

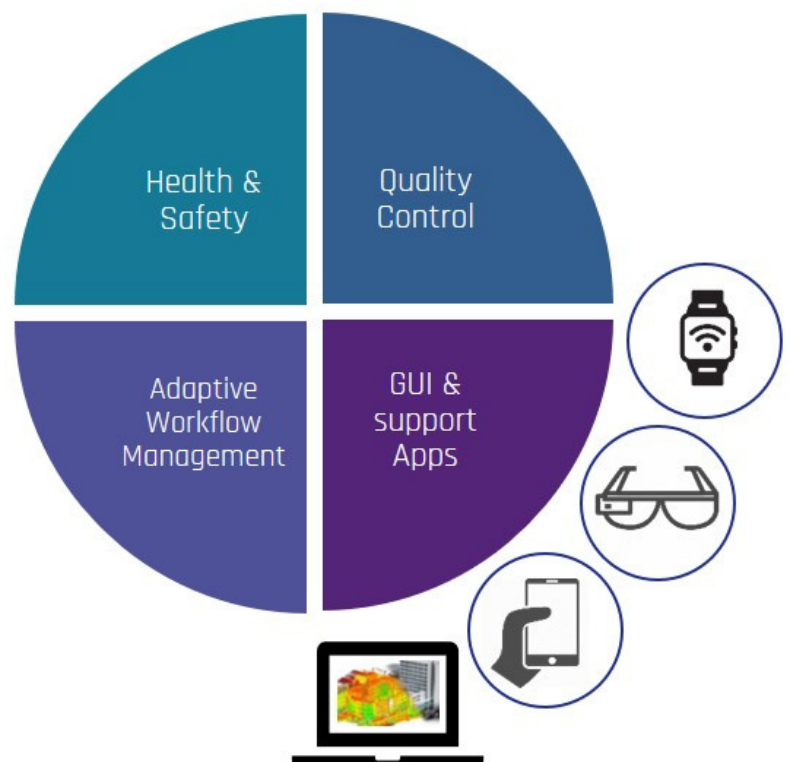
○ Digital Twinning the capital project delivery phase

Construction phase digital twin model (COGITO) is a project that started in November 2020 with funding from the European Union's Horizon 2020 research and innovation programme.

The COGITO project aims to establish a **Digital Construction 4.0 toolbox** that integrates: reality capture technology to collect data capturing the actual state of operations from construction sites; Building Information Models (BIMs) initially containing design and planning information and subsequently augmented with as-built data; and innovative integrated data management and software solutions to optimise site operations.

The COGITO Digital Construction 4.0 Toolbox will effectively deliver a “**Digital Twin**” of **construction operations** and employ it for improving performance in terms of **safety, quality, schedule and cost**. The reality capture tools will include digital cameras, laser scanning, and resource tracking sensors.

Construction Support Services



Construction Phase Digital Twin Platform



An important contribution of the project is in developing methods to ensure interoperability among the different components constituting the Digital Twin ecosystem. This includes the development of the **COGITO Ontology/Data Model** that will integrate all data/information in a model that can be meaningfully queried by the software tools.

The COGITO Construction 4.0 toolbox will be tested and validated using two railway-related projects located in Madrid, Spain and Copenhagen, Denmark.

The consortium of the project includes 13 partners from 7 countries (United Kingdom, Poland, Austria, Denmark, Spain, Greece and Slovakia).

The COGITO consortium comprises partners who bring significant expertise and capacity in their respective domains as well as existing tools that will be adapted, configured and re-purposed for the needs of the project. Partners span from universities and research centres to SMEs and large corporations.



- While the team is currently in the process of collecting user requirements for the proposed COGITO toolbox, the project has set up a **Living Lab**, that will be used to engage and interact with stakeholders within and outside the COGITO consortium throughout the project.

If you are interested, do not hesitate to contact:



Dr Frédéric Bosché
University of Edinburgh
f.bosche@ed.ac.uk



Agnieszka Mikolajczyk
ASM Market Research and Analysis Centre
a.mikolajczyk@asm-poland.com.pl

Follow the COGITO project on:



cogito-project.eu



[cogito_project](https://twitter.com/cogito_project)



[cogito-project](https://www.linkedin.com/company/cogito-project)



[Cogito](https://www.facebook.com/Cogito)