

Viega at the ISH 2025: Hall 4.0, Stand B02/B20

Viega supports with practical expertise in the introduction and implementation of digital construction processes.

Integrated planning with BIM as a prerequisite for sustainable construction

Frankfurt/Attendorn, 17 March 2025 - Across Europe, buildings are responsible for 36% of carbon dioxide (CO₂) emissions (source: EU Commission, 2020). Digital construction can make a measurable contribution to reducing these high CO₂ emissions. An important starting point is integral planning with the working method of Building Information Modelling (BIM). Viega supports planners, installers and operators in the introduction and implementation of BIM with its Viega Building Intelligence Service. The impact of digital planning and implementation on construction projects is demonstrated by the example of Viega World. The seminar centre is a showcase project for digital construction in which sustainably generated energy is used particularly efficiently.

The construction industry is facing enormous challenges. In addition to the sharp rise in the price of building materials, the shortage of skilled workers is causing major problems. At the same time, the quality of workmanship is becoming increasingly important. As well as improving comfort and safety, this also has an impact on energy consumption. According to EU regulations, all new buildings should be zero-emission buildings by 2030. For existing buildings, zero emissions are required by 2050.

These goals can only be achieved by significantly increasing the digitalisation of the entire construction process. This is because "integral planning with BIM and networked technical building equipment make it possible to build up a comprehensive database that is updated throughout the building's development. It simplifies the planning and construction processes, makes construction costs more calculable and measurably improves the construction performance itself," says Ulrich Zeppenfeldt (Vice President Global Service & Consulting at Viega). At the same time, this approach ensures more sustainable building operation: "The ability to intelligently network the technical

Your contact: Juliane Hummeltenberg Public Relations

Viega GmbH & Co. KG Viega Place 1 57439 Attendorn Germany

building services allows regenerative energy inputs and consumption reductions to be optimised and thus efficiently coordinated."

Requirements as a starting point

The first essential step towards a digitally sustainable building is to accurately assess demand. This includes determining how much energy is needed for heating and hot water, what the load curves and concurrences look like in normal operation, and what interrelationships need to be considered.

Using the digital model of integral planning with BIM, the requirements data also form the basis for variant analyses using simulation to analyse key sustainability aspects of the construction in the subsequent planning phase. This includes, in particular, the technical building equipment, which has a decisive influence on the resource-saving operation of the building, both functionally and through the life cycle assessment of the installation. An important keyword in this context is the Environmental Product Declaration (EPD), which describes standardised and transparent information on the environmental impact of a product over its entire life cycle.

In this way, the digital planning basis directly opens up the potential for ecological optimisation, which has an equally sustainable effect from installation through the operating phase to dismantling.

The challenge: data networking

In order to realise this potential, however, it is necessary to ensure an unhindered flow of data for optimising energy flows in building operations from the early planning stage. This requires a consistent and systematic methodology that links technical building equipment, building automation and facility management using BIM, from planning through to execution. It also requires a coherent representation of the energy-related characteristics of the technical building equipment, including performance indicators and operational attributes in addition to technical product data. The aim must be to merge the requirements data master, via the sustainability attributes of the installed products and systems, with the data from the BIM model in such a way that an appropriate building rating or certification can be derived.

The consistent data is also available during the operating phase. This enables seamless monitoring of the key factors influencing resource consumption -



Your contact:
Juliane Hummeltenberg
Public Relations

Viega GmbH & Co. KG Viega Place 1 57439 Attendorn Germany

viega

Press release

such as the use of energy for heating/cooling, water consumption and energy used to provide potable water hot (PWH). By comparing planned data with measured actual values, it is possible, for example, to identify above-average heating requirements or hygiene-critical temperature changes in potable water installations at an early stage and to take appropriate measures. Another application is the resource-saving balancing of "competing" thermal systems, such as short-term active air conditioning and the rather slow concrete core activation.

Viega World: a showcase project for sustainability

In view of the complexity of the subject, Viega offers "Viega Building Intelligence" (see box) to support planning offices and planning contractors in the introduction and implementation of integral planning with BIM. The range of services is based on the extensive practical experience that Viega gained during the construction of the Viega World seminar centre. This is the first time that an educational building has been so consistently and scientifically implemented using BIM. In addition to functional, didactic and organisational requirements, sustainability played a central role in the operational phase.

The result is a comprehensive energy concept consisting of a modern, insulated building envelope, a photovoltaic system covering several thousand square metres, two heat pumps and the use of local heating from a neighbouring Viega production plant. A comprehensive monitoring system integrated into the building automation system seamlessly records the energy generated as well as the consumption-related sinks (ventilation, cooling, heating, lighting, potable water heating, etc.). This means that any necessary efficiency adjustments can be made in good time. As a result, Viega World is an energy-plus building, despite strongly fluctuating load profiles due to changing usage. This means that on an annual average, more energy is generated than is required for operation. The German Sustainable Building Council (DGNB) has therefore awarded Viega World its highest certificate - "Platinum" - confirming how effective the approach of integral planning with the BIM working method is for the future of sustainable construction.

Your contact:
Juliane Hummeltenberg
Public Relations

Viega GmbH & Co. KG Viega Place 1 57439 Attendorn Germany

viega

Your contact: Juliane Hummeltenberg Public Relations

Viega GmbH & Co. KG Viega Place 1 57439 Attendorn Germany

Phone: +49 (0) 2722 61-1962 Juliane.Hummeltenberg@viega.de www.viega.de/medien

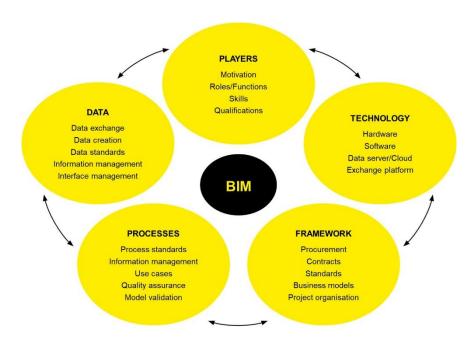
EXTRA BOX

Viega Building Intelligence" service

The "Viega Building Intelligence" service is based on four pillars: consulting, training, management and systems. "Consulting" includes, for example, the joint development of a target definition and the steps that may be necessary to initiate a change process in the company towards working with BIM. In the "Training" module, Viega offers support through training courses and provides relevant information and up-to-date knowledge on building with BIM based on its own expertise. The "Management" service complex includes strategic and operational support for the implementation of your own BIM projects.

Based on a thorough initial consultation, we always put together a service package that is precisely tailored to your knowledge and objectives — including, if required, support for the change management process within your company. The "Systems" pillar represents the digital infrastructure for the implementation of integral planning. This includes specialised software solutions for planning and system configuration.

PressRelease_ISH_Digital-construction_20250317.docx



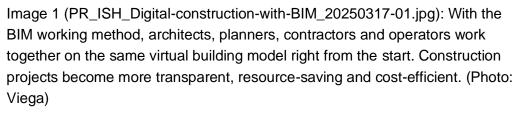


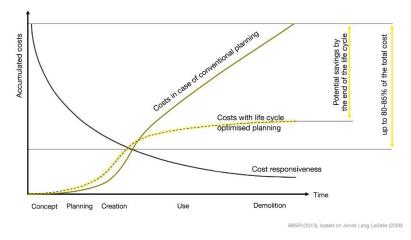


Image 2 (PR_ISH_Digital-construction-with-BIM_20250317-02.jpg): Digital construction is resource-efficient from the first model design through to operation, as the example of the Viega World seminar centre shows: The lighthouse project for digital construction clearly demonstrates how energy can be used efficiently with the right planning and execution. (Photo: Viega)



Your contact: Juliane Hummeltenberg Public Relations

Viega GmbH & Co. KG Viega Place 1 57439 Attendorn Germany



Graphic (PR_ISH_Digital-construction-with-BIM_20250317-03.jpg): Ideally, sustainable construction begins in the early concept phase, because the decisions made here have a significant impact on the operating costs over the entire life cycle of a building. (Graphic: Viega)

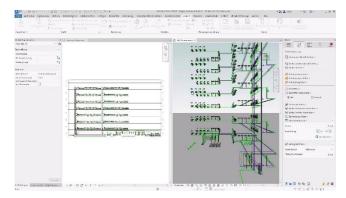


Image 3 (PR_ISH_Digital-construction-with-BIM_20250317-04.jpg): The right software is essential for the interdisciplinary, sustainable modelling of a digital building model; here: the Viega software "LINEAR Solutions - Viega Edition" for coordinated workflows in interdisciplinary work. (Photo: Viega)



Your contact: Juliane Hummeltenberg Public Relations

Viega GmbH & Co. KG Viega Place 1 57439 Attendorn Germany

viega

Press release



Image 4 (PR_ISH_Digital-construction-with-BIM_20250317-05.jpg): With the BIM working method, architects, planners, contractors and operators work together on the same virtual building model right from the start. Construction projects become more transparent, resource-saving and cost-efficient. (Photo: Viega)

Your contact: Juliane Hummeltenberg Public Relations

Viega GmbH & Co. KG Viega Place 1 57439 Attendorn Germany

Phone: +49 (0) 2722 61-1962 Juliane.Hummeltenberg@viega.de www.viega.de/medien

About Viega:

Viega is an expert in healthy potable water in buildings and a global market and technology leader in the installation sector. As a quality-focused family business employing more than 5,500 people throughout the world, the company has over 125 years of experience in building technology. Its core areas of expertise include maintaining and developing potable water hygiene, energy efficiency, comfort and safety in buildings. With ten locations around the world, the company group produces more than 17,000 products and systems.