Instructions to using SEEK to manage your research assets

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Pre-task

- Pick up your assigned username/password (as sandbox guest) from “Working_Groups” file in google drive : https://docs.google.com/spreadsheets/d/1KTClX1xJdAg0ljjpXDbHoT6Dbue8kCPYp_HudIJU7bk/edit#gid=
- Go to the sandbox SEEK instance https://sandbox7.fairdomhub.org/, log in
- All users are member of the project “Modelling COVID-19 epidemics” https://sandbox7.fairdomhub.org/projects/9
- Go to https://sandbox7.fairdomhub.org/events/2, look for Hands-On-Instructions linked to this Event or use Instructions stored in google drive course folder: https://drive.google.com/drive/folders/1s0PU6q7V6p4SyVD8_5vgOG3QmuTpSgkO

Pre-task (continued)

We will use original data/model stored in FAIRDOMHub
https://fairdomhub.org/investigations/372
(without login, data is publicly available)

Here you can find user SEEK user guide and Help documents
http://docs.seek4science.org/help/

Instructions

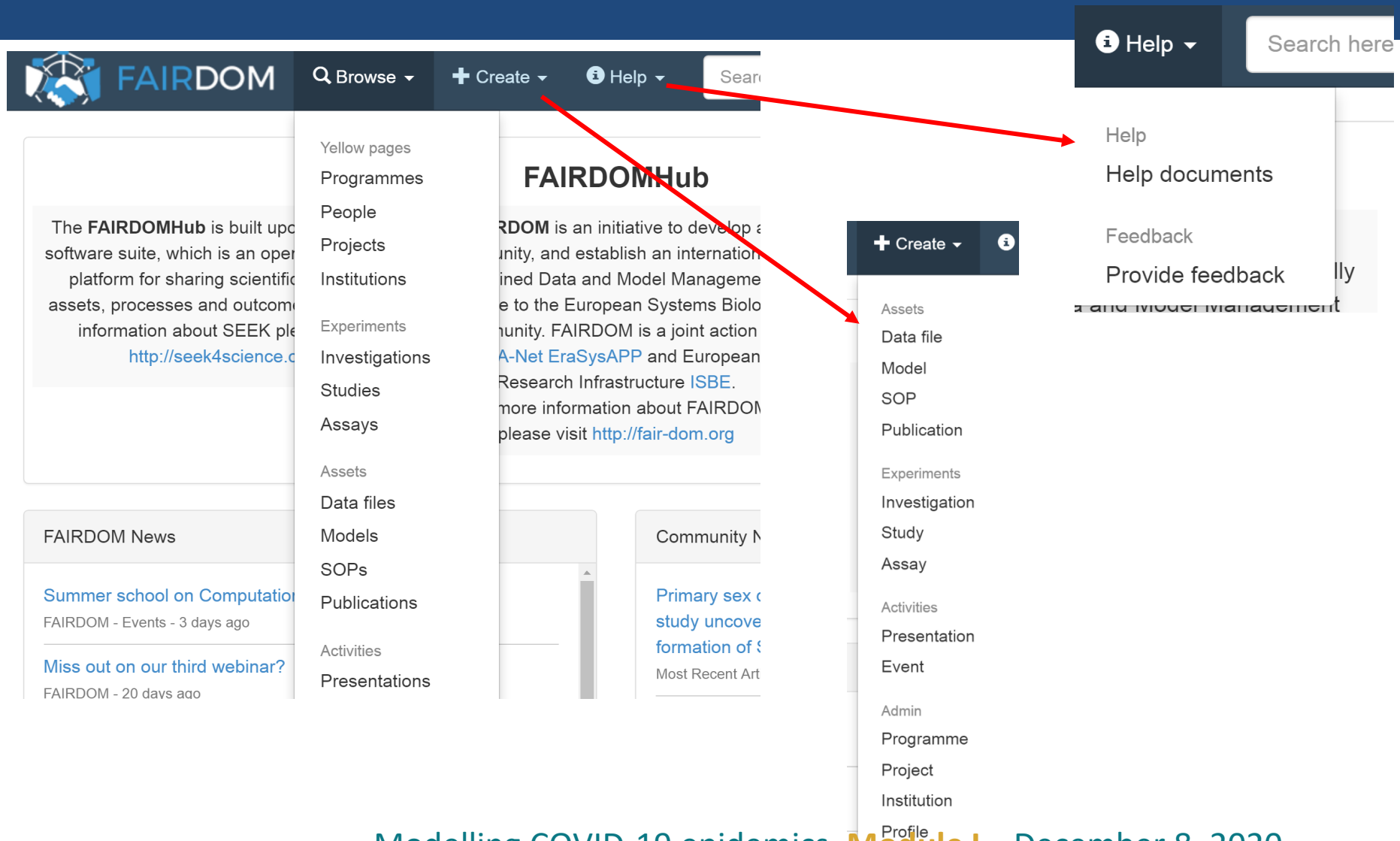
In the hands-on session you can either

(i) use your own data, SOPs, to set up an ISA structure in SEEK

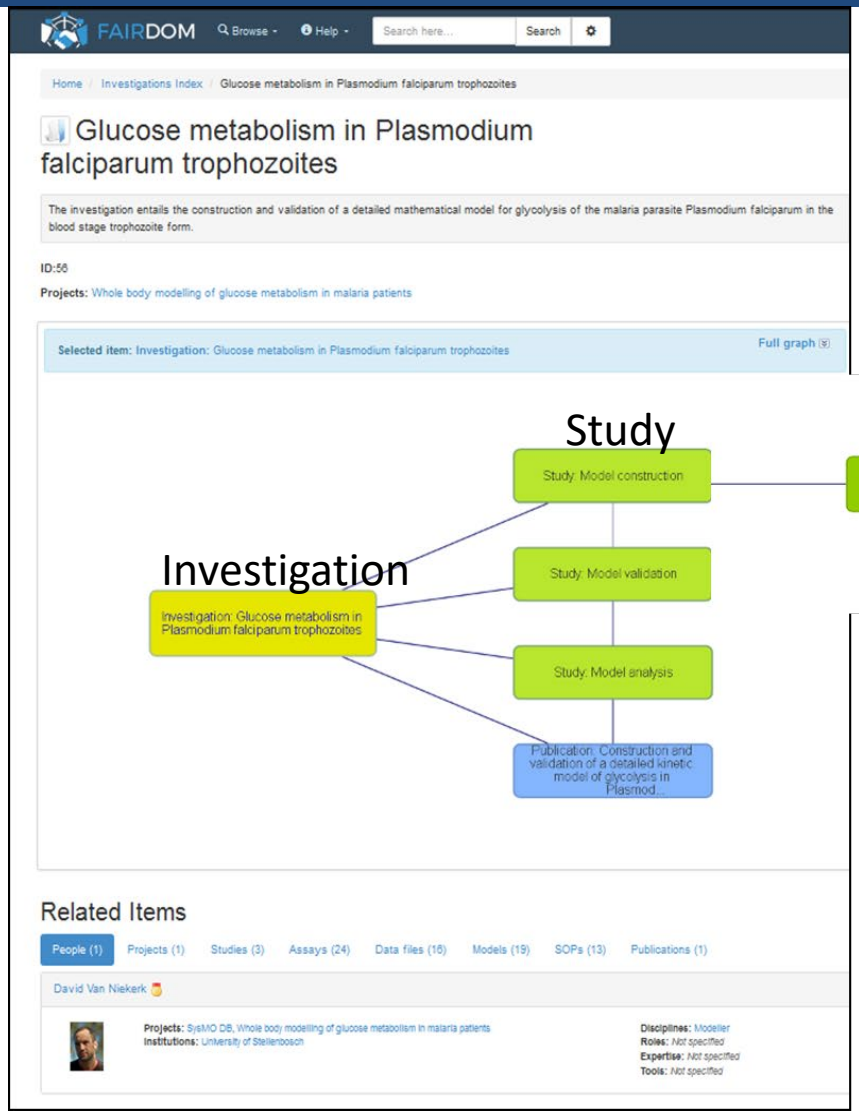
(ii) use examples from FAIRDOMHub (e.g. templates with example data , SOPs, available to you

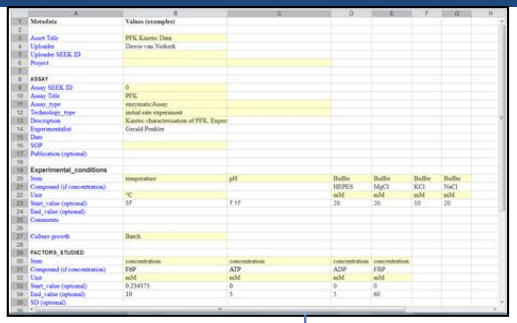
Please note that the assets you create in a training sandbox instance will be available for the duration of the workshop (+ one month) and deleted afterwards

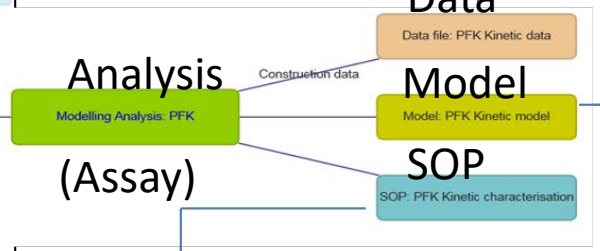
FAIRDOMHub: Landing page

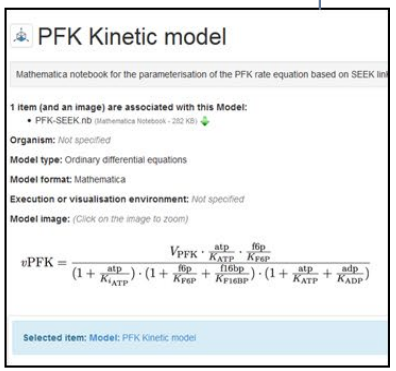


Research outcomes organised in an ISA (Investigation, Study, Assay/Analysis) format.









Tasks

- **T1.** Creating and interlinking ISA elements
- **T2.** Downloading data file from FAIRDOMHub, editing it and uploading to own ASSAY created in T1.
- **T3.** Creating SOP (as link to externalrepository)
- **T4.** Registering publications (with DOI or PubmedID), linking it to ISA, data file.
- **T5**. Create model, upload image representing e.g. pathway your model describes
- **T5**.Publishing your data in FAIRDOMHub

Task 1. Creating new ISA

- Go to pre-created Investigation https://sandbox7.fairdomhub.org/investigations/4 , associated it to your project
- Add a new Study, associate it to your project , share it with your project
- Scroll down to the I-S-A graph, navigate to the Study page
- Add new modeling analysis Assay to your Study
- Define **Model type , Model format, and Preferred execution or visualisation environment** (choose from the drop-down lists) Define the access rights for your Assay – e.g. sharing it with own project, or with single person
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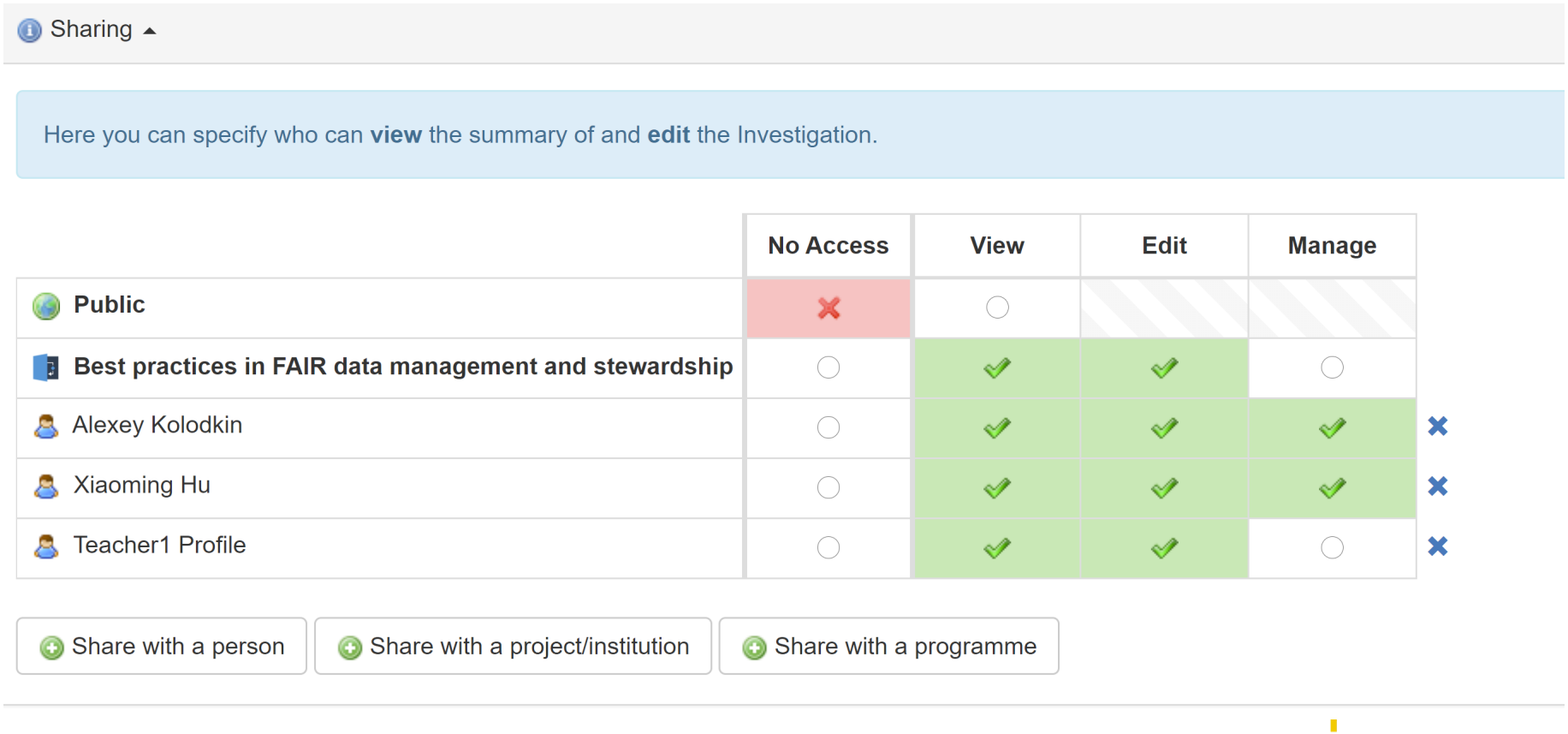
Access Permissions : Just Enough Sharing



Task 2. 1 Downloading and uploading data

- Go to https://fairdomhub.org/data_files/3708 to get a data example file **(or use your own data file)**
- Visualise data content
- Download this data file and open it, save the data file with a new name on your PC
- Upload (create new data file) this file to https://sandbox7.fairdomhub.org/
- Describe your data
- Link the data file to own modelling assay created in T1.

Task 2.2 Sharing data file

- Share data file with (i) project (ii) certain person (iii) public
- Define a temporary public link to your data file (expiring e.g. at end of October 2020)
- Logout and check whether you can access the file directly via temporary URL
- Subesequently make the file public
- Logout and check whether you can find and access the data file by browsing

Task 3. Creating SOP

- Create SOP as an external link to “Instructions for running the Corona Model of Westerhoff and Kolodkin on JWS Online” stored in FAIRDOMHub https://fairdomhub.org/documents/670 to get an example SOP or or use your own local SOP file

- Share it with own project, or with single person

- Link SOP to experimental Assay created in T1.

Task 4. Registering publications

- Go to Pubmed and choose any publication of your interest, copy PubmedID (e.g. Kolodkin, Westerhoff paper)
- Go to FAIRDOMHub and register new Publication (using PubmedID or DOI)

  - select Publication from Create menu

  - choose PubMed ID or DOI – insert the corresponding ID, click “Fetch” button

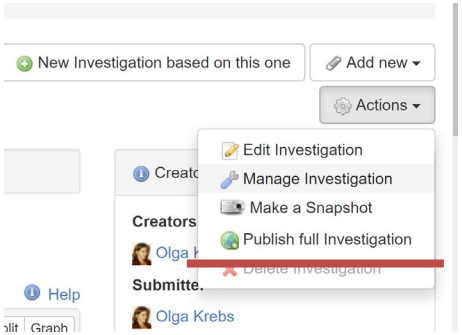
  - confirm abstract and authors list, finish
- Link Publication to Assay created in T1.

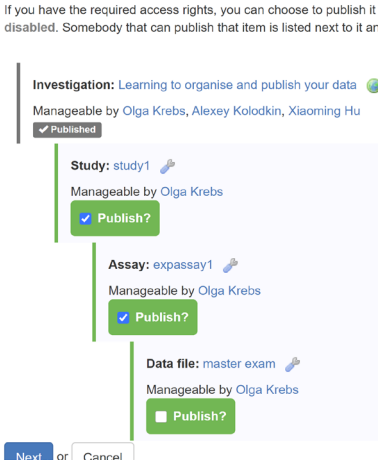
Task 5 Create model, upload image representing your model

- Upload your model: go to your modelling Assay in sandbox7 , choose “add new model” , fill in required fields
- Define image file for this model
- List creators’ names
- Define sharing permissions

Task 6. Publish your data via FAIRDOMHub

- Go to your Investigation https://sandbox7.fairdomhub.org/investigations/4 and open „Actions“ menu, choose „Publish full investigation“ option





- Create a snapshot
- Create DOI *(this does not work in sandbox, of course, because there are no toy- or test- DOIs), here live example of DOI for ISA used as supplementary material for published paper https://fairdomhub.org/investigations/74

Task 7 – during and **after** this course : make your model representation **FAIR**

- upload all versions of your model (in SBML format)
- write and upload your own SOP about modeling process and steps
- Produce data file with simulation results, upload them as simulation results
- link all assets to your modeling Assay