SuperMap

GIS Leads
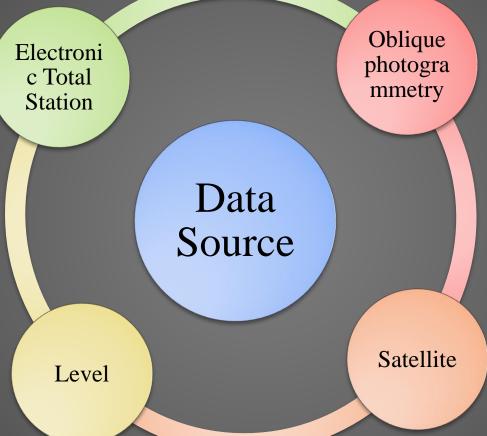# The New Generation of Survey

Content

- ➢ **Support multi-source data**

- ➢ **Oblique Photogrammetry**

- ➢ **Image processing using AI**

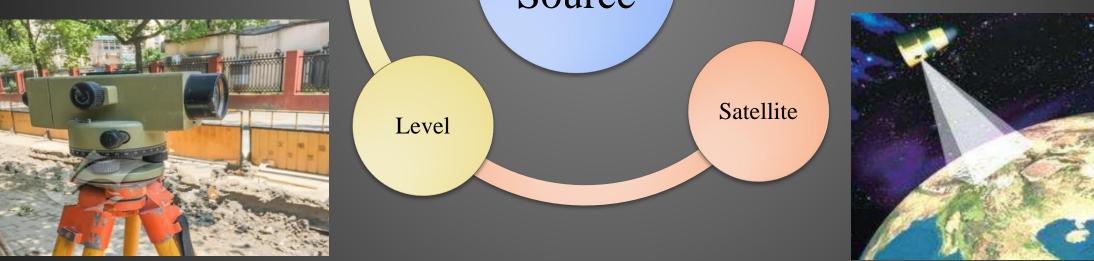- ➢ **Data Collection using Mobile**

- ➢ **Visualization of Point Cloud**

Data Source

Electronic Total Station

Oblique photogrammetry

Level

Satellite
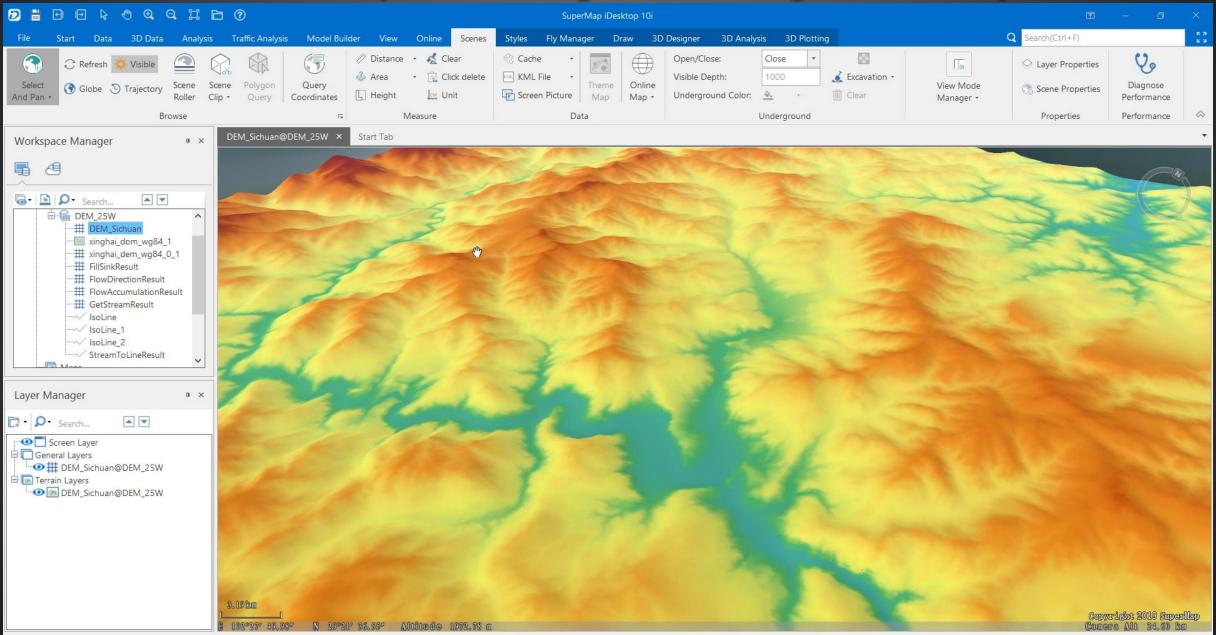
Data Processing Flow

Data collection → Data processing → Mapping → Map publish → Data update
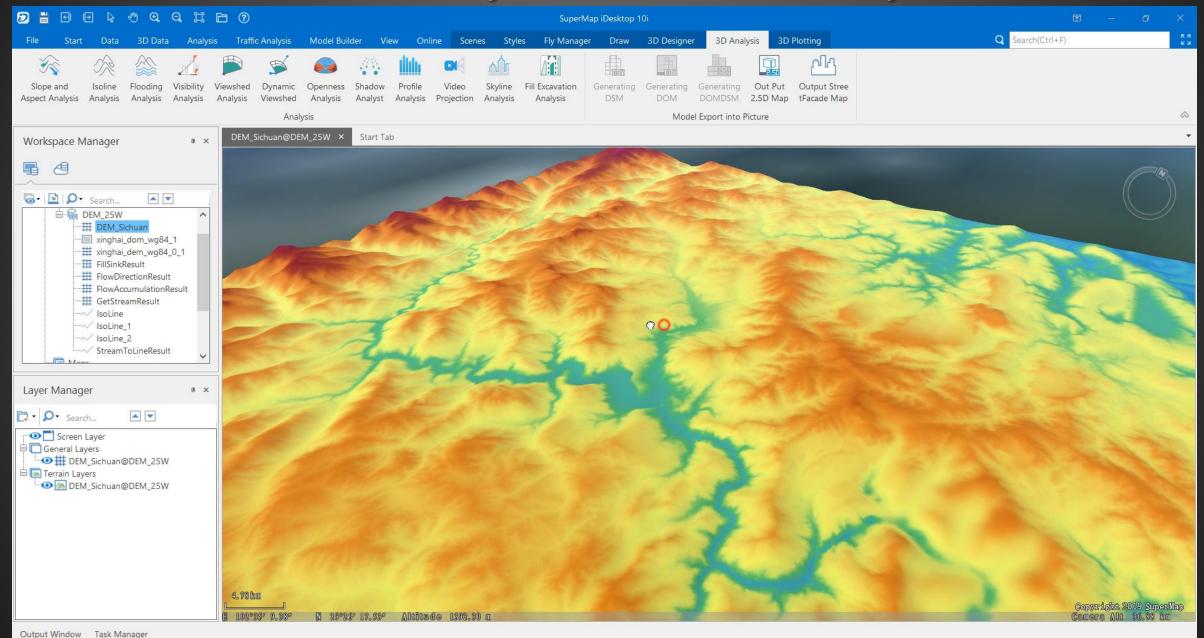
DEM Analysis - Slope and aspect analysis
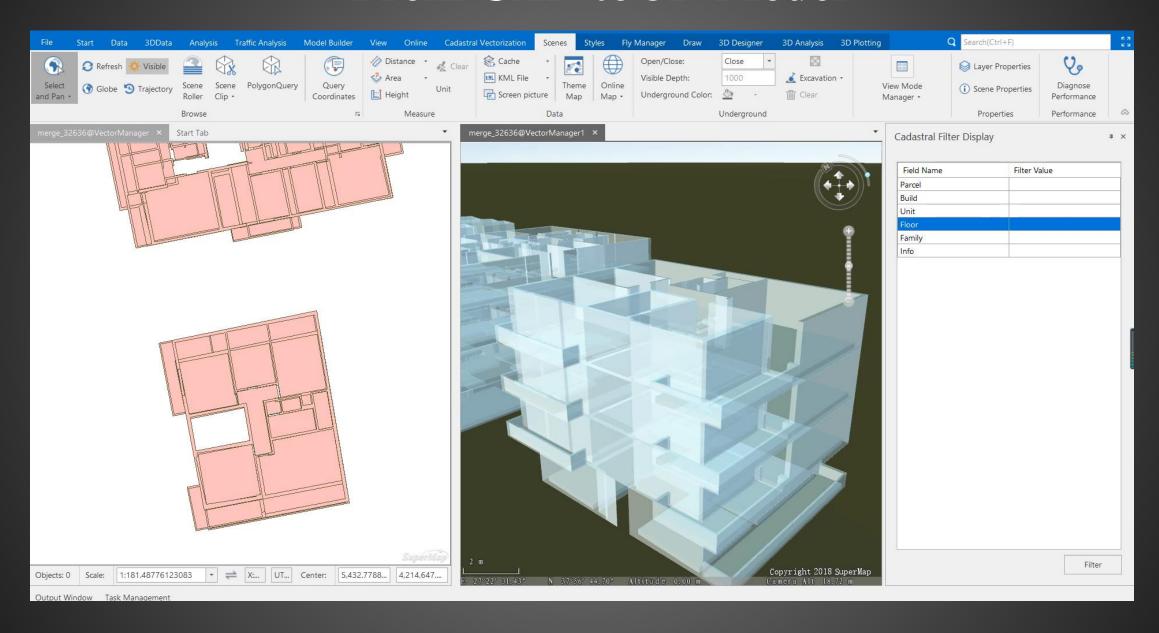
From CAD to 3D Model

New Generation of Survey

SuperMap

| Traditional survey | → | New Survey |

Traditional survey

- Vector：DLG、DEM
- Image：DOM、DRG
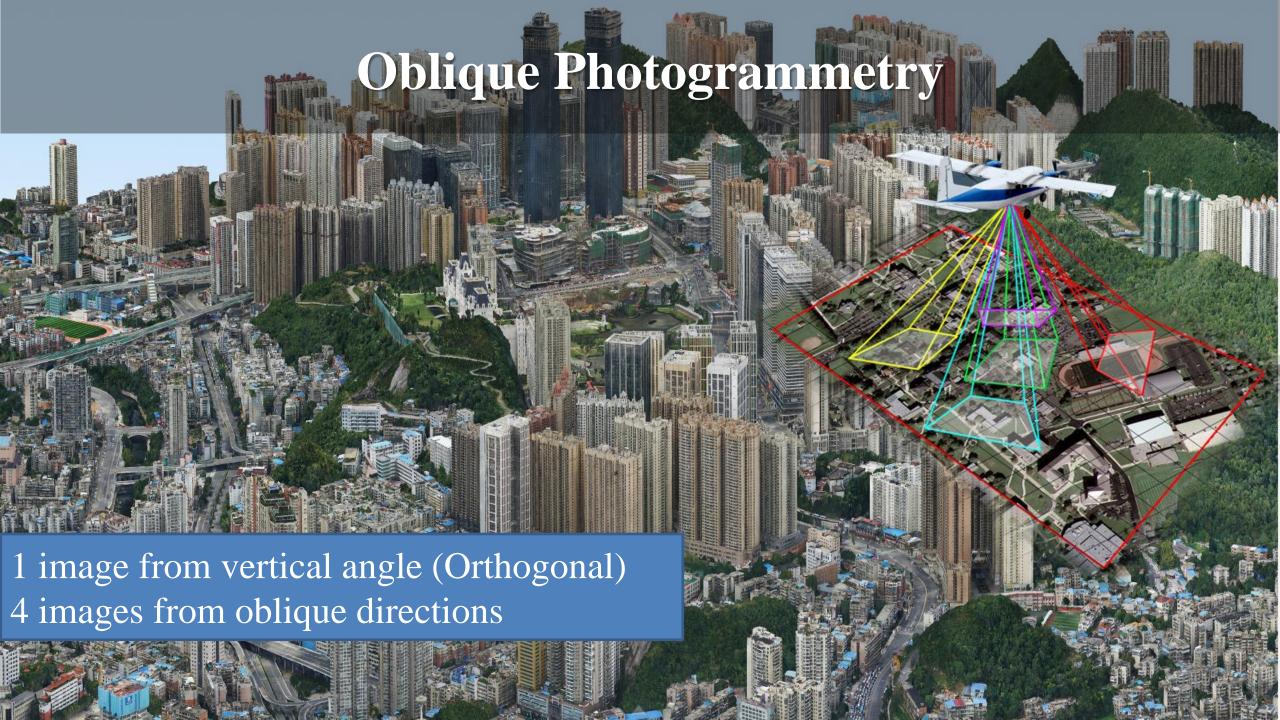
New Survey
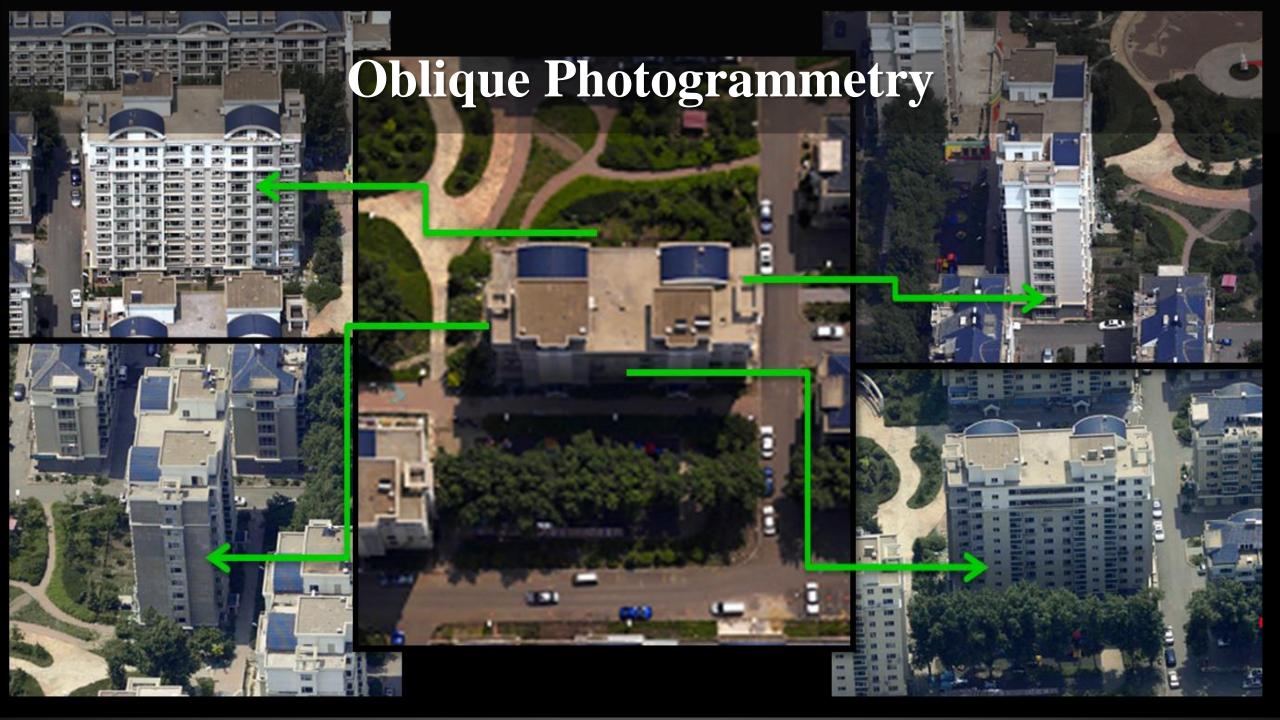
- Photogrammetry/Point cloud（Outdoor）
- BIM（Indoor）
- Pipelines（Underground）
- AI
- …

2

Oblique Photogrammetry

Oblique Photogrammetry

1 image from vertical angle (Orthogonal)
4 images from oblique directions

Oblique Photogrammetry

Support Mainstream modeling software

Oblique Photogrammetry（City）
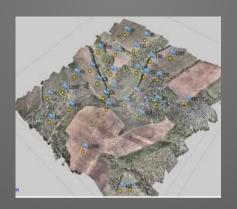
Advantages of Oblique Photogrammetry Modeling

Oblique photogrammetry data in SuperMap

Oblique Photogrammetry+IoT(CCTV)
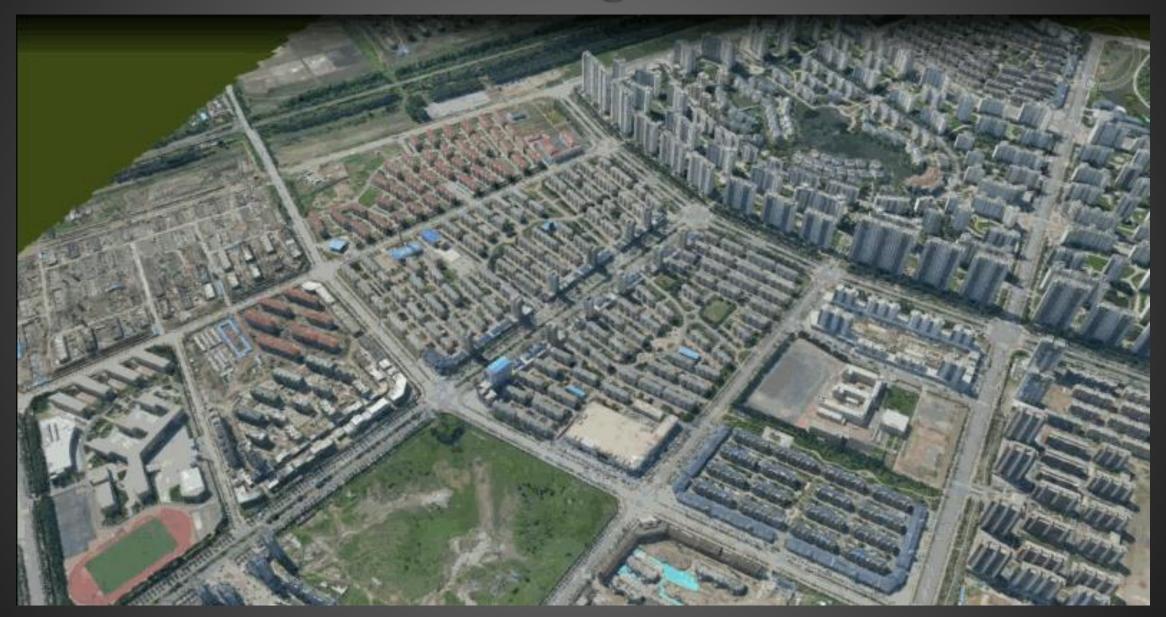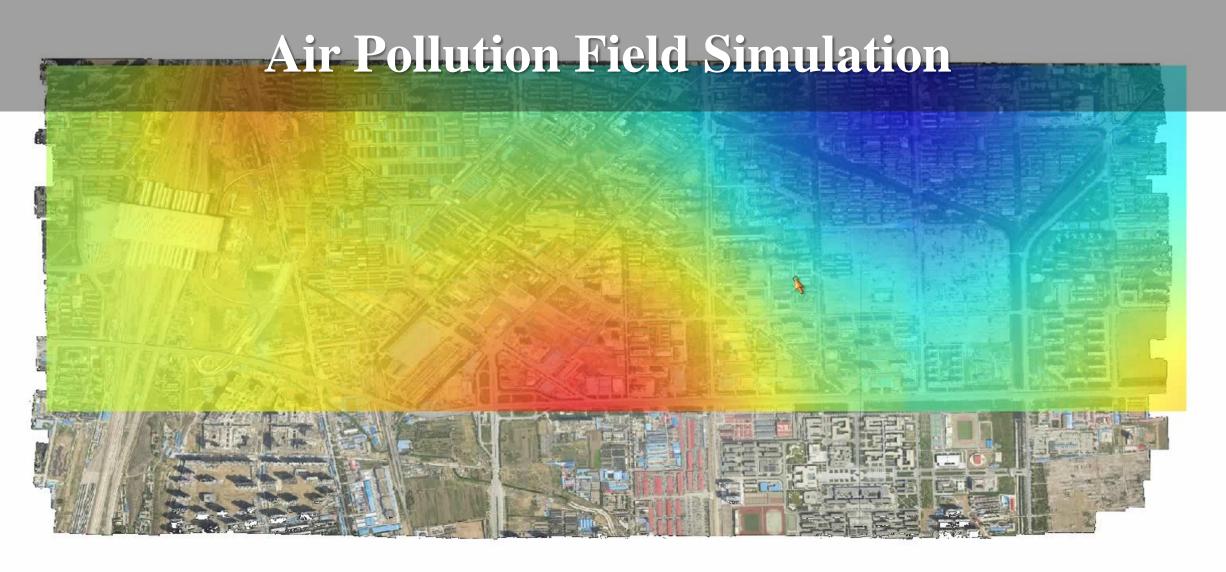
Urban Flooding Simulation

Air Pollution Field Simulation

SuperMap
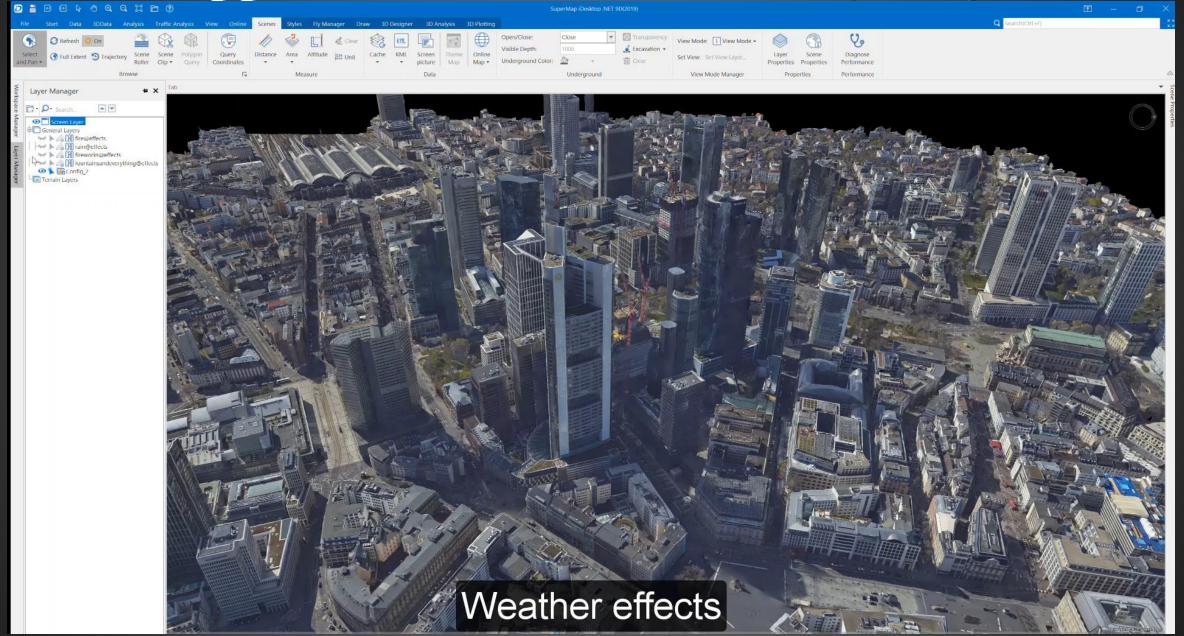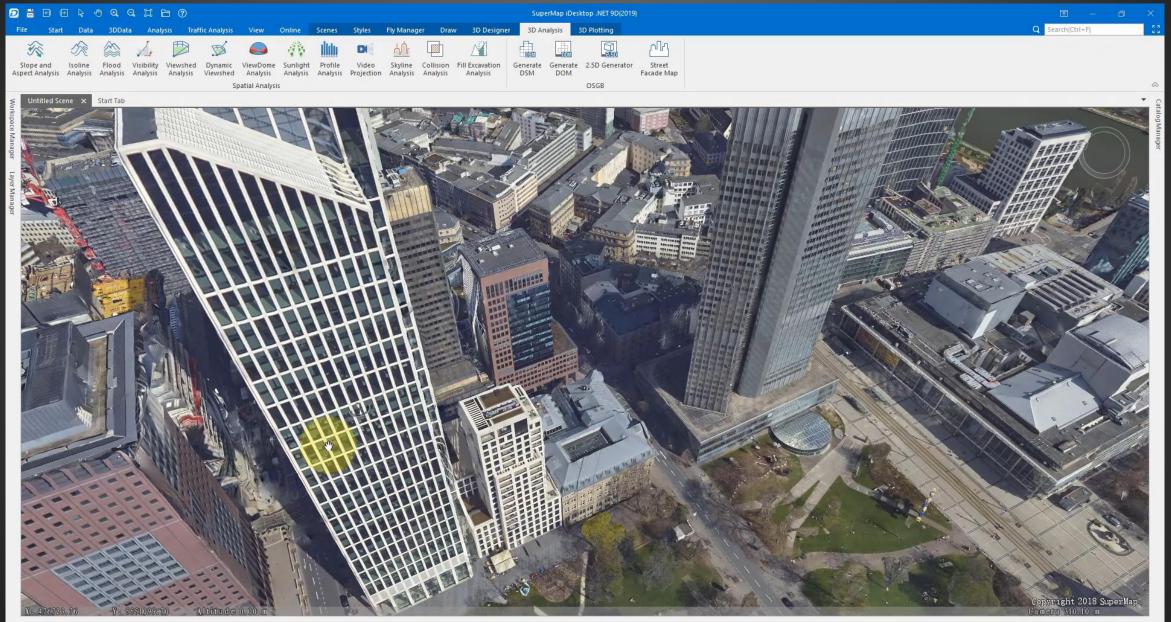
Application - Weather Effect (Rain)

Weather effects
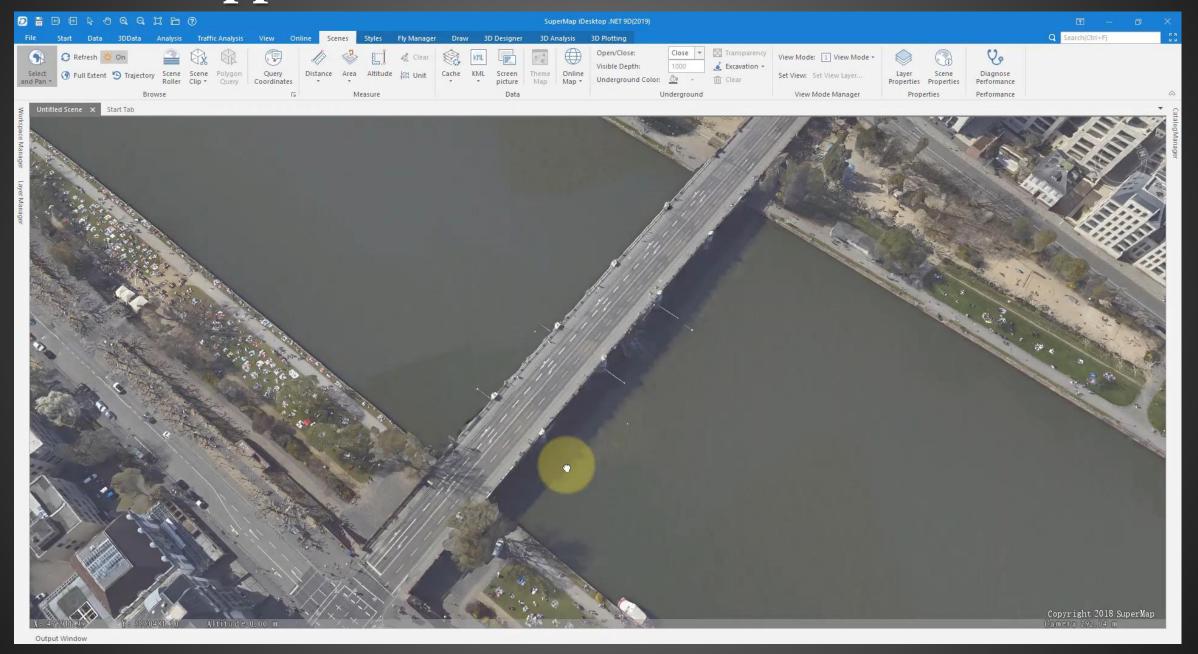
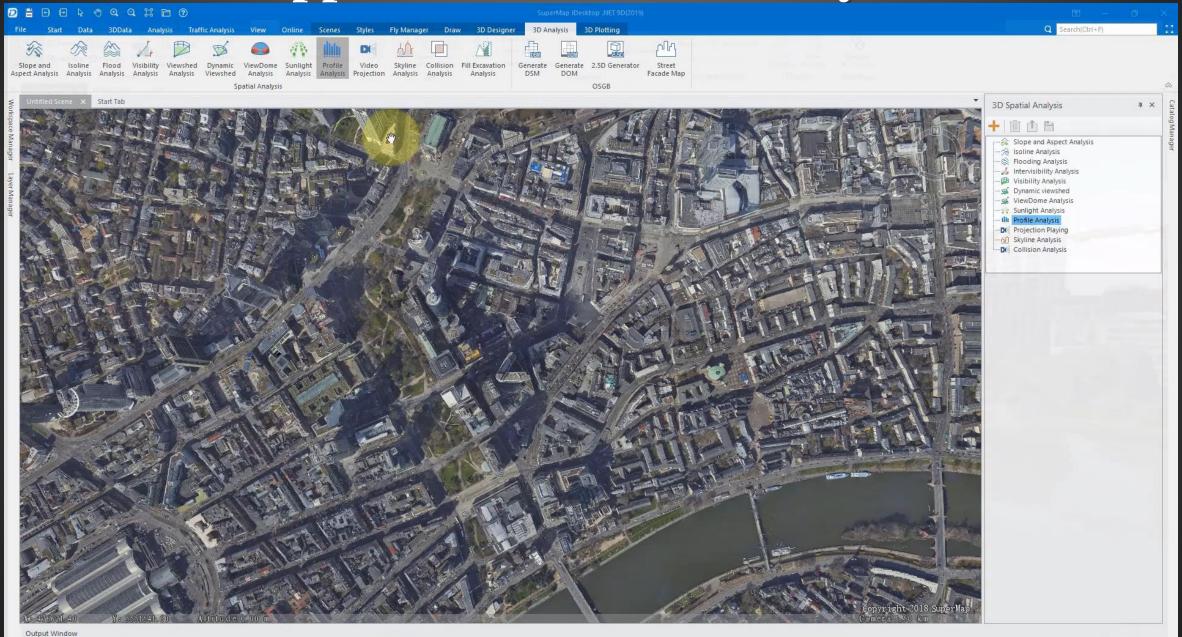Application - Measure the Area
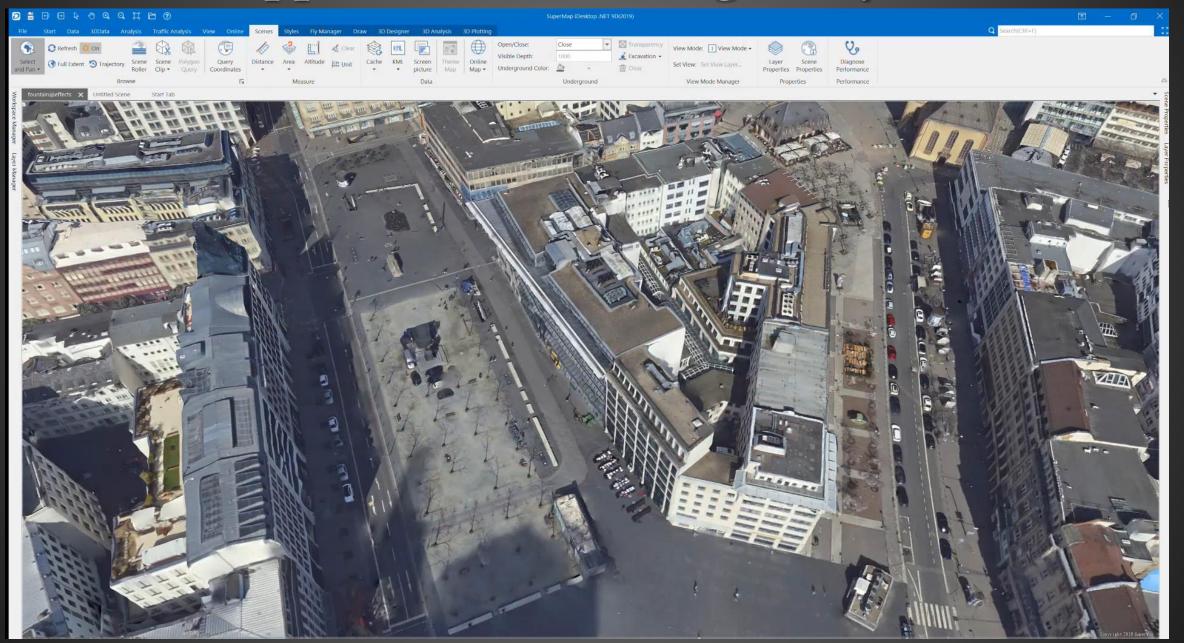
Application - Measure the Distance

Application - Profile Analysis
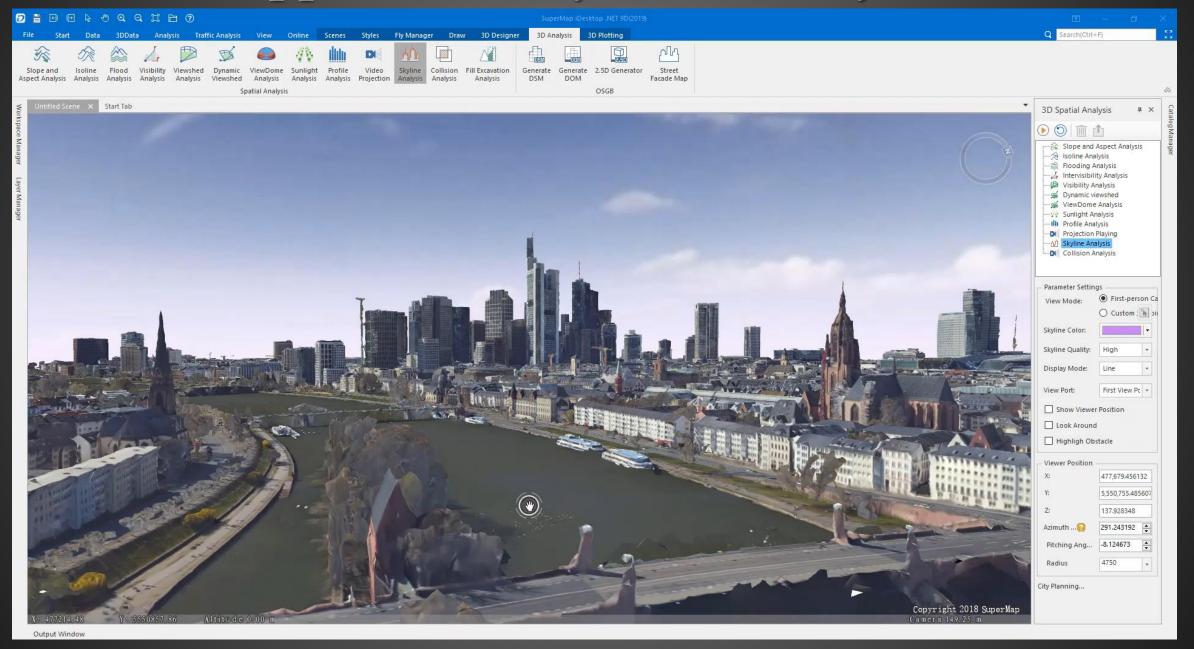
Traffic Road Planning and Design

Water Conservancy and Electric Power

- Water Conservancy levee monitoring
- Project safety management
- Reservoir monitoring
- Water conservancy facilities Planning
- Power patrol line
- Power facility planning site selection

Monument Protection Project

Satellite image data

New Technology : AI GIS

Computer Science

Geography Information Science

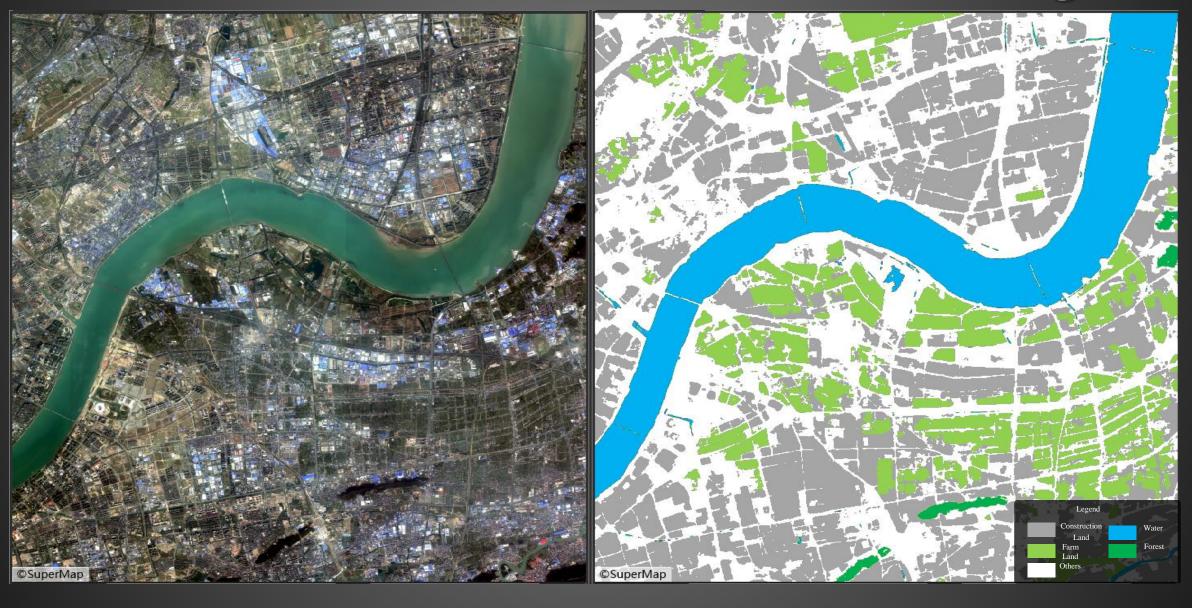Find Cats in Pictures

Find the Plane in the Image

Object Detection: Palm Trees

Binary Classification: Extracting Building Footprint from Image

Land Use Classification from Satellite Image

Legend

Construction Land — Water

Farm Land — Forest

Others

Comparative Analysis of Urban Architecture
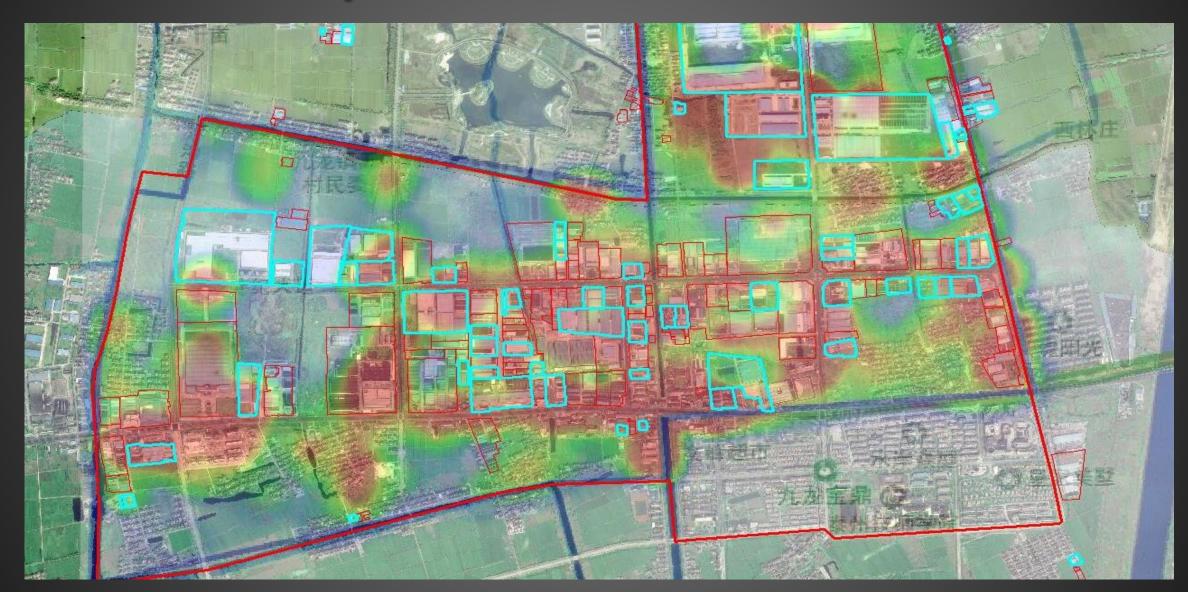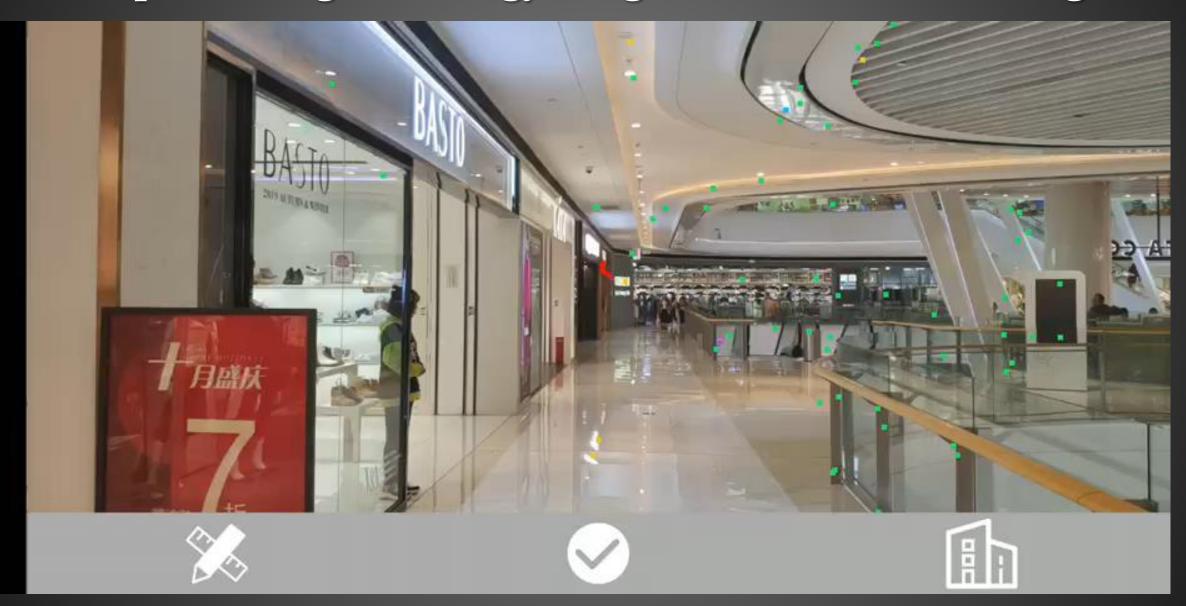
Data Collection using Mobile

4

AR + AI Mapping

AI Based Attribute
Data Collecting
(Illegal Parking)

AI Based Attribute
Data Collecting
(Posters)
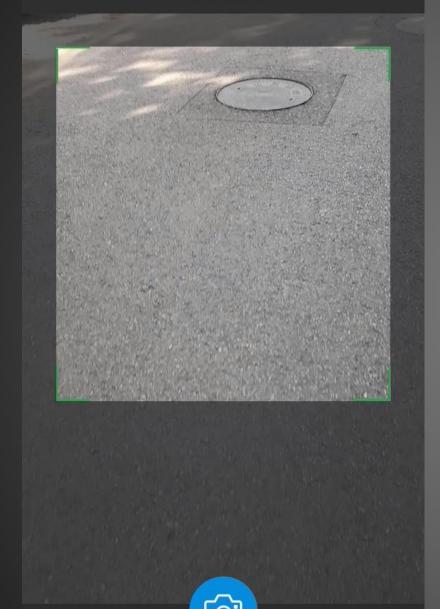
AI Based Attribute
Data Collecting
(Manhole Covers)
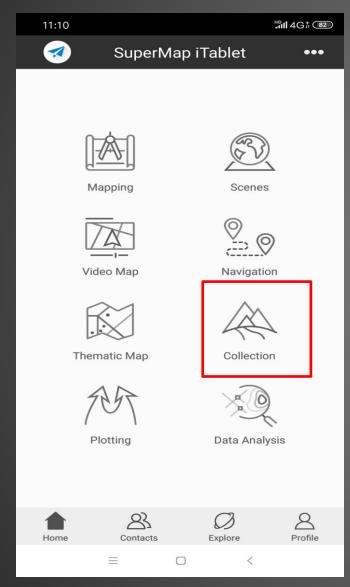
Visualization of Point Cloud Data

Distributed Processing of Point Cloud Data

SuperMap
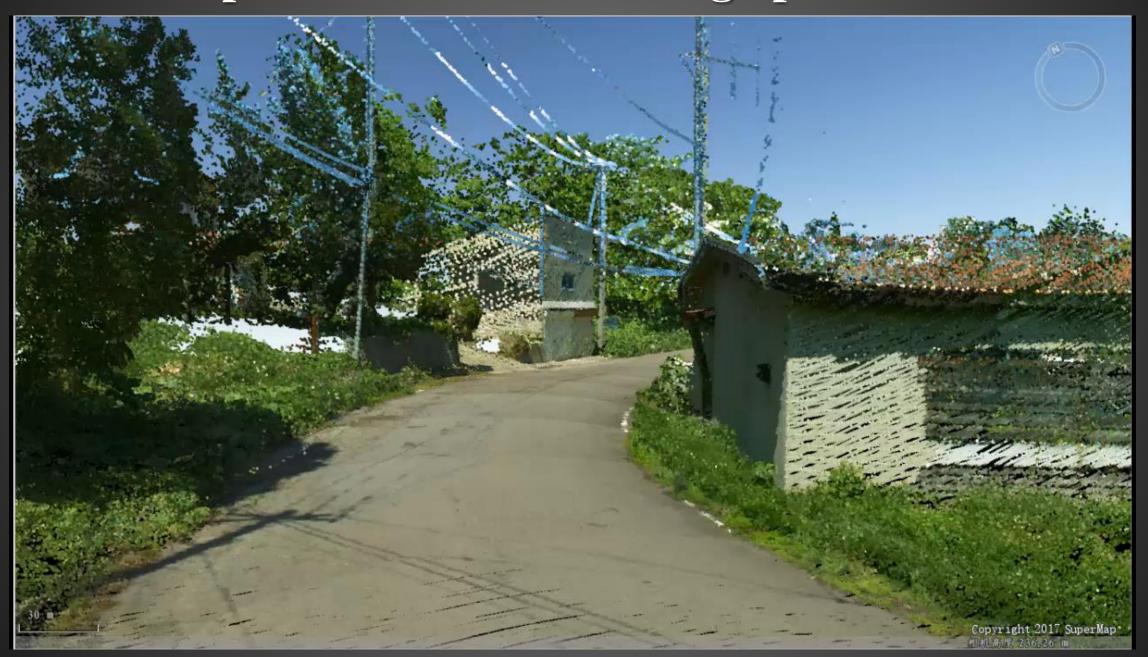
Distributed File System

Distributed Operator

Distributed Database

HDFS

Append mode

Build LOD

Build index

Convert to S3M

MongoDB

Service Publishing

Distributed Computing

180GB(las etc)

53GB(S3M)
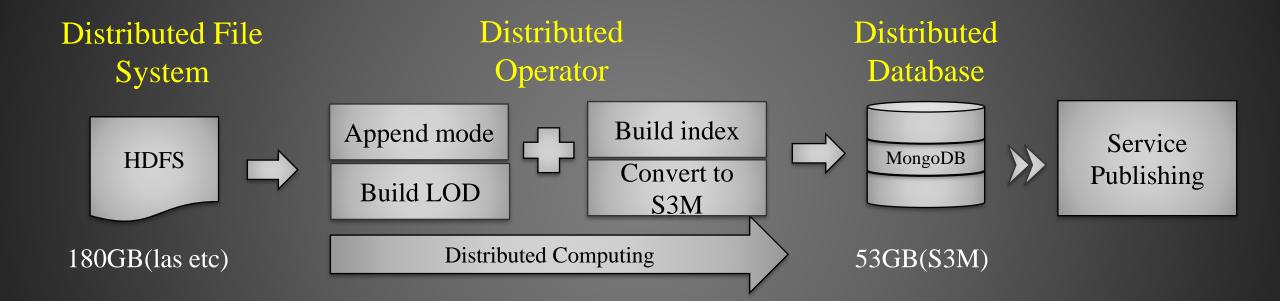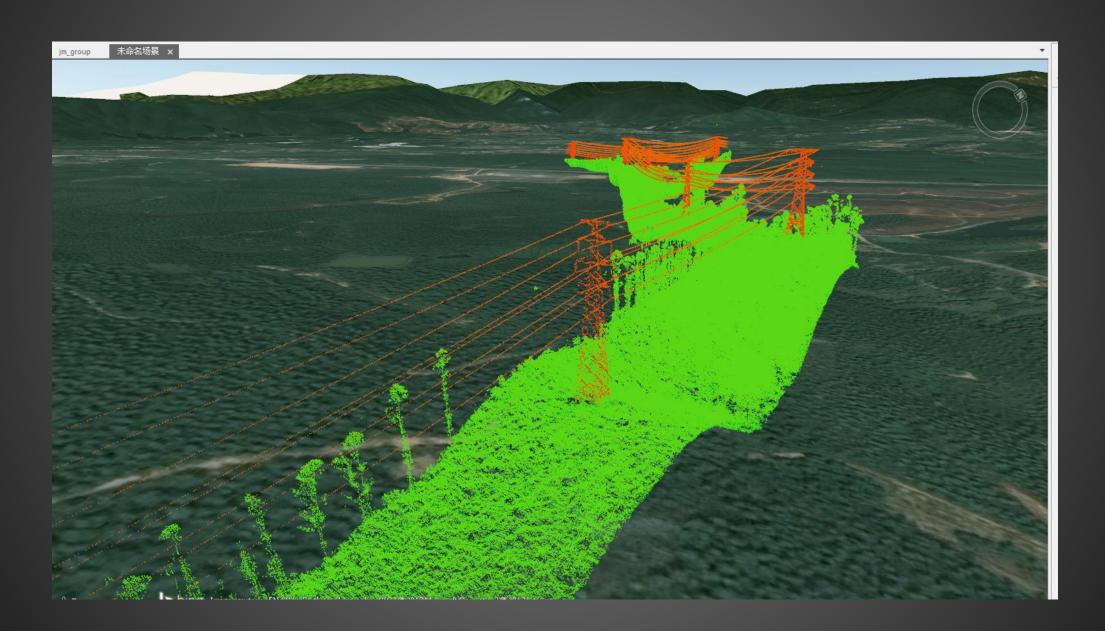
Set the color for Point cloud cache

Point Cloud Data（300GB）