

# SIntegraM: A Transformative Journey

Prof Saviour Formosa (SIntegraM Ideator)

Ms Ashley Hili (SIntegraM Project Leader)

**Workshop Contribution of Defence and Dual-Use Activities  
towards Regional Development through the use of the  
European Structural and Investment Funds (ESIF)**

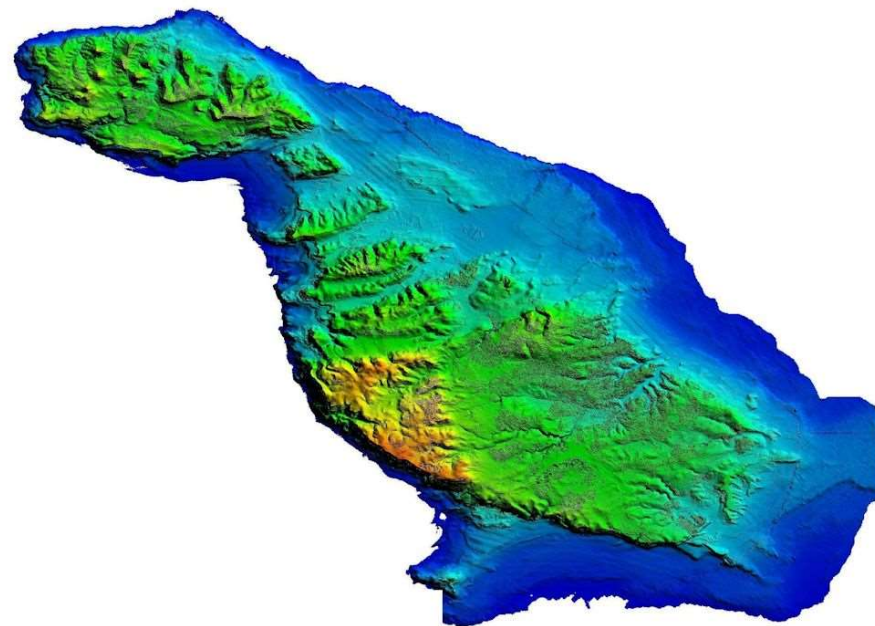
Date: 29/01/2021



Operational Programme I - European Structural and Investment Funds 2014-2020  
"Fostering a competitive and sustainable economy to meet our challenges"  
Project part-financed by the European Regional Development Fund  
Co-financing rate: 80% European Union; 20% National Funds



## ERDF Project



## SintegraM

Spatial Data Integration for the Maltese Islands:  
Developing Integrated National Spatial Information Capacity  
€7 million

---

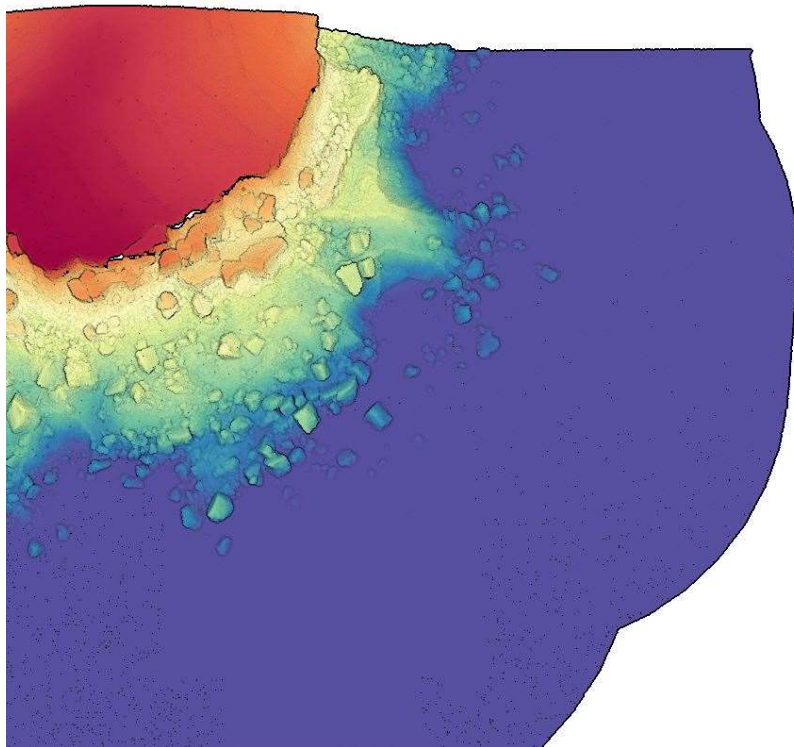


## The Scope

Enhancement of spatial data, systems, infrastructure, exchange and training:

- identification of information gaps in the data cycle
  - identification of data creation
  - creation of new basemap
  - integration of all data in a national system
  - creation of data exchange security protocols
  - building of infrastructure/technologies
  - training of experts
-

# The Outcomes



- (1) **Strategy for National Spatial Data Integration**
- (2) **Basemap**
- (3) **Data acquisition** of imagery, LiDAR, infra-red, etc.
- (4) **Integrated Datasets** and systems in a common formation and projection
- (5) **Acquisition of Systems** (servers, workstations, software)
- (6) **Acquisition of Analytical Tool** for real-time investigations (predictive tools, immersive environments)
- (7) **Acquisition of Equipment** for future preparedness (aerial, terrestrial and marine technologies)
- (8) **Dissemination Tool/s**
- (9) **Stakeholder group**
- (10) **Training regime**



## Contributions – Regional Development

Created a collaborative framework for all thematic entities that include:

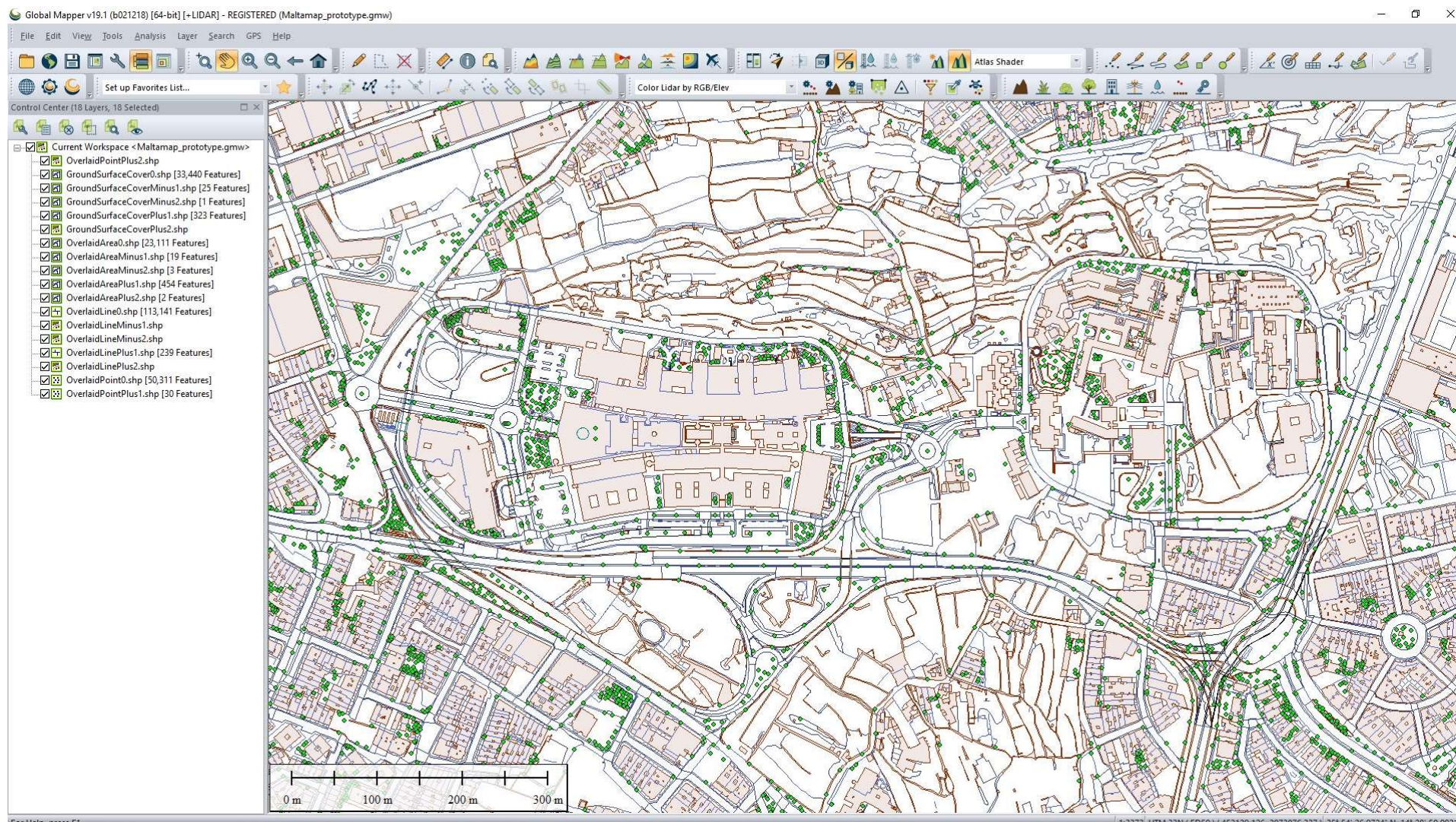
- Brought together local and regional administrations through spatial data as used for decision-making processes
  - Enhanced development planning, transport and utilities' baseline data thus informing spatial plan formulation
  - Removed redundancies and duplication costs
  - Enabled entities such as Land Registry and the cadastre
  - Enabled social entities such as Housing Authority and NGOs
  - Helped enforcement agencies to enact regulations
  - Gave the public access to information and online tools
  - Enabled the data-information-knowledge-action process
-





European  
Commission

# The Outcomes: Basemap







European  
Commission

# The Outcomes: LiDAR

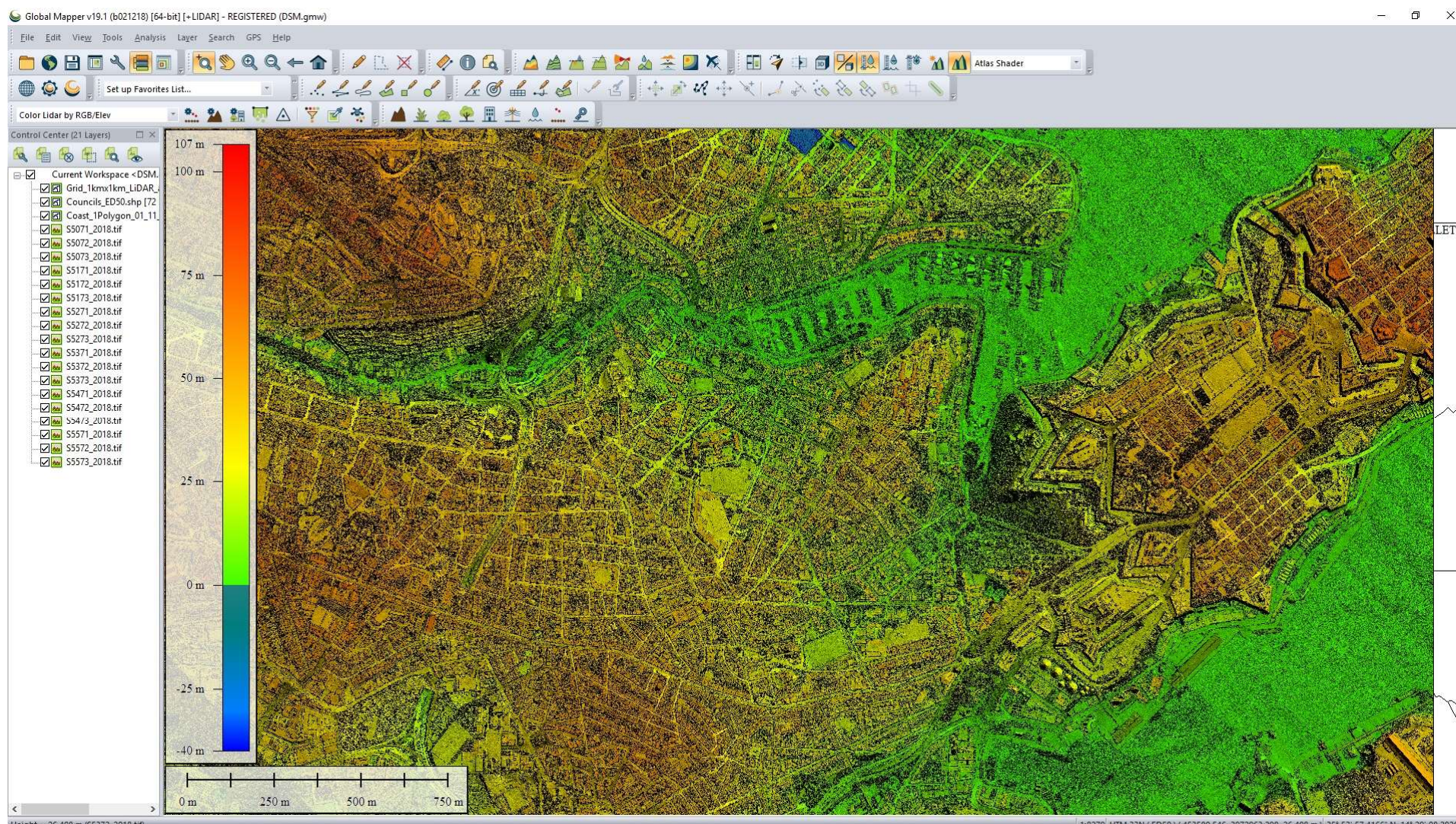






European  
Commission

# The Outcomes: DTM-DSM

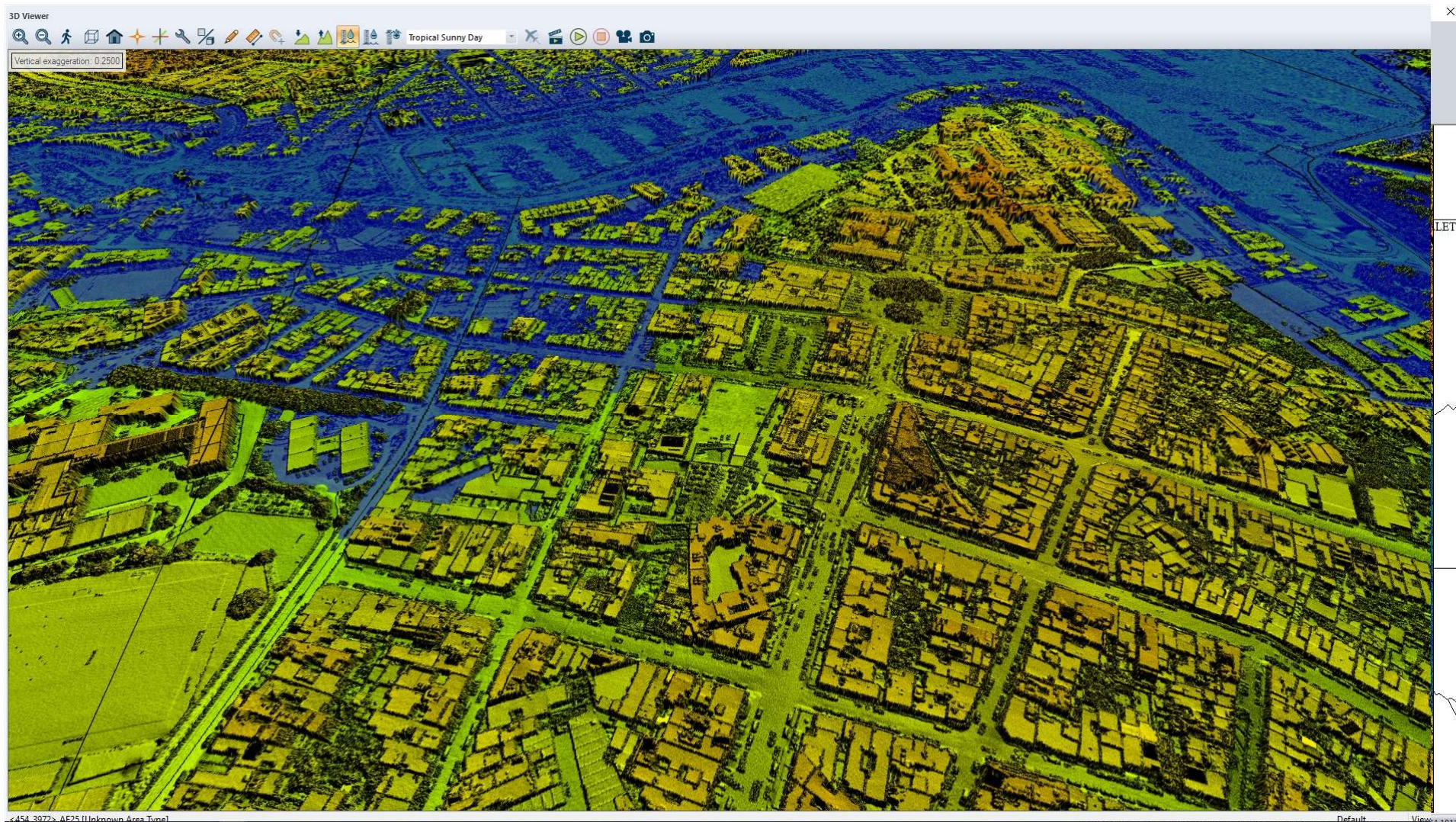






European  
Commission

# Results: SLR – Sea Level Rise







European  
Commission

# Results: Cloudisle.org

C\_455\_39722 x Smokie Concert Bratislava 8: x www.um.edu.mt/projects/cloudi x www.um.edu.mt/projects/cloudi x 18\_Floriana x +

localhost/webpublish/C\_455\_3972.html ☆ ⚙ ⋮

Apps Getting Started CrimeMalta Search results - savio 3D CAD VR Modelling Download - OpenSp Bookmarks Online LIDAR point of UM Dissertation Proposal myLink - Protect your virpi butt - Google St Understanding Coerc Passive Aggressive A >>

Scene

Export:  
JSON DXF

Objects

- Point Clouds
  - C\_455\_3972
- Measurements
- Annotations
- Other
  - Camera

Properties

Point size: 1.00

Point sizing  
ADAPTIVE

Shape  
SQUARE

Opacity: 1.00

Attribute  
Elevation

Elevation  
Elevation range: 25.46 to 91.19

Gradient Scheme:

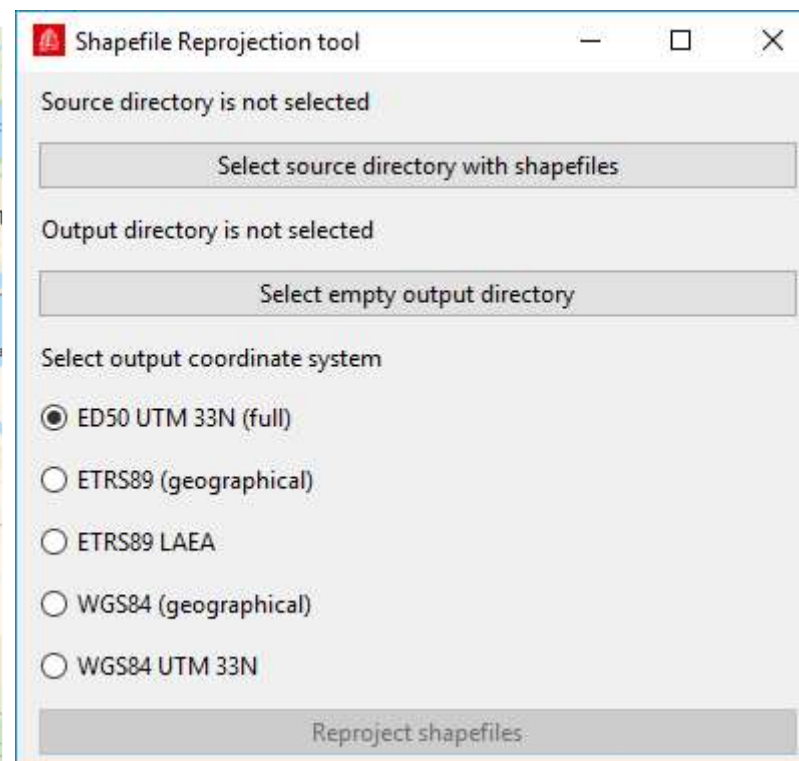
Five small icons showing different color gradient schemes for the point cloud, ranging from blue to red.





European  
Commission

# The Outcomes: Re-projection Tool



National Projection  
UTM WGS Zone 33N  
EPSG: 32633

<https://epsg.io/32633>



European  
Commission

# The Outcomes: Dissemination portal

The screenshot displays the SIntegraM dissemination portal interface. At the top, there is a navigation bar with the SIntegraM logo and menu items: HOME, DATASETS, MAPS, ABOUT, and LOGIN. Below the navigation bar is a search section titled "Query Datasets" with the sub-header "Enter Search Criteria".

The search section is divided into three main areas:

- Search Datasets by Spatial Extent:** A map of Malta showing the islands of Gozo, Comino, and the main island of Malta. The main island is labeled with "Kapsala", "Melbaha", "Mosta", "Sliema", and "Valletta". The map is powered by Esri.
- Search Datasets:** A central search area with three input fields:
  - Search Datasets by name (with a search icon)
  - Search Datasets by Stakeholder (with a dropdown arrow)
  - Search Datasets by Creation Date (with two date pickers for "From" and "To")
- Search Datasets by Type:** A section with three buttons: "All" (selected), "Vector", and "Raster".
- Search Datasets by Category:** A section with seven buttons: "Trending", "Basemaps", "Imagery", "Boundaries", "People", "Infrastructure", and "Environment".

At the bottom of the search section, there are controls for "Exact Match" (a toggle switch), an "Add" button, a "New" button, a "CLEAR" button, and a "SUBMIT" button.

Below the search section is a results section showing a list of datasets. The first six items are visible, each with a thumbnail map of Malta and a title:

- DSM2012\_1M\_ERDF156
- Ortho\_2004
- Ortho\_2018
- DTM2012\_1M\_ERDF156
- Ortho\_2016
- Ortho\_2012

Each item also includes a "Share" button and a "Stop" button.



# The Outcomes: Aerial







European  
Commission

# The Outcomes: Marine





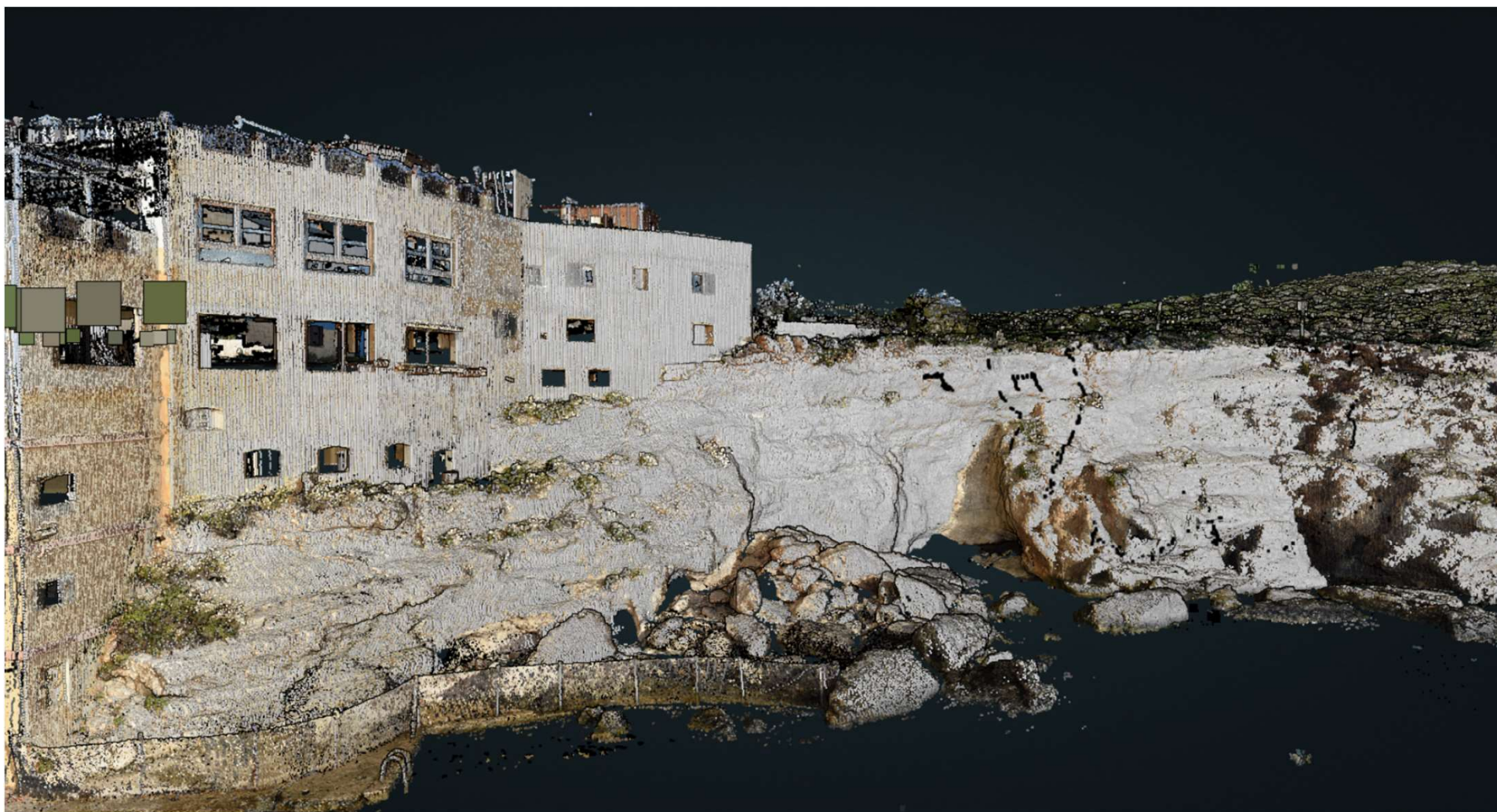


European  
Commission

# The Outcomes: Terrestrial



# Results: Erosion





# Results: Heritage



# The Outcomes: CAVE

Need for Enclosed Spaces technology

DVI

Courts

Heritage

Marine

ERA

Quarries

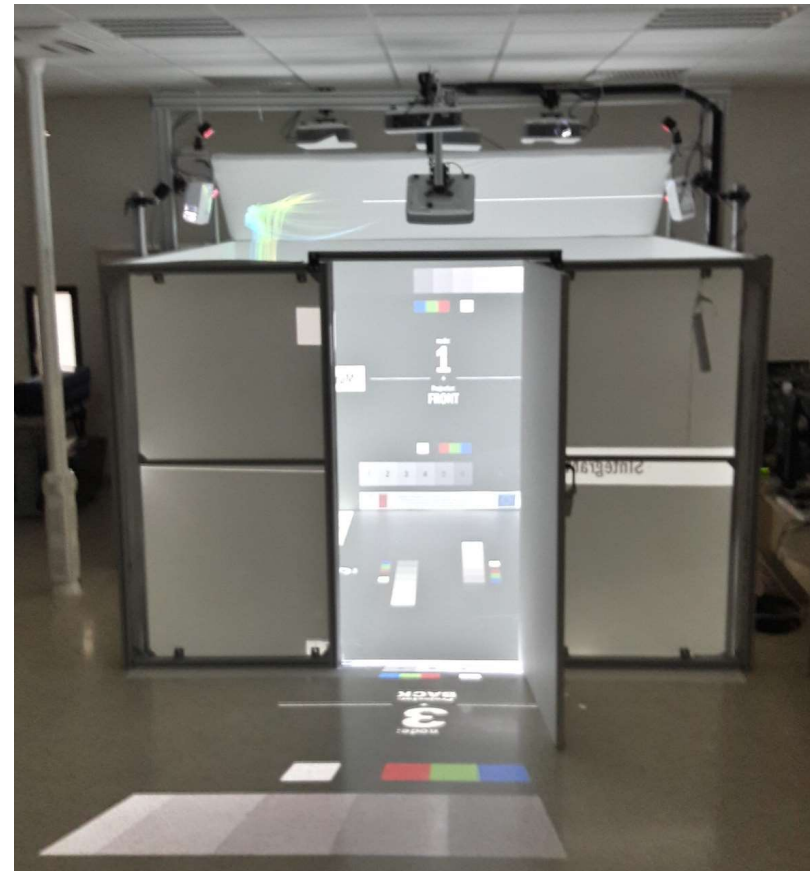
Erosion

Utilities

Noise

Transport

Artists







# Thank You

[Saviour.formosa@um.edu.mt](mailto:Saviour.formosa@um.edu.mt)

[Ashley.hili@pa.org.mt](mailto:Ashley.hili@pa.org.mt)