Delivering a sustainable tomorrow

5-point guide to building savvy sustainability strategies

fact sheet

Summary

Siemens PLM Software's commitment to climate protection manifests itself in environmentally friendly product development processes, reengineered manufacturing processes and software solutions that enable customers to design "green" electronics products more efficiently. These initiatives have helped establish the key best practices that enable companies to turn sustainability policies into a competitive advantage.

Benefits

Gain competitive marketplace advantage by offering products that are environmentally friendly

Differentiate your company by promoting the fact that your products and processes are green

Look for opportunities to weave environmental and regulatory compliance into your company's mission

Help your engineers design green products by providing software tools that automate regulatory compliance

Ensure that your supply chain is able to identify compliance problems before they reach the production stage

Leverage PLM and "lifecycle thinking" to holistically address environmental considerations from product conceptualization to end of life and product retirement

Electronics companies move to "green" policies

In recent years, we've seen an outpouring of mandates and regulations aimed at making electronics goods (along with their production and disposal) less harmful to the environment. These include the European Directives on Waste Electrical and Electronic Equipment (WEEE), the Restriction of Use of Hazardous Substances (RoHS) and the Registration, Evaluation and Authorization of Chemicals (REACH), as well as corporate initiatives, such as Wal-Mart's directive to impose "green" imperatives on its suppliers. Regardless of the source, these initiatives are not optional. Electronics manufacturers must comply or lose the ability to sell in certain markets.

On the positive side, consumers want products that illustrate concern for the environment. In an industry such as electronics, where commoditization has focused the purchase decision mainly on price, the ability to offer "green" products is becoming an increasingly important differentiator. In one study, consumers indicated that of two products with the same features and the same price, they would choose the one that was better for the environment.

This presents a tremendous opportunity for companies in this industry to "do well by doing good." By offering products that are better for the environment, electronics manufacturers can gain a competitive advantage in a highly desirable segment of the market. Other benefits of environmental care include lower production and waste removal costs as manufacturing practices are made more efficient and fewer hazardous materials are used.

Siemens PLM Software's best practices

An environmental sustainability strategy must be backed up by concrete action. At Siemens PLM Software, our commitment to sustaining this planet's natural resources manifests itself in the following ways: product development processes that reduce the use of hazardous substances and the energy consumption of our products; re-engineering our manufacturing processes to save energy and reduce green house gas emissions; and providing software that helps customers design "green" while lowering the costs associated with doing that.

These efforts, as well as the experiences of some of our major customers, have helped us establish the following best practices for turning care of the environment into a competitive advantage:

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1 *Look for the opportunity.* Environmental requirements should not be viewed as simply additional mandates. From that narrow perspective, collecting and reporting required compliance data is considered an additional cost. We suggest adopting a broader point of view that considers care for the environment to be a way to open new markets or separate your company from your competitors in existing ones.

In other words, instead of asking "What do the regulations require?" ask, "What do potential customers, who care about the planet, want from our products?" The most effective organizations are adopting this focus by creating C-level positions to drive an overall corporate strategy for the environment. With direction from this level, protecting the environment can be woven into the overall compliance and regulatory efforts and integrated into the mission of your company.

2 *Help your engineers design "green".* The design phase is where you find the greatest ability to address environmental requirements. It is in the concept phase that designers must have access to the most up-to-date information about the material and substance makeup of components and parts. But asking design engineers to focus attention on an additional labyrinth of product variables may have its drawbacks. It is possible, however, to automate much of what designers need to consider in regard to environmental care.

For example, we provide software tools to evaluate the physical content of designs for regulatory compliance and end-of-life requirements. This information can be used early in the product lifecycle, enabling designers to make decisions on materials and components as the design is taking shape. Additionally, you can track market requirements for environmental compliance and validate product readiness for market launch.

3 *Don't let suppliers jeopardize your efforts* (secure your supply chain). This practice is especially important because ultimately, it is your company that will pay for the cost of non-compliance – whether that takes the form of fines, closed markets or disastrous public relations.

Companies must establish procedures to ensure that they have adequate sources of compliant components and that they efficiently manage supplier-provided compliance information, including material, substance data and validation information. Siemens PLM Software provides supplier relationship management (SRM) solutions to manage supplier relationships and identify companies with compliant components and processes. Similar to the automated tools that help designers with environmental compliance, these solutions can automatically evaluate final bills of material (BoMs) for compliance with mandates such as REACH, RoHS and WEEE. These solutions also produce reports to support their compliance, including approved/preferred sourcing BOMs. These tools can identify supply chain problems before they make it into production.

4 *Use "lifecycle thinking" to streamline compliance activities.* Companies that use product lifecycle management (PLM) software have an advantage in adapting to new environmental regulations because they already have adopted "lifecycle thinking" – the ability to view a product from concept to end of life. This is important because environmental regulations will require action across the lifecycle: in design as engineers specify components, in purchasing as suppliers are chosen for their ability to show their commitment, in production as manufacturing and assembly processes are refined for energy efficiency and in after-sales support as processes are put in place for product retirement and recycling.

PLM-supported lifecycle thinking integrates various stages of the product lifecycle (and the data each stage produces) in way that facilitates compliance with environmental regulations. For example, when design and manufacturing activities can share data, it is a simple matter to compare



as-designed and as-built BOMs to identify component changes made during manufacturing that might result in non-compliance.

In a traditional product development framework where the various aspects of the development process are distributed, this sort of compliance safety net would take a lot more effort to achieve. Enabling the product lifecycle to support green design, ensure compliance and enable recycling requires additional resources in the short term to extend your company's environmental knowledge and capability. But the end result is a streamlined compliance effort.

5 *Expose and promote your green efforts.* With an environmental care plan in place, you can confidently expose what you're doing to the market and differentiate yourself by promoting the fact that your products and processes are green. This is where real-world competitive advantages, such as enthusiastic new customers, begin to be seen. When viewed from this angle, regulations such WEEE and RoHS can be considered for what they really are – opportunities that are too good to pass up.

PLM is an increasingly important and visible enterprise business strategy. PLM enables companies to fully marshal the skills, expertise, knowledge, experience, creativity and ideas of their people and partners, and collaboratively apply them to environmental sustainability initiatives. As a result, Siemens PLM Software empowers the execution of a sustainable business strategy that influences a complete product lifecycle that extends from concept ideation through product retirement.

Contact us now to discover how Siemens PLM Software's solution for sustainability can help you bring in the green at: www.siemens.com/plm.



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