BEHIND THE CONSTRUCTION FENCES | DIGITALISATION | INNOVATION

Smart Construction

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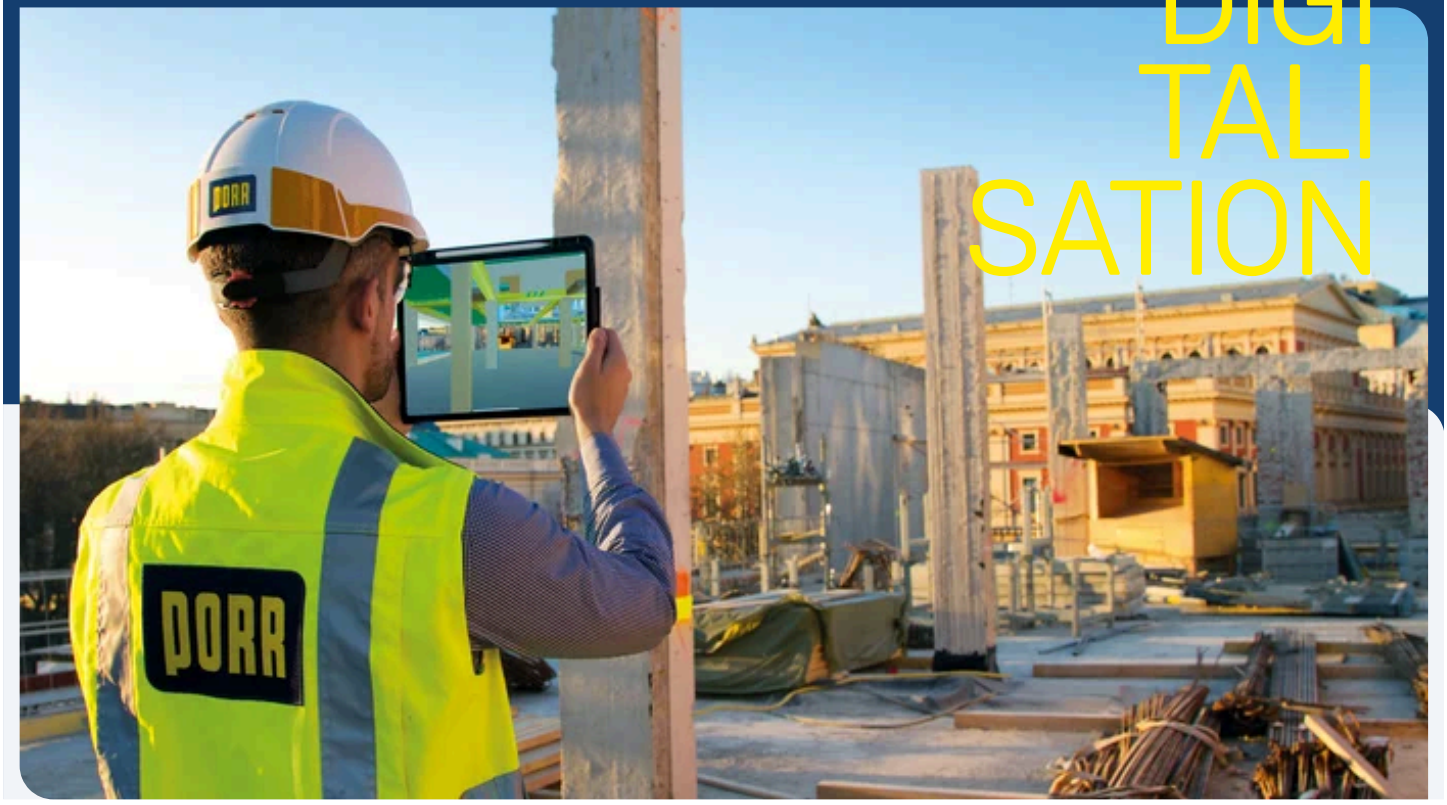

The Internet of Things and the use of artificial intelligence are making the construction sector smarter. And the data generated from this is in turn making all construction processes more efficient.

The interplay between IoT and AI forms the backbone of an increasingly digitalised construction industry. This is because AI and IoT technologies help companies generate data, evaluate the findings, and then use this as a basis to make the right decisions.

The principle behind it is simple: AI describes an algorithm that recognises recurring patterns in existing data sets and provides detailed insights and approaches for full-scale process optimisation. And it does this for the entire value chain in construction and all related trades.

Optimal framework

Decreasing costs for IoT hardware and the ever-greater availability of optimised network technologies such as 5G mean that fully networked construction sites are no longer a pipe dream, they are already a reality today.

The concrete applications for trailblazing digital solutions are multifaceted and range from predictive maintenance of construction machinery and optimised fleet management through to minimizing inefficiency in construction material logistics and automating construction processes right through to evaluating historic data trends to improve the quality of the work rendered and the safety of staff.

Manifold opportunities

Construction sites are increasingly being influenced by digital information and processes. This leads to greater complexity of the respective construction project on the one hand, and new jobseeker profiles on the other.

Project managers not only have to keep any eye on the individual requirements of a project and everyone involved. They also have to incorporate the use of IT applications, smarter sensors and better networked machinery in their planning and execution. This means that they themselves need to keep learning and stay abreast of any developments. That said, the growing complexity throughout the entire value chain for construction is simultaneously opening up a multitude of opportunities for the construction industry in which digital natives and highly educated experts can shine and proactively counter the skilled labour shortage.

> Applying these trailblazing technologies translates into higher productivity, quality and safety across every construction process.

Clear competitive advantages

The benefits of IoT and AI solutions are plain to see: applying these trailblazing technologies translates into higher productivity, quality and safety across every construction process. At the same time, they allow any environmental impact to be minimised effectively while taking the sustainability, usability and resilience of complex projects and infrastructure to a new level.

As projects and deadlines are getting ever tighter and the shortage of skilled labour is placing an additional strain on the overall situation, it is more important than ever to take current, precise, complete and thereby usable data from the operating business and to evaluate it in detail on site.

The larger the data volume accessed, the better the basis it provides for any decision. Anyone who isn't already part of this digital revolution may well have already missed the boat. And will lose the battle for forward-looking projects and the best-educated experts.