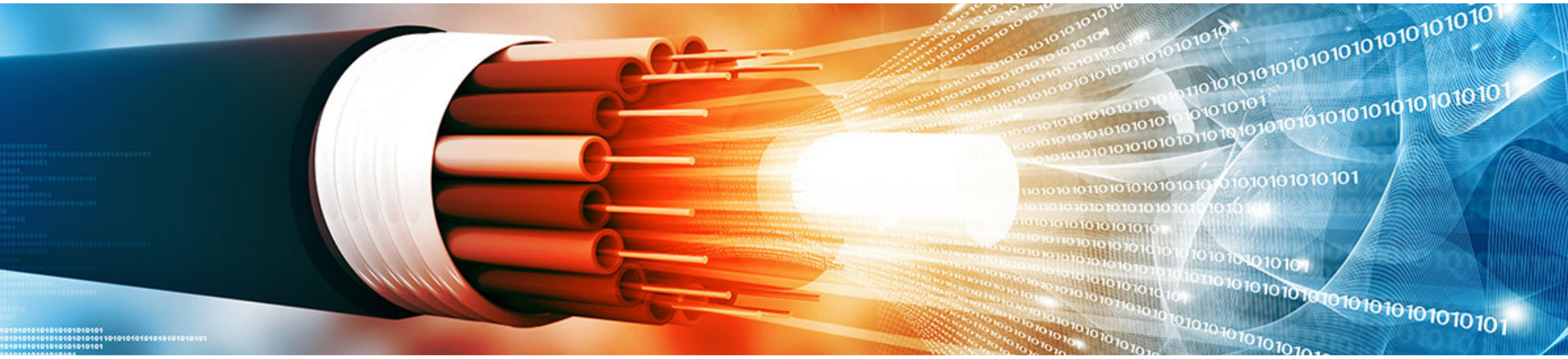


EOSC NORDIC

EOSC-Nordic FAIR assessments

Andreas O Jaunsen
(NeIC, WP4 lead)

EOSC-Nordic project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 857652

neic
NORDIC E-INFRASTRUCTURE COLLABORATION

EOSC NORDIC

WORK PACKAGES

WP6
Communication and Engagement

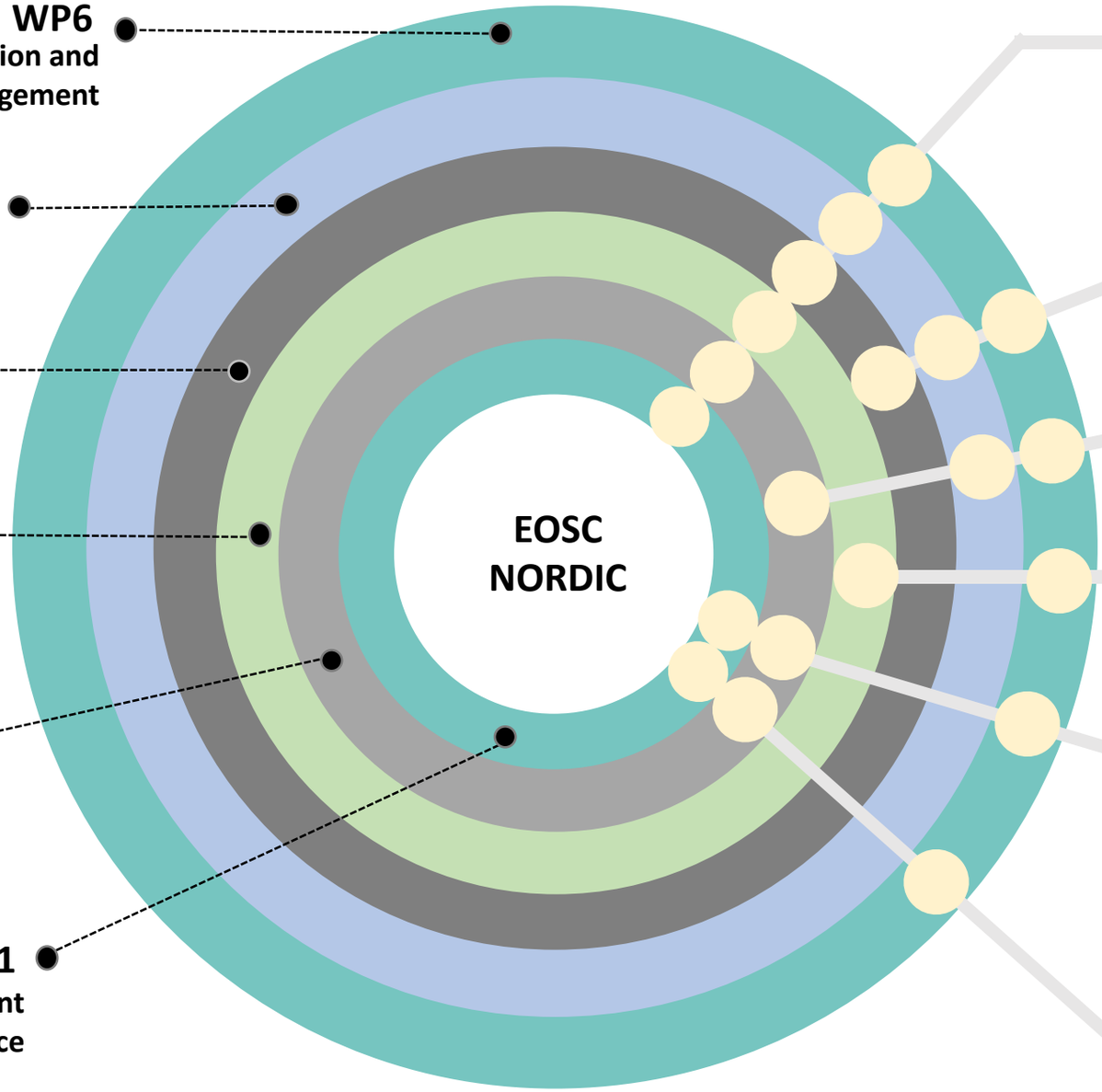
WP5
Open Research Demonstrators

WP4
FAIR Data

WP3
Support to EOSC Service providers

WP2
Policies, legal issues and sustainability

WP1
Project management adm. & Finance



STAKEHOLDERS INVOLVEMENT

- e-Infrastructure- and service providers
- Data repositories
- Research communities and institutions
- Universities & Libraries
- Research Councils and Funding Agencies
- Governmental agencies and Ministries

WP4 members

21 participants

Iceland

Guðbjörg A Jónsdóttir (HI)

Norway

Adil Hasan (Sigma2)
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Andreas Jaunsen (NeIC)

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Mari Kleemola (UTA)
Pauli Assinen (UHEL)
Tuomas Aleterä (FSD)

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Liisi Lembinen (UTartu)

Denmark

A S Fink Kjeldgaard (DNA)
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Troels Rasmussen (DeiC)

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Sweden

Birger Jerlehag (SND)
Iris Alfredsson (SND)
Monica Lassi (SNIC/LU)

Netherlands

Bert Meermans (GFF)

For Humans

For Machines

PLOS ONE

OPEN ACCESS PEER-REVIEWED

RESEARCH ARTICLE

Community Health Workers and Mobile Technology: A Systematic Review of the Literature

Rebecca Braun, Caricia Catalani, Julian Wimbush, Dennis Israelski

Published: June 12, 2013 https://doi.org/10.1371/journal.pone.0065772

472 Save | 187 Citation | 37,138 View | 57 Share

Abstract

Introduction

In low-resource settings, community health workers are frontline providers who shoulder the health service delivery burden. Increasingly, mobile technologies are developed, tested, and deployed with community health workers to facilitate tasks and improve outcomes. We reviewed the evidence for the use of mobile technology by community health workers to identify opportunities and challenges for strengthening health systems in resource-constrained settings.

Methods

We conducted a systematic review of peer-reviewed literature from health, medical, social science, and engineering databases, using PRISMA guidelines. We identified a total of 25 unique full-text research articles on community health workers and their use of mobile technology for the delivery of health services.

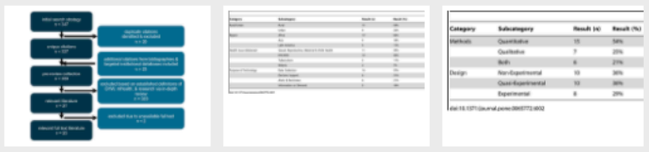
Results

Community health workers have used mobile tools to advance a broad range of health aims throughout the globe, particularly maternal and child health, HIV/AIDS, and sexual and reproductive health. Most commonly, community health workers use mobile technology to collect field-based health data, receive alerts and reminders, facilitate health education sessions, and conduct person-to-person communication. Programmatic efforts to strengthen health service delivery focus on improving adherence to standards and guidelines, community education and training, and programmatic leadership and management practices. Those studies that evaluated program outcomes provided some evidence that mobile tools help community health workers to improve the quality of care provided, efficiency of services, and capacity for program monitoring.

Discussion

Evidence suggests mobile technology presents promising opportunities to improve the range and quality of services provided by community health workers. Small-scale efforts, pilot projects, and preliminary descriptive studies are increasing, and there is a trend toward using feasible and acceptable interventions that lead to positive program outcomes through operational improvements and rigorous study designs. Programmatic and scientific gaps will need to be addressed by global leaders as they advance the use and assessment of mobile technology tools for community health workers.

Figures



Citation: Braun R, Catalani C, Wimbush J, Israelski D (2013) Community Health

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   communication. Programmatic efforts to strengthen health service delivery focus on improving adherence to st
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   Programmatic efforts to strengthen health service delivery focus on improving adherence to standards and gui
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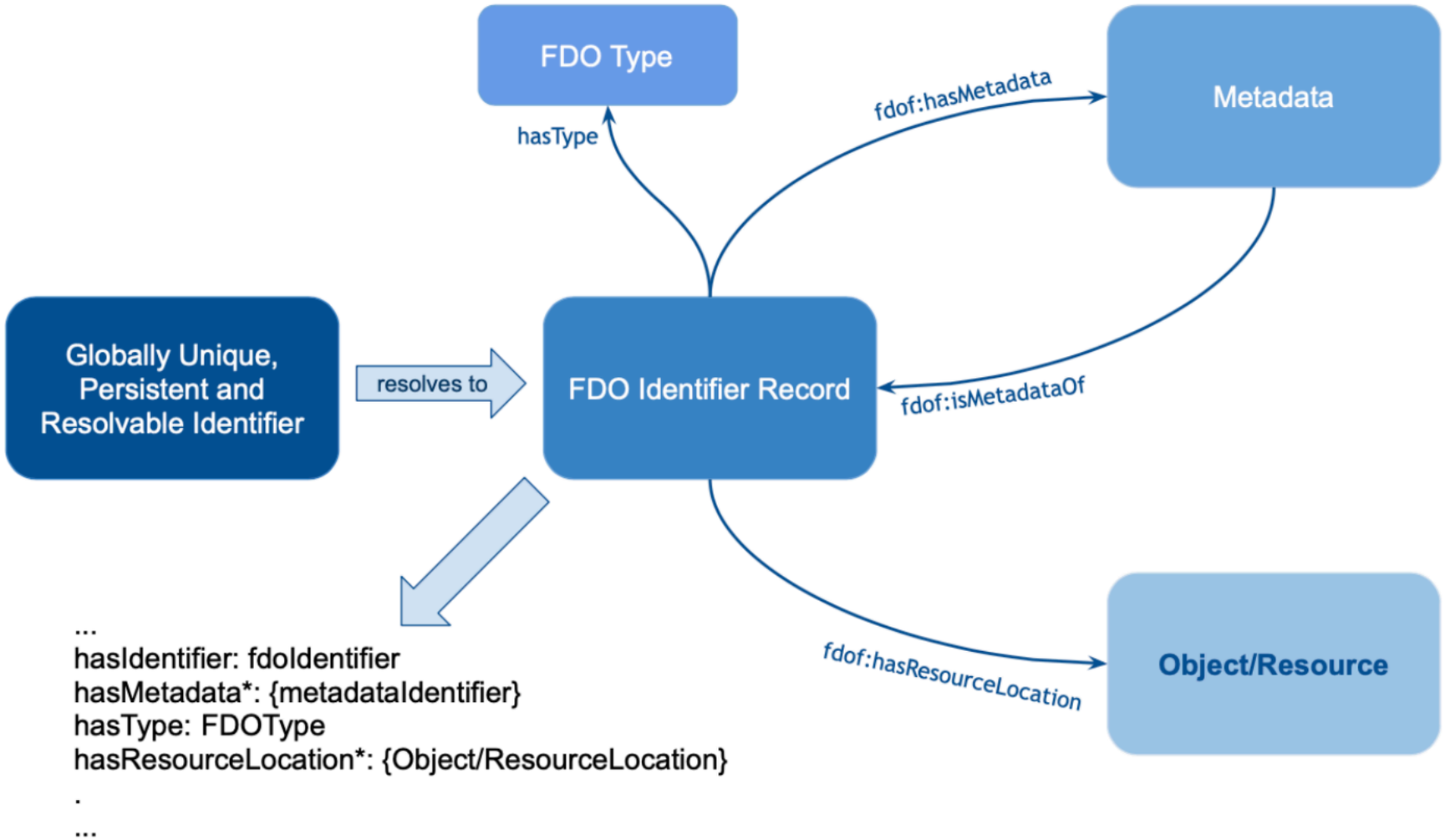
FAIR Digital Objects



Bonino 2019

It’s all about FAIR…

FAIRification of data requires competent support staff – data stewards

FAIR Data Stewardship

Implementation & specialisation areas

POLICY

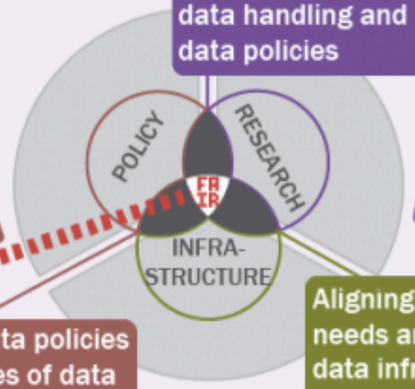
(Applied) University boards & deans

Policy makers

Funders

EU

Aligning researcher's data handling and data policies



RESEARCH

Domain specialist

(Data) Scientists

Aligning researcher's needs and required data infrastructure

Aligning data policies and features of data services/ infrastructures

Technicians

IT personnel

Application managers

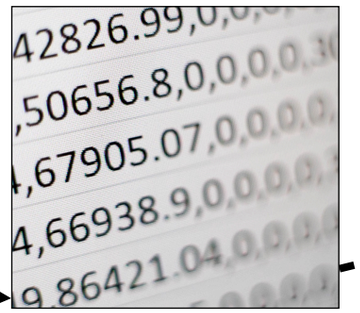
Infrastructure providers

INFRASTRUCTURE

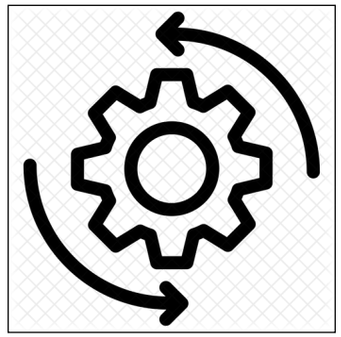
Credits: DTL

FAIR assessment

Surveyed Nordics region for research repositories (~100 repositories in sample)



(Manually) selected N=10 datasets per repository (74 repositories), resulting in 740 unique datasets and 1000+ identifiers



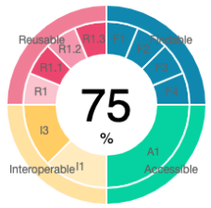
Evaluated datasets using metrics that (mostly) explore machine-actionable metadata (Wilkinson et al. 2019 & Devaraju et al. 2020)

Our goal is to guide communities based on FAIR assessments of their data repository and hope this leads to action and as a result FAIRer data

F-UJI Automated FAIR Data Assessment Tool

Disclaimer: The test results shown here are based on preliminary data and code which still is under development.
F-UJI is rapidly evolving and not yet available in a productive environment.

Summary:



Findable: 7 of 7

Accessible: 3 of 3

Interoperable: 2 of 4

Reusable: 6 of 10

Report:

Findable

FsF-F1-01D - Data is assigned a globally unique identifier.

FsF-F1-02D - Data is assigned a persistent identifier.

FsF-F2-01M - Metadata includes descriptive core elements (creator, title, data identifier, publisher, publication date, summary and keywords) to support data findability.

FsF-F3-01M - Metadata includes the identifier of the data it describes.

FsF-F4-01M - Metadata is offered in such a way that it can be retrieved programmatically.

Accessible

FsF-A1-01M - Metadata contains access level and access conditions of the data.

FsF-A1-03D - Data is accessible through a standardized communication protocol.

FsF-A1-02M - Metadata is accessible through a standardized communication protocol.

Interoperable

FsF-I1-01M - Metadata is represented using a formal knowledge representation language.

FsF-I1-02M - Metadata uses semantic resources

FsF-I3-01M - Metadata includes links between the data and its related entities.

Reusable

FsF-R1-01MD - Metadata specifies the content of the data.

FsF-R1.1-01M - Metadata includes license information under which data can be reused.

FsF-R1.2-01M - Metadata includes provenance information about data creation or generation.

FsF-R1.3-01M - Metadata follows a standard recommended by the target research community of the data.

FsF-R1.3-02D - Data is available in a file format recommended by the target research community.

F-UJI is a result of the FAIRsFAIR “Fostering FAIR Data Practices In Europe” project which received funding from the European Union’s Horizon 2020 project call H2020-INFRAEOSC-2018-2020 (grant agreement 831558).

EOSC NORDIC

docs.google.com/spreadsheets/d/1irMqPJSrUCeULLnlfb654QqCh0MxiN4LjO02rXBak-U/edit#gid=1813595792

FAIR evaluation production (F-UJI)

File Edit View Insert Format Data Tools Add-ons Help Last edit was seconds ago

	A	datasetID	Evaluation link	Evaluatic	F-score (7)	A-score (3)	I-score (4)	R-score (9)	FAIR score	Succeded tests / Total tests	Status	Analyze start time	Analyze end time	Total time for analyzing	Run script?
607	19	http://eed.nsd.uib.no/webview/velocity?v=2&mode=cube&cube=http%3A%2F%2F129.177.90.166%3A80%2Fobj%2FfCube%2FFIEP2004%21Display_C1&study=http%3A%2F%2F129.177.90.166%3A80%2Fobj%2FfStudy%2FFIEP2004%21Display			14.29%	0.00%	0.00%	0.00%	4.35%	(1:23)	Ready	23-Nov-2020, 15:34:58	23-Nov-2020, 15:35:01	0:00:03	
608	19	http://eed.nsd.uib.no/webview/velocity?v=2&mode=cube&cube=http%3A%2F%2F129.177.90.166%3A80%2Fobj%2FfCube%2FDEPA2009%21II%21Display_C1&study=http%3A%2F%2F129.177.90.166%3A80%2Fobj%2FfStudy%2FDEPA2009%21II%21Display			14.29%	0.00%	0.00%	0.00%	4.35%	(1:23)	Ready	23-Nov-2020, 15:35:07	23-Nov-2020, 15:35:11	0:00:04	
609	19	http://eed.nsd.uib.no/webview/velocity?v=2&mode=cube&cube=http%3A%2F%2F129.177.90.166%3A80%2Fobj%2FfCube%2FISPA2003%21Display_C1&study=http%3A%2F%2F129.177.90.166%3A80%2Fobj%2FfStudy%2FISPA2003%21Display			14.29%	0.00%	0.00%	0.00%	4.35%	(1:23)	Ready	23-Nov-2020, 15:35:29	23-Nov-2020, 15:35:32	0:00:03	
610	19	http://eed.nsd.uib.no/webview/velocity?v=2&mode=cube&cube=http%3A%2F%2F129.177.90.166%3A80%2Fobj%2FfCube%2FITPA2008%21Display_C1&study=http%3A%2F%2F129.177.90.166%3A80%2Fobj%2FfStudy%2FITPA2008%21Display			14.29%	0.00%	0.00%	0.00%	4.35%	(1:23)	Ready	23-Nov-2020, 15:35:45	23-Nov-2020, 15:35:50	0:00:05	
611	19	http://eed.nsd.uib.no/webview/velocity?v=2&mode=cube&cube=http%3A%2F%2F129.177.90.166%3A80%2Fobj%2FfCube%2FNOREF1994%21Display_C1&study=http%3A%2F%2F129.177.90.166%3A80%2Fobj%2FfStudy%2FNOREF1994%21Display			14.29%	0.00%	0.00%	0.00%	4.35%	(1:23)	Ready	23-Nov-2020, 15:35:56	23-Nov-2020, 15:36:00	0:00:03	
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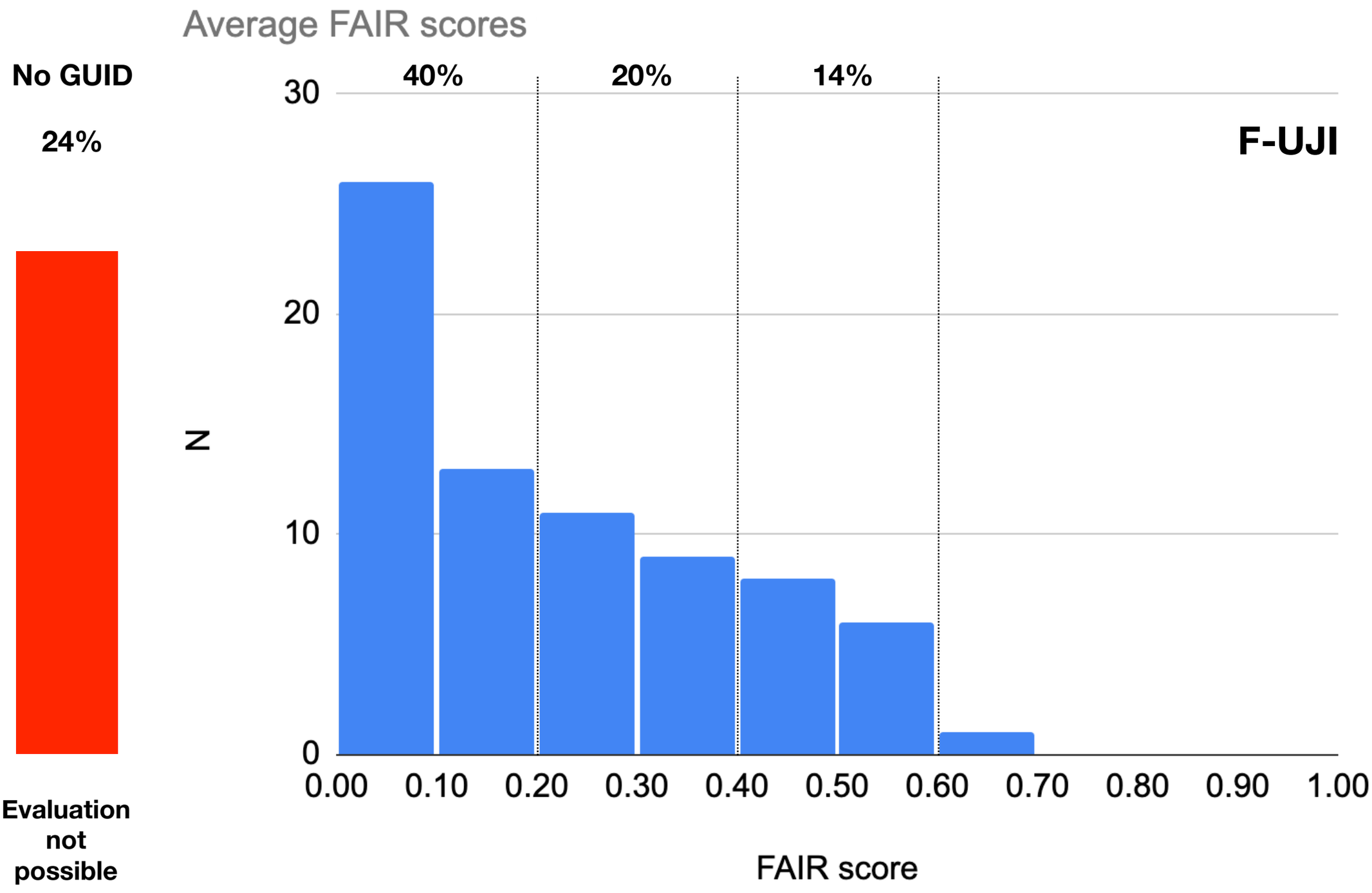
EVAL Sheet2 Epoch1 Explore

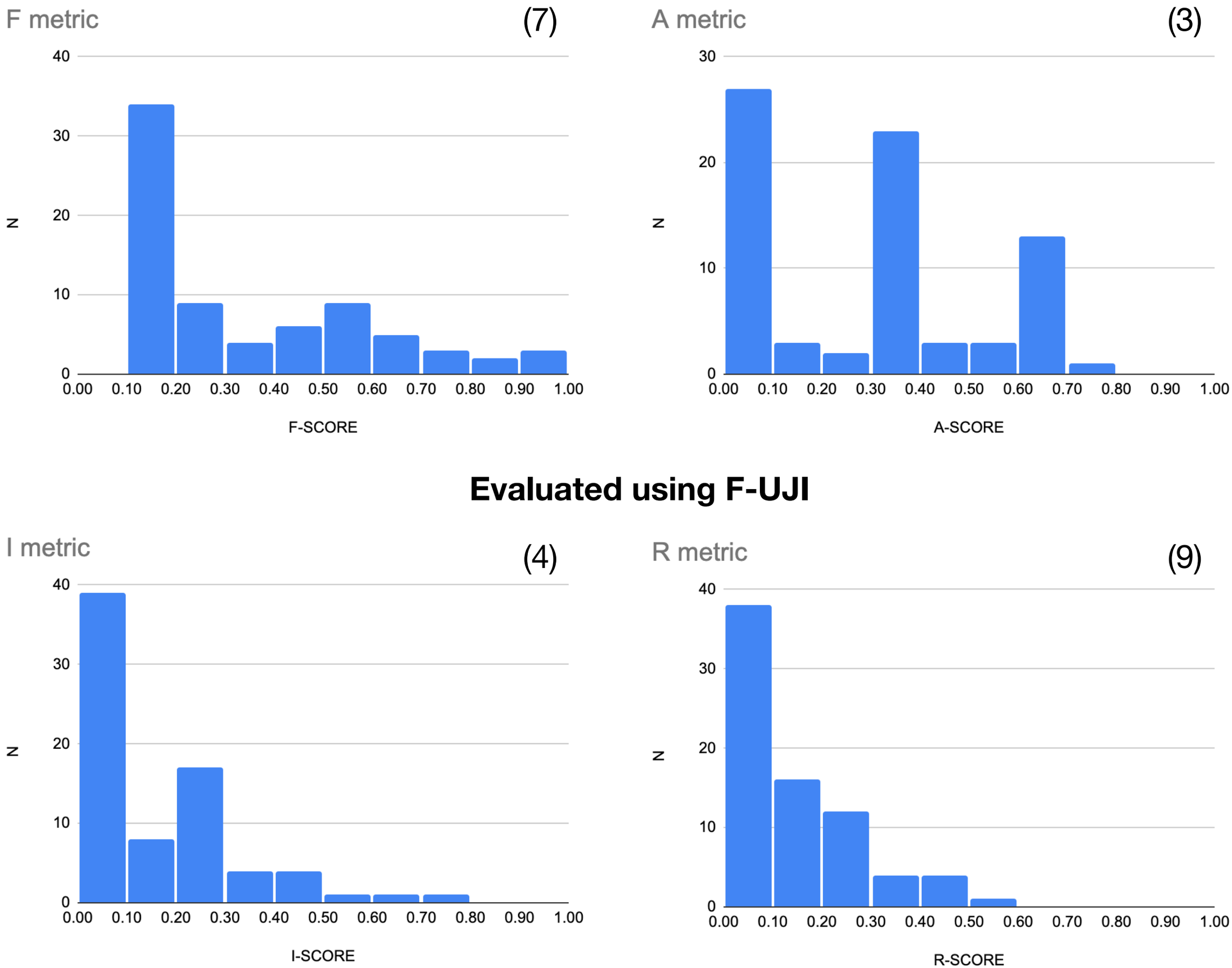
				F-UJI evaluator (latest)														
repoID	Name	Data	Platform	F-score	A-score	I-score	R-score	FAIR	Sigma	Sigma (F	Sigma (A	Sigma (I	Sigma (R					
2	CLARIN-DK	40	Dspace	50.00%	66.67%	9.72%	22.22%	34.30%	0.036	0.072	0.000	0.124	0.000	X			X	
3	DDA	20		57.14%	33.33%	50.00%	33.33%	43.48%	0.073	0.293	0.000	0.000	0.000					
4	Det Kgl. bibliotek	20		30.00%	13.33%	5.00%	7.22%	14.57%	0.118	0.307	0.294	0.131	0.154					
6	Kielipankki	10	META-SHARE	14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000	X			X	
7	Data Service Portal Aila	10		71.43%	66.67%	25.00%	33.33%	47.83%	0.000	0.000	0.000	0.000	0.000					
8	Fairdata IDA	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
9	NMBU dataverseNO	16	Dataverse	85.72%	66.67%	37.50%	43.05%	58.15%	0.050	0.148	0.000	0.129	0.038					
10	NSD	20	NESSTAR	37.86%	13.33%	0.00%	8.89%	16.74%	0.087	0.283	0.168	0.000	0.112	X				
11	HUNT Databank	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
13	CLARINO Bergen Center repo	20	Dspace	30.00%	20.00%	7.50%	6.67%	15.65%	0.096	0.153	0.313	0.118	0.104	X			X	
16	Språkbanken	10		14.29%	33.33%	0.00%	22.22%	17.39%	0.000	0.000	0.000	0.000	0.000					
17	ESS Data	9		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
18	TROLLing	22	Dataverse	75.00%	56.67%	27.50%	35.55%	48.91%	0.103	0.240	0.244	0.160	0.160	X				
19	EED	10	Nesstar	14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
20	UiT Open Research Data Dat	20	Dataverse	85.72%	66.67%	32.50%	44.44%	57.83%	0.047	0.147	0.000	0.118	0.000					
24	Språkbanken	13		17.59%	0.00%	0.00%	0.00%	5.35%	0.016	0.063	0.000	0.000	0.000		X		X	
25	Lund University Humanities	20		21.43%	0.00%	0.00%	0.00%	6.52%	0.018	0.073	0.000	0.000	0.000					
26	su.figshare.com	20	Figshare	51.43%	45.00%	10.00%	29.44%	34.78%	0.098	0.287	0.196	0.126	0.136					
27	SND	20		64.29%	50.00%	42.50%	38.89%	48.69%	0.077	0.220	0.171	0.118	0.057	X				
28	ICES data portals	8		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
29	JASPAR	10		14.29%	33.33%	0.00%	11.11%	13.04%	0.000	0.000	0.000	0.000	0.000					
30	STRING	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
32	GBIF	22	IPT	59.74%	66.67%	25.00%	38.89%	46.44%	0.047	0.180	0.000	0.000	0.057			X		
39	HPA	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
41	Fishbase	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
45	ISIG	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
47	GERDA	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
49	ACTRIS	8		46.43%	33.34%	12.50%	16.67%	27.17%	0.139	0.312	0.356	0.231	0.178					
52	NPDC	20		37.86%	35.00%	13.75%	17.22%	25.22%	0.127	0.259	0.366	0.151	0.178					
54	Bolin Centre Database	12		61.90%	33.33%	25.00%	22.22%	36.23%	0.028	0.111	0.000	0.000	0.000					
55	SMHI open data	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
57	NIRD Archive	20		44.29%	20.00%	0.00%	11.11%	20.43%	0.093	0.311	0.168	0.000	0.114					
60	GTN-P Database	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
62	UNITE	20		35.72%	33.34%	6.25%	16.67%	22.83%	0.114	0.220	0.342	0.111	0.171					
63	Estonian Biocentre Public	10		14.29%	33.33%	0.00%	22.22%	17.39%	0.000	0.000	0.000	0.000	0.000					
64	DataDOI	18		61.90%	62.97%	2.78%	27.78%	38.40%	0.068	0.208	0.108	0.081	0.116					
65	CELR META-SHARE	20		35.72%	33.33%	0.00%	5.56%	17.39%	0.057	0.220	0.000	0.000	0.057	X			X	
66	AHEAD	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
68	USN RDA	10	Figshare	28.57%	33.33%	0.00%	22.22%	21.74%	0.000	0.000	0.000	0.000	0.000					
71	LOAR	19		61.65%	63.16%	2.63%	26.31%	37.76%	0.077	0.243	0.153	0.079	0.085					
72	AIDA Data Hub	20		65.71%	43.33%	23.75%	30.00%	41.52%	0.080	0.188	0.219	0.099	0.103					
73	QoG Institute's data	10		31.43%	10.00%	0.00%	6.67%	13.48%	0.084	0.276	0.161	0.000	0.107					
76	JYX	20		35.72%	33.34%	1.25%	11.11%	19.78%	0.093	0.073	0.342	0.056	0.114					
78	B2SHARE	12	Invenio	38.10%	27.78%	0.00%	13.89%	20.65%	0.118	0.275	0.343	0.000	0.172					
79	DH	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
80	NLL	10		25.71%	53.34%	40.00%	35.55%	35.65%	0.101	0.060	0.281	0.211	0.187					
84	RTU RIS	10		14.29%	0.00%	25.00%	11.11%	13.04%	0.000	0.000	0.000	0.000	0.000					
85	FinBIF	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
87	SARV	10		14.29%	33.33%	0.00%	11.11%	13.04%	0.000	0.000	0.000	0.000	0.000					
92	SSRI	15		42.86%	26.67%	0.00%	13.33%	21.74%	0.131	0.362	0.338	0.000	0.169					
94	IINH	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
100	QsarDB	20		35.72%	30.00%	11.25%	15.55%	22.83%	0.110	0.220	0.323	0.128	0.163					
104	Bird	20		30.00%	40.00%	0.00%	6.67%	16.96%	0.074	0.222	0.137	0.000	0.137					
106	Migration Institute of Fin	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
108	Musiikkiarkisto	4	CKAN	28.57%	66.67%	50.00%	50.00%	45.65%	0.016	0.000	0.000	0.000	0.064					
109	SLS	14		14.29%	23.81%	0.00%	7.94%	10.56%	0.041	0.000	0.156	0.000	0.052					
113	SweFreq	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
114	Metabolic Atlas	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
115	SEAD	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
116	NOW	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
117	SNM Digital Assets	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
120	GEUS	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
123	LARM	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
127	Garamantas	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
129	MMB	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
130	PlutoF	20		35.72%	31.67%	3.75%	16.11%	21.96%	0.111	0.220	0.333	0.092	0.167					
131	MIDAS	10		14.29%	0.00%	0.00%	0.00%	4.35%	0.000	0.000	0.000	0.000	0.000					
132	NMDC	20	Dataverse	85.72%	66.67%	32.50%	35.55%	54.35%	0.048	0.147	0.000	0.118	0.046					
133	IINH BIOTA	10		14.29%	33.33%	0.00%	22.22%	17.39%	0.000	0.000	0.000	0.000	0.000					
134	ICOS	20		21.43%	0.00%	0.00%	0.00%	6.52%	0.018	0.073	0.000	0.000	0.000					
135	CESSDA DC	14		34.70%	19.05%	14.29%	12.70%	20.50%	0.139	0.335	0.313	0.234	0.208					
136	DTU data	10	figshare	28.57%	33.33%	0.00%	22.22%	21.74%	0.000	0.000	0.000	0.000	0.000					
137	CLARIN IS	20	CLARIN	50.00%	63.34%	21.25%	22.22%	35.87%	0.039	0.073	0.103	0.092	0.000					
138																		

Expose the results to repos/ communities, so that they can use the feedback from the tool as a guideline to improve their FAIRness

FAIR uptake

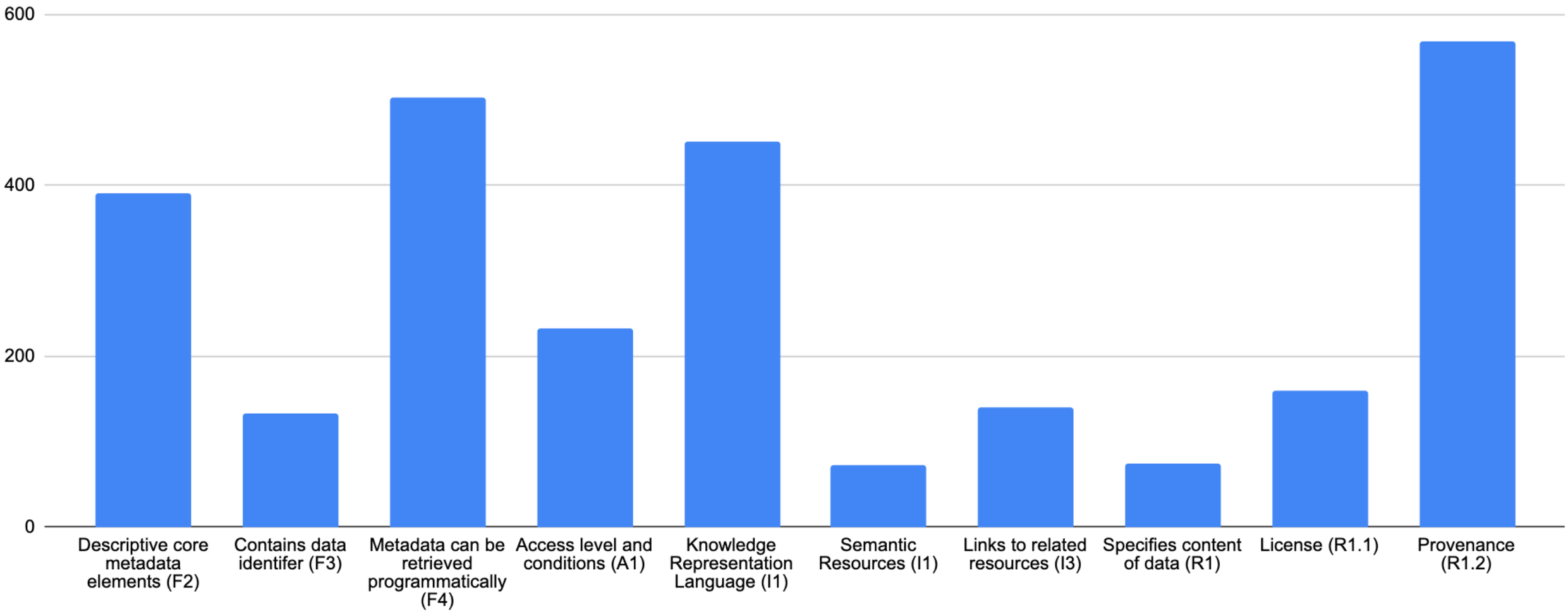


98 repositories (75 evaluated)

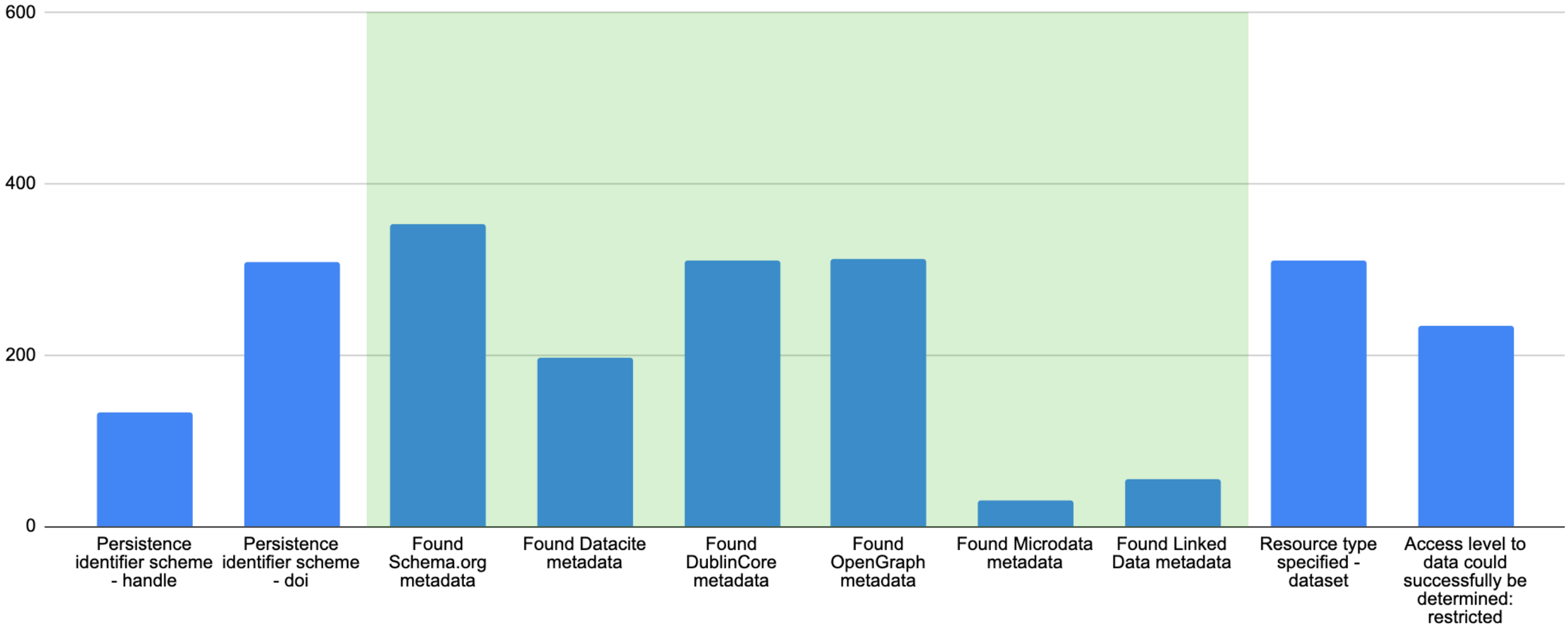


Evaluated using F-UJI

Assessment tests



Misc assessment output



Highlights

- The majority of repositories are not very FAIR, primarily because they do not support machine-actionable metadata
- 24% of the sample cannot be evaluated due to lack of GUID
- 23% of the sample does not support ma-FAIR (<0.1)
- The average score of the 75 evaluated repositories is 0.22
- Repositories running on established platforms score an average of 0.38
- Repositories that are certified score an average of 0.29

Take away

- Machine-actionable metadata (and data) is the way to FAIR!

- Local competent support staff to assist in the FAIRification of data is needed (data stewards)

- Persistent identifiers, (generic) metadata standards, licensing, provenance and data identifiers are among the important FAIR implementations

The End

Ongoing and coming tasks

Events to support community FAIRification process

Certification support for repositories that wish to go this route

Supporting implementation of FAIR data standards

FAIR incentives and stakeholder liaising

FAIR Certification

- Selection of ‘suitable’ repositories
- Adopting FAIR + CTS (recommendation from FAIRsFAIR)
- Interviews with prospective repositories
- WP4 certification team offers support for:
  - Self-assessment feedback
  - Guidance during the CTS cert. process
- Requires commitment (mainly an effort by repository)

FAIRification

metric_specification	https://doi.org/10.5281/zenodo.3934401
metric_version	metrics_v0.4.yaml

results — [-] Array data structure, 16 items

[key]	id	metric_identifier	metric_name	output	score	test_debug	test_status
0	1	FsF-F1-01D	Data is assigned a globally unique identifier.	[-] Object, 2 properties **guid**: https://dataverse.no/dataset.xhtml?persistentId=doi:10.18710/RIHOIE **guid_scheme**: url	[-] Object, 2 properties **earned**: 1 **total**: 1	[-] Array, 3 items 0: INFO: Using idutils schemes 1: SUCCESS: Unique identifier schemes found ['url'] 2: INFO: Finalized unique identifier scheme - url	pass
1	2	FsF-F1-02D	Data is assigned a persistent identifier.	[-] Object, 4 properties **pid**: *null* **pid_scheme**: *null* **resolvable_status**: true **resolved_url**: https://dataverse.no/dataset.xhtml?persistentId=doi:10.18710/RIHOIE	[-] Object, 2 properties **earned**: 0 **total**: 1	[-] Array, 6 items 0: INFO: PID schemes-based assessment supported by the assessment service… 1: INFO: Retrieving page https://dataverse.no/dataset.xhtml?persistentId=… 2: INFO: Content negotiation accept=text/html, application/xhtml+xml, sta… 3: INFO: Found HTML page! 4: INFO: Object identifier active (status code = 200) 5: WARNING: Not a persistent identifier scheme - url	fail

2	3	FsF-F2-01M	Metadata includes descriptive core elements (creator, title, data iden…	[-] Object, 3 properties
				core_metadata_found: [-] Object, 7 properties
				  creator: [-] Array, 1 item
				    0: Helland-Riise, Siri Helene
				  keywords: [-] Array, 4 items
				    0: Medicine, Health and Life Sciences
				    1: Parasite
				    2: Metacercariae
				    3: Experimental infection
				  object_identifier: https://doi.org/10.18710/RIHOIE
				  publication_date: 2019-11-11
				  publisher: DataverseNO
				  summary: [-] Array, 1 item
				    0: Data for the article Regional distribution of a brain-encysting parasi…
				  title: Replication Data for: Regional distribution of a brain-encysting paras…
				core_metadata_source: [-] Array, 3 items
				  0: Schema.org JSON-LD (Embedded)
				  1: Embedded DublinCore
				  2: Embedded OpenGraph
				core_metadata_status: all metadata
					[-] Object, 2 properties
					earned: 2
					total: 2
						[-] Array, 20 items
						0: INFO: Formats of structured metadata embedded in HTML markup - ['json-…
						1: INFO: Could not identify Microdata metadata
						2: INFO: RDFa metadata parsing exception, probably no RDFa embedded in HT…
						3: INFO: Extract metadata from Schema.org JSON-LD (Embedded)
						4: SUCCESS: Found Schema.org metadata: dict_keys(['title', 'object_type',…
						5: INFO: Checking for DublinCore metadata
						6: INFO: Extract DublinCore metadata from html page
						7: SUCCESS: Found DublinCore metadata: dict_keys(['object_identifier', 'o…
						8: INFO: Extract metadata from None
						9: INFO: Found OpenGraph metadata
						10: SUCCESS: Found OpenGraph metadata: dict_keys(['title', 'object_identif…
							pass

FsF-F2-01M

INFO: Formats of structured metadata embedded in HTML markup - ['json-ld', 'opengraph', ‘rdfa']

INFO: Could not identify Microdata metadata

INFO: RDFa metadata parsing exception, probably no RDFa embedded in HTML

INFO: Extract metadata from Schema.org JSON-LD (Embedded)

SUCCESS: Found Schema.org metadata: dict_keys(['title', 'object_type', 'publication_date', 'modified_date', 'creator', 'publisher', 'summary', 'keywords', 'object_identifier', 'object_content_identifier'])

INFO: Checking for DublinCore metadata

INFO: Extract DublinCore metadata from html page

SUCCESS: Found DublinCore metadata: dict_keys(['object_identifier', 'object_type', 'title', 'publication_date', 'publisher', 'creator', 'keywords'])

INFO: Extract metadata from None

INFO: Found OpenGraph metadata

SUCCESS: Found OpenGraph metadata: dict_keys(['title', 'object_identifier', 'summary', 'object_type', 'publisher'])

INFO: Trying to access metadata from: https://dataverse.no/dataset.xhtml?persistentId=doi:10.18710/RIHOIE

INFO: Retrieving page https://dataverse.no/dataset.xhtml?persistentId=doi:10.18710/RIHOIE

INFO: Content negotiation accept=application/xml, text/xml;q=0.5, status=200

INFO: Found HTML page!

INFO: Extract metadata from Generic XML (Negotiated)",

INFO: Expected XML but content negotiation responded: html",

INFO: Not a PID, therefore Datacite metadata (json) not requested.",

INFO: Type of object described by the metadata - Dataset",

INFO: Required core metadata elements ['creator', 'title', 'publisher', 'publication_date', 'summary', 'keywords', 'object_identifier']

Metadata & standards

Generic metadata standards

- https://www.dcc.ac.uk/resources/subject-areas/general-research-data
- https://guides.lib.unc.edu/metadata/standards
- https://en.wikipedia.org/wiki/Metadata_standard

Disciplinary metadata standards

- https://www.dcc.ac.uk/guidance/standards/metadata

Google dataset search

- https://developers.google.com/search/docs/data-types/dataset

HTTP Signposting:

- http://www.signposting.org/

Rich metadata validation

Validators

- https://search.google.com/test/rich-results
- https://search.google.com/structured-data/testing-tool#

FsF-R1-01MD

INFO: Object landing page accessible status - **True**

SUCCESS: Resource type specified - **Dataset**

INFO: Number of data content URI(s) specified - **5**

INFO: Selected content file to be analyzed - **https://dataverse.no/api/access/datafile/10393**

INFO: File request status code 200

INFO: Succesfully parsed data file(s) - https://dataverse.no/api/access/datafile/10393

WARNING: NO measured variables found in metadata, skip 'measured_variable' test.

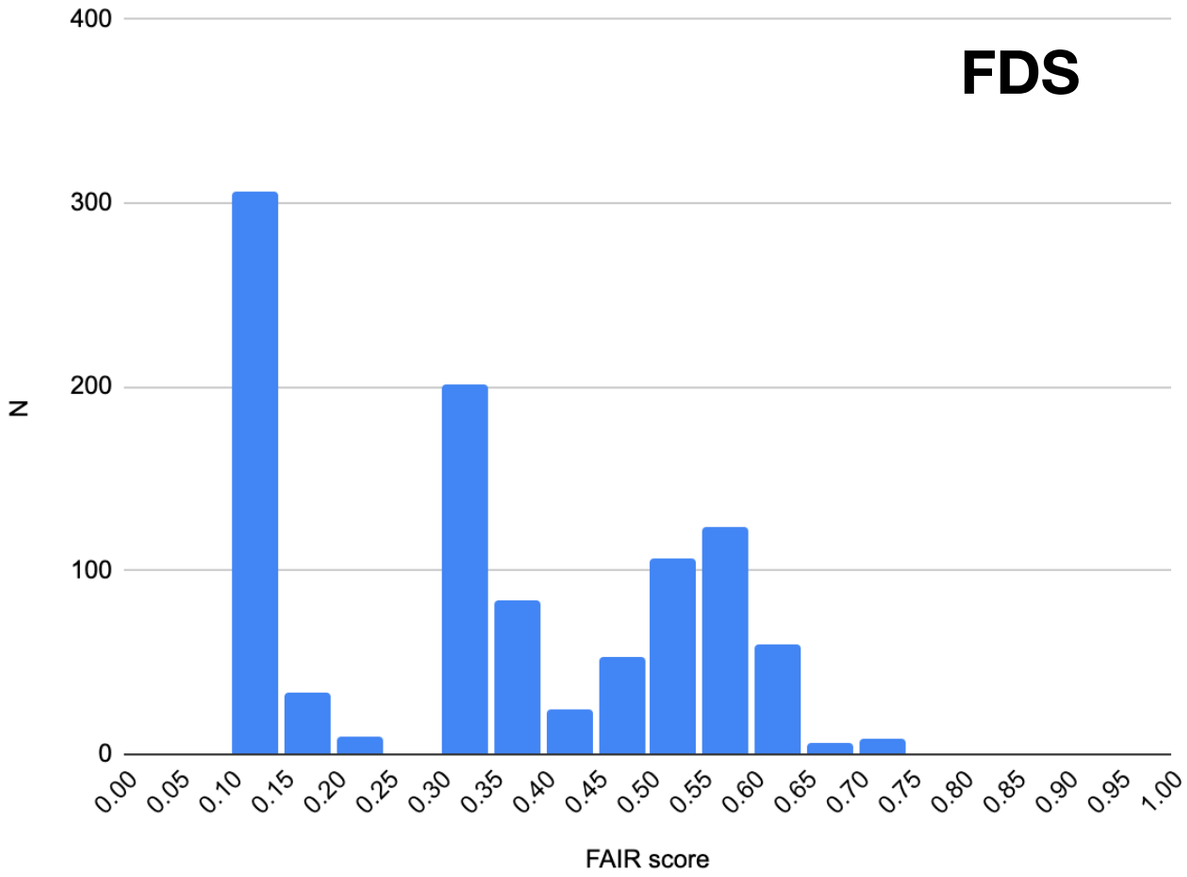
WARNING: Measured variables given in metadata do not match data object content

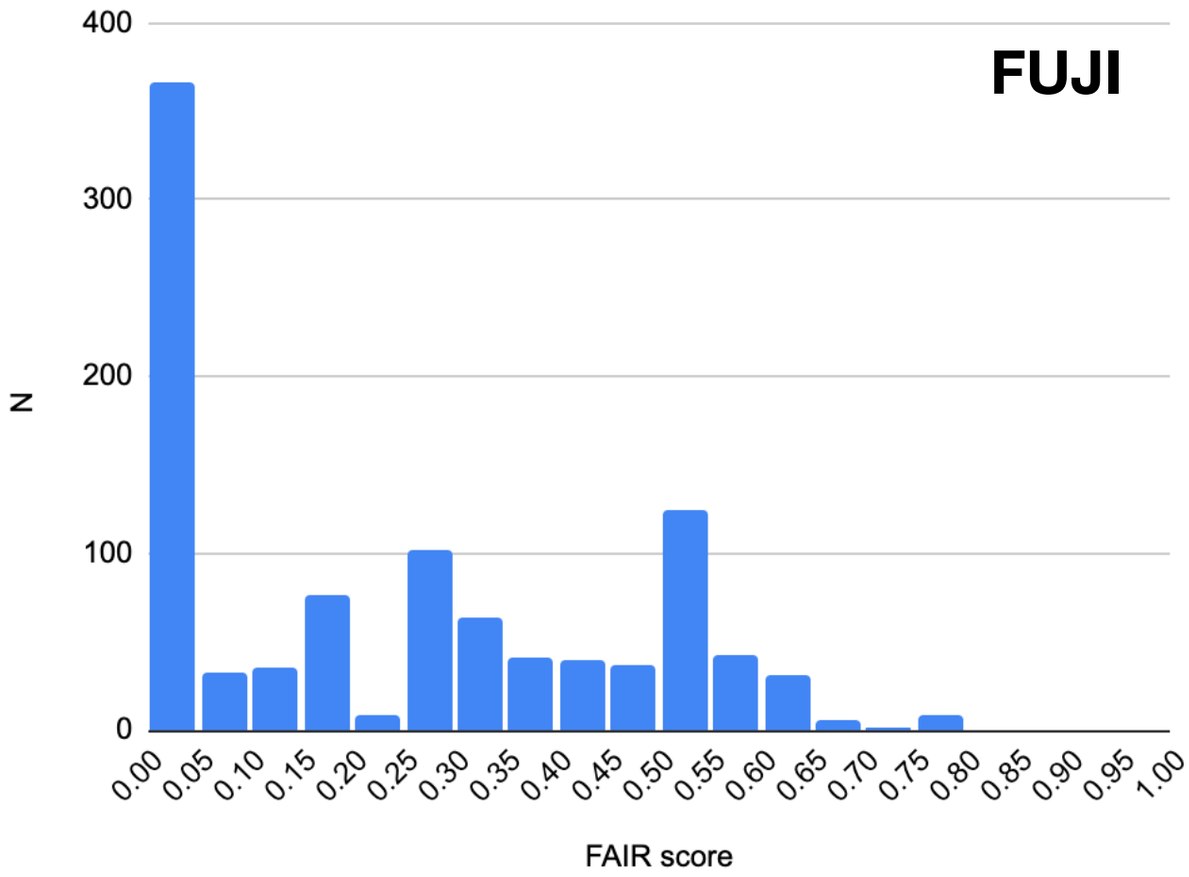
FsF-R1.1-01M

INFO: License metadata found (schema.org) - {**'@type'**: **'Dataset'**, 'text': 'CC0', 'url': 'https://creativecommons.org/publicdomain/zero/1.0/'}

WARNING: Looks like schema.org representation of license is incorrect, skipping the test.

WARNING: License unavailable


FDS
400
300
200
100
0
N
0.00
0.05
0.10
0.15
0.20
0.25
0.30
0.35
0.40
0.45
0.50
0.55
0.60
0.65
0.70
0.75
0.80
0.85
0.90
0.95
1.00
FAIR score


FUJI
400
300
200
100
0
N
0.00
0.05
0.10
0.15
0.20
0.25
0.30
0.35
0.40
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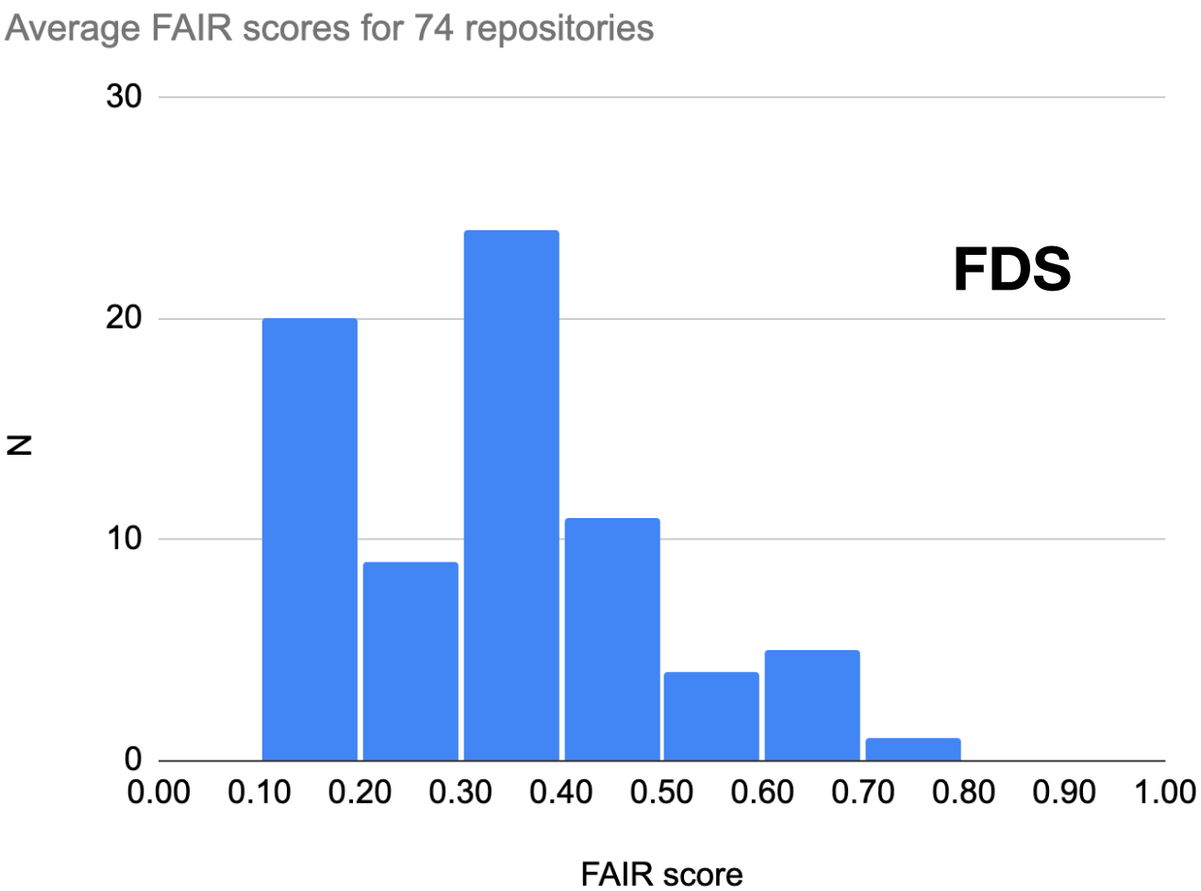
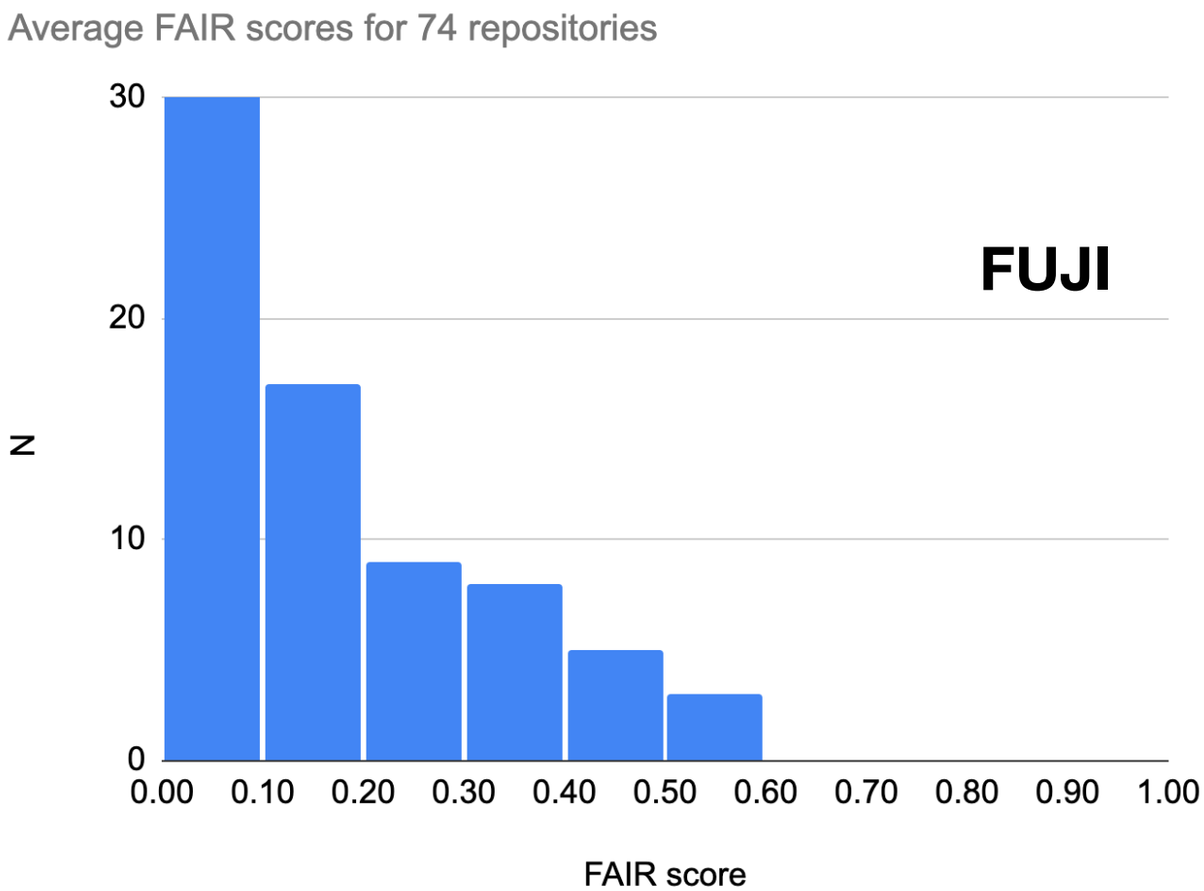
0.50
0.55
0.60
0.65
0.70
0.75
0.80
0.85
0.90
0.95
1.00
FAIR score

Comparison of results on 1000+ datasets for 74 repositories