

DAta for PHoton and Neutron Experiments

An NFDI consortium of the DFG
1 December 2021



DAPHNE4NFDI satellite meeting

DAPHNE4NFDI: Science driven data management solutions for the user community

PROGRAMME

Chair: Bridget Murphy (Kiel University)

13:00 Anton Barty (DESY, DAPHNE Speaker)
The DAPHNE4NFDI project

13:15 Tom Arnold (ESS)
Orso - The Open Reflectometry Standards Organisation initiative from the association for reflectometry

13:40 Axel Scheiding (Kiel University)
In search of the „perfect“ ELN (electronic lab notebook)

14:00 Speaker Carlo Minotti (PSI)
The SciCat data portal

14:20 Alejandra Gonzalez-Beltran (STFC)
The ICAT project: A modular ecosystem of tools for large-scale facilities data management

14:40-15:10 Break

Chair: Astrid Schneidwind (Jülich)

15:10 Alexander Guda (Southern Federal University)
Online XAS-data analysis using machine learning algorithms

15:30 Thomas Holm Rod (ESS)
easydiffraction.org: Making diffraction data analysis and modelling easy

15:50 Dr. Stefan Kowarik (Uni Graz)
Neural network based co-refinement of XRR data enables sparse data sampling

16:10-16:45 Discussion and community engagement



Brings
together

- KFS and KFN
- Large-scale photon and neutron research facilities
- Universities
- Research institutions
- Wider community



Deutsche
Forschungsgemeinschaft



Nationale
Forschungsdaten
Infrastruktur

DAPHNE
4NFDI

Brings
together

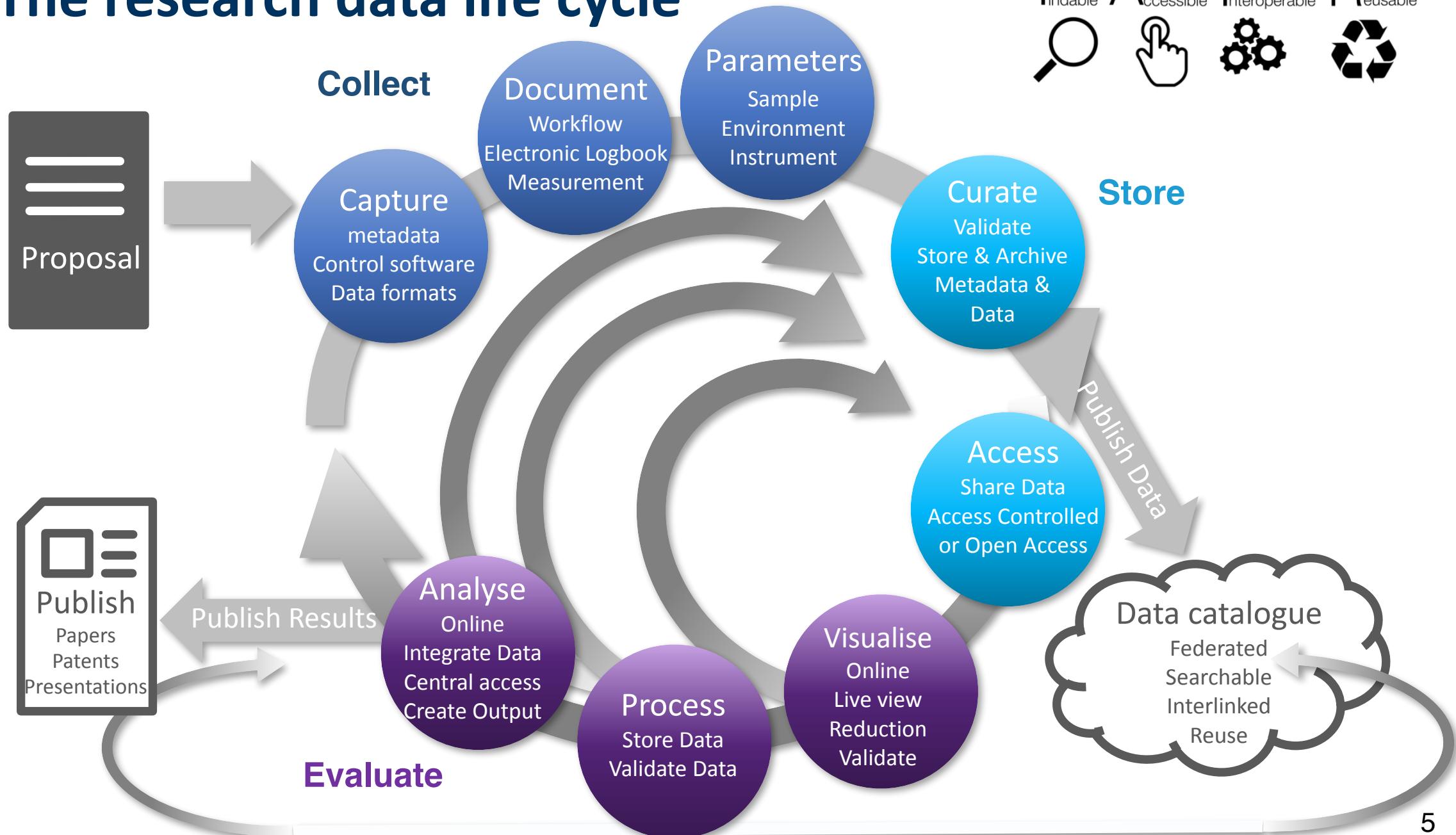
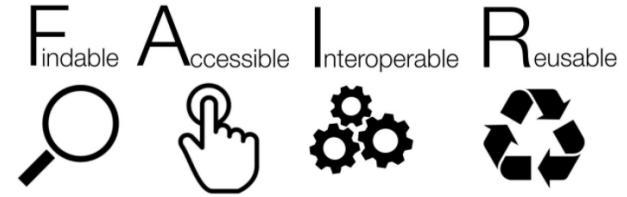
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Research data infrastructure, without hardware

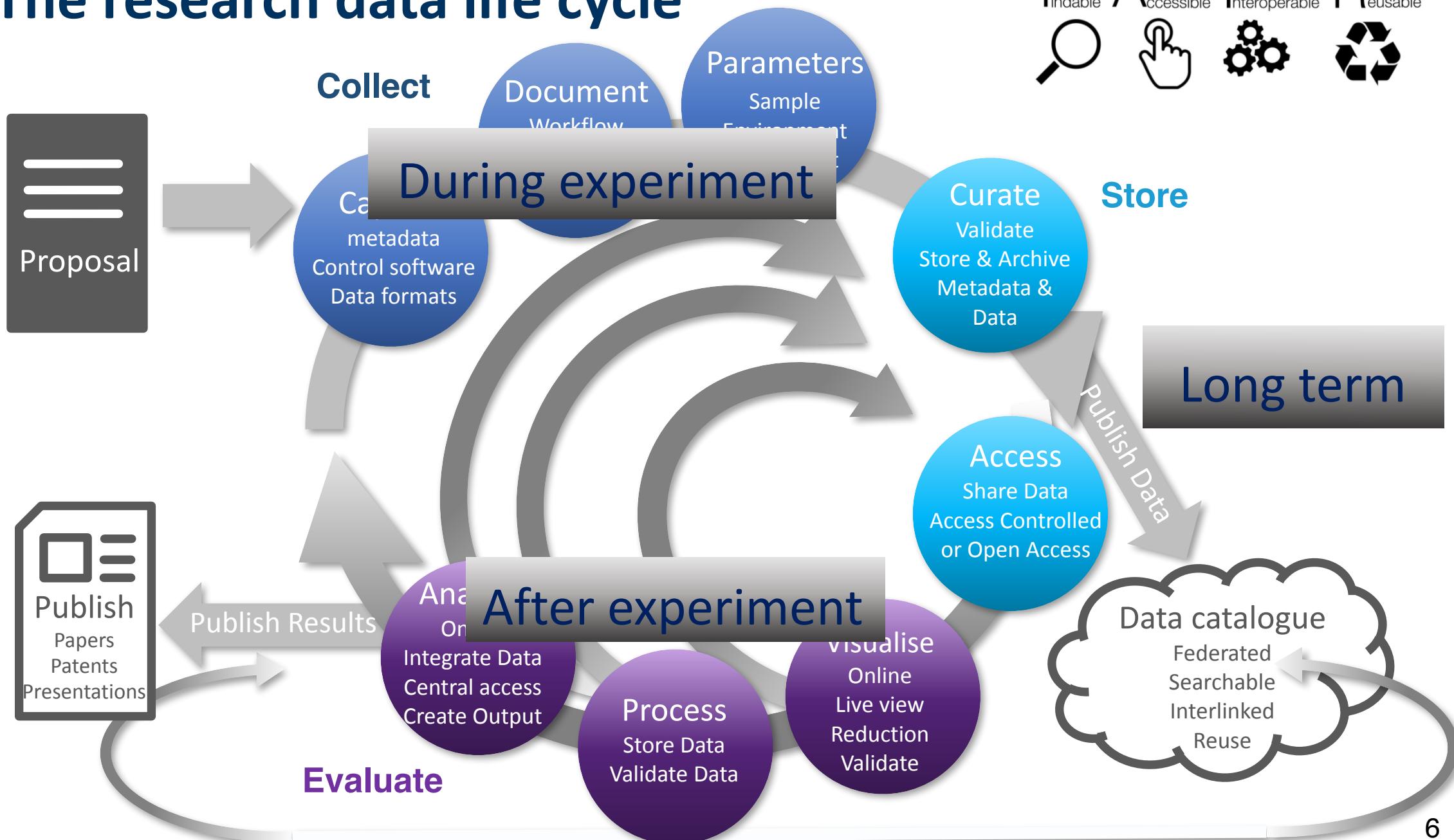


Scope: 5 years, 40 or so positions

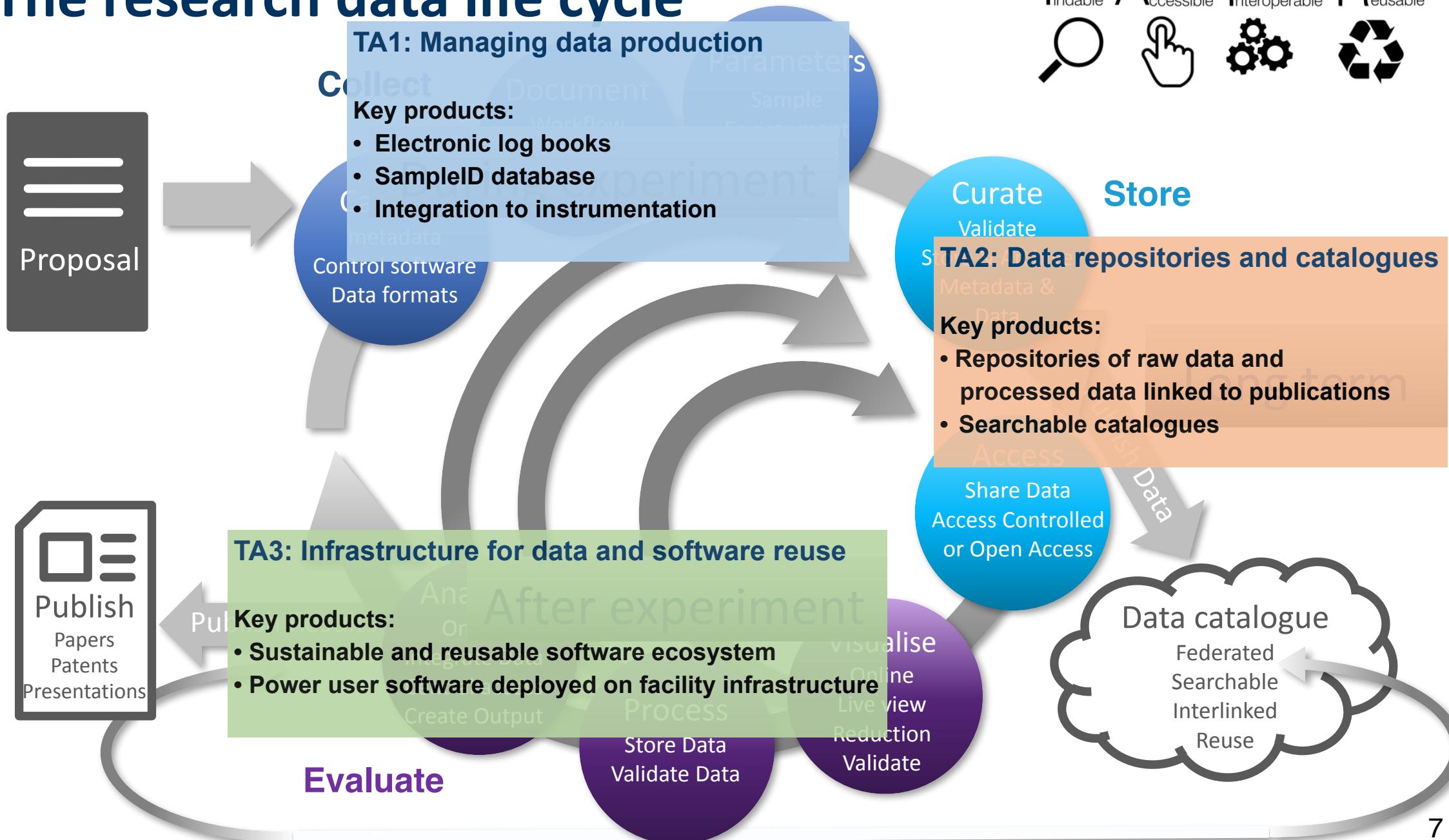
The research data life cycle



The research data life cycle

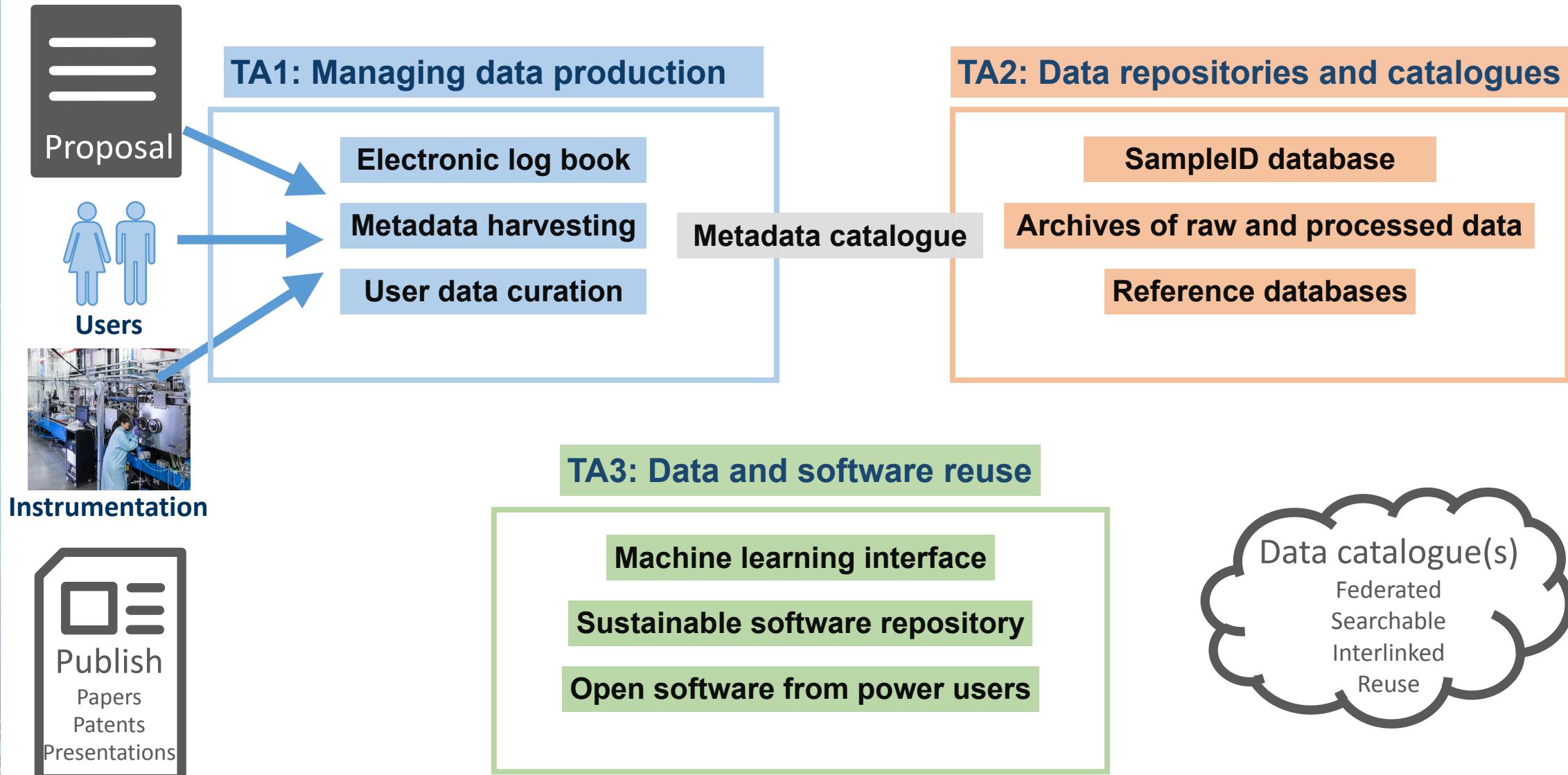


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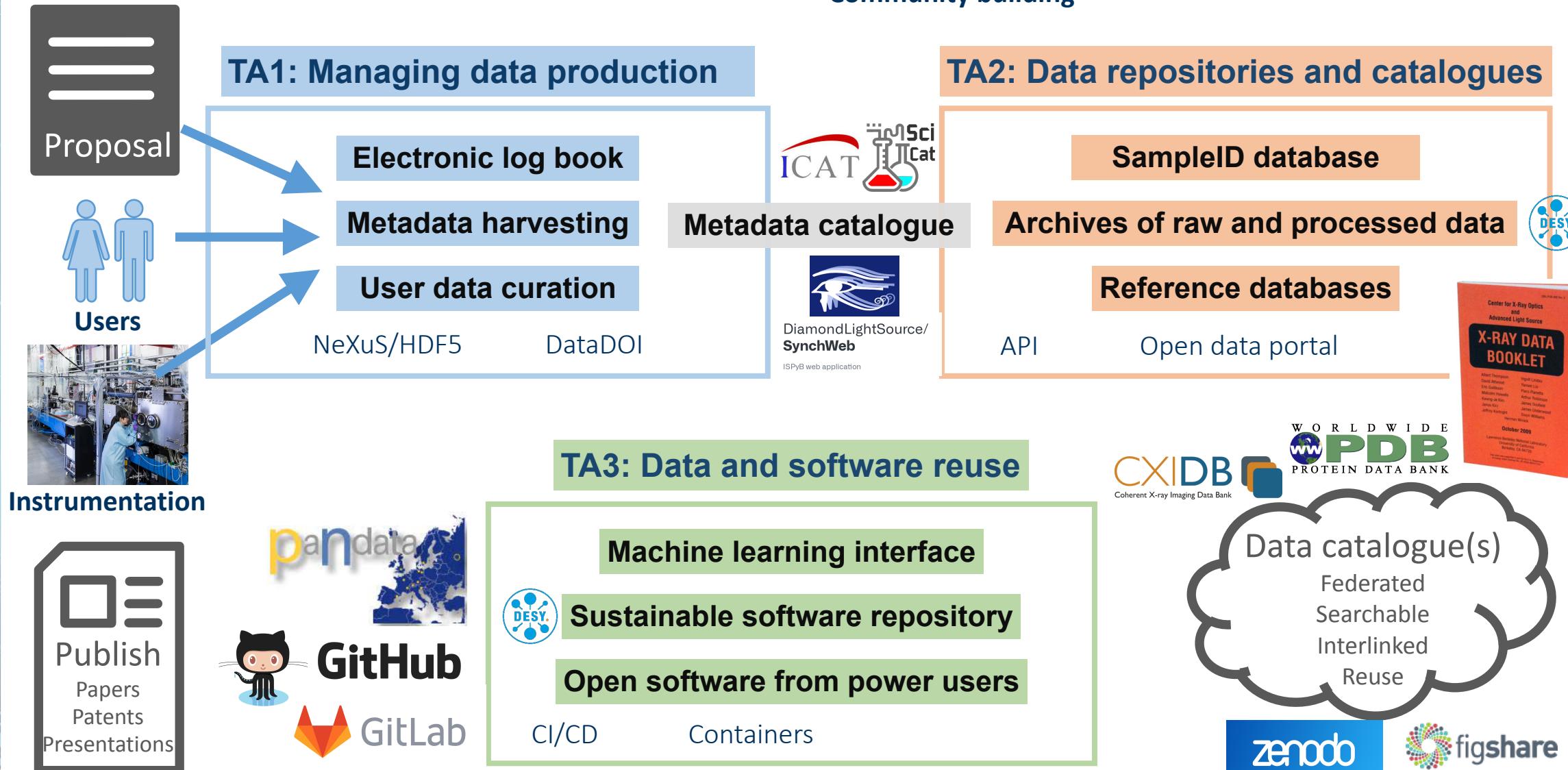
Core products to focus on

Our deliverables to the community (and NFDI)



Core products to focus on

Our deliverables to the community (and NFDI)



Task Area 4: Dissemination and outreach

The NFDI consortium as a role model and educator

Inside DAPHNE

- Explain, discuss and disseminate
 - Organize
 - Provide an exchange platform
 - Support pilot projects and Use Cases
- DAPHNE VISION

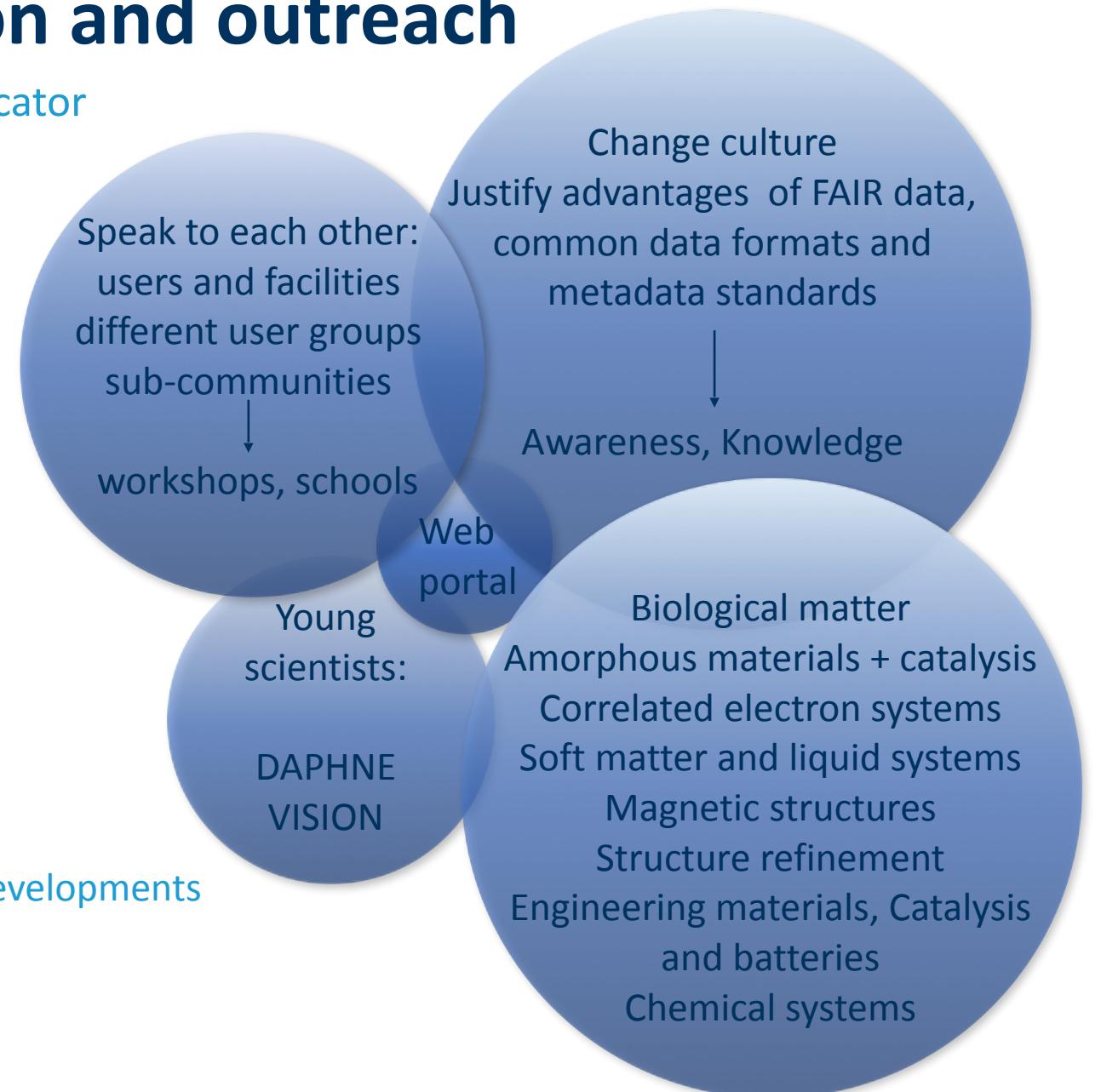
DAPHNE within NFDI

- Support Task2
- Connect specialists, use experiences
- Organize and support common Use Cases

Outreach to society and industry

- Inform industry about
- Connect society and industry to highlight developments
- Encourage to re-use

DAPHNE VISION



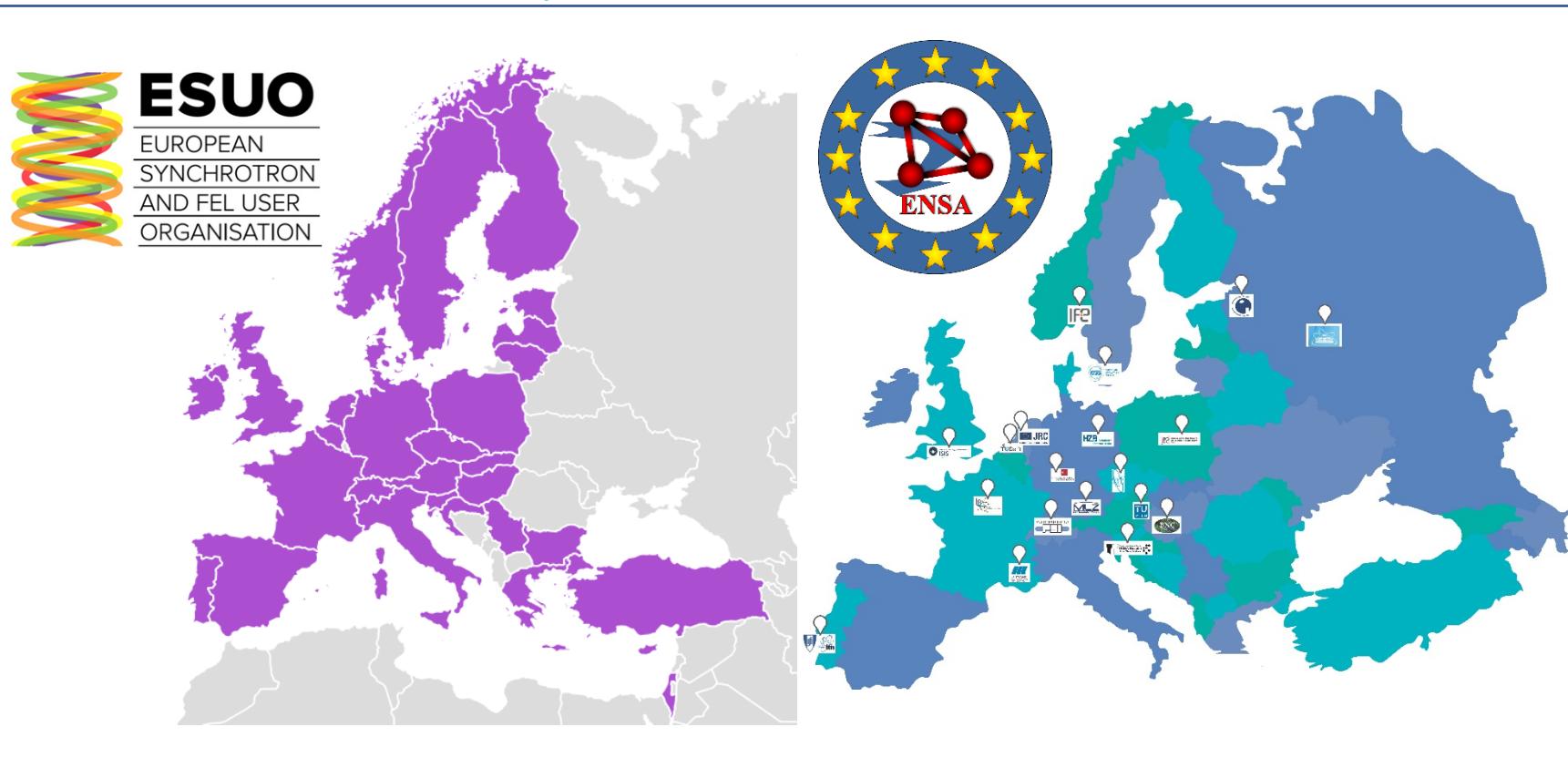
Task area 5: External communication and policy

Integration into the international research community

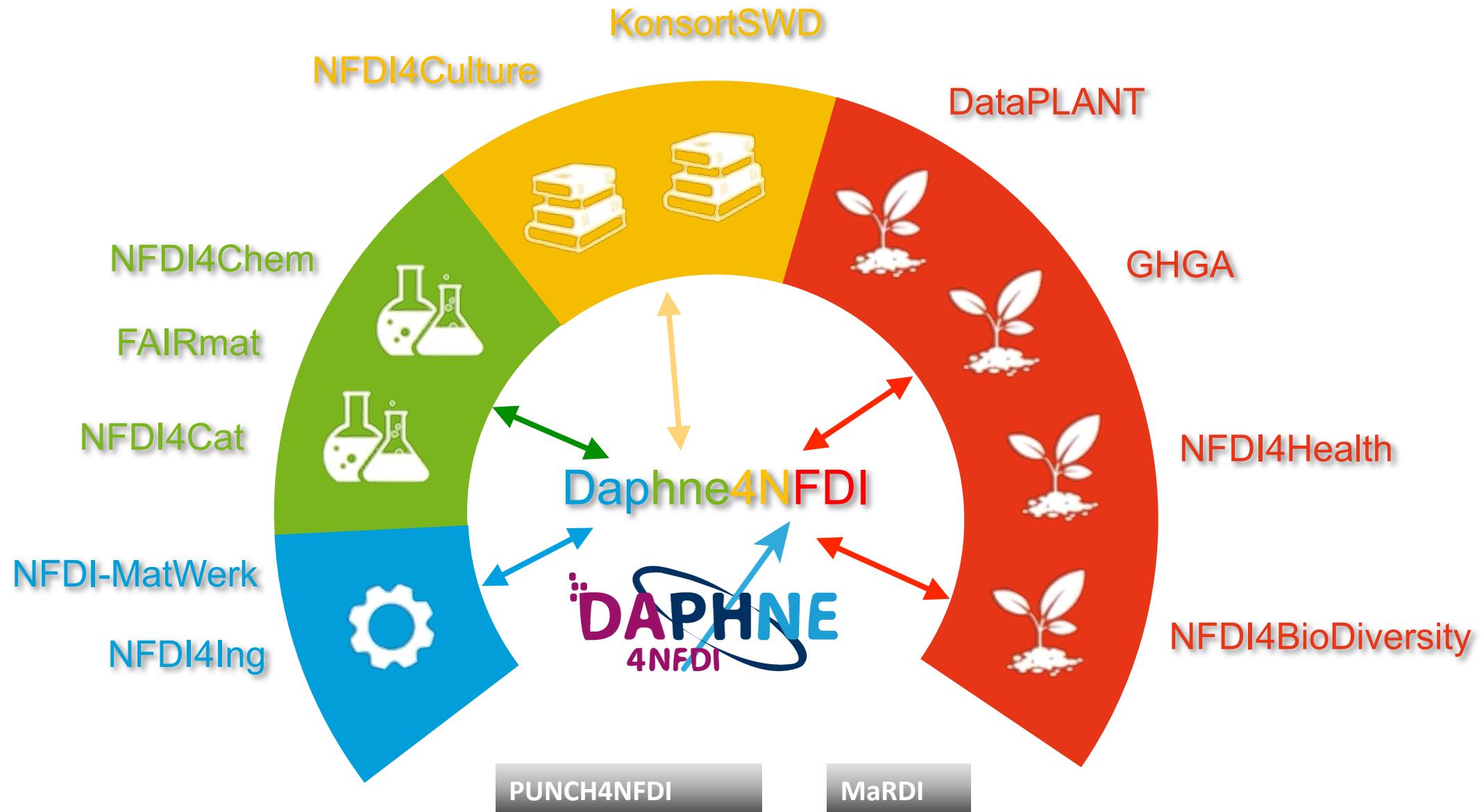
DAPHNE is embedded in a worldwide network of > 30.000 synchrotron and neutron users

Organizational structures exists:
European user organizations and facility organization

Connects to European open science cloud X-ray and neutron data projects PaNosc and ExPands



Networked to other NFDI consortia



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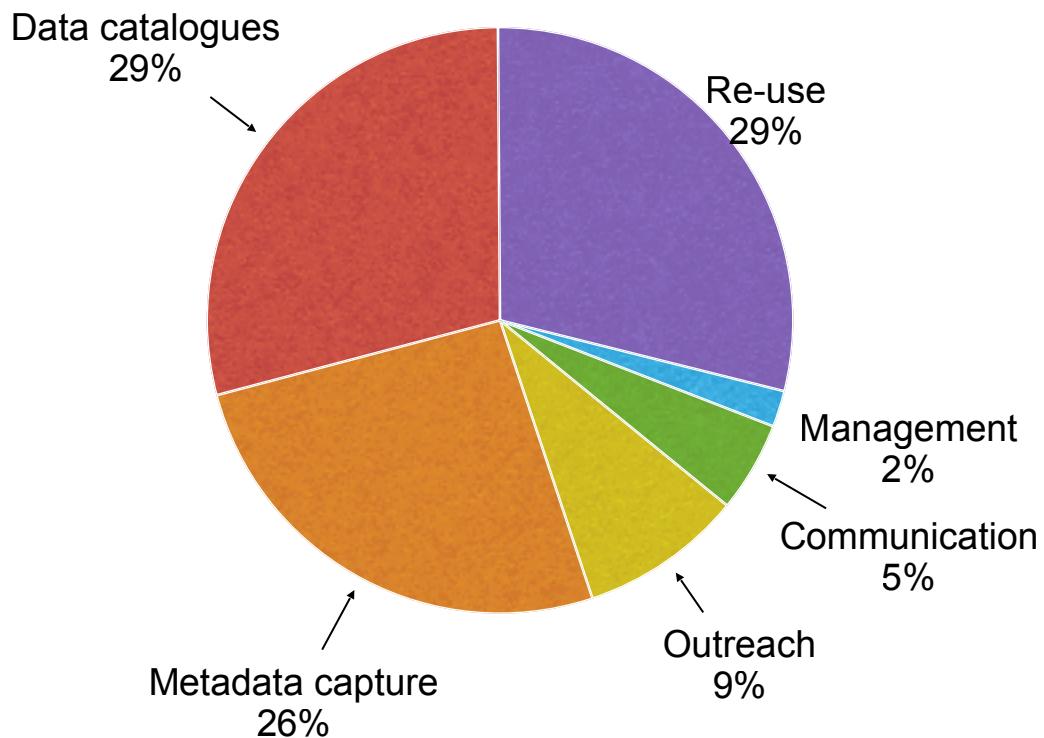
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Project profile

Project organised into 6 parts:

1. Management (3%)
2. Communication (5%)
3. Outreach and education (10%)
4. Metadata capture (25%)
5. Data catalogues and archives (28%)
6. Infrastructure for data and software re-use (29%)



Participants across Germany:

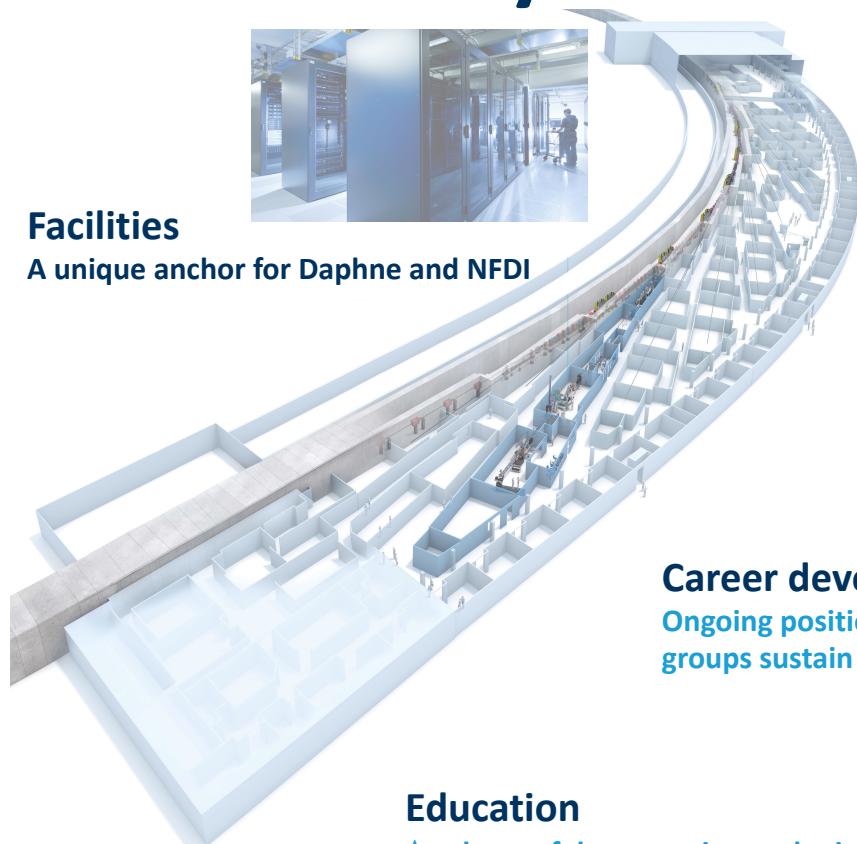
1. Technical University of Munich (12%)
2. University of Kiel (14%)
3. University of Siegen (10%)
4. Karlsruhe Institute of Technology (8%)
5. Friedrich Alexander University Nürnberg (7%)
6. Technical University of Berlin
7. University of Wuppertal
8. University of Gottingen
9. Ludwig Maximilian University Munich
10. University of Tübingen
11. University of Aachen
12. Deutsches Elektronen-Synchrotron (14%)
13. Forschungszentrum Jülich (6%)
14. European XFEL
15. Helmholtz Zentrum Geesthacht
16. European Molecular Biology Laboratory
17. Helmholtz Zentrum Berlin
18. Helmholtz Zentrum Dresden-Rossendorf

Sustainability within NFDI beyond initial DFG funding



Facilities

A unique anchor for Daphne and NFDI



Integration

Daphne data infrastructure will be closely integrated with facilities, ensuring continued impact long after NFDI is over.

Continued operation of services

Operation of services and maintenance will be provided by the facilities after funding is over.

Career development

Ongoing positions, including long term, within facility computing groups sustain Daphne after initial funding.

Education

A culture of data curation and scientific software development will be embedded in University courses for students and future generations

Leading by example

Power user groups act as role models leading the community in entrenching best practices



Science domains

A large and diverse research community



DAta for PHoton and Neutron Experiments

NFDI consortium presentation
Nov. 24, 2020

Thanks to the Proposal team



Christian Gutt
KFS  UNIVERSITÄT
SIEGEN



Anton Barty
DESY photon science

Astrid
Schneidewind
 KFN JÜLICH
Forschungszentrum



Bridget Murphy
KFS 
Christian-Albrechts-Universität zu Kiel



Wiebke
Lohstroh
KFN



Technische Universität München

DFG - NFDI

Zoom link for breakout rooms

Link in chat

Breakout rooms unfortunately require us to change to another Zoom meeting:

Meeting-ID: 642 5960 7336

Kenncode: 057838

<https://tum-conf.zoom.us/j/64259607336?pwd=NXBDRE1tUjU5dStJZDdrV1IWczRzQT09>

Schnelleinwahl mobil

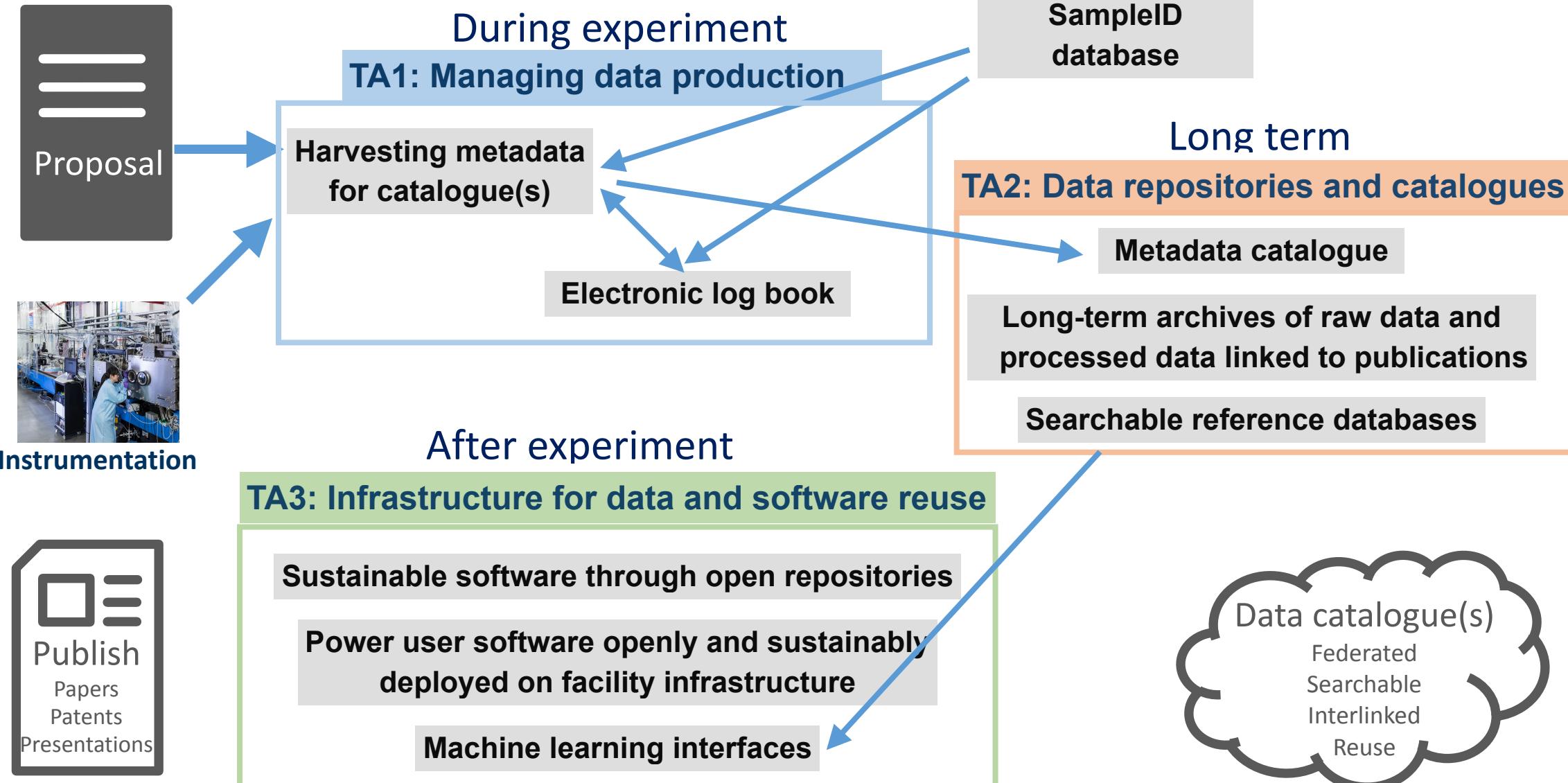
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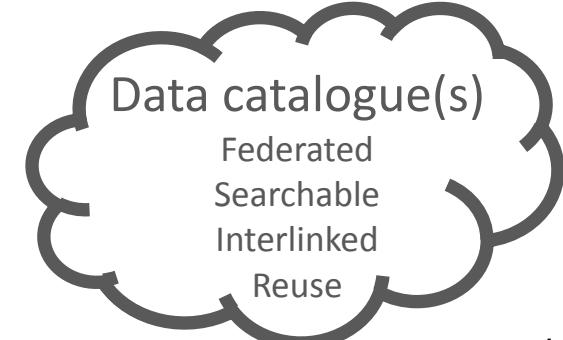
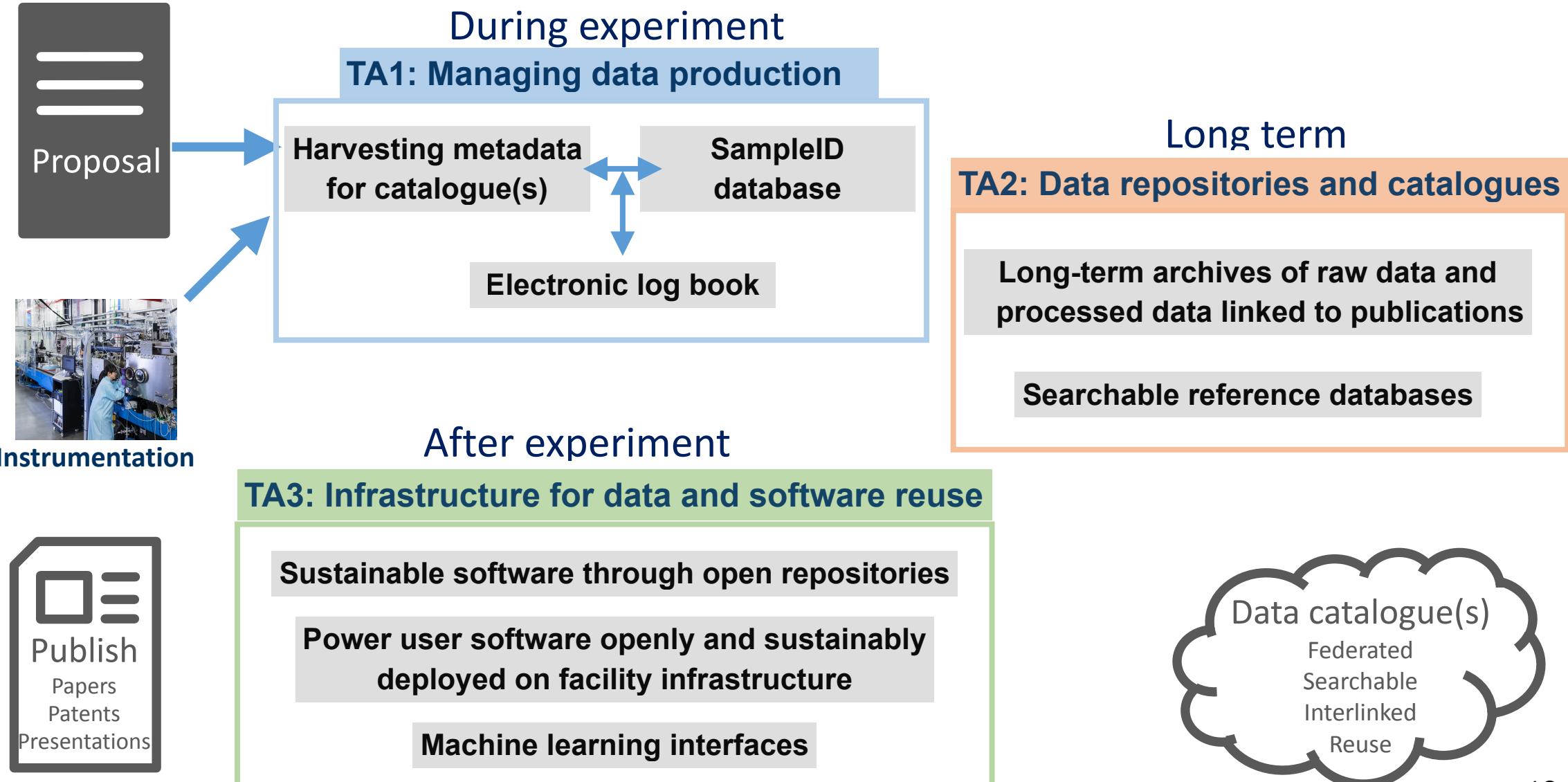
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Rich metadata capture requires user input

