

Product development for the DuoShake Digital Generation



Expert interview with Benjamin Kitze

Global Service & Product Manager Forming Section
Voith Group Division Paper

You have been presenting updates of your shaking unit DuoShake for more than 20 years now. How can you still find things that need to be improved?

You have a point. The DuoShake is now so refined in terms of engineering and design that improvements in this regard are becoming increasingly difficult. However, we are always open to requests from our customers for optimizations and we incorporate them into our product development. Of course, we also closely observe which technological innovations are being developed and how we can let them flow into product updates in a way that accommodates the requirements of our customers.

Does this mean that the product development is not worked out centrally by one department in a quiet little room?

No, of course not. We often put together cross-divisional teams for this. Transdivisional and transnational departments from Sales, Research and Development, Product Management, Service, and other areas collaborate to ensure the maximum added value for the customer. From our point of view, this is the only way that can work. Agile development methods such as Design Thinking and Scrum are being used more and more intensively for our innovations. Our Voith Innovation Lab is also becoming more relevant.

Now I have to ask this: What exactly is meant by Design Thinking and Scrum? And what is the Innovation Lab?

Design Thinking is an idea-finding process applied to development of products and solving of specific problems. The special thing about it is that it is centered around the customer. The approach requires that an interdisciplinary team put itself in the position of the user or customer and look at the situation from different angles so that it can systematically identify the user's or customer's needs and develop a solution based on this. In this way, we can ensure that our product meets the actual needs.

This is also one of the purposes for which Voith brought the Voith Innovation Lab, a group-spanning unit with experts from technology, business, and design, into being in Berlin. The goal of the unit is to uncover innovation potential and get from idea to functional prototype in a short time while continuously receiving feedback from our customers.

If we have then found an innovation worth developing, we also like to use Scrum, an agile development method that can respond flexibly to changing requirements. Here, the team is likewise initially put together from different areas such as Development and Management so that it can then process specific task packages as well as make and implement decisions. For this type of approach, a weekly rhythm, which we call a Sprint, is important. These Sprints are repeated until the entire task has been completed. The goal of this procedure is to avoid unnecessary coordination meetings. This concentration on processing instead of meetings and a recurring rhythm instead of ad hoc meetings is the secret behind the rapid progress of Scrum projects.

At the beginning you said that customer requirements play an important role in product development. Can you give us a concrete example in which they flowed specifically into the development of the DuoShake Digital Generation?

In meetings, we received, for example, feedback indicating that especially customers being introduced to the operation of the DuoShake needed a little more time before the control system became routine for them. In order to improve that, we developed special software with intuitive visualization that promises to make handling and control of the machine easier. Here, it's also important to implement new tools. Young people especially love these things and then learn faster. Usability or the user experience in the operation of machines via devices is a central aspect.

Optimized process reliability and increased machine availability are also important topics. They are naturally always at the top of our customers' wish lists. If there are irregularities in operation, it is essential that an experienced employee be able to troubleshoot quickly. If this specialist is not on site at the time, valuable time is lost in taking countermeasures to optimize operation. Here, thanks to the possibilities offered by digitalization and new technologies, we were able to develop a solution that is fully geared to the needs of our customers. With the new DuoShake Digital Generation, the specialist can also check the current operating data and conduct a preliminary fault analysis in real time via mobile devices while on the go. I think that with this possibility, we struck a nerve with our customers because they can really save valuable time.

How do you make sure that you are really “up to date” with your update?

By relying on two core competencies at Voith. For one, we at Voith Paper have been demonstrating our technological leadership for years with constantly new innovations as well as our expertise in the construction of high-quality, precise, and reliable machines – with the DuoShake, for more than a quarter of a century already. We are very proud of this, and it also forms the foundation of our work.

For another thing, we have created a strong digitalization competency with the Group Division Digital Ventures, which has supported us tremendously in the development of the DuoShake DG with its expert knowledge. The interesting thing is that thanks to digitalization, we already have more ideas for the DuoShake today that will continually increase the benefit to the customer. So, we are definitely up to date and are already now working on tomorrow.

Were there also customer requirements regarding maintenance and repair that went into the product update?

Yes, there were. And that is an aspect by means of which the advantages of our product update can also be seen very clearly. Whereas previously the components of the DuoShake had a fixed maintenance interval – so, about every two years – the DuoShake Digital Generation registers the actual number of operating hours and shows when maintenance will be necessary again based on that. The shaking unit does not always run during production, and planned downtime sometimes lasts longer than expected. Of course, this also correspondingly extends the time until the next maintenance on the DuoShake. With the new product generation, we are in a position to change the usual time-based maintenance to condition-based maintenance. This means that the service life can be extended – with no risks to process reliability or availability.

If I understand that correctly, the DuoShake Digital Generation also gathers operating data. Can findings that enable completely new maintenance scenarios be gained from that?

The DuoShake Digital Generation primarily collects its own condition data. Thus, in the future it will be possible to replace the previously described preventive maintenance, which we are already raising to a new level today, with predictive maintenance. The new DuoShake will hence suggest the required maintenance actions before failure occurs. The service life will thus be continuously improved. As far as that goes, the product update is already prepared for the future today.

Will the availability of the DuoShake also increase further through this?

Today we are already talking about an availability that is virtually unparalleled in the industry. But yes, with the use of the digital tools and in combination with coordinated service, we will continuously increase the availability. Give us some time. I would even go so far as to say that we will soon be able to guarantee nearly 100 percent availabilities if our customers are open to the new digital possibilities.

Voith Group
St. Poeltener Str. 43
89522 Heidenheim
Germany

Contact:
Phone +49 7321 37 0
duoshake@voith.com
www.voith.com/duoshake



VOITH
Inspiring Technology
for Generations