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## Axivion Bauhaus Suite enables high-quality coding and a harmonised architecture at Dentsply Sirona

After searching long and hard for a code and architecture verification solution, Dentsply Sirona opted for the Axivion Bauhaus Suite. These Axivion tools mean that the dental equipment provider is now able to develop the increasingly complex software solutions required for CAD/CAM, imaging systems and treatment units using state-of-the-art methods while also ensuring that these solutions are maintainable in the long term. The developers at Dentsply Sirona were able to integrate the Axivion Bauhaus Suite into their process with ease and start using it productively in next to no time. The structured and automated approach to code and architecture verification soon produced results, resulting in a high level of acceptance among all users of the Axivion Bauhaus Suite.

### Axivion Bauhaus Suite for complex software development

As the market leader in dental appliances, Dentsply Sirona has the industry's largest R&D department, where it develops innovative end-to-end clinical solutions for improved patient care. At various locations, large numbers of in-house and external developers can be found working on various software solutions for CAD/CAM, imaging

systems and treatment units – both in teams and individually. The Axivion Bauhaus Suite maintains the technical quality of the increasingly complex systems by using cross-functional coding rules and a harmonised software architecture.

### Configurable and scalable

The Axivion Bauhaus Suite is highly configurable and can be adapted to the various complex environments at Dentsply Sirona, as well as its existing development tools. The tool suite distinguishes reliably between handwritten code and automatically generated software elements, for instance generated by IBM Rational Rhapsody®. The tool suite is also fully scalable. Thus, only metric checks are to be carried out during the introductory phase, with architecture analysis gradually being added further down the line. The Axivion Bauhaus Suite is also scalable for different project sizes, making it possible to analyse large C++ projects as well as embedded projects.



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### Benefits in all product areas

With the Axivion Bauhaus Suite, software architects and developers who are responsible for refining existing code can detect potential weaknesses in new code early on. This is because it allows analyses to be carefully targeted and keeps the workload manageable.





In the event of architectural violations, they are notified promptly, which not only directly safeguards code quality but also augments the developers' long-term know-how. The suite provides project managers with a tool for reliably ensuring that architectures are also implemented consistently by external programmers and suppliers. Another process that has been made much easier at Dentsply Sirona is the training of new personnel. This is down to the company-wide, harmonised review processes that the Axivion Bauhaus Suite has incorporated into development.

For more information on the Axivion Bauhaus Suite and the functions it offers for architecture and code analysis, see [www.axivion.com](http://www.axivion.com).

#### About Axivion

Axivion, based in Stuttgart, Germany, is a provider for innovative software solutions for static code analysis and for protection from software erosion. The core product of Axivion is the Axivion Bauhaus Suite, a tool suite for the improvement of software quality and maintainability of software systems implemented in the programming languages Ada, C, C++, C#, and Java. In addition to static code analysis, the tool suite includes innovative software tools for architecture verification and clone management. Moreover, the tool suite detects software erosion factors such as cycles, dead code and violations of programming rules. Axivion's MISRA checker covers 100% of all automatically testable MISRA rules for the standards MISRA C:2004, MISRA C:2012, and MISRA C++:2008. Furthermore, the CERT® programming rules for secure software development are supported.

The Professional Services Team of Axivion offers methods and training concepts as well as service and consulting to support customers to assure an effective and efficient rollout of the tools.

Axivion's customers are companies that develop innovative technical software across different industries, e.g. industrial automation, automotive, railway, electronics, information and telecommunication, avionics, medical, mechanical engineering, as well as measurement, control and regulation technology.

Since its foundation in 2006, Axivion maintains close research links to the University of Stuttgart, Germany, and to the University of Bremen, Germany to keep up with the newest trends in programming and code analysis research.

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