

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 magenta line on the left and right sides, and a solid yellow line on the top and bottom sides. Small white dots are placed at regular intervals along all four sides of the frame, creating a dotted border effect.

**AETHER**

R.2424 – Release Notes

Deployment June 12, 2024

# Summary

MAIN TOPICS	MODULE
Import image calibrated metadata - <a href="#">LINK</a>	Data Studio
Annotations improvements - <a href="#">LINK</a>	Data Studio
Annotation Explorer improvements - <a href="#">LINK</a>	Data Studio
Analytics - Point Cloud Difference - <a href="#">LINK</a>	Data Studio
UX/UI Improvements - <a href="#">LINK</a>	Data Acquisition
UX/UI Improvements - <a href="#">LINK</a>	Digital Inspection
Attributes edition - <a href="#">LINK</a>	Infield mobile app
UX/UI Improvements - <a href="#">LINK</a>	Data Flow
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What's Next? - <a href="#">LINK</a>	All

# Data Studio – Import image calibrated metadata

## CONTEXT

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**Use case:** Import image-calibrated metadata from off-platform photogrammetry into Aether.

**Target Audience:** Users importing images and related metadata into Aether

## PROBLEM SOLVED

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In the last release, new functionalities have been developed on the 3D viewer:

- Proximity filter
- Projection of annotations between 3D and images

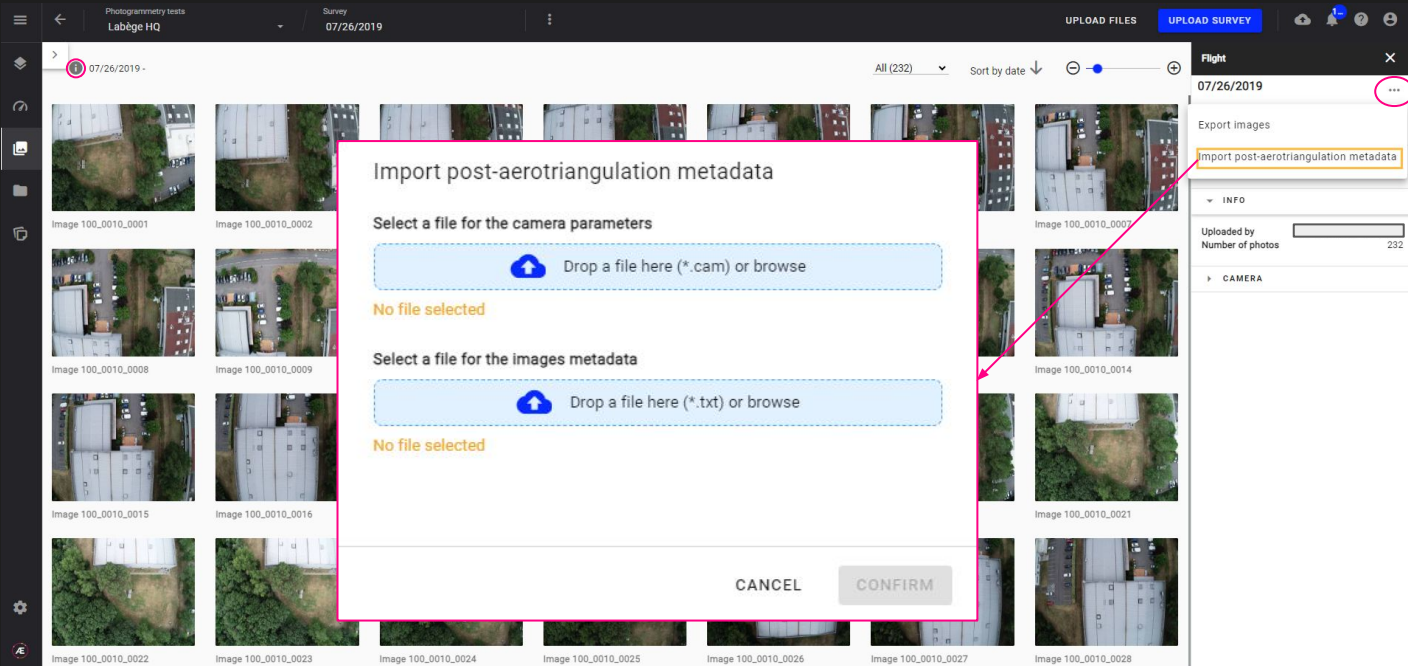
However, these functionalities can't work if image metadata are not calibrated.

Today, image calibrated metadata are automatically processed by the platform for automatic photogrammetry process only.

**With this feature, users will have the ability to upload image calibrated metadata when photogrammetry has been done manually off-platform.**

# Data Studio | Import image calibrated metadata

In the “Image gallery”, you can import post aerotriangulation metadata: internal camera parameters and external camera parameters (position/rotation)



# Data Studio – Annotations improvements

## CONTEXT

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**Use case:** Qualify issues during an asset inspection.

**Target Audience:** Users performing asset inspections

## PROBLEM SOLVED

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Previously, we had limited ways to qualify annotations.

This new feature will enable the user to characterize an annotation as “note” (like today) or “issue”.

For “issues”, the user can complete the description of the annotation with some attributes, such as : Component, Defect, Severity, Priority, Actions, Status and Custom.

In addition, to make it easier to group annotations, the user will be able to select the “annotation folder” in which to place the annotation.

## Data Studio | Annotations improvements

To qualify an issue, select the “issue” annotation type, and the “issue details” panel will open to enter all the attributes.

**Rust\_detection\_1**

Describe Rust\_detection\_1...

PROPERTIES COMMENTS

Annotation type  
 Note  Issue

Folder Annotations

Add a tag... +

INFO

ISSUE DETAILS

Component  
Solar Panel

Defect  
Rust

Severity  
Medium

Priority  
High

Actions  
Replace the solar panel

Status  
To plan

Custom

Change an annotation from one folder to another :

**Annotation**

< 12 / 41 >

**Point**

Describe Point...

PROPERTIES COMMENTS

Annotation type  
 Note  Issue

Folder

Add a tag...

INFO

MEASURE Annotations

STYLE High priority

ATTACHM Low priority

Files to upload

Drop a file here or [BROWSE](#)

# Data Studio – Annotation Explorer improvements

## CONTEXT

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**Use case:** The annotation explorer provides a global view of all annotations in a project and allows to perform bulk actions on annotations.

**Target Audience:** Any users managing annotations

## PROBLEM SOLVED

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The following improvements have been made on the annotation explorer :

- Addition of new filters to filter on annotation type and on issue attributes
- Addition of columns to visualize all the issue attributes in a table
- Possibility to update issue attributes in “bulk”, selecting a list of issues.
- Possibility to change annotations from one group to another in “bulk”, selecting a list of issues.

# Data Studio | Annotations Explorer improvements

In the “Annotation explorer”, you can visualize issue attribute information and filter on these attributes.

The screenshot displays the Annotations Explorer interface. The main table lists annotations with the following columns: Survey, Folder, Modification date, Component, Defect, Severity, Priority, Actions, Status, and Custom. A pink box highlights the 'Component' and 'Defect' columns. The 'FILTERS' sidebar on the left includes a search bar and a 'Category' section with a checked 'Issue' checkbox. The 'APPLY' button is located at the bottom of the sidebar.

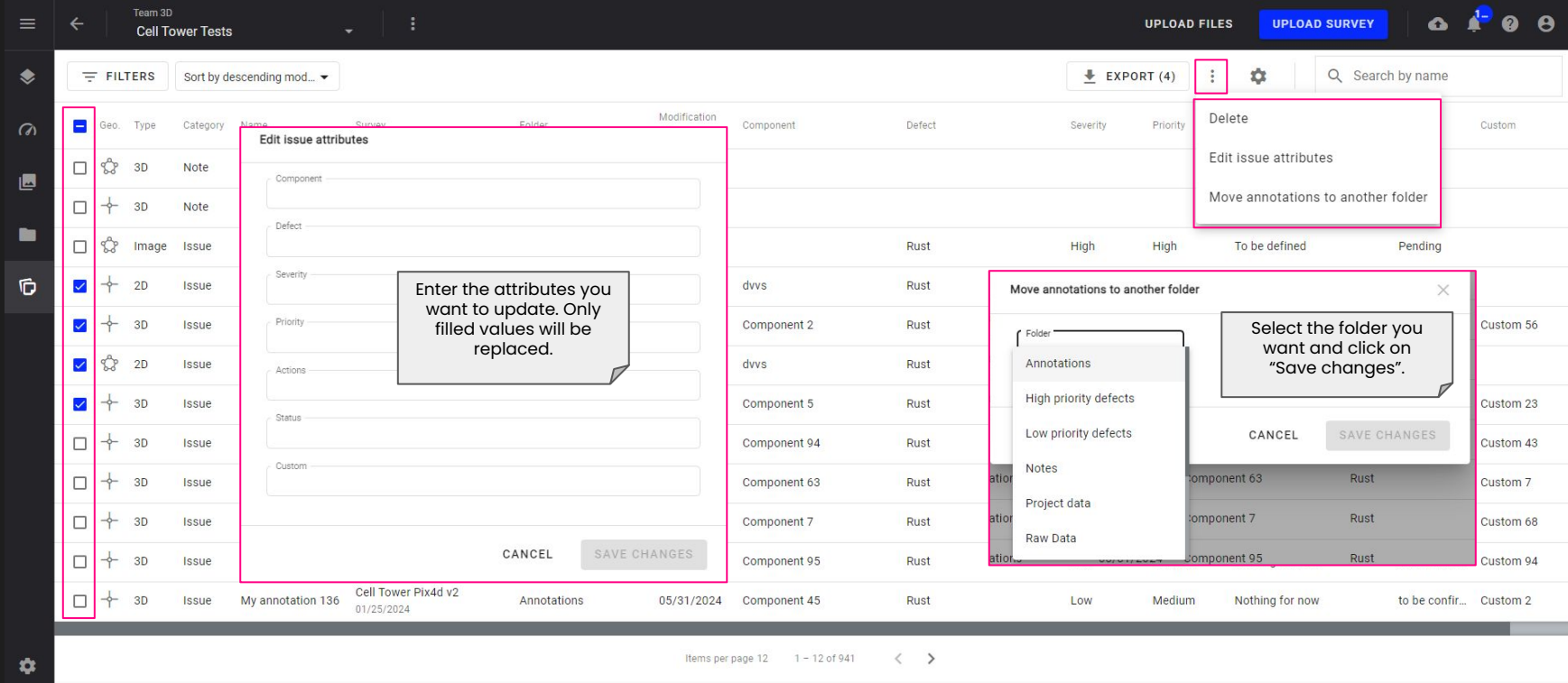
Survey	Folder	Modification date	Component	Defect	Severity	Priority	Actions	Status	Custom
Cell Tower Pix4d v2 01/25/2024	Annotations	05/31/2024							
Cell Tower Pix4d v2 01/25/2024	Notes	05/31/2024							
Cell Tower Pix4d v2 01/25/2024		05/31/2024		Rust	High	High	To be defined	Pending	
Cell Tower Pix4d v2 01/25/2024	Notes	05/31/2024	dvvs	Rust	High	High	To be defined	Pending	
Cell Tower Pix4d v2 01/25/2024	Annotations	05/31/2024	Component 2	Rust	High	High	To be defined	Pending	Custom 56
Cell Tower Pix4d v2 01/25/2024	High priority defects	05/31/2024	dvvs	Rust	High	High	To be defined	Pending	
Cell Tower Pix4d v2 01/25/2024	High priority defects	05/31/2024	Component 5	Rust	High	High	To be defined	Pending	Custom 23
Cell Tower Pix4d v2 01/25/2024	Notes	05/31/2024	Component 94	Rust	Low	Medium	Nothing for now	to be confir...	Custom 43
Cell Tower Pix4d v2 01/25/2024	Annotations	05/31/2024	Component 63	Rust	Low	Medium	Nothing for now	to be confir...	Custom 7
Cell Tower Pix4d v2 01/25/2024	Annotations	05/31/2024	Component 7	Rust	Low	Medium	Nothing for now	to be confir...	Custom 68
Cell Tower Pix4d v2 01/25/2024	Annotations	05/31/2024	Component 95	Rust	Low	Medium	Nothing for now	to be confir...	Custom 94
Cell Tower Pix4d v2 01/25/2024	Annotations	05/31/2024	Component 45	Rust	Low	Medium	Nothing for now	to be confir...	Custom 2

[Link to kb](#)



# Data Studio | Annotations Explorer improvements

New bulk actions are now available to facilitate the categorization of annotations: one to move annotations from one folder to another, and one to edit issue attributes.



# Analytics – Point Cloud Difference

## CONTEXT

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**Use case:** Identify changes between 2 scenes (point clouds), e.g., the deformation of a ship between two maintenance campaigns.

**Target Audience:** any users involved in asset maintenance operations

## PROBLEM SOLVED

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The improvements made are the following :

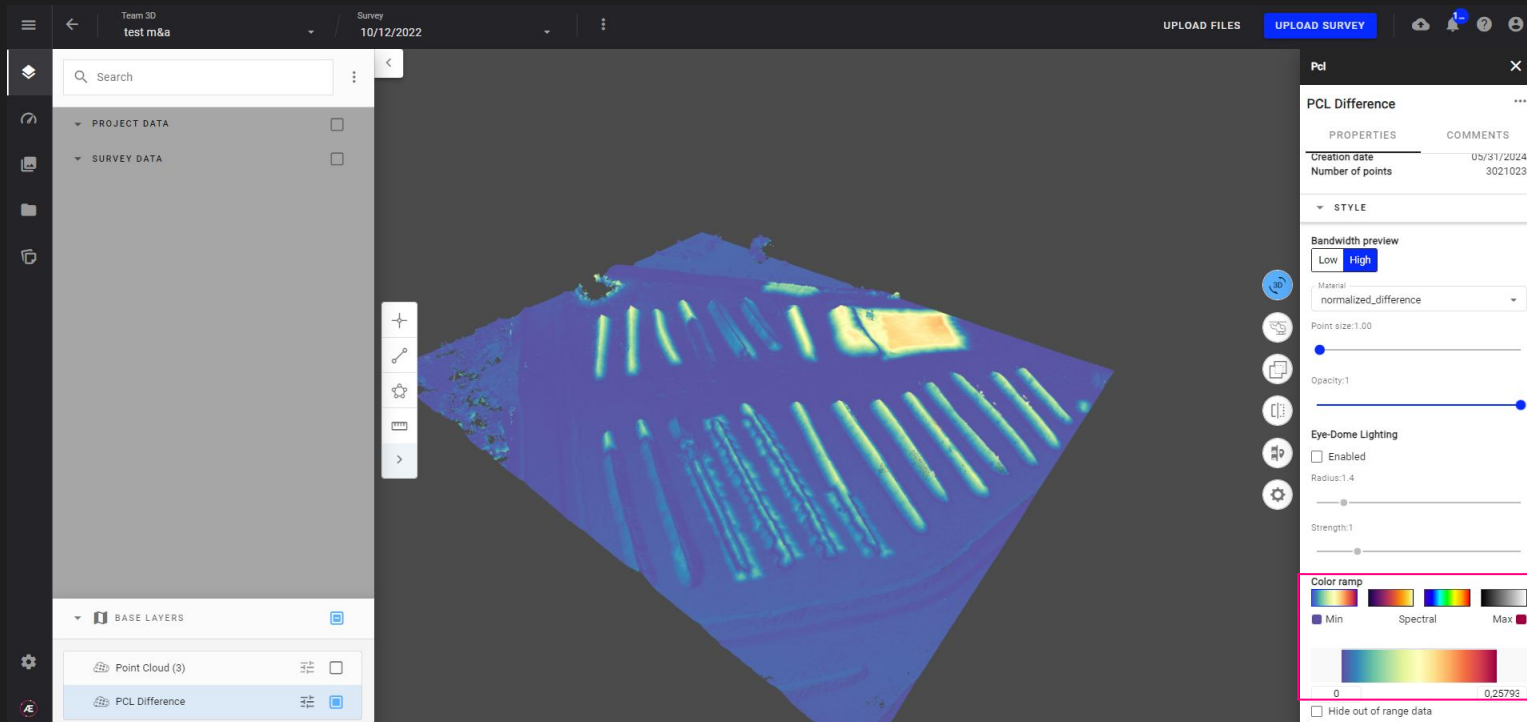
- Possibility to launch analytic on a specific zone of the asset (and not necessarily the full asset)
- Possibility to define “control points” to locally adjust the coregistration of the 2 point clouds.
- Visualization of outputs: “normalized difference” displayed by default, with the possibility to change the default colour ramp.

# Analytics | Point cloud difference

2 new steps: define the “crop” zone and the control points.

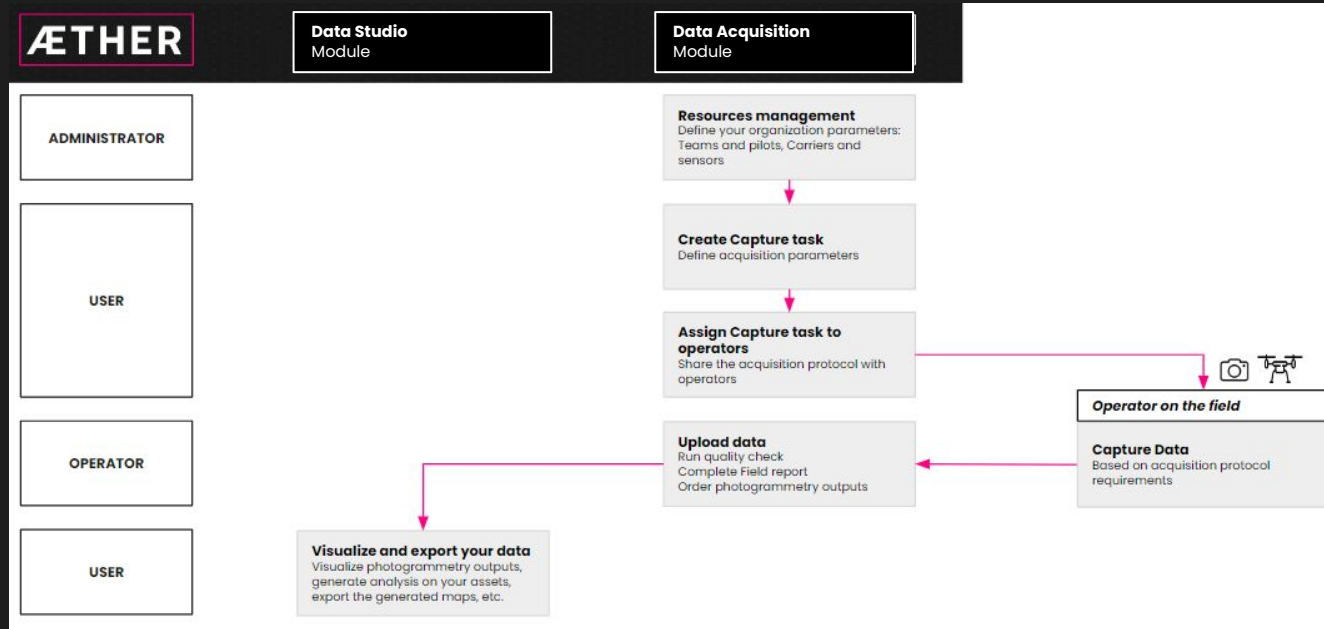


The “PCL difference” output layer can be filtered to display only a certain level of deformation.



# Data Acquisition – UX/UI Improvements

The **Data Acquisition** module allows to **organize pilots and teams of pilots, create and assign tasks to pilots, upload and QC data acquired on field, complete tasks** to trigger invoicing process.



Vegetation detection can be launched manually from the Analytics catalog

# Data Acquisition - UX/UI Improvements

## CONTEXT

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### Use case:

- **Bulk capture tasks** management
- **LiDAR** capture tasks management
- Capture task **activity monitoring**

**Target Customers:** All users having access to Data Acquisition module

## PROBLEM SOLVED

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### Before the release:

- Actions on capture tasks were performed individually (time consuming)
- No specific LiDAR workflow for this type of acquisition (only workarounds)
- No specific metrics to validate the completion of the tasks or order new acquisitions

### After the release

- Bulk actions can be done from the listing view
- Capture tasks based on LiDAR can be created
- Extraction of data coverage metrics when LiDAR data footprint and mission area are available

## Data Acquisition | Bulk actions on capture tasks

Bulk actions on a selection of capture tasks (delete, reject, complete, export)

The screenshot shows the task management interface with 2 tasks selected. The 'DELETE TASKS' button is highlighted with a red box. The interface includes a top navigation bar with '+ NEW TASK', 'EXPORT TASKS', and 'RESOURCES'. Below this is a 'FILTERS' section with 'Sort by descending crea...' and a search bar 'Search by name'. The table below has columns for 'Task name', 'Status', 'Forecast date', and 'Scheduled date'. The selected tasks are all 'Scheduled' with a forecast date of 6/5/24 and a scheduled date of 6/5/24.

Task name	Status	Forecast date	Scheduled date
[blurred]	Scheduled	6/5/24	6/5/24
[blurred]	Scheduled	6/5/24	6/5/24
[blurred]	Scheduled	6/5/24	6/5/24

The screenshot shows the task management interface with 2 tasks selected. The 'REJECT TASKS' button is highlighted with a red box. The interface includes a top navigation bar with '+ NEW TASK', 'EXPORT TASKS', and 'RESOURCES'. Below this is a 'FILTERS' section with 'Sort by descending crea...', 'Status: 1 filter', and a search bar 'Search by name'. The table below has columns for 'Task name', 'Status', 'Forecast date', and 'Scheduled date'. The selected tasks are all 'Assigned' with a forecast date of 5/6/24 and a scheduled date of -.

Task name	Status	Forecast date	Scheduled date
[blurred]	Assigned	5/6/24	-
[blurred]	Assigned	5/6/24	-
[blurred]	Assigned	2/6/24	-

The screenshot shows the task management interface with 2 tasks selected. The 'COMPLETE TASKS' button is highlighted with a red box. The interface includes a top navigation bar with '+ NEW TASK', 'EXPORT TASKS', and 'RESOURCES'. Below this is a 'FILTERS' section with 'Sort by descending crea...' and a search bar 'Search by name'. The table below has columns for 'Task name', 'Status', 'Forecast date', and 'Scheduled date'. The selected tasks are all 'Complete' with a forecast date of 5/6/24 and a scheduled date of -.

Task name	Status	Forecast date	Scheduled date
[blurred]	Complete	5/6/24	-
[blurred]	Complete	5/6/24	-

# Data Acquisition – UX/UI Improvements

## Complete Lidar tasks

It is now possible to create tasks of type LiDAR and to follow the complete workflow

**COLLECTION REQUIREMENT**

**Carrier and sensor**

Carrier type  
Fixed wing

Optional

Sensor type

- RGB
- Multispectral
- Hyperspectral
- Thermal
- Lidar**

① Data uploaded and waiting for photogrammetry results

UPLOAD MORE DATA

SET AS COMPLETE

**REPORTING**

Field report Complete VIEW OR EDIT

**DATASETS**

VIEW SURVEY

Point cloud \* Available VIEW COVERAGE

## Module is translation-ready

Données importées et en attente des résultats de photogrammétrie

IMPORTER DES DONNÉES SUPPLÉMENTAIRES

DÉFINIR COMME TERMINÉ

**RAPPORTS**

Rapport terrain AJOUTER

**JEUX DE DONNÉES**

VOIR LE RELEVÉ

Raw images \* Disponible

**PROPRIÉTÉS DE LA TÂCHE**

**Identifiants**

Nom de tâche

Objectif

**Détails du projet**

Organisation

Projet

Relevé

**LOCALISATION & CONTACT**

Adresse

Zone de mission

EXPORTER

Informations du contact



## Data Acquisition | Point cloud coverage metrics

Display metrics on the task completeness (for imported point cloud)

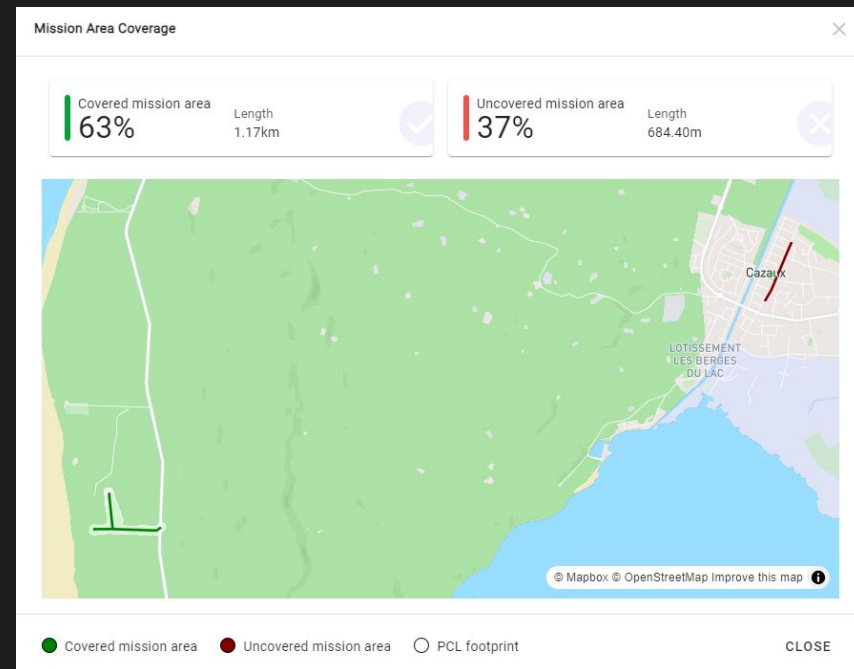
To upload data [UPLOAD MORE DATA](#)

**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



# Digital Inspection - UX/UI Improvements

## CONTEXT

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### Use case:

- Improve User experience for GIS specialists

**Target Customers:** Digital Inspection module users

## PROBLEM SOLVED

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The following improvements have been made:

- New button to select all sections from the substation feeder
- Each zone is represented by a dedicated color from the folder details page
- The applicable GIS version is displayed directly on the folder creation form
- An informative pop-up is displayed when creating a zone from a folder based on an outdated GIS version
- The outdated GIS versions are indicated

The content of global report and Excel anomaly report, is updated for users

# Digital Inspection – UX/UI Improvements

## Select all sections from the station feeder

It is now possible by one-click, to select all sections from the station, when creating a folder or a zone

### LINE SECTIONS TO INSPECT

Use the map and click on the line sections to add or remove from the folder. You may also add the section identifiers separated by ; in the text field below and press Enter :

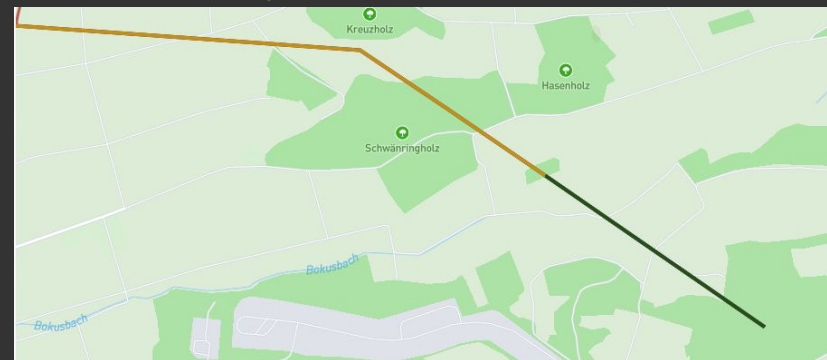


0 entity associated - 0.00m

**SELECT ALL**

## Better distinction of zones from the folder page

Each zone is represented by a dedicated color from the folder details page



2 Inspection tasks

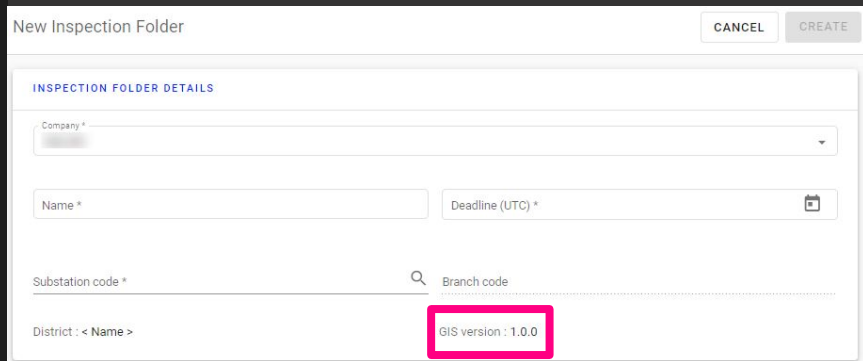
**ADD TASK**

	<b>ZONE 1</b>	For March 2024	Waiting collection	→
	<b>ZONE 2</b>	For June 2024	Waiting collection	→

# Digital Inspection – UX/UI Improvements

## Applicable GIS version in the folder creation form

The GIS version is displayed directly on the folder creation form



New Inspection Folder CANCEL CREATE

**INSPECTION FOLDER DETAILS**

Company \*

Name \* Deadline (UTC) \*

Substation code \* Branch code

District : < Name > GIS version : 1.0.0

## Improved information about outdated GIS versions

Outdated GIS version are better indicated



Assigned to

Description

GIS version 0.9.5 Please note, this folder is based on an old version of the GIS

Updated At 19 mars 2024

Updated By

### Create a new task

The GIS version has evolved since the last task creation. The current folder is still attached to GIS 0.9.5. Do you want to proceed to create a new task ?

CANCELCONFIRM

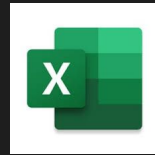
## Digital Inspection | Enriched reports

The Global folder/zones report now references the list of all sections IDs for each created folder



Additional column with all section IDs

The anomaly report at zone level now contains a new sheet with properties named as per the client anomaly reference



Additional sheet with properties from the client anomaly reference

# Infield app - Attributes edition

## CONTEXT

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### **Use case:**

Asset Inspection: report measures, observations, quality checks directly based on the asset designs (ex: construction designs, solar panel designs...)

Agriculture: report field observations or microplot level measurements

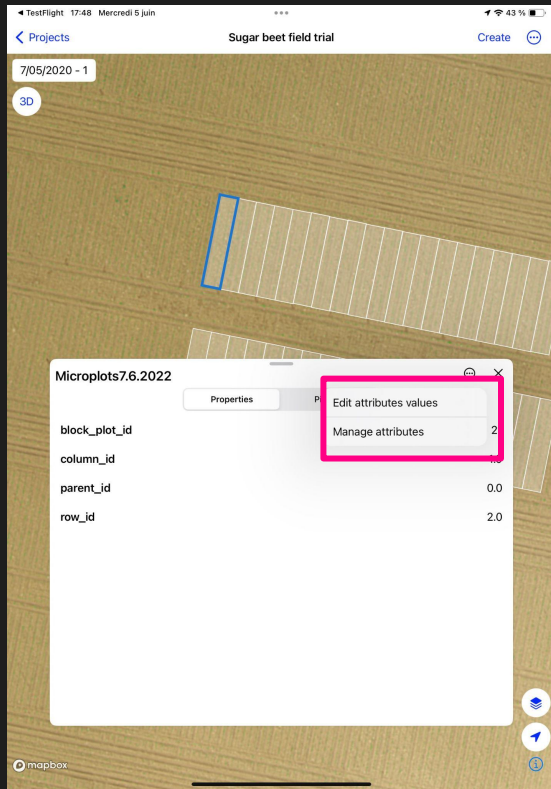
**Target Audience:** Operators, technicians involved in asset or, agricultural field inspection

## PROBLEM SOLVED

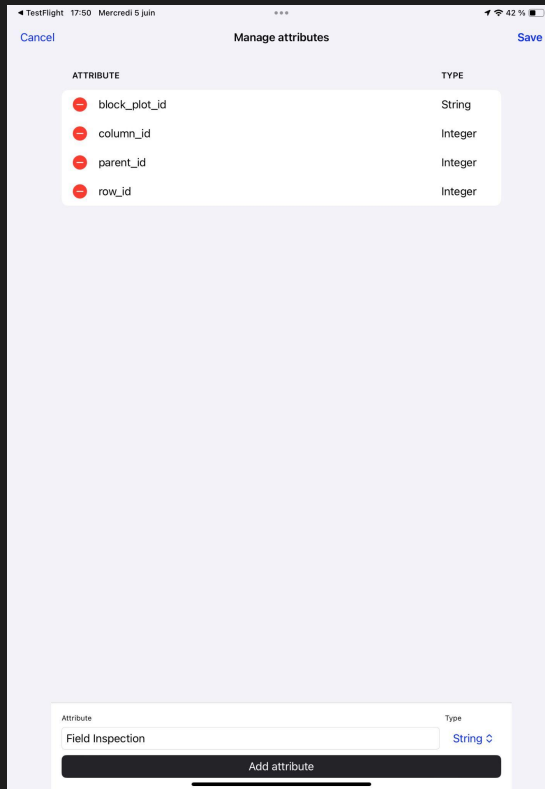
---

Infield users can now report any infield information to Aether based on existing designs. It includes the creation of attributes and addition of custom values from the field.

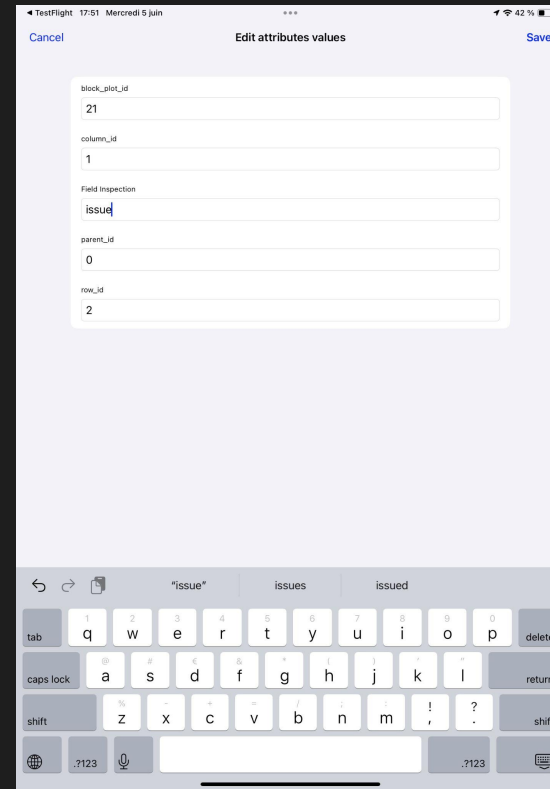
## Edit vector information



## Manage attributes



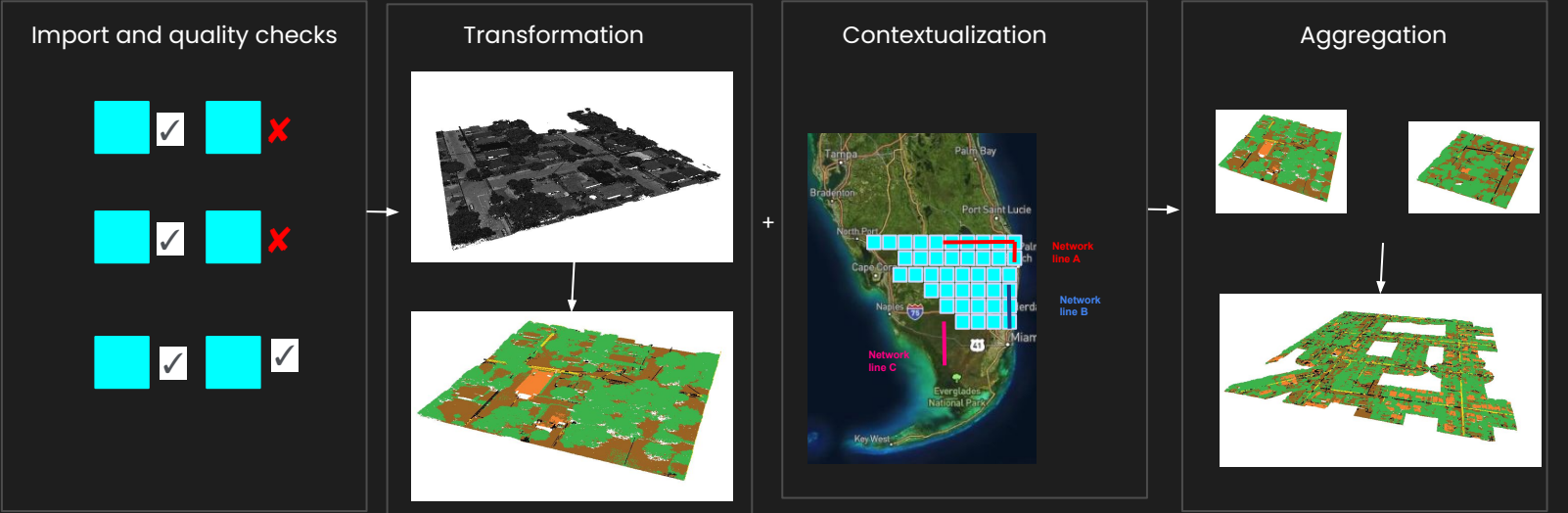
## Edit attribute values



# Data Flow – UX/UI Improvements

The **Data Flow** module allows us to **import**, **quality check**, **transform**, **contextualize**, **aggregate** large volumes of files.

*It might be a prerequisite before to launch the vegetation detection analysis around power lines*



Import and quality check data

Identify the vegetation, the ground, the network ...

Link the imported files to user assets

Aggregate the data for **visualization**



Vegetation detection can be launched in the analysis management Module



# Data Flow - UX/UI Improvements

## CONTEXT

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### Use case:

- Real time visibility on the progress of the data streams (ensure SLA compliance)
- Easily pinpoint areas where delays or errors occur and take proactive measures to address them

**Target Audience :** All dataflow users

## PROBLEM SOLVED

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- How might we allow users to **effortlessly locate their ingested data**?
- How might we empower users to **pinpoint problematic data** for correction and operational optimization?
- How might we enable users to **analyze the quality checks** applied to their data and their results?
- How might we enable users to determine if their data is **ready** for further analysis and **field operations** ?

# Data Flow | Visualize datastream, files and asset footprints on a map

Visualize **datastream**, **files** and **asset** footprint on the map to view their location and identify areas where delays or errors occur

**INFORMATION**

Data stream information

Template  
Datastream template for demo

Project  
Datastream project for demo

Data capture - start date  
1/1/2022

Version de l'actif  
2.0.0

Data stream source  
x3://Demo/

Quality checks

Quality check name | Description

Temporal Consistency Check | Check that the imported files are captured after the storm date

CRS Compatibility | Check that the point cloud data CRS is correct

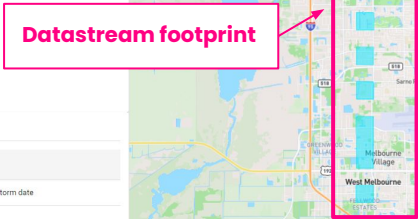
Organisation  
Demo company

Nom  
Datastream for demo

Data capture - end date  
1/1/2022

Description  
Import, transform and contextualize data

2 km



**FILES**

FILTRES | Rechercher

Data stream files

Name	Status	Contextualization status	Quality check	Import date
38f9c0d273e4e38e0179896c13a6958c.las	Complete	Contextualized	●	05/23/2024
38f9c0d273e4e38e0179896c13a6958c.las	Complete	Noncontextualized	●	05/23/2024
38f9c0d273e4e38e0179896c13a6958c.las	Complete	Contextualized	●	05/23/2024
38f9c0d273e4e38e0179896c13a6958c.las	Complete	Contextualized	●	05/23/2024
38f9c0d273e4e38e0179896c13a6958c.las	Complete	Contextualized	●	05/23/2024
38f9c0d273e4e38e0179896c13a6958c.las	Complete	Contextualized	●	05/23/2024
38f9c0d273e4e38e0179896c13a6958c.las	Complete	Contextualized	●	05/23/2024
38f9c0d273e4e38e0179896c13a6958c.las	Complete	Contextualized	●	05/23/2024

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**File footprint**

## Data Flow | Visualize datastream, files and asset footprints on a map

Visualize **datastream**, **files** and **asset** footprint on the map to view their location and identify areas where delays or errors occur

The screenshot displays the 'ASSETS' tab in the interface. The table below shows the following data:

Asset name	Asset coverage	Asset coverage percentage
202531	2 500,883 m	62%
202531CB	3 328,642 m	34%
202532	1 107,618 m	34%
202532CB	470,7 m	14%
202533	3,295 m	0%
202534	980,813 m	30%
202534CB	102,801 m	6%
202535	1 100,13 m	13%

The map view shows a blue-shaded area representing the asset footprint, with a red arrow pointing to it from the label 'Asset footprint'. Another red arrow points to a specific location on the map labeled 'File footprint'.

## Data Flow | Quality checks monitoring

List the available quality checks for a given data stream and display quality check status per file

INFORMATION FILES ASSETS

Data stream information

Template  
RZ424\_0\_PCL\_GMA\_Test\_Auto

Organisation  
Team 2 Playground

Projet  
RZ424\_0\_PCL\_GMA\_Test\_Auto

Nom  
RZ424\_0\_PCL\_GMA\_Test\_Auto

Data capture - start date  
1/1/22

Data capture - end date  
1/1/22

Version de l'actif  
2.0.0

Description  
description

Data stream source

Quality checks

Quality check name	Description
Temporal Consistency Check	Check that the imported files are captured after the storm date
CRS Compatibility	Check that the point cloud data CRS is correct

INFORMATION FILES ASSETS

FILTRES

Data stream files

Name	Status	Contextualization status	Quality check status	Import date
...	Complete	Contextualized	Complete	05/23/2024
...	Complete	Contextualized	Complete	05/23/2024
...	Complete	Contextualized	Complete	05/23/2024
...	Complete	Contextualized	Complete	05/23/2024
...	Complete	Contextualized	Complete	05/23/2024
...	Complete	Contextualized	Complete	05/23/2024
...	Complete	Contextualized	Complete	05/23/2024
...	Complete	Contextualized	Complete	05/23/2024

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# Data Flow - UX/UI Improvements

## CURRENT LIMITATIONS

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- Only the status of the quality checks are displayed (no details about the type of quality check are provided yet)

## NEXT STEPS

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- **Map views:** Overlay file footprints and assets to help identify files with issues
- **Quality checks:**
  - detail of quality checks by files
  - Improved filters

## DEPLOYMENT

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- **Map views with footprints:** available to all users who have access to the Data Flow module
- **Quality checks:** quality check shall be first configured for the data stream template of interest.

# Other upgrades

## Data Studio - Split view 3D / Images Image location display

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Split view 3D/Images gallery :

- Image locations layer is no longer displayed by default when opening split view.
- However, the image locations are automatically displayed when the proximity filter is activated.

## Data Studio - 3D Manage large volumes of annotations

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For surveys with more than 200 polygon annotations, annotations are displayed as "points" to simplify the display.

Polygons can be displayed by clicking on the "points".

Possibility to display several polygons quickly with "MAJ" + hovering mouse over points.

## Data Studio - Stockpiles module

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In the newly generated reports, 3 volumes metrics will be available: cut, fill and net volumes

# Solved issues

MAIN TOPICS	MODULE
Fixed - "Clearance to Wire" attribute was missing in attribute table	Insight
Fixed - Shared url 2D didn't redirect to Insight correctly in SSO context	Insight
Fixed - Chromium issue (cf following slides)	Operations

# What's Next?

Next release : R2431 scheduled on 30-July-2024

- **Analysis module** - Clearance report alerting
- **Insight** - Enable to visualize platform external vector tiles: arcgis feature server, PM Tiles
- **Data Acquisition** - Display metrics on the task completeness for all deliverables
- **Data Acquisition** - Addition of coverage metrics to CSV export
- **Data Acquisition** - Additional flight parameters for RGB
- **Data Acquisition** - Submit field report from a LiDAR tasks
- **Data Flow** - Data stream monitoring improvement



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