National Initiatives for Open Science in Europe

Evenimentul Național NI4OS-Europe de Formare privind Consolidarea Capacităților în Domeniul Științei Deschise pentru Moldova
24 septembrie, 2020
eveniment online – platforma de formare NI4OS-Europe, conferință video

Managementul datelor științifice deschise

Nicolaie Constantinescu, Kosson / Universitatea „Transilvania" din Brașov

Universitatea Transilvania din Brașov

Cloud-ul european de cercetare

Aprilie 2016
apare inițiativa

European Commission

Home > Research and Innovation > Strategy > Goals of research and innovation policy > Open Science >

European Open Science Cloud (EOSC)

This is a cloud for research data in Europe. Background, policy information, events and publications related to the EOSC

| Home | Open Access | European Open Science Cloud | | Open Science Policy Platform | | Groups | Open Science Monitor |

English EN

https://ec.europa.eu/research/openscience/index.cfm?pg=open-science-cloud

https://horizon-magazine.eu/article/europe-joins-forces-create-largest-shared-data-folder-history.html

https://horizon-magazine.eu/article/nine-things-we-now-know-about-european-open-science-cloud.html
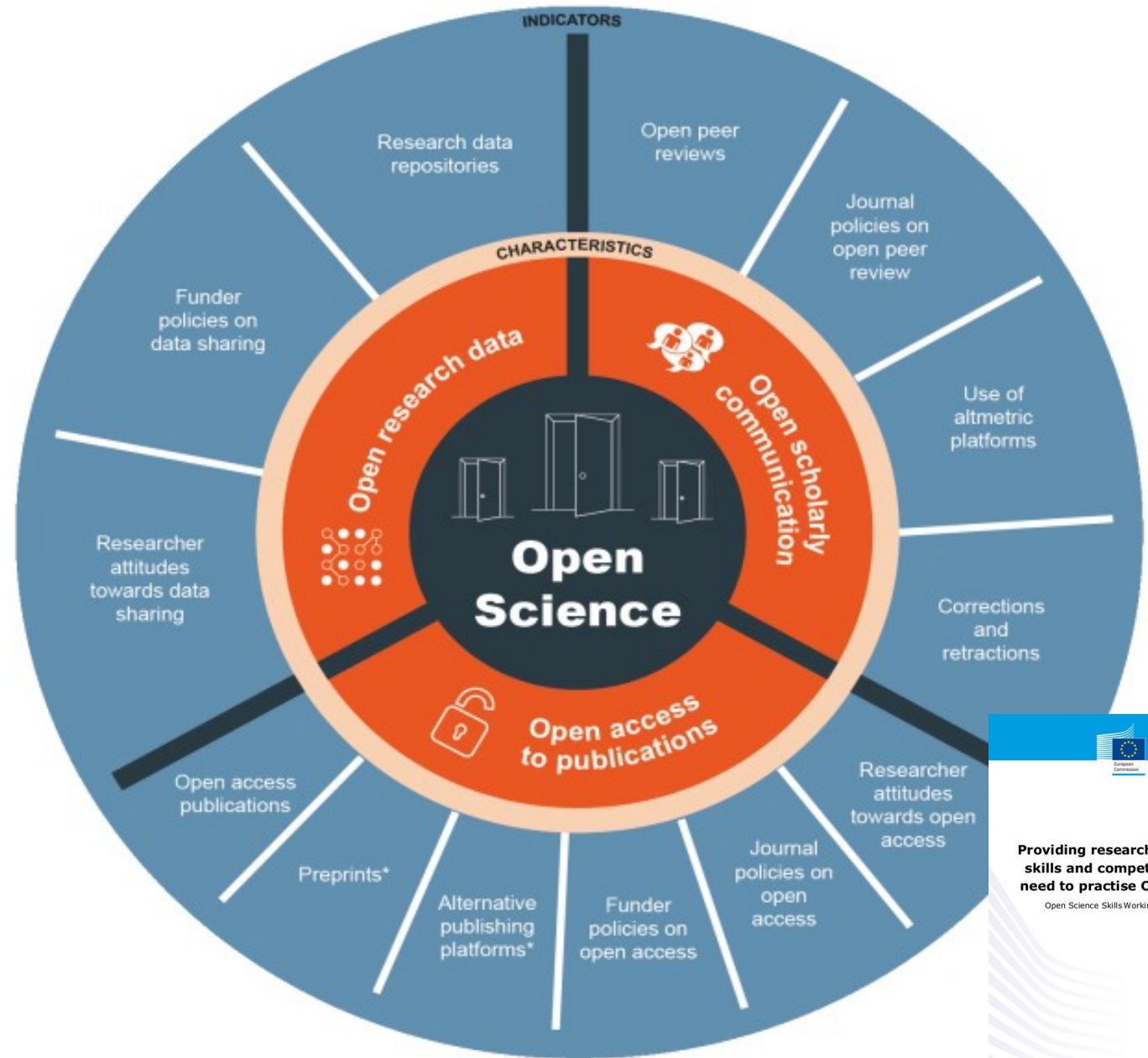
Știință deschisă

OPEN SCIENCE

Open Science is a system change allowing for better science through open and collaborative ways of producing and sharing knowledge and data, as early as possible in the research process, and for communicating and sharing results. This new approach affects research institutions and science practices by bringing about new ways of funding, evaluating and rewarding researchers. Open Science increases the quality and impact of science by fostering reproducibility and interdisciplinarity. It makes science more efficient through better sharing of resources, more reliable through better verification and more responsive to society's needs.

Din 2016, Comisia își organizează politica în domeniul științei deschise conform celor opt „ambiții":

Opt ambiții

Date deschise: pentru rezultatele cercetării științifice finanțate de UE, FAIR (date care pot fi găsite, accesibile, interoperabile și reutilizabile) și distribuirea deschisă a datelor ar trebui să fie din oficiu.

European Open Science Cloud (EOSC): un „ecosistem federat de infrastructuri de date de cercetare" va permite comunității științifice să împărtășească și să proceseze rezultatele cercetării și datele finanțate din fonduri publice dincolo de granițe și domenii științifice.

O nouă generație de metrici: trebuie dezvoltați noi indicatori pentru a completa indicatorii convenționali privind calitatea și impactul cercetării, pentru a pune în valoare practicile științelor deschise.

Viitorul comunicării științifice: toate publicațiile științifice evaluate de colegi ar trebui să fie liber accesibile, iar distribuirea timpurie a diferitelor tipuri de rezultate ale cercetării ar trebui încurajată.

Recompense: sistemele de evaluare ale carierei de cercetare ar trebui să recunoască pe deplin activitățile caracteristice științei deschise.

Integritatea cercetării: toate cercetările finanțate din fonduri publice din UE ar trebui să respecte standardele convenite în mod comun privind integritatea cercetării.

Educație și abilități: toți oamenii de știință din Europa ar trebui să aibă abilitățile și sprijinul necesar pentru aplicarea rutinelor și practicilor de cercetare caracteristice științei deschise.

Știința cetățenească: publicul larg ar trebui să poată aduce contribuții semnificative și să fie recunoscut ca producători valabili de cunoștințe științifice europene.

EOSC – proiecte legate de pregătire

Cloud-ul de cercetare european este o inițiativă legată organic de managementul și complexul de servicii curatoriale ale datelor.

https://www.eosc-pillar.eu/establishing-fair-data-services

"The Data layer: establishing FAIR data services at the national and transnational level" Work Package (WP5) will reduce technical, societal and organisational barriers to ensure research data considered in EOSC-Pillar is FAIR.

Mize

https://www.europeandataportal.eu/sites/default/files/edp_creating_value_through_open_data_0.pdf

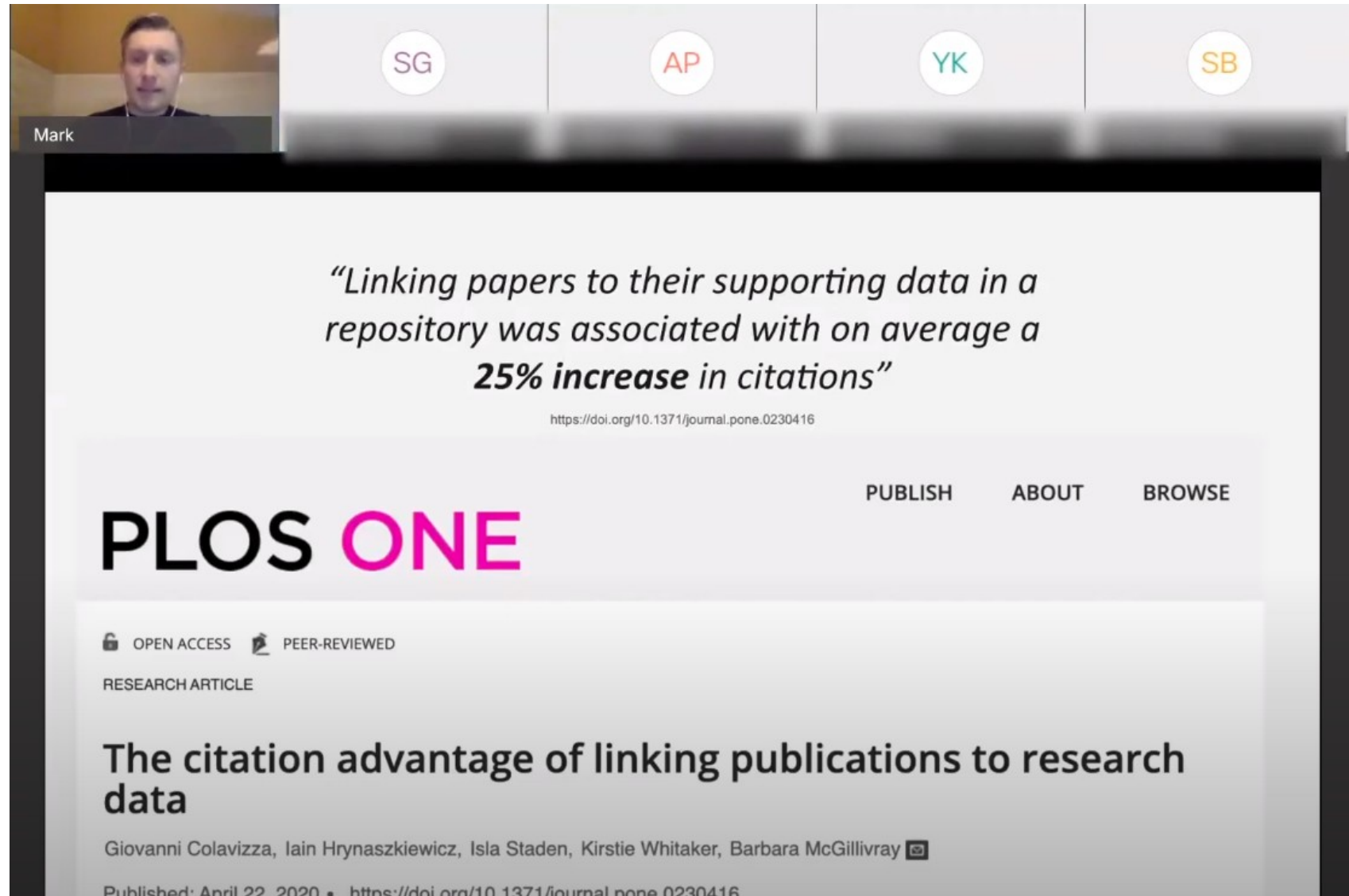Creating Value through Open Data

EUROPEAN DATA PORTAL

Using the Open Data Maturity model of the EU28+ countries, the market size of Open Data has been calculated. A distinction can be made between the direct market size and the indirect market size. Together they form the total market size for Open Data. For 2016, the direct market size of Open Data is expected to be 55.3 bn EUR for the EU 28+. Between 2016 and 2020, the market size is expected to increase by 36.9%, to a value of 75.7 bn EUR in 2020. The total market value of Open Data is estimated between 193 bn EUR and 209 bn EUR for 2016 with an estimated projection of 265-286 bn EUR for 2020, including inflation corrections. For the period 2016-2020, the cumulative direct market size is estimated at 325 bn EUR. The cumulative total market size for Open Data is forecasted to be between 1,138 and 1,229 bn EUR.

Creating Value through Open Data:
Study on the Impact of Re-use of Public Data Resources

Digital Agenda for Europe

265 – 286 miliarde de euro

Mize

Dacă legi setul de date de articolul științific, crești șansa de a fi citat cu 25%.

Mark Hahnel, fondator Figshare

https://datascience.nih.gov/news/case-making-data-open-possible

"Linking papers to their supporting data in a repository was associated with on average a **25% increase** in citations"

https://doi.org/10.1371/journal.pone.0230416

PLOS ONE

PUBLISH   ABOUT   BROWSE
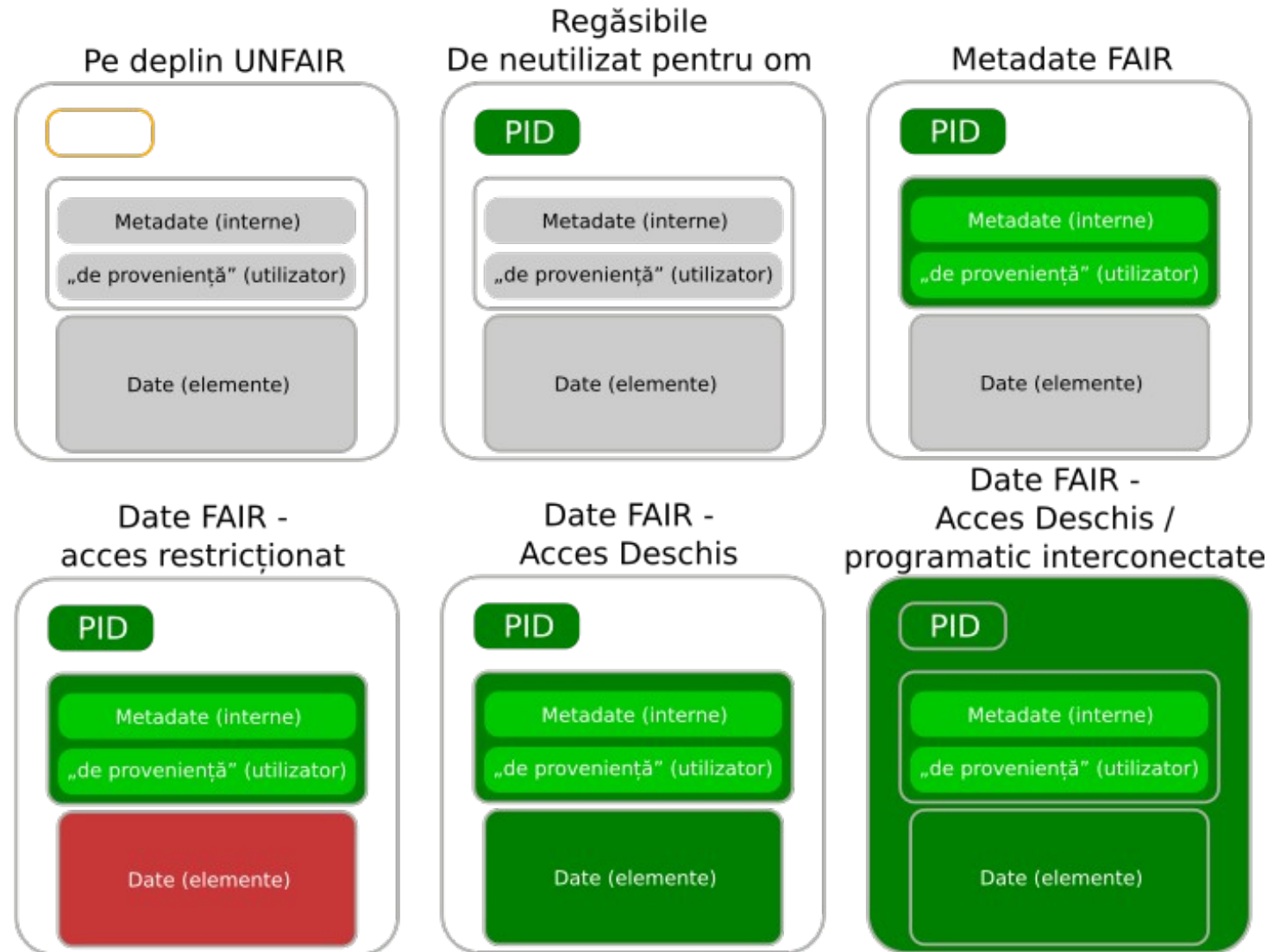
🔓 OPEN ACCESS   📄 PEER-REVIEWED

RESEARCH ARTICLE

The citation advantage of linking publications to research data

Giovanni Colavizza, Iain Hrynaszkiewicz, Isla Staden, Kirstie Whitaker, Barbara McGillivray 🔘

Published: April 22, 2020 • https://doi.org/10.1371/journal.pone.0230416

Date FAIR

Datele ca Obiecte Digitale FAIR în dezvoltare

Findable
Accessible
Interoperable
Reusable

Ușor de regăsit
Accesibile
Interoperabile
Reutilizabile

Pe deplin UNFAIR

Metadate (interne)
„de proveniență" (utilizator)
Date (elemente)

Regăsibile
De neutilizat pentru om

PID
Metadate (interne)
„de proveniență" (utilizator)
Date (elemente)

Metadate FAIR

PID
Metadate (interne)
„de proveniență" (utilizator)
Date (elemente)

Date FAIR -
acces restricționat

PID
Metadate (interne)
„de proveniență" (utilizator)
Date (elemente)

Date FAIR -
Acces Deschis

PID
Metadate (interne)
„de proveniență" (utilizator)
Date (elemente)

Date FAIR -
Acces Deschis /
programatic interconectate

PID
Metadate (interne)
„de proveniență" (utilizator)
Date (elemente)

Realitatea?! ... doar o ușoară creștere

The State of Open Data 2019

A selection of analyses and articles about open data, curated by Figshare

Foreword by Dr Paul Ayris

OCTOBER 2019

Digital Science Report

8000 de participanți din 180 de țări

2019	I am familiar with the FAIR Principles	I have heard of, but am not familiar with FAIR	I have never heard of the FAIR principles
GO FAIR	5%	18%	77%
FAIRdat	5%	17%	78%
MakeDataCount	11%	24%	65%
DataCite	4%	14%	82%
FORCE	11%	20%	69%

Table 1: Level of awareness of FAIR initiatives

In spite of these many initiatives, 2019 has seen only a slight increase in familiarity with the FAIR principles compared to 2018.

How familiar are you with the FAIR principles?

2018 — 59.64%

2019 — 54.33%

- I am familiar with the FAIR principles
- I have previously heard of the FAIR principles but I'm not familiar with them
- I have never heard of the FAIR principles before now

Probleme (anul 2016)

Expertiza lipsește în Uniunea Europeană!!!

There is an alarming shortage of data experts both globally and in the European Union.
Este o lipsă alarmantă de experți de date la nivel global, cât și în Uniunea Europeană.

Increasing reliance on data experts, especially in academia where they are most severely undervalued, a lack of data related core expertise may well be among the risks for Europe losing a leading position in science.

O creștere a dependenței de experții de date, mai ales în sfera academică, unde sunt cel mai mult subevaluați, o lipsă de expertiză la nivel de bază privind datele, pot fi printre riscurile ca Europa să piardă o poziție de top în știință.

https://ec.europa.eu/research/openscience/pdf/realising_the_european_open_science_cloud_2016.pdf

DATA EXPERTISE IS LACKING IN THE EU

As a side effect of the above, there is an alarming shortage of data expertise in the EU and a pressing requirement with regards to the data expertise needed to support the aims of the EOSC is apparent. It became clear-and has been reflected in nearly all stakeholder contributions to the HLEG- that there is a major hole in the EOSC planning if we do not repair the significant lack of Core Data Experts. We use the term Core Data Experts here deliberately, emphasising that we are dealing with a range of skills that warrant the definition of a new class of colleagues with core scientific professional competencies and the communication skills to fill the gap between the two cultures.
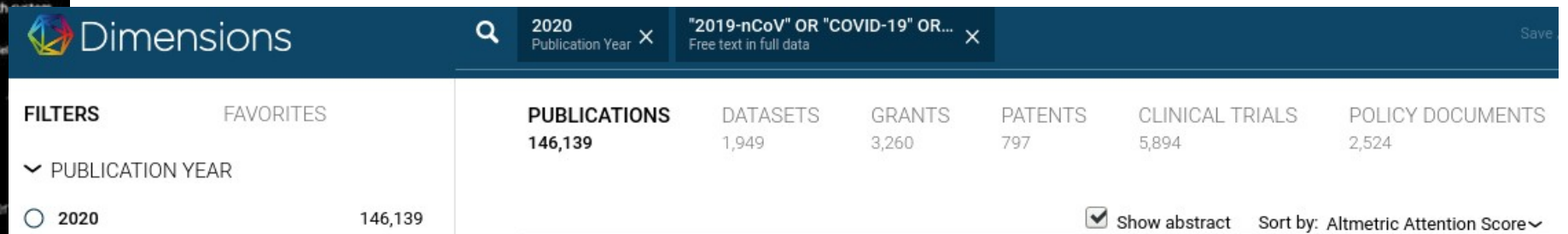
Core data experts are neither computer savvy research scientists - although the latter also need to be educated to the point where they hire, support and respect Core Data Experts - nor are they hard-core data or computer scientists or software engineers. They should be technical data experts, though proficient enough in the content domain where they work to be routinely consulted in the research team at the very beginning (experimental design, proposal writing) until the very end of the data discovery cycle. They will work to secure that good data management plans are an essential part of good research practice (including data re-use and stewardship planning and proper budgeting) and the proper capturing of new data capture (formats, metadata richness, standards, provenance, publishing, linking and analysis), they will also support analysis. This package of skills and expertise is rare and the few people with this skill set are often attracted to industry or outside Europe where they are more respected and valued.

The number of people with these skills needed to effectively operate the EOSC is, we estimate, likely exceeding half a million within a decade. As we further argue below, we believe that the implementation of the EOSC needs to include instruments to help train, retain and recognise this expertise, in order to support the 1.7 million scientists and over 70 million people working in innovation[9]. The success of the EOSC depends upon it.

Diluviul...

As a closing thought, the research presented here suggests that the changes that have been going on in scholarly communication are being accelerated in areas around COVID-19 research. Open Access models, rapid peer review, preprints and next generation search technologies are all playing a role in accentuated ways as a part of this extreme situation. COVID-19 is, in some sense, a natural experiment: A microcosm that allows us to see the future of scholarly communication. This isn't intended as a cynical or opportunistic comment, but rather as an observation that the results of COVID research may be outcomes that can benefit the whole of research in years to come. There may be approaches taken to scholarly communication that are tried in the COVID-research world that allow us to side-step errors that could be highly damaging, were they to be adopted more widely or introduced slowly and in a way that might be difficult to reverse later.

În cinci luni, s-a generat un volum de muncă care a luat ani să fie creat chiar și de domeniile cele mai dinamice și mai noi cum ar fi deep learning sau nanotehnologiile.

https://digitalscience.figshare.com/articles/How_COVID-19_is_Changing_Research_Culture/12383267
https://www.digital-science.com/blog/news/new-digital-science-report-how-covid-19-is-changing-research-culture/

2016 versus 2019

Implementation recommendations [**Recomandări de implementare**]

I2.1: Set initial guiding principles to kick-start the initiative as quickly as possible [**Setați principiile directoare inițiale pentru a porni inițiativa cât se poate de repede**].

O primă cohortă de *experți nucleu în date* ar trebui să fie instruită imediat pentru a traduce nevoile științei bazate pe date în specificații tehnice, care vor fi discutate cu *cercetătorii de date de tip hard-core* și inginerii. Această nouă clasă de experți nucleu pentru date va ajuta, de asemenea, să traducă înapoi către cercetătorii de date de tip hard-core oportunitățile și limitările tehnice

Costurile unor astfel de evoluții și schimbările culturale necesare pentru a încorpora o astfel de practică la nivel universitar înseamnă că aceasta nu va fi livrată rapid.

Their report [5] stressed the need for hundreds of thousands of data experts to be trained by 2020, and for each Member State to have at least one certified institute to support the introduction of data management across disciplines. 2020 will soon be upon us, but this ambitious goal has not yet been reached. The costs of such developments and the culture change needed to embed such practice at university level mean that it will not be delivered quickly.
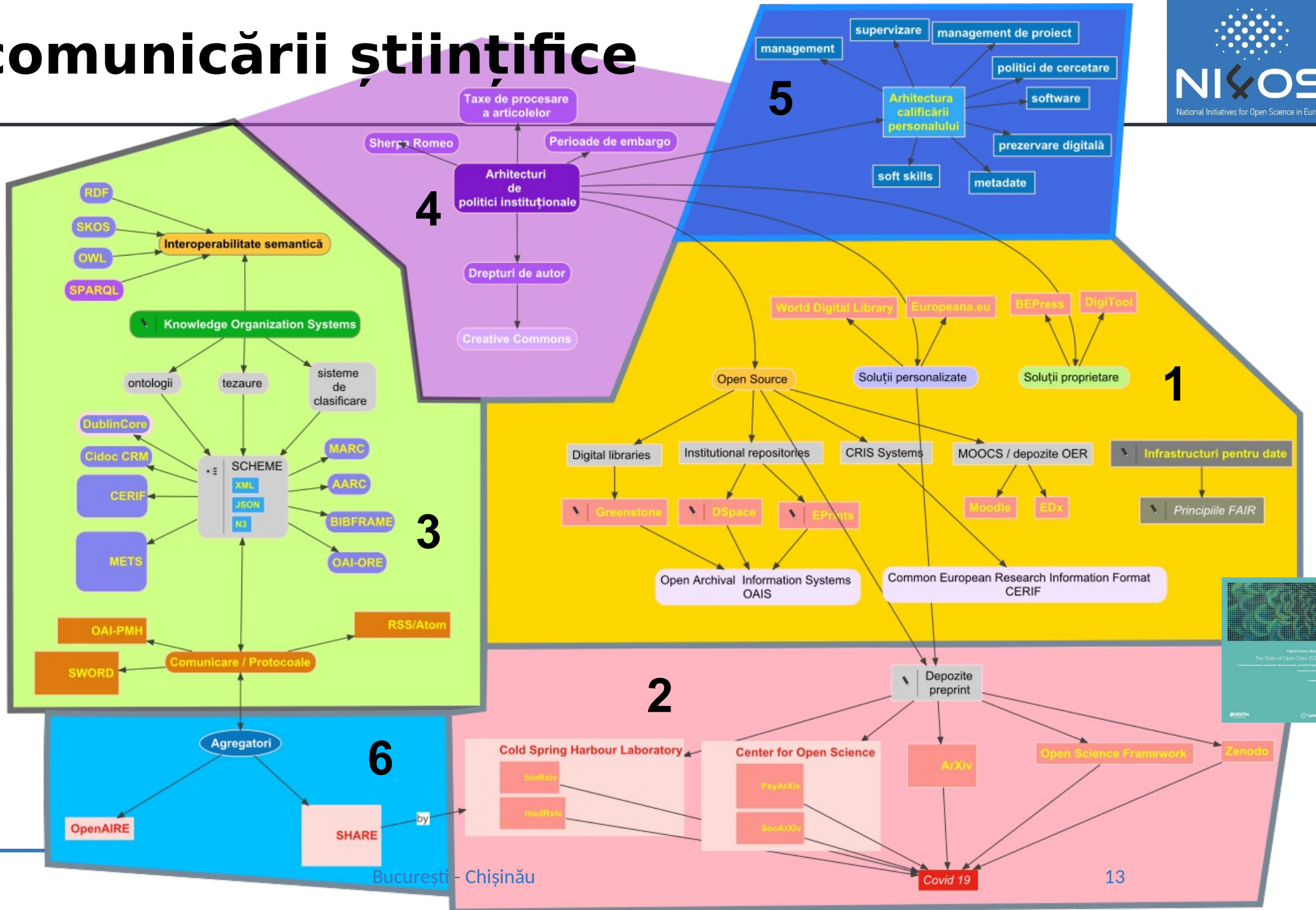
Dr. Paul Ayris is Pro-Vice-Provost (UCL Library Services), Chief Executive of UCL Press and the chair of LIBER's Citizen Science Working Group

Orașul comunicării științifice

1. Arhitecturi de sisteme
2. Sisteme de valorificare fără evaluare colegială
3. Sisteme de contextualizare a informației
4. Arhitecturi de politici instituționale
5. Managementul personalului
6. Agregatori

5

management
supervizare
management de proiect
politici de cercetare
software
Arhitectura calificării personalului
prezervare digitală
soft skills
metadate

4

Taxe de procesare a articolelor
Sherpa Romeo
Perioade de embargo
Arhitecturi de politici instituționale
Drepturi de autor
Creative Commons

3

RDF
SKOS
OWL
SPARQL
Interoperabilitate semantică
Knowledge Organization Systems
ontologii
tezaure
sisteme de clasificare
DublinCore
Cidoc CRM
CERIF
METS
SCHEME
XML
JSON
N3
MARC
AARC
BIBFRAME
OAI-ORE
OAI-PMH
RSS/Atom
SWORD
Comunicare / Protocoale

1

World Digital Library
Europeana.eu
BEPress
DigiTool
Open Source
Soluții personalizate
Soluții proprietare
Digital libraries
Institutional repositories
CRIS Systems
MOOCS / depozite OER
Infrastructuri pentru date
Greenstone
DSpace
EPrints
Moodle
EDx
Principiile FAIR
Open Archival Information Systems OAIS
Common European Research Information Format CERIF

2

Depozite preprint
Cold Spring Harbour Laboratory
bioRxiv
medRxiv
Center for Open Science
PsyArXiv
SocArXiv
ArXiv
Open Science Framework
Zenodo
Covid 19

6

Agregatori
OpenAIRE
SHARE
by

NI4OS
National Initiatives for Open Science in Europe

Digital Science Report
The State of Open Data 2019

O posibilă soluție (anul 2017)

Matricea OS Career Assessment Matrix (OS-CAM) descrie modul în care aceste aspecte mai largi pot fi luate în considerare în contextul recunoașterii contribuțiilor cercetătorilor la Știința Deschisă.

Evaluation of Research Careers fully acknowledging Open Science Practices

Rewards, incentives and/or recognition for researchers practicing Open Science

Written by the Working Group on Rewards under Open Science
July – 2017

TEACHING AND SUPERVISION	
Teaching	Training other researchers in open science principles and methods Developing curricula and programs in open science methods, including open science data management Raising awareness and understanding in open science in undergraduate and masters' programs

Instruirea altor cercetători în principiile și metodele științei deschise
Dezvoltarea curriculei și de programe în metodele științei deschise, incluzând managementul datelor științifice deschise
Creșterea gradului de conștientizare și înțelegere în domeniul științei deschise în programele de licență și masterat

Providing researchers with the skills and competencies they need to practise Open Science

Open Science Skills Working Group Report

2.3. Professional Development for Open Science

Researchers perceive the opportunities for skills development better through actual practice than through training courses as shown in Figure 2.4. They more actively 'learn by doing' in the areas of collaboration and networking, research publishing and dissemination, teaching and supervision, research and data management, research integrity, and popularising science for the general public. Opportunities for learning by doing are lower for involving the general public in research, fundraising and investment pitching, and intellectual property and patenting.

There is a clear need either for more courses or more awareness of existing courses for researchers on Open Science at institutions as in Figure 2.4. One quarter of researchers are aware of courses on research and data management, teaching and supervising, intellectual property and patenting (IPR), research publishing and dissemination, and research integrity. Respondents are less aware of courses on popularising science for the general public, fundraising and investment pitching, involving the general public in research, and collaborating and networking. More opportunities via learning by doing than via courses apply generally for all researchers at all career stages.

Good Practice on Training: The FOSTER portal is an e-learning platform that brings together the best training resources on Open Science.[35] FOSTER offers broad training on all aspects of Open Science and offers specialisation by co-funding community-driven events.

Training opportunities specifically for Open Access and Open Data is likely heavier events than in place from the per... has long been on... have actually follow... majority who woul... noteworthy as four...

Există o nevoie clară pentru mai multe cursuri și mai multă popularizare a celor existente pentru cercetătorii din Științele Deschise

Good Practice on Courses: Leiden University's Centre for Digital Scholarship actively promotes and supports Open Science and offers researchers specialised courses on Open Access and Open Data.[36] The two main courses focus on publishing in Open Access and research data management.

https://ec.europa.eu/research/openscience/index.cfm?pg=skills_wg

… o adevărată familie
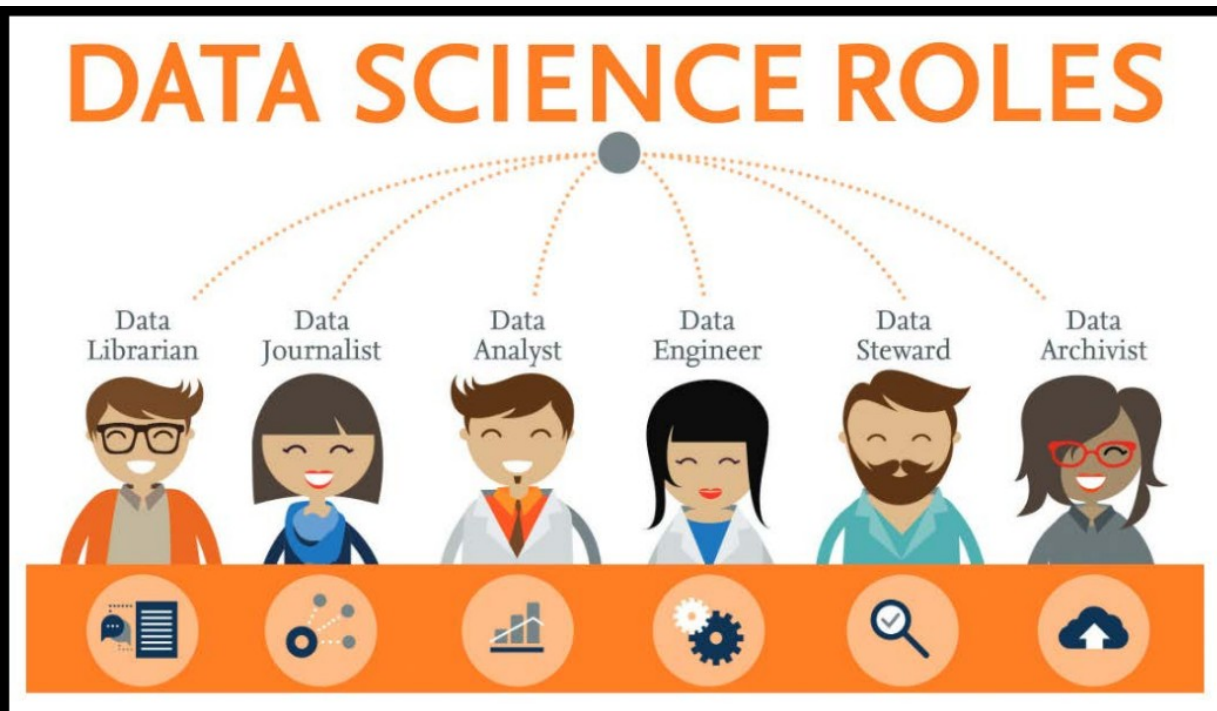
European Commission

Providing researchers with the skills and competencies they need to practise Open Science

Open Science Skills Working Group Report

As stated throughout this document, engagement in Open Science should be viewed in its broadest sense and needs to include citizen scientists and interaction with civil society, media and communication professionals including publishers, medical, legal, engineering and other professionals. Particular attention needs to be paid to developing and growing the cohort of information professionals (which can include librarians, data scientists, data stewards and others). The EDISON project has provided an in-depth description of the qualifications, skills, competences and training required for data professionals. We note here also that, related to this, implementing Open Science practices will also require a new workforce of data stewards who will support researchers, and thus this also opens up new employment opportunities for researchers in all disciplines.[83] These data stewards need to be adequately trained, not only to support researchers in Open Science but also to realise the European Open Science Cloud, and they themselves will need to be supported in their tasks (*e.g.* by setting up national institutes for data stewardship).[84]

Written by the Working Group on Education and Skills under Open Science
July – 2017

Research and Innovation

DATA SCIENCE ROLES

Data Librarian · Data Journalist · Data Analyst · Data Engineer · Data Steward · Data Archivist

A family of new data science roles

Lyon & Brenner (2015) IJDC

EOSCpilot FAIR4S Framework

Definițiile conceptelor de lucru

EOSC pilot delivers the foundation for the European Open Science Cloud 17 Jun 2019 - Marion O'Sullivan

The European Open Science Cloud (EOSC) pilot project has now delivered its final contributions and recommendations, setting strong foundations for the implementation of EOSC in the coming months and years.

https://www.scd.stfc.ac.uk/Pages/EOSCpilot-delivers-the-foundation-for-the-European-Open-Science-Cloud.aspx

FAIR4S

EOSCpilot framework of FAIR data stewardship skills for science and scholarship, and draft recommendations on FAIR training

Key points for consultation

About FAIR4S

The EOSCpilot FAIR4S Framework aims to help you and your organisation to identify the capabilities and skills required to ensure research objects are 'FAIR' (findable, accessible, interoperable and reusable), and that they stay FAIR. In other words the skills to provide stewardship of research outputs. Stewardship skills development is likely to involve a range of 'data experts' - data stewards and other professional groups involved in producing research objects (data managers, data service engineers, and data scientists/analysts).

The European Open Science Cloud is taking shape through EOSCpilot, and its successor projects starting with EOSC-hub, OpenAIRE+, and FREYA. The EOSCpilot Framework offers a template for these projects, their service providers, and the many universities and other Research Producing Organisations (RPOs) that will comprise the EOSC environment. The Framework can be used to identify and describe the competences and learning materials that match the capabilities you need. It offers core competences for data stewardship, relating topics to expertise levels for researchers and the professional groups that support them. The Framework also offers examples of capability and competence statements, focusing these on identified skills gaps.

The Framework has now been published as version 1.0 on the EOSCpilot portal (->) alongside our proposals for Training-as-a-Service in the EOSC. We invite feedback from all those with an interest in skills development for the EOSC, especially training coordinators in Research Infrastructures, e-Infrastructures, and Research Institutions.

We are committed to finalizing the FAIR4S Framework and recommendations about FAIR training in the final months of EOSCpilot to take account of all input received.

Below you will find 5 key points of FAIR4S described further. The 6th point includes our draft recommendations: -

1. Key definitions for the FAIR data stewardship skills context
2. Competences described across relevant professional groups
3. Key dimensions for benchmarking skills development
4. Lifecycle-based approach to describe skills groups
5. Individual-level competences and organisation-level capabilities
6. A path towards FAIR training on FAIR data stewardship

Definiții de lucru pentru o platformă

1. Key definitions for the FAIR data stewardship context

FAIR 4S offers the following definitions that apply key terms in skills development to the FAIR data stewardship context.

https://en.wikipedia.org/wiki/Research_Object

Stewardship	The formalisation of roles and responsibilities and their application to ensure that research objects are managed for long-term reuse, and in accordance with FAIR data principles.
Capability	*Competence* applied at a research team or organisational level, with a defined level of expertise and responsibility, to perform a service role or work in the EOSC environment.
Competence	An element (topic) of theory or practice e.g. 'workflow set-up and management', combined with an *expertise level* to indicate whether someone has an awareness of the area, or an ability to do it, or expert knowledge of it.
Skill	A *competence* or *capability* acquired or applied in a specific context, e.g. producing a research output or deploying a service. A skill may be specified in a 'skills user story'. A badge or certificate may provide evidence that a skill has been acquired, and a publication, personal profile, portfolio or CV may provide evidence that a skill has been applied.

Stewardship [administrare]: Formalizarea rolurilor și a responsabilităților, precum și a modului de aplicare al acestora pentru a se asigura faptul că obiectele de cercetare sunt gestionate pentru reutilizare pe o lungă durată, acestea în concordanță cu principiile datelor FAIR.

Capabilitate: competență aplicată a unei echipe sau la un nivel organizațional care deține un nivel de expertiză și responsabilitate necesar performării unui rol într-un serviciu sau a unei sarcini în mediul EOSC.

Competență: un element (subiect), o teorie sau o practică, de ex. „inițierea unui flux de lucru și a managementului", combinate cu un *nivel de expertiză* care indică dacă cineva are cunoștințele domeniului sau dacă poate performa, ori dacă are cunoștințe la nivel expert.

Abilitate: O *competență* sau o *capacitate* deținută sau aplicată într-un context specific, de ex. constituirea rezultatului unei cercetări sau operaționalizarea unui serviciu. O abilitate poate fi specificată într-o „descriere a abilităților unui utilizator". Un ecuson sau un certificat ar putea oferi dovada că o abilitate a fost dobândită, iar o publicație, un profil personal, portofoliu sau CV ar putea oferi dovada că acea abilitate a fost aplicată.

RECOMANDAREA (UE) 2018/790 A COMISIEI din 25 aprilie 2018 privind accesul la informațiile științifice și conservarea acestora

1 Statele membre **ar trebui să definească** și să pună în aplicare **politici clare** (astfel cum sunt detaliate în **planuri**le **naționale de acțiune**) pentru diseminarea și accesul deschis la publicațiile științifice rezultate din cercetarea finanțată din fonduri publice.

2 Statele membre **ar trebui să se asigure că instituțiile de finanțare** a cercetării responsabile cu gestionarea finanțării publice a activităților de cercetare și instituțiile academice care beneficiază de finanțare publică **pun în aplicare politicile și planurile naționale de acțiune** menționate la punctul 1 la nivel național într-un mod coordonat

3 Statele membre **ar trebui să stabilească și să pună în aplicare politici clare** (astfel cum sunt detaliate în planurile naționale de acțiune) pentru **gestionarea datelor cercetării** rezultate din cercetarea finanțată din fonduri publice, inclusiv accesul liber la acestea.

4 Statele membre **ar trebui să se asigure că instituțiile de finanțare** a cercetării care sunt responsabile cu gestionarea finanțării publice a activităților de cercetare și instituțiile academice care beneficiază de finanțare publică **pun în aplicare politicile și planurile naționale de acțiune**, menționate la punctul 3

5 Statele membre **ar trebui să stabilească și să pună în aplicare politici clare** (astfel cum sunt detaliate în planurile naționale de acțiune) pentru **consolidarea conservării și reutilizării informațiilor științifice** (publicații, seturi de date și alte rezultate ale cercetării).

Data Management Plans

https://www.youtube.com/watch?v=GRNsLTQGjCo

Data Management Plans - Horizon

L. Conditions related to open access to research data

Participants will engage in research data sharing, according to Article 29.3 of the Horizon 2020 Model Grant Agreement(s). This means that beneficiaries must deposit and take measures to make it possible for third parties to access, mine, exploit, reproduce and disseminate, free of charge for any user: (1) data needed to validate the results presented in scientific publications ('underlying data'); and (2) other data as specified by the beneficiaries in their Data Management Plan (DMP, see below).

Projects can "opt-out" of these provisions before or after the signature of the grant agreement (thereby freeing themselves from the associated obligations) on the following grounds:

a) Incompatibility with the Horizon 2020 obligation to protect results that are expected to be commercially or industrially exploited

b) Incompatibility with the need for confidentiality in connection with security issues

c) Incompatibility with rules on protecting personal data

d) Incompatibility with the project's main aim

e) If the project will not generate / collect any research data, or

f) If there are other legitimate reasons not to provide open access to research data

Any costs related to the implementation of these provisions are eligible for reimbursement during the duration of the grant.

A proposal will not be evaluated more favourably if the consortium agrees to share its research data, nor will it be penalised if it opts-out.

Further information on open access to research data is available on the Participant Portal.

A Data Management Plan (DMP) details what data the project will generate, how it will be exploited and made accessible for verification and re-use, and how it will be curated and preserved. The use of a Data Management Plan is obligatory for all projects that do not opt-out. Projects that opt-out are also strongly encouraged to submit a Data Management Plan if relevant for their planned research. Further information on Data Management Plans is available on the Participant Portal.

O simplă căutare după cheia *data management plan template* este tot ceea ce este nevoie.

https://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-dissemination_en.htm

https://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-data-management/data-management_en.htm

https://osf.io/v5zv9/

Managementul personalului (5)
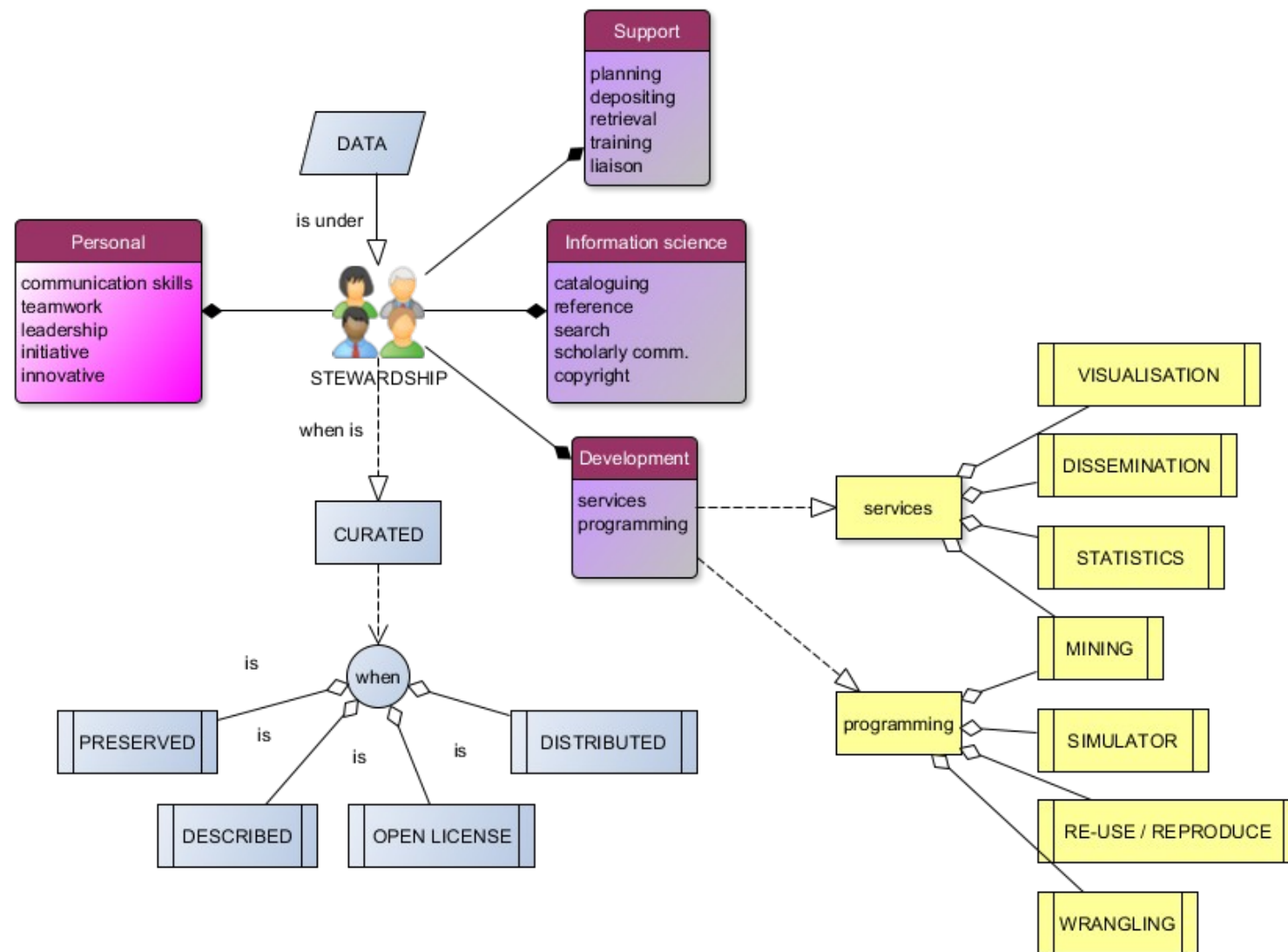
Constantinescu, N. (2018). Data Librarian, the Steward. Revista Română De Biblioteconomie și Știința Informării = Romanian Journal of Library and Information Science, 14(4), 113-121. https://doi.org/10.2666 0/rrbsi.2018.14.4.113

Metadate

https://rd-alliance.github.io/metadata-directory/

https://rd-alliance.github.io/metadata-directory/standards/
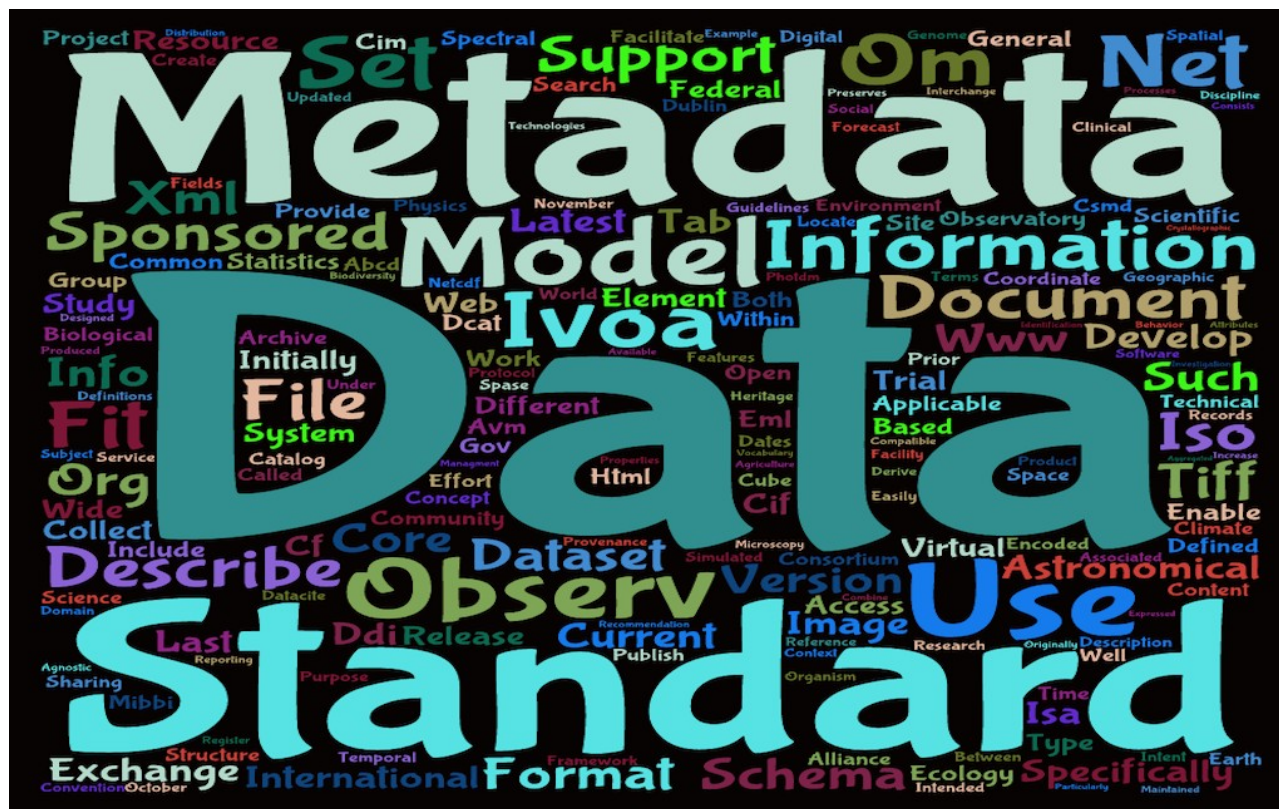
FAIRsharing.org
standards, databases, policies

https://fairsharing.org/

Social Science & Humanities

Physical Science

General Research Data
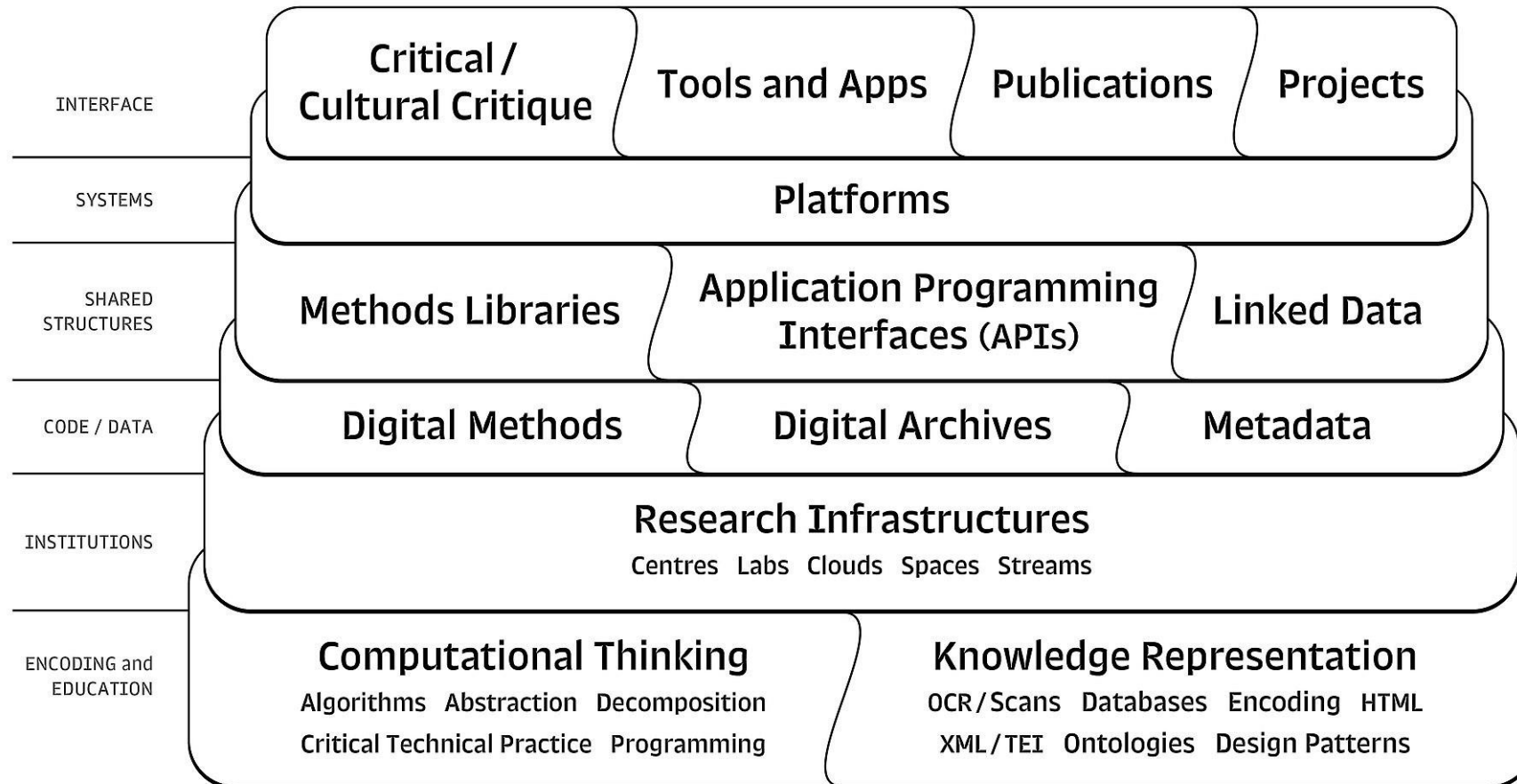
Earth Science

Biology

https://www.dcc.ac.uk/guidance/standards/metadata
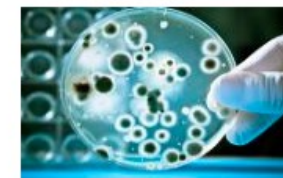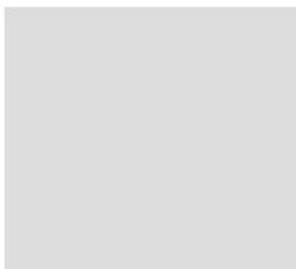
Nu este ceva apărut din senin

The Digital Humanities Stack (from Berry and Fagerjord, *Digital Humanities: Knowledge and Critique in a Digital Age*)

Recteur honoraire, ULiège. Président de WBE (Wallonie Bruxelles Enseignement). Virologist. Volunteer for the cause of fair, open and public science.

EUROPEAN RESEARCH & INNOVATION DAYS

Universities should be incentivised to:

1. build **national consortia on evaluation** to unify assessment procedures ;
2. create an **institutional committee on evaluation policy** ;
3. determine **institution-specific assessment criteria and narratives** ;
4. set up **training programmes** ;
5. ensure that **criteria of doctoral programmes meet OS principles.**

Bernard Rentier

European Commission

#RiDaysEU

Mulțumesc!

https://datascience.nih.gov/news/case-making-data-open-possible

https://rdr.ucl.ac.uk/articles/presentation/
Presentations_from_the_Launch_of_the_UCL_Research_Data_Repository/8313395

https://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-data-management/open-access_en.htm

https://en.wikipedia.org/wiki/Open_data