

Unleashing Research Data Management Potential

The Power of Integrations

By: Jan Wisgerhof

About me

Jan Wisgerhof

Information Technology background

Started working at UQ in 2016 for the UQ Library

From 2017 – Developed the UQ Research Data Manager

From 2020 – Technical lead for UQRDM

The definition of “integration”



What is UQRDM?

The UQ Research Data Manager (UQRDM) is an integrated solution for collection research data metadata and provisioning storage services to researchers.

- Developed in-house by UQ and in operation since 2018
- UQRDM is not mandatory at the University
- Collaboration between the Research portfolio, central IT and the Library
- A very strong focus on **core deliverables and objectives**
- Strong uptake: ~21,000 active users storing ~21,000TB of data (first copy)



Designed at The University of Queensland

How does it work?

In a nutshell

01

Researcher creates UQRDM record

- Basic metadata
- Creation is instant

02

Researcher adds services

- Storage
- Digital Research Notebooks
- Impact Tracker

03

Researcher adds collaborators

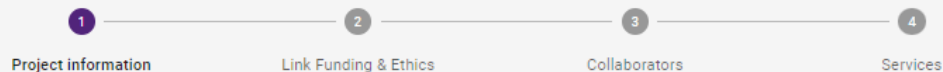
- UQ Staff
- UQ Students
- External users

04

Updates

Researcher can add/update/remove collaborators and add services at any stage

Create a new record



Project information

Project record information provides detailed metadata describing your research project. This metadata can be associated with grants, research data, and other research systems and services. It can be exported to provide a lasting record of University outputs and researcher impact.

Project name *

Must be at least 5 characters in length

Project description *

Must be at least 100 characters in length

Field of research codes *

UQ organisational unit *

Pro-Vice-Chancellor (Researcher Development)

Warning: The Organisational Unit associated with this record can no longer be associated with a UQRDM project. Please consider updating your record.

Project start date *

DD-MM-YYYY

Start date is when research has or will commence.

Project end date *

DD-MM-YYYY

End date is the current estimated completion of the project.

Is this project a higher degree by research (HDR) project? *

Yes No

Does this project use animal subjects? *

Yes No

Does this project use human subjects? *

Yes No

[2023-RD000026] My new *edited* record

- Update project metadata
- Publish a dataset to UQ eSpace

| COLLABORATORS (3 ACTIVE, 0 INVITED) | | | RECORD HISTORY |
|-------------------------------------|------------------------|-------------------|-------------------|
| Name | Email address | Role | Invitation expiry |
| Mr Jan Wisgerhof | j.wisgerhof@uq.edu.au | Owner | - |
| Dr Andrew Kneynsberg | a.kneynsberg@uq.edu.au | Lead investigator | - |
| Ms Mariana Kaiser | m.kaiser@uq.edu.au | UQ collaborator | - |

Connected services

- ADD STORAGE
- ADD DIGITAL RESEARCH NOTEBOOK
- ADD IMPACT TRACKER

| Storage Allocation (Pending creation) | | 2 USERS HAVE ACCESS | | |
|---------------------------------------|------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Name | Email | Read/Write | Read Only | No access |
| Mr Jan Wisgerhof | j.wisgerhof@uq.edu.au | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Dr Andrew Kneynsberg | a.kneynsberg@uq.edu.au | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Ms Mariana Kaiser | m.kaiser@uq.edu.au | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

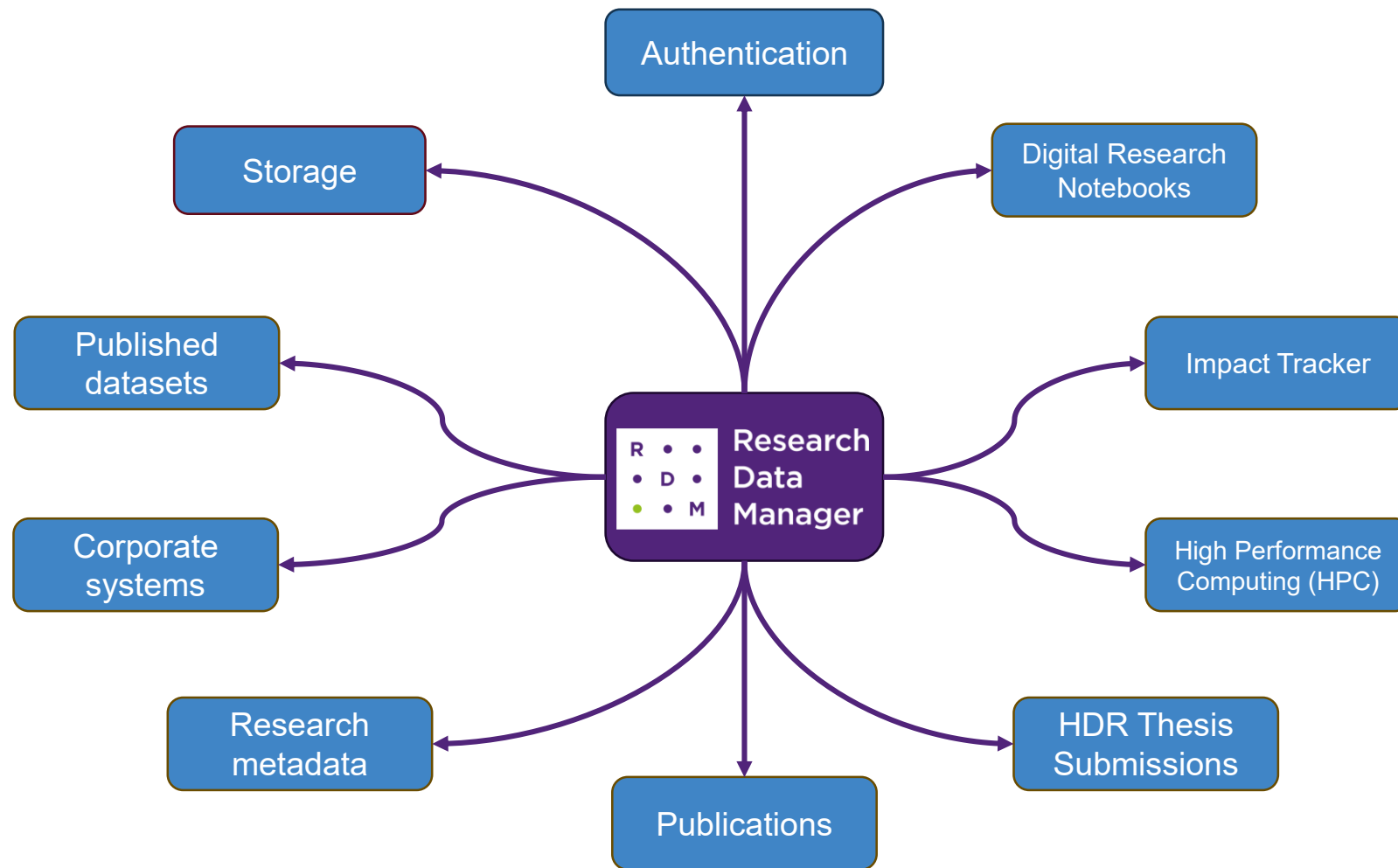
CANCEL SAVE

How did we achieve this?

- Strong focus on what **is required**, not what we would **like to do**. Through minimal metadata questions.
- Developed in collaboration with UQ researchers in a pilot program
- Strong partnerships across the University

- Focusing on core principles:
 - “Adoption is key.”
 - “Research is a collaborative effort.”
 - “Creating a research data management plan should be simple.”
 - “Entering data more than once is tedious.”
 - “UQRDM must meet all legislative and regulations by design.”

Integration overview



Authentication

“Research is a collaborative effort!”



UQ Authenticate

Used by all UQ staff, students and affiliates



Australian Access Federation (AAF)

Used by all AAF member organisations



eduGAIN

Used by international collaborators of member organisations



REANNZ Tuakiri

Used by New Zealand collaborators



LinkedIn

Used by industry collaborators, as well as health centers

Authentication

“Research is a collaborative effort!”



UQ RDM

UQ Staff and Students

Sign in

Or sign in with



Australian Access Federation



eduGAIN



Tuakiri Federation (NZ)



LinkedIn

Authorization

“Research is a collaborative effort!”

Permissions for all services and access methods are managed through the central UQRDM platform

| Storage Allocation | | 1 USER HAS ACCESS | | |
|----------------------|------------------------|-------------------------------------|--------------------------|-------------------------------------|
| services_1-A0296 | | | | |
| Name | Email | Read/Write | Read Only | No access |
| Dr Andrew Kneynsberg | a.kneynsberg@uq.edu.au | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Mr Jan Wisgerhof | j.wisgerhof@uq.edu.au | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Ms Mariana Kaiser | m.kaiser@uq.edu.au | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

| Digital Research Notebook | | 3 USERS HAVE ACCESS | | | |
|---------------------------|------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|
| service notebook 234543 | | | | | |
| Name | Email | Administrator | User | Guest | No access |
| Dr Andrew Kneynsberg | a.kneynsberg@uq.edu.au | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Mr Jan Wisgerhof | j.wisgerhof@uq.edu.au | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ms Mariana Kaiser | m.kaiser@uq.edu.au | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Corporate data

“Creating a research data management plan should be simple.”

“Entering data more than once is tedious.”

Data is present in other systems, which we pre-fill as much as possible

- Personal details from HR / student system
- Organizational unit
- Enrolment / employment status

Future state:

- Thesis details (milestones, supervisor, etc)
- Head of organisational unit

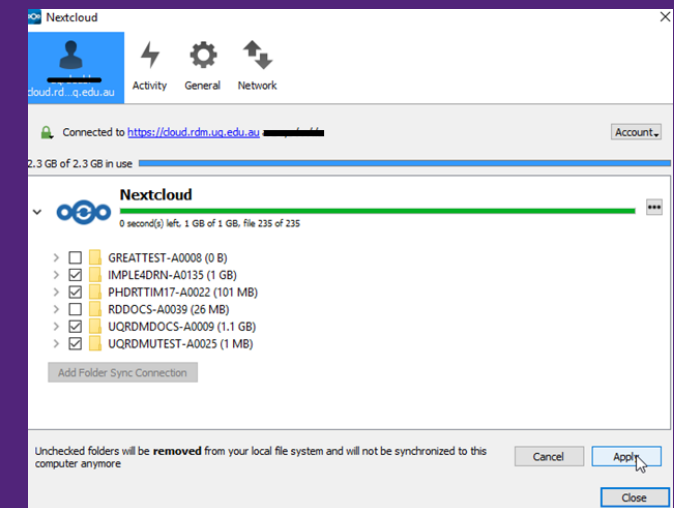
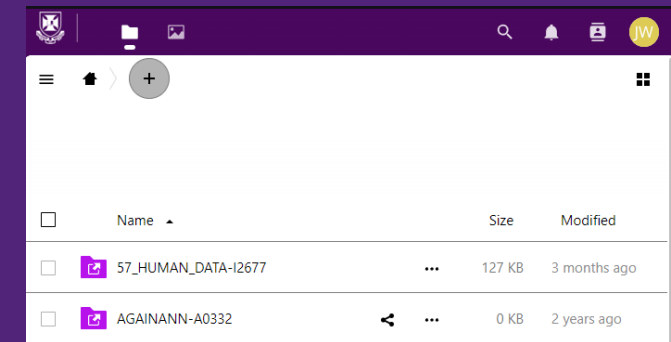
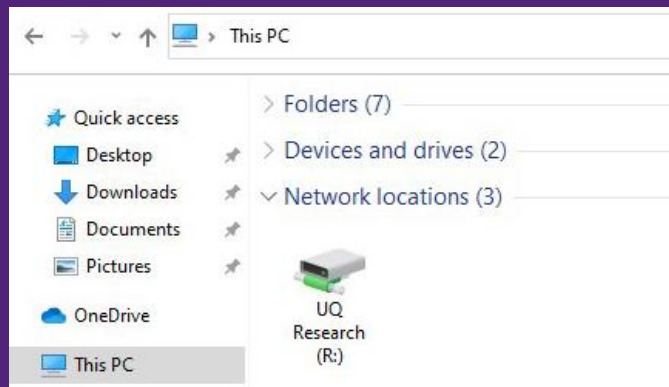
| User information | |
|------------------------|--|
| Display name | Mr Jan Wisgerhof |
| First name | Jan |
| Last name | Wisgerhof |
| Email | j.wisgerhof@uq.edu.au |
| auEduPersonSharedToken | 84F-hNgFvyqrwuy1oCePMNNNo |
| eduPersonPrincipalName | uqjwisge@uq.edu.au |
| eduPersonOrcid | - |
| Organisational unit | Pro-Vice-Chancellor (Researcher Development) |
| Active? | Yes |

Storage

“Research is a collaborative effort!”

Storage must be accessible through all means users require

- GPFS / SMB via a mapped drive across the University “R”
- Direct mapping to specific storage allocations
- NextCloud for cloud access, as well as for external collaborators
- Data must be presented to HPC facilities hosted by UQ and QCIF



Other research metadata

“Research data is only a small part of the processes in the research lifecycle.”

UQRDM integrates with enterprise systems that support the research lifecycle

- Human Ethics applications (and approvals)
- Animal Ethics applications (and approvals)
- Funding applications (and established projects)
- HDR systems
- Institutional repository (eSpace)

Future state:

- Block certain grant applications from proceeding before a UQRDM record is created by the researcher
- Automated access provenance for high-profile projects, example: as requested by human ethics committees

Research data lifecycle

Research data has a convoluted lifecycle. And “completing” this lifecycle as a researcher is hard

- UQRDM allows the creation of “datasets”:
 - Immutable copy of a subsection of research data in a project
 - Kept permanently in a separate space, alongside metadata
 - Added to the institutional repository, with public metadata and a DOI
- University staff and students “off-boarding”
 - Allow owner or lead investigator of a record to be changed before user leaves University
 - Workflows in place for administrative staff to do this on behalf of a user

Future state:

- Head of organizational unit dashboard to manage “orphaned” UQRDM records
- Retention & disposal workflows

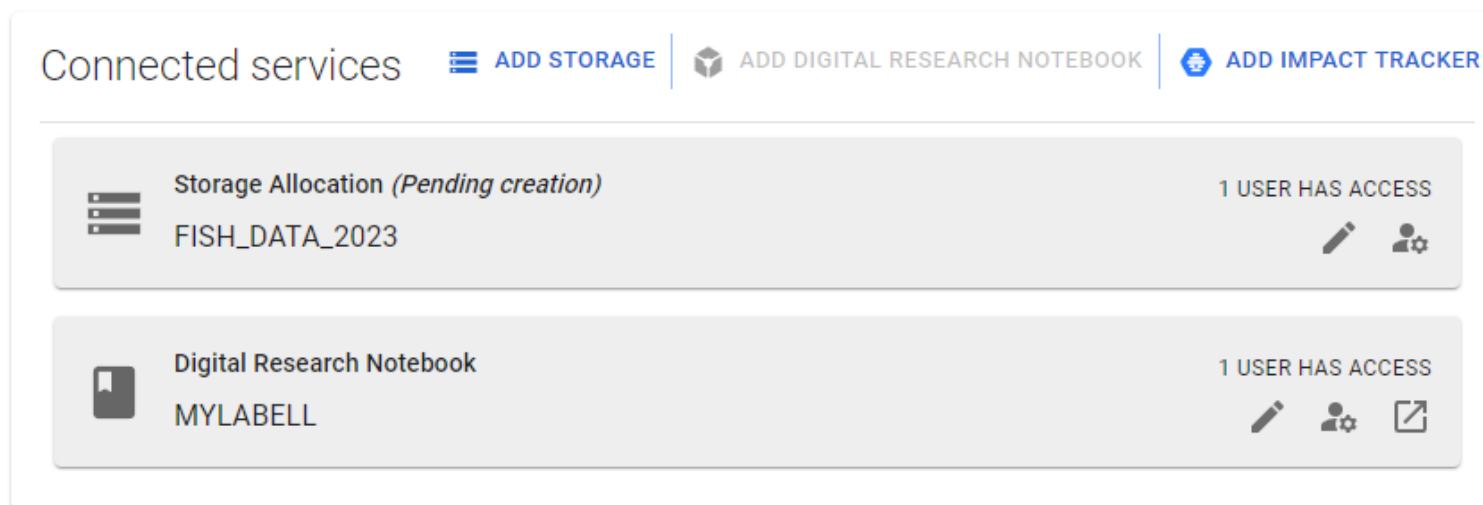


Services








“Entering data more than once is tedious.”

UQRDM integrates with third party vendors

- Instant creation of service in vendor application
- Permissions are managed through UQRDM



Connected services [ADD STORAGE](#) | [ADD DIGITAL RESEARCH NOTEBOOK](#) | [ADD IMPACT TRACKER](#)

| | | |
|--|--|--|
|  | Storage Allocation <i>(Pending creation)</i> FISH_DATA_2023 | 1 USER HAS ACCESS   |
|  | Digital Research Notebook MYLABELL | 1 USER HAS ACCESS    |





HDR Thesis Submissions

“Good practice in research data management starts early.”

UQRDM is the primary tool for HDR candidates

- HDR candidates must store their research data in UQRDM
- Progress reviews are stored in their UQRDM storage allocation
- Primary supervisor must be lead investigator on the UQRDM record
- Thesis are submitted through UQRDM workflow

Thesis Dashboard - Mr Test User

| | |
|---|---|
|  | View HDR Guide |
|  | Contact Graduate School |
|  | UQRDM Guide for HDRs |
|  | Contact UQRDM Team |


Approved by the Graduate School to submit your thesis

Congratulations on passing your thesis progress reviews. The Graduate School has marked that you are eligible to begin the thesis submission process.

All HDR students should have one project record in collaboration with their principal advisor for their PhD or Master's degree - to be used from the beginning of your degree for data storage, progress reviews, and thesis submission. To create a project record, click the menu on the top left.

Select your thesis submission tile below to begin the process. For more information on the thesis submission process, please review our **1 page overview** or for more detail, visit the **Graduate Schools page on thesis submission**.

Your thesis submissions

 [Click here to submit your thesis](#)

Status: Ready to submit by candidate | **Last updated:** 12-Oct-2023 07:57:48

HDR Thesis Submissions

1 Candidate submits thesis

2 Principal advisor reviews thesis

3 Graduate School reviews thesis

4 Graduate School assigns examiners

5 Examiners review thesis

6 Approved for thesis finalisation

📘 Congratulations!
The Graduate School has marked you eligible for thesis submission! Use this form to submit your thesis for examination.

For more information on the thesis submission process, please review our **1 page overview** or for more detail, visit the **Graduate Schools page on thesis submission**.

UQRDM record that is connected to your thesis
2022-RD000002 - Active record with services ?

Thesis title *

← → **B** *I* U x² x₂ Ω *I*x

Type your thesis title here

UQ organisational unit *
Office of the Deputy Vice-Chancellor (Research and Innovation) ?

Thesis type *
PhD ?

Principal Advisor
Mr Bob Marley ?

Additional supervisors ?

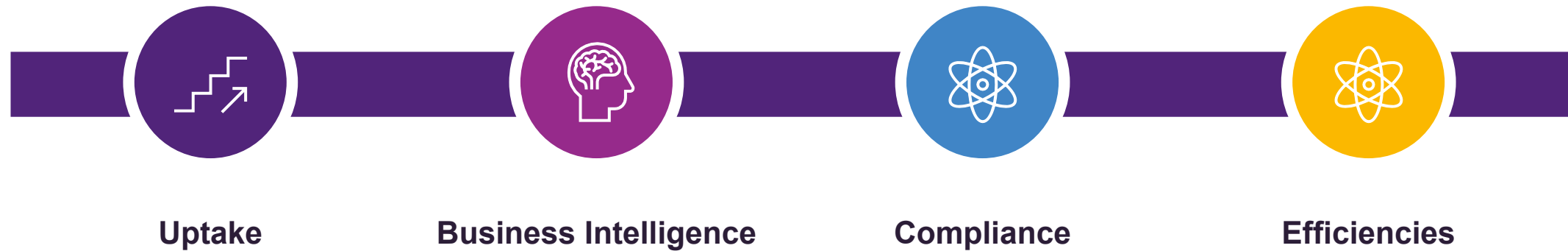
Thesis files ?

| Thesis document * | Submitted on | Actions |
|-----------------------------|--------------|---------|
| No thesis document uploaded | | |

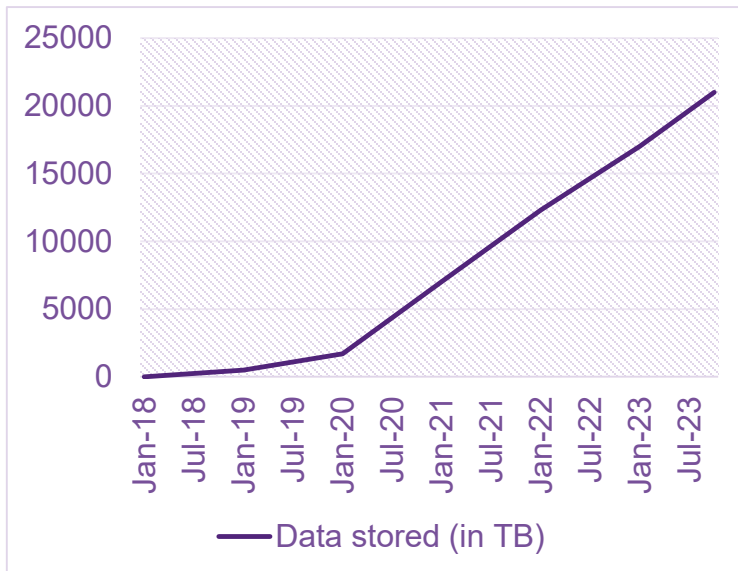
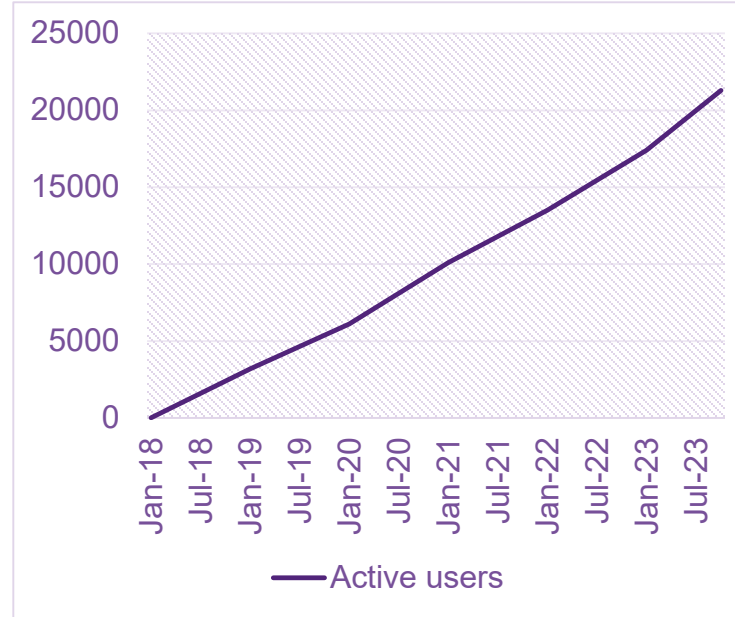
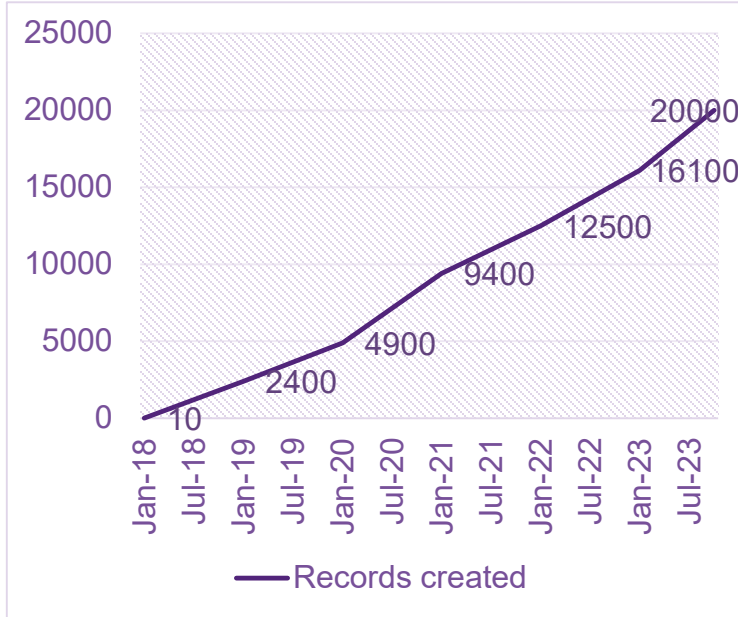
📄 UPLOAD THESIS DOCUMENT

That's a lot of integration!

What do we get back for all this work?

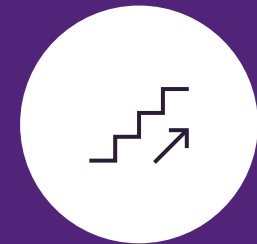


UQRDM is not mandatory



Of 30,000 registered users:

- 14,000 are UQ staff
- 10,000 are UQ students
- 6,000 are external collaborators



Uptake

Thank you

Jan Wisgerhof

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