Version history

- V. 1.0 date: 22.2.2023
  - Original version
- V. 2.0 date: 22.04.2025
  - Updated version

INFRAKIT

Basic Guide

Part 1

Features and functions

1. Login
2. Settings
3. Overview of the map page
   - Search function
   - Filters
   - Notifications and projects
   - Measuring tools
   - Map image
4. Map layers
   - Map layers tab
   - Map levels in project settings
5. Models tab
6. Drawings tab
7. Documents tab
   - External documents
8. As-built tab
9. Photos tab
10. Saved views
11. Equipment tab
12. 2D Cross Section
13. Cross section window
14. Long section
15. Long section window

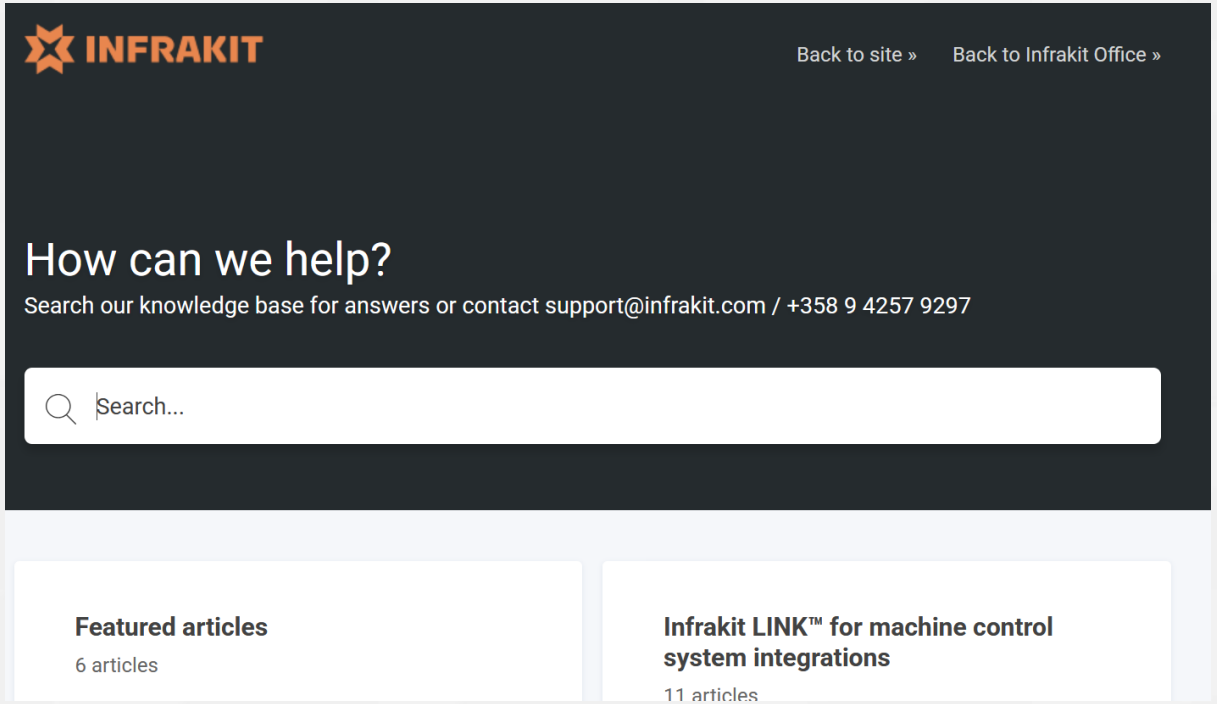
Part 2

Features and functions

16. Files page
17. As-built page
    - Adding as-built points
    - Filtering as-built points
    - Editing as-built points
    - Information of as-built points
    - Downloading as-built points
18. Photos page
19. Equipment page
    - Usage statistics
    - Assignments
    - Accuracy
20. Visualization page (3D)

Knowledge base

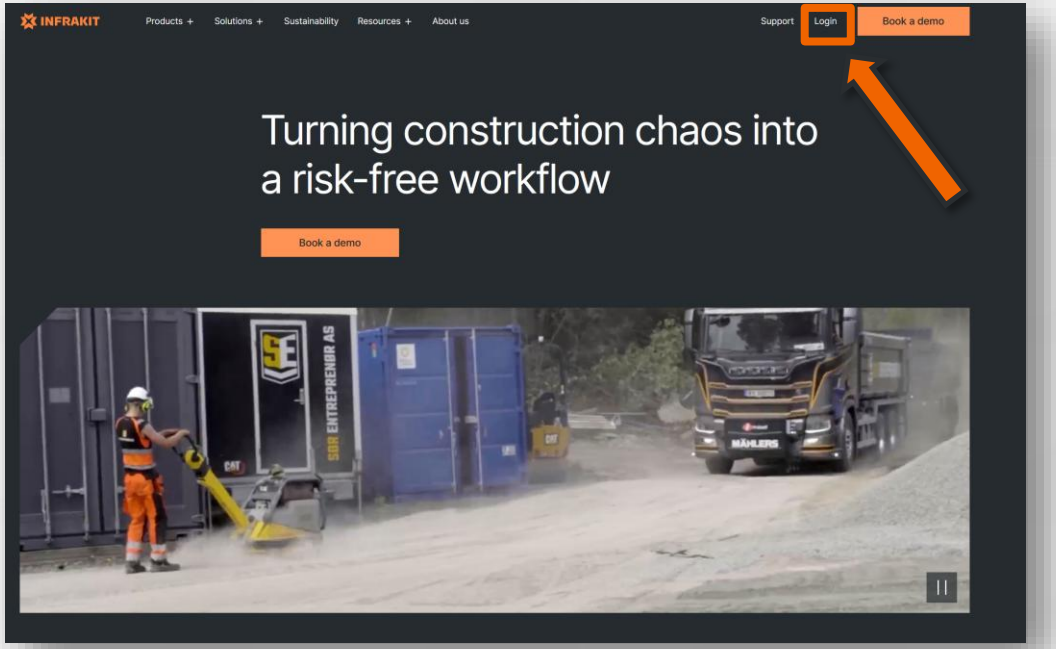
- This guide explains basic functionality of Infrakit OFFICE
- For more in-depth guides and frequently updated specific instructions go to Infrakit Knowledge base
- https://support.infrakit.com

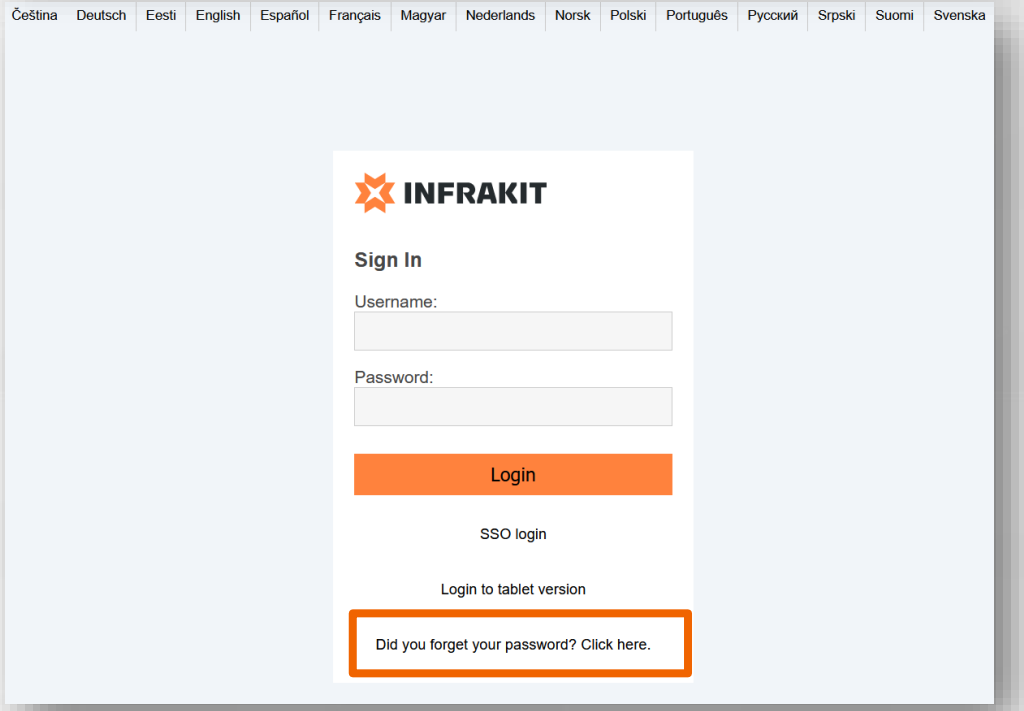


Login

1. Type the url in the browser: https://infrakit.com/
2. Select "*Login*" in the upper right corner
3. Enter your username and password
   - **You will receive your username**
     - **Either from your organization's administrator**
     - **Or from Infrakit support@infrakit.com**

- On this page you can also
  - Change the language from the top bar
  - Choose SSO login
  - Login to Infrakit tablet version
  - Request a new password

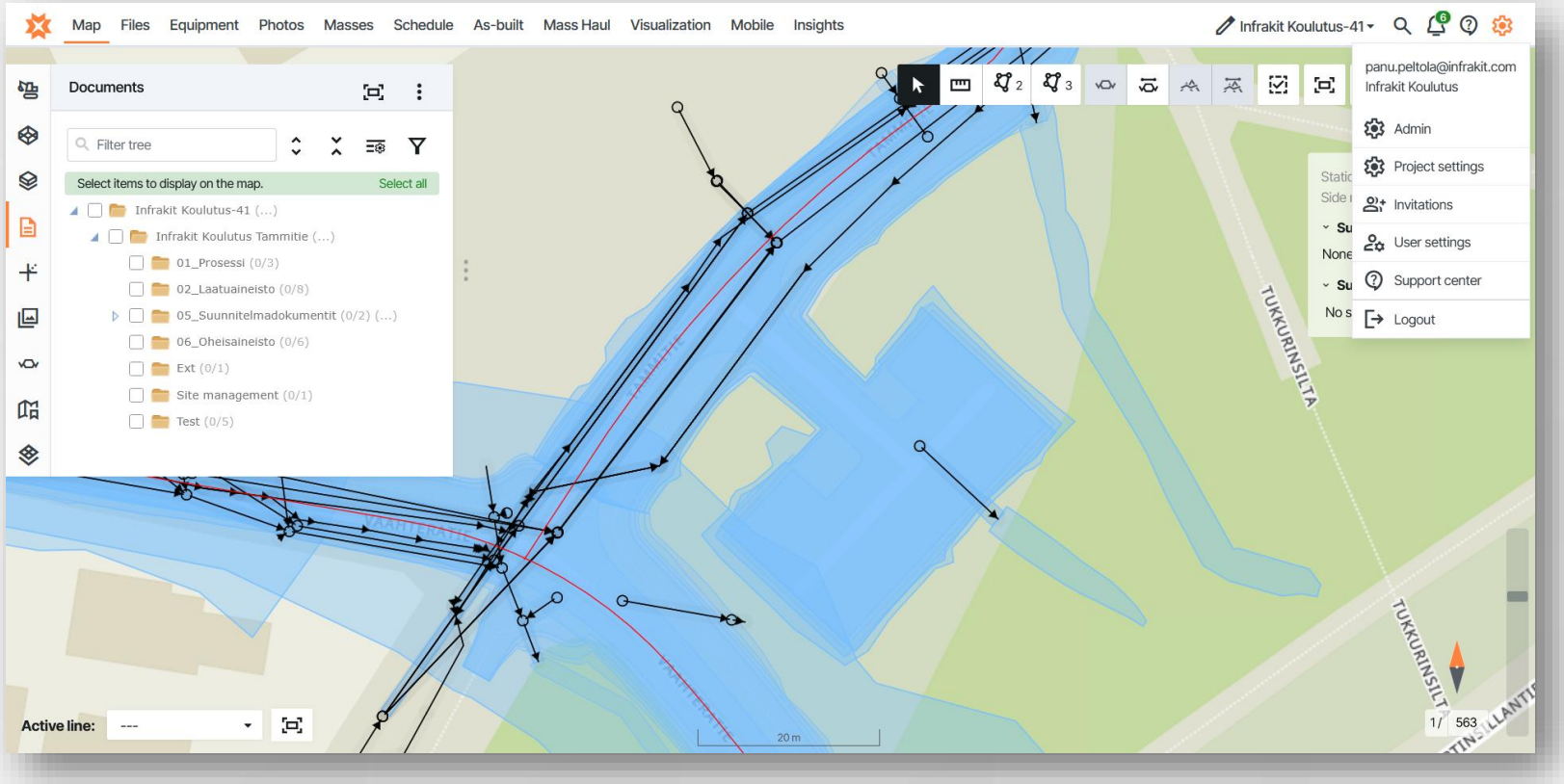




Settings

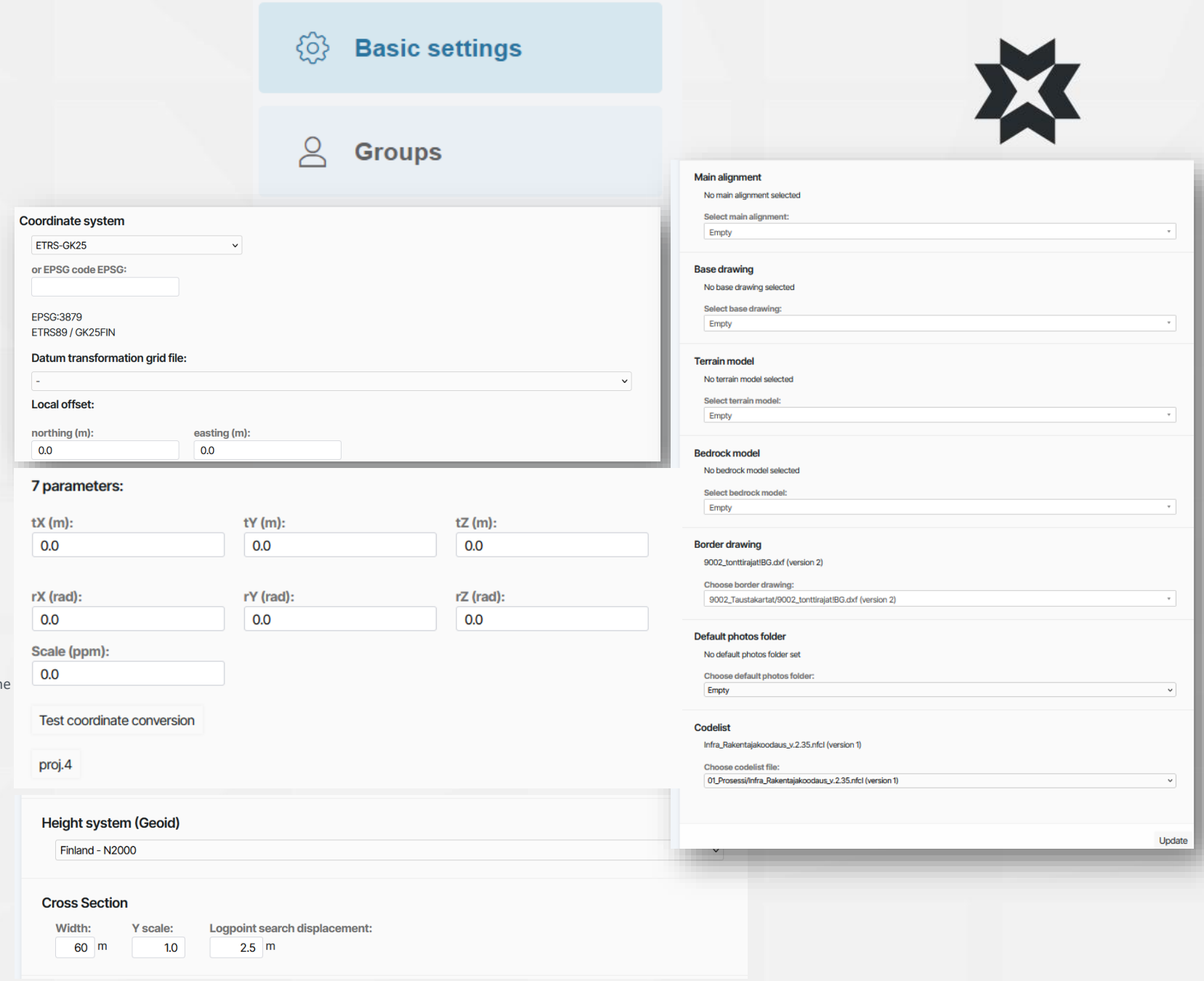
Settings are located under “gear" button:

- Admin
  - Manage organization settings
- Project settings
  - Manage project settings
- User settings
  - Manage personal information and change of language and password
- Project invitations
  - Accepted and pending project invitations
- Support center
  - Open Infrakit Knowledge base
- Log out



Project settings

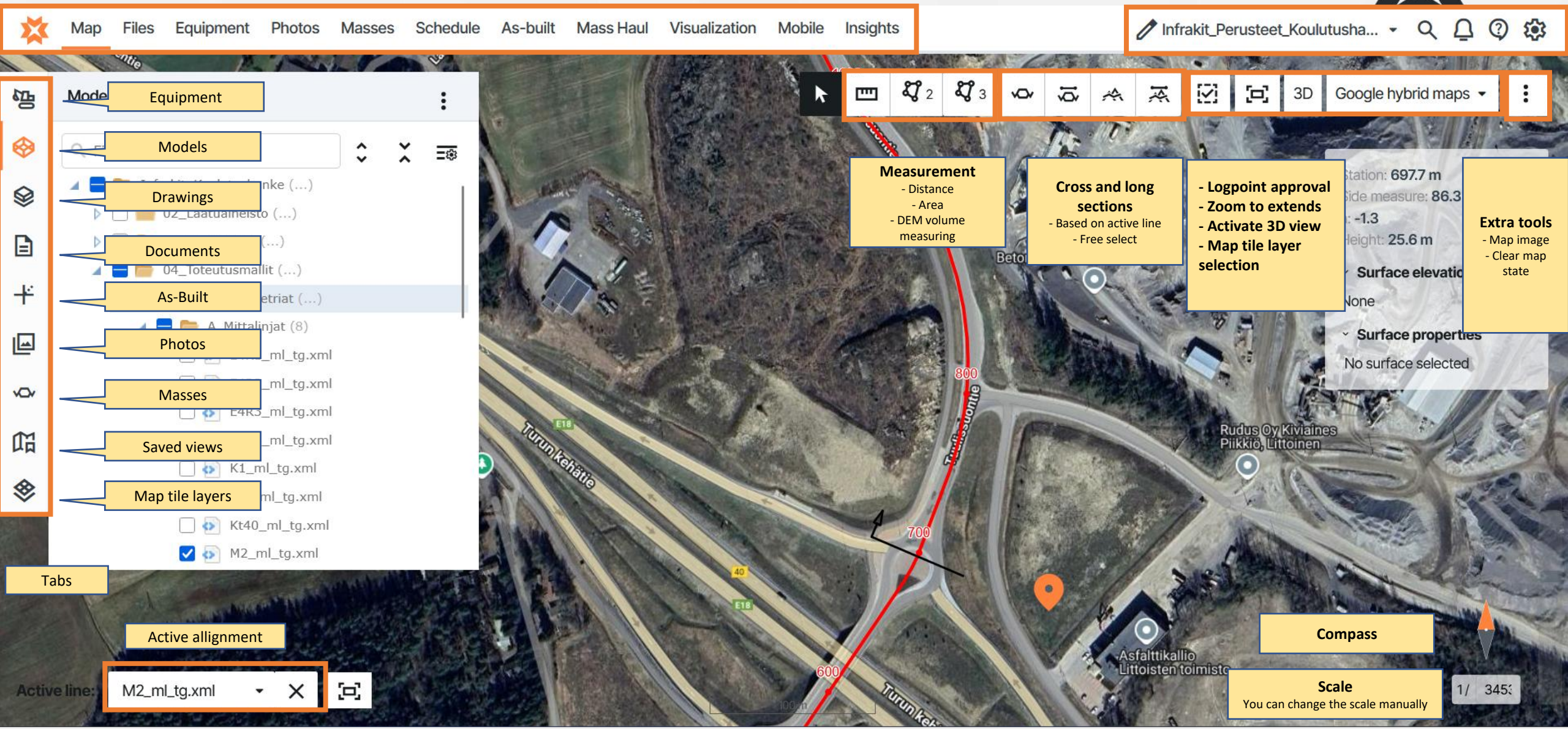
- **Coordinate system**
  - This setting defines the coordinate system of the project
- **Local offset**
  - If a local transformation has been made to the coordinate system, the offset is entered here
- **7 parameters**
  - Configure the coordinate system using the 7 parameter conversion
- **Height system**
  - Affects height in FIELD application - Set correctly
- **Main alignment**
  - Default active alignment for the project (FIELD)
- **Base drawing**
  - Base map for Trucks application
- **Terrain model**
  - The terrain model of the initial data is always shown as a dashed line in the cross sections
- **Terrain bedrock model**
  - The bedrock surface model of the initial data is always shown as a dashed line in the cross sections
- **Project border drawing**
  - Break lines of the 2D plane are shown as vertical lines for cross-sections, e.g. takeover boundaries
- **Default photos folder**
  - Select the default root folder for photos taken in Field application
- **Codelist**
  - Interprets the legend for measurement codes



Overview of the map page

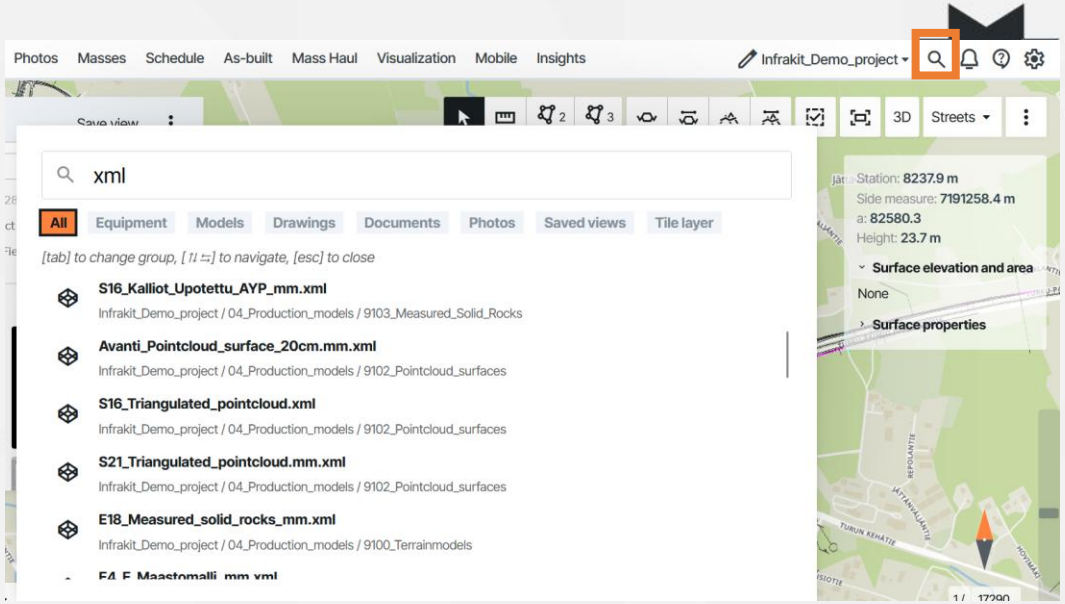
Pages for different functions

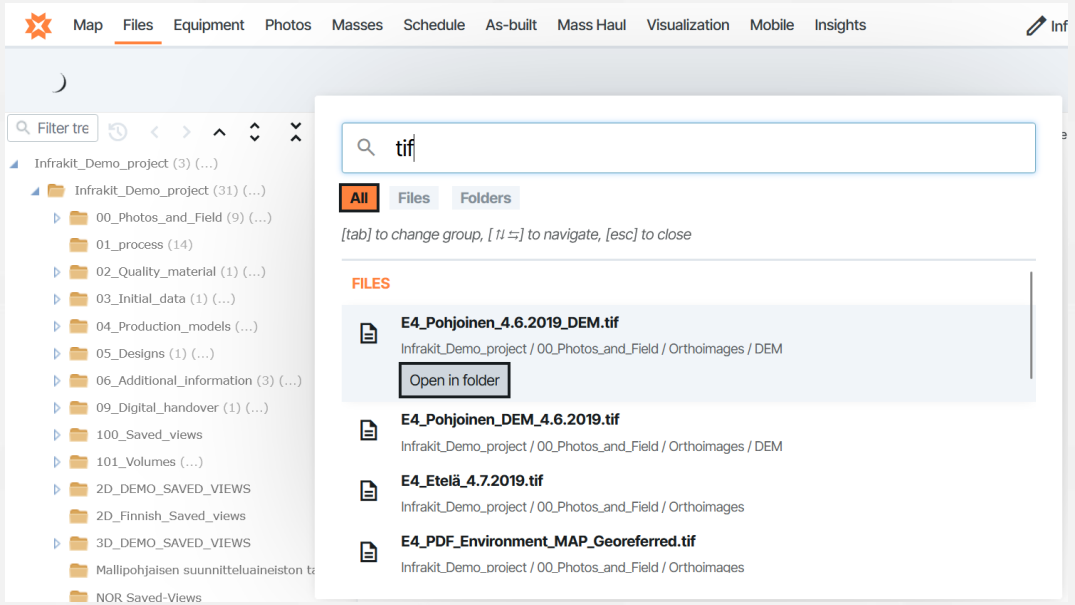
Project selection
Search function
Help Center
Settings



Search function

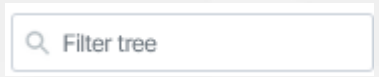
- Open the search function by clicking on the magnifying glass in the upper right corner of the screen or by pressing CTRL+Spacebar
- The search function searches from all tabs on the page
  - Search function searches from file names and descriptions
- Add search results to the map by selecting ”Load” next to the file name
- The search window can be navigated by using a mouse or keyboard buttons as instructed by the window
- Different kinds of files can be filtered by changing the file type in the file search window
- Note that using the search function in ”Map” page and ”Files” page may give different results. The map page only shows files you can normally choose from the map page and files page searches from the documents on files page
  - For example, searching on map page does not find video files and searching on files page does not find pictures



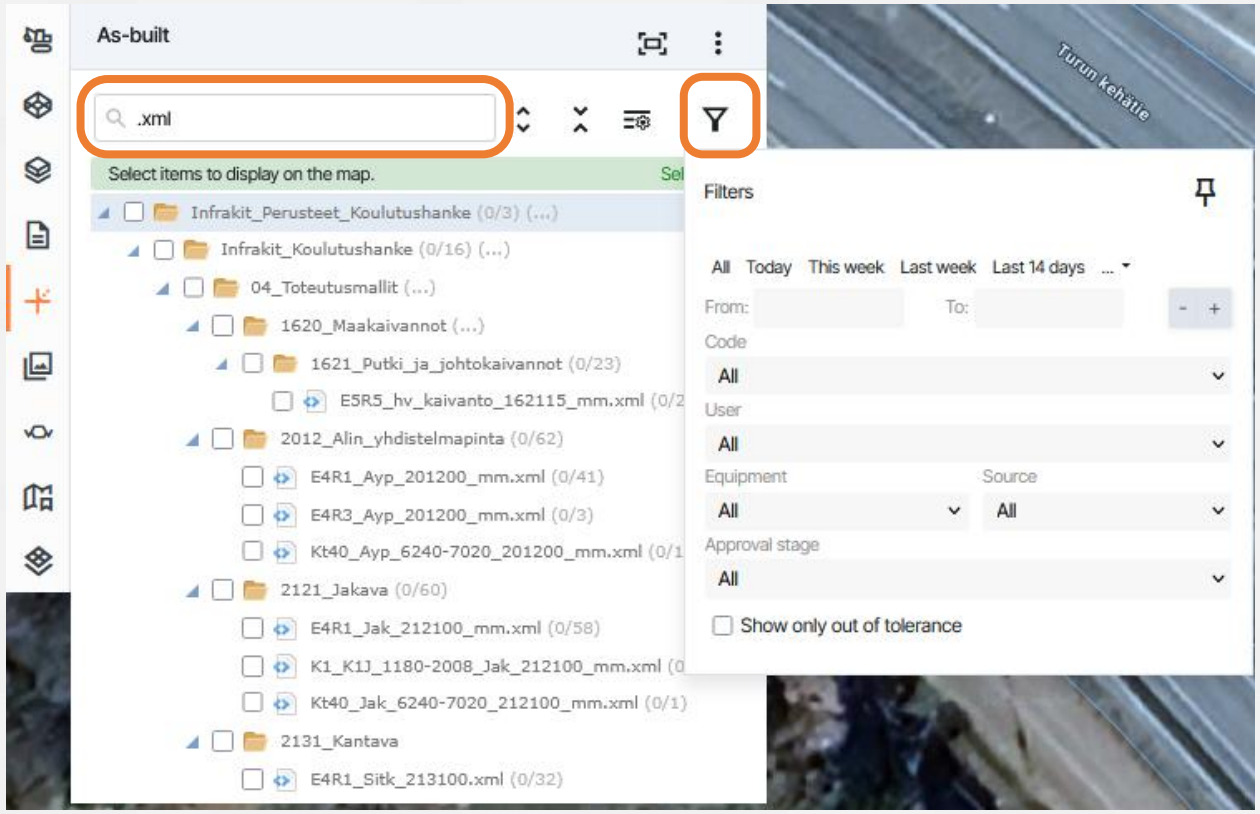


Filters

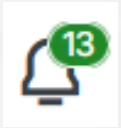
- Another way to search and filter files is by using filters on a tab
- Each tab has its own filter selection



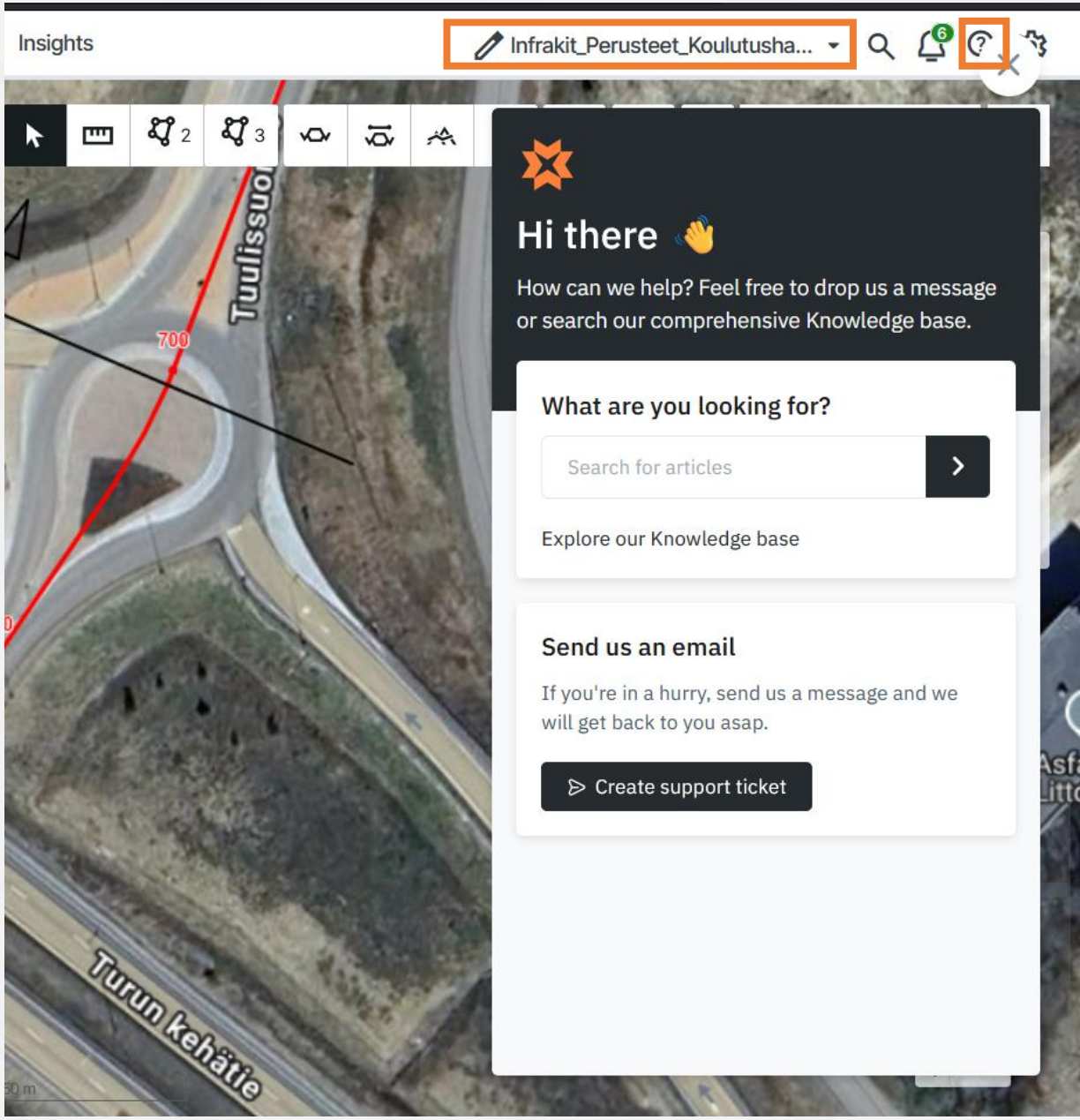
- Every tab has a field to filter by name
- In this you can search by:
  - File name
    - Example 1: Search all files containing string ”.xml”
  - Folder name
- The Documents, As-built, and Photos tabs have more filters connected to the page. For example:
  - Date added
  - Type
  - User
  - Attached allignment
  - Properties
- Note that filters only work for the tab they are set to
- Different filters can be set to different tabs at the same time
- The easiest way to save filters is to create a saved view after configuring the filters



Notifications and projects



- You can find project notifications behind the “bell" icon in the upper right corner
- The number on top of the bell indicates the number of activities that took place between login times by event type
  - All – All events of the project
  - Files – Added / Removed files
  - Folders – Added / Removed folders
  - Photos – Added / Removed photos
  - Service – Infrakit's general announcements, e.g. new application version
  - Chat – The project's conversation, which everyone in the project can see
- Selecting the question mark opens a support window in which you can:
  - Search articles from the Infrakit Knowledge base
  - Create a support ticket to Infrakit support
- You can select a project from the drop-down menu on the left side of the bell
- If you are the admin of the project, you can press the pencil symbol next to the project listing to access the admin page of the project, where you can:
  - Edit the coordinate system, height system, organization, truck mode
  - Edit and download log the user list by inviting users
  - Edit and download log of equipment (machines)
  - Integrate the project into different machine control systems



Measuring tools

Distance measurement

You can measure distances by selecting the start point and the end point with the mouse.

- End measuring by double-clicking, the line remains visible

✓ For example, the distance between wells

Area measurement

You can measure the areas by selecting the desired area point by point with the mouse.

- End measuring by clicking on the starting point or by double-clicking, the area remains visible

✓ For example, asphalt squares from an orthoimage

DEM measurement

Measure volumes between a DEM model and design or self defined height

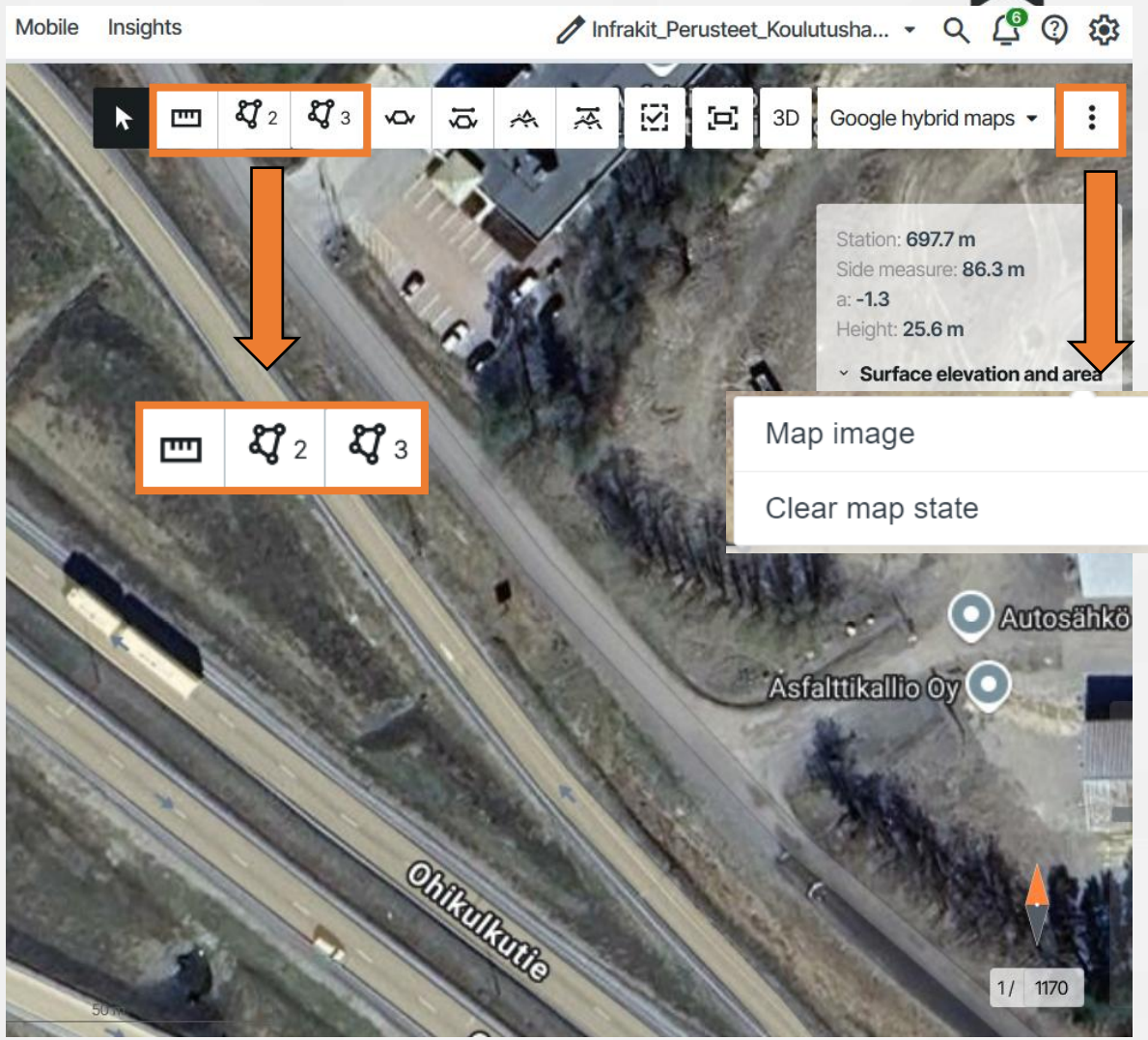
- Same controls as area measurement

✓ Follow earthworks, calculate pile volumes

Map image

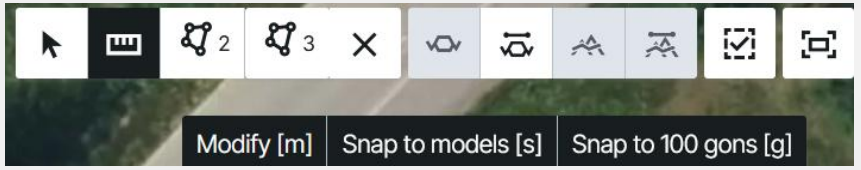
You can take a Map image e map page view from behind the “more" button by selecting "Map image"

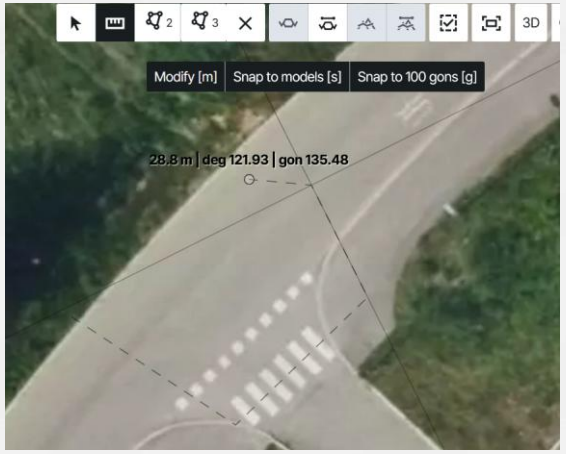
✓ E.g. to include in documents or as an e-mail attachment



Distance measuring

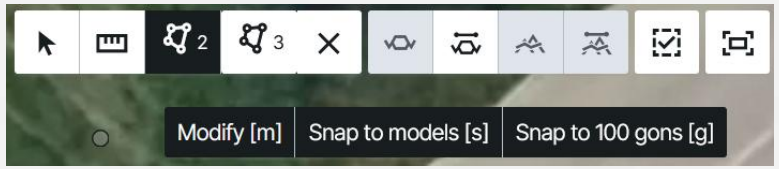
- Select the distance measuring tool icon
- After choosing the tool options can be toggled:
  - Modify → Modify a finished measuremen by clicking and dracking it from its corner points or create new corner pointsby double clicking while hovering cursor above a line
  - Snap to models → Cursor snaps to edges of models
  - Snap 100 gons → Infrakit draws assist lines, and the cursor snaps those lines. The lines form a cross and each line has an angle of 100 gons (90 degrees) from the last one. If a line is drawn outside of the assist lines, it will be oriented perpendicular to the last line drawn.
- Many lines can be drawn into one measurement
- End the measurement by double clicking left mouse button
- Infrakit shows the total length of the line and angle compared to the last line
- Line can be drawn freely by pressing and holding the shift-key
- Measurements can be deleted by clicking a measurement with the right mouse button and selecting delete. All measurements can be deleted by clicking the cross next to the tool menu





Area measuring

- Select Area measuring icon from the toolbar
- Area measuring tool has otherwise the same controls as the distance measuring, except double clicking left mouse button completes the shape
- The selected area can be downloaded as xml or kml format and the area can be converted as an area for the Trucks application



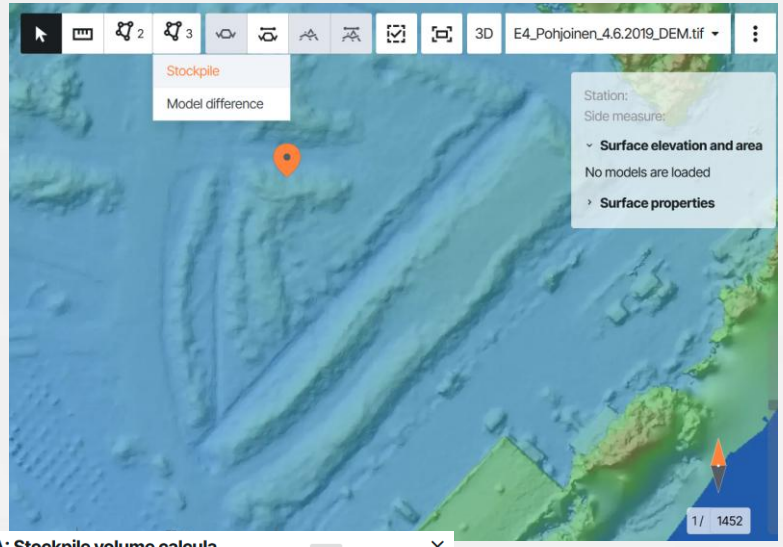
- ✓ Tip 1: Use a kml file created with the area measuring tool for example to create flight programs for DJI drones
- ✓ Tip 2: Area and distance measurements can be saved into a saved view or map image

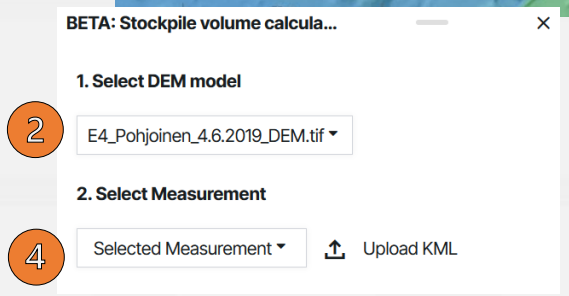
Volume Calculation 1/2

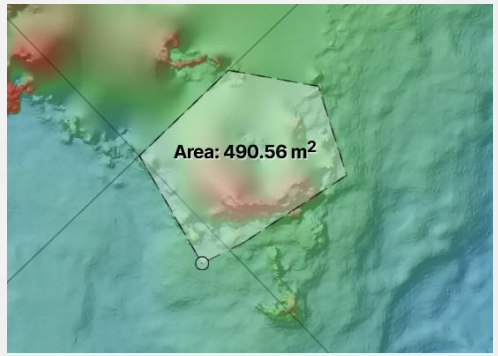
- Volume calculation can measure volumes from height models (DEM, DSM and DTM), that are in .tif or .tiff format
- The volume can be compared against a reference height or model

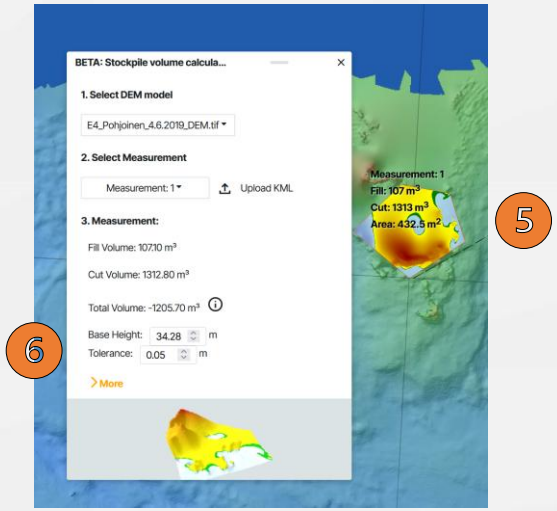
Stockpile:

1. Select volume measuring tool and choose “Stockpile” from the drop-down menu
2. Choose a model from which the volume will be measured from
3. Draw the area on the map (controls are the same as area tool)
4. Choose the wanted area measurement from the volume measuring menu
5. The measurement, it’s volume and area will be drawn on the map. The height will be calculated by using the average height of the perimeter.
6. Reference height and tolerance can be changed from the menu. The drawn 3D model can be rotated by pressing and holding the left mouse button







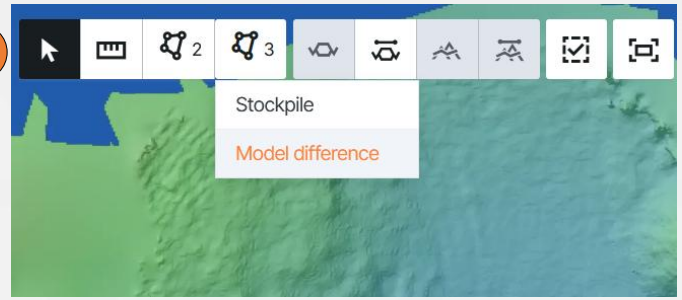


Volume Calculation 2/2

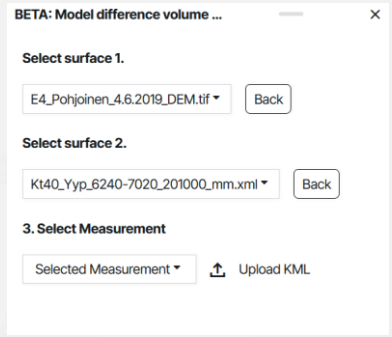
Model difference:

1. Select volume measuring tool and select “Model difference”
2. Select the height model and reference model. Only active models will be shown on the reference model menu
3. Draw the area on the map
4. Choose the wanted measurement from the volume calculation menu
5. The measurement, it’s volume and area will be drawn on the map and the drawn 3D model can be rotated by pressing and holding the left mouse button

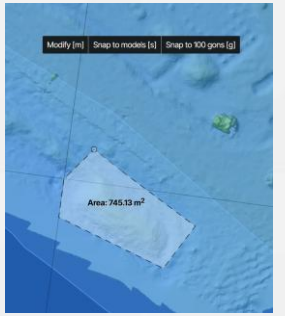
1



2

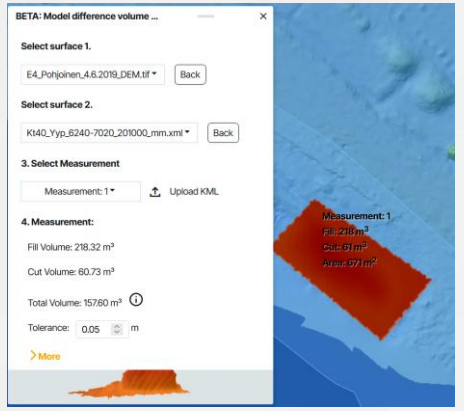


3



4

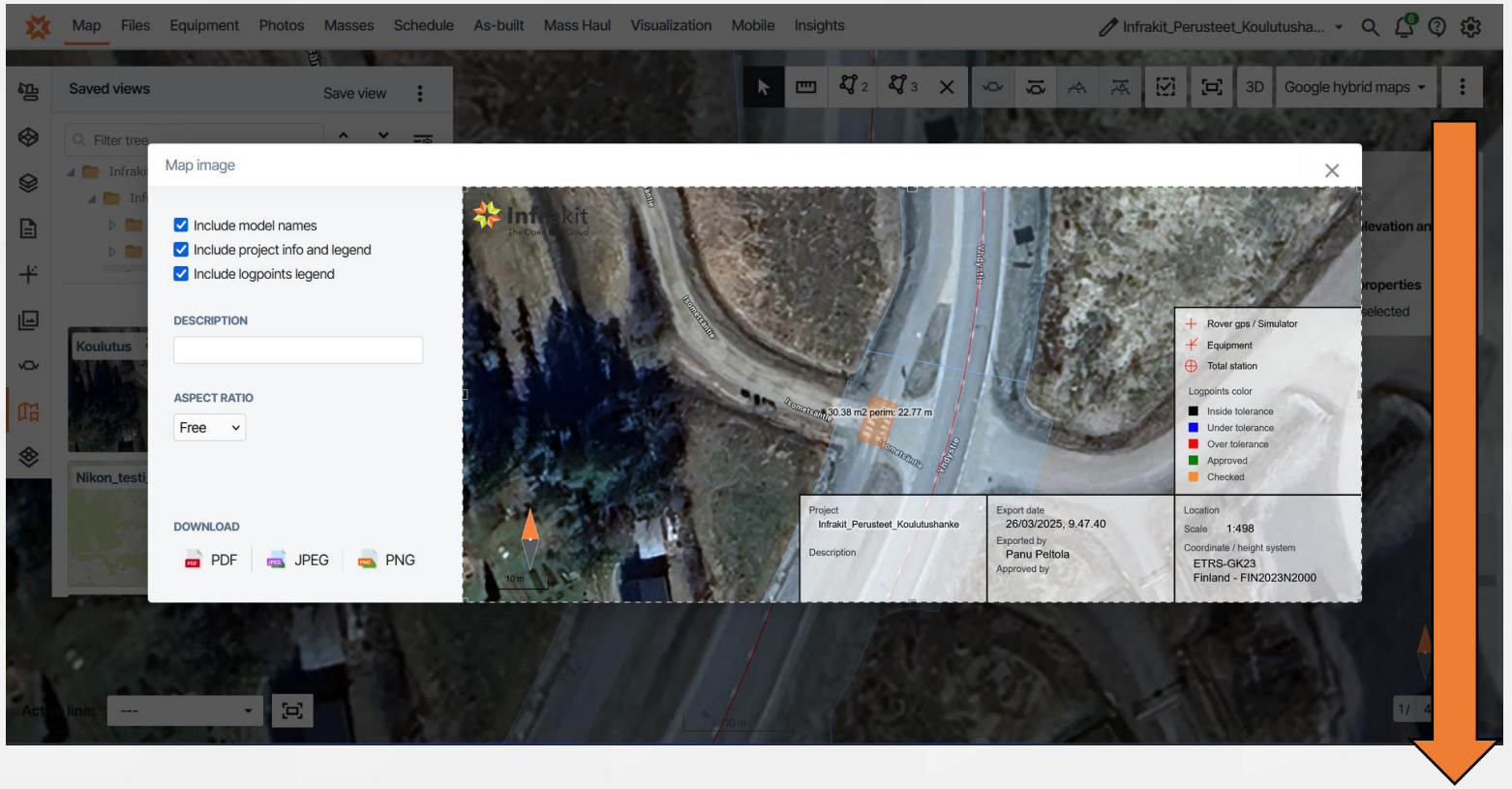
5

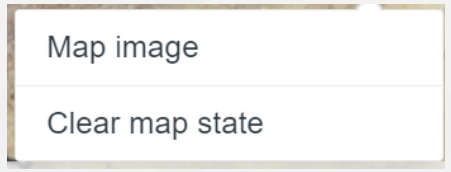


Map image

- Map image (takes a screenshot *.png / *.pdf)
  - You can take a screenshot of the map page view
  - Add a title / legend and description to the map image
  - You can use the map image as an e-mail attachment
- All the information displayed on the screen will be included in the map image
  - Comments on the saved view
  - Measurements taken on the screen (length, area)
  - Models
  - Drawings
  - Document symbols
  - As-built points
  - Photo symbols

- Workflow (example on the right)
  - Activate the desired elements on the map
  - Measure the distances and areas you need
  - Save view
  - Comment/Draw → “Send”
  - Take a map image of the view
  - Select "PDF"



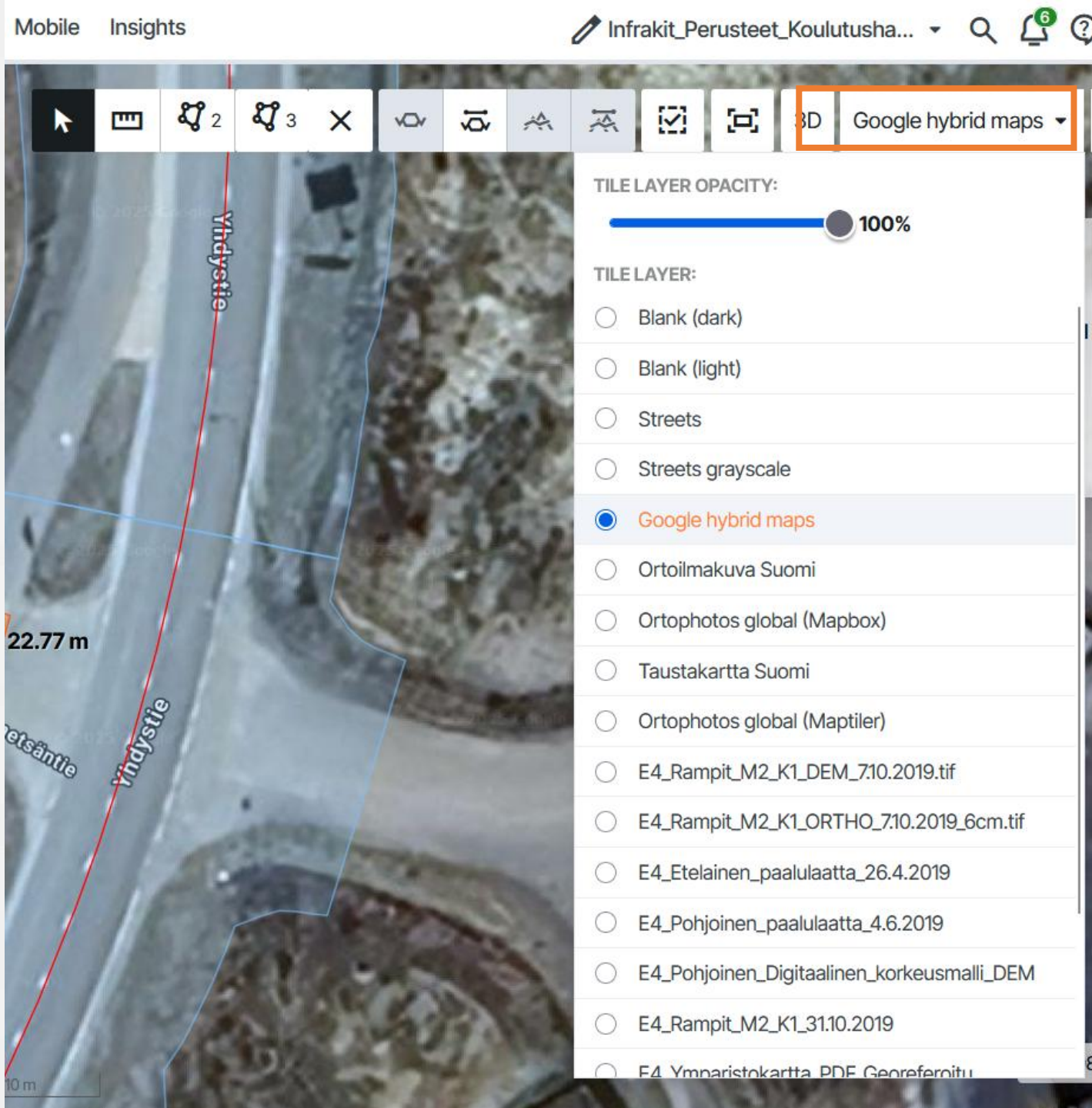


Map tile layers

- You can change individual map tile layers to be the background map from the pull-down menu
- The transparency of the individual map tile level is adjustable
- Infrakit has different standard layers for map tiles by default, for example:
  - Blank (light) – Empty (light background)
  - Blank (dark) – Empty (dark background)
  - Streets – Street map (in colors)
  - Streets Grayscale – Street map (gray scale)
  - Ortoilmakuva Finland - Aerial image Finland
  - Orthophotos global (Mapbox) – Global aerial view provided by Mapbox
  - Background map of Finland – Street map
  - Orthophotos global (Maptiler) – Global aerial view provided by Maptiler
- From the pull-down menu you can also find project-specific map tile layers added to the project, e.g. aerial photos produced by drone or open data map layers

  *Support for open map services, WMS, WMTS, XYZ

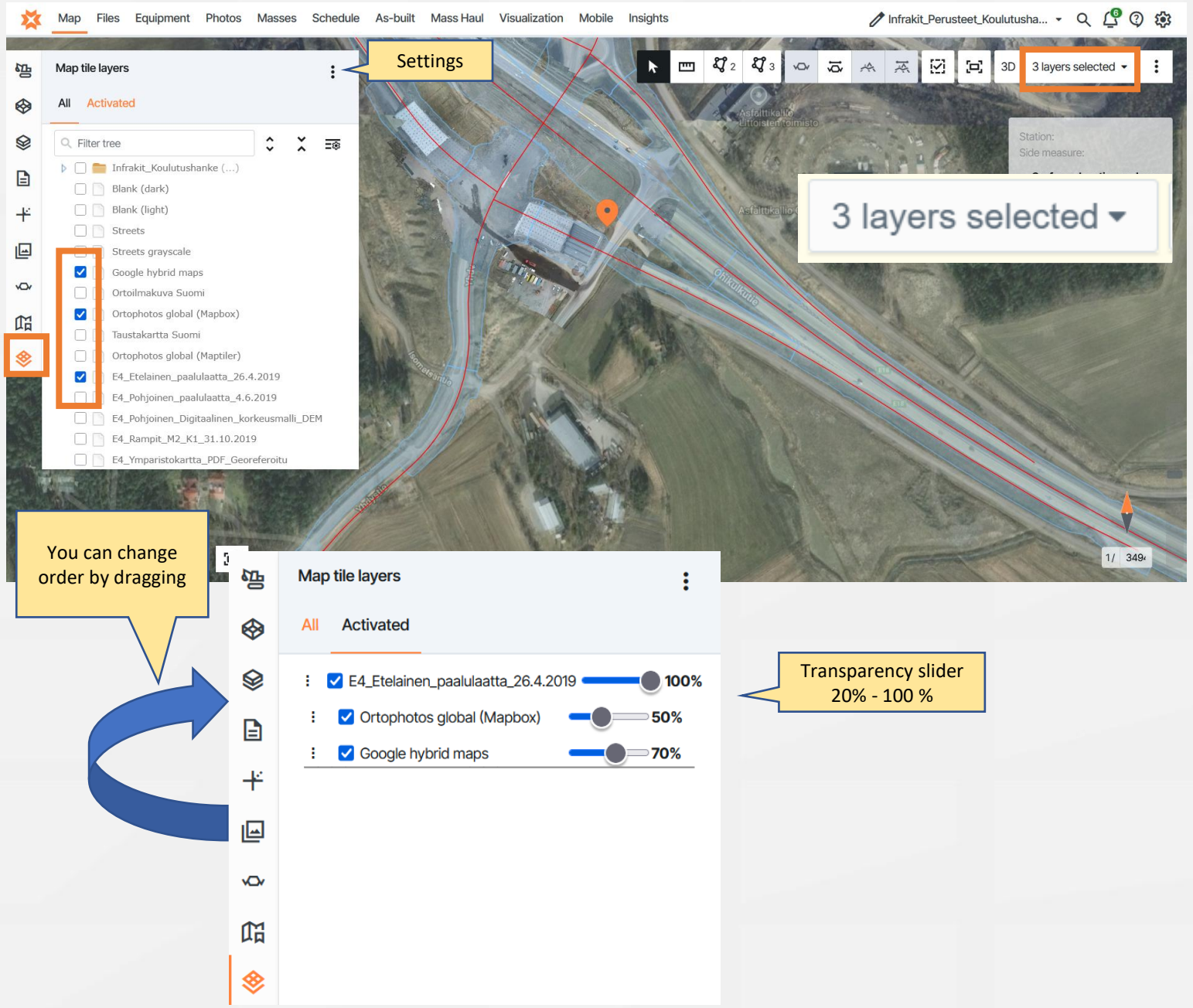
  *see separate instructions: "Map layers: Project settings"



Map tile layers tab

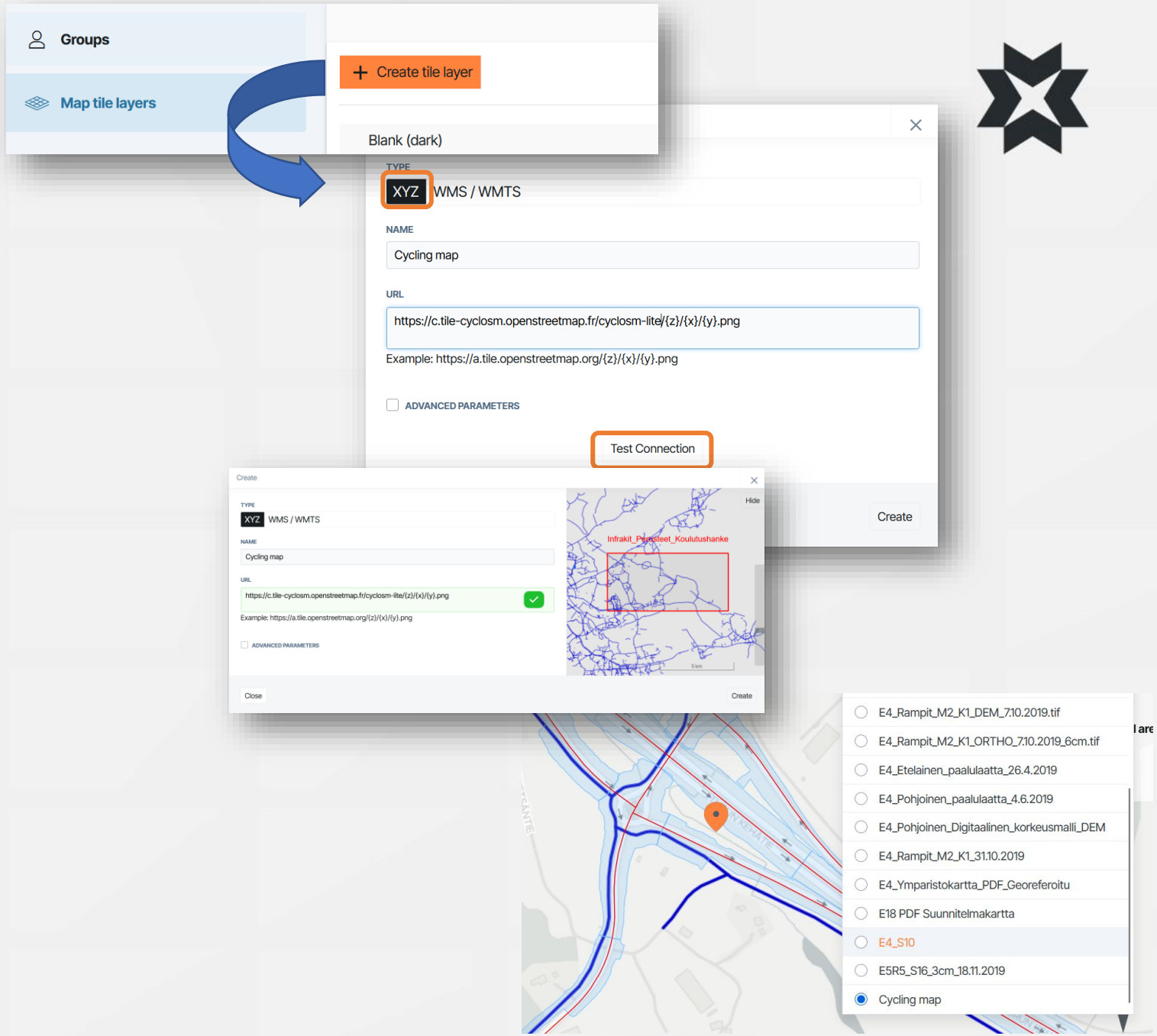
- In map layers tab you can :
  - Activate several map layers simultaneously
- In the Activated page you can:
  - Set layer-specific transparency
  - Change the order of map layers – layers listed above on the list will be on top on the map

- Organize map layers based on creation date (timeline)
- Ortho + street maps
- You can display more information by activating several map layers on top of each other and changing transparencies



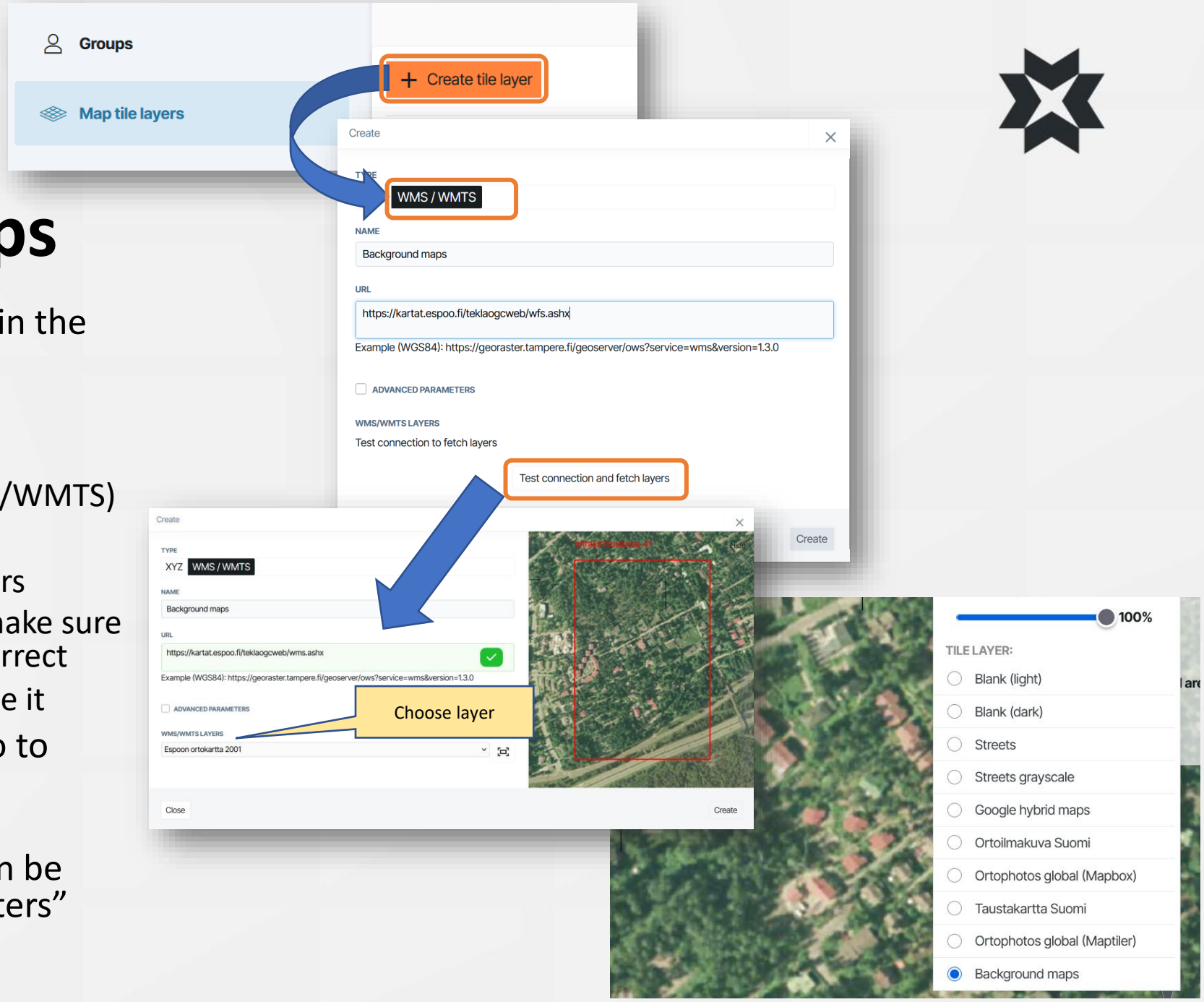
Map layers : Project's settings **XYZ maps**

- You can add XYZ maps in the project settings
- Choose
  - Map tile layers
  - Create a new map tile layer (XYZ)
  - Enter the name for the layer
  - Enter the URL
  - Test connection and fetch layers
    - If the connection fails, make sure service address is correct
  - After clicking create, the layer should be added to the list
  - Map tile layers can be edited and deleted from project settings
  - If authentication is needed, it can be added in the “Advanced parameters” menu



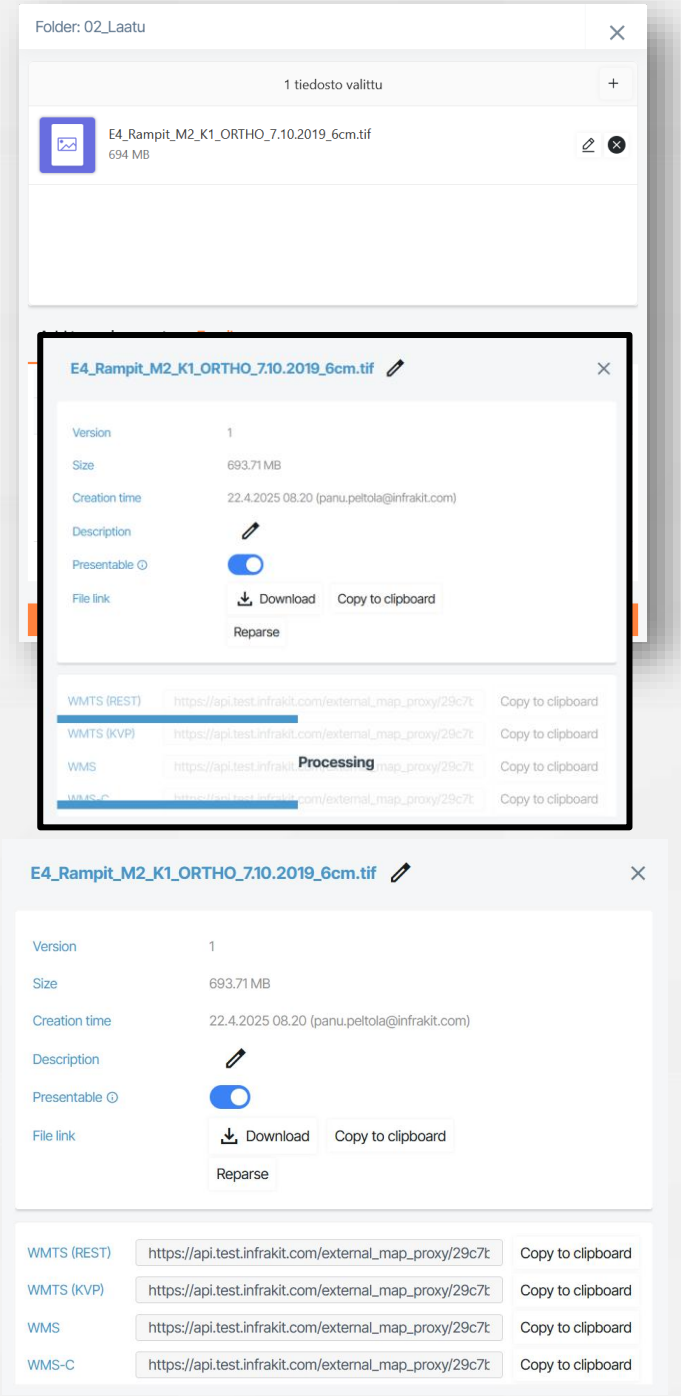
Map layers : Project's settings **WMS/WMTS maps**

- You can add WMS/WMTS maps in the project settings
- Choose
  - Map level
  - Create a new map level (WMS/WMTS)
  - Enter the URL
  - Test connection and fetch layers
    - If the connection fails, make sure the service address is correct
  - Choose wanted layer and name it
- Added map levels are visible also to other users and in Infrakit FILED application
- If authentication is needed, it can be added in the “Advanced parameters” menu



Map layers: Orthophotos and point clouds

- Add an orthophoto or point cloud to the "Files page"
- Once the file has been added, Infrakit automatically processes it into a map tile layer
- Note that the point cloud can only be opened in 3D view
- Large files can take several hours to process
- The map layers processed by Infrakit can be shared to third-party services as XYZ or WMS map tile layers.
- Using the WMS layers from Infrakit in a third-party software requires identification with Infrakit account that has access to the project



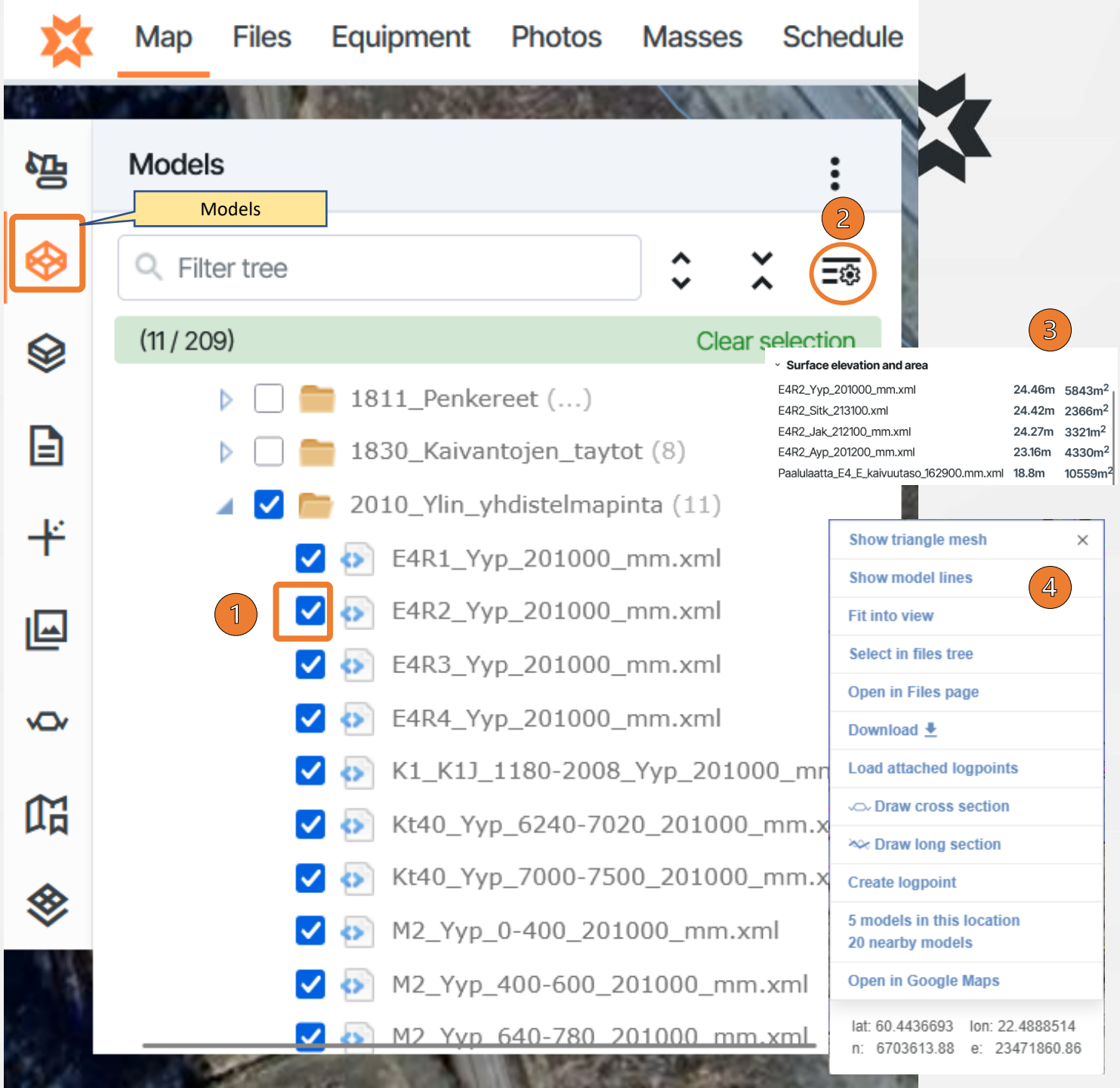
Models tab

On the models tab, you can find all the project's models

1. Model selection
   - Put a check mark in the box in front of the model name, Infrakit will visualize the model area on the map in blue color
   - By clicking on the model name, Infrakit focuses the view on the selected model
   - You can select all models in a folder by holding down the "Shift" key and putting a check mark in the box in front of the folder
   - If you wish, you can also select all models on the screen at once by selecting "select all"
2. Limiting the number of visible folders
   - You can also choose whether the directory is expanded every time a tab is opened

Additional functions / information for models

3. Infrakit shows additional model information by clicking on the model (height at the cursor position, 2D surface area, and 3D surface area when you hover the mouse cursor over the 2D surface area reading)
4. Right-click on the model to open an additional menu. In the menu you can
   - Display the triangle mesh of the model
   - Show the breka lines of the model
   - Fit the selected model to the map
   - Select the model file from the directory
   - Open the model in files page
   - Download the model to your computer
   - Load the as-built points attached to the model
   - Create a manual as-built point at the point indicated by the marker
   - Open the menu that shows the models at the cursor position and the models in the surrounding environment
   - Open the selected point in Google Maps (models will not be displayed)

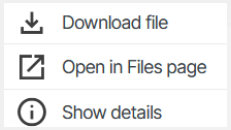


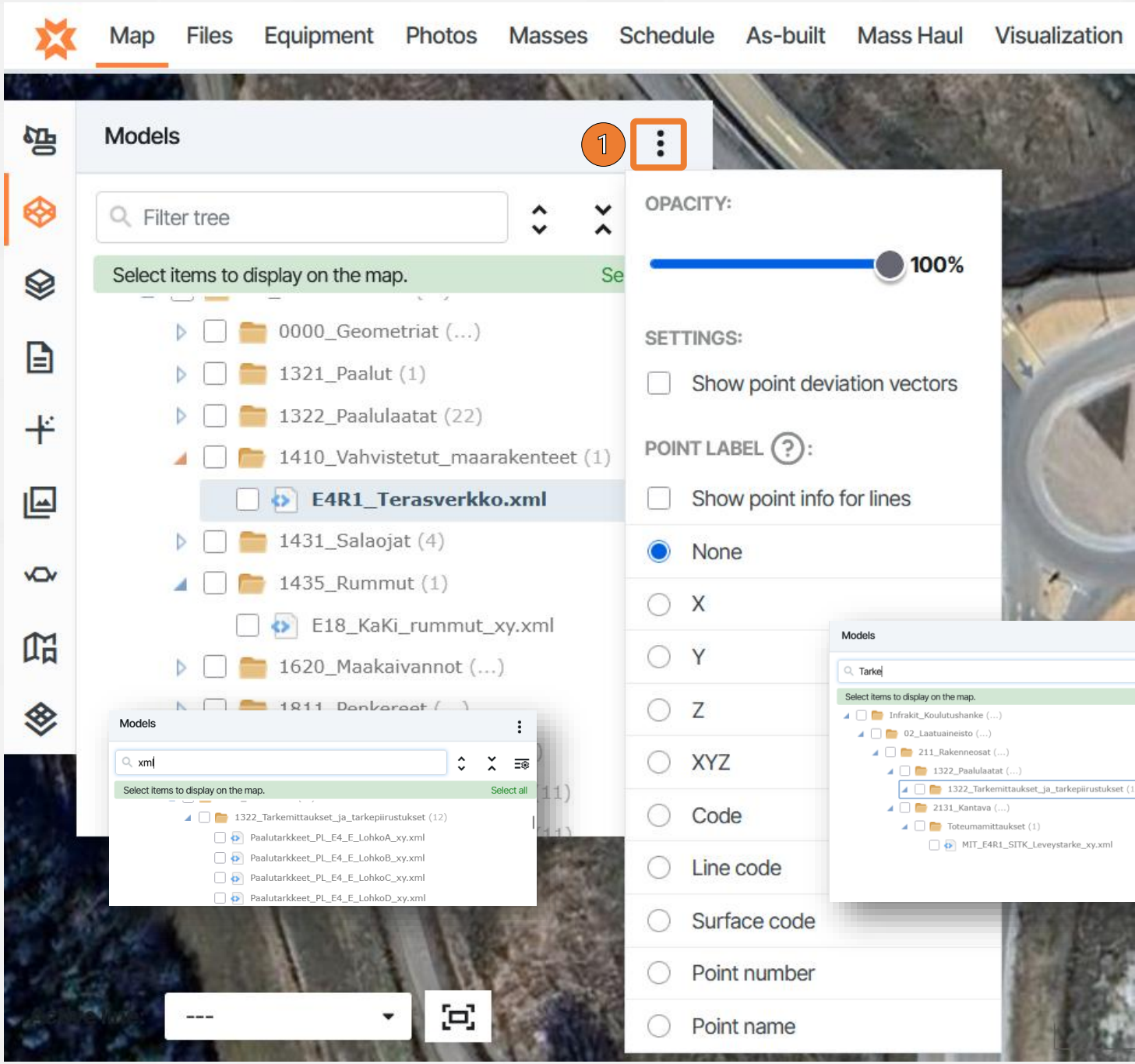
Models tab

1. Model settings 

   You can adjust the transparency of the models you choose and the information displayed about the models* (*point data only)

✓ **Tip 1** : Use the search function on the map page and open the file “files page" by pressing the right mouse button and selecting or download it directly





Drawings tab

- Drawings refer to 2D materials in vector form, which are most commonly known as CAD images or design files. The most common formats for drawings are DWG, DXF, but there are other formats as well.
- On the Drawings tab, you can find all 2D vector drawings recognized by Infrakit

1. Selection of drawing

   Put a check mark in the box in front of the name of the drawing, Infrakit visualizes the drawing in the map view

   By clicking on the name of the drawing, Infrakit focuses the view on the selected drawing

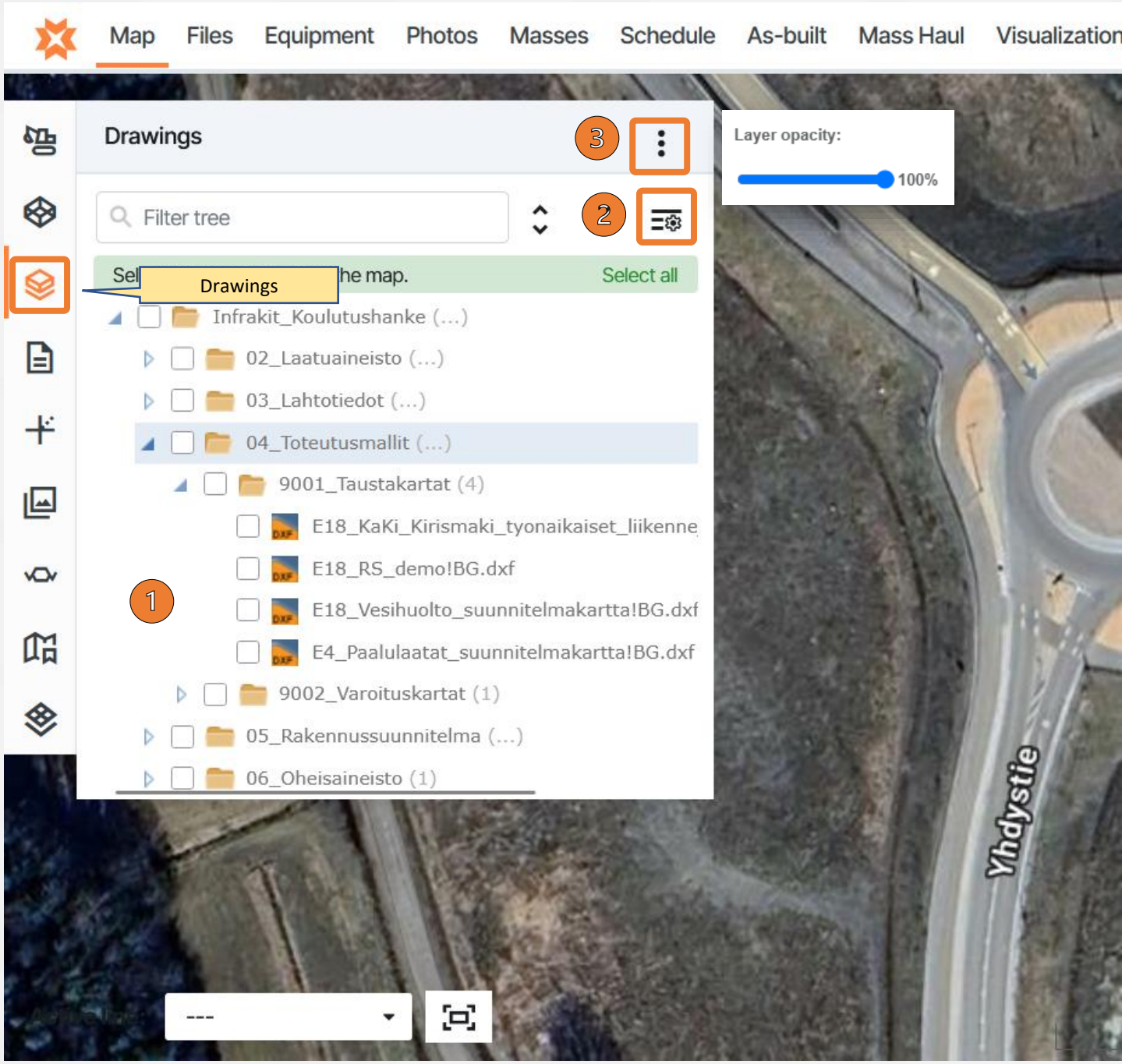
   You can select all the drawings in the folder by holding down the "Shift" key and putting a checkmark in the box in front of the folder

   If you wish, you can also select all drawings on the screen at once by selecting "select all“

2. Limiting the number of visible folders ⋮
   - You can also choose whether the directory is expanded every time a tab is opened

3. Settings for drawings

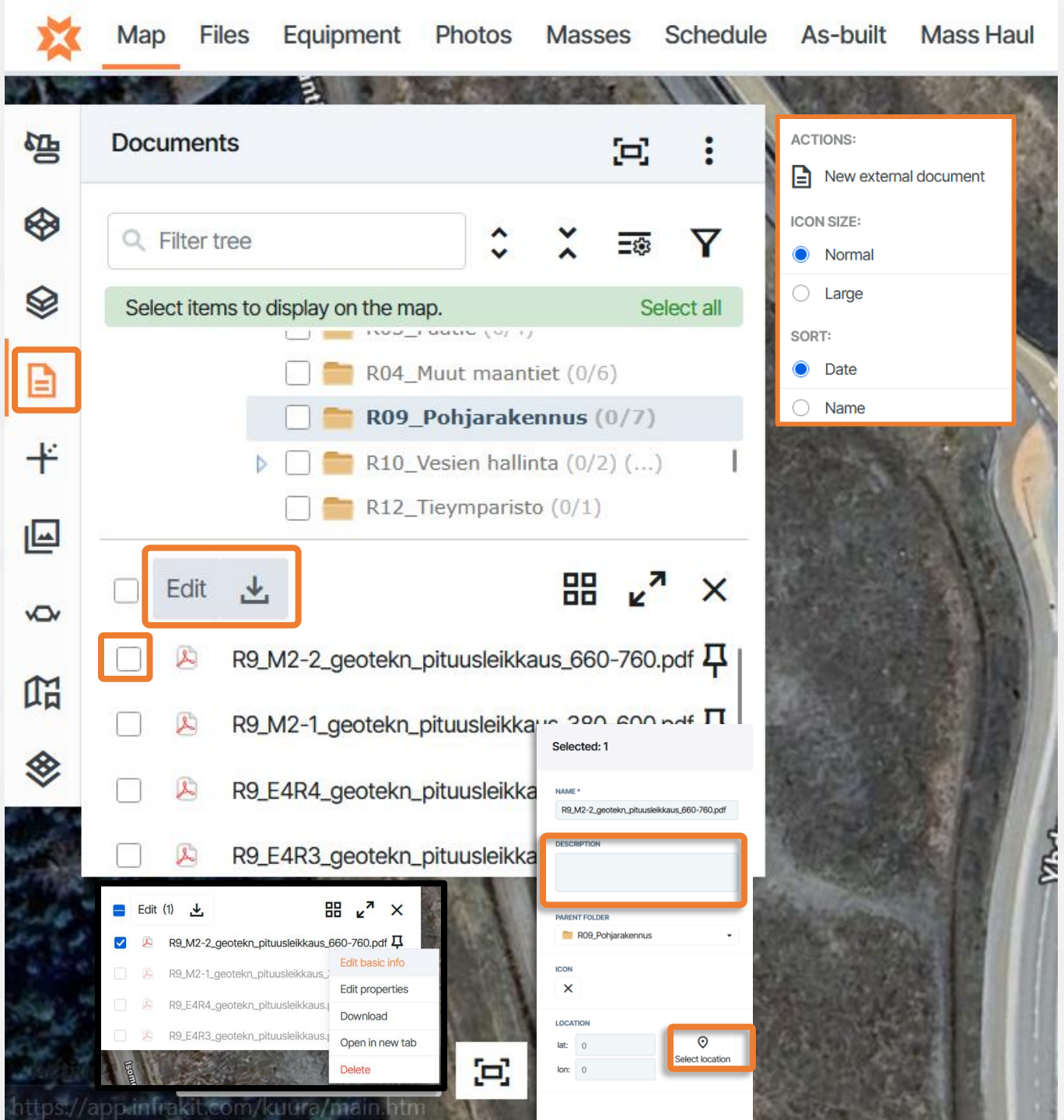
   You can adjust the transparency of the selected drawings in the settings menu



Documents tab

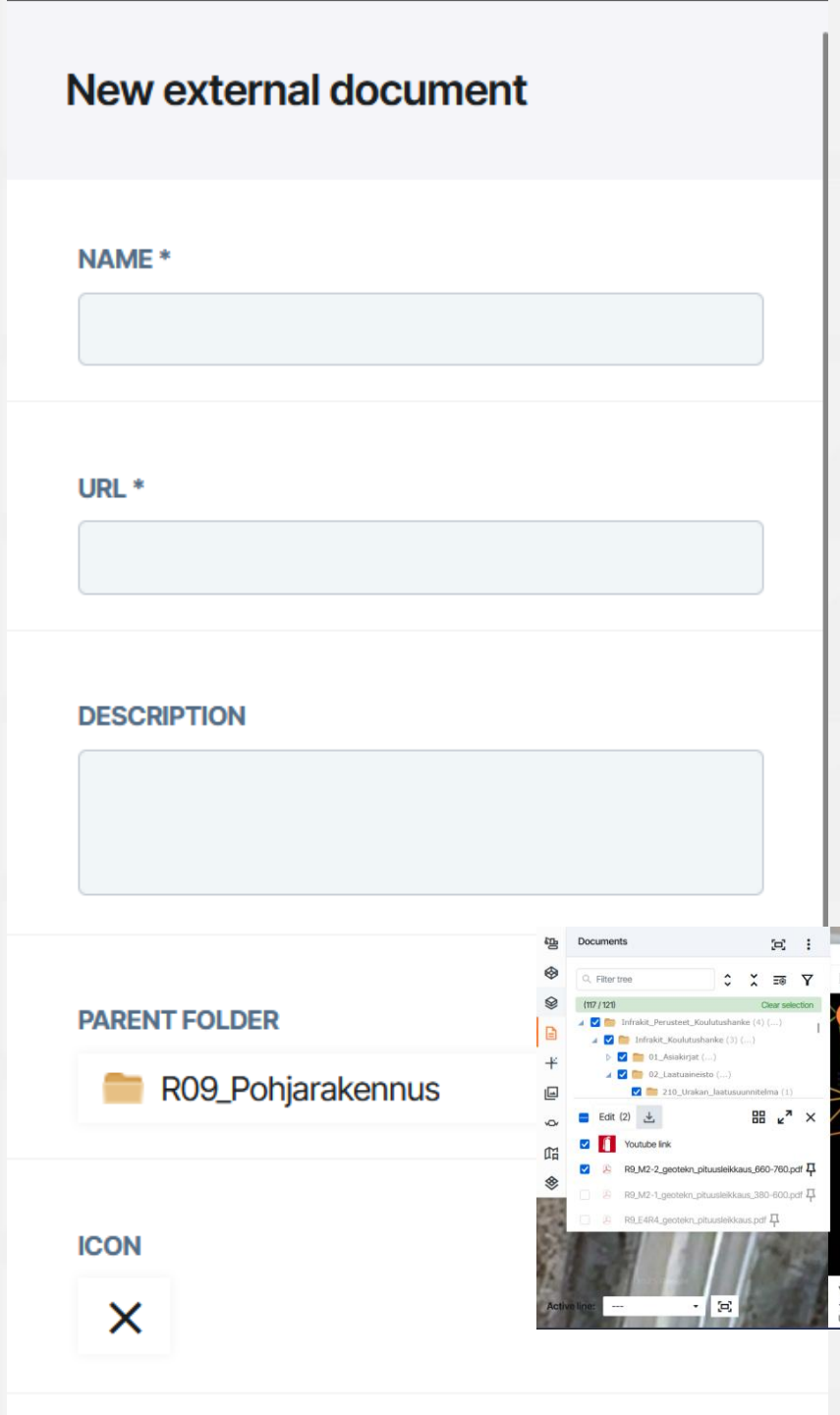
- Infrakit's map page has a separate documents tab that shows the PDF documents brought to the project
- An external document can be added by clicking the three dots in the upper right corner of the menu and choosing “New external document”
- The document can be placed on the map by editing the document
  - Select the document and alternatively press "Edit" at the bottom of the opened document or select "Edit" from the three dots after the file name
  - After that, press the "Select location" tool and click on the map to indicate the location of the document on the map and save
- In document basic settings editing menu you can:
  - Change the file name of the document
  - Give the document additional information such as a "description" of the document's content, a free caption, etc.
  - Change the folder of the document
- In document properties editing menu you can:
  - Edit file properties

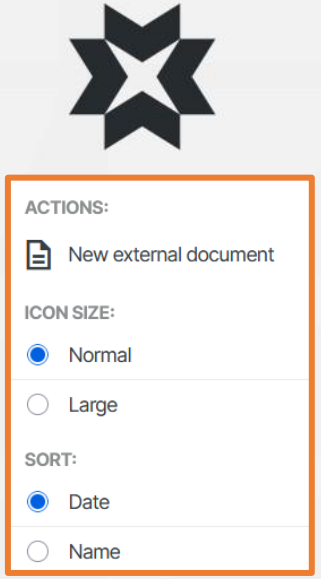
✓ **Tip 1** : Place e.g. the well maps, installation photos, etc. needed by the site near the object, this way the documents are easy to open in the field by clicking on the map in Infrakit FIELD application

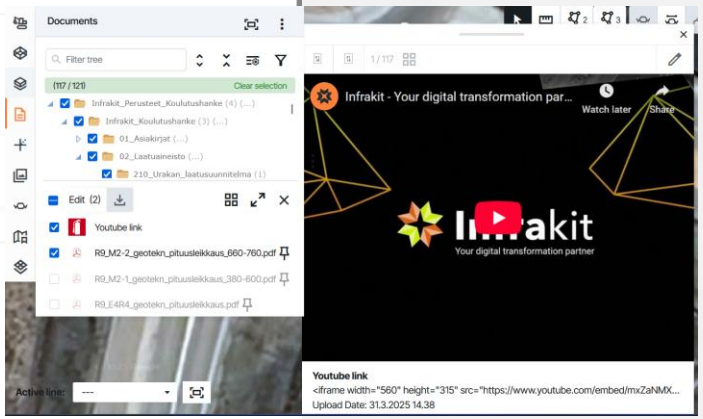


External documents

- External documents can be added from the map page's document tab by selecting the three dots in the upper right corner of the menu and choosing "New external document"
- Select the name and URL for the external document
- An description can be added to the document
- Select the folder for the external file to be saved in
- An icon and location can be configured to the external file
- After the file is created, it can be opened from the documents tab on the map page and on the "Documents" page
- Note that not all sites can be opened as an embedded link due to security reasons







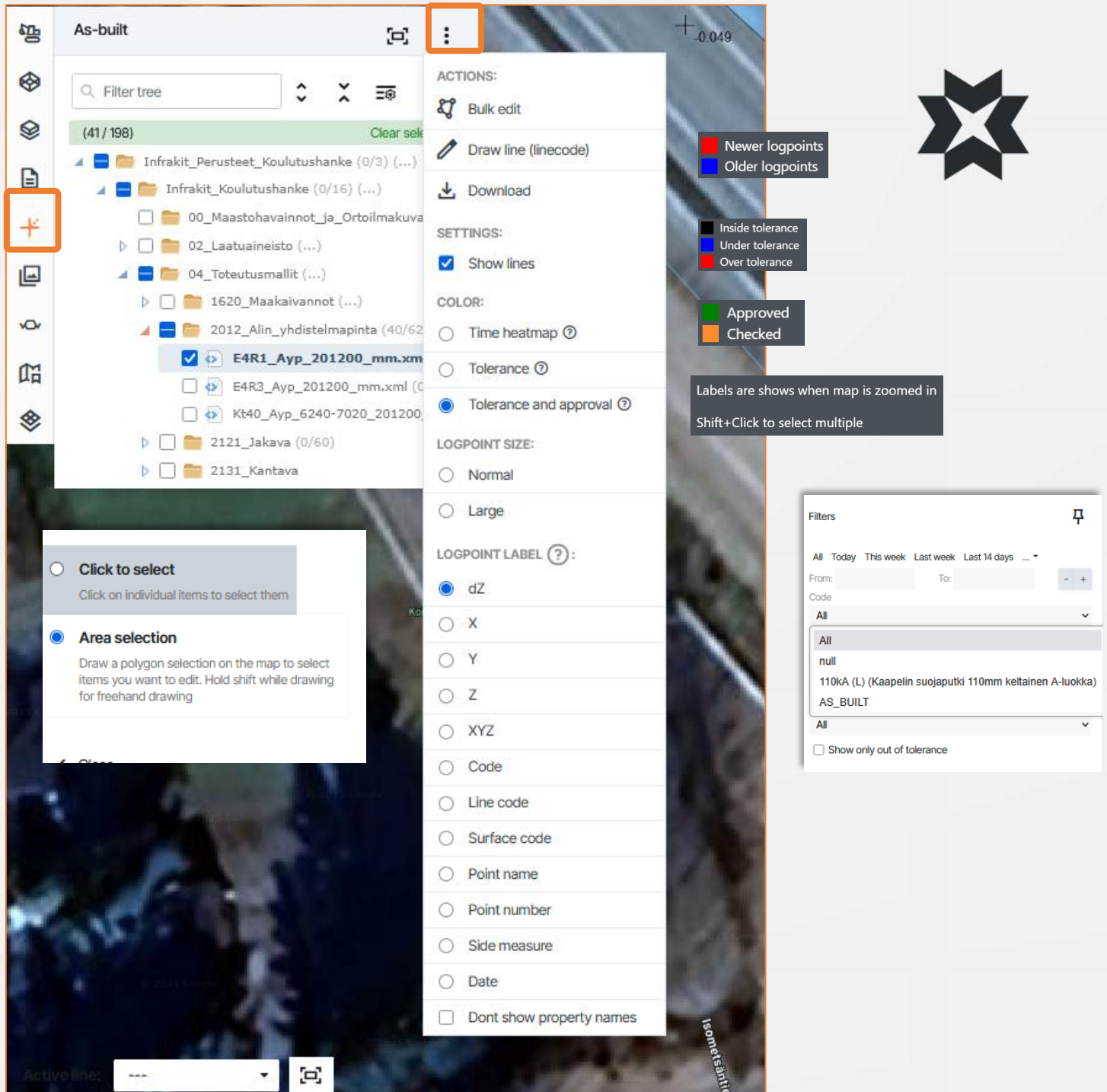
As-built tab

- On the as-built tab, you can find the measurements taken directly into Infrakit's database with work machines and/or measuring devices.
  - Here you will not find points uploaded as files (e.g. *. gt , *. xml, *. kof ...), they can be found on the models tab
- The visibility of the as-built point and the displayed information can be adjusted from the settings menu
  - Color
  - Size of as-built points
  - Text to display for points

✓ **Tip 1**: Free text is often used in the coding of as-built points. To search for as-built points based on the code, select all folders and open the "Code" filter → you can see all the codes used in the as-built points, e.g. “Base courses", “Base", " *Basecourse " = the same thing, slightly different name*

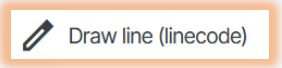
✓ **In Infrakit, the symbols used for as-built points**

Rover gps / Simulator
Equipment
Total station



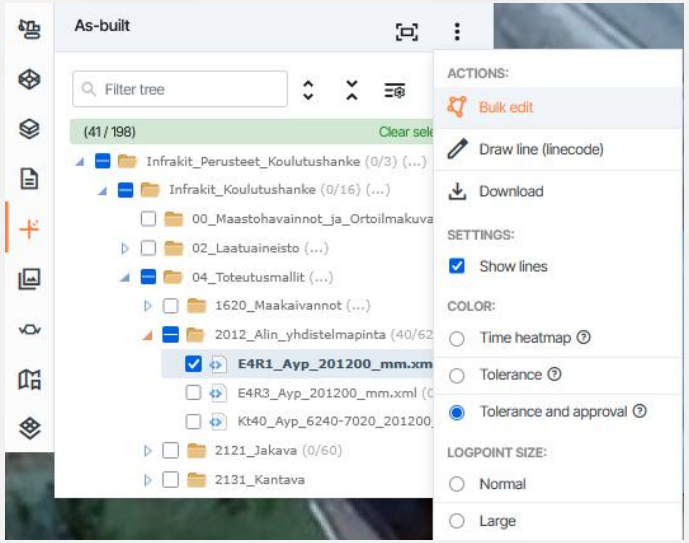
As-built tab

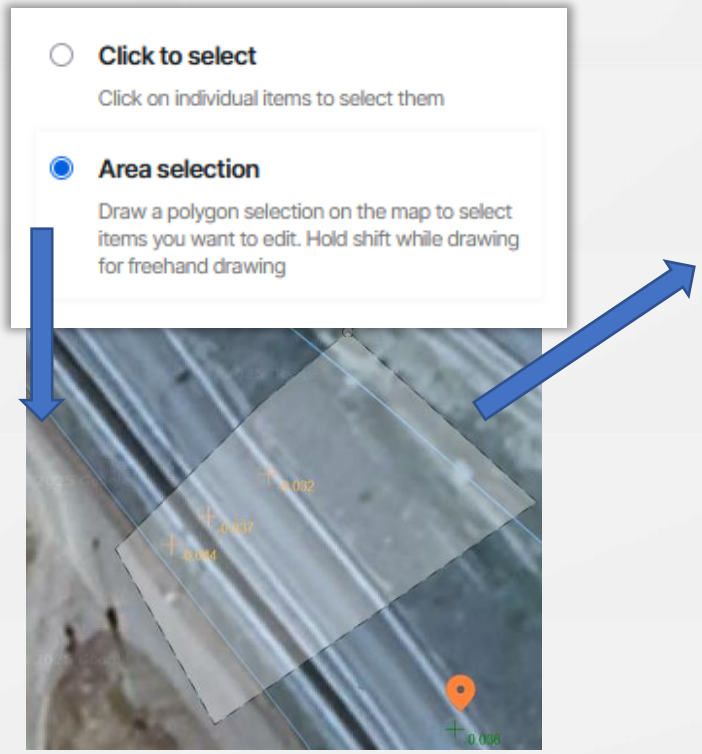
- You can edit several as-built points by selecting 

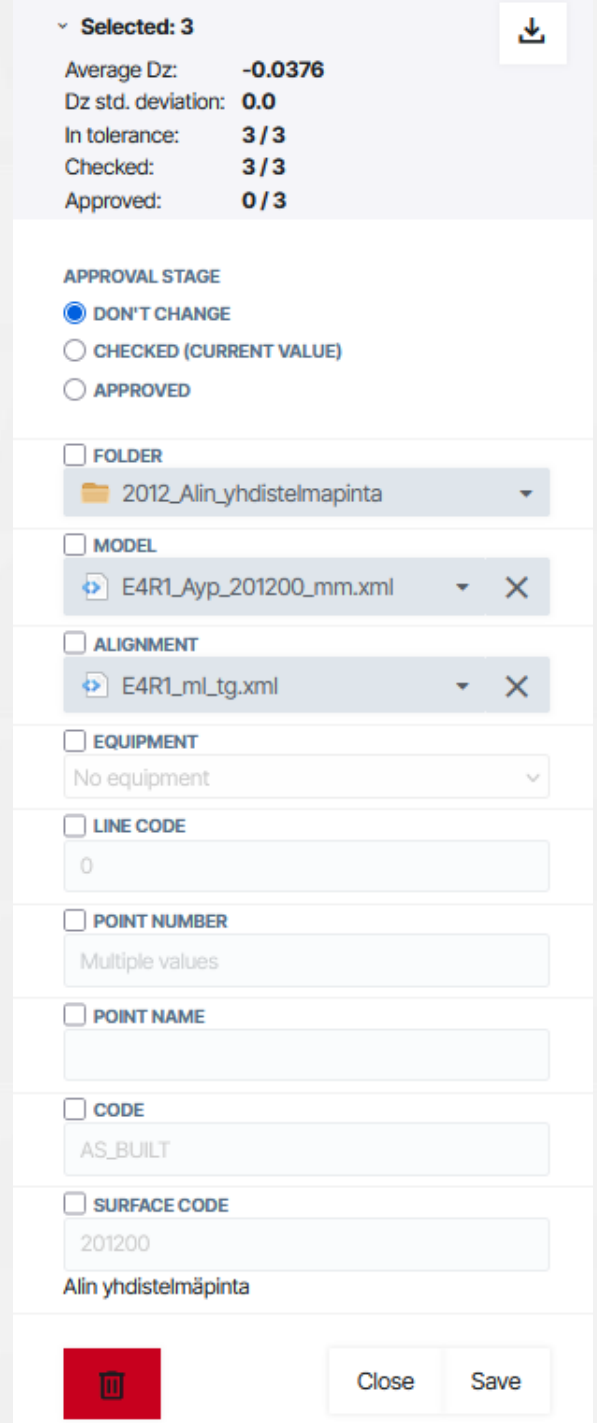
  - A menu opens where you can choose
    - Do you select points individually or
    - Do you draw the area inside which the points are selected
- After selection, a new side menu opens where you can
  - See e.g. dZ averages of the points you selected
  - Download the as-built points as a file in different formats
  - Change the status of the selected point group -> checked / approved
    - (note. The selection cannot be cancelled)
  - Change properties of the selected point group
    - Folder
    - Model connection
    - Alignment
    - Equipment
    - Linecode (T2)
    - Point number (T4)
    - Point name
    - Code (T3)
    - Surface code (T1)
  - After making the desired changes, press "Save" and the changes will be saved in the Infrakit database
- You can also draw a break line between the as-built points by selecting 

- You can fit the selected as-built points on the screen by pressing 

✓ **Tip 1** : The points can be restored with the help of Infrakit's technical support if you delete as-built points from Infrakit's database by accident. Data can ALWAYS be returned from the database back to the project.



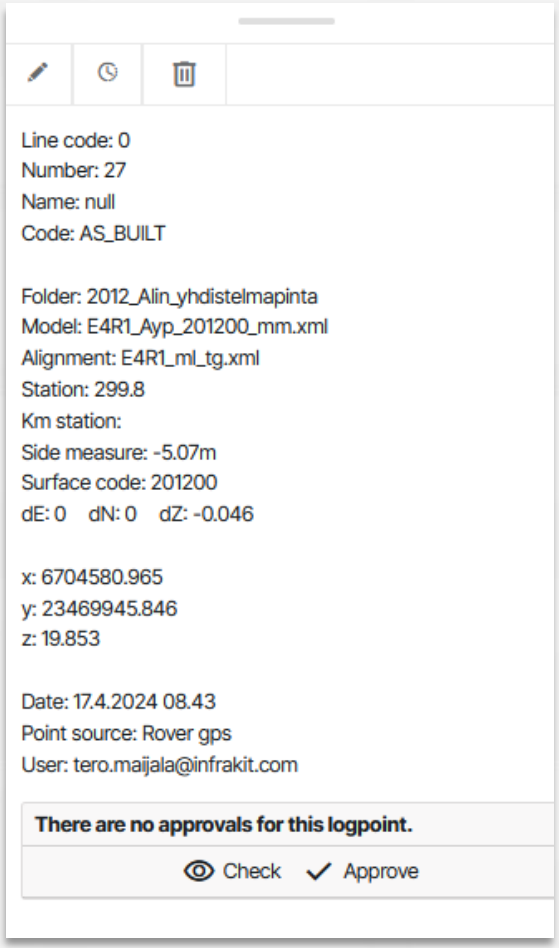


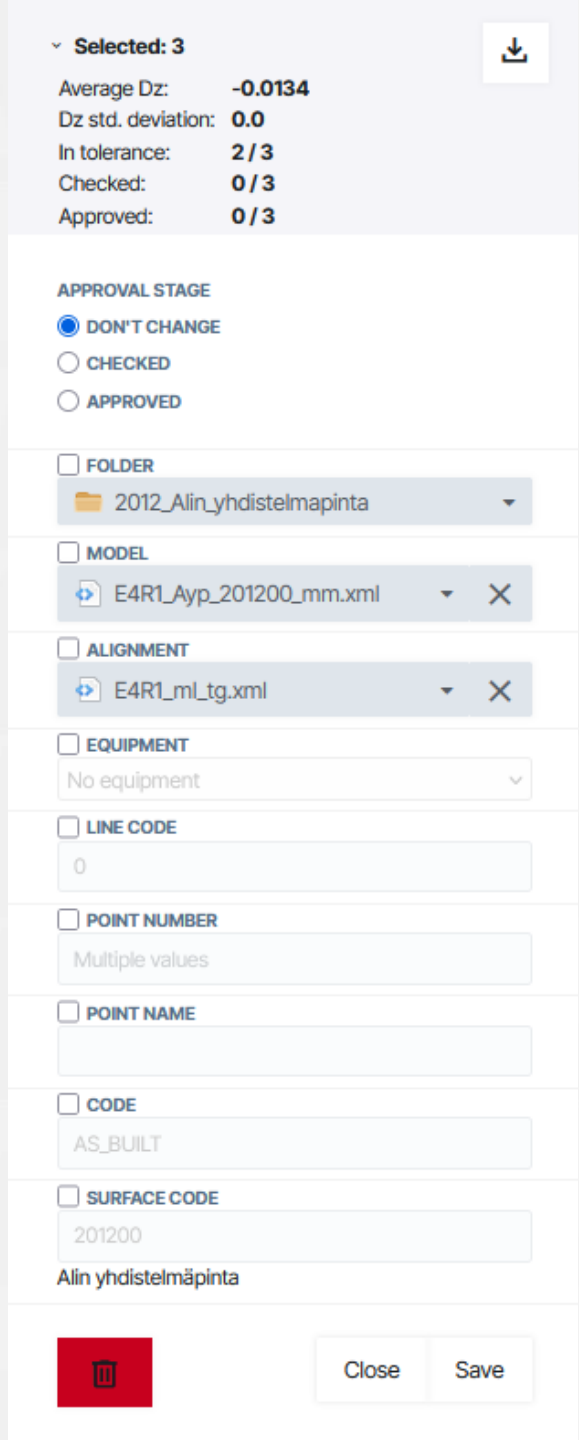


Approval of as-built points

You can approve and check as-built points either:

1. By editing the point/points
   - From the edit menu, select the approval status as checked or approved, depending on the agreement
2. By selecting a point on the map and clicking Check or Approve from the menu that opens



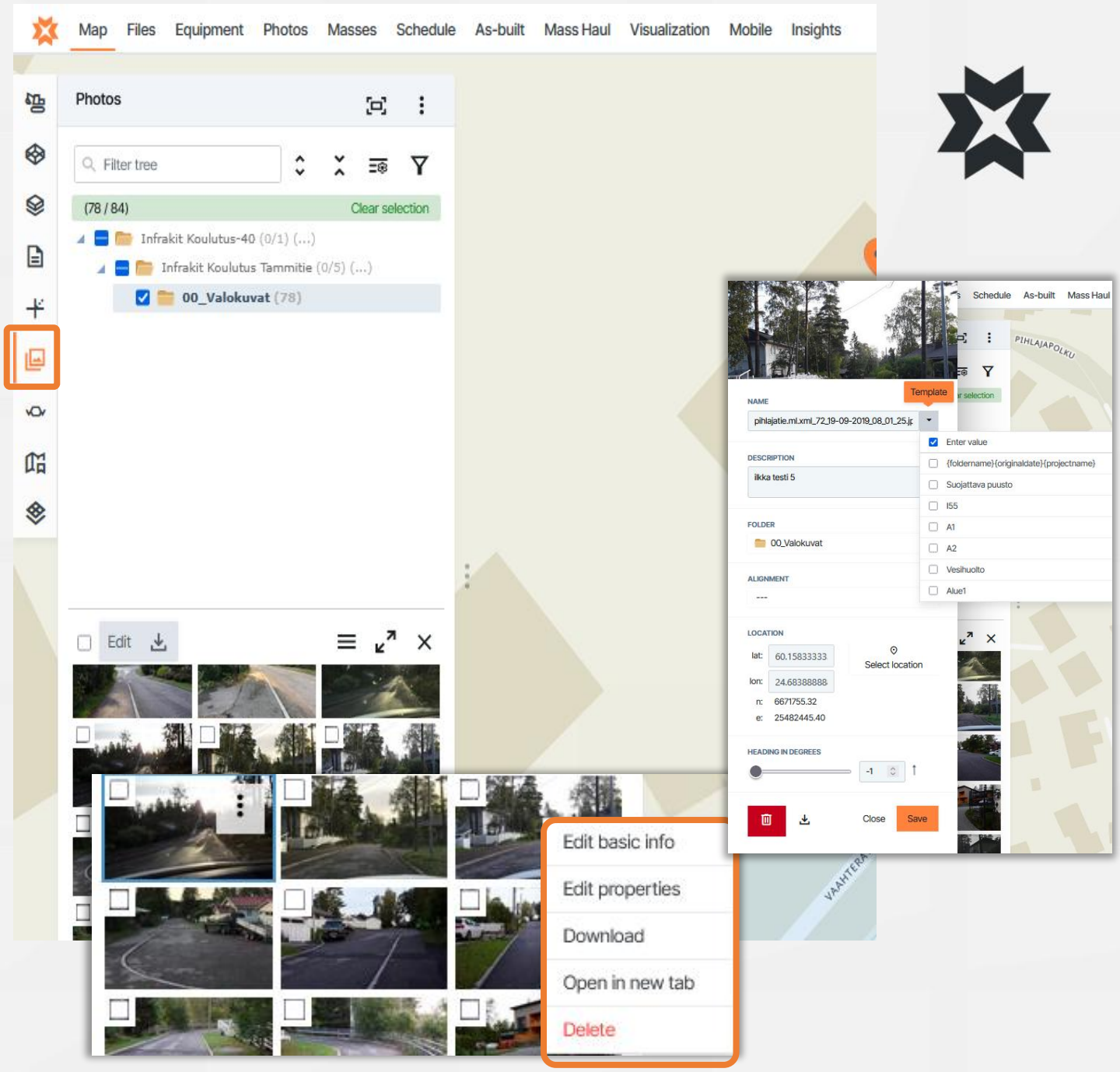


Photos tab

- Infrakit's map page has a separate photos tab which shows the photos uploaded to the project.
- Click on the image to enlarge the image 
- You can change the way the images are presented from the folder structure by clicking on the "hamburger menu" or the four squares on the side of the image menu
- Photos that contain location information are automatically placed on the map at the location defined by the location information
- Photos that do not contain location information can be placed on the map by selecting a photo from the directory and editing the image's properties
  - Select a photo and press either "Edit" at the bottom of the opened photo or alternatively select "Edit" from the three dots after the file name
  - After that, press the "Select location" tool and click on the map to indicate the location of the photo on the map and save
- In photo editing menu you can also:
  - Changes the name of the photo
    - A name template can be chosen to rename photos
  - Give the photo additional information such as a "description" of the content, a free caption, etc.
  - Change the photo folder
  - Change the allignment the photo is attached to
  - Edit the heading of the photo

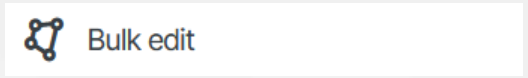
✓ **Tip 1** : When you use the Infrakit mobile version either with a browser or with the FIELD application, the images automatically get the correct location and are immediately visible in the browser version.

✓ **Tip 2:** Report safety observations, deviations, plan changes, sudden obstacles such as a surprising cable, pipe or rock directly from the construction site to the project office.

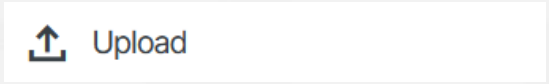


Photos tab Actions

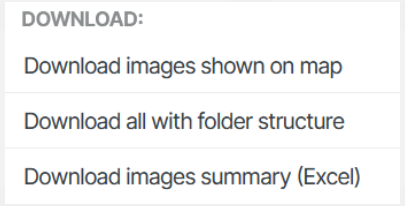
- By selecting the three dots in the photos tab, you will get the "Actions" menu open



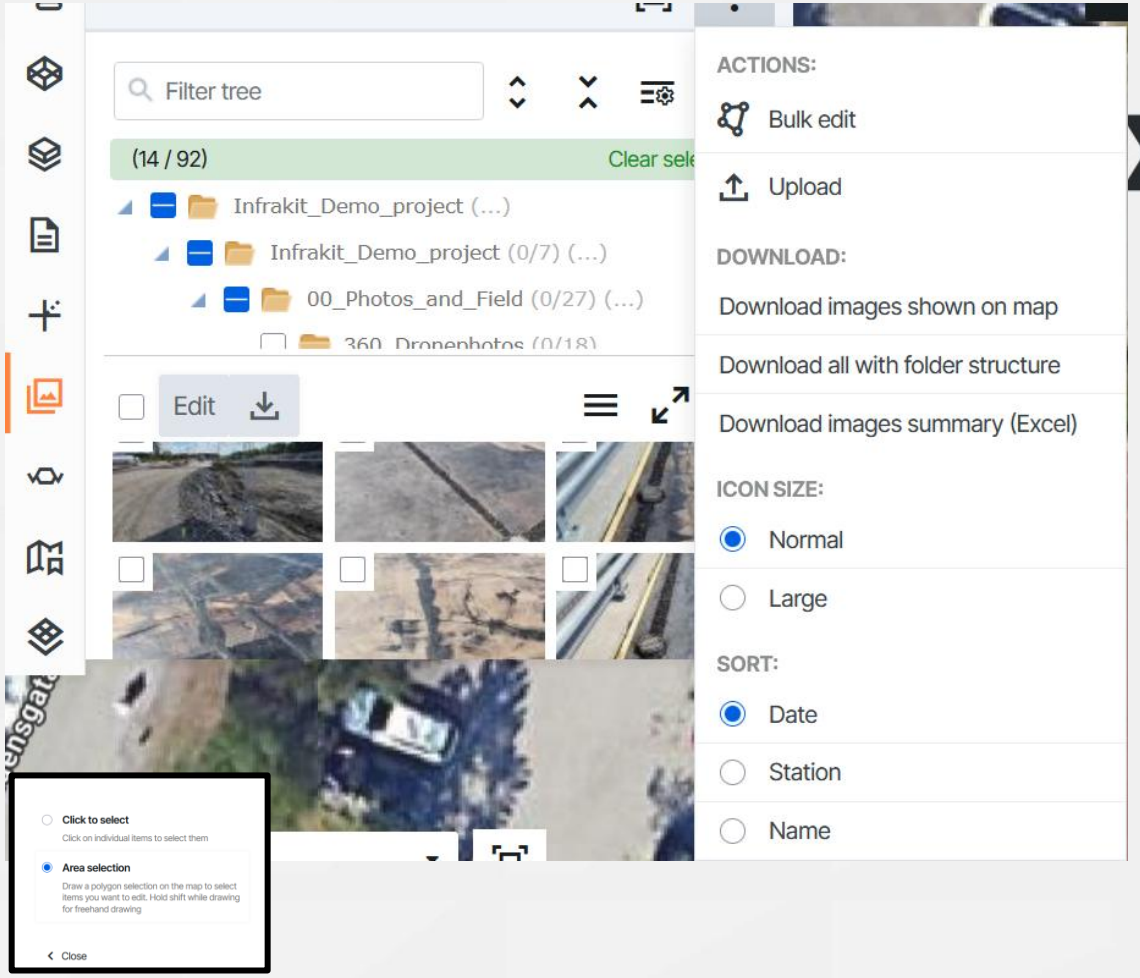
- By selecting “Bulk edit" you will open the same checkbox as for As-built points and you can select several images to edit at once
- This allows you to choose an image template for several images at once, for example

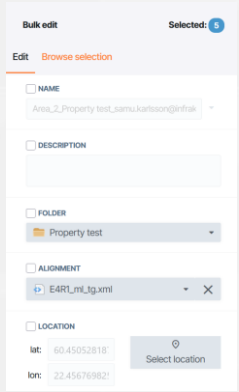


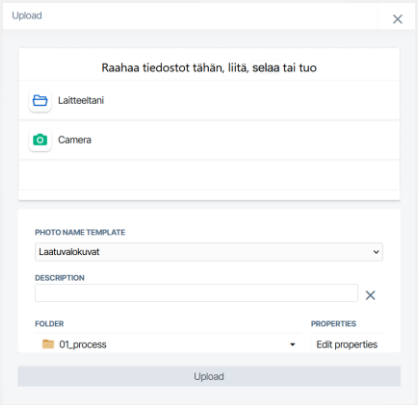
- By selecting “Upload”, you can add images to the project



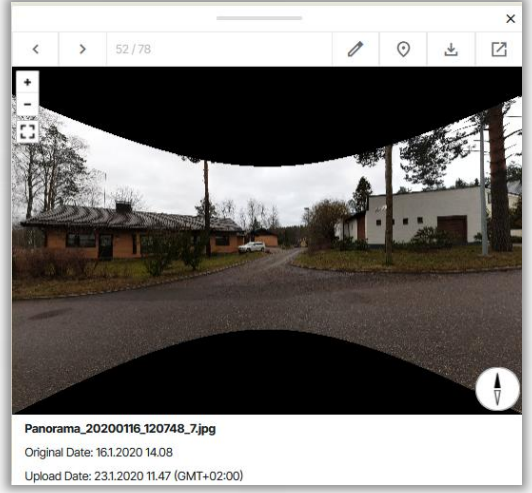
You can also download multiple images at a time to your device







Viewing photos

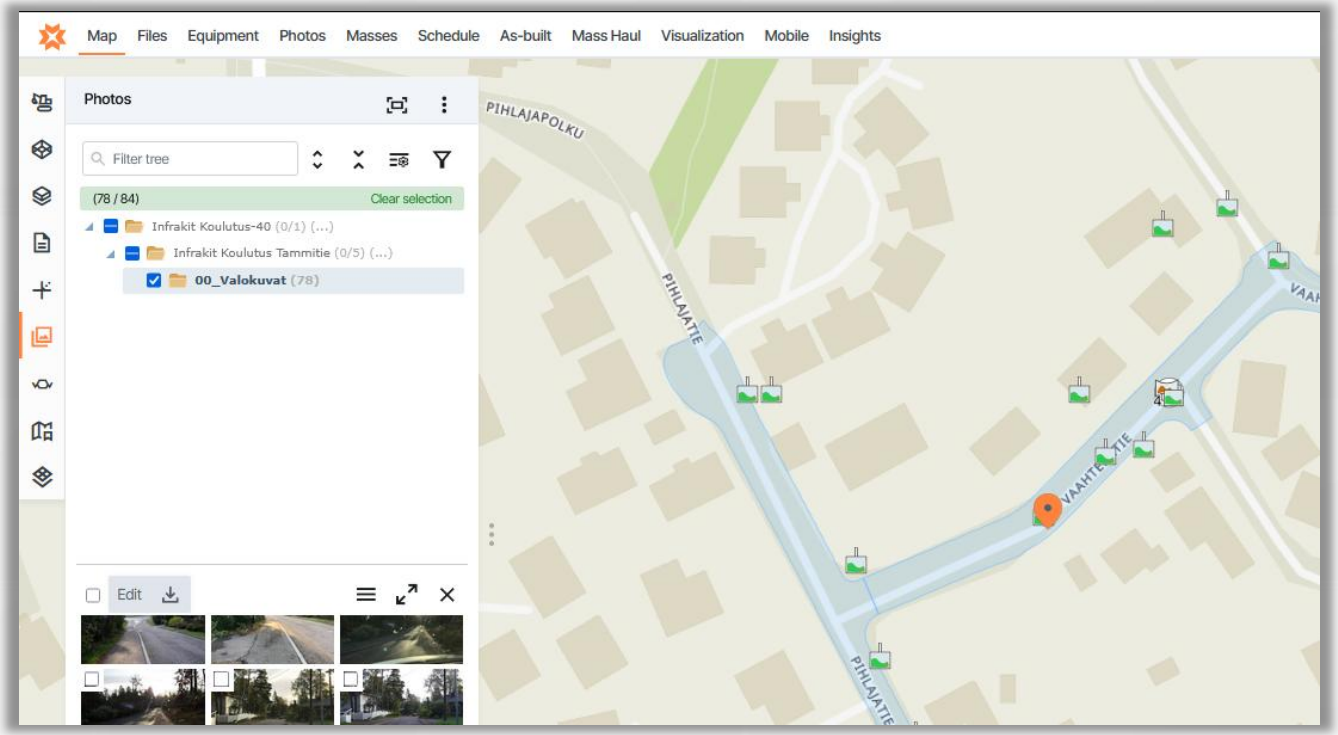


- Infrakit photo formats (*.jpg / *. jpeg / *. tiff / *. tif / *. gif)
  - A regular photo
  - 360° photo
  - Animated GIF image
- Photo symbols on the map

  A regular photo

  360 - photo (panorama)

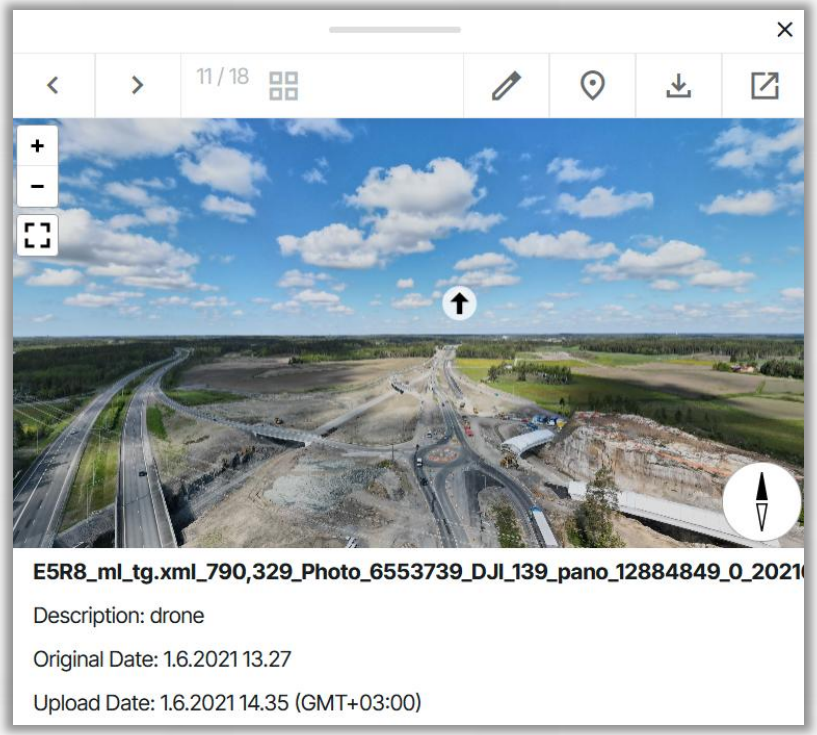
- Regular photo
  - The photo preview opens by moving the mouse over a single image
  - By clicking on the image symbol, the image opens larger
  - You can also open the image in a larger size by clicking it from the menu on the photos tab of the map
  - The image opens in a new tab by pressing in the upper right corner
  - You can switch to editing the image by pressing the "Edit" button
  - You can move to the location of the image on the map by pressing the "Search on map" button
  - To upload the image, press the "Download" button
- 360 - photo
  - The photo preview opens by moving the mouse over a single image
  - By clicking on the image symbol, the image opens larger
  - You can rotate the image by moving the mouse over the image and holding down the first mouse button at the same time
  - The image opens in full screen size by pressing the top right corner or by pressing the one on the left side of the image
  - You can zoom in on the photo by rotating the mouse wheel button or by using the tools on the left side of the image
- Animated GIF image
  - The photo preview opens by moving the mouse over a single image
  - The animation does not work in the preview phase, the GIF image is opened in a new tab by pressing from the bottom right corner

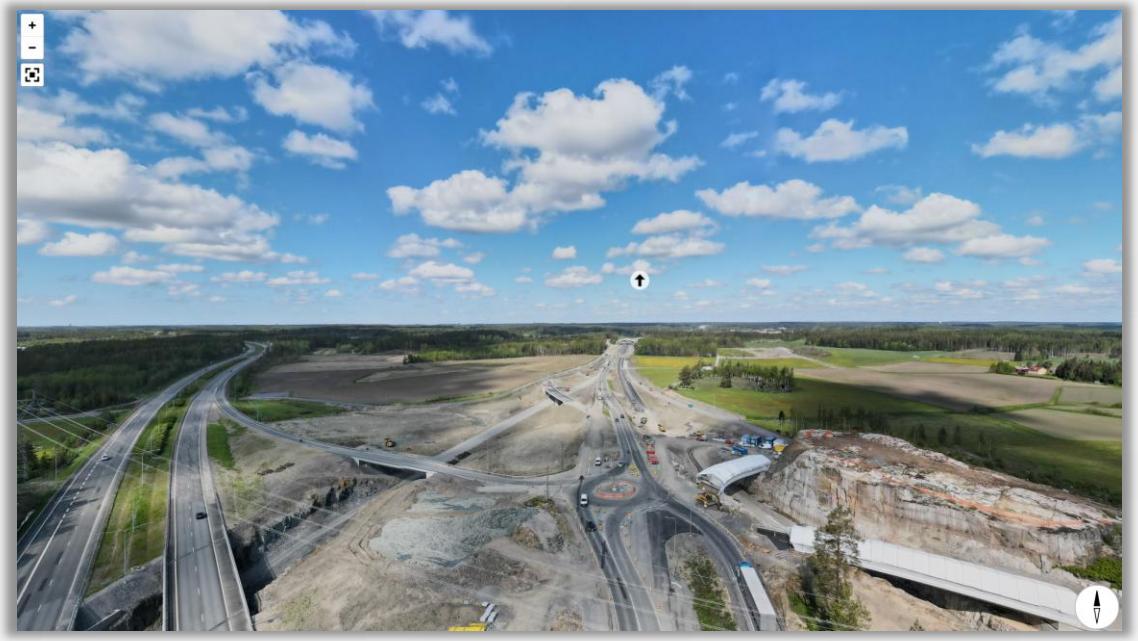


Viewing photos

360 – photo

- To open a photo preview, hover over an individual image
- Click on the image symbol to enlarge the image
- To rotate the image, hover over the image and hold down the left mouse button at the same time
- You can also rotate the image with the WASD buttons and zoom forward and backward with the Shift and CTRL buttons
- To open the image in full screen, press in the upper right corner
  or by pressing the
- You can zoom in on the photo by rotating the mouse wheel button or using the tools on the left side of the image
- To switch between 3D images, click the arrow button





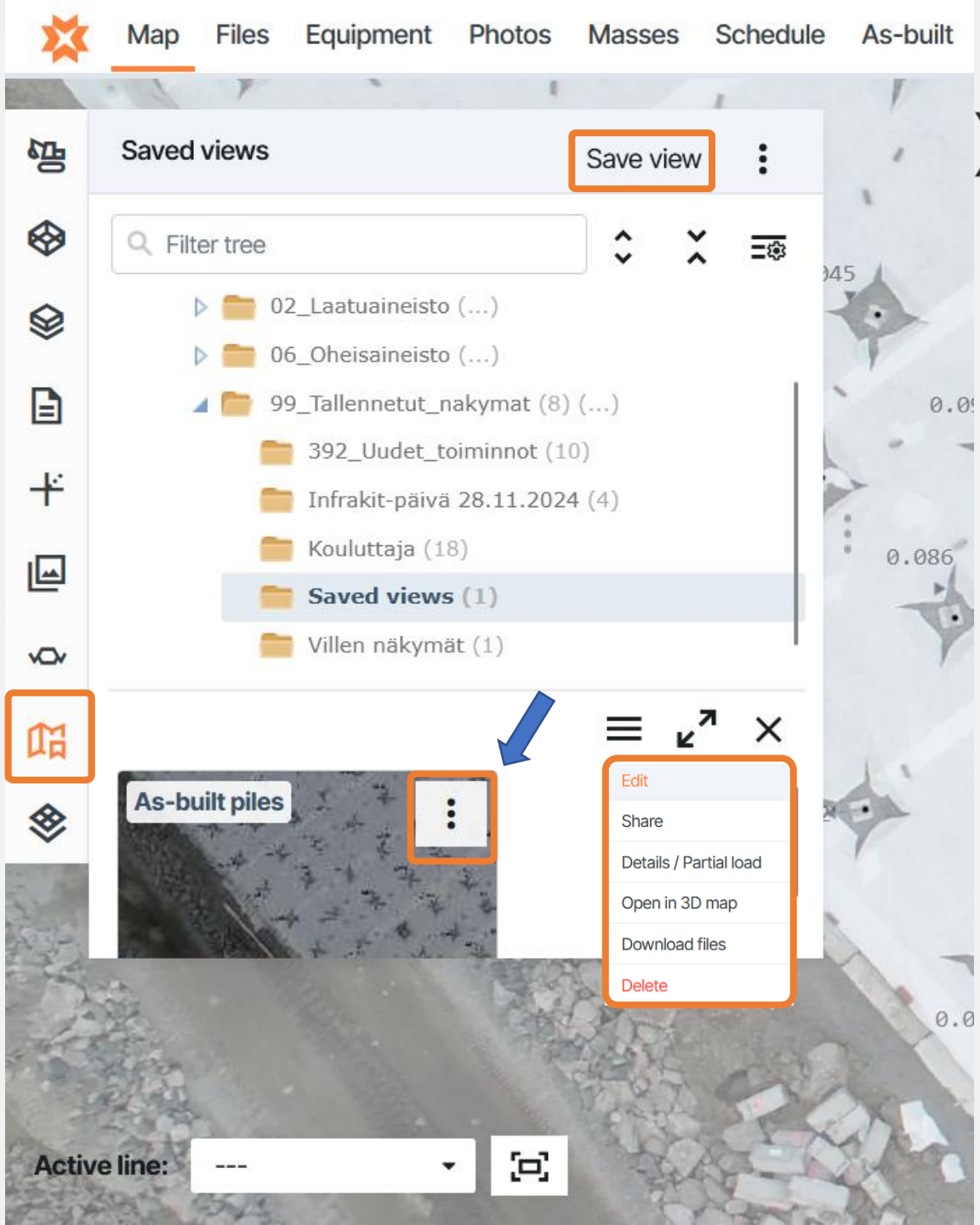
✓ **Tip 1:** Use 360° photos to create a real-time observation image for e.g. the project's weekly meetings

Saved views

- The saved views tab allows you to create different ready-made views to share or create your own personal views.
- Infrakit saves all your choices from different tabs and you can return to the situation you saved by clicking on the view
- You can create a saved view of any situation shown on the map and save it in the folder of your choice
- Take note that a new saved view will not have a name and the name needs to be changed in the “Edit” menu
- The saved view can be commented;
  - To text dialogue
  - By writing text on the map
  - By drawing symbols or freehand
- Additional information can be attached to a saved view:
  - Attachments (PDF documents)
  - Links to websites

✓ **Tip 1** : Add a link to the saved view, which takes you for example to the Infrakit file folder (e.g. the folder containing the quality documents and files related to the view)

✓ **Tip 2:** Share the saved view to workgroups, the subscriber, the supervisor, the view also works in a mobile browser.

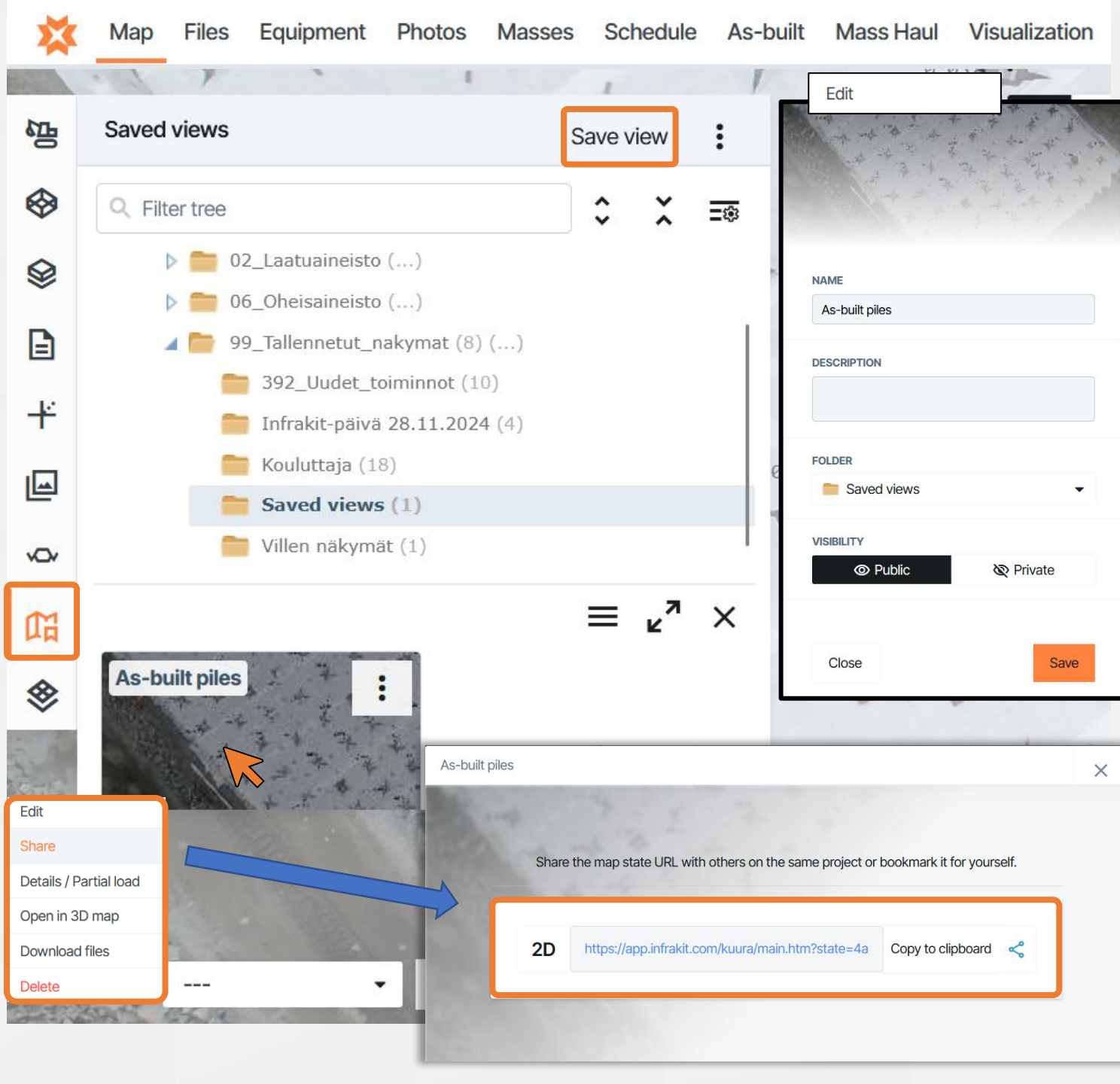


Creating and editing saved views

- Creating a saved view in the "Saved views" tab
  - Select the files you want to display from the othet tabs, zoom, center the view and then go to the "Saved views" tab
  - Select the folder where you want to save your view
  - Press "Save view" at the top → a preview of the view appears at the bottom
  - Click the button in the upper right corner of the view preview icon and select "Edit"
  - Name the view as you wish, write a description, you can still change the folder and choose visibility Public / Secret
    - Public, visible to all project users
    - Secret, only visible for the one who saved the view
- Sharing a saved view as a link
  - Click the button in the upper right corner of the view preview icon and select "Share“
  - Only accounts with existing access to the project can open the saved view
  - Saved views can be hidden by using access controls on the folders in the “Files” page

✓ **Tip1** : Add a link to the saved view, which takes you for example to the Infrakit file folder (e.g. the folder containing the quality documents and files related to the view)

✓ **Tip2:** Share the saved view to workgroups, the owner, the supervisor, the view also works in a mobile browser.



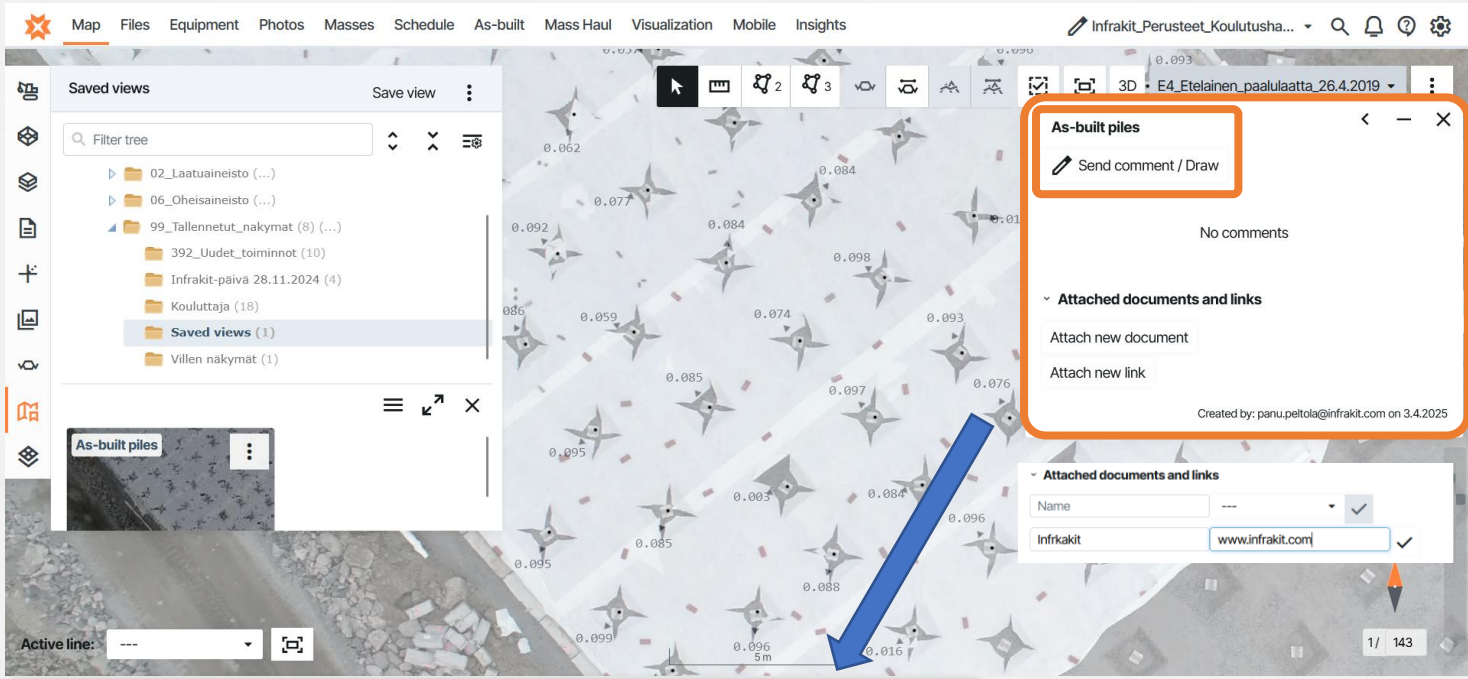
Commenting on saved views

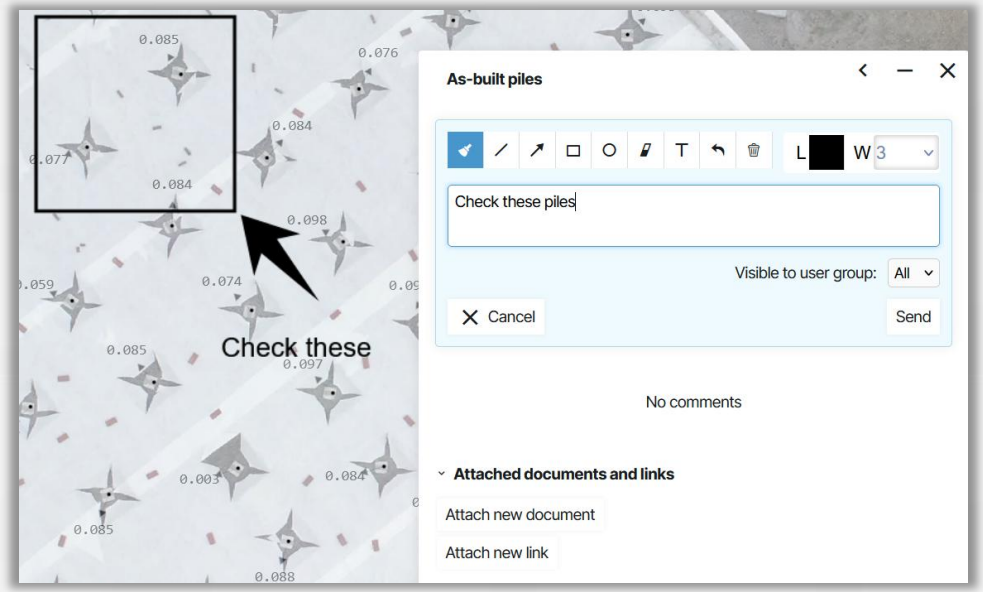
- After opening a saved view it can be commented by users
- To create a comment click on “Send comment/Draw”
- The username and timestamp of the comment will be saved
- On the comment you can:
  - Write text in the comment field
  - Mention people on the comment field (A notification will be sent to the user inside Infrakit)
  - Add shapes and text on the map
  - Attach documents from the project files to the saved view
  - Attach links to the saved view

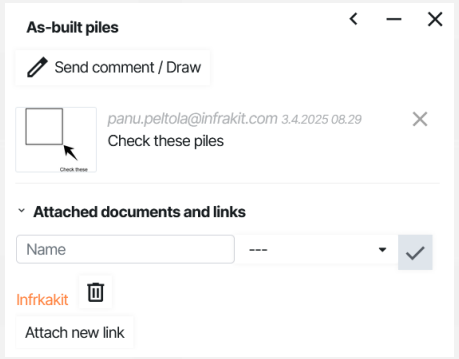
✓ **Tip 1** : Add a link to the saved view, which takes you for example to the Infrakit file folder (e.g. the folder containing the quality documents and files related to the view)

✓ **Tip 2:** Share the saved view to workgroups, the owner, the supervisor, the view also works in a mobile browser

✓ **Tip 3**: Use saved views to collect material and save for easy access on the Field-application

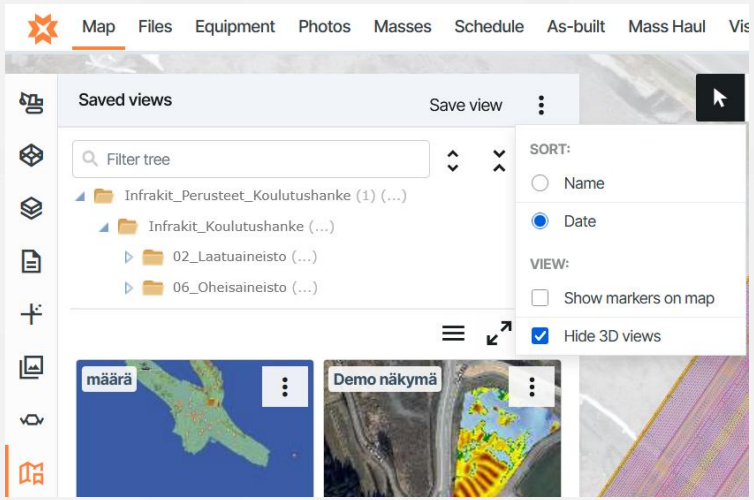


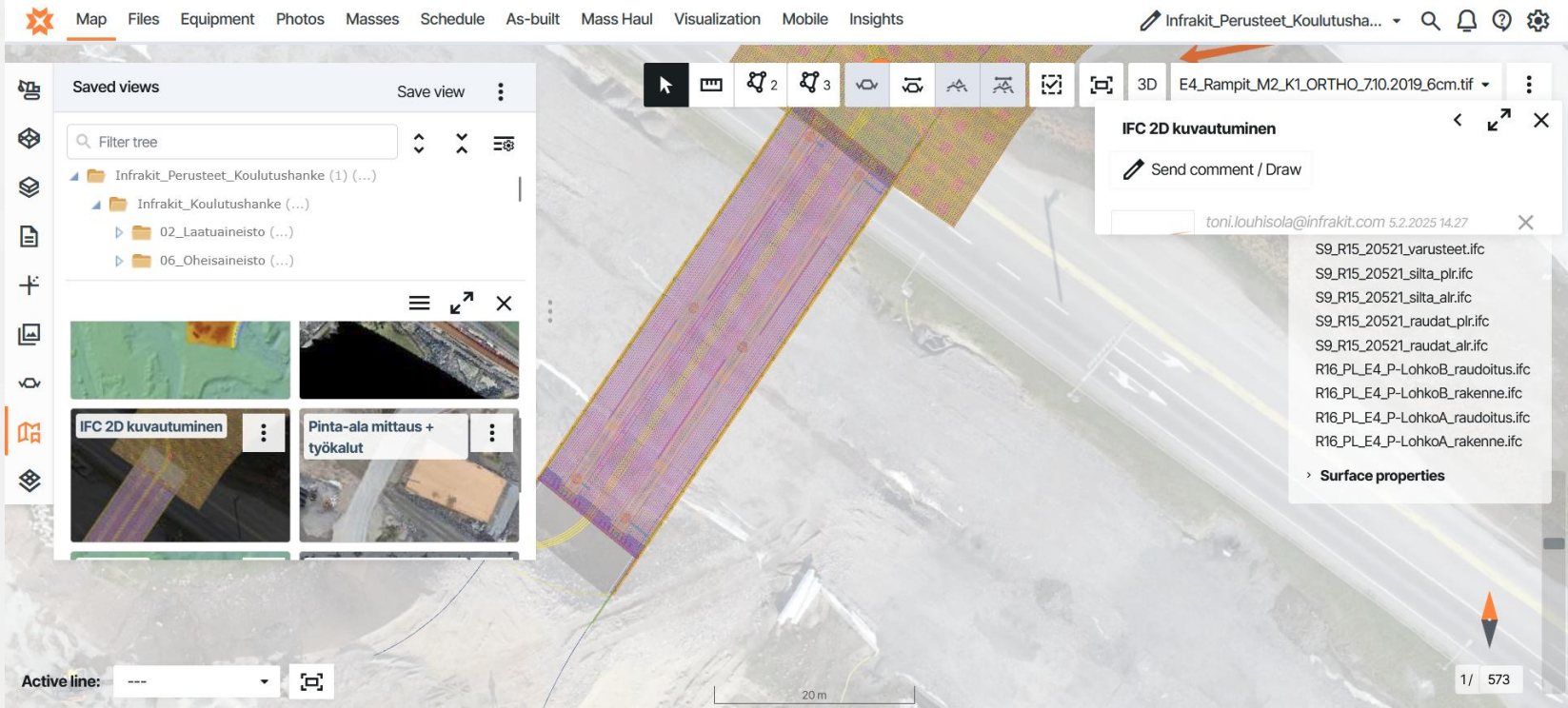




Saved views

- Saved views work on both 2D (Map) and 3D (Visualization) pages with same logic
  - Choose the files you want and save view
  - To display saved 3D views on the map page or to show the markers of saved views on the map choose the settings behind the three ⋮ ts





Equipment

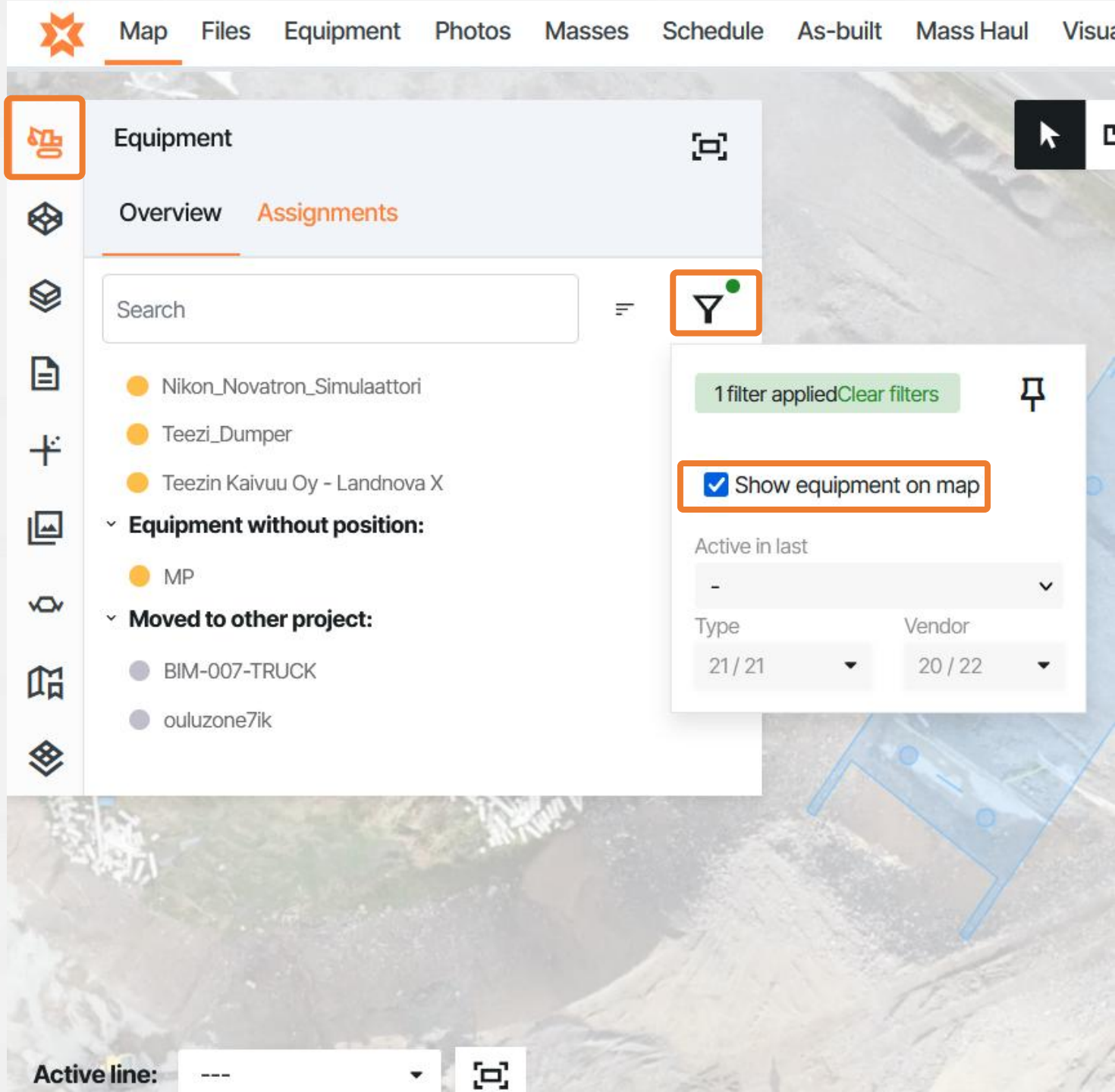
- On the Equipment tab, you can see an overview of the equipment connected to the project
- You can choose whether the equipment are displayed on the map from the filter menu
- You can filter the equipment based on name, type and vendor
- You can sort the equipment listing by name, last connection, vendor or type
- Color explanations:

The device is online and the models are up to date

The device is offline /passive for more than 15 minutes, the models are up to date

The device models have not been updated or there is another problem, e.g. a connection problem

The device is set “on hold" and the assignment remain ready when the device returns



2D Cross Section

Cross-section from the alignment 

- You can get a cross-section from any point on the alignment. The cross-section is always perpendicular to the alignment.
- You need an alignment and it should be selected as active from the bottom left of the map view.

Free cross-section 

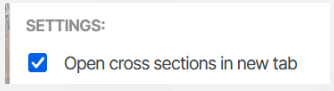
- You can get a cross-section from any point by first selecting the left and then the right edge of the cross-section
- You don't need a alignment.
- By default, the models and vector files visible on the map are drawn to the cross section (vector files are generally at 0 level)
  - If models or vector data are not selected, all models located at that point are drawn in the cross section

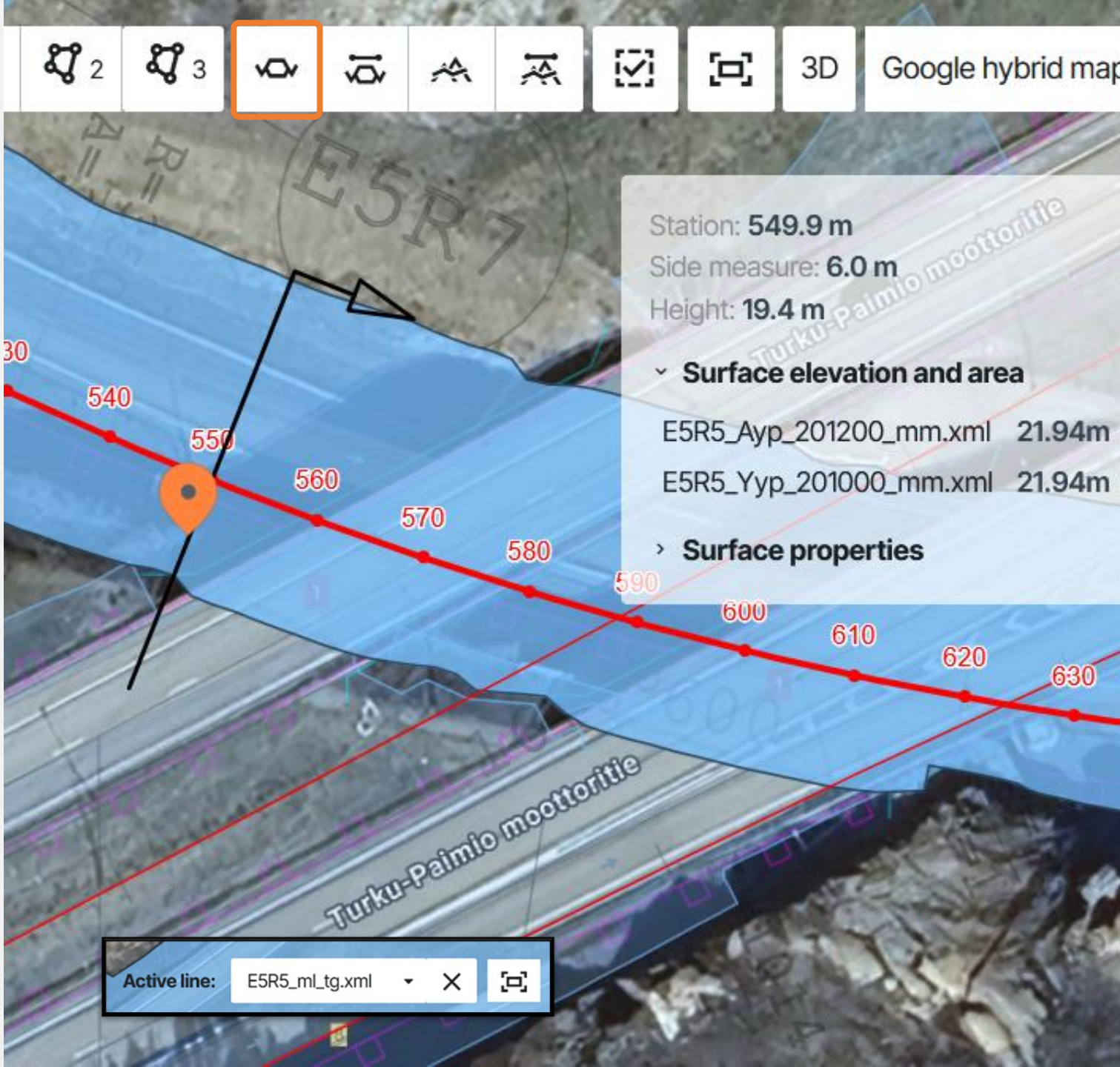
The 2D Cross Section window opens automatically after selecting the drawing point of the cross section

✓ **Tip 1** : You can activate the alignment by pressing the first mouse button over the red line

✓ **Tip 2** : You can draw a cross-section by pressing the right mouse button on the map and selecting from the menu that opens

✓ **Tip 3**: You can choose if the cross-section opens in a pop-up window or a new tab by toggling the setting “Open cross sections in new tab” behind the three dots next to the active layer in the top right corner



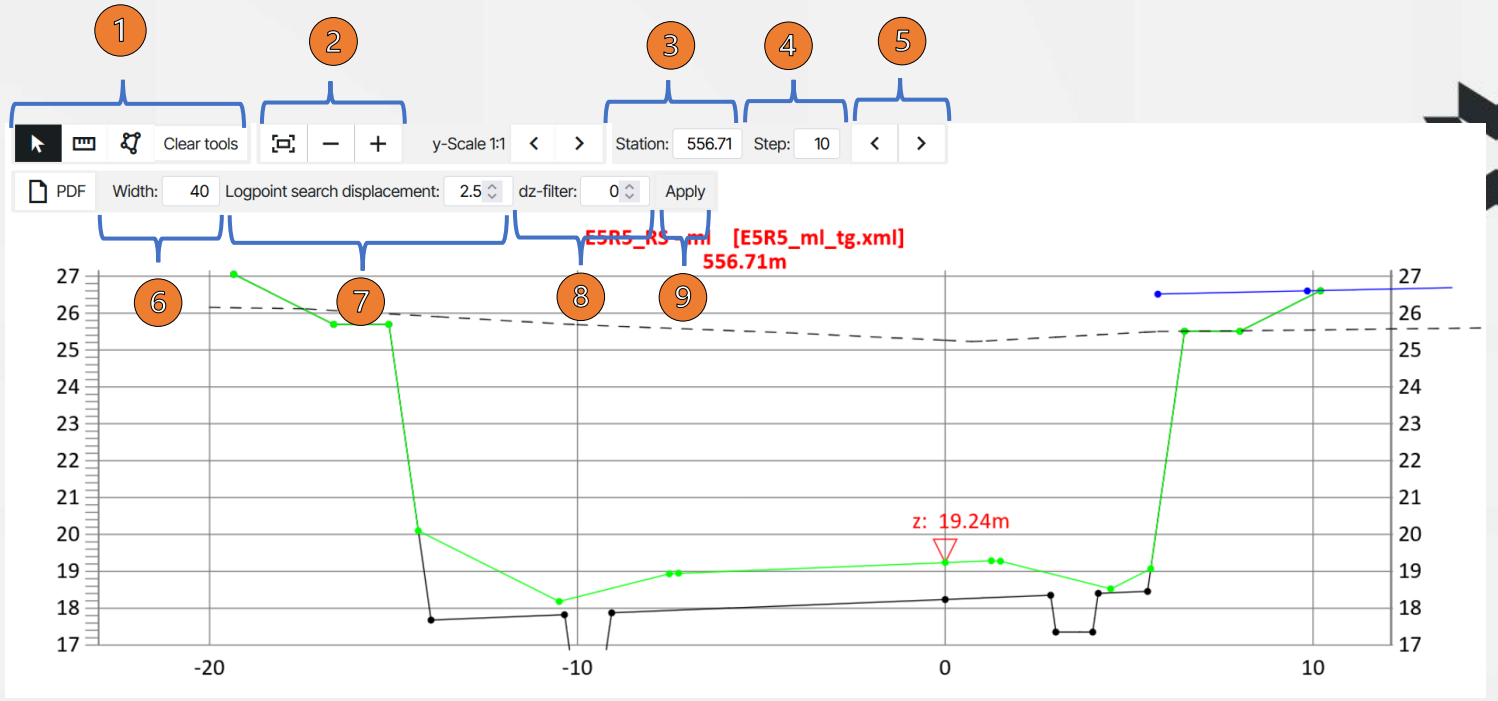


Cross section window

In the cross-section window, you can view the models of the selected station as a 2D cross-section

Note the type of cross-section

- perpendicular to the line of measure
- free cross-section



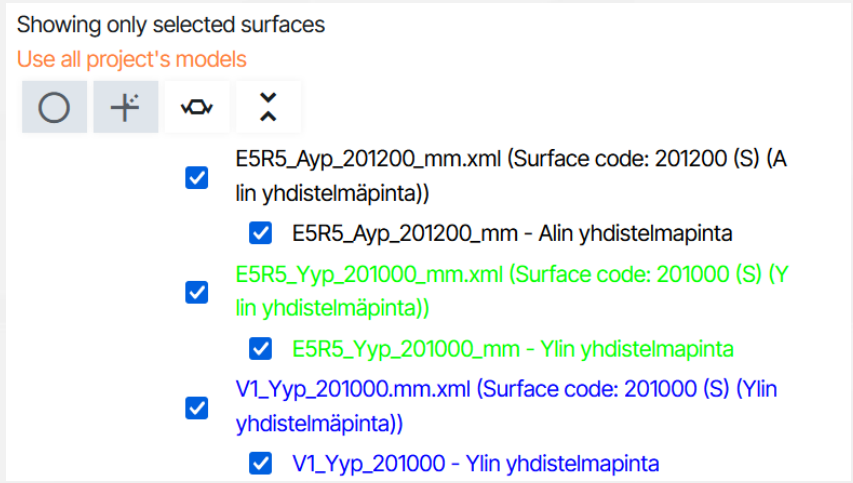
At the top of the page you will find the tools:

1. Measuring tools
   - Distance
   - Surface area
2. Zoom and fit to view
3. Set the station
4. Set the step interval (e.g. 10 = 10m)
5. Forward and backward scrolling buttons
6. Sets the cross-section width and height factor
7. Search distance for as-built points (forward and backward, m)
8. dZ of the height filter of as-built points (the value beyond which as-built points are not shown in the cross-section)
9. Apply changes

At the bottom, you can see a cross-section of the materials shown as a list

The color of the text is the same as the surface visible in the cross-section

You can hide models individually by removing the check mark in front of the name



Turns the pipe symbols on/off in the cross-section (Pipenetworks xml file)

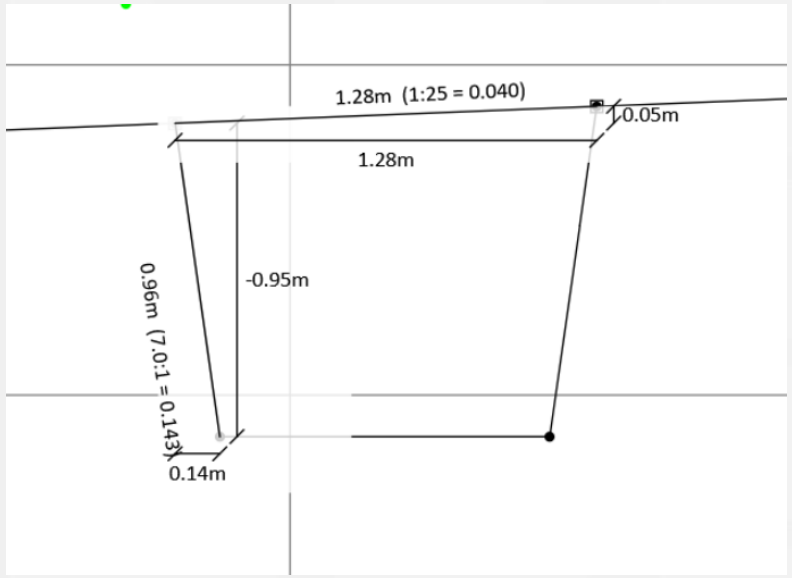
Switch as-built points on/off in the cross-section
By default all on

Switch models on/off in the cross-section
By default all on

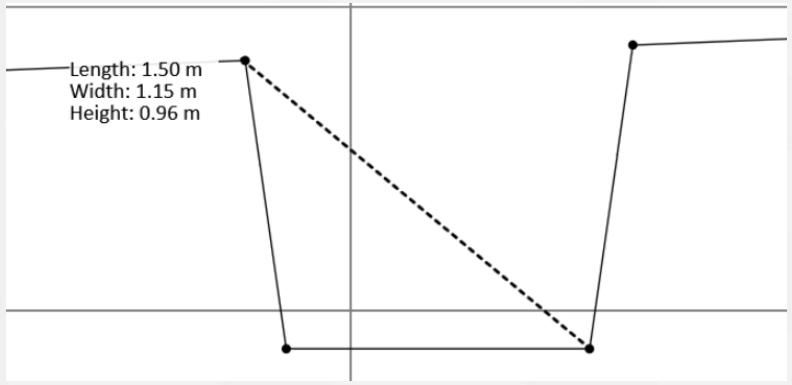
Cross section measurement tools

In the cross-section window, you can measure with three tools

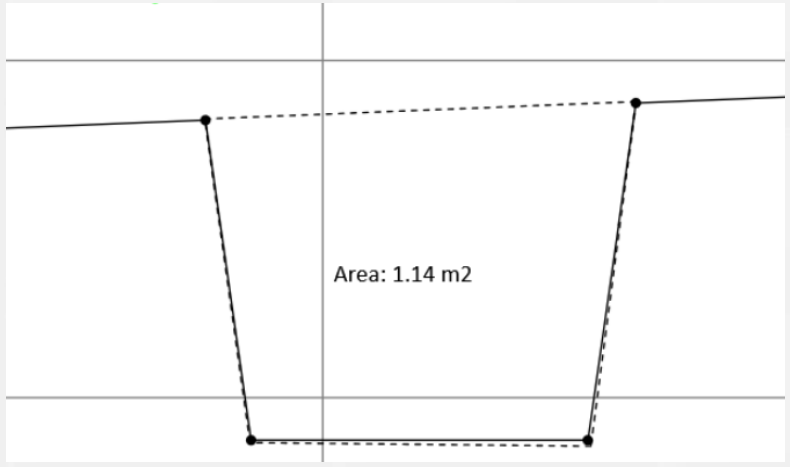
1. Free selection
   - Choose two breakpoints and measure the distance and grade between them
   - Multiple selections can be chosen at the same time



2. Distance tool
   - Freely select two points from the cross-section
   - Only one measurement can be visible at the time, new measurement will delete the old one



3. Area mesuring tool
   - Measure the area between chosen points
   - Only one measurement can be visible at the time, new measurement will delete the old one

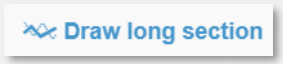


Long section

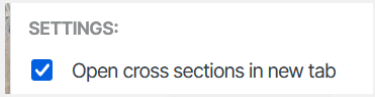
- Long section along the entire length of the alignment
  - You get a long section along the entire length of the alignment
  - You need an alignment and the alignment should be selected as active
- Bounded long section between stations you choose
  - You can choose the start and end station from the active line, the long section is shown between these stations
  - You need an alignment and the alignment should be selected as active
- By default, the models you have selected to the map are drawn to the long section
  - If no model is selected, only the geometry in the area of the long section is drawn to the long section window.
- The long section window opens automatically after clicking the icon

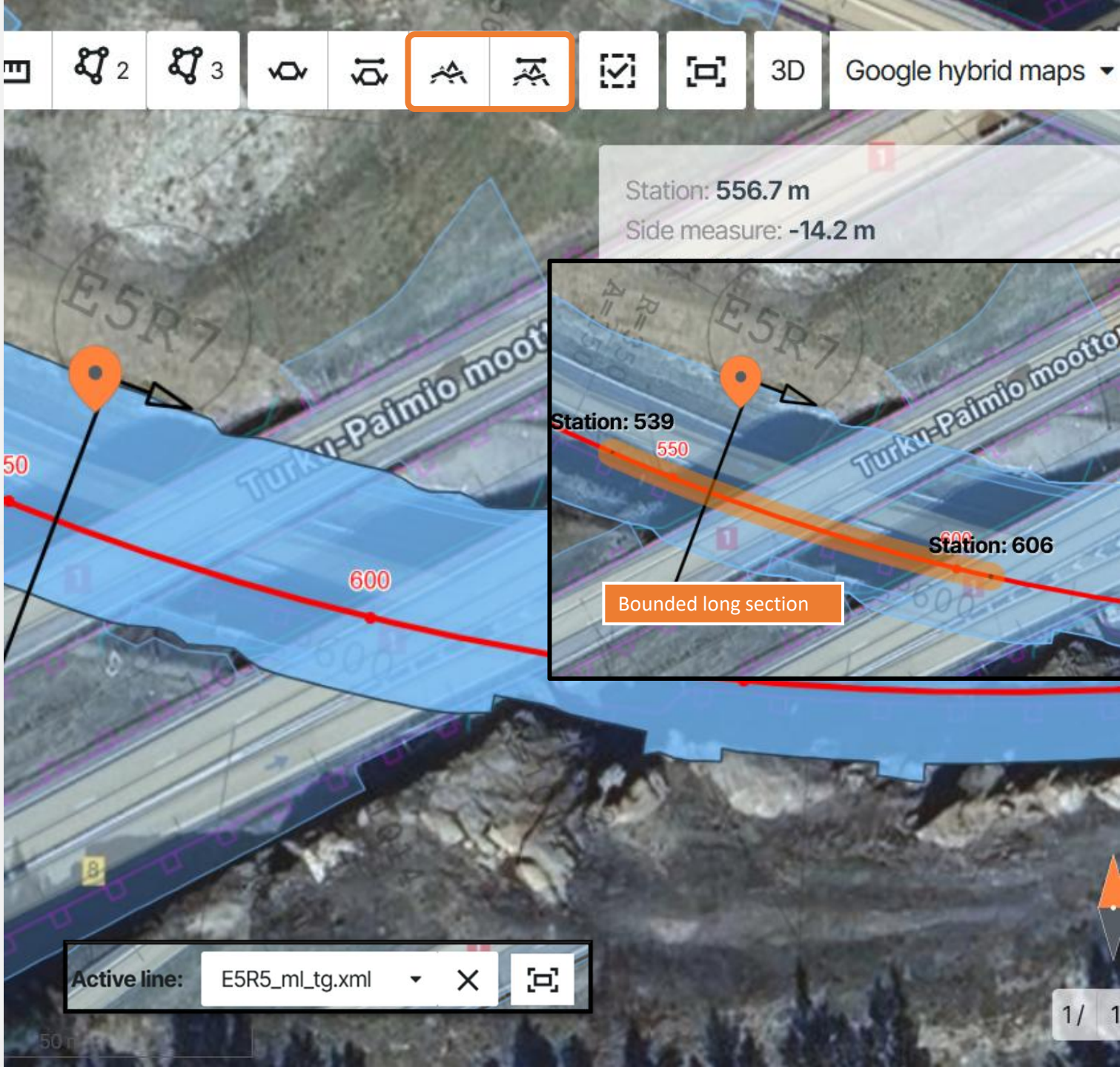
Tip1 : You can activate the alignment by pressing the first mouse button over the red line

Tip2 : You can draw a longitudinal section by pressing the right mouse button on the map and selecting from the menu that opens

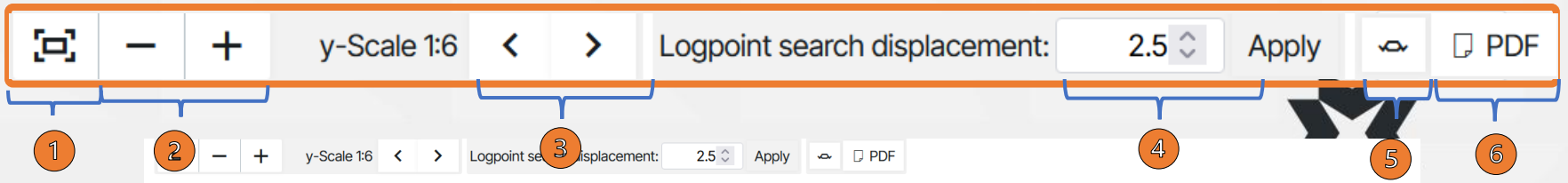


Tip 3: You can choose if the cross-section opens in a pop-up window or a new tab by toggling the setting “Open cross sections in new tab” behind the three dots next to the active layer in the top right corner





Long section window



In the long section window, you can view the models of the alignment you have chosen (= usually the center line of the street, road) as a long section

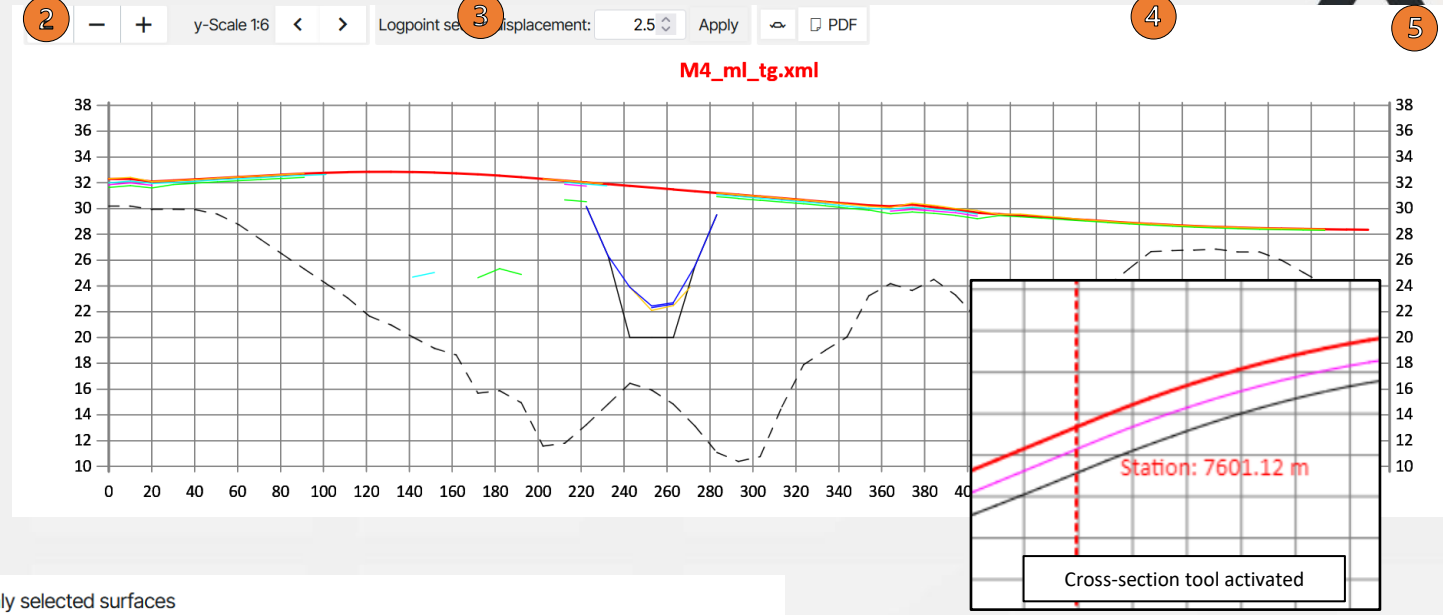
- The long section draws the elevation plane of the surfaces at alignment

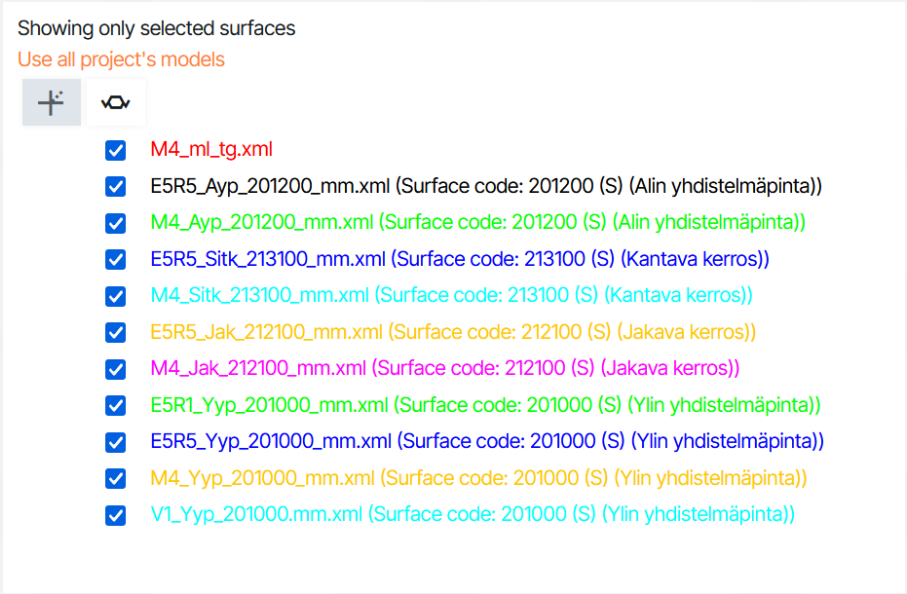
At the top of the page you will find the tools:

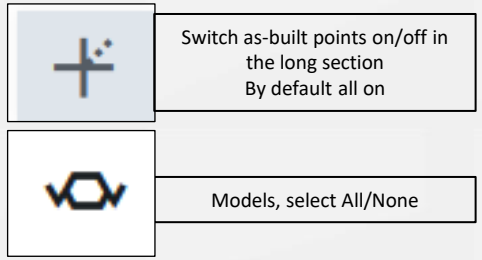
1. Returns the view to the moment the window was opened and zoom
2. Zoom buttons
   - Adjust the view
   - Zoom out (-) / Zoom in (+)
3. Sets the height factor of the long section
4. The search distance of the objects from the long section to the lateral direction (m)
5. Cross-section tool, which can be pressed to activate the possibility to search for the desired stake point from the long section
6. PDF button – Prints the longitudinal section in PDF format

At the bottom, you can see a list of the models shown in the long section

- The color of the text is the same as the surface visible in the long section
- You can hide models/surfaces individually by removing the checkmark in front of the model







Part 2

Features and functions

16. Files page
17. As-built page
    - Adding as-built points
    - Filtering as-built points
    - Editing as-built points
    - Information of as-built points
    - Downloading as-built points
18. Photos page
19. Equipment page
    - Usage statistics
    - Assignments
    - Accuracy
20. Visualization page (3D)

Files page

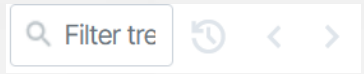
1. On the Files page, you can manage and view the project's files

Create new folder or subfolder

Add file to chosen folder

Download folders and files summary excel

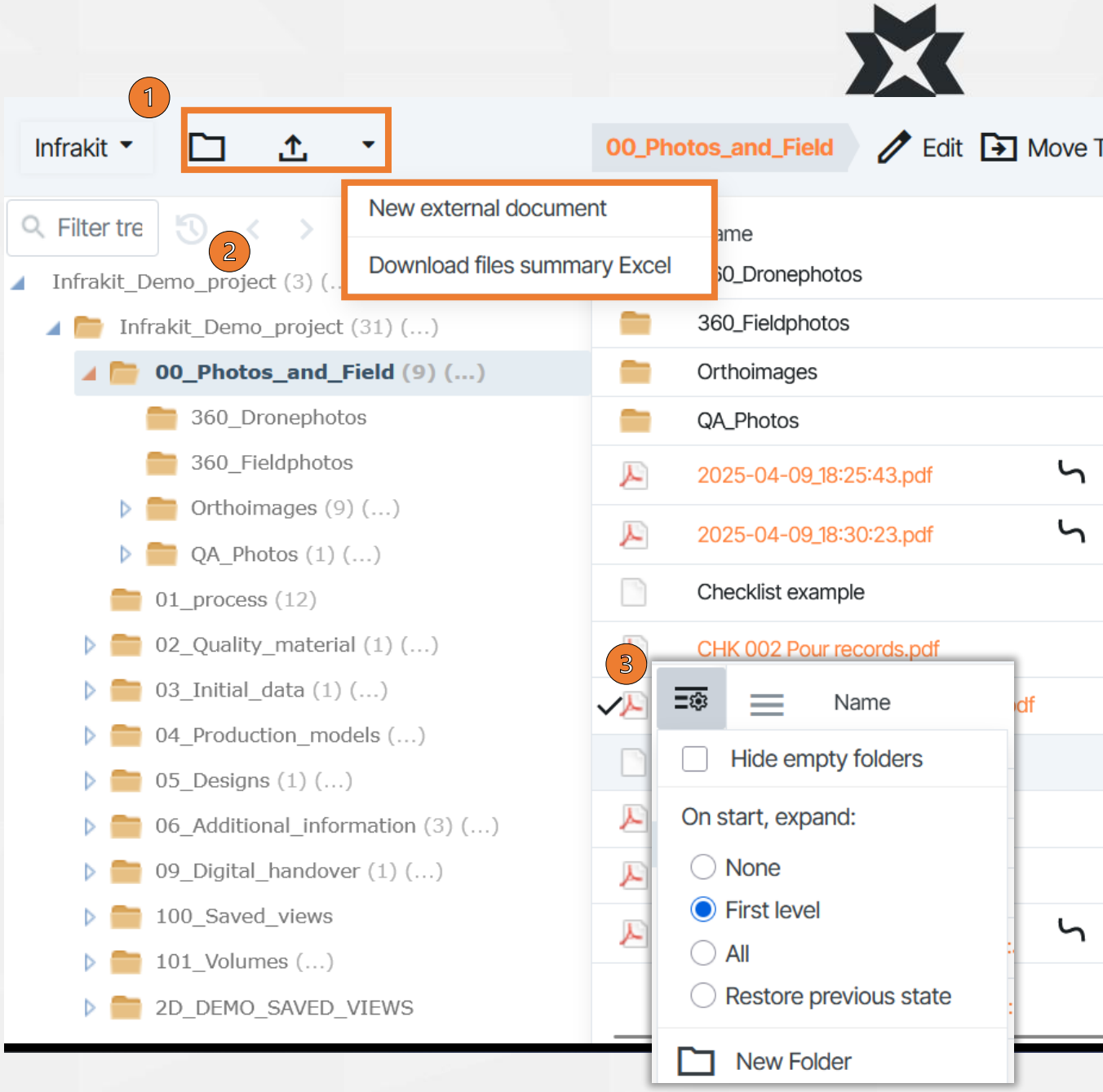
Add an external document

2. 

Buttons to move in directory and filter

First opens all folders and subfolders.
Second reduce all subfolders.

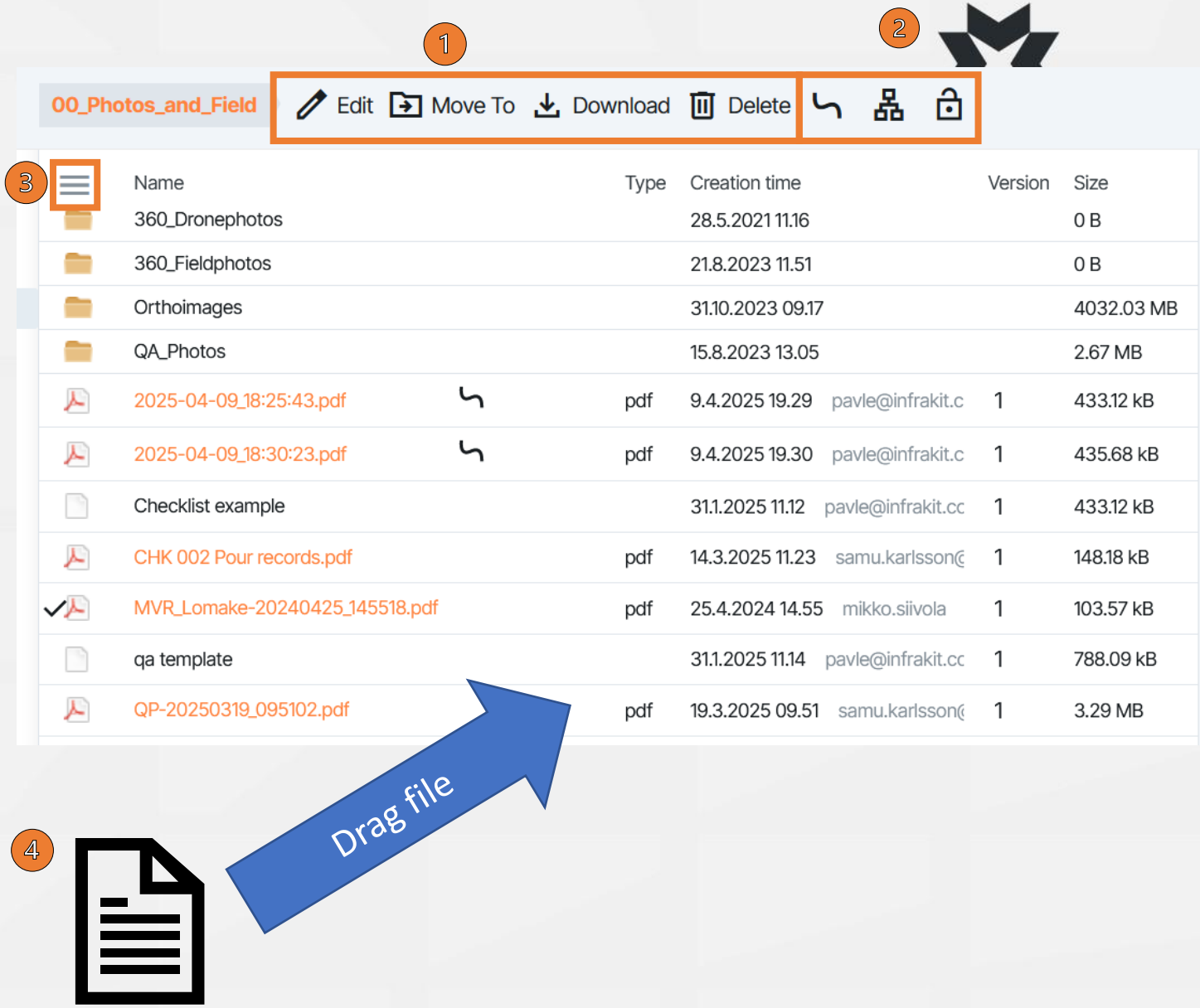
3. Behind the cogwheel is a button that can be used to hide all empty folders. From there you can also choose whether the files page automatically opens all subfolders or just the title level.



Files page

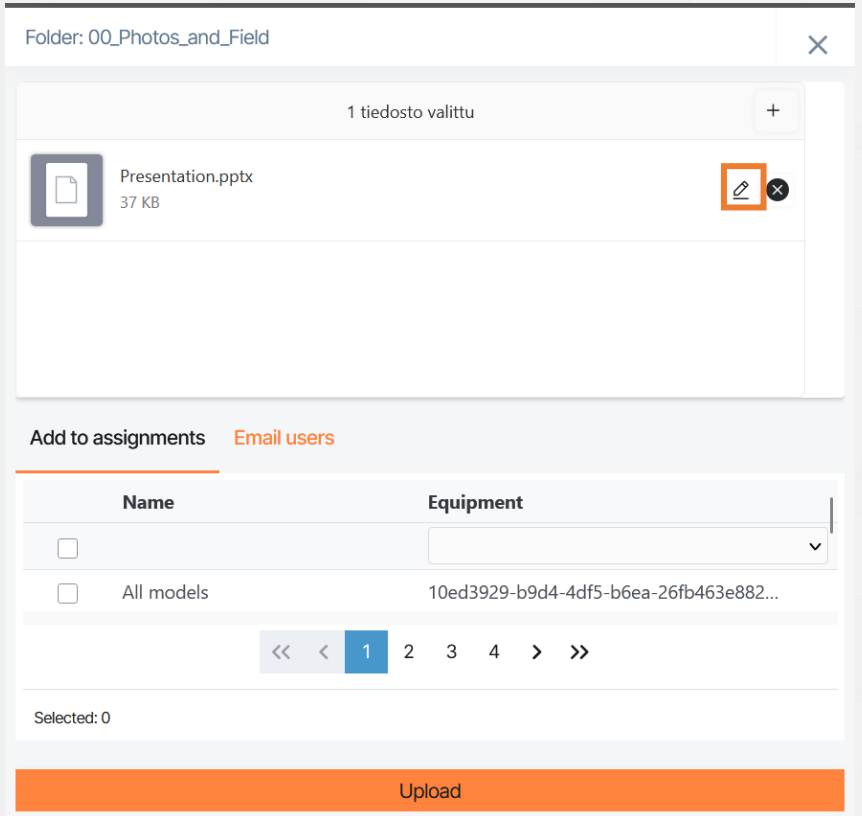
1. You can edit, move, download and delete the selected folder
2. The selected folder can be attached to an alignment, so that the future as-built points for this model will automatically be attached to alignment, the stakenumber and the offset.

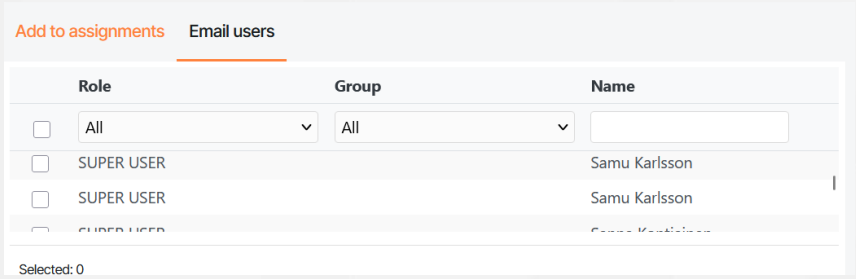
   You can set properties for the folder or limit its visibility to the groups defined in the project settings
3. Select which columns are visible in the file tree
4. You can upload entire directory, zip file or multiple files by dragging them

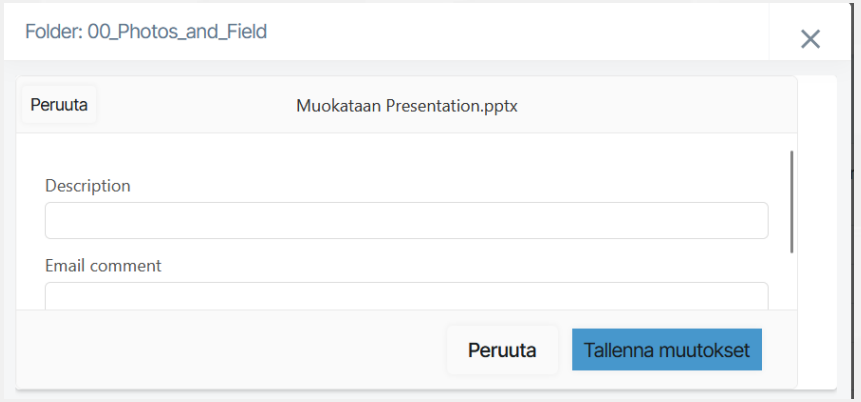


Adding Files

- While adding files you can:
  1. Add them to assignments
  2. Send them as an email to selected users in the project
  3. Add a description and Email comment

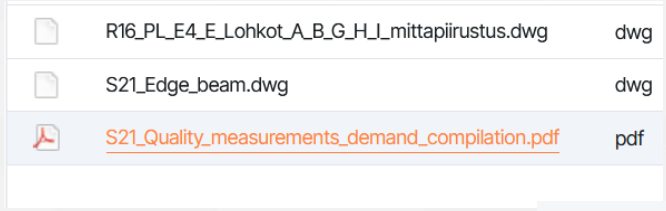


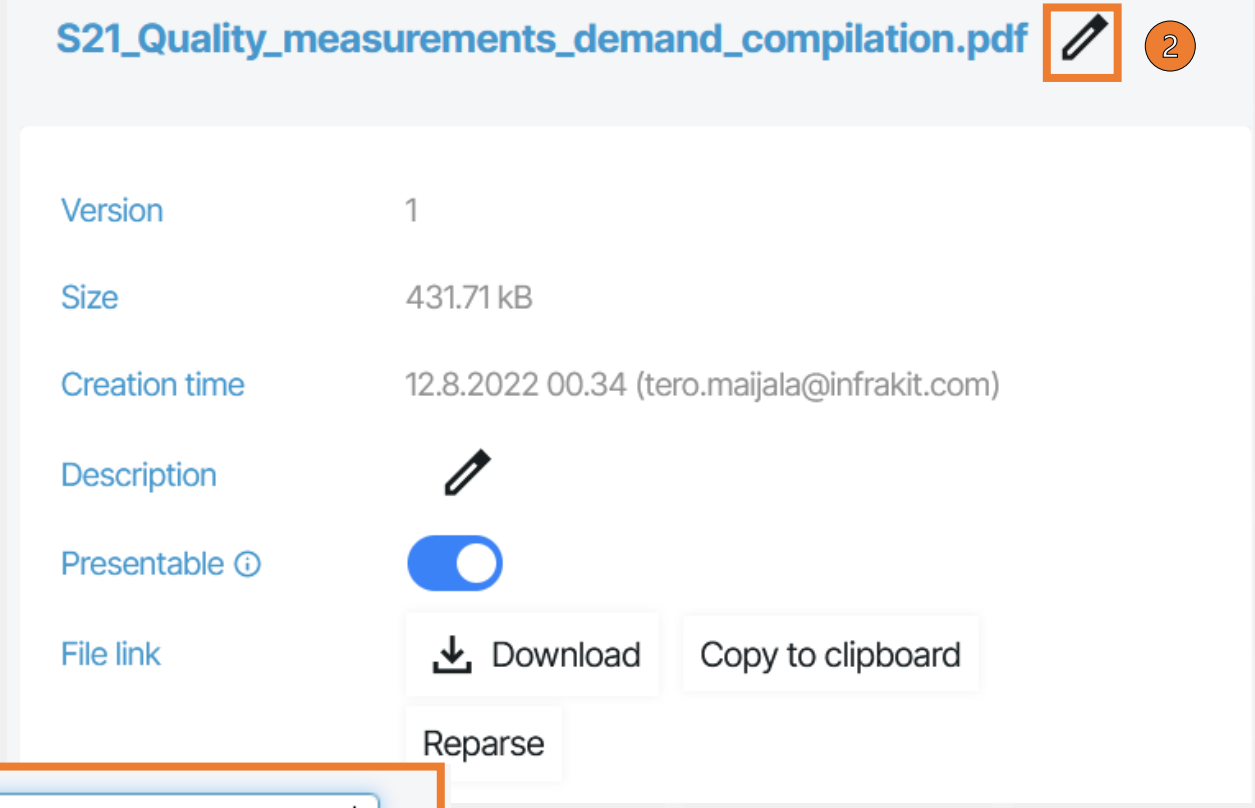




Files page

Adding a new version





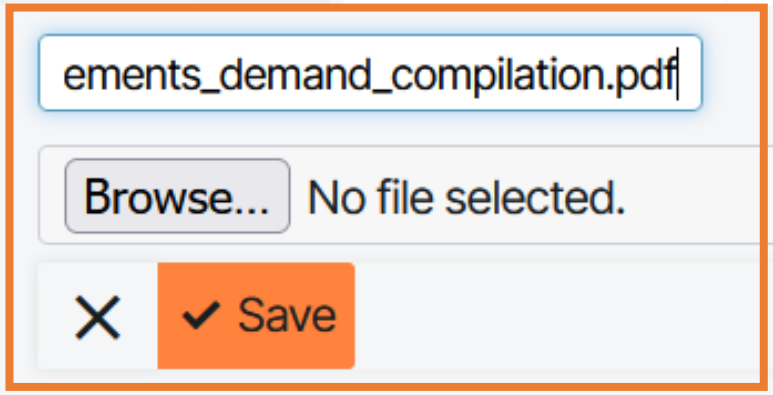
A new version of the file with the same name can be added by dragging the new file into the window where the old version is.

Infrakit automatically creates a new version of the file.

New version of the file with different name is added as follows:

1. Click the file name
2. Click the pen
3. Select the new file 

The file name can also be changed instead of selecting a new file.



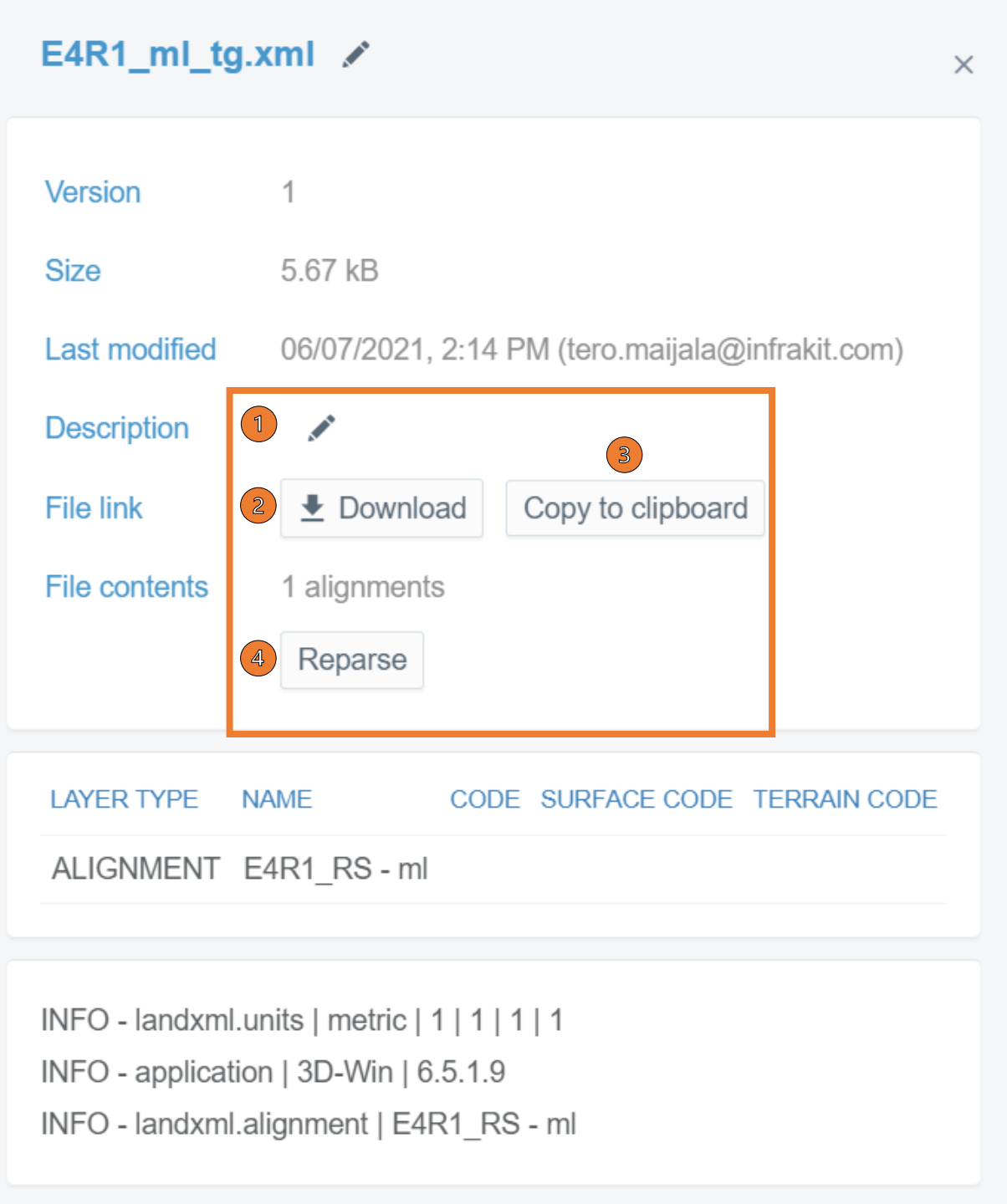
Files page

After clicking on the file name, you can also:

1. Write description for the file

   For example additional information about the file
2. Download the file
3. Copy the file link to the clipboard
4. Reparse the file

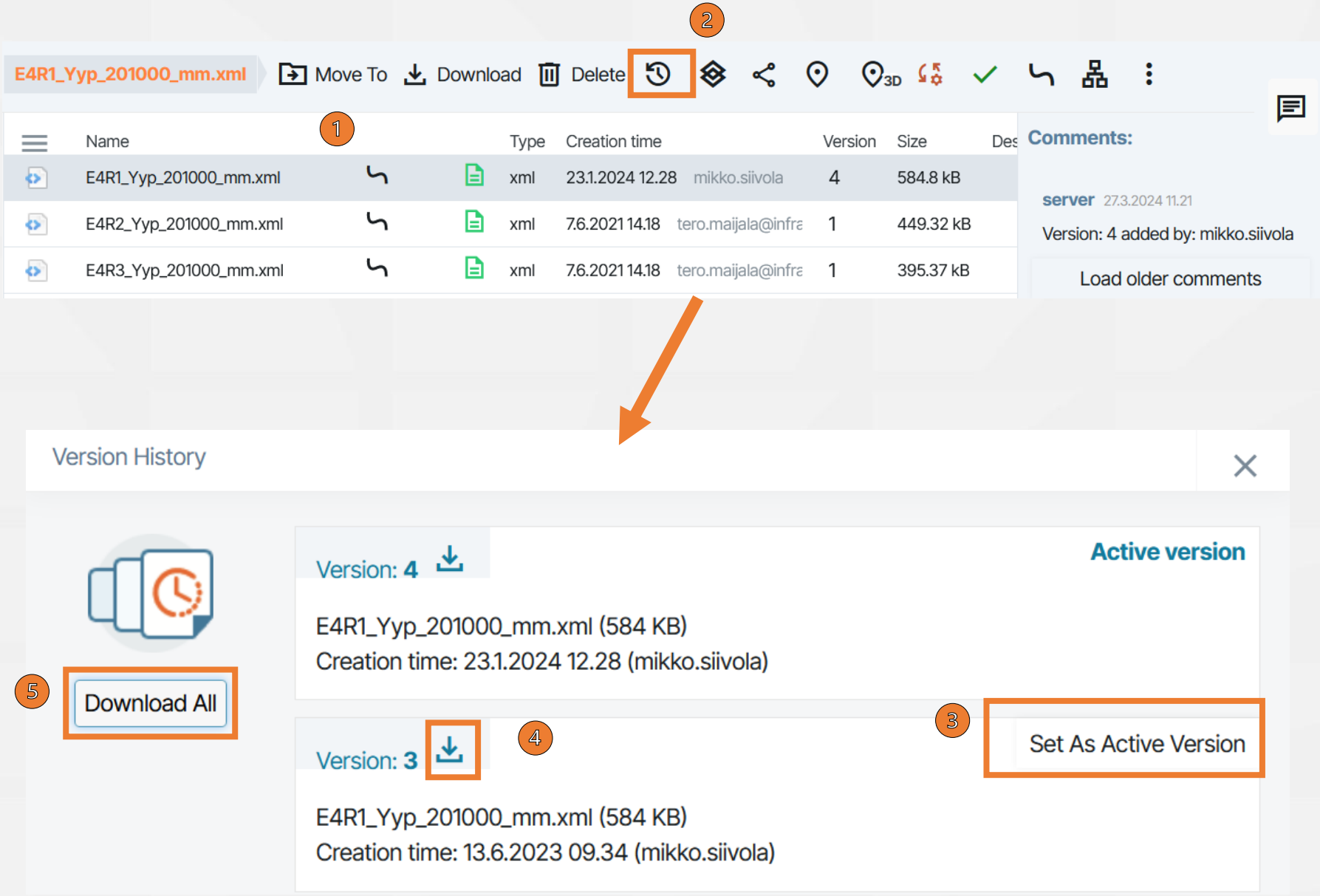
   The file is read into the system again



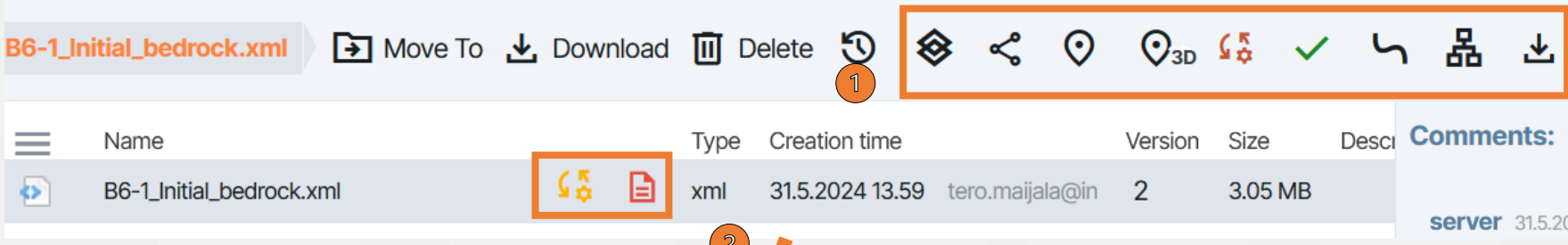
Files page

The version history is managed behind the clock icon

1. Click on the line of the file and it will turn gray
2. Click on the clock icon
3. Set active version
4. Previous versions can also be downloaded
5. All versions of the file can be downloaded



Files page



1. File Tools:

Create shortcut of the file to another folder

Email another user a link to the file

View the file on a map or in a 3D view (opens a new tab)

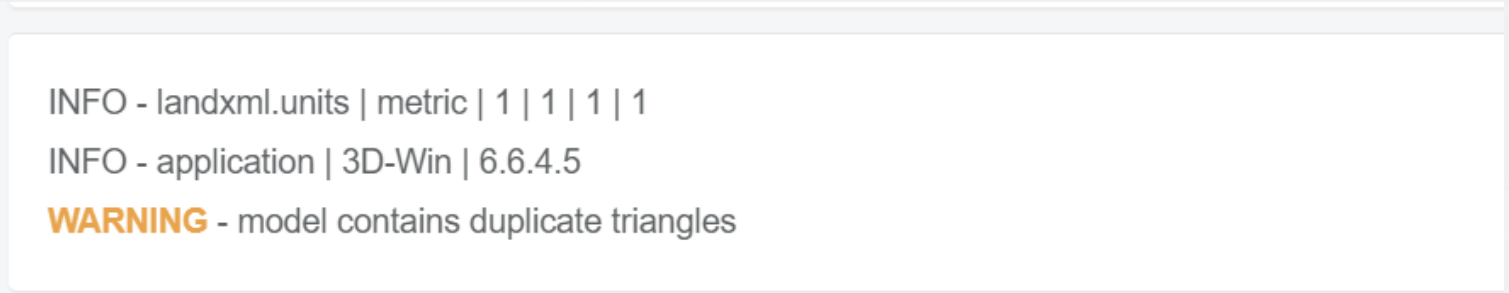
Reparse the file

Approve the file

Attach alignment to the file

Set file properties

Download the InfraModel surface model inspection report

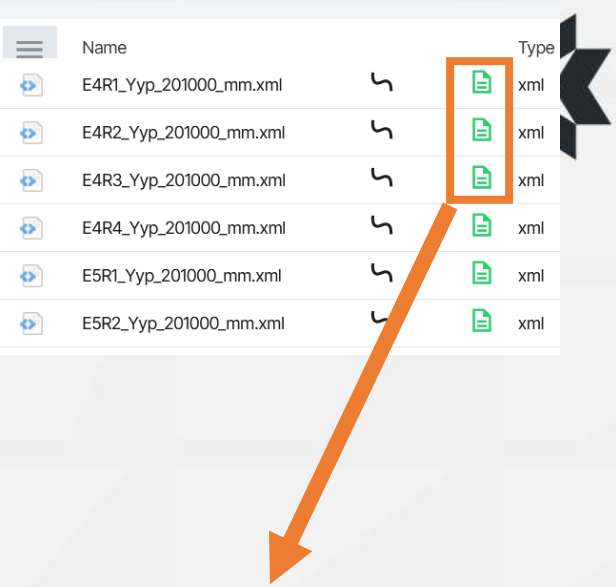


2. Additional file information:

Warning about file parsing error

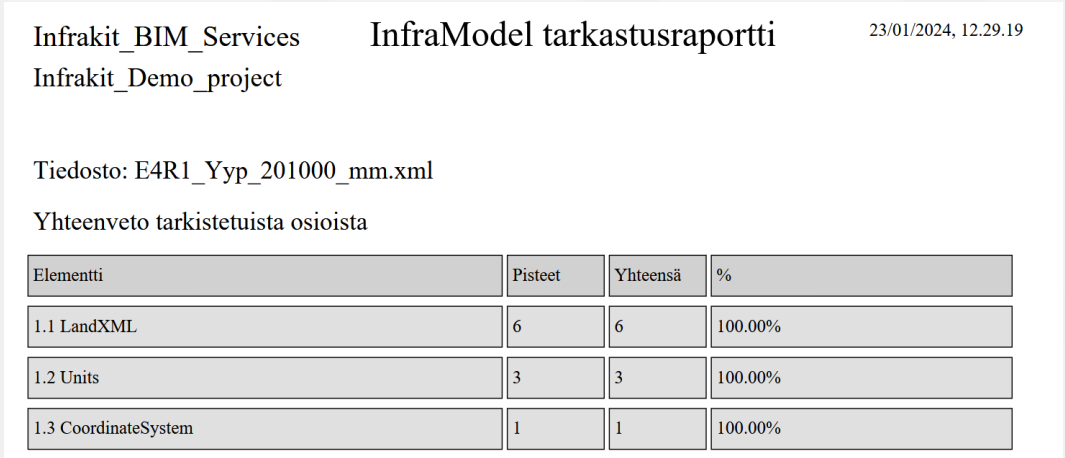
Model inspection service

With the help of the service, you can check whether the file that has been downloaded is compliant with Inframodel format



Symbols:

- OK, the model passed the inspection
- The model did not pass the inspection, serious flaws or errors that might prevent the use of the model during the construction phase



Infrakit_BIM_Services
Infrakit_Demo_project

InfraModel tarkastusraportti

23/01/2024, 12.29.19

Tiedosto: E4R1_Yyp_201000_mm.xml

Yhteenveto tarkistetuista osioista

Elementti	Pisteet	Yhteensä	%
1.1 LandXML	6	6	100.00%
1.2 Units	3	3	100.00%
1.3 CoordinateSystem	1	1	100.00%

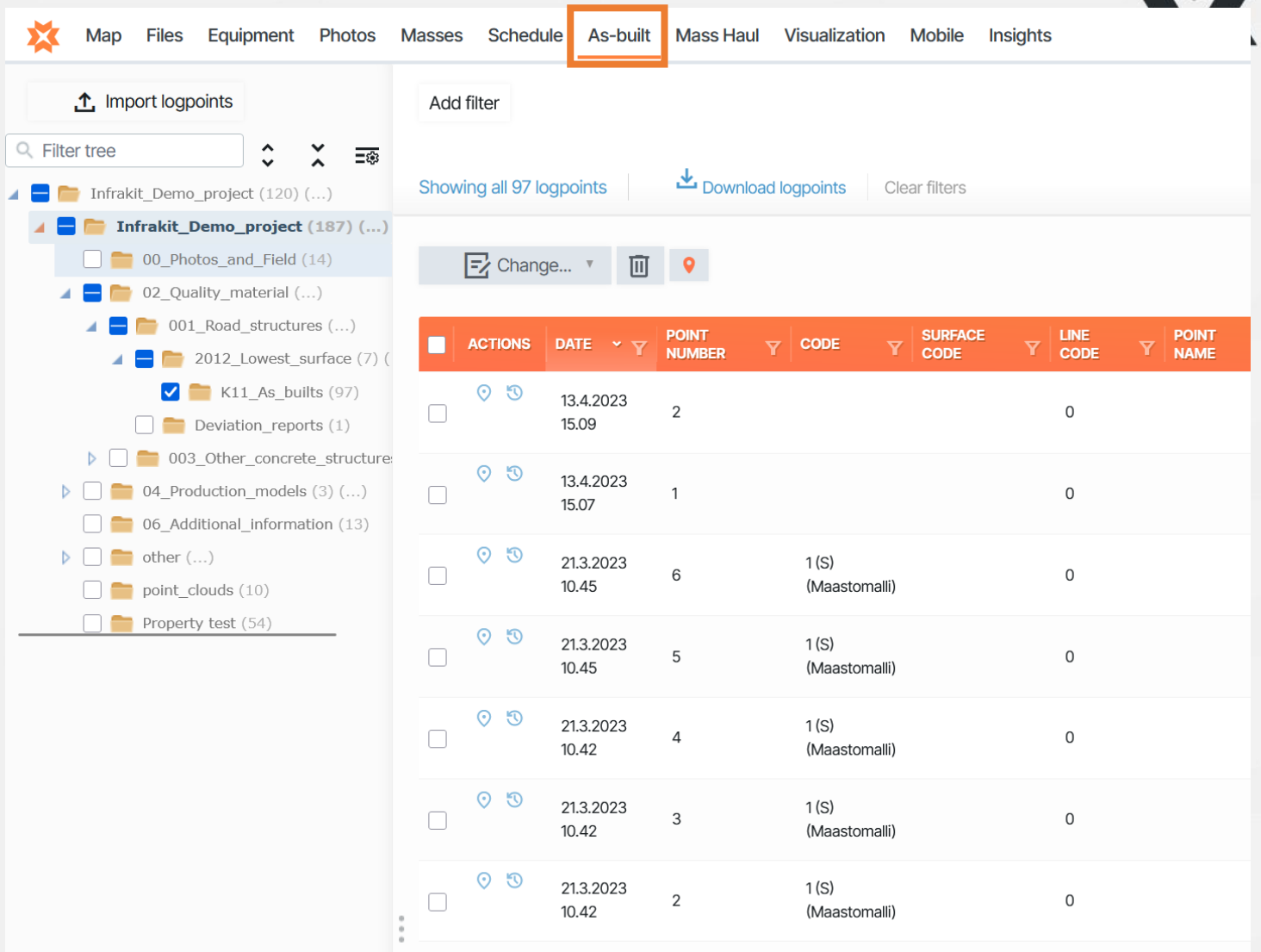
You can download a pdf report on the model inspection by clicking on the document symbol.

As-built page

From the folder structure on the left side, choose which folder's points you want to view

(...) after the folder name tells you that there are points in its subfolders, and the number in brackets tells you how many as-built points are in that folder

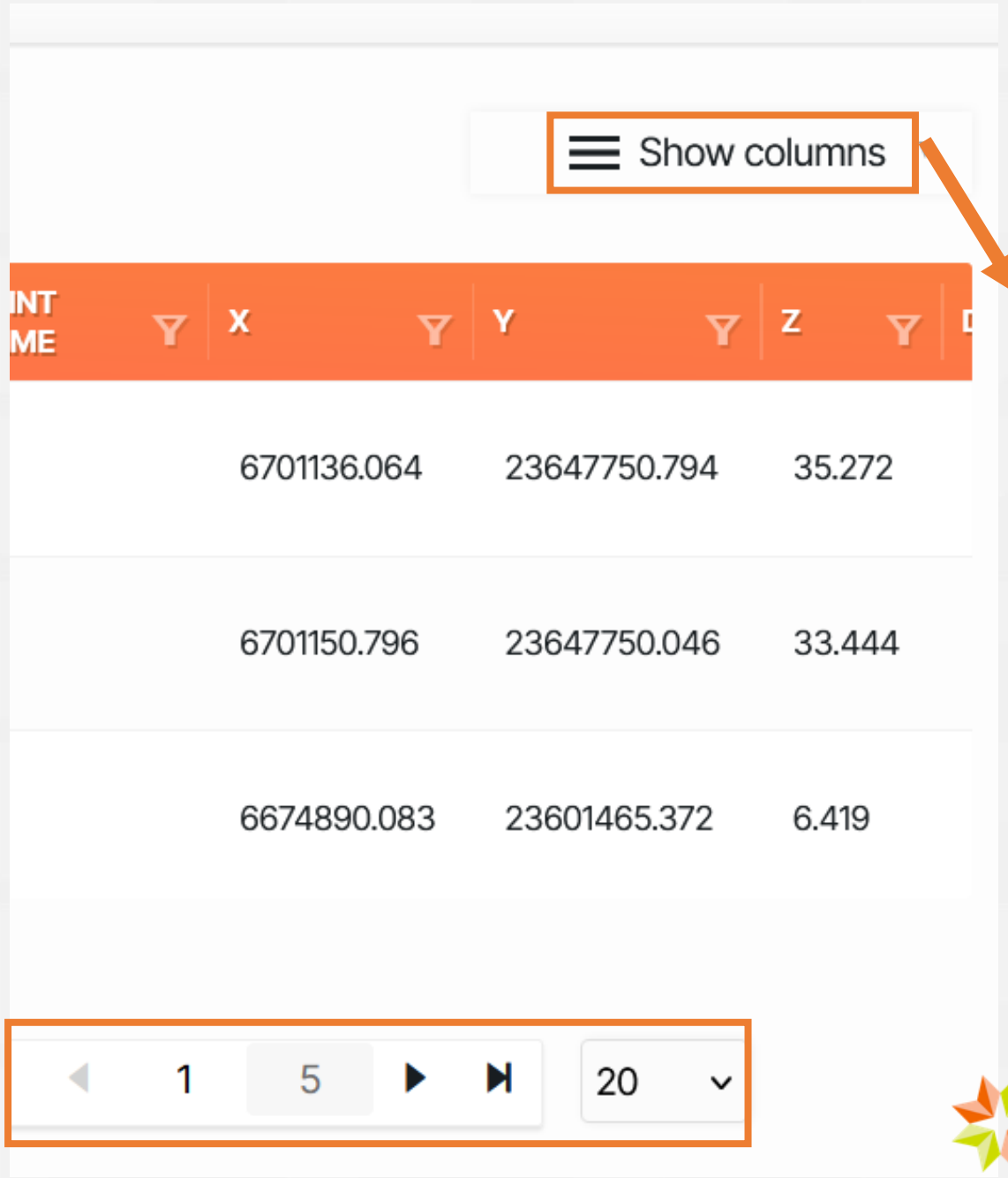
You can view all the points by clicking the box of the topmost folder while pressing shift-key



As-built page

From the "Show columns" button at the top, you can choose which properties of the point is shown in the table

From the bottom, you can scroll through the pages of the table, and change how many points are displayed on the page



Infrakit

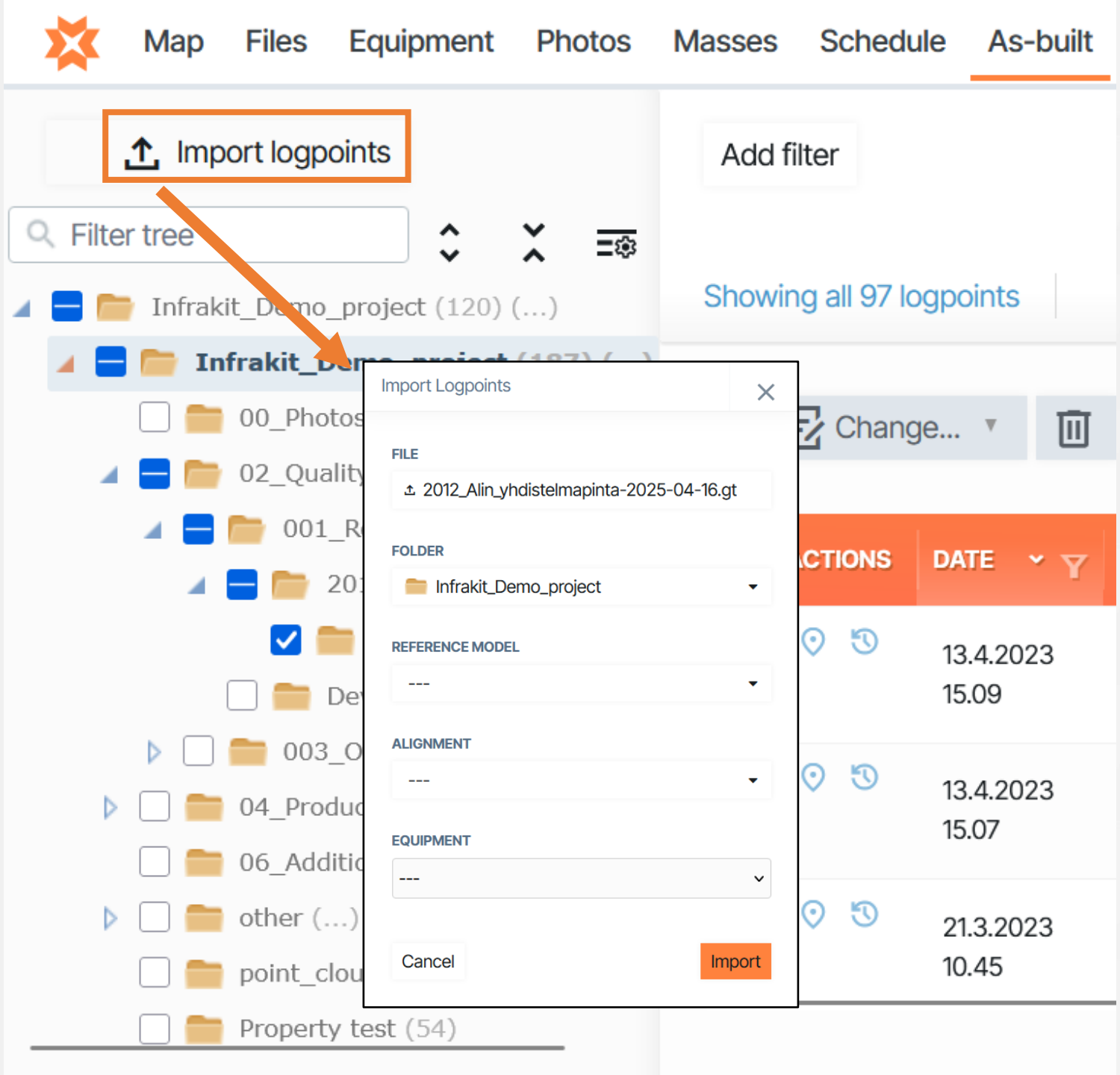
Adding as-built points

Add as-built points from the button in the upper left corner. The right folder must be first selected by clicking on the folder name.

Select the file from which you import the points and then select the correct equipment type.

You can choose alignment and model for the as-built points.

Note that the points do not have to be in the same folder as the used model.

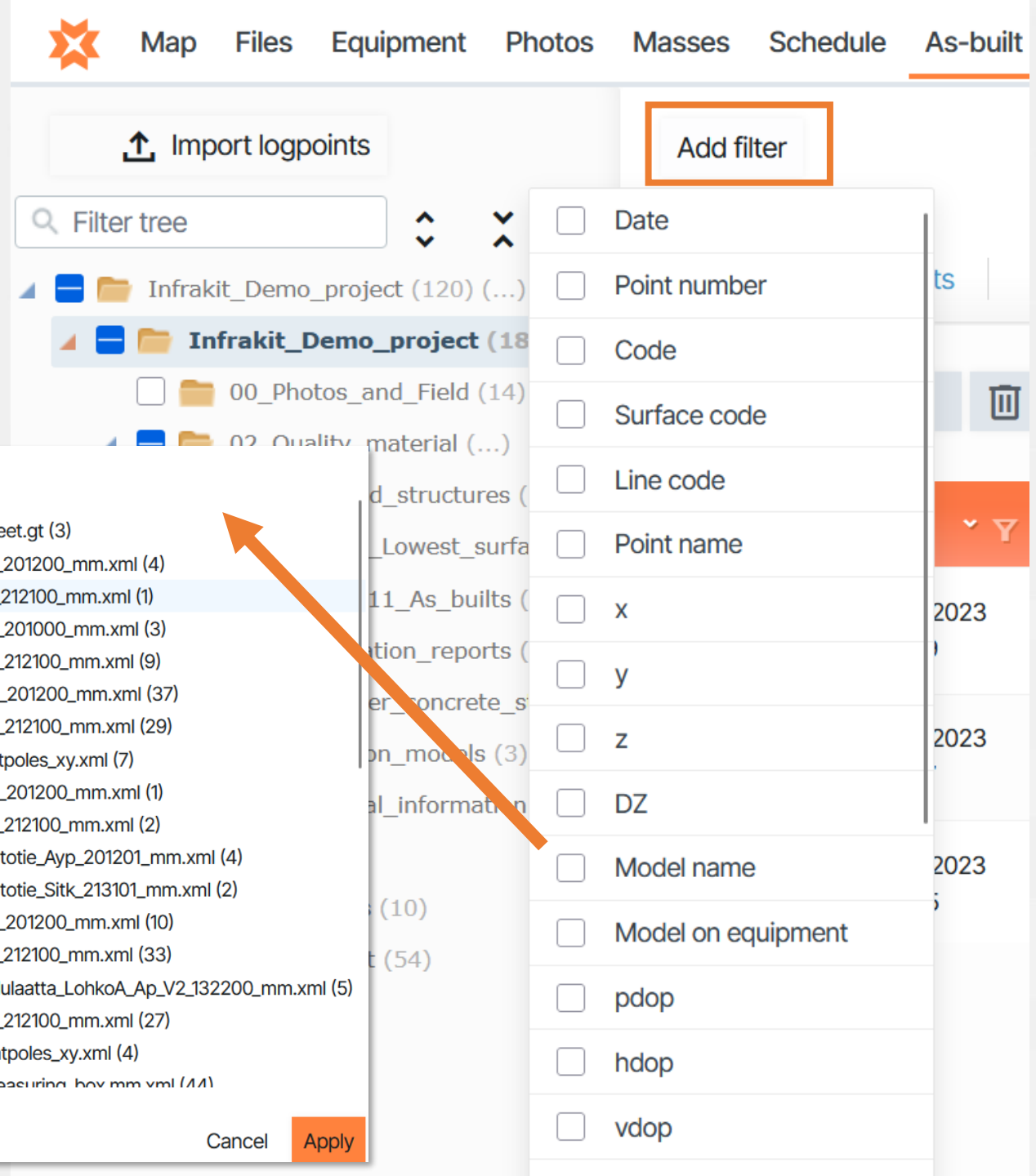


Filtering as-built points

You can filter as-built points with the "Add filter" button at the top. There is a list of properties that can be used to filter points.

Filtering can be done with many properties at the same time, for example a specific date and surface code.

The number in brackets after the feature indicates the number of points that have that property.



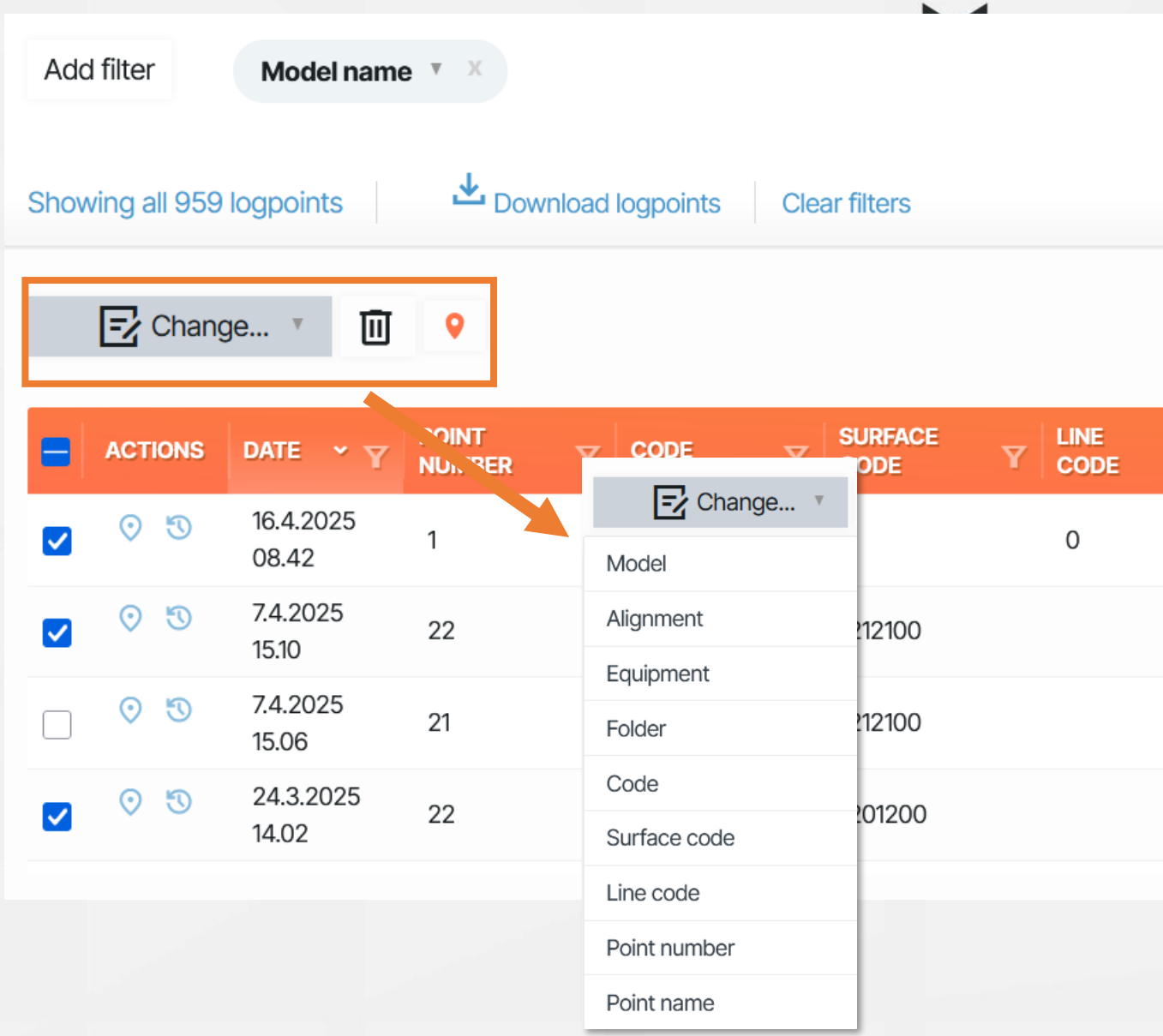
Editing as-built points

You can change the properties of the selected points from the Change button. It opens a list of properties that can be edited with the tool. The tool writes new data over the old one.

Delete selected points

Selected points open on the map page

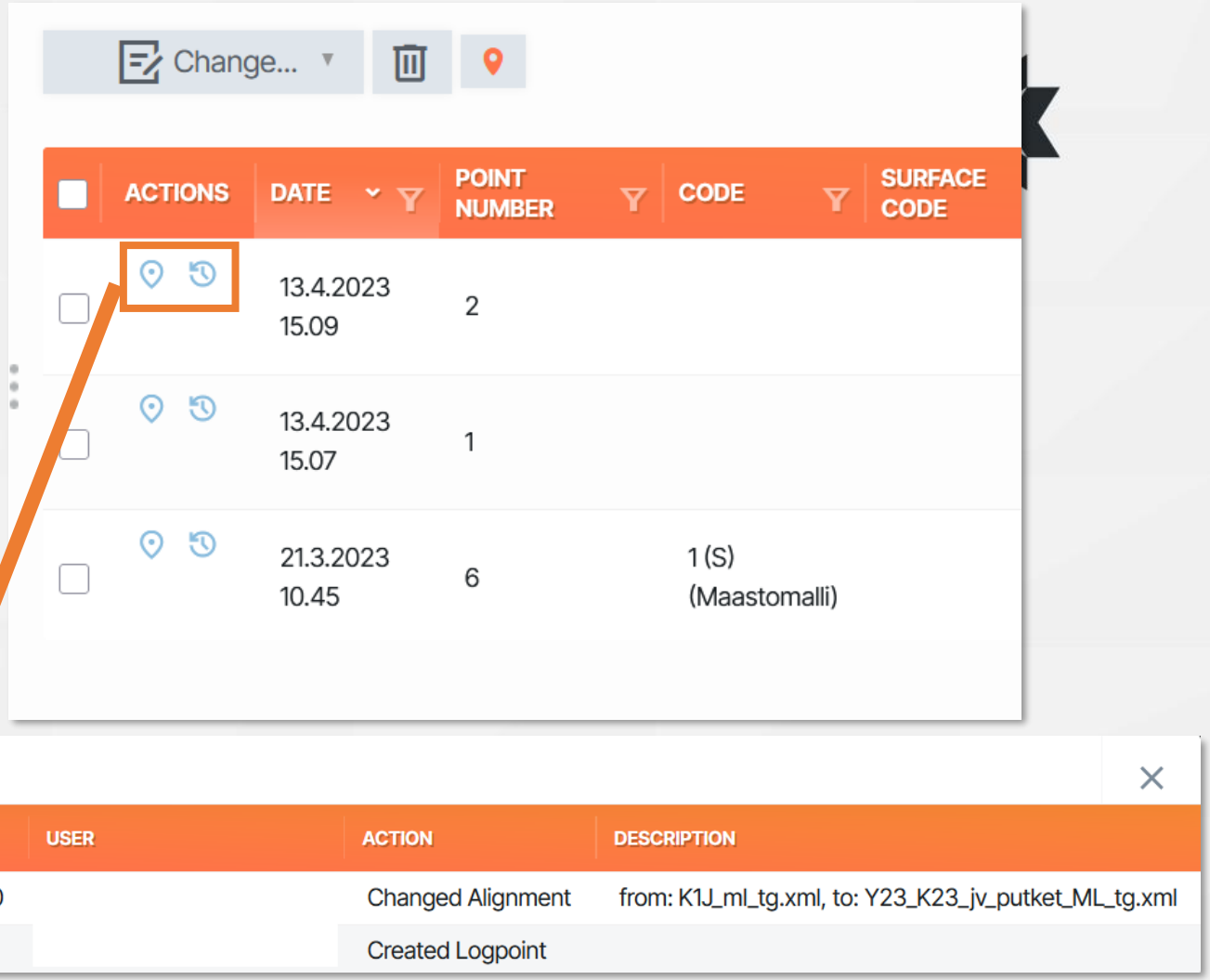
You can edit several points at once. Select several points at once from the ☑ - box in front of the row



Information of as-built points

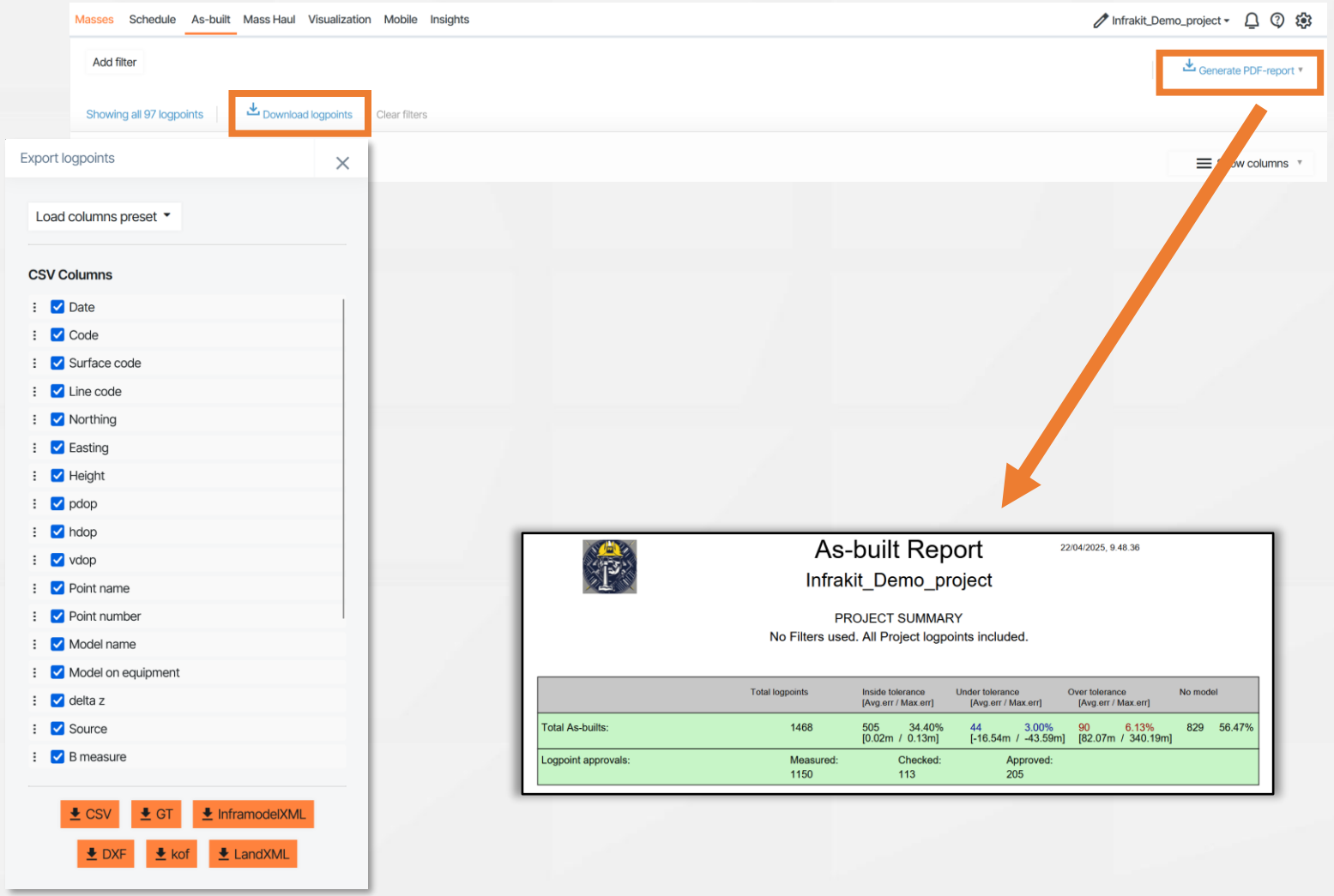
By clicking the location symbol, the point opens on the map page (opens new tab)

The edit history of the point opens by clicking the clock symbol



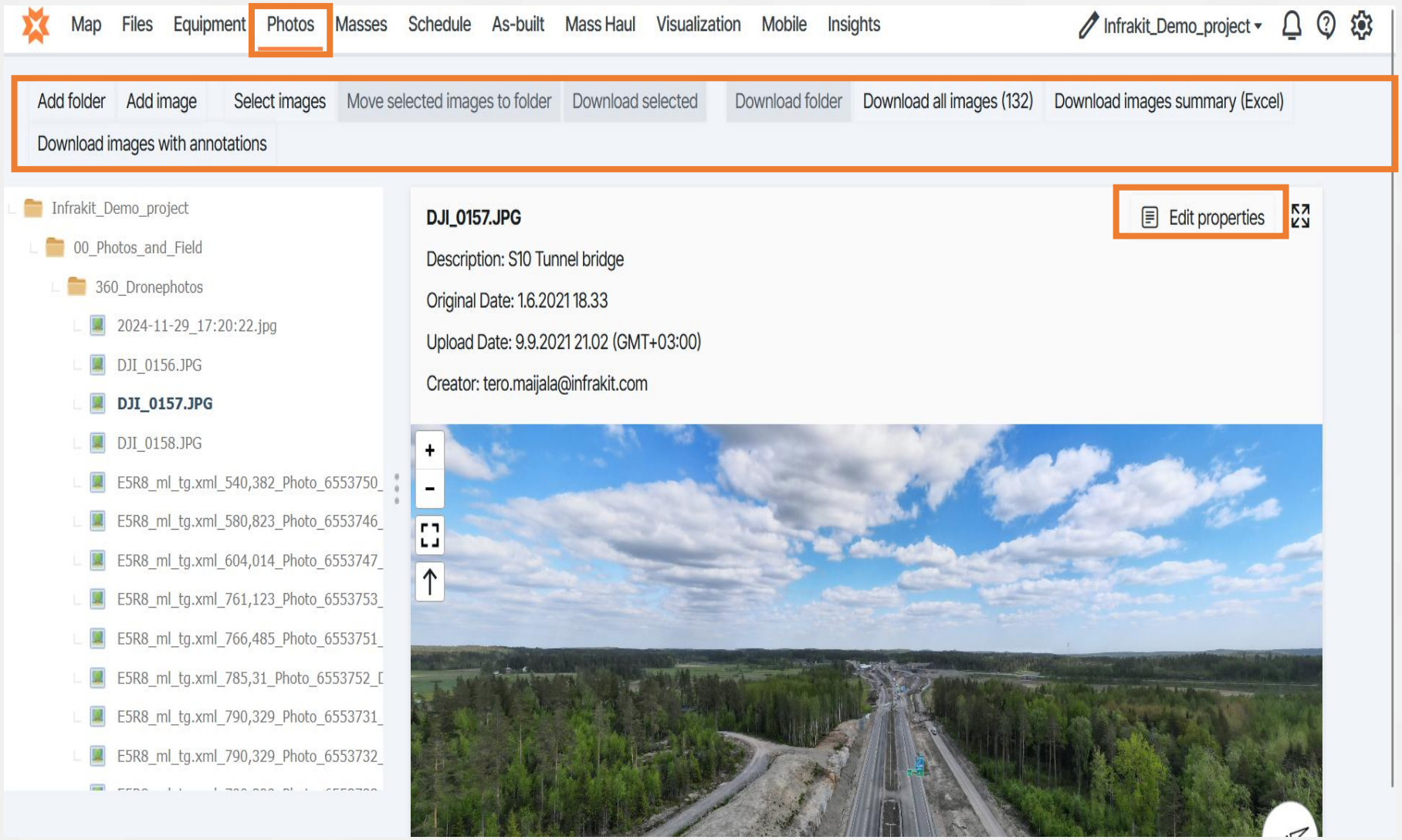
Downloading as-built points

- You can use "Download logpoints" - button to download the as-built points to the computer in desired format. If no point is selected, all points in the table are downloaded. If something is selected, only the selected points are downloaded
- After selecting download option, you can choose which columns will be saved in a .csv file, other formats get their columns automatically based on the format
- “Generate PDF-report" button can be used to download the as-built report either for all or only selected/filtered points. The report shows how many points there are and how they are within tolerance



Photos page

- Photos can be edited, uploaded, moved and downloaded on the Photos page
- Tools for managing photos are on the top of the page. Certain photo's properties can be edited from the top right corner of the selected photo
- Same tools are aviable on the "Map" page



Equipment page

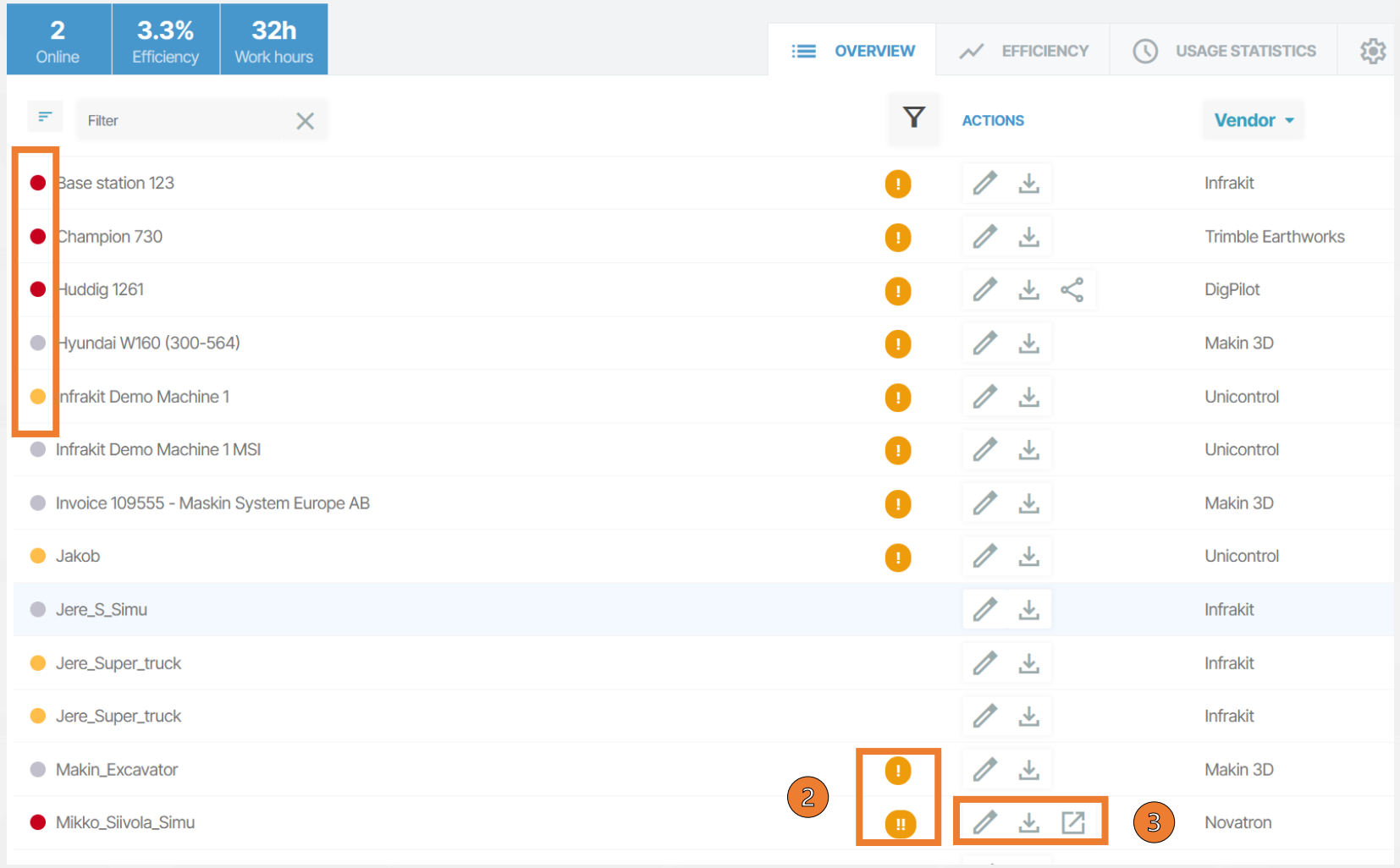
- Online
- Offline
- 1 Not in the project
- Not synced

- The machine's last accuracy calibration was
- 2 over 2 weeks ago or it's accuracy is over the tolerance or both

- 3 Organization admin can access the equipment settings

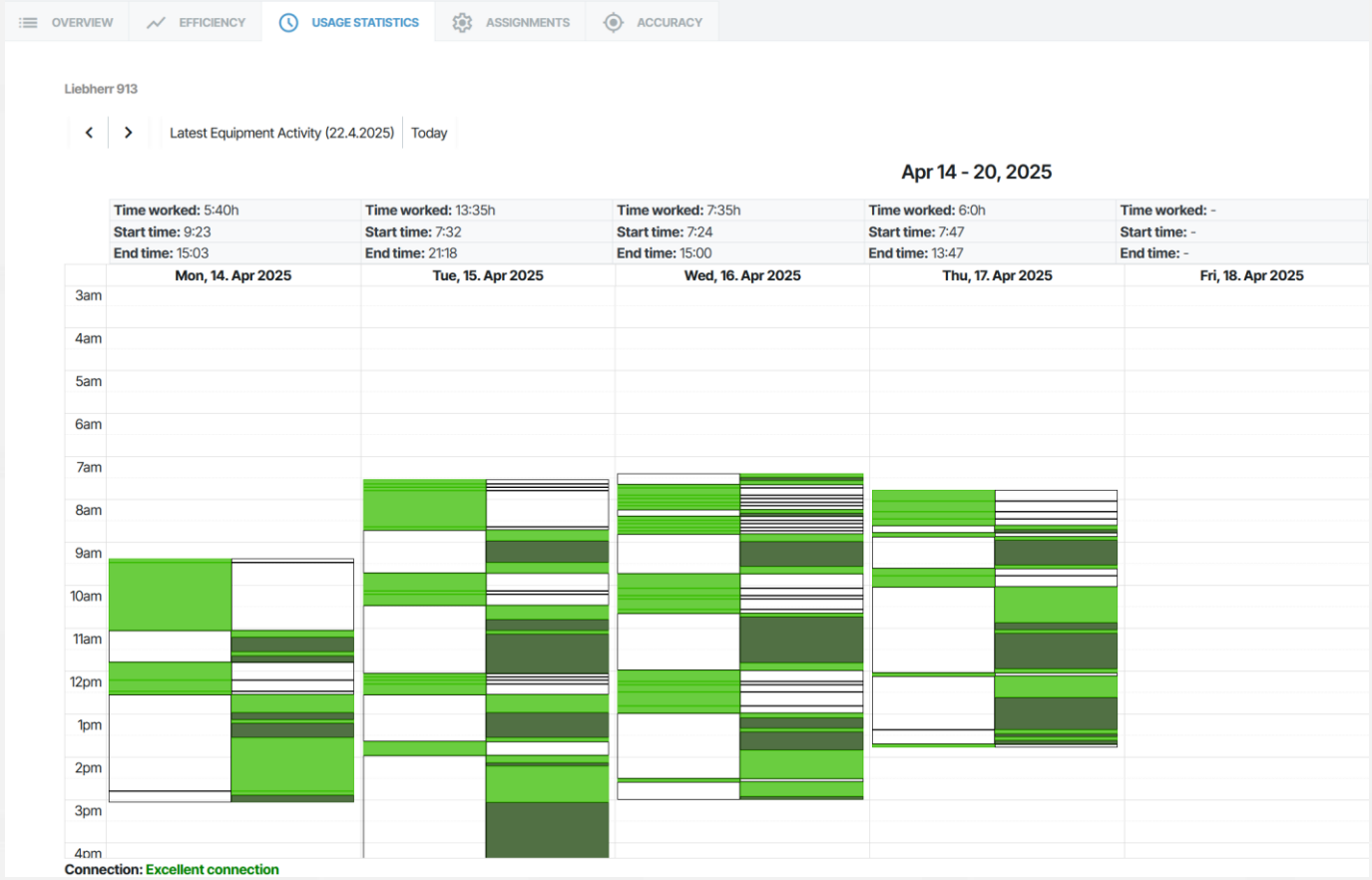
Downloading the machine's as-built points from a certain time perioid

Link to Novatron Xsite manage



Usage statistics

- The usage statistics tab of the equipment page allows you see each machines workin statistics
- Select equipment from the list on the left, and the usage statistics opens in the calendar
- By clicking on the green bar, you can see which model the machine has been working on at that time
- Light green means that the machine has moved at that time, dark green means that the machine has not been moving
- Weeks can be changed with the arrows at the top
- The "Last connection" and "Today" buttons allow you to jump directly to the day in question

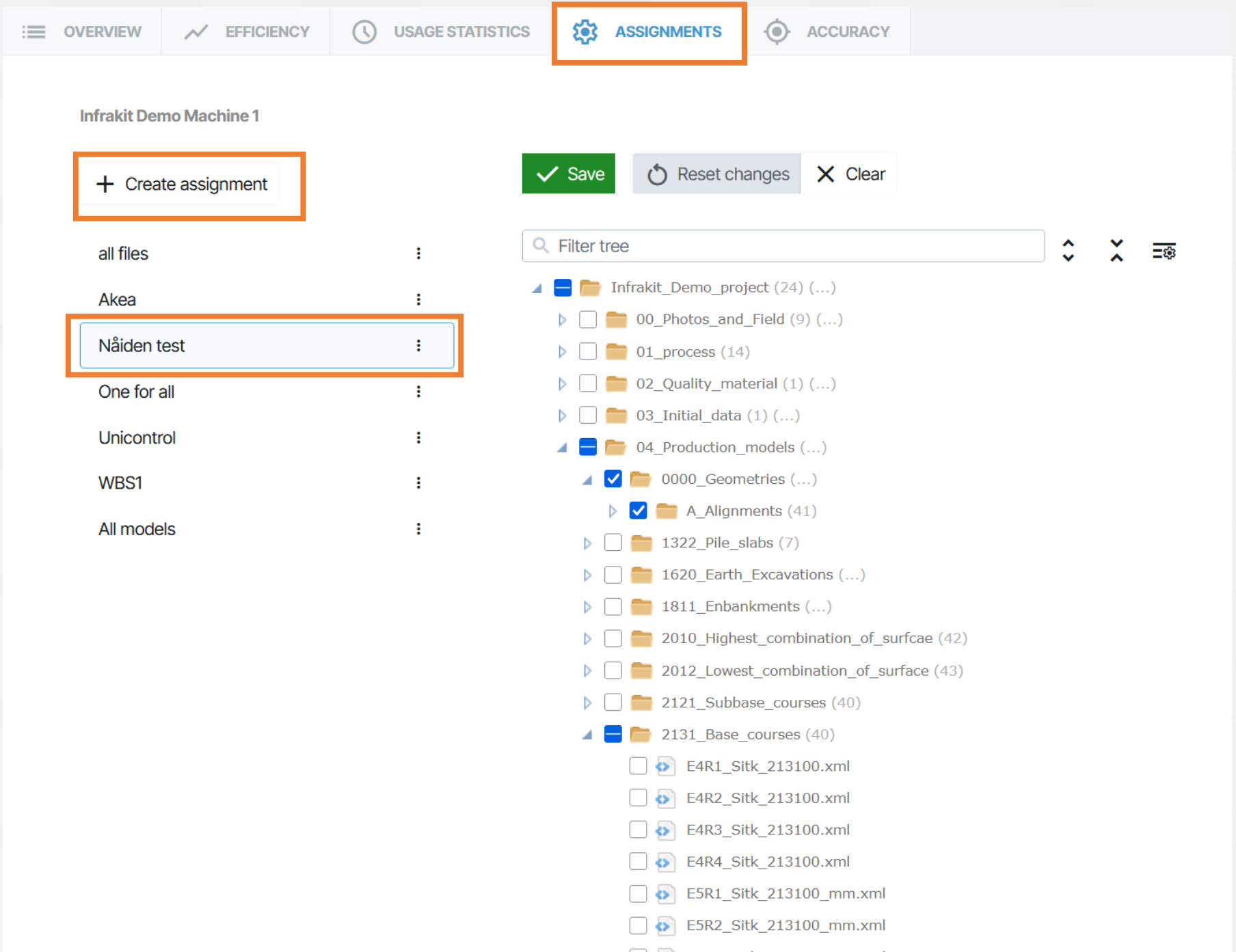


Assignments

Model assignments are used to manage which surface models and background maps are sent to machines

You can view machine's assignment by clicking the name of the machine on the left. All assignments are shown when no machine is selected

From the three points, you can assign it to different equipments or delete it



Equipment accuracy

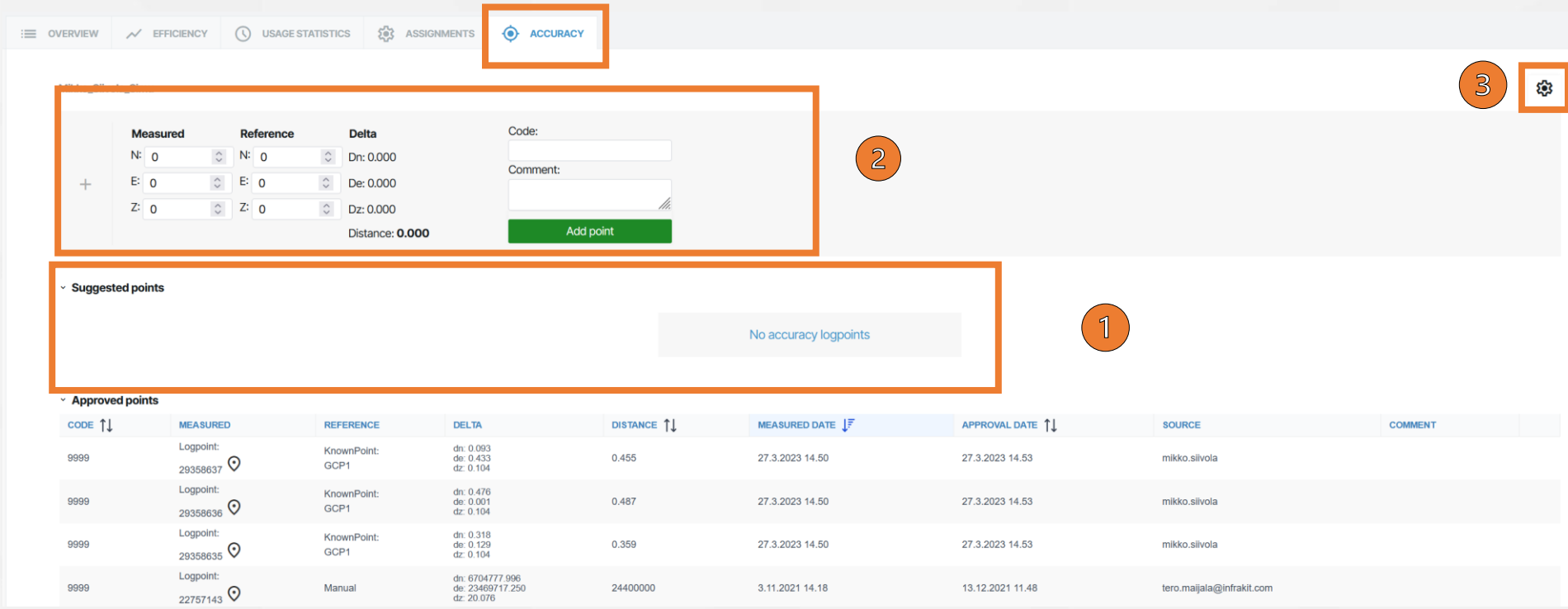
1. The equipment accuracy tab shows the accuracy logpoints measured by the machine, and they can be also approved here

2. The machine accuracy logpoints can also be entered manually

   The coordinates measured by the machine are entered in the “Measured” column

   The coordinates measured by the surveyor are entered in the “Reference” column

3. In the settings, you can edit the tolerances of the project, download accuracy report and choose whether the coordinates of the measured point are showed



Visualization (3D)

All models in Infrakit can be viewed in 3D view

Supported formats

- ✓ IFC, PipenetWorks (XML), triangular surface models (XML, DWG, DXF…)

- ✓ Always have the projects models in right coordinate and height systems for visualization of all project related models **in one single view**

Thank you

More instructions at
support.infrakit.com