EOSC Task Force
FAIR Metrics and Data Quality

Carlo Lacagnina & Mark Wilkinson
Task Force co-Chairs
- A *multidisciplinary advisory group* of 26 experts in biology, metrology, climatology, data science and management, philosophy, computer sciences, etc. Experts come from 17 different European countries

- Kick-off in December 2021. Two co-chairs coordinate this EOSC TF: Mark Wilkinson and Carlo Lacagnina

- Bi-weekly meetings over two years in a mixed method approach including virtual discussions, workshops organization and participation, use cases collection, and survey dissemination
Goals of this Task Force

• Explores issues related to the governance of FAIR evaluations
• Examine the problem of inconsistency between FAIR evaluation tools
• Evaluate the applicability and uptake of FAIR Metrics across research communities
• Undertake a state of the art to generate mutual understanding about data quality
• Conduct several case studies to identify common features and dimensions to define a data quality approach for EOSC.
FAIR Metrics group

Current status
• Explore issues related to the governance of FAIR evaluations
  - Who has the authority to decide what should be tested, how, and what is a successful result? There are (at least) 17 different FAIR evaluation systems, and nobody knows which one to trust
  - This is extremely problematic, when agencies and publishers are beginning to demand FAIRness

• Examine the problem of inconsistency between FAIR evaluation tools
  - Evaluators are generating dramatically different results

• Evaluate the applicability and uptake of FAIR Metrics (specifically RDA Maturity Indicators)
  - Ongoing… Measuring the effect that a well-governed and consistent FAIR assessment ecosystem will have on stakeholders’ perceived trust in FAIRness evaluations, and their willingness to be evaluated using these tools.
FAIR Metrics Group: Three key objectives

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Outcomes:

Whitepaper on Governance for peer review and to initiate a discussion around governance models for FAIR metrics and testing.

Objective: a self-sustaining, peer-reviewed mechanism for approving FAIR metrics and tests (including domain-specific!) that is trusted by the broad community of stakeholders.
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Inconsistency between FAIR evaluation tools

Evaluator harmonization: find a common workflow

FAIR Signposting: a no-guesswork, unambiguous specification for pointing between a canonical identifier, the data it represents, and the metadata about that data

Table 1: Link Relations used by FAIR Signposting

<table>
<thead>
<tr>
<th>Relation</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>cite-as</td>
<td>A one-to-one relationship between the entity and its globally unique identifier</td>
</tr>
<tr>
<td>describedby</td>
<td>A one-to-many relationship between the entity and all known metadata records about that entity</td>
</tr>
<tr>
<td>item</td>
<td>A one-to-many relationship between an entity representing a deposit and the data file(s) it contains.</td>
</tr>
</tbody>
</table>

Four TF-hosted Hackathons → specification and reference environment for checking that all evaluators are behaving identically when faced with a FAIR Signposting-compliant site
Inconsistency between FAIR evaluation tools

Evaluator harmonization: find a common workflow

A FAIR Signposting-compliant metadata harvesting engine has now been published @ UPM that can be used by all Evaluator systems.
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Thank you!

Presented by Mari Kleemola, Tampere University/FSD and CESSDA ERIC
TF member
mari.kleemola@tuni.fi