

BIM Building information modeling (Civil Engineering)

Digital planning methods such as building information modeling (BIM) enable engineering, architecture and construction professionals to coordinate the ever more complex operations at play in the real-estate planning and construction process. In addition to increasing planning security, BIM helps to enhance planning and construction quality. It is therefore a benefit for planners and developers alike. BIM also helps to ensure the well-structured, digital documentation of project data over a building's entire lifecycle.

BIM is a method applied in the construction sector to optimize the planning, construction and management of buildings. BIM leads to an enhanced planning basis by enabling the advanced processing and cross-referencing of planning data. This makes it easier to coordinate the work of project participants, while also generating timely insights over a building's entire lifecycle, insights that go far beyond the benefits of conventional CAD planning.

We help planning teams to coordinate the use of BIM, advise developers when it comes to defining goals, specifications and processes for BIM-based planning, executing BIM-based design competitions and applying BIM to existing buildings.

BIM coordination for the planning team

The BIM method leads to a general increase in planning security, as well as the quality and transparency of planning. This, in turn, leads to an increase in the quality of building construction. Planning results in the form of BIM models to enable automated monitoring (e.g. achievement of project goals, detection of conflicts, etc.) and increase the efficiency of efforts to ascertain quantities and key figures. Superior BIM databases also enable an extensive range of data analysis and simulation operations.

Our services

- We develop implementation concepts and processes for BIM coordination.
- We establish data environments, set up necessary platforms and manage the implementation of BIM processes.

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- We define and coordinate the exchange of planning results among the partners in the planning team (BIM execution plan).
 - We organize and moderate BIM workshops for the planning team.
 - We examine the BIM models developed by the planners for potential conflicts and with respect to their capacity to facilitate the achievement of project goals.
 - We coordinate exchanges concerning modeling conflicts and other planning issues so as to ensure their timely resolution.

BIM management for developers

Your planning specifications can be processed directly in digital form by the planning team from the very outset of your project. Moreover, the above-mentioned advantages for the planning team apply equally to the developers throughout the planning and realization phases. Thanks to the use of a well-structured data model, the quality of your building documentation will also be far superior upon the completion of the project. The linking of BIM models with other databases and lists (e.g. detailed room plans or an FM tools) enables the effective management of all project information across the building's entire lifecycle.

Our services

- We help you to exploit the potential of BIM for specific projects and situations.
- We help you formulate the project goals you would like to reach with BIM, and also assist you with cost-benefit analyses.
- We advise you in matters relating to the selection of appropriate data formats and tools. Non-proprietary file formats have the advantage of enabling you to retain control over your data without entering into relationships of dependency with software suppliers.
- We help you to specify goals and define the employer's information requirements (EIRs) that are necessary to reach these goals.
- We help you to develop space-allocation plans for BIM orders.
- We convert BIM goals into specific requirements to be met by BIM models and processes. This helps when it comes to the optimal use of BIM.
- We help you to draft BIM-specific contractual provisions.
- We arrange for the exchange of planning results between the planning team and the developer (BIM execution plan), establish processes and data environments, and make sure the members of the planning team are sufficiently aware of these.
- We examine the BIM models submitted by planners in terms of their capacity to facilitate the achievement of the defined goals. This includes model consistency and data quality.
- We support you in the context of all phase transitions.
- We assist you at the transition to the facility-management phase and help with the installation of the necessary databases and platforms.

Digital design competitions

Digital calls to tender facilitate the communication of specifications (e.g. room plans)

and the submission of proposals by architectural, engineering and planning teams. Submissions in the form of BIM models also increase transparency, enable automated assessment procedures (e.g. relating to room-plan, access and statutory requirements) and increase the efficiency of quantity and key-data assessments. And finally, a BIM call to tender represents the first step in a thorough BIM project, which – as outlined above – will continue to generate benefits.

Our services

- We help you to formulate the goals that you would like to achieve with the use of BIM in the design-competition phase.
- We help you to define space-allocation plans for BIM orders.
- We convert BIM goals into specific requirements for design-competition submissions.
- We define contractual the specifications that are to be met by the planning team so that the BIM goals can be achieved in the further course of the project.
- We formulate requirements in ways that facilitate your work and that of the submitting teams. This lightens your load and encourages excellent firms to participate in the design competition.
- We examine the submitted models in terms of their compliance with the requirements outlined in the call to tender and their capacity to facilitate the achievement of the project goals.

BIM for existing buildings

BIM models represent an excellent database for conversions, renovations and demolitions. Moreover, the models can also account for the information that is necessary for the facility-management phase or that is gathered during the facility-management phase. In the case of conversions and renovations, BIM models are adapted accordingly and therefore remain up to date.

Our services

- We help you to exploit the potential of BIM for specific projects and situations.
- We help you formulate the project goals you would like to reach with BIM, and also assist you with cost-benefit analyses.
- We advise you in matters relating to the selection of appropriate data formats and tools. Non-proprietary file formats have the advantage of enabling you to retain control over your data without entering into relationships of dependency with software suppliers.
- We convert BIM goals into specific requirements to be met by BIMs.
- We draft needs-based BIMs and line up appropriate partners.
- We coordinate additional services such as laser scanning and building imaging.
- We accompany the transfer of the BIM to you and ensure a well-structured database.

Why EBP?

EBP combines consulting competence with experience in the area of planning and construction. We find the happy medium between the expense and benefits of using BIM applications and orient ourselves while doing so to your enterprise and your project goals.

We have experience and know-how in the following areas

- The application of BIM in various planning contexts (construction engineering, civil engineering, structural engineering, facility management, building systems engineering, electrical engineering, building automation, façade planning)
- Developer support in general and project-management assistance in particular
- The application of BIM in the area of developer support
- Preparation, management and execution of design competitions, including the preliminary examination of submissions
- Participation in design competitions as a planning firm
- Information technology, especially in the processing of spatial data

EBP is an active member of the Swiss Association of Digital Building Applications and was at the forefront of digital planning processes and their application in planning settings that are typical for Switzerland. In 2015, EBP published the guideline [“Principles of Open BIM for Switzerland”](#) which describes an open BIM process. We also played a leading role in the drafting of the [“BIM Workbook 2.0”](#) which was published at the beginning of 2018 by the Swiss Association of Digital Building Applications.