



Harrer Chocolate
Factory, Sopron,
Hungary

Allplan in practice

SWEET TREATS – CLASSICALLY PACKED

A building is more than just a structure, it is also a complete work of art, created in harmony between visionary architecture and innovative engineering.

One excellent example of a timelessly elegant building that deserves the description "work of art" is the Harrer chocolate factory located in Sopron, Hungary.

Engineer Tibor Gábor Báthory commented on the beginning of the project, saying: "You have to think of it like this: Mr. Harrer writes the script, and we – the architects and engineers – film the movie." Building client Karl Harrer had very precise

ideas, which Báthory and his team first turned into drawings, layouts and then finally into a building. Specifically: into a three-story chocolate factory with office and shop.

The professed aim was to achieve an overall project "without an expiration date" and not succumb to the current zeitgeist. In line with the principle "form follows function", simple forms are combined with unusual structural features. You could describe the



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form of the building thus: Three rectangular building complexes “floating” like chocolate boxes on and next to each other without central displacement. A seven meter long projection gives the whole structure a sense of weightlessness. There were many technical obstacles to overcome, particularly during shell planning. As the construction site previously contained the clay pit of a brickyard, the engineers were required to develop a sophisticated foundation. A five to seven meter thick, non-tight filling layer meant a pile foundation was necessary for the project. Combined with cast-in-situ concrete slabs, they provide sufficient load-bearing capacity.

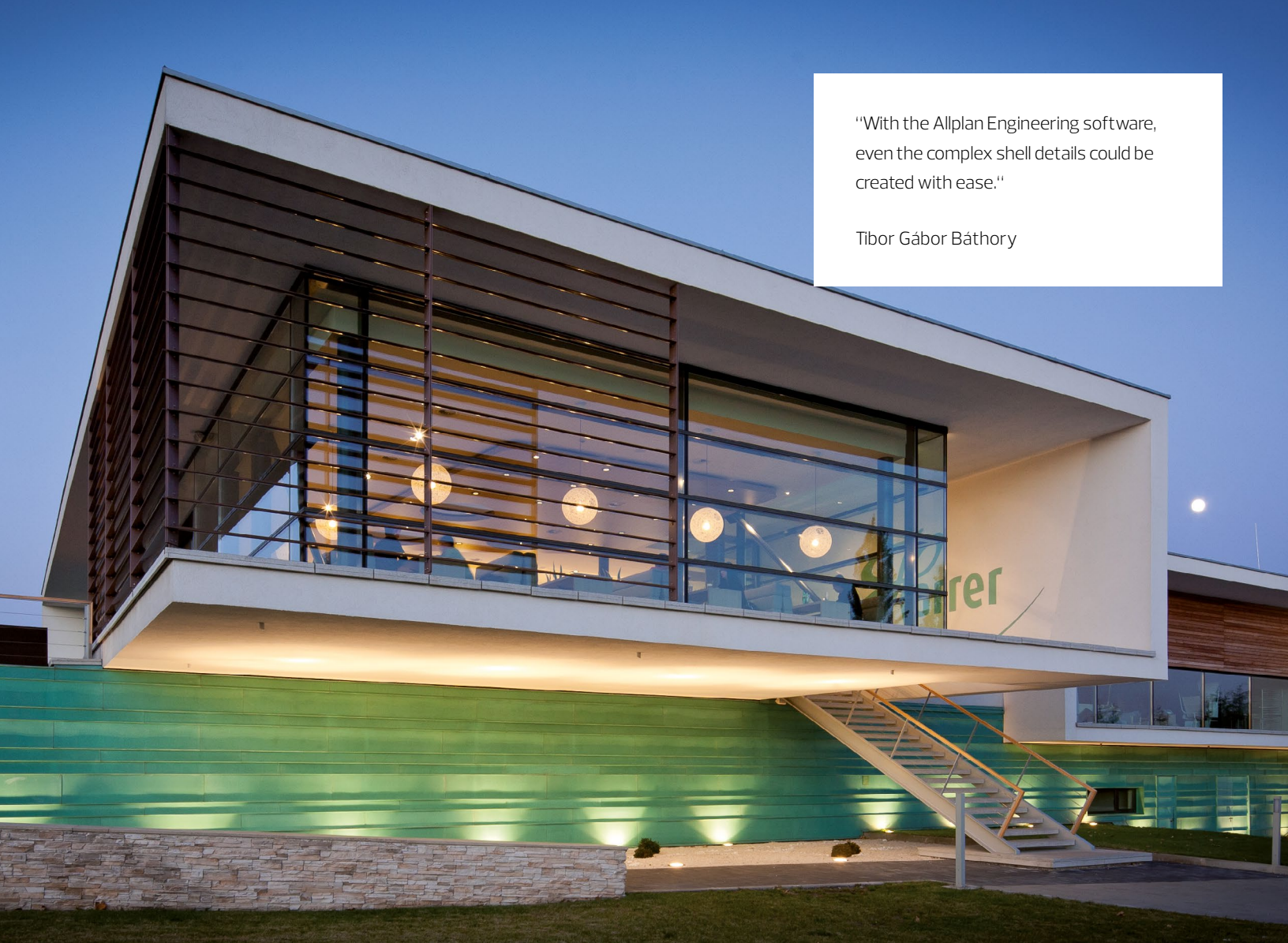
To meet the building client's requirements regarding a short construction period, the experts decided to use a fast production-enabled construction method using cavity wall elements, hollow-core planks and tensioned slab floors.

The upper and lower slabs of the protrusion were made of cast-in-situ concrete. The upper slab spans seven meters in one direction and nine meters in the other direction. The lower slab has a thickness of 18 and 23 centimeters respectively. The relatively high loads required a structural calculation method of the second order.

With the help of a high reinforcement content in the lower and upper position, the engineers were able to adhere to the prescribed deflections. The punch-through resistance was achieved with fixing fillets. The loads of the projection are borne by two frameworks in the interior. The 25 centimeter wide cast-in-situ concrete supports form vertical members, the lower slab and a binding joist below the upper slab define the horizontal members. The diagonal tension rods in both girders are made of BSt550 constructional steel with a diameter of 120 millimeters.

Tibor Gábor Báthory draws an extremely satisfactory conclusion about this project: “I think we have been able to build a classic here, a building which will bring pleasure to the Harrer family and visitors alike for decades to come.”

Engineering office Báthory Tibor Gábor mérnökiroda was founded in 1993 in Sopron. From building shell planning, the office's tasks have expanded over time to include building monitoring and local building management. Tibor Gábor Báthory was involved in the development of the prefabricated house system of Austrian company Decron GmbH and worked as a structural engineer for the load-bearing small panel systems of exported prefabricated houses of Sopron-based TAEG Aktiengesellschaft in Germany.



"With the Allplan Engineering software, even the complex shell details could be created with ease."

Tibor Gábor Báthory

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