ALLPLAN
A NEMETSCHEK COMPANY

ALLPLAN AEC 2022
NEW FEATURES IN THE VERSION

HIGHLIGHTS

The interaction of components has been fundamentally revised. Intersection within a drawing file is now consistently controlled via priorities.

New: Elements such as plates, webs, bolts and welds for structural steel connections as well as stiffening braces.

The functionality for terrain modeling and road design has been redeveloped with an intuitive interface to get started quicker.

With Allplan Bridge 2022, parametric modeling has been extended to include bridges made of precast girders.

The integration of PRECAST SOFTWARE ENGINEERING has added a precast solution to the ALLPLAN portfolio.

Allplan 2022 stands for the integrated working method of architects, engineers and contractors on a single platform from the initial design to successful implementation on the construction site. Allplan supports thorough capture of the construction environment with functionality for terrain model and road design. For the detailing of the building model, the new version offers optimized tools for modeling, visualization, concrete and steel structures as well as new functions for implementation on the construction site. At the same time, the new version impresses with optimized user-friendliness in many areas.

OPTIMIZATIONS FOR INSTALLATION AND PROJECT IMPORT

With the new Windows Installer, you can now get started even faster. The user guidance has also been redesigned and simplified. You decide which components you need, only these are downloaded and installed. The download and installation process has been speeded up. If you have a large number of workstations, you can save all settings and then run the installation completely automatically. In addition, projects can now be imported from any source directly in the project selection dialog. The Allplan Workgroup Manager can be activated or deactivated at any time.

EASY OPERATION RIGHT FROM THE START

To make it easier to get started with Allplan, the tooltips have been enhanced: when you hover over an icon with the mouse button, a brief explanation of the function is now automatically displayed. Developments to standardize the user interface have also been continued: For example, property palettes have been added for more object types such as openings and steel connections components. For the simplified use of cloud services, there is now a common login for Allplan Connect and Bimplus. Another new feature is the ability to rotate around a selected object in the animation.

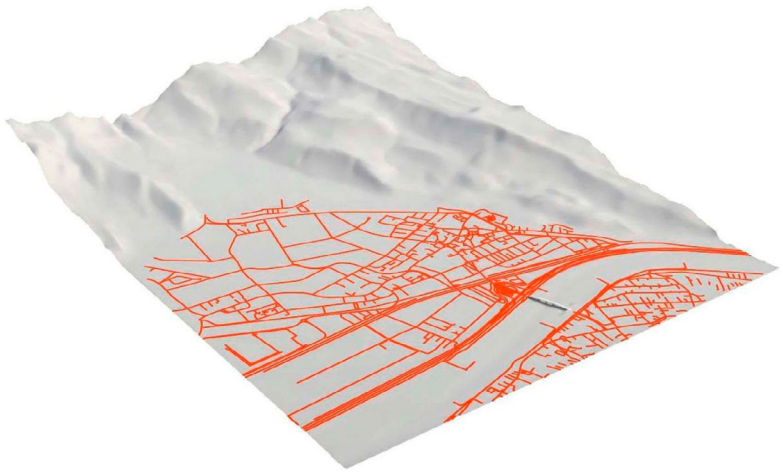
COLLABORATE FASTER AND MORE SECURE WITH ALLPLAN SHARE

Numerous optimizations have been made for work across locations with Allplan Share. For example, data is uploaded in the background without waiting times. In addition, there is a new backup function that can be used to automatically save revisions of drawing files and plans. If the Internet is not available or is disrupted, you can access the data in your computer's cache and simply continue working.

MORE EFFICIENT AND DETAILED MODELING

Detailed and precise models are a key prerequisite for efficient processing of BIM projects. With Allplan 2022, the interaction of components has been fundamentally revised. Intersection within a drawing file is now controlled consistently via priorities. Manual rework is no longer necessary. The resulting increased model quality reduces the effort required to create working drawings and detailed drawings. Collisions are avoided and quantities can be determined even more reliably.

More variety in steel construction



Terrain model and Road design

WRITING YOUR OWN SCRIPTS IS BECOMING EASIER AND EASIER

A number of optimizations in the Visual Scripting area make creating custom scripts even easier and faster. For example, the new palette designer allows parameters to be placed selectively on multiple tabs. Tooltips have been improved and sliders are now supported. It is also possible to access additional components such as columns and beams and to control IFC export. In addition, actions can be undone or repeated with just one click.

AUTOMATED REINFORCEMENT: FAST AND PRECISE

The automated reinforcement for beams, columns, walls and punching shear reinforcement introduced with Allplan 2021-1 has been improved in many ways. For example, the underlying PythonParts are retained even after placement and can be adjusted parametrically at any time. A new feature is the possibility to define user-specific member shapes. The content of associative legends is precisely controlled via drawing file filters. The ability to copy reinforcement complete with sections and labels has also been optimized. This drastically reduces the time required to document many similar reinforcement situations.

MORE VARIETY IN STEEL CONSTRUCTION

Based on the structural framing objects, bolted and welded steel connections have been newly developed for Allplan 2022. To accommodate the enormous variety, the steel construction connections are based on standard elements, e.g. for plates, cleats, bolts and welds. These are available in the new connection toolbox, but can also be combined into connections using Python scripts. The scripts are accessible to all users and can be adapted, extended, or even completely redefined for other steel connection components.

In addition, the grid on which many steel structures are based has been further improved in terms of display and labeling. Standard or country-specific material catalogs can be downloaded via Bimplus and linked to structural components. The bracing type has been added to the structural objects. In addition, automatic mark numbering is possible, even across different drawing files and when using the Allplan Workgroup Manager or Allplan Share.

NEW: TERRAIN MODEL AND ROAD DESIGN

The functionality for terrain modeling and road design has been completely redeveloped and includes an intuitive user interface to get started quicker. In addition, the import of point lists, LandXML and REB files as well as the transfer of road alignments from Bimplus is supported. To further optimize performance, relevant areas can be cut out of a terrain model. In addition, the number of points in the terrain model can be reduced. Discontinuities in the terrain can be modeled by break lines.

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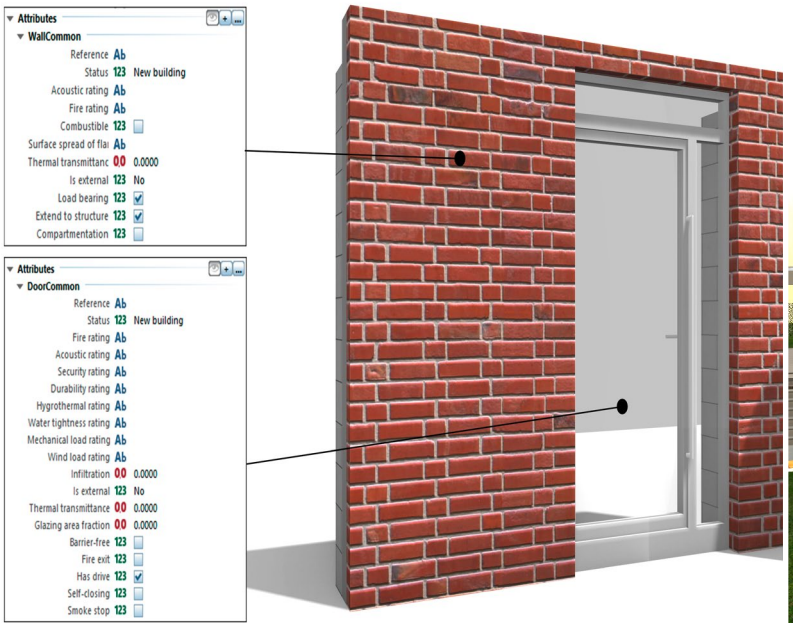

Valuable innovations for Attribute Management

Present projects even more convincingly

Road design supports parametric modeling of straight lines, transition curves and arcs in site plan and elevation. Slopes are generated independently. Longitudinal and cross sections can be generated and placed automatically according to predefined rules.

The design of utilities placed under or next to roads, such as water, sewage, electricity, Internet, natural gas or district heating, is also supported. Pipes and manholes are generated and displayed in dimensioned and labeled sections.

VALUABLE INNOVATIONS FOR ATTRIBUTE MANAGEMENT

Due to its central importance for BIM projects, attribute management with Allplan and Bimplus is constantly being further developed. For example, the performance of the interaction between Allplan and Bimplus has been improved. The formula editor for attributes now supports the Python programming language as well as a syntax check for detecting incorrect formulas. There is no longer any restriction on the length of attributes. The property palette has also been optimized: Attributes are now grouped into IFC-compliant PSet Commons as well as standard-specific and user-specific attributes. In this case, the associated IFC PSet is automatically activated by assigning the IFC object type. In addition, it is now possible to assign IFC PSets in the building structure.

PRESENT PROJECTS EVEN MORE CONVINCINGLY

Allplan's integrated visualization capabilities have long been impressive. For version Allplan 2022, the Graphics Engine has been revised so that you can make even better use of the capabilities of modern graphics cards and the Vulkan graphics interface for better performance and convincing visualizations. New effects are available for this purpose, including volumetric fog, bloom and lens flare. NVIDIA Denoiser uses artificial intelligence to remove graininess from real-time renderings. This significantly reduces the time it takes to get a high-quality image.

ADJUST VIEWS AND SECTIONS QUICKLY AND EASILY

With Allplan 2022, views and sections have been further optimized. For example, properties can now be easily transferred via the property palette, context menu or wizards. The visibility and representation of objects can be precisely controlled using drawing file and layer filters as well as explicit selection and deselection. The visible area can be quickly and easily adjusted via handles.

ENHANCEMENTS IN DIMENSIONING

With Allplan, associative dimensioning of angles, radii and arcs is now also possible. In addition, the adaptation of existing dimensions has been optimized. Furthermore, additional texts are possible, and the elevation dimensioning can be rotated.

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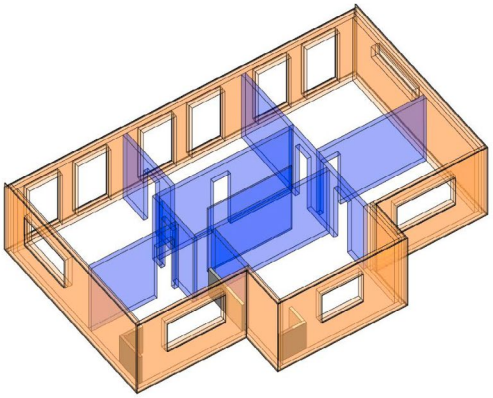

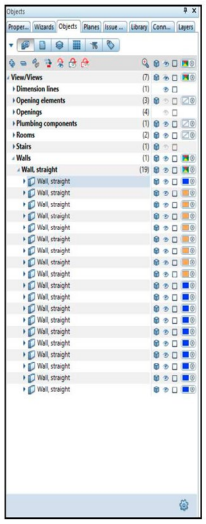

Detect errors more quickly thanks to color coding

New objects such as cranes are offered for the construction site equipment.

DETECT ERRORS MORE QUICKLY THANKS TO COLOR CODING

As of Allplan 2022, objects can not only be quickly filtered via the object palette, but also displayed in color-coded form. This allows component properties to be displayed clearly and checked at a glance. Attributes that have not been assigned or have been assigned incorrectly can thus be recognized quickly.

RELIABLE BASIS FOR COST PLANNING

The determination of traceable quantities is an essential task in the design process. With Allplan 2022, not only the quantities contained in the model (e.g. cubic meters of concrete) can be evaluated. It is also possible to output quantities that have not been modeled (e.g. square meters of formwork area). This provides a reliable basis for cost planning.

RELIABLE COLLABORATION IN OPENBIM PROJECTS

Smooth data exchange is a top priority for ALLPLAN. Therefore, Allplan 2022 and Allplan Bridge also support the new IFC 4.3 standard. This has been extended specifically for civil structures such as bridges, roads, railroad lines and waterways. Improved or newly added is the import of data from SketchUp (*.skp) and Wavefront (*.obj), which can transfer data that has both geometric and visual properties. Thus, a variety of content objects as well as laser scans (e.g. Zephyr or RealityCapture) can be imported. In addition, reinforcement data can now also be exported with couplers.

NEW ROLE IN THE ACTIONBAR: ALLPLAN CONSTRUCTION

BIM and digitization are not limited to the design process, but also play an increasingly important role in construction. Accordingly, the construction process is already being given greater consideration during design and prefabrication. Allplan 2022 supports this trend. New objects such as cranes and concrete pumps are offered specifically for construction site equipment.

NEW: DESIGN OF BRIDGES FROM PRE-CAST GIRDERS

With Allplan Bridge 2022, the options for parametric modeling have once again been significantly expanded. A special focus is the design of precast girder bridges. Bloss curves are also supported for the design of railroad bridges. PythonParts, which have been placeable in Allplan Bridge since version 2021-1, are now displayed in detail in Allplan Bridge, including parametric reinforcement and fixtures. Code-based design and checks can now be carried out according to the American AASHTO LRFD standard in addition to the Eurocode. For improved usability, undo and redo functions are now possible throughout.

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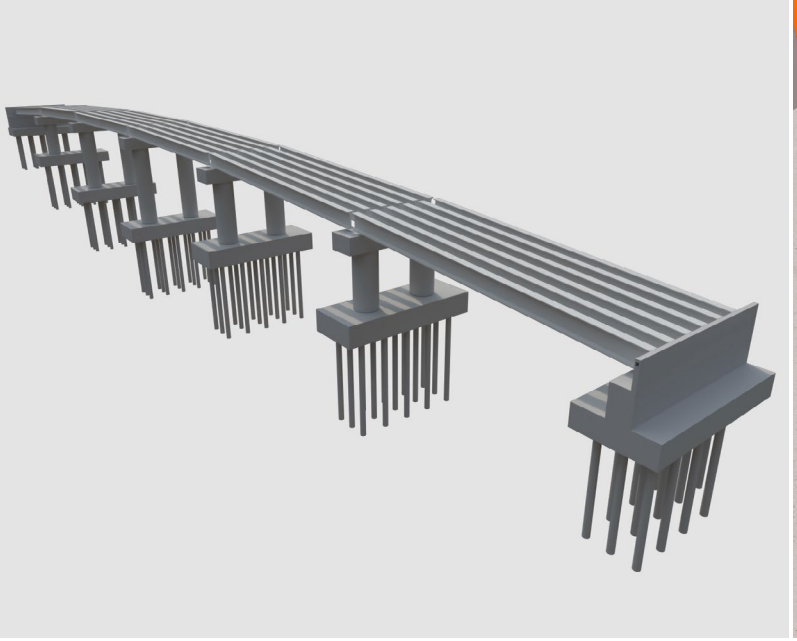
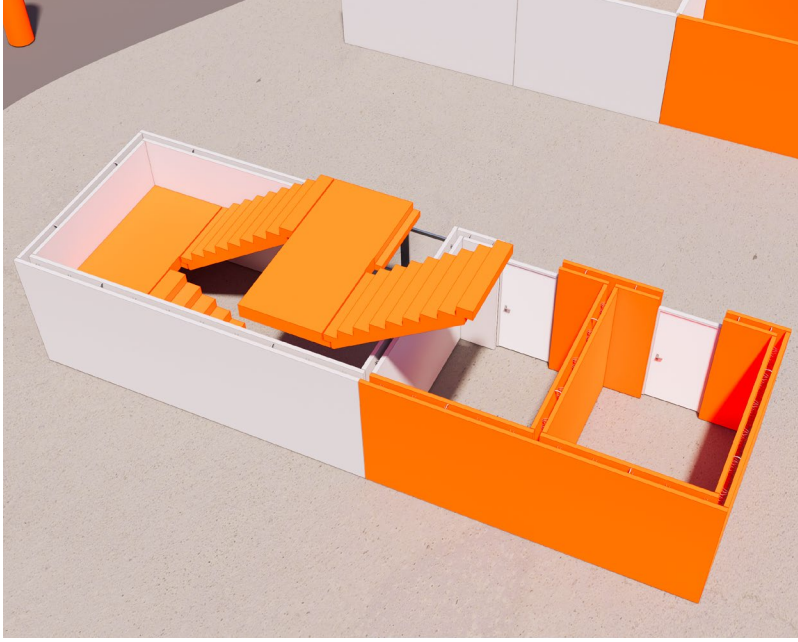


Design of Bridges from Precast girders



Solution for Design and production of Precast elements

NEW AT ALLPLAN: SOLUTION FOR DESIGN AND PRODUCTION OF PRECAST ELEMENTS

The integration of the previously independent Nemetschek brand PRECAST SOFTWARE ENGINEERING has added a solution for the design and manufacturing of precast elements to the ALLPLAN portfolio. As Planbar is already based on the Allplan platform, this opens up new possibilities for customers: Architects, engineers and construction companies can transfer BIM models completely digitally to industrial production, including connection to MES and ERP systems. In addition, precast plants can build on existing BIM models from designers and integrate them directly into the production process.

In a first step, the Allplan licensing system is now also available for Planbar. In further steps, work will be done on merging the two products. Customers are already benefiting from precast-specific developments, such as the new openBIM interface IFC4precast or automatically created element plans with sections, dimension lines and labeling.

MULTIPLE OPTIMIZATIONS IN BIMPLUS

The open BIM platform Bimplus for interdisciplinary collaboration offers a variety of improvements that, for example, speed up the loading of large models, simplify measurement and optimize document management. In addition, documents and links can now be attached in the Issue & Slideshow Manager and properties in the Issue Manager can be customized. Finally, export of selected objects in IFC format is now possible.

Current System requirements can be found at allplan.com/info/sysinfo

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