

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

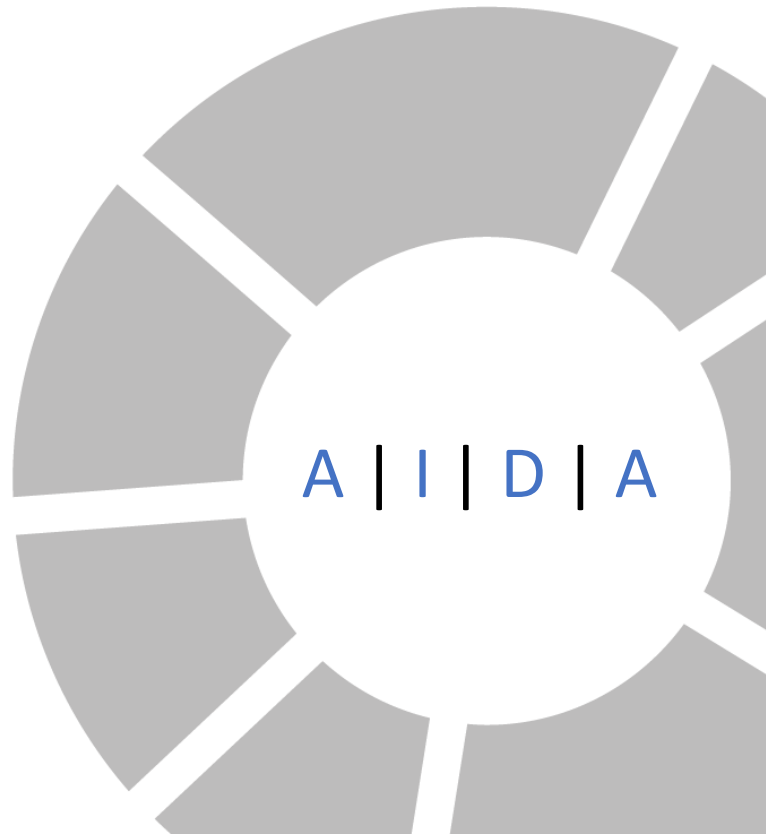


"The AIDA project is actively contributing to the digital transition of the construction industry and its verticals, focusing on the particular use case of elevator sector, aiming to bridge the digital gap between the assessment of building assets and the pre-installation activities of Mechanical, Electrical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

Pietro De Cinque
Gruppo DE5

Michael Striligas
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-INNOV4EU 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

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

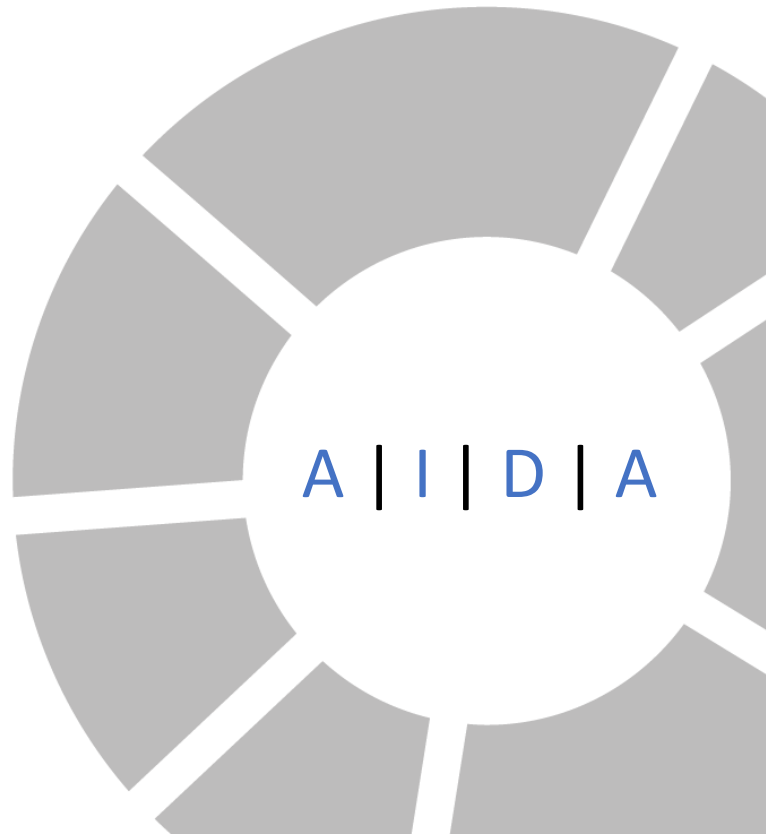
Goal

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.



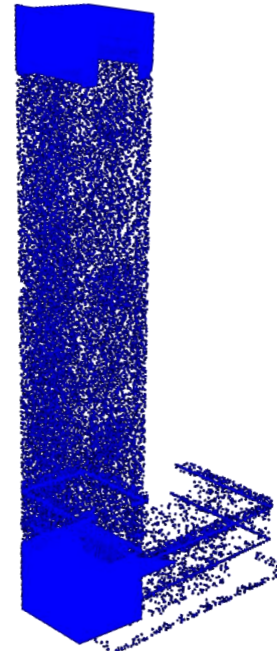
The Challenge

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.