FAIRDOM: hands-on basic training

Polymers in the Liver - Metabolism and Regulation

Using SEEK to manage your research assets

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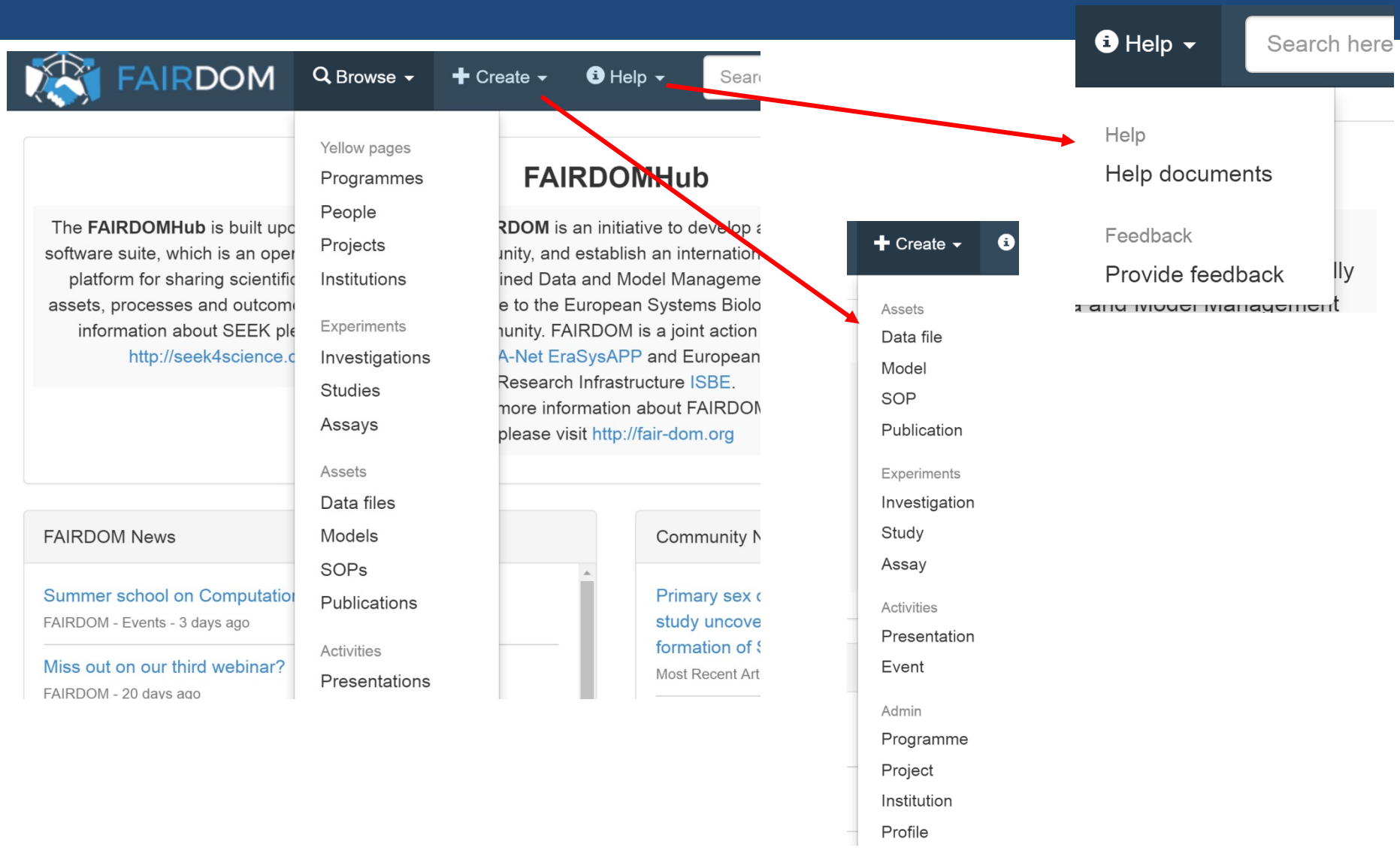
Tasks

- **T1.** Creating and interlinking ISA elements
- **T2.** Downloading spreadsheet templates based data from SEEK, editing it and uploading to own ASSAY created in T1.
- **T3.** Creating SOP (as link to Nature protocols or local file to upload), link it to data file
- **T4.** Registering publications (with DOI or PubmedID), linking it to ISA, data file.
- ***T5****. Creating/using sample types and (bio)samples*
- ***T6****. Create model, upload image representing e.g. pathway your model describes*

Pre-task

- Go to the SEEK instance set for training https://sandbox4.fairdomhub.org/
- Log in https://sandbox4.fairdomhub.org/ (username/password : **guest11 – guest30**)
- Go to https://sandbox4.fairdomhub.org/events/3
- Find Help documents http://docs.seek4science.org/help/
- Find Presentation “HandsOn_SEEK_Instructions” https://sandbox4.fairdomhub.org/presentations/7

FAIRDOMHub: Landing page



Instructions

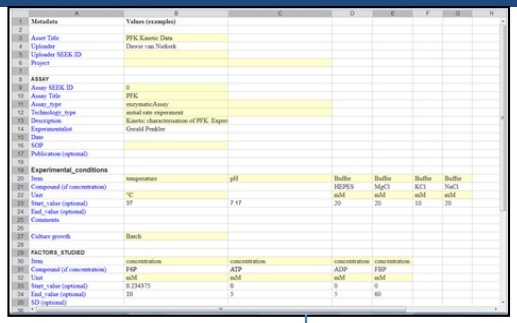
In the hands-on session you can either

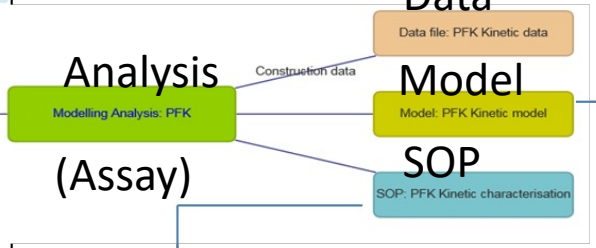
(i) use your own data, SOPs, to set up an ISA structure in SEEK

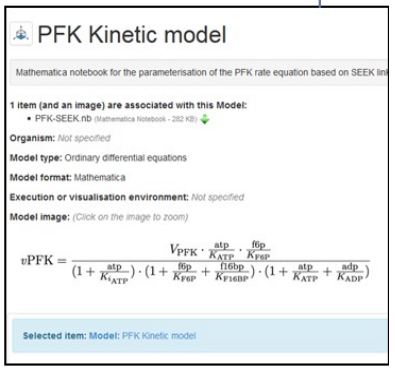
(ii) use examples from FAIRDOMHub (e.g. templates with example data , SOPs, available to you

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

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







Task 1. Creating new ISA

- Create new Investigation, associate it to your project (FAIRDOM training) , share it with own project
- On created Investigation page add a new Study, associate it to your project (FAIRDOM training) , share it with own project
- Scroll down to the I-S-A graph, navigate to the Study page
- Add new experimental Assay to the Study created
- Define assay type and appropriate technology type (choose from the drop-down lists)
- Assign your Assay to the existing Study
- Define the access rights for your Assay – e.g. sharing it with own project, or with single person
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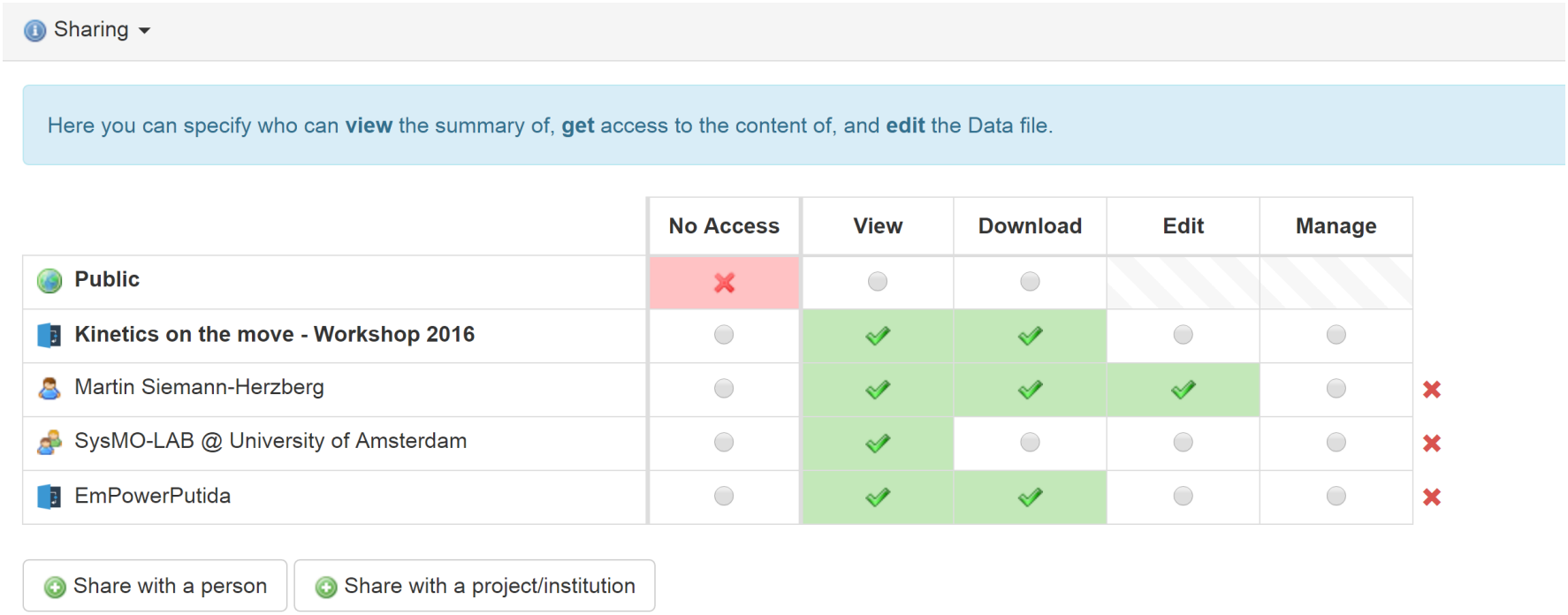
Access Permissions : Just Enough Sharing



Task 1a. Creating new ISA

- Navigate back to the Study page (via menü or using I-S-A graph)
- Add new modelling analysis Assay to your Study
- Define **Model type , Model format, and Preferred execution or visualisation environment** (choose from the drop-down lists)
- Assign your Assay to the existing Study
- Define the access rights for your Assay – e.g. sharing it with own project, or with single person

Task 2. 1 Downloading and uploading data

- Go to https://fairdomhub.org/data_files/927/
- Visualise data content, look for spreadsheet structure and format
- Download this data file and open it
- Fill in some reasonable example data. This spreadsheet has been created using RightField, so you can select values from the drop-down lists in the spreadsheet
- Save the data file with a new name on your PC
- Upload (create new data file) this file to https://sandbox4.fairdomhub.org/
- Describe your data
- Link the data file to own experimental 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 June 2017)
- 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

- Go to example SOP https://fairdomhub.org/sops/253 , view content
- Go to http://www.nature.com/protocolexchange/protocols/

and choose any protocol (e.g. http://www.nature.com/protocolexchange/protocols/4761)

- Go to FAIRDOMHub , create new SOP as

a) external link to Nature protocols (URL)

b) uploading local file (downloaded from FAIRDOMHub or your own prepared SOP

- Share it with own project, or with single person
- Link SOP to experimental Assay created in T1.
- Link SOP to the data file created in T2.

Task 4. Registering publications

- Go to Pubmed and choose any publication of your interest, copy PubmedID

  (e.g. https://doi.org/10.1371/journal.pcbi.1003186)
- 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 data file created in T2.
- Link publication to SOP created in T3.