



Digitising and transforming the European construction industry

ASHVIN introduces digital twin technologies enabling energy-efficient buildings with a low environmental impact



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ASHVIN H2020 Project

OUR CONTRIBUTION



Improve Scheduling Capabilities and Accuracy

Support a reliable project planning and the near eradication of project delays

Contribute to the Standardisation for Digital Twins at a European scale

Propose a European wide digital twin standardization scheme



Significantly reduce Construction Costs

Leverage the true potential of the accurate digital twin representation construction projects

Towards a Safer & Greener European Construction Industry

Reduce the number of on-site accidents and Increase Resource Efficiency



THE TEAM



ASHVIN has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 958161

OUR CHALLENGES



Construction productivity needs to be significantly improved and costs reduced

- Global labor-productivity growth in construction has averaged only 1 percent a year over the past two decades
- The construction industry is one of the least digitised sectors with flat or falling productivity rates
- By 2025 full-scale digitalisation will lead to annual global cost savings of 13% to 21% in the design, engineering and construction phases, and 10% to 17% over the operations phase



Current safety levels on construction sites are not acceptable

- Within the EU, construction is by far the most dangerous occupation with a very high rate of fatalities compared to all other industries
- Safety planning in the construction industry is complicated due to the dynamic nature of the construction environment and the active involvement of various stakeholders



Digital twin and IoT Technology is mature and already used on construction sites

- The viability of using digital twin technology and IoT has already been proven in pilot projects
- The constant flow of real-time data from IoT sensors combined with historical data from other projects can be used not only in the monitoring of current job sites, but to provide the required historical data for predictive and prescriptive analytics with advanced AI methods

OUR APPROACH

To enable the European construction industry to significantly improve its productivity, while reducing cost and ensuring safe work conditions, ASHVIN will provide the first of its kind digital twin platform that will be completely IoT ready and that will be interoperable with a wide range of design and engineering applications.

Through this interoperability, the ASHVIN platform will be able to represent as-designed models. At the same time, through the integration with a wide range of sensors (including photogrammetric sensors) a continuous synchronization between the as-designed and the as-built models will be achieved.

