

## Publishable executive summary

The scope of this task is to provide the key prerequisite for the research work of this project as well as for the self-inspection and self-instruction concept: a holistic model which integrates all data acquired from manual inspections, cameras and sensors. This information of the physical world will be extended and continuously updated with design and project execution data (drawings, schedule, costs, as-designed quality and performance, operation manuals).

Linking all those information to the 3D model will result in a BIM model which will provide the structure for integration of cross discipline data and should be able to serve navigation, visualization, search and export purposes.

Deliverable D4.1 is the creation of those BIM models and therefore it is of type “others”.

Due to the fact that the BIM models serve as a base for all aimed use cases of this project, it takes an important role inside INSITER project. Therefore there was the decision to create this additional report which explains following issues:

- List Use Cases for BIM models to create benefits regarding self-inspections and self-instructions
- Which requirements are defined by those use cases towards the BIM models?
- Define different types of BIM models to cover those requirements
- Create a definition for the structure of BIM models

Furthermore, the model and associated data will be provided to the whole project team as well as to external stakeholders via a BIM framework. The models will be linked to data from different software systems with incompatible data structures, granularity and type (images, documents, time-lines, properties) into an overall structure suitable to serve downstream use cases. This platform will be elaborated within deliverable D4.3 (M12) “Framework for BIM, hardware and software data inter-operability”.

Since there is no decision about which real-life project will be used in INSITER yet, it is not possible to perform and evaluate laser-scans and point-clouds at the current stage of the project. This will be done when an appropriate project has been chosen. This, as well as considering the environment of the construction site itself, is scheduled to be done within the upcoming two years of INSITER.

Because the several use cases are not finally decided within the INSITER project, it is currently not possible to define all requirements in detail. In case there are new findings within INSITER project, which will lead to new or changed requirements, those changes will be incorporated into the BIM models.

