

# **BIM implementation at SBB Infrastructure.**

With the introduction of Building Information Modelling (BIM), SBB is making a significant contribution to the future-oriented and efficient planning, construction and operation of buildings and technical facilities. SBB has been using the BIM method for its construction projects since 2021. In 2025, the BIM method will be implemented for infrastructure projects.

BIM has an impact on collaboration: information management is simplified, processes are improved and work steps can be automated.

To integrate these changes into the construction work, SBB has defined a plan for their implementation in several stages. This will make it possible for all stakeholders to take the next steps together.

The BIM implementation strategy shows how SBB is introducing BIM in construction projects: in stages, following in line with construction plans. Infrastructure projects with BIM will be put out to tender from mid-2024.

The stages are divided into major and minor releases and are based on the construction process and SIA project phases.

It will be introduced in all of SBB's technical units (e.g. civil engineering, safety installations, track, catenary construction, geomatics etc.).

### Major release

The major release takes place every two years and will provide major BIM functionalities within the designated time period. This includes providing necessary tools (such as BIM-enabled systems and instruments), as well as critical instruments and training materials, to employees and partners.

#### **Minor release**

The minor release takes place every six to twelve months and will provide extended functionalities relevant to a specific major release. There are dependencies between the major releases. It is necessary to ensure that a certain development level is achieved in a given area before the major release is implemented.

With the BIM implementation strategy, SBB ensures that all construction projects can be implemented with the BIM method in both a stringent manner and in line with the construction process.

From 2025, construction projects that are started with the BIM method in the pre-project phase will be completed with BIM throughout all project phases.

## What happens next?

This information is continually updated. Visit <u>www.sbb.ch/en/bim</u> or send your question(s) to bim@sbb.ch.



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	Stage 0: until 2025 Construction projects are put out to tender using BIM. From this point on, every construction project that starts with BIM in the preliminary project phase will be completed with BIM.		Stage 1: 2025 to 2027 Construction projects are planned with BIM. Changes in the project methodology will be controlled via major and minor releases.		Stage 2: 2027 to 2029 Construction projects are carried out with BIM. For this purpose, services are procured and the project execution is carried out with BIM. This also includes the model-based safety test (SIOP-A).		Stage 3: 2029 to 2031 Construction projects are commissioned and completed with BIM. This also includes model- based technical conformity checks of all specialist units, the model- based SIOP-B as well as the take-over of facilities.		Stage 4: 2031 to 2033 Using BIM, data-driven facility maintenance, predictive maintenance, measurement and analysis of condition data will be enabled.	
(	PREPARATION	2025	PLAN	2027	CONSTRUCTION	2029	INITIATION OF SERVICE	2031	MANAGEMENT	2033
	Mid-2024 Introduction of the procurement of planning services with BIM.		<ul> <li>Major 1: Introduction of 'BIM basic functions pre-project' including model-based cost determination</li> <li>Minor 1.1: Expansion of Major 1 to construction project</li> <li>Minor 1.2: Expansion of Major 1 to study phase</li> <li>Minor 1.3: Project structure and management</li> </ul>		Major 2: Execution, procurement, AVOR, SIOP-A Minor 2.1: Expansion of Major 2 to quality inspection and contracts for work		Major 3: Commissioning, SIOP-B and conformity test Minor 3.1: Take-over of facilities Minor 3.2: Project completion		Major 4: Lifecycle management, management of requirements Major 5: Worksite and disruptions	