



# Monitoring and Managing Forests with GDi solutions

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Monitoring and Managing Forests with GDi solutions

# About GDi

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# GDi - Creating Efficiencies. Stimulating Growth.

## GDi

A leading Central European solutions provider with global relevance.

Europe, Middle East, North and South America, Africa








# GDi - Creating Efficiencies. Stimulating Growth.

- GDi solutions help users manage
  - resources
  - assets, infrastructure
  - Operations
- Focus on „processes and operations“ solutions and platforms
- GDi solutions used worldwide, in 11 time zones.
- 150 + staff
- 25+ years in the business and 1000s of customers
- We support successful organizations to create even more efficient and agile business



# GDi - Creating Efficiencies. Stimulating Growth.

## PROCESSES AND OPERATIONS

-  Troubleshooting
-  Work orders
-  Workflows
-  Data Collection
-  Scheduling

## REPORTING AND KPIs


-  KPIs
-  Dashboards
-  Reports

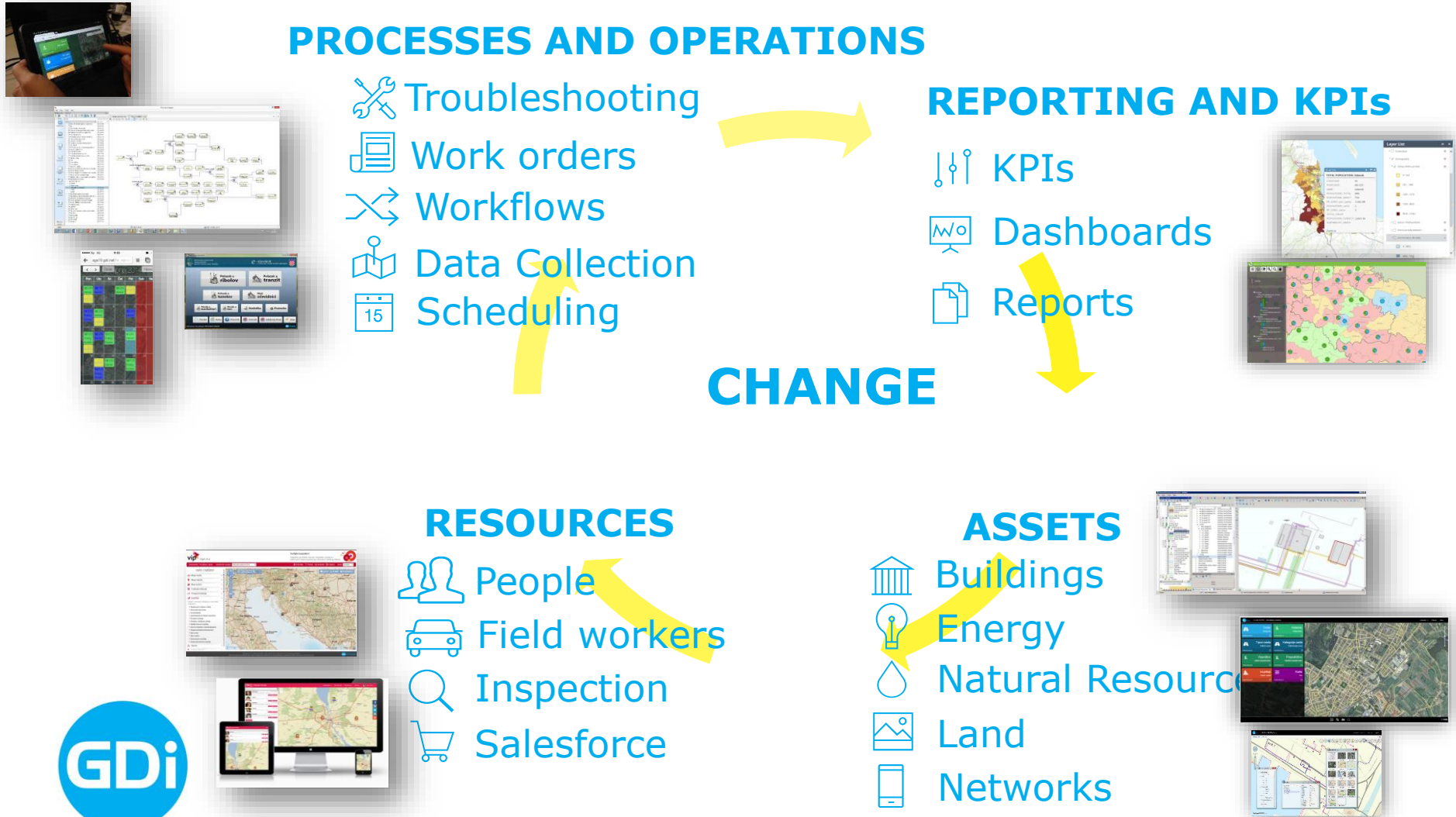
## CHANGE

## RESOURCES

-  People
-  Field workers
-  Inspection
-  Salesforce

## ASSETS

-  Buildings
-  Energy
-  Natural Resources
-  Land
-  Networks





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# Forest management

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# What needs to be done?

Monitor

Understand

**GDi Software Solutions and  
Data Products**

Plan



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# What can technology give to forest management?

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# Goal

s

- Improve inventory
- Improve land administration
- Improve sustainable forest planning
- Better management of timber exploration

# Benefits

A scenic landscape of rolling green hills and dense forests under a blue sky with white clouds. The foreground is a lush green field, and the background shows a dense forest covering a hillside. The sky is bright blue with scattered white clouds.

Fast and accurate decision making

Monitoring in real time

Managing complete circle with technology tools

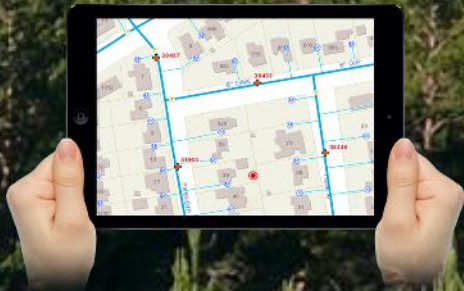
Cost optimization



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# Remote sensing

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# High level

- Data collection on-demand
  - Satellite imagery – up to 30 cm
  - Aerial imagery – better than 30 cm
- LiDAR





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**LiDAR**

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# How LiDAR works?

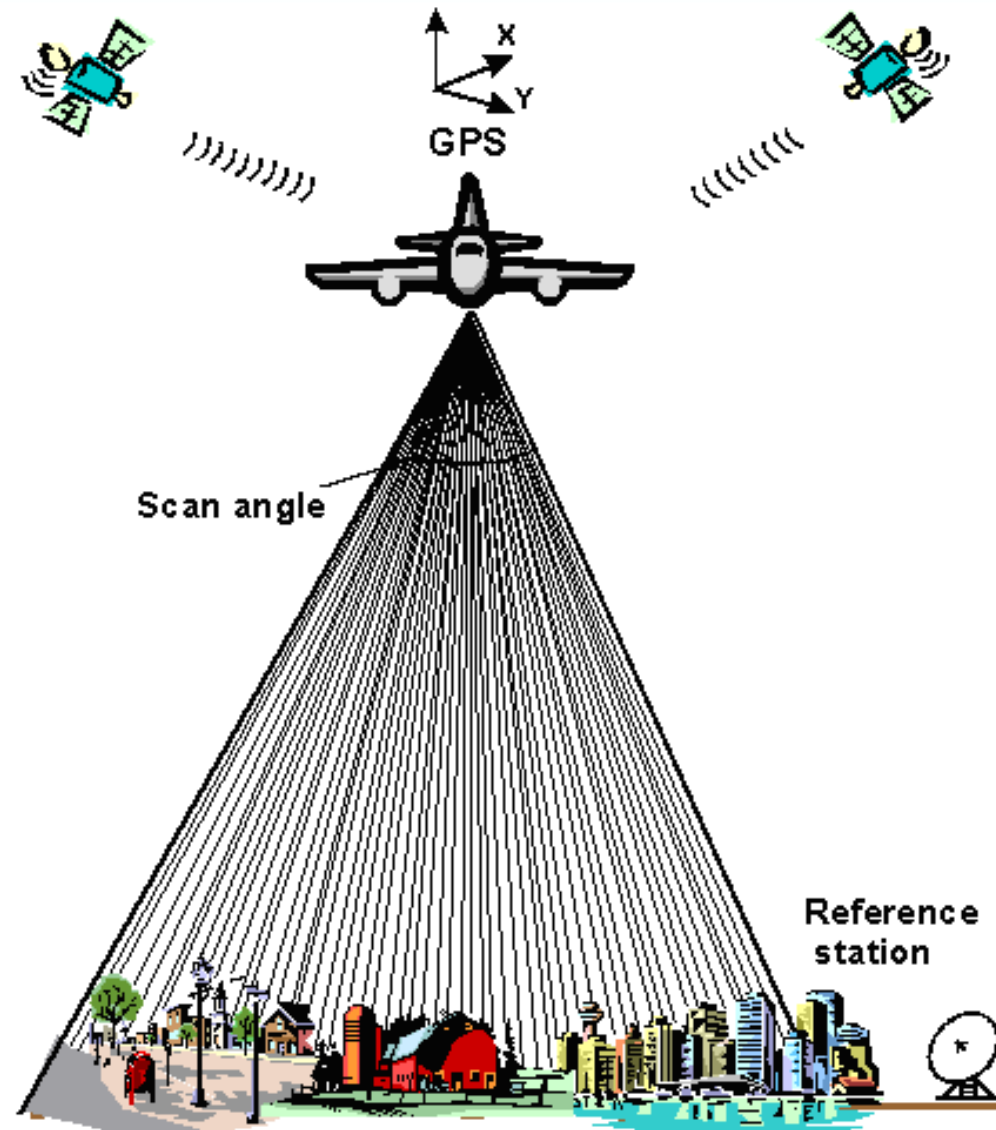
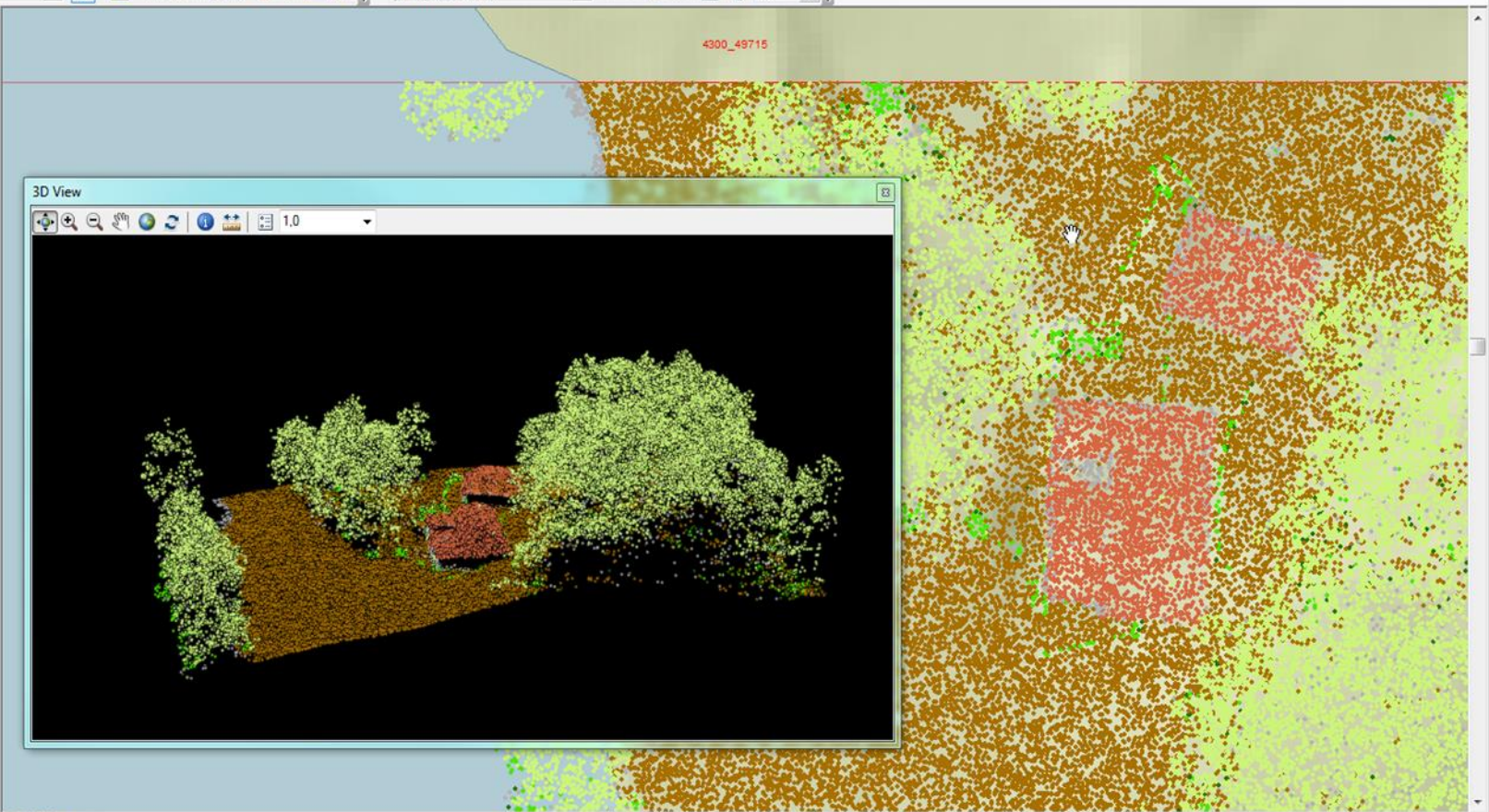


Table of Contents

- Layers
  - tp\_4295\_49705
  - tb\_4295\_49705
  - mp\_4295\_49705
  - ter\_4295\_49705
  - t\_4295\_49705
  - Rijeka
  - Jezera
  - 
  - Granica NP
  - NP Buffer 1 km
  - Shema 500x500 m
  - Shema 1000x1000 m
  - plitvice\_dtm
  - hill315
  - WMS Državne geodetske uprave RH
  - WMS Državne geodetske uprave





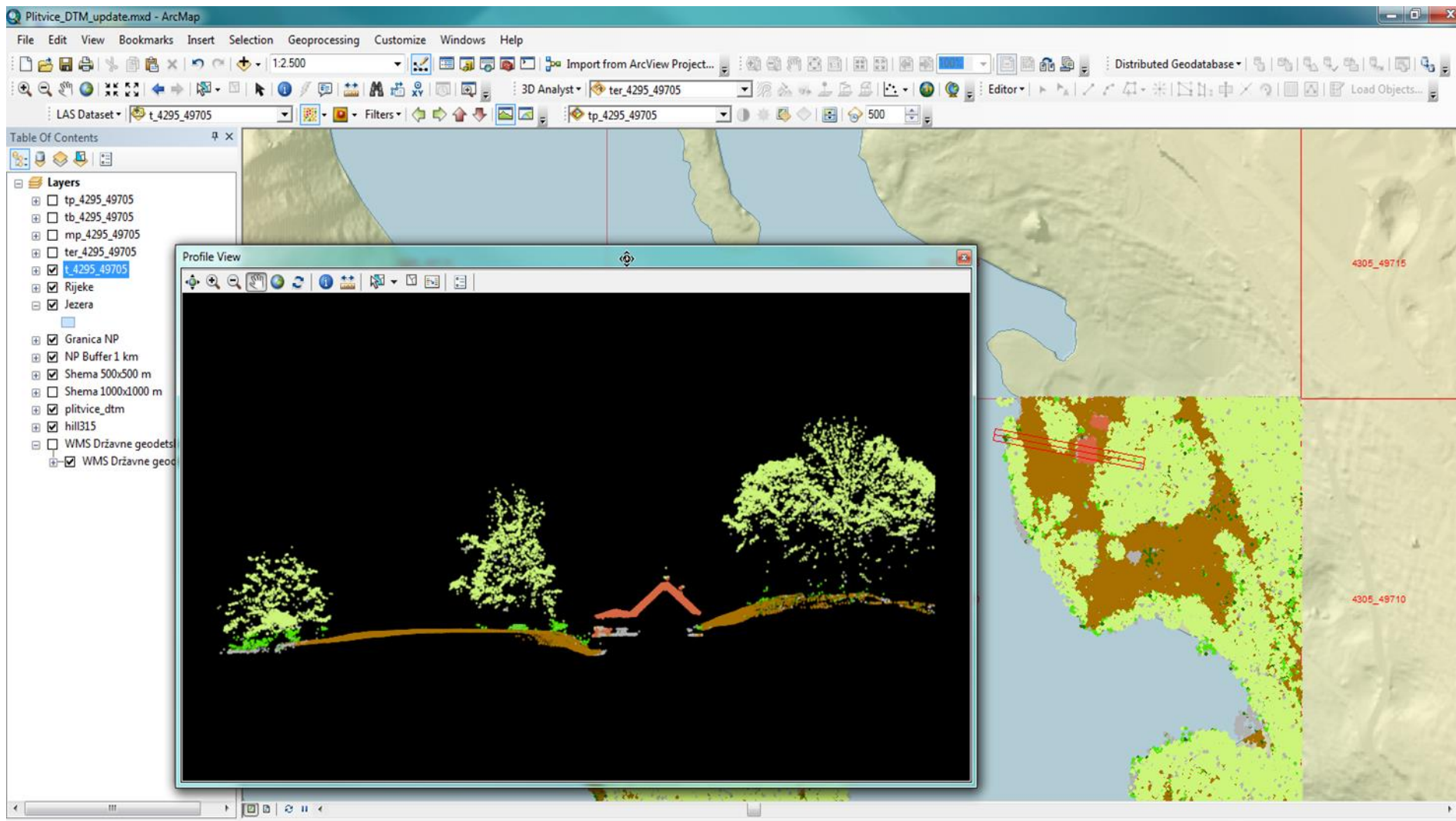
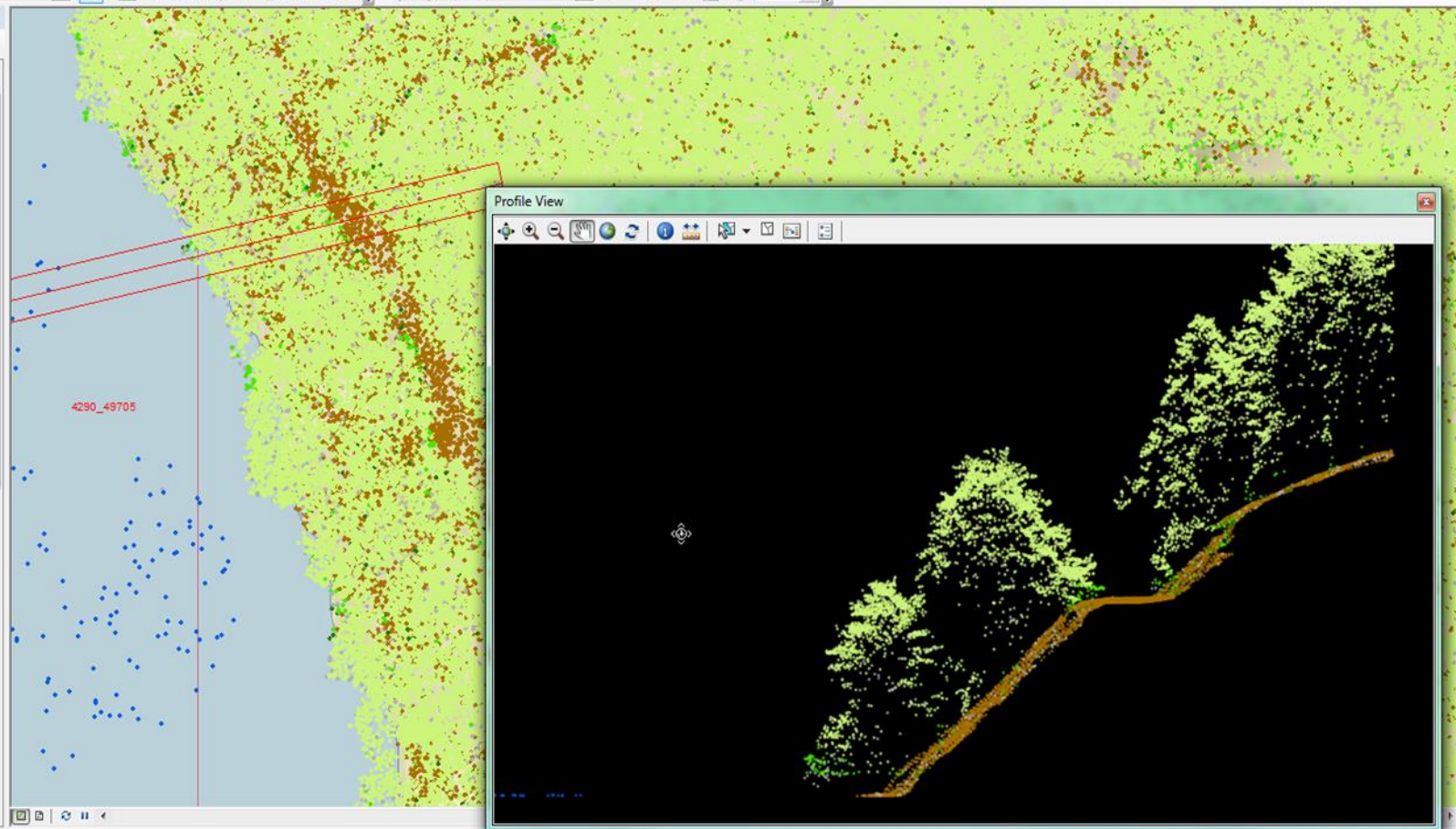


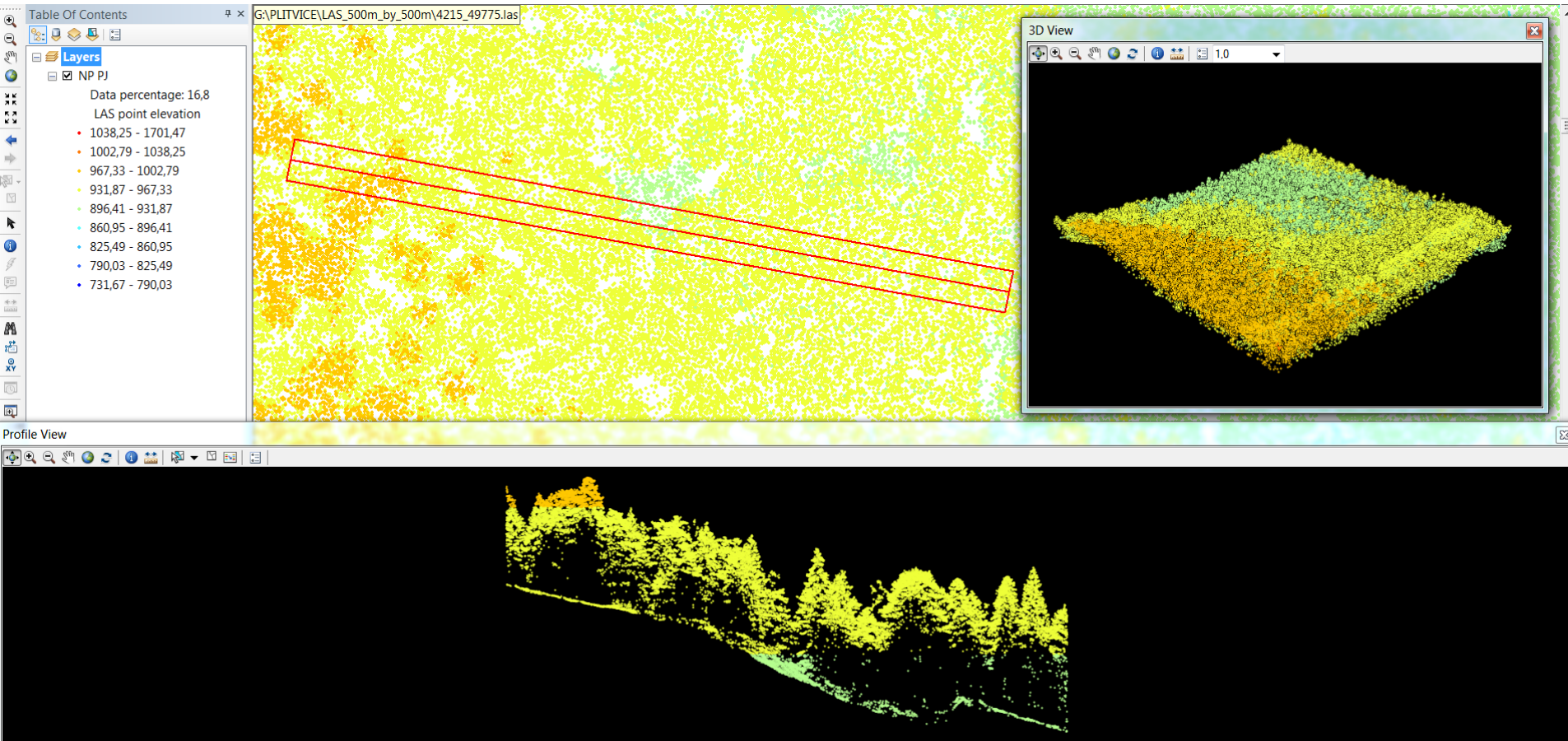
Table of Contents

- tp\_4295\_49705
- tb\_4295\_49705
- mp\_4295\_49705
- ter\_4295\_49705
- t\_4295\_49705
  - Data percentage: 14,3
  - Classification
    - 0 Never Classified
    - 1 Unassigned
    - 2 Ground
    - 3 Low Vegetation
    - 4 Medium Vegetation
    - 5 High Vegetation
    - 6 Building
    - 7 Noise
    - 8 Model Key
    - 9 Water
    - 10 Reserved
    - 11 Reserved
    - 12 Overlap
    - 13 Reserved
    - 14 Reserved
    - 15 Reserved
    - 16 Reserved
    - 17 Reserved
    - 18 Reserved
    - 19 Reserved
    - 20 Reserved
    - 21 Reserved
    - 22 Reserved
    - 23 Reserved
    - 24 Reserved
    - 25 Reserved
    - 26 Reserved
    - 27 Reserved
    - 28 Reserved

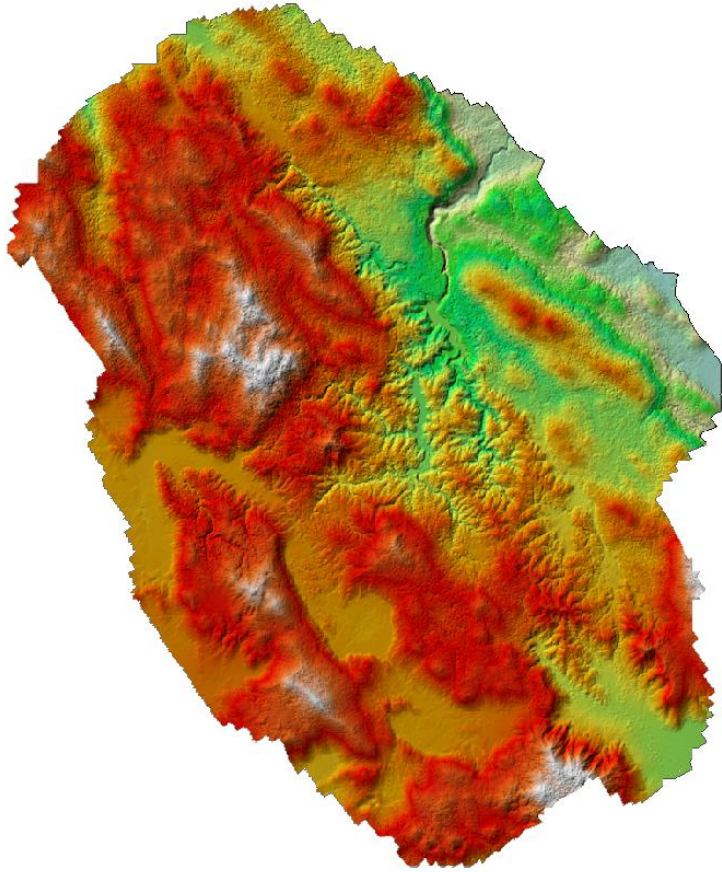


# Example - LiDAR

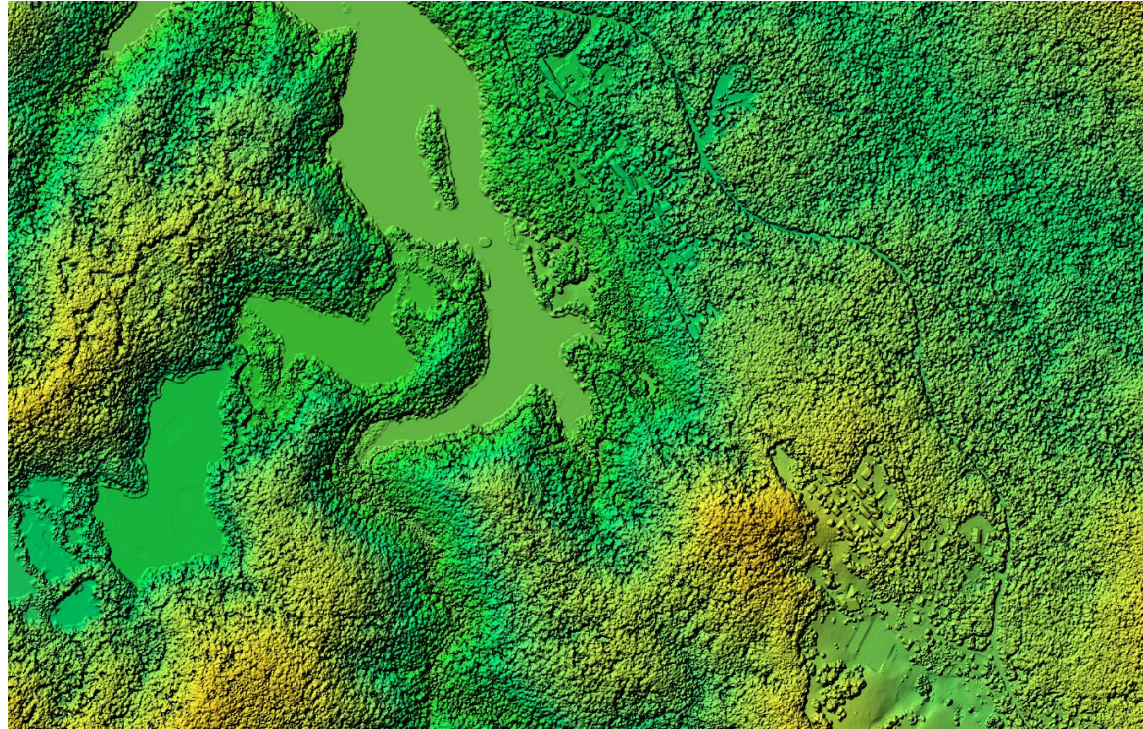
NP Plitvička jezera – LAS, 10 pt/m<sup>2</sup>



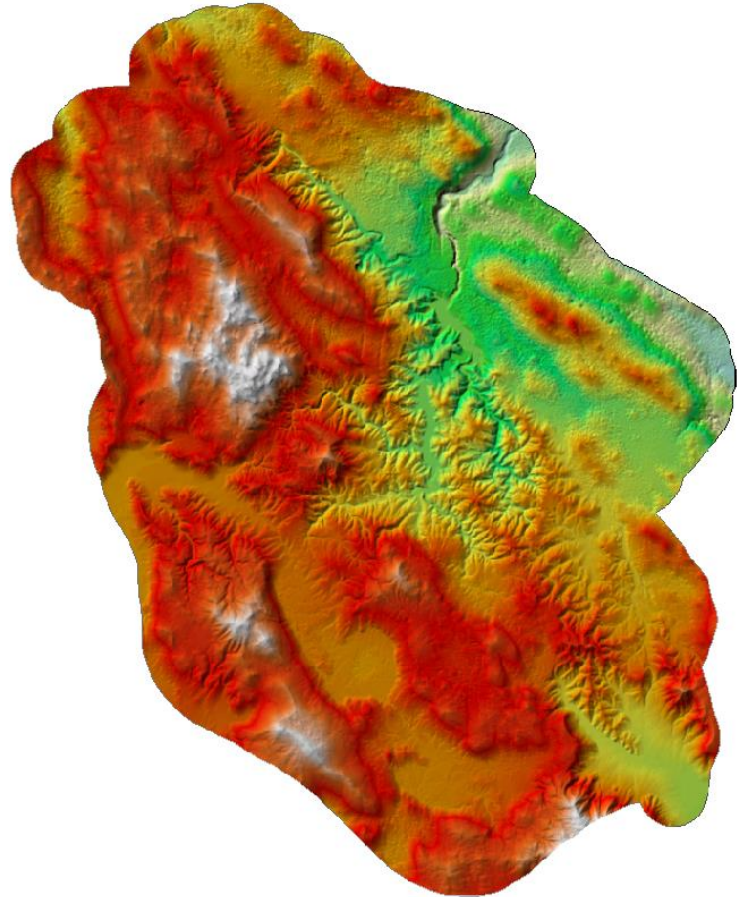
# Example - LiDAR



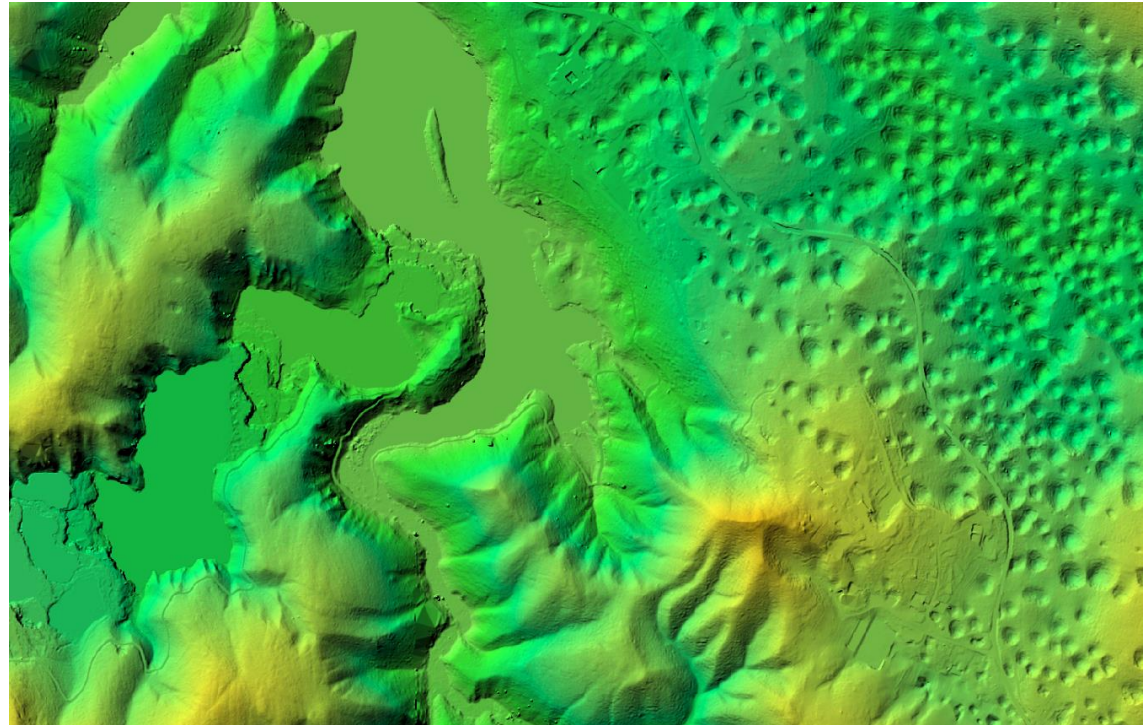
NP Plitvička jezera – DSM 0,5m



# Example - LiDAR



NP Plitvička jezera – DTM 0,5m





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**Monitor in real time**

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**Orthophoto mosaic**



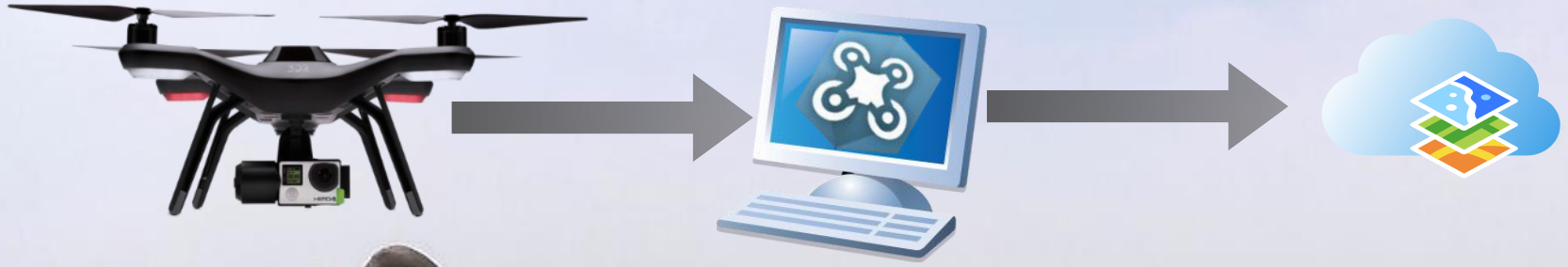
**3D data**



**Fast inspection**



# Data processing



**Software solution for direct data integration.**



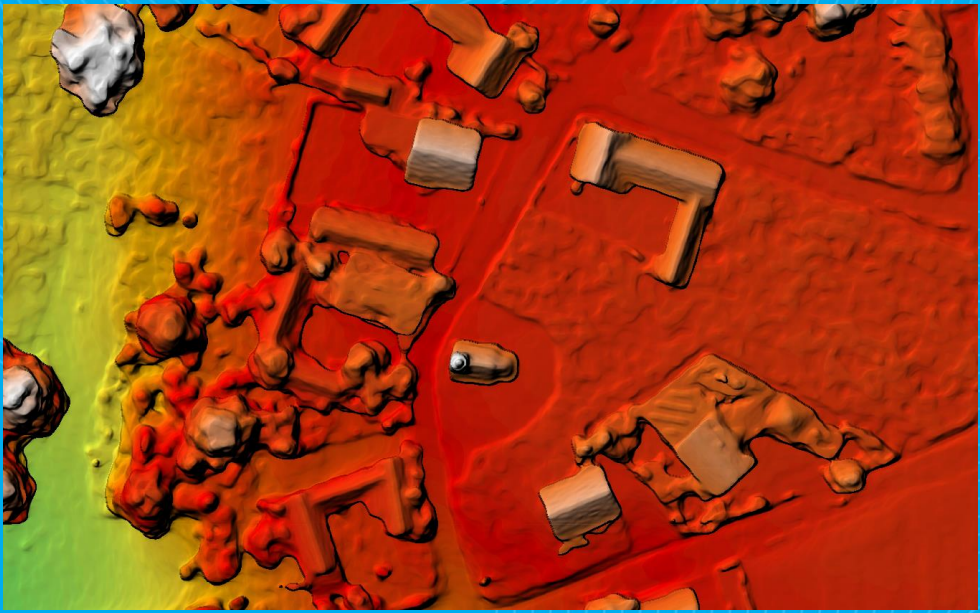


**Digital orthophoto  
mosaic**



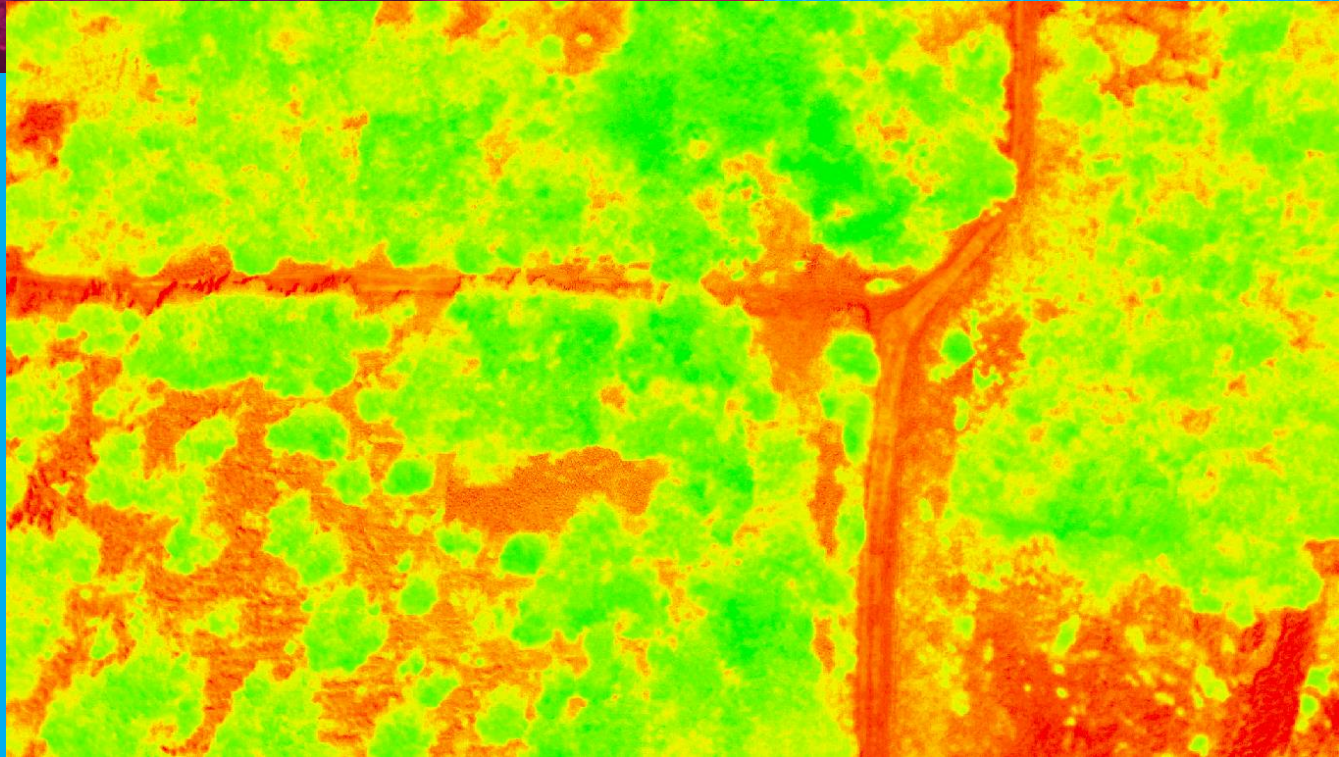


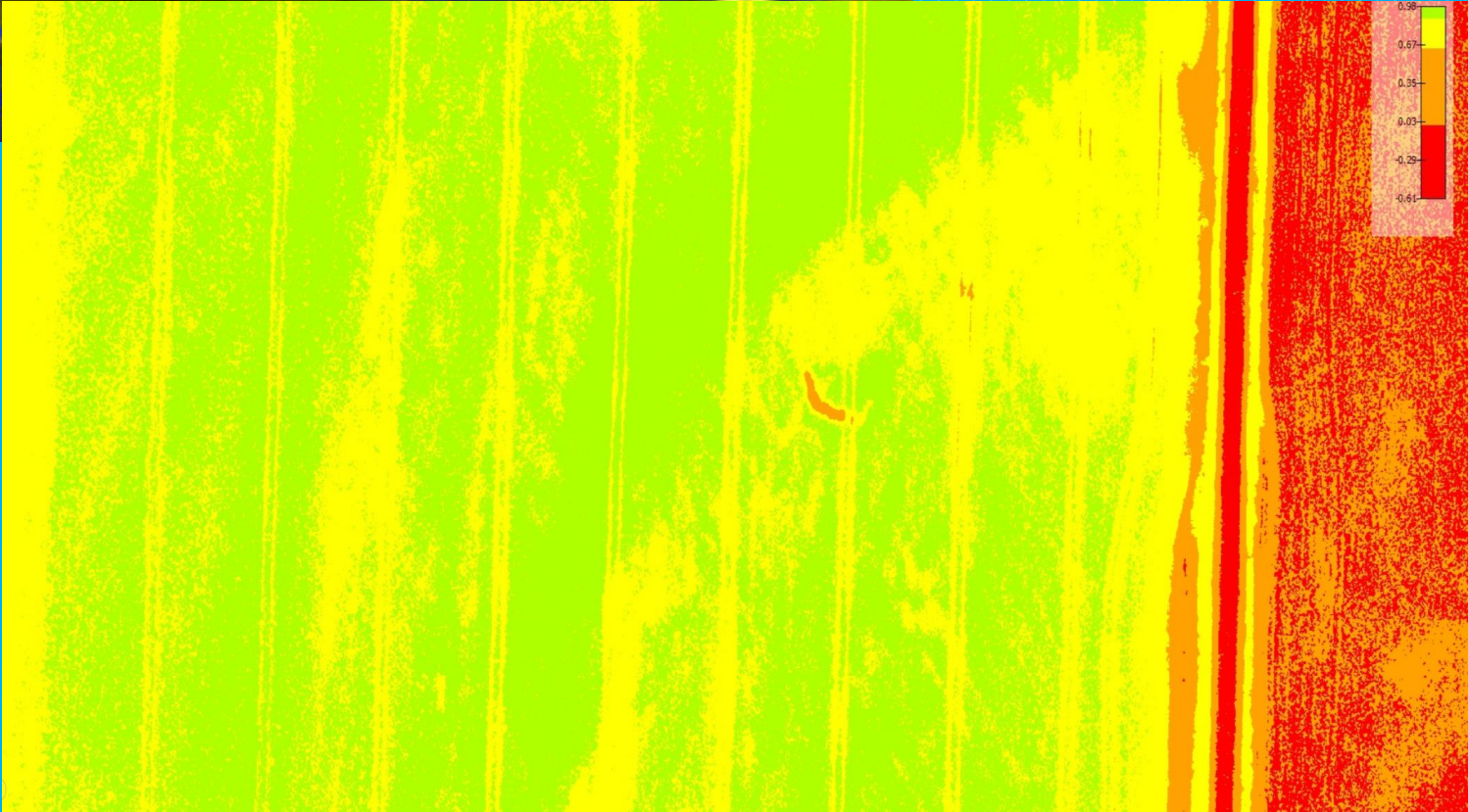
**3D data**





**NDVI**





**NDVI**

# Collector for ArcGIS

- Field collection of **points, lines and polygons**  
**točkaka, linija i poligonalnih** podataka
- Fast fiels inspection and data analysis
- Support for **pictures**
- **Online** and **offline** mode





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# Benefits to circular economy

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# Some of detected benefits...

Strong support in monitoring processes

Fact based decision making

Resources management in real time

Crisis management



**Thank you!**

**Ivan Lukić**  
**GDi GISDATA Zagreb**