

## Publishable executive summary

Deliverable 4.2 is a result from Task 4.1, in which model checking and clash detection are performed on regular intervals simultaneous with the development of BIM models. The outcomes of model checking / clash detection will be part of virtual self-inspection.

Before BIM models can be validated by using virtual inspection methods, regulations have to be defined. These modeling guidelines will serve as a base for creating checking methods to prove that the BIM models fulfill the given modeling rules.

Chapter 1 of this deliverable describes the process of developing modeling guidelines and gives an overview of the three different kind of guidelines:

- General Modeling Guidelines
- Project Specific Guidelines
- Use Case Specific Guidelines

The created guidelines are included in the appendix of this additional report to deliverable D4.2.

Chapter 2 describes the different kind of checks, which have been performed in INSITER project. It gives an explanation what are semantical-, numerical-, geometrical-checks and introduces additional validation methods like version comparison, deviation analysis and the issue tracker.

Chapter 3 aligns the identified validation methods with INSITER's eight step methodology. It shows which checking tool will be used at which process step. Direct links towards the INSITER toolset SharePoint site enable the reader to directly approach the described data.

The explanation of all listed tools, which are used for model checking, clash detection and value engineering provide a detailed insight to INSITER's tools for validating BIM models.

While deliverable D3.2 is focusing the INSITER toolset, its interface and all of its components in total, this deliverable D4.2 is focusing on INSITER's tools for model checking, clash detection and value engineering. It describes the usage of model validation tools, which have been performed on the several demonstrator projects and highlights the context in which process steps of the INSITER methodology they become relevant.

Deliverable D4.2 is of type 'other', which means that it is not a document but a consolidation of several software packages, tools and elaborated processes embedded into the INSITER toolset. Therefore, this document is created accompanying the several model validation tools to explain the functionalities and the process steps behind them.

