Technical Bulletin

Civil Infrastructure
03 February 2017

HOW TO CONVERT MX2 DATA TO IMPORT TO TRIMBLE MX SOFTWARE

✓ Resources

1. Trimble MX Generic Projected Import Template can be download from:

   https://drive.google.com/file/d/0B6tm7iPJZ9OEajJaU3RnZVotQWs/view?usp=sharing
   or
   https://orbitgt.com/kb/mm_templates

2. POSPac MMS
3. Trident
4. Ladybug Capture Pro
5. Trimble MX Asset Modeler

1. Trajectory

Open your original trajectory processing project in **POSPac MMS**.
Go to **Project Settings/Export** and select the **Output Format Editor**:

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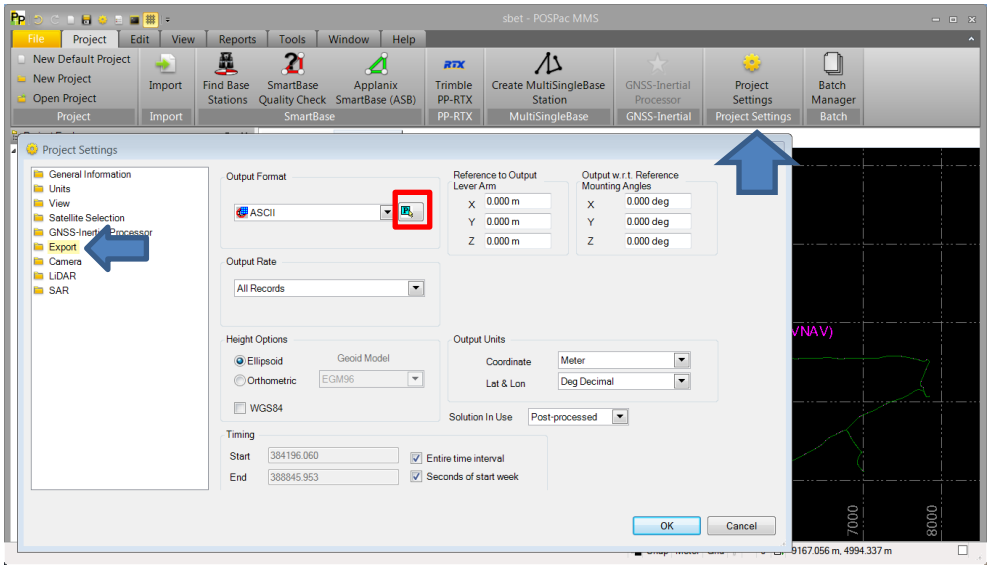
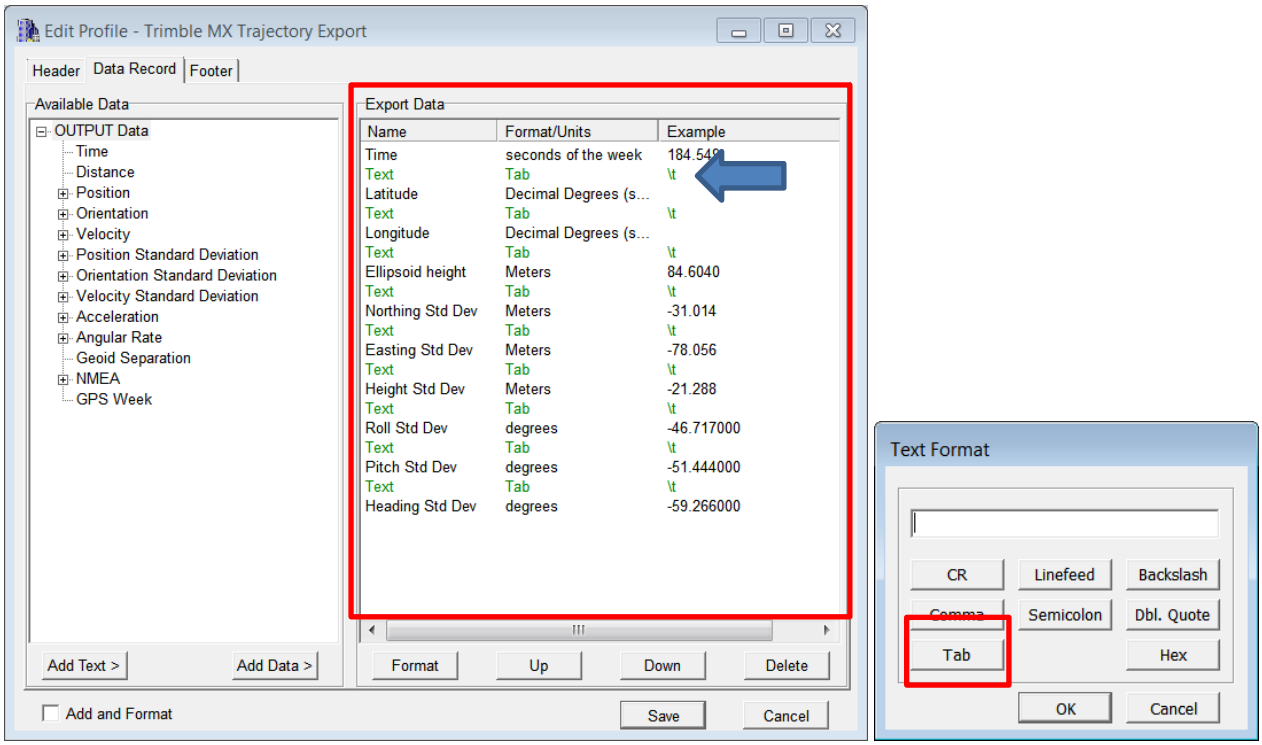


Create a new format Trimble MX Trajectory Export. The format should look like this:



Make sure you have a "**Tab**" between each data field (using the "**Add Text**" button).

When complete change the output rate to "**Specified Time Interval**" 1.000s.

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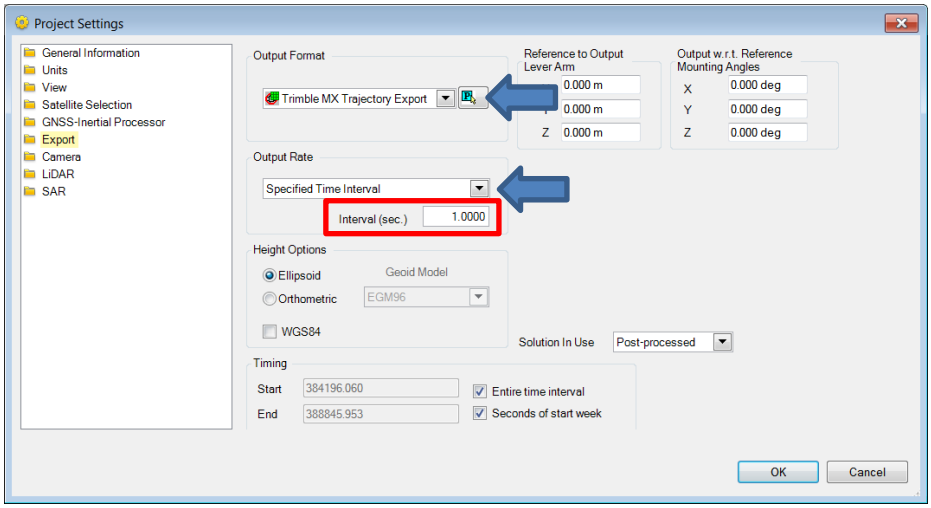
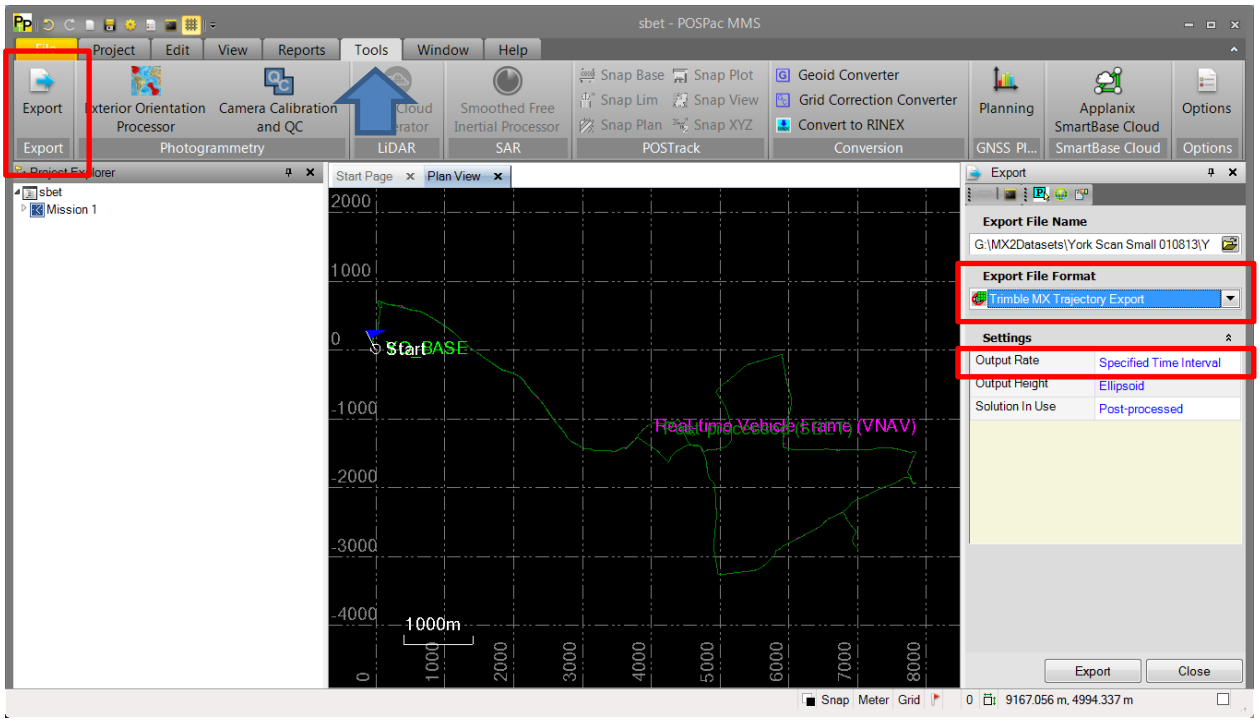


Go to **Tools** and **Export**.



And **Export**.

Your exported data will look like this:

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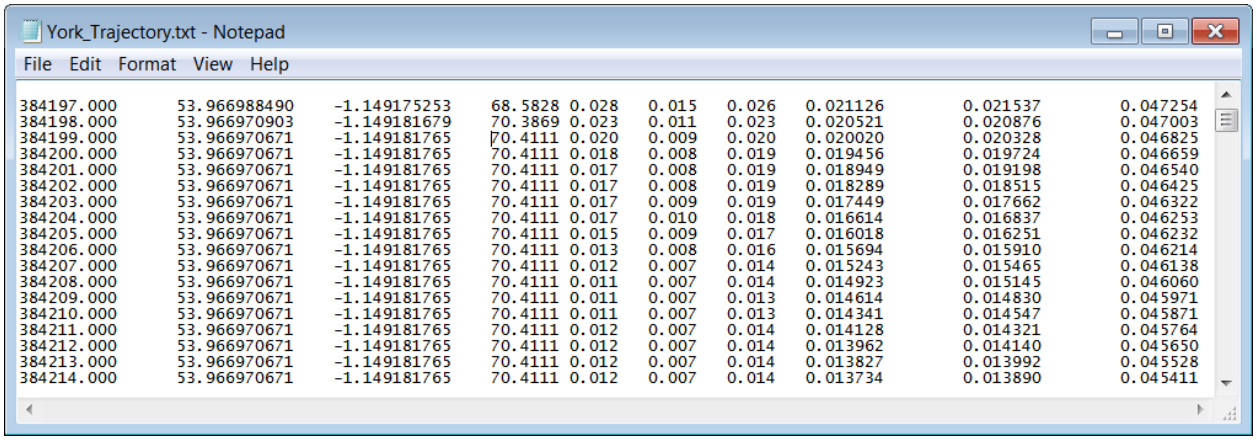


2. Image Conversion

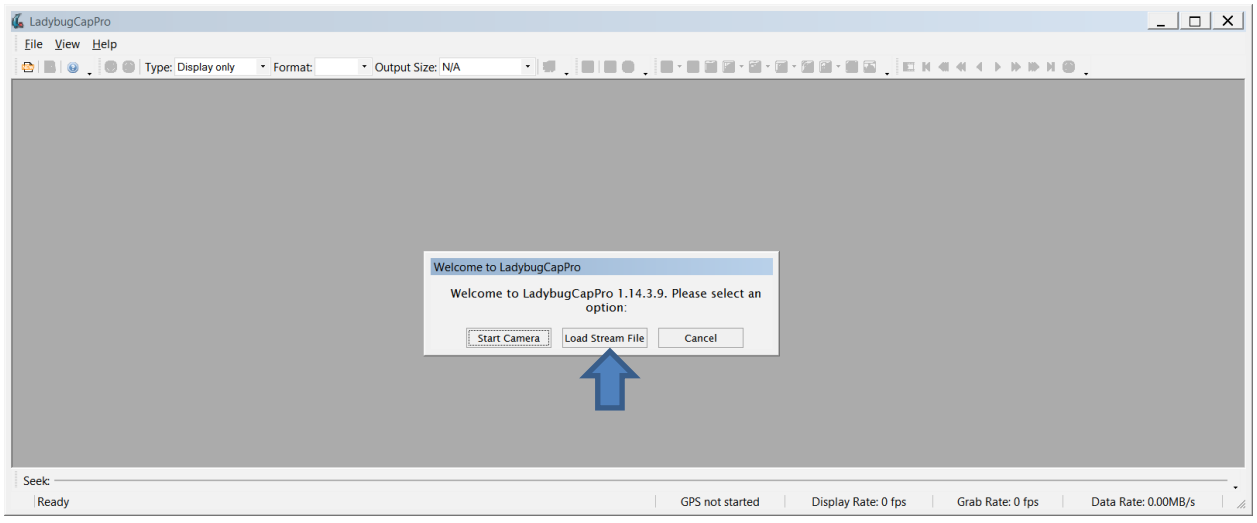
Use Ladybug Capture Pro software to convert images file from PGR to panoramic jpg format.

This can be downloaded at:

https://www.ptgrey.com/Downloads/GetSecureDownloadItem/10585 or

https://drive.google.com/file/d/0B6tm7iPJZ9OEb3dwaGxyWlRYcXM/view?usp=sharing

Load in your PGR data:



Select **Type:** Panoramic **Format:** JPG **Output Size:** 8000x4000.

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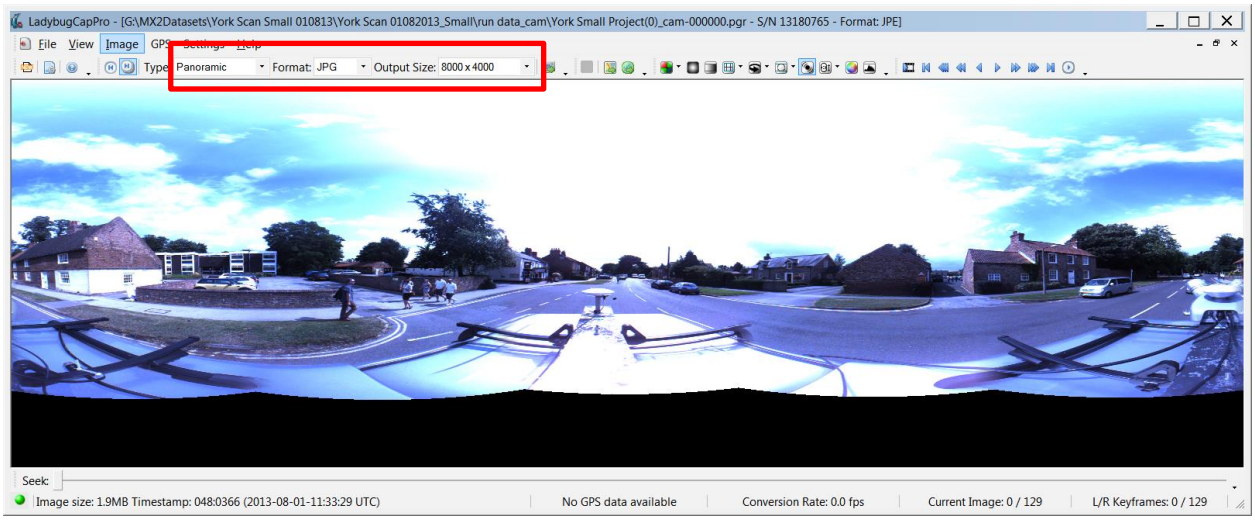
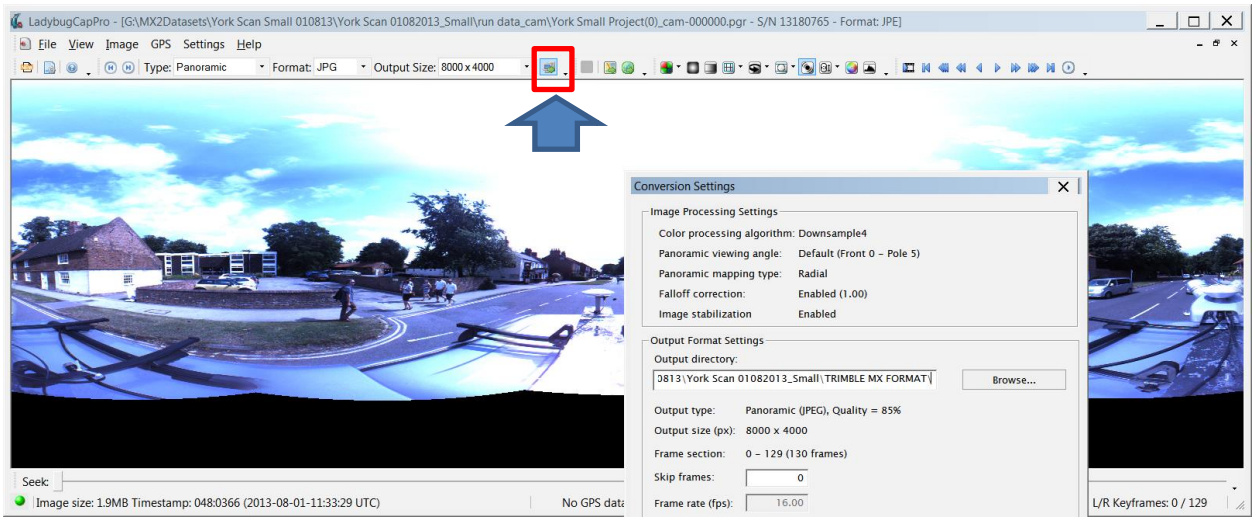
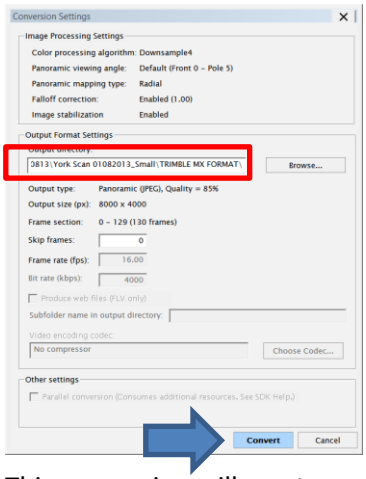


Select **Convert**.





This conversion will create a panoramic jpg for each camera location:

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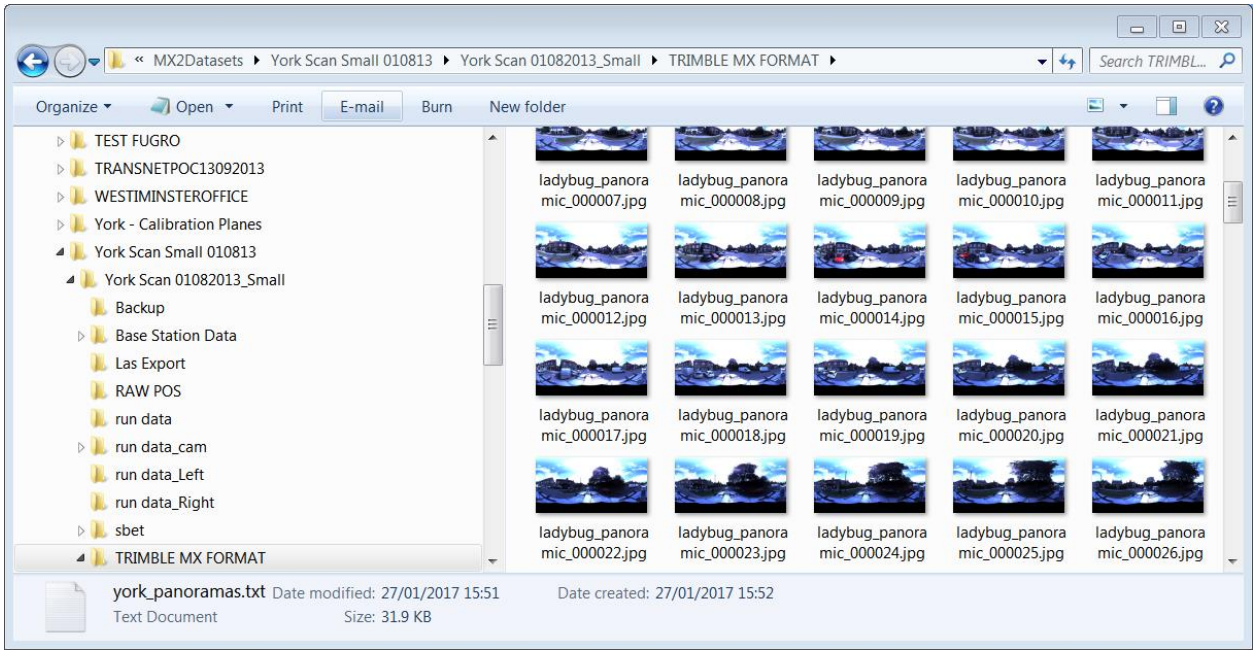
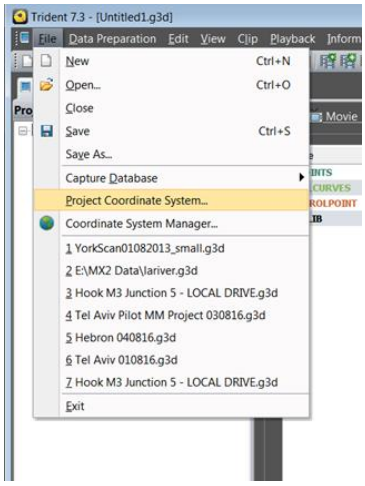


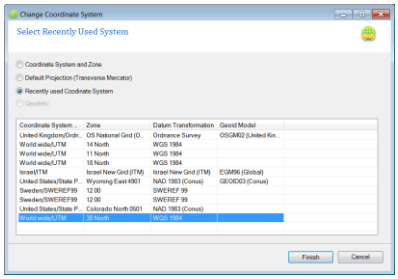
3. Convert Point Cloud Data

Open your MX2 project in Trident.

In Trident set your project coordinate system to a **projected/grid coordinate system**.



In this example I chose UTM 30N.



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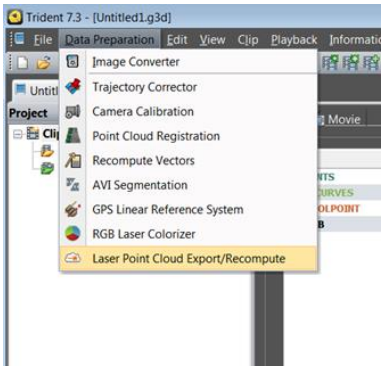
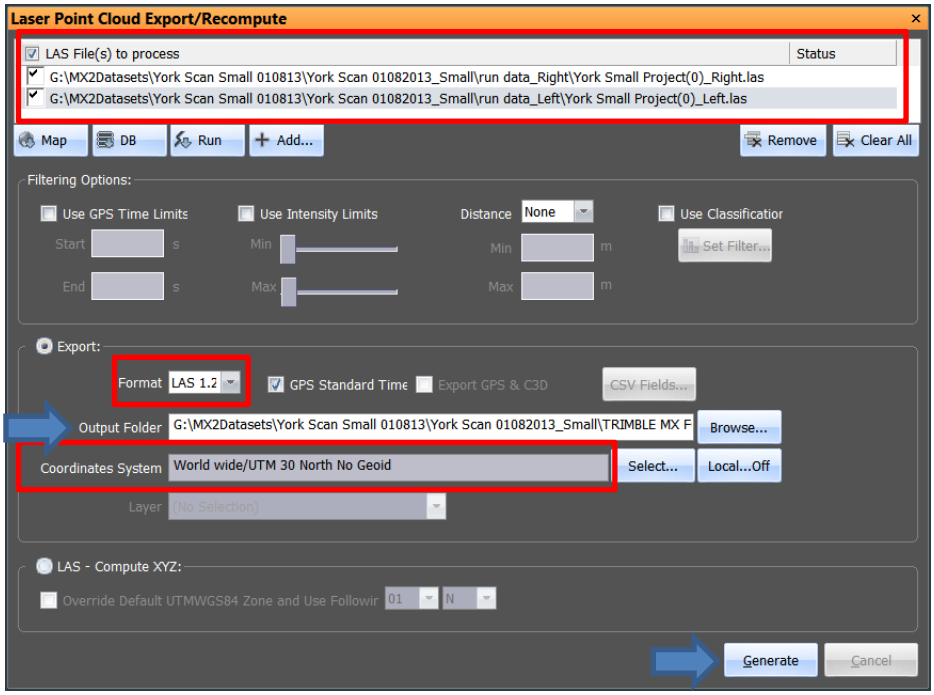
Run **Data Preparation/Laser Point Cloud Export/Recompute**.

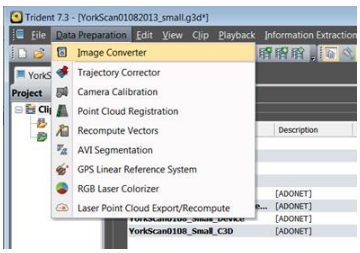


Load your laser files. Select format **LAS 1.2**, **Output folder** and make sure that you are writing the files to a Grid/Projection based system:



4. Create Position & Orientation Text File for Image Locations

In Trident select **Data Preparation/Image Convertor**:



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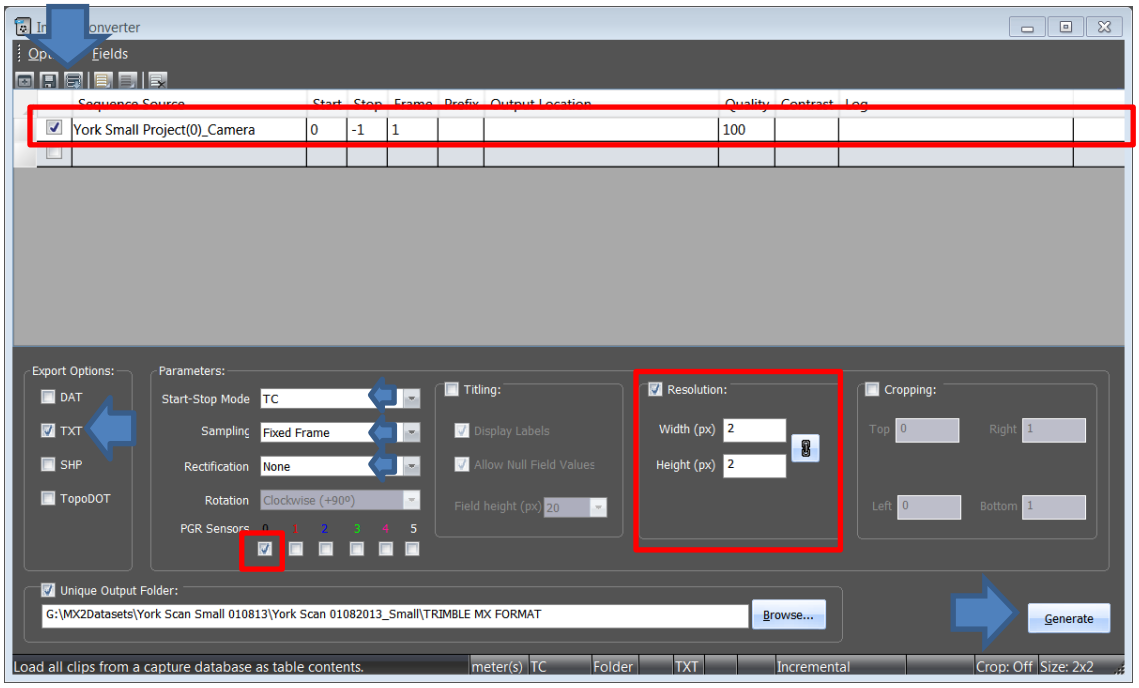
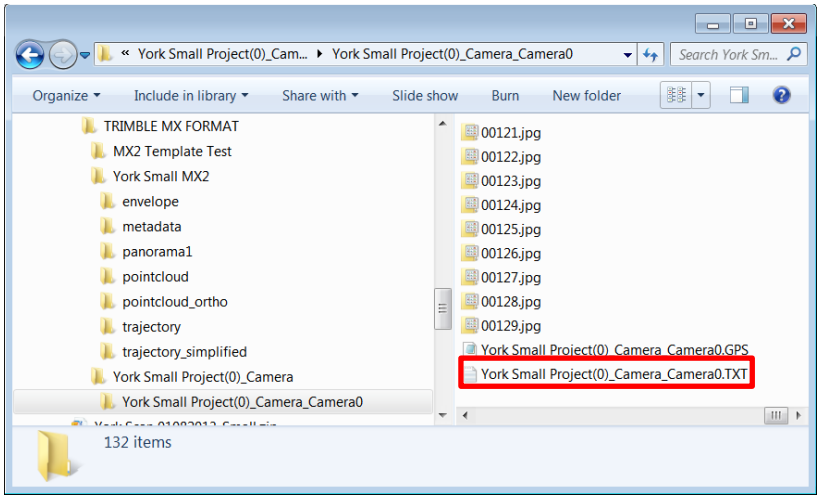
Load your image files. We will not use the images converted as we are using the jpg's converted using the Point Grey Capture Pro software, however this Converter requires that you select at least one PGR sensor for conversion. We will only use the "TXT" file. As we have to write at least one image for each frame this can take some time. Make sure your project coordinate system is the same as used to generate LAS files.



The output we want from this conversion is the position TXT file:



Suggest renaming this to "panoramas.txt".

Data should look like this:

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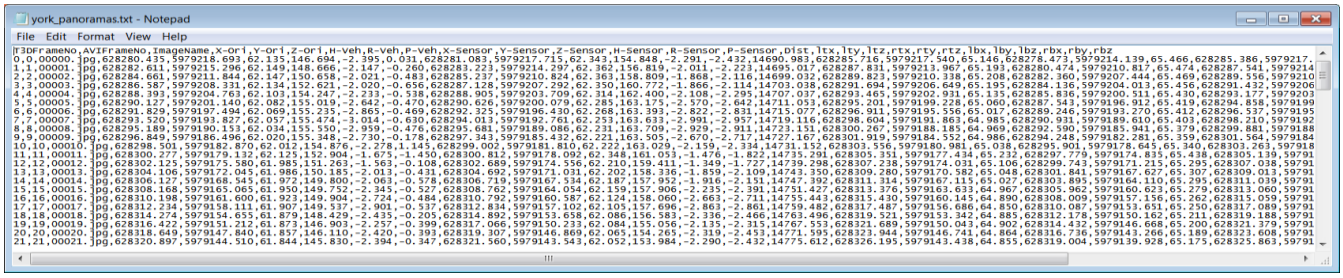
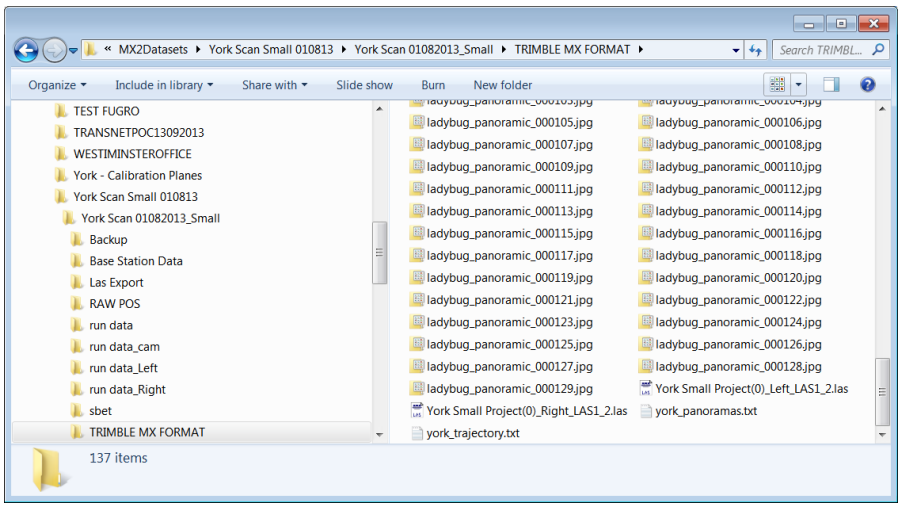


5. Data Import - Trimble MX Asset Modeler

Collect all the data together in one folder.

1. Image jpg's
2. LAS filesTrajectory.txt
3. Panoramas.txt



Your data is now ready to import into Trimble MX Asset Modeler/Content Manager.

Download the template:

https://orbitgt.com/kb/mm_templates or

https://drive.google.com/file/d/0B6tm7iPJZ9OEajJaU3RnZVotQWs/view?usp=sharing

Prepare Trimble MX Generic Resources - V2	Trajectory, panoramas, point cloud	projected	download
		geographic	download

Unzip the contents to a folder on your computer hard disk.

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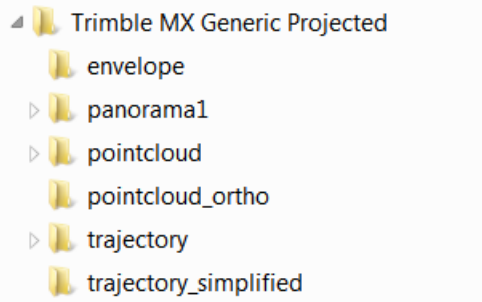
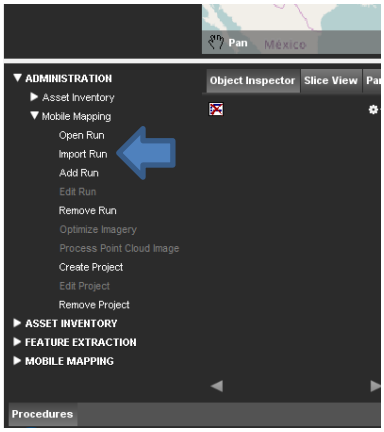
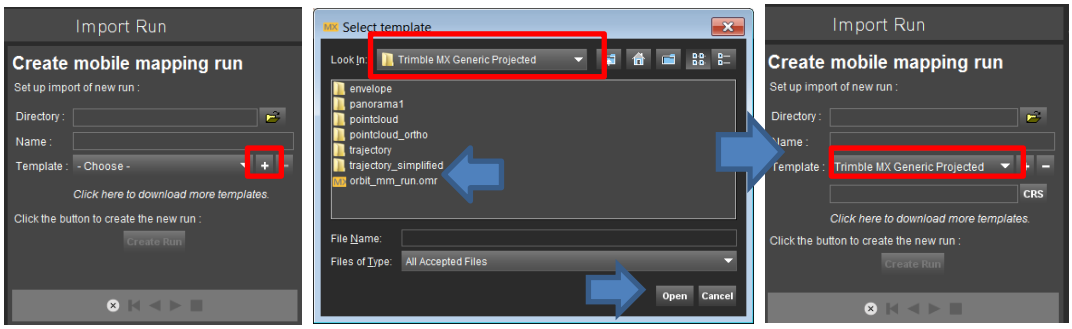


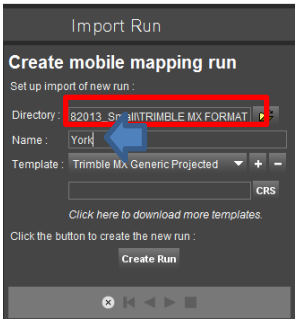
In Trimble MX Asset Modeler – **ADMINISTRATION/Mobile Mapping/Import Run**:



Add your template:



Select a folder for you Trimble MX Asset Modeler Run and a Run Name:



Select the coordinate system (same as used in Trident for Image and LAS file export):

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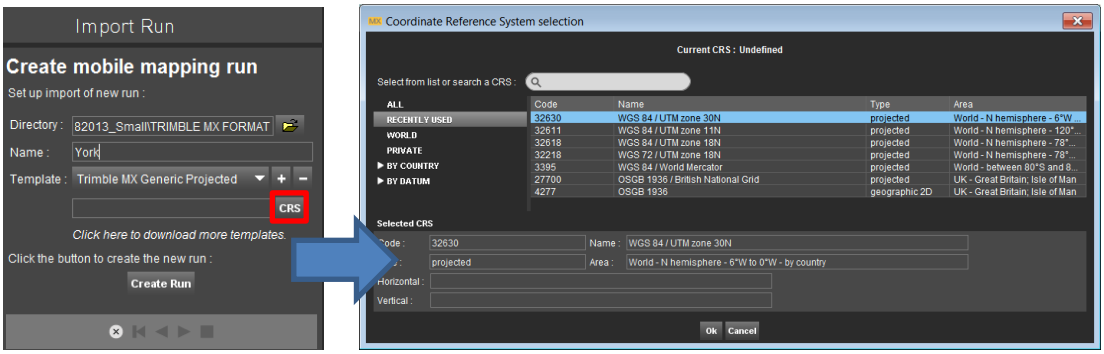
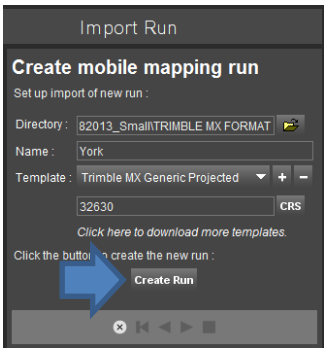
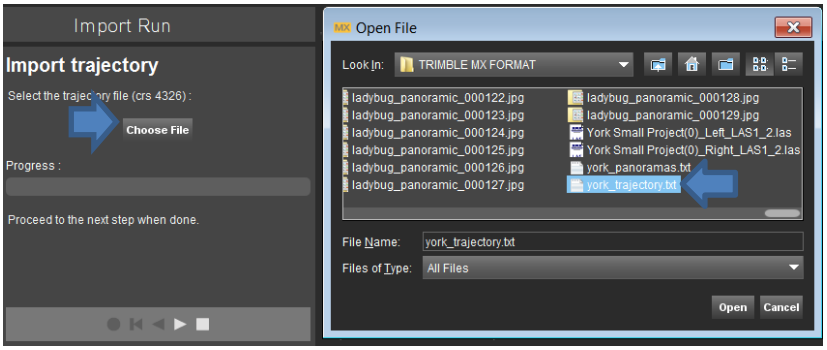


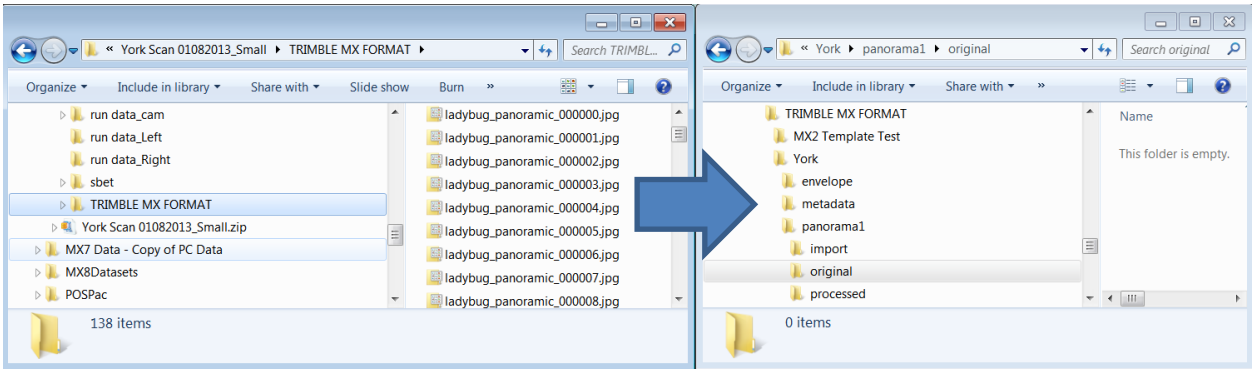
Create Run.



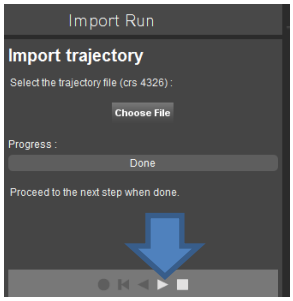
Choose the correct trajectory file (created by POSPac MMS).



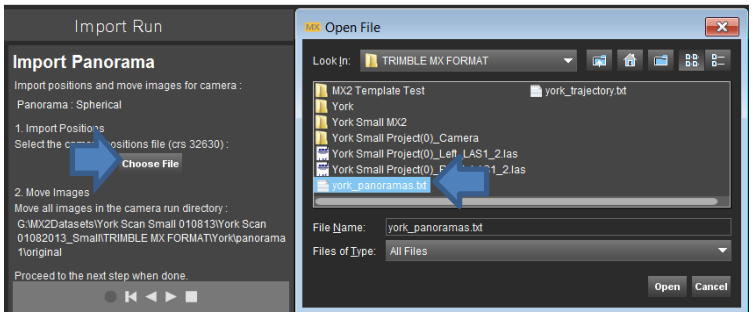
At this point go into Windows File Explorer and Move Your Image Files to the directory structure of the run just created by Trimble MX Asset Modeler. You need to move the jpg files to the "**original**" folder.



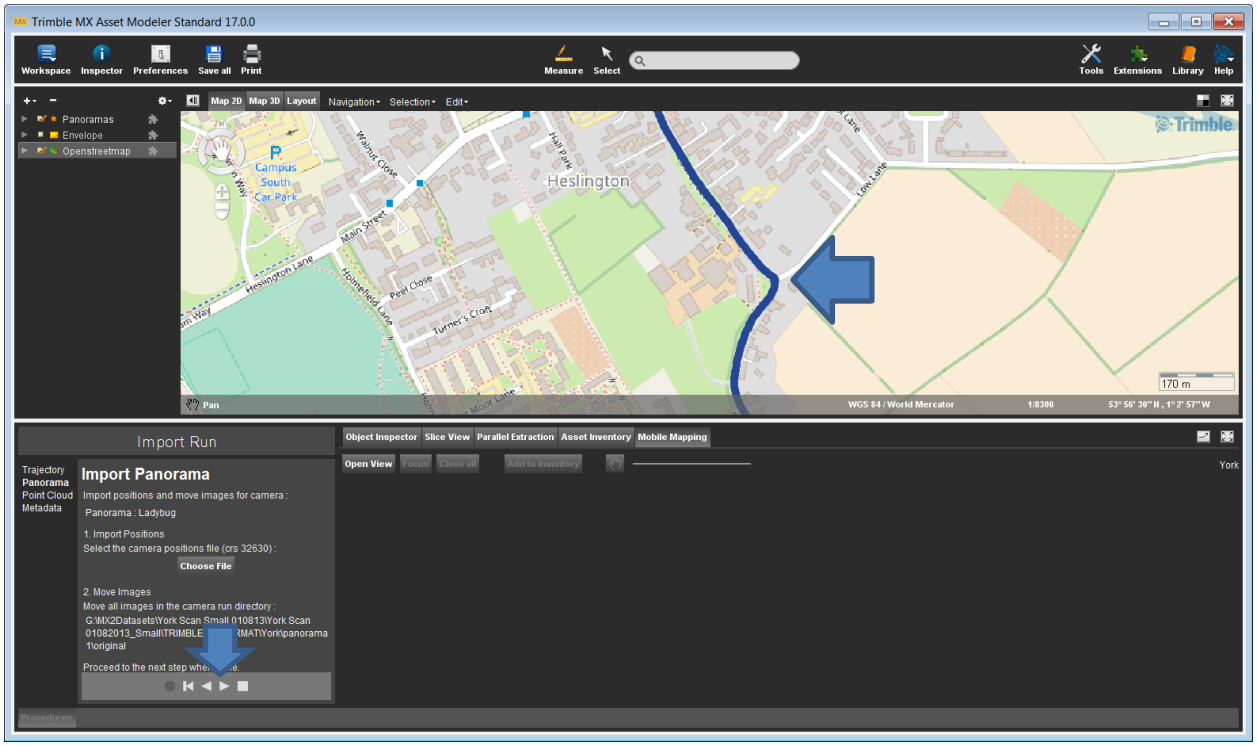
Now press the arrow to move to the next step of the import wizard:



Now choose the panorama's text file (the file exported from Trident):

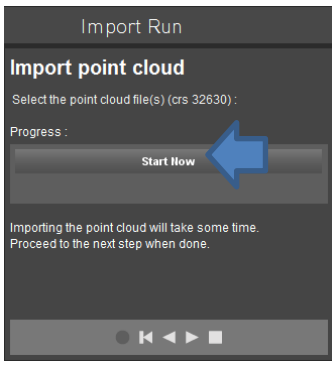


Panorama locations will appear in the map window. Select the arrow key to continue with the data import wizard:

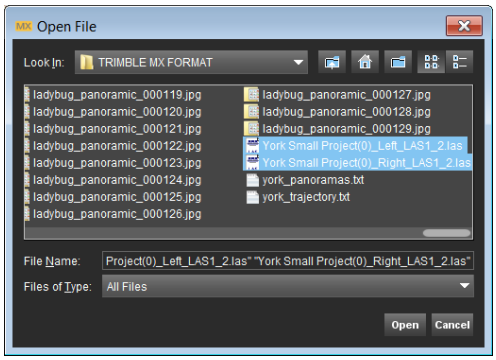


You are now ready to import the point cloud data.

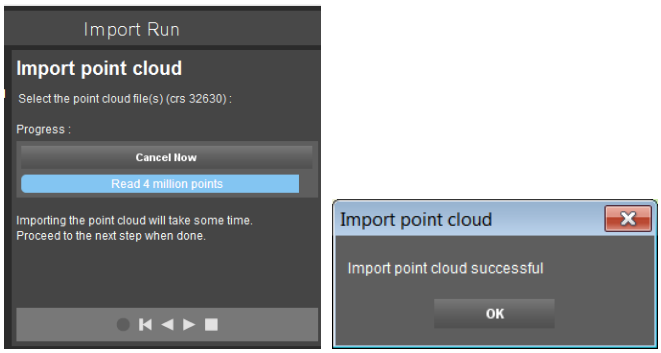
Press **Start Now**.



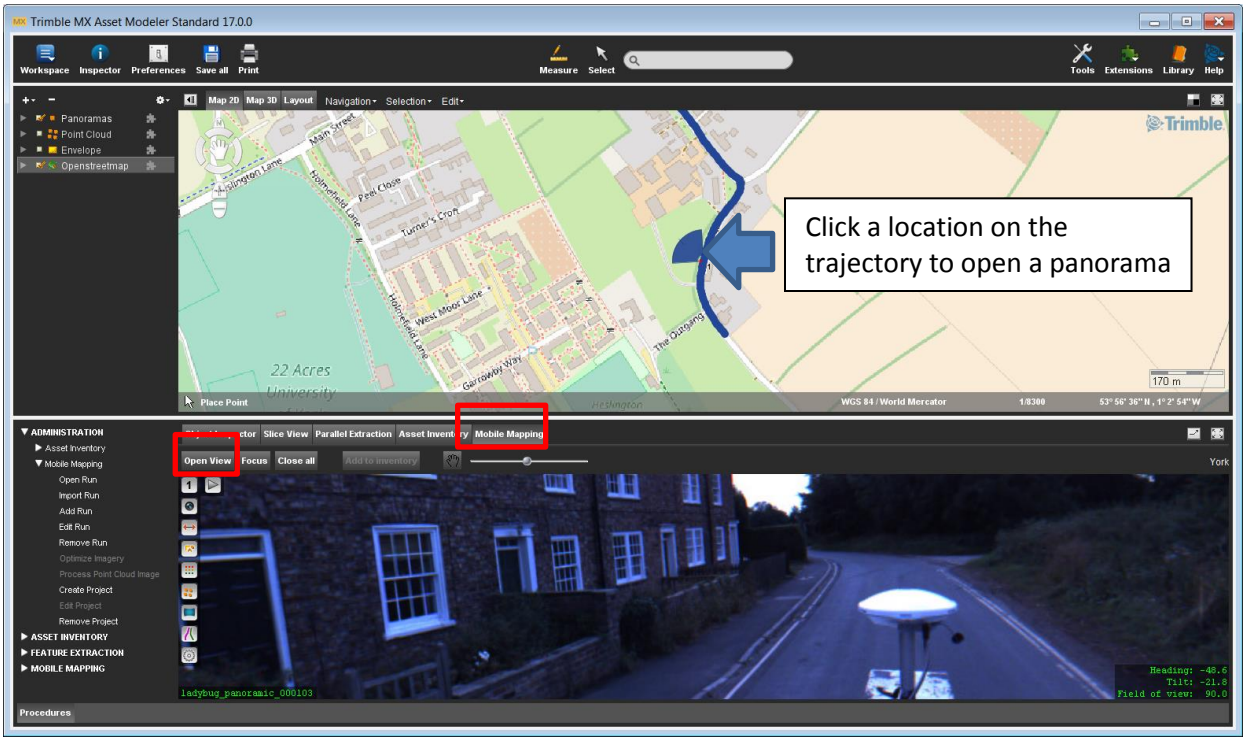
Select your LAS files:

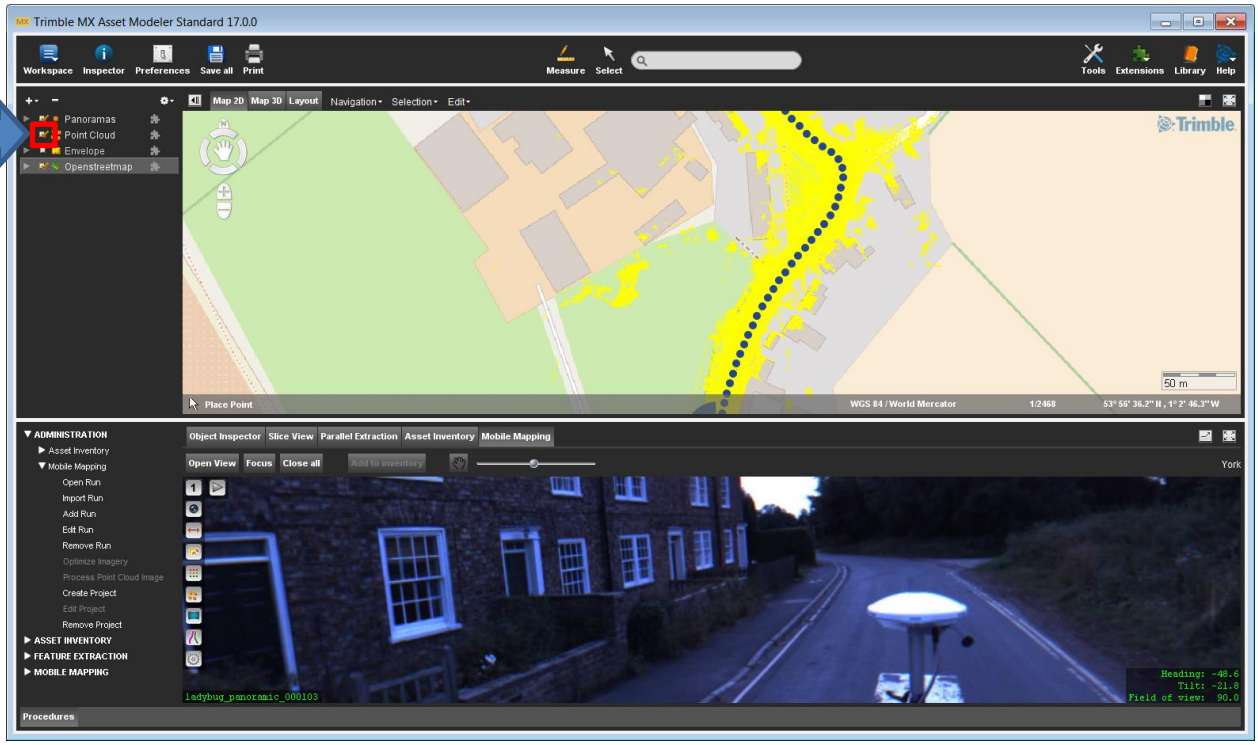


LAS files are imported:



To check data has imported correctly open a Panorama and display the Point Cloud:


Trimble MX Asset Modeler Standard 17.0.0
Workspace
Inspector
Preferences
Save all
Print
Measure
Select
Tools
Extensions
Library
Help
Map 2D
Map 3D
Layout
Navigation
Selection
Edit
Panoramas
Point Cloud
Envelope
Openstreetmap
Click a location on the trajectory to open a panorama
Place Point
WGS 84 / World Mercator
ADMINISTRATION
Asset Inventory
Mobile Mapping
Open Run
Import Run
Add Run
Edit Run
Remove Run
Optimize Imagery
Process Point Cloud Image
Create Project
Edit Project
Remove Project
ASSET INVENTORY
FEATURE EXTRACTION
MOBILE MAPPING
Object Inspector
Slice View
Parallel Extraction
Asset Inventory
Mobile Mapping
Open View
Focus
Close all
Add to inventory
Procedures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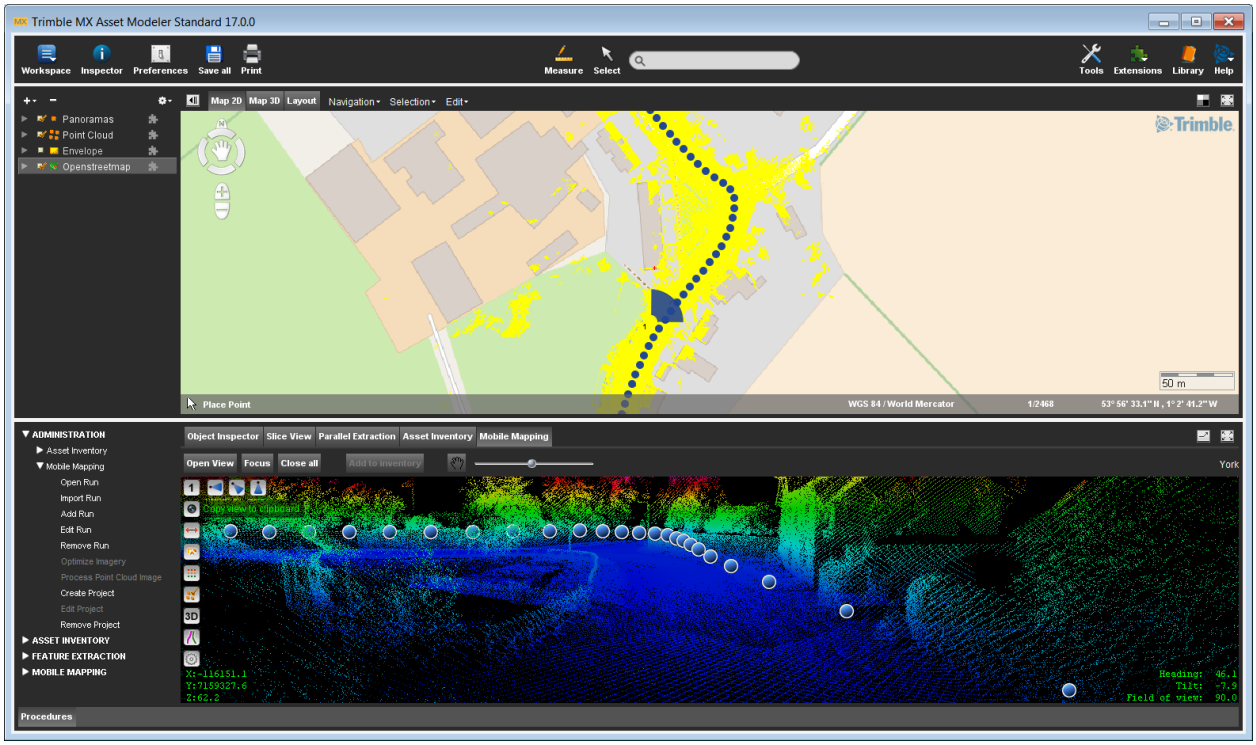
Edit Project
Remove Project
ASSET INVENTORY
FEATURE EXTRACTION
MOBILE MAPPING
Object Inspector
Slice View
Parallel Extraction
Asset Inventory
Mobile Mapping
Open View
Focus
Close all
Add to inventory
Procedures



For more information

For more information contact your local Trimble Distribution Partner.