

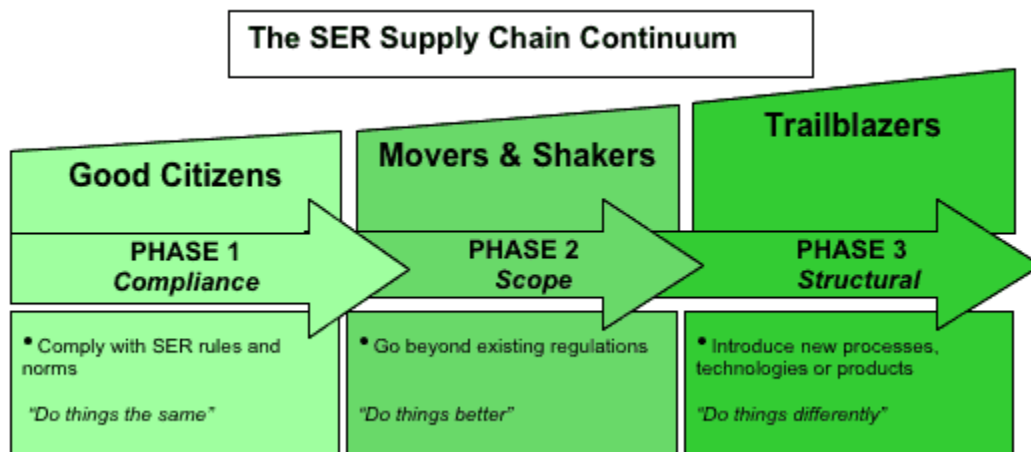
Supply Chain “Trailblazers” Can Reap Rewards

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Awareness of social and environmental responsibility (SER) has risen and supply chains are grappling with just how far they want to progress with these efforts. Should they take a few baby steps beyond compliance or implement larger scale changes? Recently the Stanford Socially and Environmentally Responsible Supply Chains program reviewed the SER practices of 20 successful supply chains and found that it's the trailblazers who realized the greatest benefits.

It can be useful to think of SER activities in the supply chain as existing along a continuum that has three distinct phases:



Companies at the first phase are Good Citizens: they make efforts to comply with existing rules and regulations. Over time, they may expand and improve their SER activities to the point that they reach the second phase: Movers and Shakers. These second-phase companies often monitor more layers of their supply chains or expand their SER product development methods to a broader range of products. At the third stage, as Trailblazers, companies implement structural changes. At this final point of the continuum, they may introduce innovative products, processes or technologies that transform their businesses — and even the communities around them — as they transform their supply chains.

In our review there were a small number of companies whose SER activities were located in phase 3 of the continuum, and they appeared to derive the greatest business, environmental and social benefits. An example of a trailblazer is steel manufacturer POSCO, which developed an innovative steel-making process that dramatically reduced its environmental footprint and capital and production costs. Historically, the blast furnace method had been used to produce molten iron — a costly and polluting process. POSCO partnered with Siemens VAI to develop FINEX, a new process that eliminated the need for the sinter and coke plants used in the blast furnace method to process raw materials. The environmental benefits related to the FINEX process have been enormous. By relying on cleaner coal, emissions of sulfur and nitrogen oxides have been reduced by 90 percent, and dust has been reduced by 80 percent. There were also significant business benefits: the

process costs 15 percent less than the conventional blast furnace method and development of new plants is now 20 percent less expensive.

Another trailblazer is Johnson Controls, which has developed an advanced lithium-ion battery technology that is likely to power the next generation of hybrid and electric vehicles. They are smaller, lighter, cost less and last longer than the nickel metal batteries used today. In September 2005, the company built a US\$4-million advanced ion battery development laboratory that focused on cathode materials, new cell designs for better thermal management, modular design and cell balancing to ensure operation, extended performance and cycling. In 2006, the company formed a joint venture with French battery maker Saft to design and manufacture advanced battery technologies. The decision to develop technologies that promote sustainability has helped to spur battery technology innovations and open new market opportunities. Case in point: the company signed a letter-of-intent with a major automaker for one of the industry's first lithium development orders, was awarded a US\$14.4-million contract by the U.S. Advanced Battery Consortium, and was awarded a contract by General Motors to design and test lithium-ion batteries for use in the prototype Saturn Vue Green plug-in hybrid SUV.

In the area of supply chain social responsibility, Mexican cement manufacturer CEMEX is a trailblazer. Through its Patrimonio Hoy program, low-income families receive loans to purchase construction materials and are given professional guidance, helping to create a new market for the company's cement. CEMEX has also developed a distribution network called Construrama that has enabled Mexican distributors to participate in a retail network that has strong brand recognition. Distributors in the network are given seed capital, training opportunities and marketing support. The program has strengthened CEMEX's sales network through the standardization of IT systems and store fronts, and has helped to increase supply chain operation efficiencies and reduce costs (World Bank, 2004).

It's not easy to move up the supply chain SER continuum. Companies have to be willing to invest in new technologies, change their core business processes, and experiment with innovative SER practices. But, as the cases presented here show, it's the trailblazers that walk away with the largest rewards.

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