

## TEKLA BIM AWARDS 2025 – Project Summary

### SO/ Hotel Budapest Structural Renovation

#### Project name, location, duration, participants

The project involved the comprehensive structural renovation of the Sofitel (SO/) Hotel in the heart of Budapest. Detailed structural design was carried out by CEOS Kft., commissioned by Bánáti + Hartvig Architects. The project spanned from 2022 to 2025, with close collaboration between multiple architectural, construction, and engineering stakeholders.

#### The role of TEKLA in the project

The complete model was built in Tekla Structures, from which steel and reinforced concrete formwork plans as well as demolition and reconstruction plans were generated. It proved particularly effective in accurately modeling the phases of structures to be demolished, retained, and newly built. Trimble Connect served as a common platform for efficient communication, document management, and change tracking. The models were linked live to the old, digitized microfilm plans.

#### Applied BIM solutions and innovations

Structural phases were color-coded, IFC files were selectively shared and automatically updated via Trimble Connect. Links attached to the original rebar drawings provided users with direct access to relevant information, minimizing search time. The received point cloud and geodetic surveys were effectively used to coordinate connections between old and new structures.

#### Model detail and construction support

A detailed model was created for all major structural components (Skybar, Grand Stair, Green Wall courtyard, Atrium lift cores, Roof structures, etc.). Steel and concrete elements were modeled in separate phases and statuses (existing, to be demolished, new). Linked PDFs, point clouds, and geodetic surveys further enhanced the design process.

#### Unique challenges and their solutions

The absence of the original plans of the 40-year-old building and tracking subsequent modifications posed the greatest challenge. Model-based planning and integrated documentation enabled efficient comparison between original and actual states. The structural complexity of the Grand Stair and roof reinforcements required particular precision in simulating connections and demolitions.

#### Project impact / results / lessons learned

This project is an outstanding example of how modern BIM tools can support the revitalization of a complex, historically structured building. The combined use of Tekla and Trimble Connect not only increased planning efficiency but also reduced construction errors.

and improved documentation clarity. These methods serve as a model for other renovation projects.