



INCREASED PLANNING PRECISION WITH THE HELP OF 3D SIMULATION

Dentsply Sirona optimizes manufacturing processes using 3D simulation

As the world's leading manufacturer of dental products and technologies, Dentsply Sirona really gets its teeth into oral hygiene. Precision in product development and manufacturing is its number one priority – that's why it sets so much store by the Visual Components 3D simulation platform developed by DUALIS GmbH IT Solution when it comes to simulating and visualizing its processes. Dentsply Sirona reaps the many benefits of the platform, including improved validation of product ideas and projects, increased manufacturing throughput and greater planning precision.

**Dentsply Sirona:
the world's leading manufacturer
of dental products and technologies**

Dentsply Sirona's product portfolio enables dentists and dental technicians to carry out standard and specialized treatment in restorative dentistry, implantology, endodontics and orthodontics. The company also supports universities and dental clinics by providing simulation units, consulting and other services. It currently has more than 15,000 employees in over 120 countries.

**Wanted:
the ideal software
for simulating and
visualizing processes**

Dentsply Sirona's production site in Bensheim, Germany, has an imaging department whose remit includes planning the production logistics and designing the manufacturing layout. For a long while, there was very little room for maneuver as the only feasible layout design was a static one.



What's more, the company lacked a suitable software solution for simulating and visualizing its processes, as well as an appropriate CAD interface, which is crucial for ensuring realistic visualizations and integrating its own components. Dentsply Sirona was using a software

program for 3D layout design, but it ultimately fell short of the demands of increasingly complex projects as it could only give static visualizations with standard components. The imaging department knew that it was high time they switched to a new software.

They wanted a simulation platform that offered plenty of room for maneuver and could keep pace with changing requirements. That meant a software program that could provide both dynamic visualizations and simulations that were as realistic as possible.



And so Dentsply Sirona began an evaluation phase. It had its sights set on a solution that could combine process simulation and visualization to achieve the optimum result. The Visual Components software solution from DUALIS enables manufacturers to map their

production processes and to plan for the future using realistic 3D simulation. It is the go-to simulation platform for planning plants and machines as well as interlinked production processes. DUALIS is the specialist distributor for Visual Components and develops add-ons and services designed specifically for the platform.

**3D simulation solution:
flexible, extensible and intuitive**

For Dentsply Sirona, Visual Components ticked all of the right boxes.

"The simulation software provides all-round support for validating ideas and projects. Crucially, the detailed layouts also give us valuable information for our marketing work, particularly when we're liaising with stakeholders."

Philipp Müller, Assembly Logistics Planner at Dentsply Sirona



The flexibility and extensibility of the software components really won the team over as they needed a program that could keep pace with their growing requirements. Philipp Müller, Assembly Logistics Planner at Dentsply Sirona, explains why they were so impressed by the software: “Visual Components perfectly combines process simulation and visualization functionalities. It’s the best CAD interface for visualization available on the market. Compared with the other programs we tested, we found Visual Components to be intuitive and easy to operate. The fact that it was such good value for money, as well as having all the technology features we needed, was yet another bonus. In our view, it was clearly the best software solution out of those we trialled.”

Real benefits in no time

Dentsply Sirona is now using Visual Components Premium, a complete solution which allows it to virtually map its production lines across the entire factory. “The rollout ran very smoothly. Our level one support team implemented the software in just one day – during ongoing operation. Areas that would be affected by the switchover were equipped with powerful high-end gaming PCs that work extremely well with Visual Components and are especially future-proof,” says Müller.

It did not take long for them to see real benefits start to emerge. In addition to the flexible software components, the option to import their own CAD data, create animation files and view virtual reality simulations, and the extensive standard library quickly led to greater efficiency in daily operations. The software opened the door to more possibilities and resulted in an increase in the quality and precision of their planning and layout design in the areas where it was being used. Visual Components also proved its worth as a test and validation environment.

Boosting performance and analyzing potential

The imaging department at Dentsply Sirona’s site in Bensheim saw benefits in three areas: validating ideas and projects, stock planning and simulation itself.

Dentsply Sirona considerably increased its performance in stock planning by using the software. It was able to halve the time it took to create new plans thanks to the Stock Configurator component, which reduced the necessary drawing work. What’s more, fewer factory maintenance adjustments were needed further down the line as a result of increased planning precision. The option to export part lists also ensured greater transparency of material costs.

Dentsply Sirona was now able to carry out informative simulation studies, and the imaging department made full use of this resource in order to identify both optimal and suboptimal manufacturing sequences for increasing throughput, as well as the necessary measures to achieve them.

Looking to the future

Visual Components has enabled Dentsply Sirona to tailor its process simulation and visualization to the needs of the market. That’s why it is looking to expand its use of the software in other areas. Its plans for the future include acquiring another Professional license and developing extensions.

For example, it intends to integrate static calculations into the Stock Configurator component and to introduce process mining. The emphasis is therefore on linking process mining and Visual Components, with the aim of creating a live 3D tracking function for manufacturing orders in the near future.



Facts and figures



Company size:
15,000 employees
in over 120 countries



License scope:
Visual Components Premium



Increased planning precision
thanks to fewer mistakes
during the design phase



Increased throughput
in production



Greater transparency
of material costs



Improved validation
of projects



“We saw potential for savings in many different areas and for increased maximum throughput on each line. This required an optimum manufacturing sequence and the right number of orders. The simulation study identified a straightforward, easy-to-adopt strategy for optimizing the dispatch sequence of our manufacturing orders – an incredibly helpful insight for our team.”

Philipp Müller, Assembly Logistics Planner at Dentsply Sirona



DUALIS GmbH IT Solution

Breitscheidstraße 36
01237 Dresden, Germany
Telephone +49 (0) 351-47791-0
simulation@dualis-it.de
www.dualis-it.de

DÜRR GROUP

Find out more
about

**VISUAL
COMPONENTS**



Dentsply Sirona Deutschland GmbH

Fabrikstraße 31
64625 Bensheim,
Germany
www.dentsplysirona.com