TOPCON

CRR
for
Asset development and Maintenance

John Foster – BIM Business Development Manager - Europe

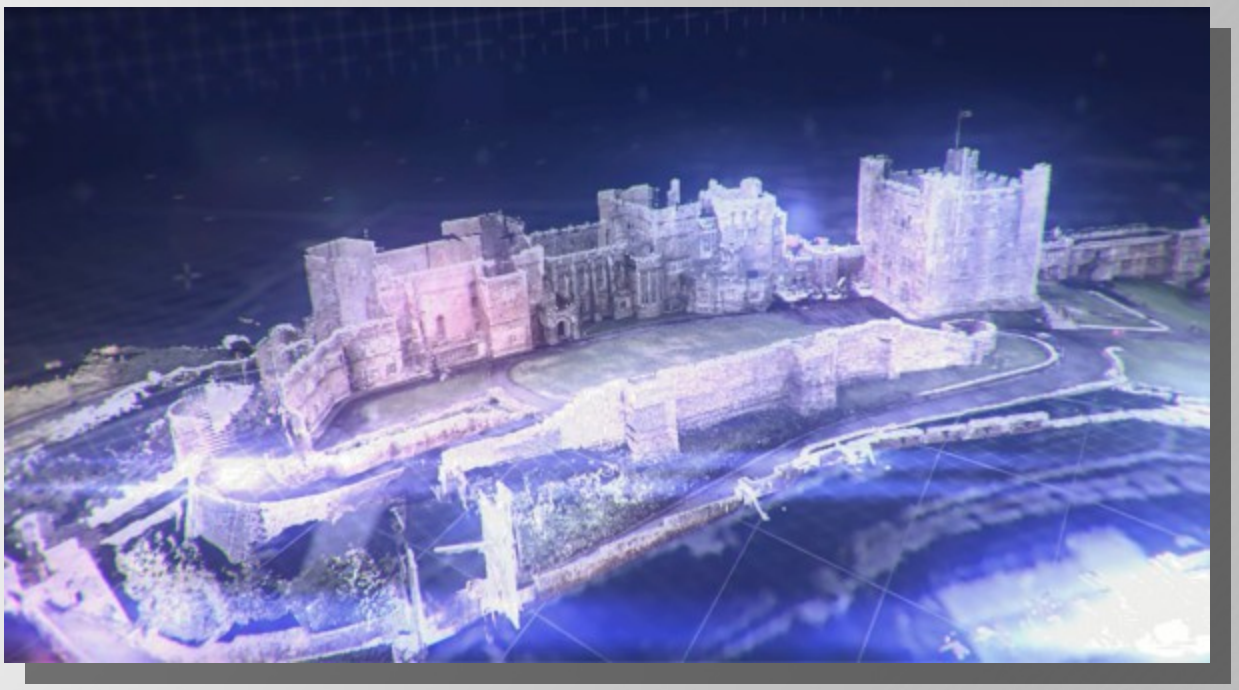
Lisbon, 28th May 2015

CRR Continuous Representation of Reality

Our Vision
For Industries we serve

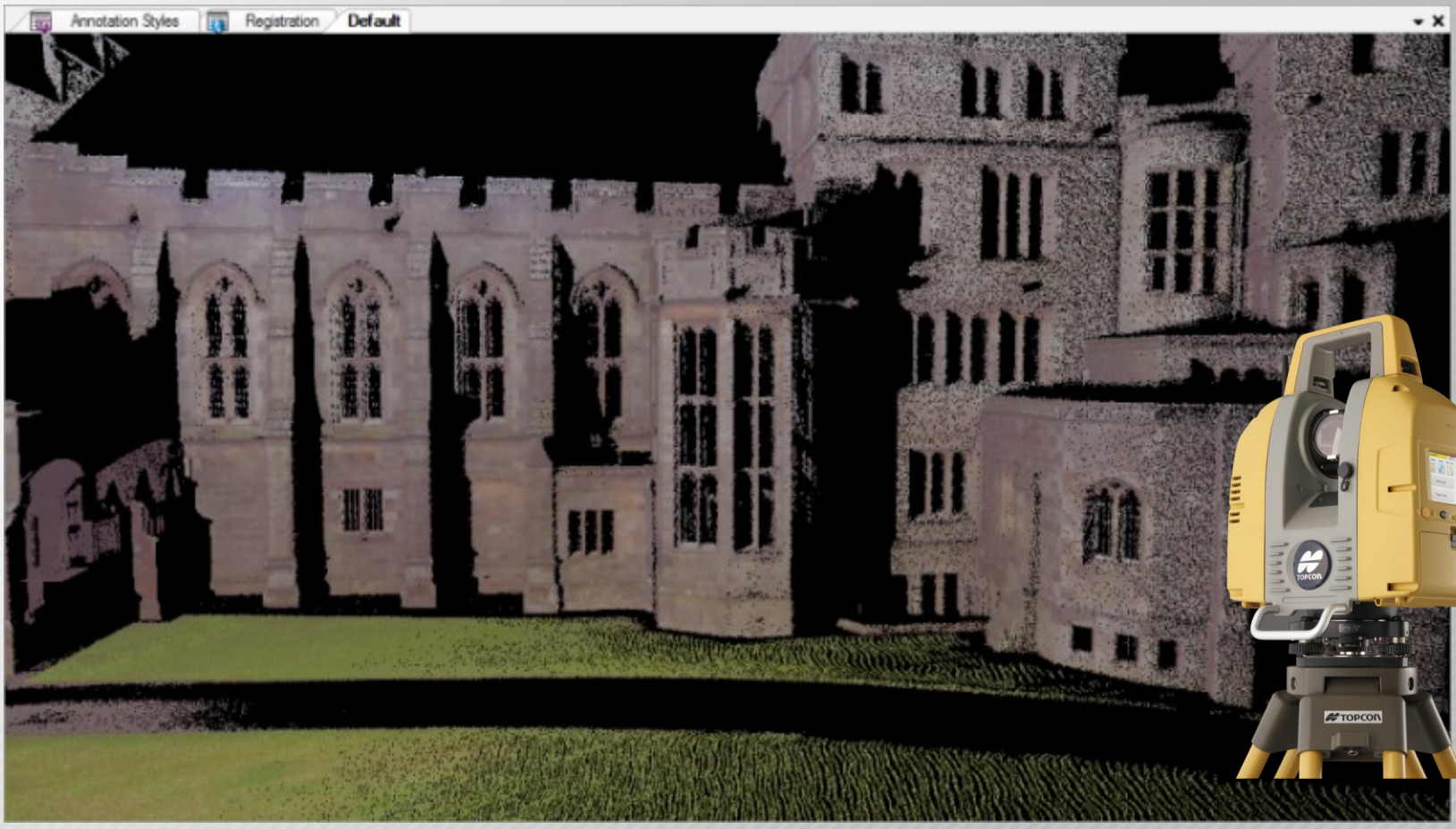
TOPCON

CONTINUOUS REPRESENTATION
OF REALITY



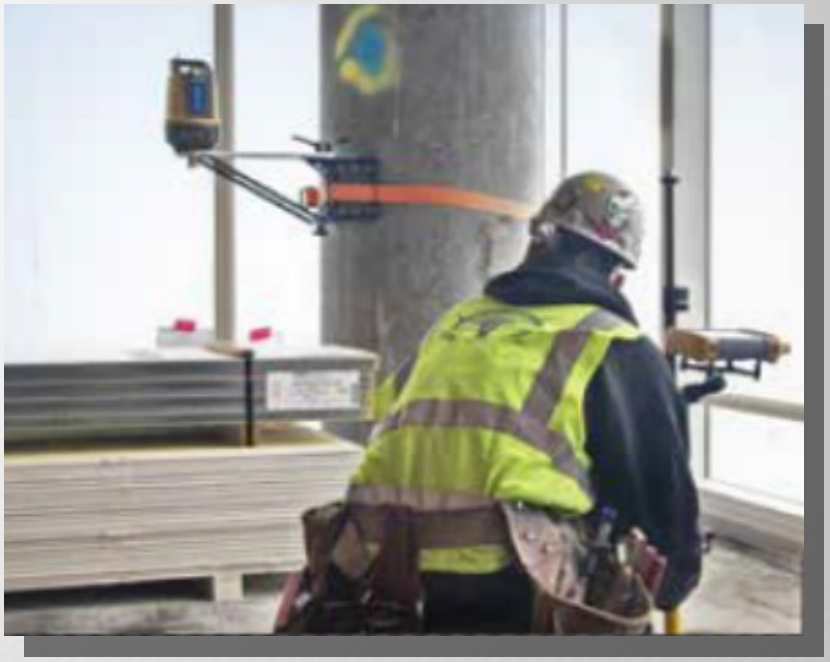
TERRESTRIAL SCANNING

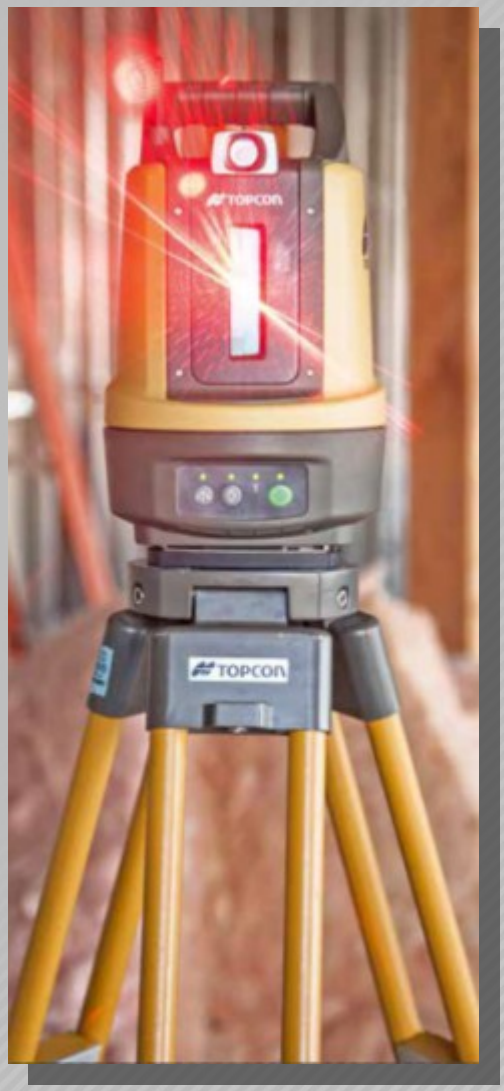
+ BIM Workflow Integration



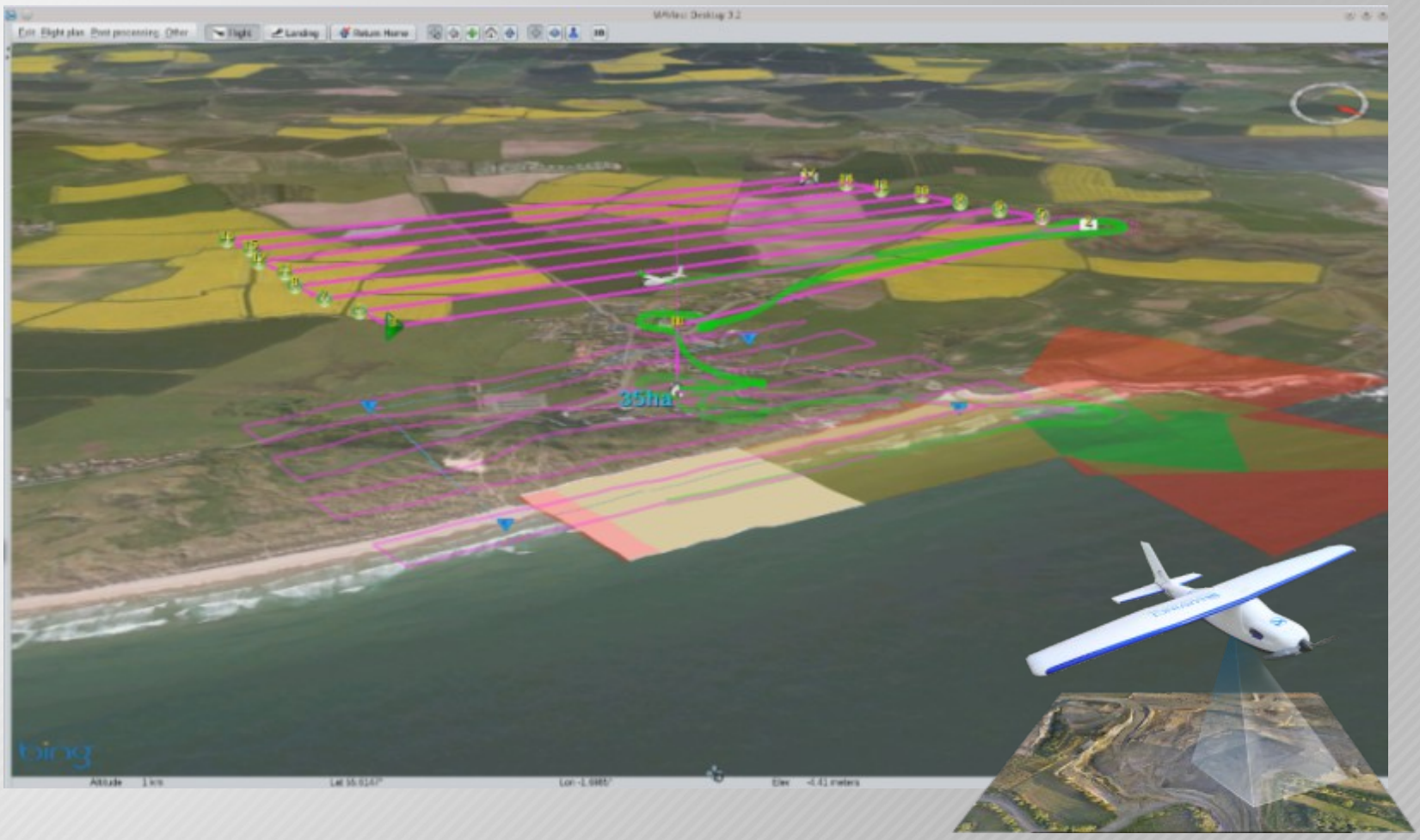
DIGITAL LAYOUT

+ BIM Workflow Integration





AERIAL MAPPING



MOBILE MAPPING

TOPCON

GNSS & TOTAL STATION

TRADITIONAL SURVEY

CRR + BIM - Capture and Consume

WORKFLOWS

- **Design Stage:**

  existing site condition to office ⇨ clash avoidance

- **Construction Stage:**

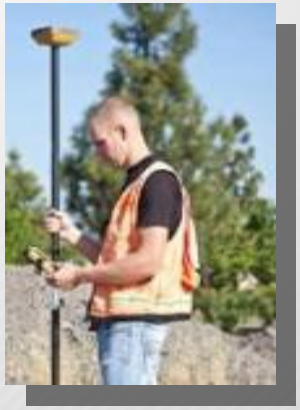
  office to field ⇨ clash avoidance, layout/QA, progress

- **O&M Asset Management:**

  Continuous Representation of assets/facility

Mobile Mapping

A Revolution in the way we map



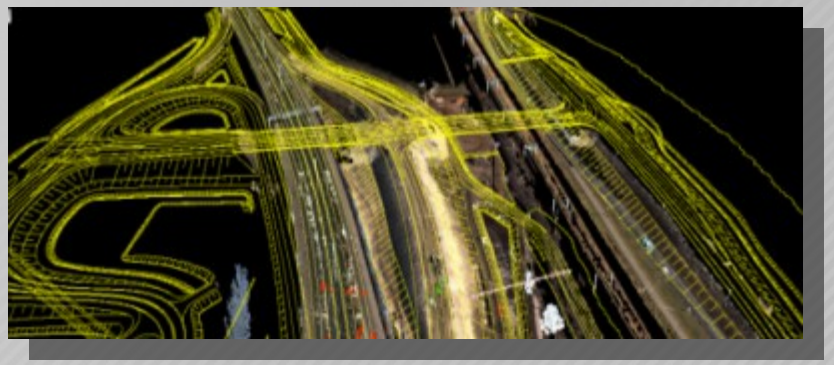
Advantages

- Speed
- Cost
- Safety
- Completeness
- Collect once, use many

Mobile Mapping Applications

Mobile Mapping Applications

- Asset Management
- Topographic mapping
- Survey
- Geo-enabled applications



Asset Inventory

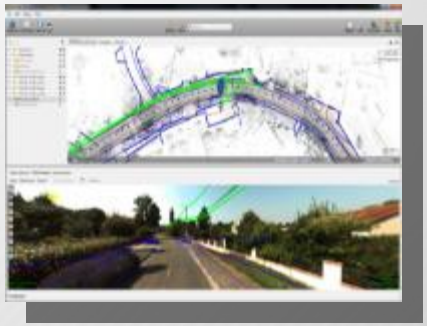
Geo-reference and add meta-data to objects

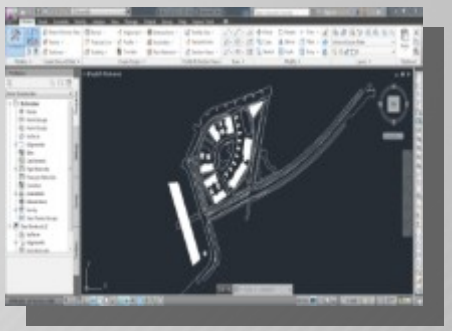
- Road markings
- Traffic signs
- Light poles
- Trees
- Road damage
- Power lines
- Any street(side) object

Topographic mapping

Create and update line and object oriented maps

- **GIS enabled**
- **Integrate in CAD workflow**

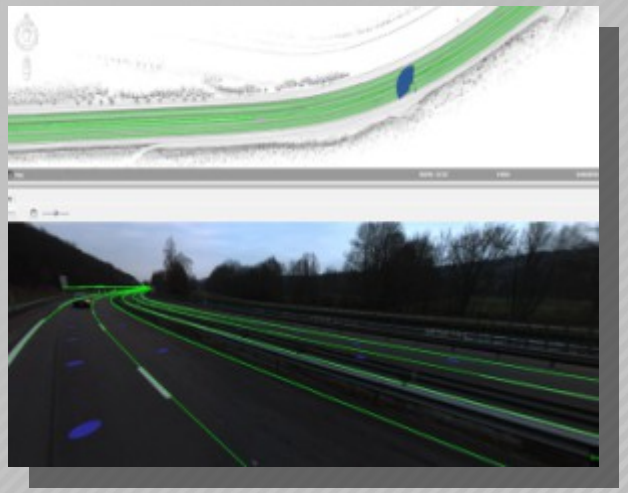




Automatic indexing of reality

Object recognition, classification and geo-referencing

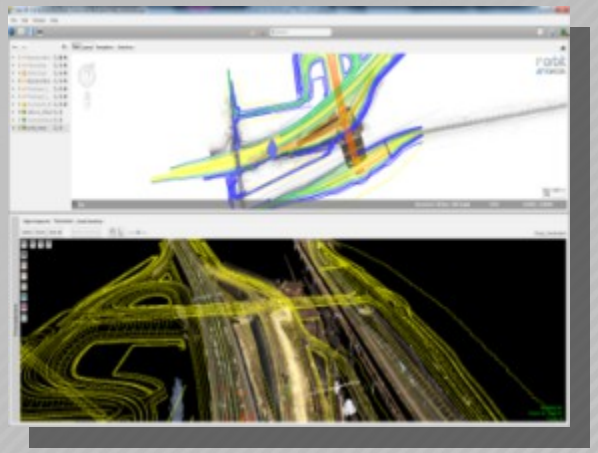
- Traffic signs
- Road Markings
- Railway tracks
- Clearances



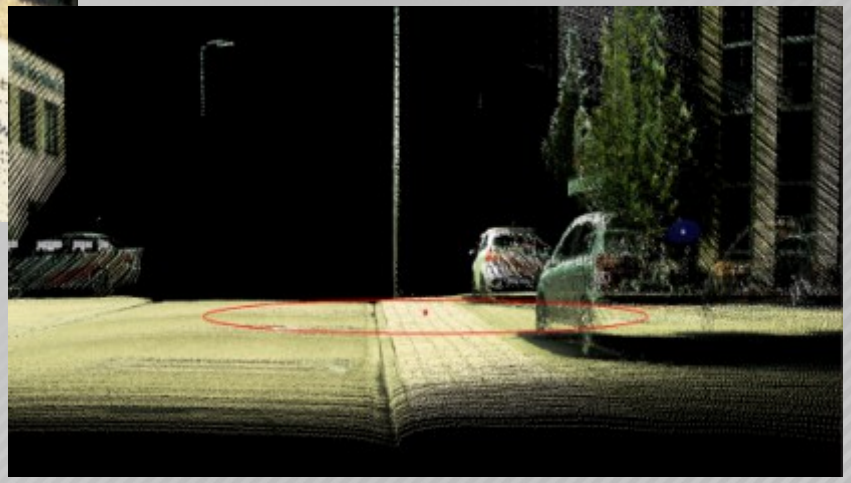
Survey

For construction, open pit mines, quarries

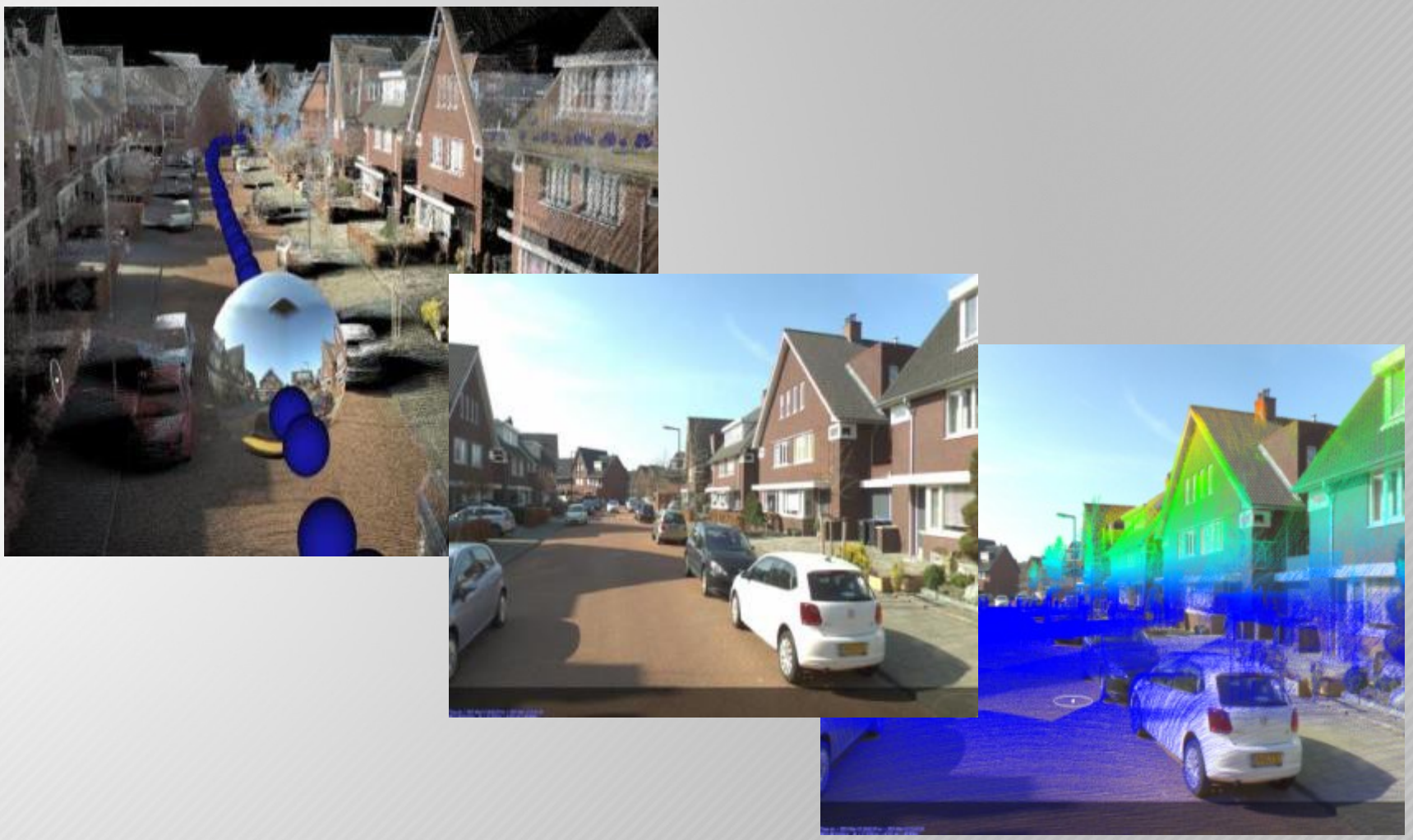
- **Create**
  - DEMs, TINs
- **Analyze**
  - Volumes, sections
- **Compare**
  - Design versus as-built



3D point cloud



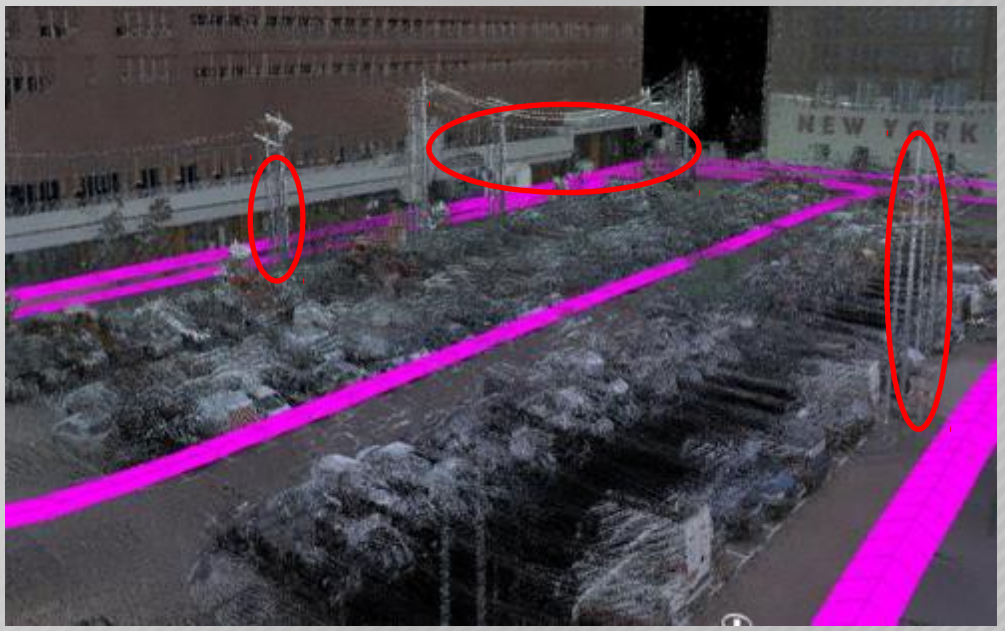
3D Experience



Project: mapping a city centre

Project brief:
Produce as-built documentation prior to development planning .
38 km, 1 h 37 mins, 6911 images, 2.2 billion scan points
How else could you do this?

e.g **Tokyo City Centre**
RecentlyCompleted
– billions of points



Double poles: passes don’t match

Survey of Tower Bridge to Create Point Cloud Image

from LandScope Engineering Ltd

Working with the Port of London Authority, LandScope utilised the autoMAP Mobile Mapping Service to provide a point cloud to compliment multi-beam echo sounder data collected around Tower Bridge.

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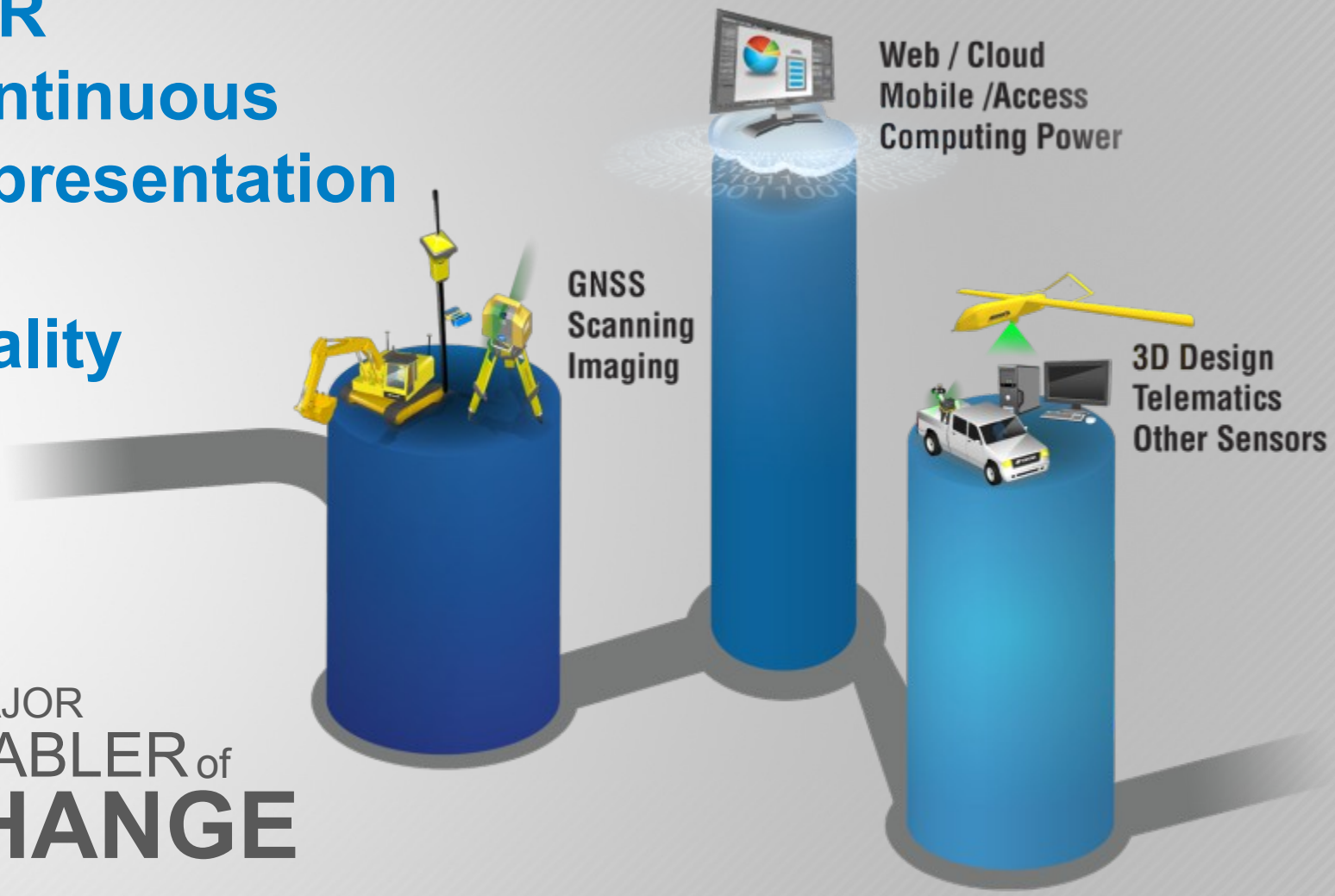

A MAJOR
ENABLER of
CHANGE

TOPCON

OUR VISION

YOUR PRODUCTIVITY.
TECHNOLOGY.