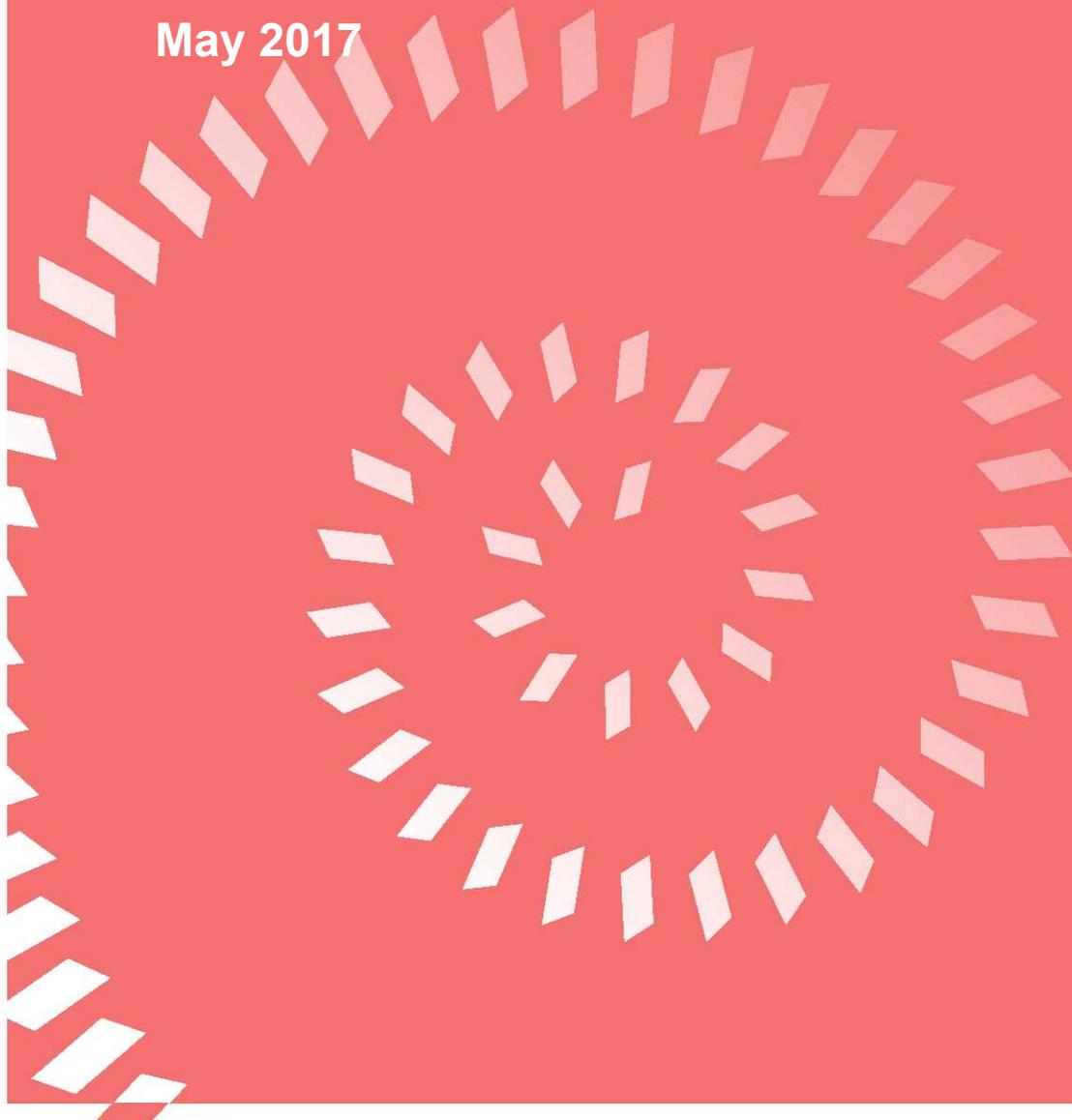




# Dell: The Business Case for a Sustainable Supply Chain

## Making Business Mutual Case

May 2017



# Dell: The Business Case for a Sustainable Supply Chain

Mutuality in Business Research Team – Saïd Business School

With contributions by  
Louise Koch – Dell  
Stephen Roberts – Dell

Edited by Justine Esta Ellis

## ***About the Making Business Mutual Case Studies***

This series of case studies explores how mutual approaches to business can help companies and their partners tackle some of the most pressing global challenges. The businesses featured in this series share a commitment to objectives beyond purely financial performance, as well as a serious intent to implement mutual practices through new forms of ownership, governance, leadership, measurement and management.

In particular, these cases address the measurement of multiple forms of capital, ecosystem shaping approaches, leadership development, business education, and policy formulation through laws and regulation that promote mutual conduct. The authors appreciate the collaboration of participating companies in creating these cases.

These cases were first developed for the annual *Responsible Business Forum*, the convening event of the Mutuality in Business Project, a joint research programme between Saïd Business School, University of Oxford, and the Catalyst think tank at Mars, Incorporated. The *Responsible Business Forum* brings together global companies, MBA candidates, scholars and activists to share their experience in confronting key challenges in their ecosystems to generate financial, social and environmental value.

Saïd Business School  
Egrove Park  
Oxford OX1 1HP  
[www.sbs.edu/mutuality-business](http://www.sbs.edu/mutuality-business)

Author's Note: This is a descriptive case study, based on publicly available materials as well as on the information shared by the company described. This case study is not meant to provide critical analysis of the literature or information used to develop it. All errors and omissions are the authors' own.

<b>Case Name</b>	Dell: The Business Case for a Sustainable Supply Chain
	<p>Dell is one of the world's largest computer manufacturers and technology companies. It became a private company in 2013 through an acquisition by Silver Lake Partners, a private equity firm, and Michael Dell, the founder and CEO of Dell. Dell offers a wide range of IT hardware, software products and services.<sup>1</sup> Its clients include numerous governments, large enterprises, small businesses and consumer markets. Dell also markets third-party software and hardware. In particular, Dell is known for its direct sales and customisation model, as well as for its innovative supply chain management.</p>
<b>Ecosystem Pain Point</b>	<p>E-waste is the world's fastest-growing waste stream, with a relatively low recycling rate overall (approximately 15% globally).<sup>2</sup> Rapid technology innovation and ever-shortening product lifespans contribute to the increase of e-waste. Of the components that comprise e-waste, gold, copper and plastic content dominate the material value of e-waste material.<sup>3</sup> Plastic, in particular, is overabundant in landfills.</p> <p>Responsible e-waste disposal is important from an environmental perspective, but it also makes good business sense. It harnesses "untapped potential to create a more efficient and sustainable product ecosystem" and reduces dependence on fossil fuels, which have fluctuating prices.<sup>4</sup></p> <p>One of the solutions to e-waste disposal is to gather and use recycled plastic in products. Although recyclers have made technical progress in recent years, it remains challenging for companies to source a sufficient supply of high-quality postconsumer recycled plastic that meets the technical, economic and aesthetic requirements of ICT product manufacturers</p>
<b>Business Strategy</b>	<p>Dell has taken a full lifecycle approach to change its production, use and disposal of plastic. The company's product design, in particular, emphasises the ease of repair and recyclability from the start. Dell also continuously looks for ways to incorporate sustainable materials, such as recycled plastic, into products and packaging. Dell's Global Takeback programme makes it easier for customers to dispose of old electronics. For products beyond repair or reuse, Dell offers free recycling for consumers, as well as convenient, secure and compliant solutions for larger customers.</p>
<b>Performance</b>	<p>The Dell Recycling programme has recovered 1.76 billion pounds of electronics since 2007. Since mid-2014, the programme's closed-loop recycled plastic supply chain has used plastics recovered from recycled computers to create nearly 5,000 tonnes of new parts for more than 90 products across millions of units. Through collaboration with TruCost, Dell has taken a multi-capital approach to quantify the natural capital benefits of the closed-loop model. It has also explored the possibility of measuring the social impact associated with this approach. This collaborative work identified financial and environmental savings.</p>
<b>Prognosis</b>	<p>The next step for Dell is to scale the programme and to recycle a larger number of different materials through the programme. As Dell looks to the future, expanding collection capacity in developing countries represents a new front.</p>

<sup>1</sup> "Dell Inc. at a Glance," Company Profile, *Vault.com*, <http://www.vault.com/company-profiles/computer-hardware/dell-inc/company-overview>

<sup>2</sup> GreenBiz, *GreenBiz Group Inc.*, <https://www.greenbiz.com>

<sup>3</sup> C.P. Baldé et al., "The global e-waste monitor," *United Nations University*, 2015, <https://i.unu.edu/media/unu.edu/news/52624/UNU-1stGlobal-E-Waste-Monitor-2014-small.pdf>

<sup>4</sup> Anya Khalamayzer, "How Samsung, Dell are reinventing IT products," *GreenBiz*, 9 December 2016, <https://www.greenbiz.com/article/how-samsung-dell-are-reinventing-it-products>

## **Making Business Mutual Case Study: Dell Incorporated** ***The Business Case for a Sustainable Supply Chain***

### **About the Company**

Dell is one of the world's largest computer manufacturers and technology companies. The company sells a wide range of IT hardware, software products and services for enterprise, government, small business and consumer markets.<sup>5</sup>

As a privately held company, Dell has the freedom to pursue a longer time horizon and to commit to changing its company resource use. The principle of efficiency is central to the Dell business model and informs the company's approach to resources, sourcing and waste management. In particular, Dell is also known for its innovative supply chain management.

### **Ecosystem Pain Point**

Dell's commitment to efficiency has prompted the company to take on the timely challenge of disposing of e-waste. This case study outlines Dell's contribution to responsible e-waste disposal through the use of circular economy and closed-loop ecosystems. Attempts to develop a sustainable supply chain represents one key initiative, among others, to maximise efficiency for Dell and its customers.

E-waste, discarded electrical and electronic equipment, is the world's fastest-growing waste stream.<sup>6</sup> Rapid technology innovation and ever-shortening product lifespans contribute to the increase of e-waste.<sup>7</sup> If e-waste continues to proliferate at current rates, experts caution that the problem will worsen in the future. According to a United Nations University report, the amount of global e-waste reached 41.8 million tonnes in 2014, and the total amount of global e-waste may hit 50 million tonnes in 2017, the report warns.<sup>8</sup> To compound matters, e-waste has a low overall recycling rate, which means that unwanted equipment remains unused.

Responsible e-waste disposal is not only important from an environmental perspective, but also makes good economic sense.<sup>9</sup> As an example, the material value of global e-waste was estimated to be 48 billion Euros in 2014 alone.<sup>10</sup> Leveraging this underutilised resource opens up vast "untapped potential to create a more sustainable, efficient product ecosystem."<sup>11</sup>

The circular economy takes the traditional, linear model of "take, make and dispose" — which moves products from design to factory to consumer to landfill — and bends it into a more efficient closed-loop ecosystem.<sup>12</sup> Unwanted, used electronics can be taken back for refurbishment and then resold on the secondary market. Products beyond repair, or those that are no longer economical to repair, are recycled to allow for precious and scarce materials to be recovered. Recycled content can either be incorporated into the design and manufacturing of new products or sold out to the market for others to use.

---

<sup>5</sup> "Dell Inc. at a Glance," Company Profile, *Vault.com*,

<http://www.vault.com/company-profiles/computer-hardware/dell-inc/company-overview>

<sup>6</sup> Center for Security Studies, <http://isnblog.ethz.ch>

<sup>7</sup> C.P. Baldé et al.

<sup>8</sup> James Rubin. "E-Waste: The circular economy's achilles heel," *edie newsroom*, 26 June 2015, <https://www.edie.net/library/E-Waste--The-circular-economy-s-achilles-heel/6611>

<sup>9</sup> Irene Kitsara, "E-Waste and Innovation: Unlocking Hidden Value," *Wipo Magazine*, June 2014, [http://www.wipo.int/wipo\\_magazine/en/2014/03/article\\_0001.html](http://www.wipo.int/wipo_magazine/en/2014/03/article_0001.html)

<sup>10</sup> C.P. Baldé et al.

<sup>11</sup> Anya Khamayzer.

<sup>12</sup> GreenBiz, *GreenBiz Group Inc.*

Research shows that approximately 30% of consumers have technology products lying around the house unused, and half of consumers are unsure of what to do with their old electronics.<sup>13</sup> According to Dell, similar situations exist with businesses warehousing old equipment.

Takeback options make it easy for a wide variety of customers to dispose of their old electronic products in a responsible manner. This measure ensures that unwanted electronics get reused or, if at the end of life, properly recycled.

---  
*Takeback options  
make it easy for a  
wide variety of  
customers to  
dispose of their old  
electronic products*  
---

Plastic is one of the most useful and important materials in modern society. It is popular in computers due to its durability, ease of fabrication into complex shapes and electrical insulation qualities.<sup>14</sup> However, plastic recycling remains challenging and, as a result, the material constitutes a major contributor to landfills. The production of plastic also uses a substantial amount of fossil fuels. Manufacturing plastics from fuel is resource intensive, requires large amounts of energy and releases relatively high levels of CO<sub>2</sub> emissions in the process. Recent research has shown that our current use of plastics will become unsustainable if we do not take steps to improve recycling and reduce plastics' usage.

Using secondary, recycled plastic as feedstock for new computers presents one possible solution. With the fast pace of innovation and product upgrades in the ICT sector, recycled content can reduce the environmental toll of manufacturing with virgin materials. The circular economy and the development of secondary raw material markets are high on the European agenda. Nevertheless, it remains challenging to find a sufficient supply of high-quality postconsumer recycled plastics that meets the technical, economic and aesthetic requirements of ICT products manufacturers.<sup>15</sup>

## **Business Strategy**

In response, Dell is taking steps towards creating a "circular" supply chain. Increased volatility in commodities and growing pressure on resources have alerted Dell to the necessity of rethinking materials and energy use.<sup>16</sup> In 2013, Dell committed to putting a total of 50 million pounds of recycled materials back into its products by 2020. The company reached this goal in the beginning of 2017 and is continuing to scale its efforts.

For Dell, sourcing postconsumer recycled plastics from the market and building a new, stable closed-loop supply chain for plastics from used electronics collected through takeback programmes present viable and affordable alternatives to using virgin materials. Rather than focusing exclusively on individual challenges, Dell has taken steps to approach their supply chain from a broader, systemic perspective. Jennifer Allison, Director of Supply Chain Sustainability at Dell, summarises the company's current business strategy:

We're talking about systems — not just products, programmes or initiatives. Looking at the whole system is when change begins to make a significant difference. Technology is a great tool for measuring and analysing systems, understanding processes and identifying inefficiencies.<sup>17</sup>

---

<sup>13</sup> "Switched on to Value," *WRAP Report*, November 2014,

<http://www.wrap.org.uk/sites/files/wrap/Switched%20on%20to%20Value%2012%202014.pdf>

<sup>14</sup> "Plastics: Key Materials for Innovation and Productivity in Major Appliances," *American Plastics Council*, <http://infohouse.p2ric.org/ref/11/10437.pdf>

<sup>15</sup> "Best Practices in Recycled Plastic," *DigitalEurope*, August 2016, <http://www.digitaleurope.org/DesktopModules/Bring2mind/DMX/Download.aspx?Command=CoreDownload&Entr yId=2276&language=en-US&PortalId=0&TabId=353>

<sup>16</sup> "Best Practices in Recycled Plastic," *DigitalEurope*.

<sup>17</sup> Lisa Arnseth, "Full Circle," *Institute for Supply Management*, October 2016,

In this way, Dell takes a whole ecosystem view of its product lifecycles. This approach is transforming the design of products and services. Dell's lifecycle approach aims to keep viable products and parts in circulation for longer periods of time. It also harnesses global efforts to reuse, refurbish and resell products and parts to extend their lifetimes and to recycle them at end of life.

Product design emphasises ease of repair and recyclability from the beginning. Dell also looks continuously for ways to incorporate sustainable materials, such as recycled plastic and reclaimed carbon fiber, into products and packaging.<sup>18</sup>

### **The World's Largest Electronics Takeback Programme**

Dell has the world's largest electronics takeback programme, which spans across 83 countries and territories. The programme has recovered approximately 800,000 tonnes of electronics since 2008. For commercial customers, Dell offers a full-spectrum of logistics and disposal capabilities via the Asset Resale and Recycling Service. Current capabilities include data security, on-site shredding, recycling and full traceability reporting. Dell also makes it easy for individual consumers to recycle by partnering with freight companies to provide free mail-back recycling of Dell-branded equipment. In many countries, the programme will even pick up used equipment from a customer's home.<sup>19</sup>

Another programme designed to make the recovery of obsolete electronics easier and more accessible is the Dell Reconnect Partnership with Goodwill, a not-for-profit organisation committed to helping people become independent through education and training. The Reconnect Programme allows people to drop off any brand of used electronics to more than 2,000 Goodwill locations across the United States. Dell Reconnect accepts any brand of computer equipment in any condition from consumers and provides free recycling services.<sup>20</sup>

Dell returns all proceeds to Goodwill in order to help support Goodwill's mission of putting people to work.<sup>21</sup> By participating in this initiative, customers simultaneously help protect the environment, benefit the community and receive a receipt for tax purposes. In this way, the programme helps both the costumers and the business.

The donated equipment has value as a whole system, as parts and sometimes as raw materials such as metals, plastics and glass.<sup>22</sup> If the equipment can be refurbished, Goodwill sells it. If not, the end-of-life product is sent to Wistron, one of Dell's recycling partners, for asset recovery in the United States. Metals such as tin, gold and tungsten are re-sold in the commodities market. To complete the closed loop, plastics are sorted and shipped to China, turned into pellets and mixed with virgin plastics for use in new Dell products.<sup>23</sup>

### **Closed-Loop Recycled Plastic Supply Chain**

---

<http://www.elementalimpact.org/pdf/Oct-2016-SMI-Feature-FullCircle-Article.pdf>

<sup>18</sup> "Dell on the Circular Economy," March 2016,

<http://i.dell.com/sites/content/corporate/corp-comm/en/Documents/circular-economy-0316.pdf>

<sup>19</sup> "Dell Recycling," Dell Inc., <http://www.dell.com/learn/us/en/uscorp1/dell-environment-recycling>

<sup>20</sup> GreenBiz, *GreenBiz Group Inc.*

<sup>21</sup> 'About Us,' *Goodwill Industries International, Inc.*,

<http://www.goodwill.org/about-us/>

<sup>22</sup> Dell Reconnect – How It Works," *Dell Inc.*,

<http://www.dell.com/learn/us/en/uscorp1/corp-comm/how-it-works-reconnect>.

<sup>23</sup> Mike Hower, "Dell cuts e-waste with recycled carbon fiber," *GreenBiz*, 23 October 2015,

<https://www.greenbiz.com/article/dell-cuts-e-waste-recycled-carbon-fiber>

Dell's 2020 "Legacy of Good" sustainability plan set the goal of incorporating 50 million pounds of post-consumer recycled-content plastics and other sustainable materials into Dell products by 2020.<sup>24</sup> Dell met this target ahead of schedule in early 2017.

In 2014, Dell launched its closed-loop recycled plastics supply chain to accelerate progress against their goal of using 50 million pounds of sustainable materials. Since then, the company has used more than 10.5 million pounds of closed-loop plastics in new products. As a result, Dell now offers over 90 products made with closed-loop recycled plastics. These products include flat panel monitors, desktops and all-in-one computers.



Run in conjunction with various supply chain partners, the programme consists of collecting, recycling and using e-waste to make new Dell products.<sup>25</sup> It begins with sorting plastics out of the various takeback streams, further processing them and then sending them to a manufacturing partner in Asia. The plastics are then melted down and moulded into new parts and computer components, thereby creating a closed-loop system.<sup>26</sup> The whole process – from the time the equipment is received for recycling to the time the plastics are back in a customer's hands as part of a new product – takes just under six months.

The closed-loop system also provides businesses with a price more stable than the cost of virgin materials, which fluctuates with the price of oil. It also reduces the company's dependence on environmentally costly virgin materials. Furthermore, by reusing plastics already in circulation, Dell cuts down on e-waste, reduces carbon emissions and helps drive a circular economy for IT. The closed-loop process yields an 11% lower carbon footprint as compared to using virgin materials.<sup>27</sup> The closed-loop plastics supply chain delivers products that are better for the environment, which is increasingly what Dell customers demand.<sup>28</sup>

**Fig. 1:** Dell's model of a closed-loop plastics supply chain



<sup>24</sup> "Best Practices in Recycled Plastic," *DigitalEurope*.

<sup>25</sup> Mike Hower.

<sup>26</sup> Lisa Arnseth.

<sup>27</sup> "Dell 2020 Legacy of Good Plan," *Dell Inc.*,

<http://i.dell.com/sites/doccontent/corporate/corp-comm/en/Documents/2020-plan.pdf>

<sup>28</sup> "Dell's Closed-loop recycling process," *Dell Inc.*,

<https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=0ahUKEwjdkPqots7TAhXhKsAKHde7AF0QFggoMAE&url=http%3A%2F%2Fi.dell.com%2Fsites%2Fdoccontent%2Fcorporate%2Fse-cure%2Fen%2FDocuments%2FClosed-Loop%20Recycling%20full.pdf&usq=AFQjCNHzBL-F4ooKUKnDSbgyHG-8CLRzQ&sig2=bKIXDKjRA1YoWSQgh4H5yg>

Dell's leadership in recovering and reusing plastic from used computers constitutes an integral step in transitioning the larger electronics industry toward a circular economy. Louise Koch, Corporate Sustainability Lead in EMEA for Dell, describes the impetus for initiating a closed-loop system:

Dell's programme is driven by both an effort to improve efficiency – a principle that goes back to its founding ethos and business model – as well as a commitment to reducing environmental impact.<sup>29</sup>

The use of closed-loop plastics may create a demand for plastic from used computers and thereby increase the level of plastic recycling from electronics. This, in turn, generates new jobs and opportunities for those in the nascent industry, all while staying true to Dell's founding principles.

### **Challenges in Transitioning to a Closed-Loop Recycling System**

In transitioning from a "take-make-dispose" linear supply chain to a circular supply chain, Dell has had to overcome a number of hurdles. It continues to experience four key challenges in the following areas:

1. Technical
2. Supply-side
3. Regulation and geographic
4. Demonstrating benefits to costumers

#### ***Technical Challenges***

One of the biggest challenges that Dell faced with the closed-loop recycling was identifying which types of plastic can be incorporated back into new products. As Scott O'Connell, Director of Environmental Affairs for Dell, puts it, "When dealing with plastics, getting the properties equivalent or better to virgin materials isn't easy...But this is a challenge we've been able to overcome with engineering know-how."<sup>30</sup> Dell worked with partners to test different approaches. Testing revealed that, due to mechanical and aesthetic considerations, the blend of recycled-content with virgin plastic produces the best outcomes.

#### ***Supply-side Challenges***

Another challenge involves establishing a reliable closed-loop supply chain. As O'Connell describes, "We had to make sure that we had sufficient volume of product coming in to be able to yield enough plastics to put into a mainstream Dell product."<sup>31</sup> Supply of products and plastic derives from Dell's own sources, which adds a greater degree of insight and security. However, for the closed-loop recycling to work and scale, Dell needs a security of supply, which can be difficult to attain with fluctuating numbers of products collected through takeback. Shrinking form factors—the fact that there is less plastic per item recycled as electronics become smaller—further complicates the situation. Hence, Dell needs to continue to drive increasing participation in takeback programmes, while at the same time exploring other means of acquiring recycled-content materials.

#### ***Regulation and Geographical Challenges***

---

<sup>29</sup> Louise Koch (Corporate Sustainability Lead for Europe, Middle East and Africa), personal communication.

<sup>30</sup> Scott O'Connell (Dell, Director of Environmental Affairs), interviewed by Mike Hower, "Dell cuts e-waste with recycled carbon fiber," *GreenBiz*, 23 October 2015,

<https://www.greenbiz.com/article/dell-cuts-e-waste-recycled-carbon-fiber>

<sup>31</sup> Ibid.

Transporting materials poses an additional challenge. Dell customers are all over the world, which means takeback initiatives must accommodate the global scale. Materials need to be collected in sufficiently dense amounts to make shipping to a centralised processor worth the economic and environmental costs. This involves logistics, regulations and other considerations. In Europe, for example, closed-border regulation inhibits transportation of electronic waste and, at present, makes it unfeasible for Dell to set up a branch of their closed-loop supply chain there.

### ***Demonstrating the Benefits to Customers***

The final challenge for Dell is to demonstrate the benefits of closed-loop recycling to customers. Ultimately, these products look and perform identically to those made from virgin materials. Dell must communicate the value proposition to customers by highlighting the amount of recycled content in the final product, the closed-loop nature of the materials and the benefits to the customers' own sustainability goals.

### **Performance Global Takeback and Closed-Loop Recycling Programme**

Since 2008, Dell has taken back more than 1.76 billion pounds (nearly 800 million kg) of used electronics and, since mid-2014, when Dell launched the closed-loop plastic recycling programme, it has created nearly 5,000 tonnes of plastics from recycled computer parts. Dell has saved more than USD 1 million from this process, and the carbon footprint of circular plastics is 11% smaller as compared to the manufacture of virgin plastics. Dell now uses circular plastics in approximately 90 products across millions of units globally.

### **Natural Capital Accounting**

Together with TruCost, Dell has done an evaluation to understand the gains from moving away from virgin plastics. One of the most useful ways for companies to account for these risks is to quantify the environmental impacts generated by their activities—internal operations, upstream supply chain and downstream product use and disposal—and then convert those impacts into monetary values.<sup>32</sup> The monetary value helps identify the value not captured in traditional financial markets and incorporates these considerations into decision-making.<sup>33</sup>

Dell quantified the greenhouse gas emissions savings derived from using closed-loop plastic and expanded it in the following ways:

- Measured the net benefit for environmental impacts of the closed-loop plastic, compared to traditional plastic.
- Valued the environmental net benefit in terms of natural capital—the stock of natural resources that makes human life possible and upon which businesses rely to produce goods and services.
- Scaled these benefits to larger applications, including utilising closed-loop plastic across many of Dell's product lines.
- Prepared a framework for incorporating social and financial impacts into the net benefit valuation in the future.<sup>34</sup>

The evaluation demonstrated the environmental benefits of closed-loop recycled plastic usage. Findings showed that "Dell's closed-loop plastic has a 44% (USD 1.3 million annually) greater environmental benefit compared to virgin ABS plastic."<sup>35</sup> In particular,

---

<sup>32</sup> Dell, *Dell Inc.*, <http://www.dell.com/en-us/>

<sup>33</sup> Ibid.

<sup>34</sup> Ibid.

<sup>35</sup> "Valuing the net benefit of Dell's more sustainable plastic use at an industry-wide scale," *Trucost*, September 2015, <http://i.dell.com/sites/content/corporate/corp-comm/en/Documents/circular-economy-net-benefits.pdf>

increased computer recycling lessened environmental impacts. The research found that recovering and recycling the used plastics from computers minimised “human health and ecotoxicity impacts” and reduced the overall “emission of hazardous substances.”<sup>36</sup>

In addition to quantifying the environmental benefits of closed-loop recycling systems, Dell has also begun to incorporate social impact metrics into its valuation framework.<sup>37</sup> Emergent strategies such as analysing activities for their use of social and human capital, will likely present an area for further refinement and application in the future.<sup>38</sup> At present, Dell is combining both environmental and social impact metrics into its process in order to help tackle the challenge of responsible e-waste disposal.

## Prognosis

- On a global scale, there is still huge potential to scale up circular resource streams in the IT sector and beyond. Only 10% of the plastics produced today are recovered – and more than 50% end up in landfills.
- Dell has increased the use of recycled materials (both closed-loop and traditional postconsumer recycled plastics) in new products and Dell plans to continue to scale the programme.
- As Dell continues to scale the current programme, it will look to expand into reclaiming and reusing other materials. Dell has already had success with using reclaimed carbon fiber for products and are currently using recycled ocean plastics for packaging.
- Dell will also look at how ocean plastics or other solutions can be used with products.
- Dell will continue to measure social impact using the same methodology, updating models for collection totals to follow form-factor trends. It will report progress annually, building on this total toward a cumulative 2 billion pounds by 2020.<sup>39</sup>
- Dell continues to lead conversations with governments and industry partners about recycling and circular loops on a global scale. Dell is open to innovative collaborations with even more customers, partners and governments in the coming years. Dell sees particular opportunities in creating partnerships in developing countries to strengthen this ecosystem.

Dell's takeback programme presents a compelling example of the potential of circular economy and closed-loop systems to contribute to responsible, mutual business practices. Looking towards the future, creating closed-loop recycling programmes in developing countries represents a new frontier. Recycling products in the countries from which they are recovered brings skilled jobs, creates industry and strengthens the local economy.<sup>40</sup> Using its proven abilities to leverage partnerships and government relationships to create the infrastructure needed for new programmes, Dell can continue driving a culture of recycling in communities around the world.<sup>41</sup> As Dell's programme example highlights, collaborative approaches have the potential to create both financial and environmental savings for corporations and customers on the global scale.

---

<sup>36</sup> “Valuing the net benefit of Dell's more sustainable plastic use at an industry-wide scale,” *Trucost*, September 2015, <http://i.dell.com/sites/content/corporate/corp-comm/en/Documents/circular-economy-net-benefits.pdf>

<sup>37</sup> Ibid.

<sup>38</sup> Ibid.

<sup>39</sup> “Dell 2020 Legacy of Good Plan,” *Dell Inc.*, <http://i.dell.com/sites/doccontent/corporate/corp-comm/en/Documents/2020-plan.pdf>

<sup>40</sup> Ibid.

<sup>41</sup> Ibid.

### Saïd Business School

Saïd Business School at the University of Oxford blends the best of new and old. We are a vibrant and innovative business school, yet deeply embedded in an 800-year-old university. We create programmes and ideas that have global impact. We educate people for successful business careers, and as a community seek to tackle world-scale problems. We deliver cutting-edge education programmes and ground-breaking research that transform individuals, organisations, business practice, and society. We seek to be a world-class business school community, embedded in a world-class university, tackling world-scale problems.

### Mars Incorporated

Mars' approach to business has long since been guided by five principles – quality, responsibility, efficiency, freedom and mutuality. Together they inform and guide the actions of all Mars associates every day as they do their jobs and interface with the outside world. The Mars' leadership has tasked its economic research unit, Catalyst, to start new work into unexplored territory for business; to identify critical drivers of mutuality and, using business pilots, to develop and test new metrics and management practices that can help boost mutuality in business situations. This work is called the Economics of Mutuality.

### The Oxford-Mars Mutuality in Business Partnership

On the back of these promising findings, a multiyear partnership with Oxford University's Saïd Business School was established in 2014 to focus on the development of a business management theory for the Economics of Mutuality with corresponding teaching curriculum, new management practices, and case study research. The research programme has combined the pursuit of normative questions – what is mutuality and how should it be enacted? – with grounded, ethnographic research on current thinking and practices. This has led to the development of field experiments and case studies examining how large corporate actors conceive of and pursue responsible business practices, and how these relate to their financial and social performance.

Saïd Business School  
Park End Street  
Oxford OX1 1HP

Mutuality in Business  
T: +44(0)1865 422875  
E: [responsiblebusiness@sbs.ox.ac.uk](mailto:responsiblebusiness@sbs.ox.ac.uk)  
W: [Mars Catalyst Labs](#)  
W: [www.sbs.edu/mutuality-business](http://www.sbs.edu/mutuality-business)