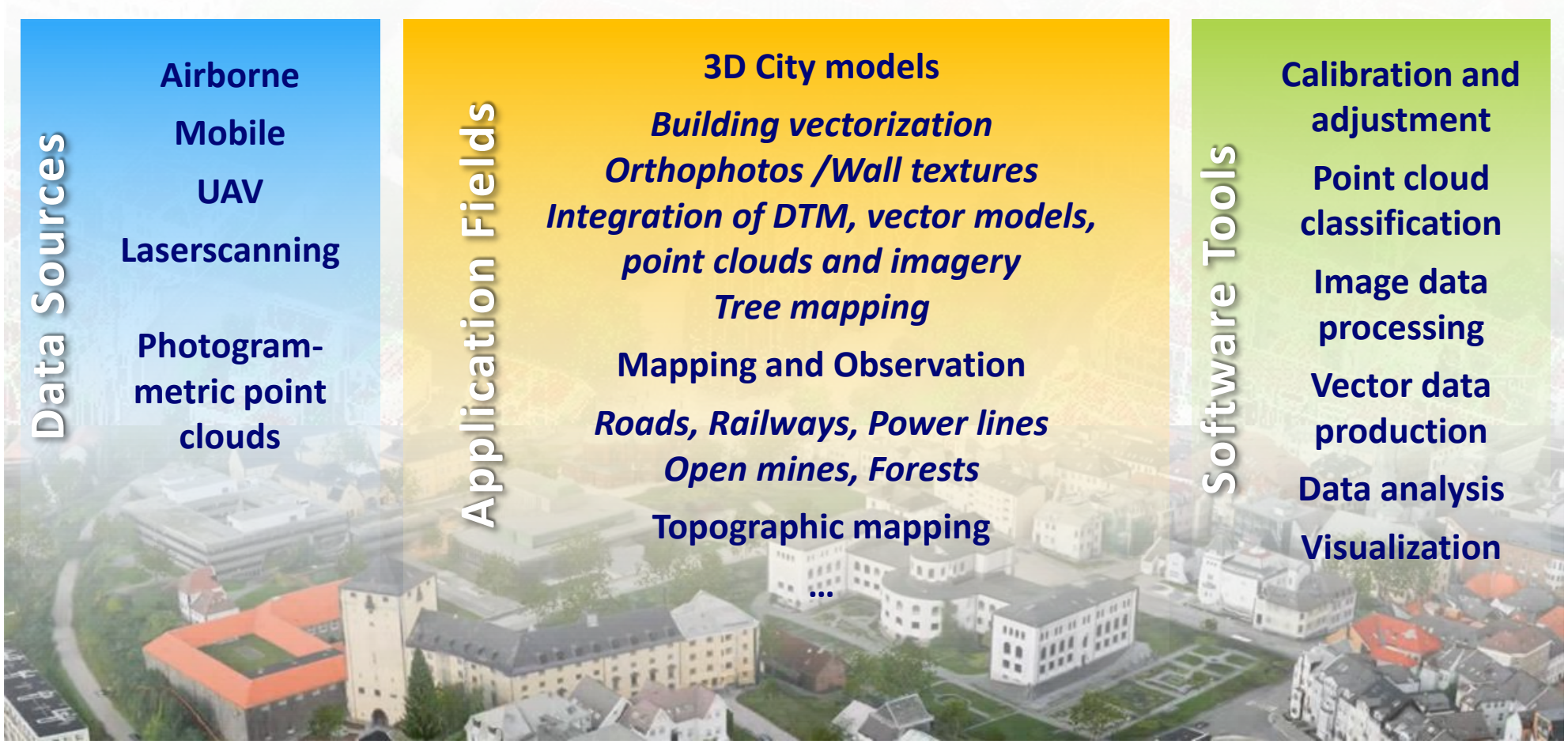
INTERGEO digital 2020

TERRASOLID SOFTWARE – AN OVERVIEW

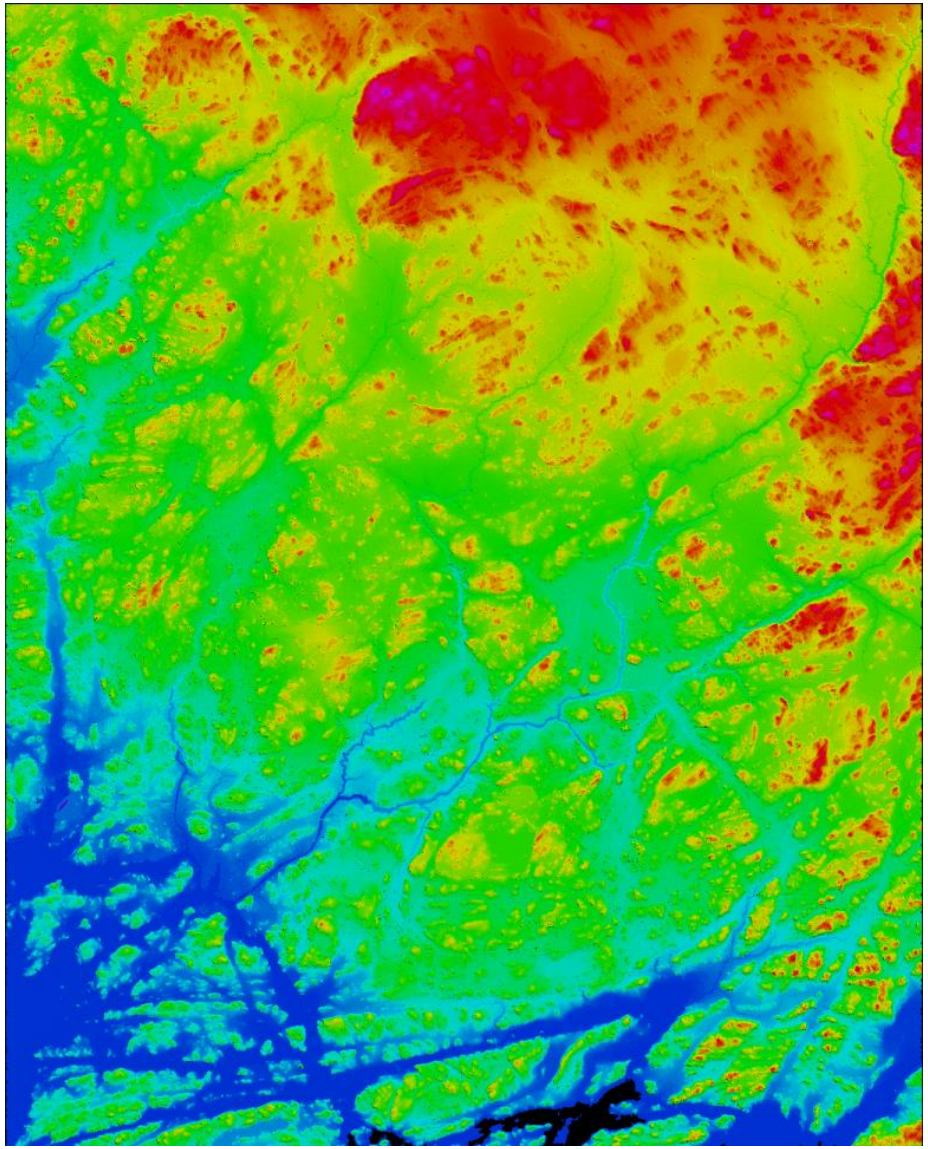
Friederike Schwarzbach
Oktober 2020

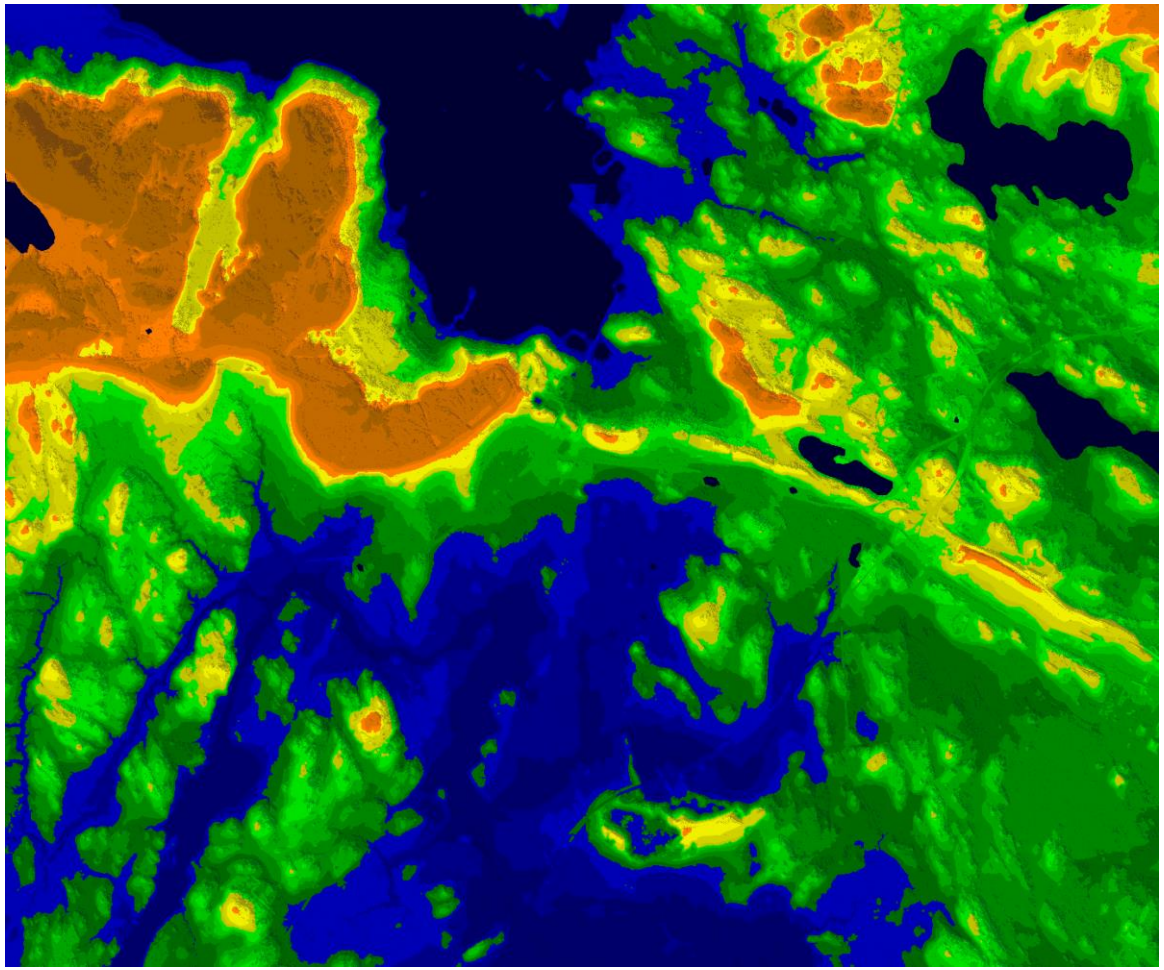
Introduction Terrasolid

- founded in 1989, located in Finland
- worldwide leading software provider for processing point clouds and associated image

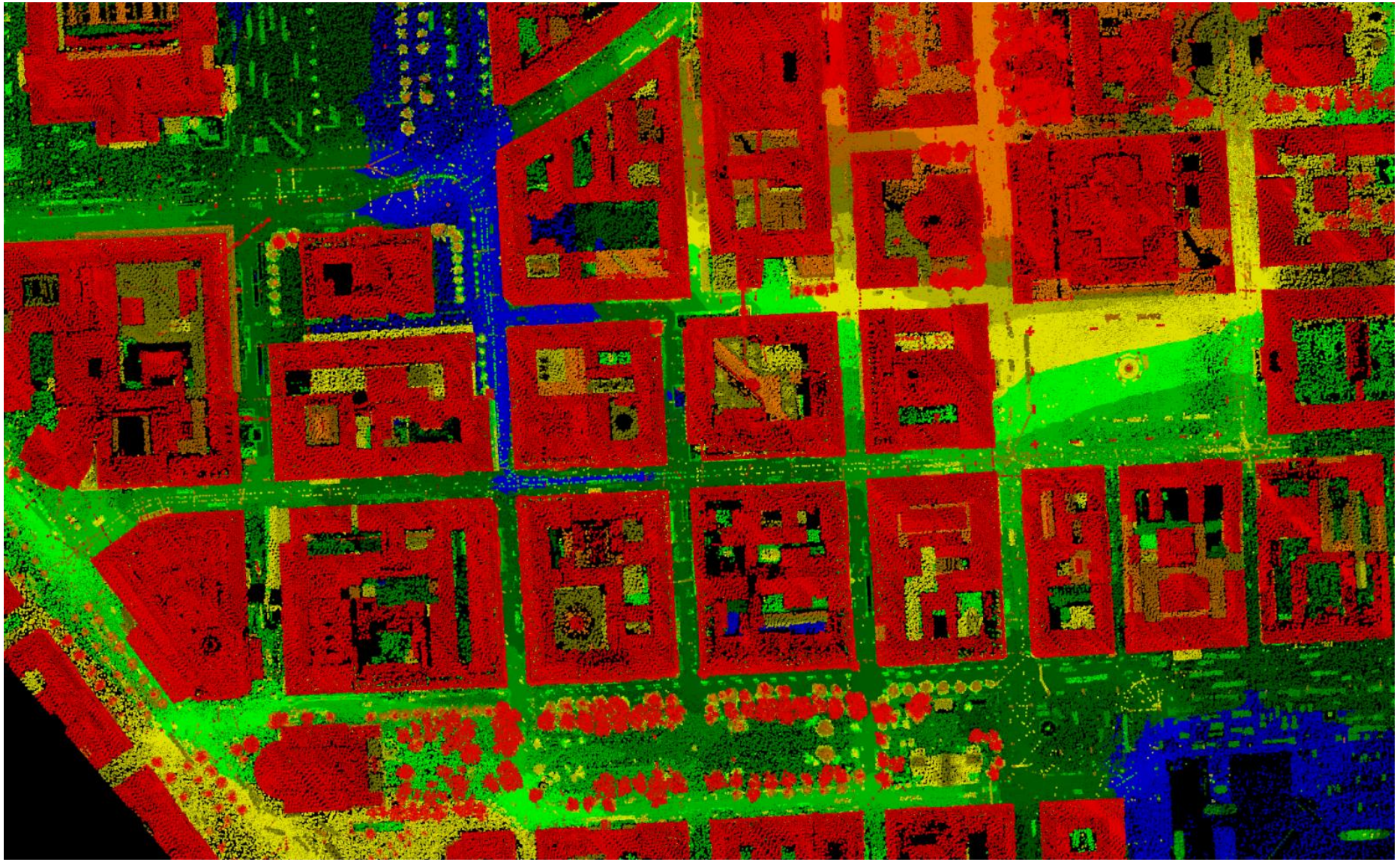


DTM/DSM Production - ALS

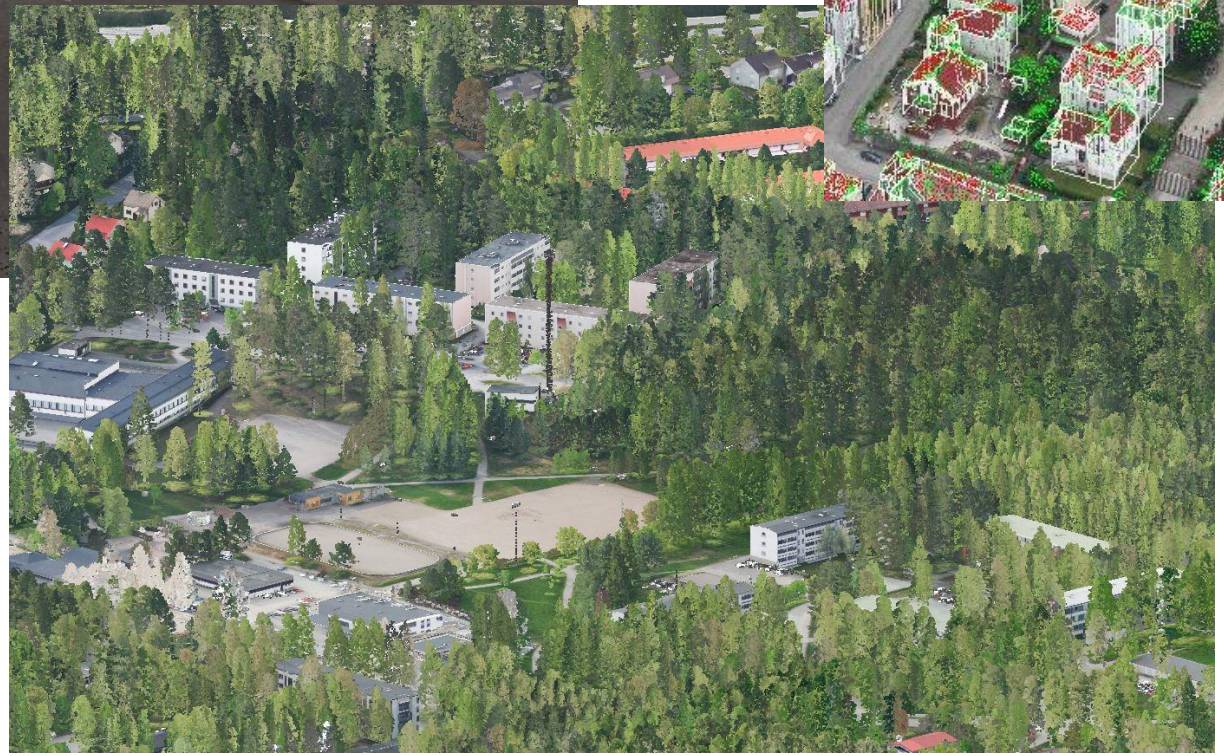




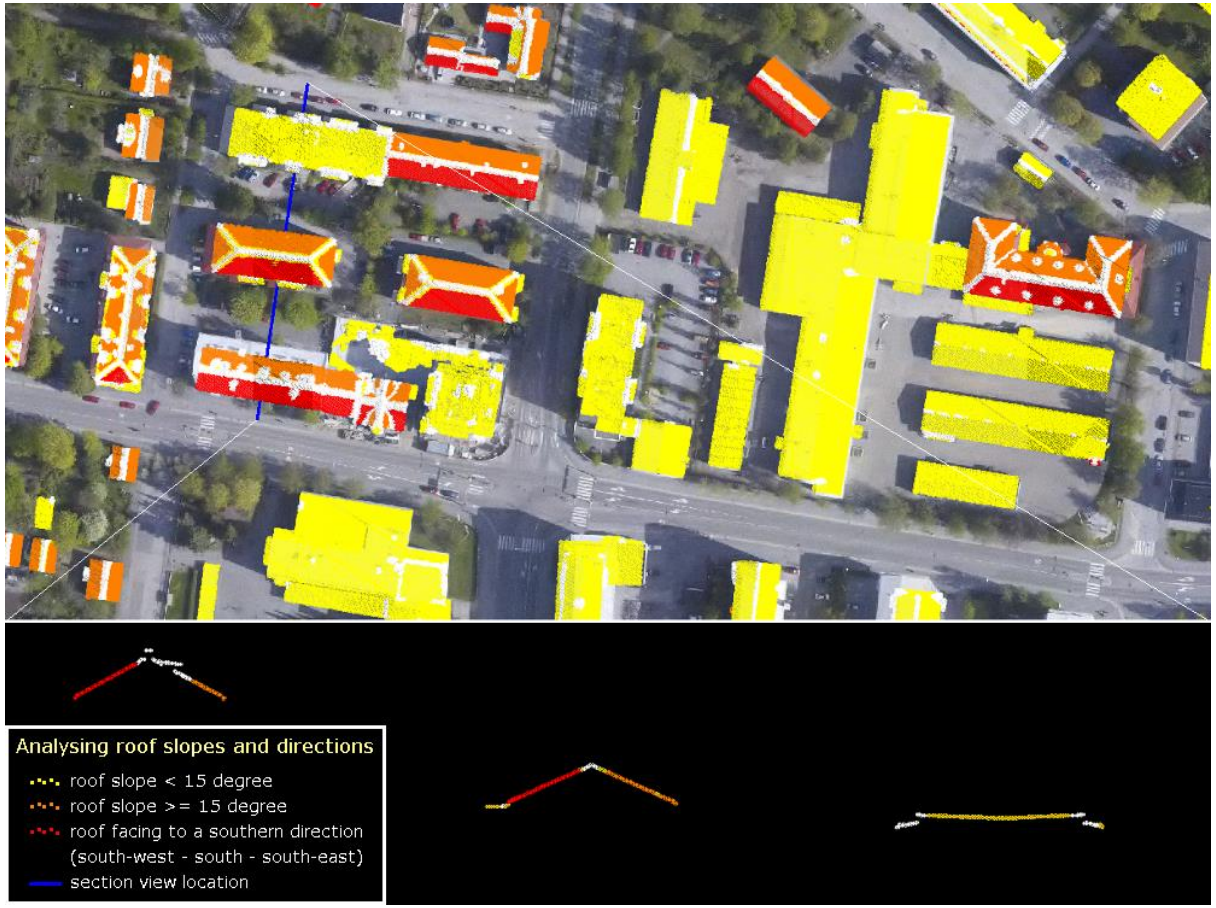
DTM/DSM Production - ALS

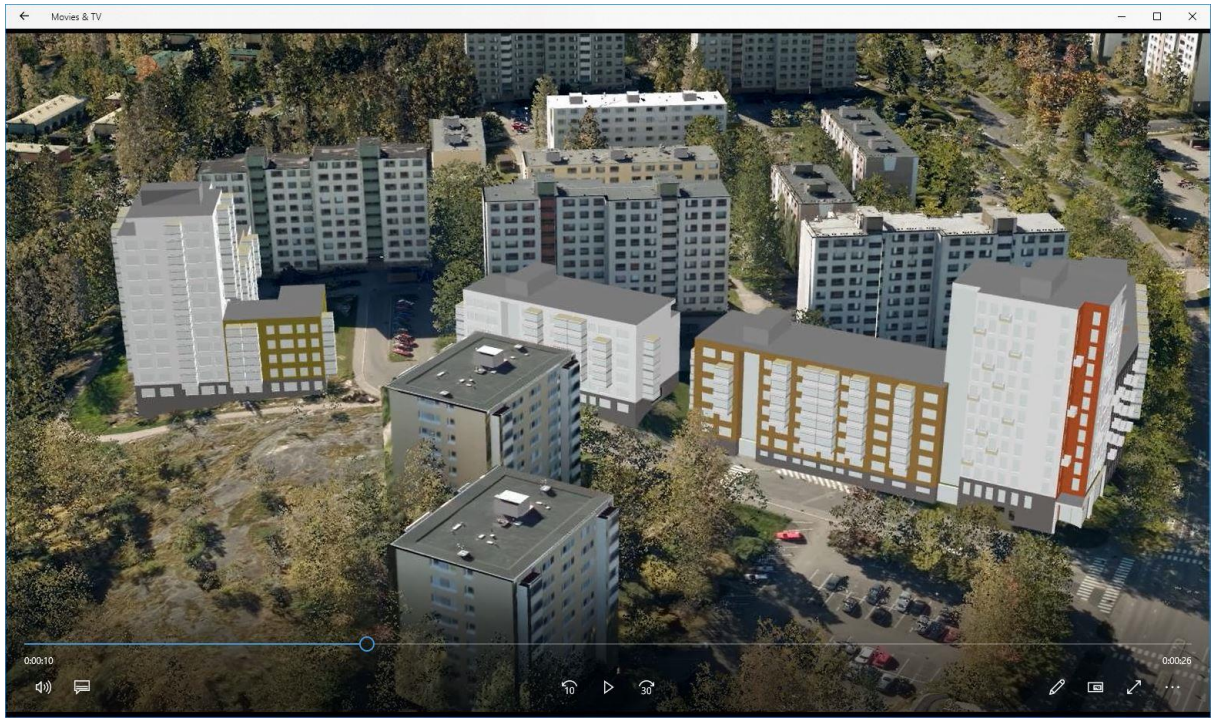


3D City Models – ALS / MLS

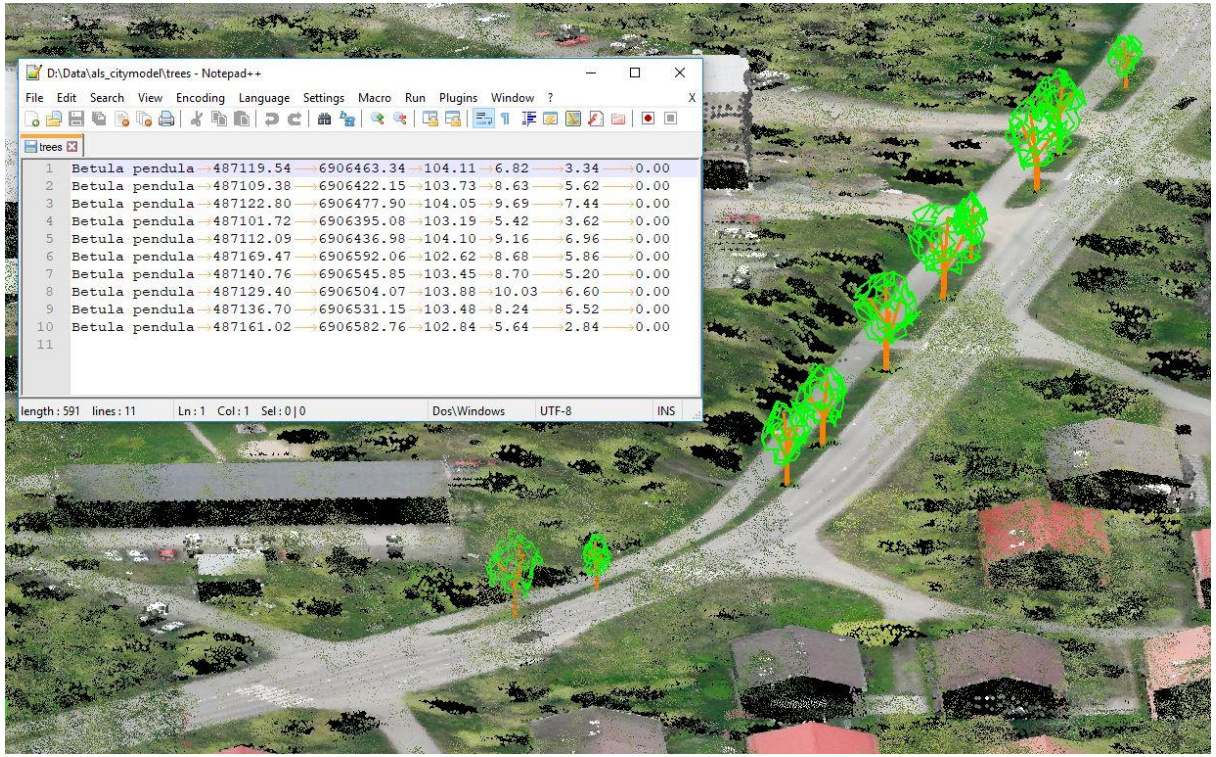


3D City Models – Analysis of roof structure, Planning tasks

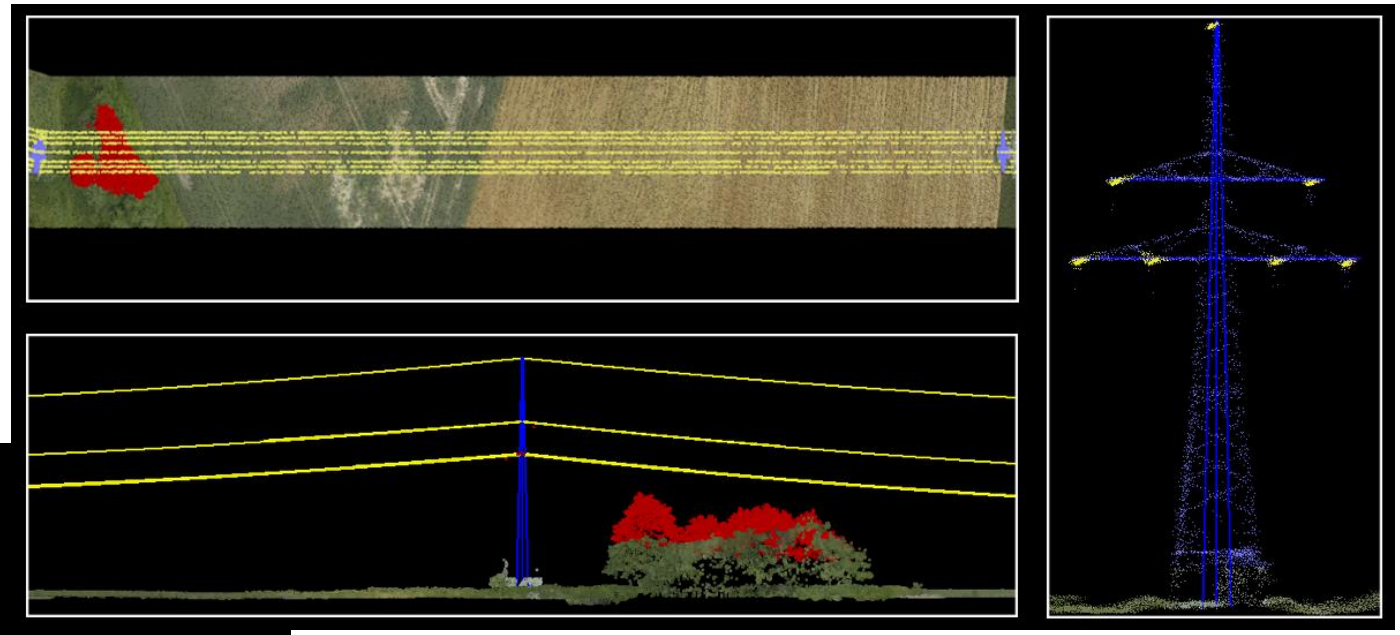


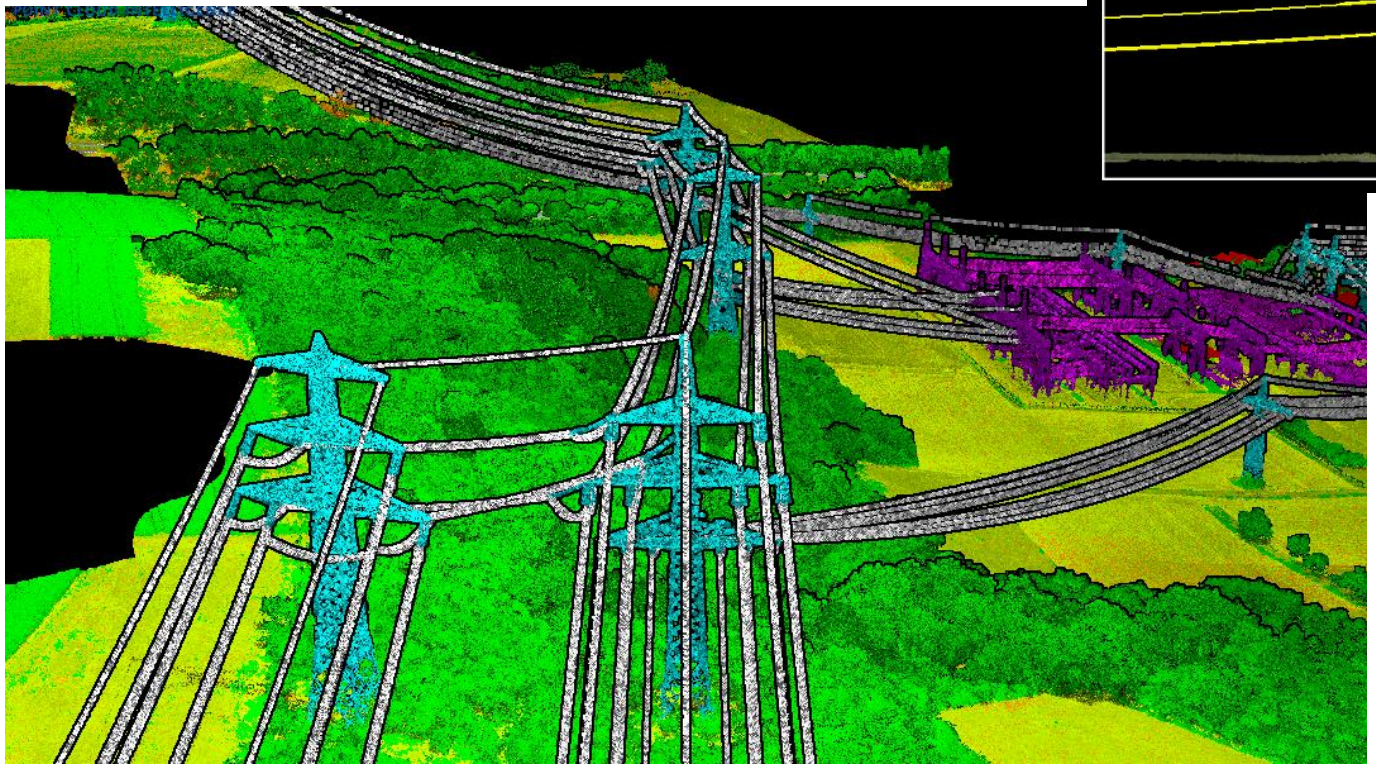


3D City Models – Mapping of trees in public areas



Power Line Maintenance - ALS



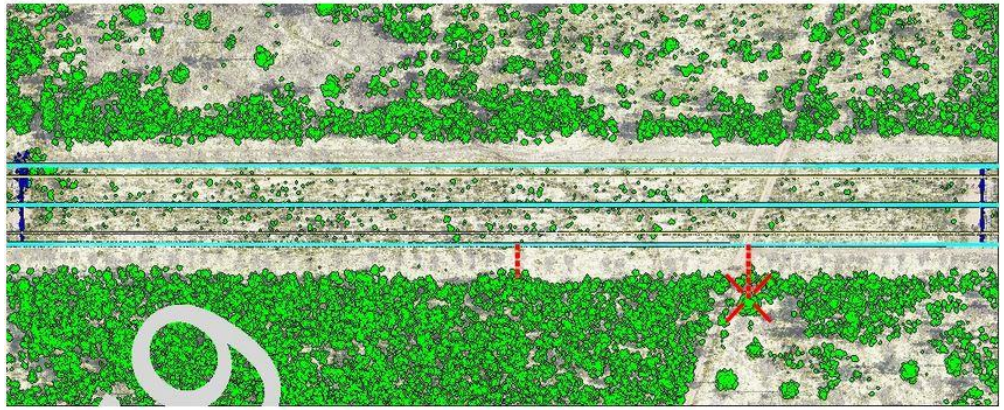


Power Line Maintenance – Danger object detection

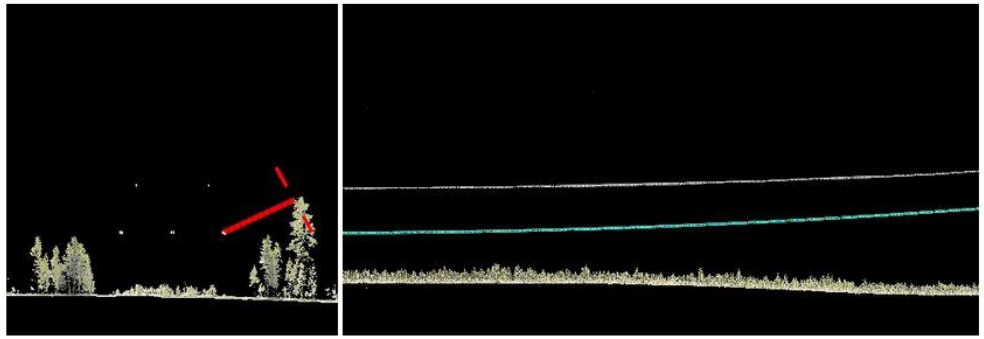
Point number	Span	Distance from 1st tower
12	79-80	23.41

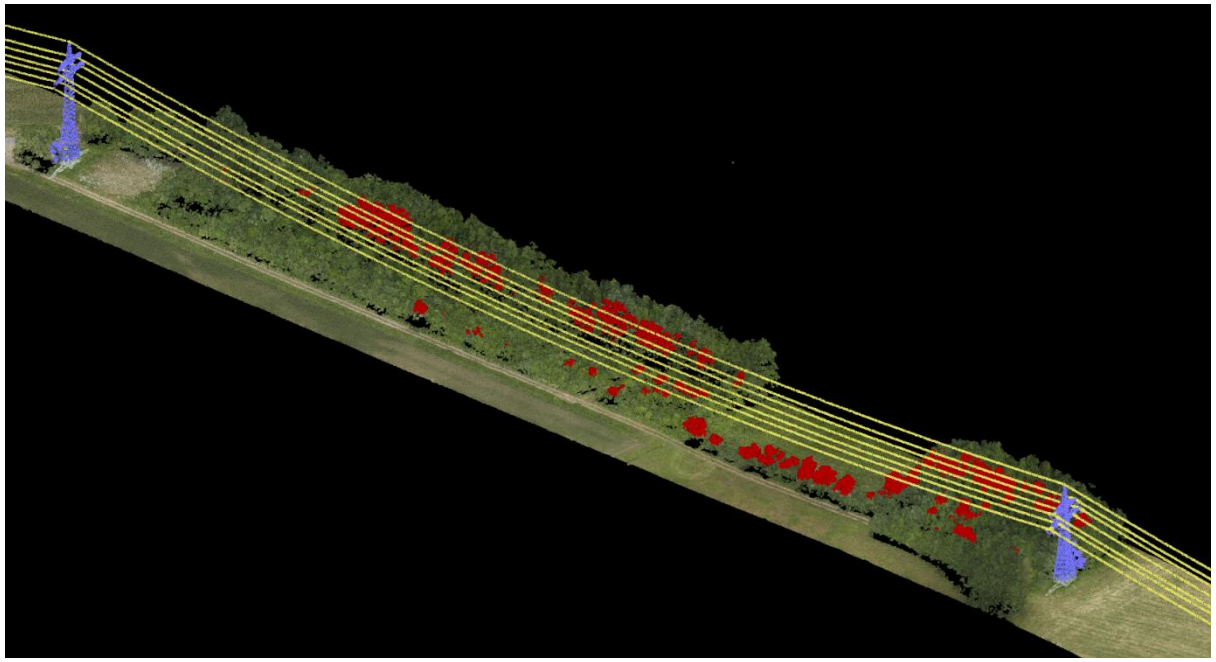
Easting	Northing	Elevation
1462607.9	6784937.6	226.79

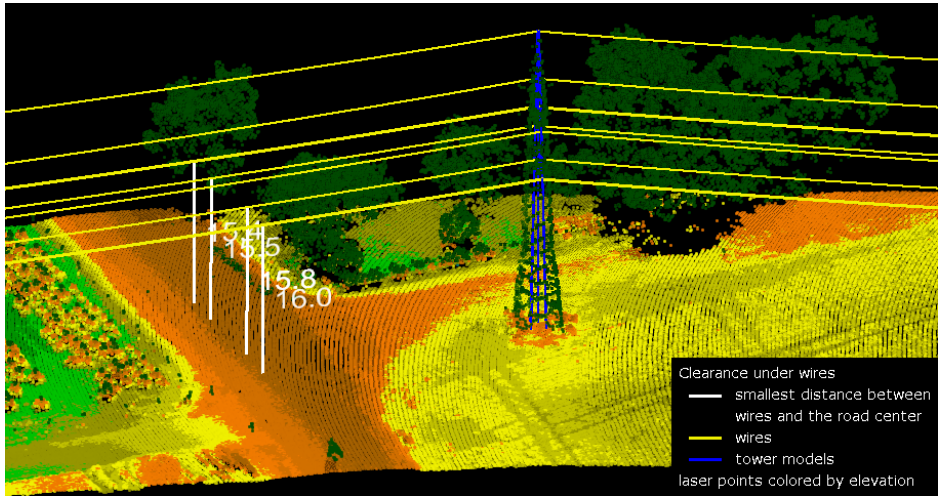
Longitude	Latitude	Distance from wire
15.110123	61.178357	2.09



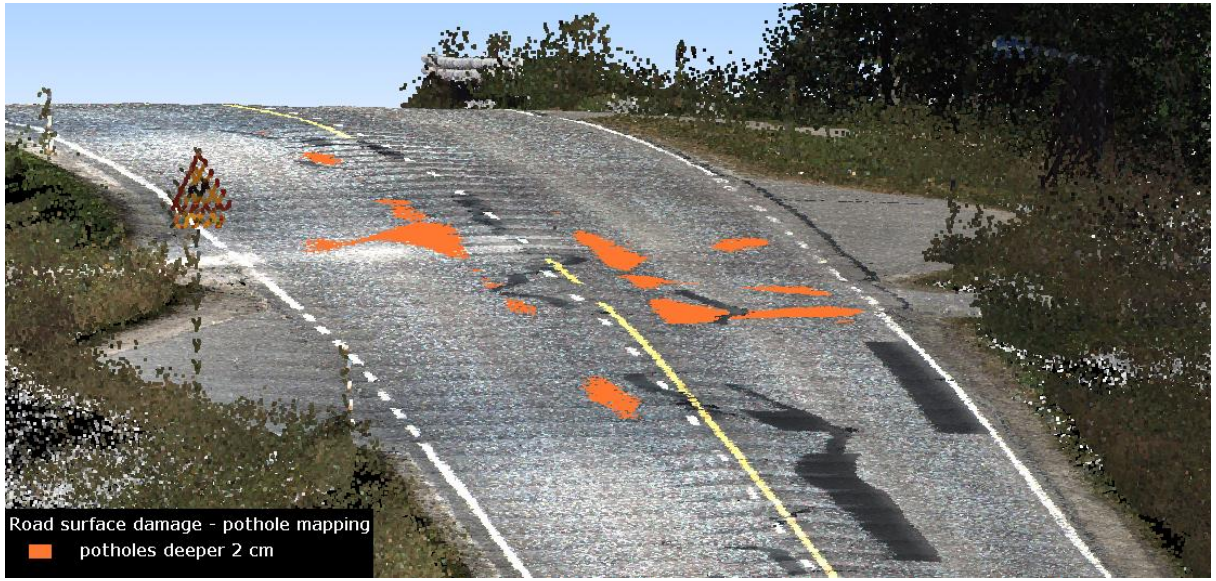
Span top

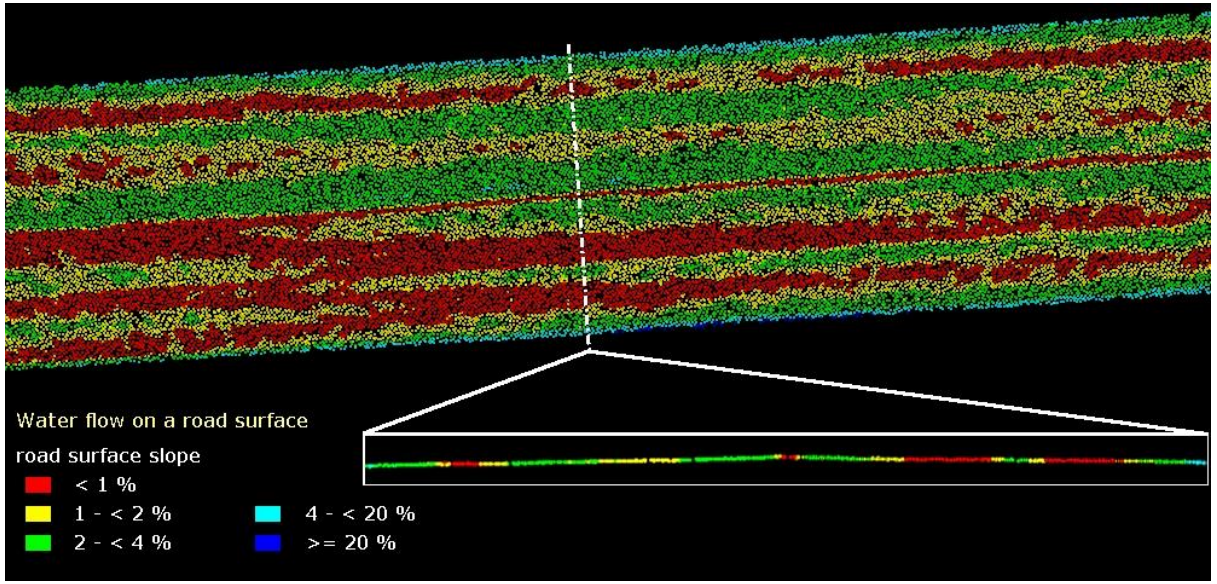


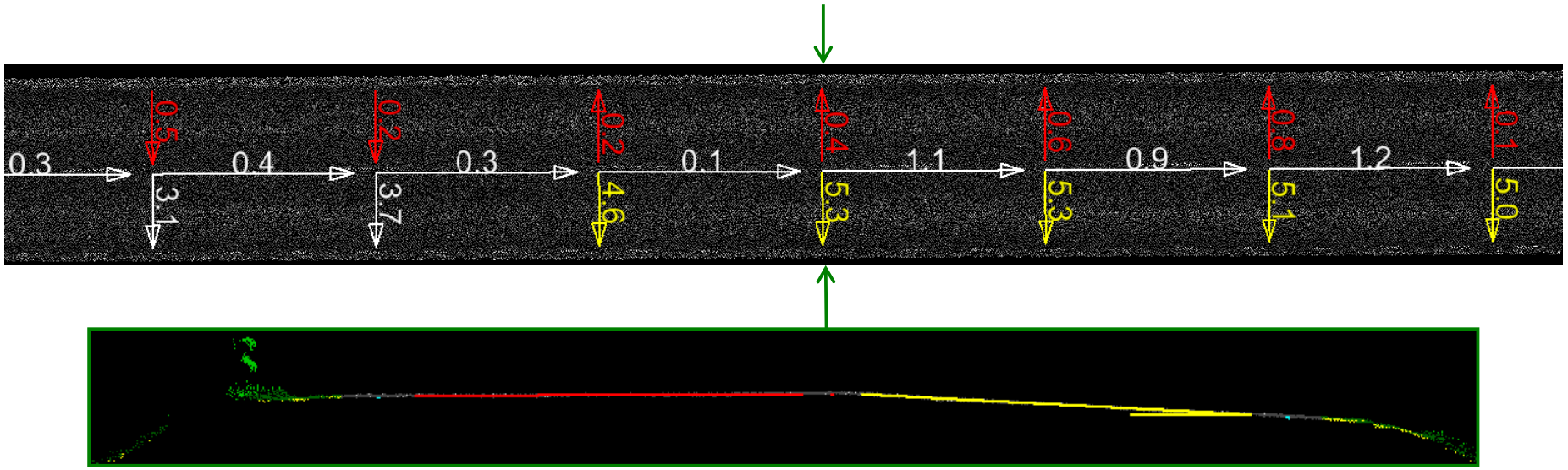




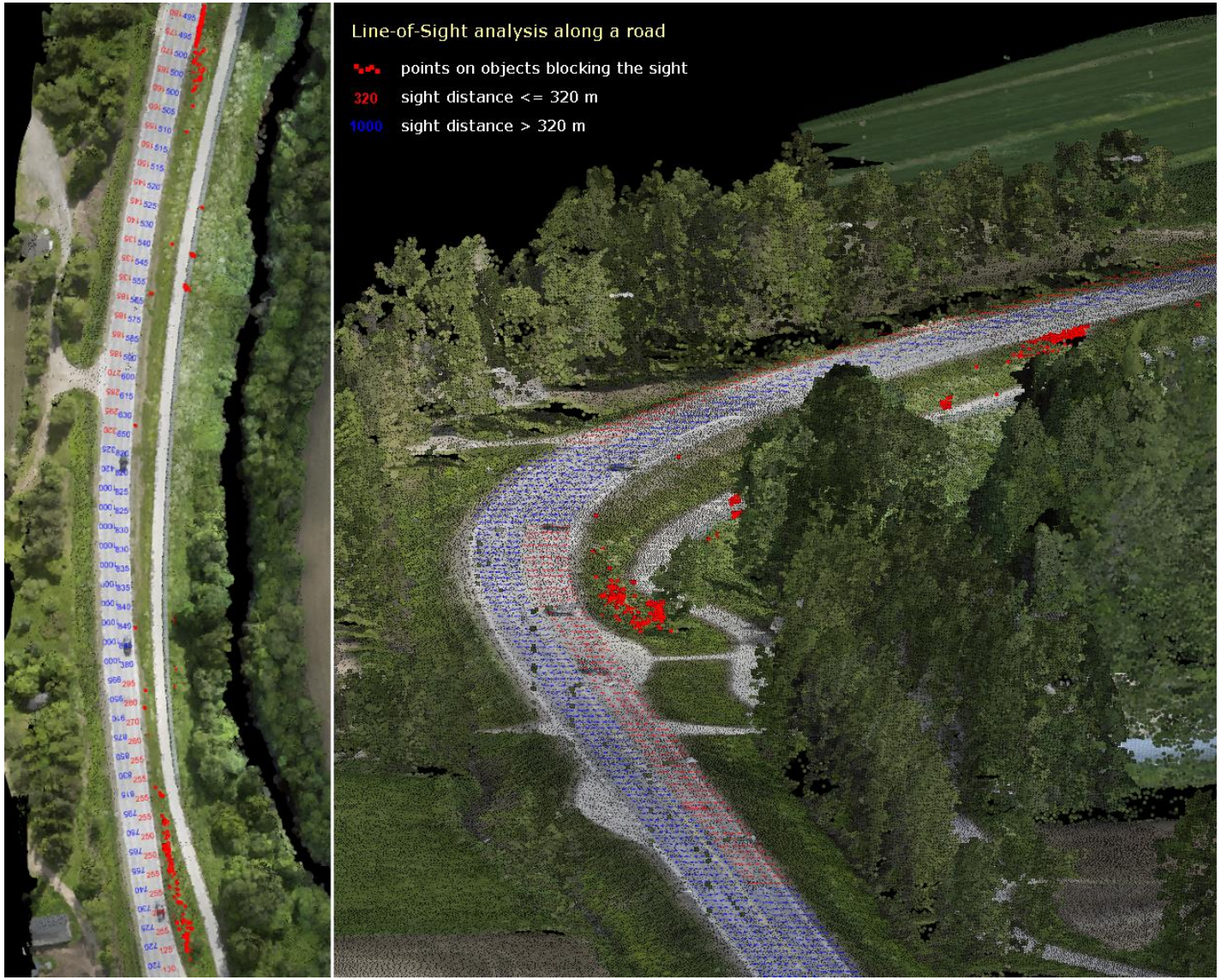
Road Maintenance – MLS / ALS

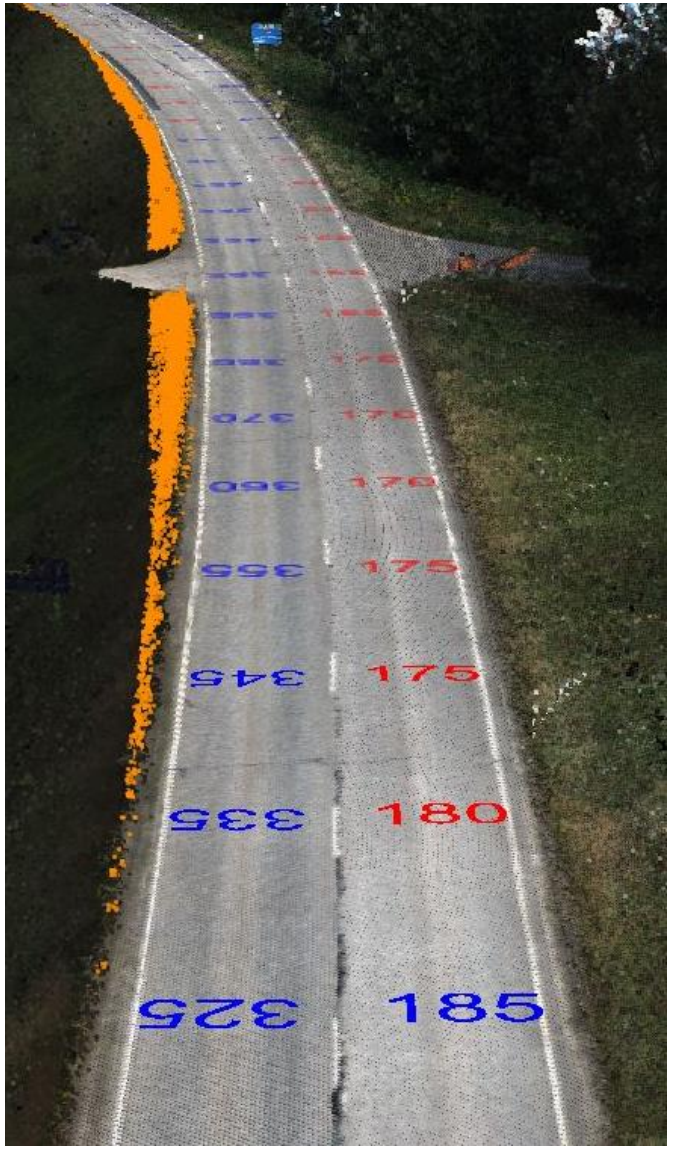




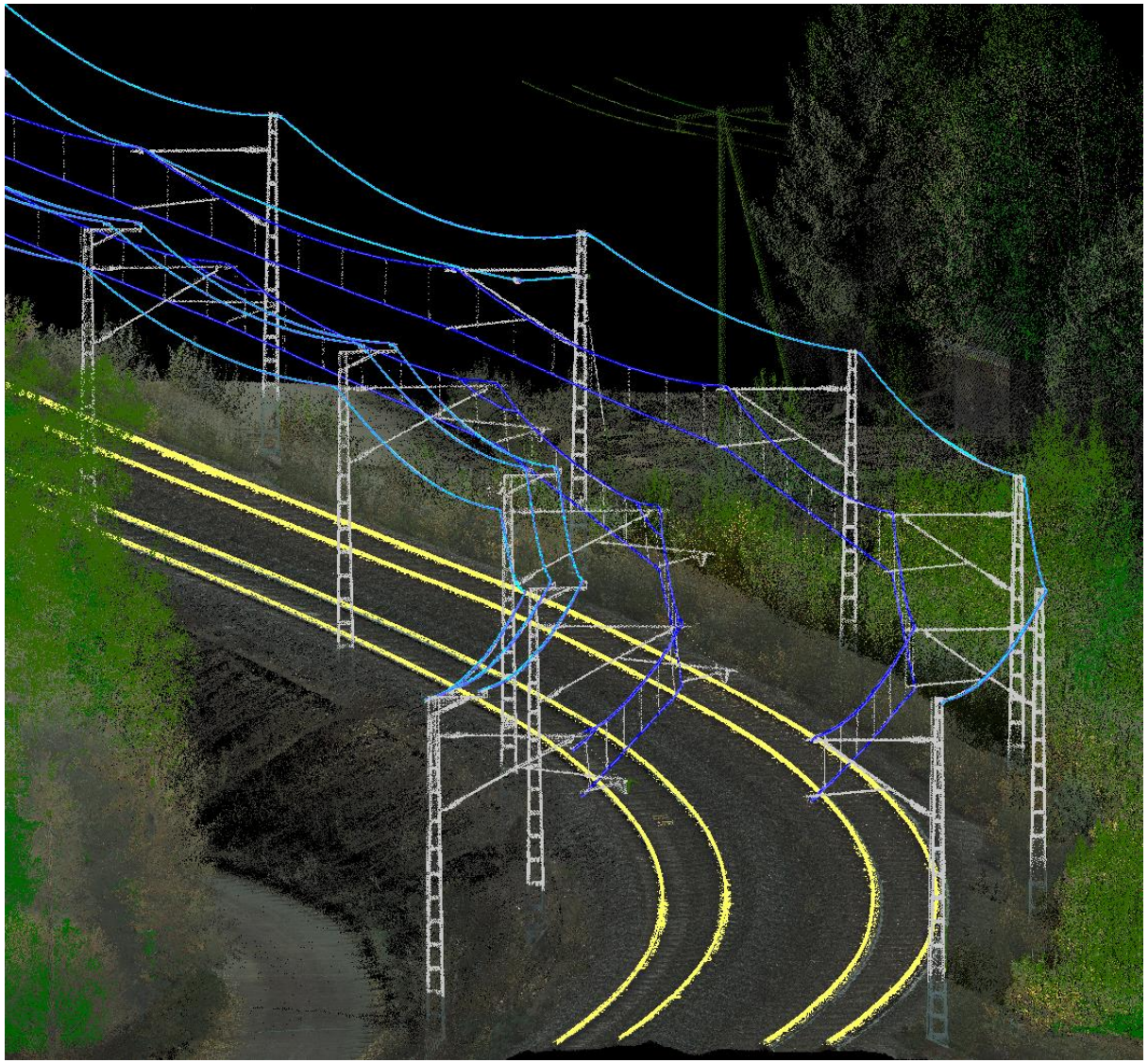


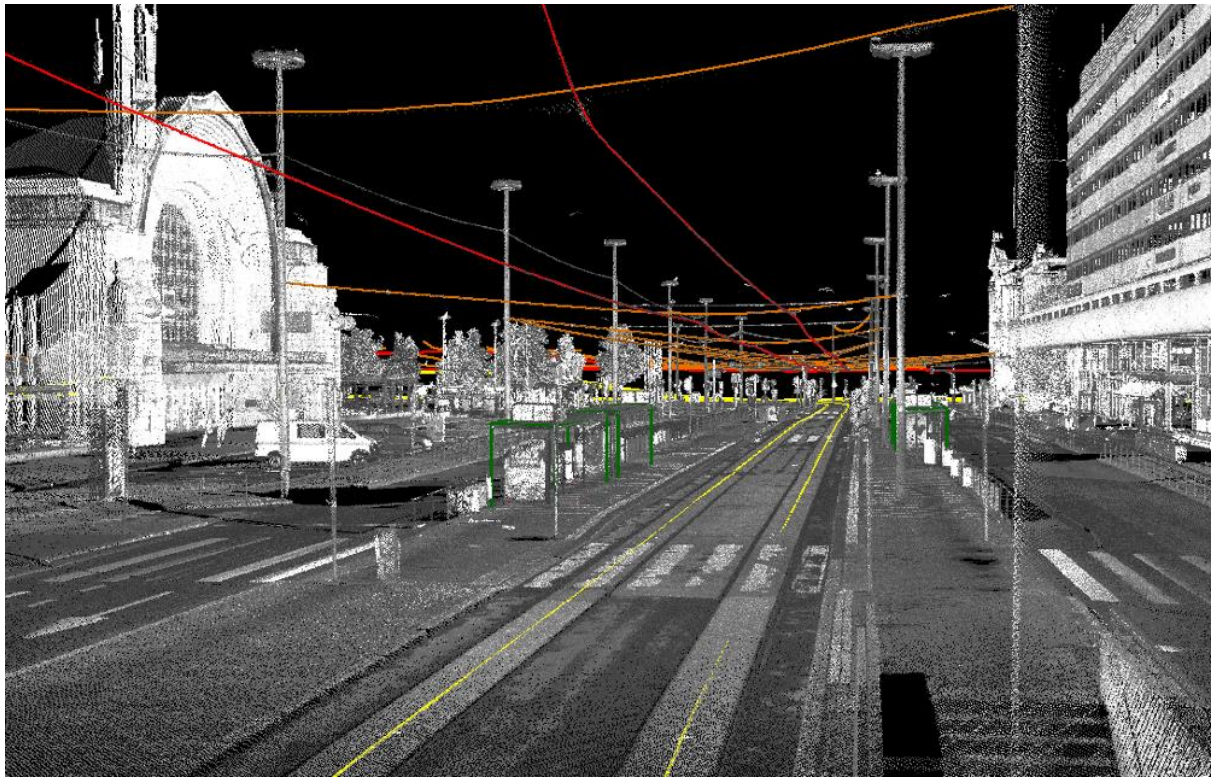
Road Maintenance – Line-of-sight analysis



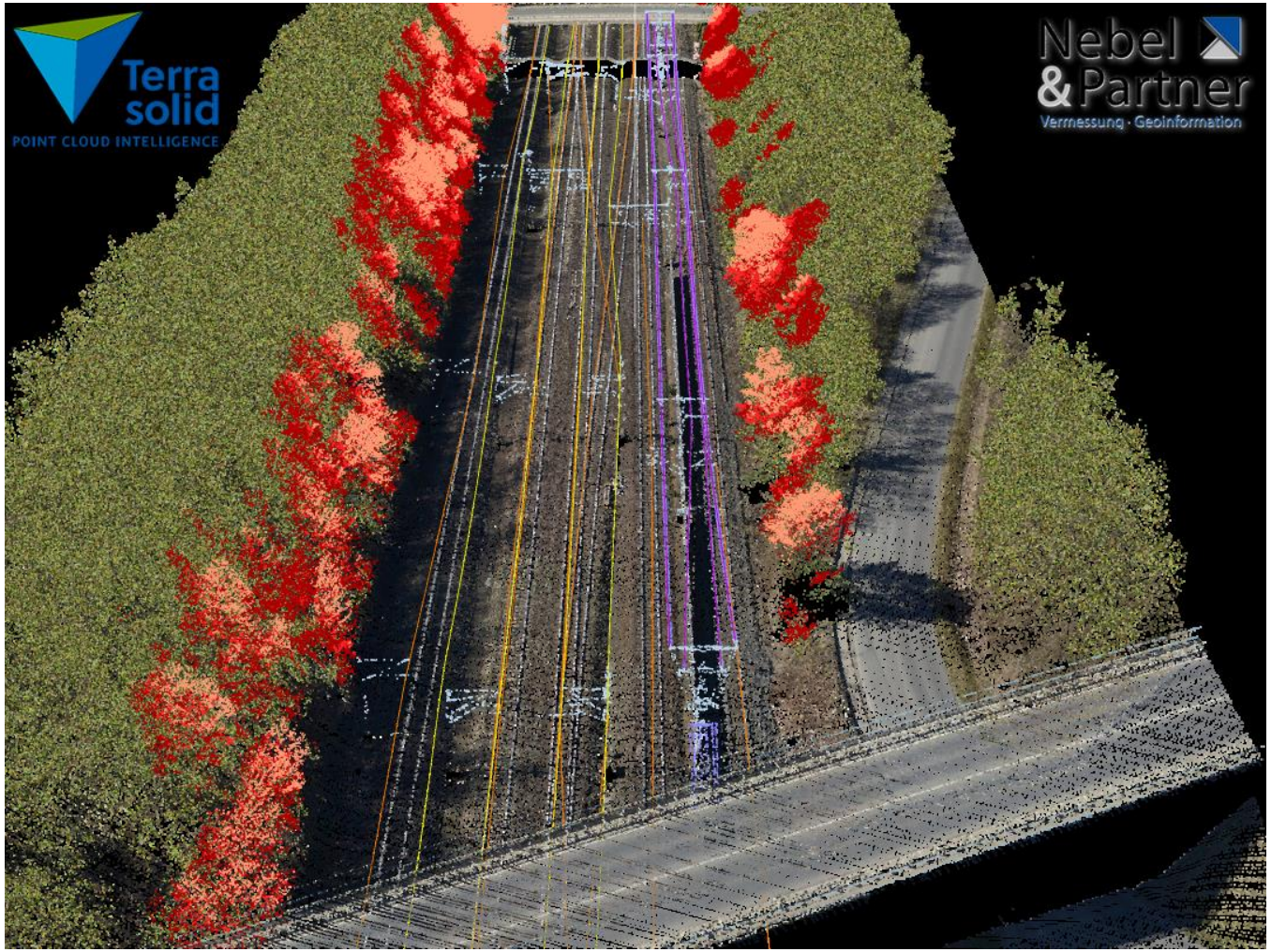


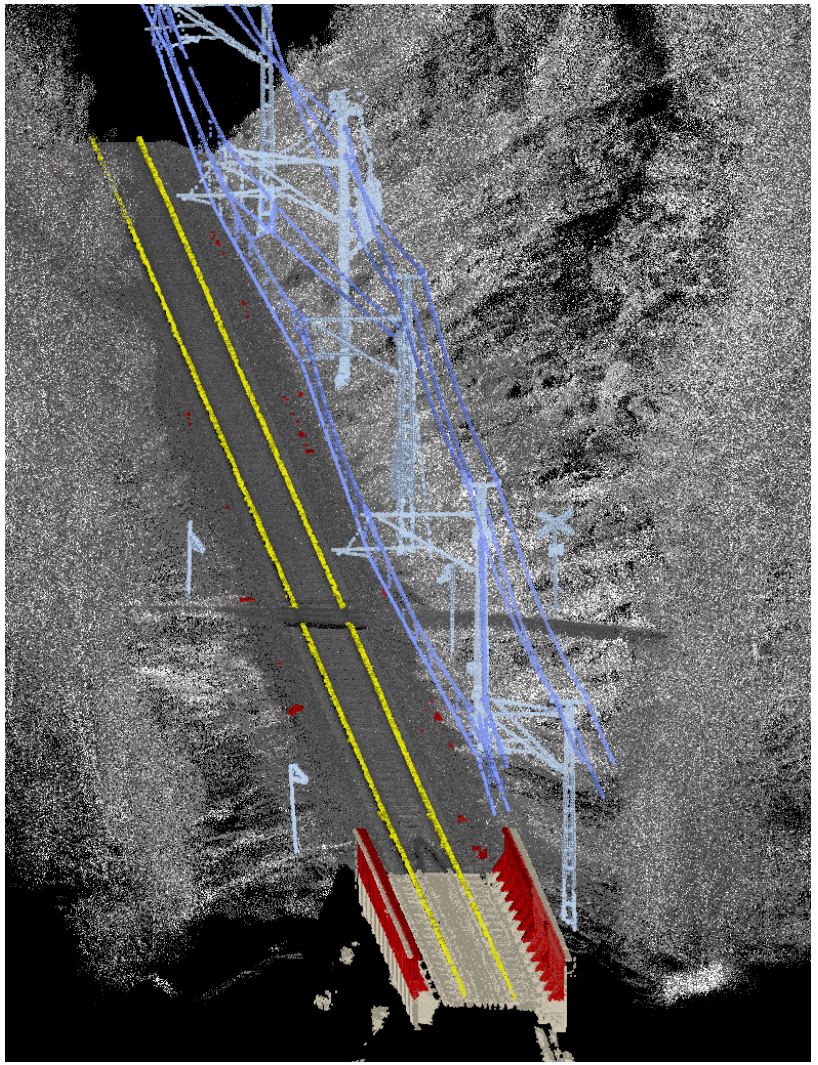
Railroad Maintenance – MLS / ALS



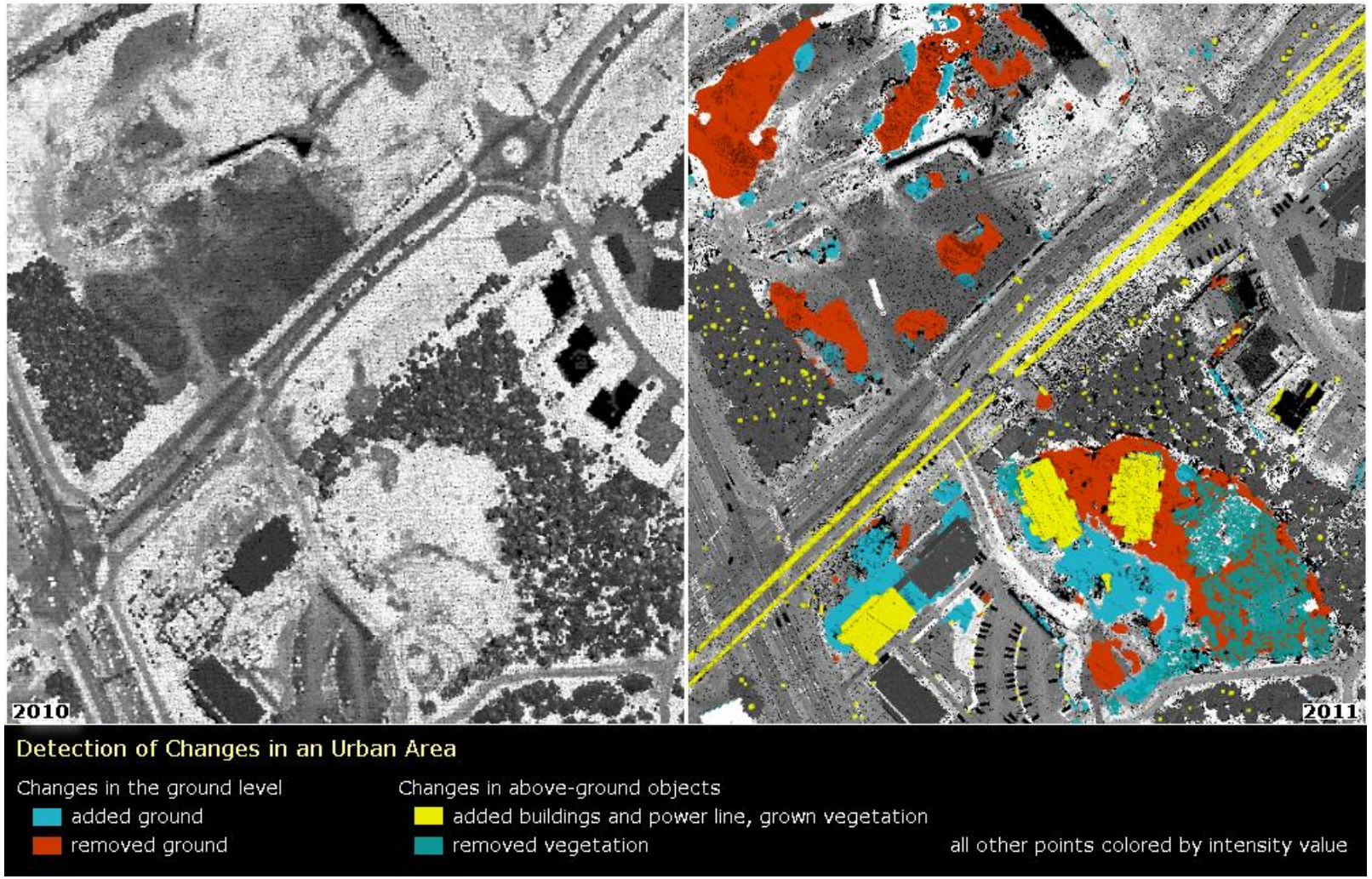


Railroad Maintenance – Danger object analysis

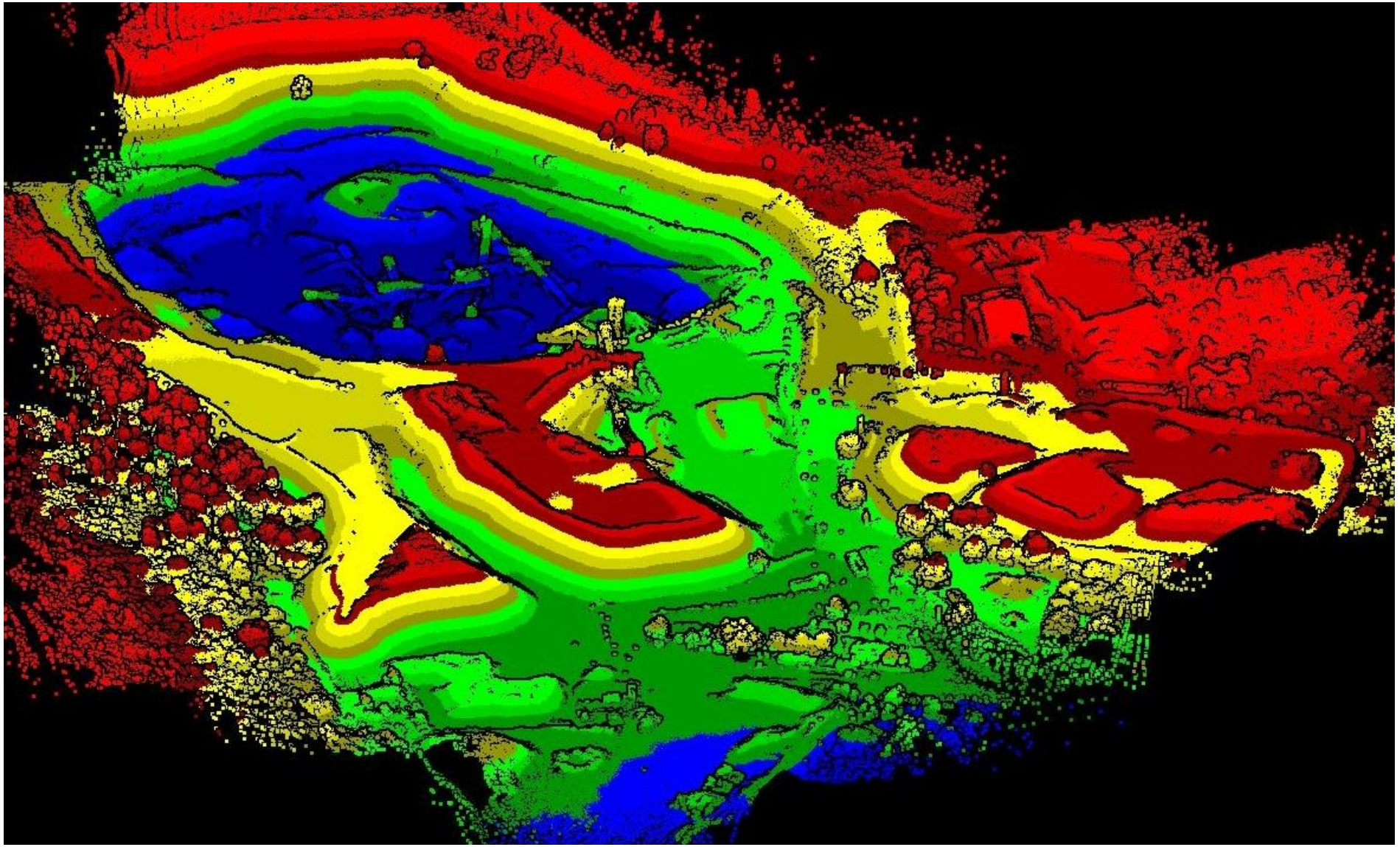




Change Detection – ALS / UAV



Observation of Open Mines – UAV



Fast Mapping of Small Areas – UAV

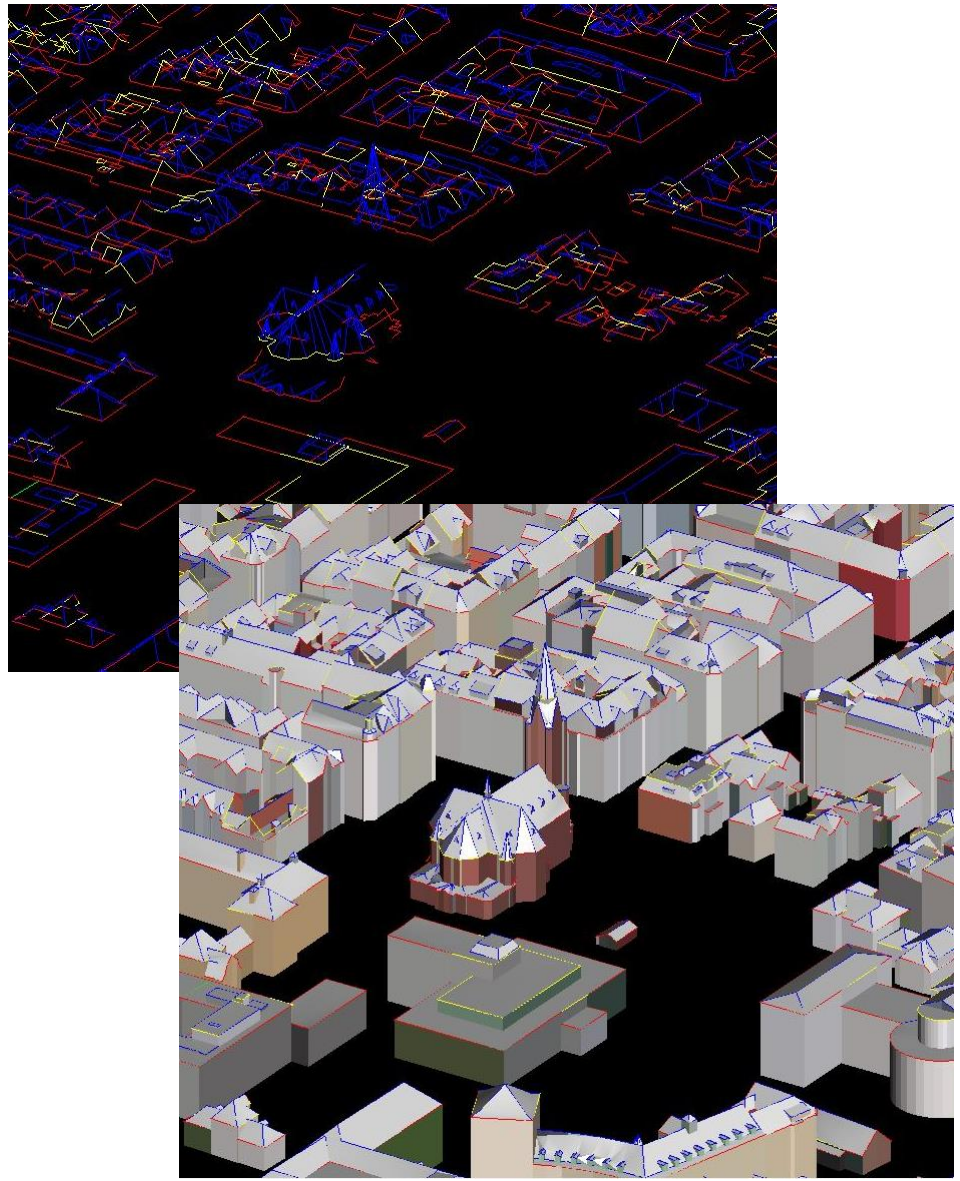
Terrasolid Software

- Software modules:
  - TerraScan[UAV, Lite] – point cloud processing
  - TerraMatch[UAV] – calibration and strip adjustment of LiDAR point clouds
  - TerraPhoto[UAV, Lite] – image processing
  - TerraModeler[UAV, Lite] – surface modeling
  - TerraStereo – advanced point cloud visualization
  - TerraSlave – automatic/distributed processing in batch mode
  - TerraSurvey, TerraStreet, TerraPipe, TerraBore, … for specific mapping tasks, local market

- Runs on top of CAD Software:
  - Spatix – CAD program developed by GISware Integro / Terrasolid
  - MicroStation, Map PowerView, PowerDraft, … – CAD product family of Bentley

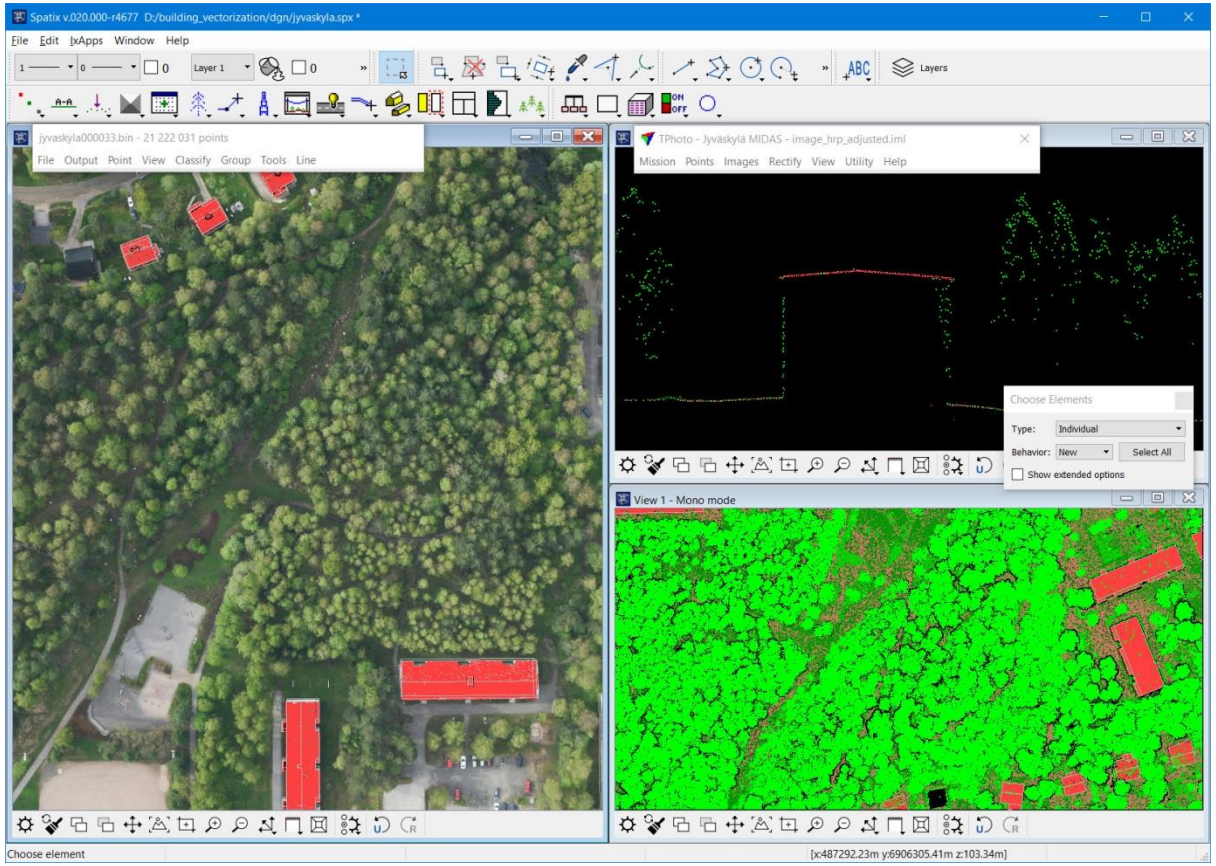
Terrasolid Software – CAD platform

- The CAD System provides:
  - Tools needed to create, modify, delete and manage vector elements
  - Management of level names and ability set visible levels
  - 3D viewing capability and view manipulation tools
  - Data exchange in different formats
  - Ability to run applications from different sources simultaneously
  - Ability for users to implement own tools



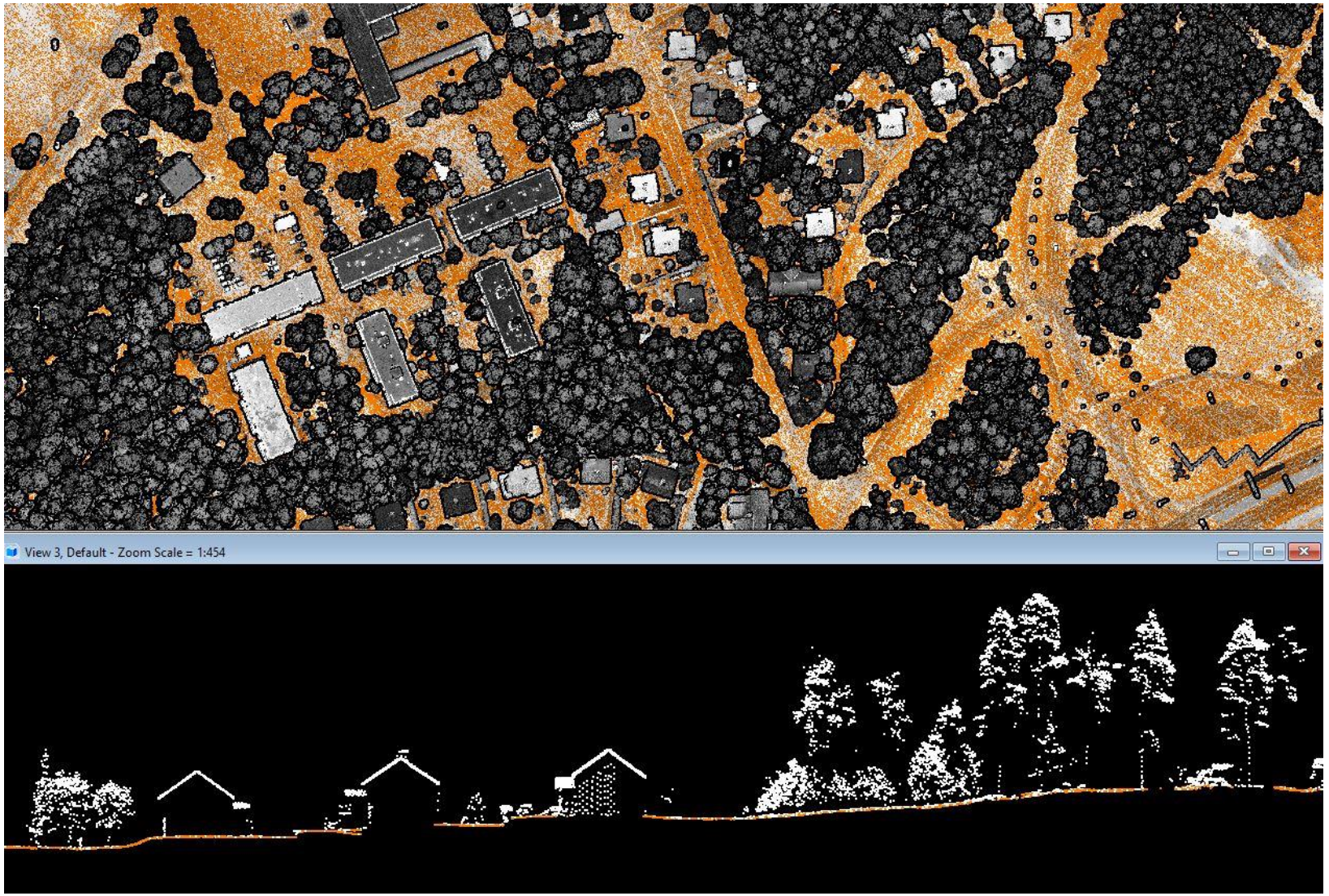
- Practically same functionality in both platforms
- For Terrasolid software, the same licenses are valid for both platforms
- The customer decides which platform to use

Spatix

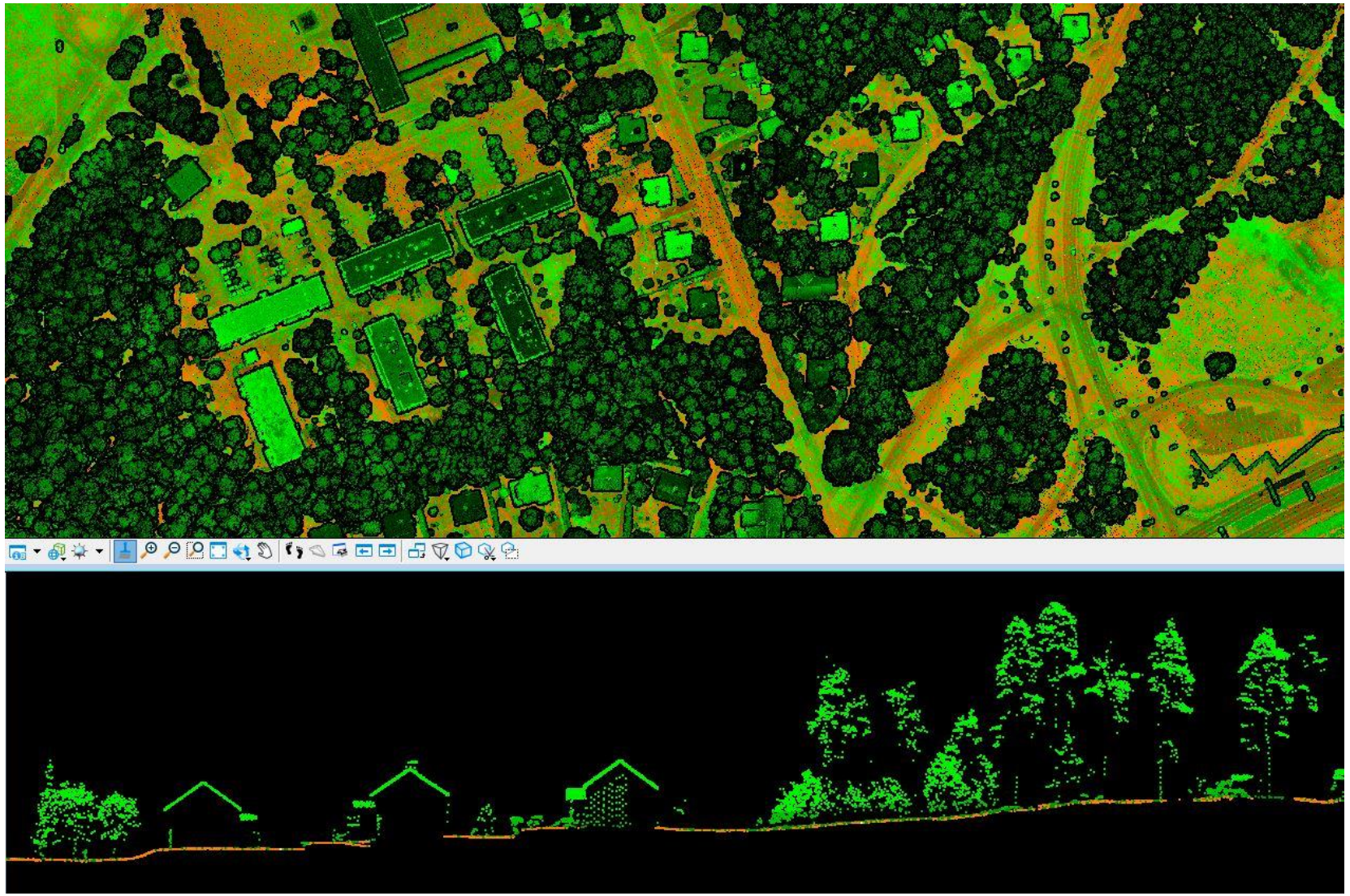


- Developed by GISware Integro, Russia in cooperation with Terrasolid
- Included in the Terrasolid software package
  - One price
  - One installation package
- Small and simple 3D CAD Software
- Up to 8 views supported: orthographic, perspektive, stereo
- Pulldown menu and tool boxes
- Programming interface “ixApps“

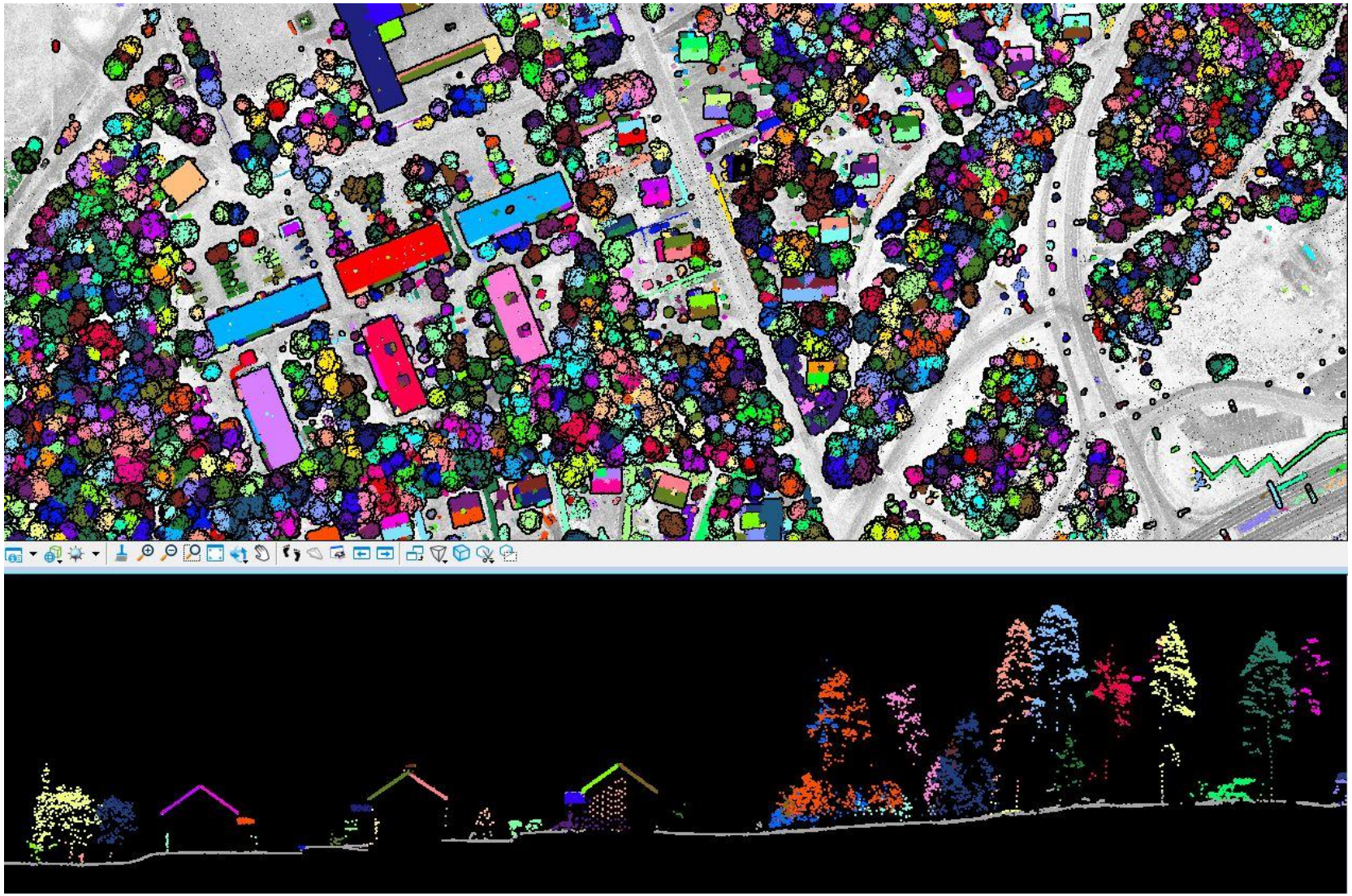
- Processing of point clouds, creation and modification of vector data



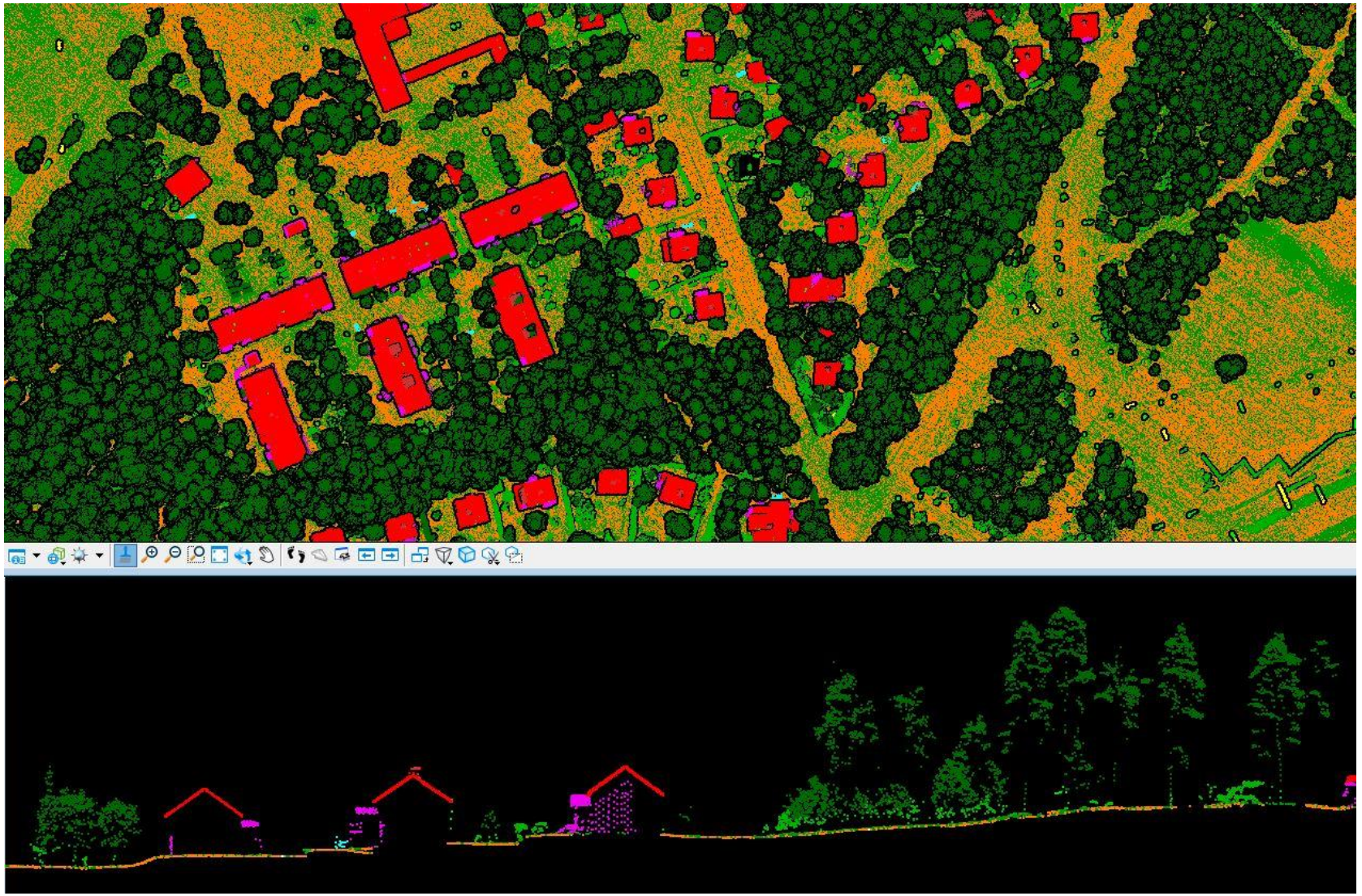
- Processing of point clouds, creation and modification of vector data



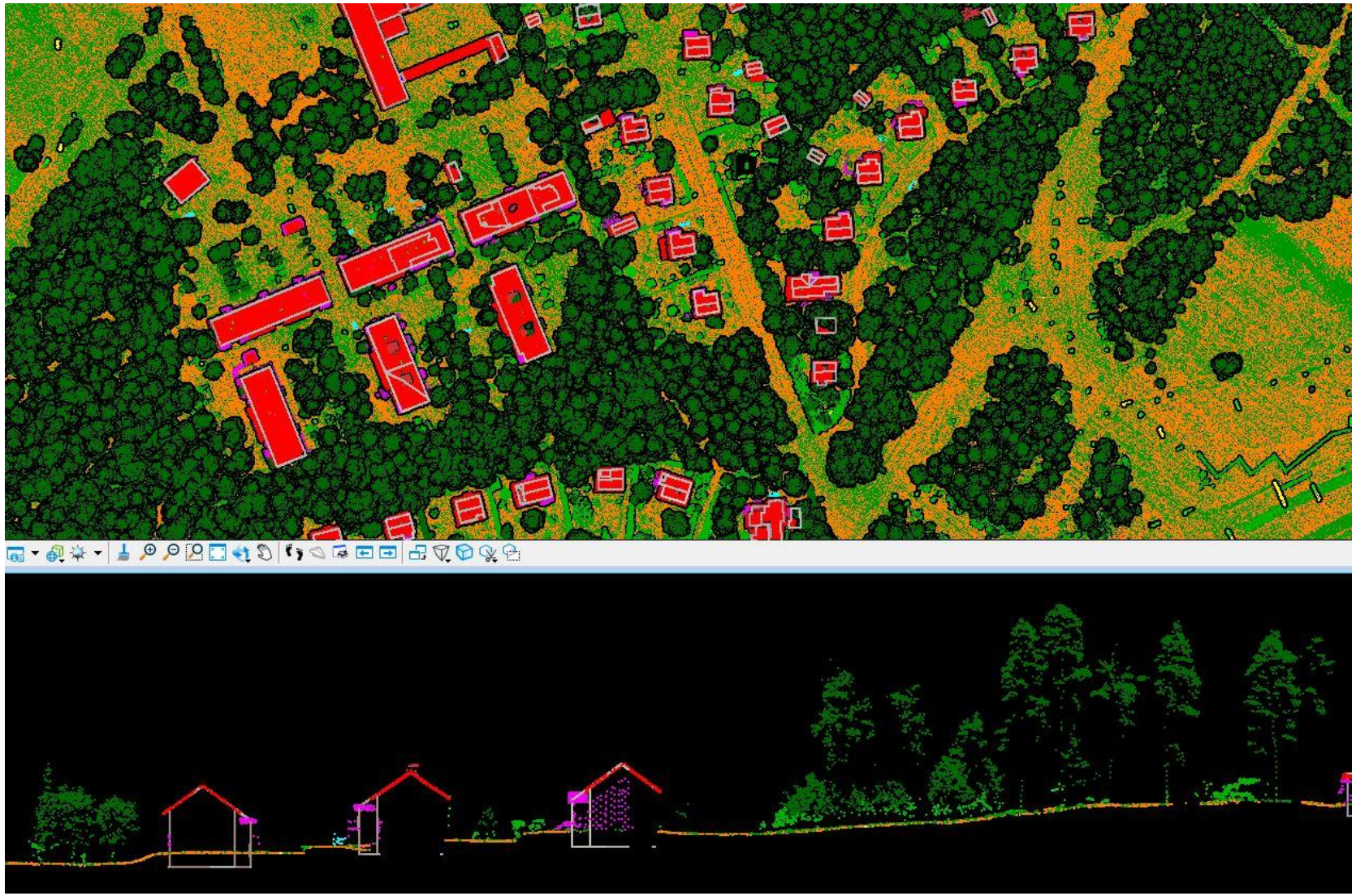
- Processing of point clouds, creation and modification of vector data



- Processing of point clouds, creation and modification of vector data



- Processing of point clouds, creation and modification of vector data



- Processing of image data, creation of rendered images and animations

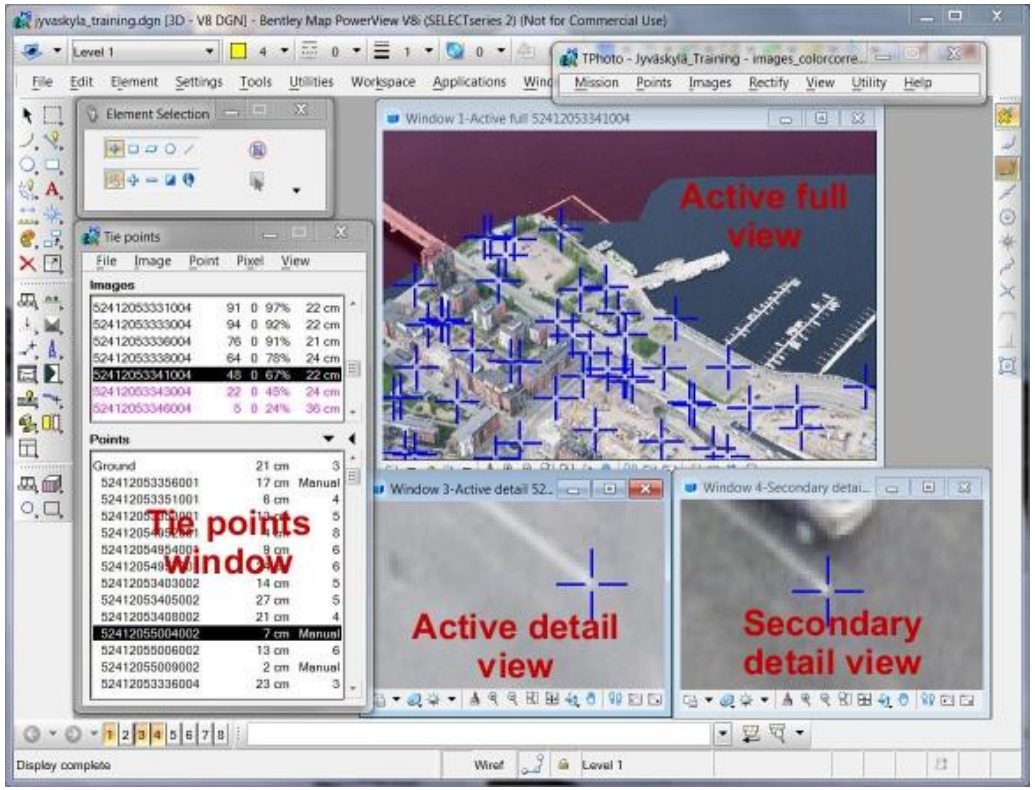
nadir image

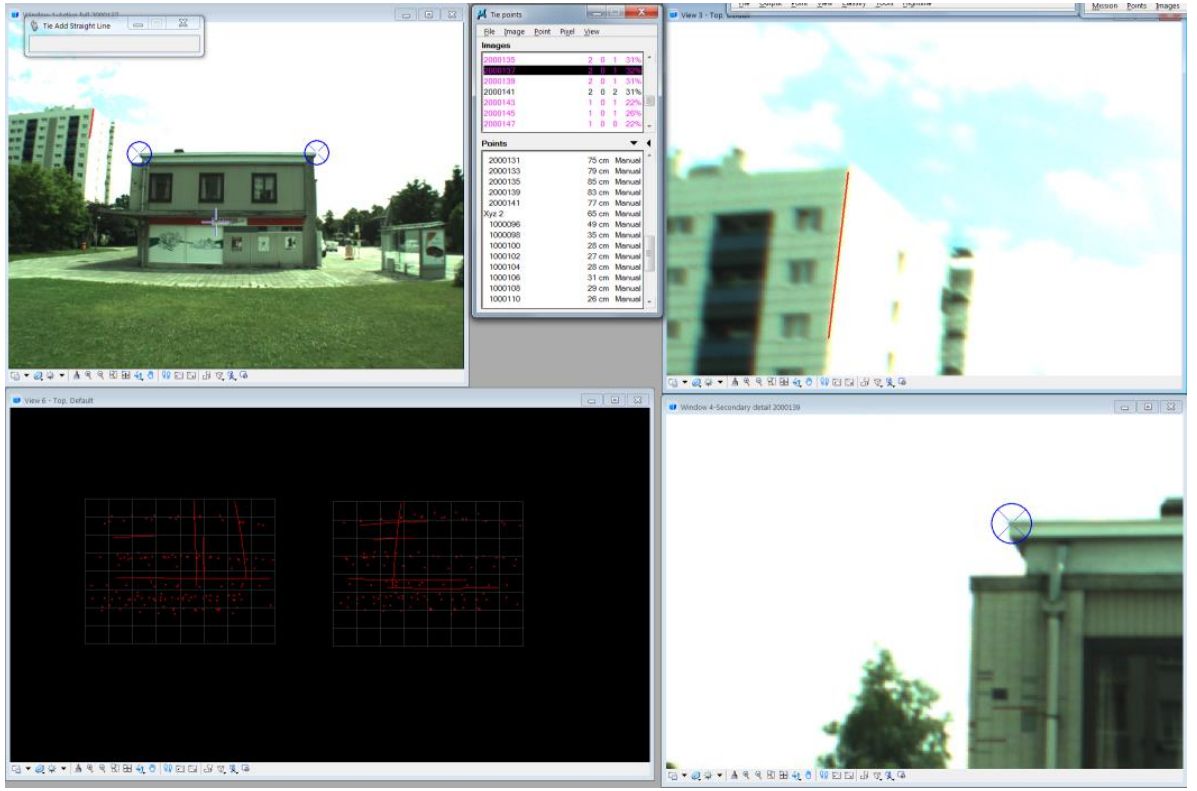
oblique image

- Processing of image data, creation of rendered images and animations

panoramic image

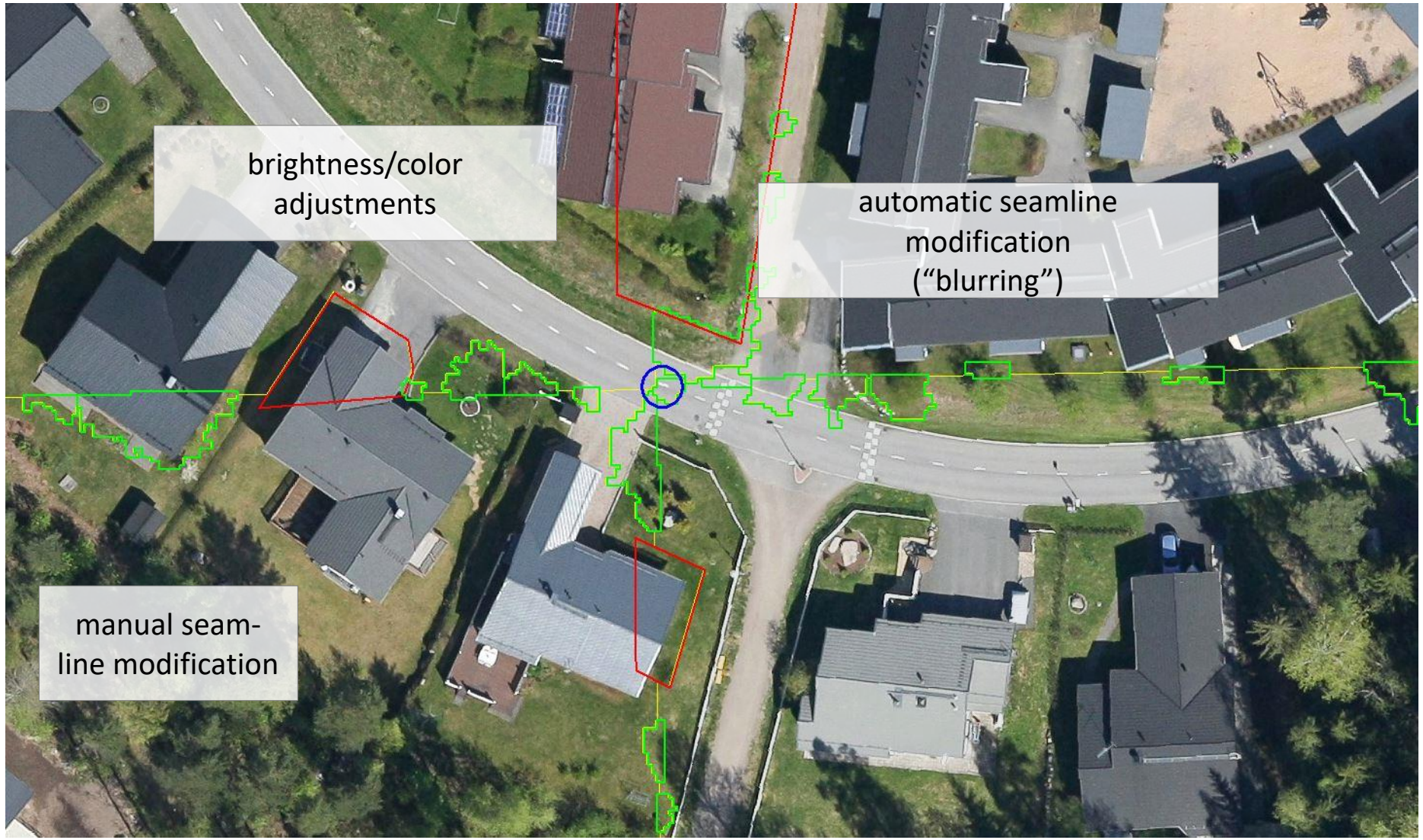
- Processing of image data, creation of rendered images and animations





- Processing of image data, creation of rendered images and animations

- Processing of image data, creation of rendered images and animations

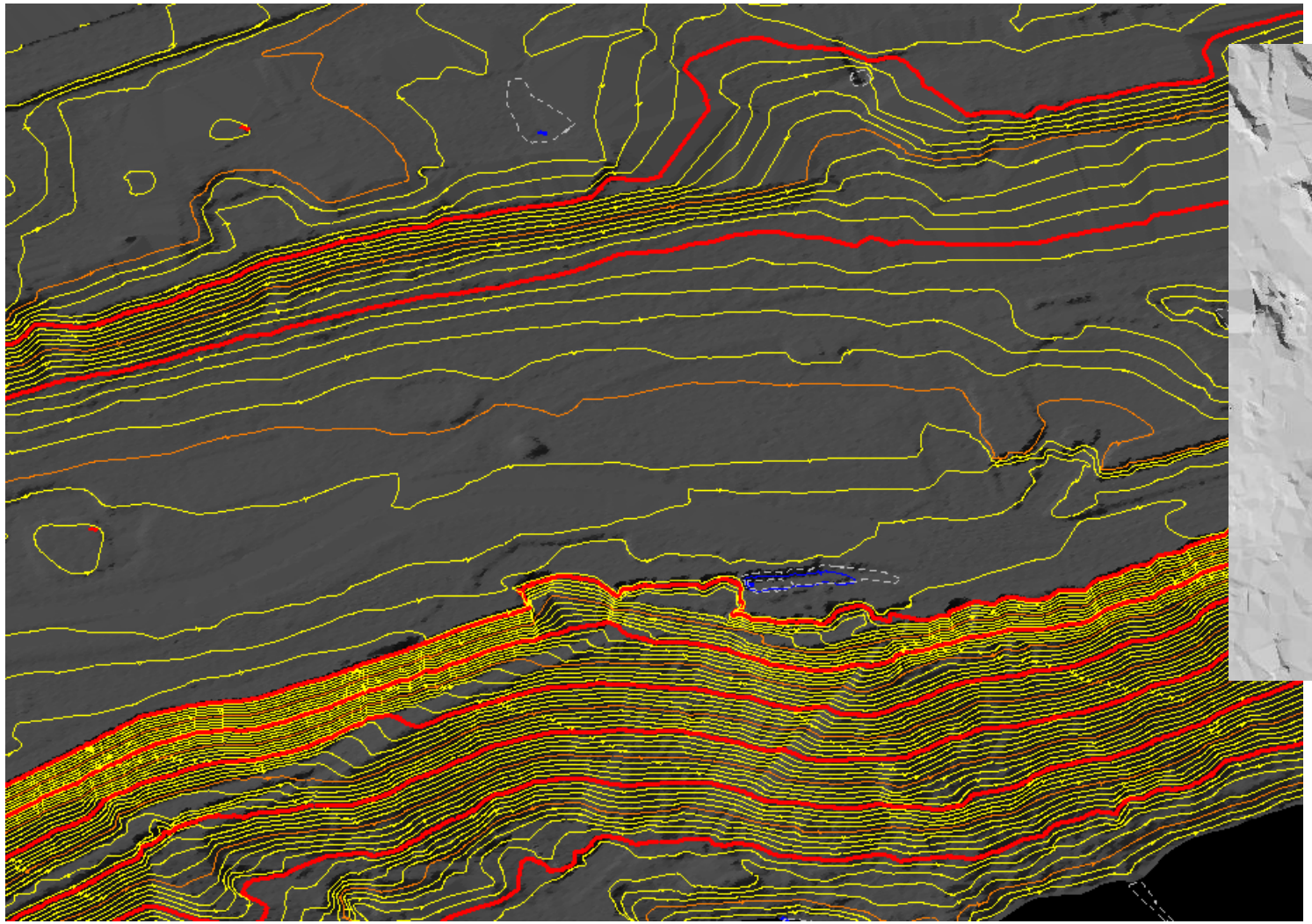


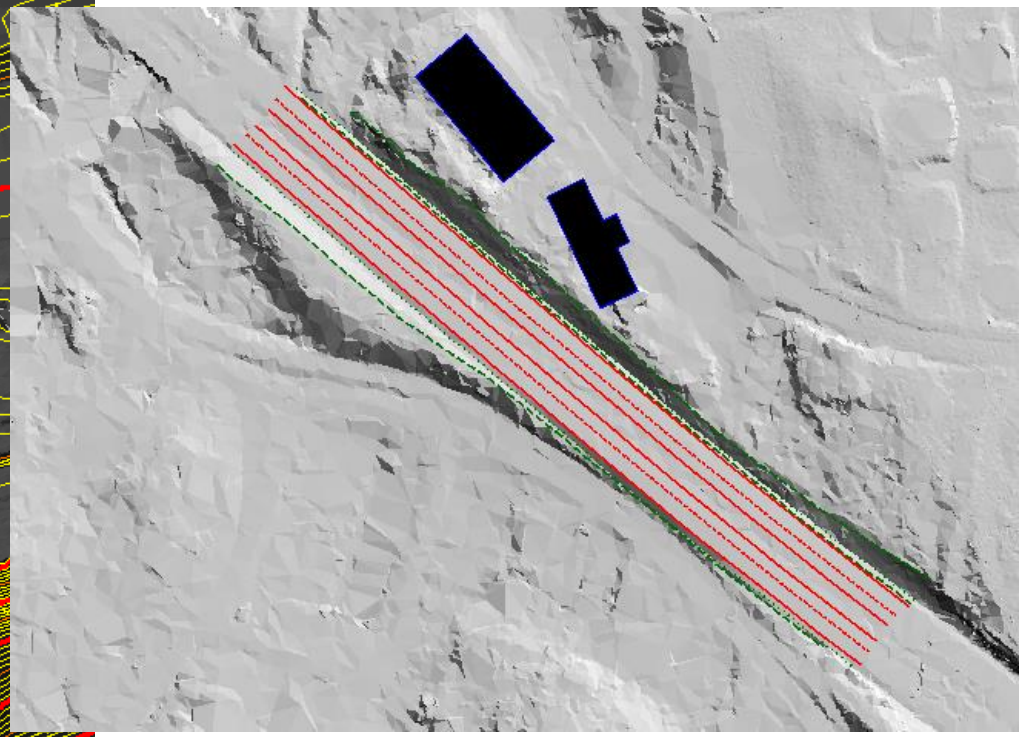
- Processing of image data, creation of rendered images and animations

- Processing of image data, creation of rendered images and animations

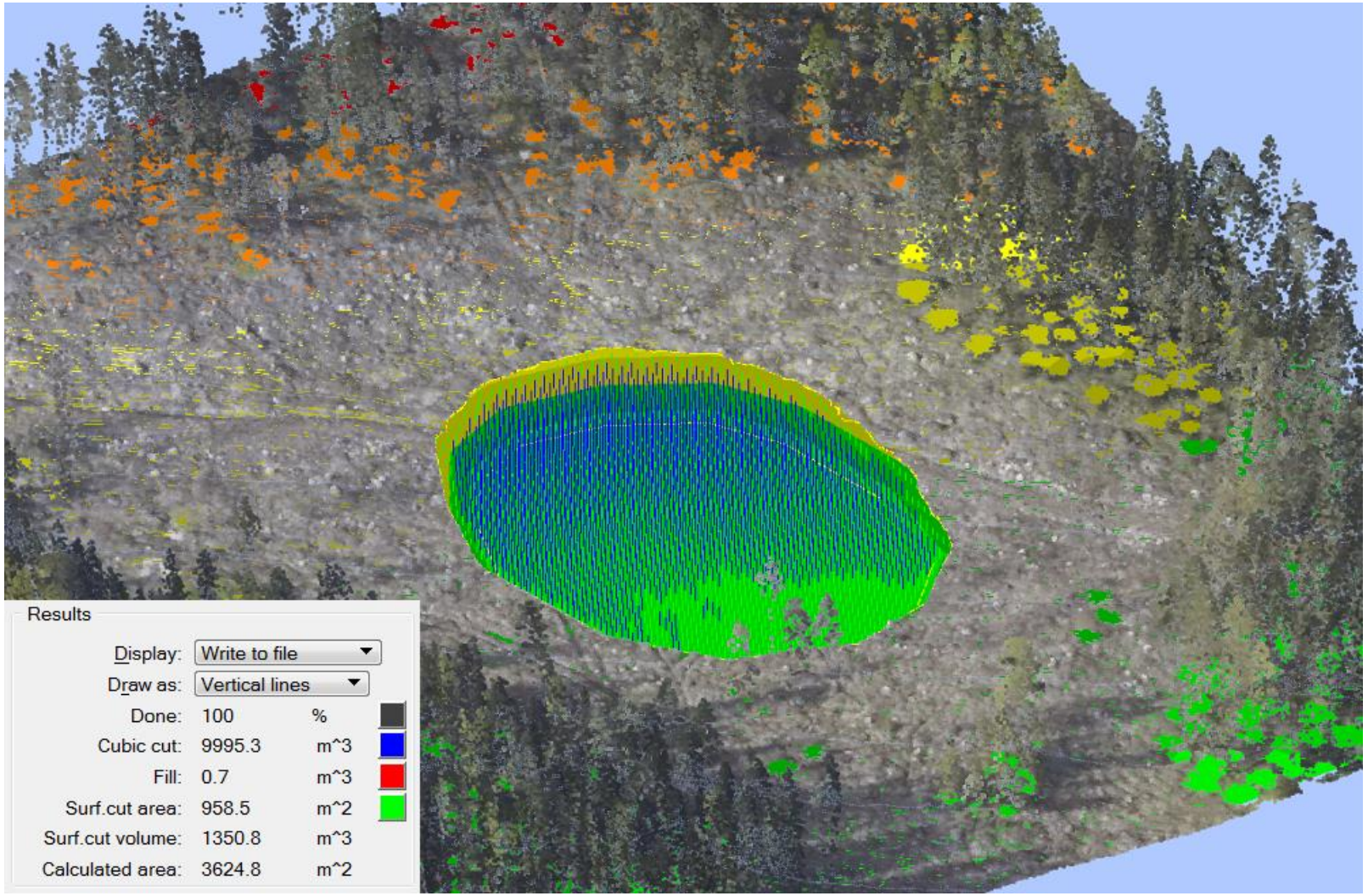
- Processing of image data, creation of rendered images and animations

- Creation and visualization of surface models, volume computation

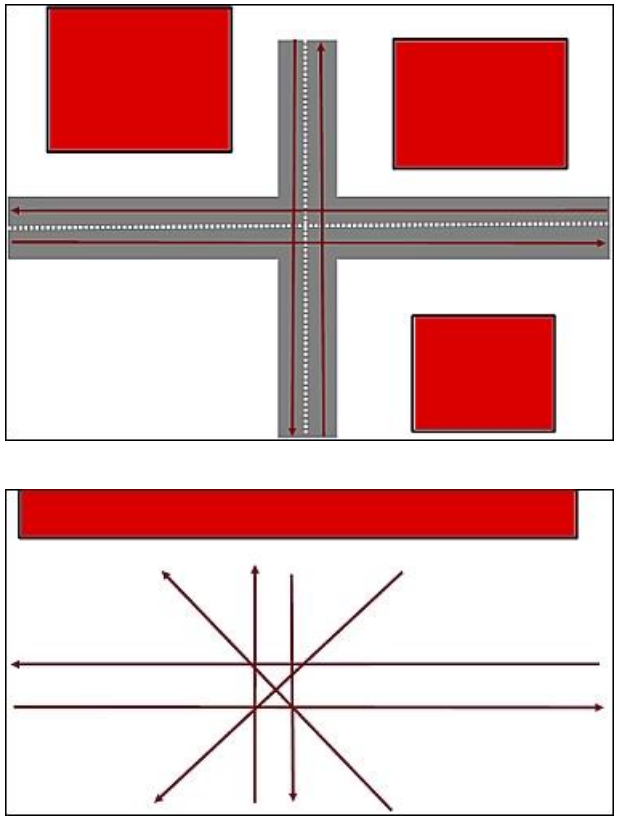


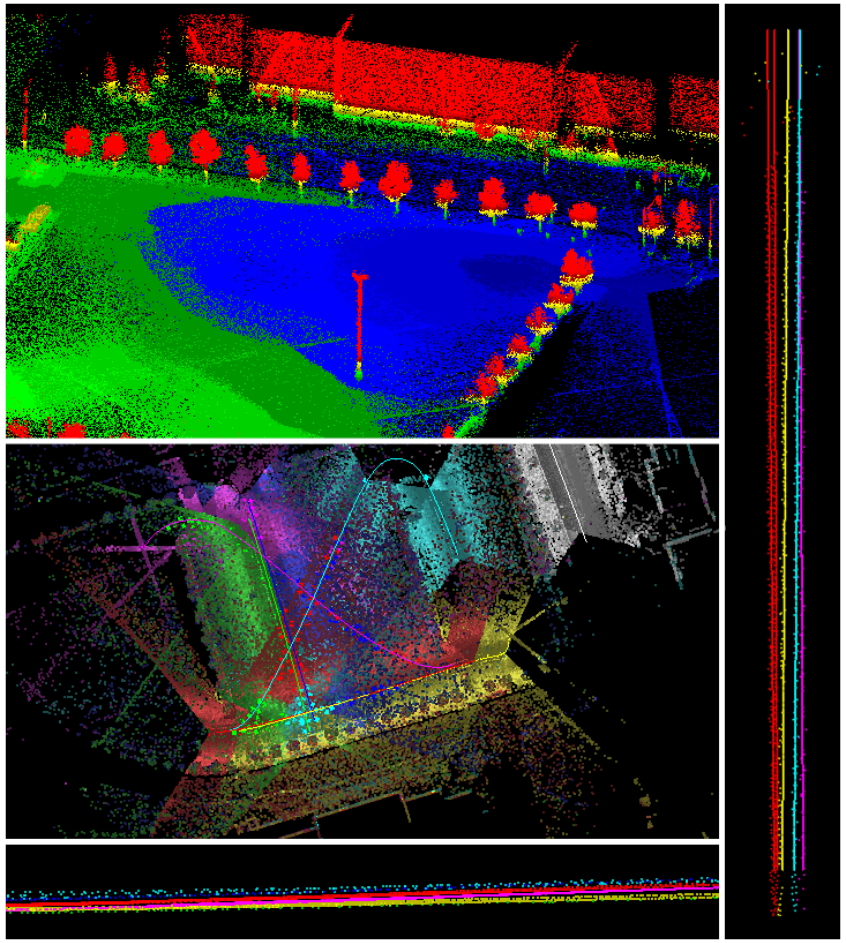


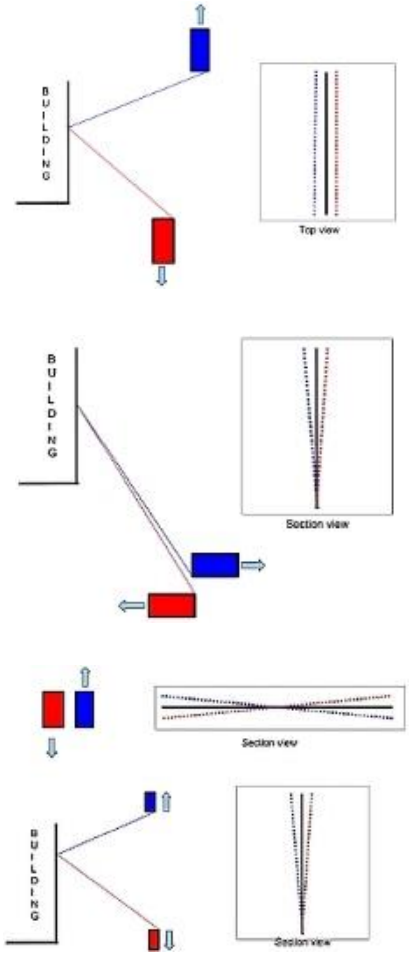
- Creation and visualization of surface models, volume computation



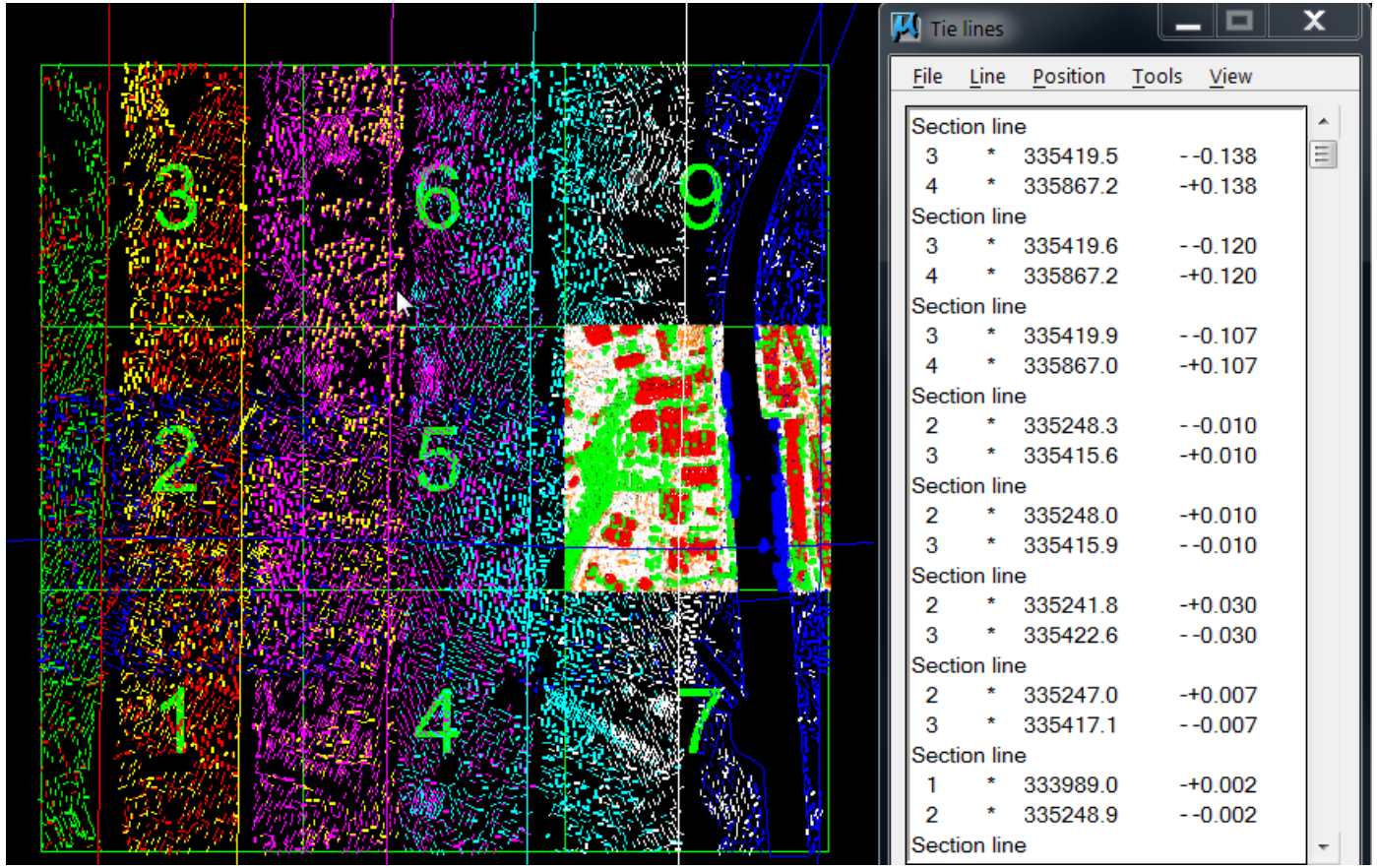
- Calibration of scanner systems, matching of flight lines/drive paths in ALS/MLS point clouds (correction of misalignment angles, XYZ shift and drift, GPS errors)

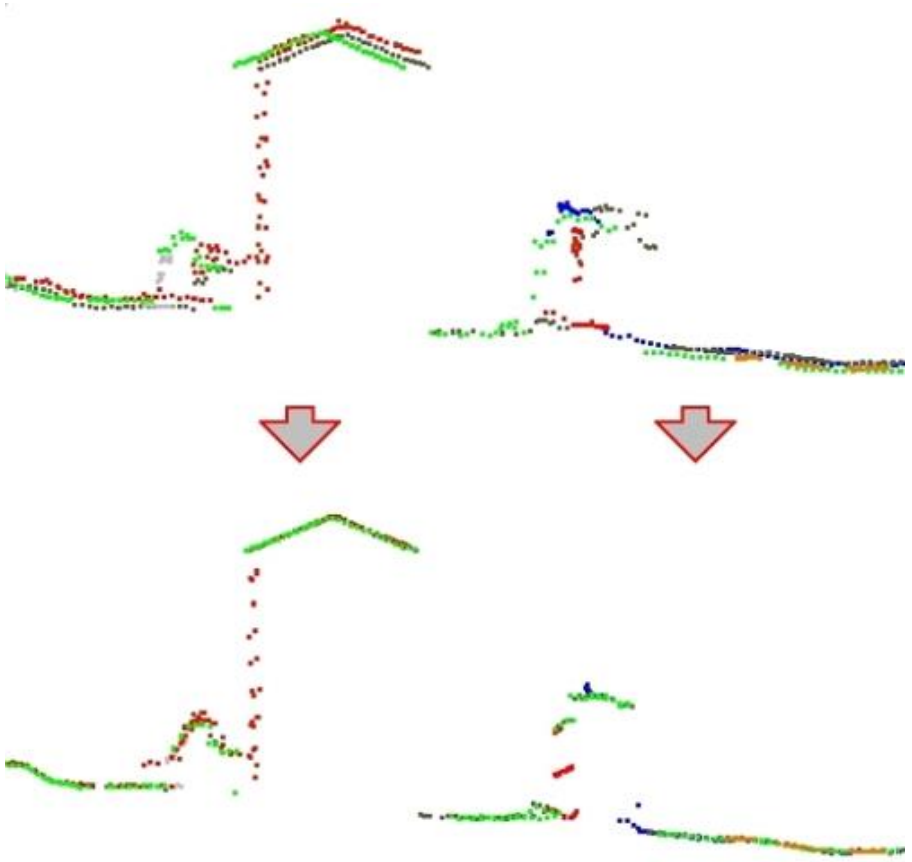




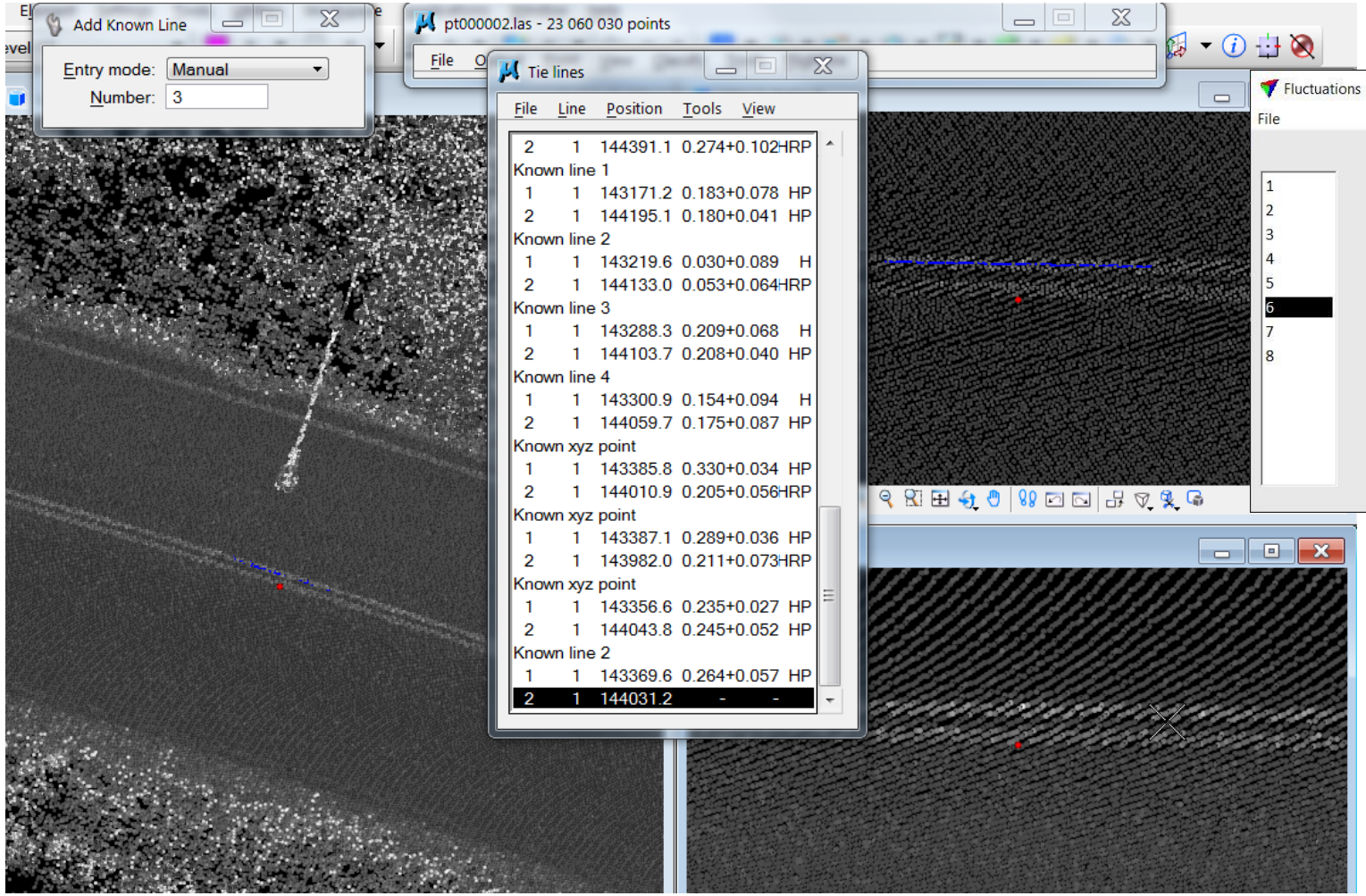


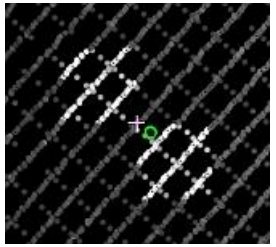
- Calibration of scanner systems, matching of flight lines/drive paths in ALS/MLS point clouds (correction of misalignment angles, XYZ shift and drift, GPS errors)



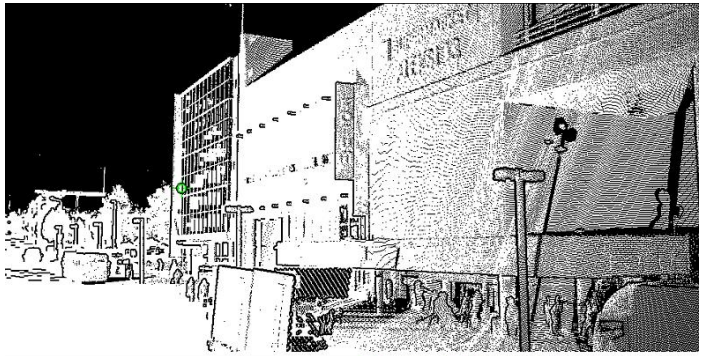


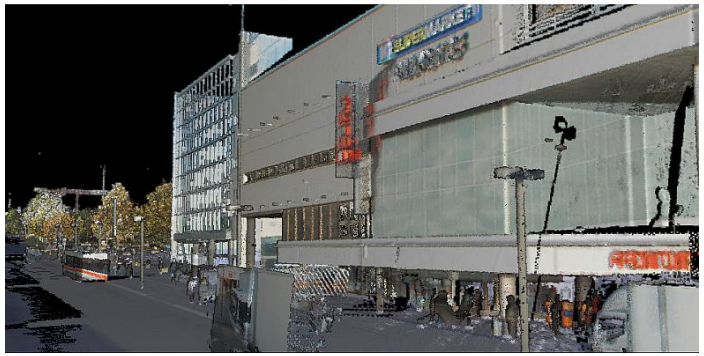
- Calibration of scanner systems, matching of flight lines/drive paths in ALS/MLS point clouds (correction of misalignment angles, XYZ shift and drift, GPS errors)

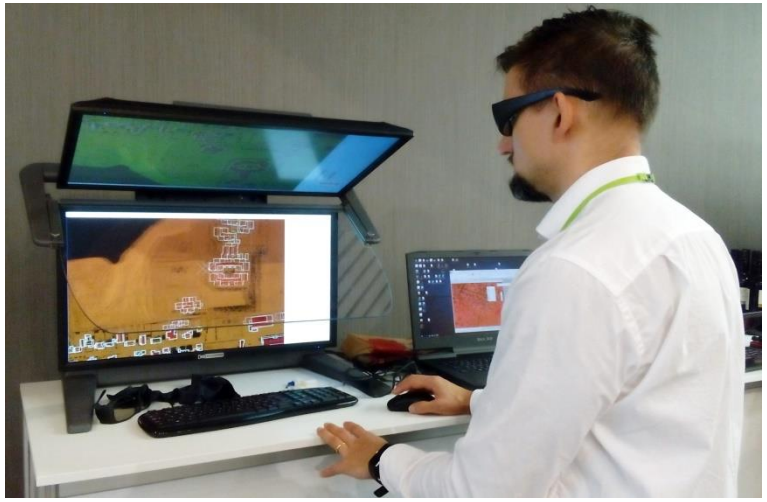




- Mono-/Stereovisualization of big point clouds, visual analysis







Contact and Requests

Terrasolid
info@terrasolid.com

Upseerinkatu 3 C, 02600 Espoo / Finnland
www.terrasolid.com

German customers
Friederike Schwarzbach
friederike.schwarzbach@ne-pa.de

Werkstraße 8, 24837 Schleswig
www.nebel-partner.de