

# European Open Science Cloud

*Klaas Deneudt*

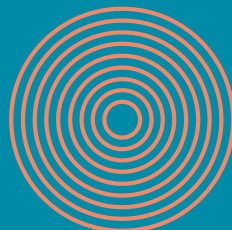
*Vlaams Instituut voor de Zee*

*With slides by:*

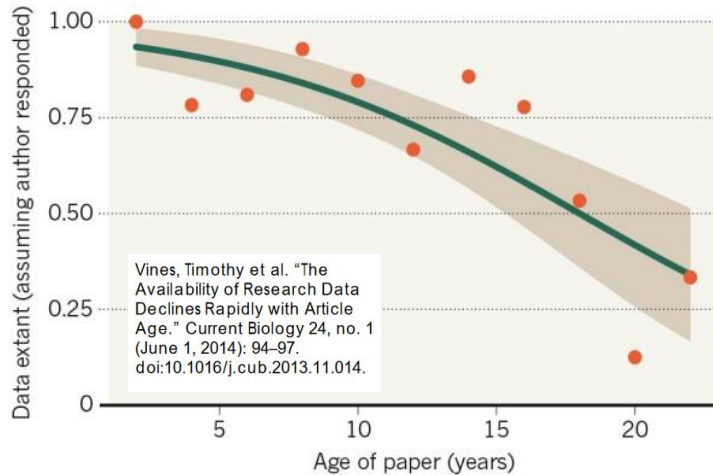
- *B. Mons & GOFAIR initiative*
- *JC Burgelman - EC*
- *C. Goble - Univ Manchester*
- *V. Kiermer - PLOS*



Vlaams Instituut voor de Zee vzw  
Flanders Marine Institute



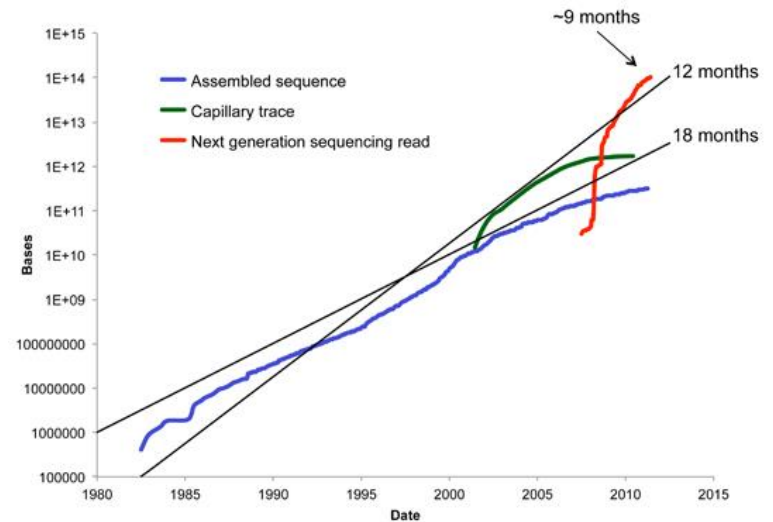
## Verlies van data



Nature news, 19 December 2013

- Waarschijnlijkheid om onderliggende data van publicatie terug te vinden neemt af met 17% per jaar
- Tot 80% van de data is verloren voor hergebruik

## Toename data omvang

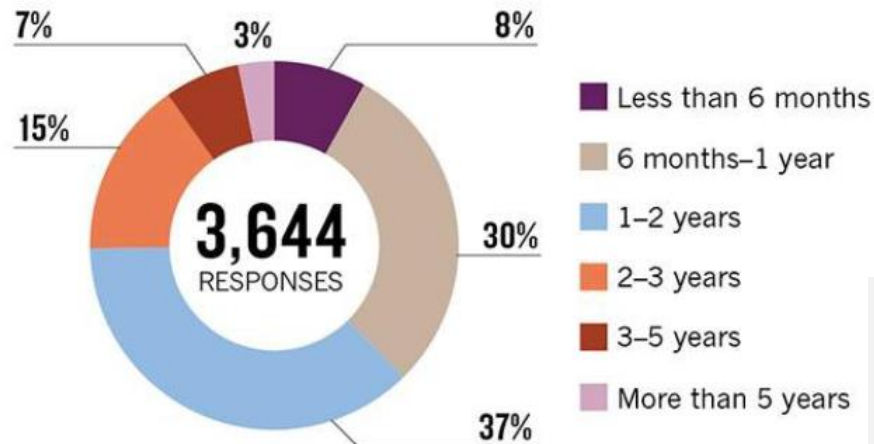


- DNA sequence data in medische wetenschappen verdubbelt in omvang elke 6 maand
- Computer snelheid en opslag capaciteit verdubbelt elke 18 maand

# Vertraging in publicatie

## THE WAITING GAME

Around 10% of *Nature's* readers say that their longest wait to get a paper published in a journal has been 3 or more years.



**Poll question:** What is the longest time that you have waited for a research paper to be published?

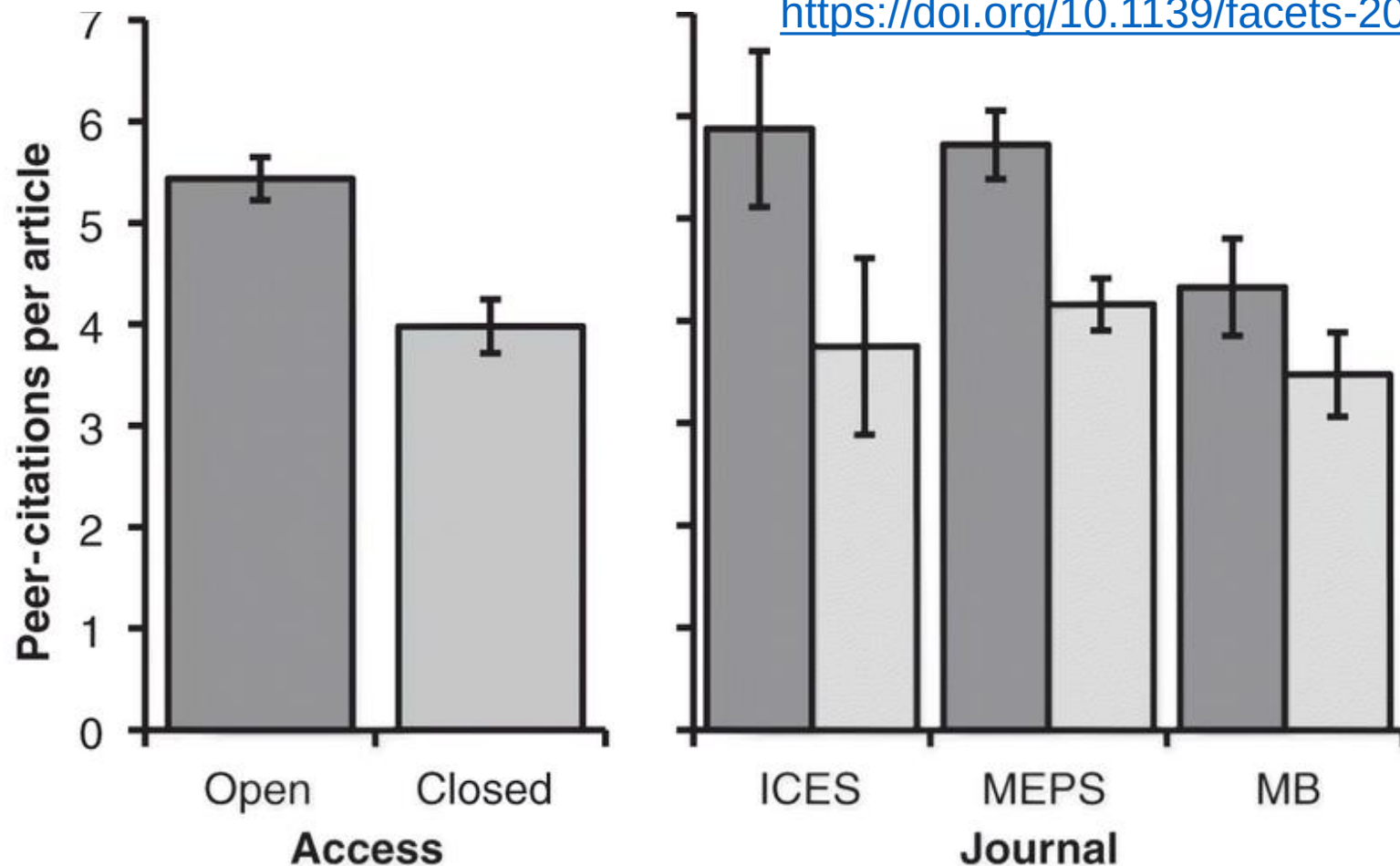
Kendall Powell | Nature | 10 Feb 2016

doi:10.1038/530148a

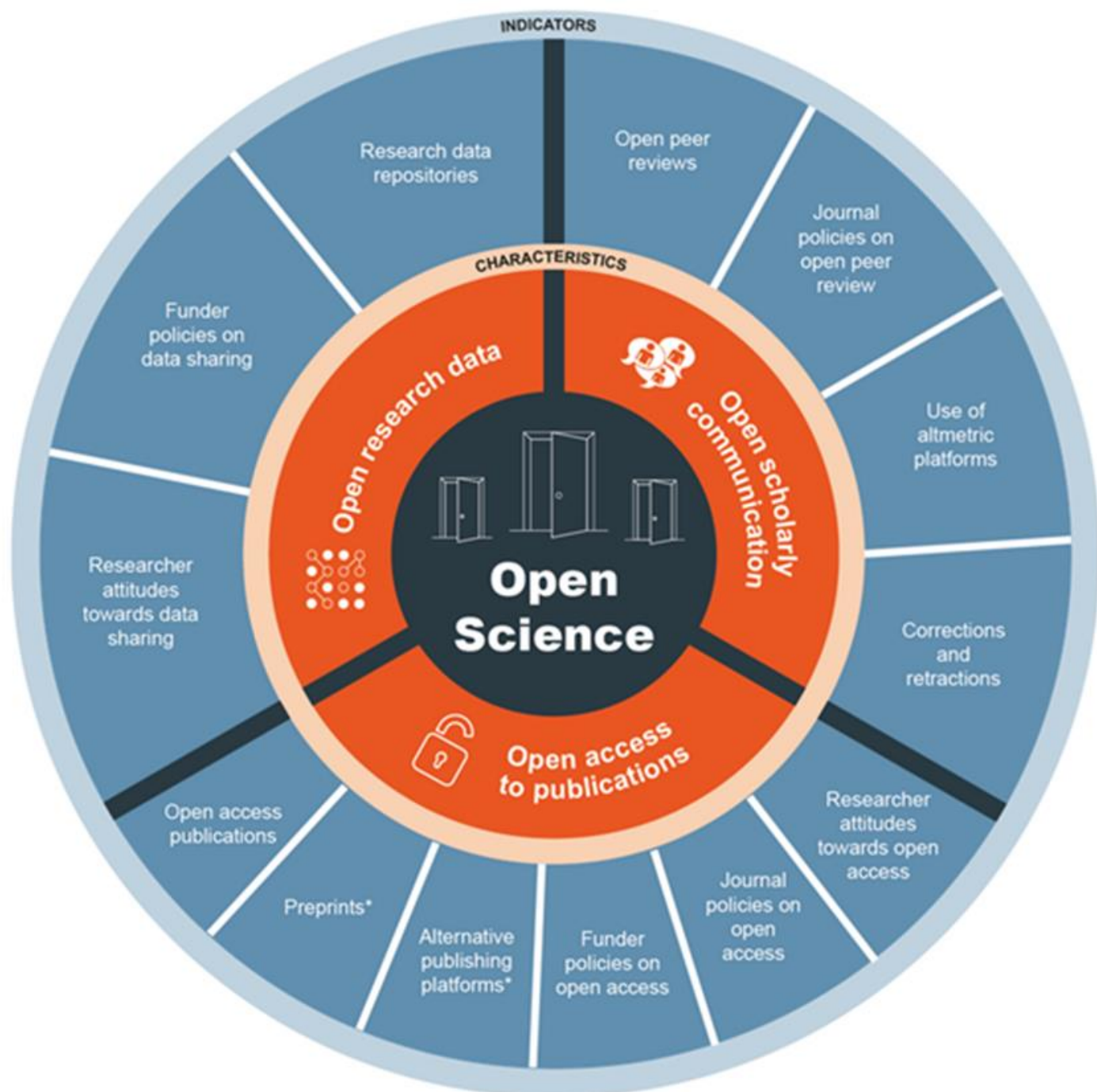


## Meer citaties voor open access publicaties

<https://doi.org/10.1139/facets-2016-0032>



**Fig. 2.** Left: Mean peer-citations ( $\pm$ SEM) per article for open access and non-open access papers pooled across journals. Right: Mean peer-citations ( $\pm$ SEM) per article for open access and non-open access papers published in ICES JMS ( $n = 24$  open access and non-open access), MEPS ( $n = 200$  open access and non-open access), and MB ( $n = 61$  open access and non-open access) from 2009–2012. See Fig. S1 for underlying data.





# RESEARCH & INNOVATION

## Open Science Cloud



### Open Innovation



- Foster innovation potential of research infrastructures
- Facilitate access of SMEs to research infrastructures while respecting confidentiality
- Stimulate investment towards sustainable research infrastructures

### Open Science



- Maximise research result through the open access to scientific publication and to research data
- Promote the European Open Science Cloud
- Support transnational access to research infrastructures
- Develop ICT based e-infrastructures

### Open to the World



- Promote the international outreach of research infrastructures
  - Contribute to a Framework for Global research infrastructures
-



# RESEARCH & INNOVATION

## EUROPEAN OPEN SCIENCE CLOUD

BRINGING TOGETHER CURRENT AND FUTURE DATA INFRASTRUCTURES

A trusted, open environment  
for sharing scientific data

Open and seamless  
services to analyse and  
reuse research data

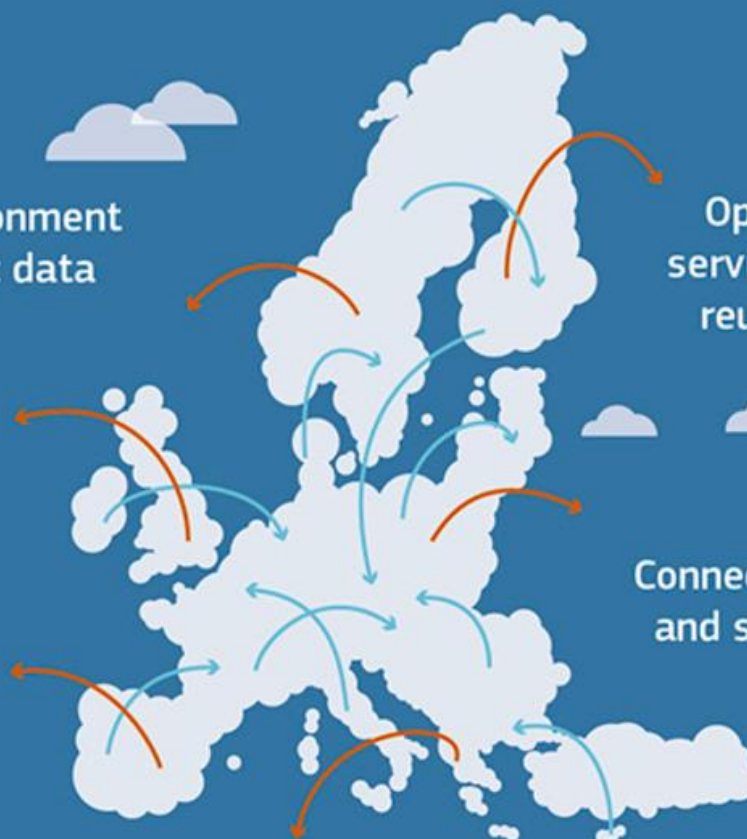
Linking data

Connecting across borders  
and scientific disciplines

Connecting scientists  
globally

Improving science

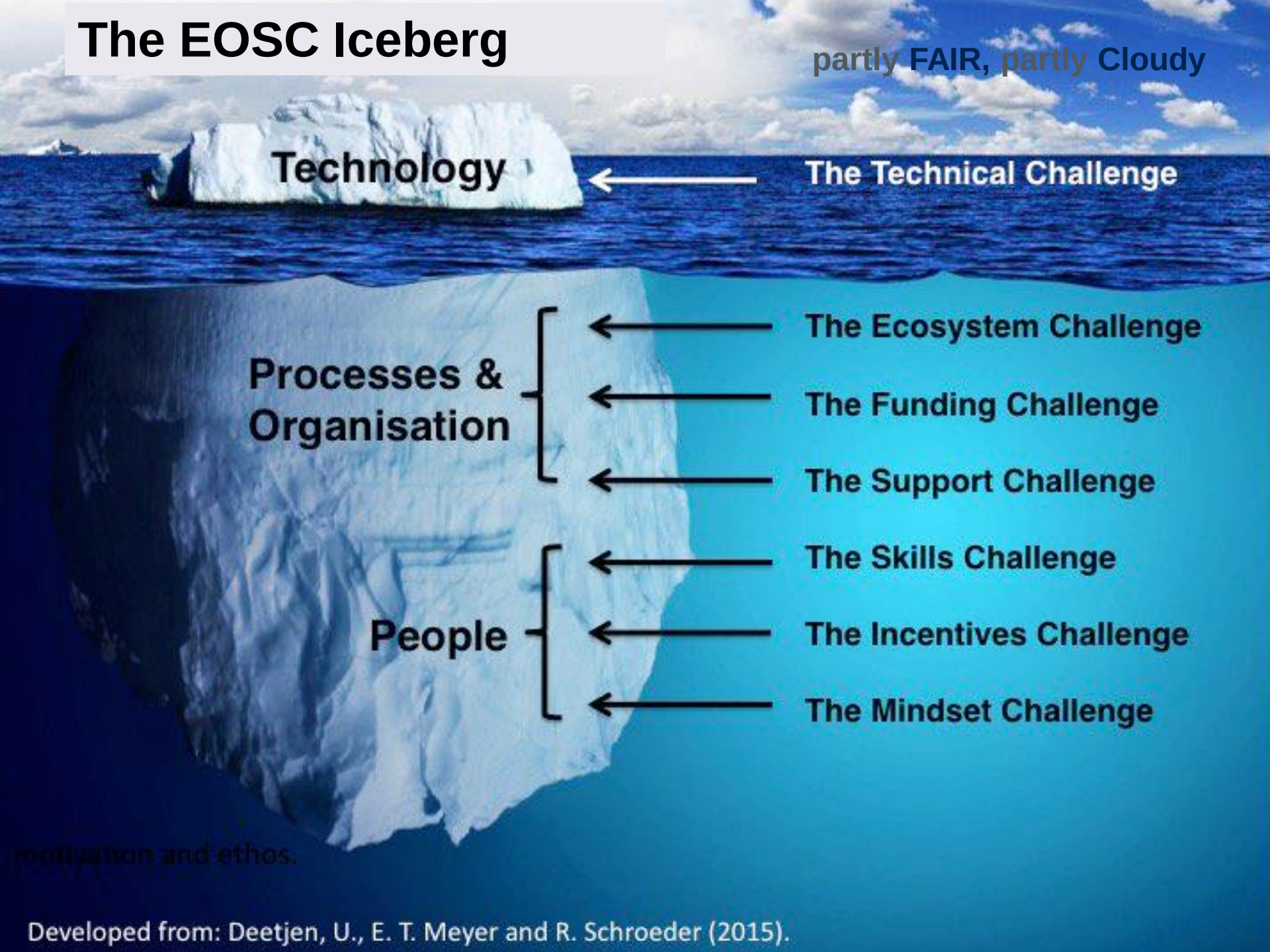
Long term  
and sustainable





# The EOSC Iceberg

partly FAIR, partly Cloudy





# European Open Science Cloud



EUROPEAN COMMISSION  
DIRECTORATE-GENERAL FOR RESEARCH & INNOVATION

The Director-General

Brussels, 10 July 2017

## EOSC Declaration

**[Open access by-default]** All researchers in Europe must enjoy access to an open-by-default, efficient and cross-disciplinary research data environment supported by FAIR data principles. **Open access must be the default setting for all results of publicly funded research in Europe**, allowing for proportionate limitations only in duly justified cases of personal data protection, confidentiality, IPR concerns, national security or similar...

Horizon 2020

## RESEARCH DATA – OPEN BY DEFAULT



## Phase 1: 2016-2017



*H2020-INFRADEV-04-2016*

- Governance framework
- Interoperability Architecture
- Service Pilots
- Science Demonstrators

## Phase 2: 2018



*H2020-EINFRA-12-2017*

### **EOSC Hub Service Catalogue**

Simplify access to a broad portfolio of products, resources and services provided by the major pan-European and international organisations through an open and integrated service catalogue



EUROPEAN OPEN  
SCIENCE CLOUD

# Launch of the European Open Science Cloud

23 November 2018,  
Vienna, Austria

[Join us](#)

## ACCESS EOSC SERVICES & RESOURCES



NETWORKING



COMPUTE



STORAGE



SHARING & DISCOVERY



DATA MANAGEMENT



PROCESSING & ANALYSIS



SECURITY & OPERATIONS

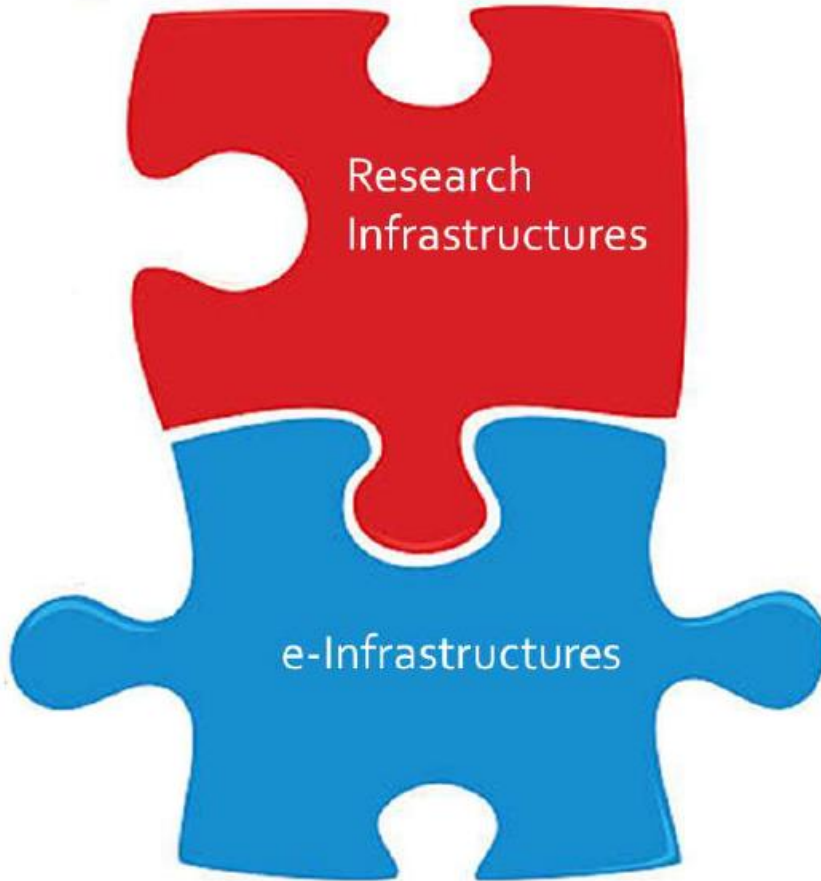


TRAINING & SUPPORT

## Phase 3: 2019

# INFRAEOSC-04-2018 - Stepping up the establishment of the EOSC and connecting ESFRI infrastructures through Cluster projects

## Domain thematic services

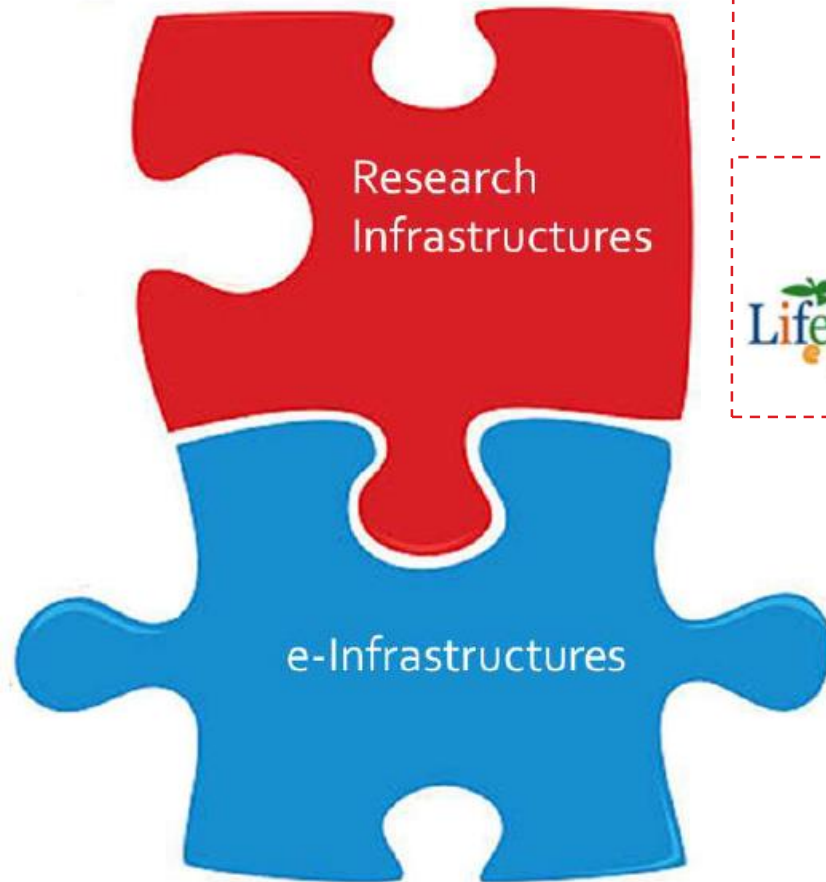


## Common “cross cutting” services



## Phase 3: 2019

# INFRAEOSC-04-2018 - Stepping up the establishment of the EOSC and connecting ESFRI infrastructures through Cluster projects



## Domain thematic services



## Common "cross cutting" services

# Open science beleid in België en Vlaanderen



FÉDÉRATION  
WALLONIE-BRUXELLES  
RECHERCHESCIENTIFIQUE.BE



DEPARTMENT OF  
ECONOMY  
SCIENCE &  
INNOVATION

- **Open science beleid in België**
  - CFS-CIS Open Science
  - Open Science Conference
  - Open Access in Belgische wetgeving
- **Open Science beleid in Vlaanderen**
  - Vlaanderen wil koploperspositie innemen mbt Open Science beleid
  - WG4 EU platform “Open Science & Innovation”
  - VLIR Werkgroep “Research Data Management & Open Science”
  - Studie (study Technopolis) aangaande status en governance Open Science traject in Vlaanderen

**OPEN SCIENCE CONFERENCE 2018**  
**‘Back-to-Back Belgium-European Commission’**  
21 November 2018, 09h00



# Take home messages

- **Open science** is een **beweging** naar wetenschap met open onderzoeksdata, open toegang tot publications and open wetenschappelijke communicatie
- **EOSC** is a grootschalig Europees initiatief om open science te realiseren door een **virtuele omgeving** op te zetten waarin **FAIR onderzoeksinformatie** uit reeds gefinancierde activiteiten kan worden **opgeslagen, gedeeld en herbruikt**.
- EOSC genereert **momentum rond Open Science & Research Data Management** in Europa en op meer lokaal niveau in België en Vlaanderen

