

The word "AETHER" is written in a bold, white, sans-serif font. It is centered within a rectangular frame. The frame is composed of a solid line that transitions from a light blue on the left to a light orange on the right. Small white dots are placed at regular intervals along the top and bottom edges of the frame.

**AETHER**

R.24.17 – Release Note

Deployment April 23, 2024

# Summary

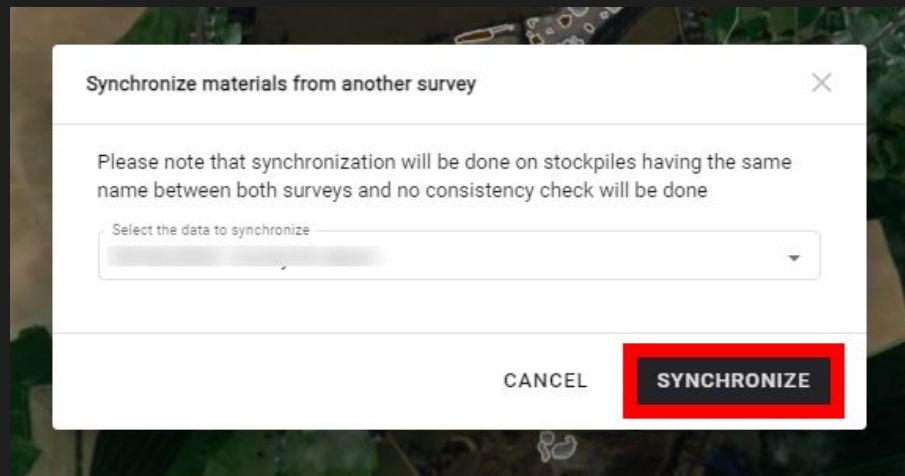
MAIN TOPICS	MODULE
<b>Stockpile module improvements</b>	Data Studio / Stockpile Module
<b>Photogrammetry - Pix4D V2 improvements</b>	Data Studio / Analytics Catalog
<b>Photogrammetry - Update to Metashape V2</b>	Data Studio / Analytics Catalog
<b>Split view 3D improvements</b>	Data Studio / Advanced 3D viewer
<b>Projected 3D annotations</b>	Data Studio / Advanced 3D viewer
<b>Annotations Management tool</b>	Data Studio / Annotations explorer
<b>3D Local Frame</b>	Data Studio / Advanced 3D viewer
<b>Export cropped PCL from 3D viewer</b>	Data Studio / Advanced 3D viewer
<b>Data Acquisition improvements</b>	Data Acquisition
<b>Data Management Module improvements</b>	Data Management

# Summary

MAIN TOPICS	MODULE
<b>Vegetation Encroachment from satellite data</b>	Data Analysis, Operations, Insight
<b>Share link to location</b>	Insight
<b>New 2D / 3D viewers activation</b>	Insight

## Stockpiles Module | Synchronize materials from another survey

Materials can now be “one-click” assigned to the newly computed advanced stockpiles



## Stockpiles Module | Manage stockpile prices

Stockpile prices are automatically computed according to material settings

Project settings

Filter materials by:  
Company: [dropdown] Inventory: [dropdown]

11 materials IMPORT CSV ADD MATERIAL

Material name	Material density	Material price
*	[dropdown]	0 USD
This material will be added to the Company's inventory too.		
0.48	2.32 t/m <sup>3</sup>	[edit] [delete]
0/14	1.68 t/m <sup>3</sup>	[edit] [delete]
0/15	1.334 t/m <sup>3</sup>	[edit] [delete]
0/32	2.04 T/yd <sup>3</sup>	[edit] [delete]
0/40	2.13 t/m <sup>3</sup>	[edit] [delete]
10/20	1.8 t/m <sup>3</sup>	61.72 EUR [edit] [delete]

20

PROPERTIES COMMENTS

Add a tag... +

GENERAL

Name 20  
Type Advanced stockpiles  
Created [date]  
Updated [date]

MATERIAL TYPE

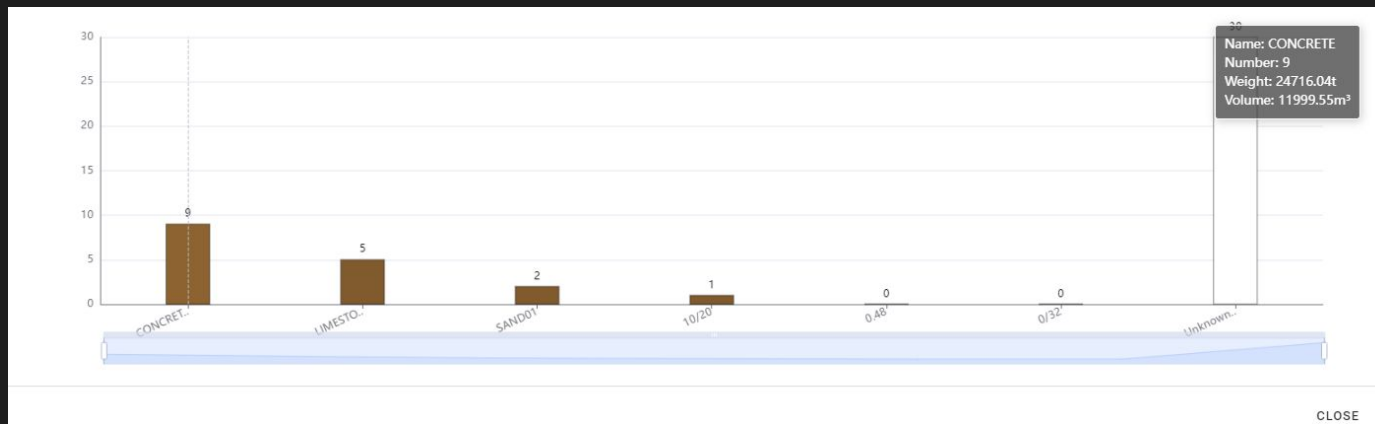
Material type CONCRETE

MANAGE MATERIAL TYPES

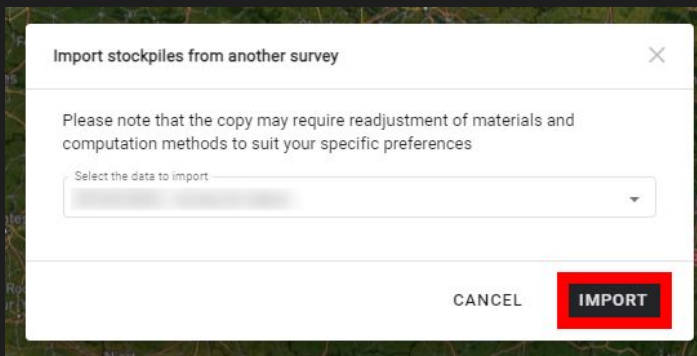
METRICS

Area	1164.1m <sup>2</sup>
Volume	3499m <sup>3</sup>
Weight	7207.06t
Price	395,426.19 EUR

Most existing currencies are available (119)



It is now possible to enlarge the material production chart



The “import stockpiles” option is now only available if another survey contain some self-service stockpiles and if there is a DSM on the current survey.

[Stockpiles module](#)

[Material management](#)

# Photogrammetry - Pix4D V2 improvements

## CONTEXT

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Pix4D engine V2 will be **selected by default** when launching a RGB photogrammetry on all domains where it is activated.

In addition, the default settings have been adjusted to guarantee the best performance :

- "Deghost" is activated by default for 3D model generation
- DSM parameters have been integrated, to enable users to choose between **rural or urban** environment to get the best results according to their needs.

## DEPLOYMENT

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If presets have been defined at company or project level, the original custom presets remain applied by default.

Next Step : Supporting Multispectral

[Photogrammetry engines and options](#)

Photogrammetry settings

**Execution**

Advanced

Self-service

**Processing engine**

Pix4Dengine

Pix4Dengine v2

Metashape

**Settings**

Recommended settings

Custom settings

Calibration templates Large	Point cloud densification templates Nadir
Mesh templates Large	Mesh textures templates Deghost
Orthomosaic pipeline Fast	DSM settings Urban

CANCEL SAVE

Effect of the “DEGHOST” option on the MESH:



Before



After



## Photogrammetry | Update to Metashape V2

### What has been done:

- Metashape V2 has been integrated into the platform to continue using this photogrammetry engine.
- New parameters have been added to this version, improving the photogrammetry results.
- All users having access to Metashape photogrammetry engine will now use Metashape V2 without any change to be done on their side.



# Data Studio – Split view 3D improvements

## CONTEXT

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### Use case:

3D Asset Inspection workflow:

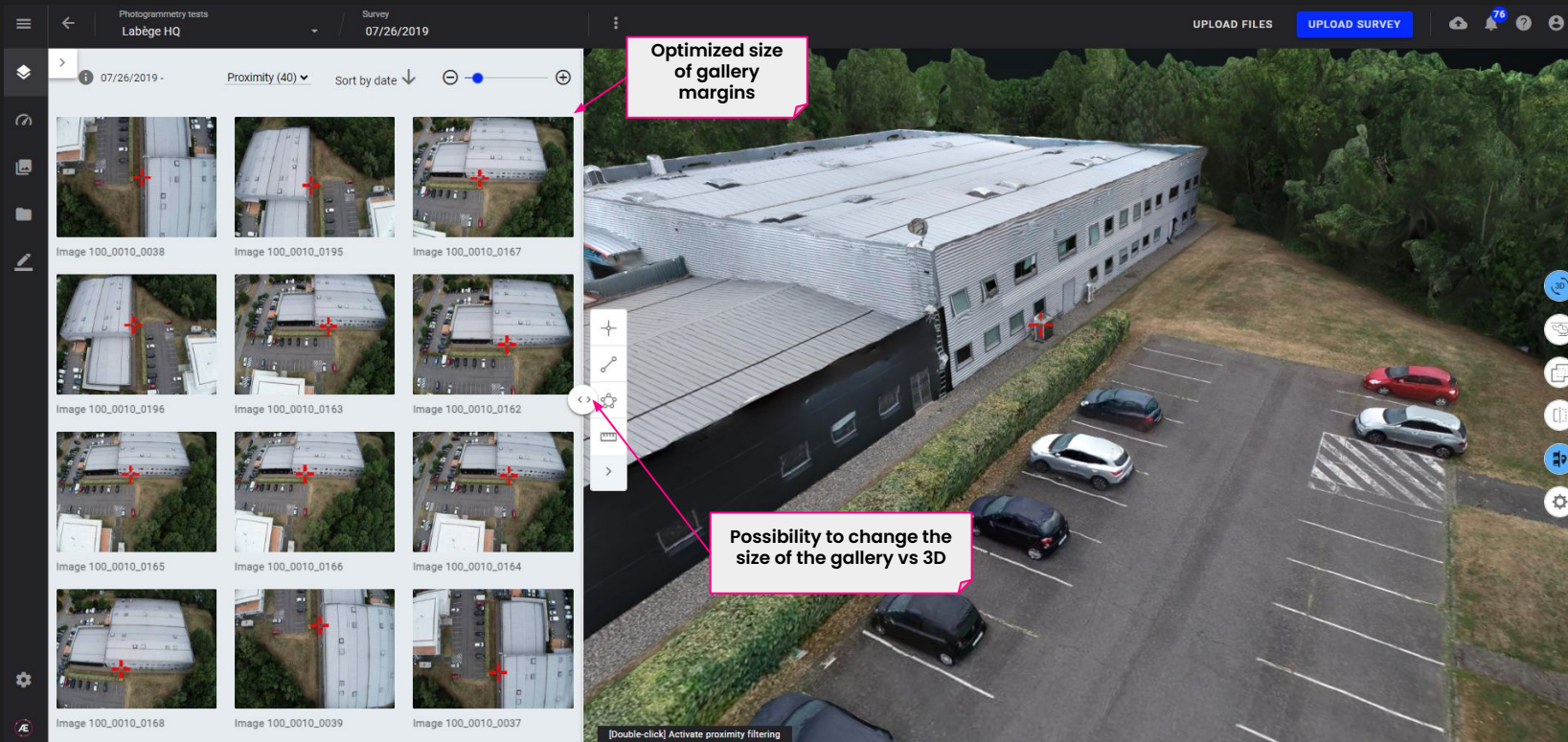
- 1) 2D images collected with drone and imported in Aether
- 2) 3D model generated from the 2D images in Aether
- 3) **3D inspection in split view mode (image / 3D)**

## DEPLOYMENT

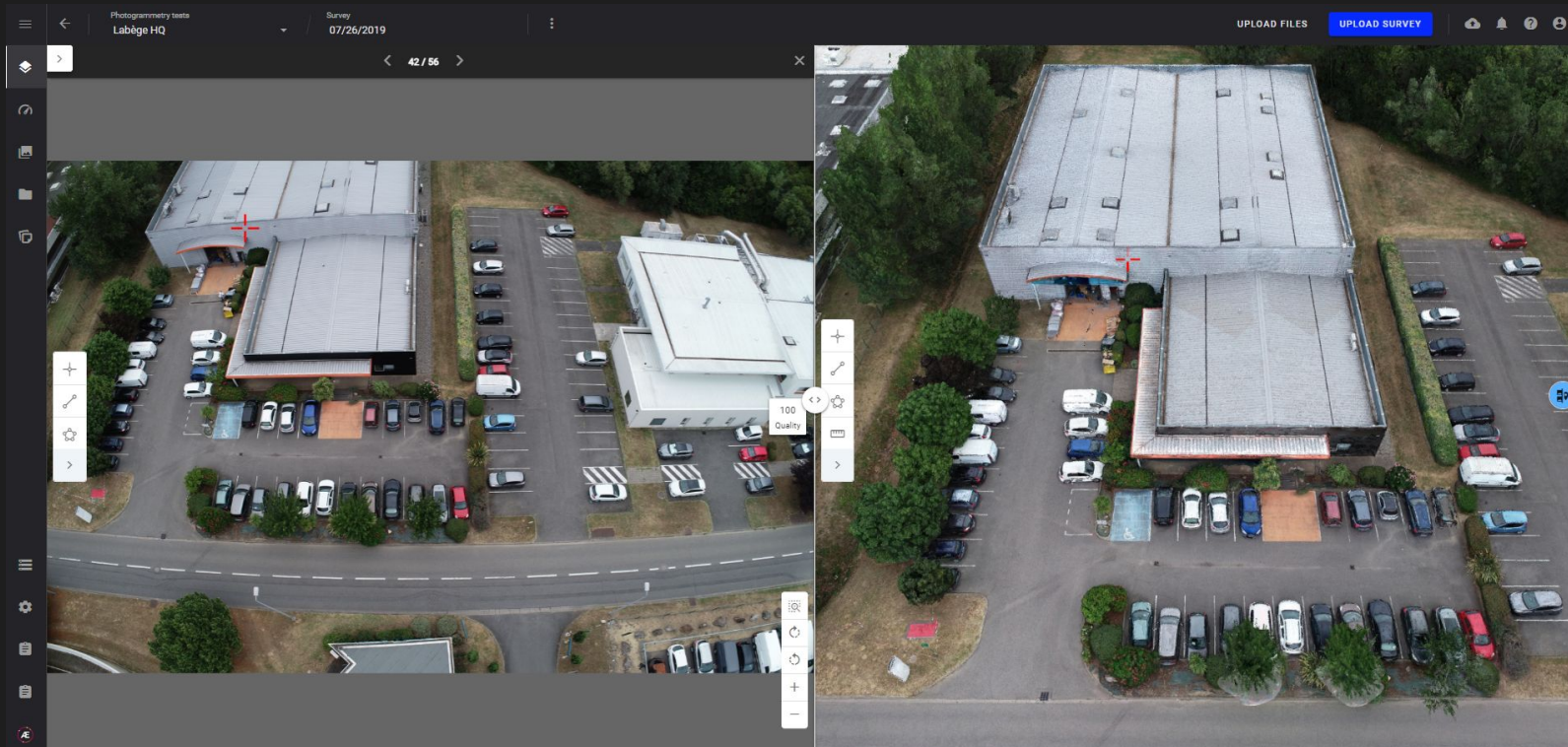
---

Several enhancements have been made to improve the user experience when interacting with the images and the 3D model at the same time.

[Advanced 3D viewer](#)

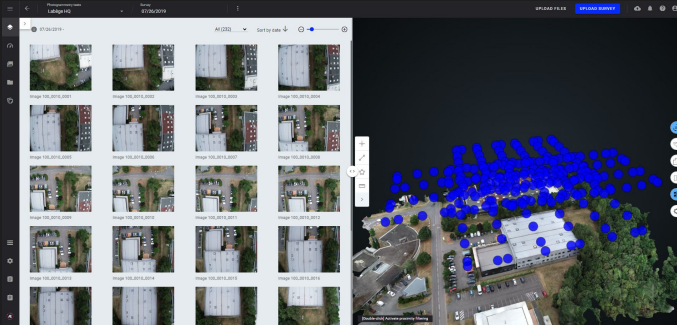


Possibility to open an image in the split view, to visualize a single image and the 3D model at the same time



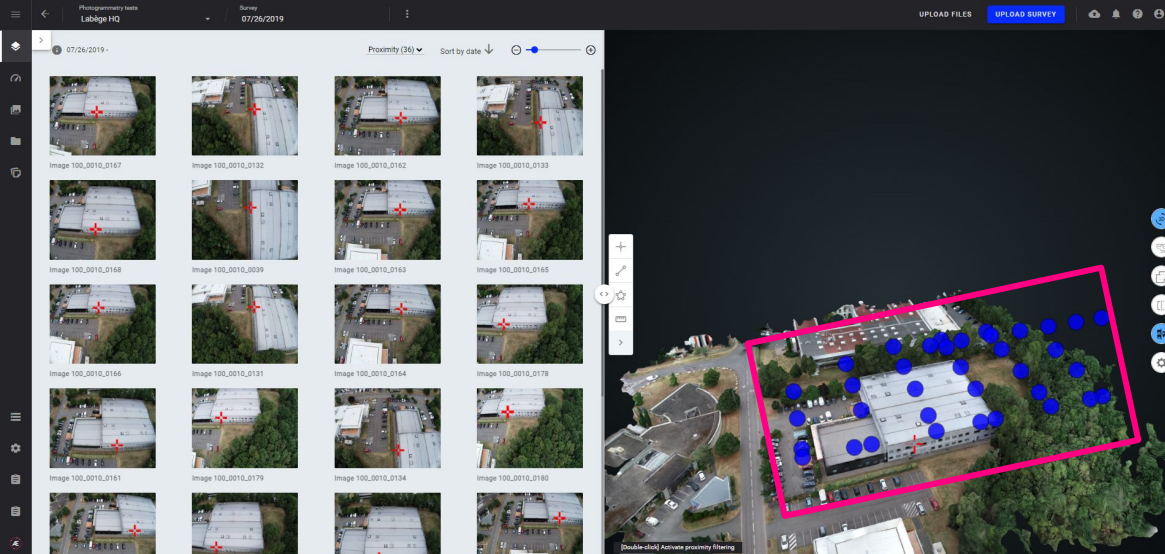


## Data Studio | Improvements on the 3D proximity filter



Before activating the proximity filter: all image positions are displayed

After activating the proximity filter: only the position of images that see the point are displayed



Red cross appearance has been changed to indicate if the clicked point is in front or behind the 3D model.



# Data Studio – Projected 3D annotations

## CONTEXT

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### Use case:

3D Asset Inspection workflow:

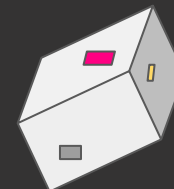
- 1) 2D images collected with drone and imported in Aether
- 2) 3D model generated from the 2D images in Aether
- 3) Issues/defect detected automatically or manually
- 4) **Interaction with the related annotations in 3D**

## DEPLOYMENT

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Creation of annotations on images without duplicating annotations

Global visualization of defects on my infrastructure

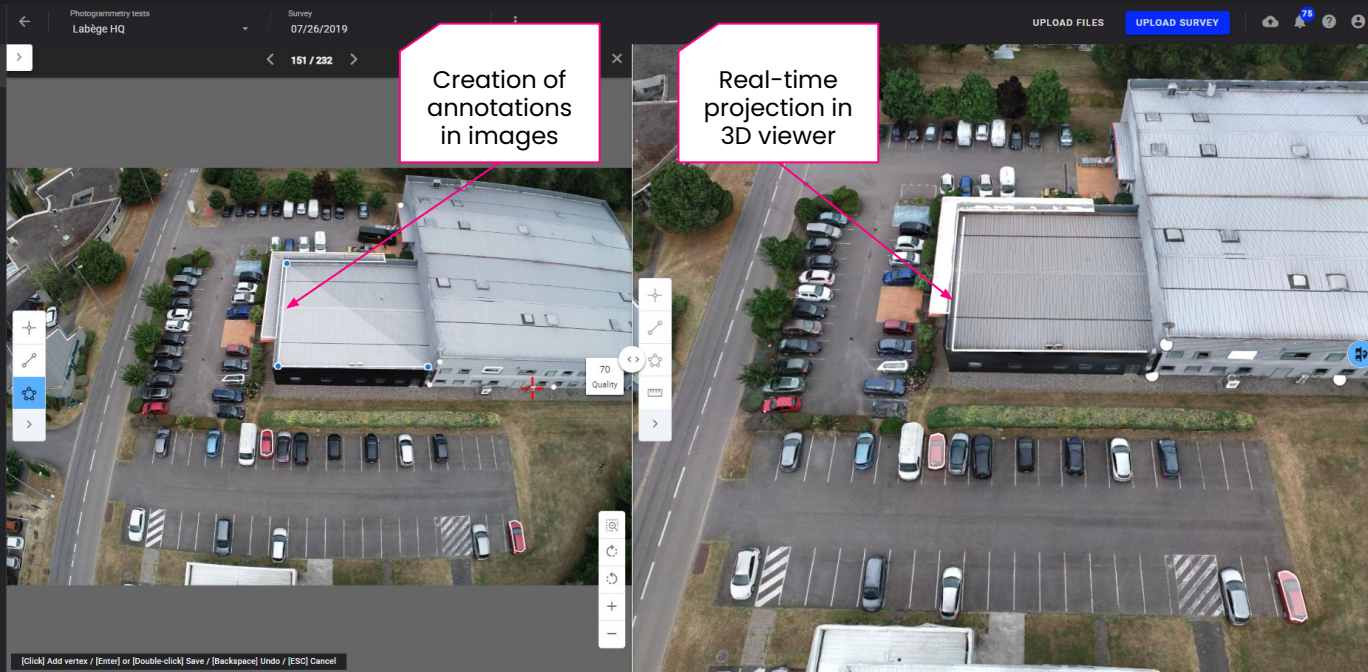


*rather than*

Individual visualization of anomalies on pictures



[3D inspection projected annotations](#)



- 3D annotations are visible and editable on related 2D images
- Annotations created in images are visible and editable on the 3D model
- Projected 3D annotations are activated in the project settings



## Data Studio | Annotations Management tools

User can list all annotations available on a specific project.

**Export or delete selected annotations**

**Configure displayed columns**

**Filter annotations by creation date, creator and survey**

**Annotation details can be displayed**

Type	Name	Survey	Creator	Creation date	Modification date
<input type="checkbox"/>	clem_car	07/26/2019		04/11/2024	04/11/2024
<input type="checkbox"/>	clim	07/26/2019		04/11/2024	04/11/2024
<input type="checkbox"/>	window	07/26/2019		04/11/2024	04/11/2024
<input type="checkbox"/>	red_car	07/26/2019		04/11/2024	04/11/2024
<input type="checkbox"/>	red_car	07/26/2019		04/11/2024	04/11/2024
<input type="checkbox"/>	delair_eave	07/26/2019		04/11/2024	04/11/2024
<input type="checkbox"/>	Point4	07/26/2019		04/11/2024	04/11/2024
<input type="checkbox"/>	Point3	07/26/2019		04/11/2024	04/11/2024
<input type="checkbox"/>	Point2	07/26/2019		04/11/2024	04/11/2024
<input type="checkbox"/>	Point1	07/26/2019		04/11/2024	04/11/2024

clim

Problem on that clim

Created by

Creation date 04/11/2024

Perimeter 4.41m

Area 1.24m<sup>2</sup>

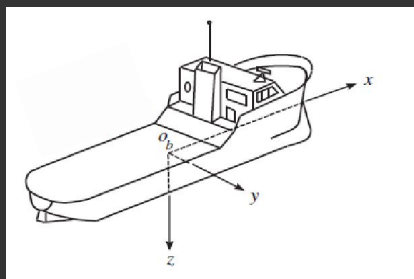
# Data Studio – 3D Local Frame

## CONTEXT

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**Use case:** Some assets have specific frame of reference (ex: war ship local frame). For 3D inspection, it may be simpler for users to use this local frame instead of geographic coordinates.

**Feature Upgrade:** 3D Local Frame



## PROBLEM SOLVED

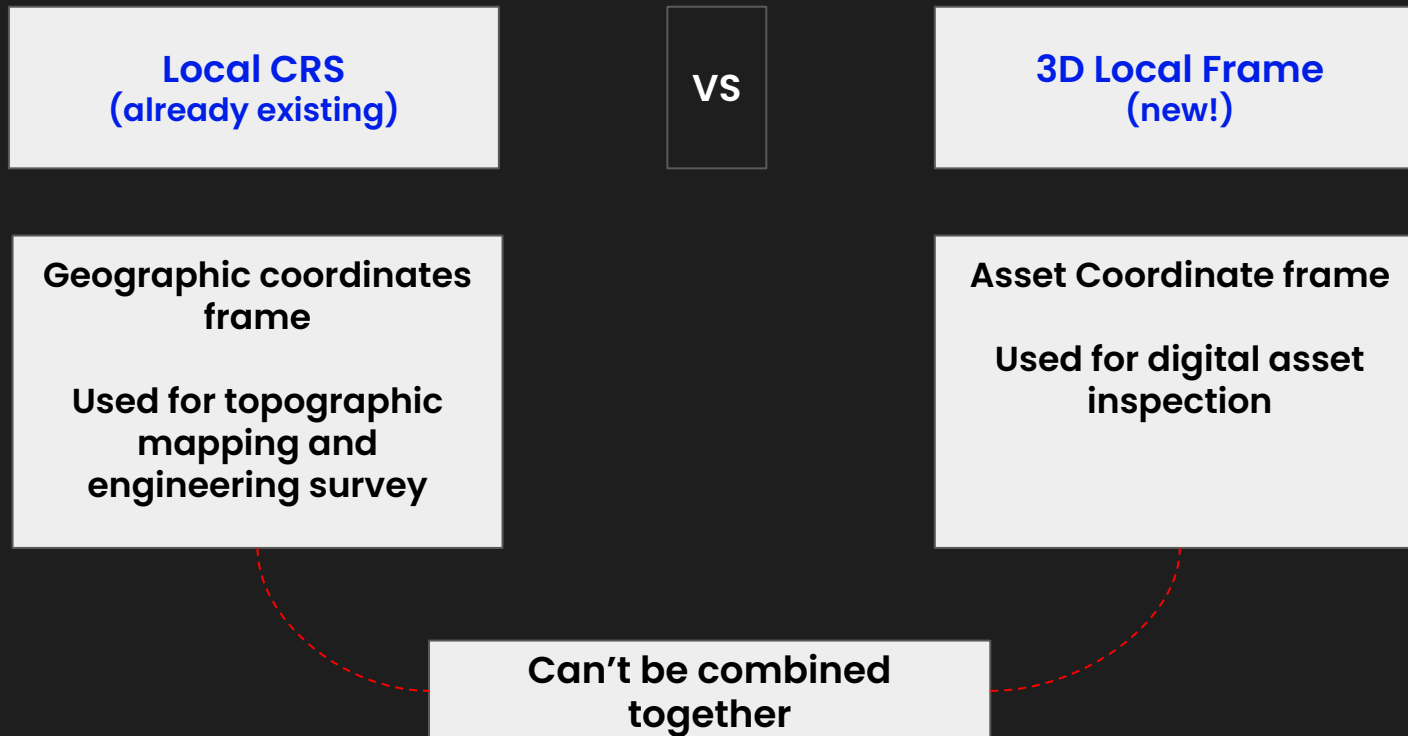
---

Integration of the local frame of inspected asset in Aether, enabling:

- Visualization of coordinates in local frame
- Measures in local frame
- Export of PCL in local frame

[3D local frame](#)

### What is the difference with the local CRS ?



# Data Studio | 3D local frame

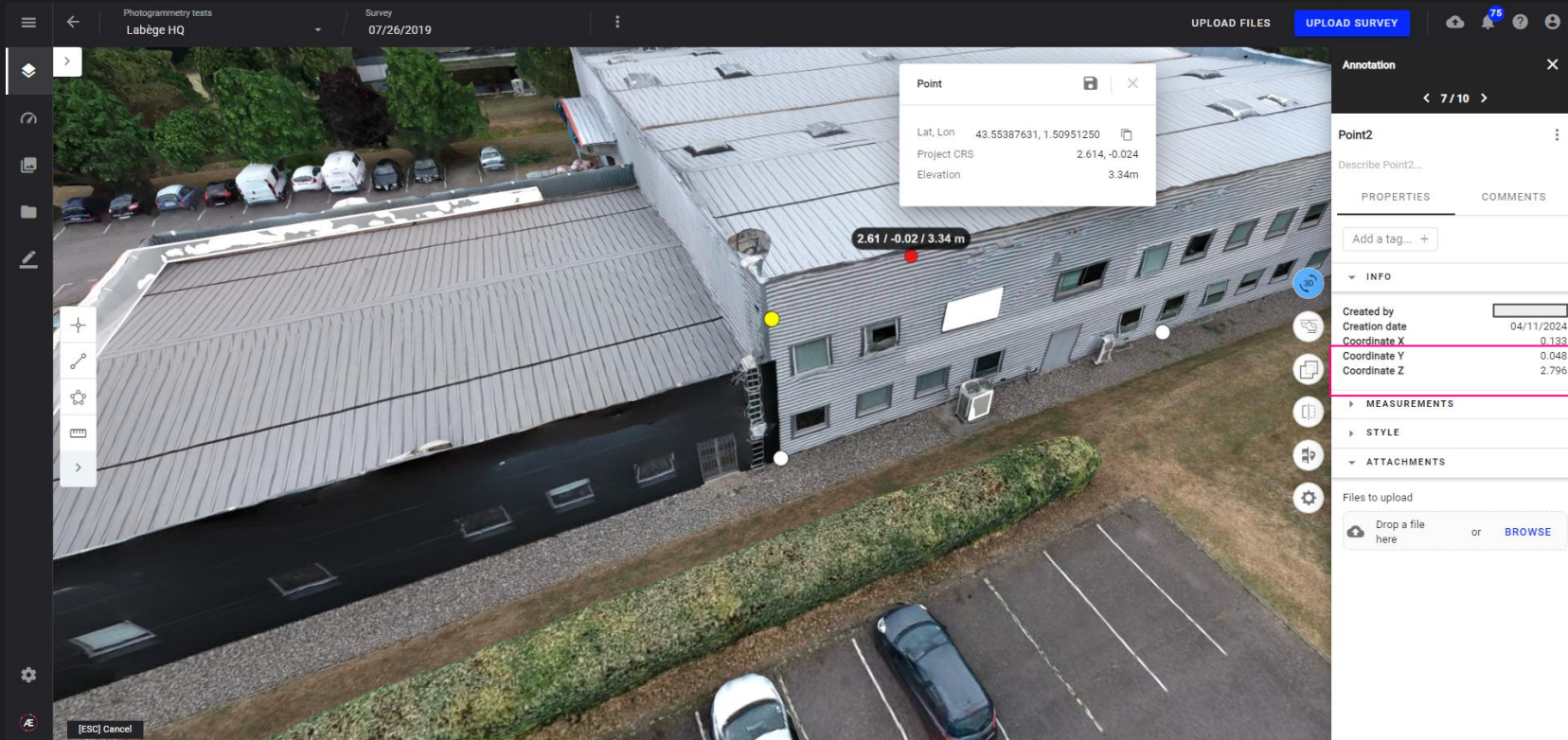
3D local frame is defined at project level based on 4 reference points.

The screenshot displays the 'Local frame setup' dialog box overlaid on a 3D aerial view of a building. The building has four red circular markers labeled 1, 2, 3, and 4, representing the reference points. The dialog box contains the following fields:

- Local frame name: [Empty text field]
- Reference point 1: x=0, y=0, z=0
- Reference point 2: x=0, y=0, z=3
- Reference point 3: x=10, y=0, z=0
- Reference point 4: x=0, y=20, z=0

At the bottom of the dialog, there are 'CANCEL' and 'SAVE' buttons. A tooltip at the bottom left of the 3D view reads: [Drag] Move point / [ESC] Cancel.

When 3D local frame is activated, measures and annotation coordinates are displayed in local frame.





# Data Studio | Export cropped PCL from 3D viewer

The screenshot displays the Data Studio interface with a 3D viewer in the center. A cyan wireframe box is drawn around a portion of the point cloud. An 'Export file' dialog is open, showing 'Cropped PCL' selected. The 'Point Cloud Demo 2417' properties panel is visible on the right.

**1. Select the Point Cloud you want to work on**

**2. Activate the "cropping" tool and define your cropped box**

**3. Select the "Export PCL" option**

**4. Select "Cropped PCL" and click on EXPORT**

**Export file**

Conversion format  
LAS (.las)

Full PCL  
 **Cropped PCL**

Local frame reprojection  
 Coordinate reference system reprojection

Global Coordinate Reference System (CRS) APPLY PROJECT CRS

Horizontal CRS (x,y)  
EPSG:32612 - WGS 84 / UTM zone 12N (meters)

Vertical CRS (z)

CANCEL EXPORT

**Point Cloud Demo 2417**

PROPERTIES COMMENTS

Add a tag... +

INFO

Flight date 07/26/2019  
Creation date 03/21/2024  
Number of points 16366111

STYLE

Bandwidth preview  
Low High

Material

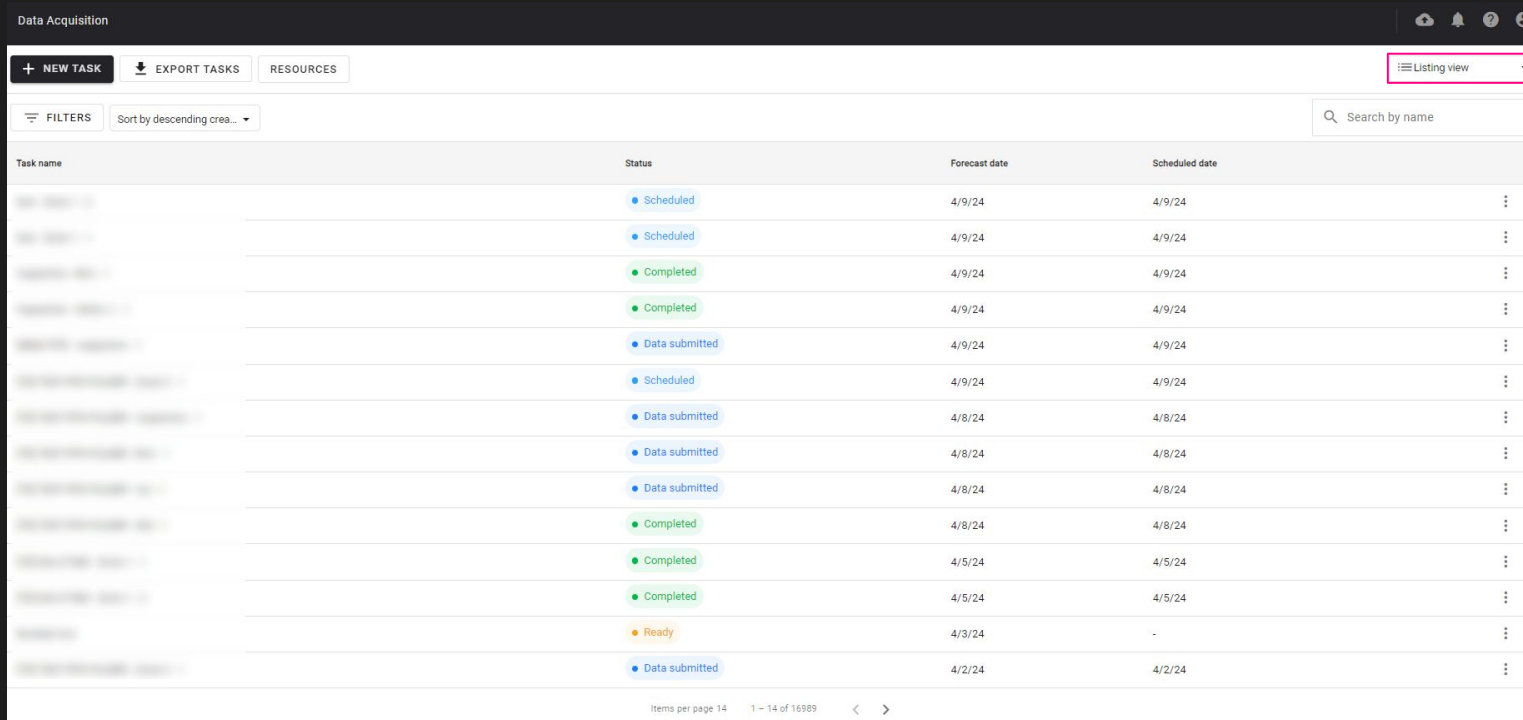
Point size: 1.00

Opacity: 1

Eye-Dome Lighting  
 Enabled  
Radius: 1.4  
Strength: 1

## Data Acquisition | **New listing view**

Access the list of capture tasks through a new “listing” view



The screenshot displays the 'Data Acquisition' interface. At the top, there are navigation buttons: '+ NEW TASK', 'EXPORT TASKS', and 'RESOURCES'. A dropdown menu is open, showing 'Listing view' selected. Below this, there are 'FILTERS' and a sorting option 'Sort by descending crea...'. A search bar is labeled 'Search by name'. The main area is a table with columns: 'Task name', 'Status', 'Forecast date', and 'Scheduled date'. The table contains 14 rows of task data. At the bottom, it shows 'Items per page 14' and '1 - 14 of 16989'.

Task name	Status	Forecast date	Scheduled date
...	Scheduled	4/9/24	4/9/24
...	Scheduled	4/9/24	4/9/24
...	Completed	4/9/24	4/9/24
...	Completed	4/9/24	4/9/24
...	Data submitted	4/9/24	4/9/24
...	Scheduled	4/9/24	4/9/24
...	Data submitted	4/8/24	4/8/24
...	Data submitted	4/8/24	4/8/24
...	Data submitted	4/8/24	4/8/24
...	Completed	4/8/24	4/8/24
...	Completed	4/5/24	4/5/24
...	Completed	4/5/24	4/5/24
...	Ready	4/3/24	-
...	Data submitted	4/2/24	4/2/24

# Data Acquisition | Export of tasks

Export tasks in a CSV file – limited to 1000 first entries

The screenshot displays the 'Data Acquisition' interface. At the top, there are navigation tabs: '+ NEW TASK', 'EXPORT TASKS' (highlighted with a red box), and 'RESOURCES'. Below the tabs, there are filters and a search bar. The main area is a Kanban board with six columns representing task stages: Pending, Ready, Assigned, Scheduled, Data submitted, and Completed. Each column contains task cards with details like 'Forecast date' and 'Scheduled date', and a status indicator (e.g., Pending, Ready, Assigned, Scheduled, Data captured, Completed).

Column	Task Status	Forecast Date	Scheduled Date
Pending	Pending	Unknown	-
Pending	Pending	Unknown	-
Pending	Pending	08/03/2024	-
Pending	Pending	Unknown	-
Pending	Pending	Unknown	-
Ready	Ready	03/04/2024	-
Ready	Ready	15/11/2020	-
Ready	Ready	25/11/2020	-
Ready	Ready	23/11/2020	-
Ready	Ready	23/11/2020	-
Assigned	Assigned	14/07/2021	-
Assigned	Assigned	15/01/2024	-
Assigned	Assigned	06/02/2024	-
Scheduled	Scheduled	-	24/11/2020
Scheduled	Scheduled	-	25/11/2020
Scheduled	Scheduled	-	26/11/2020
Scheduled	Scheduled	-	27/11/2020
Scheduled	Scheduled	-	30/11/2020
Data submitted	Data captured	-	09/12/2020
Data submitted	Data captured	-	08/12/2020
Data submitted	Data captured	-	12/01/2021
Data submitted	Data captured	-	13/01/2021
Data submitted	Data captured	-	22/12/2020
Completed	Completed	-	18/11/2020
Completed	Completed	-	15/11/2020
Completed	Completed	-	24/11/2020
Completed	Completed	-	24/11/2020



## Data Acquisition | Point cloud footprint

Display of point cloud footprint on a map (only for imported PCL)

To upload data [UPLOAD MORE DATA](#)

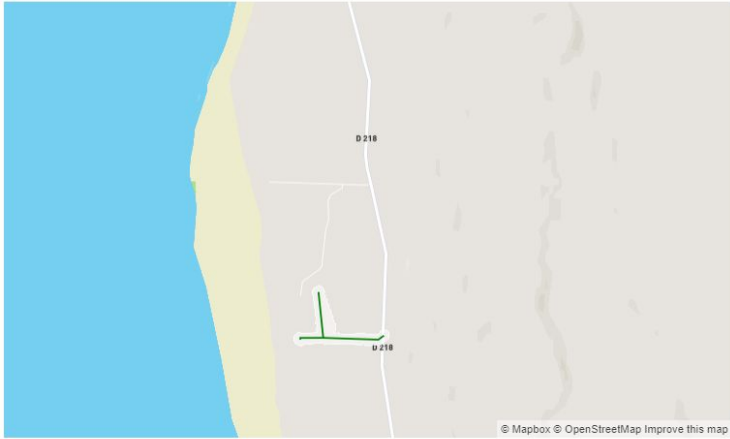
**REPORTING**

Field report Required [ADD](#)

**DATASETS** [VIEW SURVEY](#)

- Raw images No data available
- Orthomosaic \* No data available
- DSM \* No data available
- Point cloud Available [VIEW COVERAGE](#)
- 3D model No data available

Task Area Coverage ×



© Mapbox © OpenStreetMap Improve this map

CLOSE

# Data Management | Delete and download datasets in bulk

FOR ENTERPRISE CUSTOMER ONLY – The Data management module allows you to consult, delete and download your files from multiple projects, surveys and companies at the same time

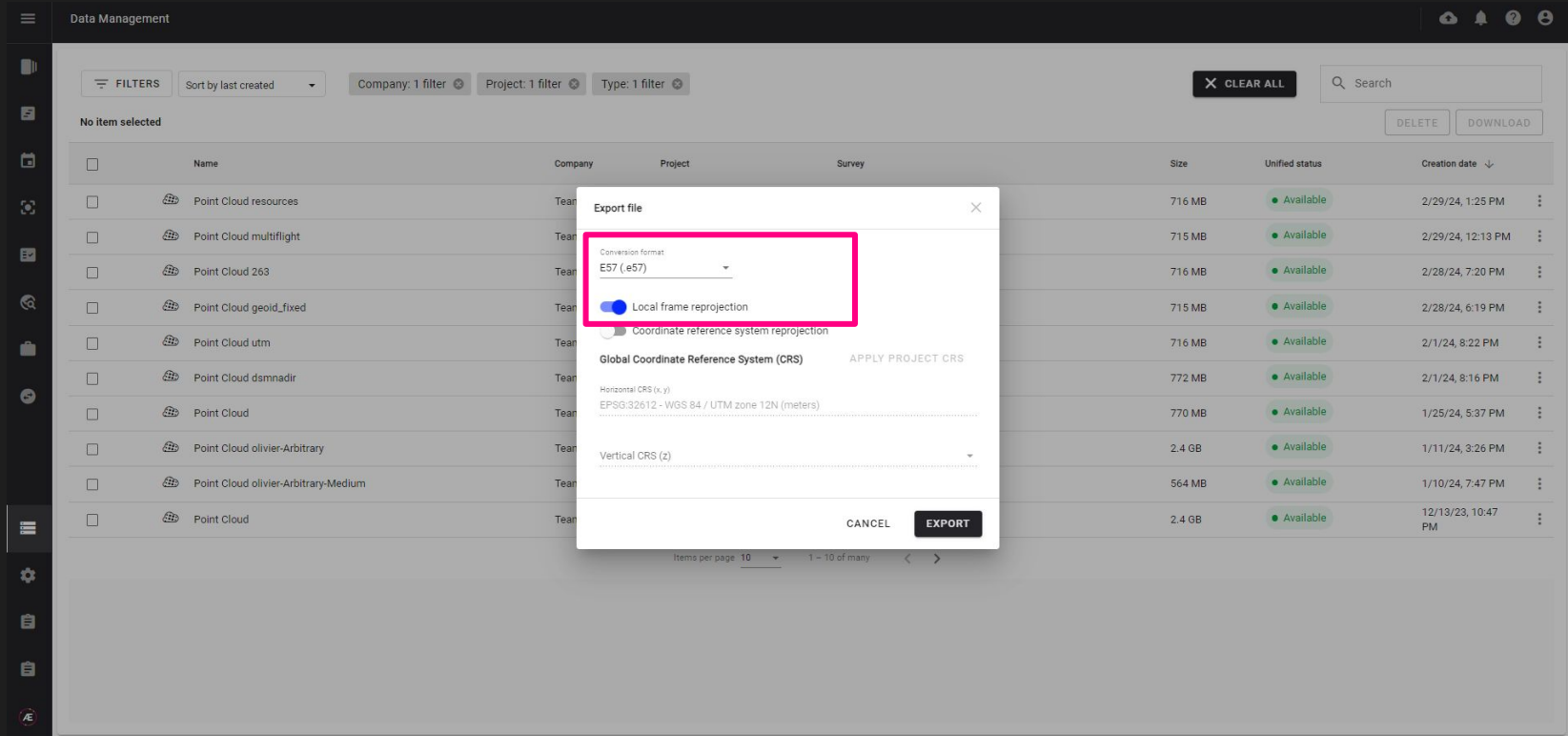
The screenshot shows the 'Data Management' interface with 10 items selected. The table below lists the datasets:

	Name	Company	Project	Survey	Size	Unified status	Creation date
<input checked="" type="checkbox"/>	Point Cloud		Datasets	06/09/2017 - test	2 MB	Available	3/7/24, 3:54 PM
<input checked="" type="checkbox"/>	6596703153f1000efd8947b9216000_930000		Datasets	07/26/2019 - Survey 1	487 bytes	Available	2/29/24, 5:44 PM
<input checked="" type="checkbox"/>	Point Cloud		Cell tower	01/16/2018	704 MB	Available	2/22/24, 9:25 AM
<input checked="" type="checkbox"/>	3D Model		Cell tower	01/16/2018	130 MB	Available	2/22/24, 9:25 AM
<input checked="" type="checkbox"/>	3D Model mesh_tower		Cell tower	01/16/2018	130 MB	Available	2/22/24, 9:25 AM
<input checked="" type="checkbox"/>	Point Cloud mesh_tower		Cell tower	01/16/2018	703 MB	Available	2/22/24, 9:25 AM
<input checked="" type="checkbox"/>	3D Model		NC - Demo Cold Storage	05/07/2019 - First survey	10 MB	Available	2/15/24, 11:49 AM
<input checked="" type="checkbox"/>	Point Cloud		NC - Demo Cold Storage	05/07/2019 - First survey	58 MB	Available	2/15/24, 11:49 AM
<input checked="" type="checkbox"/>	Point Cloud pix4D		Datasets	07/26/2019 - Survey 1	178 MB	Available	2/9/24, 5:04 PM
<input checked="" type="checkbox"/>	3D Model Metashape		Datasets	07/26/2019 - Survey 1	64 MB	Archived	2/9/24, 5:04 PM

[Data management - dataset deletion](#)  
[Data management - dataset export and download](#)

# Data Management | Export PCL files in e57 format and local frame

The Data management module allows you to export point cloud file in local frame and e57 format



The screenshot displays the Data Management interface with a table of point cloud files. A modal dialog titled "Export file" is open, showing the following options:

- Conversion format: E57 (.e57)
- Local frame reprojection:
- Coordinate reference system reprojection:

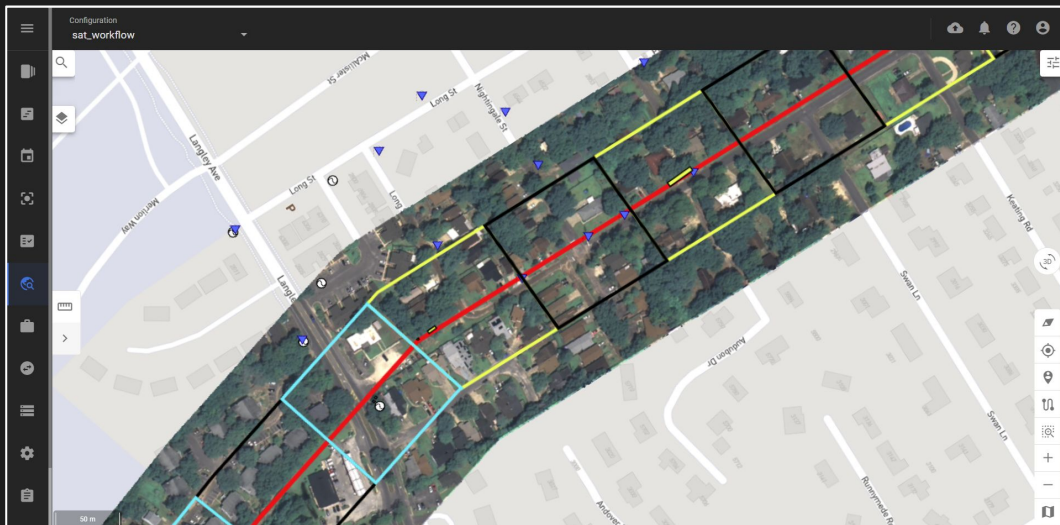
The dialog also shows the Global Coordinate Reference System (CRS) settings:

- Global Coordinate Reference System (CRS): APPLY PROJECT CRS
- Horizontal CRS (x, y): EPSG:32612 - WGS 84 / UTM zone 12N (meters)
- Vertical CRS (z):

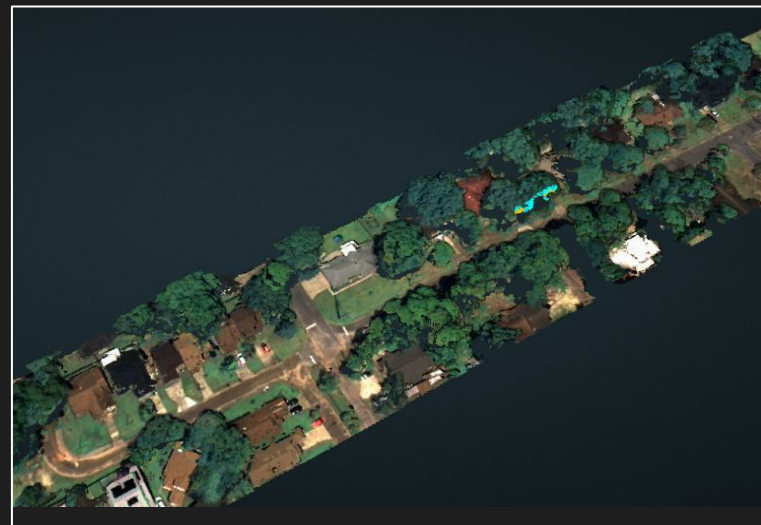
The table in the background lists the following files:

Name	Company	Project	Survey	Size	Unified status	Creation date
Point Cloud resources	Team			716 MB	Available	2/29/24, 1:25 PM
Point Cloud multflight	Team			715 MB	Available	2/29/24, 12:13 PM
Point Cloud 263	Team			716 MB	Available	2/28/24, 7:20 PM
Point Cloud geoid_fixed	Team			715 MB	Available	2/28/24, 6:19 PM
Point Cloud utm	Team			716 MB	Available	2/1/24, 8:22 PM
Point Cloud dsmnadir	Team			772 MB	Available	2/1/24, 8:16 PM
Point Cloud	Team			770 MB	Available	1/25/24, 5:37 PM
Point Cloud olivier-Arbitrary	Team			2.4 GB	Available	1/11/24, 3:26 PM
Point Cloud olivier-Arbitrary-Medium	Team			564 MB	Available	1/10/24, 7:47 PM
Point Cloud	Team			2.4 GB	Available	12/13/23, 10:47 PM

Encroachment from satellite and satellite orthomosaic can be displayed in 2D  
Satellite point cloud can be displayed (with RGB and NDVI view)



2D mode



3D mode

Encroachment analysis can be operated directly from the Analysis module

The screenshot displays the software interface for satellite encroachment analysis. On the left, a sidebar contains navigation icons. The main panel is titled 'Configuration sat\_workflow' and 'Analysis Analyzing'. It features an 'ANALYSIS INFORMATION' section with the following details:

ANALYSIS INFORMATION		
Name		
Creation date	Created by	
4/2/24, 3:37 PM	Beniot Admin	
Review date	Reviewed by	
4/2/24, 3:38 PM	Beniot Admin	
Analysis details		
Analysis Type	Asset Version	Data stream
satellite	1.0.0	NW-Pensacola
Asset Type	Asset ID	
corridor	b000293	

Below this is an 'Ordered analysis' table with one entry:

Name	Status
Vegetation Encroachment Analysis for Satellite	Processing

The right side of the interface shows a satellite map of a region with a large, semi-transparent white polygon overlaid, representing the analysis area. A blue rectangular box highlights a specific area within this polygon. The map includes labels for 'Florida River Wildlife Management Area' and 'Escambia County Equine Center'. A dark sidebar on the far left contains various tool icons.



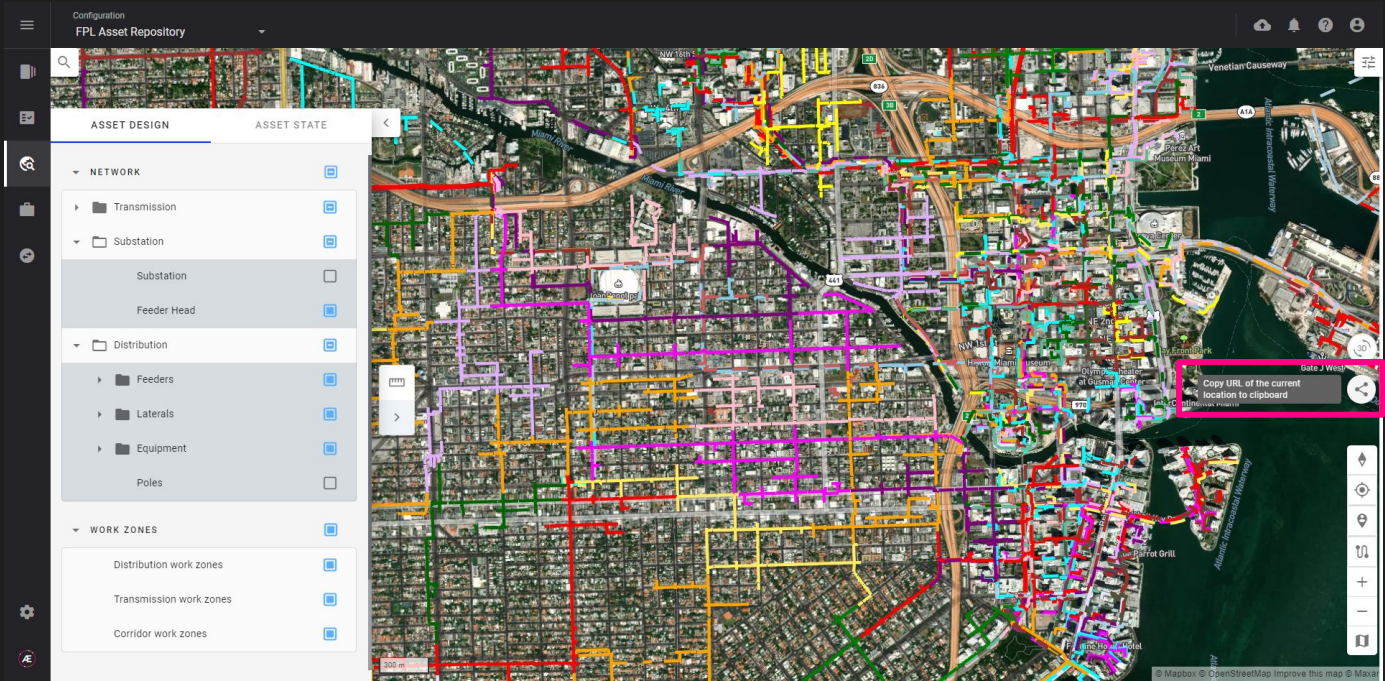
Work orders can be created based on satellite vegetation encroachment analysis

The screenshot displays a software interface for managing work orders. On the left, a sidebar contains a table of work order information and two expandable sections for operations selection. The main area shows a satellite image of a residential street with a yellow highlighted area indicating a specific work order location. The interface includes a top navigation bar with a back arrow, a breadcrumb 'Work order', and a status indicator 'Scoping - Planned'. A top right corner shows a checkmark, a link to 'corridor-b000919.kmz', and a 'COMPLETE FIELD WORK' button. The sidebar table contains the following data:

WORK ORDER INFORMATION			
Asset Version	Data collection date		
1.0.0	6/2/23		
External ID	Asset type	Asset ID	
-	corridor	b000919	
Creation	Created by	Last modified	Edited by
4/3/24, 5:41 PM	Benoit sat	4/3/24, 5:42 PM	Benoit sat

Below the table are two expandable sections:

- OPERATIONS SELECTION SUMMARY >
- OPERATIONS SELECTION >



**Capability to generate an URL from the user interface**

The URL redirects to the associated Insight configuration, viewer (2D), layers, location and extent

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SUPPORT  
[support@alteia.com](mailto:support@alteia.com)

PRESS INQUIRY  
[press@alteia.com](mailto:press@alteia.com)

JOB OPPORTUNITIES  
[hr@alteia.com](mailto:hr@alteia.com)

EVERYTHING ELSE  
[contact@alteia.com](mailto:contact@alteia.com)

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