



# WORKSPACES AND ARTIFACTS

Lecture 1.4

*Modelon*

# OVERVIEW



Import/Export of workspaces



Handling of Artifacts



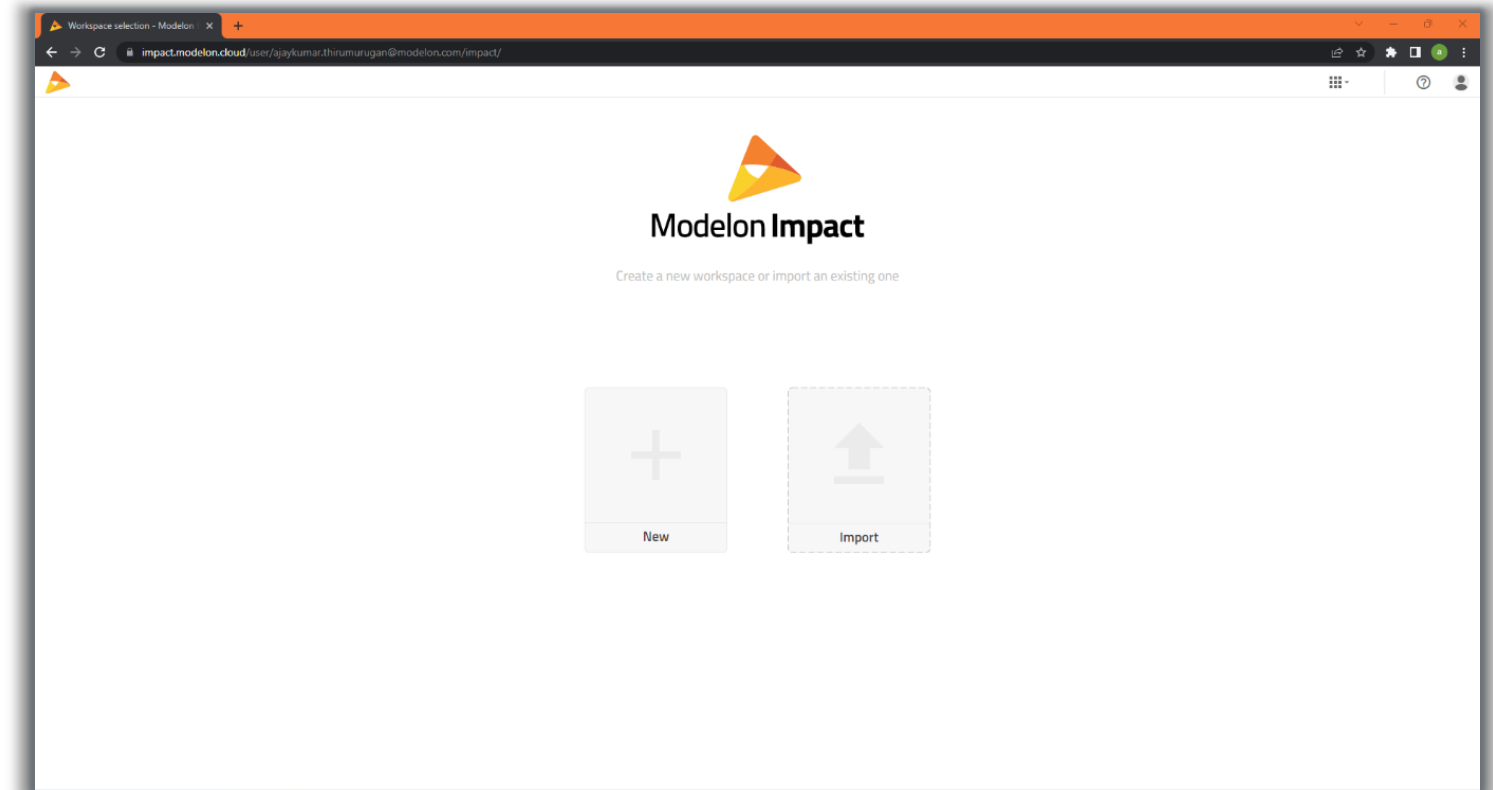
Workspace Management



# WORKSPACES

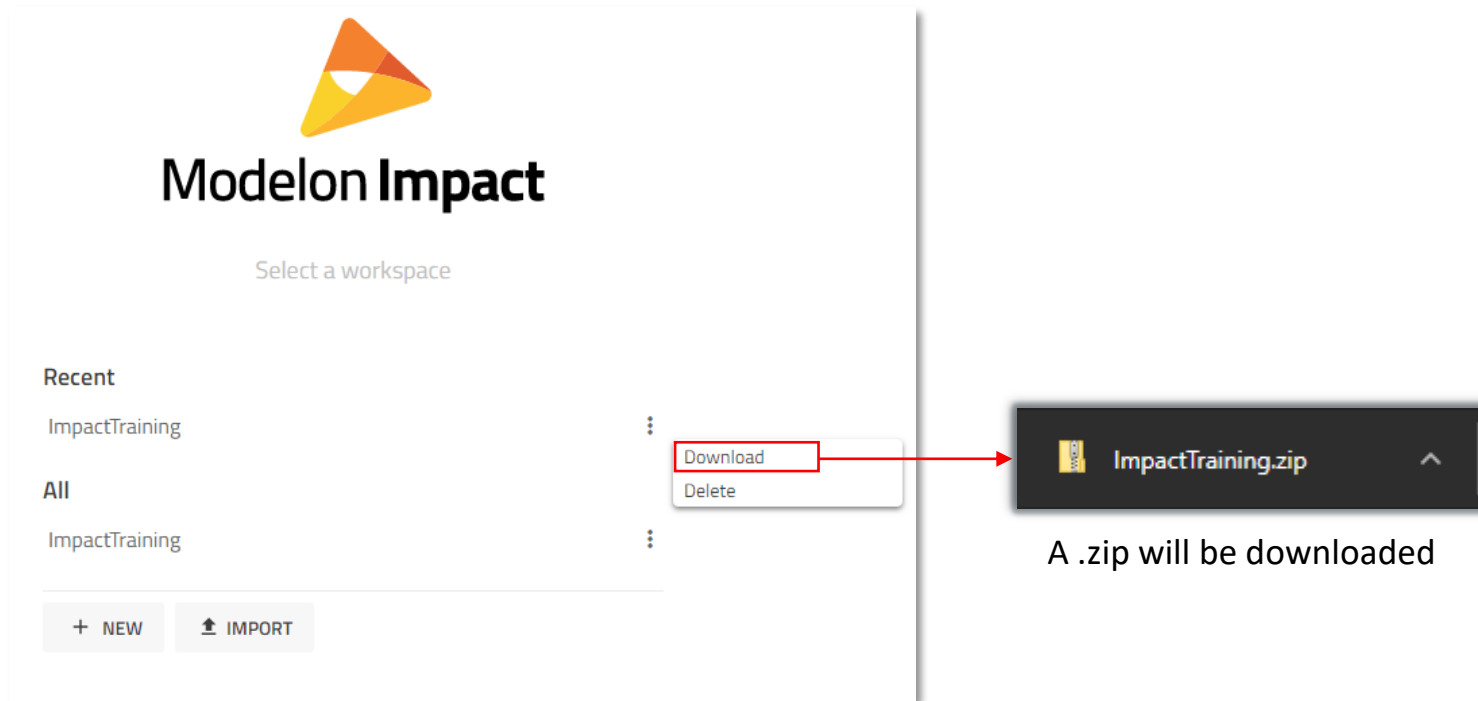
# WORKSPACES

- *Workspace* is the environment that a user does modelling, simulation etc. in
- Models (source code), compiled models (FMUs), results, resources and views are saved to the workspace
- Choose which workspace to use (or create or import one) from the welcome screen



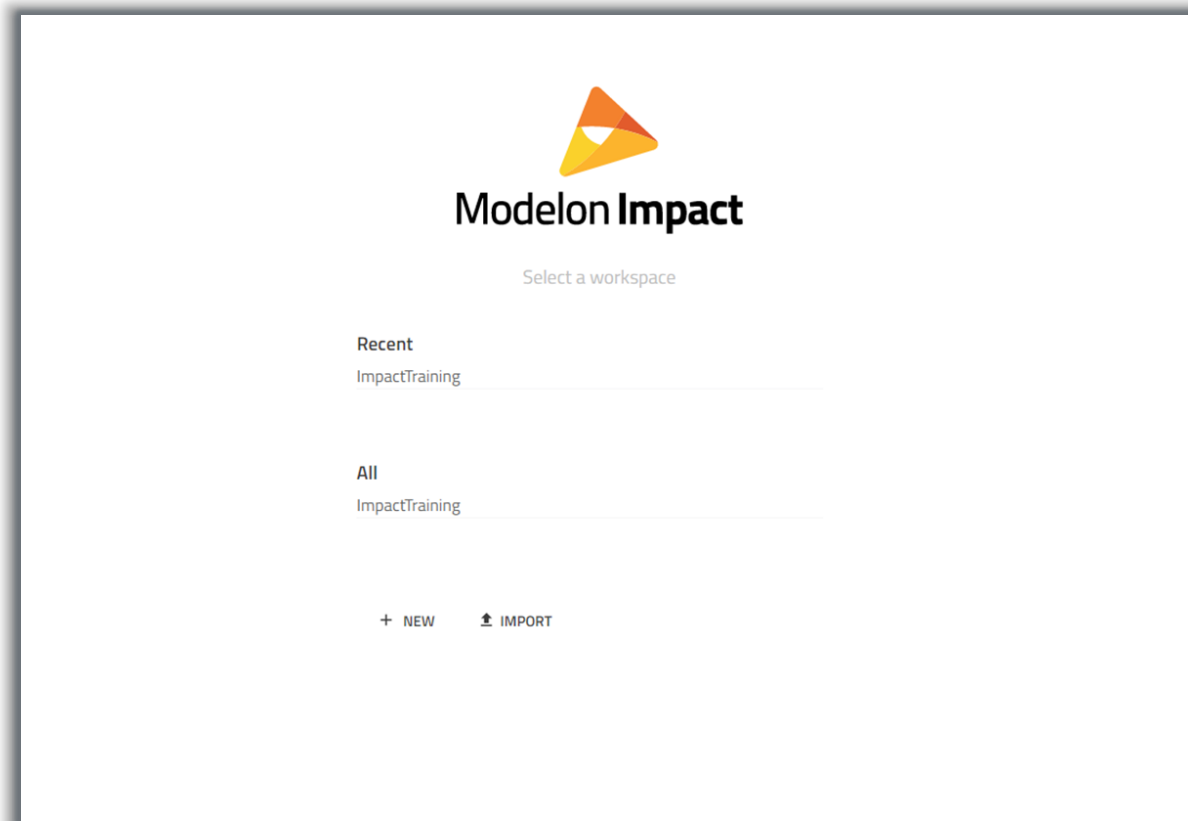
# WORKSPACES: EXPORT

- A workspace can be downloaded and shared
- Navigate to Workspace selection window



# WORKSPACES: IMPORT

- Import of an exported workspace is made from the starting screen
- It can be done by **Import-> Selection of the .zip file -> Open**

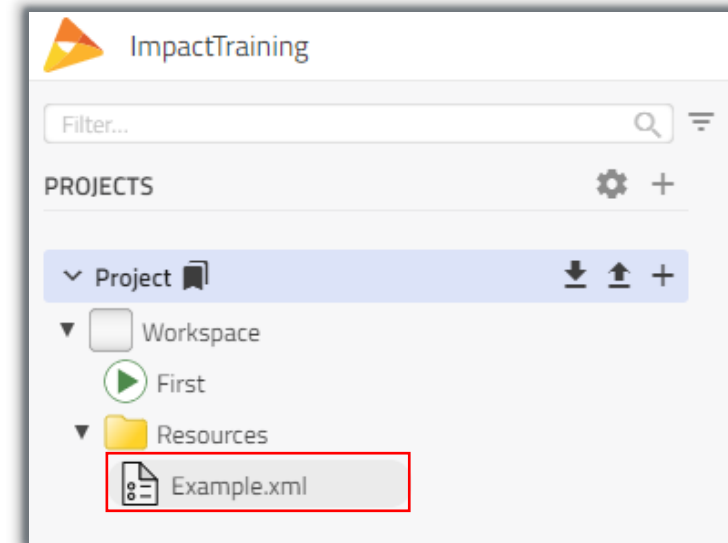




# HANDLING ARTIFACTS

# ARTIFACTS

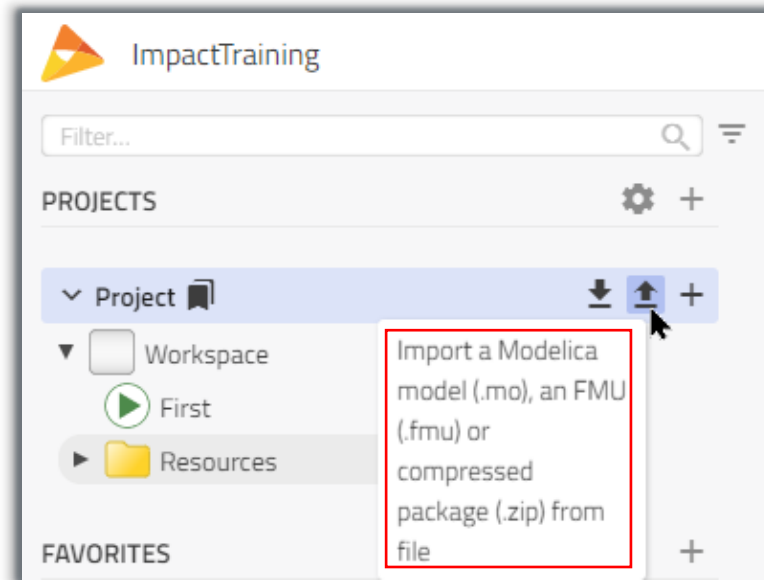
- There are several artifacts associated to your workspace:
  - Libraries
  - Datafiles
  - Compiled models
  - Result files
- The Workspace package is automatically created
  - Convenient storage for any work in progress





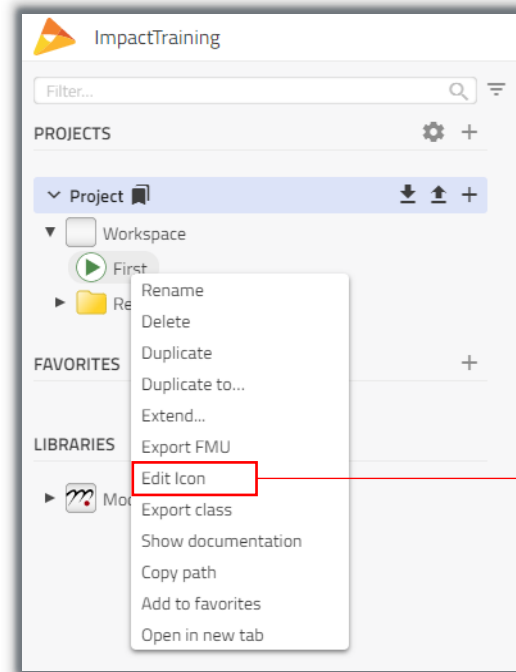
# ADDITIONAL LIBRARY IMPORT

- Additional models and/or packages can be uploaded
- .mo, .zip and .mol (encrypted) supported formats
- Encrypted packages (.mol) will appear under the **Libraries** section
  - Uploaded package only accessible for the active workspace



# MODEL EXPORT - SOURCE

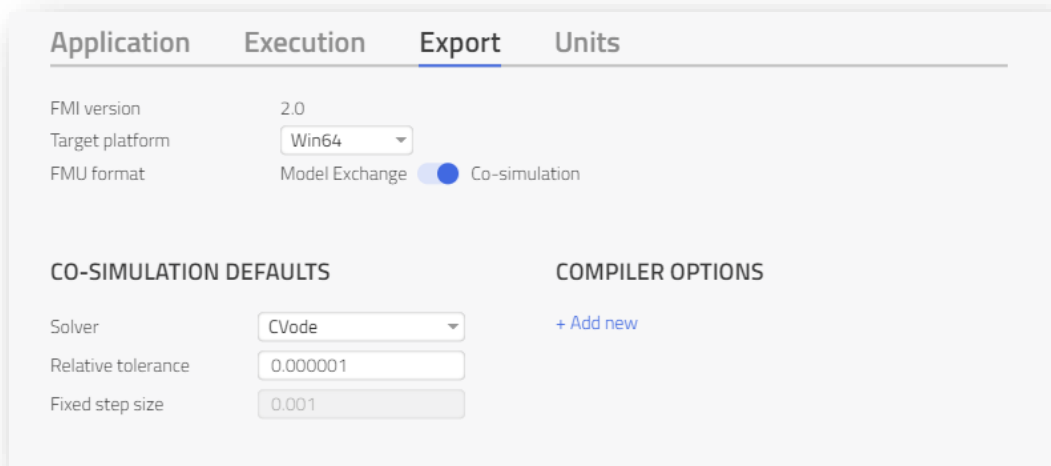
- Models can be exported as source code or compiled objects (FMUs)
- Encryption of models to be exported is currently not supported



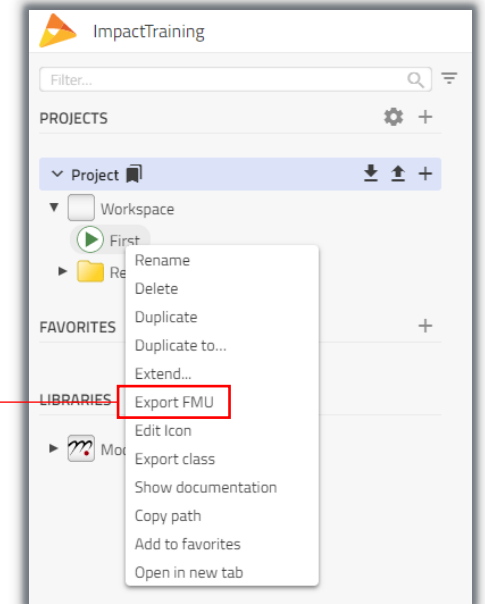
This will export a .mo file  
(without dependencies)

# MODEL EXPORT - FMU

- FMUs are compiled executables of models
- Export settings can be accessed from the context menu or from tool settings



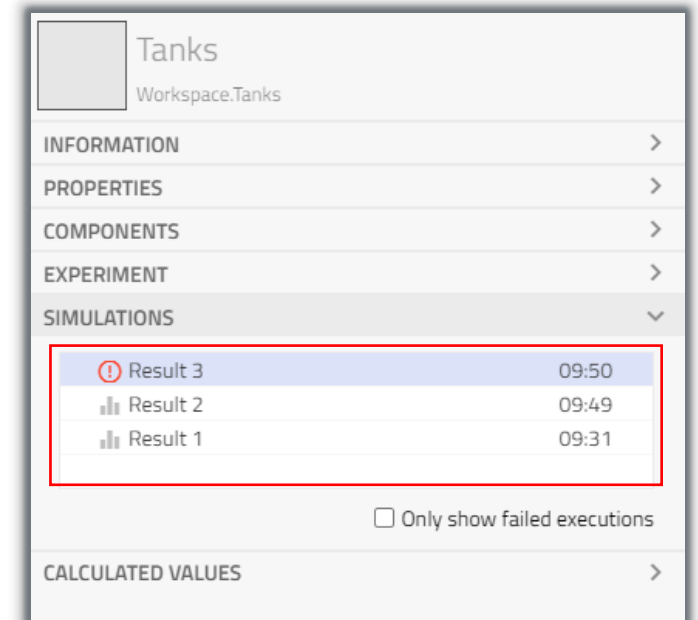
This will export a compiled model (FMU)



- Cross-compilation is supported

# RESULT HANDLING

- Results are accessible from the **Results Mode -> Simulations tab**
- When a simulation is finished, a new result is added to the list of results
- If the simulation or compilation fails, an entry will still be added for log review
- Results are connected to the workspace, meaning that if someone else simulates a specific model, the result will show up for any user accessing the model.



# RESULT HANDLING


Right-clicking or clicking for any of the result items will give you access to a list of commands

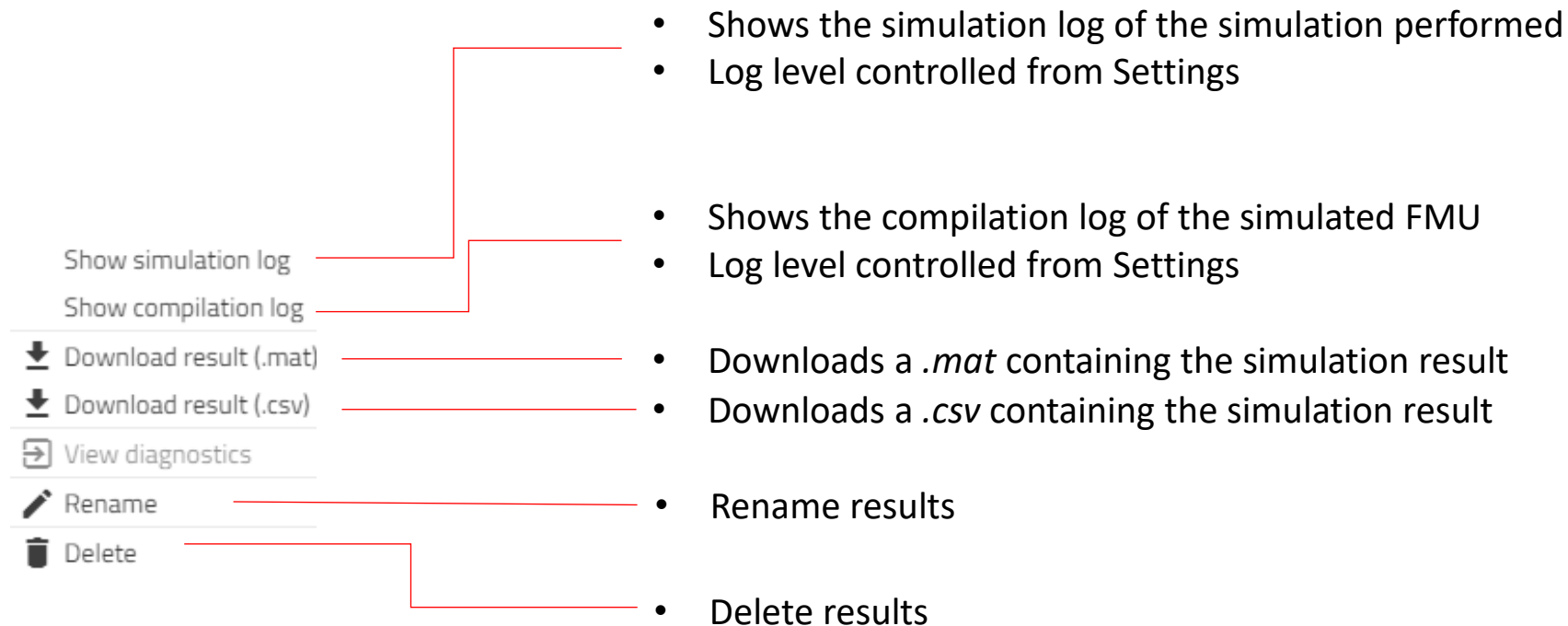
The screenshot shows a 'SIMULATIONS' panel with a list of four results. Red boxes and arrows highlight specific UI elements and their functions:

- Name of the result:** Points to the text 'Result 1' in the first column of the list.
- To Rename the result:** Points to a pencil icon next to 'Result 1'.
- Date and time of the simulated result:** Points to the text 'Aug 25 13:44' in the second column of the first row.
- To delete the result:** Points to a three-dot menu icon and a close button (X) in the third column of the first row.

Result Name	Date and Time	Actions
Result 4	16:39	[Pencil] [More] [Close]
Result 3	16:37	
Result 2	16:01	
Result 1	Aug 25 13:44	

# RESULT HANDLING

- Right-clicking or clicking  for any of the result items will give you access to a list of commands



The image shows a context menu with the following items:

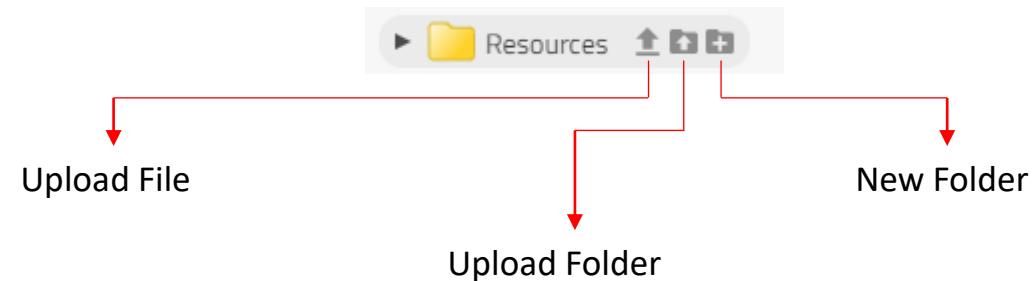
- Show simulation log
- Show compilation log
- Download result (.mat)
- Download result (.csv)
- View diagnostics
- Rename
- Delete

Red lines connect these items to their corresponding descriptions on the right:

- Show simulation log
  - Shows the simulation log of the simulation performed
  - Log level controlled from Settings
- Show compilation log
  - Shows the compilation log of the simulated FMU
  - Log level controlled from Settings
- Download result (.mat)
  - Downloads a *.mat* containing the simulation result
- Download result (.csv)
  - Downloads a *.csv* containing the simulation result
- Rename
  - Rename results
- Delete
  - Delete results

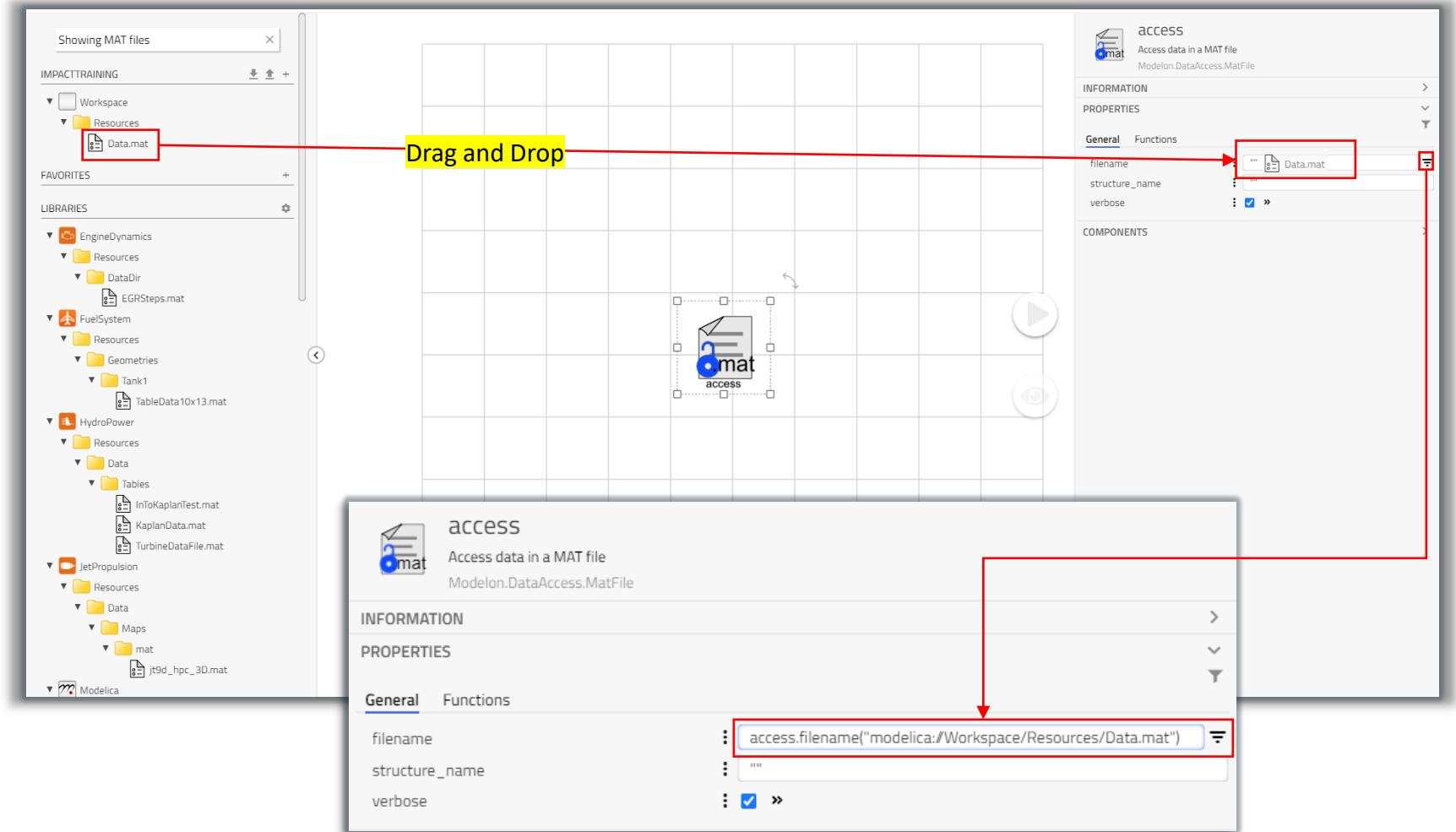
# RESOURCES

- Data files are stored in a folder named Resources within a library.
- If a library includes a Resource folder, it is shown in the library browser.
- For read-only libraries, resource files can be downloaded for editing locally.
- The workspace package resource files can also be uploaded (and whole folders).
- Sub-folders can be added to organize the data



# RESOURCES

- When including data files into components, there is a convenient way of doing so
- Using the filter button (☰) all matching data files will show in the library browser
- Drag file name into the appropriate field to insert the correct reference to the data file





A person is shown from a high angle, working on a laptop. The laptop screen displays a complex technical diagram, likely a power system or control system, with various components and connections. A semi-transparent image of a wind turbine is overlaid on the left side of the screen. The text "WORKSPACE MANAGEMENT" is centered over the image in a bold, orange font.

# WORKSPACE MANAGEMENT

# WORKSPACE MANAGEMENT

- Collaborate and manage model repositories and libraries from a dedicated user interface using the new workspace management app (exclusive for Modelon Impact On-Premise).
  - Check out content from Subversion (SVN) or Git
  - View information on checked out content (size on disk, revision, libraries inside, ...)
  - See if there are remote updates to checked out Modelica libraries
  - Upload (commit/push) changes to the remote SVN/Git repository
  - Configure workspaces with version controlled content and Modelon Impact libraries
  - Credentials store to enable easy access to version controlled libraries

## EXCEL ADD-IN

Add-in manifest file

Download template

Open template

## WORKSPACE MANAGEMENT

Project Explorer

Workspace Configuration

## TOOLS - ADVANCED

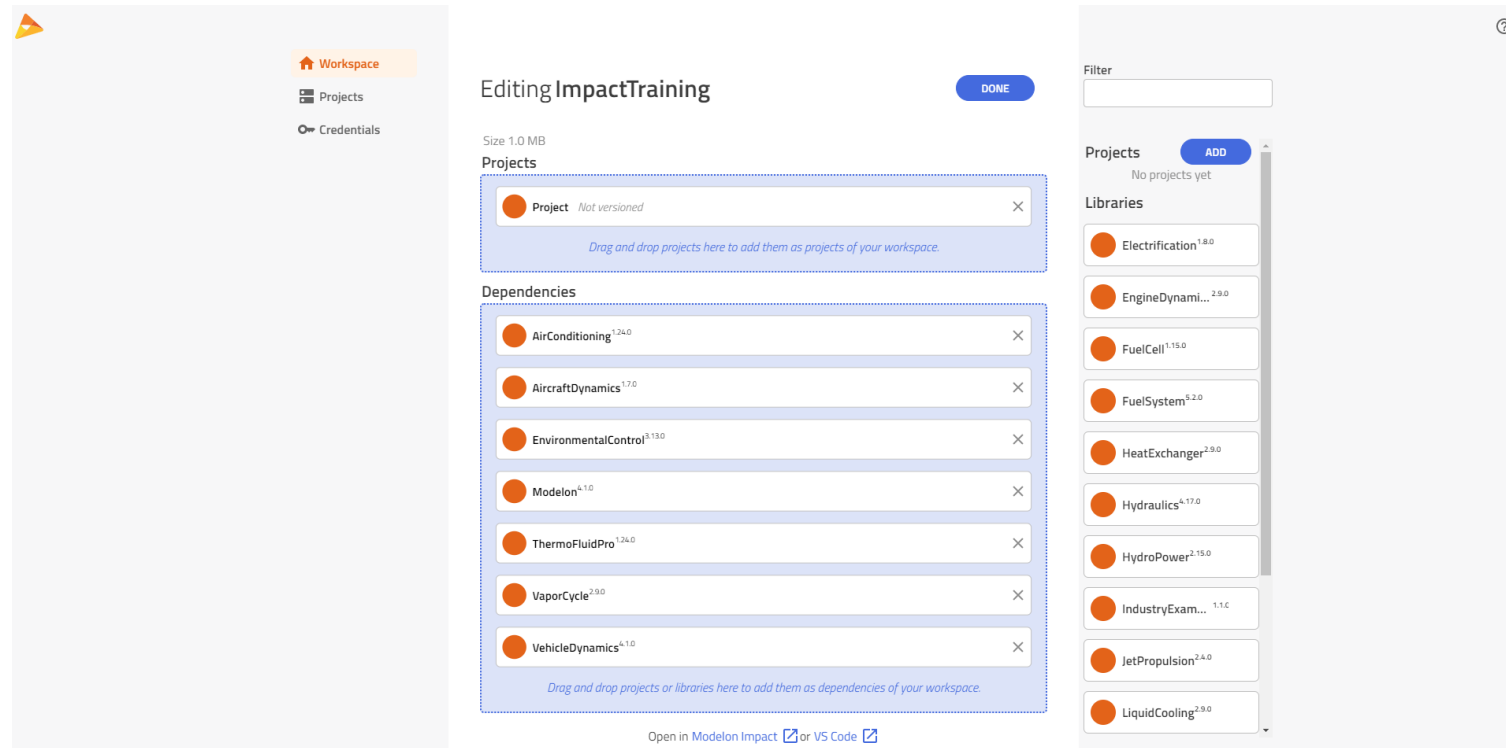
JupyterLab

Server Management

VS Code in browser

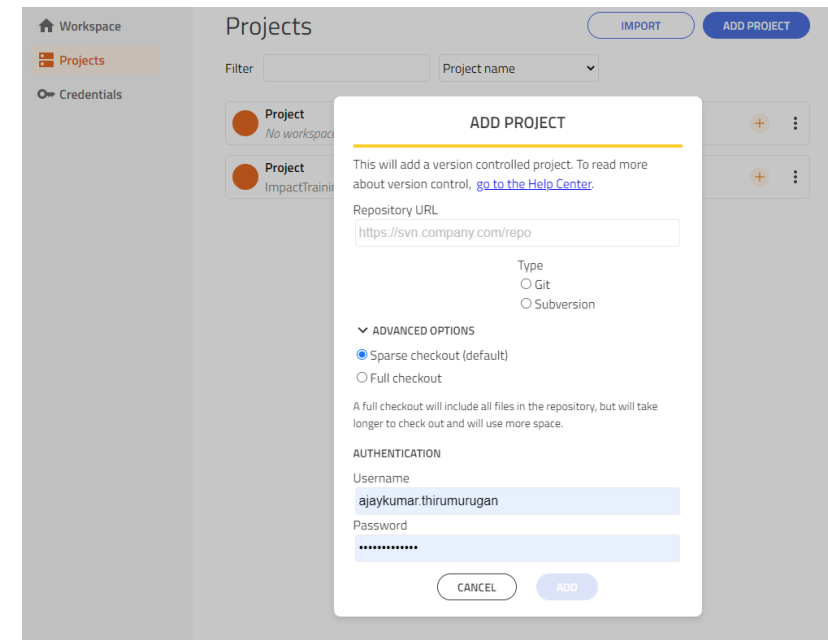
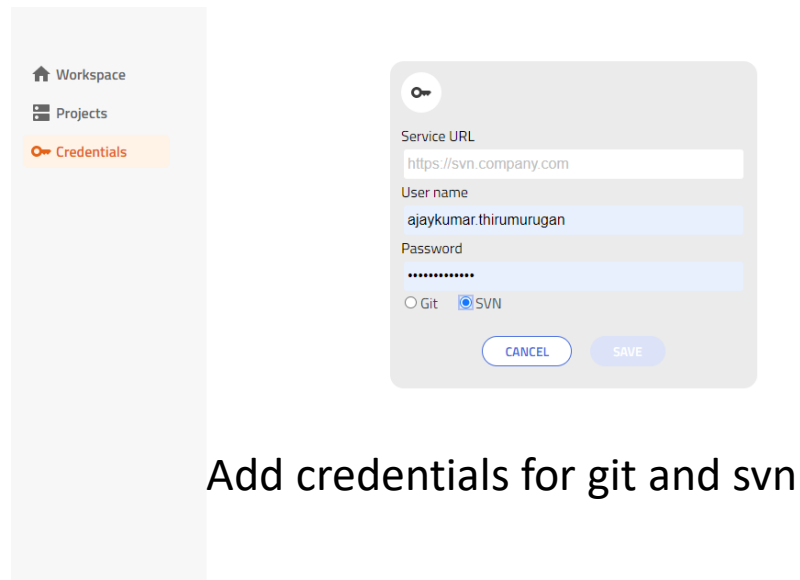
# WORKSPACE CONFIGURATION

- Configure which libraries to use by drag & drop to and choose if they should be editable or read-only
- Choose between released or checkout (version controlled) libraries



# REPOSITORY MANAGEMENT

- Manage your version-controlled model repositories
- Model libraries are automatically detected and presented in the user-interface
- Use basic version control operations to stay in sync with your colleagues. For advanced operations, a 3rd party plugin can be used.



# REPOSITORY MANAGEMENT

1. Check out repository from server
2. Add to workspace though workspace configuration
3. Reload workspace and edit model
4. Go to Repository management, select operation with your modifier

The screenshot displays the Modelon interface, divided into two main sections: 'Projects' and 'Editing ImpactTraining'.

**Projects Section:** At the top, there are 'IMPORT' and 'ADD PROJECT' buttons. Below them is a 'Filter' input and a 'Project name' dropdown. The project list includes:

- Project:** Not versioned, No workspace.
- TestProject:** trunk, No workspace. URL: `https://svn.modelon.com/P700-Training/trunk/`, revision: 4352, size: 121 kB. It lists 'Modelica libraries' (Demo) and 'Other resources' (VIEWS, FAVORITES, CUSTOM\_FUNCTIONS, GENERIC, REFERENCE\_RESULTS, EXPERIMENT\_DEFINITIONS).

**Editing ImpactTraining Section:** Features a 'DONE' button and a 'Size 1.1 KB' indicator. The main area is titled 'Drag and drop the projects' and contains:

- Projects:** A blue box with the text 'No projects yet' and 'Drag and drop projects here to add them as p...'. A 'TestProject trunk' card is being dragged into this area.
- Dependencies:** A blue box with 'Modelon<sup>4.1.0</sup>' and 'VehicleDynamics<sup>4.1.0</sup>' listed. Below it is the text 'Drag and drop projects or libraries here to add them as dependencies of your workspace.'

On the right side, there is a sidebar with 'Filter', 'Projects' (with an 'ADD' button), and 'Libraries' (listing 'AirConditioning<sup>1.24.0</sup>' and 'AirConditioning<sup>1.25.0</sup>').

At the bottom, there is another 'Projects' section with 'IMPORT' and 'ADD PROJECT' buttons, a 'Filter' input, and a 'Project name' dropdown. The project list includes:

- Project:** Not versioned, No workspace.
- TestProject:** ImpactTraining trunk. A context menu is open over this entry, showing options: 'Revert changes', 'Update status', 'Open in VS Code', and 'Delete'.

# WORKSHOP 1.4

In this workshop you will:

- Download artifacts from the workspace