

View Point



Complying with Waste of Electrical and Electronic Equipments and Restriction on use of Hazardous Substance directives: the way forward

Anuradha Goyal, Amit Bakre

Overview

The European Union announced two directives in 2003: Waste of Electrical and Electronic Equipments (WEEE) and Restriction on Use of Hazardous Substance (RoHS). WEEE directives came into effect in August 2005 and RoHS directives will come into effect from July 2006 for the electrical and electronics industry players. These directives help to improve the ecological environment, reduce the use of hazardous materials in electrical and electronics goods, enable reuse and safe disposal of the hazardous components. While some of the global leaders have begun adopting these environment compliance regulations, most of the organizations haven't yet realized the impact of non-compliance of these directives. The impact could be in terms of loss of revenues, low brand equity, reduced customer base and a risk of potential penalties. As a result, these organizations have not allocated finances to meet the environmental compliance requirements. To minimize the impact of non-compliance of directives, organizations need to have a well-defined strategy for compliance to both the RoHS and WEEE directives.

Non-compliance to WEEE and RoHS

Non-compliance to WEEE and RoHS directives affects organizations significantly:

Organizational Processes: RoHS directive affects the flow of hazardous materials in the supply chain and hence impacts all the processes associated with material movement in the procurement process. Procurement processes need to ensure that the items being procured meet the RoHS specifications and the restricted material usage is minimized in the components and products. On the other hand, WEEE puts the responsibility of the end-of-life disposal of products on the manufacturers. If the organization has no processes for reverse logistics, it has to ensure these processes are adopted. Other processes such as new product design, quality management and regulatory reporting can be affected as well. Thus, all these processes need to be changed to address the compliance regulations.

For example, new product design needs to ensure that the hazardous materials usage is minimized. Also, the product design needs to be modular in nature to enable high reusability. Procurement processes need to incorporate checks and balances to ensure that the components procured from suppliers have the hazardous material content within prescribed limits. The reverse logistics processes are also not very well-defined in the electrical and the electronics industry and may need to expand to have a proper mechanism for collection, disposal and recycling of the equipments as per the WEEE directive.

Finance: Non-compliance to these directives influences the financial planning of the organization. Non-compliance could result in major financial losses due to:

- Loss in revenue due to rejected shipments
- Penalties that may be imposed
- Loss of customer base to competition which is WEEE/RoHS compliant

In addition to the financial impact, the brand equity and the corporate image of the organization may also get tarnished affecting its future growth and positioning in the market.

Information Systems: The various application systems supporting the operations in an organization need to be modified or enhanced in order to support the environment compliance requirements. New applications/tools may be required for compliance reporting. For instance, if the organization sets up a reverse logistics process, it needs information systems to track and monitor customer returns, managing re-cycling data and reporting to the regulatory authorities.

Going forward

It is expected that in the future the 'Go Green' laws will keep evolving. EU was the first to come out with these directives, followed by Japan, China and California. Other countries are soon expected to formulate directives and laws for environment compliance. Today in EU, about six items are on the restricted items list. The laws will evolve and may include more items in this list with stringent tolerance limits with respect to the item composition. As of now, the directives have been put in place for the electrical and the electronic goods industry, but soon other industries could fall under similar directives, especially the chemicals-based productions/products industry.

Global corporations would be affected more than corporations with a regional presence, as they need to comply with the laws in multiple countries they operate and service. These organizations need to re-strategize and adjust to the emerging regulatory requirements.

Organizations today are taking a piecemeal approach to these directives, rather than a holistic approach. There are certain disadvantages of this reactive approach:

- **Total cost of compliance:** The cost of piecemeal approach eventually will be higher than the holistic approach
- **Shifting the supply chain liability:** It is possible that by doing so they may be shifting the liability from one part of the supply chain to another
- **Short-term focus:** Being a reactive approach, the focus will always be to cater to the immediate requirement, which may or may not be useful in the long term

Charting a roadmap for compliance

It is important to understand the impact of compliance regulations before we define the optimal strategy for it. The major factors to consider are – the risks associated with non-compliance and the cost of being compliant as against being non-compliant. Compliance profiling helps organizations create a risk/cost/impact map and helps them lay down the guidelines for the long-term strategy. Compliance profiling involves:

- **Qualitative Risk Assessment:** Corporates need to assess the risk of non-compliance with the directives. This risk analysis should evaluate the extent of non-compliance which can be borne by the organization without leading to any penalty, without affecting the brand image and organizational goals. Organizations need to assess risks for each market based on the market share in that particular market. This is necessary as organizations will have market specific strategy depending on how it is perceived in the market. Risk assessment should also help in quantifying revenue loss due to non-compliance. Risk should also be calculated in the effort required to change processes and fine tune IT systems.
- **Total Cost of Compliance:** To calculate the cost of compliance, various aspects to be considered are – new process design, introduction of new processes, changes required in IT systems to support compliance, audits and reporting requirements. Also, it is important to calculate the cost of non-compliance. These costs can be with respect to revenue loss due to shipment rejections, penalties/fines to be paid for non-compliance and loss in market share due to non-compliance.
- **Budgeting for Compliance:** It is suggested that there should be a separate dedicated budget for the compliance related initiatives. As of now most of the compliance projects are funded either from the business function budgets or from the IT budgets. But going forward it is suggested that there should be a separate dedicated budget for the Compliance related initiatives. Appropriate budget allocation is possible only after a thorough effort is made towards calculation of costs required to achieve compliance.
- **Define Compliance Profiling:** Compliance profiling is the means to arrive at a matrix mapping product portfolio, compliance datelines and country specific guidelines/ regulation.

It provides guidelines about the products that need to be compliant. It also helps organizations determine the sequence of products that should be compliant, based on the phase of the product in the product life cycle. Any product with declining sales and which is likely to be phased out need not be in the compliant products basket thereby saving costs and effort. A comprehensive compliance profiling helps organizations determine the products which need to be compliant and hence have a time-phased plan to achieve this compliance. Compliance profiling should ensure that the compliance strategy is based on the market where the product is sold. This is necessary because the regulations are country specific and each country is likely to have different dates to follow compliance. This effectively means that the organizations could have different marketing strategies which could be country specific depending on the compliance requirement stated by the particular country.

- **Governance Model:** The compliance initiatives need to have an executive level sponsorship and should be an organization-wide initiative. These initiatives and strategic projects need appropriate resources to be assigned. Periodic tracking and reviews by senior executives needs to be conducted. The teams could be virtual cross-functional teams with representation from different functions and representation from IT with clearly defined responsibilities, accountability and governance structure.

Strategic approach to compliance

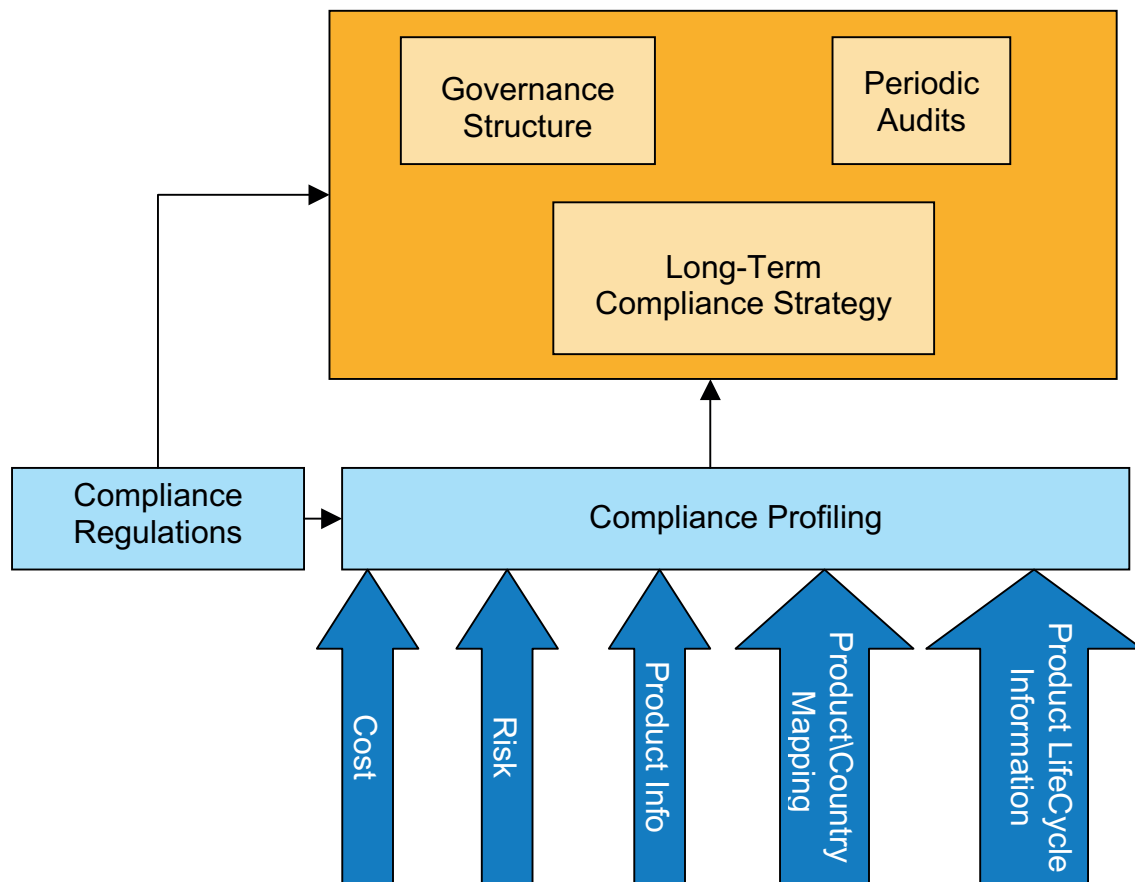
It is recommended that organizations need to have a well-defined strategy to meet the WEEE and RoHS compliance needs, which is long-term, holistic and flexible. The strategy should not look at these directives as only imperative for regulatory compliance but also as an opportunity to improve the organizational processes in such a way that new processes cater to long-term compliance requirements.

The key constructs for an effective compliance regulations strategy are:

- Long-term strategy with short-term goals to respond to immediate regulatory requirements
- Flexible to take into account:
 - Different regulations in different countries
 - More items added to the RoHS list
 - More stringent/narrow tolerance limits
 - More countries

Strategy to be adopted by global organizations will be different from organizations which have only a regional presence. The strategy developed should take into account different country specific requirements. Global organizations may have to re-look at their global supply chain processes to cater to the local compliance needs.

In case organizations are planning to enter new countries, either as a new market or as a part of the supply chain in sourcing or manufacturing, the compliance roadmap to be developed for compliance should take into account the date when the compliance directive comes into effect in that particular country. Marketing strategies may need to be in tune with the new products designs. A shift in marketing strategy may be required for existing products. In certain markets, being compliant may help in gaining competitive advantage. Organizations can have a positive impact on the market when they achieve compliance. The strategy with respect to existing product needs to be closely tied with the product position on the product life cycle.



Flexibility in compliance strategy is required as the compliance regulations are evolving (new products and materials may be added to existing list) and will continue to have changes which should be accommodated in the strategy without much trouble. The strategy should be developed in such a manner that compliance is seen as an opportunity to improve and not just as satisfying the regulation. Every dollar spent for the compliance initiative should be utilized to improve business processes and thereby achieving business benefits. There should be compliance audits at periodic intervals to ensure that the processes are being followed.

Conclusion

With the directives like WEEE and RoHS, the compliance is no longer a choice for the high-technology industry. A long-term and flexible strategic approach to compliance can ensure that the investments made in compliance initiatives are best leveraged and contribute not only to compliance requirements, but are also used as a process improvement opportunity. A flexible approach can help you remain compliant for the long-term and even as the businesses expand their global footprint. Compliance profiling can help organizations plan, prioritize and execute the compliance needs as part of the business strategy. Compliance can also be looked upon as competitive advantage if positioned in the right way.

About the Authors

Anuradha Goyal is a Senior Consultant with Strategic Planning & Solutions Group. She has experience spanning multiple enterprise applications like Oracle Applications, SAP in finance and manufacturing domains, for various Fortune 1000 customers. She currently anchors the go to market industry solutions for Enterprise Solutions at Infosys.

Anuradha can be reached at anuradha_goyal@infosys.com

Amit Bakre is a Senior Consultant with the Enterprise Solutions group at Infosys. He has more than 10 years of experience in IT consulting space primarily in the supply chain domain. He has managed complex assignments in retail and manufacturing industries.

Amit can be reached at amit_bakre@infosys.com



For more information, contact askus@infosys.com

About Infosys

Many of the world's most successful organizations rely on Infosys to deliver measurable business value. Infosys provides business consulting, technology, engineering and outsourcing services to help clients in over 30 countries build tomorrow's enterprise.

For more information about Infosys (NASDAQ:INFY), visit www.infosys.com.