

PERI accompanies the construction sector for Industry 4.0 integration

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5D Conference, Konstanz, Germany

PERI and other companies in the construction industry are becoming increasingly involved with the issue of "Building Information Modelling" (BIM), the all-embracing project planning in five dimensions. The new planning method guarantees time and cost savings through simple and early involvement of all parties. At the third 5D conference in Konstanz, Germany, the trend towards BIM was adopted and welcomed as the new standard.

The German construction industry is in a state of upheaval and is making up ground regarding holistic, digital planning of construction processes. It is now standing on the threshold of Industry 4.0 – this term represents the fourth industrial revolution. After steam power, assembly lines and digitization, information management is now the driving force behind this revolutionary change. Here, the focus of the building industry is on the digital interconnectivity of all service providers throughout the construction project. New technologies and standards in modern communication form the basis for this development.

In particular, the 3D planning of a structure will be expanded to include the dimensions of time and money when using a 5D planning process. Together with a central data management system, the commonly used English phrase "Building Information Modeling" (BIM) is now the preferred term of description. Because planning with BIM affects all phases of a project, this can be referred to as the "Product Lifecycle Management" of a construction project. All project phases from the conception and realization of a virtual model through to the construction, operations and renovation or demolition are displayed in BIM. The central compilation, processing and administration of all building project data in one single model helps to keep conventional stress factors such as time, costs and quality under control. Errors can be detected and eliminated at a very early stage. Costly reworking operations and delays in the construction process therefore become a rare occurrence.

The 5D conference is the trendsetter for the German construction industry

The Hochschule Konstanz University of Applied Sciences (HTWG) organized the 5D conference for IT-based project management in the construction industry for the third time. While the first two events featured wide-ranging discussions about the 5D/BIM trend, this year's focus was on the implementation by the various stakeholder groups. 400 representatives from international industry leaders exchanged information throughout the two days in 52 presentations and numerous workshops on the theme of "From strategy to implementation – bringing 5D to the heart of construction". In addition, experts in project development, planning, construction work and facility management were provided with the opportunity to establish new contacts with software companies. PERI has also been focused on this subject for quite some time now and participated in May for the third time as the main sponsor of the conference. Apart from the financial commitment, PERI was also actively involved with its own "lab" in its role as an innovative company. Here, practical demonstrations of PERI's own PDM, PERI CAD and myPERI systems were provided along with a pilot project developed together with the software manufacturer, Autodesk

The immediate future of construction project planning

The pilot project, which was presented at the 5D conference, features a communication as well as data management system with two software applications: "Autodesk BIM 360 Glue" and "Autodesk BIM 360 Field". In the process, PERI's own systems are integrated in Autodesk BIM 360 Glue via interfaces. This allows all those involved in the planning and construction processes access to the same project information via easy-to-use user interfaces. Drawings, documents and models from the PERI-developed project data management system (PDM) and the PERI CAD 3D drawing program can thus be easily accessed. The myPERI customer portal, which among other things gives details on-site material inventories, also provides a wealth of information. New requirements and changes as well as solutions can be communicated quickly and directly using the Autodesk BIM 360 Glue planning software. As all parties involved in the project, from the project office through to building material suppliers, are directly provided with the current project information, capacity problems, for example, can be detected and analyzed very early in the planning process.

For the day-to-day operations on the construction site as well as operation of the building, the relevant information of the planning software is available in the Autodesk BIM 360 Field project management software. In addition, this offers the possibility of documenting and effectively communicating all tasks, problems (so-called issues), checklists, instructions, photos and reports regarding the communications between all parties involved on the construction site.

The site manager can, for example, carry out routine inspections with the help of checklists already stored in the system, photograph construction errors with his tablet, document this, and forward it in the form of an issue directly to the supervisor. He receives the message directly via the Autodesk BIM 360 Field software forwarded and is then able to take immediate action. If he needs special information on the building or assembly instructions for the construction materials being used for his work, then he can find this information in the project software. After the error has been rectified, he can for his part directly complete the issue by means of a photo and specific comments. The site manager is automatically informed about this and can check the work done.

PERI always at the cutting edge of developments

After all-in-one planning process using BIM has already been used in a number of countries and has sometimes been even required by the respective public authorities, it is now only a matter of time until this approach is also firmly established in Germany. At PERI, optimization of the planning processes along with active cooperation with construction companies in terms of IT-based project management will continue to be an important theme. The Technical Department (Formwork) at company headquarters in Weissenhorn, headed by Jochen Köhler, is continuously updated on industry developments and is working on further innovations. Naturally, this greatly benefits PERI customers. They save time and money through more efficient cooperation, realistic simulations and visualizations, automated conflict solutions and detailed 5D planning.

Source: PERI