ASHVIN H2020 project launches its activities aiming on making the construction industry more efficient, reliable & safe with Digital Twin technology

The **"ASHVIN - Assistants for Healthy, Safe, and Productive Virtual Construction Design, Operation & Maintenance using a Digital Twin"** consortium is proud to announce the **official start of this joint international initiative** funded by the European Commission under the **Horizon 2020** Research & Innovation programme.
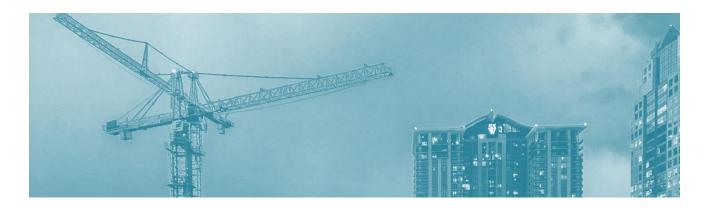
ASHVIN aims at enabling the **European construction industry** to significantly improve its productivity, while reducing cost and ensuring absolutely safe work conditions, by providing a proposal for a European wide **digital twin standard**, an **open source digital twin platform** integrating IoT and image technologies, and a **set of tools and demonstrated procedures** to apply the platform and the standard proven to guarantee specified productivity, cost, and safety improvements.

The **envisioned platform** will provide a **digital representation of the construction product** at hand and will allow to collect **real-time digital data** before, during, and after production of the product to continuously monitor changes in the environment and within the production process. Based on the platform, **ASHVIN** will develop and demonstrate applications that use the **digital twin data**. These applications will allow it to **fully leverage the potential of the IoT based digital twin platform** to reach the expected impacts (better scheduling forecast by 20%; better allocation of resources and optimization of equipment usage; reduced number of accidents; reduction of construction projects).

The **ASHVIN** solutions will overcome **worker protection and privacy issues** that come with the tracking of construction activities, provide means to fuse video data and sensor data, integrate geo-monitoring data, provide Multiphysics simulation methods for digital representing the behavior of a product (not only its shape), provide evidence based engineering methods to design for productivity and safety, provide 4D simulation and visualization methods of construction processes, and develop a lean planning process supported by real-time data.

All innovations will be demonstrated on 9 real-world construction projects across Europe.

The **ASHVIN** consortium combines strong R&I players from **9 EU member states** with strong expertise in construction and engineering management, digital twin technology, IoT, and data security / privacy. The consortium is formed by **14 partners**, including 8 SMEs, 1 Large Industries, 1 Research Organisation, 3 Higher Education Institutions, and 1 Non-Profit from Germany, Netherlands, Greece, Serbia, Austria, Spain, Croatia, Poland and Sweden.