IT SERVICES COVERING THE RESEACH DATA LIFE CYCLE: from isolated research support platforms to a Research Data Infrastructure

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TU/e EINDHOVEN UNIVERSITY OF TECHNOLOGY

LIBRARY AND OPEN SCIENCE

- Information Skills
- Library Front and Back Office
- Library Collection and Research Information
- Open Science Support

PRODUCT AREA LEAD
Paul Hofman

COMPETENCE MANAGER
Dianne Koenen

RESEARCH

- Data Stewards
- Research IT
- RDI Lab
- HPC Lab

PRODUCT AREA LEAD
Sandor Schmikli

COMPETENCE MANAGER
Dianne Koenen

EDUCATION

- Assessment Support
- Alliance Support
- Hybrid Education and Audio Visual Support
- Learning Support
- Student and Education Logistics Support

PRODUCT AREA LEAD
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COMPETENCE MANAGER
Auke Peters

CORPORATE

- Campus, Facility and Service Management
- Communication and CRM
- Faculty Support
- Finance and Procurement
- Human Resources Management
- Process Optimization
- Student and Employee Service Desk
- Workplace Devices

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COMPETENCE MANAGER
Ans Wevers

DATA AND INSIGHTS

- Archive
- Business Intelligence & Analytics
- Data domain coordinators
- Data Management
- Privacy Operations

PRODUCT AREA LEAD
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PLATFORMS

- Collaboration and Productivity
- Compute and Storage Services
- Network and Connectivity Services
- Identity and Access Management
- Integration Services
- Security Operations
- Workplace Management

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René Wassink

COMPETENCE MANAGER
Ruud Vrijsen

PRODUCT TEAM

Product owner · Scrum master · Experts

DIRECTOR
Frank Hendrickx

DEPUTY DIRECTOR
Bert van Iersel

OFFICE OF THE CIO

- ACE
- Agile Initiative Lead
- Architecture
- Archive
- Contract and Supplier Management
- Communication
- HR/Finance
- Portfolio and Performance Management
- Privacy, Security & Risk management
- Secretariat

Presentation outline

Why RDI?

What is an RDI?

What does RDI offer?

RDI project: Current activities

Roadmap

1. Why ?

1. **TU/e Ambitions in Research: leaders of Change**
2. **Changing research demands from inside and outside TU/e**
3. **Current services with separate platforms are incomplete, inefficient and not ‘user friendly’**

1. Why ? Tue Ambitions

Internationally leading research through state-of-the-art research infrastructure

Digital infrastructure for obtaining, storing and processing research results in the AI era with bigger and more datasets, and with more collaborations

Digital platforms that provide open access to results, data and code following the Open Science principles

Adapt to new demands such as Research Data Management

Reduced workload and improved output for both our academic and support staff

1. Why ? Changing demands

Bigger datasets. More complex datasets. AI, ML. More storage, more compute power

Data ingestion. Data exchange/sharing (DP and EDX)

Brainport activities/national collaborations : HDP/Health-RI/AI consortium

High risk data (personal/medical): imminent need for RDM that also improves compliance

(Inter)National standards on working with data: RDM, OS, EU guidelines AI etc.

1. Why ? Incomplete, inefficient

No archive solution/retention policies, patch work solutions storage, no proper HPC integration, incidental connection with RSO support

No guidance into proper RDM when using current platforms >compliance issues !

No active support for FAIR principles, no support Open Data/Open Science

Services originate from separate service teams: independent, not connected, inefficient

Experience of time lost: redundant services processes, different communication methods, lack of overview for researchers

1. Why ? Incomplete, inefficient

The effect on researchers

Confused & lost in the service space because of unclear, disconnected processes.

Information overload from different regulations, stakeholder expectations, reporting requirements.

2. What is a Research Data Infrastructure ?

An RDI is the overarching system or framework that encompasses various components and services to support researchers in every stage of the Research Data Life Cycle (RDLC, next slide).

Research data support platforms contain the specific services that assist researchers in utilizing the infrastructure effectively.

The connection of the support platforms within an RDI allows support staff to increase efficiency in service delivery, but also to automatically introduce RDM standards.

Together they create a holistic ecosystem for research data management within institutions and research communities.

Research Data Life Cycle

The Research Data Lifecycle is a framework to coordinate the systems and processes to facilitate research end-to-end in accordance with research data management practices.

A Research Data Infrastructure is designed to facilitate Research Data Management practices and processes, to ensure that data is managed 1) Securely, 2) Sustainably, 3) making it Easy-to-find, understandable and (re-)useable.

3. What does it offer?

1. Services derived from the entire Research Data Life Cycle
2. Integrated services using connected workflows
3. Project and service documentation accessible for staff throughout the cycle
4. Uniform communications with a SPoC (‘Research Cockpit’); supported by service staff
5. Education: Workshops and tutorials, courses…. curriculum
6. Built in controls for RDM, privacy and security as well as Open Science demands
7. Automated Data Retention policies
8. Connection with PDO/PM workflows
9. Study Management System (future)

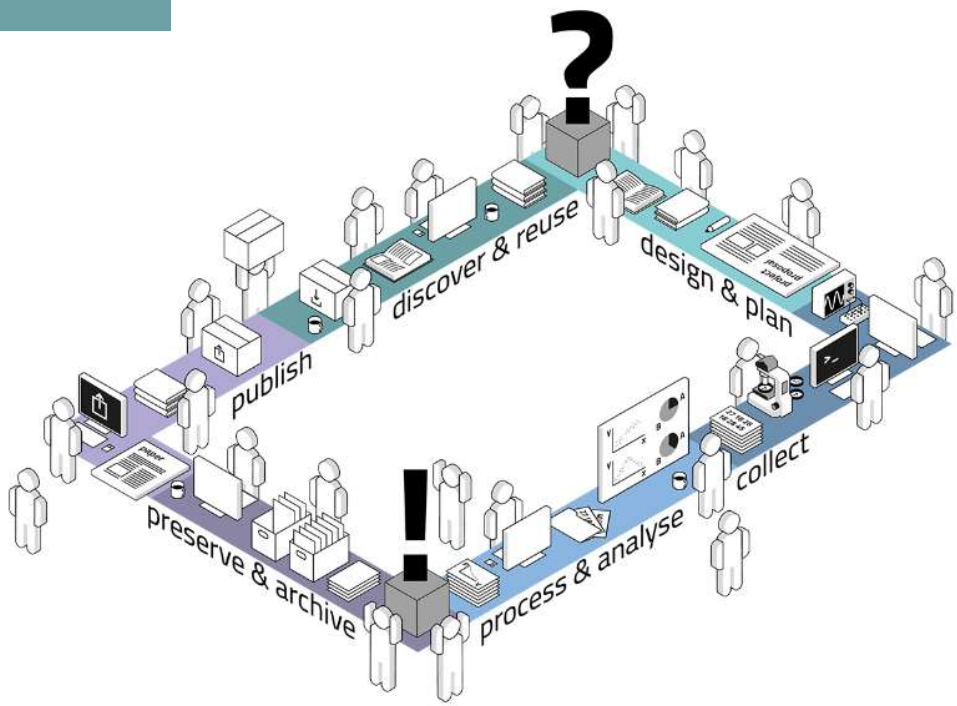
Placeholder demo interface – Research cockpit

4. Activities in 2023: introduction of RDLC

PAR Solution Searcher

Research Life Cycle Categories About

the link



Welcome to the PAR Solution Searcher! Here researchers can search for products and services supporting them throughout the research life-cycle phases, sorted by the corresponding phase or the solution category.

Research Life Cycle

The research life cyle phase comprises several phases. Although varying per discipline, overall they can be labeled and grouped as follows:

Before research
Discover & Reuse
Design & Plan

During research
Collect
Process & Analyse

After research
Preserve & Archive
Publish

Select a phase from the menu above or the research life-cycle representation to discover related solutions.

4. Activities 2023/ q1 2024

1. Reorganization: RDM and DI lab > RDI lab, minimal staffing (Done)
2. Video of the Research Cockpit (November 2023, this week)
3. NWO-DCC project: Redesign of the Plan Phase (Privacy, Security, Ethics workflows , start Jan 2024)
4. Integration of PDO/PM activities within RDI environment M&C, BE (tba in December)
5. Financial agreement/approval RDI : december 2023
6. Board Initiative: improve Research Support (2 working groups)
7. Tender: Secure Research Environments (e.g. DRE/ or alternatives with 2AT-Twente University) : q1 2024
8. Tender: Catalog Software (governance and sharing of data) : q1 2024
9. Up-to-date Research Data Management policy : q1 2024