



E.ON administration building, Germany

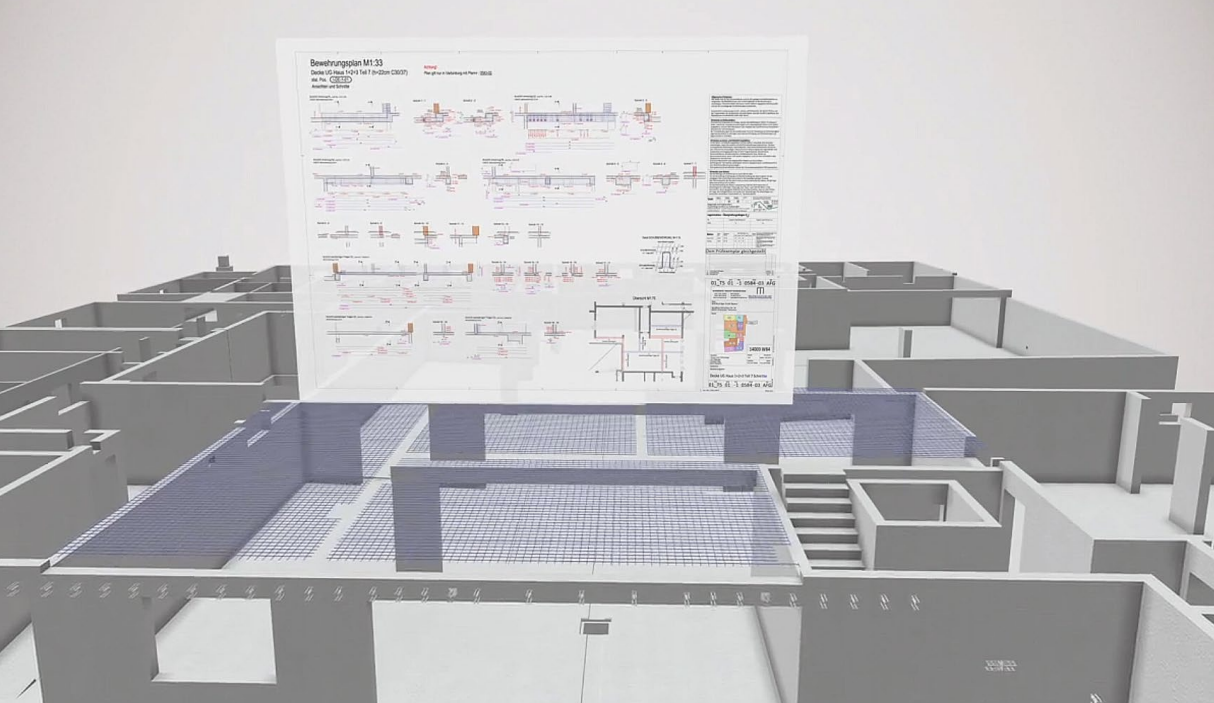
### Allplan in practice

## SOFTWARE-ASSISTED PLANNING COMPETENCE ASSURES HIGH QUALITY

**“Economic and efficient building is only possible if the planning process itself is efficient from the very start. 3D-assisted planning helps the engineers achieve this aim.”**

When compared internationally, engineering offices are expected to cope with high demands. This can only be achieved by maintaining permanent willingness to innovate and it demands continuous examination of the latest technical trends. MUCKINGENIEURE has an excellent track record when it comes to planning complex building structures using Allplan Engineering.

Through the consequent use of 3D planning tools, detailed and reliable dimensions can be calculated at an early planning stage. This provides reliable and precise data to comply with the economic targets set by the client.



Automatic updating of  
all drawings and bending  
schedules/  
Reliable quantity takeoff

## THE CHALLENGE

Walter Muck, owner of MUCKINGENIEURE, bases his design work on collaborative mindset. He regards himself and his team as part of a construction family composed of architects, engineers and construction companies, all involved in planning and all sharing joint responsibility towards the client. The common aim is to produce a construction plan that is an economic success.

MUCKINGENIEURE relies on the complex use of ALLPLAN software in the office, since economic and efficient building is only possible if the planning process itself is efficient from the very start. 3D-assisted planning helps the engineers achieve this aim.

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- > **Minimizing potential sources of error**
  - > **Using planning software competently**
  - > **Harnessing the added value of 3D planning**
  - > **Assuring cost certainty through early use of quantity surveying**
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## THE SOLUTION

The solution was to develop organizational structures to expand the high planning quality that exists in an engineering office, and maintain this for all projects. This was achieved by making reliable definitions of technical workflows.

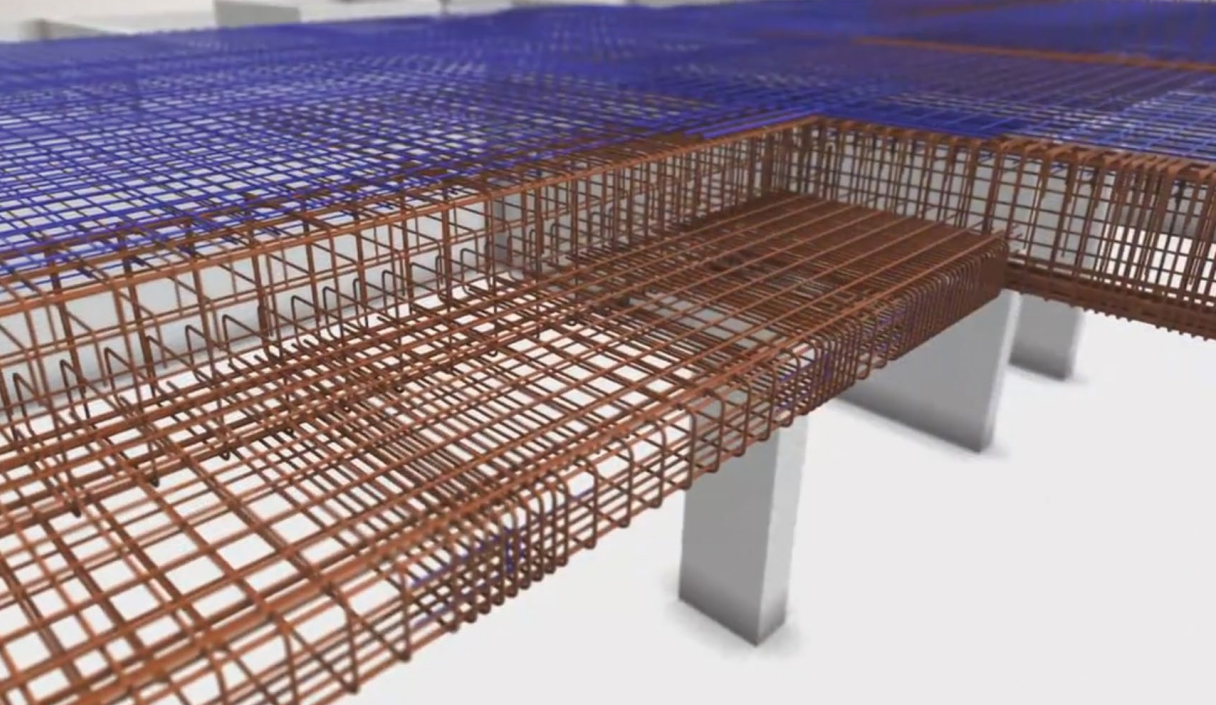
Inevitably, this led to many changes in construction planning.

MUCKINGENIEURE works using a 3D BIM model and stored attributes to increase flexibility in the face of requested changes and as a reliable method of verifying their feasibility. The engineers normally draw up lists and attributes themselves, since Allplan Engineering offers the opportunity to program individual reports, or save components and their properties.

The advantage: the component parts used can be renewed at any time.

Therewith Labelling changes automatically, whether this relates to quantities, linear meters, or units of weight. The component part list excludes incorrect inputs. It needs only a few clicks to obtain all the necessary information about component parts and/or mounting parts in the form of lists.

The proportion of steel included in concrete parts is determined to evaluate or estimate the steel weight. Many planners calculate these parameters by using square meter or cubic meter data and enter them by hand in Excel spreadsheets, which can take several hours. Of course, this work method cannot rule out typing errors.



Simply reinforce standardi-  
zed and costumed shapes  
in 3D

If there are any changes to the plan, the volume of all the individual construction parts must be recalculated and corrected, which is a laborious task. During 3D planning work using Allplan Engineering, dimensions are easy to change by starting a new evaluation on the changed 3D model. Since the software calculates dimensions precisely down to decimal points, calculation and typing errors are a thing of the past. In addition, a new dimension list can be generated within minutes. Reliable information on steel weights is obtained at the touch of a button. With paper plans, this would have had to be calculated laboriously by hand.

### **BENEFITS**

MUCKINGENIEURE has continued to achieve their internal high standards with great success and high efficiency using software from ALLPLAN for the 3D planning of complex building structures and for use in everyday planning. The office has worked with ALLPLAN software for the past 20 years and has achieved the following:

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- > **High economic performance**
  - > **Visible quality improvements**
  - > **International success**
  - > **Relevant planning security**
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"We received certification according to the 'Planer am Bau' (quality management system in the construction sector) quality standard in 2011 and are audited every three years by TÜV Rheinland. But even before certification, we actively lived the required quality standards at our office. Our work is very structured and we developed reliable internal standards early on. For this, we always rely on software from ALLPLAN."

Walter Muck

## ABOUT THE CUSTOMER

MUCKINGENIEURE was set up by Walter Muck in 1996. After graduating from the University of Applied Sciences in Munich, Walter Muck started his career in 1982 as a software developer in the engineering offices of Professor Nemetschek in Munich. Since 1996, his team, comprising engineers, planners and designers, have worked with international success and apply future-based technologies, the latest expertise, and a continuously growing pool of experience.



## ABOUT ALLPLAN

ALLPLAN is a global provider of BIM design software for the AEC industry. True to our "Design to Build" claim, we cover the entire process from the first concept to final detailed design for the construction site and for prefabrication. Allplan users create deliverables of the highest quality and level of detail thanks to lean workflows. ALLPLAN offers powerful integrated cloud technology to

support interdisciplinary collaboration on building and civil engineering projects. Around the world over 500 dedicated employees continue to write the ALLPLAN success story. Headquartered in Munich, Germany, ALLPLAN is part of the Nemetschek Group which is a pioneer for digital transformation in the construction sector.

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