CONSTRUCTION DETAILS | DIGITALISATION | BEHIND THE CONSTRUCTION FENCE | VIDEO

Data centers: Always one step ahead

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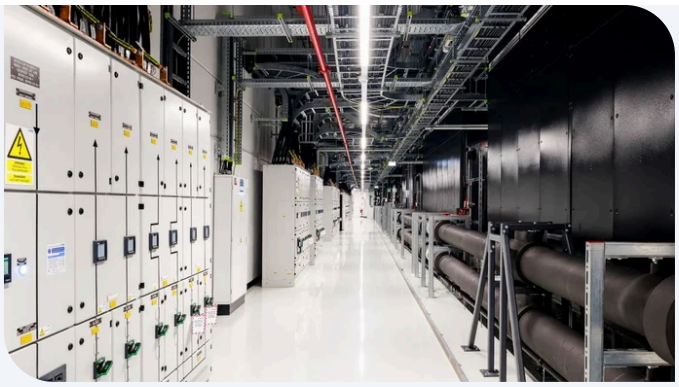
Another growth market conquered: PORR is a specialist in the construction of data centers. We show you what is involved. And why movement plays such an important role.

“A faster route is available,” says the voice from the smartphone. The sat nav has identified a traffic jam and calculated an alternative route in real time. You activate the voice assistant, which sends a message to your business partner: “I’ll be about ten minutes late for our appointment.” Sent. After the meeting, you make your way home. The smart lighting recognises that you are almost home and switches on all the lights. Now a little more movement. Today on the training plan created by artificial intelligence: running. The smartwatch obviously records every step and every heartbeat. Then you take a sporty selfie, *smile please*, and send it to the cloud, where all passwords, messages, notes, and contacts are stored. Now you can post the photo on Instagram. And of course, like the latest post from the **PORR Group.** Done. A smart day comes to an end.

Digital motion



Our lives are digitalised. At least to a large extent. And it’s getting more and more so. This means that ever larger volumes of data have to be processed. Like almost all trends, this one also has a decisive influence on the construction industry. “The increasing use of cloud technologies and AI applications is creating a growing need for data infrastructure. **PORR** plays a central role in this area and is actively helping to shape this infrastructure,” says CEO Karl-Heinz Strauss. It all started with the COVID-19 pandemic. People had to stay at home, so their everyday lives had to become as digital as possible. PORR has recognised the opportunity in this and, in cooperation with global clients, has built up and expanded expertise in the implementation of data centres. PORR now offers a comprehensive portfolio of services – all from a single source, of course. This includes needs analysis, planning, construction, integration of technical systems, and the technical commissioning and start-up of data centres. At every stage, our experts work closely with clients to find the best solutions that meet the strictest industry standards. We have already built seven state-of-the-art data centres for international players such as Vantage Data Centers and Data4 in Germany and Poland – the eighth is currently under construction. These projects are more than just concrete and steel – they are the backbone of the digital economy. And the figures speak for themselves: the European market for data centres is expected to triple by 2032 compared to 2023. But while data, technologies, and the market are constantly in motion, there is one thing that must never move: the foundations of a data centre.

Zero motion

Data centres are highly sensitive. The data races through fibre optic cables at the speed of light, but the building itself is not allowed to move a millimetre. Even the slightest movement of the subfloor can have serious consequences. Settling or vibrations in the floor slab can move sensitive IT systems out of position, disrupt connections, and impair performance. So before we break ground, we analyse the ground in detail to minimise risks. A deep foundation ensures absolute stability. But there are even more challenges. When choosing a location, factors such as access to the power grid, proximity to internet hubs, availability of skilled labour, and potential environmental impact must be taken into account. Innovative solutions to reduce energy consumption, such as the use of renewable energies and advanced cooling systems, are essential. The waste heat from cooling the servers can also be used to heat neighbouring buildings, for example. Physical and digital security measures are then needed to protect sensitive data. And that’s not all. The authorisation procedures are complex, the schedules are very ambitious, and the demands on the technical building equipment are particularly tough. That’s why PORR also relies on LEAN in these projects to optimise all processes. And, of course, Building Information Modelling (BIM). This enables us to make our construction processes transparent for everyone involved in the project, identify challenges and potential construction-related collisions – for example in the area of building technology – at an early stage, and thus hand over the data centre in the best quality and on time.

Constant motion

With projects such as the BER12 data centre in Ludwigsfelde, the DC01 in Jawczyce, and the WAW 11.1 in Warsaw, we have proven that we not only keep pace with digital developments, but actively help to shape them. Our everyday lives are becoming increasingly digital, and we are doing all we can to contribute to this. But we have proven something even more important: we think outside the box and recognise trends and growing business areas at such an early stage that we can take a leading position ourselves. We are constantly moving forwards. And are always one step ahead.