Where to with it? Deciding where to publish data

Jan Vališ

Dpt. of Analytical Chemistry, Faculty of Chemical Engineering, UCT Prague

& Academic Services, NTK







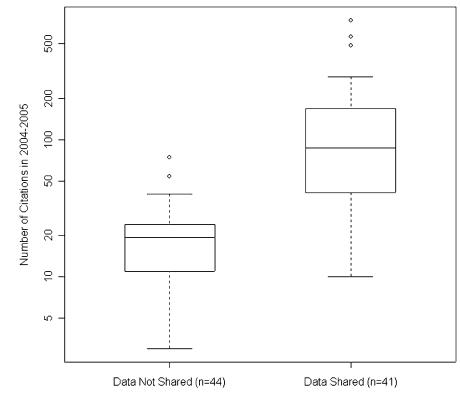
Who are you?

- Position (PhD candidate, postdoc, data-steward...)
- Field (Natural science, engineering ...)
- Do you have any experience with research data management?



Why should I care about a repository?

- Safety and security
- Clear licensing
- Transparency, integrity
- Sharing, collaboration
- Impact
- Compliance



2004–2005 citation counts of 85 trials by data availability. Heather A. et al. 2007. PLOS ONE. License: <u>CC BY 4.0</u> 10.1371/iournal.pone.0000308.

Repositories



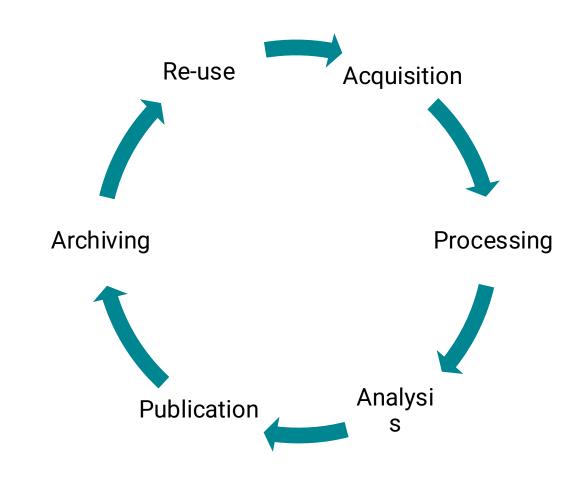
Repository types

- Institutional (e.g., CERN, ESO, ASEP)
- General purpose (e.g., Zenodo, National Repository)
- Field-specific/Disciplinary
 - Instrument/analysis/data type (e.g., MS, FT-IR, XRD)
 - Topic (e.g., drug discovery)



Repository types

- Position in lifecycle
 - raw primary data repository
 - processed data repository
 - supporting data for an article
- By curation
 - open
 - curated
 - peer-reviewed





What to ask when looking for a repository?

- Motivation? (community, publication or grant compliance?)
- Metadata & ontologies?
- File format compatibility?
- File size/number limitation?
- Access control/embargo?
- Licenses?
- Reputation, persistence, sustainability?
- Price?



Ideal characteristics

- Relevant metadata and ontologies
- PIDs (DOI, ORCiD, ROR, IGSN ...)
- Supports versioning
- FAIR
- Grant dedications
- Stable funding
- Free to contribute to



Red flags and pitfalls

- HTTP, expired certificates
- No clear sustainable business plan/funding
- Low number of records
- Publisher-owned
- No grant dedication
- No PIDs
- Irrelevant licenses



Where to look for repositories?

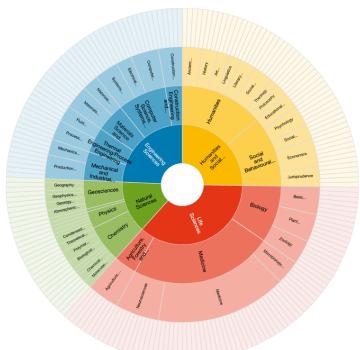
- All-purpose aggregators (e.g. <u>re3data</u>, <u>FAIRsharing</u>)
- Societies and grant agencies (e.g. <u>NFDI4Chem</u>, <u>ERC</u>)
- Publishers?

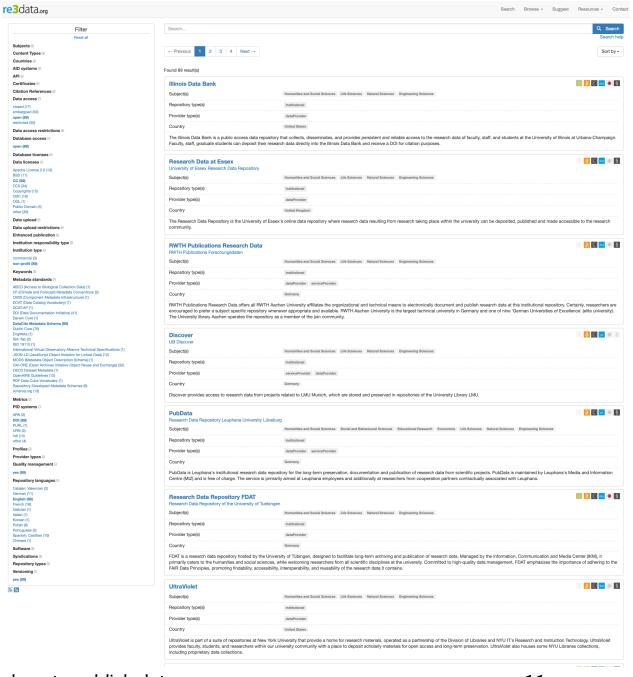


re3data

Browse by subject

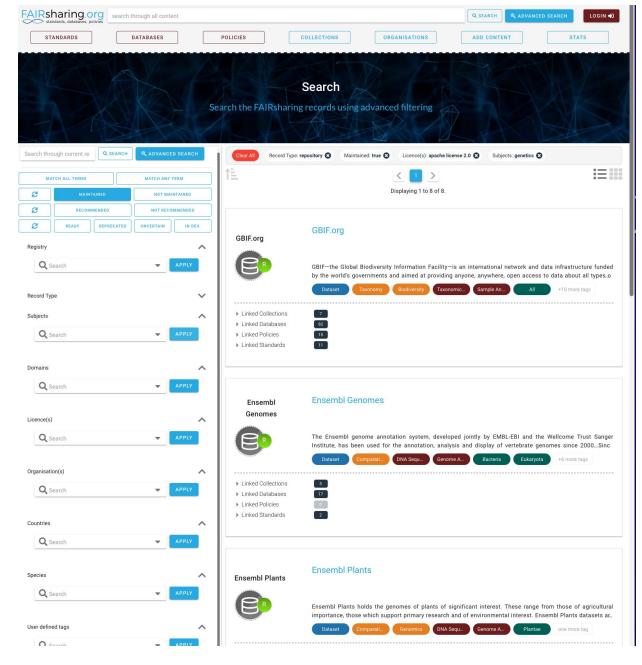








FAIRsharing







	Repository		Is the repository	Trusted - Certified	Community	Trusted - Basic	Exemplary Readiness Level	Essential Readiness Level	Close to Essential Readiness Level	Data Inconclusive		EDG Davido		Specific Literature	Access to	Access to	Presence in	Sa different and		Internationall		
name			trusted?	repository	Endorsement						Coverage		Content type		content							Policy URL
4TU.Research		https://data.4t		Yes	No	Yes	No	No	Yes	No	1 11	PE1 Mathemat			No barriers		Yes, my reposit			No	Yes	https://data.4t
ARCHE - A Res	ARCHE	https://arche.i	Yes	Yes	Yes	Yes	No	No	No	Yes	Disciplinary;	SH4 The Huma	Data; Software	e/Code; Other -	r No barriers	Community/D	Yes, my reposit	Core Trust Seal	Yes	Yes	Yes	https://arche.a
Biological and	BCO-DMO	https://www.bc	Yes	Yes	Yes	Yes	No	No	Yes	No	Disciplinary;	PE10 Earth Sys	Data; Softwar	e/Code; Other	- No barriers	Funder specific	No, my reposit	Core Trust Seal	Yes	Yes	Yes	https://www.bc
BioStudies		https://www.e	Yes	No	Yes	Yes	No	No	Yes	No	Disciplinary;	LS1 Molecules	Data		No barriers	Community/D	Not yet/Not su	No certificatio	Yes	Yes	Yes	https://www.eb
DANS Data Sta	tion Social Scie	https://ssh.dat	Yes	No	Yes	Yes	No	No	Yes	No	Disciplinary;	SH1 Individual	Data	Reports, proje	No barriers	Country specif	Yes, my reposit	No certificatio	Yes	Yes	Yes	https://dans.kr
Finnish Social	FSD	https://www.f	Yes	Yes	Yes	No	No	No	Yes	No	Disciplinary;	SH1 Individual	Data		No barriers	Other	Yes, my reposit	Core Trust Seal	Yes	Yes	Not Applicable	8
GFZ Data Servi	ces	https://datase	Yes	No	Yes	Yes	No	No	Yes	No	Disciplinary;	PE10 Earth Sys	Data; Software	/Code	No barriers	Community/D	Not yet/Not su	No certificatio	Yes	Yes	Yes	https://dataser
Lithuanian Da	LIDA	https://lida.da	Yes	No	Yes	No	No	No	Yes	No	Disciplinary;	SH1 Individual	Data; Software	/Code	Authenticatio	Other	Yes, my reposit	No certificatio	Yes	Yes	Not Applicable	е
PANGAEA - Da	PANGAEA	https://www.p	Yes	Yes	Yes	Yes	No	No	Yes	No	Disciplinary;	PE10 Earth Sys	Data		No barriers	Community/D	Yes, my reposit	Core Trust Seal	Yes	Yes	Yes	https://www.p
Protein Data E	PDBe	https://pdbe.o	Yes	Yes	Yes	Yes	No	No	No	Yes	Disciplinary;	LS1 Molecules	Data		No barriers	Community/D	Yes, my reposit	Core Trust Seal	Yes	Yes	Yes	https://www.v
Social Data Ne	SoDaNet	https://sodane	Yes	No	Yes	Yes	No	No	Yes	No	Disciplinary:	SH1 Individua	Data		No barriers	Community/D	No, my reposit	No certification	Yes	Yes	Yes	https://sodane
The Austrian S	AUSSDA	https://data.ai	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Disciplinary:	SH1 Individual	Data; Software	/Code	No barriers	Community/D	Yes, my reposit	Core Trust Seal	Yes	Yes	Yes	https://aussda
The Tromsø Re		https://trolling		No	Yes	Yes	No	No	Yes	No		PE6 Computer			No barriers	Community/D				Yes	Yes	https://site.uit
UK Polar Data	-	https://www.t		Yes	Yes	No	No	No	No			PE2 Fundamer			No barriers	Community/D				Yes	Not Applicable	

Metadata contains "License" field	PID Assignment	Machine- actionable	Standardized Metadata		Linked resources	Linked resources PID(s)	CCO or PD or equivalent Metadata	Author(s)	Description	Title	Date of publication/d eposit	Venue of publication/d eposit	Embargo	Metadata allow reference to "Horizon Europe"	Grant Project	: Grant project acronym	t Grant project number		Author(s) PID	Organisation PID	Grant PID
Yes	Yes	Yes	Yes		Yes, through a			,				, ,	, ,	: Yes, through a					: Yes, through a		Yes, through a s
Yes	Yes	Yes	Yes	We have a ded	i Yes, through a	Yes, through a	Yes	Yes, through a	Yes, through a	Yes, through a	: Yes, through a	Yes, through a	Yes, but not th	Yes, but not th	Yes, through a	: Yes, through a	a : Yes, through a	: Yes, through a	: Yes, through a	: Yes, through a	: Yes, through a s
:Yes	Yes	Yes	Yes	ISO19115-2, D	Yes, through a	: Yes, through a	Yes	Yes, through a	Yes, through a	Yes, through a	: Yes, through a	Yes, but not th	Yes, through a	! Yes, but not th	Yes, through a	: Yes, through a	: Yes, through a	: Yes, through a	: Yes, through a	Yes, through a	: Yes, through a s
: Yes	Yes	Yes	Yes	schema.org JS	Yes, through a	Yes, through a	Yes	Yes, through a	Yes, through a	Yes, through a	: Yes, through a	Yes, through a	: Yes, through a	: Yes, through a	Yes, but not th	hi Yes, but not th	h Yes, through a	: Yes, through a	: Yes, through a	Yes, but not th	Yes, but not the
Yes	Yes	Yes	Yes	DataCite	Yes, through a	Yes, through a	Yes	Yes, through a	Yes, through a	Yes, through a	: Yes, through a	No	Yes, through a	: Yes, through a	No	No	Yes, through a	: Yes, through a	: Yes, through a	No	Yes, through a s
Yes	Yes	Yes	Yes	DDI	Yes, through a	Yes, through a	Yes	Yes, through a	Yes, through a	Yes, through a	: Yes, through a	Yes, through a	: Yes, through a	: Yes, through a	No	No	Yes, through a	: Yes, through a	: Yes, through a	No	No
ı Yes	Yes	Yes	Yes	DataCite, ISO1	Yes, through a	Yes, through a	Yes	Yes, through a	Yes, through a	Yes, through a	: Yes, through a	No	Yes, through a	Yes, but not th	Yes, through a	: Yes, through a	: Yes, through a	: Yes, through a	: Yes, through a	No	Yes, through a s
Yes	Yes	Yes	Yes	Dublin Core, D	Yes, through a	: Yes, through a	Yes	Yes, through a	Yes, through a	Yes, through a	: Yes, through a	Yes, through a	: Yes, through a	Yes, but not th	Yes, through a	: Yes, through a	: Yes, through a	: Yes, through a	: Yes, through a	Yes, but not th	No
Yes	Yes	Yes	Yes	Dublin Core, S	Yes, through a	: Yes, through a	Yes	Yes, through a:	Yes, through a	Yes, through a	: Yes, through a	Yes, through a	: Yes, through a	Yes, but not th	Yes, through a	Yes, but not th	h Yes, through a	: Yes, through a	: Yes, through a	Yes, through a	: Yes, through a s
Yes	Yes	Yes	Yes	PDBx/mmCIF	Yes, through a	Yes, through a	Yes	Yes, through a:	Yes, through a	Yes, through a	: Yes, through a	Yes, through a	Yes, but not th	Yes, through a	No	No	Yes, through a	No.	Yes, but not th	No	No
Yes	Yes	Yes	Yes	DDI	Yes, through a	Yes, through a	Yes	Yes, through a:	Yes, through a	Yes, through a	: Yes, through a	Yes, through a	: Yes, through a	Yes, but not th	Yes, through a	ı: No	Yes, through a	: Yes, through a	: Yes, through a	No	No
Yes	Yes	Yes	Yes	CESSDA Metad	Yes, through a	Yes, through a	Yes	Yes, through a:	Yes, through a	Yes, through a	: Yes, through a	Yes, through a	: Yes, through a	: Yes, through a	: Yes, through a	: Yes, through a	: Yes, through a	: Yes, through a	: Yes, through a	Yes, through a	: Yes, through a !
: Yes	Yes	Yes	Yes	See the section	Yes, through a	Yes, through a	Yes	Yes, through a:	Yes, through a	Yes, through a	: Yes, through a	Yes, through a	: Yes, through a	Yes, but not th	Yes, through a	Yes, but not th	h Yes, through a	: Yes, through a	: Yes, through a	Yes, but not th	Yes, but not the
Yes	Yes	Yes	Yes	ISO 19115	Yes, through a	Yes, through a	Yes	Yes, through a	Yes, through a	Yes, through a	: Yes, through a	Yes, through a	Yes, but not th	Yes, but not th	Yes, but not th	h Yes, but not th	h: Yes, but not th	Yes, but not th	Yes, but not th	Yes, but not th	No

Deposits



Good practice

- Title descriptive & concise
- Metadata common (e.g., DataCite) & field-specific
- Formats preferred
- Organization clear, shallow, logical, well-described, no RAR
- File names no special characters, consistent, unique, YYYYMMDD
- ReadMe file
 - title, DOI, last update, contact, license, methods, SW, formats, units, naming
 - TXT or PDF/A
 - UTF-8



Common issues

- Publishing
 - Unsuitable data (IP, sensitivity ...)
 - Non-preferred formats
 - Without ReadMe
- Embargo/controlled access
 - not using one when suitable
 - using when unsuitable

- Missing/incorrect metadata
 - PIDs
 - Creator vs. Contributor
 - Grant dedication
 - License
 - Qualified references
- Not linking dataset in article's data availability statement



Where to get support?

- Your institutional
 - Data Stewards
 - Librarians
- NTK free consultations
- Community
 - Map of Data Stewards
 - Discord





What to take home?

- Motivation → requirements → repository selection
- Consider places, where you already retrieve data from
- Use the aggregators or your funders for overview
- If in doubt, reach out for support the community is here for this

Questions?

jan.valis@techlib.cz







