



BIM Contracts: The Devil is in the Details

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Key Take-aways

- 1.** With its vast potential, BIM may quickly become a standard tool in planning and construction in Switzerland – which leads to the question of how to address the relevant issues in the construction related contracts.
- 2.** There is no „one size fits all“ contract template for BIM contracts. BIM contracts have to be custom-tailored to the specific requirements of the project at hand.
- 3.** The critical issues to be addressed are known, but there have not as of yet been established any reliable best practices or comprehensive industry standards regarding BIM contracts in Switzerland.

1 Introduction

The growing trend towards digital planning and construction in Switzerland has led to an increasing interest in and use of **BIM** (Building Information Modeling) for the construction of new buildings. In a nutshell, BIM is a digital method used for the planning and execution phases of a construction project allowing the project participants (such as planners, architects, engineers, employer, etc.) to use digital models of the planned building for coordination purposes. Not only does BIM enable to visualize the final project in 3D, it also facilitates cost assessment and identifying potential „clashes“ between different work areas (e.g. ventilation ducts and static frame).

With its vast potential, BIM is likely to become a standard tool in planning and construction in Switzerland. The increasing interest in the use of BIM in Switzerland raises questions as to how to address related issues in construction contracts. To address this, the SIA (Swiss Society of Engineers and Architects) has issued a template „Addendum“ (SIA 1001/11:2018) and related annotations (SIA 1001/11-K:2018), aimed at helping parties address the use of BIM in their contractual relationship, as well as the SIA Brochure „Building Information Modeling (BIM) – Basis for the application of the BIM method“ (SIA 2051:2017) laying out the SIA’s understanding of the BIM method and the underlying terminology. In addition, other actors in the Swiss construction industry, such as e.g. *Bauen digital Schweiz*, have also published BIM related documentation and guidelines in order to assist parties in tackling BIM related questions and drafting appropriate contractual documents.

The aim of this overview is to highlight important issues that need to be considered when drafting or negotiating BIM related contracts, in view of these existing guidelines and documentation.

2 Pre-Contractual Phase: „Let’s Talk About BIM!“

Before the start of any BIM project, the parties should clarify their mutual understanding of BIM as a working method. As there is no „one and only BIM method“, but many ways of using BIM for a construction project, the parties will need to define their intended use of BIM, the means and measures to be implemented and the goals and deliverables to be achieved.

Should neither party already have extensive BIM experience and corresponding documentation at hand, the parties may choose to refer to the SIA 2051:2017 for the terminology and description of the different ways BIM may be implemented.

Although the desired BIM method needs to be defined mutually, it is important that the employer of a BIM project clearly defines its BIM-related expectations and objectives. *Bauen digital Schweiz*, in „BIM Vertrag, Rollen, Leistungen – Merkblatt“ („BdS-Merkblatt“), suggests that these expectations and objectives be defined in a document called „Employer Information Requirements“ (**EIR**). The EIR defines the purpose and goals to be achieved through the use of BIM (e.g. by

enumerating the specific use cases, deliverables expected, etc.). The EIR can be made part of the tender documents for the procurement of the suppliers.

On the basis of the EIR, the suppliers can then prepare the so-called „BIM Execution Plan“ (**BEP**, as suggested in the *BdS-Merkblatt*). The BEP sets out the specific use of BIM for the project in detail. The BEP should, *inter alia*, identify the main team members and their BIM-related roles and responsibilities, the project milestones, the BIM strategy and implementation goals, the method of work, the specifics regarding data exchange and model coordination and the employer’s expectations in terms of content and quality of the models used and/or to be delivered. Further guidance on the BEP can be found in SIA 2051:2017.

As recommended in the *BdS-Merkblatt*, both the EIR and BEP should become part of the contracts, as they contain binding obligations on the parties, in particular on the suppliers regarding the development and execution of the project.

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method‘, there is no
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contract template.**

In Switzerland, employers usually enter into individual standard contracts with each project participant, and include specific BIM-clauses in each individual contract (e.g. by using „BIM Terms and Conditions“ as an integrated part of all contracts). Here, the SIA Addendum (SIA 1001/11:2018) may serve as a helpful starting point. While multi-party agreements have gained some popularity in other jurisdictions (in particular in connection with „Lean Methods“ and the „Integrated Project Delivery“ approach), they are rarely used in Switzerland, due to the complex setup and the risk that, due to the peculiarities of Swiss law, such multi-party agreements might lead to joint liability, which in the eyes of most project participants takes the „integration“ a step too far.

3 Obligations and Responsibilities: „Who is to Blame?“

As there is no standard BIM method, there is also little guidance regarding which party shall bear which responsibility. It is thus important that the parties precisely define their respective contractual obligations.

The content of these obligations will depend on the roles attributed to each project participant as well as on the

works or services to be rendered - and thus different legal provisions might have to be considered. For example, the work related to a specific BIM model and its delivery will usually be governed by the provisions regarding Contracts for Work and Services (Art. 363ff Swiss Code of Obligations, SCO) whereas the organization and coordination services provided by the BIM coordinator will be governed by mandate provisions (Art. 394ff SCO). This will have to be considered when defining the appropriate standard of care, areas of responsibility, and limitations of liability.

If the scope of work includes delivery of a BIM model, then the parties should also define the specifics and aspects thereof. For example, if several project participants have contributed to a specific BIM model, it might be advisable to define a specific date of delivery applicable to all contributors in order to prevent the starting of the warranty periods for the different contributions at different dates.

Furthermore, the BIM coordinator will play an important role in detecting possible clashes, inconsistencies and other defects in the BIM model which might - at worst - lead to actual defects in the construction project or - at best - be detected early enough in the process to be remediated in the virtual model, before the start of the physical construction. The parties should thus carefully define the role and obligations of the BIM coordinator - including under whose responsibility he will carry out his tasks.

Existing tools and checklists can provide valuable guidance in setting up BIM contracts.

4 IP Rights: „Ownership – or Rights to Use?“

A BIM model may not only be a valuable tool during the planning and construction process, but also provide a great basis for the operation of the building, e.g. as a coherent data basis for facility management. Furthermore, relevant information contained in a BIM model can - to a certain extent - be extracted and reused in whole or in part, or even the entire BIM model might be reused. The parties are thus well advised to properly address the intellectual property (IP) rights related to such BIM models - and to define who may use them and for what purposes.

While the employer might benefit most from full ownership of all the related IP rights (e.g. in order to use the BIM model(s) and elements for the building operation, or in similar future projects without limitations), the other project partici-

pants such as planners, designers, etc. might be reluctant to consent to full transfer of the related IP rights (e.g. because they themselves might want to re-use certain elements created during a BIM project for future applications). The parties will thus have to find common ground and strike a contractual balance between full transfer of IP rights, extensive rights to use (without transfer of the underlying IP rights) and limited rights to use, possibly custom-tailored to the specific deliverables and IP rights in question.

On this issue, the SIA-Addendum (SIA 1001/11:2018) suggests that upon payment of the agreed fee, the employer shall be granted the non-exclusive right to make limited use of the results of the work provided by the contractor for the agreed project only. From an employer's perspective, careful consideration should be given to assess whether this will suffice. On the other hand, the contractor will have to ensure that any IP rights granted (or transferred) are in fact his to grant (or transfer) and do not infringe the rights of any third parties (e.g. of any sub-contractors). Employers as well as contractors will thus have to pay close attention to the specific IP rights granted (or transferred) and any upstream contracts affecting such grant / transfer.

5 Remuneration: „BIM for Free – or BIM for a Fee?“

The parties are obviously free to agree on the appropriate remuneration regarding the various BIM services and are well advised to specify whether the BIM remuneration is included in the general project remuneration - or is to be paid on top of any existing project fees. In order to facilitate the parties' discussion, the SIA-Addendum (SIA 1001/11:2018) contains a number of suggestions on how to address this issue including, among others, the payment of specific „BIM-fees“ based on an hourly rate, or the payment of a fixed „BIM-fee“ specified in advance.

In addition, the use of the BIM method has a material impact on the amount of work necessary in the traditional phases of a construction project as described in SIA 102 (provisions regarding the services and fees of architects) and SIA 103 (provisions regarding the services and fees of civil engineers). In general, more work is necessary in the early phases of a project and this should be reflected in the allocation of the related fee percentage per phase.

6 IT-Aspects: „Pressing the Right Buttons“

Finally, a number of Information Technology (IT) related aspects should also be addressed in BIM contracts.

On a more general level, IT-related obligations will have to be defined and appropriately allocated, in particular regarding provision of the IT infrastructure and responsibility for system availability.

On a more specific level, depending on the specific set-up of the BIM project and the method of cooperation imple-

mented by the project participants, additional requirements regarding data security and data protection, data backup obligations and data access rights should be defined.

7 Conclusion: „With BIM, There is No One Size Fits All“

Since BIM may be used in a multitude of ways, varying from project to project, there is certainly no „one size fits all“ contract template. Rather, the scope and content of BIM contracts will largely depend on the employer’s objectives and require-

ments, the project participants’ BIM-related abilities, and the specific setup and circumstances of the project in question. The critical issues to be addressed are known, as pointed out above. However, *the devil is in the details* – and those details will have to be custom-tailored to the project at hand. The existing documentation and guidelines should thus not be seen as „tick the box“ ready-to-use templates, but rather as checklists and „aide-memoires“ in order to help cover all the relevant areas.

For specific advice on the issues that may arise in BIM projects and for assistance in the drafting of BIM contracts, please contact our SW construction team in Geneva or Zurich.



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