

## Chemring Australia

Customer Success Story

Autodesk® Product Design Suite  
Autodesk® Vault Professional  
Autodesk® Inventor®

Autodesk Vault Professional is as intuitive as it is robust, and that's not even taking into account the integration with Inventor and SharePoint. Our workflows are much more automated. Our team is free to focus more energy on design quality instead of managing data.

—Jason Biggs  
General Manager – Operations  
Chemring Australia

Collaboration is much easier today. Our authorized users can simply access managed design data directly through SharePoint without the need for technical assistance or additional training.

—Alex Harmati  
Supply Chain Manager  
Chemring Australia

# A flare for progress.

## Chemring Australia turns to Autodesk Vault Professional and Microsoft SharePoint to manage design data.



### Project Summary

Chemring Australia (Chemring) develops and manufactures energetic materials and products for the defense and marine safety markets. Its offerings include air countermeasures, munitions, explosive ordinance disposal solutions, marine flare kits, and more. From battlefield situations and military training operations to rescues at sea, the people who use Chemring's products rely on them to carry out their missions safely. In fact, lives depend on Chemring's products to perform as specified in the most dangerous conditions.

Chemring understands the importance of its products, services, and support. It is committed to continuously improving the quality of all aspects of its business. Until recently, the scope of improvement was heavily restricted by the way in which the company managed data. By turning to Autodesk® Vault Professional and Microsoft® SharePoint®, Chemring enhanced its data management processes with a higher degree of control, automation, and flexibility.

Lead Engineer for Chemring, Kirk Berenger, explains, "We added Autodesk Vault Professional to help us manage design data more effectively. Now, it's easier to share, secure, revise, and reuse the designs we create with Autodesk® Inventor® software." Since adopting Autodesk Vault Professional software along with Autodesk Inventor, which are both part of the Autodesk® Product Design Suite, Chemring has been able to:

- Efficiently share design information with the extended enterprise thanks to integration with Microsoft® SharePoint®
- Create a bill of materials (BOM) in two hours instead of two days
- Enhance the way it manages individual product design files, saving hours of data management for every new design and significant revision
- Reduce duplicate work and the risk of errors

### The Challenge

Prior to implementing Autodesk Vault Professional, Chemring relied on time-consuming manual processes to manage and share product data. The engineers and chemists driving the design process collaborated and created BOMs using a process that involved manually tracking design changes using a spreadsheet. An elaborate file naming system helped facilitate design reuse, but just maintaining the file structure took as much as 15 hours per design per year.

"We found that our people were spending too much time managing data," says Berenger. "It was time consuming to track the configuration of designs or to share them beyond the engineering department. We decided to look for an integrated solution to enhance our design and data management processes."

### The Solution

As it explored design and product data management solutions, Chemring turned to KarelCAD, an Australia-based provider of design solution expertise and services, for assistance. Together, Chemring and KarelCAD considered several factors as they evaluated options. Most importantly, the company needed a solution that integrated 3D design and data management seamlessly.

Chemring's goals aligned well with the Autodesk solution for Digital Prototyping. Autodesk Inventor software delivered 3D mechanical design and simulation capabilities that allowed the company to explore and validate ideas digitally. Autodesk Vault Professional provided the tools Chemring needed to organize, manage, and track data for efficiently controlling production build standards.

According to Berenger, "Vault Professional had all the design, product data, and revision management

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# Chemring increases productivity with better data management workflows.

functionality we required. We were very impressed with how favorably Vault Professional compared to much more expensive solutions. It's powerful and quite cost-effective, but the standout feature for us was the integration with Microsoft SharePoint. Since we already used SharePoint, it was an easy decision to add Vault Professional to our workflow."

## Seamless SharePoint Integration

At Chemring, a single design project can involve dozens of people within and beyond the design department. Engineers and chemists collaborate to enhance products using Autodesk Inventor software and other professional tools. But there's a broad range of additional data related to each product, such as user documentation, BOMs, supplier data, and more. Nontechnical professionals at Chemring can now access product data managed with Autodesk Vault Professional—including design data—via a familiar Microsoft SharePoint interface.

"In the past, people outside the design department had to work with one of our technical staff to access design data," says Alex Harmati, Supply Chain Manager for Chemring Australia. "Collaboration is much easier today. Our authorized users can simply access managed design data directly through SharePoint without the need for technical assistance or additional training."

Berenger adds, "Security control is vital in the defense industry. Even though people are collaborating through SharePoint, Autodesk Vault Professional lets us control access and helps maintain secure data so the right people can access the right data at the right time."

## Better BOM Management

In Chemring's industry, BOM creation and management require significant attention to detail. It's not just a question of having accurate BOMs for procurement. To ensure proper product performance, Chemring's materials must meet customers' exact

specifications. A slight material change in a key composition might impact a number of products, requiring Chemring engineers to review multiple product lines for compliance with specifications.

"Creating a BOM the old way took on average about two days," says Berenger. "With Autodesk Vault Professional, we can build an even more detailed BOM in just two hours. We can track materials used in each of our products at the composition level. Say a supplier changes a material specification—we can route the change for review within Vault Professional to our engineers or chemists. They can almost immediately track these changes and assess the overall business impact."

Berenger goes on to note that, "It's not about administering BOMs—it's about managing for quality. Autodesk Vault Professional essentially automates the way in which we track the usage of materials in our products and our production processes. This allows our people to apply their expertise to ensure our products perform as expected when lives depend on it."

## Reusing Proven Designs

Autodesk Vault Professional makes it easier for Chemring's engineering department to reuse designs. Since it no longer has to contend with a manually maintained file structure, the design team can find a proven design and copy it quickly, along with all related files and documentation.

"Autodesk Vault Professional gives us a single source for accessing the latest version of the parts we use across designs," says Berenger. "The previous approach we took increased the potential for designers to create new designs based on old part geometries and models or redraw entire portions of designs unnecessarily. Every time Vault Professional helps us to reuse an existing design, we save days of wasted resource."

## The Result

Since implementing Autodesk Vault Professional and Autodesk Inventor software, Chemring has seen measureable benefits. "We're saving days of engineering time because it's so much easier to reuse designs and we no longer have to manage design files and BOMs manually," says Berenger.

Summing up the advantages of Autodesk Vault Professional, Jason Biggs, General Manager of Operations for Chemring Australia, points beyond product data management processes. He says, "Military, law enforcement, and safety customers depend on our products with their lives. The biggest advantage of better data management is that it helps us work more efficiently. Autodesk Vault Professional is as intuitive as it is robust, and that's not even taking into account the integration with Inventor and SharePoint. Our workflows are much more automated. Our team is free to focus more energy on design quality instead of managing data."

## Learn More

Support increased productivity by improving the way you manage data. Visit [www.autodesk.com/vault](http://www.autodesk.com/vault) to learn more.

## About Chemring Australia

Chemring Australia is a leading developer, manufacturer, and supplier of high-quality energetic materials for the defense and marine safety markets. Chemring's products include munitions, pyrotechnics, countermeasures, and counter IED and marine safety solutions. In addition, Chemring maintains design, development, manufacture, testing, evaluation, and support capabilities. Chemring Australia is part of the Chemring Group, a global group of companies that is now the world's largest supplier of advanced expendable countermeasures, providing solutions for specific customer requirements across the defense, security, and safety markets in over 80 countries.



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—Kirk Berenger  
Lead Engineer  
Chemring Australia

Images courtesy of the Australian Department of Defence

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