

Your Benefits with Allplan

The integrated Allplan Engineering facilitates interdisciplinary collaboration between architects, structural engineers, building services engineers, quantity surveyors and facility managers without system discontinuities.

You can run through the building process beforehand using an intelligent building model: conflicts are detected at an early stage; the system transfers modifications automatically to all drawings and schedules.

With Allplan, you decide how you want to work. In addition to working with a 3D building model, hybrid and traditional 2D working methods are also supported – and you can switch to another method of working at any time.

Keep track of everything, even with individually designed construction projects involving complex geometries: Allplan combines object-oriented GA design with a 3D reinforcement model.

Minimize the risk of error: Allplan enables seamless interaction between CAD and CAE and you can use the structural model as the basis for the analytical model.

For more information please visit us at www.allplan.com

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Music Theatre Graz, Austria; Engineering Office convex.ZT GmbH, Graz



Allplan Engineering

Support right down the line

Are you looking for a CAD system that makes everything possible? A system that redefines efficiency in general arrangement and reinforcement design, a system where CAD and structural analysis are perfectly harmonized for interdisciplinary design? Allplan Engineering supports the entire design process, from the initial architectural design through to the finished general arrangement and reinforcement plans. Together with Frilo structural analysis and Scia Engineer, it provides a complete solution for CAD and structural analysis from a single source.

Reducing Your Workload

For many years, Allplan Engineering has been the benchmark in three-dimensional GA and reinforcement design and detailing. The key to this is the intelligent building model, which opens up a whole host of new opportunities for you. From the intelligent building model, you can derive drawings and schedules in addition to creating isometric projections or exploded views. The benefits for you include fewer queries and a reduced workload when creating detailed designs. Combining building objects, break-throughs, reinforcement and fixtures in an intelligent building model helps you keep track of everything. You can virtually run through the construction process in advance, enabling you to detect any inconsistencies and collisions at an early stage. Working with an

intelligent building model is particularly advantageous when it comes to modifications and adjustments to the original design: you carry out all amendments centrally so you only ever need apply them once because your amendments are then transferred automatically to all drawings and schedules. This saves time, reduces the risk of errors and allows you to concentrate fully on developing efficient structures.

Making Your Work Easier

Allplan Engineering provides you with all the components you require for GA design (e.g. walls, slabs, beams, columns, stairs) and architectural design (e.g. windows, doors, roofs). For skeleton constructions, Allplan Engineering provides you

with columns with corbels, socket foundations and purlins. If you are designing longitudinal engineering structures and earthworks, you can use a special bridge and civil engineering modeler. A pleasant side effect: quantity take-off occurs almost incidentally during GA design. The advantages of working with an intelligent building model take full effect in GA design. Working in the traditional 2D, creating GA drawings involves a considerable amount of work. You have to invest a lot of time and effort to correctly represent all components with openings, break-throughs or slits with cut, visible or hidden edges and the corresponding hatching.

In contrast, the use of an intelligent building model offers you a considerably easier method of working: you can generate foundation plans, ceiling views, wall elevations and sections directly from the building model. Representation of lines and hatching ensues on a largely automatic basis, unlike conventional methods of working whereby you as the user are solely responsible for correct representation in the various plans. This means you can enjoy maximum time savings and minimum error rates.

Design without Limits

Allplan Engineering provides you with a comprehensive range of tools for reinforcement design and detailing, from steel bars (with rebar coupler systems from Annahütte and Erico-Lenton) to stock and custom meshes (including stirrup meshes, rebar spacers and BAMTEC reinforcement carpets) through to standard-compliant labeled schemas as well as clear bending schedules. The reinforcement



Gotthard Main Tunnel
AlpTransit Gotthard AG, Luzern/Switzerland

design system is rounded off with catalogues for fixtures from Halfen-Deha, Peikko and Schöck. The intelligent building model is highly practical for reinforcement design: by simply switching drawing types from "GA drawing" to "reinforcement drawings", it takes very little time to reduce line thicknesses or hide dimensions, hatching and colored backgrounds. It is evident that, from the outset, Allplan Engineering was designed to support unrestricted, interactive GA and reinforcement design, especially when it comes to construction projects involving complex geometries. The interaction between component-oriented GA design, automatic formwork finder technology, predefined reinforcement groups and comprehensive grip-based control options ensures a high degree of practicality.

components from the CAD system to Frilo Statics (Allplan Add-on Structural Analysis) or transfer a complete building model from the CAD system to Scia Engineer structural analysis software (Allplan Add-on) and derive the structural system from that. Upon completion of the calculation, reinforcement required or adapted steel profiles are sent back to Allplan. This "Round-Trip Engineering" enables seamless interaction between CAD and CAE, making your work more efficient and convenient, but also reducing the risk of error that results from frequently modifying designs. Last but not least, you are able to keep to your schedules and process projects as calculated.

For creating attractive designs and models, Allplan offers a range of new CAD objects and textures optimized for this software. All of this predefined data is available on the Internet. For fast and effective utilization, users can search for, download and install the appropriate elements.

In addition, all objects are assigned a country code, thus also enabling targeted searches for international projects.

Calculation without Errors

Are you still designing with CAD and CAE software from different manufacturers that do not interact? Do you have to re-enter the data into your structural analysis software without the usual convenience of CAD? Then it is high time to make some changes! With Allplan Engineering, you can directly transfer

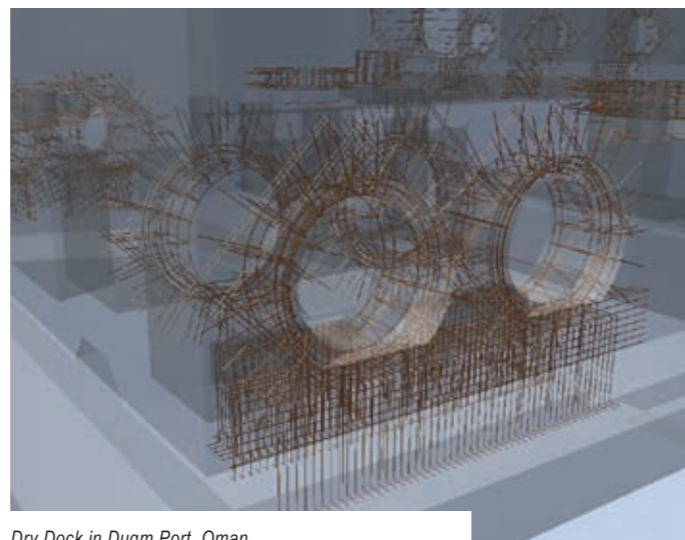
Allplan as a platform

As an integrated system, the flexible Allplan CAD platform is perfect for interdisciplinary work in structural and civil engineering:

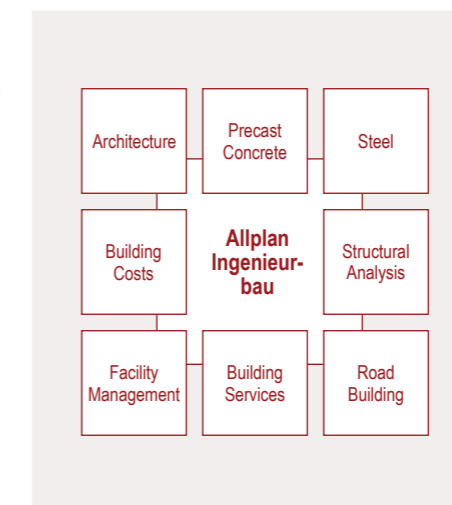
- Allplan supports more than fifty file formats, including DWG, DXF and DGN. The DWG format for AutoCAD 2010 makes it easy to exchange data with AutoCAD and other systems.
- Drawings from other CAD systems are imported or exported as two-dimensional PDF files. In so doing, the correct plan, scale and layers are retained.
- Complete building models or details can be provided as 3D PDFs.
- Using the certified 2x3 IFC interface, building models can even be exchanged with partners who do not work with Allplan.
- Using the STL interface, buildings created in Allplan can be printed out as 3D models. Using the SKP format, textured building models can be exported from Allplan into Google SketchUp. From there, they can be displayed in GoogleEarth or converted in 3D rendering programs.
- Data exchange can be optimized by means of predefined settings for import and export.



Music Theatre Graz, Austria
Engineering Office convex ZT GmbH, Graz



Dry Dock in Duqm Port, Oman
Daewoo Engineering & Construction (Daewoo E&C)



Intelligent Integration –
Allplan as an open CAD-Platform