

BIM -Tender- Management

Process development for International Contractors in Tender Management

Graduate



Andreas Suter

Introduction: Building Information Modeling, or BIM, is progressively becoming an established process in the construction industry. Building owners are increasingly demanding these services from companies, architects and engineering firms. This can be observed in the UAE and the entire GCC states especially. With mega projects such as the Burj Khalifa, Masdar City or the Etihad Towers, Abu Dhabi and Dubai are among the hotspots for further development and innovation in the construction industry.

The Strabag SE construction group has been active in the Middle East for over 30 years and has helped shape this development. They want to develop further, especially in the field of digital construction and BIM, in order to remain an efficient and competitive company.

Problem: Despite the progress of digitization, the implementation of the BIM philosophy to increase efficiency has not yet been completed.

Today, building owners often still plan a construction project by drawing 2D plans, creating a bill of quantities and carrying out a price comparison to determine the best construction price. The contractor then has to work with still partly inaccurate and incomplete data and determine the price because the project usually does not have enough information at the moment of tendering and is constantly being developed in the further process. If details change during the course of the project and drawings are revised, the entire process has to be repeated and corrected by the contractor. This generates unnecessary additional work.

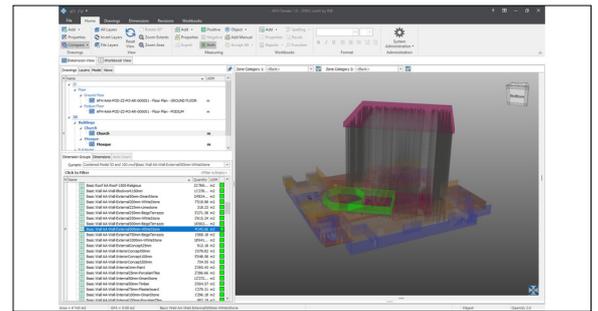
With BIM, a continuous concept is possible. A 3D model is developed, and elements are stored with information and linked to the bill of quantities. If changes are made in an area, they are automatically adjusted and corrected. For example, a wall needing to be moved will appear on all plans and in the specifications after the information has been revised. This allows for a constant cost and time security during the whole project.

To be able to carry out a BIM project, the work structures have to be adapted to move from conventional tendering to a purely model-based method.

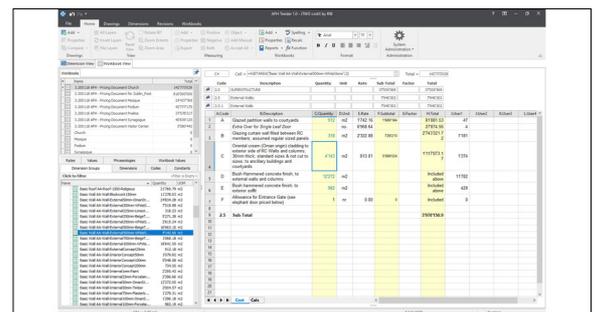
Approach / Technology: In order for construction tenders to be carried out efficiently and in a performance-oriented manner, BIM is needed as a universal communication platform between the client and contractors. To handle the volume of data from the 3D models, specialized and diversely positioned teams must work together. IT specialists are needed to create a high-performance environment, model authors to provide the model with the necessary information, quantity surveyors to link the elements

with the specifications, and estimators to calculate the best prices for the building using the information from the procurement team who know the market.

Measured elements Church Abraham Family House
Own presentation



Linked BoQ to the elements of the Model
Own presentation



Render of the Abraham Family House in Abu Dhabi
Tender Documents Zublin LCC Abu Dhabi



Advisor

Rolf Steiner

Co-Examiner

Manfred Wetzel
Christian Paar, ZUBLIN
Construction LLC, Abu
Dhabi

Subject Area

BIM / Digitalisierung

