



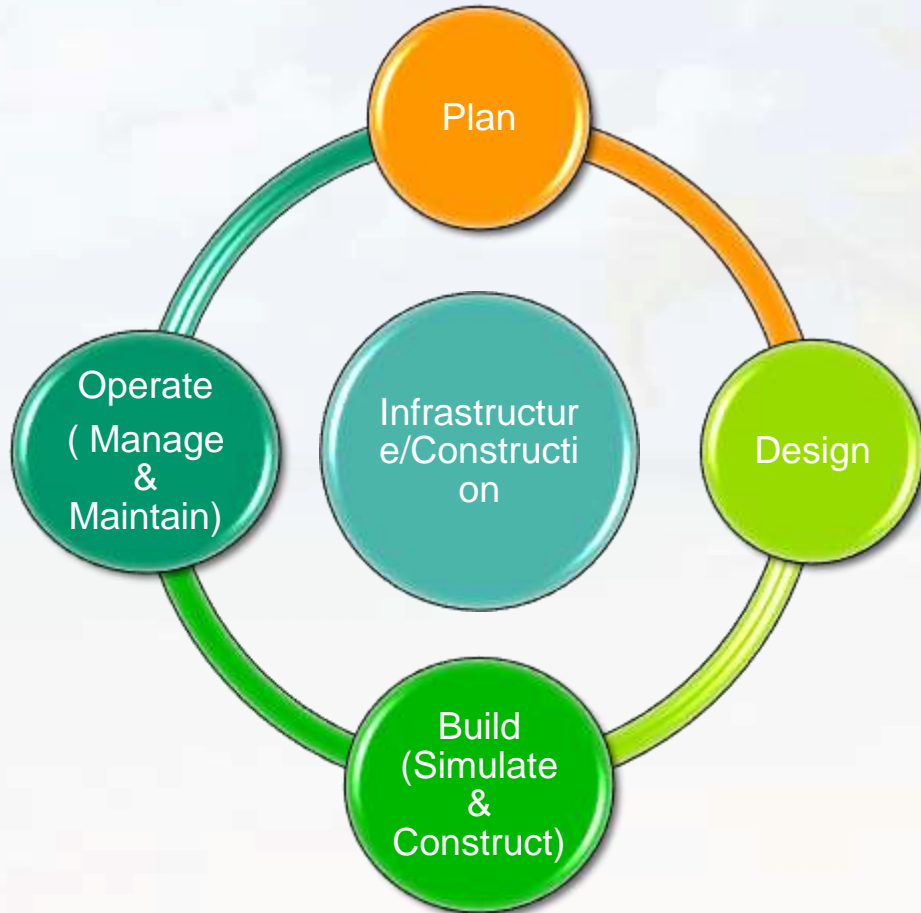
DISRUPTIVE TECHNOLOGIES ENABLING SMART CITIES

Geospatial Sensors & Systems for 3D data

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16th November 2022





- Field Survey (including non spatial data)
- Aerial/Satellite Data
- 2D/3D data
- Lidar/Photogrammetry
- CAD/BIM
- GIS

Importance of 3D data in Smart cities

- Master Planning Applications
- Navigational Applications
- Utility Design Applications
- Decision Support System Applications
- Property Management Applications
- Spatial Data Infrastructures (SDIs)
- Emergency Management
- Augmented Reality
- Intelligent Transportation Systems
- City Information Systems
- 3D gaming

ROTER



1980
Exported 1000 Plane
Table Sets to Iraq



1936
Manufacturing of
Survey equipments



2002
Supplied 100 Total Stations
to Govt of Andhra Pradesh

1982

Successfully executed order of 200
precision theodolites for Sri Lanka
government



2006

Served 200 Total Stations
to state of Karnataka



2009
Supplied 600,000 Intelligent
Survey Markers to National
Land Commission, Bhutan



2011

Supplied 350 High Precision Digital
Levels to Irrigation Department, Patna



2012
Launched Mobile LIDAR for
Delineating the FRL of Almatti
Dam

2015

Conducted 3D study of a 150m
deep void in the Himalayas



2016
Developed standards for
using Mobile LIDAR for
NHAI



2017

Launch of 4th Generation
with first eVTOL UAV



2018
Largest supplier of Mapping
Drones to Survey of India under
SVAMITVA SCHEME



2020

Established standards for using
drone based technologies for
surveying & mapping



2022

ROTER GROUP awarded as "India's
Best Drone Company" by MoCA,
AAI & FICCI & started state of the art factory in
Roorkee

Aerial Platform

- **Drones**
- **Drone Sensors**
 - Imagery/Photogrammetry (Nadir/Oblique)*
 - Lidar*
 - Multispectral/Thermal*

Terrestrial Platform

- **Terrestrial Laser Scanners**
- **Mobile Laser Scanners**
- **NSV**
- **Back pack Scanners**

Sub surface imaging solutions

- **GPR**
 - Underground Utility Detection*
 - Pavement profiling*
 - Concrete Scanner*
 - Rescue Radar*

Drone and Drone Sensors for 3D data

- One of the most disruptive technology in recent years
 - Ease of operation/Unmanned
 - Quick turn around
 - Multiple payload options



- Applications unlimited
 - Surveillance
 - Delivery
 - Agriculture
 - Surveying & Mapping

Drone Lidar Data

Drone Oblique Camera Data

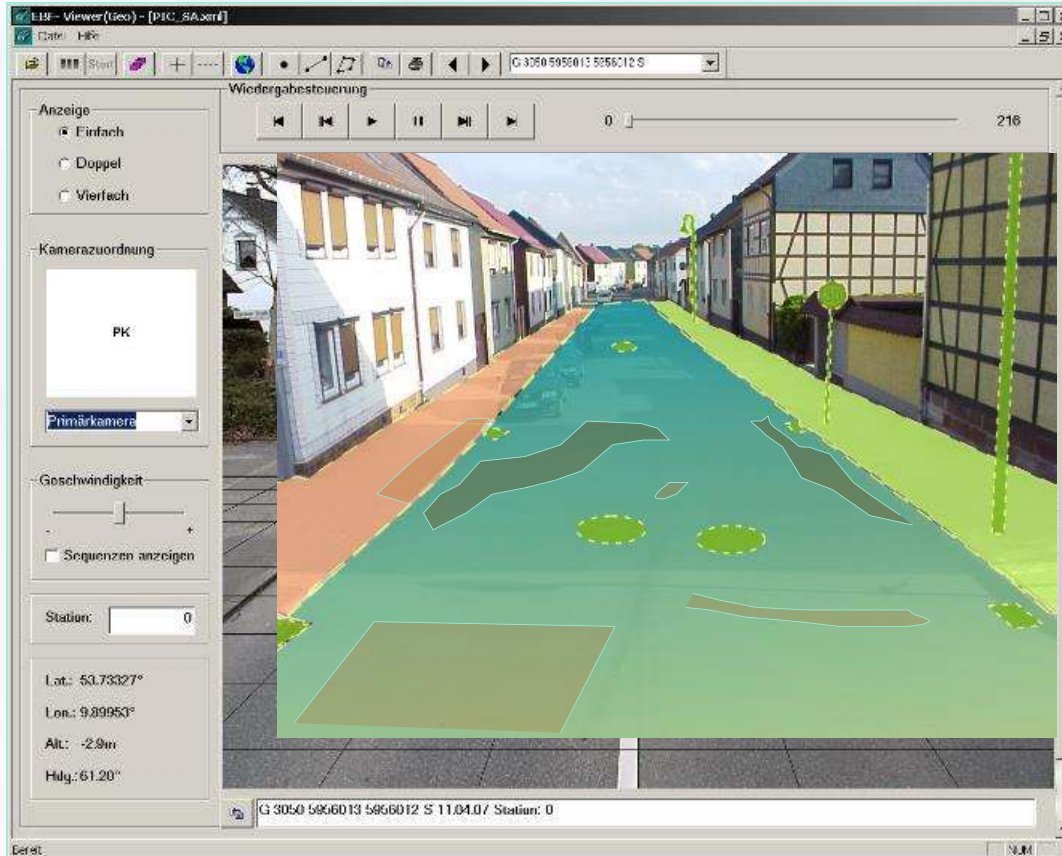


- Transport infrastructure mapping & managing
- Asset Mapping
- Pavement condition studies
- Encroachment studies
- Highway Widening projects
- Autonomous Navigation

3D data from Mobile Lidar System



Road Asset and Condition extraction



Shape

Inventory

Condition

- For identifying the underground utilities
- Concrete Scanning(NDT)
- Geotechnical Investigation
- Pavement structural evaluation
- Saving precious life's during catastrophes (building collapse/land slide etc)

GPR

SUBSURFACE IMAGING SOLUTIONS

ROTER
Precision by Tradition

LMX

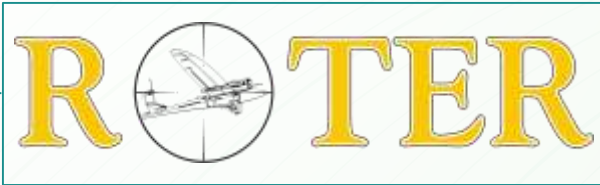
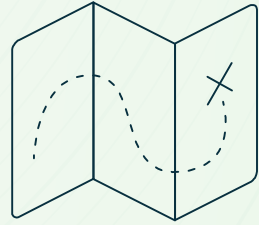


Conquest



Noggin





Thanks!

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and systems**

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