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FULL CIRCLE

TURNING WASTE INTO VALUE WITH YOUR SUPPLY CHAIN

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IN THE PAST TWO DECADES, THE CIRCULAR ECONOMY HAS EVOLVED FROM A SPECIALIST CONCEPT TO A MAINSTREAM BUSINESS STRATEGY

According to Accenture Strategy research, nearly all larger product-based companies say they've put in place circular supply chains for recovery and recycling.[1] But despite the enthusiasm, too many programs remain "skin deep," failing to capture the full potential of the approach. It's time to come full circle—transforming supply chain operations and company cultures to build an ecosystem of partners, suppliers and markets that capitalize on circularity.

CIRCLING SUCCESS

The circular economy is a reality today, and a full 94 percent of companies surveyed by Accenture Strategy report implementing elements of circular supply chains. When it comes to what exactly they're prioritizing, most (44 percent) name recycling.[2] And that's great. But recycling wasted materials within a company's operations is low-hanging fruit that only scratches the surface when it comes to squeezing value out of the circular economy.

When it comes to deeper plays, where companies are reusing or refurbishing materials they've recaptured at the end of life, only 18 percent of companies have efforts on that front.[3] When they do recapture parts and material, it's often because of competitive pressure or warranty issues. Parts are taken back for refurbishment if a low-cost rival offers a similar part—or for repair because of warranty issues. Net-net: These efforts don't decouple production from primary resource use and aren't about changing business to adopt circular economy principles, unleashing growth and profitability.

One company that does embrace the full circle: Dell.[4] The company has been a leader in designing products with an emphasis on recapture and waste elimination. They manufacture products from plastics recovered from their own computer products—recapturing plastics in a closed-loop fashion to use in the production of new products. The result: a smaller carbon footprint and a reduction in manufacturing cost.

Caterpillar's Cat® Reman program[5] offers customers the option of buying parts—an engine for instance—that's been refurbished from existing equipment to a "same as new" standard. And the environment wins too. According to the company, they recycle 134 million pounds of material annually and are approaching "zero landfill" status.

CLO THE SING CIRCLE

Although 92 percent of companies surveyed by Accenture Strategy say they are geared up for product life extension, only 30 to 40 percent are actually doing it. And for resource recovery, four out of 10 programs only recycle base materials, ultimately destroying or disposing of more than 60 percent of products reclaimed—losing all the embedded value.[6]

While many companies remain at surface level, first movers that go beyond basic recycling are realizing significant value. Consider Apple.[7] The company found that a number of low-cost competitors were refurbishing their iPhone products and reselling them in Asia. Instead of ceding a market segment, Apple took a bite out of it, refurbishing their products (even the iPhone 7) and selling them at a lower price to Asian consumers.

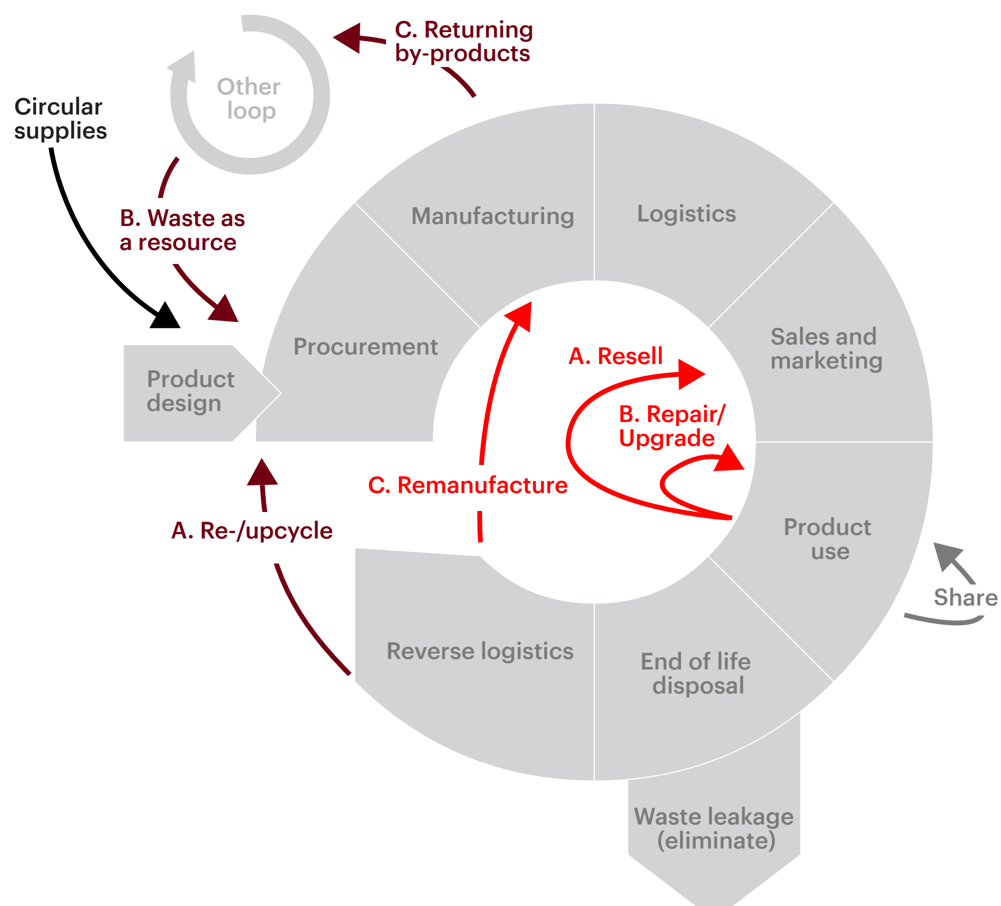
What do these first movers have that others lack? A holistic vision, coupled with effective leadership, that lets them move to circular business models (see Figure 1 of the circular economy business models).

FIGURE 1

THE CIRCULAR ECONOMY IS CHARACTERIZED BY FIVE PRIMARY BUSINESS MODELS

- **Circular Supplies:** Provide renewable energy, bio-based or fully recyclable input material to replace single-lifecycle inputs
- **Resource Recovery:** Recover useful resources/energy out of disposed products or by-products
- **Product Life Extension:** Extend working lifecycle of products and components by repairing, upgrading and reselling
- **Sharing Platforms:** Enable increased utilization rate of products by making possible shared use/access/ownership
- **Product as a Service*:** Offer product access and retain ownership to internalize benefits of circular resource productivity

*Can be applied to product flows in any part of the value chain



Source: *Waste to Wealth: The Circular Economy Advantage*, Accenture, September 2015.

Driving real value through circular in **AUTOMOTIVE**

Michelin,[8] the tire manufacturer, is a first mover that embraced the circular economy by enabling fleet customers to lease instead of purchase tires outright—effectively selling “tires as a service,” with customers paying per miles driven. This represents a massive shift in the company’s business model and mindset. And it allows them to move from being a product manufacturer to become a service provider with full control over products throughout their lifecycles.

SOFT SPOT
FOR THE CIRCLE

Although adoption of circular as a business strategy has hit barriers, the barriers are quickly falling. That's partly thanks to an inflection point that's been reached: Digital technologies such as analytics, IoT and sensors are eliminating hurdles when it comes to operational issues like sorting materials and recapturing them. Materials can be traced. Loops can be closed.

Accenture Strategy research shows that digital is a top enabler cited by executives. Ninety percent of companies surveyed believe digital technology has influenced their ability to implement operational changes to deliver circular supply chain(s), product life extension or waste-to-value capabilities.[9]

So there are no longer "excuses" for not acting. Except one: According to our research, "lack of leadership/sponsorship" is cited as the top barrier for going circular. And leadership influences other "soft" issues like corporate culture as well.[10]

Frans van Houten, CEO of Philips, is one leader nurturing the circular economy.[11] In fact, the circular economy is now at the core of Philips' value proposition to customers. According to Philips' website, their goal is, "To have 70 percent of our turnover coming from solutions that meet EcoDesign principles and 15 percent circular economy principles."[12]

WIDENING THE CIRCLE

To capture the full potential of the circular economy in supply chain operations, companies need to pursue higher—and more complex—value initiatives. To do that, successful companies will:

FOCUS ON DRIVING CIRCULAR BUSINESS MODELS TO CAPTURE THE FULL VALUE OF THE OPPORTUNITY.

At any given point in time, $7 trillion worth of passenger cars are unused around the world.[13] It's a staggering opportunity—one that was recognized by Daimler through their subsidiary car2go. What it takes to act on something this big is an expanded vision of circular beyond recycling, and of quantifying the full value of the opportunity for a circular transformation.

QUESTIONS TO ASK:

- What are the largest areas of waste in the supply chain and how can we extract value from them?
- Where are low-cost rivals encroaching on my territory?
- Which resource-related bottleneck of the linear model can be addressed through a new business model?

BREAK DOWN SILOS. Circular is disruptive to the organization and requires both strategic collaboration with suppliers and across functions such as R&D, procurement, supply chain, manufacturing and marketing. It's why too many companies stop at recycling, which can be accomplished within a single functional silo. Companies that will gain the greatest value from circular will be those that look for opportunities that impact the very core of their operating models and seek to build an ecosystem of partners.

QUESTIONS TO ASK:

- Which parts of the company need to work together to bring circular initiatives to fruition?
- What external partnerships could enable and bring value to the circular business model?
- Do we have the right capabilities that effectively deploy and operate circular economy principles?

START THE CIRCLE FROM THE TOP. Leadership at the very top of the company must create business imperatives, cultural changes and governance to promote circular objectives—and integrated goals and metrics. That requires taking traditional metrics—like EBITDA, gross margin, etc.—and blending them with new metrics including take-back quantities, the degree to which materials were effectively refurbished or reused, and resource productivity.

QUESTIONS TO ASK:

- What does success look like in the long term?
- How do we know our efforts are achieving their goals?
- What are the new metrics we need to measure circular impact?

LEVERAGE DIGITAL. Technologies like IoT, RFID and analytics are critical for embedding circularity across operations and ecosystems to increase the ability to track resources and monitor things like utilization and waste capacity. Digital allows companies to have a much more granular understanding of the value of materials, and to gauge the condition of assets and products—determining when they'll need service or replacement, for example. Gaining these capabilities is quickly becoming "table stakes" to engage in a fuller circular economy supply chain.

QUESTIONS TO ASK:

- Which technologies can we leverage to enable circular business models including resource recovery, product life extension, and products as a service?
- What do we need more insight into (i.e., tracking products) and how can we get it?

FULL CIRCLE ADVANTAGE

There are clear signs that the circular economy is gaining real traction in the supply chains of most major product-based companies. But to fully deliver on the value—to people and the planet—circular efforts need to expand beyond low-hanging fruit like recycling and move to other circular business models. Companies like Michelin, GM, Dell, Philips and Apple are leading the way and will continue to profit from their circular advantage.

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NOTES

[1] Accenture Strategy Circular Economy in Supply Chain research, 2016.

[2] Ibid.

[3] Ibid.

[4] Dell, Closed-Loop Recycled Content.

[5] Caterpillar, Cat® Reman program.

[6] Accenture Circular Economy in Supply Chain research.

[7] Caitlin McGarry, "Refurbished iPhones now available on Apple's website," *MIS Asia*, November 9, 2016.

[8] MICHELIN® Fleet Solutions™.

[9] Accenture Circular Economy in Supply Chain research.

[10] Ibid.

[11] Royal Philips, "Rethinking the future: Our transition towards a circular economy," 2014.

[12] Royal Philips, "Healthy people, sustainable planet: Our ambition for 2020," 2016.

[13] Accenture, "Automotive's latest model: Redefining competitiveness through the circular economy," 2016.

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ABOUT THE RESEARCH

In September of 2016, Accenture Strategy conducted an online survey which explored how operations within companies are positioned to generate value from the circular economy. The study polled 503 organizations with yearly revenues greater than US$1 billion in Australia, Brazil, France, Germany, Japan, the United Kingdom and the United States. The survey covered a range of industries: Consumer Goods and Services, Automotive, Industrial Equipment, Energy, and Communications, Electronics and High Tech. Respondents targeted were COOs, CSCOs and global leads of Manufacturing, Operations or Supply Chain.