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Software and service

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Fig. 1. Metal fabricators use Schüco hardware and software applications to design their actual metal fabrication units

These days, whenever we visit our customers and partners, we are increasingly asked, "What do we actually have to do to be involved in these BIM projects?" It's a simple question, but there is no simple, general answer – all the more so because we are an international business and there are very different framework conditions in each country. BIM structures are significantly further developed in the UK, Scandinavia, the Baltic States and Benelux than here in Germany, for example. The answer to this question therefore needs to focus on different aspects in each case.

It's easy to assume that all you need to do as a supplier of construction products is provide corresponding digital data records for your product ranges. You only need to make sure you have the right format for your customer to be able to use the BIM environment.

But we all know it's not that easy. Even if we just had to use one software application and data format (such as Revit), this simple approach would not be expedient. Questions from our customers show that the entire process chain for the BIM process needs to be supported.

As a subsidiary of Schüco International KG, Schüco Digital helps architects, design offices and metal fabricators with any issues related to hardware and software applications. We provide the right solutions for design tasks and metal fabrication. (Fig. 1)

Our job is not just to provide software support. We want to make getting started with BIM planning methods as pain-free as possible for our partners. For us, this approach means that we first provide comprehensive advice to our customers and then offer them the necessary data and software solutions in individual steps – with a support service provided throughout.

When do I need to provide my BIM data, to what LOD (what does LOD even mean?) and who will guarantee that my data is secure? And last but not least: how will I be paid for this special service?

– i –

The consultation

In many cases, we lay the groundwork by providing information about the process chain for BIM. This starts with clarifying organisational tasks which are assigned to the metal fabricator or specifier looking to take part in such a project. Does new software (or even hardware) need to be procured? Can employees be trained for this or would it be better to look for new employees who can already use it?

We also make sure that certain details about the processes are clarified, as there is still a great level of uncertainty here: when do I need to provide my BIM data, to what LOD (what does LOD even mean?) and who will guarantee that my data is secure? And last but not least: how will I be paid for this special service?

We think it's really important that our customers are convinced that BIM is not an end in itself and doesn't just benefit clients and architects. As part of the project team, they are also able to optimise their planning and coordinate better with their partners. This is the only way to generate the necessary level of acceptance to justify the level of work involved to get to grips with the BIM environment.

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BIM models on platforms

We freely provide our product data on internet platforms for the initial planning steps. We use the PLAN1 and BIM-object websites for this. Both platforms are primarily aimed at architects and project developers.

Our product data can be found there in different formats, from simple PDF planning information and AutoCAD 2D drawings through to 3D models in Revit or ARCHICAD format. The Schüco range is shown extensively here, with both standard products such as window and door units, sliding systems, façade and skylight constructions, as well as special components such as shading systems, access control and ventilation units. (Fig. 2)

These elements can be downloaded free of charge and then copied over to your project. They are general models. The parameter sets contain product information from the manuals. The 3D models in Revit or ARCHICAD format also contain 2D profile section details and floor plans to allow customers to make a precise assessment of the attachment to building structure at this early planning stage.



Fig. 2. Schüco products can be easily integrated in the BIM model



Fig. 3. The interface can be used to import specific building components into BIM models

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Project-specific BIM models (Schüco Revit interface)

As the BIM library is so practical and easy to use, the level of information about the units eventually becomes insufficient as the project progresses. In order to obtain BIM models with credible parameter data, we provide a simple yet secure tool in the form of the Schüco Revit interface.

The Schüco Revit interface can be found alongside the pure product data on the online databases of PLAN1 and BIMobject. The interface enables the direct transfer of unit information from a Revit project to the metal fabrication calculation software SchüCal: possibly the simplest communication interface between specifiers and fabricators.

After installing the Schüco Revit interface as a plug-in in Revit, specifiers can save information about wall-based opening units (windows, doors, sliding systems, façades etc.) as an r2s file via a brief dialog box and then send it on. (Fig. 3)

Metal fabricators can import this data directly to their usual planning environment (the SchüCal software) and analyse it. In SchüCal, they can accurately create the unit required by the specifier. They then export the unit data in Revit or IFC output format from SchüCal and send it back to the specifier.

The specifier imports this data into their Revit project and the old units are automatically replaced with the latest SchüCal BIM units. Manual positioning is not necessary. All parameter data that contains the units is reliable and resilient thanks to the check in SchüCal (structural properties, U value, Rw value, price etc.). Furthermore, almost every façade design is possible – even façade solutions with complicated geometries are no longer an issue. (Fig. 4)

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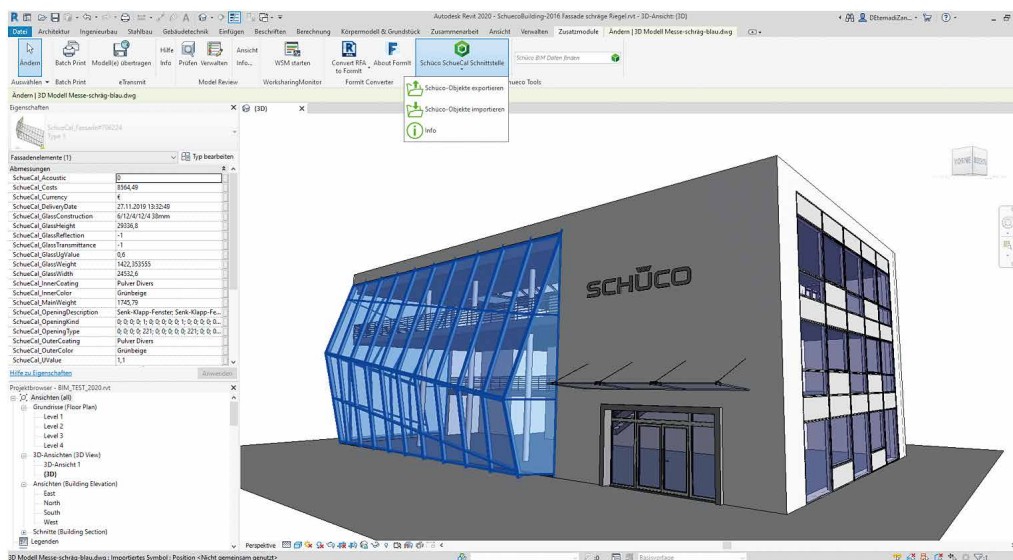


Fig. 4. Import complex façades from SchüCal

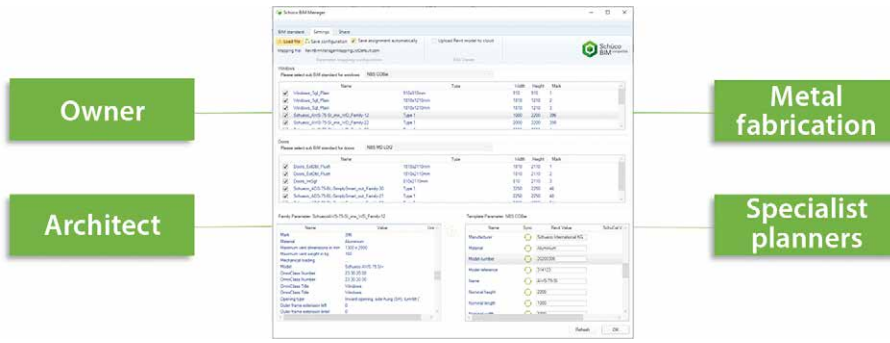


Fig. 5. With the Schüco BIM Manager, unique building component information can be entered and managed in a standardised way

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Individual BIM parameter lists (BIM Manager)

The more accurately the necessary building component properties are specified in advance, the easier it is for everyone involved in the project to meet these requirements. Unfortunately, the standards for the shared parameters of a building component are still not clearly defined. The Construction Operations Building Information Exchange (COBie) defined by the NBS in the UK can be held as an example in this regard. (Fig. 5)

Some critical information is often missing in the automatically generated native data for the components in standard BIM programs. The new Schüco BIM Manager remedies this. The web-based tool provides quick, easy access for creating individual parameter lists and project-specific parameter standards for defining units. Alternatively,

you can also use country-specific parameter standards as templates.

The architect can clearly define what information they need for the building component and the metal fabricator can amend this or add more important data. To speed up the process even more, an interface for direct exchange between Revit and SchüCal will be provided which automatically reads all data that has already been defined.

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Our BIM service:

Software is only as good as the service that comes with it. This is why we advise users of our BIM tools in a number of different ways. General information and instructions can be found on our homepage (www.schueco.de/bim or www.schueco.com/bim). We provide webinars and a number of customer seminars, as well as directly contact our customers, in order to help them get to grips with BIM.



Fig. 6. Create the perfect Schüco solutions through teamwork (Photos/Fig.: Schüco)