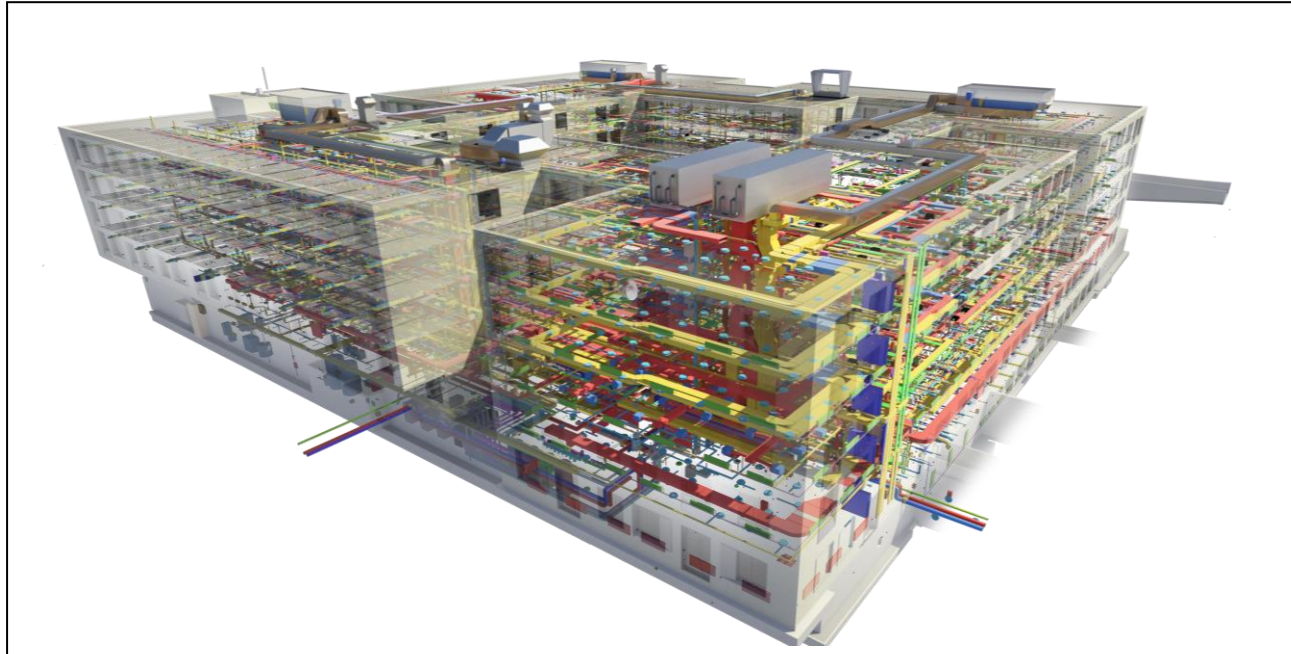


Felix Platter-Hospital in Basel (Switzerland)

First project with a bi-directional link to the CAFM system through open BIM standards



The new Felix Platter-Hospital is a 5-story building that gathers all necessary facilities, i.e. outpatient, diagnostic and inpatient departments with 320 available beds. The outpatient clinic, the Basel Mobility Center and the Memory Clinic are integrated in the new building. Moreover, the interior design of the new hospital responds sensitively to the diverse needs of tranquillity and confidentiality of both the patients and the staff.

The project delivery through the entire design and construction phase of this project has been Open BIM delivery based on the Industry Foundation Classes (IFC). During the first stage of the project, the owner defined part of a BIM Directive's objectives and requirements for the use of BIM throughout its entire life cycle, from planning to

operation. In the second stage the contractors, together with the client, defined the BIM goals and targets in all the project phases.

Multiple BIM-Workshops were held by the Information-Manager to increase the awareness and knowledge of BIM-processes and guidelines within the project stakeholders. In addition, Integrated Concurrent Engineering Sessions (ICE) took place on a bi-weekly basis. Interoperability problems were solved directly with the software vendors through regular meetings and workshops to increase the quality of the IFC files being exported from their software.

Client:

Felix Platter-Spital

Contractor:

BAM Deutschland AG (BIM Management)
BAM Swiss AG (BIM Coordination)
Marti Generalunternehmung AG

Design team:

Architect 1 : wörner traxler richter
Architect 2 : Holzer Kobler Architekturen
Structure: Gruner AG
MEP: Brunner Haustechnik

Contract value: CHF 240 Mio.

Floor area: 45,000 m²

Completion: October 2018

Key features

- BIM throughout its entire life cycle (from design to operation).
- Industry Foundation Classes (IFC) as main model exchange method.
- BIM Collaboration Format (BCF) to communicate issues between project participants.
- BIMcollab as online platform to communicate clashes and collisions
- Development of a bi-directional link to the CAFM Software.

Experience gained and benefits:

Communication

The use of IFC formats to communicate the models, and the use of BCF formats to communicate the clashes lead to great improvements in the planning process. IFC models are uploaded into BIM 360 Glue/Field for construction management purposes; and to update and add as-built information and documents to the model.

Quality

Solibri allowed to check advanced quality requirements like:

- Physical clashes (i.e. between two walls or doors)
- Non-physical clashes (clear space in the fire-escape routes...)
- Codes and accessibility
- Optimization process for distance between rooms

Cost

BIM increases the costs in the earlier phases of the project, on the other hand, risks and changes in the construction phase are reduced to a minimum. Solibri is used for quantity takeoffs in the planning and construction phase.

Time

The model was linked to the time-schedule to generate a construction and logistics simulation (4D time planning).

Innovation:

The Construction Information Management System (CIMS) and the Virtual Maintenance System (VMS) are bi-directionally connected with Computer Aided Facility Management (CAFM) System.

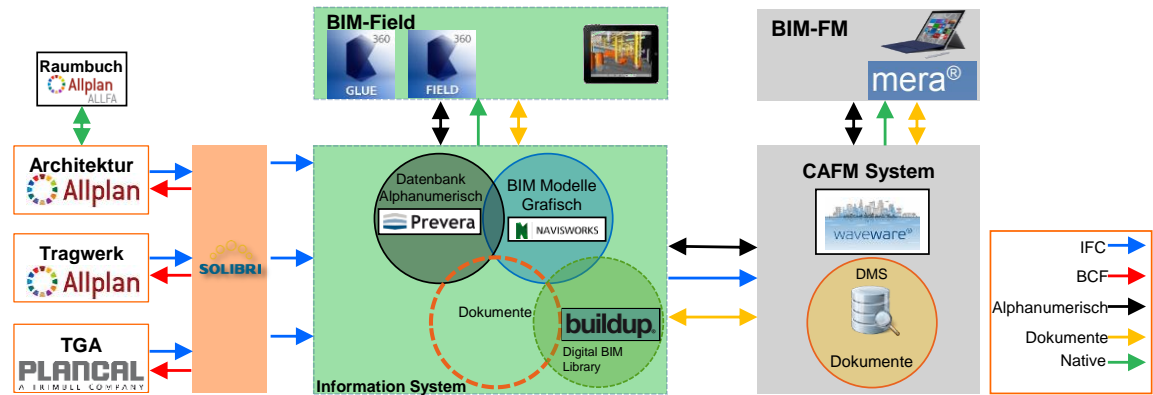
Laser-scanning will be used to create an As-Built Model for the core & shell, and MEP services during the construction phase. This As-Built Model will be used as the base model for the operation phase of the building.

Collaboration:

The strong collaboration with the external designers and the supply chain leads to a high quality and an efficient design and construction process.

		PHASE				
		PRELIMINARY STUDIES	DEVELOPMENT DESIGN	DETAILED DESIGN	CONSTRUCTION	OPERATION
BIM USES	GATHER		CAPTURE EXISTING FACILITY/SITE			QUANTITY TAKEOFF FOR FM
	GENERATE		BIMs			3D MODEL UPDATE
	ANALYZE		ISSUE MANAGEMENT/SOLIBRI			VIRTUAL MAINTENANCE SYSTEM VMS
			COMPLIANCE VALIDATION (CODES, STANDARDS, DISABILITIES...)			
			QUANTITY TAKEOFF			
	COMMUNICATE		LCC ESTIMATION			LCC SIMULATION
			ISSUE MANAGEMENT			3D VISUALIZATION FOR FM
			MODEL EXCHANGE THROUGH IFC			BIM-TO-FM
	REALIZE		DIGITAL DOCUMENTATION THROUGH HYPERLINKS			FM DOCUMENTATION
					PRE-MANUFACTURE	MANUFACTURE FM
				Construction Management	ASSEMBLE FM	
		CONTROL AS-BUILT			CONTROL FM	

The BIM Uses



Information System



Winner of bSI 2016 Award
 "Operation and Maintenance Using Open Technology"



Winner of BIM Cluster Stuttgart Award 2016
 "Prozesse / Organisation"