



Credit Suisse, Zurich, Suisse

Stücheli Architekten AG, Suisse

A Built Landscape

The mission: to build an eleven-storey office building with space for 2,500 additional work stations, customer areas, a restaurant with kitchen and storage area, not to mention its own energy supply facility, and to sensitively integrate it into a nature reserve. Sounds impossible? Maybe, but that was just what Credit Suisse asked the architecture firm Stücheli Architekten AG in Zurich, Switzerland to do. And the Swiss architects proved that they were more than up to the job of designing the extension to the bank's headquarters in such a way that it blended seamlessly into the surrounding woodland landscape. Construction is planned to complete in early 2011.

The idea behind the extension to the Credit Suisse administration center in the south of Zurich was that the topographical structure of the environment would be reflected in the building, with the aim of creating a built landscape. As it takes shape on the old clay pit site of the former Zürcher Ziegeleien company at the foot of the Üetliberg mountain, tectonic layers provide the overriding design concept for the new parts of the construction project. The façade is horizontally structured by means of stratified balustrades. This effect is achieved by alternating glass elements – which wrap around the building in an uninterrupted line – with solid, pre-fabricated concrete components. The building is optically connected to its environment by the relief-like surface of the concrete, a color scheme that fits in with the surroundings, and roof planting. The stratified effect is further enhanced by the fact that the stories of the building are offset from each other. This offset accentuates and provides extra emphasis for the main entrance to the complex in particular.

Stücheli Architekten AG was founded in 1945 and is one of Zurich's oldest architecture firms. With approximately 70 employees, the company mainly carries out large construction projects for the service industry, such as offices and banks, and public buildings such as schools and hospitals. Stücheli Architekten holds the role of general planner on the Credit Suisse project, and manages a team of ten planning consultants. Two-thirds of the staff at Stücheli Architekten work with Allplan and some of these also use CINEMA 4D visualization software.

Solutions in 3D

At Stücheli Architekten, Allplan is used for preliminary studies and design, planning and planning execution, among other things, while CINEMA 4D is used to create 3D models for every stage from conception to execution. "Our goal is to use 3D to construct a volumetric model that can also be used for problem-solving," explains Bernhard Looser, project manager of the Üetlihof extension at Stücheli Architekten. "When it comes to design details at a scale of 1:10 or 1:5 – in other words, the fine details – we switch to 2D because of the large data quantities and time constraints."

Bernhard Looser considers Allplan to be a "modern and highly usable design tool", with its clear, pre-set structure being one of its main benefits. This structure also enables new employees to work quickly and effectively with the software after a very short training period. "This was an important prerequisite with the Credit Suisse project in particular, as each planning phase was followed by the next within a tight timeframe." Bernhard sees the flexibility of the system as yet another benefit: "Individual areas can be easily divided into sub-images that can then be re-assembled to create plans for different technical teams. The images are simply transferred as part of the plan assembly process. The result is a logical structure that is oriented towards today's requirements, rather than a mish-mash of interconnections."

PDF data exchange with planning consultants

The size and complexity of the project, as well as increasing time pressure, posed a significant challenge to the architectural team. The existing structure – a building with approximately 5,500 work stations – was to get additional office space for another 2,500 employees, as well as a new restaurant with a kitchen and storage area, customer areas, and an energy facility for independent electricity supply. "The building is like an iceberg – most of it is hidden beneath the surface," says Bernhard Looser. Seven of the eleven stories are underground, and this is where the electricity facility is located. And the transitions to the existing high-rise office block posed another challenge. "But Allplan was an invaluable support in the various planning phases," comments the architect.

This is mainly thanks to the thoroughness of the system. For Bernhard Looser, Allplan really proved its worth in the process of information exchange with the planning consultants: "For us, it was a great benefit to be able to create PDFs directly from within Allplan. Together with the Adobe Acrobat program, the PDF format is very popular among construction clients and planning partners for communicating quickly and effectively."

Another Allplan function that comes in useful at Stücheli Architekten is the Workgroup Manager. This is a user-friendly administration and user management tool that enables multiple employees to



access the same project simultaneously without creating redundant data. Bernhard Looser has only good things to say about the Workgroup Manager: "It means that access permissions can be assigned on a per-project basis, which makes everything really easy to manage. As well as that, the high level of module integration enables every administrator to work quickly." Not surprisingly, then, the planning phase was quickly completed and construction is now ready to begin in 2009..





What are the challenges in construction planning today?

One major challenge is that we have to develop and plan increasingly complex construction projects within ever-shorter time windows, and to implement these projects in accordance with the construction client's requirements. For this to be possible, you have to have an experienced team with the required know-how. And, of course, a system with a clear, logical structure, like Allplan.

In your opinion, how important is an end-to-end software solution?

The only way to have an unbroken data flow is to use software solutions that are compatible with each other. This avoids redundancies and reduces the risk of error. We use Allplan with its 3D functionality as early as the design phase, and then, in

accordance with the individual construction project, we leverage this data right up to the execution stage. Unfortunately, not all external partners use Allplan software, such as some heating and ventilation partners, and so the "one-stop solution" approach does not always work as well as I would like.

What are the main benefits to you of working in 3D?

A major advantage of integrated 3D work is the ability it gives me to assess and familiarize myself with a space in advance. This creates the basis for a visualization that I can then use when communicating with the construction client. This method can also be used to handle structural and design-related problems in the planning, unfinished structure and interior work stages.

What do you think will be the future planning trends?

Requirements in terms of design and structure in architecture have increased dramatically and are continuing to do so. Complex geometries, complicated lines and individually-shaped special components are also future trends. What this means is that it will have to be possible to directly transfer 3D models to the implementation stage – for blueprints in general arrangement and reinforcement planning, for example. The only way to achieve this is with a comprehensive, flexible system like Allplan.