FAIRSFAIR

Fostering Fair Data Practices in Europe

Coming together to build a FAIR and functioning EOSC

Ingrid Dillo, Marjan Grootveld, Simon Hodson, Sara Pittonet,
FAIRsFAIR Synchronisation Force

Introduction to the second workshop

29th April 2020

FAIRsFAIR "Fostering FAIR Data Practices in Europe" has received funding from the European Union's Horizon 2020 project call H2020-INFRAEOSC-2018-2020 Grant agreement 831558

How FAIR is Research in Europe today

Image: Mabel Amber via Pixabay

Plan for today

- Introduction to FAIRsFAIR and the Synchronisation Force
- Stakeholders in this workshop
- Looking back on the first Synchronisation Force workshop (November 2019)
- Goal of this workshop and intended output
- Recap of the *Turning FAIR into Reality* recommendations
- What do we expect from you?
- Q&A

On a practical note:

- Please mute your microphone when you don't speak.
- During the introduction please use the chat for questions.
- Please save this link to join the FAIRsFAIR Synchronisation Workshop series: https://us02web.zoom.us/j/82343510738. You can use this link for all workshops.
- Reminders will be sent prior to each session, including details about its structure, chairs and rapporteurs.

Our objective

Help **survey the landscape of FAIR activities** in relation to EOSC and identify where dialogue and collaboration can be encouraged.

Create a **basis for harmonisation** efforts to bring together the various actors working in the **FAIR ecosystem** and build a **functioning EOSC** and **active community** around EOSC.

Specifically this workshop – a virtual series – aims to **identify overlaps, divergences and challenges** related to FAIR within the EOSC framework, with a special focus being given to the recommendations for «Turning FAIR into Reality».

Overall project aim

- *'FAIRsFAIR addresses the development and concrete realisation of an overall knowledge infrastructure on academic quality data management, procedures, standards, metrics and related matters based on the FAIR data principles';*

- 'The objective is to accelerate the realization of the goals of the EOSC by opening up and sharing all knowledge, expertise, guidelines, implementations, new trajectories, courses and education on FAIR matters';

- Implementation of recommendations from the EOSC HLEG and the Expert Group on FAIR Data.

FAIRsFAIR in a nutshell

Call: H2020-INFRAEOSC-5c

Budget: 10 million euro

Length: 36 months
Starting date: March 1 2019

22 partners from 8 MS
6 core partners

FAIRSFAIR
Fostering Fair Data Practices in Europe

FAIRsFAIR partners

Data Archiving and Networked Services
DANS

Trust-IT Services
ICT to markets

Universiteit van Amsterdam

DCC

HELSINGIN YLIOPISTO
HELSINGFORS UNIVERSITET
UNIVERSITY OF HELSINKI

COMMITTEE ON DATA
CODATA
INTERNATIONAL SCIENCE COUNCIL

eua EUROPEAN UNIVERSITY ASSOCIATION

uc3m | Universidad Carlos III de Madrid

CSC

Inria

Universidade do Minho

SURF SARA

SPARC Europe

University of Essex

DataCite
FIND, ACCESS, AND REUSE DATA

Science & Technology Facilities Council | UK Research and Innovation

escience data FACTORY

GEORG-AUGUST-UNIVERSITÄT GÖTTINGEN

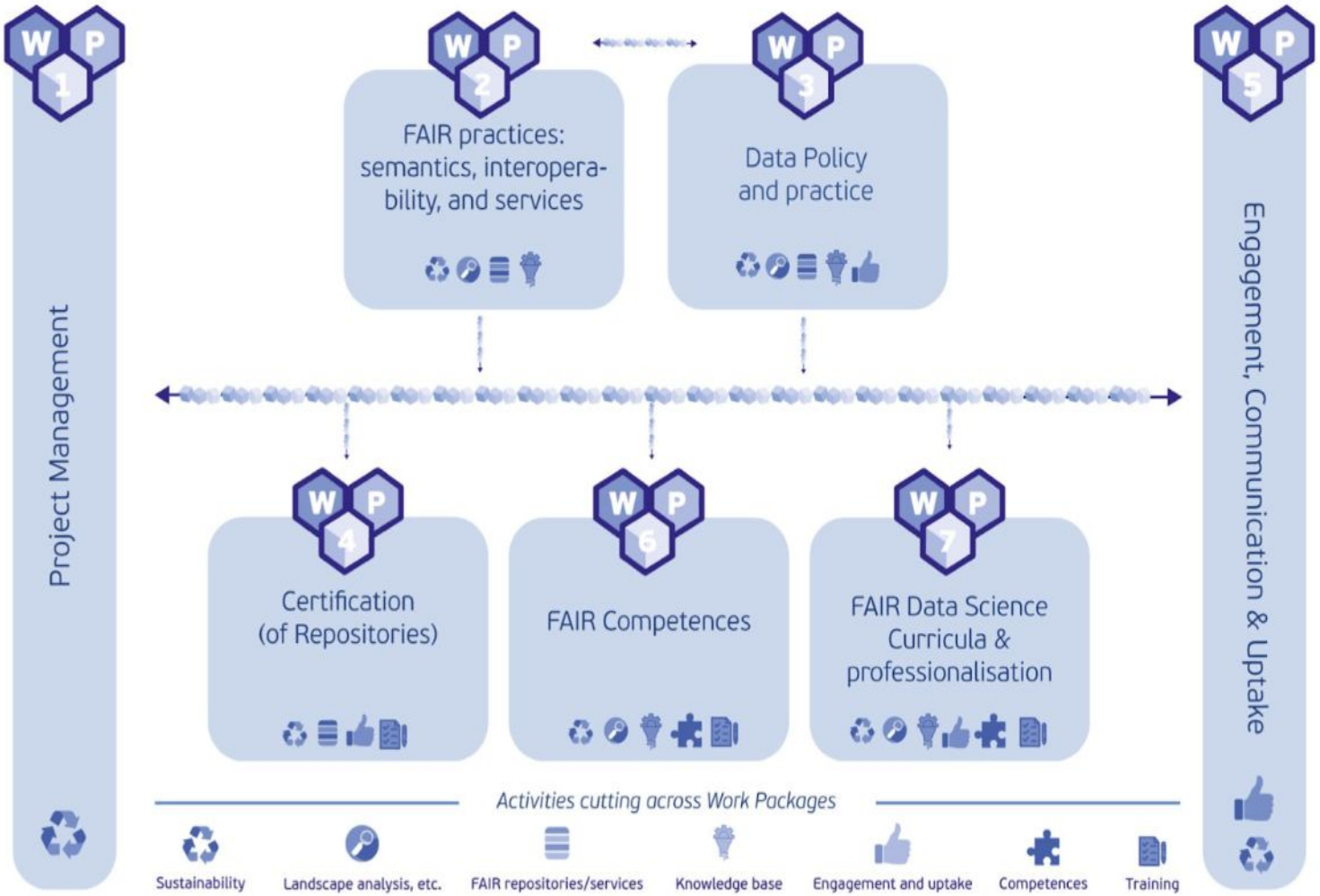
INES
Centre Informatique National de l'Enseignement Supérieur

RDA
RESEARCH DATA ALLIANCE

DTL

Universität Bremen

Work Packages



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Fostering Fair Data Practices in Europe

FAIRSFAIR IN ACTION

- IMPROVE INTEROPERABILITY OF FAIR RESOURCES
- INCREASE PRODUCTION AND USE OF FAIR DATA
- BUILD A NETWORK OF TRUSTED DIGITAL REPOSITORIES
- SET UP A FAIR COMPETENCE CENTRE FOR ALL COMMUNITIES
- DEVELOP A CAPABILITY MATURITY MODEL TOWARDS FAIR CERTIFICATION
- EMBED FAIR DATA EDUCATION IN UNIVERSITY PROGRAMMES
- ORGANISE AN OPEN CALL FOR REPOSITORIES TO GET SUPPORT FOR CERTIFICATION

www.fairsfair.eu/

Main Challenges

- Coherence within the project
- Serving an evolving EOSC governance structure
- Creating synergies with all FAIR-related projects, initiatives and activities in Europe *and beyond*

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EOSC Governance Board

EOSC Executive Board

(5a)

EOSC secretariat.eu
Setup and management of the EOSC Secretariat supporting the EOSC Governance

Regional Nodes / Thematic Projects (5b)

EOSC SYNERGY · NI4OS · EOSC-Pillar · EOSC NORDIC · ExPaNDS

FAIR (5c)

FAIRSFAIR · Synchronisation Force · EGFC European Group of FAIR Champions

EOSC working groups

- Landscape WG
- Sustainability WG
- Rules of Participation WG
- Architecture WG
- FAIR WG
- Skills & Training WG

FAIR WG task groups:
- FAIR practice
- Interoperability
- PIDs
- Metrics and certification

INFRAEOSC-5 Cross Project Collaboration Board (CPCB)

INFRAEOSC-5 Task Forces:
- Landscaping
- FAIR data and infrastructures
- Services onboarding
- National policies and governance
- Training and skills
- Dissemination and events

EOSC Interest Groups:
- Researcher engagement and use cases
- Service and research product catalogue
- Federating core
- Glossary

'Horizontals'

ARCHIVER · PRACE · eInfra Central · RDA Research Data Alliance · OpenAIRE · OCRE Open Clouds for Research Environments · EOSC-hub

ESFRI Clusters

FAIR ENVRI · panosc photon and neutron open science cloud · ESCAPE · SSHOC · EOSC-Life

Other FAIR initiatives

FAIR4Health · STM Research Data · GO FAIR · FAIRsharing.org standards, databases, policies · FAIRplus

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Fostering Fair Data Practices in Europe

The High Level Advisory Committee

Jaana Bäck
Affiliation: University of Helsinki
Country: Finland

Jaana Bäck, University of Helsinki (UHEL), Institute for Atmosphere and Earth System Research INAR. Prof. Jaana Bäck's field is forest-a She has contributed to the conceptual understand processes, e.g. biogeochemical cycles, trace gas ex by environmental factors. In particular, she is inter sinks and contribute to atmospheric aerosol forma change especially in arctic and boreal regions. She 30 years, and has studied e.g. the effects of atmosp

in Linkedin | Twitter

David Carr
Affiliation: Wellcome Trust
Country: United Kingdom

David Carr is Programme Manager for Open Resea efforts to maximise the availability and use publications, software and materials), in ways that accelerate the delivery of health benefits. Prior Wellcome where he led on work to develop and co areas, including research data sharing, open access

in Linkedin |

Patricia Clarke
Affiliation: Health Research Board (HRB)
Country: Ireland {Republic}

Dr. Clarke is Programme Manager, Policy and EU Ireland and a National Delegate in H2020 Societal and Wellbeing. Dr. Clarke has a particular interest the HRB Open Research publishing platform. She Research Forum with the Higher Education Authori expert group on National Points of Reference on Sc

in Linkedin | Twitter

Rūta Petrauskaitė
Affiliation: Vytautas Magnus University
Country: Lithuania

Rūta Petrauskaitė is a professor at Vytautas Magnus University and a proponent of data-driven research, Open Access and data sharing initiatives. With research interests ranging from corpus and computational linguistics to discourse analyses, she has initiated and supervised compilations of the first big corpora of the Lithuanian language and performed corpus-based research in most fields of linguistics.

in Linkedin |

Carthage Smith
Affiliation: Organisation for Economic Co-operation & Dev
Country: United Kingdom

Dr. Smith joined the Organisation for Economic Co-oper 2014 as head of the Global Science Forum Secretariat. His define the overall strategy and priorities for the Forum, inc infrastructures, Open Science, research funding mech processes.

in Linkedin |

Shelley Stall
Affiliation: American Geophysical Union
Country: United States

Shelley Stall is the Senior Director for the American Geop Program. She works with AGU's members, their organiza community to improve data and digital object practices w how research data is managed and valued. Better data science.

in Linkedin | Twitter

Francoise Genova
Affiliation: Strasbourg Astronomical Data Centre
Country: France

Ms. Genova is one of the founders of the astronomic chaired the International Virtual Observatory Alliance (IVO and has led operations in France since 2004. She has European projects on behalf of CNRS. Director of the Stra from 1995 to 2015, Ms Genova led the Data Access, Dis Package of the European ASTERICS Cluster, the aim of w data coming from the astronomical and astroparticle projects.

|

Stan Gielen
Affiliation: Dutch Research Council: NWO
Country: Netherlands

Dr. Gielen holds a PhD in biophysics and worked at Nor University Utrecht before being appointed as Full Prof University Nijmegen (1988) with a chain in both the scie 2010 to 2016 he served as dean of the Faculty of Science.

in Linkedin | Twitter

Thomas Hahn
Affiliation: Siemens
Country: Germany

Thomas Hahn has been Chief Software Expert at Siemer computer science at Friedrich-Alexander University of Erl 1986 and worked as a product developer in the field of in 1993 he moved to Nuremberg, where he worked in produ as a project manager responsible for development of worked as Head of Development atTraffic Control Systems

in Linkedin |

European Group of FAIR Champions
Current Members

Mark Allen
- **Affiliation:** Strasbourg Astronomical Data Centre
- **Country:** France

Isabel Bernal
- **Affiliation:** DIGITAL.CSIC
- **Country:** Spain

Alastair Dunning
- **Affiliation:** Delft University of Technology
- **Country:** Netherlands

Odile Hologne
- **Affiliation:** French Institute for Agricultural Research
- **Country:** France

Maria Johnsson
- **Affiliation:** Lund University
- **Country:** Sweden

Eetu Mäkelä
- **Affiliation:** University of Helsinki
- **Country:** Finland

Andreas Rauber
- **Affiliation:** Tech Uni Vienna
- **Country:** Austria

Susanna-Assunta Sansone
- **Affiliation:** University of Oxford
- **Country:** United Kingdom

Barbara Sierman
- **Affiliation:** Digital Preservation
- **Country:** Netherlands

Eefke Smit
- **Affiliation:** International Association of STM Publishers
- **Country:** Netherlands

Tobias Weigel
- **Affiliation:** German Climate Computing Center
- **Country:** Germany

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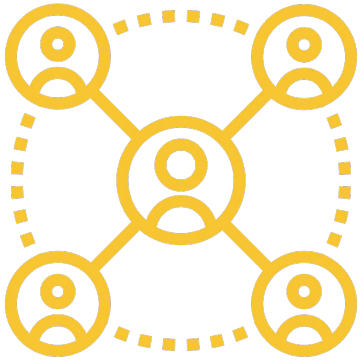
Synchronisation Force

Establishing a dialogue among the various projects and actors in the EOSC Ecosystem whose work touches on FAIR in order to:



- Maximise coordination & minimise unnecessary overlap or duplication;
- Encourage the dovetailing of projects' and actors' activities with EOSC governance;
- Promote mechanisms to collaborate on turning FAIR into reality.

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INFRAEOSC5 projects

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ARCHIVER, PREEVA, eInfra Central, RDA Research Data Alliance, OpenAIRE, OCRE Open Clouds for Research Environments, EOSC-hub

ESFRI Clusters

FAIRCORE ENVRI, panosc photon and neutron open science cloud, ESCAPE, SSHOC, EOSC-Life

Other FAIR initiatives

FAIR4Health, STM Research Data, GO FAIR, FAIRsharing.org standards, databases, policies, FAIRplus

INFRAEOSC-5 Collaboration Board & Task Forces

INFRAEOSC-5 Cross Project Collaboration Board

Overseeing the collaboration between the INFRAEOSC-5 abc projects. EOSCsecretariat project (5a) supports and funds it.

INFRAEOSC-5 Task Forces

1. Landscaping
2. **FAIR data and infrastructure - Lead by FAIRsFAIR**
3. Training & Skills
4. Service on-boarding
5. National Policies & Governance
6. Communication & Dissemination

FAIRSFAIR
Fostering Fair Data Practices in Europe

FAIRsFAIR Work Packages

- Internal Synchronisation Force, functioning as a linking pin between the activities within the project and the EOSC WGs: FAIR, landscaping, RoP, sustainability, architecture, ..
- 3 workshops producing reports, that will feed into a White Paper

Synchronisation Force

- Synch… …IR …es and

First Synchronisation Force workshop
25th November 2019 in Budapest:
Focus on the EOSC Working Groups

EOSC Working Groups

Changes since the first workshop

- The EOSC Working Group Skills and Training has started its activities.
- The European Group of FAIR Champions grew from 5 to 11 members.
- "The importance of clustering activities and outputs around recommendations from the *Turning FAIR into Reality* report was underemphasized during the first workshop" > this is now the main structure of the workshop series
- "The question of who gets a seat a the table (…) was raised various times". "The 2nd SF workshop will incorporate more stakeholders" > this time ESFRI clusters and INFRAEOSC5 projects were invited. For the 3rd SF workshop in autumn the horizontal projects will be invited.
- FAIRsFAIR will deliver a "Synchronisation Force digest".

FAIRsFAIR *D5.3 Report on the First Synchronisation Force Workshop*
https://doi.org/10.5281/zenodo.3629159

Workshop members

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(5a)

EOSC secretariat.eu

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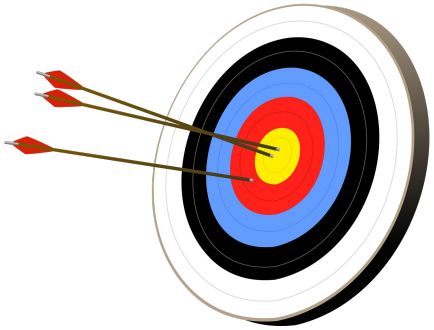
Goal of the workshop and final output



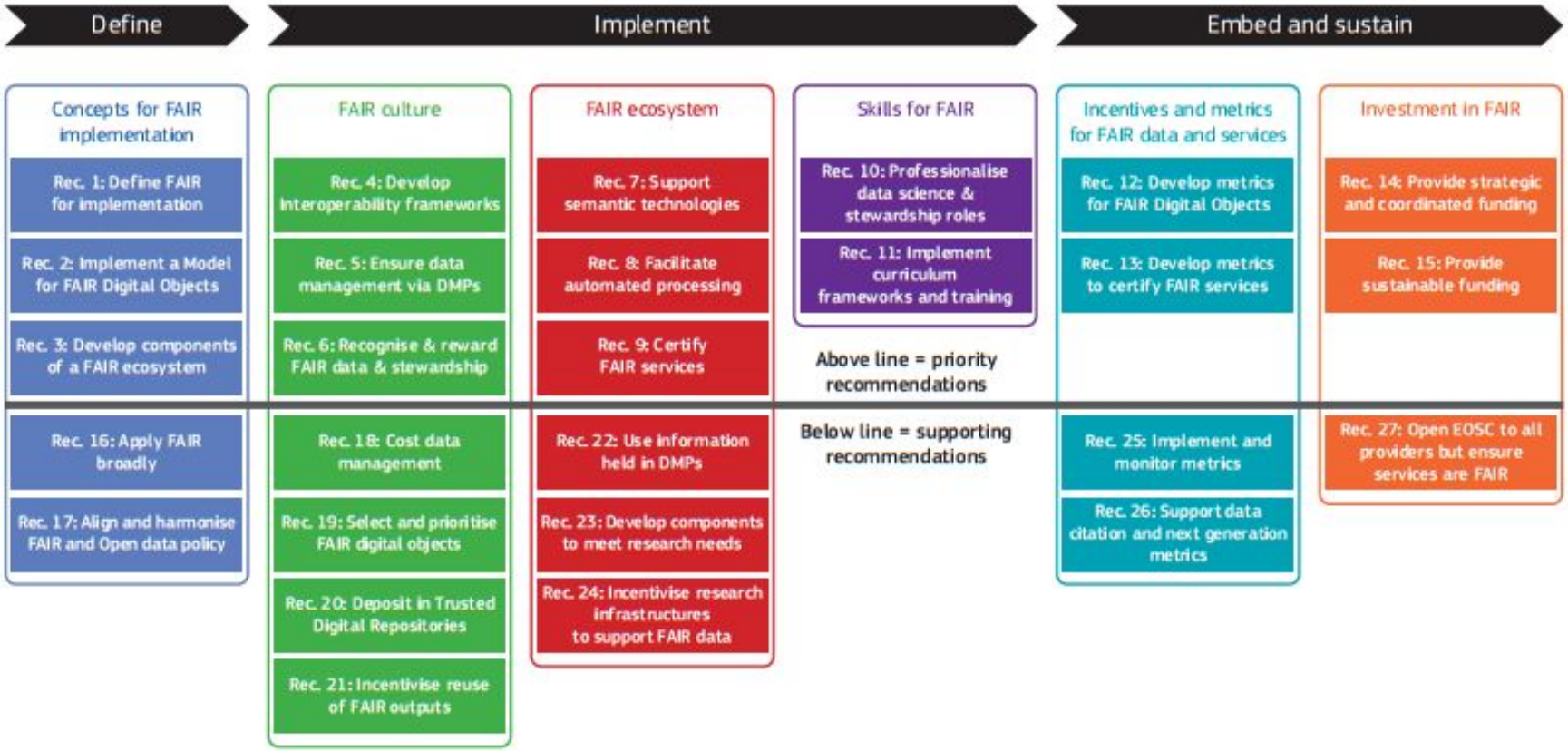
- Goal: chart how the represented projects and initiatives contribute to carrying out the recommendations from the "Turning FAIR into Reality" report.

- Output of this workshop:
  - Spreadsheet of all recommendations – priority and supporting – and all projects and WGs activities.
  - Workshop report (draft report shared before final plenary session).

- Output of the *three* workshops (2019-2020): White Paper with recommendations for how to encourage alignment and synchronisation around FAIR, Open Science and EOSC.

Turning FAIR into Reality: Recommendations

The Synchronisation Force will map the FAIRsFAIR, EOSC WG and other EOSC FAIR outputs to the TFIR recommendations and track progress and make necessary recommendations to the EOSC Governance Board. **Read FAIR Action Plan: pp.59-75.**



FAIRsFAIR Synchronisation Force

To work with partners to...

1. Maximise coordination and minimise unnecessary overlap or duplication;
2. Encourage the dovetailing of projects' and actors' activities with EOSC governance;
3. Promote mechanisms to collaborate on turning FAIR into reality.

FAIRsFAIR Synchronisation Force Workshops

- An analysis of how well stakeholders, groups, projects etc are responding to the Turning FAIR in Reality Recommendations and Action Plan
  - Are there gaps? Are there recommendations that are not being addressed?
    - Does this mean that effort needs to be directed at this recommendation? Or that the recommendation is unnecessary?
  - Are there activities that are not covered by the recommendations?
    - Does this mean that the recommendations need to be expanded?

Completing the Spreadsheet

Our first request: re-read the recommendations in "Turning FAIR into Reality". Read FAIR Action Plan: pp.59-75. Consider the **actions** as necessary to help flesh out the recommendation and help reporting below.
Our second request: add your project activities to the spreadsheet at least two days before the relevant pillar session:
https://bit.ly/FsF-SF-outputs-sheet

1.a. What have you already done that addresses the recommendations?
1.b. What has your project planned and scheduled which will address these recommendations?

Please provide brief but usable information: name of activity/output, short description; title, URL, deliverable number and due date where possible.

Please make sure the spreadsheet is completed BEFORE the virtual workshop session.

Virtual Workshop Sessions

Consider the recommendations for the pillar you are addressing.

Address the **priority recommendations** first; the supporting recommendations if you have time.

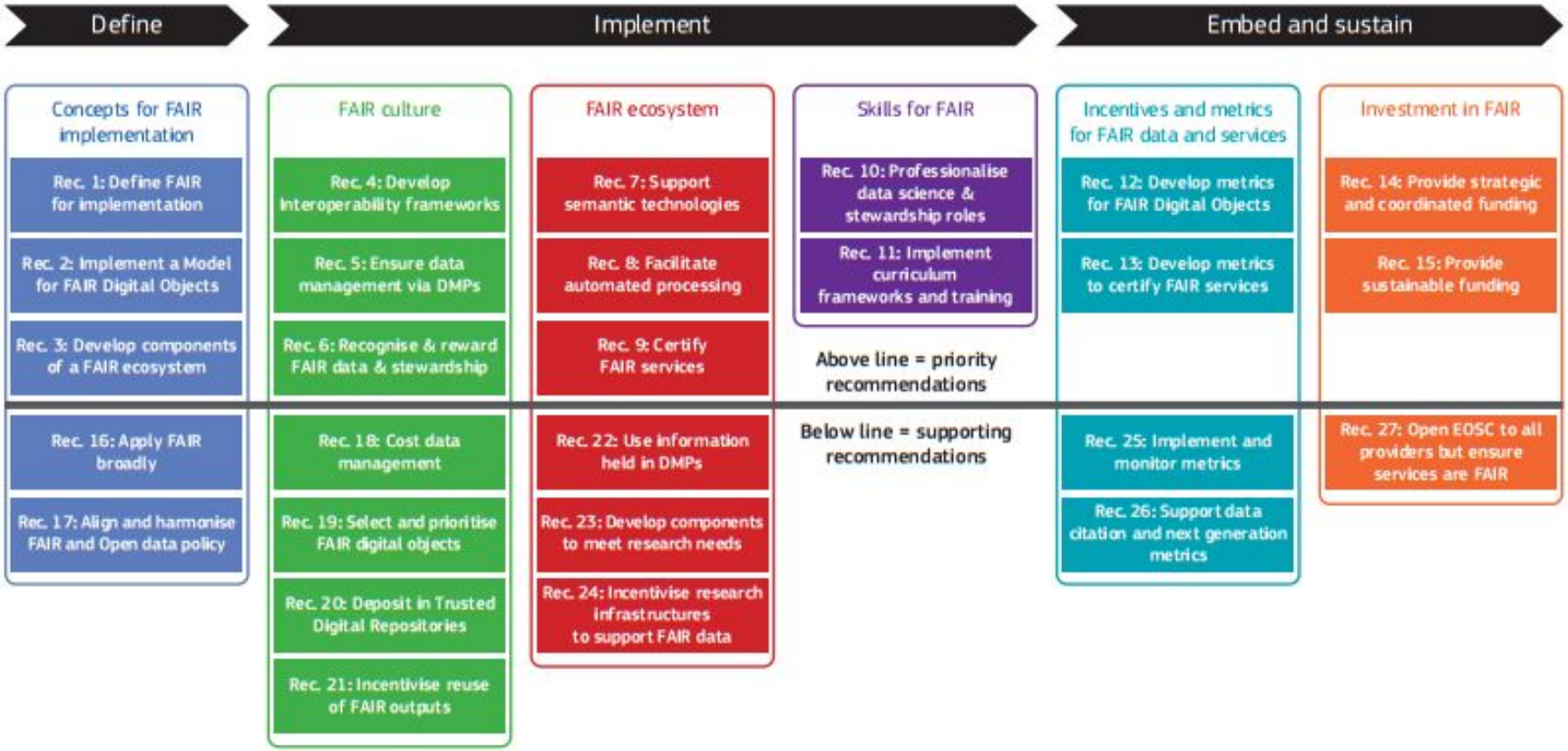
2.a. Are you doing anything of significance related to implementing FAIR in the context of the EOSC that is not covered by the recommendations?
2.b. Does this need to be included in an updated action plan and revised set of recommendations?

3. For this pillar can you identify any gaps, any recommendations that are NOT being addressed?

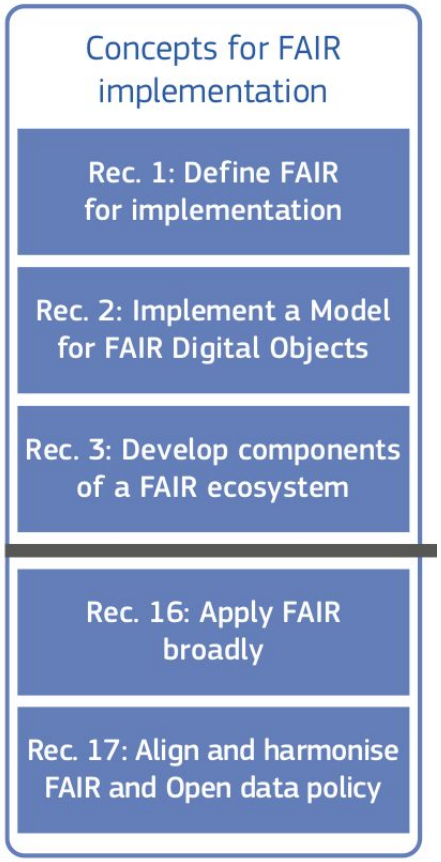
Capture the discussions and information in template (to be provided).

Turning FAIR into Reality: Recommendations

The Synchronisation Force will map the FAIRsFAIR, EOSC WG and other EOSC FAIR outputs to the TFIR recommendations and track progress and make necessary recommendations to the EOSC Governance Board. **Read FAIR Action Plan: pp.59-75.**



TFiR Pillar 1: Concepts



Rec. 1: Define FAIR for implementation
Incorporate and emphasise concepts that are implicit in the FAIR principles, namely: data selection, long-term stewardship, assessability, legal interoperability and the timeliness of sharing.

Rec. 2: Implement a model for FAIR Digital Objects
By definition, these have a PID linked to different types of essential metadata including provenance and licencing. Use of community standards… rich documentation.

Rec. 3: Develop components of a FAIR ecosystem
[Requires], at minimum, the following essential components: policies, Data Management Plans, identifiers, standards and repositories. There need to be registries cataloguing each component of the ecosystem, and automated workflows between them.

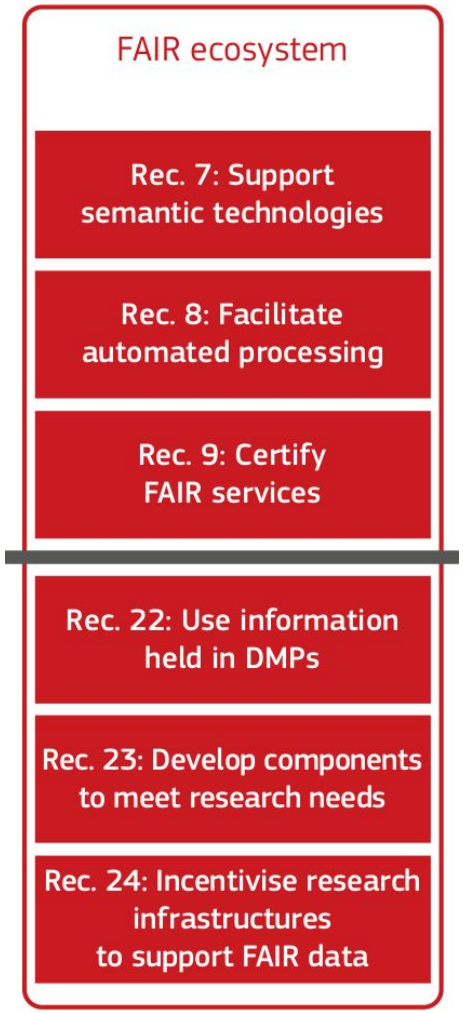
TFiR Pillar 2: Culture

Rec. 4: Develop interoperability frameworks for FAIR sharing within disciplines and for interdisciplinary research

Rec. 5: Ensure Data Management via DMPs
All research projects producing or collecting data should have create a DMP, which provides information of all relevent outputs as FAIR Digital Objects.

Rec. 6: Recognise and reward FAIR data and data stewardship

TFiR Pillar 3: Ecosystem

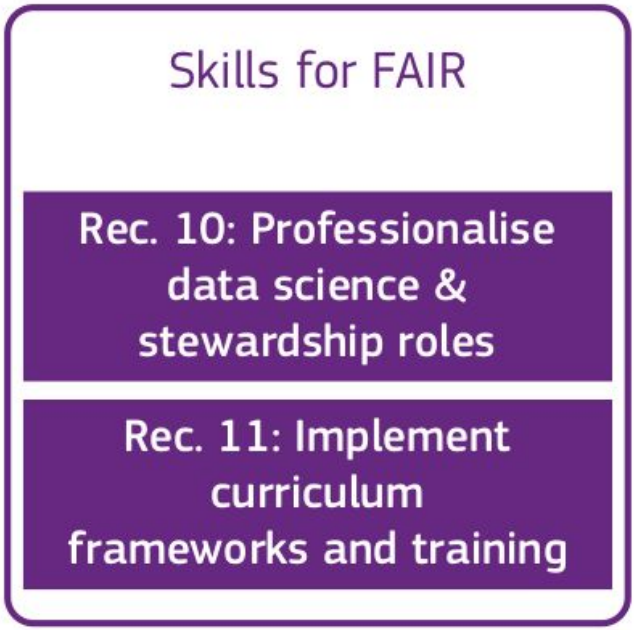


Rec. 7: Support semantic technologies
7.1: metadata specifications and standards, vocabularies and ontologies; 7.2: common protocols...

Rec. 8: Facilitate automated processing
8.1: develop automated workflows (for data access, aggregation, analysis); 8.3: develop mechanisms to broker requests...

Rec. 9: Develop assessment frameworks to certify FAIR services
Data services must be encouraged and supported to obtain certification, as frameworks to assess FAIR services emerge. Existing community-endorsed methods to assess data services, in particular CoreTrustSeal (CTS) for trusted digital repositories, should be used as a starting point to develop assessment frameworks for FAIR services.

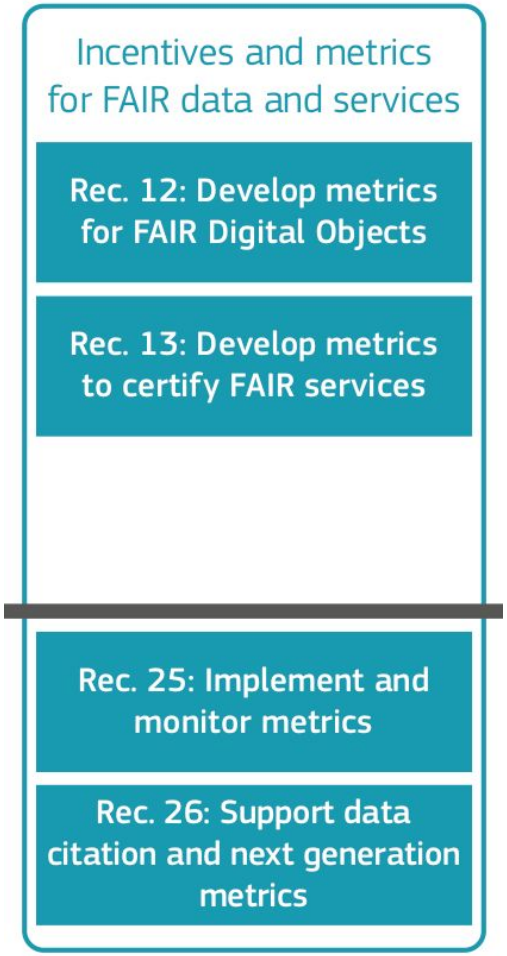
TFiR Pillar 4: Skills



Rec. 10: Professionalise data science and data stewardship roles and train researchers
Steps need to be taken to develop two cohorts of professionals to support FAIR data: data scientists embedded in research projects, and data stewards who will ensure the management and curation of FAIR data. All researchers also need a foundational level of data skills.

Rec. 11: Implement curriculum frameworks and training
A concerted effort should be made to coordinate and accelerate the pedagogy for professional data roles. To support uptake, skills transfer schemes, fellowships, staff exchanges and informal training opportunities are needed, as well as formal curricula.

TFiR Pillar 5: Incentives, Metrics



Rec. 12: Develop metrics for FAIR Digital Objects
A set of metrics for FAIR Digital Objects should be developed and implemented, starting from the basic common core of descriptive metadata, PIDs and access.

Rec. 13: Develop metrics to certify FAIR services
Certification schemes are needed to assess all components of the ecosystem as FAIR services. Existing frameworks like CoreTrustSeal (CTS) for repository certification should be used and adapted rather than initiating new schemes based solely on FAIR, which is articulated for data rather than services.

TFiR Pillar 6: Investment

Rec. 14: Provide strategic and coordinated funding
Funders should adopt a coordinated approach to supporting core infrastructure and services, building on existing investments where appropriate. Funding should be tied to certification schemes, sustainable business models and other community-vetted indicators that demonstrate viability.

Rec. 15: Provide sustainable funding
Funders who issue requirements on FAIR must provide support to ensure the components of the FAIR ecosystem are maintained at a professional service level with sustainable funding. Service providers should explore multiple business models and diverse income streams.

Recommendations and Actions

Rec. 7: Support semantic technologies

Semantic technologies are essential for interoperability and need to be developed, expanded and applied both within and across disciplines.

Action 7.1: Programs need to be funded to make semantic interoperability more practical, including the further development of metadata specifications and standards, vocabularies and ontologies, along with appropriate validation infrastructure.
Stakeholders: Funders; Standards bodies; Coordination fora; Research communities.

Action 7.2: To achieve interoperability between repositories and registries, common protocols should be developed that are independent of the data organisation and structure of various services.
Stakeholders: Data service providers; Standards bodies.

Action 7:3: Field-specific approaches to expressing semantic relationships should be more closely aligned with web-scale technologies and standards.
Stakeholders: Research communities; Standards bodies; Coordination fora.

Related recommendations: Rec. 4: Develop interoperability frameworks for FAIR sharing.

Completing the Spreadsheet

Rec. 12: Develop metrics for FAIR digital output	D4.1 (Feb 2020) Draft recommendations on requirements for FAIR datasets in certified repositories: https://doi.org/10.5281/zenodo.3678716 and M4.9 (Aug 2020) Report on FAIR data assessment mechanisms to develop pragmati concepts for FAIRness evaluation at the dataset level

Planning and wrap-up

6-14 May: six working sessions, each builds around one of the 'pillars' of the "Turning FAIR into Reality" Report.

Our first request: re-read the recommendations (and actions) in "Turning FAIR into Reality".
Our second request: add your project activities to the spreadsheet at least two days before the relevant pillar session:
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Reminders will be sent prior to each session.

Summaries of each session will be circulated to all participants in the form of a draft 'workshop report', plus some questions to you.

11 June, 14.00-15.30: plenary discussion with working session participants, providing an opportunity to refine the content of the draft reports.

Thank you for contributing to the video *How FAIR is Research in Europe today*.

Questions?

www.fairsfair.eu

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In/fairsfair

info@fairsfair.eu