

Six Technology Tactics to Promote Corporate Social Responsibility

An Epicor White Paper

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Corporate Social Responsibility

As the world continues to analyze energy availability and the long-term effects of climate change, businesses too are turning their attention to an area of opportunity—reduction of carbon emissions, energy conservation and supply chain sustainability. Despite the fact that government incentives in this area are still in their infancy, many businesses are finding that these initiatives go beyond simple good-citizenship to real business opportunities and bottom line savings that can contribute financial value to the organization while meeting demanding customer requirements.

Corporate social responsibility (CSR) is a relatively new precept for business. Conceptually, CSR holds organizations to a higher moral and ethical standard considering the overall interests of society in the operations of its day-to-day business. Under this utilitarian view, businesses would need to take responsibility for the impact of their activities on all parties that they would affect—customers, shareholders, surrounding communities, and the environment—in all aspects of their operations. Ultimately, companies will look to IT and software solutions to help them find opportunities to be better stewards of the environment and extend the tangible benefits of corporate social responsibility from the business through the extended supply chain.

What Does 'Green' Mean to Your Business?

How do you define 'Green IT' initiatives and how do they fit into the CSR statements of direction that many companies are now implementing? These are questions most CEOs and CIOs are struggling with on a daily basis. Being green is a subset of the broader world of supply chain sustainability and corporate social responsibility. In the purest sense, sustainability incorporates a multitude of supply chain considerations such as fair labor practices, energy and resource conservation, human rights, and community responsibility.

Many equate CSR to the reduction of emissions of carbon dioxide and greenhouse gases, but the concept of CSR goes beyond the local impact of a business to their extended supply chain. Many companies are now managing global supply chains and need to adhere to a more global view of sustainability and hold themselves to many of the same regulatory and social standards across multiple geographies.

Globalization – More Than a Trend

Globalization is driving longer and more complex supply chains. Distribution and manufacturing activities are pushing companies to assess the social and environmental impact of their supply chain on the world. Supply chains are continually changing and operating within the scope of modern technology limits for getting product from point A to point B. Modern supply chains are cracking under the stress of a multitude of macroeconomic factors such as the high cost of oil and increasing environmental regulations intended to minimize the impact of carbon emissions—these factors were never considerations as little as a decade ago. Even five years ago, would anyone have predicted \$4.00 per gallon for gasoline? Building a sustainable supply chain is of paramount importance for many CEOs. A PricewaterhouseCoopers poll found that 70% of CEOs believe that CSR is vital to their firm’s profitability^{1*}.

Today companies are considering redesigning long and complex supply chains to reduce transportation costs and the associated carbon footprint generated by moving goods long distances. Incorporation of carbon emission measurement as part of a supply chain network design is turning into an industry norm. Companies need to understand from a more holistic point of view the impact of measurable costs (both tangible and intangible), customer service levels, and carbon tradeoffs associated with different network layouts.

Gaining Momentum – Regulatory and Social Trends

Regulatory pressures are mounting and increasingly affecting businesses of all sizes, from small manufacturing organizations up to Fortune 500 companies. From a global, macro level the Kyoto Protocol International Framework Convention on Climate Change was backed by 178 countries with the sole intent of reducing greenhouse gases. On a micro level, many cities are now committed to reducing CO2 emissions by 25-50 percent by 2025 (compared to 1990 levels). There are also many proposals outlining cap-and-trade systems whereby carbon-emitting companies would have to reduce emissions or pay for credits that allow them to continue to operate at current carbon producing levels.

¹ 5th Annual CEO Survey – Uncertain Times, Abundant Opportunities in Conjunction with the World Economic Forum, 2002

Greenhouse gas emission reduction is not the only target of new legislative actions taken by governmental agencies—hazardous substances that make up many products have become the target of a spate of legislation. Companies worldwide must adhere to the European directives of RoHS (Restriction of certain Hazardous Substances), REACH (the Registration, Evaluation, Authorization and Restriction of Chemical substances), and WEEE (Waste Electrical and Electronic Equipment) in order to sell their products in the European Union (EU).

Beyond the legislative directives, increasingly consumers are very aware of the social and environmental impact that long and complex supply chains have on the world. More consumers are basing their purchasing decisions on the use of sustainable materials in the manufacturing process and fair trade labor practices. Consumers are not the only ones watching. Sustainable supply chains and labor practices are being monitored by Wall Street investment banks who are tracking sustainability and environmental risk factors. The veil of good corporate citizenship applies to the parent company and goes all the way down to second and third tier suppliers.

Forward Thinking for a Socially Responsible Business

If a business decides that corporate social responsibility is a priority, they will need to start the process by asking themselves some simple questions: Why do you want to be socially responsible? What is the end game of what you would hope to accomplish?

The objectives of an executive sponsored CSR policy need to be decided upon when contemplating the overall goals of the program. For example:

- Is the goal a reduction in your current carbon footprint?
- Is your company trying to meet regulatory guidelines?
- Does your company see a business opportunity in being socially responsible or as a moral imperative of being a good corporate citizen?
- Is your corporate brand reputation tied to your supply chain and with it customer satisfaction and loyalty?

Evaluating your answers will set the course to socially responsibility, which will consist of a series of socially responsible actions. Businesses can position themselves anywhere along the spectrum of social responsibility. You could begin by complying with regulations and to employing equipment like bio-diesel engines or low-energy-consuming light. More forward-thinking companies can position themselves to move ahead of the curve to be at the forefront of shaping and fixing the environment by redesigning and developing new environmentally-friendly products or redesigning their supply chains to include sustainable suppliers and transportation modes. Being at one end or the other of the spectrum is not necessarily good or bad—it simply depends on your objectives and the dynamics of your particular business.

The Difference Maker – Technology

Businesses are taking notice of these trends and are looking to use technology systems they already have to help become good corporate citizens and be proactive in combating carbon emissions. As with the financial compliance standards that guided the earlier part of the decade, technology can be the means for action - rather than being reactive once legislation has mandated adherence to local, state, national or international requirements.

AMR Research estimates that within the next two years 89% of companies in the US and 62% in Europe plan to use technology to manage their CSR initiatives, and even more encouragingly, 70% of companies have a dedicated budget for CSR initiatives². Some of the more notable areas that corporations are placing emphasis on when deciding on a path to CSR surround strategic sourcing and procurement, logistics, continuous process improvement, product lifecycle management (PLM) and virtualization.

1. Strategic Sourcing and Procurement

As a result of the increased scrutiny, companies are now setting up supplier guidelines that include social and environmental requirements and supplier codes of conduct. Preferred suppliers have traditionally been viewed as those with the best performance, total cost, and quality. In leading-edge companies, CSR and sustainability are now part of the preferred supplier equation ensuring social and environmental compliance as well as the normal performance metrics of product quality, on-time performance and price.

Historically, procurement has been based on two criteria - price and quality. As long as the right product arrived on the doorstep at the right price everyone was happy. Today when you are talking about procurement in a more socially conscious world your company will have to worry more about sustainable procurement. Sustainable procurement broadens this framework to take account of third-party consequences of procurement decisions, forming a “triple baseline” of environmental, economic and social considerations. Due to the extended supply chains of many companies it is more critical than ever for enterprises to have the proper information about their supplier base (environmental performance, environmental certifications, and codes of conduct of their supply partners). The recent toy recalls for excessive lead paint levels should serve as a wakeup call for all manufacturers. Supply chain disruptions such as these can potentially cost millions of dollars to enterprises.

Supply chain inefficiencies that promote poor environmental performance can just as easily put themselves at a disadvantage. Managers in companies are teaming with their procurement departments to better leverage their efforts to “green” their suppliers. This requires the company to carry out an assessment of the environmental consequences of a product at all the various stages of its lifecycle which means measuring the environmental costs of securing raw materials, and manufacturing, transporting, storing,

² AMR Research - U.S. Companies Lead Europe in Corporate Social Responsibility Data Integration, (March 2007)

handling, using and disposing of the product. Implementing an automated supplier enablement process brings higher visibility into the overall process. It provides essential and comprehensive information about suppliers that improves the strategic value of those relationships and mitigates risk.

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2. Continuous Process Improvement

Midmarket companies are challenged with finding ways to facilitate better communication and create streamlined manufacturing processes that don't slow down current production or add additional cost to the final product. One way for manufacturing based companies to enable sustainability across all the various processes in their organization is to implement continuous process improvement programs. The underlying principles of process improvement are to build effectiveness and efficiency across the entire supply chain and help companies maintain success through continued process improvement utilizing such tools as lean manufacturing, Six Sigma and Total Quality Management (TQM) principles.

Companies may not consciously target "environmental" issues such as energy or water use, solid or hazardous waste, or chemical hazards, in their process improvement initiatives. Yet, with the recent public focus on green and corporate social responsibility coupled with the rise in energy (and transportation) costs, an increasing number of companies have begun specifically targeting energy consumption with process improvement initiatives. Energy consumption and waste output have a very definite and measurable impact on a company's bottom line as well as a facility's environmental footprint.

Most companies believe that continuous process improvement's main benefits come from cutting costs and improving manufacturing and distribution process and efficiency, but that is really a mistaken perception. Process improvement is not a quick solution for cost reduction; it is a fundamentally different system than traditional management for organizing and deploying corporate assets. Process improvement initiatives can have far reaching implications ranging from management of supplier and customer relationships to executing product development initiatives and managing manufacturing production resources across the extended enterprise. While continuous process improvement's fundamental focus is on the elimination of non-value added activity and waste from the production and distribution processes, the implementation of continuous process improvement principles leveraging lean manufacturing, Six Sigma and TQM methods results in significantly improved environmental performance. What that translates to is a focus on continually improving the resource productivity and production and distribution efficiency, which frequently translates into less material, less capital, less energy, and less waste per unit of production.

Continuous process improvement also ultimately identifies overall manufacturing and distribution requirements and aligns production 'need' to production capacity. Doing this will always ensure that the production lines are optimized, optimizing the utilization of energy and raw product in the manufacturing process. Implementation of continuous process improvement principles can also provide companies the necessary resources to tightly align packaging material to production events. Effectively aligning the two processes will again result in more efficient use of materials, reduce waste and improve line and machine utilization.

3. Product Lifecycle Management

Another hurdle to overcome with a global supply chain is a lack of communication between design and manufacturing. Product lifecycle management (PLM) is an enterprise, business and information strategy that enables companies to establish global information networks to meet these challenges. By providing a digital manufacturing environment with a centralized data repository, PLM can make it possible to capture information from all stages of manufacturing and production. This includes product engineering; product release management; assembly process planning; process simulation and validation; process detailing and documentation; and product launch support.

The entire process combines all relevant data into one repository and reduces the number of redundant parts used in product development, efficiently manages component identification and sourcing, performs substance survey collection and storage and testing reports and also analyzes components for The RoHS Directive restricted substances, searching bill-of-materials (BOM) information and related material data to determine compliance. On a more tactical level, PLM when linked with the sourcing initiatives and vendor management applications provides companies with a means of identifying and sourcing from suppliers that follow sustainable practices, fair-trade relationships, and progressive labor practices.

PLM systems can also provide a new perspective on a company's own use of resources. For example, the PLM capabilities could be used to calculate the amount of packaging used for its products and to help identify opportunities to reduce packaging. This not only improves margin by lowering packaging costs, but also reduces the amount of waste produced when the product is opened and the packaging discarded.

4. Logistics

There is an inherent paradox in positioning logistics as green processes as it fits into the grand scheme of CSR. Companies and their freight carriers are continuing to strive to provide higher delivery service levels while reducing costs and minimizing the impact of logistics usage to the environment. Can these two seemingly incongruent goals be rationalized to create efficient and environmentally friendly logistics systems? The answer to these questions is a resounding—yes.

Logistics software applications are at the forefront of the CSR effort by bringing very tangible benefits to companies that are using software to optimize shipping routes which in turn reduce costs and reduce the carbon footprint. The value proposition is as simple as getting from point A to point B: optimized trucking and shipping routes mean less miles traveled, less miles traveled means less gas used by trucks, less gas used by trucks means less CO₂ emissions. Logistics software can manage more than just fastest distance from point to point.

This type of logistics software helped UPS shave \$28.5 million miles off its delivery routes, which has resulted in savings of roughly 3,000,000 gallons of gas and has reduced CO₂ emissions by 31,000 metric tons – just by eliminating left hand turns out of their delivery routes³.

In addition, the use of logistics software in conjunction with a continuous improvement strategy, like lean or Six Sigma, allows tighter alignment between suppliers and customers ensuring that materials arrive on time and at the right place mitigating potential issues with spoilage and improving manufacturing effectiveness and efficiency. The ability to make many products while shipping only once can significantly improve truck utilization and reduce fuel and other related costs while reducing CO₂ emissions.

5. Performance Management and Measurement

Environmental dashboards are one of the technologies that have the potential to be one of the more environmentally proactive tools available to company management. All levels of the organization can benefit from access to this information. For example, decisions by a line of business manager could affect the environmental performance of the company. A line change or a customer order expedition have cascading impacts to the environment and performance management dashboards provide the information of the potential effects of waste and emissions due to business decisions.

Companies are challenged to capture data that will assist them to be more proactive in their decision making ability. Without exception, if you want to get Enterprise-wide visibility your company will require an enterprise-level system. Monitoring real time changes will help employees make good, informed decisions while at the same time reducing poor decisions that have a negative environmental impact. Dashboards and Web portals are immensely important systems as they provide the outward integrated face of enterprise systems by providing critical information for decision making that can really evaluate and guide the CSR programs within a company.

³ Left-Hand-Turn Elimination – December 9, 2007 New York Times Magazine

6. Virtualization

The attractions of server virtualization are very clear. Virtualization enables organizations to reduce the number of physical servers they need, while increasing the utilization rate of those that remain. The introduction of virtualization technology can also lead to a significant reduction in energy consumption, as there are fewer physical servers to power, and less cooling is required to dissipate the heat these servers generate. Energy consumption is rapidly becoming a far from trivial issue. A recent report by the Environmental Protection Agency claims datacenters in the U.S. consume 4.5 billion kWh annually, 1.5 percent of the country's total⁴. This figure has doubled from 2000 to 2006 and does not appear likely to stop any time soon. Businesses are looking for ways to cut costs and utilize assets more efficiently. Many are turning to creating green datacenters and using virtualization as one of the centerpieces to reduce costs and become more socially responsible.

Move Slowly at Your Own Peril

It is one thing to talk about the use of technology—it is another to actually put the use of technology into practice. Companies of all sizes are looking at implementing green initiatives across their extended supply chains. For example, Herman Miller a leading global provider of office furniture recently undertook the daunting challenge of working with their entire supplier base to determine whether or not their entire product was recyclable at the end of its useful life. The company's goal with the introduction of this project is to have 100% of its products comply with the company's policy of zero landfill and zero hazardous waste generation by 2020. In the process of working with their suppliers, Herman Miller examined their entire supplier base to ensure this goal is realized⁵.

Wal-Mart® recently implemented a new supplier packaging scorecard in February of 2008 that formally rates suppliers on their progress toward developing sustainable packaging which includes assisting Wal-Mart in meeting sustainability goals to reduce waste, use renewable energy and sell sustainable products⁶. Wal-Mart's goal is to reduce overall packaging by 5 percent by 2013. If the goal is met, millions of pounds of trash will be kept from reaching landfills. The company also estimates that this initiative will save 667,000 metric tons of carbon dioxide from entering the atmosphere. This is equal to taking 213,000 trucks off the road per year, eliminating the need to use 323,800 tons of coal and 66.7 million gallons of diesel fuel.

⁴ http://www.eia.doe.gov/emeu/reps/enduse/er01_new-eng_tab1.html

⁵ 'Green' Procurement Goes Into the Black, By Maria Varmazis - 5/8/2008 (<http://www.purchasing.com/article/CA6554607.html>)

⁶ Wal-Mart is Taking the Lead on Environmental Sustainability – <http://walmartstores.com/download/2392.pdf>

Obviously these are large companies but the point is that the supplier base of Wal-Mart and Herman Miller and other large organizations like them affect the entire supply chain by their CSR direction and policies. Organizations both large and small move towards more environmentally and socially responsible programs for any number of reasons whether it be because of new regulatory pressures, whether the organization feels morally obligated to be environmentally or socially responsible. The entire supply chain is affected and suppliers at every level will need to comply by force or by choice to become more green utilizing the tools that companies have available to them by leveraging their ERP data, by leveraging their procurement, or logistics applications or by employing lean manufacturing and logistics strategies through the organization.

Introducing Epicor Next-Generation Enterprise Applications

In response to this climate of heightened governance, risk and compliance (GRC) with an emphasis on supporting your CSR initiatives, Epicor has created next-generation enterprise applications to help you achieve maximum optimization and performance across your entire enterprise, whether it operates on a local, regional or global scale.

Epicor has long been a consistent leader and innovator for global enterprise resource planning (ERP) solutions built entirely on a true service-oriented architecture (SOA). In this approach, “services” are self-contained pieces of business logic that can be mixed and matched, are platform independent, and can be dynamically located, invoked and used to configure and re-configure processes, and improve integration of applications.

The result of this leadership and innovation is Epicor’s next-generation enterprise software. It is the foundation upon which businesses execute strategies and achieve objectives, one that operates seamlessly and effectively in the background, enabling highly productive enterprise optimization. Epicor offers comprehensive capabilities in support of strategic sourcing and procurement initiatives, PLM, continuous improvement, lean manufacturing, supply chain management and logistics, enterprise performance management, and IT virtualization.

Furthermore, offers a true service oriented architecture (SOA), Epicor *True SOA*™ built on the Microsoft® .NET™ Framework and offers a business architecture that melds SOA and collaborative Web 2.0 concepts to give a business maximum flexibility with minimal overhead. Epicor can take your business to the next level by leveraging consumer Web concepts to deliver an agile, adaptable resource that can not only grow and change with your business but is designed to help you optimize your most important resources.

About Epicor

Epicor Software (NASDAQ: EPIC) is a global leader delivering business software solutions to the manufacturing, distribution, retail, hospitality and services industries. With 20,000 customers in more than 140 countries, Epicor provides integrated enterprise resource planning (ERP), customer relationship management (CRM), supply chain management (SCM) and enterprise retail software solutions that enable companies to drive increased efficiency and improve profitability, and also empower global enterprises to achieve even greater success.

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