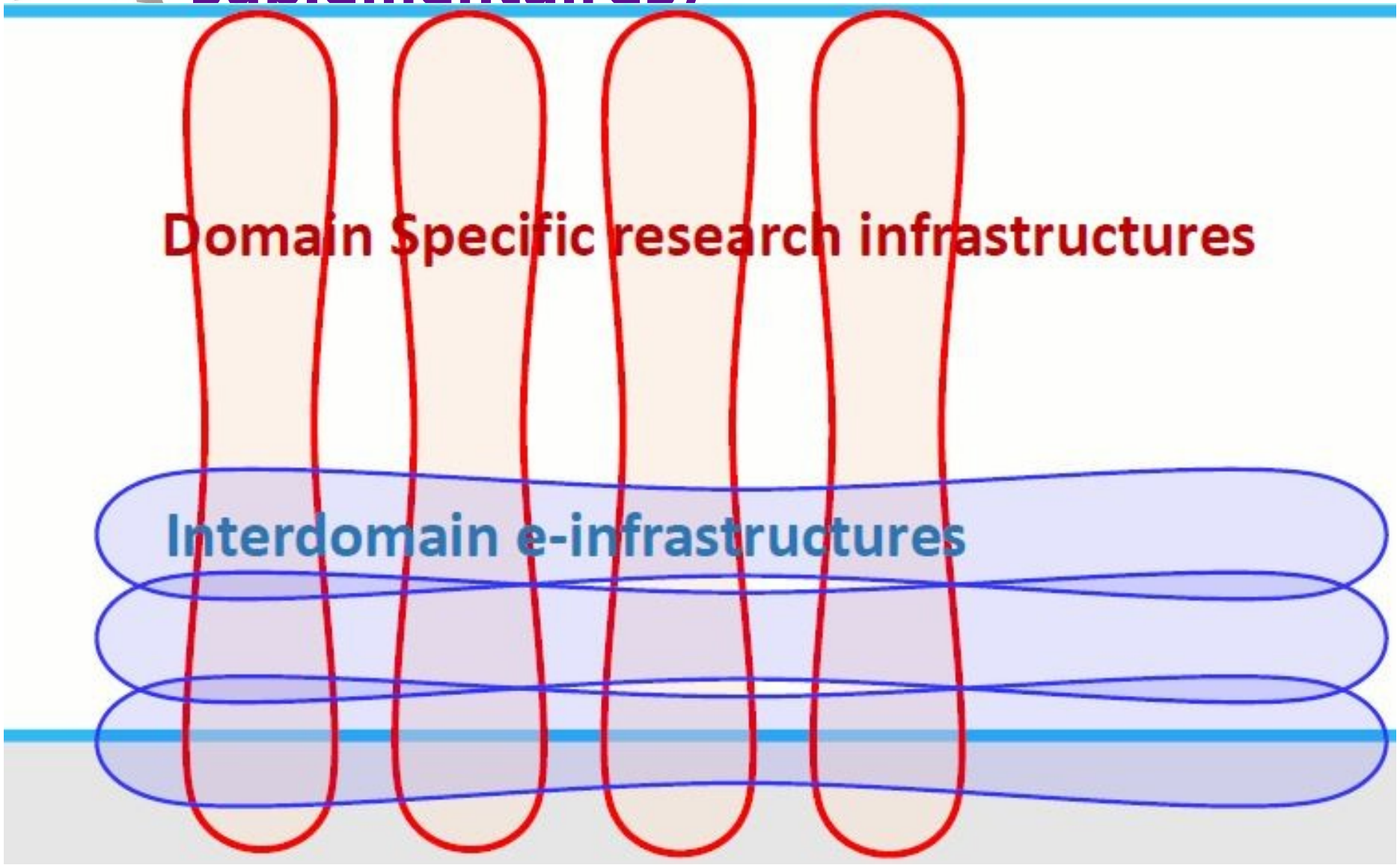
Summary (comment gagner en

- EOSC (and FAIR) is coming… mieux vaut l'anticiper !
- Introduction de nouvelles règles que l'on peut influencer - maintenant !
- La France dispose de toutes les compétences nécessaire pour ce jeu…
- Il faut intégrer EOSC (et les pratiques FAIR, DMP, etc) dans la coordination de nos projets, leur intégration. On a tout à y gagner, en particulier en termes de sciences reproductibles, d'optimisation des ressources…



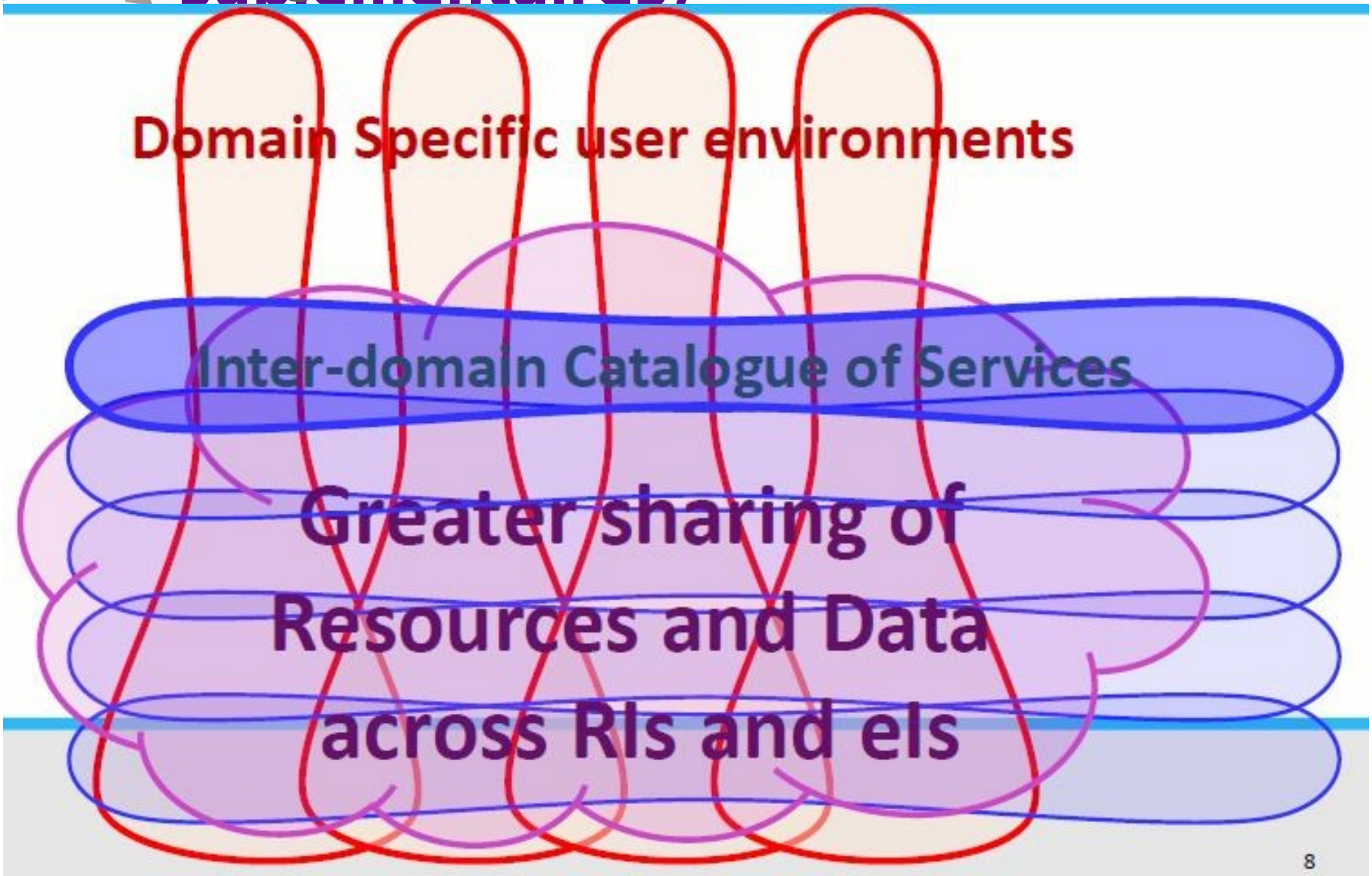
THANK YOU FOR YOUR ATTENTION

EOSC Overview (slides Horizontal & Vertical supplementaires)



EOSC Overview (slides supplémentaires)

Merging



EOSC Overview (slides Clusteri Supplementaires)

EOSC Overview (slides supplémentaires)

Domain spécifique IR : interoperable horizontal