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We Do Digitize Everything – Don't We?

Digitization, Autonomous Systems, Artificial Intelligence, Construction Machinery 4.0 – all well-known and familiar buzzwords that we use today without any hesitation. I think that we all recognize that these terms are not just empty phrases, but decisive impulse generators that are also changing the world of the construction industry and construction machinery. However, I get anxious when I read – as I did recently – that all resources as well as the entire German research funding should be 100 % focused on digitization issues. This would entail that all conventional problems and challenges have been satisfactorily solved and that further research into areas such as lifetime optimization or efficiency enhancement of components and the development of new construction methods are no longer necessary. But is that really the case? I have my doubts.

Will there only be autonomous and networked systems in the future? From large-scale machinery in opencast mining facilities to mini excavators in horticulture? Are we digitizing everything now? Surely, no one would accuse a university professor of being hostile to progress and merely sticking to the traditional. Generally speaking, the opposite is more likely to be the case. This is precisely why I dare to say this: No, we will not digitize everything! And, why should we?

This very question is asked too rarely (and above all – too rarely answered) in the current discussion. It might not be a new insight, but perhaps we should remember that not everything that is technologically possible is also sensible and economical. So, let us jointly re-evaluate the goals and work out the answers. In doing so, we must take into account the requirements and framework conditions of the diverse applications, as well as regional cost structures and the availability of qualified employees. Only after having identified a desirable goal will we then be fully committed to its implementation – but not beforehand.

This is precisely where joint industrial research, that is to say cooperation between the industry and universities, can make a significant contribution: The research institutions provide the deep analytical, systematic and visionary working methods as well as the latest findings and tools. The industrial partners, with their more pragmatic approach, ensure that researchers and visionaries are mindful of what is reasonable, feasible and affordable. Practical and usable results remain the goal of cooperative industrial research. With this in mind, I invite all those involved, from component manufacturers to machine manufacturers and operators, to join us in the search for meaningful goals and solutions.