

L'iniziativa ICDI: Insieme verso L'European Open Science Cloud

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Open Science

- **A systemic change in the modus operandi of science and research**
- **Affecting the whole research cycle and its stakeholders**

Commissioner Carlos Moedas
Open Science Presidency Conference
Amsterdam, 4 April 2016



An new modus operandi for a multitude of actors

Open Science

“Open Science represents a new approach to the scientific process **based on cooperative work and new ways of diffusing knowledge by using digital technologies and new collaborative tools.** The idea captures a systemic change to the way science and research have been carried out for the last fifty years: shifting from the standard practices of publishing research results in scientific publications **towards sharing and using all available knowledge at an earlier stage in the research process.**”

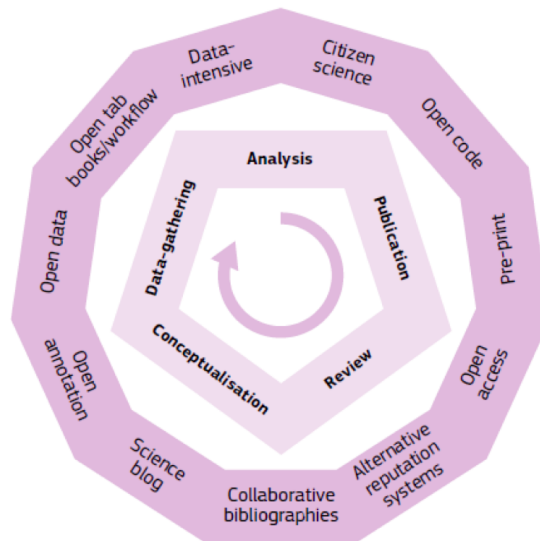
“Open Science **has an impact on the entire research cycle,** from the inception of research to its publication, and on how this cycle is organised.”



Collaboration & sharing

Open Science opens up the entire research enterprise.....

Open Science opens up the entire research enterprise (inner circle) by using a variety of means and digital tools (outer circle) [EC - DG R&I 2016, p. 36]



A facilitator of new scholarly and scientific processes

European Science Cloud

European
Cloud Initiative

← Comunicazione CE 19/4/2016

European
Open Science
Cloud (EOSC)

European Data
Infrastructure
(EDI)

«The initiative will give Europe a global lead in data infrastructures and services, and ensure that European science, technology and industry reap the full benefits of data-driven science.»

«It will provide a virtual environment with open and seamless services for research data storage, management, analysis and re-use, across borders and disciplines.»

EuroHPC Joint
Undertaking

GÉANT / PRACE




“Implementation Roadmap for the European Science Cloud”

EOSC SWD (EC 18/03/18)

- Risultante dalle consultazioni fatte dalla EC con stati membri, istituzioni e “stakeholders” più rilevanti
- Linee di azione per l’implementazione di EOSC:
 - (a) Architecture of the federated infrastructures to counteract the fragmentation of current research data infrastructures;
 - (b) Data based on FAIR principles;
 - (c) Services that cover the needs of the users;
 - (d) Access & Interfaces to simplify the use of data across different disciplines;
 - (e) Rules of participation for the EOSC actors;
 - (f) Governance of the EOSC to ensure EU leadership.

Adopted conclusions on the European Open Science Cloud (EOSC)- 29/05/2018


- RECALLS that the creation of EOSC, one of the major research-centred processes in the EU today, **lies in the joint responsibility of the European Commission and the Member States**, taking into account the involvement and support of the stakeholders;
 - In this context, WELCOMES the Commission Staff Working Document on the Implementation Roadmap for the European Open Science Cloud introducing **the EOSC federated model and a two-stage approach for the roll out of the EOSC**; TAKES NOTE of the **planned support to the first phase of EOSC implementation by means of projects** funded by the EU Framework Programme for Research and Innovation (Horizon 2020) and **STRESSES the importance of coordinating the various ongoing and future projects funded by the EU Framework Programmes on EOSC**, including transnational initiatives that are adhering their activities to EOSC
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Adopted conclusions on the European Open Science Cloud (EOSC)- 29/05/2018 (cont1.)

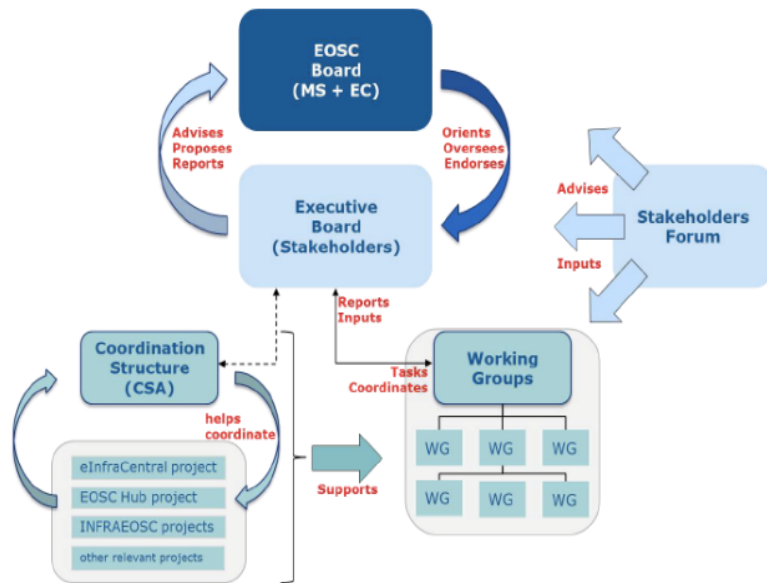
- AGREES that the EOSC model should be based on a **pan-European federation of data infrastructures** in order to be flexible and adaptable to changing needs of the stakeholders; with regard to enabling this federation of national and European data infrastructures, **ENCOURAGES Member States to invite their relevant communities, such as infrastructures, research infrastructures, Research Funding Organisations (RFO's) and Research Performing Organisations (RPO's), to get organized** so as to prepare them for connection to the EOSC and CALLS ON the Commission to make optimal use of ongoing projects, existing expertise and knowledge available via existing initiatives, such as ESFRI, eIRG, GO FAIR and others;



Adopted conclusions on the European Open Science Cloud (EOSC)- 29/05/2018 (cont2.)

- CONSIDERS that given the open character of EOSC, its development should be an inclusive and gradual process and RECOMMENDS to the Commission and Member States to ascertain that **stakeholders can participate on a voluntary basis by choosing which services or datasets they can share based upon the available means and according to the applicable rules and regulations**; 10. INVITES the Commission and the Member States therefore, to jointly explore the creation of **a map of national research data infrastructures and initiatives in the Member States** which could be federated, in order to ensure that current structures, competences, functions, and initiatives regarding research data management are duly taken into account;
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Governance



Gli Stati Membri devono creare le loro “national roadmaps” ed è fondamentale che **si lavori a livello nazionale con i rappresentanti dentro ERAC e ERC oltre che dimostrare una coesione infrastrutturale nazionale**

GOFAIR

- Visione : Fostering the coherent development of the global Internet of FAIR Data & Services (IFDS), with the main focus on early developments in the European Open Science Cloud (EOSC)
- Strategia: GO FAIR follows a bottom-up open implementation strategy for the technical governance and funding needed to establish the first phase of the European Open Science Cloud (EOSC) as part of a broader global Internet of FAIR Data & Services. The approach is largely based on the EOSC communication and the recommendations of the High Level Expert Group.
- Azioni:
 - Implementation Networks - Un consorzio per definire strumenti e metodi
 - Technology – Strumenti e metodi da implementare (metriche, metadata e tools)
 - Training – Percorsi formative per esperti di “data stewards”
 - Certification – Validazione di Servizi, Strumenti, Organizzazioni e Persone
- Adesioni: Olanda (promotrice di FAIR), Germania e Francia

Italian Computing and Data Infrastructure (ICDI)

- Idea lanciata all'inizio del 2017
- E' in corso la preparazione di un Accordo di Programma tra Enti (Istituzioni Nazionali) e Consorzi Nazionali che ospitano e/o gestiscono Infrastrutture di calcolo e dati per la Ricerca
- Primo passo verso un JRU
- Aperto anche ad altri attori



Obiettivi

- Formulare e condividere la visione strategica del coinvolgimento della rete di ricerca italiana nello sviluppo delle iniziative europee e internazionali e in particolare EOSC, EDI e EUROHPC, e della Research Data Alliance (RDA), **definendo azioni che valorizzino ed espandano il ruolo dell'Italia in queste iniziative.**
- Promuovere la partecipazione italiana alle calls Horizon Europe per la realizzazione di un piano coerente e pienamente rappresentativo **per l'evoluzione e lo sviluppo delle infrastrutture di ricerca e di calcolo italiane.**
- **Favorire il massimo ritorno alla comunità scientifica nazionale** dalla partecipazione italiana ad ESFRI e a progetti associati ad EOSC e EDI.
- **Condividere con i rappresentanti del MIUR** gli elementi riguardanti la partecipazione nazionale alle attività europee in modo da consentire il massimo del ritorno in termini di **capacità di attrarre finanziamento comunitario, guidare progetti strategici, favorire l'attrattività e la competitività del sistema scientifico e dell'innovazione nazionali.**
- Svolgere **attività di consulenza e indirizzo** su richiesta del MIUR per attività a valenza internazionale riguardanti le infrastrutture informatiche.
- Sviluppare una **visione strategica nazionale** per l'ottimizzazione dei servizi per i dati a favore della ricerca scientifica e dell'innovazione; per la individuazione delle risorse necessarie; per la promozione ed il riscontro a livello europeo ed internazionale del sistema scientifico nazionale

Istituzioni partecipanti (<https://www.icdi.it/it/partecipanti>)

NODI ITALIANI	INFRASTRUTTURE DI RIFERIMENTO	ENTE
EPOS - INGV	EPOS ERIC EPOS HUB ENVRI+ EUDAT 2020	INGV
GARR	GEANT	GARR
EMSO - INGV	EMSO ERIC	INGV
EOSC Pilot	PRACE, EUDAT, SKA, OpenAire	INFN, CINECA, INAF, CNR, UniFI
BBMRI	BBMRI ERIC	CNR
E-RIHS	E-RIHS RI	CNR, ENEA
ENEA	EoCoE, MINNI	
DARIAH-IT	DARIAH	
Stazione e gruppo di lavoro italiano in ACTRIS2	ACTRIS	CNR
OGS	ECCSEL Euro-Argo SDLS, SNAP, EMODnet/SeaDataNet	OGS
Elixir-ITA	Elixir	CNR
ASI	CEOS	ASI
ESS-IT	ESS ERIC	Univ Perugia
Nodo italiano NFFA		
EMBRC-IT	EMBRC ERIC	SZN
ISBE-IT	ISBE	Univ Napoli Federico II, Univ Milano Bicocca

Attività & Piani

- Serie di riunioni per definire gli obiettivi e azioni
- Convenzione-Accordo di Programma in formato draft
- Prima versione di un «censimento» di servizi e risorse di calcolo in Italia
- Lista preliminare di persone di riferimento per RI e el
- Piano per la sottomissione di /partecipazione in proposte EU





HOME OBIETTIVI PARTECIPANTI DOCUMENTI CONTATTI



<https://www.icdi.it/it/>