Navigating the Ocean of Global Regulatory Requirements

CIMdata Commentary

Key takeaways:

- *In today's global marketplace, the world is indeed flat and competitors and business opportunities can come from anywhere.*
- *Global value chains have to satisfy the compliance requirements for all countries in which they do business.*
- *The ever-changing nature of compliance regimes requires a product development environment that can rapidly adapt.*

Satisfying Global Compliance Requirements

The seeds of globalization were planted in the first Industrial Revolution. Industrial practices resulted in standardized products, creating economies of scale. Steamships greatly reduced the costs of international transportation, replaced in the next hundred years by mammoth cargo ships, laden with shipping containers, invented in 1956 to help better connect shipping with land-based transportation to bring goods to every corner of the globe Communications technology made it easy to do business with remote partners and customers.

As a result, companies of all sizes are making and delivering products that are sold, seemingly, everywhere. These changes created a level playing field, one topic in Thomas Friedman's best-selling book The World is Flat, which allows products and services to move seamlessly across borders. When your products were made and sold locally, it was relatively easy to meet the necessary rules and regulations. They were in your locale, presumably in your language.

When your markets are global, you have to meet all of the requirements of all of your markets: a big job. Every country can have its own set or variations of governing rules. Just knowing what they are can be a complex endeavor. This is one reason that many companies work with local partners who understand these requirements and can help navigate them effectively. But rules, like most things, are subject to change.

One area of great change is in environmental regulations, an area of growing concern in many markets around the world. The initial regulations originated in Europe, including:

- ELV: End-of-Life Vehicle Directive (1997) aimed at reducing waste from vehicles at the end of their useful life
- WEEE Directive: Waste Electrical and Electronic Equipment (2002, amended often) focuses on discarded electrical or electronic devices
- RoHS: Restriction of Hazardous Substances Directive, started in Europe (2003), focuses on the hazardous materials used to manufacture electrical or electronic devices, which led to variants in other countries, including China and Korea, and the State of California.
- REACH: Registration, Evaluation & Authorization of Chemicals (2006) looks at chemicals that are possibly affecting humans more broadly.

Once these rules were defined and adopted across Europe, other countries quickly adapted them for local use, in many cases adding local extensions. Other rules emerged in the United States, including:

- CPSIA: Consumer Protection Safety Improvement Act, USA (2008), is a broad US law that imposed requirements across a broad range of materials.
- Conflict Minerals regulations, embedded in the Dodd-Frank financial bill, that require companies to report on possible usage of minerals from the Democratic Republic of Congo.

Conflict minerals are a particularly hot topic because the first annual reporting requirement starts in May 2014. Right now the risk from non-compliance is small, with no well-publicized fines, recalls, or real consequences. However, many companies are now scrambling to meet this soon to be more stringent requirement.

Competing on a global basis means that companies need to document the various rules and regulations they need to meet. On a practical level, this means that regulatory compliance data management is a cost of doing business. This problem is getting more complex with each passing day. In the recent past, countries which ignored such regulations drew industrial investment precisely because companies could ignore them too. After years of environmental abuse, those same countries are now looking at costly, extensive remediation and are promoting these same regulations.

To paraphrase Heraclitus, a Greek philosopher from 500 BC, the only constant is change, and this is certainly true in environmental regulations. In late 2013, the US Environmental Protection Agency announced their intention to introduce hundreds of new regulations over the next two years. China has recognized that their environmental regulations need an overhaul. If the previous pattern holds, once a major country implements a new rule, other countries will quickly follow suit.

Since change is constant, companies need a solution that can help them address this problem systemically:

- Companies must stop wasting time, effort and money in stopgap measures and put a holistic effort in place.
- The solution must be able to respond quickly to the constant change and churn in environmental regulations.
- The solution and a company's business processes need to be able to quickly change to respond to new regulatory requirements.
- Companies need solutions that can span customer and supplier relationships, and that can dig down into the design process to track usage, and help support avoidance.

Focus on Dassault Systèmes

One long-time player in materials compliance is Dassault Systèmes, a leading provider of PLM enabling solutions. The roots of their solution go back to "Compliance X-Sight", introduced by Centor Software in 2001. When MatrixOne acquired Centor in 2005, the solution was rebranded Materials Compliance Central (MCC). Dassault Systèmes acquired MatrixOne in 2006, and it has since become a core offering of the ENOVIA brand, and provides the underpinnings for the company's 3DEXPERIENCE strategy.

MCC is a role-based system that was designed to support many stakeholders in the compliance process. It has evolved over the years through close collaboration with leading customers, including Agilent Technologies, AB Sciex, and Great Wall Automotive. According to Dassault Systèmes, MCC was designed for flexibility. It is relatively easy to implement changes in the system, such as adding a new regulation or substance to the system, changing the thresholds for materials, or changing how a metric is calculated. This makes it easy for MCC customers to respond quickly to the ever-changing regulatory environment. No software changes are required and, as with other changes to the ENOVIA solution, changes can be instantly available without restarting the server.

Their approach can also provide flexibility when collecting data from the supply chain. Suppliers often report differently, and the information needs to be readily parsed into the right format. This is important, because every industry has its own data exchange format:

- IPC 1752, from the former Institute for Interconnecting and Packaging Electronic Circuits, focuses on materials declaration to support RoHS and REACH.
- The Japanese industrial market has long supported this issue, first with their Japan Green Procurement Survey Standardization Initiative (JGPSSI) form, and now with two newer solutions:
  - Joint Article Management Promotion (JAMP) form
  - Japanese Automobile Manufacturers Association (JAMA) form
- The International Material Data System (IMDS) is a global repository for environmental reporting data.
- BOMCheck.net, a European initiative that focused on healthcare and medical device compliance.
- Compliance Connect, an Excel based technology adopted by several global companies because their supply chain data collection tool is built upon Dassault Systèmes' technology.

According to ENOVIA, recent solution releases have greatly enhanced the ability of Dassault Systèmes customers to adapt to these varied global environmental requirements. Future releases will continue this approach, adding support for new formats, such as an aerospace and defense-focused capability in 2014/2015.

Conclusion

Competing in global markets means complying with global standards. Compliance regimes have blossomed, expanded, and evolved, a process that will not stop. In fact, they will continue to expand and get more complicated. Companies need flexible solutions to support their value chains that can change along with the regulations. Based on the experience of current Dassault Systèmes customers, the ENOVIA MCC offering can help them navigate this ocean of often conflicting regulations to deliver compliant products to markets around the world without cost overruns or launch delays.

About CIMdata

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