



# 3D MAPPING FORUM

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Integrating all Streetlevel, UAS and Oblique data

Peter Bonne  
CEO Orbit GT

INTEGRATING ALL  
**STREETLEVEL, UAS, OBLIQUE**  
IMAGERY and POINTCLOUDS  
THROUGHOUT the  
***ESRI PLATFORM***

Peter Bonne  
CEO, Orbit GT

July 18<sup>th</sup>, 2015

Taking Mobile Mapping as Example for all types of data

# INTEGRATED

*Bound for Results !*

1





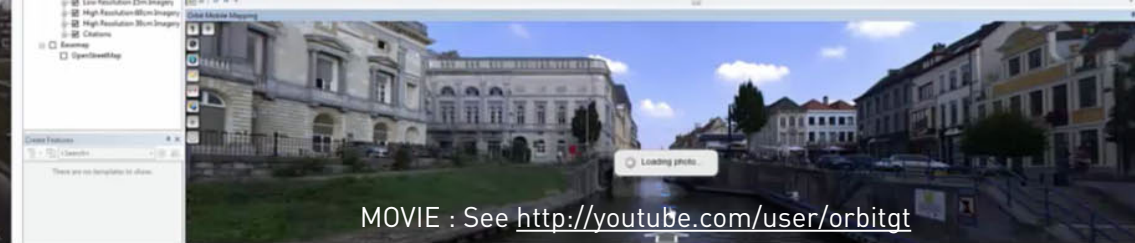
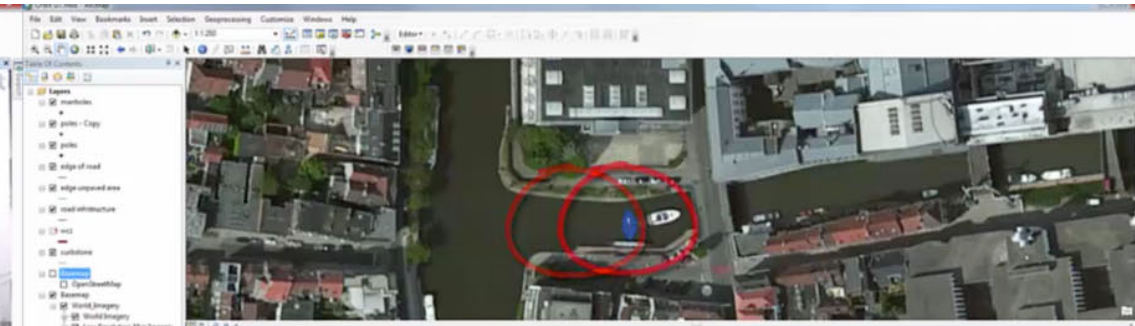
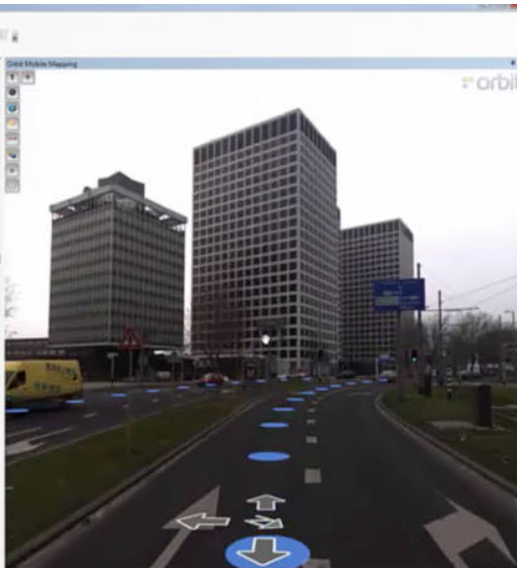
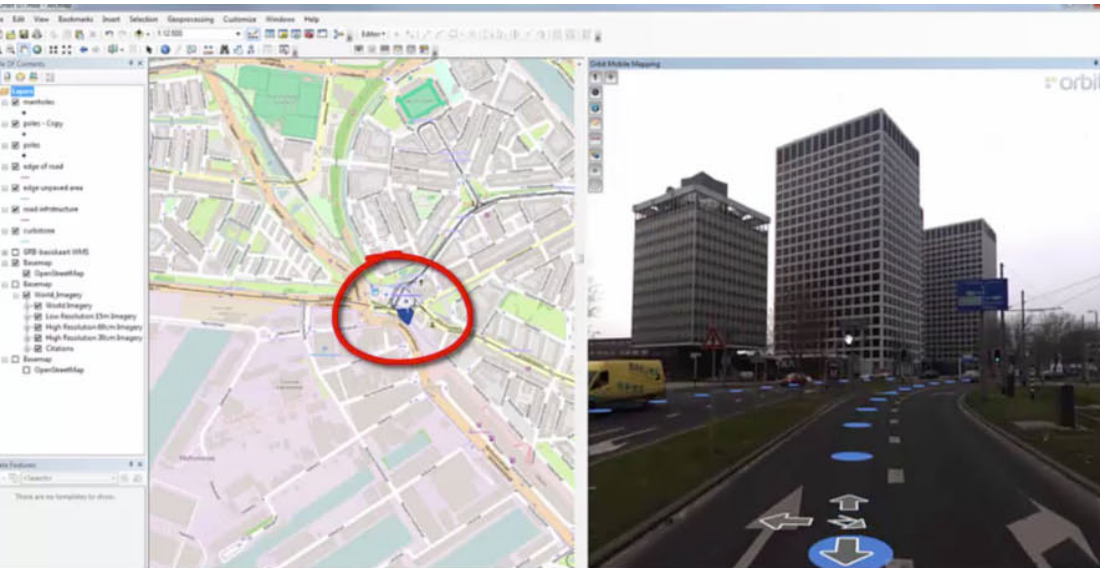


# Everything Mobile Mapping



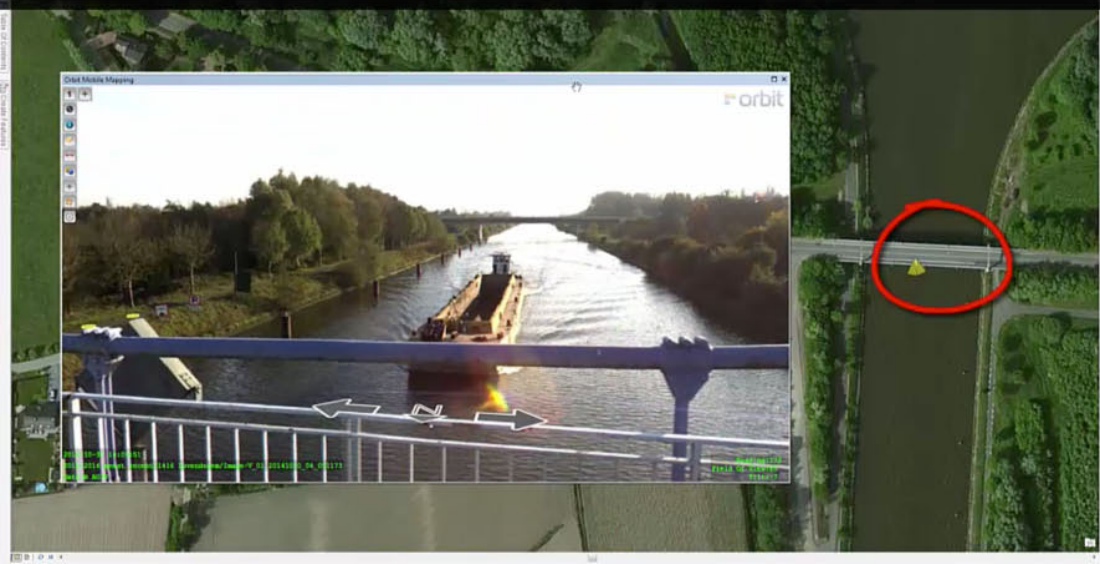
MOVIE : See <http://youtube.com/user/orbitgt>





MOVIE : See <http://youtube.com/user/orbitgt>

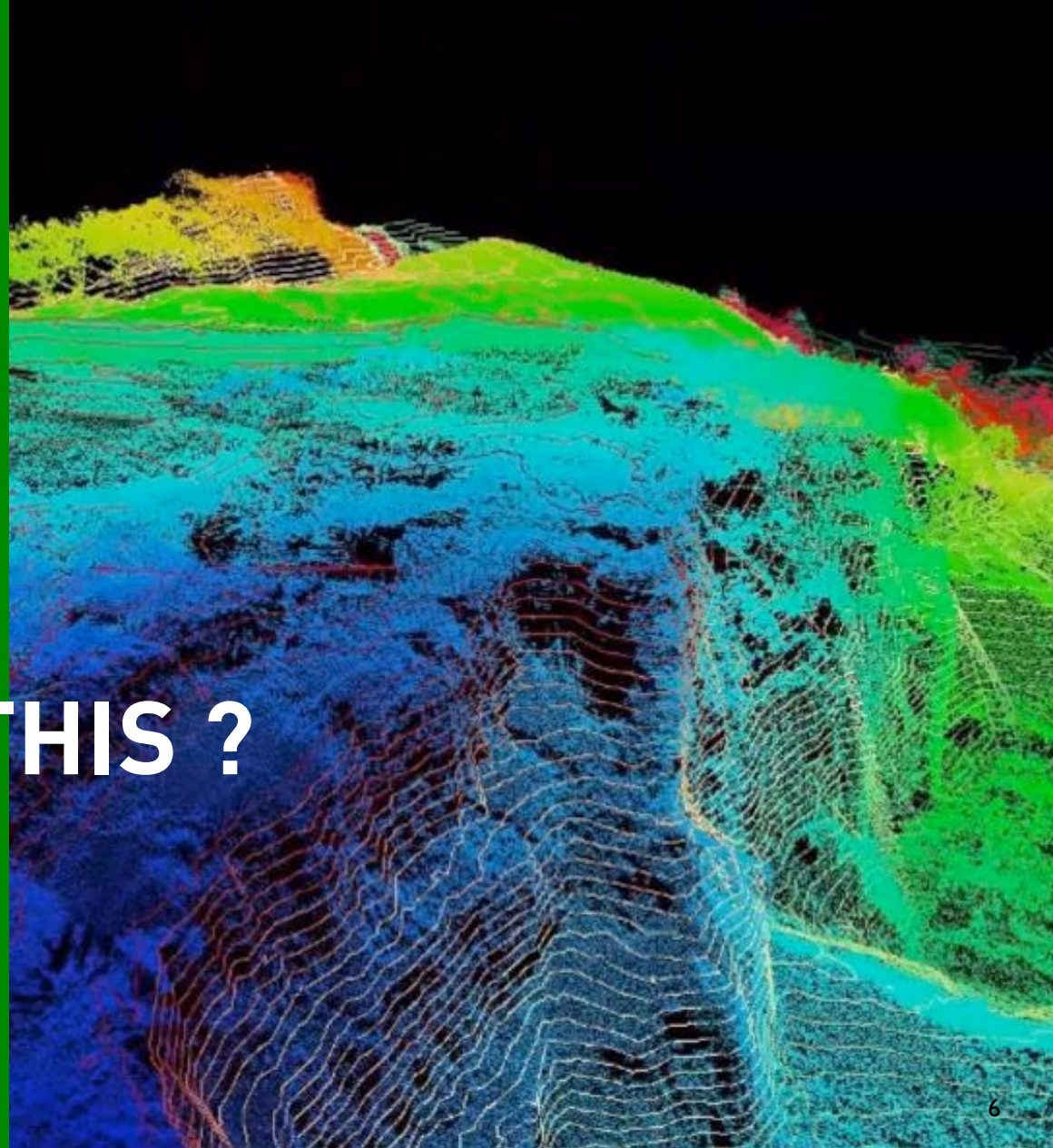
# Orbit mobile mapping seamless integrated in ArcGIS





2

HOW DO WE DO THIS ?



ROAD

RAIL

AIR





ROAD

RAIL

AIR





ROAD

RAIL

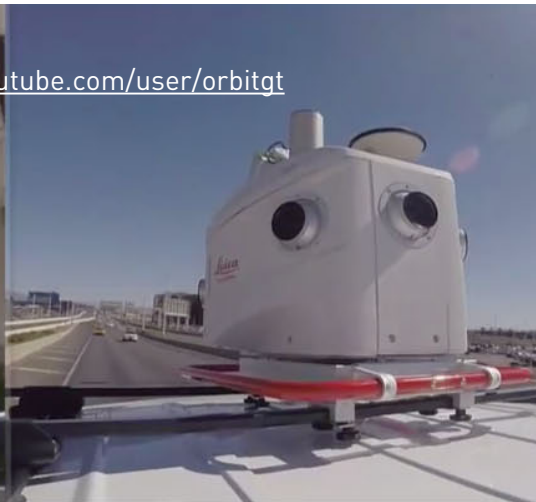
AIR



MOVIE : See <http://youtube.com/user/orbitgt>

# Everything Mobile Mapping

Vieworx  
Michael Baker  
AmsConsulting  
Emirates Solutions  
Sam O. Hirota  
Brandt Tractor  
Airtel  
Erlandsen  
BAE Maritime  
Cyclomedia  
Faro  
Earthmine  
Panolife  
MapXact  
Solve3D  
Civis  
Position Partners  
Surveying Vision  
CAT Surveys  
Cobra  
Costain  
Cowi  
IPCarto  
LandScape





An aerial photograph of a city street grid, overlaid with a vibrant, multi-colored data visualization. The colors range from dark blue and purple to bright yellow and green, representing different data points or sensor readings collected by mobile mapping vehicles. The overlay is most prominent along the roads and in clusters, suggesting data density. The background shows buildings, trees, and the overall urban layout.

# MOBILE MAPPING DATA VOLUME

Up to 1 TeraByte  
PER DAY PER VEHICLE

# LIFE OF MOBILE MAPPING CONTENT

*COLLECT / PRODUCE*  
> CONTENT MANAGER

*EXTRACT / PROCESS*  
> FEATURE EXTRACTION

*SHARE / DELIVER*  
> PUBLISHER





# HARDWARE SETUP

IMAGERY  
*Planar and  
Spherical*

POINTCLOUD

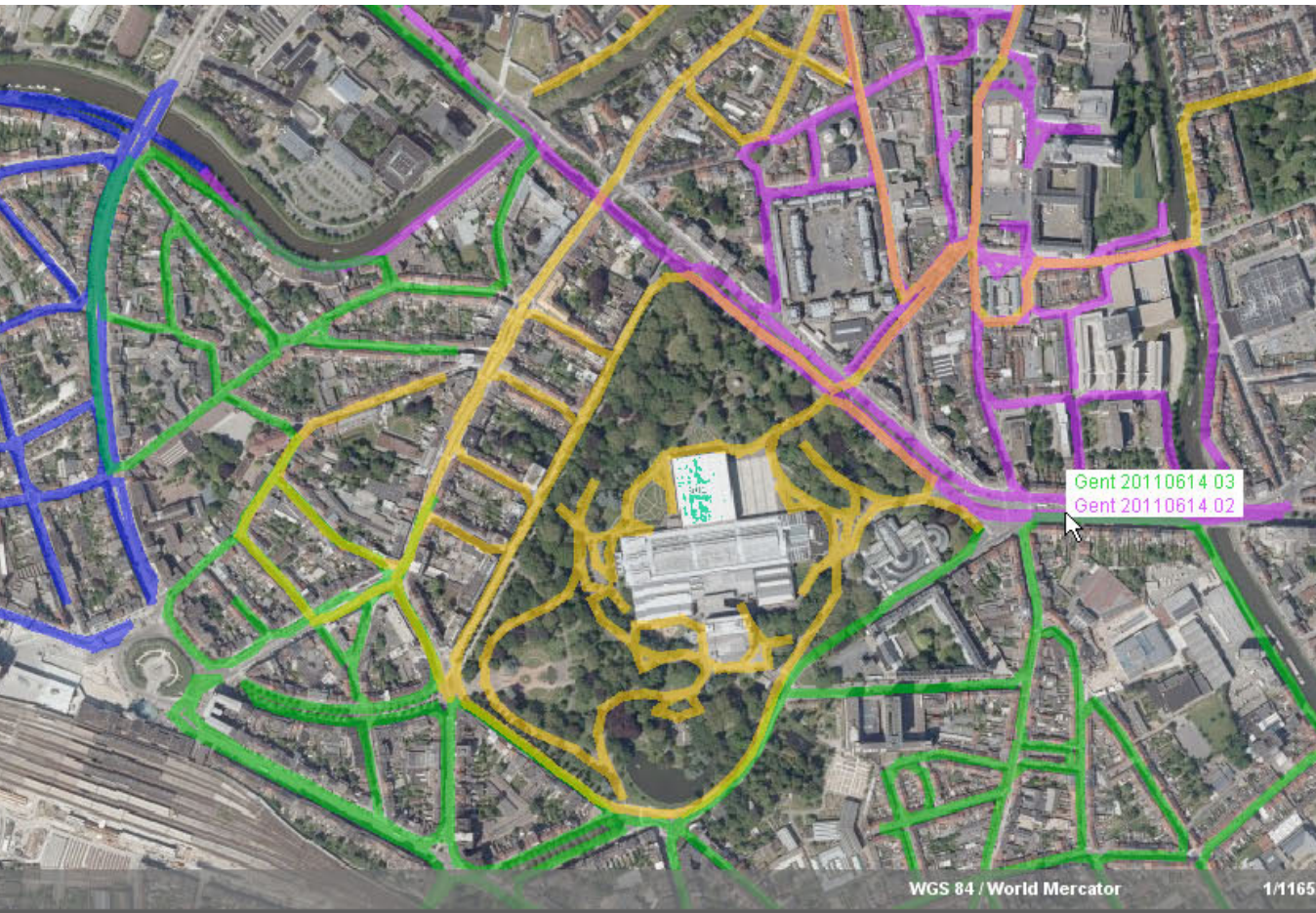


COLLECT



# POST PROCESS

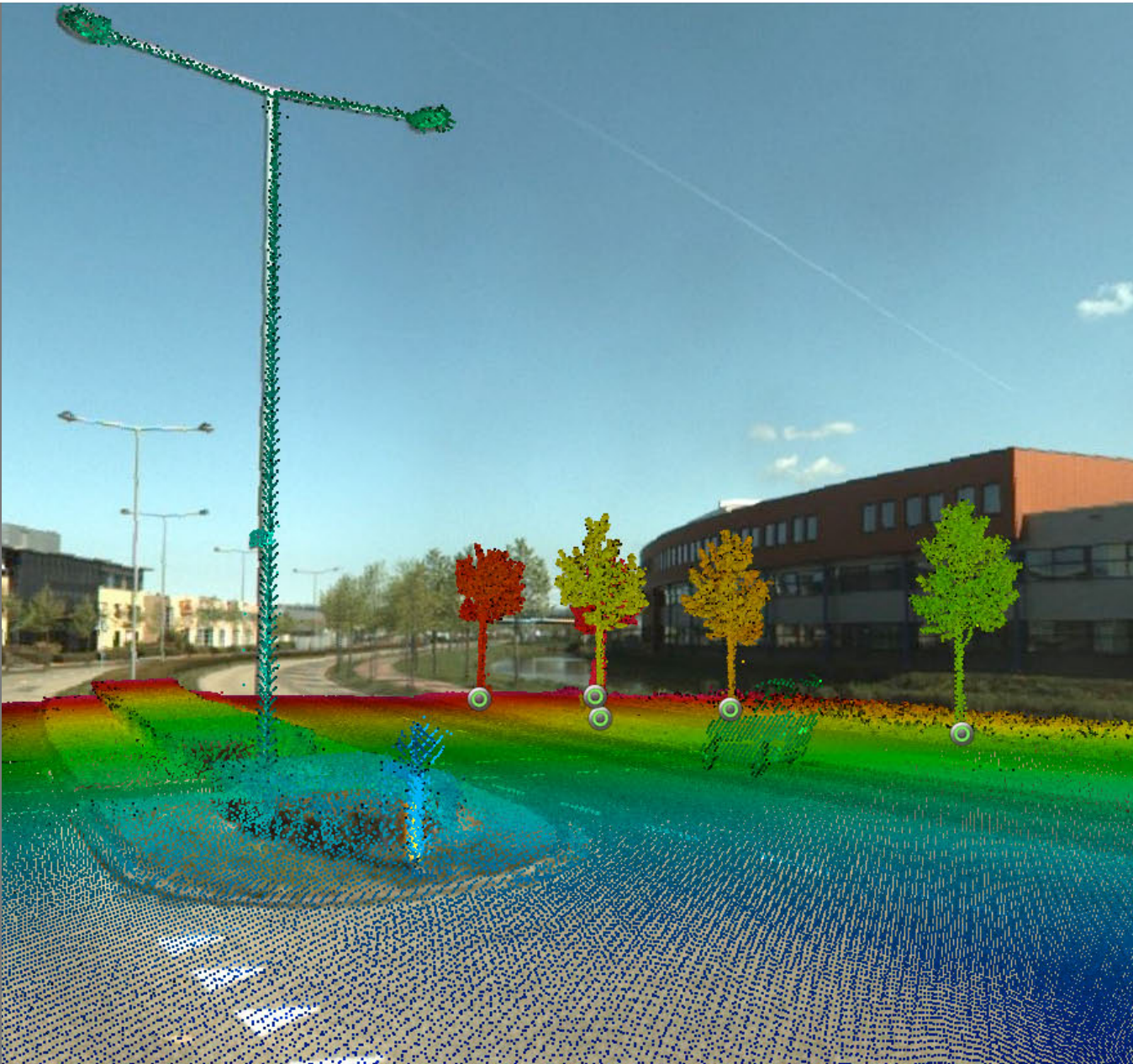
JOB CONTROL  
QUALITY CHECKS  
DATA DELIVERY



Q Gent

Collection date	Status	Sphericals	Planars	Point Cloud	Total
2011/06/14	In process	4459		0	134 m
2011/06/14	Imported	3306		0	82 m
2011/06/14	Imported	6368		0	130 m
2011/06/14	Imported	6230		0	158 m





# EXTRACT

MEASURE  
INVENTORY  
ANALYSE  
CLASH DETECTION  
PROFILES  
VOLUMES

...



extract in GIS  
with automatic surface, corner  
& ridge recognition

Distance XYZ

Distance XYZ	3.607 m
Slope	1.896 %
Slant	88.914 deg

Copy to Clipboard Clear

Copy to Feature

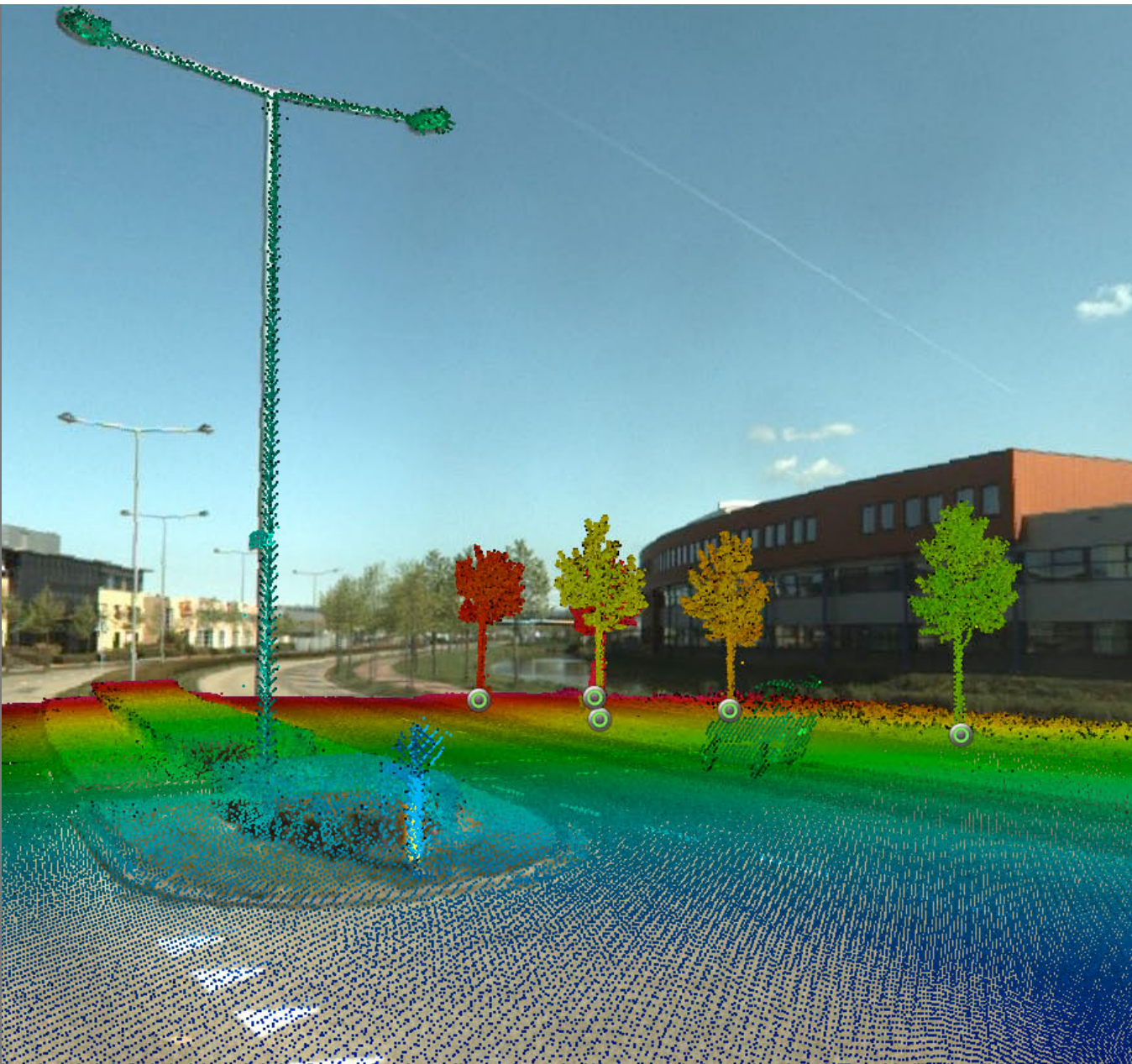
Use point cloud



15678\_855486000  
41216\_11542788

Heading: 76.4  
Tilt: -3.3  
Field of view: 99.0





# PUBLISH

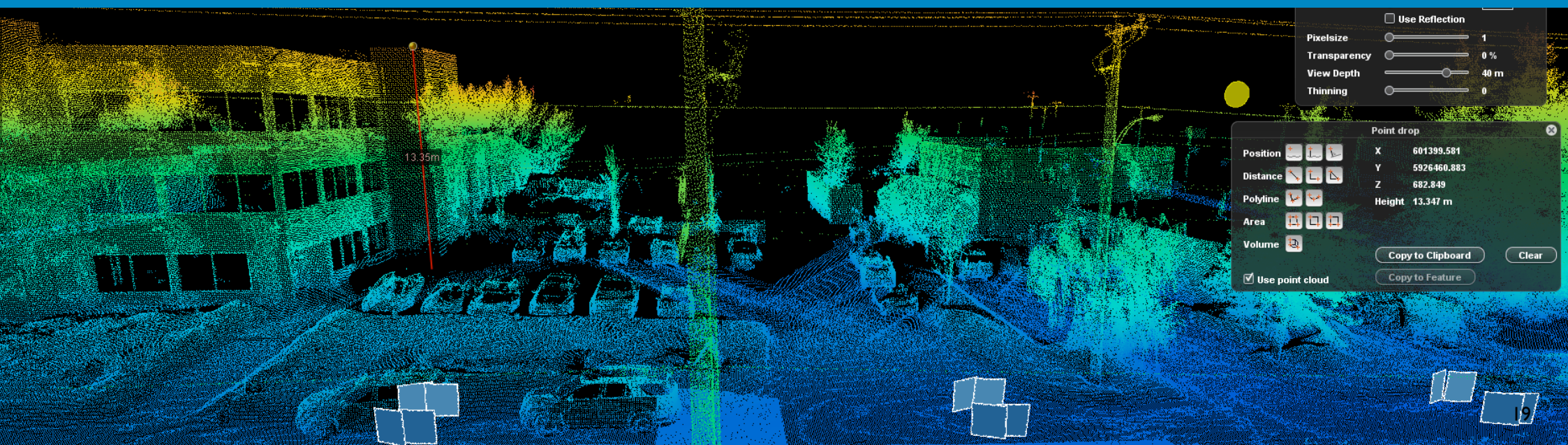
SHARE  
WEB  
SMARTPHONE

ARCGIS DESKTOP  
ARCGIS ONLINE  
ARC...



# What *CUSTOMERS* do

3



# State & Federal

An aerial night view of a city with a glowing green and blue grid overlaying the streets. The grid is centered on a large 'X' shape, which is also highlighted in green. The city lights are visible in the background, and the overall scene is dark with the grid providing a high-contrast overlay.

*DOT's, Assets, ROW*  
*Traffic Signs*  
*Taxes*  
*Historic Database*



Squared area with 2 points

Position Area XY 0.00000 m2

Distance Area XYZ 17.80638 m2

Polyline

Area

Volume

Use point cloud

Copy to Clipboard

Copy to Clipboard

# State & Federal Municipalities



*Various Streetside Asset Inventories  
Taxes & Permits  
Ad Hoc visual checks*

# State & Federal Municipalities Utilities & Rail

*Poles & Cables (assets)  
Planning and 3D Analysis  
Ad Hoc visual checks & measurements*

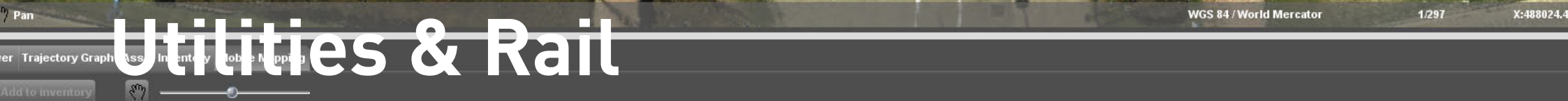
Curve 184.009 m  
6.860 m  
183.784 m

184.009 m





# State & Federal Municipalities Utilities & Rail



WGS 84 / World Mercator 1/297 X:488024.4

# Private Service Companies

*Public Tenders  
Mapping  
Feature Extraction  
Analysis*





# THE ESRI USERS *ARE NEXT*

4

An aerial photograph of a city, likely New York City, showing a dense urban landscape with various buildings and structures. A large white circular marker is overlaid on the left side of the image, containing the number '4'. The marker is semi-transparent, allowing the city details to be seen through it. The overall image has a high-contrast, slightly grainy appearance.



# PUBLISH & SHARE ONLINE



area measurement  
(based on pointcloud)

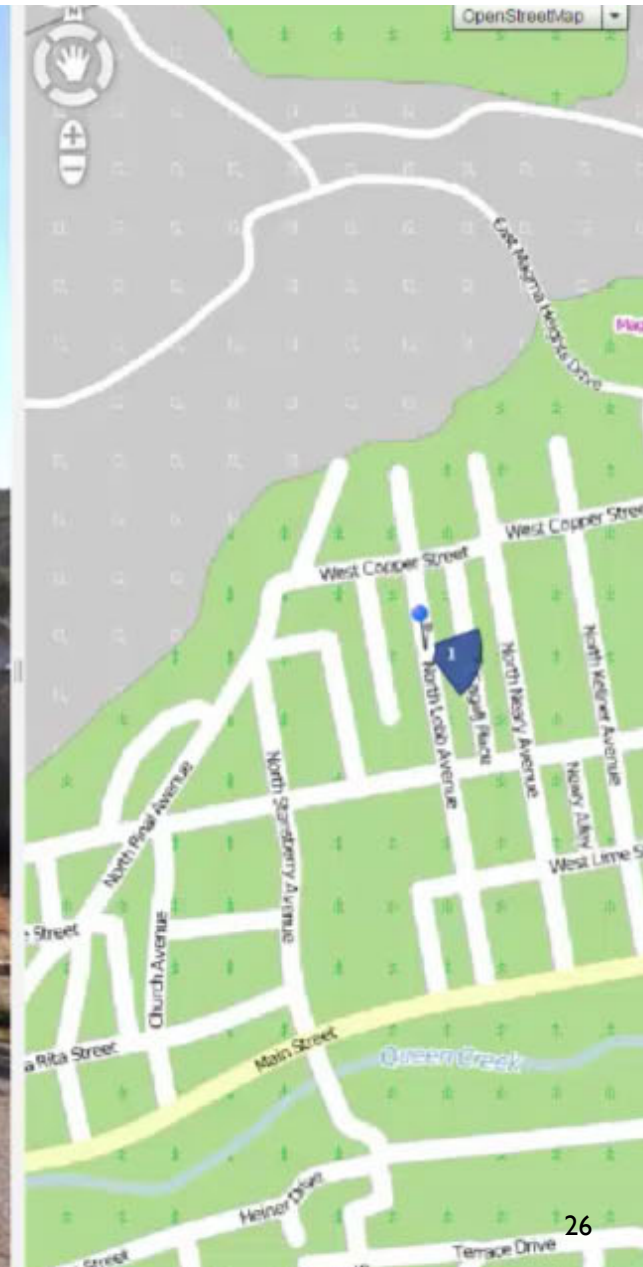
orbit

Measure on Panorama - Area

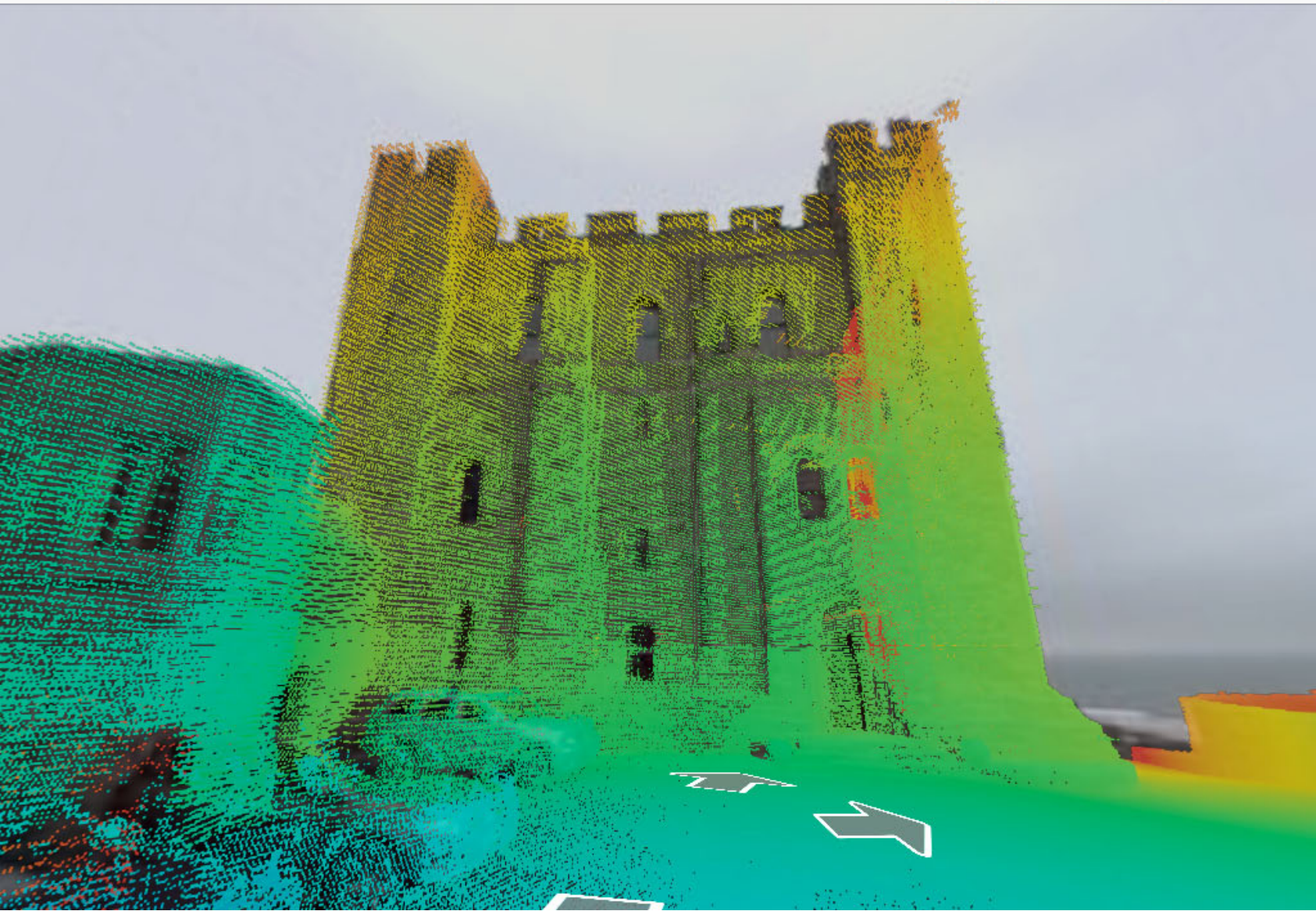
Position		Distance XYZ	-
Distance		Distance XY	-
Line		Height	-
Area		Area XY	-
Volume		Area XYZ	-

Use Pointcloud

**PUBLISH**  
**On the Web**



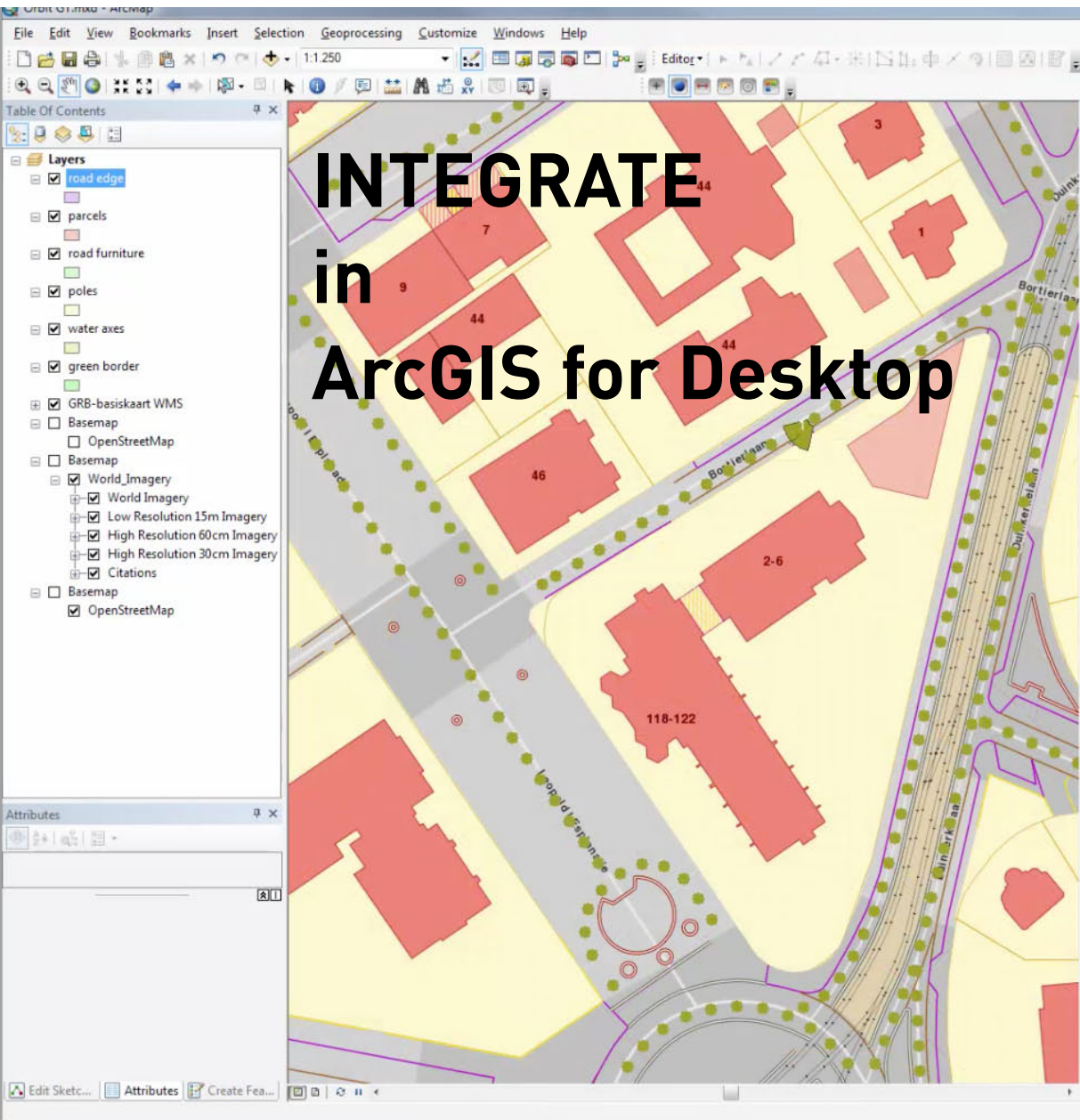




# PUBLISH To Smartphone

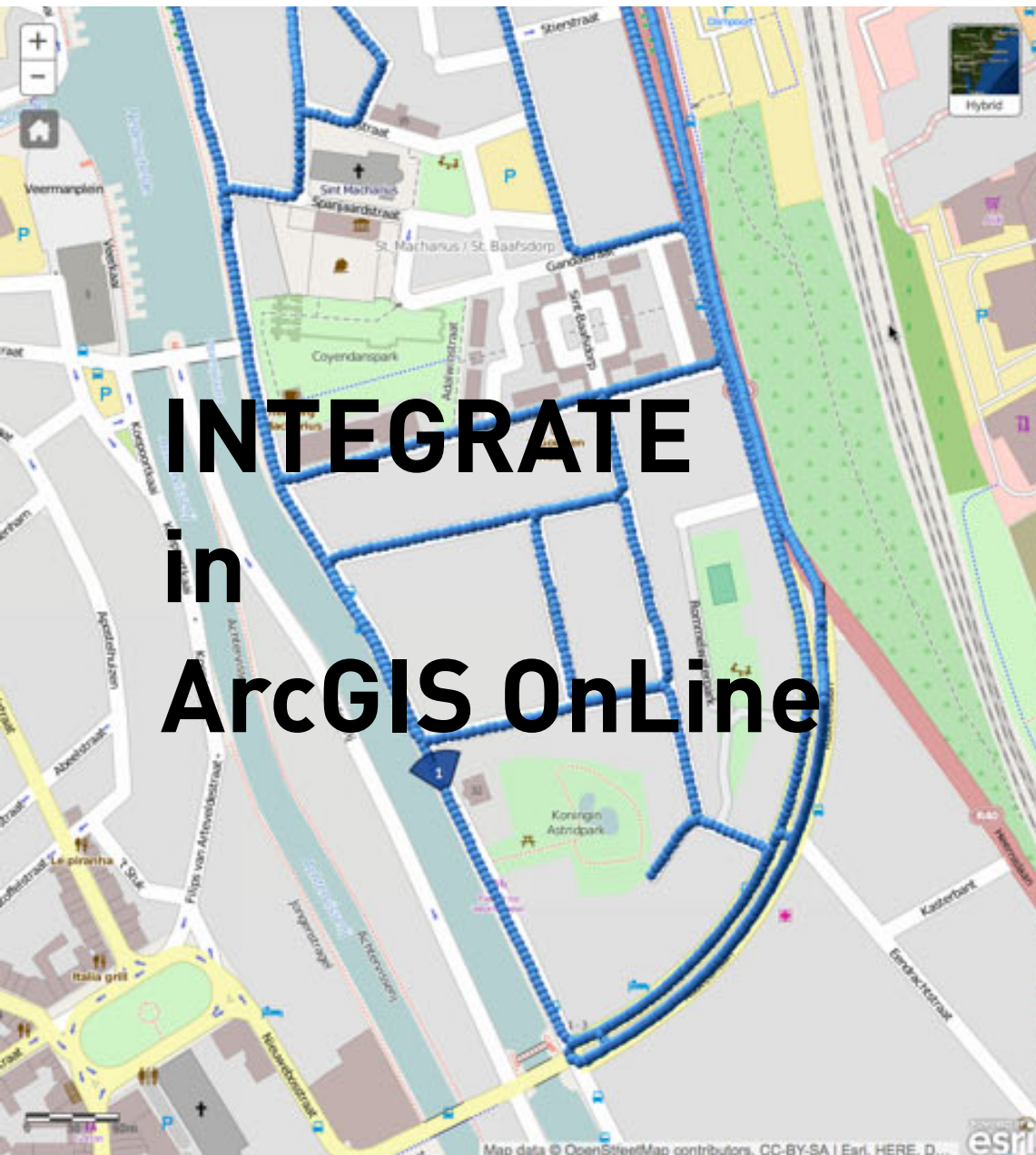


# INTEGRATE in ArcGIS for Desktop





# INTEGRATE in ArcGIS OnLine



# REQUIREMENTS

**Integrated Access**

**Central Storage**

**Various Requests**

**Ad Hoc Requests**

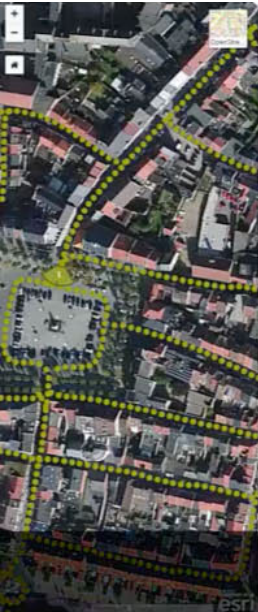


# REQUIREMENTS

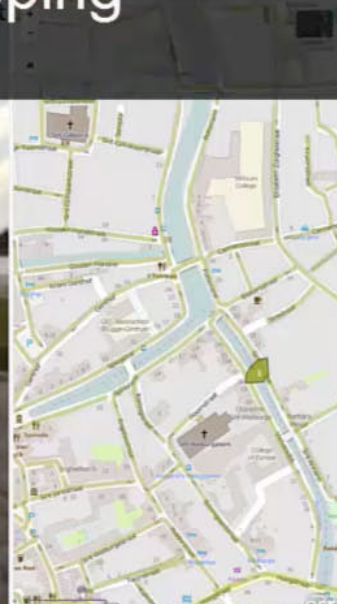
**Integrated Access**  
**Central Storage**  
**Various Requests**  
**Ad Hoc Requests**

# SOLUTION

**Any HW / Sensor**  
**Any Precision**  
**Any Collection**  
**And historical data**  
**(Google, HERE, ...)**



# Everything Mobile Mapping



MOVIE : See <http://youtube.com/user/orbitgt>



# 5

## FIVE TAKE-AWAYS

- 1. MASS DATA, NO LIMITS*
- 2. COMPLEX AND VARIED DATA*
- 3. STANDARDIZE & OPTIMIZE*
- 4. ONE SIZE FITS ALL*
- 5. ESRI INTEGRATED*

*Come by our booth for Live demo of Mobile, Oblique and UAS Mapping*

# THANK YOU

**Peter Bonne**  
**Orbit GT**  
**[www.orbitgt.com](http://www.orbitgt.com)**