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COVER STORY

By Lisa Arnseth



Full Circle

Supply management can play a key role in the circular economy, working with suppliers to eliminate waste and drive financial value.



When products are designed, made and delivered with the entire life cycle in mind, not only is it good for the planet, it's good business. In fact, it's the backbone of the circular-economy concept, in which companies find monetary value in making sure no material is wasted throughout a product's manufacture and use. In a circular economy, recycling, reuse and repurposing initiatives within the supply chain can save money and could even create new revenue streams for an organization.

The circular economy operates on a closed-loop manufacturing model, where every step of the process is given consideration to eliminate waste. One of the most established authorities on circular economy concepts and principles is the not-for-profit Ellen MacArthur Foundation, whose mission is to "accelerate the transition to a circular economy" by helping businesses, government and other institutions understand the potential of eliminating waste by sharing various expert insights and analyses on the subject. The Ellen MacArthur Foundation defines a circular economy as "one that is restorative and regenerative by design, and which aims to keep products, components and materials at their highest utility and value at all times, distinguishing between technical and biological cycles."

How is this accomplished in today's business world? Initiatives focused on sustainability, such as driving carbon neutrality or achieving net-zero waste in the supply chain, are important parts of the circular economy. Dozens of international companies have been implementing bold sustainability target goals under this model, including Philips International, H&M, Dell, Levi Strauss & Co., ING and Unilever.



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However, transitioning from the traditional linear business model to a circular concept can be challenging when companies are accustomed to creating and disposing of waste as part of the manufacturing, distribution and end-customer use processes. This not only involves a new way of thinking — a culture shift — but it requires high-level planning and holistic considerations of the entire supply chain.

Dell Computes the Value of the Circular Economy

Implementing a closed-loop plan involves many complex and intricate tasks requiring significant analysis, says Jennifer Allison, director of supply chain sustainability at Dell. “One of the most important things in understanding the circular economy is that we’re talking about systems — not just products, programs or initiatives,” she says. “Looking at the whole system is when change begins to make a significant difference. Technology is a great tool for measuring and analyzing systems, understanding processes and identifying inefficiencies.”

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— Jennifer Allison, Dell

As a corporate member of the Ellen MacArthur Foundation’s Circular Economy 100 (CE100) network, Dell has taken on an advocate role to share potential circular economy solutions with companies around the world, says Allison. By sharing experiences, developing new approaches and identifying new partnerships, Dell is proactively working to help the circular economy flourish on a global scale.

“A key facet of the circular economy is that it’s, in fact, about the economy,” she says. “There is significant potential for a company to reduce costs or open new market opportunities through the effective use and reuse of resources. And that potential will grow as the circular economy matures.”

Dell’s primary concern is with its global environmental footprint. Its manufacturing facilities currently divert 97 percent of waste from landfills, which accounts for the computer giant’s largest source of operational waste, says Allison. How does Dell do it? It begins with local efforts. “Through the development of local partnerships, our Brazil plant produces virtually zero waste, with by-products from our manufacturing process being recovered and reused, for example, as a commercial source of energy,” Allison says.

This approach extends to its products. Dell has established a closed-loop plastics recycling process, whereby plastics collected from its recycling program are melted down and mixed to make new parts and computer components. “Since this program started in mid-2014, we’ve saved more than (US)\$500,000 while creating more than 7.5 million pounds of new parts for tens of millions of new computers and monitors,” says

Allison. “The process also yields an 11 percent smaller carbon footprint.”

This plastics recycling program has been recognized by the Green Electronics Council for the 2015 Catalyst Award, and the Sustainable Purchasing Leadership Council awarded Dell its 2015 Outstanding Case Study award. The company has made its detailed “Dell 2020 Legacy of Good Plan” available on its corporate website, sharing information about its goals and how action is being taken on a number of challenging fronts, including reducing energy use across its product portfolio, recycling and recovering materials, and maximizing water use.

Kimberly A. Brown, former vice president of global materials at Dell, says the company is proud of these achievements, adding that efforts to make changes on multiple fronts are ongoing. “Advancing the circular economy requires whole systems to evolve, rather than specific products or initiatives,” she says. “Through leadership and collaboration — with technology as a key enabler — we can develop innovative and scalable solutions that create more value with less resources.”

Hunting for Wayward Supply Chain Waste

It’s not just Fortune 100 companies like Dell that are getting their arms around the potential in a circular economy. Smaller manufacturers are also making large strides to create more value by using less.

Identifying opportunities to keep waste out of the landfill is second nature to Earth Friendly Products, an organic cleaning product manufacturer based in Cypress, California. All employees are aware of the company’s sustainable manufacturing practices and are encouraged to come up with creative solutions to eliminate

trash and reuse/recycle as much as possible. However, due to their overall vantage point of the entire supply chain, supply management practitioners are central to Earth Friendly Products' success, says Nadereh Afsharmanesh, the company's vice president of sustainability and education.

"The knowledge and experience of our procurement organization is invaluable, not only because it ultimately selects a supplier that matches an innovation or new product the development team might be working on, but it can pinpoint issues in all steps of the production process," says Afsharmanesh. "For instance, procurement may discover that a shipping package is nonrecyclable, which is something the initial development team may not have considered."

The company has strict guidelines to help keep procurement practitioners on track and proactive as they work with suppliers. According to Earth Friendly Product's sustainable procurement policy, supply management personnel are responsible for:

- Collaborating with suppliers to design and implement a system to track and document the environmental attributes of products
- Compiling records to produce an annual summary of the company's environmentally responsible purchasing actions, as a way to evaluate the effectiveness of how these things have helped reduce the overall environmental impacts of company procurement
- Identifying opportunities to educate end users about the impacts of their product choices.

"Procurement is a key player, and executive and senior management teams should work with this

team because it's able to save money and find the best deals with the right suppliers," says Afsharmanesh.

Executives could benefit from Afsharmanesh's lessons when it comes to taking sustainability seriously. Afsharmanesh, who literally sifts through trash produced by the company to seek out inefficiencies, is about as thorough as a vice president could be. Recently, she examined the trash at one of Earth Friendly Products' five manufacturing facilities and discovered a piece of packaging material that she had not encountered before: a new Styrofoam liner. "I spoke with our director of procurement because this material hadn't been accounted for in an earlier assessment, and discovered a new supplier was shipping its materials with these nonrecyclable liners."

After a conversation with the supplier, the liner was changed to a recyclable material. The process took a couple of months, and during the transition, Earth Friendly Products' procurement team found a way to repurpose the nonrecyclable liners. "We found out a local The UPS Store could use the liners in their packaging, so we simply donated them," explains Afsharmanesh.

Thanks to these kinds of efforts (and many more), Earth Friendly Products' five U.S. plants were recognized by the U.S. Zero Waste Business Council with Zero Waste Business Facility Certification — at USZWBC's highest, or Platinum,



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certification level. It requires ongoing effort to maintain that certification, says Afsharmanesh. Thus, the company meets with employees every two weeks to share updates and new resources as well as offer reminders about actions that contribute to the zero-waste bottom line. And the company will soon launch an incentive program with a scorecard to keep employees motivated.

Afsharmanesh is aware this advanced level of sustainability is not easy for many companies to reach, but she believes that's no reason to avoid aiming high. "For some, it might start with baby steps, but in my opinion, this baby needs to grow up quickly," she says. "Look for small wins, and build on those foundations. But after a while, you have to draw a line and set goals. Make a commitment to never compromise your standards to accommodate people who don't care."

Why Suppliers Are the Key

Once a company has made an internal commitment to driving zero waste or reducing overall carbon output, it must turn to its closest partners to take these initiatives to the next level.



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Suppliers that share similar mindsets are valuable players in a company's role in the circular economy, says Holly Elmore, founder and CEO of Elemental Impact, a national non-profit based in Atlanta helping companies put sustainability best practices into action. "Once you've found the suppliers that are committed to environmental sustainability, build relationships on a foundation of trust and collaboration. Remember, it's about working in a partnership with suppliers, and not dictating changes. Go to the table with your suppliers and work together," she says.

Working together with key suppliers on sustainability issues does start with a shared vision, says Allison of Dell. "To reach our goals, our partnership with suppliers is crucial. We want to help suppliers embrace opportunities to innovate and improve performance." To that end, Dell hosts multiple supplier workshops and training sessions each year to address issues such as corporate responsibility performance evaluation tools, greenhouse gas accounting and how to report data to the Carbon Disclosure Project's (CDP) supply chain program. These events also serve as networking opportunities.

"Our supply chain members learn and share best practices at these events, and due to their popularity, we have increased these opportunities by 200 percent year-over-year," says Allison. "This year, we will train 540 operational managers from more than 180 suppliers."

In addition to management training, Dell's Worker Engagement Program empowers workers in its supply chain to adopt responsible business practices in their daily activities and seek out efficiency opportunities. Dell conducts "innovation sessions" with suppliers to challenge

traditional ways of thinking and explore new product opportunities.

The company also takes communications and performance tracking seriously, not only when using external/third-party reporting, but by asking suppliers to be transparent with their sustainability initiatives. For example, more than 50 suppliers with water-intensive processes have published their water-mitigation plans and shared them with Dell, which feeds into the company's goal of requiring all production suppliers to have a water plan in place by 2020. "We review these mitigation plans through our quarterly business reviews, measuring progress to goals, and facilitating several capacity-building programs to support these initiatives," says Allison.

Suppliers also provide regular sustainability reports to the procurement team at Earth Friendly Products, according to Afsharmanesh. Since 2015, suppliers have been expected to undergo on-site sustainability assessment and self-select specific goals, such as to cut energy use on the production line, then report their progress along with any challenges encountered. "We understand that making these changes is not always easy, so we make ourselves available to help them achieve their goals," she says. "We provide them with resources and do whatever we can to support positive changes."

Dell is also considering climate-related emissions among its suppliers, encouraging participation in the CDP's

Action Exchange, which is a platform where suppliers can find out how to find energy inefficiencies within their operations. So far, Dell's efforts have achieved real results. "Of Dell's 27 participating suppliers, 12 separate facilities have used the tools to identify 753 energy efficiency opportunities and \$39.7 million in potential savings," says Allison.

Overall, the most important factor to success in the circular economy is taking waste elimination initiatives seriously as a de facto way of doing business. "It's a matter of corporate culture, stemming from the C-suite, the board of directors and the stockholders," says Elmore. "Sustainability is a long-term commitment that requires, at times, short-term investments or temporary financial shortcomings. But in the long run, if it is done with integrity and committed planning with the right resources plugged in, the ROI will be there." **ISM**

Lisa Arnseth is a publications coordinator for *Inside Supply Management*®.

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