

**RESEARCH DATA  
MANAGEMENT AT FRANCE  
BIOIMAGING**

Guillaume Gay

OME user meeting, Dundee May 29th 2024

# FRANCE BIOIMAGING

- ~~7 Nodes~~ 10+1 Nodes
- 18+ Imaging Core Facilities
- 30 associated R&D teams
- 300+ staff
- 350+ set-ups
- 20-25 M€ of budget/year (full cost)
- more than 7000 users



**RMD AT FRANCE BIOIMAGING**

Presentation available at:

[downloads.openmicroscopy.org/presentations/2024/Dundee](https://downloads.openmicroscopy.org/presentations/2024/Dundee)

# OBJECTIVES

- Bring microscopy data to the 
- Together with bioimage analysis 
- Switch to an Open Science culture 

# CONSTRAINS

## Infra

- IaaS
- Pluggable at the facility
- Minimal local IT involvement

# CONSTRAINS

## Infra

- IaaS
- Pluggable at the facility
- Minimal local IT involvement

## Data

- FAIR
- Close to compute



# CONSTRAINS

## Infra

- IaaS
- Pluggable at the facility
- Minimal local IT involvement

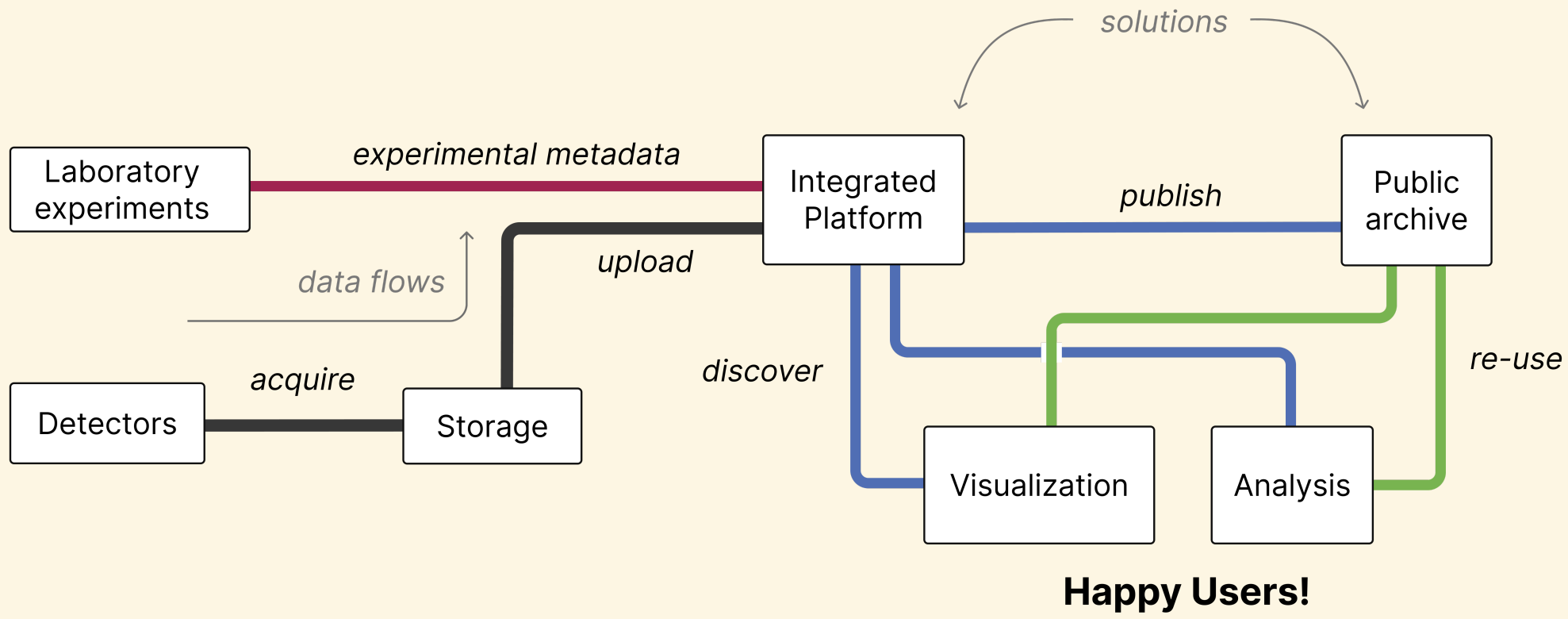
## Data

- FAIR
- Close to compute

## User

- Keep raw data access
- Opt in
- Ease collaborations
- Don't repeat user inputs
- Ease analysis workflows

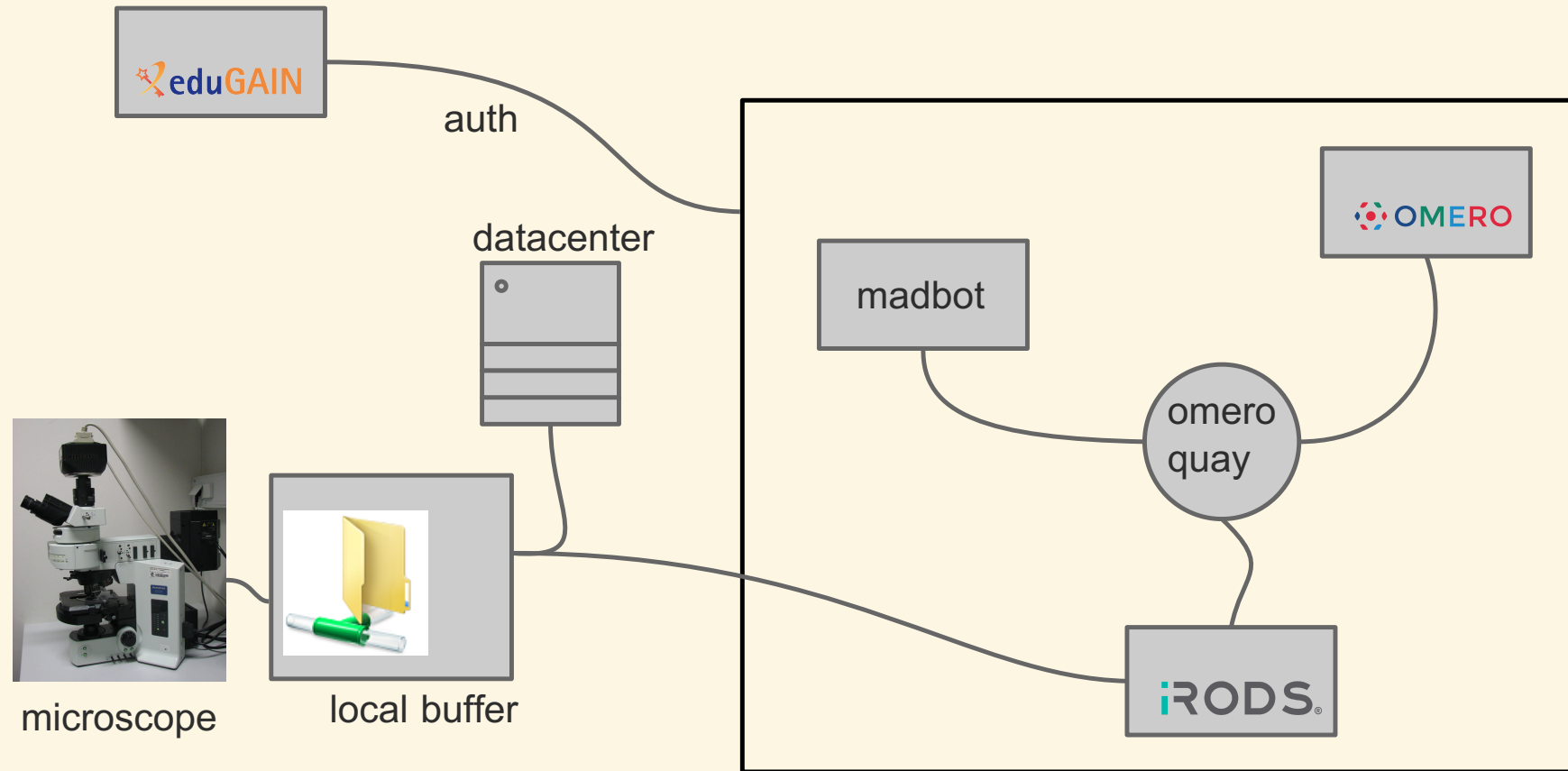
# BIOIMAGE TOWN



J. Moore et al.

**IRODS, OMERO, MADBOT**

# SERVICES ARCHITECTURE

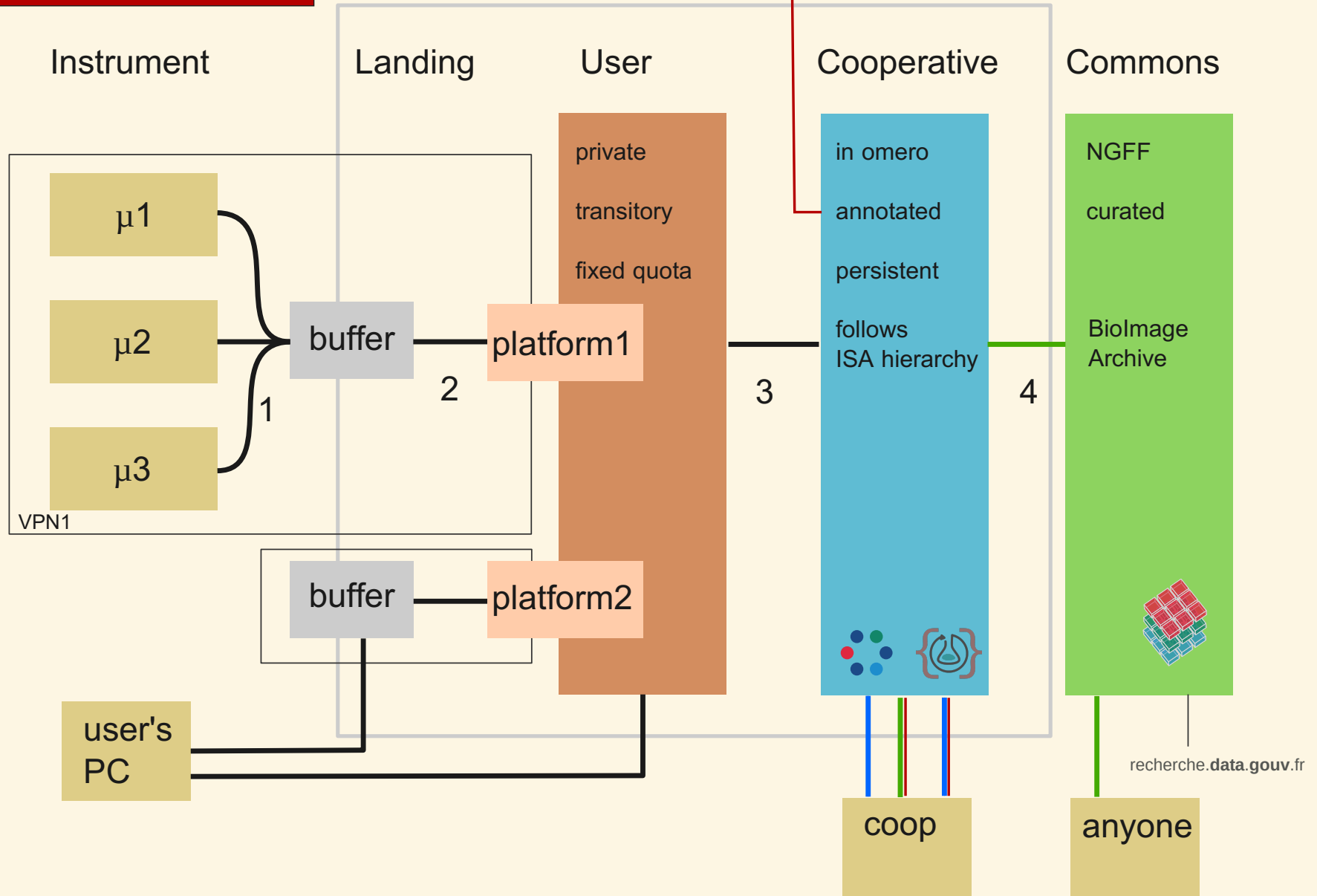


- Core services in the datacenter (Montpellier or Nantes)
- Facility buffer / regional storage

# USER EXPERIENCE

metadata sources

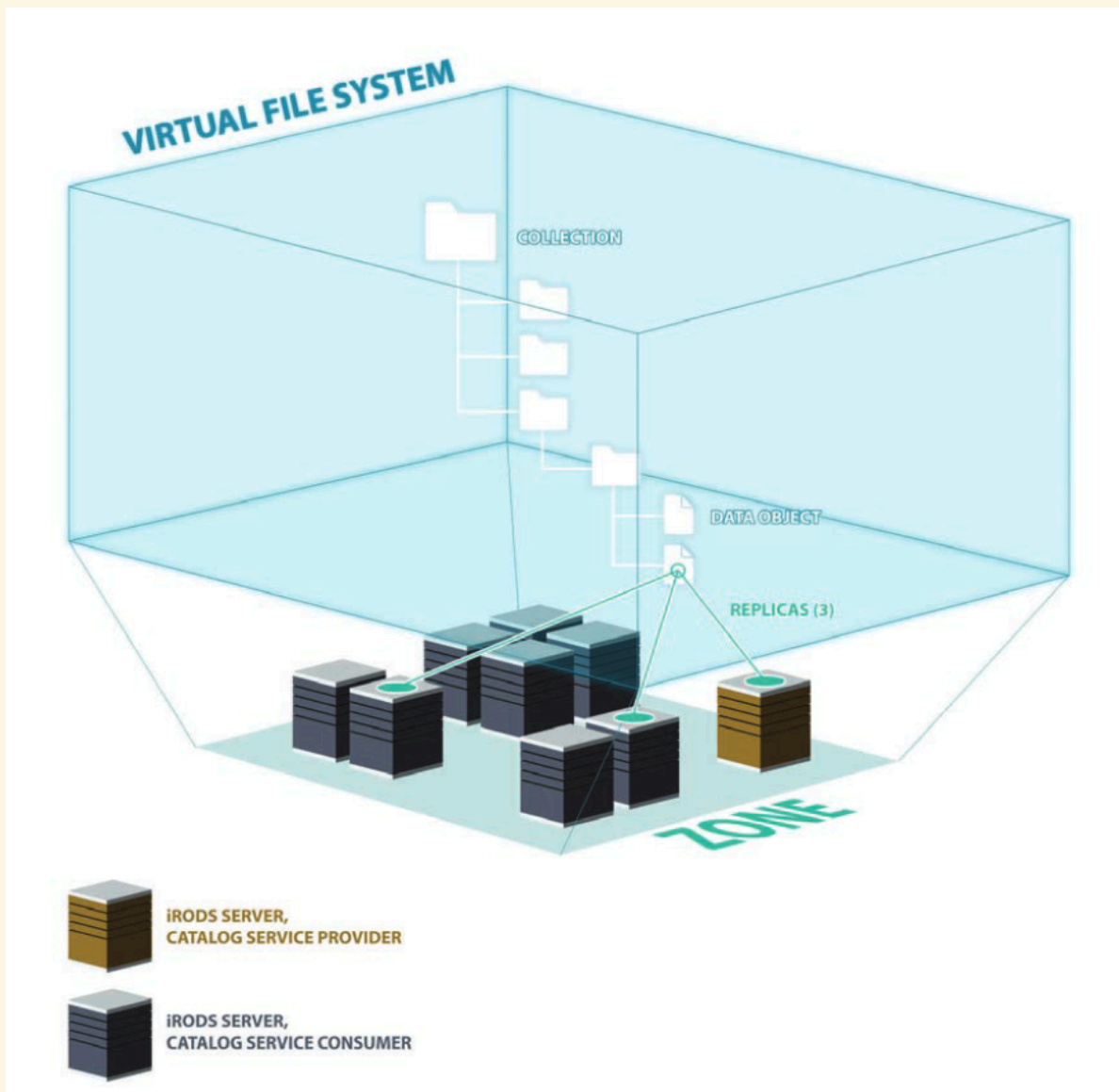
iRODS®



# IRODS

**Goal:** “relieve” Omero from data management





## iRODS imaging WG

# MADBOT

The screenshot displays the Madbot web application interface. At the top, a browser window shows the address bar with 'Madbot' and a search bar with 'Rechercher'. The main content area is divided into three sections: a left sidebar, a central main content area, and a right sidebar.

**Left Sidebar:** A tree view under the heading 'Stargate' with a folder icon. It contains the following items:

- Engineering
  - Main wheel
  - Naqahdah forging
  - Power supply
- Preliminary study

**Main Content Area:** The heading 'Stargate' is followed by a sub-heading 'Investigation' and a description: 'Construction d'une porte des étoiles pour aller vers l'infini et l'au-delà'. Below this, there are two sections:

- Data links:** A section with a 'NEW LINK' button. It contains two cards: 'Stargate project' and 'ReplaceSamHea... dataset'.
- Studies:** A section with a 'NEW STUDY' button. It contains a list of items: 'Engineering' and 'Preliminary study'.


**Right Sidebar:** A section titled 'Data distribution'.

**Bottom:** A blue button labeled 'NEW INVESTIGATION' is located at the bottom left. The user's name 'Julien Seiler' and a share icon are at the bottom left of the main content area.

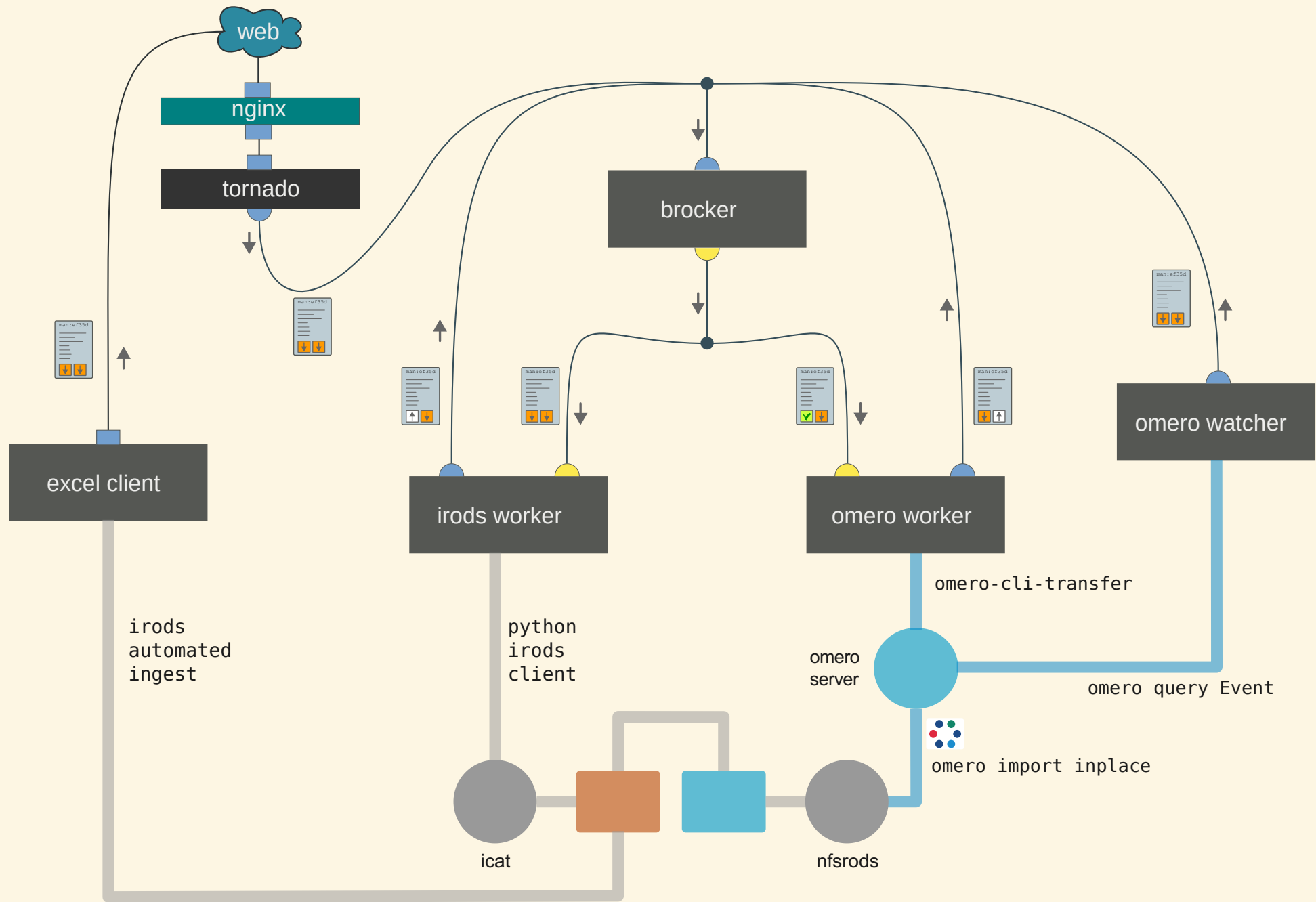
- manage ISA architecture
- manage metadata and data links
- first release at the end of summer '24

**OMERO-QUAY**

# OBJECTIVES

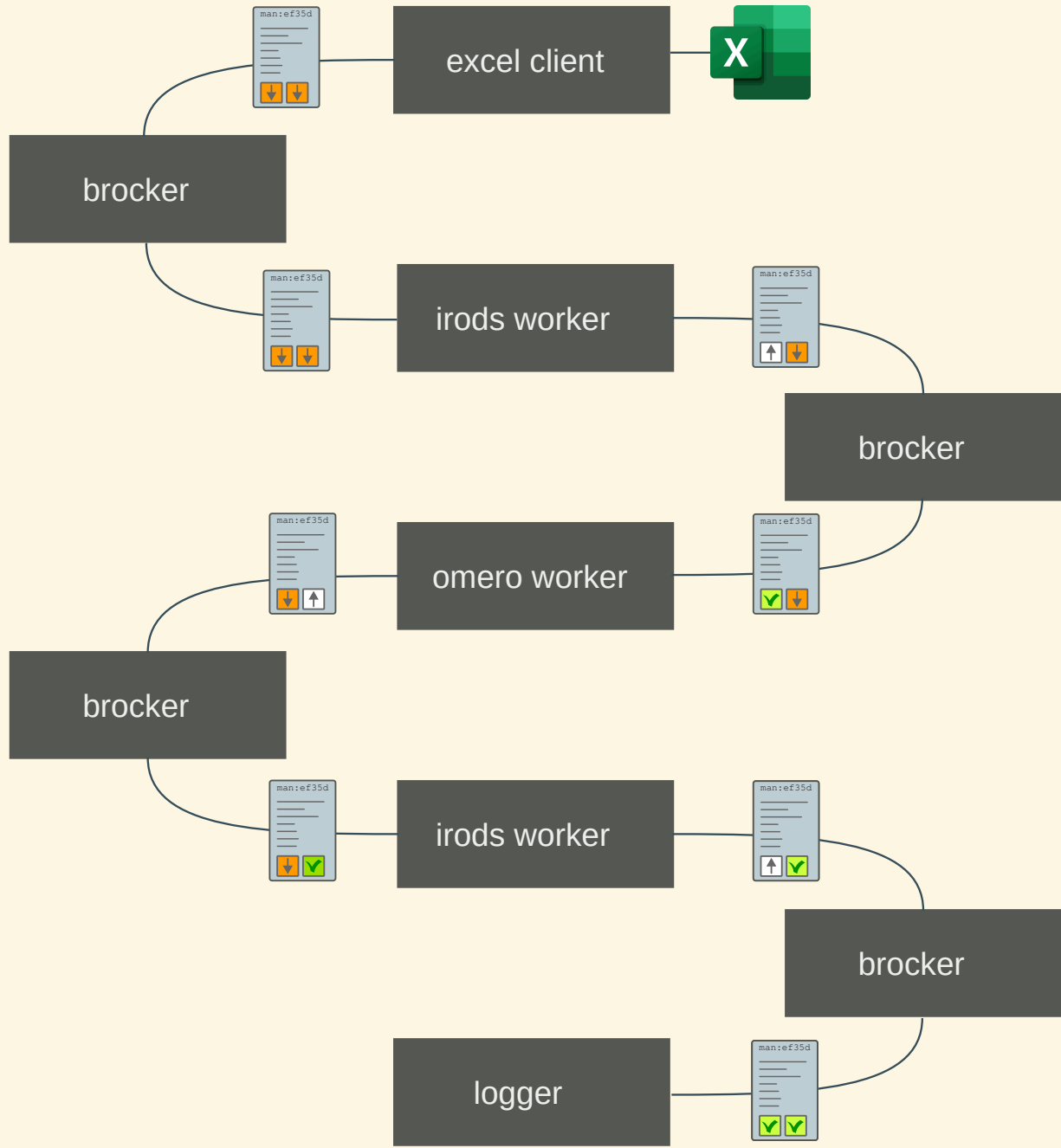
- Interact with data management tools APIs
- Trigger actions:
  - Create / Read / Update / Delete
  - Transport / Import
- Synch databases 

# ARCHITECTURE



# EXAMPLE ROUTE:





## WHERE WE ARE

- Deployed in Nantes and Montpellier, in testing
- Both [omero-fbi](#) and [omero-quay](#) have CI in place
- Consolidating implementation & test coverage this summer
- Deploying in other nodes from September on

## WHAT'S NEXT:

- **FSSpec** manager
- Streamline publication to BiImage Archive
- NGFF integration
- Compute to data for bioimage analysts and biologists

**THE COMMUNITY AND US**

# CURRENT CONTRIBUTIONS

- We contributed a bit on ansible playbooks
- We write quite a lot of doc in French
- We advocate (with RTmfm) for standards & openscience

# LONGER TERM

- The project should be consolidated
- We have a very good sysadmin
- All in all around 4 FTE persons on BioImage RDM
- Hope to make omero-quay et al. more generally usefull

# THANK YOU!

## France Biolmaging Data Team:

- Perrine Paul-Gilloteaux
- Emmanuel Faure
- Dorian Kauffmann
- Jean-François Guillaume
- Raphaël Braud-Mussi
- Guillaume Maucort
- Théo Barnouin
- Marc Mongy

# THANK YOU!

France Biolmaging Data Team:

- Perrine Paul-Gilloteaux
- Emmanuel Faure
- Dorian Kauffmann
- Jean-François Guillaume
- Raphaël Braud-Mussi
- Guillaume Maucort
- Théo Barnouin
- Marc Mongy

And the always supportive OME, Biolmaging & Open Science  
Communities 😊



