

„Increased customer benefits, new solutions“

Nikolaus Scholz, Quanos Solutions interviewed by EngineeringSpot

Three companies are merging and creating the Digital Information Twin

Ralf Steck, Friedrichshafen · EngineeringSpot

In November 2020, three companies – Schema, TID Informatik and Docware – are joining forces to form a new company: Quanos Solutions GmbH. CEO Nikolaus Scholz is leading the integration of the three companies. In this interview, he talks about the new company's structure and positioning, and the roadmap for merging the companies and the software solutions.

Mr Scholz, what challenges do you face in your current position?

Firstly, we have to bring together three medium-sized companies, which have each been very successful and profitable in their own right for many years. Secondly, this constellation gives us the opportunity to develop increased customer benefits and new solutions by combining the strengths of the three companies. This type of business development and transformation is what particularly appeals to me.

How is the new Quanos Group being structured?

Quanos Solutions GmbH is the umbrella company, which assumes the collective tasks for the two sub-divisions. The former Schema GmbH will become Quanos Content Solutions, whilst TID Informatik and Docware will be merged to form Quanos Service Solutions. The divisions

are of a similar size, each having around 60 developers and an annual turnover of 15 million euros, and will continue to work closely with customers and autonomously in the market.

What is the aim of the merger?

We want to take the existing tried-and-trusted, well-established solutions to the next level of development in the documentation and service sector. We have the core elements for aggregating, providing and linking information in the after-sales sector and for combining these functions into an integrated solution, the “single source of truth” in the after-sales sector.

We are also using functionalities that already exist in the companies and implementing these on a new joint technological basis. Therefore, one of the things we have developed is a solution that can manage 5 million bills of material and parts enquiries every day for our largest customers, with these being precisely filtered to a distinctly specified product. In doing so we are combining existing solutions and expertise together with cloud technology, to which we connect the functionalities of the former products via micro-services and APIs.

What functionalities are they?

Schema's ST4 system – which we will continue to develop in future – offers a solution for compiling modular documentation. Technical writers compile components that include text and images for a particular function or sub-assembly, and supplement these with metadata. Depending on a product's features, documentation that is individual and precisely matched to the customer's needs can then be compiled automatically. Components can also be translated into different languages, making it possible to generate different language versions of this customised documentation at the click of a mouse or fully automatically. Whenever there are any changes to a product, only one, or just a very few components need to be changed; there is no need to edit an entire monolithic text.

TID Informatik and Docware each offer a solution for compiling spare parts catalogues and service information systems – albeit with different philosophies. For TID, automation is the priority, which means its CATALOGcreator software constructs a spare parts catalogue automatically from information provided by an ERP system, for example. As with Schema,

customisation is also a priority here. Spare parts catalogues can be compiled for very different variants of a machine and made available to the owner of the machine, for example, in a web portal or an online shop.

This approach requires very high data quality to ensure good results from automation. If this kind of data does not exist, the Docware PARTS-PUBLISHER solution takes over. Here, spare parts can be manually reworked, filed and then dynamically merged into spare parts catalogues in a component content management system.

In practice, data quality often varies, which is probably also down to historic reasons. The combination of these two philosophies therefore offers high automation and flexible manual amendment in individual cases – the best of both worlds.

Exactly. We often have both these requirements in one company. So, in the first quarter of 2021, we will be launching a combination of these two approaches on the market. And then, in synergy with the Schema technology and functionality, we can implement the Digital Information Twin. In this Digital Information Twin, we link the spare parts system and ordering system for spare parts with all the relevant information from the documentation – assembly and disassembly instructions, operating instructions, warning notices and all the other information our customers and their users require in after-sales and service.

How quickly will you implement this vision?

We are able to move quite quickly, as we can consolidate many structures that have previously been developed in parallel in the companies – portal, online shop, and others – and we can focus available developer resources on consolidation of the service packages. At the same time as this, we are pushing on with re-developing the data core. Consequently, in the first quarter of 2021, we will be able to offer an integrated solution, although this will not yet be based on the latest architecture.

Where is the journey going next?

I see two areas where we can create added value for our customers with current technologies: firstly, we are currently researching data quality, which is so crucial in the service sector, and

using artificial intelligence (AI) to improve it automatically. AI can use existing data to supplement missing or incomplete metadata with a relatively high degree of accuracy.

The second area is IoT - the Internet of Things. Equipping machines with sensors that monitor operation and relay its figures and values is a logical enhancement of the Digital Information Twin. The IoT can be used for the early identification of processes in machines that result in system failure; examples here include overheating in the warehouse or unusual vibrations. The Digital Information Twin can then raise the alarm and immediately list the appropriate spare parts or even order them. This enables the completion of scheduled maintenance, which results in less disruption to the production process than an unscheduled stoppage.

I can also envisage an AI concept here; one which, for example, analyses the IoT data and, if an imminent failure is identified, analyses the customer's other machines to see whether this cause of failure is also a threat to them. Service engineers can then conduct predictive maintenance on several systems at the same time.

What enables Quanos to create this Digital Information Twin?

We come from this sector, we have years of experience and customers who are prepared to come with us. Without customers to work with to develop solutions and provide what is effectively the benchmark in practice, against which new developments will be measured, it is difficult to develop solutions that are relevant to real-life scenarios. This is where we are perfectly positioned.

A considerable number of customers are currently already using solutions from one or more of our three companies, so they have already assimilated the idea of the Digital Information Twin; we "just" need to deliver the technologies for it. Thanks to our wealth of experience, we know what customers want and need, and that is an incredibly important store of knowledge.

We also have the appropriate technologies for it – structured data, networking, automation, and so on. We just need to transfer these basic assets into a modern integrated platform. That primarily means work on the software architecture and less on the functionality and

workflows. The functionality that already exists will be maintained and enhanced and raised to a new level of technology – that is our job at Quanos Solutions for the years ahead.

Mr Scholz, thank you very much for talking to me.

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