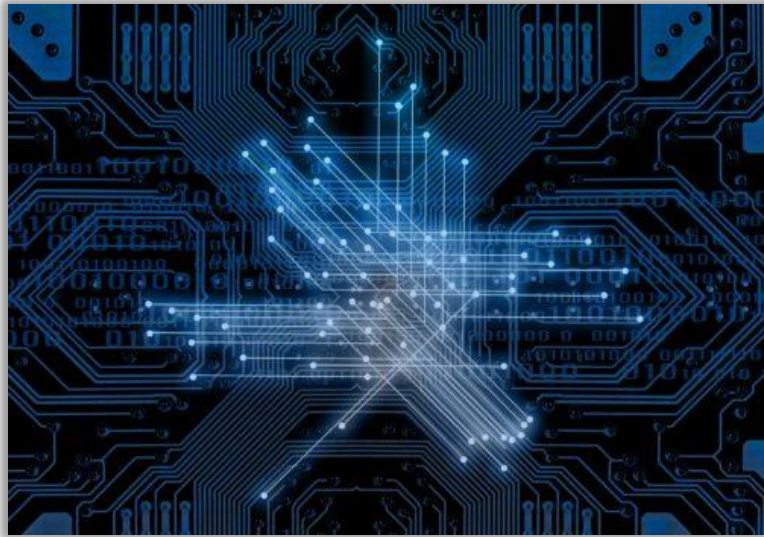


# METABUILDING 1st GROW / HARVEST CALL : MEET THE WINNERS !



*Unleashing the Innovation Potential of EU Construction SMEs*

## Construction + ICT Challenge



- Monitoring and managing building energy / comfort / health performance in buildings
- New BIM and digital tools for SMEs



METABUILDING Project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 873964. The sole responsibility for the content of this document lies entirely with the author's view. The European Commission and the European Innovation Council and SME Executive Agency (EISMEA) are not responsible for any use that may be made of the information it contains.

# METABUILDING 1st GROW / HARVEST CALL : MEET THE WINNERS !

## AIDA

### Autonomous Inspection System for Indoor Building Asset Digitalisation

SECTORS INVOLVED : Construction · Digital Industry



ITALY



VERTLINER™

GREECE



METABUILDING Innovation  
Stakeholder providing  
technical support

ITALY

*“VERTLINER introduced to DE5 the innovative solution of AIDA that enables the digital assessment of the elevator shaft and centralised the early phases of the procurement process as part of pre-installation with the power of Robotics, AI and Cloud services. The selection process of the elevator contractor is streamlined through the web dashboard of the AIDA solution, which visualises the key building attributes of the elevator shaft in a BIM format without the physical presence of an elevator service provider on-site, automating the collection of elevator system quotations resulting to operational efficiencies and standardised outcomes for the construction company.”*

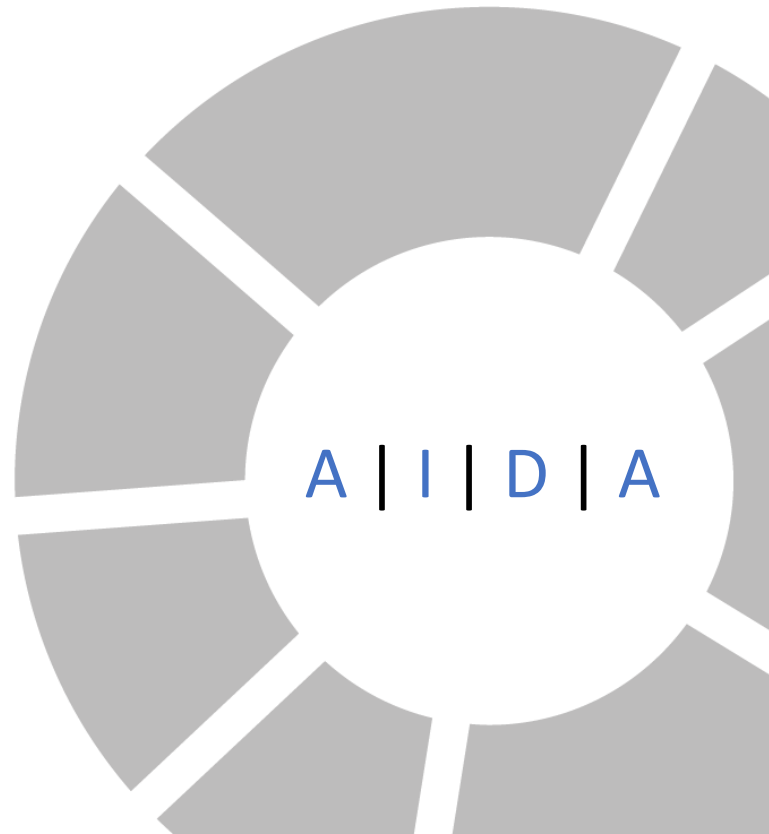
Pietro De Cinque  
Gruppo DE5



*“The AIDA project is actively contributing to the digital transition of the construction industry and its verticals, focusing on the particular use case of elevator sector, aiming to bridge the digital gap between the assessment of building assets and the pre-installation activities of Mechanical, Electrical and Plumbing systems.”*

Michael Striligás  
VERTLINER · CEO

Empowering the digital  
transition of the  
construction sector



## AIDA

Autonomous Inspection System for  
Indoor Building Asset Digitalization

*The AIDA collaborative innovation project receives funding in the framework of the METABUILDING project funded through the H2020-INNOSUP programme directed by the European Innovation Council and SMEs Executive Agency (EISMEA)*



# THE CONSORTIUM



## About us – Who we are



**Micro-Enterprise**  
Lead/System Integrator  
Greece – 2020



**SME**  
Construction/Engineering Services  
Italy – 2008



**SME**  
Consultancy Services  
Italy – 2012

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## SKILLS

- Autonomous Indoor UAV
- Robotic System Development
- Data Analytics

- Building Development
- Equipment Contractors
- Real Estate

- Innovation Consulting
- Sustainability Consulting
- Research Services
- Innovative Technologies

# THE PROJECT



## Goals and Objectives

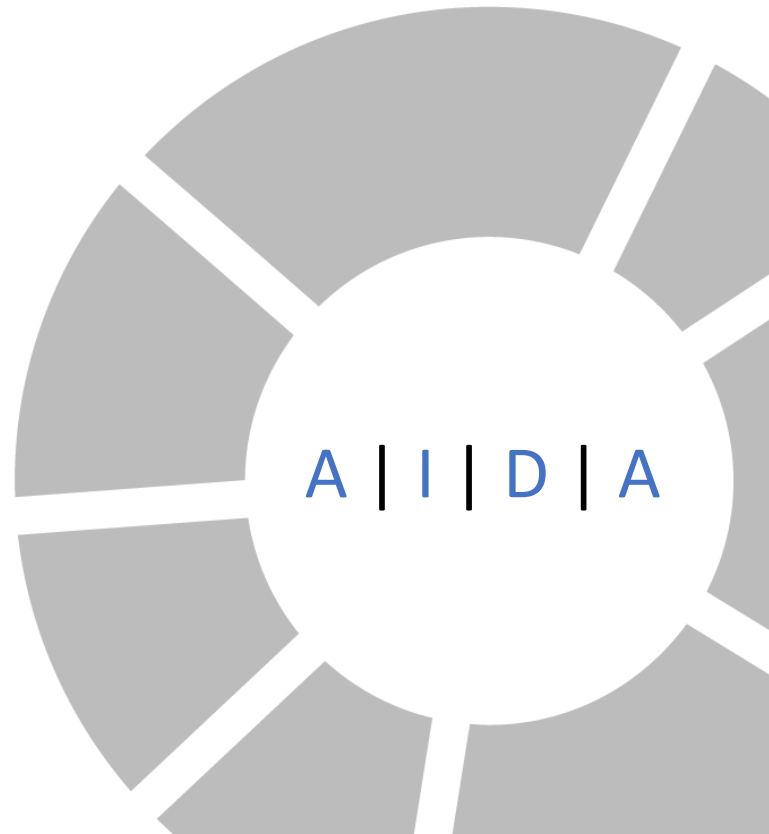
### Goal

The goal of AIDA is to digitalize the process of elevator shaft assessment in new installations, incorporating value for safe and highly adjustable elevator systems, based on an end-to-end process powered by autonomous aerial robots, through a scan-to-BIM approach.

### Objectives

- Reduction of the operational cost for indoor measurements by 65% compared to the manual process.
- Increasing safety degree to 100% by accessing an elevator shaft only from the lowest level, compared to accessing every floor.
- Achieve accuracy <15mm in shaft measurements compared to those generated by an elevator engineer.
- Automate the scan-to-BIM method to clean/process/convert point clouds to accurately feed BIM models.

Move the construction industry towards its digital transformation.



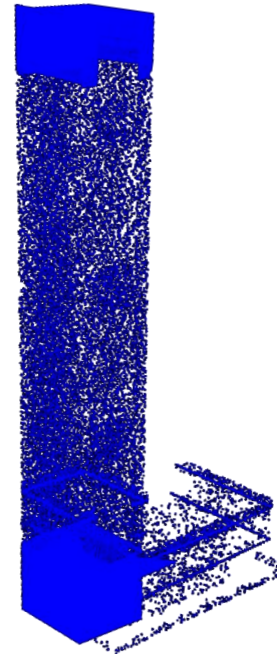
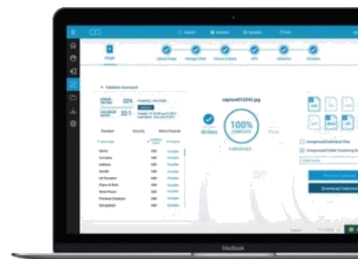
## The Challenge

New BIM and digital tools for Construction SMEs

# SOLUTION

## Main parts of the solution

AIDA is referring to a novel inspection CPS (Cyber-Physical System) consisting of an autonomous aerial robotized system that digitalizes hard-to-reach building assets by traversing confined spaces not easily reachable by humans.



The autonomous aerial robot is navigating inside the building and acquires precise 3D data and images, which can inform and update the Digital Twin models of the building during its construction process.

# METABUILDING



## An initiative that drives innovation in a traditional industry

The METABUILDING programme enabled the consortium to explore and deploy a novel approach to digitalize a crucial area of a building as part of its core infrastructure.

Without the support of the METABUILDING programme, it would not be able to validate the multiple benefits that occurred by collecting, analyzing, and delivering structural data in a safe, accurate, and fast manner utilizing the power of Robotics and AI.

Our consortium is proud to be a part of this programme that makes us 'METABUILDERS' and members of a huge family that is delivering value to a traditional industry with huge needs for optimizing its processes and activities through digitalization.





Thank you for your kind attention

Project :

[www.metabuilding-project.eu](http://www.metabuilding-project.eu)



Platform :

[www.metabuilding.com](http://www.metabuilding.com)



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