

## BAE Systems Australia improves requirements traceability with IBM Rational DOORS and IBM Rational Synergy solutions.

### Overview

#### ■ Challenge

*BAE Systems Australia was reliant upon multiple, diverse “requirements management” products, making it impossible for developers to trace requirements and collaborate efficiently, resulting in excess labor, increased development costs, and greater opportunity for error.*

#### ■ Solution

*The company chose IBM® Rational® DOORS® and IBM Rational Synergy to create a requirements-driven approach to development.*

#### ■ Key Benefits

*The company experienced improved productivity and greater confidence that all customer-requested changes were included in the final product.*



### The story

BAE Systems Australia is a company committed to being the Australian Defense Force's leading capability partner in integrated military systems and support solutions. The company combines key skills in engineering and systems integration across air, land, sea and joint environments.

Headquartered at Edinburgh Parks in South Australia, BAE Systems Australia employs more than 5,500 people, who support customs at more than 50 locations across the country.

In 1998, management recognized the need for a standardized requirements management system. The company's hundreds of geographically dispersed developers all used different requirements management tools, resulting in poor efficiency and high development costs.

“There was enormous duplication of work and effort,” said Werner Kolze, Engineering Tools Manager, BAE Systems Australia. “Traceability was difficult since each project was managed with a different requirements management solution. Also, we couldn't collate or test the requirements in a uniform way since the developers were not following any form of best practices.”

### **The best defense for traceability**

In August 1999, BAE Systems Australia entered into an open access agreement with IBM to use IBM Rational DOORS and IBM Rational Synergy software across its enterprise. After proving its capabilities in several test projects, Rational DOORS software was rolled out as the standard requirements management solution for all projects at BAE Systems Australia.

IBM Professional Services assisted with the rollout of the Rational Synergy application, which was easily modified to support the company's existing methodology and business processes. "IBM Professional Services helped us ensure that the Rational Synergy software workflow was tailored to our needs," Kolze said. "That was key to our decision to adopt the Rational Synergy solution, and we're very happy with the results."

Today, developers in six locations are using Rational DOORS software for requirements analysis on all customer projects, as well as for the company's bid proposals (RFPs). Kolze and his team customized the Rational DOORS software with scripts to support the company's unique RFP process. "The Rational DOORS customization is an invaluable asset," Kolze said. "Everyone can now work in a standardized format that's tailored to our needs and has the BAE Systems look and feel."

Most importantly, the Rational DOORS application gives the distributed development teams at BAE Systems Australia a requirements repository setup for all to access — an advantage that eliminates costly rework and duplication. In addition, having everything in one requirements management tool ensures that they can be tested against customer needs throughout the project lifecycle. "Rational DOORS software gives us the traceability we need," Kolze said. "Now, we can maximize reuse of requirements, better understand the scope of a project and estimate delivery times more accurately."

BAE Systems Australia also customized the Rational Synergy software primarily to the special lifecycle change needs of its highly classified defense projects. Presently, developers working on three integrated projects are able to maximize requirement reuse across all phases of development. "Rational Synergy software supports our process and the individual needs of all BAE projects," Kolze said. "Our developers can now respond much more quickly to fix bugs and defects."

While IBM Rational DOORS and IBM Rational Synergy are the foundation of the company's requirements-driven development approach, all project stakeholders also have flexible access to IBM Rational Rhapsody® Architect for Systems Engineers and IBM Rational Focal Point™ as part of the integrated IBM solution.

*“We evaluated Rational DOORS, and it proved to be the best on the market. We also view Rational Synergy as a ‘critical tool’ that can give us a formal, structured software configuration management solution for the first time.”*

– Werner Kolze, Senior Business Analyst, BAE Systems Australia

### **The benefits**

By standardizing IBM Rational DOORS and IBM Rational Synergy, BAE Systems Australia’s project managers have improved productivity. They’re confident that the product they release is the one asked for and that all customer changes have been included.

“We have better control of requirements traceability, testing, and impact analysis,” Kolze said.

Key benefits of IBM Rational solutions may include the following:

- *Improved quality of deliverables*
- *Faster time-to-market*
- *Enhanced customer satisfaction project requirements are fulfilled and delivered as expected*
- *Ease-of-use thanks to an intuitive GUI and easy customization*

In the near future, BAE Systems Australia plans to extend its foundation of IBM solutions as an interface with other enterprise applications, as required. “We plan to create a so-called ‘Project Pack’ that would give our internal users a ‘container’ filled with, but not limited to, IBM products to help them with project start-ups,” Kolze said. “IBM solutions help us generate new projects quickly and easily.”

### **For more information**

To learn more about IBM Rational software, contact your IBM representative or IBM Business Partner, or visit:

[ibm.com/software/rational](http://ibm.com/software/rational)



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