

# Info-clouds and their potential in disaster risk reduction

May 2011

Ruedi Wagner & Tauno Saks

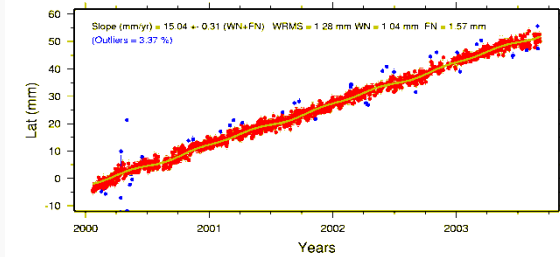
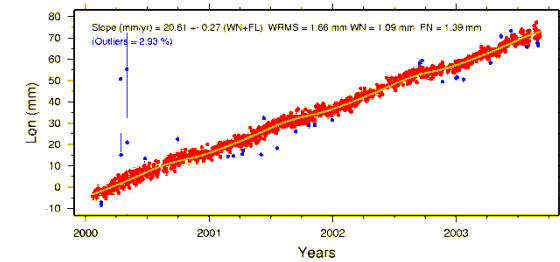
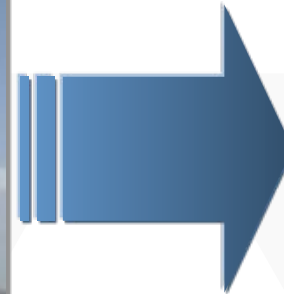
Hexagon Geosystems, Geospatial Solutions Division

# Hexagon Geosystems – Geospatial Solutions

*Better  
geospatial  
solutions that  
help to  
understand, plan  
and implement  
changes and  
impact*

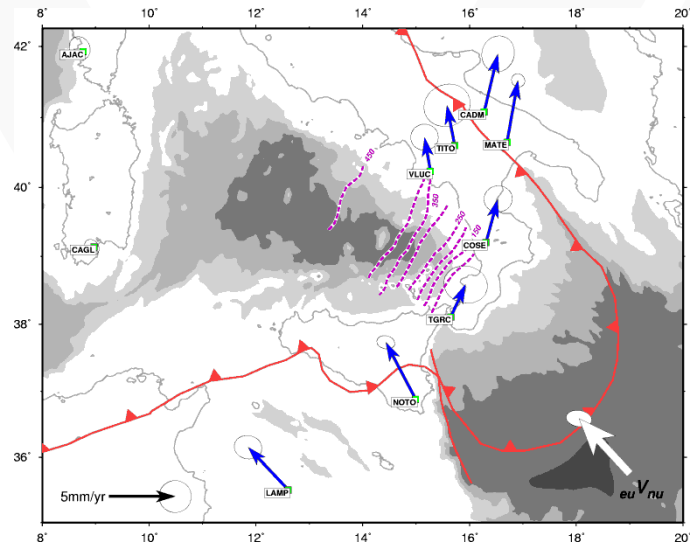


# Monitoring – Regional Reference and Monitoring Network

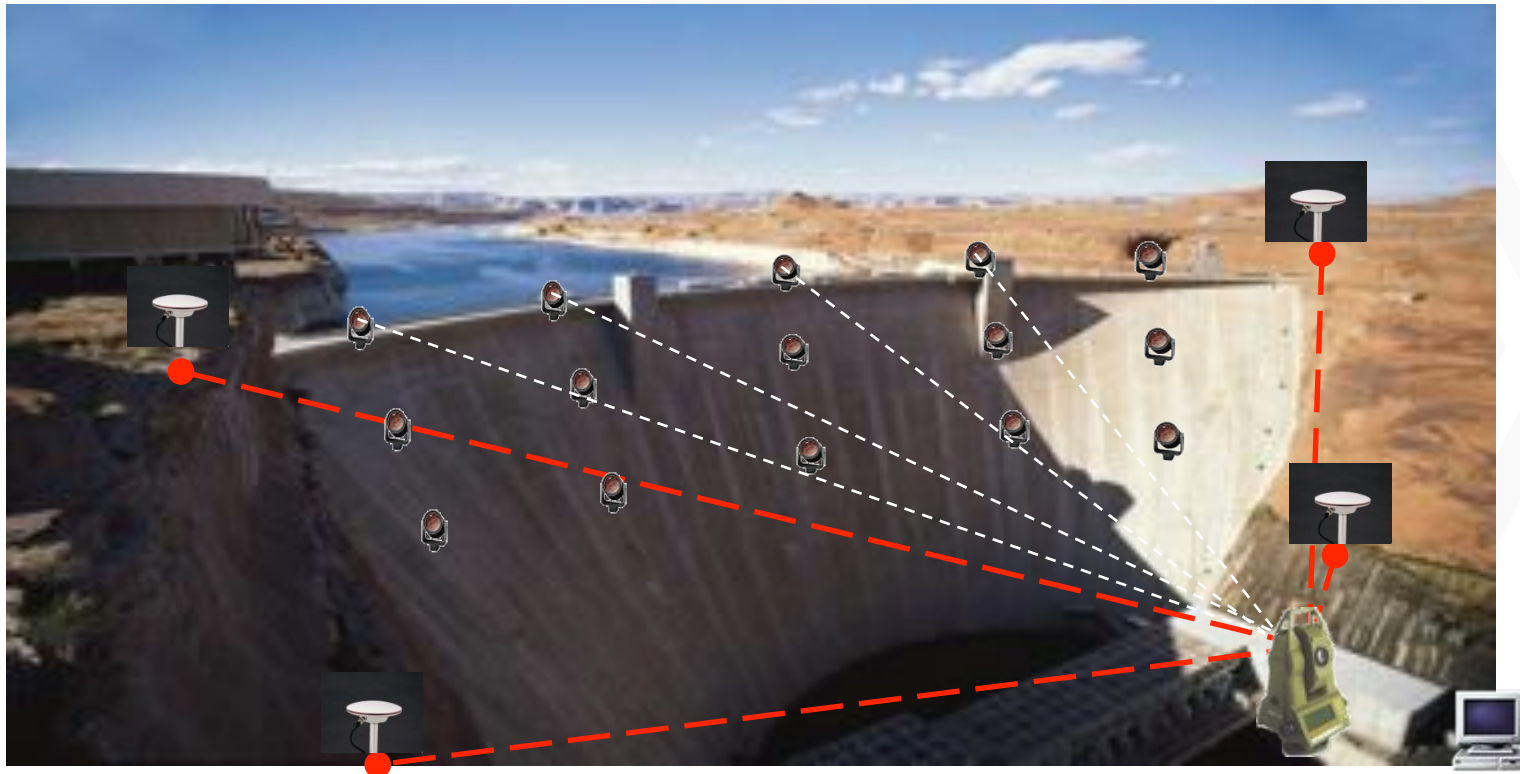


Measures of Position with GPS technology

Velocity of plates interior



# Monitoring - Facilities

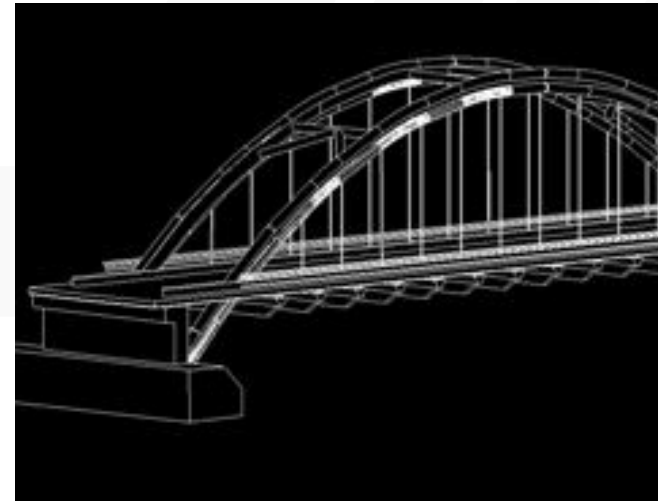
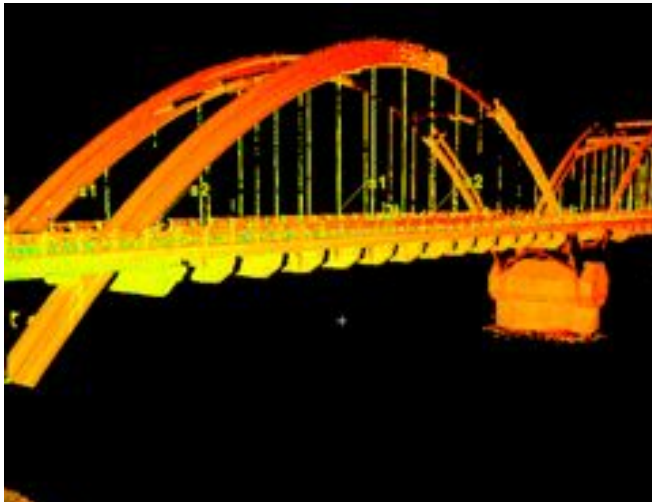
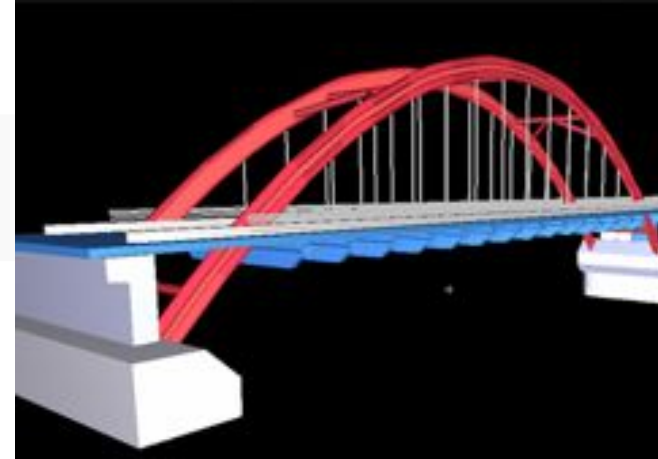


Monitoring i.e. modelling and analysis of natural phenomena (e.g. earthquakes, land slips, crustal movement) and man-made critical structures (e.g. bridges, buildings, tunnels, dams).



# Post Damage Assessment

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# Airborne Post Damage Assessment Toolbox





# First Response Post Damage Assessment - Regional



# First Response Post Damage Assessment - Regional





# First Response Post Damage Assessment - Regional



# First Response Post Damage Assessment - Local





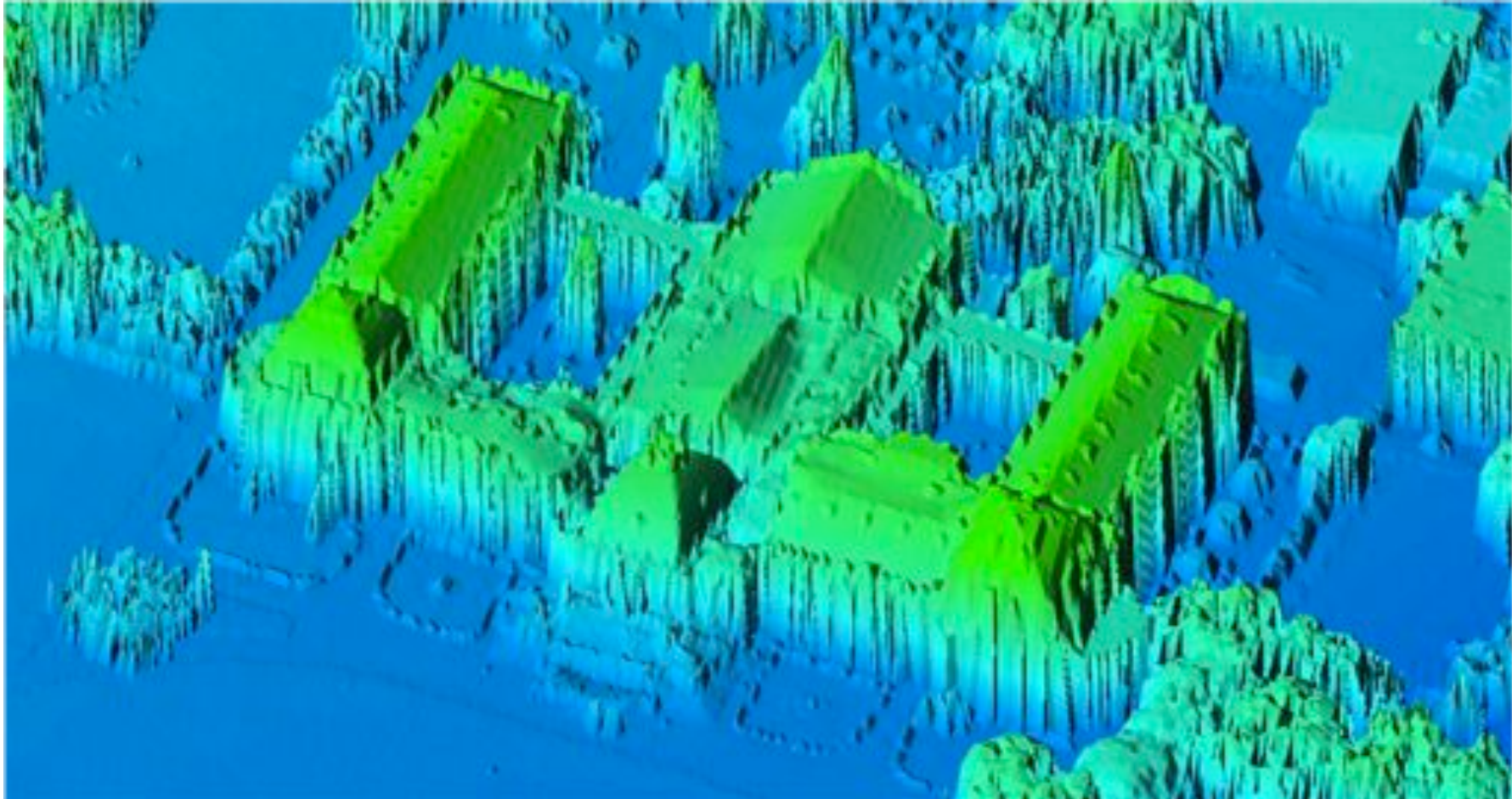
# First Response Post Damage Assessment - Local





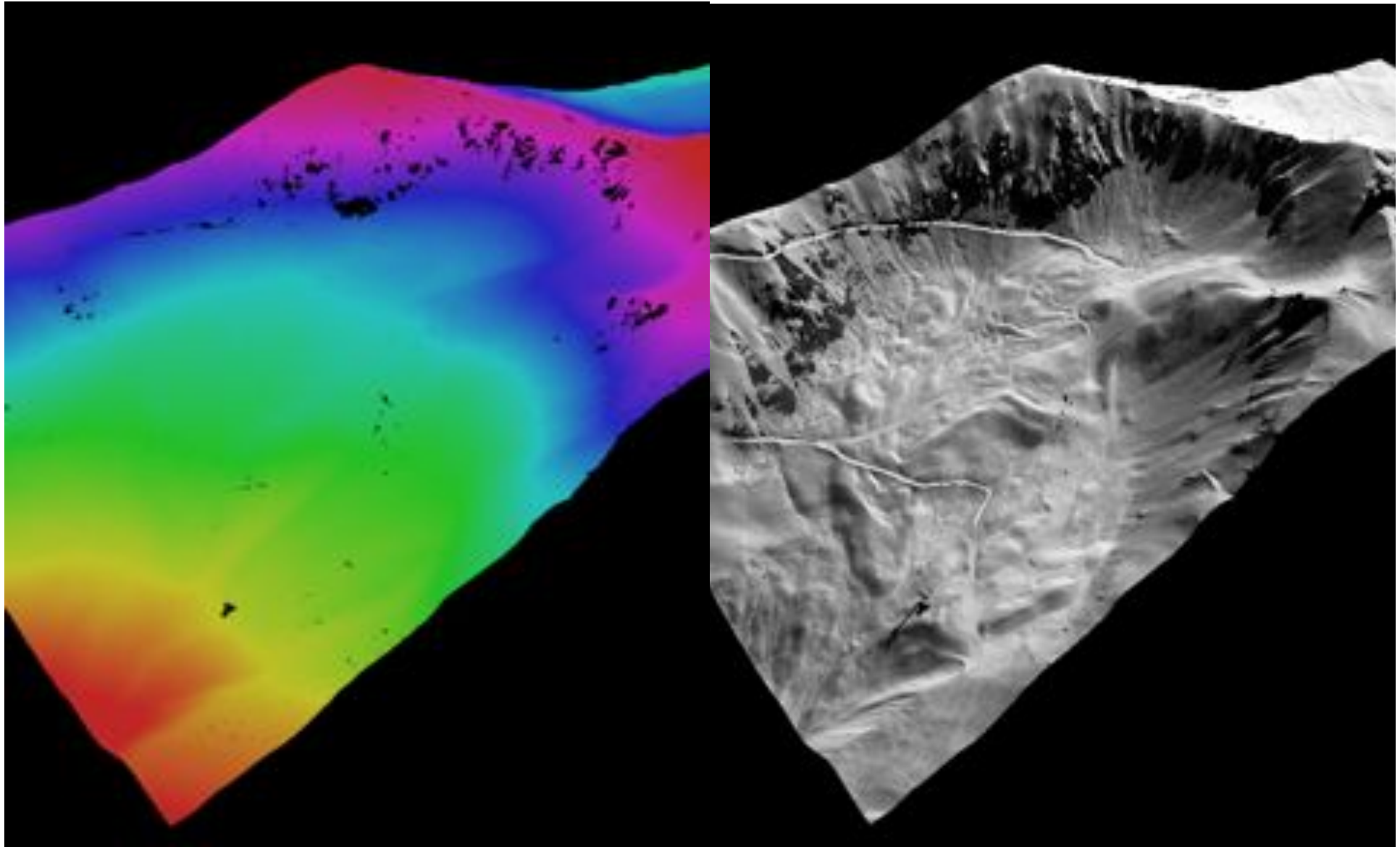
# Haiti Palace after Earthquake 2010 - LiDAR

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Courtesy RIT WASP and Kucera Intl

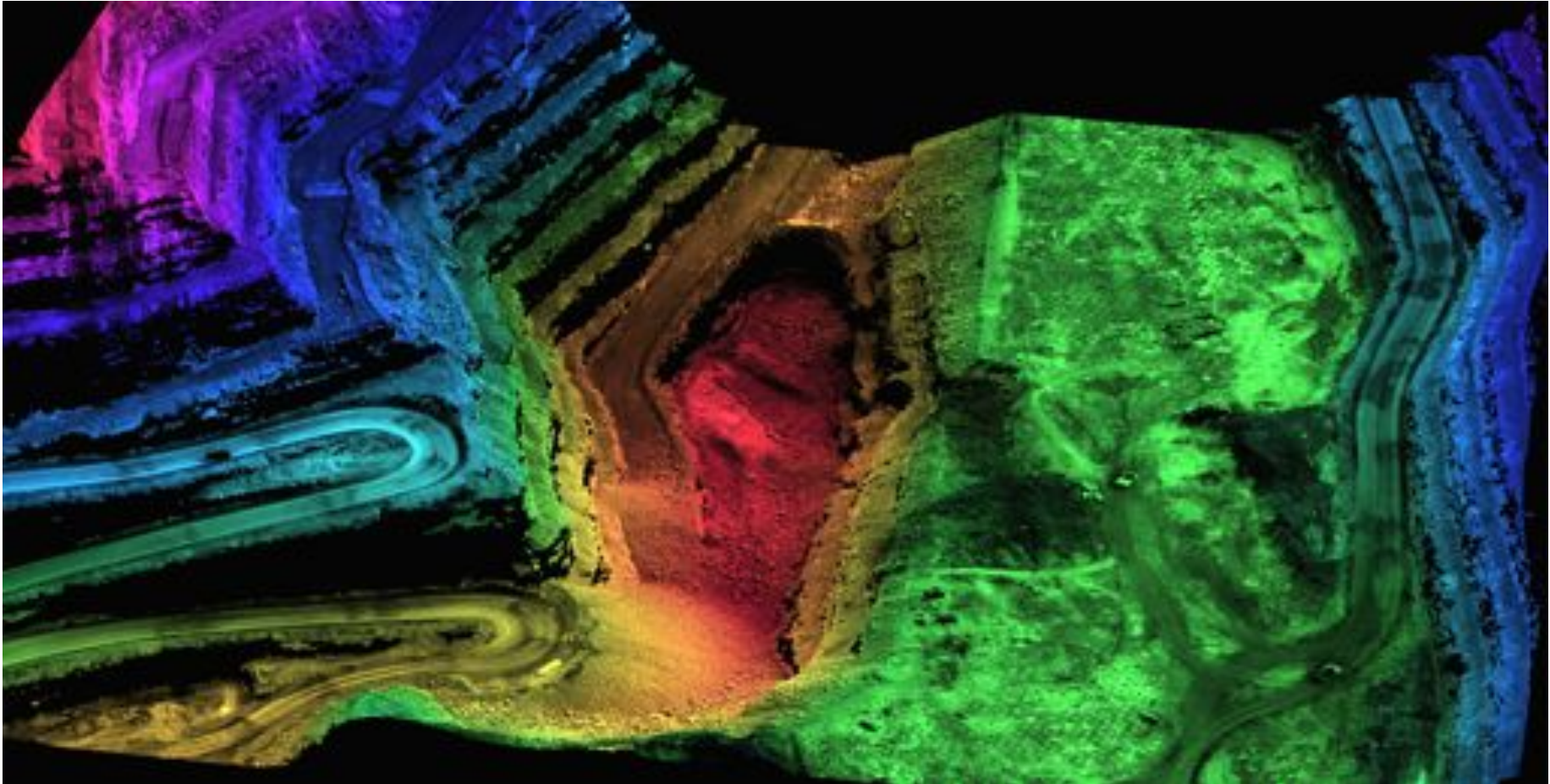
# New: DSM's from Pixel Matching based on Imagery





# Leica XPro DSM – High Accuracy

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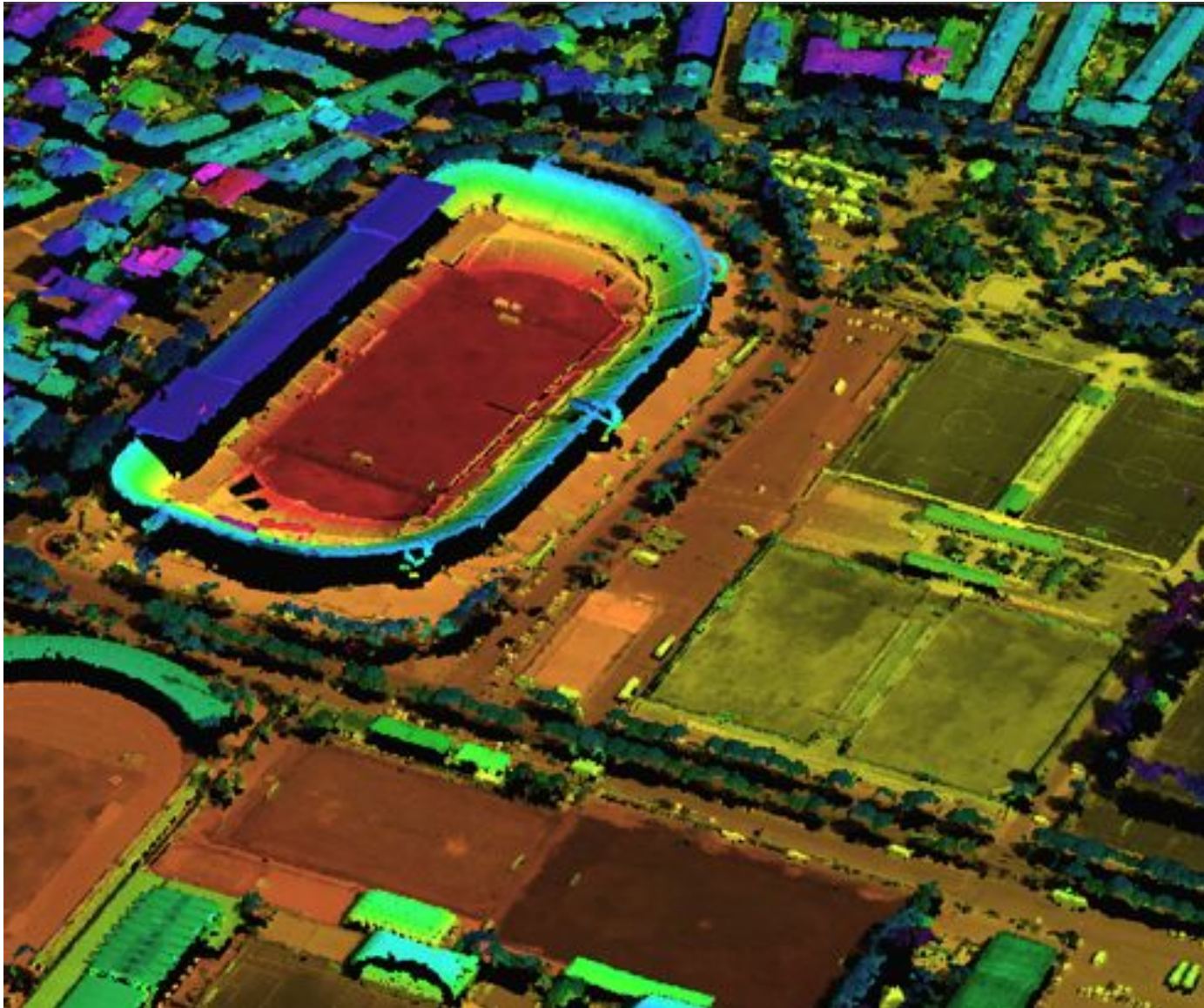


Data courtesy of Fugro Spatial Solutions, Australia



# Leica XPro DSM – 3D City Modelling

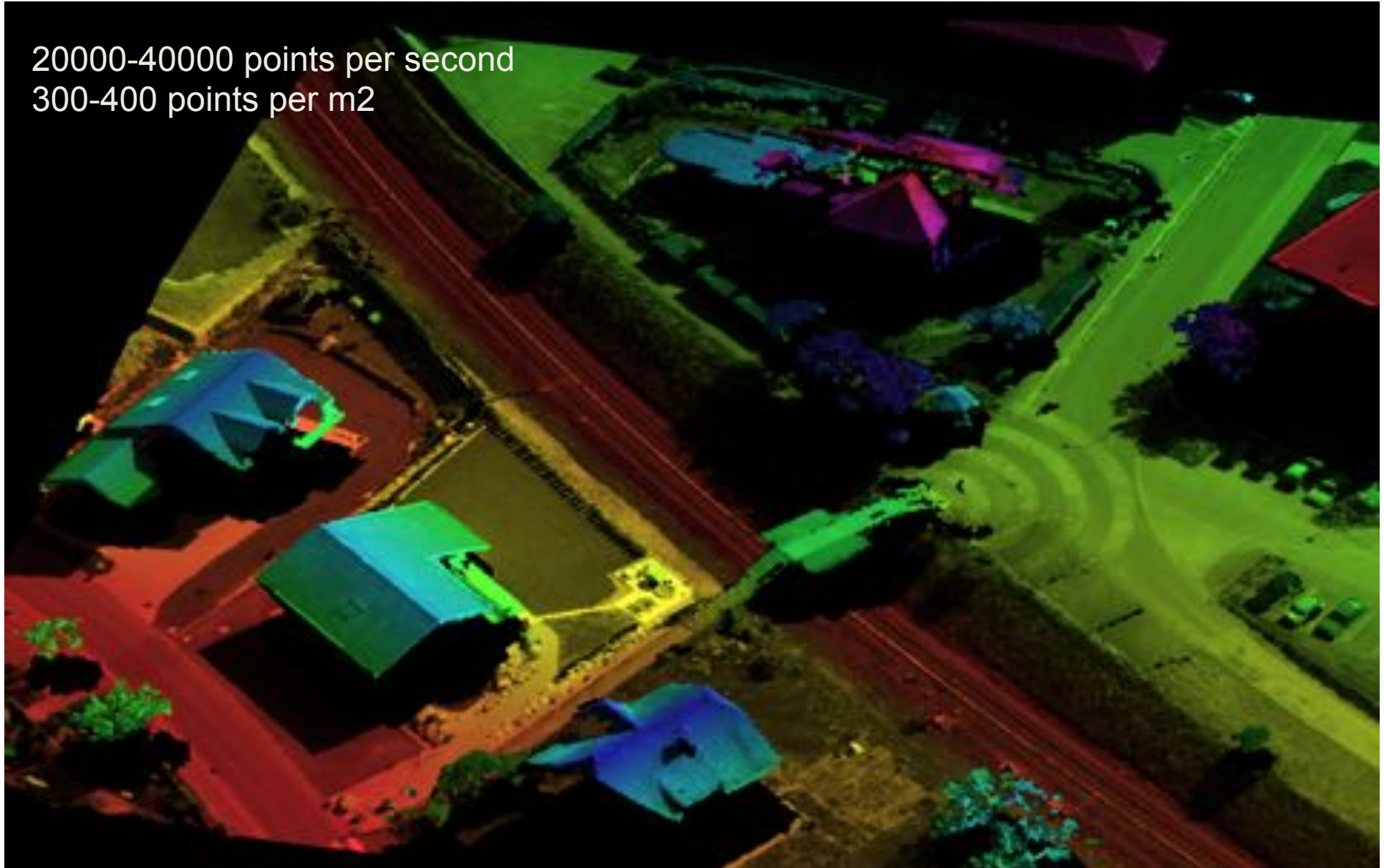
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Data courtesy of Blom CGR S.p.A, Italy

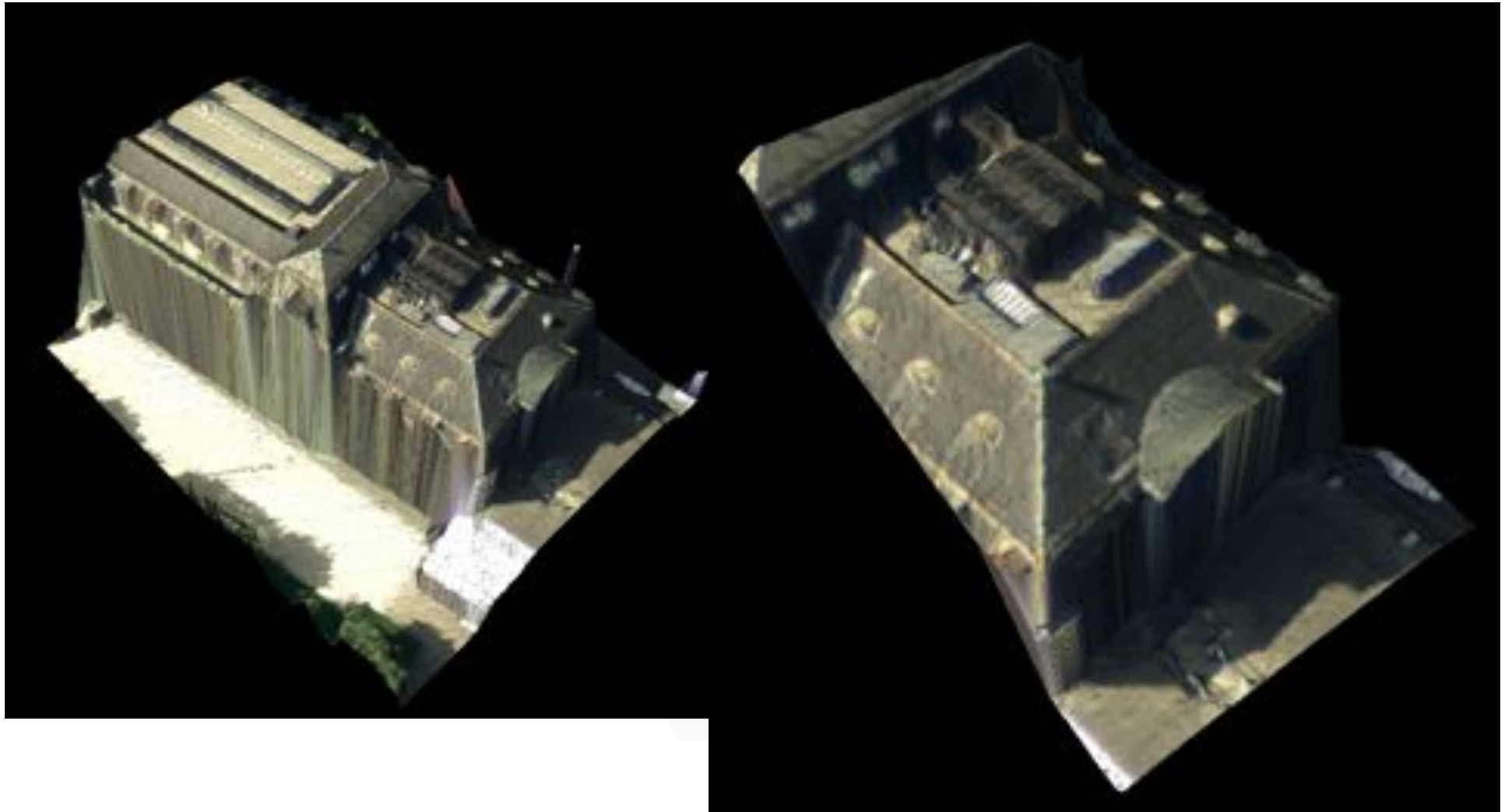
# Urban DSM Extraction from Airborne Imagery

20000-40000 points per second  
300-400 points per m<sup>2</sup>





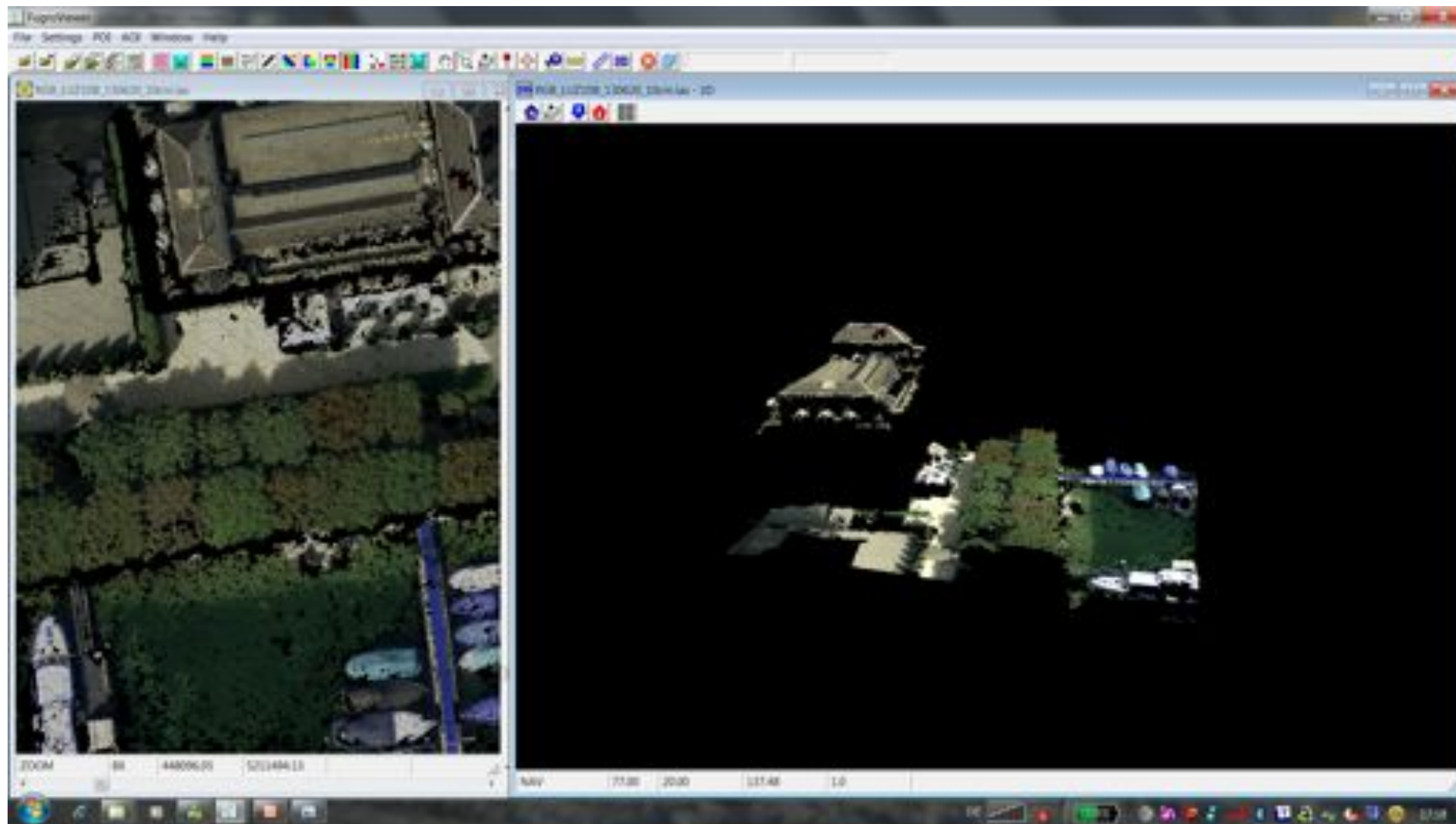
# Leica XPro DSM – Accurate Building Reconstruction





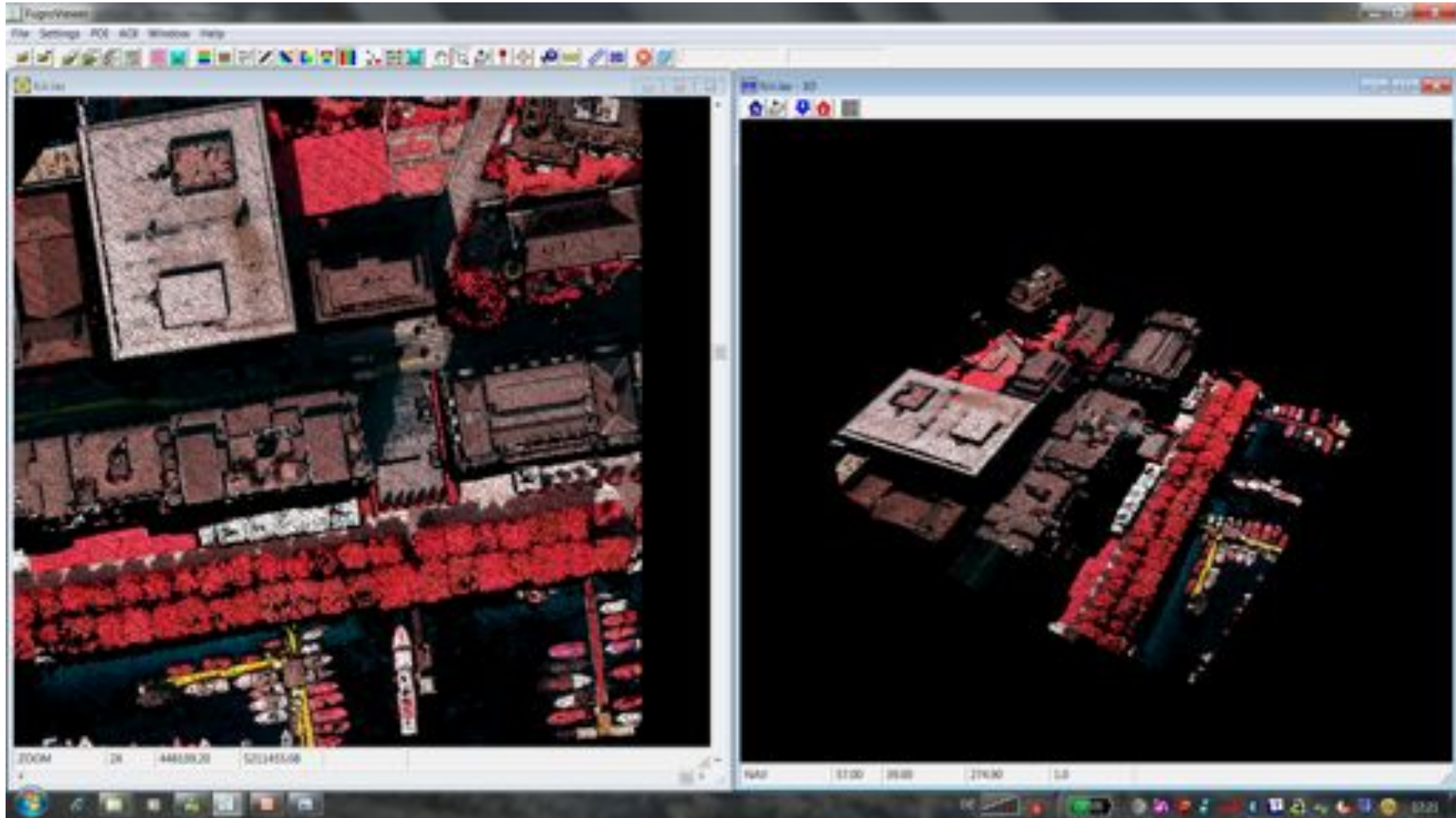
# From Point Cloud to Info Cloud

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# From Point Cloud to Info Cloud

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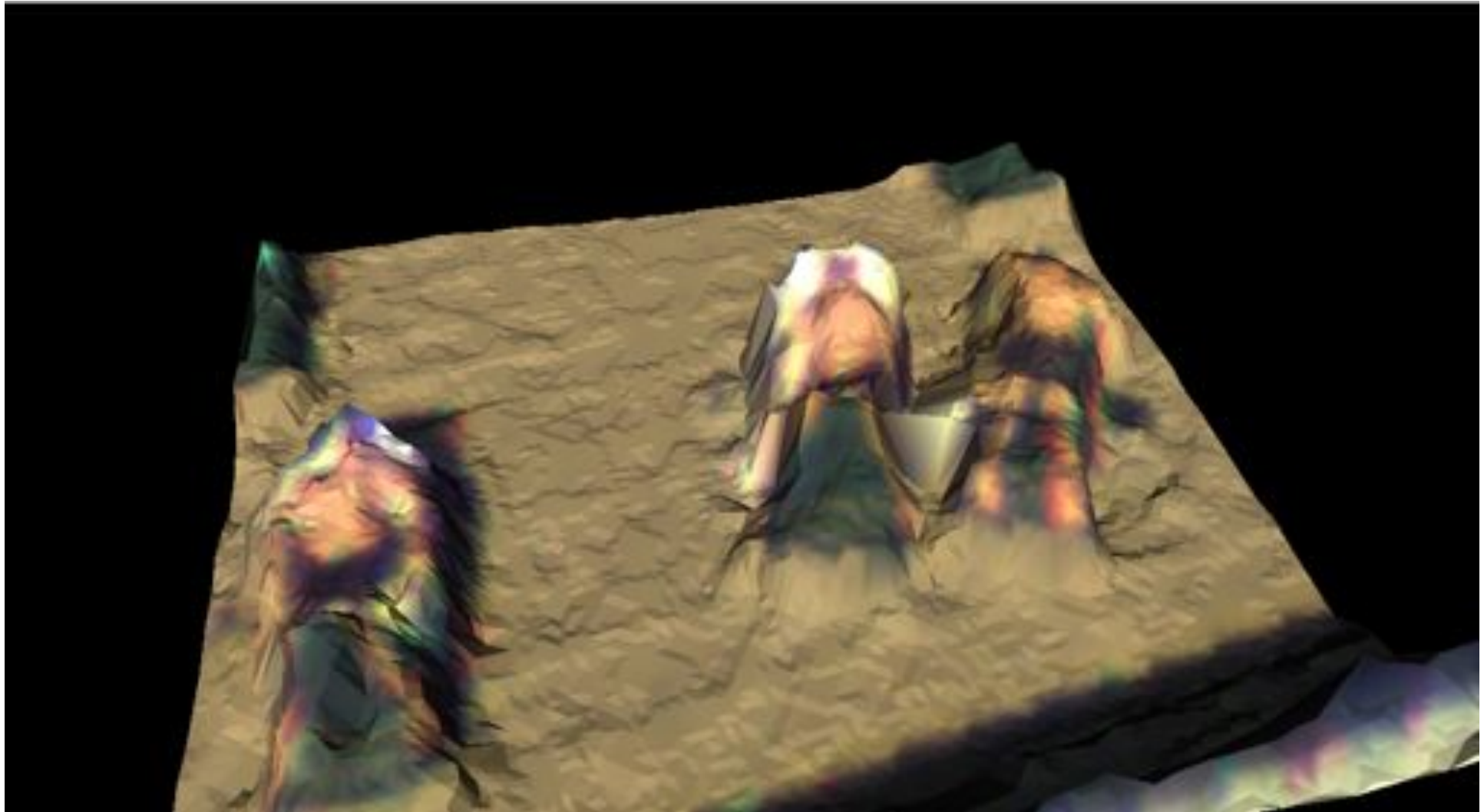
# Leica XPro DSM – Modelling

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# Leica XPro DSM – Modelling – Tinned Info-cloud



# Leica XPro DSM – Potential for Reconstruction

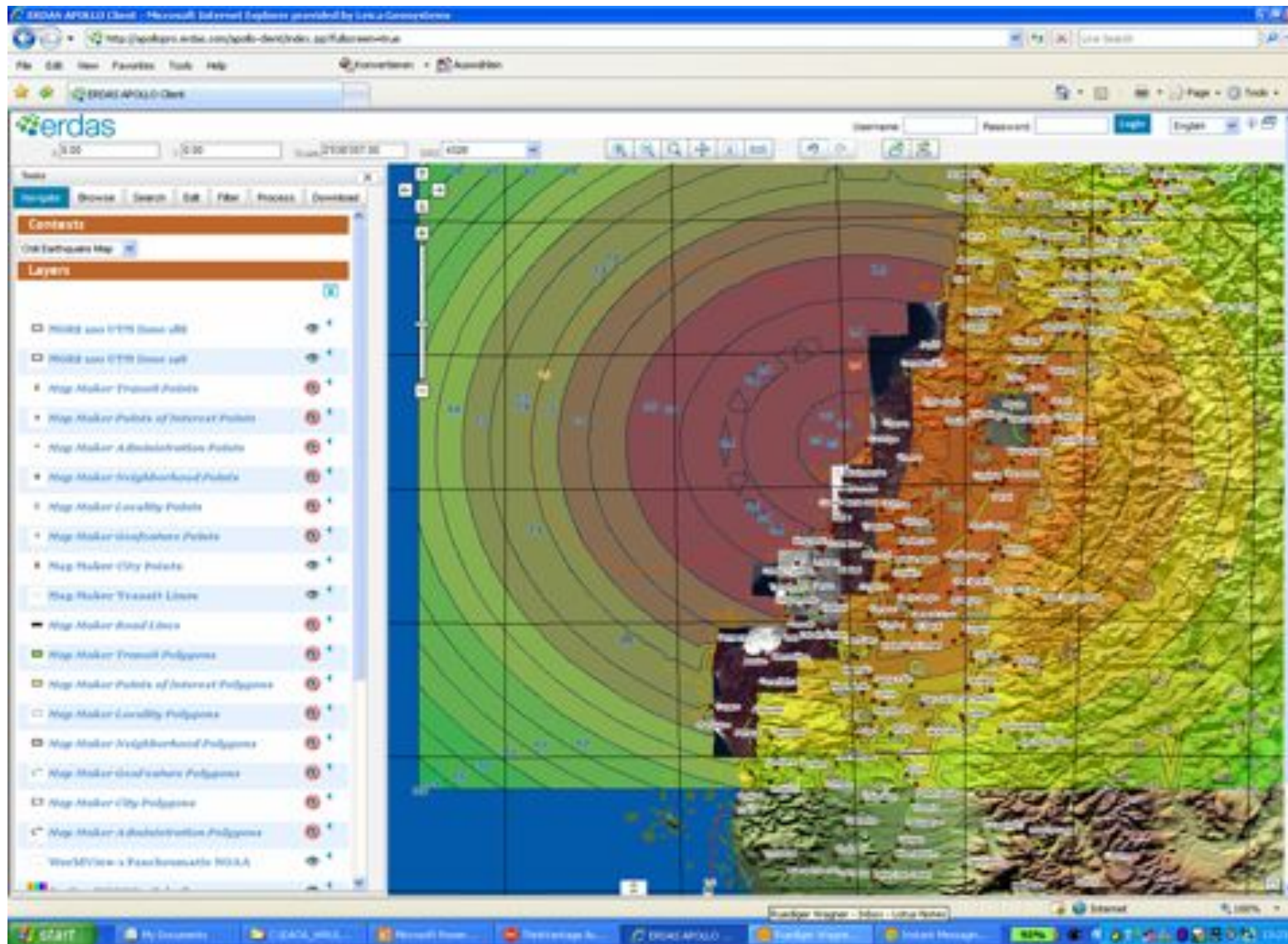
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Courtesy RIT WASP and Kucera Intl



# Distributing Imagery

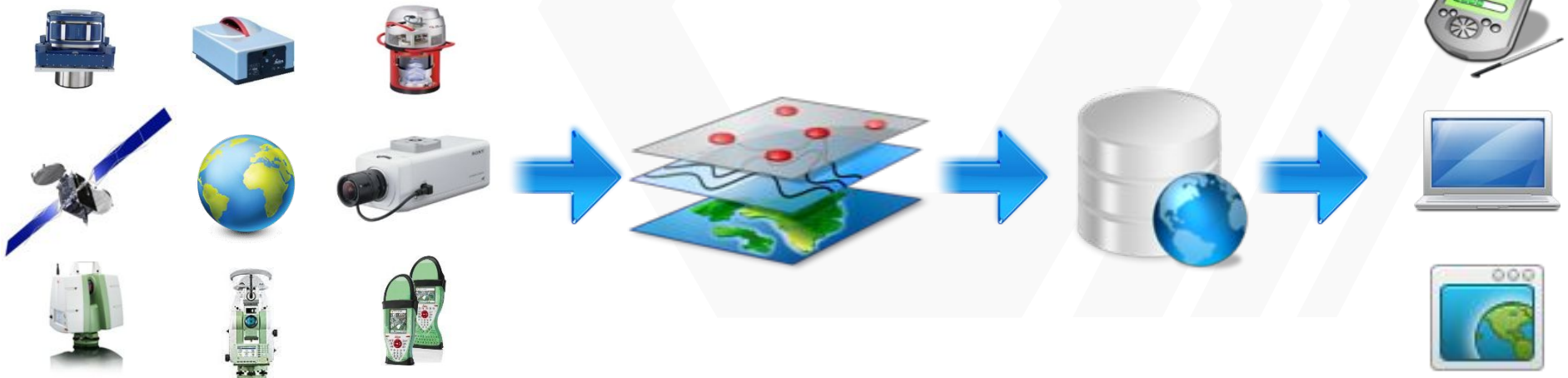




# Dynamic GIS: Measuring and Understanding Our Changing Earth



## Geospatial Information Value Chain



Capture

Process

Share

Deliver



Titel

Autor

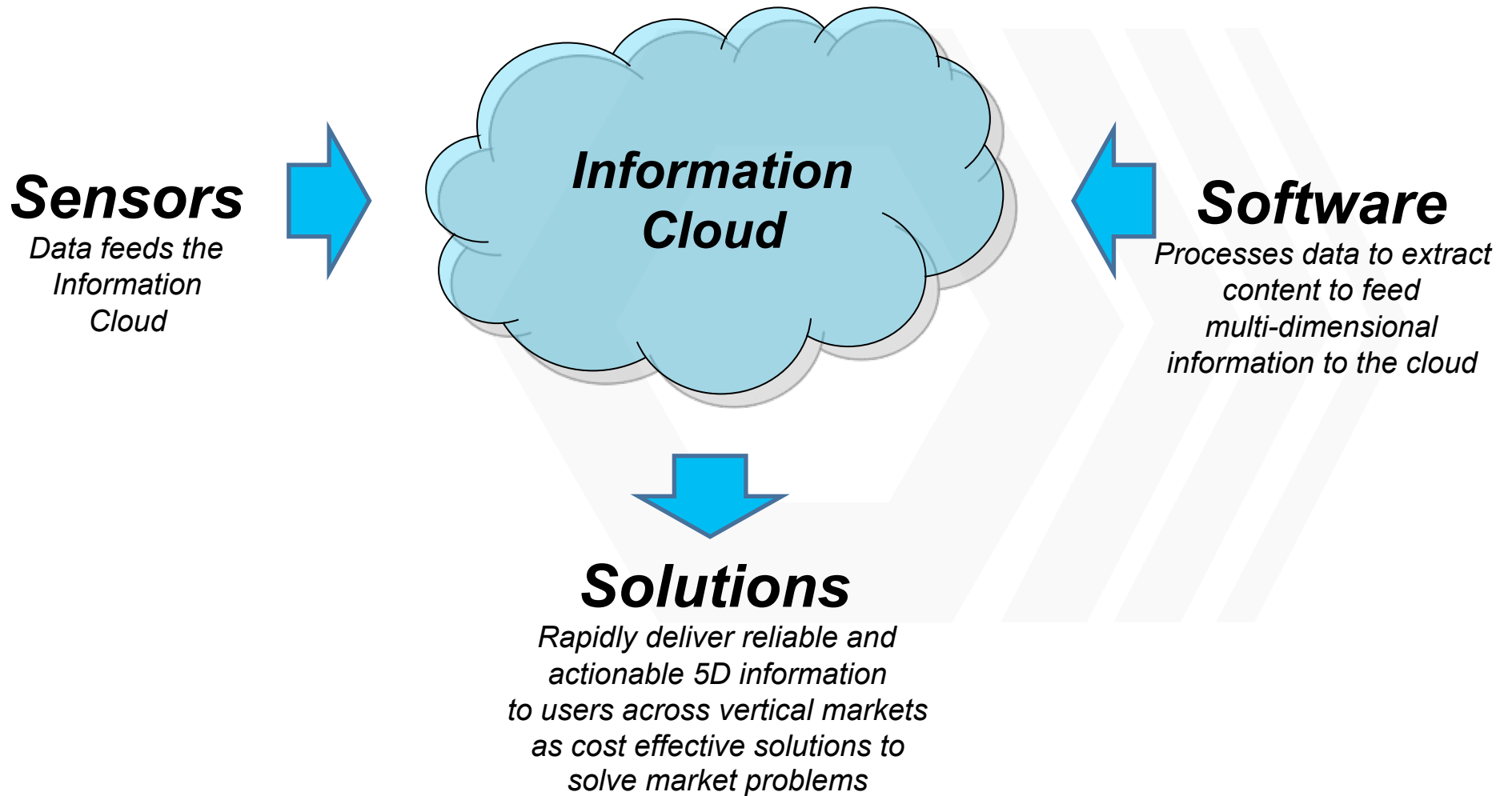
Datum



# Managing the Info Cloud

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## Dynamic GIS





**HEXAGON 2011**  
Building A Smarter World

**THANK YOU!**

