

# ALLPLAN 2021

## NEW FEATURES IN THE VERSION

### HIGHLIGHTS

All in all, working with Allplan Share has once again been significantly accelerated, enabling you to work productively even with less than optimal Internet connections.

To optimize the interaction between Allplan and Allplan Bimplus, you can now start the BIM Explorer directly from Allplan without any intermediate steps.

In conjunction with Allplan Bimplus, a new model converter is available (Serviceplus contract required) that can intelligently convert architectural and structural models into analytical models.

In Allplan 2021, floor and ceiling finishes are not displayed schematically anymore but with real dimensions, including in animation and in hidden view.

Allplan 2021 is the ultimate BIM solution to meet the challenges of the construction industry and benefit from the digital transformation. BIM software and ALLPLAN's industry-leading collaboration and integration tools form the ideal combination. Allplan 2021 offers groundbreaking technology for optimum performance: You can work on larger and more complex projects easier, faster and with more fun than ever before, even with challenging geometry, high levels of detail and numerous associations. ALLPLAN's cloud technology enables you to connect with the entire construction industry, use efficient workflows and take full advantage of BIM.

### SIGNIFICANT TIME SAVINGS IN MANY AREAS

Through a variety of adjustments, a fundamental acceleration of various work processes was achieved, which significantly improves the handling of large, complex and detailed projects with many associations:

When **opening a project** and **editing drawing files**, operations that are not immediately necessary, such as hidden calculations or texture preparation, are moved and later processed in the background on other processor cores.

Optimized interaction with the Parasolid® modeling kernel has especially accelerated the **modeling of free-form geometry**. But also, **the processing speed of complex components**, for example slabs with a large number of openings, has been improved, thanks to the fact that almost all changes affect only a small part of the

model, while the majority of the objects remain unchanged. The more precisely the changes can be narrowed down, the fewer objects need to be updated.

In order to increase the processing speed of **reinforcement objects**, the internal data preparation, the procedure for updates and the interaction with views, sections and legends have been optimized.

In Allplan 2021, finishes are now a permanent part of the model so that information no longer needs to be prepared repeatedly. In addition, by saving the results of Boolean operations, working with **rooms and finishes** under free-form surfaces or complex free planes has been greatly accelerated.

In the case of **views and sections**, the processing time was shortened, and the amount of data substantially reduced by filtering out non-relevant 3D bodies, components, finishes and textures. A preliminary hidden computation on the GPU of the graphics card provides further acceleration. At the same time, the final hidden computation is performed in full quality using all available CPU cores.

Optimized data preparation, avoidance of unnecessary updates and intermediate storage of data noticeably reduced the time required to **update legends**. You can use drawing file filters to define exactly which data is to be evaluated in **reports** which also contributes to a significant acceleration.



Improved teamwork with Allplan Share



Visual Scripting: Optimizations for the nodes

A noticeable time saving in the **drawing layout** has been achieved with Allplan 2021 because certain data preparations and intermediate results only have to be performed once. The data already prepared is used for further representations.

### IMPROVED TEAMWORK WITH ALLPLAN SHARE

With demanding projects, waiting times could already occur with only one user. In combination with teamwork, the requirements are again significantly increased since the changes of many users have to be processed almost simultaneously. In order to reduce communication via the Internet to an absolute minimum when using Allplan Share, up- and downloads and queries that are not absolutely necessary have now been consistently avoided through change tracking and intelligent caching of files and information. Further acceleration could be achieved by using multi-threading and switching to mass operations. All in all, working with Allplan Share has once again been significantly accelerated, enabling you to work productively even with less than optimal Internet connections.

### IMPROVED ACTIONBAR CONFIGURATOR

The ActionBar can now be used to configure all functions that are available in the current license. The other functions are greyed out.

### ENHANCEMENTS FOR GRIDS AND PLANES

Allplan 2021 now allows you to modify the length of each grid line individually, so that you can work on even more individual situations. If needed, grids can now also be exploded. The interaction with views and sections has also been improved, for example, grids are now also displayed in horizontal sections. For a better overview, planes are now displayed by absolute height.

### IMPROVEMENTS IN 3D MODELING

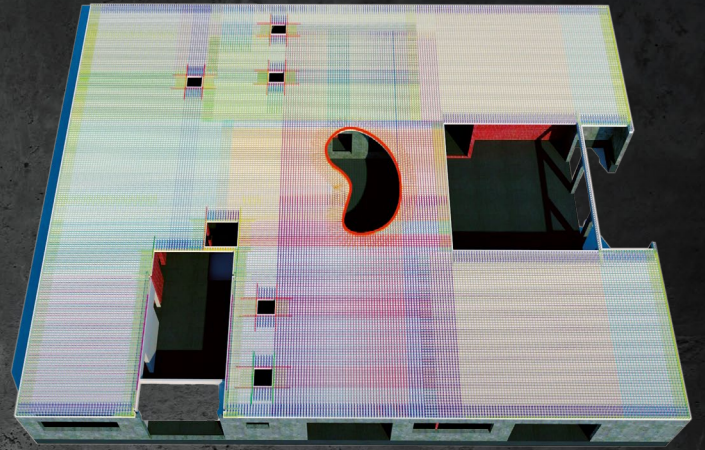
The "Copy along path" function now offers a simplified preview of parts. In addition, the behavior of the "Copy along Path" and "Extrude along Path" functions has been unified.

### VISUAL SCRIPTING: OPTIMIZATIONS FOR THE NODES

In Allplan 2021, existing nodes for Visual Scripting were optimized and new nodes were added. Allplan objects can be selected interactively for editing. The filter functions have been extended and there are new options for assigning,



Optimization of walls, roofs and structural framing



Various innovations in the field of reinforcement

modifying and removing attributes. Instead of using the library, nodes can now be inserted directly by double-clicking on the canvas. This speeds up the creation of scripts considerably. The shape, dimensions, position and material of structural objects can now be controlled using Visual Scripting.

### OPTIMIZATION OF WALLS, ROOFS AND STRUCTURAL FRAMING

In structural framing you can now modify multiple properties for several columns and beams in a single step and apply favorites to several objects simultaneously. You can now define a wall style for walls with the same composition. This helps to structure information better, simplifies change processes and improves data exchange. In addition, the editing options for roof surfaces were further expanded. Roof surfaces can now be added and removed again.

### IMPROVEMENT WHEN WORKING WITH FINISHES

In Allplan 2021, floor and ceiling finishes are not displayed schematically anymore but with real dimensions, including in animation and in hidden view. Object snaps and dimensioning are possible for all layers defined in the finishes. This significantly improves working with finishes.

### VARIOUS INNOVATIONS IN THE FIELD OF REINFORCEMENT

Allplan 2021 provides functions for subsequent splitting and reconnecting of rebars, for example, for inserting or moving openings or for considering concrete pours. In addition, the functionality for placing reinforcement along one and more paths has been optimized: Negative concrete covers, negative projections, and offsetting to edges with several path elements are now also possible. As a result, the arrangement of reinforcement in challenging situations can be controlled even more precisely. For area reinforcement and polygonal layouts, you can add additional fold lines at a later date and efficiently reuse complete reinforcement layouts via the clipboard or via the library. And when rearranging reinforcement mark numbers, you can now work with tolerances. This combines similar bending shapes and improves the clarity of steel lists and construction site logistics.

### NUMEROUS NEW FEATURES IN THE PYTHONPARTS

You can now assign the IFC attributes IfcObjectType and IfcObjectSubType to PythonParts. This improves data exchange. Newly added are PythonParts for columns with automatic formwork contour recognition, which are particularly suitable for the time-saving reinforcement





Office standard for BIM-compliant operation



Transformation of structural models into analytical models

of complete cast-in-place concrete columns. In addition, comprehensive functionality for the design of car parks made of precast elements is available.

#### ATTRIBUTE IMPROVEMENTS

Attributes can now have the status "undefined". This enables you to see immediately which attributes are already assigned and reduces the risk of incorrect information. Allplan attributes now also support formulas so that values from other attributes can be combined or calculated. This reduces the input effort and inconsistent information is avoided.

#### OFFICE STANDARD FOR BIM-COMPLIANT OPERATION

Allplan 2021 offers the new BIM EASY office standard, which supports BIM-compliant operation. It contains ready-to-use wizards for architects, engineers, planners and detailers with predefined format properties, attributes and building structures that can also be customized.

#### OPTIMIZATIONS IN IFC EXCHANGE

In IFC files, components are often described as boundary representation (BRep). This and also certain opening shapes mean that in many cases components are interpreted as general 3D bodies. This leads to restrictions in further processing and

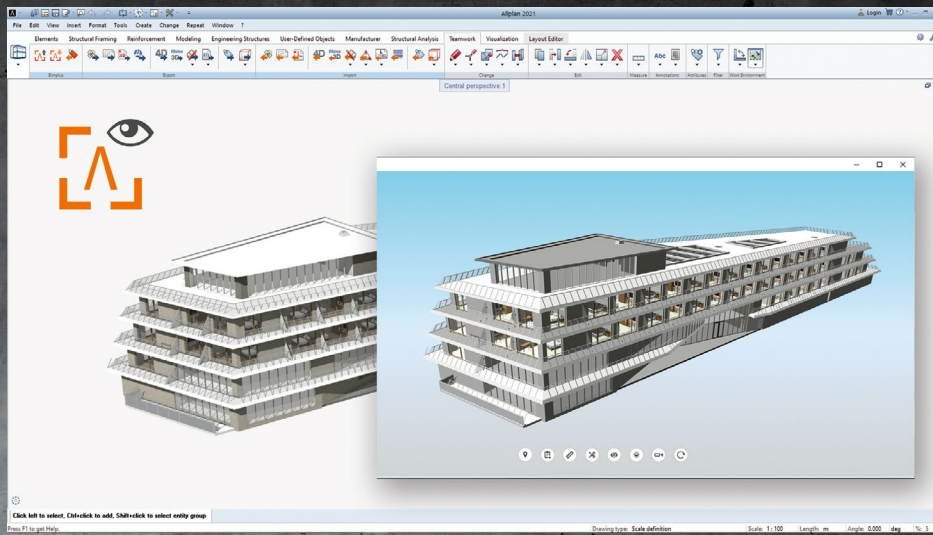
evaluations. Allplan 2021 extends the analysis of BRep geometries and openings during IFC import. As a result, more native Allplan building components such as walls, ceilings, columns, and, if necessary, with the corresponding openings can be created. This significantly improves the quality of the imported IFC models. When exporting IFC, you can also choose whether objects are exported as before as extruded solids – optionally with support for free geometry (NURBS) – or as BRep geometry.

#### TRANSFORMATION OF STRUCTURAL MODELS INTO ANALYTICAL MODELS

In conjunction with Allplan Bimplus, a new model converter, SCIA AutoConverter Light, is available (Serviceplus contract required) that can intelligently convert architectural and structural models into analytical models. Using the new Structural Analysis Format (SAF), the analytical model can be transferred to various structural analysis systems. This enables openBIM and a much better collaboration between architects, structural engineers and designers.

#### TECHNICAL PREVIEW: DIRECT IMPORT OF REVIT FILES

For the first time, the direct import of Revit files is possible within the scope of a Technical Preview. This means that Revit models can be



Interaction of Allplan and Allplan Bimplus

imported into Allplan and used without first converting them to IFC format. During import, native Allplan objects such as walls, columns, ceilings, beams, windows, doors and roofs are created.

### ISSUE MANAGER REPLACES TASK BOARD

The new Allplan Issue Manager replaces the previous Allplan Task Board. It unifies the handling of BCF issues in Allplan and Allplan Bimplus. Various BCF issues can now be imported directly into Allplan. It is also possible to create several BCF issues individually and publish them collectively at a later date.

### INTERACTION OF ALLPLAN AND ALLPLAN BIMPLUS

To optimize the interaction between Allplan and Allplan Bimplus, you can now start the BIM Explorer directly from Allplan without any intermediate steps. This makes it possible, for example, to view your own model together

with models from other disciplines (e.g. MEP) and place them in the overall context. In addition, downloading reinforcement from Allplan Bimplus for further detailing in Allplan is now supported.

### SUITABLE DEFAULT SETTINGS FOR MANY COUNTRIES

During the installation you can select suitable presets for almost all countries of the world. For the USA and Canada, labels, reports and legends in feet, inches and pounds are available. For Canada, you can now export reinforcement data in the aSa and Soule formats also in millimeters.

Current System requirements can be found at [allplan.com/info/sysinfo](http://allplan.com/info/sysinfo)

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