



**European Open Science Cloud getting
real:
policies to launch EOSC and its
governance structure**

**EOSC. Austria takes initiative
Vienna
30-10-2018**

**Jean-Claude Burgelman, Head of Unit
M. Schouppe, A. Karalopoulos,, M. Adojaan, C. Pascu, K. Szkuta, R. Keesenberg, E. Barbarossa
European Commission, Directorate General Research & Innovation (DG RTD)
Unit B2 – Open Science**

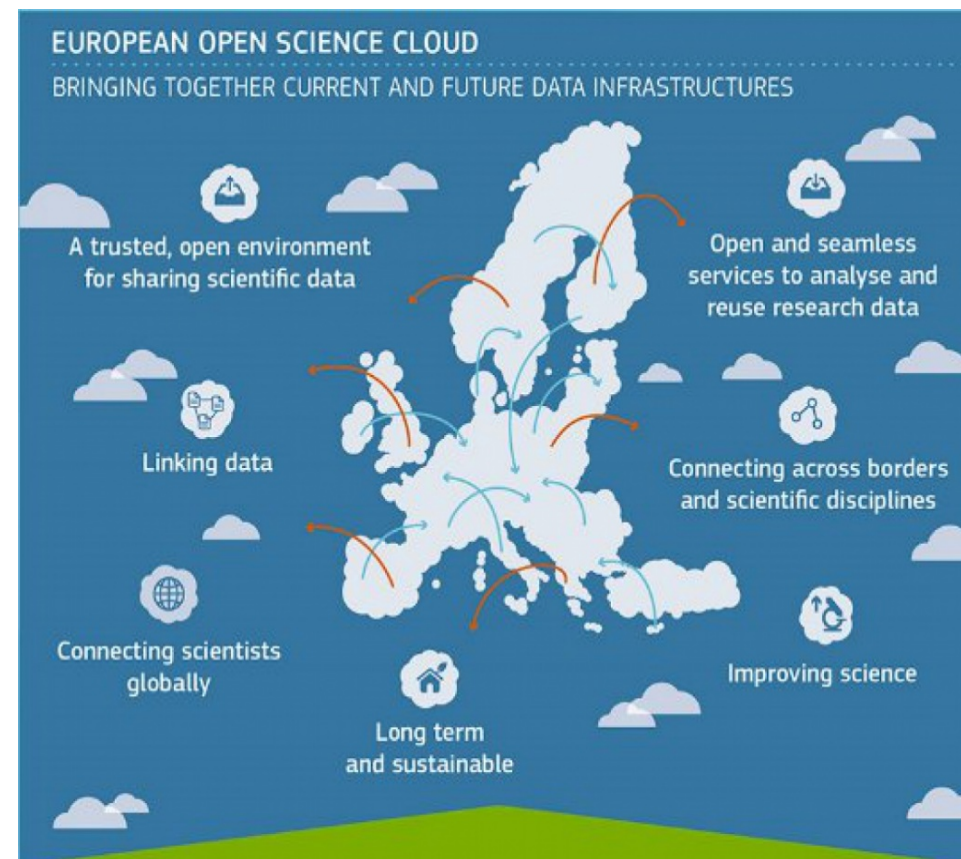
The vision



"Europe's final transition must be one from fragmented data sets to an integrated European Open Science Cloud. By 2020, we want all European researchers to be able to deposit, access and analyse European scientific data through a European Open Science Cloud.."

*Speech by Commissioner Carlos Moedas in Amsterdam, NL:
"Open science: share and succeed", 4 April 2016*

- EOSC will provide 1.7m EU researchers an environment with free, open services for data storage, management, analysis and re-use across disciplines
- EOSC will join existing and emerging horizontal and thematic data infrastructures, bridging today's fragmentation and ad-hoc solutions
- EOSC will add value (scale, data-driven science, inter-disciplinarity, faster innovation) and leverage past infrastructure investment (10b per year by MS, two decades EU investment)



History of the EOSC file



2016

**European
Cloud
initiative**

Vision for European Open
Science Cloud

2017

**H2020 – WP
2018-20**

INFRAEOSC-05-2018-2019
Call

**Implementation
Roadmap**

Federated model with 6
action lines

2018

**Council
conclusions**

Set up of EOSC
governance framework by
end 2018

Actions	Timeline	
The Commission will work with global policy and research partners to foster cooperation and to create a level playing field in scientific data sharing and data-driven science.	As of 2016	OECD, RDA, G7
The Commission will use the Horizon 2020 Work Programmes to provide funding to integrate and consolidate e-infrastructure platforms, to federate existing research infrastructures and scientific clouds and to support the development of cloud-based services for Open Science.	As of 2016	WP2018-20
The Commission will make open research data the default option, while ensuring opt-outs, for all new projects of the Horizon 2020 programme.	As of 2017	1 JAN 2017
The Commission will review the 2012 Commission Recommendation on access to and preservation of scientific information ⁴¹ to encourage scientific data sharing and the creation of incentive schemes, rewards systems and education and training programmes for researchers and businesses to share data, in close relation with the DSM 'Free flow of data' initiative.	As of 2017	Data package April 2018
The Commission will work with Member States to connect the priority European research infrastructures ⁴² to the European Open Science Cloud.	As of 2017	WP2018-20
Together with stakeholders and relevant global initiatives, the Commission will work towards an Action Plan for scientific data interoperability, including 'meta-data', specifications and certification.	By 2017 end	FAIR Action Plan

a. Architecture	Architecture of the federated infrastructures as the solution to the current fragmentation in research data infrastructures which are insufficiently interoperable.
b. Data	FAIR data management and tools. A common data language to ensure data stewardship across borders/disciplines based on FAIR principles.
c. Services	Available services from a user perspective. A rich environment offering a wide range of services covering the needs of the users.
d. Access & Interface	Mechanisms/interfaces for accessing EOSC. A simple way for dealing with open data obligations or accessing research data across different disciplines.
e. Rules	Rules of participation for different EOSC actors. An opportunity to comply with existing legal and technical frameworks and increase legal certainty & trust.
f. Governance	Governance of the EOSC, aiming at ensuring EU leadership in data-driven science but requiring new governance frameworks.

Not a cloud made in Brussels



EOSC Summit 2017 & 2018



- **180** key participants, representing all categories and scientific fields
- **15** research funders and **30** officials from Member States and Associated Countries
- **1000+** viewers via web stream
- Extensive coverage via Twitter in the EU, USA and Canada (tweets and retweets reached **350k+** people)





- 33 high level statements meant to capture our common understanding on the required & underpin the EOSC implementation
 - ✓ Data culture & FAIR data,
 - ✓ Research data services & architecture,
 - ✓ Governance and funding
- Signed by more than 70 scientific stakeholders (so called 'Coalition of the Doers').
- An Action List is attached.



○ EOSC Rules of Participation

Rules of Participation recommendations:

<https://eoscpilot.eu/open-consultation>

○ FAIR data action plan

Turning FAIR into reality:

http://bit.ly/interim_FAIR_report

FAIR Data Action Plan:

<https://github.com/FAIR-Data-EG/Action-Plan>

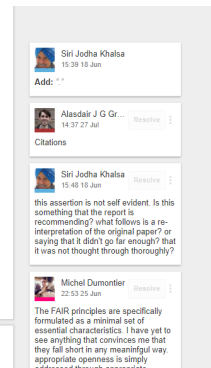


37 Open 0 Closed		Author	Labels	Projects	Milestones	Assignee	Sort
1	Rec. 1: Definitions of FAIR	Policy	data services	global fora	research communities		17
#1 opened on Jun 8 by sjDCC							
2	Rec. 2: Mandates and boundaries for Open	Policy	data services	data stewards	funders	global fora	10
#2 opened on Jun 8 by sjDCC							
3	Rec. 3: A model for FAIR Data Objects	Policy	data services	data stewards	funders	institutions	15
#3 opened on Jun 8 by sjDCC							
4	Rec. 4: Components of a FAIR data ecosystem	Technology	data services	data stewards	global fora		17
#4 opened on Jun 8 by sjDCC							
5	Rec. 5: Sustainable funding for FAIR components	Costs	data services	data stewards	funders	global fora	15
#5 opened on Jun 8 by sjDCC							
6	Rec. 6: Strategic and evidence-based funding	Costs	data services	data stewards	funders	institutions	14
#6 opened on Jun 8 by sjDCC							

gaining traction globally. When e needed to define and apply FAIR ain principles and how they apply to si gaps and suggested additions. We n the existing acronym and that r FAIR Data Objects is put forward to als are needed to make data FAIR.

also comprise appropriate openness r relevant features. To make FAIR data (the definition of FAIR,

Page 5





6 lines of action *

a. Architecture	Architecture of the federated infrastructures as the solution to the current fragmentation in research data infrastructures which are insufficiently interoperable.
b. Data	FAIR data management and tools. A common data language to ensure data stewardship across borders/ disciplines based on FAIR principles.
c. Services	Available services from a user perspective. A rich environment offering a wide range of services covering the needs of the users.
d. Access & Interface	Mechanisms/interfaces for accessing EOSC. A simple way for dealing with open data obligations or accessing research data across different disciplines.
e. Rules	Rules of participation for different EOSC actors. An opportunity to comply with existing legal and technical frameworks and increase legal certainty & trust.
f. Governance	Governance of the EOSC, aiming at ensuring EU leadership in data-driven science but requiring new governance frameworks.

* Implementation Roadmap for the European Open Science Cloud (SWD(2018)83)



▪ **SCOPE**

All actions needed for steering and overseeing the initial development of the EOSC (until end 2020) towards the EOSC federated model described in the EOSC Implementation Roadmap

▪ **EXPECTED DELIVERABLES**

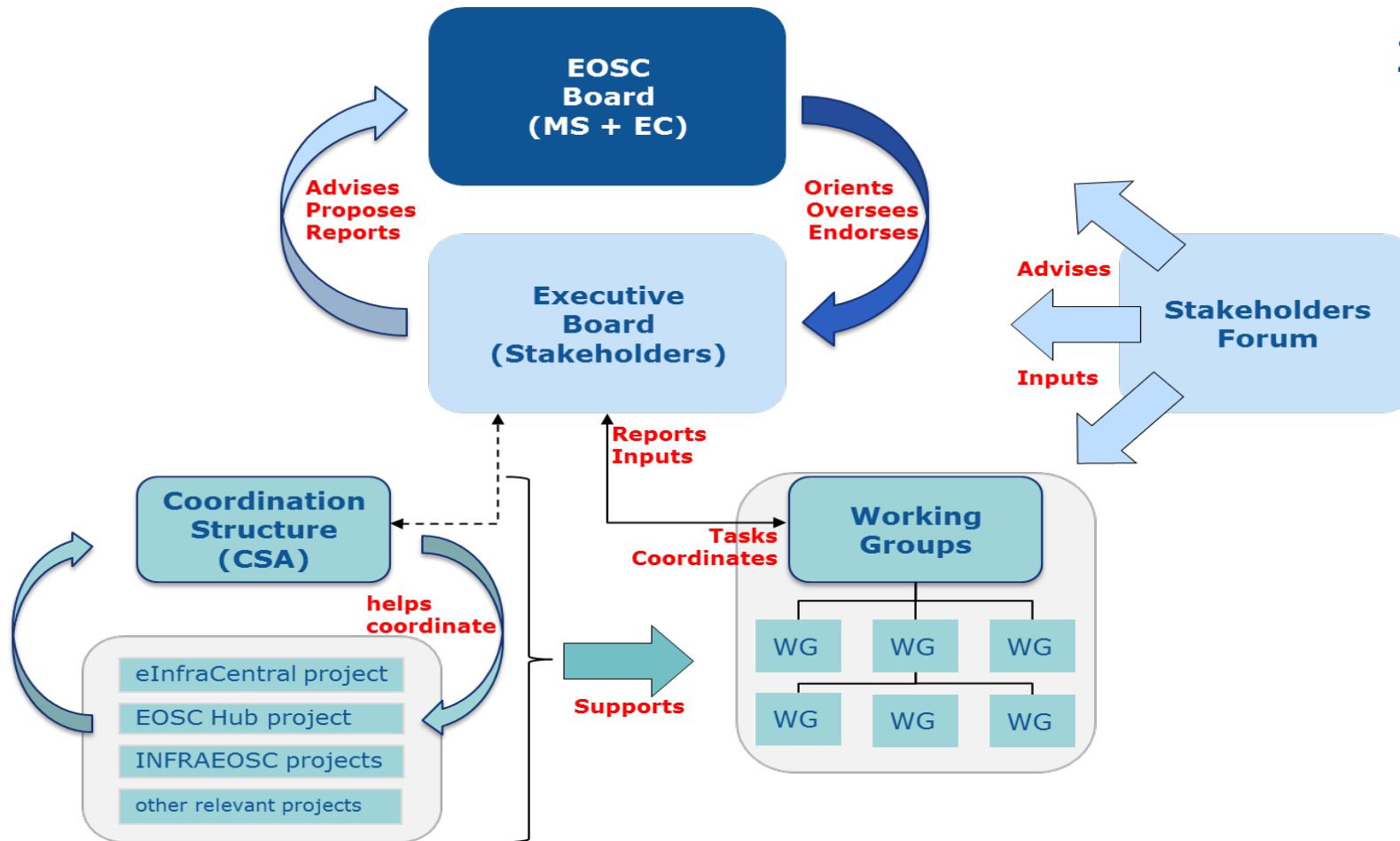
Strategic plan, Annual work plans, FAIR action plan, Rules of participation, mechanism for post-2020 governance, approach to extend user base to industry and public authorities

▪ **ACTORS**

The governance should rely on the interplay between three components:

- EOSC Board
- EOSC Executive Board
- Stakeholders Forum

Governance framework



Three layer structure as per Horizon 2020 WP 2018-2020

- *EOSC Board* of MS/AC and EC representatives to ensure effective supervision of EOSC implementation
- *Executive Board* of stakeholder representatives to help ensure proper EOSC implementation and accountability
- *Stakeholder Forum* to provide input from a wide range of actors

Further orientations for the set-up and composition of the Governance framework, to inform the consultation of MS without prejudging possible future decisions by the Council and the Commission



	Membership	Role
EOSC Board	Member States/Associated Countries and EC representatives	To oversee & steer the EOSC strategy and implementation → <i>Review and decide</i>
EOSC Executive Board	Stakeholder representatives and individual experts	To help & support the EOSC strategy, implementation, monitoring and reporting on progress of implementation → <i>Elaborate and propose</i>
Stakeholders Forum	Stakeholders organisations; e.g. scientific/user community, universities, research institutions, research infrastructures, eInfras	To advise the Executive Board and reach-out to the scientific community → <i>Provide input and feedback</i>



	Membership	Formal vehicle
EOSC Board	Member States/Associated Countries and EC representatives	Working Group of the strategic configuration of the H2020 PC (EOSC PC-WG)
EOSC Executive Board	Stakeholder representatives and individual experts	Commission formal Expert Group
Stakeholders Forum	Stakeholders organisations; e.g. scientific/user community, universities, research institutions, research infrastructures, eInfras	Self-organised with EC support; notably by the Coordination and Support Action funded by the WP of H2020 - INFRAEOSC Call



	Formal vehicle	Set-up calendar
EOSC Board	Working Group of the strategic configuration of the H2020 PC (EOSC WG)	Set-up: October 2018 1 st report to H2020 PC: 22/11 End: December 2020
EOSC Executive Board	Commission formal Expert Group	EC Decision: 27/08 Call for EoI: 11/9-10/10 Set-up: November 2018 End: December 2020
Stakeholders Forum	Self-organised with EC support; notably by the Coordination and Support Action funded by the WP of H2020 - INFRAEOSC Call	Currently: EOSC pilot Re-launch: early 2019

- **TASK**

To deliberate on the orientations of the actions funded under Horizon 2020 in support of the implementation of the EOSC

To inform the related exchanges of views in the strategic configuration in the context e.g. of possible work programme updates in those fields

- **ACTIONS**

This will notably include:

- ☐ reviewing strategic implementation and annual work plans, and related documents submitted by the European Commission – notably coming from the EOSC Executive Board
- ☐ coordinating relevant national and Commission initiatives



20 September (PC meeting)	Decision to set up EOSC Working Group and agreement on terms of reference
end September	Invitation to Perm Reps to designate experts (deadline mid-October)
early November	MS designate representatives to the EOSC board. Selection of members to the governance structure.
mid November	Opinion of EOSC WG
22 November (PC meeting)	Approval by Strategic Configuration PC
23 November	Austrian Presidency event to launch the EOSC governance framework





Phase 1, until 2020:

- the Commission will invest EUR 300 million to support the core functions of the EOSC as per milestones
- Member States would flag the national initiatives that they want to federate into the EOSC (e.g. the work of the Helmholtz Data Alliance); and the resources they are willing to provide in kind
- Research funders would start making costs eligible for FAIR data only

Phase 2, after 2020:

- To explore a mix of funding including possibly deposit fees from national funders
- Based on a full cost estimate for the running of the EOSC, conducted by the EOSC governance framework in Phase 1

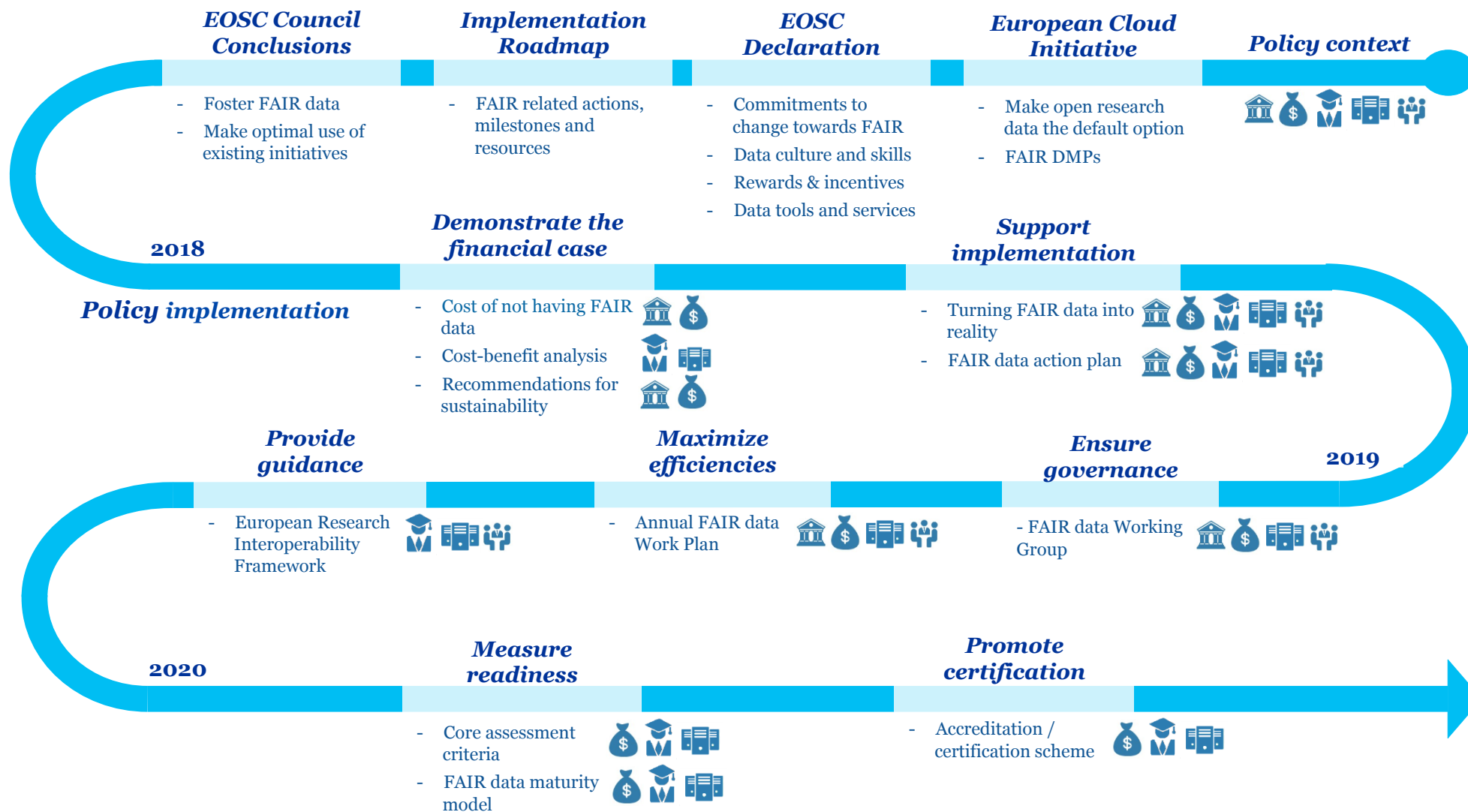


6 lines of action *



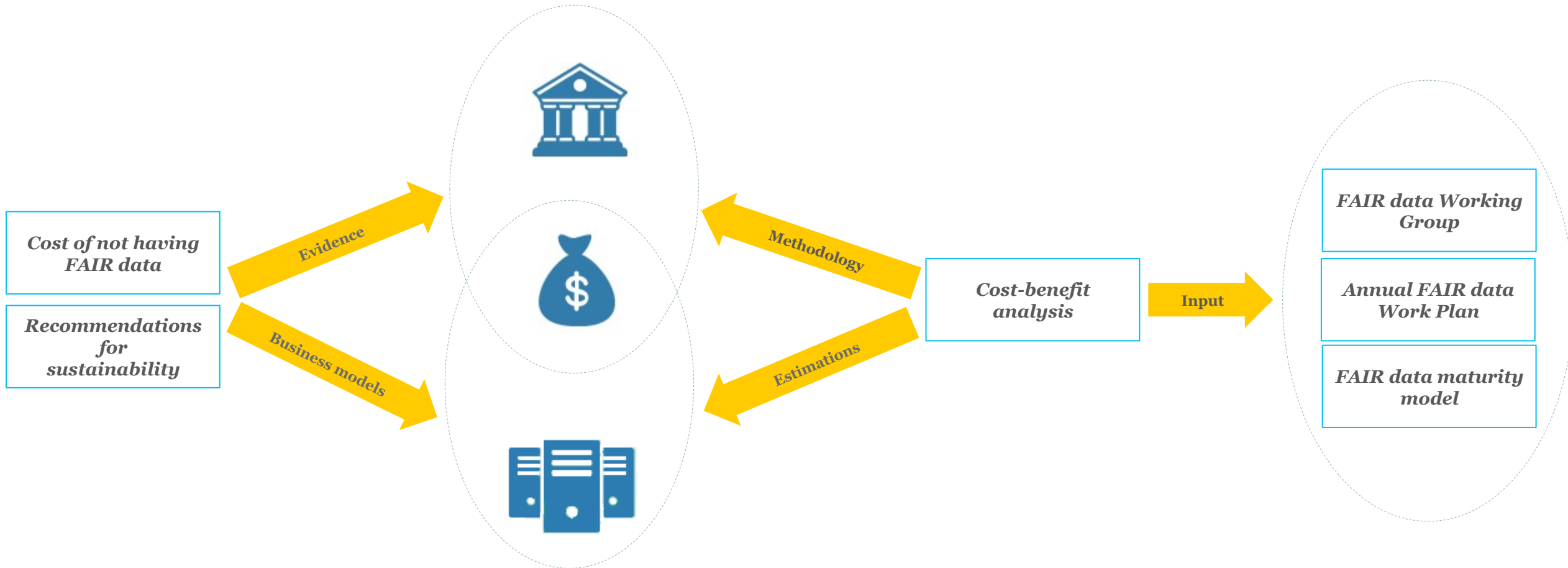
* Implementation Roadmap for the European Open Science Cloud (SWD(2018)83)

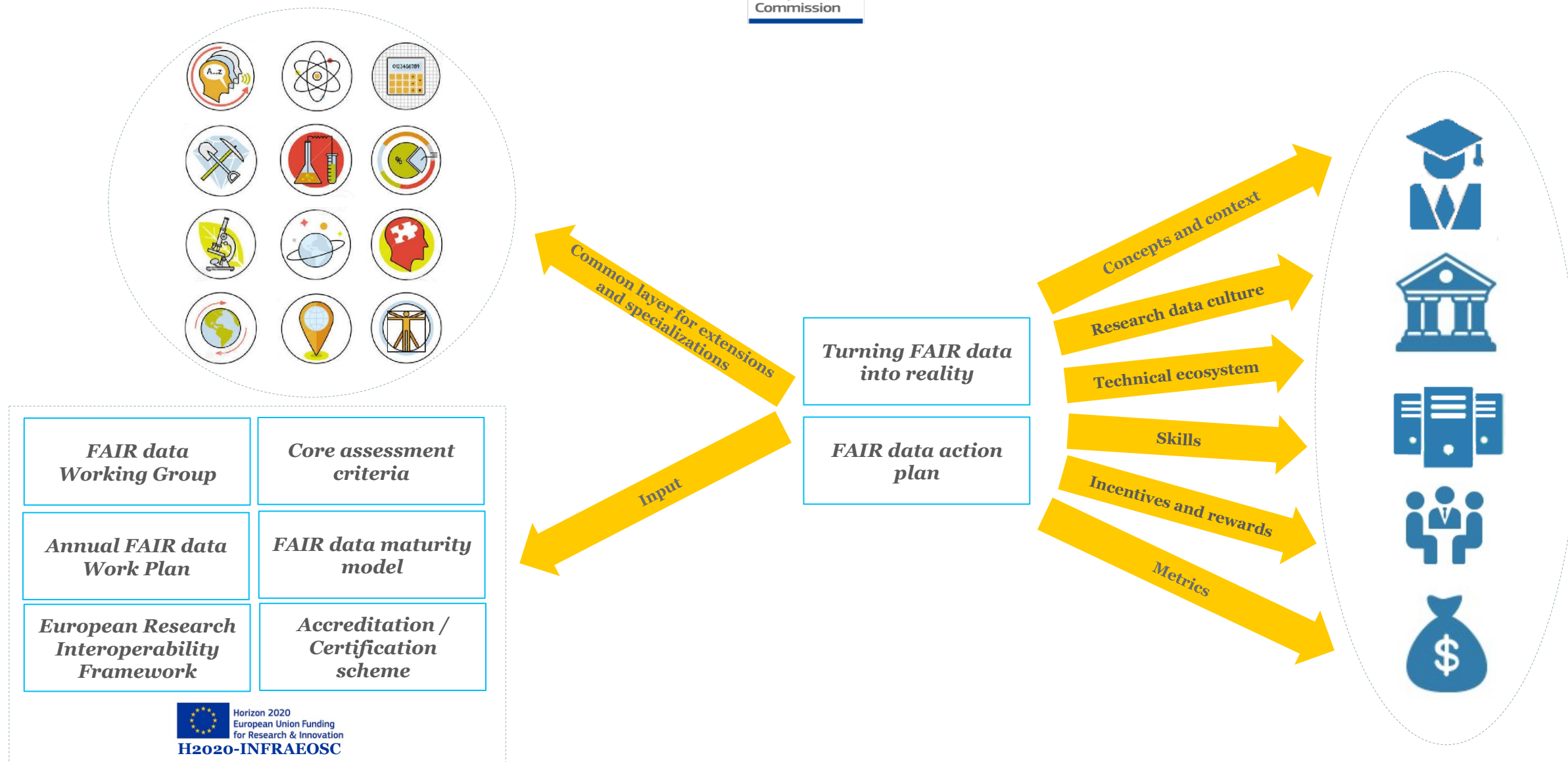
EC proposal for FAIR building blocks



Target groups

- Policy makers
- Funders
- Researchers
- Infrastructures
- Coordination Fora





Thank you for your attention

Team leader: Michel SCHOUPPE
Maarja ADOJAAN
Emanuele BARBAROSSA
Athanasios KARALOPOULOS
Roy KEESENBURG
Corina PASCU
Konstantinos REPANAS
Katarzyna SZKUTA

Website: <http://ec.europa.eu/research/openscience/eosc>
E-mail: EOSC-RTD@ec.europa.eu

