



Trimble Ensures Regulatory Compliance and Adequate Supplies for Tens of Thousands of Components

Best known for global positioning system (GPS) technology, Trimble is a leading provider of advanced location-based solutions that maximize productivity and enhance profitability for up to 40 industries worldwide. More than 40,000 off-the-shelf components go into Trimble products, and the company must ensure compliance with complex and ever changing environmental, safety, health and humanitarian regulations – including European and Chinese RoHS restrictions, European REACH regulations, and U.S. conflict mineral laws.¹ Trimble must also keep track of manufacturers' plans to discontinue parts in order to avoid supply shortfalls that might disrupt production.

Previously, locating data necessary to evaluate compliance and product lifecycle information required a Trimble employee to enter individual part numbers or upload the Bill of Materials (BOM) into the company's environmental management system. This solution returned some information about regulatory changes, but was unable to give Trimble the advance warning it needed to proactively comply with regulations scheduled to change in the future. Staff members also needed to go to the hundreds of vendor websites and manually search through product documentation or contact the vendor to request necessary information about components. "There was no way to find this information expeditiously and we were always in a catch-up mode," said Kimara Chin, Data and Business Systems Manager for Trimble.

Challenge

- ▶ Track lifecycle of more than 40,000 off-the-shelf product components
- ▶ Ensure ongoing compliance with regulations including European RoHS and REACH, China RoHS, and U.S. conflict minerals laws
- ▶ Keep ahead of changes to regulations to ensure products remain in compliance

Solution

IHS CAPS 4D Enterprise Solution™
with IHS CAPS Universe XML Web Services

Results

- ▶ Instantly find data on thousands of parts each quarter versus manually looking up each one
- ▶ Reduced delivery time of RoHS and REACH compliance documentation from weeks to under 2 days – an 86% increase in efficiency
- ▶ Provided senior executives with greater visibility into current and potential BOM issues so they can be addressed more proactively
- ▶ Conducted negotiations earlier than before for better prices on end-of-life parts
- ▶ Enabled compliance by staying ahead of changes to EHS and humanitarian regulations
- ▶ Maintained production flow by ensuring adequate supply of soon-to-be-discontinued components

The company began looking for a creative solution. "Trimble has always been about efficiency and productivity – for our customers as well as us. We wanted to address the issue with workflow innovations that streamlined the process rather than throwing more money or people at the problem," Chin explained.

Integrating Compliance Data into the PLM

As a first step, Trimble implemented the Product Governance & Compliance module of their Agile Product Lifecycle Management (PLM) system from Oracle. This approach allowed Trimble to manage all product compliance data inside its PLM solution, eliminating the need to upload part numbers or BOMs.

"The question then became what or who could provide the necessary compliance and lifecycle data about the components. After evaluating the capabilities of numerous companies, we found that IHS was the only one that could quickly tell us what items they did and didn't have data for," said Chin.

Gaining Instant Access to Accurate Data

Today, Trimble has immediate, daily access to the IHS CAPS+4D Enterprise Solution – with its world-class database and XML feed – that covers approximately 37,000 of the company's parts and contains compliance data on 92 percent of them. As a result, the Trimble team is more confident than ever that their decisions will be based on information that is up-to-date, accurate and easy to find.

Each quarter, Trimble introduces many new products. Since each product contains multiple parts, staff used

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Trimble Tracks Component Compliance and Lifecycle Data

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to conduct anywhere from 300 to 1,500 individual manual searches on vendor websites for compliance data. For the vast majority of parts that are in the IHS database, users can instantly access the data from anywhere and at any time through Trimble's PLM solution without manual look up – saving hours of time. Employees can concentrate on finding information for the remaining few parts from niche vendors or manufacturers who do not make their data available.

Verifying Compliance, Avoiding Disruptions

Trimble has mitigated the potential future business risks of falling out of environmental compliance by using this solution. For example, when a shipment arrives into any European Union port, the port authority can prevent the company from bringing it into any EU member nation unless it can provide documentation proving compliance within two business days.

"It can take weeks to gather the information requested," said Chin. "With the IHS data, we can gain a true picture of the composition of the product from top to bottom, so we can instantly and confidently tell the import/export country and customers whether or not we comply. We reduced delivery time of compliance documentation about RoHS and REACH from weeks to less than 2 days. That's an estimated 86 percent increase in efficiency."

Complying with conflict minerals regulations requires complex calculations. Trimble needs to determine the composition of each part, the percentage (e.g. parts per million) comprised of conflict minerals, such as tantalum, tin, gold or tungsten whose trade is contributing to an emergency humanitarian crisis; and where the minerals come from.

Trimble can automatically calculate the quantity of restricted conflict minerals and determine whether they were sourced from a non-conflict area. This data is transparent, auditable, and robust because it is derived from a calculation. It's also always up-to-date because the solution refreshes it automatically.

Keeping Up with Regulatory Changes

International regulations change constantly. For example, in 2012, the EU RoHS ceramic capacitor exemption expired. In 2017, the European RoHS is due for extensive changes in scope that will require Trimble to potentially revamp an entire category of product to ensure compliance.

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Kimara Chin ,
Data & Business System Manager
Trimble

When regulations change, the company risks having to perform considerable product redesign if it does not have enough lead time to determine whether a product will be compliant under the new regulations or how it needs to change. Its old solution did not give Trimble adequate warning of impending changes. It was also time consuming to go back to product documentation to determine whether or not parts remained in compliance. When the ceramic capacitor exemption was about to expire, the effort had to start 1.5 years prior. The company now instantly has much of the information it needs to ensure compliance with changing regulations.

Managing Component Lifecycles

Because Trimble extends warranties for its products for long timeframes, it needs reliable parts from the original manufacturer. If it is unable to plan effectively, it might have to turn to third-party sources, which bring the risks of unreliable counterfeit parts.

Product development teams currently have timely warnings for when components will go out of production because the XML feed automatically pushes lifecycle data into a dashboard in the PLM system. As a result, Trimble's senior executives now have greater visibility into current and potential BOM issues so the company is able to address problems more proactively. The procurement department also has access to information about end-of-life parts so it can conduct negotiations to purchase adequate supplies before the part goes out of production. Because Trimble can start these negotiations early, it has a much higher likelihood of getting parts it needs at better prices.

Overall, said Chin, "Our intellectual property is more robust and our products continue to stay compliant to worldwide standards thanks to the IHS database with the XML feed."

1 RoHS is the acronym for the "Restriction of Hazardous Substances" Directive from the European Union (EU); REACH is the EU "Registration, Evaluation, Authorisation and Restriction of Chemicals" regulation