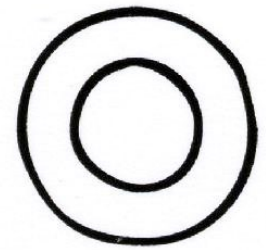




POLITECNICO
MILANO 1863



Laboratory of Places 2018

Presentation Group 2

Summer School: Surveying Cultural Heritage

7th Edition

July 23 to August 1, 2018



**ENTE DI GESTIONE
DEI SACRI MONTI**



United Nations
Educational, Scientific and
Cultural Organization



Sacri Monti del Piemonte
e della Lombardia
Iscritti nella lista del Patrimonio
Mondiale nel 2003

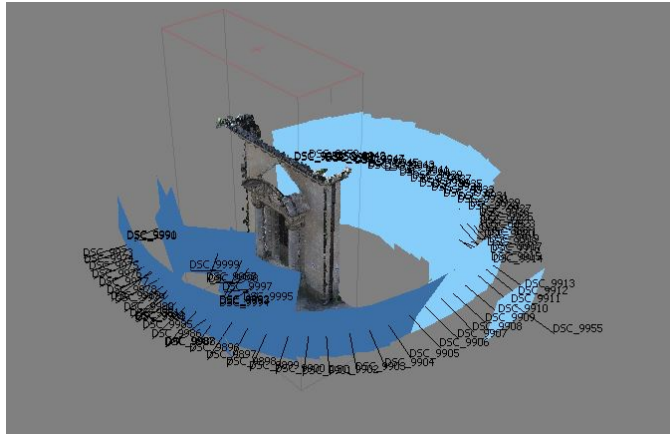
Chapel number III: «First fall of Jesus»



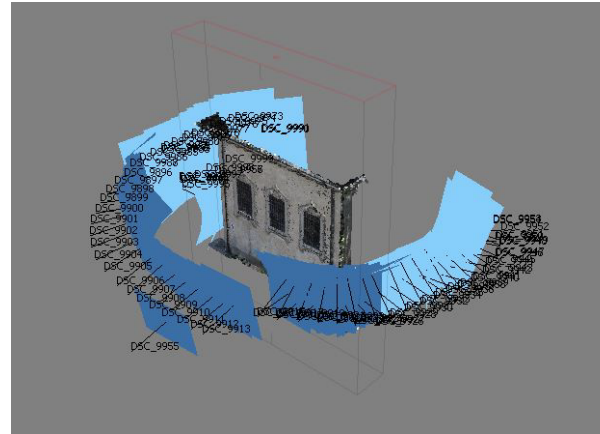
The chapel was built in 1908 and it is located in the valley of Domodossola Calvario. It is the last to be built.

Photogrammetry

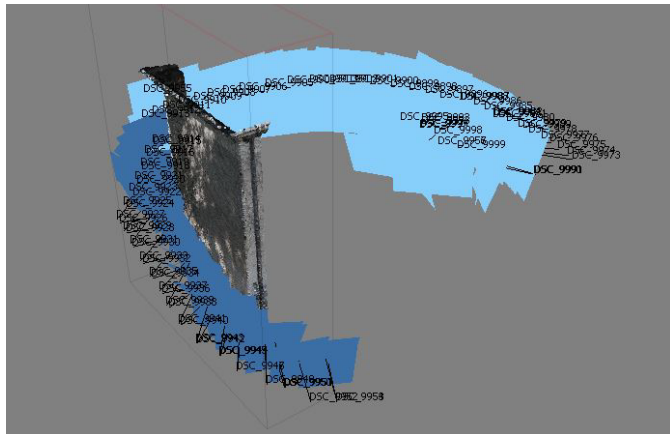
STEP 1: Taking Photos



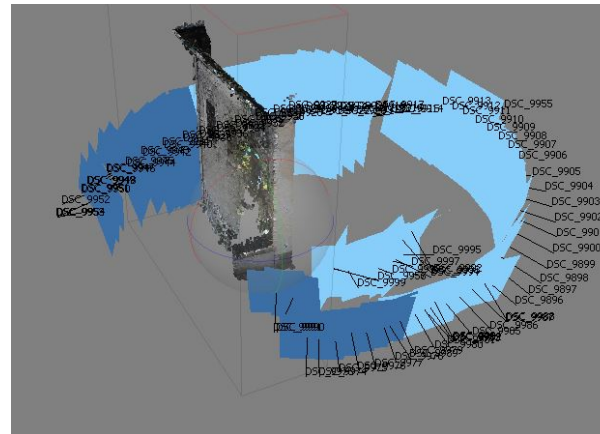
Main Facade



Side one Facade



Back Facade



Side two Facade

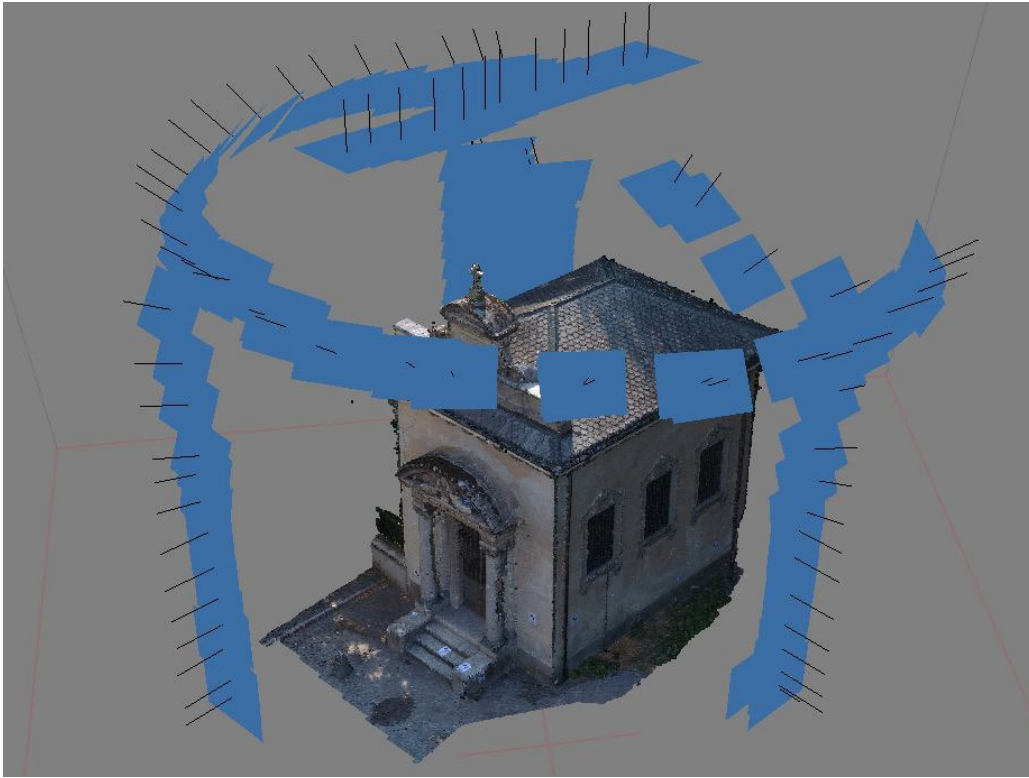
Main issues

- Location
- Setting camera
- Camera position
- Loss of markers

Solution

- Preparation
- Organization
- Check during phase
- Abundance of markers

STEP 2: Drone Photos



STEP 3: Orthophotos



Main Facade



Top View

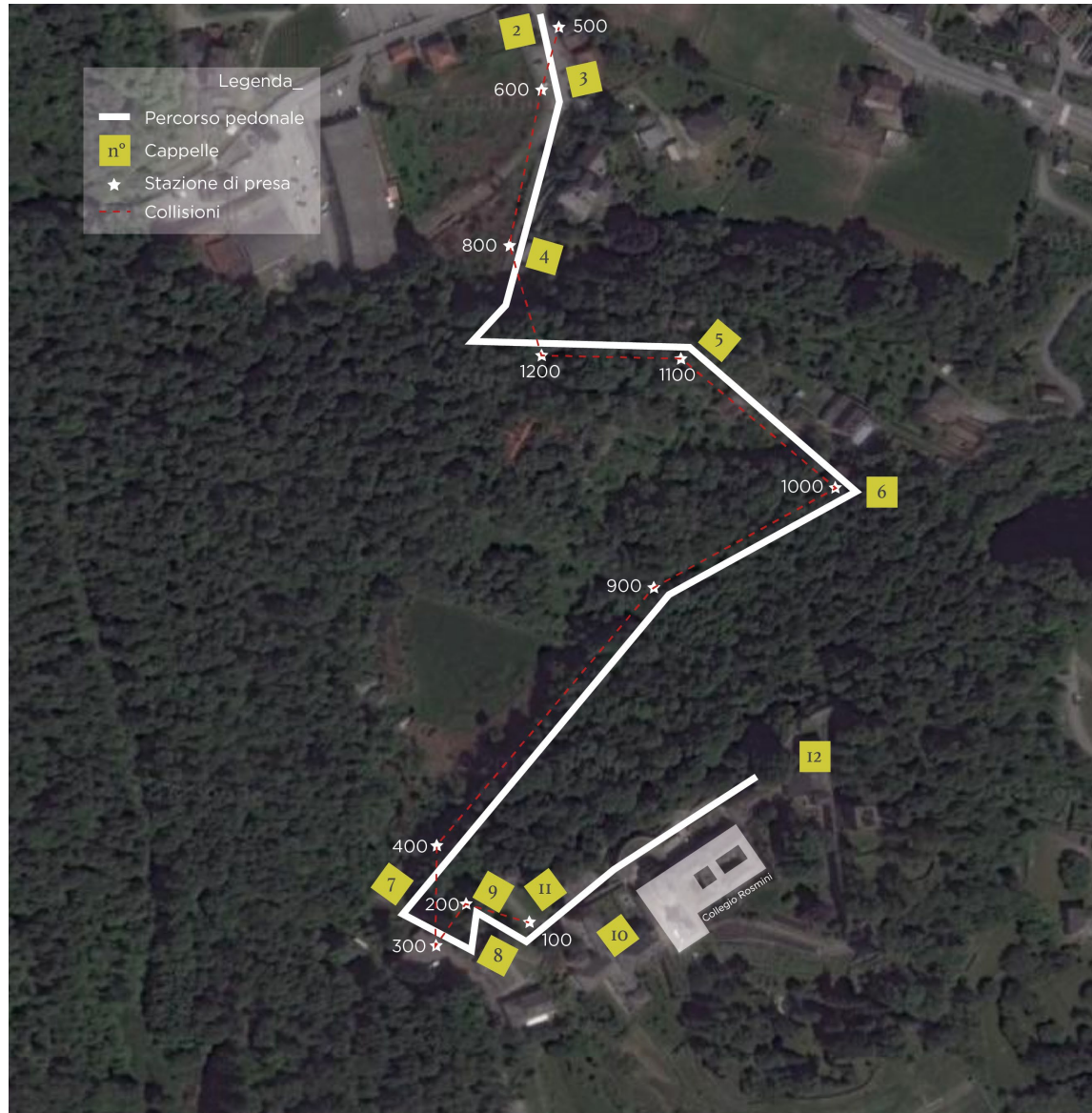


Side one Facade

- One camera
- Software
- Accuracy
- High resolution
- Cheap

Topography

Useful to:



- **Correct disposition in the space**
- **Scale the model**
- **Link data information**

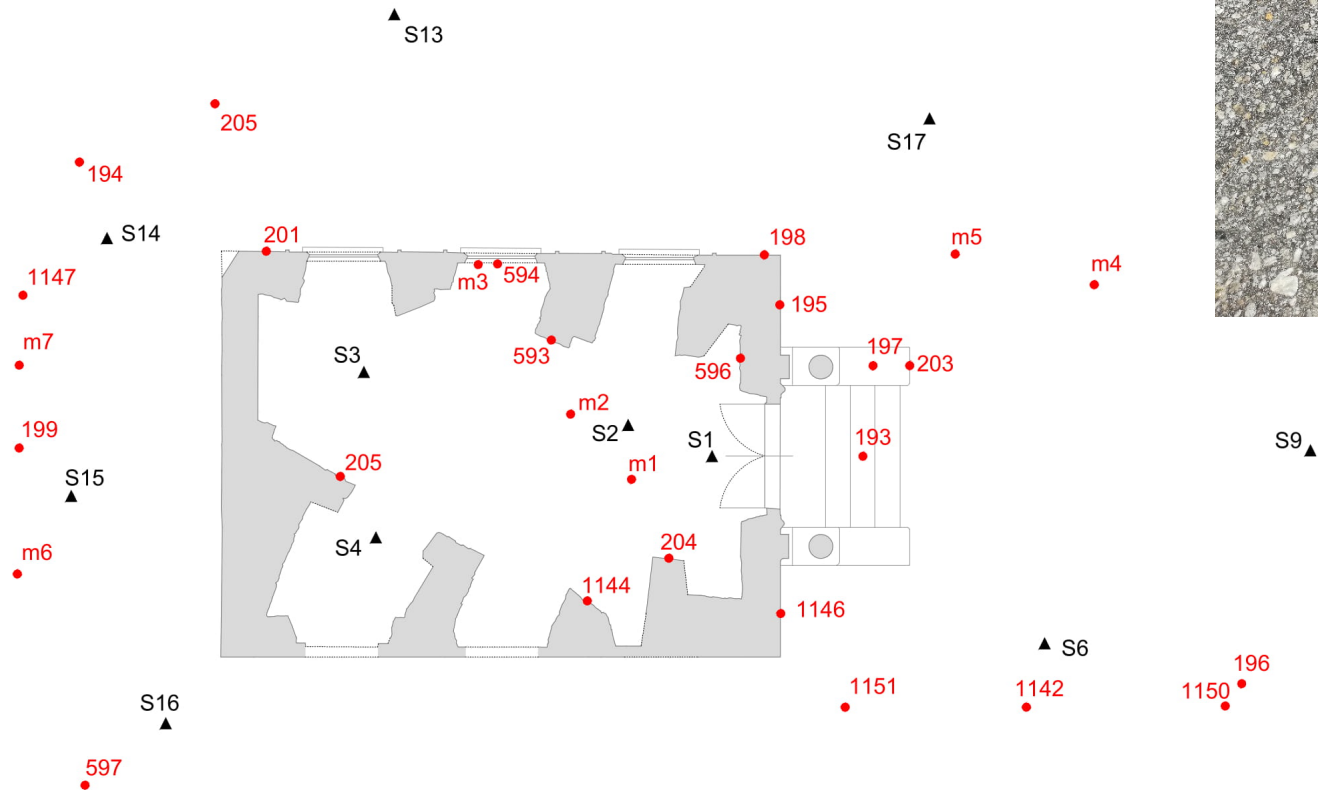


Laser Scanner

STEP 1: Target position and station definition

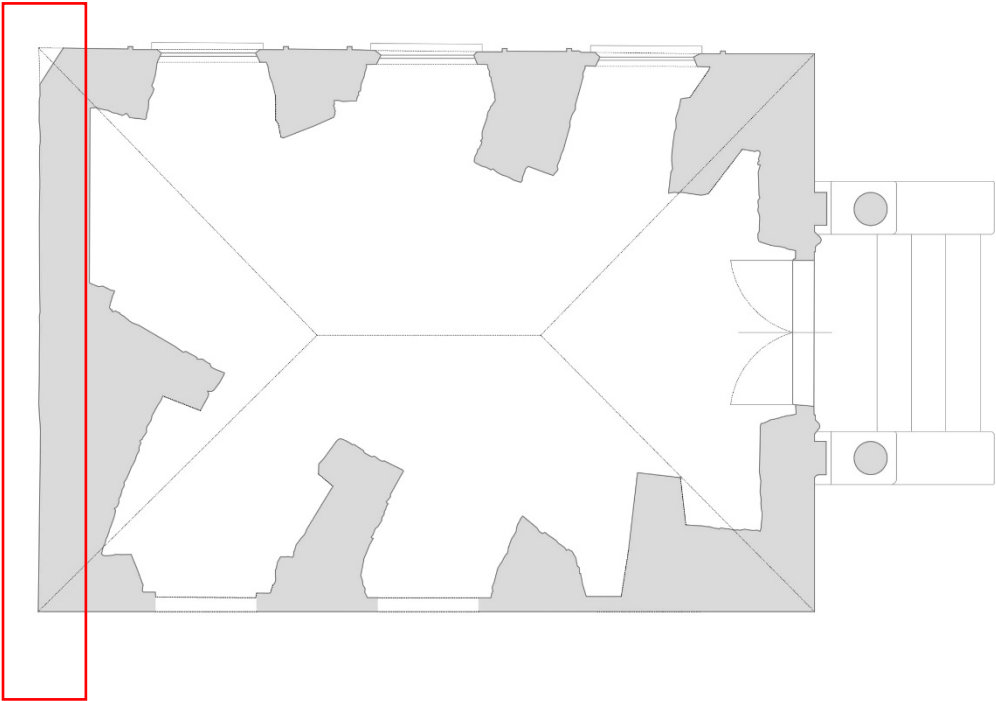
Main issues

- Weather condition
- Assign markers

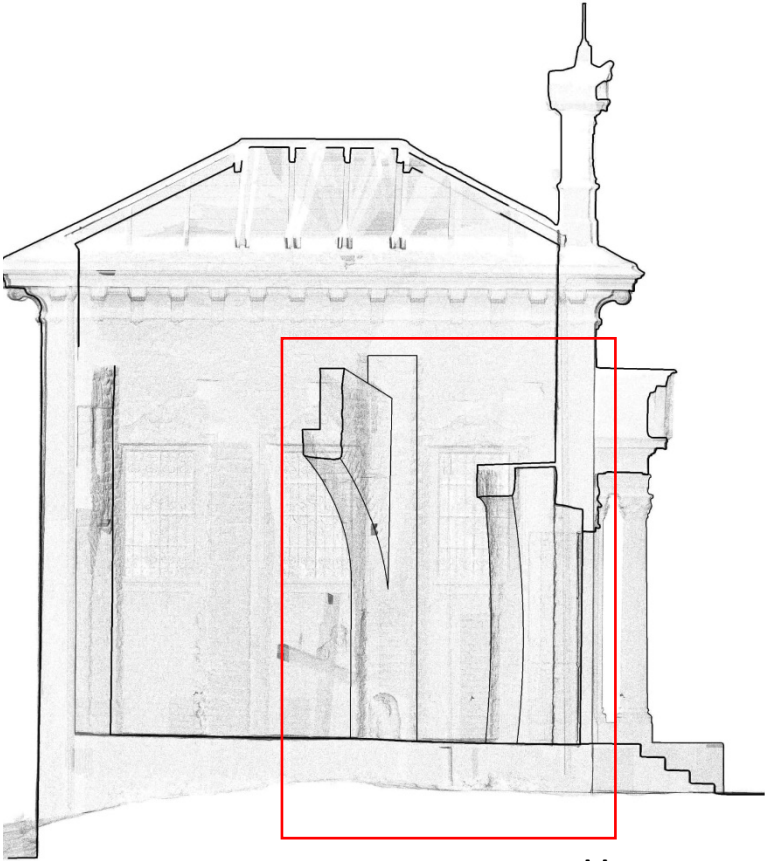


STEP 2: Products

Problem zone



Plan



Problem zone

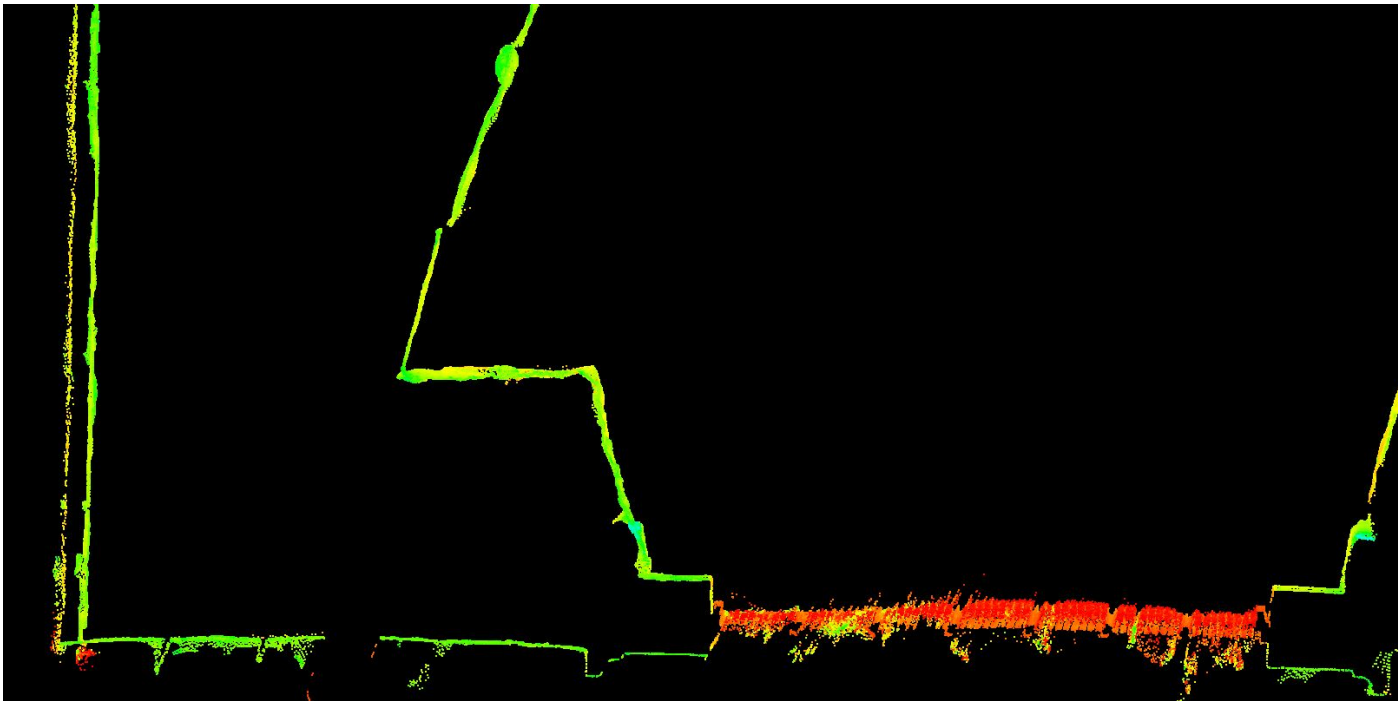
Section



Problem 1

Main issues

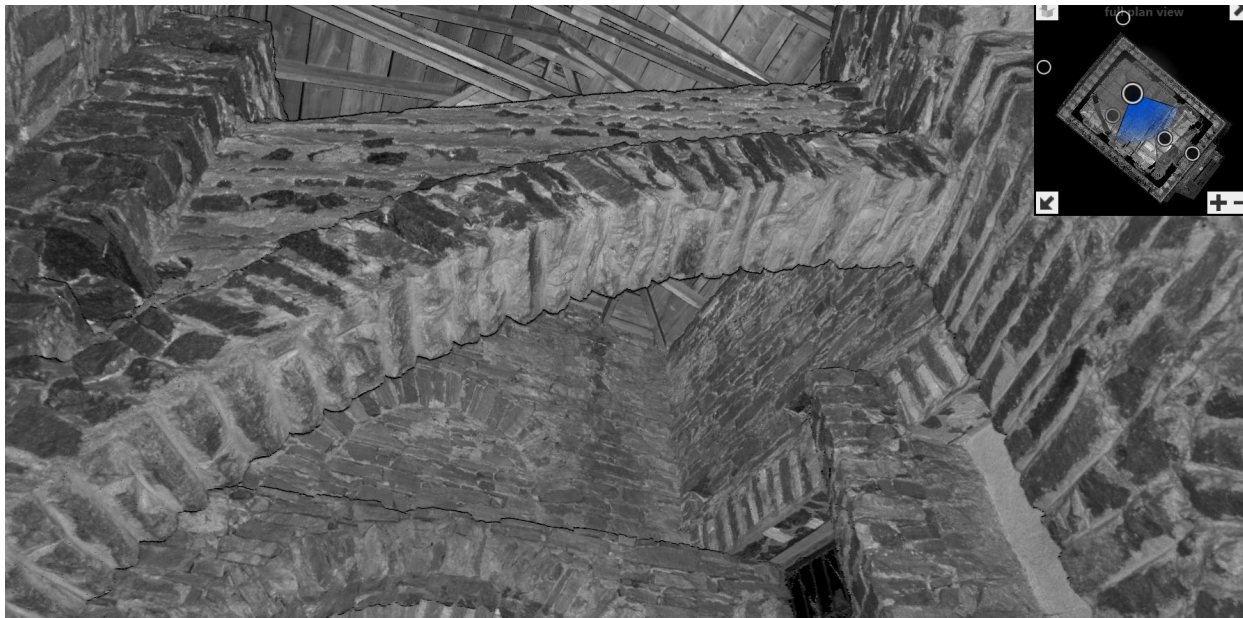
- Double line
- Cloud alignment
- Loss of markers
- Location



Problem 2

Main issues

- Supporting information
- Complex geometry
- Rapid survey

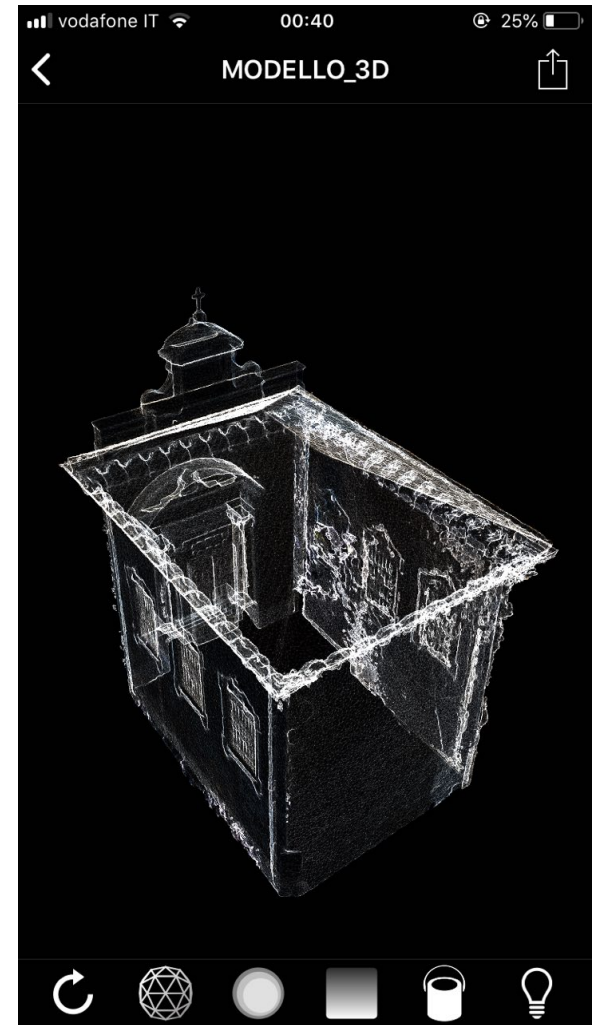


Material and Decay mapping

- Method
- Conservation



3D mobile



Emb3D

