



The Data Stewardship Network at ETH Zurich

Dr. Julian Dederke,
Research Data Management, ETH Library
30 October 2024, EnhanceR Network

FAIR Data

Towards the gold standard for handling research data...



FAIR Data Management

- Funding agencies, journals and research institutions increasingly demand that data are published according to the **FAIR**¹ data principles (**F**indable, **A**ccessible, **I**nteroperable, **R**eusable)
- Much data are generated during research projects (raw, processed, contextual, code etc.)
- *“All scholarly digital research objects, from data to analytical pipelines—benefit from application of these principles, since all components of the research process must be available to ensure transparency, reproducibility, and reusability”¹*



¹ The FAIR Guiding Principles for **scientific data management and stewardship**, *Scientific Data*, Issue 3, 2016. 10.1038/sdata.2016.18.

Brief overview of the FAIR principles



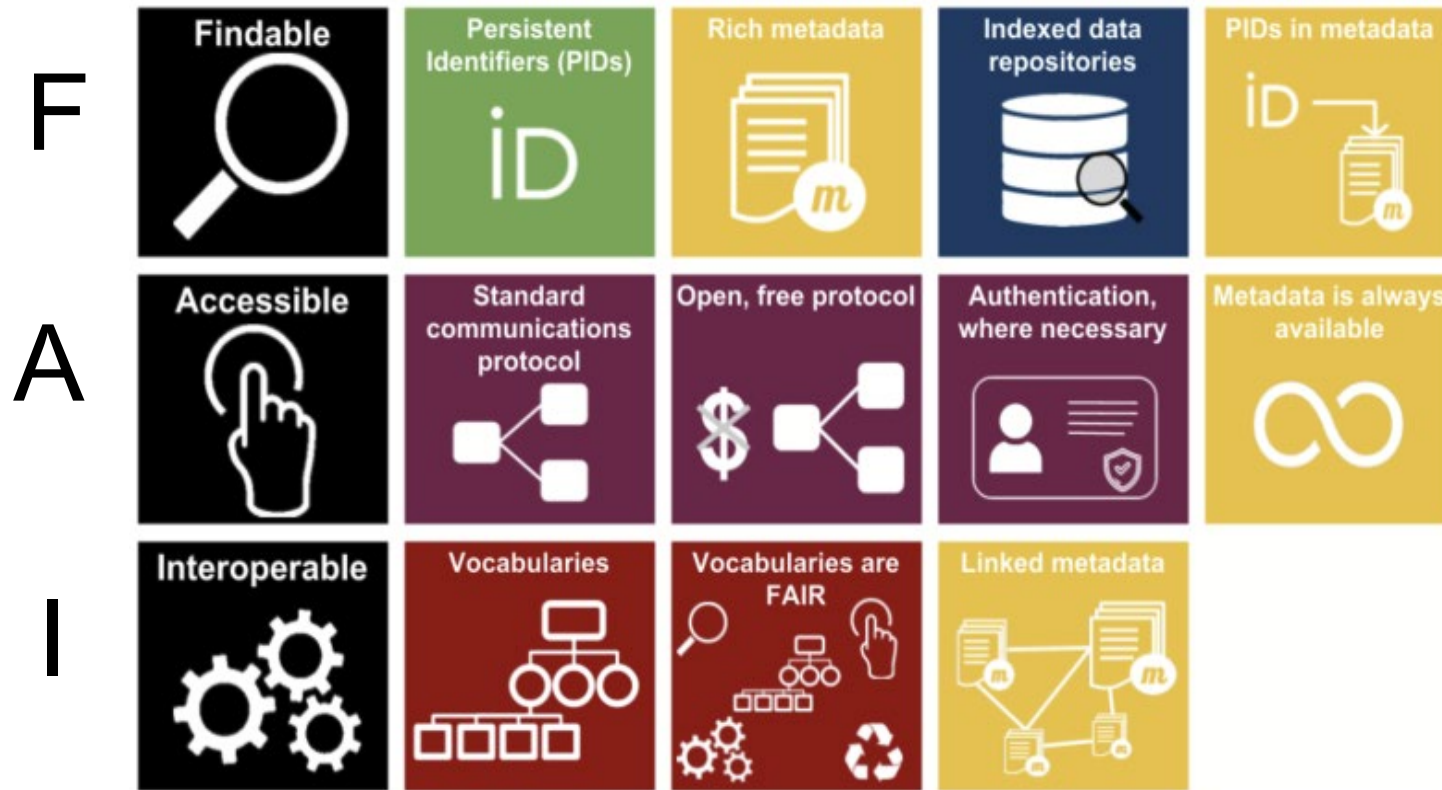
FAIR Go: New resources to support FAIR data, FAIR data infographic, CC-BY by Keith Russell, Kerry Levett, Richard Ferrers, Andrew White (except [F.A.I.R logo CC-BY-SA by Sangya Pundir](https://conference.ereseach.edu.au/2018/09/fair-go-new-resources-to-support-fair-data/))
<https://conference.ereseach.edu.au/2018/09/fair-go-new-resources-to-support-fair-data/>

Brief overview of the FAIR principles



FAIR Go: New resources to support FAIR data, FAIR data infographic, CC-BY by Keith Russell, Kerry Levett, Richard Ferrers, Andrew White (except [F.A.I.R. logo CC-BY-SA by Sangya Pundir](https://conference.ereseach.edu.au/2018/09/fair-go-new-resources-to-support-fair-data/))
<https://conference.ereseach.edu.au/2018/09/fair-go-new-resources-to-support-fair-data/>

Brief overview of the FAIR principles



FAIR Go: New resources to support FAIR data, FAIR data infographic, CC-BY by Keith Russell, Kerry Levett, Richard Ferrers, Andrew White (except [F.A.I.R. logo CC-BY-SA by Sangya Pundir](https://conference.eresearch.edu.au/2018/09/fair-go-new-resources-to-support-fair-data/))
<https://conference.eresearch.edu.au/2018/09/fair-go-new-resources-to-support-fair-data/>

Brief overview of the FAIR principles



FAIR Go: New resources to support FAIR data, FAIR data infographic, CC-BY by Keith Russell, Kerry Levett, Richard Ferrers, Andrew White (except [F.A.I.R logo CC-BY-SA by Sangya Pundir](https://conference.eresearch.edu.au/2018/09/fair-go-new-resources-to-support-fair-data/))
<https://conference.eresearch.edu.au/2018/09/fair-go-new-resources-to-support-fair-data/>

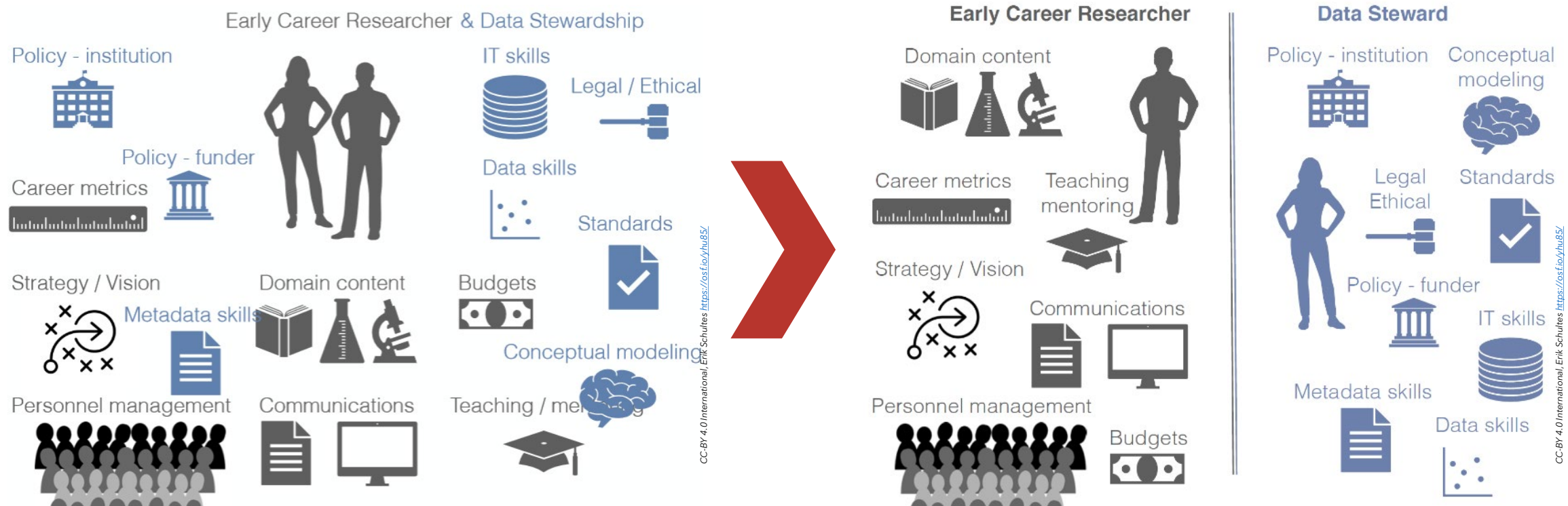
FAIR for research software (FAIR4RS)

- Barker, M., Chue Hong, N.P., Katz, D.S. *et al.* Introducing the FAIR Principles for research software. *Sci Data* **9**, 622 (2022). <https://doi.org/10.1038/s41597-022-01710-x>

Data Stewardship

What is Data Stewardship? What do Data Stewards do?

- A **data steward** is a person who deals with the management of research data that (s)he has not primarily produced herself/himself.¹



¹ For a more comprehensive definition, see Jetten et al. 2021, <https://doi.org/10.5281/zenodo.4320504>.

What is Data Stewardship?

- [swissuniversities](#) and [ETH Domain](#): Funding programmes on Open Research Data (ORD)
 - One of the goals: Establishing data stewardship and “ORD professionals”
- A **data steward** is a person who deals with the management of research data that (s)he has not primarily produced herself/himself.¹ This includes, for example:
 - RDM
 - Reproducible data analysis
 - Structured coding/ programming and software engineering
 - ...
- “Data Stewardship” in a wider sense
- Observations:
 - Central units are well-positioned for coordination of RDM activities and for exchange on good practice in the whole university
 - Strongest demand for additional support in context of specific disciplines

¹ For a more comprehensive definition, see Jetten et al. 2021, <https://doi.org/10.5281/zenodo.4320504>.

Data Stewardship in Switzerland and at ETH Zurich

- ETH Domain: [Open Research Data \(ORD\) Position 2020](#), [ORD Program 2021-2024](#)
- **Swissuniversities**-[Program on Open Research Data](#) (2022-2028)
- 25 higher education institutions in CH have submitted action plans (2023-2024)

3. Objectives	17
3.1. Action Area A: Support researchers and research communities in imagining and adopting ORD practices	17
3.1.1. Measure A1: Provide bottom-up support to promote excellence in ORD practices	17
3.2. Action Area B: Development, promotion, and maintenance of financially sustainable basic infrastructures and services for all researchers	19
3.2.1. Measure B1: Evaluate the Swiss ORD landscape with regard to the consolidation and strategic development of services and infrastructures	19
3.2.2. Measure B2: Provide researchers with long-term ORD services and infrastructures	20
3.2.3. Measure B3: Ensure long-term funding of ORD infrastructures and services of foremost national relevance	22
3.2.4. Measure B4: Provide access to ORD services and infrastructures and improve interoperability	23
3.2.5. Measure B5: Professionalisation of ORD specialists and related services	24
3.3. Action Area C: Equip researchers for ORD skills development and exchange of best practices	25
3.3.1. Measure C1: Raising awareness of FAIR principles and ORD practices in the scientific community	25
3.3.2. Measure C2: Training researchers for RDM and ORD practices	26
3.4. Action Area D: Building up systemic und supportive conditions for institutions and research communities	27
3.4.1. Measure D1: Incentives and rewards	27
3.4.2. Measure D2: Ethical and legal aspects	28
3.4.3. Measure D3: International alignment	30

Action plans of higher education institutions:

- ◻ Action Plan of the University of Basel
- ◻ Action Plan of the University of Bern
- ◻ Action Plan of the University of Fribourg and Freiburg University of Education
- ◻ Action Plan of the University of Geneva
- ◻ Action Plan of the University of Lausanne, University of Geneva, University of Zurich, Vaud University of Teacher Education, Zurich University of Applied Sciences & Geneva School of Management
- ◻ Action Plan of the University of Lucerne
- ◻ Action Plan of the University of Neuchâtel
- ◻ Action Plan of the University of Zurich
- ◻ Action Plan of the University Università della Svizzera italiana (USI)
- ◻ **Action Plan of the ETH Zurich**
- ◻ Action Plan of the Graduate Institute, Geneva (IHEID)
- ◻ Action Plan of the Bern University of Applied Sciences
- ◻ Action Plan of the University of Applied Sciences and Arts of Western Switzerland
- ◻ Action Plan of the University of Applied Sciences Northwestern Switzerland
- ◻ Action Plan of the Lucerne University of Applied Sciences and Arts
- ◻ Action Plan of the University of Applied Sciences and Arts of Southern Switzerland, SUPSI
- ◻ Action Plan of the University of Applied Sciences Grisons
- ◻ Action plan of the Zurich University of Applied Sciences ZHAW
- ◻ Action Plan of the University of Teacher Education Bern
- ◻ Action Plan of the University of Teacher Education Lurzern
- ◻ Action plan of the University of Teacher Education Zug
- ◻ Action Plan of the University of Teacher Education Zurich

Data Stewardship Network (DSN)

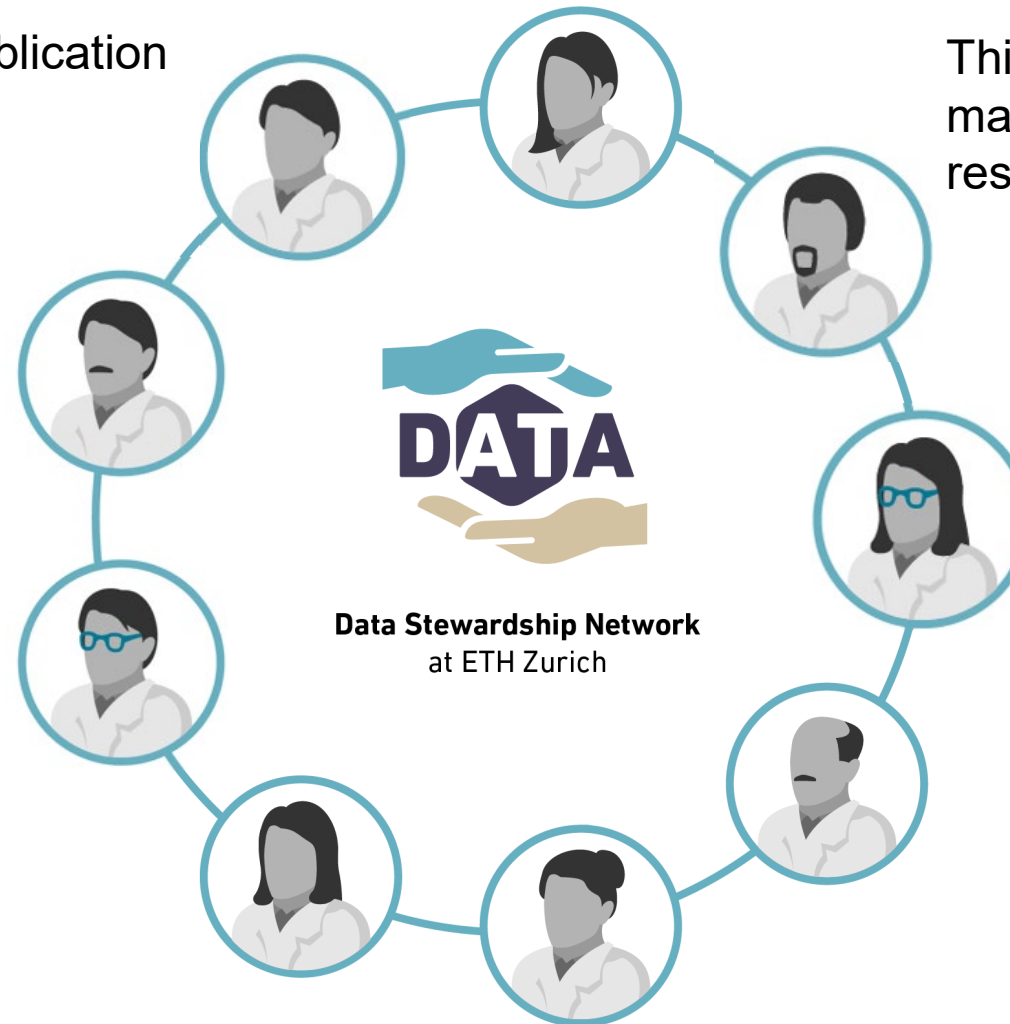
- Ideas, project, goals

Data Stewardship Network (DSN) at ETH Zurich

He deals with the data publication process in his lab.

This person develops a data management strategy in her research department.

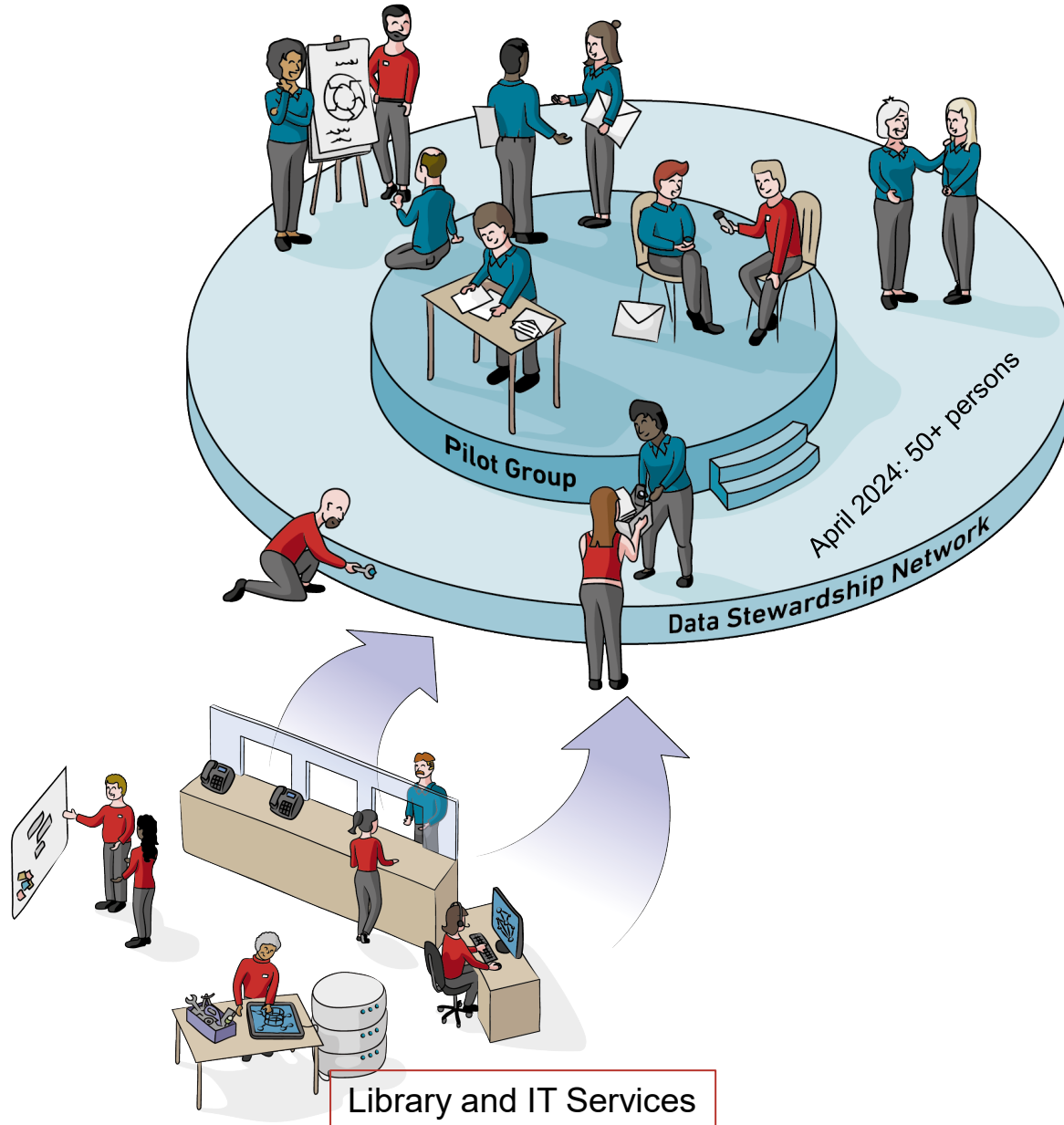
They optimise the Open Science workflows in their research groups.



She is an expert in metadata standards in biochemistry.

DSN = Community network of researchers and support professionals with tasks in RDM, data stewards, data managers, software engineers, persons with similar tasks at ETH Zurich

Coordination and Goals

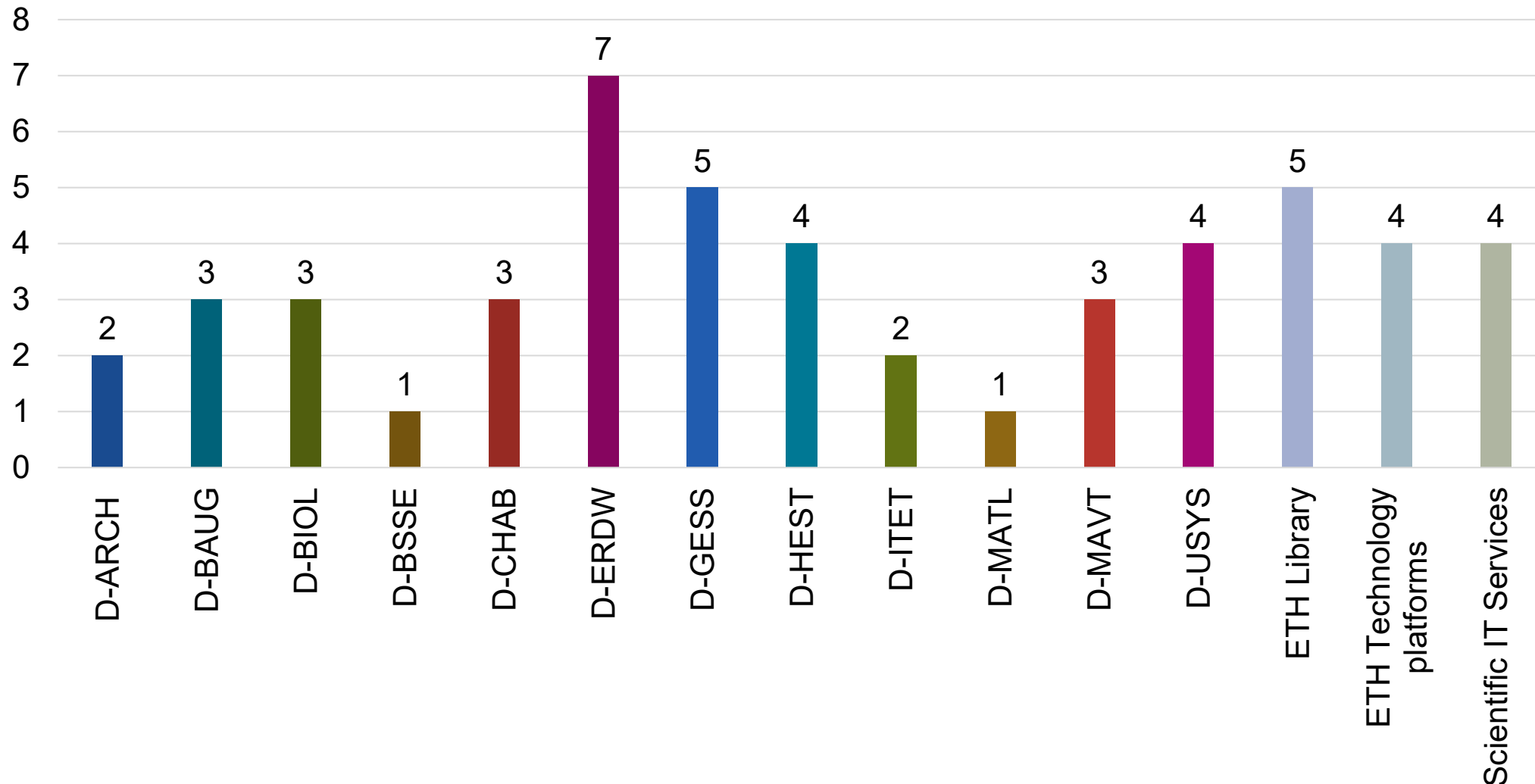


- Development and maintenance of the [DSN](#); including communication platform
- Community network events; project and event coordination
- Within the Data Stewardship Network we want to...
 - connect local RDM experts and RDM supporters,
 - network data stewards with the central RDM support (ETH Library and Scientific IT Services),
 - offer and actively share RDM courses and RDM training material,
 - inform about current developments regarding RDM and data stewardship at ETH and in Switzerland,
 - strengthen and further develop offers for RDM support and data stewardship at ETH Zurich
 - **increase visibility for data stewardship at ETH Zurich**

Members of the DSN at ETH Zurich

CLASSIFICATION: INTERNAL, do not distribute

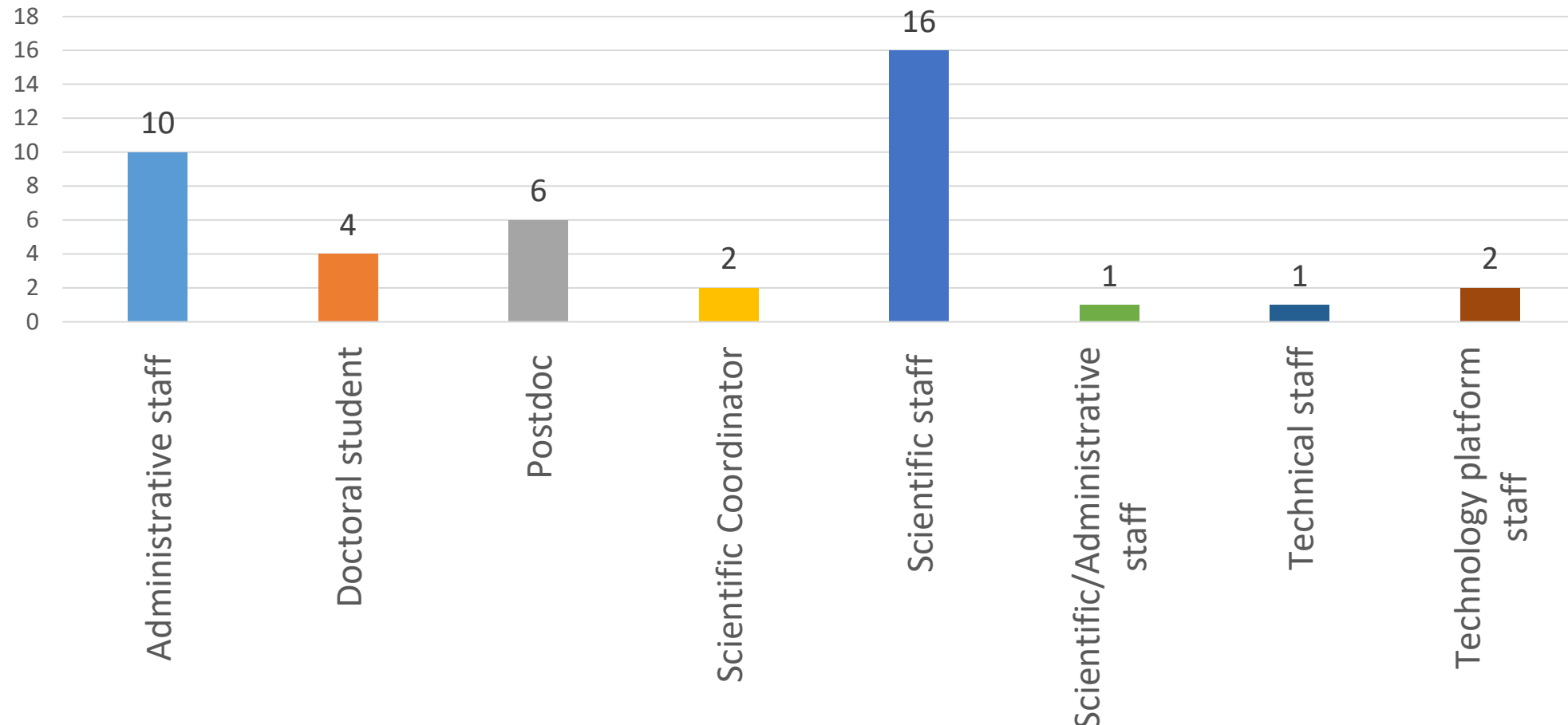
Affiliations of DSN members (12 August 2024)



Members of the DSN at ETH Zurich

CLASSIFICATION: INTERNAL, do not distribute

Positions/employment of DSN members without ETH Library and SIS (12 August 2024)



(Note: Numbers without coordinating personell from ETH Library and ID Scientific IT Services)

Data Stewardship at ETH Zurich



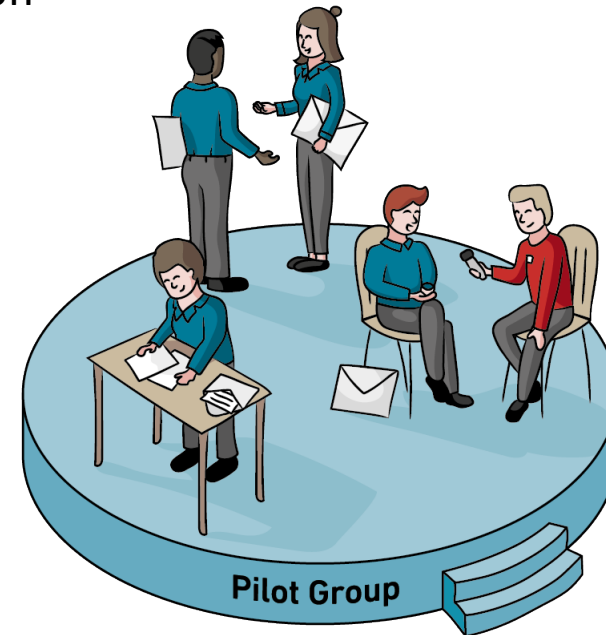
ETH Library in collaboration with *ID Scientific IT Services* coordinates activities of the Data Stewardship Network

Pilot project Data Stewardship at ETH Zurich

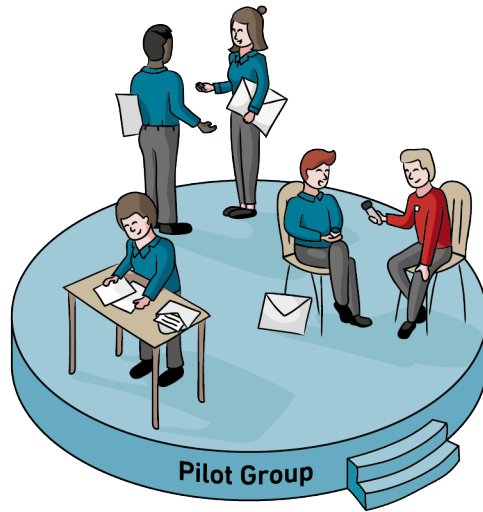


ETH Library in collaboration with *ID Scientific IT Services* coordinates activities of the Data Stewardship Network.

Project partners: pilot group of 6 data stewards from 6 different ETH Zurich departments; close coordination



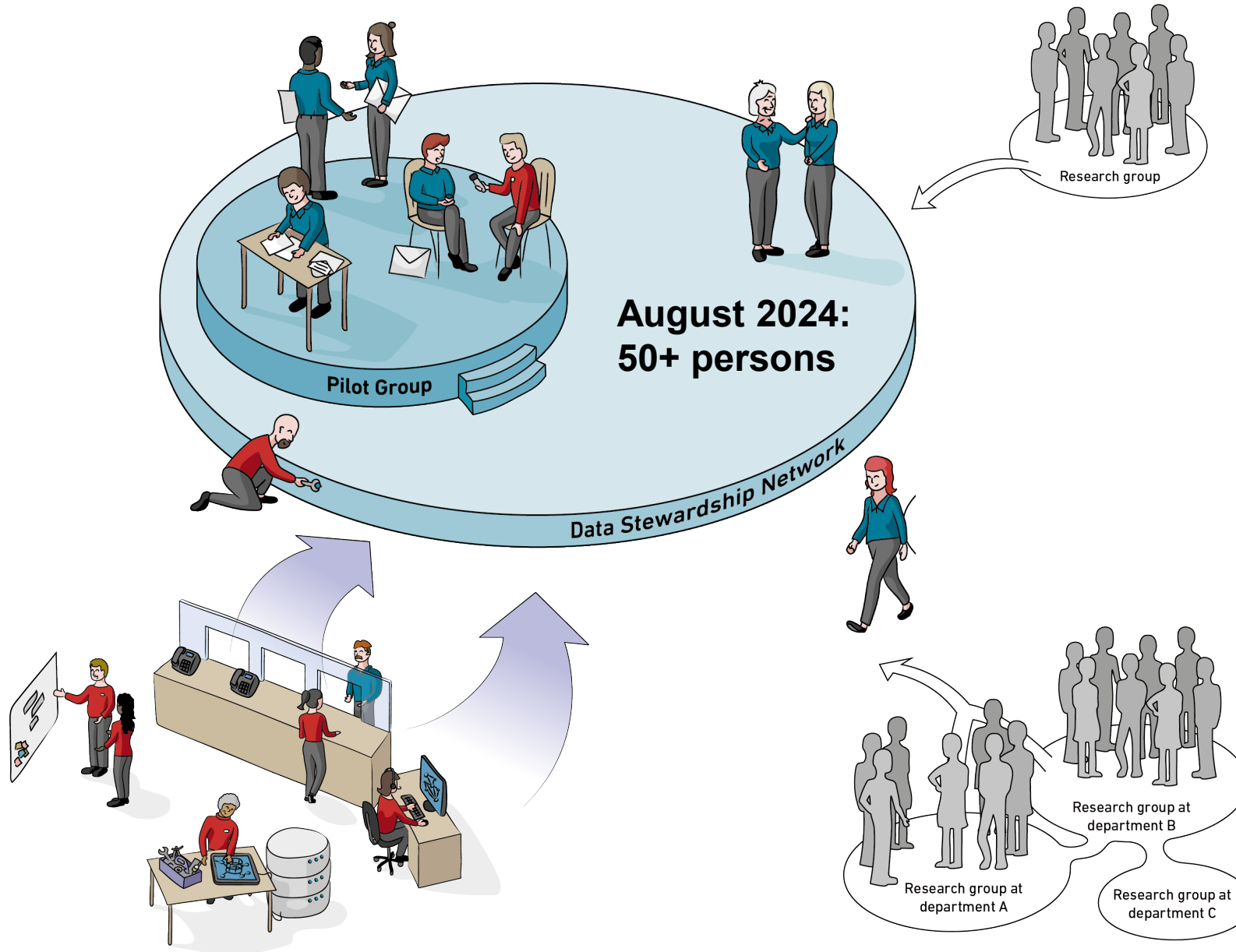
Pilot project Data Stewardship at ETH Zurich



- Set-up and maintenance of [DSN](#); including communication platform/channels
- Community Network events, project and event coordination

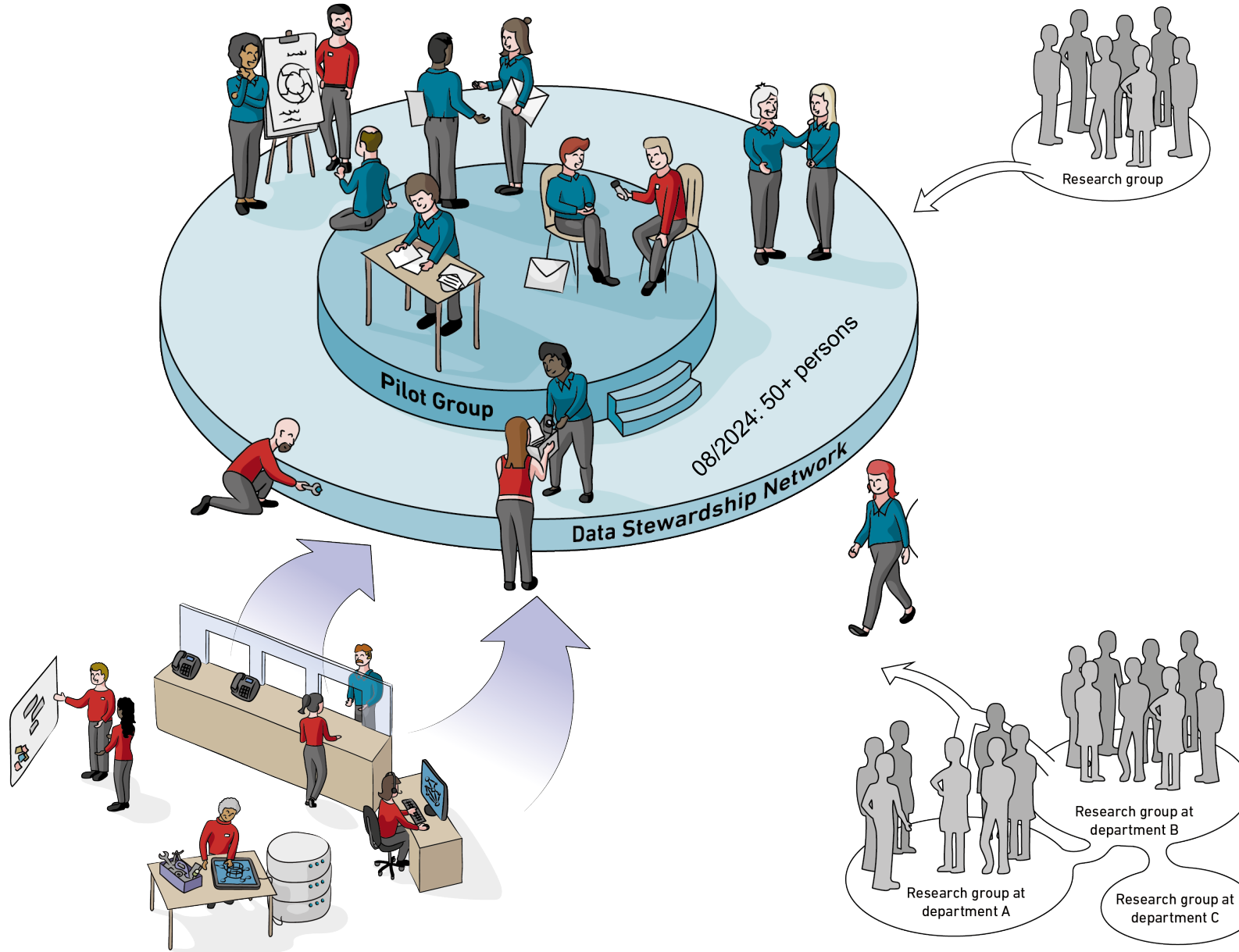


Pilot project Data Stewardship at ETH Zurich



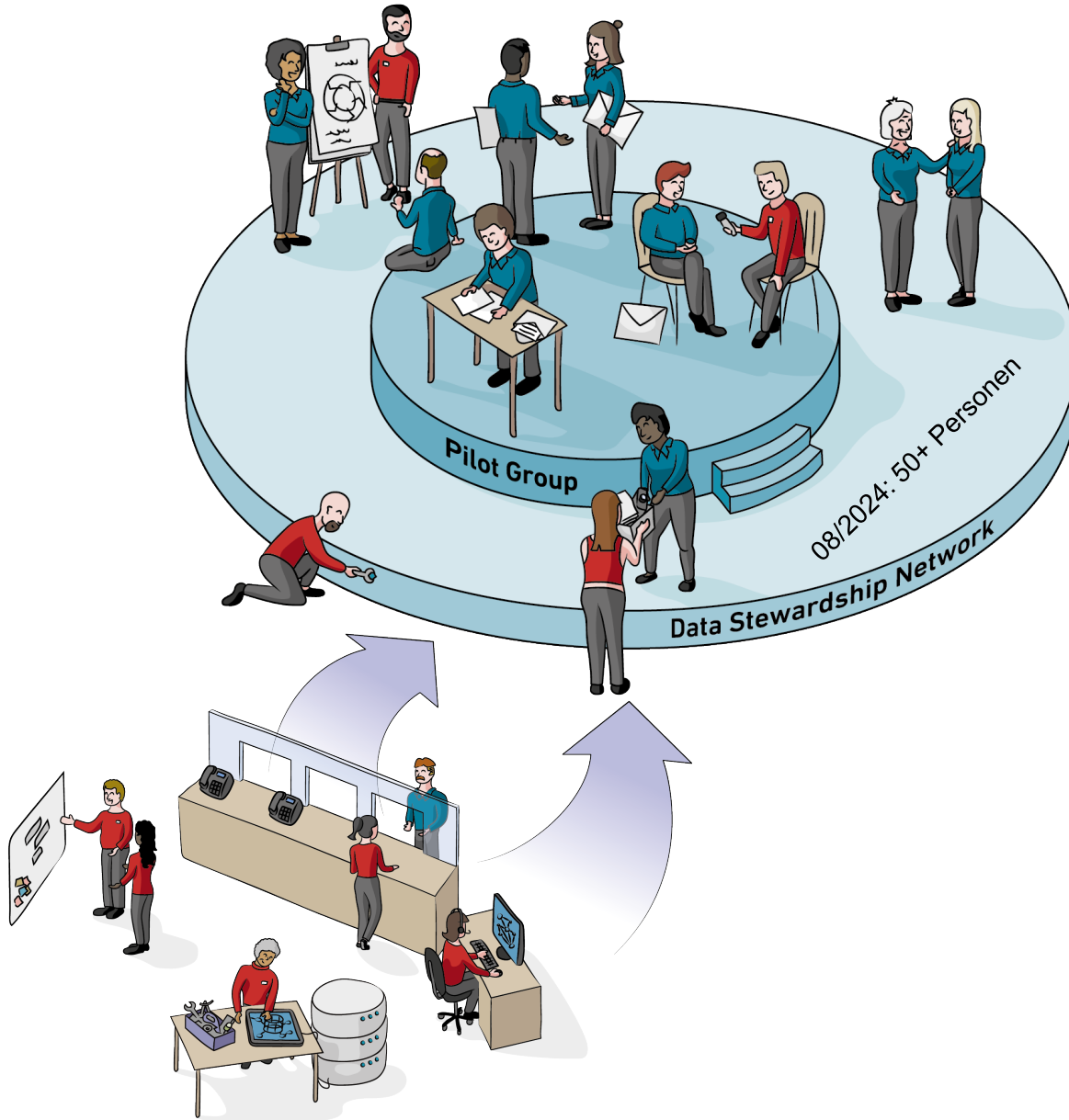
- Set-up and maintenance of [DSN](#); including communication platform/channels
- Community Network events, project and event coordination

Pilotprojekt Data Stewardship an der ETH Zürich

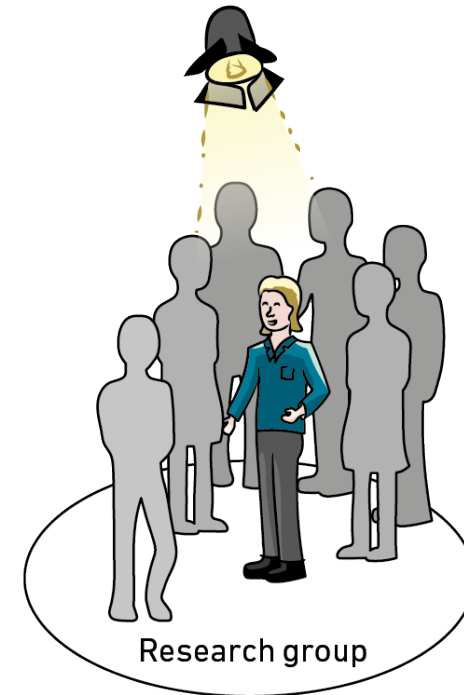


- Set-up and maintenance of [DSN](#); including communication platform/channels
- Community Network events, project and event coordination
- Target group data stewards
 - Consulting services
 - Training material
 - [Guides](#)

Pilotprojekt Data Stewardship an der ETH Zürich



- Persons in different roles already have tasks in the field of data stewardship
- **Data Stewardship is already here at ETH Zurich!**



Visibility for Data Stewards

- Website: <https://library.ethz.ch/en/researching-and-publishing/data-management-and-policies/research-data-management/data-stewardship.html>



A vision for Open Science and Data Stewardship at ETH Zurich



Data Stewardship for Monitoring Air Travel Emissions Data at ETH Zurich



Data stewardship at departmental level - insights from the D-HEST



Data Stewardship in large research infrastructures?

D-ERDW, BedrettoLab

D-GESS, Decision Science Laboratory

+

—

Dr Stefan Wehrli



Affiliation: Decision Science Laboratory, D-GESS

Function: Data Steward and Head of Behavioural Studies Laboratories

Contact: wehrlist@ethz.ch

Disciplinary field of expertise: Experimental Social Sciences, Survey Research, Sociology

Data Stewardship topics: Data collection and acquisition in behavioural labs, online environments, and field studies; Soft-ware engineering; Research data management; Research data publication.

> [ETH Person profile](#)

> [ORCID profile](#)

D-HEST, IT Support Group

D-ITET, NCCR Automation

D-USYS, Biocommunication Group

D-MAVT, Global Health Engineering

+

+

+

+

Current
Dederke |
30.10.2024

25

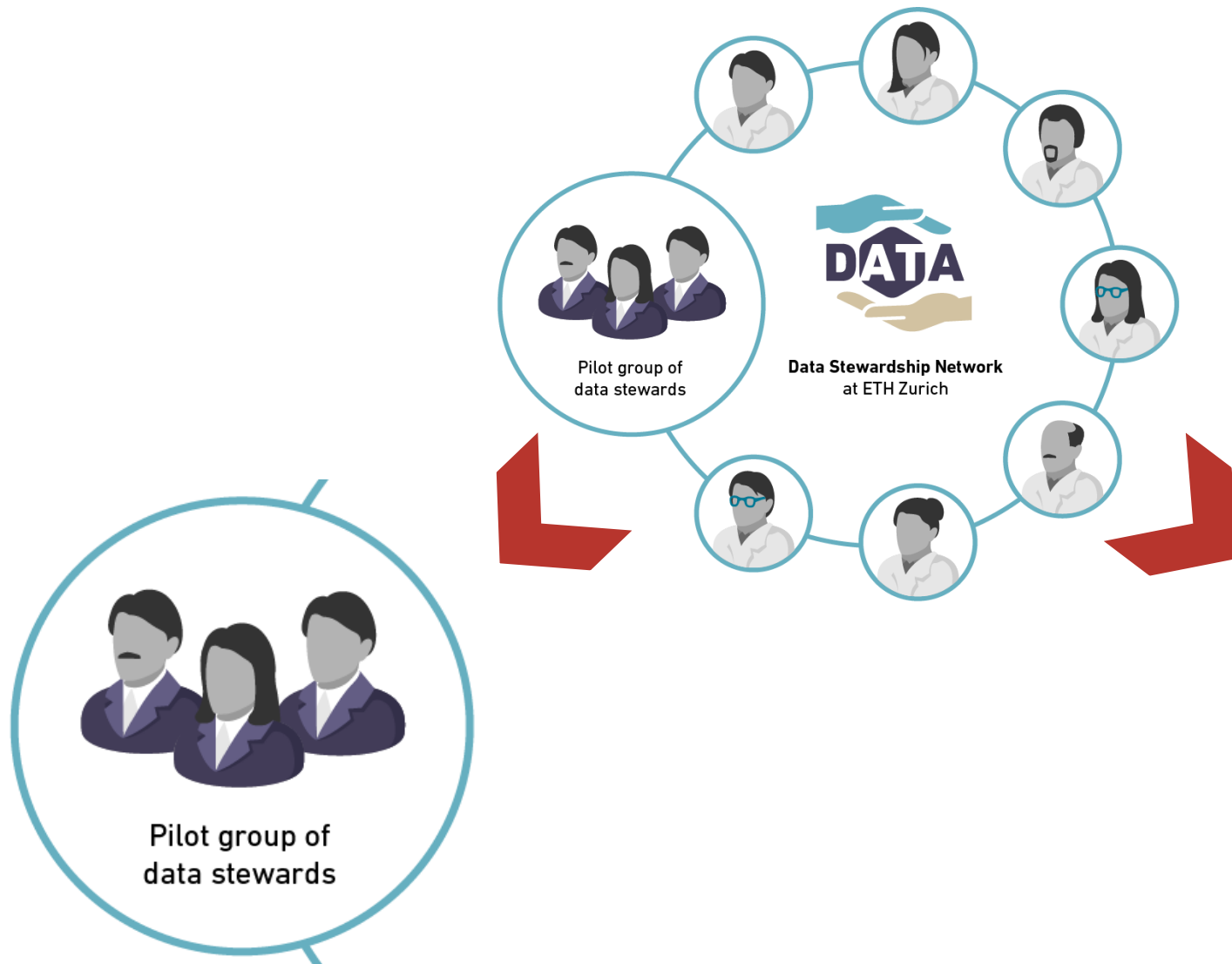
Half-yearly DSN Community Events

- **27.02.2023, DSN Kick-off: Connecting people and topics on data stewardship at ETH Zurich, 2 hours**
- **30.10.2023, DSN Autumn event: Connecting people and topics on DS at ETH Zurich, 2 hours**
- **08.04.2024, DSN Spring Community Meeting (hybrid), 2 hours**
- **07.10.2024, DSN Autumn Community Meeting (hybrid), 2 hours**

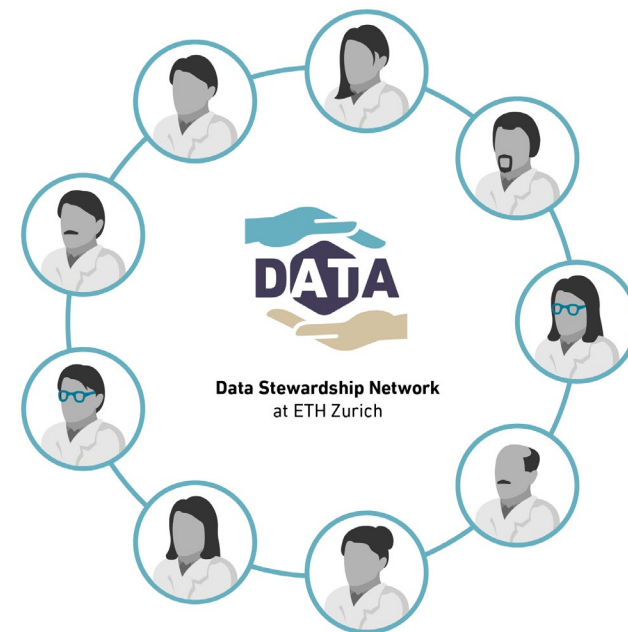
Focus:

- Presentations of current Open Research Data projects
- Presentations of current RDM workflows in research groups/projects
- Discussion of RDM requirements at ETH Zurich and how researchers implement those (e.g. publishing research data underlying a journal paper is required; data stewards use various FAIR data repositories)
- Presentation and discussion of services available at ETH Zurich (e.g. institutional FAIR data repository)
- Half-yearly community events are supplemented by smaller events with a more focused topic with ETH Zurich speakers or external speakers; e.g. *“Renku: an open-source platform where data, code and compute come together”*, or seminar *“Drafting your own data management strategy”*

Output and outlook



Project-related 2023-2024



permanent

Bsp. 1: Präsentation bestehender Rollenmodelle in Interviews

- **Data Stewardship** wird an vielen Orten an der **ETH Zürich** ausgeübt. Es hat viele Formen.
- Interviews:
 1. [Lars Schöbitz, Open-Science-Spezialist in der Forschungsgruppe für Global Health Engineering](#)



2. Giuliana Turi, Stab Präsident, Projektleiterin *ETH Air Travel*-Projekt



Address

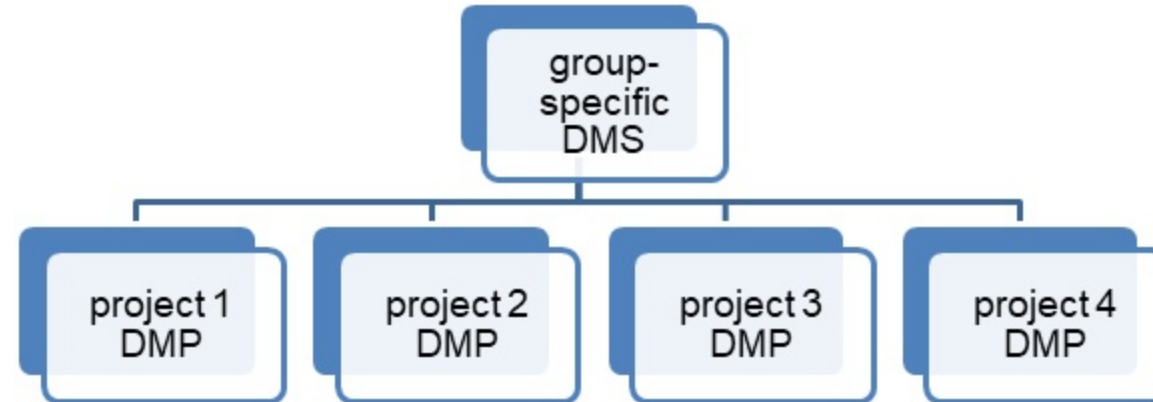
ETH Zürich
Sustainability
Dr. Giuliana Turi
Stab Präsident
WES B 13
Weinbergstrasse 41
8092 Zürich
Switzerland

3. Data Steward* 3, Forschungsgruppe A, Departement XY

Diskussionsanstoss: Welche Aufgaben aus diesem Spektrum gibt es in unserer Forschungsgruppe? Wer erledigt sie heute? Könnte man sie anders organisieren? Sollte sich jmd. schwerpunktmässig darum kümmern?

Beispiel 2: Vorlage für Datenmanagement-Strategie

- Datenmanagement-Strategie (DMS) in einer Forschungsgruppe als Festlegung und bleibende Dokumentation von Workflows rund um Forschungsdatenmanagement
- Potenziell Vorlage für projektspezifische Datenmanagementpläne (DMP) in der Gruppe



- [Data Management Strategy Instructions for ETH Zurich Research Groups](#)
 - Anleitung zum Erstellen einer DMS
 - Vorlage mit Beispielformulierungen und Hinweisen auf Supportmaterial
 - Ressource für Forschungsgruppen oder explizit Data Stewards

Dr. Julian Dederke
Research Data Management and Digital Curation
julian.dederke@library.ethz.ch

ETH Library
Research Support Services

ETH Library
Rämistrasse 101
8092 Zurich
Switzerland

www.library.ethz.ch/rdm