Business challenge

After BMW Group began outsourcing more of its software maintenance and development, it wanted to implement a robust quality control solution to make sure the company maintained a high level of software quality.

Transformation

By using eXplain QA software from IBM Premier Business Partner PKS Software GmbH and IBM® Rational® Developer for z Systems™ software, BMW was able to automate software quality control.

Business benefits

Increases quality

of BMW's application code

Improves productivity

by automating quality control processes

Boosts visibility

into application code, helping maintain control of outsourced projects

BMW Group
Gaining control over software quality with IBM software

BMW Group is a global automobile and motorcycle manufacturer headquartered in Munich, Germany. With three well-known brands—BMW, MINI and Rolls-Royce—the organization concentrates on premium market segments, such as sports cars and high-value vehicles. Founded in 1916, BMW Group has 30 production locations in 14 countries and a worldwide workforce of more than 122,000 employees. In 2015, the company delivered more than 2.2 million cars and 137,000 motorcycles to customers.

"Now that we're outsourcing, we need to be able to maintain control over software quality".

—Josef Heckl, Manager of methods and tools, BMW Group

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Maintaining software quality

Josef Heckl, manager of methods and tools at BMW, and his team of 30 IT professionals operate the DevOps environment and support approximately 500 application developers. These developers belong to different organizations and are in multiple countries, including the US, Japan, France, Italy and the UK. The developers maintain BMW's mainframe applications, including approximately 45,000 COBOL programs and 35,000 PL/I programs.

Because BMW began outsourcing more of its software maintenance and development, Heckl wanted to implement a robust quality control solution to make sure the company maintained a high level of software quality. "In the past, BMW wrote and updated all of its own software, but now that we're outsourcing, we need to be able to maintain control over software quality," says Heckl.

Automating quality control

BMW implemented eXplain QA software from IBM Premier Business Partner PKS Software GmbH, integrating the solution tightly with IBM® Rational® Developer for z Systems™ software. The eXplain QA software reads application source code in development and compiles information about dependencies, structures and correlations into BMW's existing IBM DB2® for z/OS® data server. Developers can then use the eXplain QA software to run and check the code to make sure it meets BMW-specific rules and standards for software development. If the solution detects any issues, it notifies the appropriate users before the application can go into production. As BMW moves toward a DevOps approach to software development, the business plans to implement a gateway system that will automatically prevent software from moving to production if it fails quality checks.

Improving efficiency

By integrating the eXplain QA solution from PKS with Rational Developer for z Systems software, BMW increased the quality of the applications it develops at its global locations. The new solution facilitates error detection before applications go into production, which helps reduce the number of defects in production.

The solution also gives BMW greater visibility into its software. "When our outsourcing resources work on these programs, now we can see how the program has changed," says Heckl. Heckl has also found that the solution helps improve developer productivity. Because Rational Developer for z Systems software includes context-sensitive editors, developers don't need a compiler to determine if there are code errors.