

Case study

gruner >

thinkproject

GET BETTER EVERY DAY WITH BIM

DESITE BIM impresses with
flexibility and reliability at Gruner



The Gruner group of companies

The Gruner Group is one of the leading construction service providers in Switzerland.

YEAR OF FOUNDATION: 1862

LEGAL FORM: Public limited company since 1970

CONSOLIDATED SALES: CHF 144 million (2019)

NUMBER OF EMPLOYEES: approx. 1000

SOCIETIES: 19

LOCATIONS: 32

CERTIFIED: SN EN ISO 9001:

2015, certified on November 1st, 2018, valid until December 16th, 2021

Gruner Roschi AG

Gruner Roschi AG specializes in HVAC and building climate. The "Digital Planning" team is also located here.

YEAR OF FOUNDATION: 1972

NUMBER OF EMPLOYEES: approx. 45

COMPETENCIES: Building technology

Building climate

Data center

Electric

Energy systems

Building and room automation

Geothermal energy

Heating, ventilation, air conditioning, cold

Laboratory, clean rooms, institutes

Line construction

Sanitary, sprinkler

Technical fire protection

MANAGEMENT SUMMARY

Within the Gruner Group, a leading Swiss construction service provider, Gruner Roschi AG in Köniz near Bern specialises in technical building equipment (TGA or HVAC). Here, special emphasis is placed on optimising the planning processes. Building Information Modeling (BIM) has been "set" as a planning method for many years to make early, reliable statements about quantities and costs. The digital planning department was looking for tools that could take on tasks beyond the actual modeling. An important requirement was "everything from a single source". With the decision to implement DESITE BIM from thinkproject as the central tool for model testing and quantity determination from the digital building model, planning quality and calculation were raised to a new level. The software provides all the necessary tools and is now a central component of TGA and HVAC planning. As a training partner, Mensch und Maschine (MuM) has made planners and engineers at Gruner fit for BIM and for dealing with Autodesk Revit and the tools included in DESITE BIM. Several employees were trained as BIM designers, BIM coordinators and BIM managers as part of the "BIM Ready" training. In this

user report you can read how to use thinkproject software for automatic quantity and cost determination today.

The Gruner Group is one of the leading construction service providers in Switzerland and worldwide.

The group includes a total of 19 independent companies that work closely together. A high level of competence, many years of experience, extensive specialist knowledge and the willingness to learn in every project guarantee the high quality of the engineering, consulting and planning services. The company acts according to the motto "we plan for people" and has been contributing to a livable built environment with its work for 150 years.

Gruner Roschi AG in Köniz near Bern is an engineering and planning company specialising in building technology, energy systems and line construction. This is also where the "Digital Planning" department is located, where a team of ten under the direction of Manuel Frey researches methods, sets up new processes and tests software tools. This creates concepts for the entire group. "In our 'Lighthouse Projects' we show how our ideas work and are getting a little bit better every day," Says Manuel Frey.

"One thing is clear:

**Whoever realises the most interesting projects
with the smartest methods, the most talented employees
come to themselves.**

In today's situation on the job market, that's crucial. "

MANUEL FREY

Head of Digital Planning, Gruner Roschi AG

Use the digital building model correctly

Building Information Modeling (BIM) has been dealt with since 2013. The method is the silver bullet for end-to-end processes and enables early, reliable statements about quantities and costs. The BIM Compendium, which was developed together with Ernst Basler + Partner, Herzog & de Meuron and ZPF-Ingenieure AG, was launched in 2015 for the first time. Since then, the company-wide BIM strategy has been continually developed; people are looking for suitable tools for the entire group.

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It is important for us that we later receive the correct information from the model, evaluate it and be able to transfer new results back,
explains Manuel Frey.

„

Tools were sought for the evaluation, which should come from a single provider if possible. Thematically,

it was about two things: on the one hand, collisions between pipelines of different trades and between pipes and walls must be reliably recognised, the required quantities of material should be automatically transferred to the specifications so that quantities and costs can be reliably determined at an early stage.

One tool for all tasks

thinkproject soon found the toolbox they were looking for. The DESITE BIM software offers functions for analyzing and manipulating digital building models in the IFC exchange format. It consists of six independent products – from DESITE md pro, the option for BIM managers and BIM coordinators with all functions, to DESITE touch, a mobile application for tablet PCs with a Windows operating system that is easy to use and brings model information quickly to the construction site. The planners and engineers at Gruner Roschi mainly use DESITE md pro today. Wherever you need to call up information without BIM know-how, DESITE custom is in use, and the free BIM viewer DESITE share is available to anyone who wants to get a quick overview.





Software and training from a single source

By choosing DESITE BIM as the central tool for model editing and evaluation, the decision was also made in favour of Mensch und Maschine as a supplier of DESITE BIM licenses and as a partner for advice and training.

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MuM's BIM Ready training program makes our team fit for using BIM as a method.

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We have trained some of our colleagues to become BIM managers and BIM designers, because MuM conveys knowledge and skills at a high level here,” says Manuel Frey, who is also part of the team of external speakers at BIM Ready.

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This is typical BIM: everyone looks beyond the company's boundaries and benefits from the knowledge, ideas and experience of others.

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Digital building entry and 'bill of quantities'

Today fire protection also processes digital models without modeling software, using just DESITE md pro. All information that is necessary for the digital building entry can be brought in with the help of DESITE BIM. In addition, there is the collision check, which increases the quality of the digital models.

The main area of application of DESITE BIM is the way of quantities from the model to the specification sheet, which has so far been managed with a lot of manual work and concentration – a lengthy procedure. Today building data is stored in the modeling software as an IFC model (Industry Foundation Class – data exchange format in BIM); DESITE BIM reads the data, determines the quantities and outputs the result in PDF or HTML format.

Expand yourself

DESITE BIM can be expanded with your own programming. Gruner Roschi z. for example, has not he developed an app that merges the quantities with the correct item texts into the finished specification sheet. The key is – as with the compilation bill of quantities – the breakdown of construction costs according to eBKP-H (construction cost plan for building construction), which is stored in the digital components and thus automatically belongs to the model. Thanks to this automated procedure, the quantities can also be tracked quickly in the event of changes so that the basis is laid for timely cost control.

DESITE BIM in practice

The new BIM tools at Gruner Roschi have passed their baptism of fire and have proven their worth in the renovation of Bern's Schönbürg. The Schönbürg, built in 1970, is the former headquarters of the Swiss Post. The areas in the seven-storey south, west and east wings will be converted into apartments, a hotel will be built in the north wing, and areas for fitness centers and shops will be available. For this project, Gruner Roschi planned the building services systems according to current standards. Ventilation systems with heat recovery ensure air quality and contribute to energy optimisation. In addition to the Minergie building standard, the protection of monuments had to be taken into account when planning, which made high demands on building physics, statics and fire protection.

DESITE md pro contributed to the planning quality here: the HVAC model was developed in this project with Plancal Nova; with DESITE md pro, the quantity extracts for the service specification could be read out directly from the IFC data and processed further. The app developed in-house enables the data to be filtered and to decide which properties of the respective component should be included in the report. Calculative surcharges can also be recorded and included in the calculation. Generating the reports only takes a few seconds for complex ventilation systems.



Use the digital building model correctly

At Gruner Roschi, DESITE BIM has now become the central element of the seven dimensions of digital planning. In addition to length, width and height;

Planning is about time

4th
DIMENSION

Construction costs

5th
DIMENSION

Sustainability

6th
DIMENSION

Costs of operation

7th
DIMENSION

Planning and construction costs can be delivered earlier thanks to the mass determination with DESITE BIM