

An annual update on our 2020 Legacy of Good Plan

FY17 Corporate Social Responsibility Report



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This year Dell joined forces with EMC and VMware to create Dell Technologies, an IT powerhouse built to help customers embrace, transform and thrive in the digital future.

But the power of our combination doesn't stop there. Together, we are a major force for positive change, more committed than ever to putting our technology and expertise to work where it can do the most good in the world.

That's what Legacy of Good is all about — ambitious, long-term goals that fundamentally influence how we operate, innovate and engage on behalf of people and the planet we share.

So I am particularly proud to report that, while we were busy building this new company, we were also making terrific progress toward our Legacy of Good commitments.

As a matter of fact, we achieved one of our 2020 sustainability goals in full this year when we planted our 1 millionth tree to offset carbon emissions and restore natural animal habitats. This milestone is a great example of working together for a greater good. For 10 years, our Plant a Tree program allowed customers to join us in this effort, but this year our employees got involved as well, planting over 44,000 trees to commemorate our new company and propel us to our goal.

We pioneered a new breakthrough in our sustainable packaging — using ocean plastics for protective laptop trays. The pilot project currently underway will repurpose more than 16,000 pounds of plastics from waterways, beaches, rivers and coastal areas. Our sights are set on scaling this innovative packaging solution to help achieve our goal of 100 percent sustainable materials in our product packaging.

We worked with partners in 71 countries to directly benefit 561,000 youth through our strategic giving initiatives. For example, we teamed up with Stanford University to create a computer-assisted learning platform that gives students in rural China better access to education and technology. Roughly 3,200 students participated, and they are already learning English at twice the rate of their peers outside the program. We intend to scale this initiative to 1 million students by 2020.

We continue to work in close partnership with our customers to help meet their responsible business goals. Our takeback programs, which allow customers to turn in obsolete electronics to Dell when purchasing new technologies, have made Dell the largest recycler of e-waste in the world with services in 83 countries and territories. This year we expanded our custom donation service: customers can now turn their retired IT assets into targeted, high impact donations to their community. It's a win-win-win.

I've never been more excited or optimistic about the future. Every day, there are new discoveries and breakthroughs that get us one step closer to solving some of the world's greatest challenges — and in almost every case, technology is an important part of the solution. Now, more than at any time in our corporate history, Dell Technologies sits at the intersection of innovation and human progress. There's no place I'd rather be.

A stylized, handwritten signature in a light blue or grey color, which appears to read "Michael Dell".



Linda Thompson

Our commitment

At Dell, we are committed to driving human progress by putting our technology and expertise to work where it can do the most good for people and the planet.



Challenges and opportunities

Our increased scale brings more opportunities to innovate on behalf of people and the planet. We now have a broader technology portfolio; a larger, more diverse team; and greater resources to address the world’s most pressing challenges. We also have the benefit of the fresh perspective that comes from new beginnings and the opportunity to question the status quo.

Combining two large organizations brings considerable challenges, even when they are as like-minded in the corporate responsibility realm as Dell and EMC. We must agree upon our priorities, then standardize and institutionalize our new programs worldwide. At the same time, we must be able to respond to external challenges, ranging from discordant local regulations to changing educational paradigms, across the geographies we serve.

Responding to rapid global change

As the world’s population grows, it is also becoming more urban and more connected. Our technology can help people adapt to a rapidly changing world, through solutions that create smarter cities, more sustainable agriculture, and healthier, more educated citizens. As we do so, we must keep ahead of market challenges ourselves — and redefine the market when needed. In FY17, social issues such as the ongoing refugee crisis intermingled with economic issues across the globe. Rising populism and protectionism may alter long-standing trade patterns, while the global depression of oil prices — and thus, of virgin plastics prices — made life difficult for our recycling partners. Natural disasters disrupted communities and interrupted the flow of goods throughout our value chain. And the changing political climate in some key global regions has fueled uncertainty and the potential for further change.

Amid these challenges, we have the opportunity to affect outcomes — through our customers, with our industry peers and by ourselves. Innovative programs and products, combined with a strong culture and an opportunity to redefine ourselves, will allow us to evolve and succeed in a changing world.

Putting our values in action

It is important to us that our high social and environmental standards are met throughout our value chain — among team members and suppliers alike. This can be challenging as a global company operating under a wide variety of local regulations around the world. It is further compounded by social and political changes, as well as changes to our supply base.

For this reason, we recognize the importance of trainings, education and culture-building, especially post-integration. Acting and speaking with one voice takes on a new urgency, and it is by putting our values into action that we will find that voice.

Fostering employee engagement during times of transition

Combining companies brings ambiguity and uncertainty, forcing a re-examination of corporate culture and an increased amount of churn. Learning and defining new roles, assessing gaps or restructuring redundancies can mean less time for volunteerism, professional development and sustainability initiatives. At the same time, integration provides an opportunity to put our values on display and improve team member interactions. In fact, corporate responsibility programs can be used as a uniting force. They can create opportunities for like-minded individuals to work together. They also serve as a reflection of our values as we try to attract the world’s best talent.

Measuring our CSR impacts

The dynamic nature of our company makes measurement an ever-evolving exercise, especially with the added complexity of integration. Our ability to quantify our company’s positive impact on the environment, communities and people improves with each program and product we measure. Understanding how customers are using our technology to drive benefits continues to be one of our biggest challenges.

FY17 Goals dashboard

In September 2016, Dell completed the purchase of EMC in the largest technology merger in history, forming what is now Dell Technologies. Dell Technologies encompasses Dell, Dell EMC, Pivotal, RSA, SecureWorks, Virtustream and VMware.

This corporate social responsibility report addresses key achievements for Dell, Dell EMC, RSA and Virtustream — together referred to as “Dell Inc.” in this report. Heritage Dell activities and achievements in FY17 are referred to as “Dell” while heritage EMC activities and achievements are referred to as “EMC” or “heritage EMC.” Goals for FY18 and beyond are referred to as “Dell Inc.”

This report does not include information about VMware, which produces its own sustainability report, or smaller strategically aligned businesses under the Dell Technologies umbrella such as Boomi, SecureWorks or Pivotal.

We have realigned our 2020 Legacy of Good Plan to be inclusive of Dell Inc., following our merger with EMC. Our newly aligned goals reflect the integrated company and maintain the ambitiousness of the original plan. For more information on how we aligned our goals, see our white paper.

Net Positive

Aligned Goal: By 2020, the good that will come from our technology will be 10x what it takes to create and use it

Notes on Goal Adjustment: Scope now includes heritage EMC products and operations.

FY17 Status: Dell continued work with the Net Positive Project and completed additional pilot studies investigating analyses across multiple solutions.

Aligned Goal: Demonstrate 100% transparency of key issues within our supply chain, working with suppliers to mitigate risks in those areas

Notes on Goal Adjustment: Scope now includes heritage EMC direct materials suppliers.

We have added three subgoals (below) to track transparency on key issues, though we will continue to report on additional issues of interest in our Social and Environmental Responsibility (SER) Progress Report.

FY17 Status: In FY17, we significantly expanded transparency into our supply chain through the release of our SER Progress Report. This report describes supply chain performance on Electronic Industry Citizenship Coalition (EICC) audits as well as the results of our weekly working hours monitoring and other initiatives. We will update this report semiannually.

To help achieve this supply chain goal, we will continue to track the following metrics:

Subgoal: Audit 100% of high-risk¹ direct materials suppliers and select service suppliers²

Notes on Goal Adjustment: New subgoal.

FY17 Status: 90% of our high-risk supplier facilities (including first tier and sub-tier) have undergone EICC third-party audits in FY16-FY17. The number of facilities increased last year as a result of our combined supply chain.

Subgoal: Ensure that Dell’s suppliers representing 95% of direct materials spend publish a sustainability report in accordance with Global Reporting Initiative (GRI) or equivalent recognized global framework

Notes on Goal Adjustment: New subgoal.

FY17 Status: In FY17, suppliers representing 87% of direct materials spend published a sustainability report.

Subgoal: Require a five-year responsible water risk mitigation plan from our top 250 direct materials supplier facilities in water-stressed regions or with water-intensive processes

Notes on Goal Adjustment: New subgoal.

FY17 Status: Through FY17, 100 of our supplier facilities have submitted five-year water risk mitigation plans.

Supply Chain

New Goal: By 2020, Dell’s suppliers representing 95% of direct materials spend and key logistics suppliers will set specific greenhouse gas (GHG) emissions targets and report on their emissions inventory

Notes on Goal Adjustment: New goal. This is intended to further suppliers’ reporting and their efforts to reduce GHG emissions in their operations.

FY17 Status: Suppliers representing 90% of direct materials spend reported on their emissions to CDP in mid-2016, and 81% of those reporting had emissions targets. Suppliers representing 50% of logistics spend reported on their emissions to CDP, and 100% of those reporting had emissions targets.

¹Suppliers are risk-assessed based on geographic location and manufacturing process.
²Suppliers of logistics, call centers and packaging, among other commodities, are included at Dell’s discretion based on operational risk.

Environment

Aligned Goal: Reduce global absolute GHG emissions, Scopes 1 and 2 (MTCO2e) market-based, by 40% from a FY11 baseline

Notes on Goal Adjustment: Adjusted operational emissions goal to be in line with heritage EMC target. Removed Dell reference to logistics emissions from this goal.

FY17 Status: The FY17 total Scopes 1 and 2 emissions (market-based) are 16% below the FY11 baseline for the combined companies.

New Goal: Source 50% of our total electricity from renewables (both purchased and on-site generation)

Notes on Goal Adjustment: Scope now includes heritage EMC operations.

FY17 Status: Renewable electricity represented 24% of our total electricity consumption, up from 11% in FY11.

Aligned Goal: Ensure 90% of waste generated in Dell-operated buildings is diverted from landfills

Notes on Goal Adjustment: Scope now includes heritage EMC-operated buildings and campuses.

FY17 Status: In FY17, our manufacturing facilities diverted 99% of their total waste from landfills. Because this is the largest source of our operational waste, we remain on track for achieving this goal. We estimate that the global diversion rate in our other Dell-operated buildings remains in the 50-60% range.

Aligned Goal: Develop and maintain sustainability initiatives in 100% of Dell-operated buildings

Notes on Goal Adjustment: Scope now includes heritage EMC-operated buildings and campuses. Through 2020, we will also report on water conservation initiatives as part of this goal (these were previously reported separately).

FY17 Status: At the end of FY17, 97% of our Dell-operated facilities had at least one active sustainability initiative in one or more of our eligible categories: equipment or building upgrades, renewable energy use, on-site services, water conservation, and employee engagement.

Aligned Goal: Use 100 million pounds of recycled-content plastic and other sustainable materials in our products

Notes on Goal Adjustment: Target has increased from 50 million pounds to 100 million pounds to reflect significant growth in opportunity due to commercialization of post-consumer recycled (PCR) materials, and expected use of PCR across additional product lines, driven in part by green procurement requirements.

FY17 Status: We exceeded our initial goal of 50 million pounds, using a cumulative total of 52.5 million pounds of sustainable materials in Dell products since the start of FY14. In FY17, we used 16.1 million pounds of recycled plastics in our products; 5.4 million pounds came from our closed-loop efforts and 10 million pounds came from PCR content (sourced from water bottles, etc). We increased our use of recycled carbon fiber across Dell Latitude™ products, using 0.8 million pounds in FY17. EMC products did not contribute to our FY17 totals.

Aligned Goal: Ensure 100% of product packaging is sourced from sustainable* materials

Notes on Goal Adjustment: Scope includes product packaging and service parts packaging across all Dell products, and Dell EMC packaging purchased in quantities greater than 1,000.

FY17 Status: In FY17, 94% of Dell product packaging and services packaging material by weight was sourced from sustainable materials*, an increase of 1% from FY16.

Aligned Goal: Ensure 100% of packaging is either recyclable or compostable

Notes on Goal Adjustment: Scope includes product packaging and service parts packaging across all Dell products, and Dell EMC packaging purchased in quantities greater than 1,000.

FY17 Status: At the end of FY17, 94% of all Dell packaging by weight was recyclable or compostable. This is an increase of 1% from FY16. We continue to categorize a material as being recyclable if it is accepted by a majority of municipalities, and as being compostable if it can be certified to meet the ASTM D6400 standard.

Aligned Goal: Identify and quantify the environmental benefits of IT-based solutions

Notes on Goal Adjustment: No change.

FY17 Status: We completed our Connected Workplace study in FY17. We'll continue to investigate opportunities for other IT-based solution studies.

* We define sustainable materials as those that “can be produced in required volumes without depleting nonrenewable resources, and those that come from recycled or renewable resources.”

Environment (continued)

Aligned Goal: Phase out environmentally sensitive materials as viable alternatives exist

Notes on Goal Adjustment: Scope now includes heritage EMC product lines.

FY17 Status: In FY17, we worked toward integrating Dell and EMC under one common restricted materials compliance program. We revised our [Chemicals Use Policy](#) in late FY17 to apply to all of Dell Inc. With the introduction of halogen-free laminates in FY14, and of a halogen-free solder mask in FY15, the majority of newly designed heritage EMC storage product printed circuit boards (all that are technically feasible) are free of halogens (less than 50 ppm total halogen content).

Aligned Goal: Recover 2 billion pounds of used electronics

Notes on Goal Adjustment: Scope now includes heritage EMC product lines.

FY17 Status: Dell recovered 177 million pounds (80.3 million kilograms) of used electronics in FY17. This includes heritage EMC volumes tracked for Q4 only. Since our baseline year of FY08, we have recovered a cumulative total of 1.8 billion pounds. We have achieved 88% of our 2020 goal and our estimates show we are on track to meet our target.

Aligned Goal: Reduce the energy intensity of our product portfolio by 80%

Notes on Goal Adjustment: Scope now includes heritage EMC product lines.

FY17 Status: We have reduced our product portfolio energy intensity by 54% from a FY12 baseline. Our current trajectory is slightly off track of our 2020 goal. Projections indicate we should achieve at least a 72% reduction by the end of FY21. For information on this goal, our progress and our learning, see our [white paper](#).

To help achieve the energy intensity goal above, we will continue to track the following metrics on our storage and data protection products:

Subgoal: Reduce disk drive energy intensity (as a function of capacity) 80% from a FY12 baseline

Notes on Goal Adjustment: New subgoal. Scope includes all storage and data protection products.

FY17 Status: Since FY12, our disk drive energy intensity (as a function of capacity) has improved by 70% within the storage and data protection product lines.

Subgoal: Demonstrate continued improvement, in both hardware and software efficiency, in 100% of covered products

Notes on Goal Adjustment: New subgoal. Scope includes all storage and data protection products.

FY17 Status: Of the 13 product lines managed through our product sustainability assessment process in FY17, 85% demonstrated continued improvement in hardware and software efficiency (or have committed to demonstrating improvement by product launch).

Communities

Aligned Goal: Engage 75% of team members in community service by 2020 and provide 5 million cumulative hours of service to the communities in which we live and work

Notes on Goal Adjustment: Scope now includes heritage EMC employees.

FY17 Status: In FY17, 44% of our team members registered at least one volunteer activity through our online tracking system. Team members have volunteered a cumulative total of 3.3 million hours since we set our goals in FY14. This places us 66% of the way to our goal. Annual service hours increased from 811,000 in FY16 to 821,000 in FY17.

Aligned Goal: Apply our expertise and technology in underserved communities to help 4 million youth directly* and support 12 million people indirectly* to grow and thrive

Notes on Goal Adjustment: Scope now includes heritage EMC employees. Direct impact targets adjusted from 3 million to 4 million, and indirect targets from 10 million to 12 million, to account for the additional possibilities associated with a larger product portfolio.

FY17 Status: In FY17, our strategic giving initiatives directly impacted 561,000 youth and indirectly impacted 1.5 million people. We have recalculated our goal progress as a combined company, and have directly impacted 2.4 million youth and indirectly impacted 10.1 million people since FY14. We have reached 59% of our direct impact goal and 84% of our indirect impact goal.

* Direct impact is a measurement of the youth enrolled in Dell-funded programs and indirect impact is a measurement of the individuals who are not enrolled in our programs but use the technology we donated to those programs.

People

Aligned Goal: Increase engagement and drive inspirational leadership by achieving a goal of 75% of team members rating their leader as inspiring

Notes on Goal Adjustment: We are now tracking this goal by using the metric of Inspirational Leadership, as measured in our annual internal survey of all Dell Inc. employees. We strive to reach this goal every year through 2020; it is not a cumulative goal.

FY17 Status: In FY17, 82% of employees rated their leader as inspiring. The survey was sent to 50% of the employee population and was inclusive of heritage Dell and EMC. Moving forward, it will be sent to 100% of the Dell Inc. population.

Aligned Goal: Support an inclusive culture by engaging 40% of our global team members in employee resource groups by 2020

Notes on Goal Adjustment: Scope now includes heritage EMC employees.

FY17 Status: As of the end of FY17, 23% of team members are engaged in employee resource groups.

Aligned Goal: Encourage eligible team members to enroll in flexible work programs, increasing global participation to 50%

Notes on Goal Adjustment: Scope now includes heritage EMC employees.

FY17 Status: In FY17, 15% of our employees participated in our flexible work programs. This percentage only reflects those formally enrolled in a Dell program, while many more participate in an informal manner. While the absolute number of participants grew in FY17, the percentage was significantly impacted by the addition of heritage EMC team members. We have already aligned our heritage flexible work programs into one common program, and will be encouraging work flexibility across the company.

Aligned Goal: Increase university hiring to a rate of 25% of all external hiring

Notes on Goal Adjustment: Scope now includes heritage EMC employees.

FY17 Status: University hiring made up 20% of new hires in FY17.

Aligned Goal: Be recognized as a best-in-class Employer of Choice as determined by objective, external measures: achieving a top 10 ranking on employer-of-choice awards in at least five large countries where we have a presence, attaining a score of 3.8 in our overall Glassdoor ranking, and making the DiversityInc Top 50 and the top 10 in the FlexJobs 100 Top Companies with Remote Jobs

Notes on Goal Adjustment: Scope now includes heritage EMC employees. Also new is a shift from internal metrics to external ranking to more clearly measure our progress to this goal.

FY17 Status: In FY17, we continued to be recognized as an Employer of Choice, garnering awards in over 20 countries. On Great Place to Work’s® World’s Best Multinational Workplaces list, EMC ranked 4th globally, and Dell was listed in the top 10 for five individual countries. Dell increased its overall Glassdoor ranking by 0.1, to 3.6 out of 5. Dell was one of the few technology companies that made the DiversityInc Top 50, coming in at #28 (up from #31 in 2015), and EMC made DiversityInc’s Noteworthy Companies list. Dell climbed to #6 in the global FlexJobs 100 Top Companies with Remote Jobs in 2016, up from #12 in 2015.

Aligned Goal: Achieve 75% favorable responses (or higher) in team member satisfaction globally as measured through the annual employee satisfaction survey

Notes on Goal Adjustment: Scope now includes heritage EMC employees.

FY17 Status: In November 2016, we launched our first employee satisfaction survey as a combined company. The survey went to 50% of our Dell and heritage EMC population, and their average satisfaction was 82% favorable, exceeding our goal of 75%.

Net Positive

Our company believes in the power of technology to advance human progress. It's simply not enough to do "less bad." We see technology as the key to unlocking regenerative solutions — ones that put more back into society, the environment and the global economy than they take out.

Highlights

- Taking Net Positive from conceptual to measurable
- Powering drones, empowering small businesses
- Harnessing IoT for smart cities and seas

“Technology has an innate ability to drive progress — to leave the world it touches better off than before.”

— David Goulden
President
Dell EMC

Taking Net Positive from conceptual to measurable

Working with the Net Positive Project, we continue the quest to quantify our 10x20 goal.

We believe our technologies have the potential to give back to the world more than they take. They enable customers to do more with the technology they already have, do more while consuming less energy, and create things within their communities that were never possible before. Examples include mobile solutions that allow you to work wherever you are most productive; buildings that minimize resource use while maximizing comfort; and smart transportation systems that minimize waste, reduce emissions and improve the flow of traffic. Driven by this power of technology to enable human potential, we are raising the bar on sustainability and working toward becoming Net Positive, which means we put more back into society, the environment and the global economy than we take out. While we are working as aggressively as ever to reduce our footprint, the stakes are too high to simply do “less bad.” Following our Net Positive ambitions, we’re taking a regenerative approach to sustainability, not only continuing our work to understand our footprint, but also working with our customers to power long-term solutions to the world’s most pressing problems.

Net Positive is an exciting concept that challenges us all to think big. It inspired us to set our overarching 2020 Legacy of Good Plan goal: By 2020, the good that will come from our technology will be 10x what it takes to create and use it. But Net Positive also represents a big measurement challenge. This is such new territory that there is no consensus on which social and environmental impacts should be measured, and no industry standard exists for measuring Net Positive efforts — in the IT industry or any other.

In FY17, we explored creative approaches to measurement at both the level of individual solutions and on larger scales. Our microstudies of

individual Dell solutions, such as our [study of Dell’s flexible work programs](#) and Arizona State University’s (ASU) [move to online instruction](#), helped us define methodologies; however, we cannot feasibly scale this work across every Dell- and customer-developed technology solution. And our macrostudies, such as our investigation into the link between IT spend and customer sustainability performance, do not provide specific enough data to enhance our mapping and measurement efforts.

Measurement is a challenge we can’t fully solve on our own. That’s where the [Net Positive Project](#) comes in. This cross-sector coalition launched in June 2016 with the aim of expanding the number of Net Positive companies and developing global principles for measurement. The Net Positive Project was founded by [Forum for the Future](#), [BSR](#) and the Harvard School of Public Health’s [Sustainability and Health Initiative for NetPositive Enterprise](#) (SHINE), along with several member companies including: AMD, AT&T, Capgemini, The Crown Estate, Dell, Dow, Eaton, Fetzer Vineyards, Hewlett Packard Enterprise, Humanscale, Kimberly-Clark, Kingfisher, Kohler, Owens Corning and Target.

One of our first group efforts was a vision exercise to understand where Net Positive might take us in the next decade. We realized it’s about catalyzing change. When customers start asking what we’re doing to be Net Positive, we’ll know our efforts have been successful. To get there, the Net Positive Project will focus on three main initiatives in its first year: defining Net Positive principles, building a Net Positive methodology and creating a standardized approach to developing case studies.

In addition to our work with the Net Positive Project, we started examining other creative ways to measure our social and environmental

impact, working with ASU’s [Walton Sustainability Solutions Initiatives](#) to produce “[The Feasibility of Mapping ICT Initiatives to the UN Sustainable Development Goals](#).” The Dell-funded study found that mapping ICT solutions to the United Nations’ 17 [Sustainable Development Goals](#) is possible in many cases, but insufficient data is the primary barrier. This is an opportunity for Dell and the ICT industry. If ICT’s contributions to the success of one or more of these goals can be measured, we might be able to compare it to the footprint of the ICT itself to better understand where, and how significantly, we are driving Net Positive results. At the moment, however, using data from the Sustainable Development Goals to accelerate our work on Net Positive does not seem likely.

We also created two macrostudies that attempted to accelerate our Net Positive work. The first, completed with help from Trucost, looked at Dell customers’ carbon emissions reports. The other, done in conjunction with Valutus, looked for links between IT spend and customer sustainability performance. These studies were valuable and directional, but did not directly add to our measurement toolbox. We will continue to work on measuring specific IT-based solutions in FY18 and beyond. We’ll also continue driving creative approaches to understanding and measuring Net Positive — both within the Net Positive Project and on our own — including our first efforts to apply the science of social lifecycle assessments to our supply chain.



Powering drones, empowering small businesses

Our customer Animusoft uses drone-powered machine learning for precision agriculture — driving higher crop yields and lower carbon footprints.

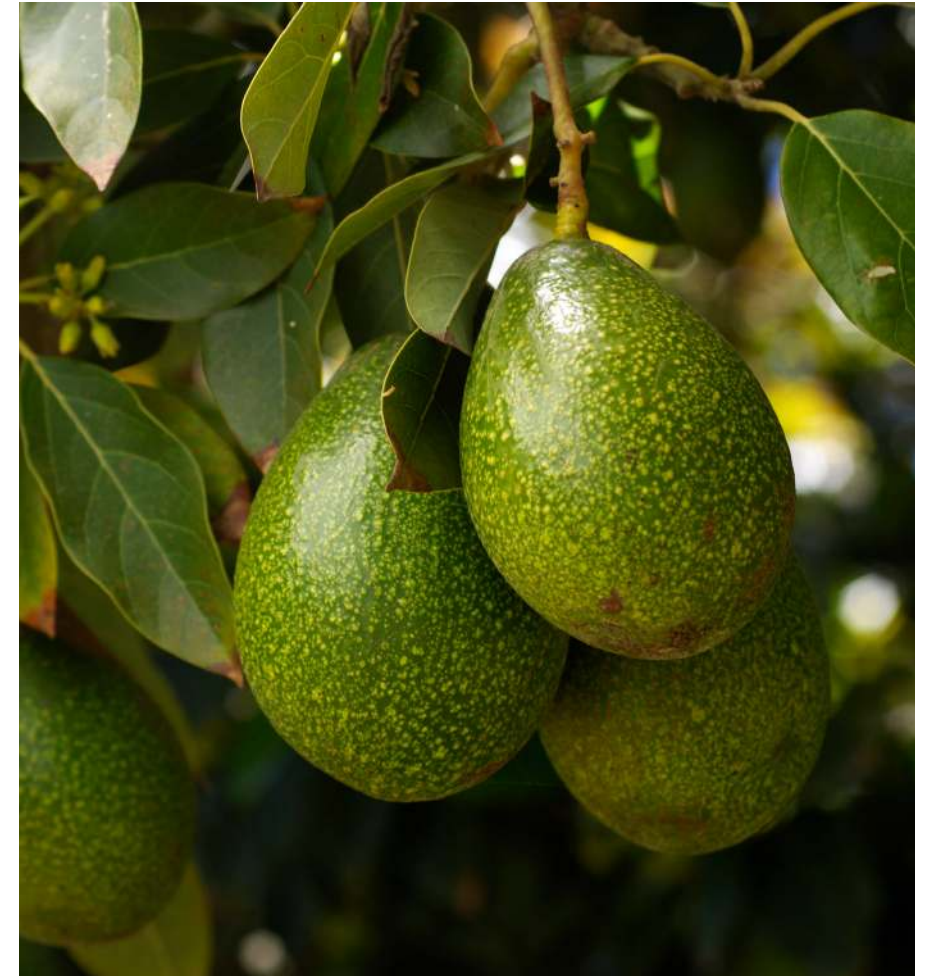
Florida may be famous for citrus farming, but avocado is the state's second-largest fruit crop. For the past few years, this \$65 million industry has faced the persistent threat of laurel wilt, a vascular disease that kills avocado trees. Infected trees must be cut down or burned before spreading wilt to their neighbors. In a grove of thousands, identifying disease early enough is a huge challenge.

One of our customers, Animusoft, has created [a drone-powered machine learning solution](#) called Alive that helps farmers more effectively identify and treat laurel wilt. Drones fly over the avocado farms, shoot video of the groves and trees, and then upload the video to Animusoft's cloud-based machine learning engine to translate the raw data into actionable intelligence. In this case, that means examining the images and data for anomalies, like changes in color that might indicate laurel wilt. [Alive's](#) processing and Animusoft's operations are both powered by our technology.

Using small, battery-powered drones to do this work weekly has a significantly smaller carbon footprint than using a full-sized, gas-powered helicopter to survey the groves three or four times a year. It also enables farmers to catch wilt much earlier, not just because imaging is more frequent but also because the solution captures and analyzes an exponentially larger amount of data. Alive automates the process, teaching computers to scan petabytes of data for early signs of wilt. With this early warning, farmers can immediately cut down an infected tree and treat its neighbors to contain the disease. Previously, they had to burn groves to the ground if the wilt had spread to too many trees.

Alive can also scan for other crop performance indicators, such as areas that are struggling due to low water use or fruit that is ready for picking, so farmers can act accordingly to maximize yields. Reducing crop waste — and the associated water and fertilizer waste — minimizes farmers' environmental impact while providing economic benefits.

Initial results indicate that, as a precision agriculture platform, Animusoft's Alive is helping farmers improve their yields by up to 25 percent. As farming techniques continue to integrate Internet of Things (IoT) technologies, the platform can use the drone-captured data to take direct action — linking to autonomous tractors or delivering precision irrigation, for example. This creative solution is just one example of how advanced technology will drive a more sustainable future.



By instrumenting the physical world of New Bedford, Mass., Dell and INEX Impact Labs enable the coastal city's businesses to be both profitable and sustainable.

New Bedford, population 95,000, is a small city doing big things. For 16 years in a row, the historic Massachusetts city's port has topped the country for dollar value of its fishing catch. To protect the health of its fishing industry — and other industries relying on natural resources — the City of New Bedford is using Internet of Things (IoT) technologies that deliver a big impact in a small footprint.

IoT solutions provide small cities and businesses with a cost-effective way to stay globally competitive.

INEX Impact Labs is working with the City of New Bedford to use interconnected IoT solutions, including Dell Edge Gateways, to solve problems throughout the city. More than 30 New Bedford city departments and small businesses have installed solutions that implement sensors and collect data to help users better understand their operations and physical environment. This enables them to make data-driven decisions that increase profits while conserving resources.

For example, the Port of New Bedford has long faced challenges in tracking all of its incoming and outgoing activity. This creates a security

issue and may lead to under-reporting fish catches — a major threat to the fishery ecosystem. The port now uses IoT-enabled sensors and a Dell Edge Gateway connected with the lighthouse at the entrance to the harbor. When the sensors detect a boat, the system triggers an optical curtain in front of the blind spot in the port and starts running video cameras. This provides persistent security for the fish houses while also ensuring boats comply with catch quotas and port regulations.

INEX Labs is also working with Quansett Nurseries, putting sensors in their wells to get a precise read on the water supply. This is especially important during the area's increasingly frequent, chaotic weather patterns of deluge and drought. Knowing the amount of water available, along with the temperature, humidity and air quality, gives Quansett's growers the insights needed to maximize production while minimizing waste.

Quansett Nurseries' neighbor, Salt Creek Vineyard, is using this technology to manage several unique microclimates where inappropriate water quality management could destroy the grapes and ruin the vines. Salt Creek is also able to monitor the multiple factors that determine the best time to harvest.

By going places people cannot go and tracking metrics that are too labor-intensive for people to measure, IoT solutions provide small cities and businesses with a cost-effective way to stay globally competitive.



Cameras and IoT-enabled sensors on the Palmer Island Light Station increase port security data for the fish houses and help ensure boats comply with catch quotas and port regulations.

Supply Chain

We hold our suppliers to the same high social and environmental standards we set for ourselves. We are committed to driving transparency, accountability and continuous improvement throughout our global supply chain.

Highlights

- Increasing transparency to build a stronger supply chain
- Promoting a positive work experience in our supply chain
- Assessing risk and building capabilities to drive accountability
- Responsibly sourcing minerals in our supply chain

“Customers increasingly want to know more about the products they buy. Transparency in the supply chain is key — insight drives a better product, a better worker experience, and better relationships with our suppliers and customers.”

– Kevin Brown
Executive Vice President,
Global Operations &
Chief Supply Chain Officer
Dell



Increasing transparency to build a stronger supply chain

We continue building on our commitment to responsibility and transparency by upholding high standards and helping customers see further and deeper into our global supply chain.

Strengthening our supply chain's social and environmental responsibility (SER) is an ongoing effort, aimed at building resilience and maintaining high standards. This is an ongoing challenge because electronics industry supply chains are particularly complex, with several tiers across wide geographies and multiple suppliers for many components. Additionally, when Dell and EMC combined, it increased the size of our supply chain, increasing the effort required to enforce our standards and hold suppliers accountable. This is a challenge we are eager to accept. With added size and complexity comes expanded reach and capabilities, as well as the opportunity to drive sustainability deeper into the supply chain.

The China tour allowed customers to interact with workers and experience their working and living conditions.

We hold all of our suppliers — and ourselves at our own facilities — accountable to the high standards outlined in the Electronic Industry Citizenship Coalition's (EICC) [Code of Conduct](#). This industrywide standard means no matter which participating company a supplier works for in the electronics industry, the base expectations are the same.

All of our production suppliers and select services suppliers sign written agreements to follow our [Supplier Principles](#), which require them to meet or exceed local laws, adopt our core policy commitments, and actively participate in our capability-building and assessment programs.

We are committed to providing our customers and other stakeholders with insight into how materials are sourced, where products and their components are made, what working conditions are like, and how our supply chain is managed. In response to growing interest and customer expectations, we have been expanding the data and access we provide. We organize tours of our supplier manufacturing facilities, most recently hosting a fall 2016 tour in China for enterprise customers. The China tour allowed customers to interact with workers and see firsthand their working and living conditions. This helped customers better understand industry supply chain issues and Dell's related initiatives. Based on positive customer feedback, we are planning additional tours in FY18.

Since not every Dell customer can feasibly tour our supply chain, in FY17 we began issuing a semiannual [Supply Chain Social and Environmental Responsibility \(SER\) Report](#) that provides an in-depth look at our programs and performance data related to key issues in our supply chain.

We also expect our suppliers to publicly report on their SER initiatives and performance. We ask them to report their carbon emissions and water data to [CDP](#), which is a global disclosure system for companies, cities, states and regions to report their environmental impacts to investors, purchasers and the public. In FY17, suppliers representing 90 percent of our direct materials spend reported their greenhouse gas emissions data to CDP,

and 81 percent of those reporting set emissions targets. We also ask our suppliers to publish company sustainability reports, following the [Global Reporting Initiative](#) (GRI) or other global guidelines. Suppliers representing 87 percent of direct materials spend published sustainability reports in FY17. This reporting helps Dell and our customers better understand the scope of our impacts, and adjust our plans and trainings to address them.

Promoting a positive work experience in our supply chain

We are developing a deeper understanding of the worker experience in our supply chain, and engaging directly with workers to address issues and improve quality of life.

Providing the people who build our products with a positive working environment makes our supply chain more resilient. It's also the right thing to do. While we respect our suppliers' autonomy to create their own corporate cultures, integrity is a Dell value we expect all of our partners to share.

Our work starts with compliance and capability-building. We track suppliers' adherence to our standards for working hours, human rights, health and safety, and environmental conditions. We then work together to resolve issues. Our audits continue to show that allowing working hours in excess of the 60-hour limit set by the [Electronic Industry Citizenship Coalition](#) (EICC) is the most frequent finding. Addressing excessive working hours continues to be an area for alignment across the sector, as well as an important area of focus for us.

In FY17, we expanded our weekly working hours monitoring program to include more than 190,000 workers across 121 supplier facilities in China. This program tracks working hours and rest days, as well as any use of student workers, dispatch workers and workers under the age of 18. Our executives review this data weekly and discuss suppliers' individual performance at quarterly business reviews. We also share aggregate data on [Dell.com](#). In FY17, 91 percent of the workers we monitored worked fewer than 60 hours per week — an increase over the previous year's compliance.

To better understand “the story behind the audit” — how issues affect workers on a daily basis and how conditions could be improved — we have also increased our direct engagement with workers. In FY17, we

launched worker surveys on health, safety and other issues at 10 of our largest supplier facilities in China. Workers completed the surveys securely and privately via mobile phones. We also launched a worker hotline that allowed workers at five of our large supplier facilities to contact Dell directly without having to go through their supervisors. This gives them a safe, independent outlet for speaking up about issues.

We partnered with the suppliers to address workers' concerns and followed up with each worker to reach a resolution. This initiative has been very well-received by the workers. We have shared the aggregate feedback with the suppliers so they can provide workers with appropriate development opportunities and strengthen their companies' management-worker dialogue and grievance mechanisms.

These initiatives allowed us to connect directly with workers to address their concerns. They also gave us the knowledge we need to prioritize actions and customize trainings that will help suppliers address the issues raised. All of this work fulfills the tenets of Dell's [Supplier Principles](#) that call for companies to respect workers' rights to open communication, direct engagement, and humane and equitable treatment.





Assessing risk and building capabilities to drive accountability

We continue our rigorous supplier and Dell facility auditing and risk mitigation programs while introducing new trainings to build capabilities.

Supply chain accountability is a two-way street. We expect our suppliers to meet the same high social and environmental responsibility (SER) standards we set for ourselves in our own Dell facilities. At the same time, we conduct risk assessments and audits to inform trainings, corrective action plans and other strategies for building capabilities.

Risk assessments are the first step in driving adherence with our standards, including those outlined in our [Supplier Principles](#). We require all new suppliers to complete an SER risk assessment before they can be qualified as a Dell supplier. This enables us to identify, prioritize and mitigate risks along our supply chain. We also work with suppliers to conduct ongoing assessments around key areas of risk. For example, in FY17, we helped 50 of our suppliers create and publish five-year water risk mitigation plans. One hundred suppliers (whom we identified as having the highest water usage and/or risk from water-related natural disasters) now have such plans in place.

Further, we risk-assess all direct material suppliers, and require 100 percent of high-risk suppliers to undergo [Electronic Industry Citizenship Coalition](#) (EICC)-certified third-party audits. This exceeds EICC membership requirements. The audits cover health and safety, labor issues, environmental issues, ethical behavior, and management systems. Suppliers must undergo a full audit once every two years and conduct follow-up audits as necessary to close all priority findings (i.e., those that signify immediate risk to human rights or health and safety) and major findings (i.e., significant failure of a management system). In FY17, more than 100 audits were completed each quarter.

It is essential that we not only assess suppliers, but also maintain a comprehensive system for immediately identifying and addressing performance issues. A suppliers' nonconformance on an audit triggers a request for a corrective action plan (CAP). Dell's SER team reviews each CAP and works with the supplier to make sure they implement the required changes and schedule follow-up audits.

Additionally, our SER Executive Review Board reviews all audit findings that could indicate a risk of forced labor, child labor or human trafficking, and monitors suppliers' completion of corrective actions. This holds suppliers accountable to our [Vulnerable Worker Policy](#).

To address the protection of vulnerable workers at an industry level, in FY17 we partnered with other leading IT companies to offer joint management trainings to suppliers in Malaysia, Singapore and Taiwan. The trainings built awareness and helped identify strategies for addressing the risks of forced labor and human trafficking. We believe this shared commitment and collaborative approach is imperative to protecting the rights and well-being of workers, reducing risks for our companies and suppliers, and improving business outcomes.

To further build our suppliers' abilities to manage any workplace issues, we expanded our training programs in FY17. During the year, more than 1,000 participants from 114 supplier facilities participated in at least one of our training programs. We increased the number of supplier networking and training sessions and implemented six demonstration projects addressing key risks: working hours, training systems, health and safety, chemical management, grievance systems, and worker-management communication.

After participating in our SER Practitioner training program, 71 percent of participating suppliers reduced their worker turnover rate, 70 percent improved their job safety analysis management, and 64 percent improved their on-site subcontractor safety management. Additionally, we used a "train the trainer" model to extend the number of people we could train on the key topics identified by our audits. We have long offered online trainings, including EICC training modules, to our suppliers. Integration with EMC brought access to their extensive SMaRT (Sustainability Management and Resource Training) Library of online resources on a wide variety of topics in multiple languages.

Additionally, we worked with other companies in our industry to explore new approaches to the shared challenges our suppliers face. For example, in FY17 Dell co-hosted a Executive Sustainability Roundtable with executives from Intel and 13 of our shared suppliers. The event created open dialogue about how to address challenges and share best practices as we collectively implement sustainability management systems. This was a first-of-its-kind event that brought about innovation and collaboration to accelerate our progress.

Responsibly sourcing minerals in our supply chain

By integrating the best practices of Dell and EMC, we continue to strengthen our approach to ensuring the minerals in our products are responsibly sourced.

As part of our focus on human rights in the supply chain, Dell is committed to the ethical sourcing of minerals. We have a responsibility to avoid contributing to conflict or human rights violations at deeper levels of our supply chain. Supply chains have enormous potential to advance economic development around the world, and we believe a sustainable, ethical supply chain can also uncover tremendous innovation and efficiencies that transform economies for the better. Since 2009, Dell has been actively working to address responsible mineral sourcing, which is a key issue affecting the electronics industry.

While we monitor the use of many minerals, our top priorities are tin, tantalum, tungsten and gold (known collectively as 3TG) and cobalt, which is a key material in lithium-ion batteries used in the majority of electronic equipment. There is concern about these minerals originating from mining operations associated with human rights violations and environmental degradation.

These are complex, nuanced issues requiring careful management. In our commitment to ethically sourced, conflict-free materials, we are working collectively to address them. We were a leading voice in the cross-industry collaboration that led to the formation of the Conflict-Free Sourcing Initiative (CFSI) in 2011. We've implemented a management system for conflict minerals based on the Organisation for Economic Co-operation and Development's (OECD) five-step framework for due diligence in the minerals supply chain. We survey our suppliers using CFSI's Conflict Minerals Reporting Template; provide them with trainings, best practices, and educational resources; and encourage them to shift their sourcing to smelters and refiners that are compliant with the Conflict-Free Smelter Program (CFSP), CFSI's third-party auditing initiative.

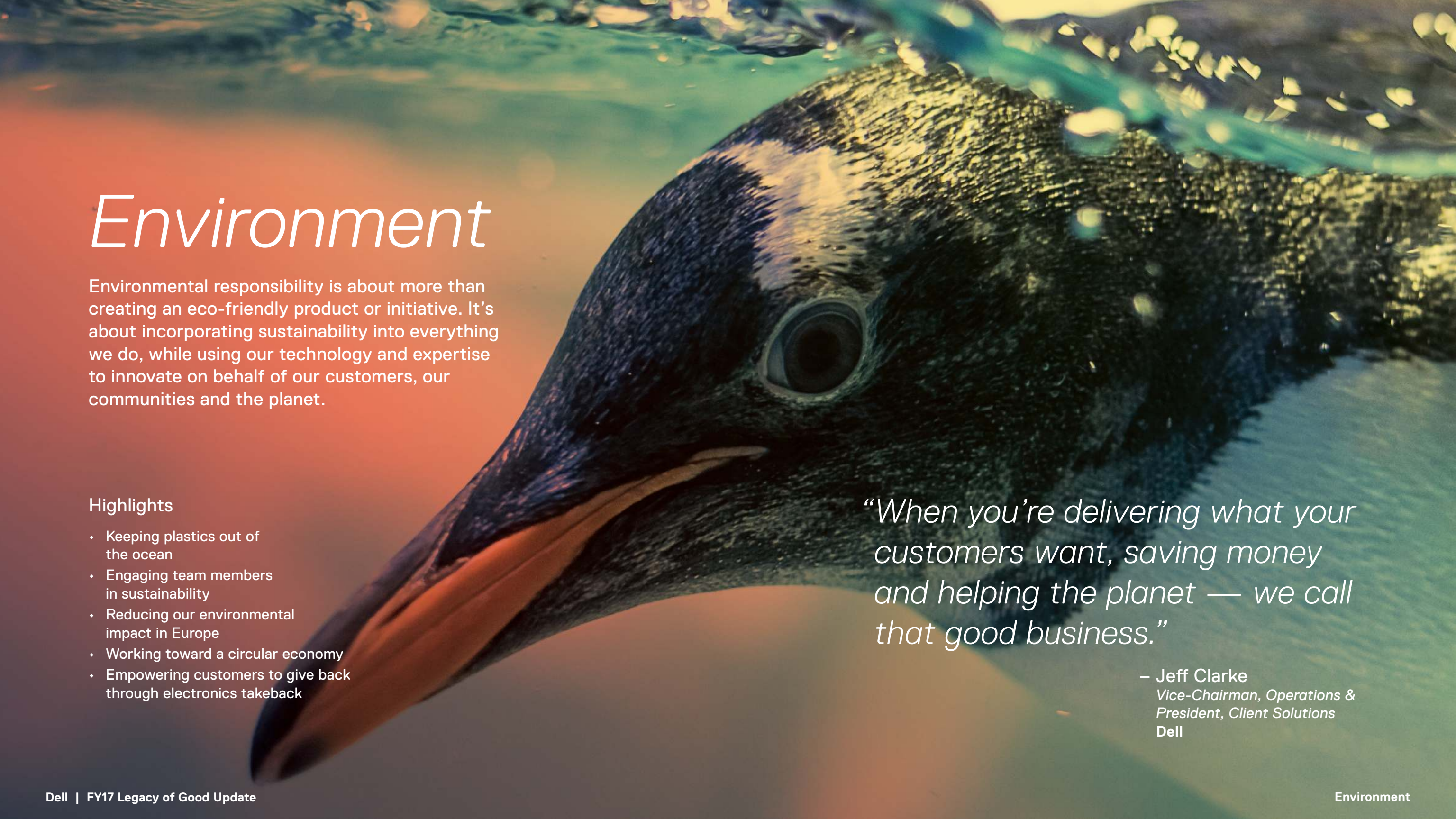
We also continue our work to help increase the number of CFSP-compliant 3TG smelters so our suppliers have a greater pool to choose from. Through CFSI work groups, we are directly encouraging smelters and refiners to undergo audits to become CFSP-compliant, and are helping advance the CFSP. By encouraging responsible sourcing through the promotion of verifiable conflict-free sources, we can help support peaceful economic activity.

Our goal is to continue developing due diligence systems for the sourcing of other minerals as we have done for 3TG. In FY17, we partnered with other technology industry leaders through the Responsible Cobalt Initiative and the Electronic Industry Citizenship Coalition's Responsible Raw Materials Initiative (RRMI). We are now working with the RRMI to develop an industry-standard template for reporting cobalt sourcing. Internally, we have taken steps to broaden our responsible raw material management system to include cobalt, and we are investigating risks for other minerals, as well. In January 2016, we surveyed our battery suppliers and other key suppliers to understand their cobalt supply chains, current traceability and sourcing policies. We also provided our battery suppliers with training on responsible sourcing and implementing OECD due diligence.

Addressing these challenges is a complex endeavor that requires cross-industry collaboration. We do not yet have all the answers, but we are committed to transparency and open dialogue as we seek solutions. It is through candid discussion that we will find shared interests that will make a positive difference in businesses and communities around the globe.



By encouraging responsible sourcing... we can help support peaceful economic activity.



Environment

Environmental responsibility is about more than creating an eco-friendly product or initiative. It's about incorporating sustainability into everything we do, while using our technology and expertise to innovate on behalf of our customers, our communities and the planet.

Highlights

- Keeping plastics out of the ocean
- Engaging team members in sustainability
- Reducing our environmental impact in Europe
- Working toward a circular economy
- Empowering customers to give back through electronics takeback

“When you’re delivering what your customers want, saving money and helping the planet — we call that good business.”

– Jeff Clarke
Vice-Chairman, Operations &
President, Client Solutions
Dell

Keeping plastics out of the ocean



Dell Inc. creates the technology industry's first packaging trays (for the Dell XPS™ 13 2-in-1 laptop) made with 25 percent recycled ocean plastic content.

Each year, an estimated 8 million tonnes of plastic enter the ocean. That's enough to put five grocery bags of plastic trash on every foot of coastline around the world. Ocean plastics are a global environmental concern because plastics break down into such small pieces that they are nearly impossible to remove from the water, and have a harmful effect on sea life. There are now an estimated 5 trillion particles of plastic floating in the ocean, and most are under 5 millimeters — roughly the size of a pencil eraser. Many sea creatures are eating these microplastics that look like phytoplankton, the small marine plants that serve as their food source. Because phytoplankton are the “first course” on the ocean's food chain, the ingested plastics can potentially affect every level of the chain, all the way up to humans.

Dell's Social Good Advocate, actor and entrepreneur Adrian Grenier, helped us understand the pressing nature of these challenges. In FY17, we followed up our work with him on the 4D virtual reality experience for The Lonely Whale Foundation by developing a solution for keeping plastics in the economy and out of the ocean. Following the same innovation model we've used to pioneer packaging made from bamboo and mushrooms, Dell developed a new packaging tray made from a blend of recycled ocean plastics (25 percent) and other post-consumer recycled, high-density polyethylene (HDPE) plastics (75 percent). We will use the tray to protect XPS 13 2-in-1 laptop shipments. This pilot project will use 16,000 pounds of plastics collected from waterways, beaches, rivers and coastal areas. Collecting from such areas is key to preventing pollution, as approximately 80 percent of ocean plastics start their journey on land before being swept to sea by other waterways and wind.

Using ocean plastics is one example of Dell's ongoing transition to circular economy solutions, where “waste” materials are used as inputs and kept in the economy rather than buried or destroyed. We are committed to scaling our use of recycled ocean plastics and are actively looking at opportunities to incorporate more of this material into our products and other packaging solutions. However, there is currently a lack of commercial-scale infrastructure for collecting and recycling plastics before they reach the oceans. To address this issue and build demand, we made a pledge to the United Nations to scale our annual use of ocean plastics by 10x by 2025, and to help build further demand by convening a work group with other manufacturers to create an open-source ocean plastics supply chain.

To help our team members understand the scope of the ocean plastics problem and the challenges we face, we held 55 cleanup events globally on beaches, shorelines, waterways and other coastal areas (where possible) for Earth Day.



Dell's Social Good Advocate Adrian Grenier explains the challenge of ocean plastics during The Economist's World Ocean Summit.

Changing the tide of ocean plastics

With our partners, Dell is recycling ocean plastics into new packaging, keeping these materials in the economy and out of the world's oceans.



Engaging team members in sustainability

Our expanded employee base brings more opportunities for team members to work together on protecting our planet.

Dell and EMC have long encouraged their team members to actively embrace sustainability, at both a personal and professional level. When Dell combined with EMC, we gave team members a welcome gift that honored their passion for our planet — a tree planted in their honor.

Using an interactive tool, team members selected one of five locations worldwide where they wanted Dell Inc.* to plant their tree. Team members planted more than 44,000 trees to help sequester carbon and restore natural habitats for animals in Texas (ocelots), Maryland (bald eagles), the Amazonian highlands (sloths), Congo River basin (forest elephants), and Borneo and Sumatra (Malaysian tigers). These trees count toward [Dell's goal](#) to plant 1 million trees by 2020, which is one of our commitments to the White House's [American Business Act on Climate Pledge](#).

Dell reached the 1 millionth tree planted shortly after Jan. 1, 2017. For perspective, that's 40 times more trees than in New York City's Central Park. Over time, the planted trees will trap 450,000 tons of carbon dioxide equivalent (CO₂e) — the equivalent of the electricity used by more than 60,000 homes in a year.

The tree-planting campaign set the stage for our companies to begin blending the best of our respective employee engagement programs. Our Planet employee resource group now has 8,250 members in 58 locations (up from 7,000 in 48 locations in FY16), and the group plans to add new chapters by incorporating heritage EMC locations. While EMC did not have a sustainability-related employee resource group, their network of sustainability ambassadors and sustainability professionals will form the basis for quick adoption.



GROW BIG. WIN BIG.

THE MILLION TREE CHALLENGE

The Million Tree Challenge brought together employees of all the Dell Technologies companies, while helping meet our goal of planting 1 million trees by 2020.

One of the hallmarks of both heritage companies' sustainability efforts was a focus on local action. FY17 was no exception, with examples of significant local efforts, including:

- Planet chapters across the globe celebrated Earth Month (April) with dozens of events focused on tree planting, recycling and energy efficiency. For example, Planet Singapore's celebration included a drive for collecting plastic beverage can rings that will be recycled into prosthetic limbs.
- EMC's sustainability ambassadors in the greater Boston area joined 3,000 volunteers from 132 other organizations as part of the 17th Annual Earth Day Charles River Cleanup. The event collected 25 tons of trash in about three hours.

- The Planet chapter in Morocco joined a national tree planting effort in the days leading up to [COP 22](#) in Marrakech, which was the first Conference of the Parties to the United Nations Framework Convention on Climate Change since the signing of the Paris Agreement. The Morocco team planted nearly 700 trees in the Settat forest.

* Dell Inc. comprises our employment and corporate brand, Dell client solutions and Dell EMC infrastructure solutions. Dell EMC is the new brand for infrastructure solutions from Dell and heritage EMC.

Reducing our environmental impact in Europe

We continue to pursue leading certifications while finding more ways to be environmentally responsible at our manufacturing facilities.

We are dedicated to continuous improvement in manufacturing — looking for every opportunity, big or small, to create quality products more quickly and cost-effectively while leaving the smallest footprint possible. Our global manufacturing facilities are working aggressively to reduce their environmental impacts, especially in the areas of energy conservation, renewable energy use and waste reduction.

All of the Dell and Dell EMC global manufacturing facilities successfully upgraded to the more rigorous [ISO 14001:2015](#) environmental management system and [ISO 9001:2015](#) quality management system certifications during FY17. Each Dell and Dell EMC factory is also certified to the [OHSAS 18001:2007](#) occupational health and safety management system standard, and is audited to the [Electronic Industry Citizenship Coalition](#) (EICC) requirements.

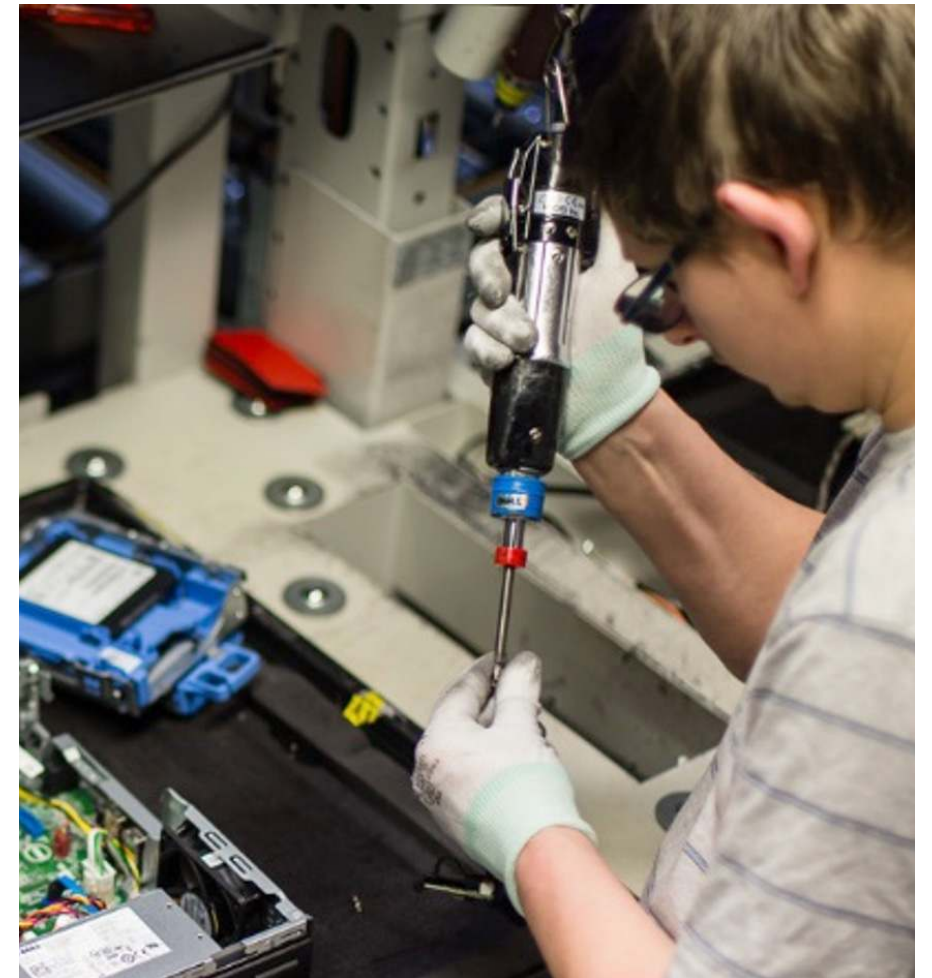
Dell and Dell EMC manufacturing operations in our Europe, Middle East and Africa (EMEA) region are also certified to [ISO 50001:2011](#). This standard applies to organizations in all sectors that aim to use energy more efficiently through a formal energy management system (EnMS). In Poland, Dell Lodz earned its ISO 50001 certification in November 2016 after a multiyear EnMS implementation. The launch of the EnMS involved extensive analysis of energy use, as well as training of key staff throughout the operation. One of the first projects undertaken under the EnMS focused on streamlining the facility's uninterruptible power supplies, which reduced the energy used in these systems by 18 percent. Other projects that have been completed since the start of the program include compressor heat recovery, installation of variable frequency motor drives, and lighting system upgrades.

The projects will drive an estimated 10 percent savings in the facility's electricity consumption, which will pay for the cost of the upgrades in less than three years.

Our facility in Ovens, County Cork, Ireland — which houses the Dell EMC manufacturing operations — has a long history of energy efficiency. Since first introducing its EnMS in 2007, it has reduced electricity use by 40 percent and natural gas use by 36 percent by implementing projects such as free and fresh air cooling, LED lighting, and boiler controls and upgrades. As a result of these measures, carbon emissions have been reduced to below the level required for participation in the [EU Emissions Trading System](#). The Sustainable Energy Authority of Ireland recognized our collective achievements by awarding Dell EMC Ireland its [2016 Sustainable Energy Award — Large Business](#). The Ovens facility has been certified to ISO 50001:2011 since 2012 and to a [predecessor energy management standard](#) since 2008.

Dell's manufacturing operations in Ireland and Lodz also purchase 100 percent of their electricity from renewable sources.

Our manufacturing locations in EMEA and across the globe engage their employees in a number of environmental, health and safety activities, both on site and in their communities. These include maintaining high waste diversion and recycling rates, hosting environmental fairs, health and wellness education, tree planting, and park cleanup events.



Working toward a circular economy

We surpassed our 2020 goal for use of recycled-content materials in products, continued to grow our closed-loop plastics supply chain, and worked with industry to scale circular economy models.

The traditional, linear economic model — in which goods are made from raw materials, used and then discarded at end of life — is not the logic of the 21st century. As populations and resource pressures grow, forward-looking organizations are recognizing the need for a shift to a circular economy in which nothing is thrown “away” because waste is designed out and materials get reused.

Dell is working toward a circular economy by analyzing the whole system in which our products are created and used, looking for ways to eliminate waste. We choose sustainable materials for products and packaging. We design our products to be easy to reuse, repair and recycle, and provide programs that make it convenient for customers to do so. Our work with closed-loop plastics is an example of these areas coming together.

In FY15, Dell created the industry’s first third-party certified, closed-loop plastics supply chain, which incorporates plastics from electronics recovered through our takeback services into the plastics used to make new Dell products. Those plastics first came in through the Dell Reconnect partnership with Goodwill®, and in FY17 we expanded this supply chain to include plastics from other return streams such as those collected from our Asset Resale and Recycling Services business customers in the U.S. Dell used 5.4 million pounds of closed-loop plastics during FY17, up from 3.4 million pounds in FY16. There are now 91 Dell products that have shipped worldwide with closed-loop recycled plastics.

In addition to closed-loop plastics, we continue to use other recycled-content materials in our products, including recycled carbon fiber and post-consumer recycled plastics from open-loop sources like water

cooler bottles and CD cases. We have used 52.5 million pounds of recycled-content plastic and other sustainable materials in our products since 2012, surpassing our 2020 goal three years ahead of schedule. By weight, 35 percent of the plastics shipped in Dell end-user computing products globally are now post-consumer recycled plastics (based on 2016 volumes).

In FY17, we continued to innovate new ways to extend the life of materials in the economy. We began piloting a closed-loop effort for Dell EMC products, wherein the bezels from old products that were recycled and returned are ground down and remolded into new bezels. We continued our pioneering packaging design work using rapidly renewable and recycled materials. This included our new packaging made with recycled ocean plastics for the Dell XPS™ 13 2-in-1. By the end of FY17, 94 percent of Dell packaging materials by weight were sustainably sourced.

Beyond our own efforts, Dell is keen to encourage other organizations to shift to circular economic approaches. As a member of the Ellen MacArthur Foundation’s Circular Economy 100 (CE100), Dell shares learnings from our initiatives with like-minded business leaders. We have also challenged other corporations to work with us on our ocean plastics efforts. Recognizing that entrepreneurship drives innovation, we sponsored the Dell Circular Economy People’s Choice Award (which recognized early-stage solutions) at the Circulares 2017 during the World Economic Forum Annual Meeting in Davos, Switzerland. And we continued to work with governments, standards organizations and other policy-making bodies around the world to identify ethical, practical solutions for facilitating the mechanics of the circular economy.

How Dell does closed-loop recycling



Empowering customers to give back through electronics takeback

Dell's Asset Resale and Recycling Services expands its custom IT donation service to give business customers around the world a simple way to meet their sustainability and corporate responsibility goals.



More than 130 ABN AMRO employees have volunteered to teach students computer coding and literacy on the company's donated, refurbished computers.

When Dutch bank ABN AMRO upgrades its technology, its used computers retire from financial analysis and begin a second life in underprivileged Amsterdam schools. The donated, refurbished ABN AMRO systems enable the schools to offer technology programs they could not otherwise afford. In FY17, more than 10,000 students gained valuable coding and problem-solving skills. The donation program supports ABN AMRO's corporate responsibility goal of helping youth discover and develop their interests and talents. It is all facilitated by Dell's Asset Resale and Recycling Services' (ARR) custom donation service, which is now offered globally.

Dell's ARR has been providing enterprise customer ABN AMRO with responsible, secure commercial recycling solutions throughout the Netherlands since 2010. In FY17, the company wanted to expand its solutions to include IT donation — a service Dell began piloting in Europe in FY15 and now offers to all business customers worldwide. In FY17, we helped ABN AMRO donate more than 1,200 systems to over 80 primary schools throughout Amsterdam to foster computer literacy and coding curriculum in their public education community.

As with all ARR customers, the process begins with Dell collecting and tagging ABN AMRO's used equipment and then securely overwriting all data. We then refurbish select computers for donation to the City of Amsterdam school district, loading the systems with all necessary educational software. The remaining systems not donated are resold by Dell, and the proceeds fund the donation program (so it's a self-funding program with no additional cost to ABN AMRO). Dell's ARR handles all logistics of donating and delivering the computers to the schools.

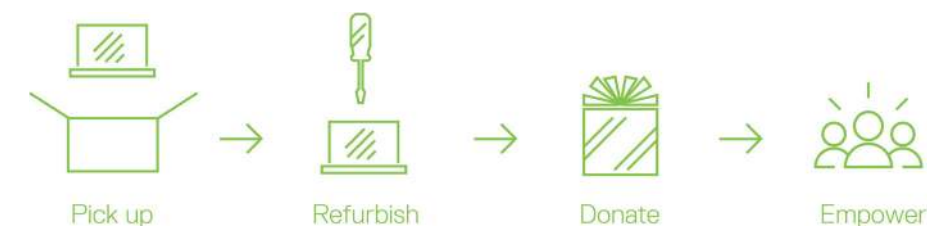
When the donated systems reach their end of life at schools, we collect the used IT products and responsibly recycle them. Dell provides ABN AMRO with fully itemized reporting of each system's journey from collection to recycling. This reporting, which we compile for all ARR customers, provides critical metrics for sustainability-minded companies like ABN AMRO.

"To make sure there are enough resources to serve the growing middle class, we have to move to a circular economy," said Richard Kooloos, ABN AMRO's director of sustainable banking. "And the best way to experience how the circular economy can work is to partner with and learn from companies like Dell who are actually doing it."

With Dell handling all operational aspects of the donation program, ABN AMRO is free to focus on volunteerism. Following the company's "Partner of the Future" mission — to discover and develop talent in young children through education in sports, arts and entrepreneurship — its employees regularly lend their technology expertise to help students with their programming lessons. Last year, the ABN AMRO Foundation partnered with the City of Amsterdam on the Coding for Amsterdam project, which set a world record for the most students (11,386) coding on a single day.

Said Kooloos, "This program helps us achieve more social impact from each dollar we invest. And by giving computers a second life, we can help reduce the demand for raw materials."

Dell's Asset Resale and Recycling Services' custom donation service





Communities

As a global technology provider and corporate citizen, we see firsthand how a lack of access to quality education and technology can prevent people from reaching their full potential. We apply our technology, expertise, funding and volunteerism toward helping communities overcome challenges and thrive.

Highlights

- Innovating new technologies for Brazilian students' solar-powered boats
- Promoting new generations of readers in Argentina
- Shrinking the rural-urban educational divide in China
- Empowering Israeli youth to build brighter futures
- Advancing the diagnosis and treatment of pediatric cancer

“How we use our funding, our technology, and our talented people can truly be a transformative force of good in our world.”

– Karen Quintos
Chief Customer Officer
Dell

Innovating new technologies for Brazilian students' solar-powered boats

Our team members use their free time — and technology expertise — to develop a Twitter-based telemetry system for a Rio de Janeiro racing team.

Rio de Janeiro has some of the world's most famous and beautiful beaches. But when the Equipe Solar crew members launch their solar-powered boats off the coast, their minds often turn to another iconic waterway — the canals of Amsterdam. This team of students from Universidade Federal do Rio de Janeiro (UFRJ) builds boats and races them in the Dutch Solar Challenge (DSC), the world cup for solar-powered boats held annually in The Netherlands' canals and rivers. Despite having one of the lowest budgets and highest travel costs of the more than 40 international teams competing in the DSC (most are from Europe), Equipe Solar has frequently finished the race in the top 10 to 15 percent. They are also the two-time champions of the Desafio Solar Brazil, a Brazilian cup that is similar to the DSC.

The Dell EMC Brazil Research and Development Center (BRDC), which is located on the UFRJ campus, started working with Equipe Solar in 2015. The BRDC team first provided grants to help fund the cost of shipping Equipe Solar's boats to The Netherlands and then began offering technical expertise. The BRDC team was inspired to help after learning of Equipe Solar's commitment to sustainability and their ability to conquer obstacles. After their advising professor died and they had to rebuild their team, they finished seventh in the DSC with just a few months of preparation.

Said Diego Salomone, senior data scientist at the BRDC, "I found their achievements amazing, even more so when I discovered what they had to overcome. I simply fell in love with the team and decided I would do what I could to help them."

With the BRDC on board, the student team was set up for even greater success. Diego and a fellow BRDC data scientist helped Equipe Solar prepare for the 2016 DSC, volunteering their free time to work with them on building a new, Twitter-based telemetry system for guiding their boat. Previously, the boat used a cell phone-based system, which required the boat's captain to read the boat's display information aloud to the professor, who was riding in a pace car along the shore. The professor would then input the data in a spreadsheet. After running calculations, the professor would give the captain instructions for how much to increase the boat's thrust or acceleration based on current conditions. This would go on for two to four hours a day, over four to five days of competition.

The new system the BRDC team developed automates much of this process using data visualization, geographical information systems (GIS), web applications and cryptography. The boat's sensors automatically gauge conditions (e.g., battery current and output voltage, incident sunlight) and generate a message on the boat captain's phone, which is then encrypted and sent to the professor's Twitter account. Calculations are then done automatically and displayed on a web application that reads the Twitter feed and presents a website shared by the professor and boat captain. While the professor still relays his recommendations to the captain over the phone for safety, automating the rest of the process enables him to focus on team coaching rather than data entry and export. It also improves response time, as a process that used to take minutes now runs automatically every 30 seconds.

"It was really fun to interact with the team and develop and deploy this system," said Diego. This was a busy year with Dell and EMC combining, but the students' perseverance through hard times inspired me to go beyond our partnership. I wanted to invest my free time helping them solve problems and achieve all the success they deserve."



The team of students from the Universidade Federal do Rio de Janeiro rally around their solar-powered boat.

Promoting new generations of readers in Argentina

Our team helps underserved kindergartners in Buenos Aires discover the pleasure of reading.

When children have early, repeated exposure to reading, it helps them build the valuable language and logic skills they'll need to learn subjects like history, math and science. Books also open the door to exciting new perspectives and possibilities, helping children learn to dream.

Unfortunately, in Buenos Aires, 43 percent of children under the age of 4 do not have books at home, which means they start school at a disadvantage that can be difficult to overcome. That's why Dell Inc.* is helping our Youth Learning partner [Fundación Leer](#) work toward their vision of an Argentina in which every child has access to books, is able to read and values reading.

Pride of ownership helps children foster an emotional bond with books.

In FY16 and FY17, we helped Fundación Leer bring their comprehensive reading education program, the Open Book Project, to two kindergartens near Dell's Buenos Aires office. The kindergartens serve more than 300 students ages 2-5, with about 20 children in each class. Our team members volunteered to build a new reading corner at each school, creating an inviting place for children to curl up with a book at any time. Team members also volunteer regularly to read to students.

We provided the kindergartens with 1,200 new books — some to stock the reading corner and others for children to keep. For many children, this gift was their very first book. Pride of ownership helps children foster an emotional bond with books.

We funded training for 20 teachers, which enabled them to learn strategies for motivating children to improve their reading skills and discover the pleasure of reading. We also supplied them with motivational tools such as reading calendars and diplomas.

Fundación Leer's [research](#) shows that 89 percent of children who participated in the Open Book Project program positively modified their behavior toward reading. They requested more books, showed more interest in reading and went to the school library more often.



* EMC initiated this project and it continued, post-integration, under the Dell Inc. brand.

Shrinking the rural-urban educational divide in China

Dell Inc. and Stanford's Rural Education Action Program (REAP) significantly boosts rural students' test scores by providing online learning opportunities.

In China, nearly three-quarters of 10- to 15-year-olds live in rural areas or suburban migrant communities. Unfortunately, these young people face many obstacles to academic achievement their urban peers do not encounter. When rural and migrant students fall behind in a subject, they cannot get extra help from their teachers, who are not permitted to tutor after school. These students cannot afford to hire private tutors or attend the “cram schools” urban students often rely on. And they cannot get help from their parents, as many rural parents are poorly educated and often work and live away from the family home.

To bridge the rural-urban educational divide, in 2010 Dell partnered with Stanford's REAP initiative to bring computer-assisted learning (CAL) to students in rural schools across China. The REAP-Dell CAL program uses fun, game-based software — run on Dell computers — to teach math, Chinese and English to students in grades 3-6. These are the subjects that rural students struggle with the most, and they are essential to the jobs that can eventually lift students out of poverty.

In 2015, we worked with Ankang University to introduce an online version of REAP-Dell CAL at 59 schools serving 3,200 students in Ankang, Shaanxi. Online CAL eliminates the need to travel to remote areas to install and maintain software, so we can eventually reach more schools. The online CAL program enables students to interact and compete with friends, which makes learning even more engaging and effective. In controlled studies conducted in 2016, it was found the online CAL program had twice as much impact on students' test scores as the installed software (offline) version of CAL.

In 2017, we plan to scale the online CAL program to all schools currently using our offline CAL program, reaching an estimated 9,000 students total. Our goal is to reach 1 million students with online CAL by 2020.



Students using the online CAL program.

The online CAL program enables students to interact and compete with friends to make learning more engaging and effective.

Empowering Israeli youth to build brighter futures

Our team members provide mentoring, tutoring and friendship to disenfranchised Israeli youth.

For the past five years, many team members at the Dell EMC Israel Center of Excellence have had a can't-miss event on their weekly calendar: one-on-one tutoring with local 14- to 18-year-old high school students.

The tutoring is part of Dell Inc.'s* Youth Learning partnership with the nonprofit youth villages Hadassah Neurim and Haogen Hakehilaty. More than 150 employees support the villages' community programs by providing technology education to young people who, for various reasons, are unable to live at home with their families. The programs include tutoring, mentoring, computer classes, field trips and even surfing — all fresh approaches to make learning fun.



Students learning to surf with Dell team members.

Surfing for Life is one program that definitely thinks outside the box. Volunteers teach students to surf the web — finding credible research sources for their studies — and to surf the waves of Israel's coast.

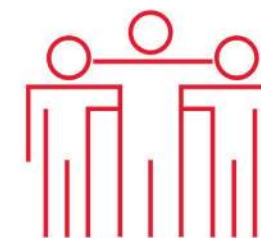
Said one student, "For years I wanted to surf but was afraid of waves. With the friends from Dell, I've enjoyed every moment and learned a lot. They also teach us about the high-tech world and help us in school. It feels like they are part of the village."

To help students gain the project management skills they'll need in the workforce, Dell volunteers guide them through the planning, budgeting and implementation of real-life projects in their community. To expose students to high-tech career paths, we regularly invite them to meet with team members at our offices and those of other leading technology companies. We also host specialized sessions for the girls, pairing them with our female team members for mentoring and learning.

"These sessions are a learning experience for everyone, both the youth and the volunteers. The mix of ideas and skills means everyone learns something new," said Debbie Pulver, senior technical content developer at the Dell EMC Israel Center of Excellence.

* EMC initiated this project and it continued, post-integration, under the Dell Inc. brand.

Surfing for Life Program



Mentoring



Tutoring



Computer classes



Field trips

Dell Inc. is powering the “precision” of precision medicine, and FY17 brought incredible breakthroughs in the speed and effectiveness of treatment for rare pediatric cancers.

Precision medicine — medicine tailored to an individual’s genetic profile — has enormous potential to increase the effectiveness of preventing, diagnosing and treating diseases. It also involves enormous amounts of data. Precision medicine starts with sequencing a patient’s genome, examining this “human body instruction manual” for clues about disease characteristics and treatment options. For a typical cancer patient, genomic sequencing requires analyzing and understanding more than 200 billion data points. When patients have a limited life expectancy, speed and accuracy are of the utmost importance.

Since 2011, Dell has helped our partners at the Translational Genomics Research Institute (TGen) use precision medicine to fight children’s cancer — including many types that are so rare they only affect a handful of patients worldwide. More recently, Dell has also helped TGen address many common cancers in adult patients. We provide funding, technology and expertise that enable researchers and doctors to accelerate and improve treatment plans. The Dell Genomic Data Analysis Platform combines high-performance computing (HPC) and a cloud-based portal to help childhood cancer researchers rapidly analyze and understand patients’ genomic data, develop individualized treatments and share their results with colleagues around the globe.

In FY17, we continued to increase the HPC solution’s computational volume and speed so doctors can access genomic data faster and see patients sooner — across an ever-greater number of patients and disease indications. Over the past six years, we have increased computational capacity over three times, and increased storage speeds and capacity to over four times that of the original systems — thereby

reducing the time it takes to sequence a genome from multiple weeks to just six hours. Last year the HPC logged over 1 million computational hours per month, compared with 2 million in our entire first year of operation.

“Dell’s solution has been like a time machine that buys us more time for these patients. A lot of them have limited days, so that is a huge value. TGen (and especially our patients) are really blessed to have this partnership,” said Dr. Jeffrey M. Trent, TGen’s president and research director.

Speed is only one part of the precision medicine equation. Accuracy is the other. TGen’s use of the Dell platform has generated more than 4 petabytes of patient genomic data. By incorporating Dell EMC Isilon technology into the solution in FY17, we’ve made it even easier for doctors to access the exact data they need to make decisions, at the right place and at the right time. And the system gets even smarter as doctors add their treatment results into the cloud to inform future cases.

“Dell has helped us democratize precision medicine,” said Dr. Trent. “Integrating and sharing all this knowledge of patients and their outcomes across a myriad of clinical institutions allows us to create an iterative learning loop that is really starting to make a major difference.”

We’ve started seeing this difference with the FY17 results from a trial developed by TGen and the Neuroblastoma and Medulloblastoma Translational Research Consortium (NMTRC). In FY16, the organizations launched the world’s first Food and Drug Administration (FDA)-supervised precision medicine trial that applies upfront molecular-guided therapy in combination with standard chemotherapy at the point of pediatric cancer’s diagnosis.



Breast cancer patient Jennifer Dunn, the daughter of TGen President Dr. Jeffrey Trent, is surrounded by her husband, Alex, and three sons.

This trial represents a new approach, as molecular-guided therapy has typically been applied only after patients’ tumors have proven resistant to more traditional therapies. As with three past TGen-NMTRC trials, Dell provided grant funding for the trial and it was run on our technology solution.

Based on these early studies, precision medicine appears two to three times more effective than standard Phase I trials without molecular-guided therapy. In FY17, 26 percent of the precision medicine trial patients had a response from treatment, such as shrinking tumors or remission, and 56 percent experienced benefits like fewer negative side effects. Standard Phase 1 trials would typically generate a 10 percent response rate. Understanding tumor biology and then being able to rationally choose the appropriate therapies have made a difference. Although much work remains, it is remarkable that these early trials appear to be of real benefit to these children.

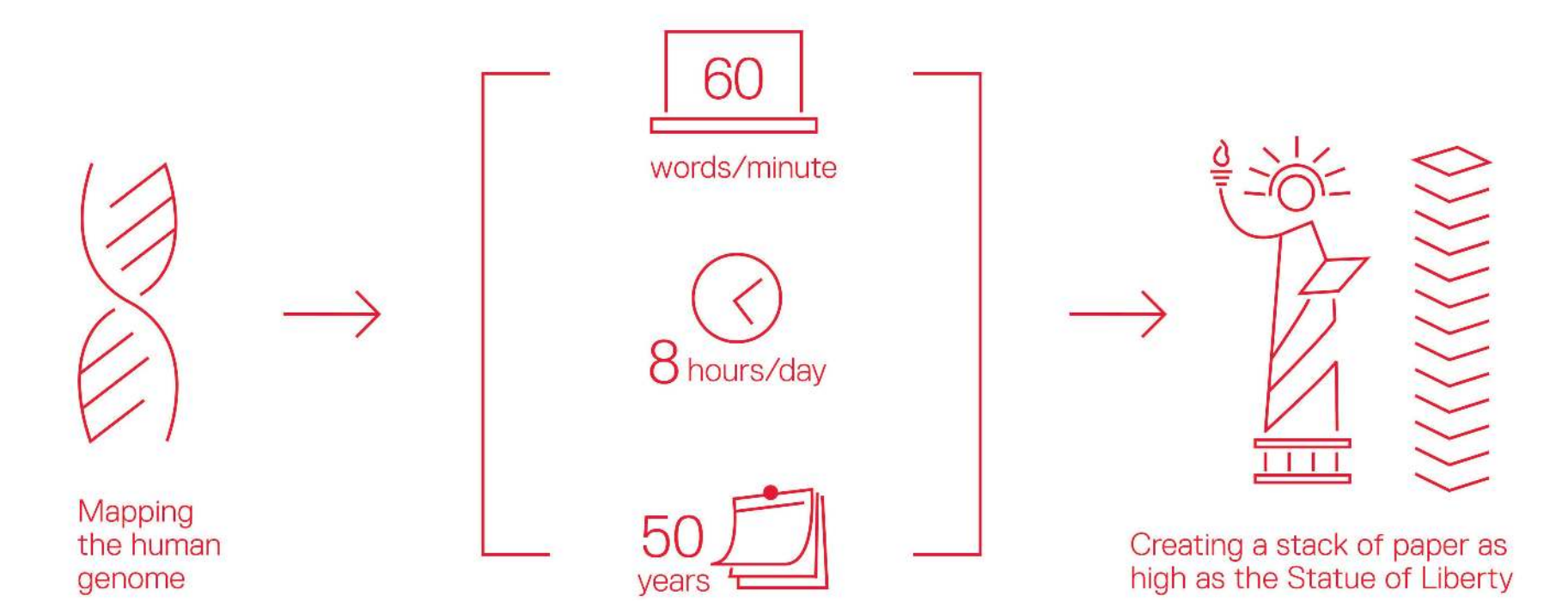
TGen is using this information to scale its work to other childhood diseases and many adult cancers. The organization recently announced a partnership with City of Hope, a world-renowned, independent research and treatment center for cancer, diabetes and other life-threatening diseases, to make precision medicine a reality for their patients.

This scalability is particularly meaningful to Dr. Trent, whose 33-year-old daughter, Jennifer Dunn, underwent personalized treatment for breast cancer last year. Her genomic analysis, run on the Dell solution, identified her cancer subtype at a level of precision that would not have been possible even two years ago. Unlike her chemotherapy, the personalized treatment Jennifer subsequently underwent to target her subtype caused no unpleasant side effects. Jennifer is now in complete remission.

“When it’s your daughter, all percentages go out the door,” said Dr. Trent. “As a dad and someone who’s been in the field as long as I have, when we’re seeing the transforming power of having these genetic, predictive suggestions for treatment come out across the common cancers and even the rarer pediatric cancers — it’s really quite fantastic.”

Mapping one human genome

According to Dr. Jeffrey Trent, TGen’s president and research director, if one were to type 60 words a minute, eight hours a day, it would take 50 years to record one human genome, creating a stack of paper as high as the Statue of Liberty — and a single misspelling could cause a disease. Dr. Trent credits TGen, Dell and EMC for forming an IT infrastructure that now allows scientists and clinicians to receive this critical information faster than ever thought possible.





People

We are committed to attracting the world's greatest talent; building diverse, inclusive teams; and delivering breakthrough performance for our team members, businesses and customers. We do this by embodying the shared values outlined in our Culture Code: customers, winning together, innovation, results and integrity.

Highlights

- Integrating two cultures into one Employer of Choice
- Cultivating an inclusive culture with Pride

“With passion, vision and inspiration — that’s how our people are enabling our own transformation, paving the way for customers to do incredible things.”

– Steve Price
Chief Human
Resources Officer
Dell



Integrating two cultures Into one Employer of Choice

After Dell and EMC joined forces, team member surveys showed incredibly high satisfaction scores — a rare feat and a testament to the power of listening and transparency.

Mergers and acquisitions are notoriously difficult and stressful times. Bringing two companies together can cause uncertainty and tension among employees. According to a [Bain & Company survey](#) of executives who have managed through mergers, culture clashes are the top reason for a deal's failure to achieve its promised value.

When Dell combined with EMC to form the world's largest privately controlled technology company, Dell Technologies, in September 2016, we sought to make the transition as smooth as possible for our combined 138,000 team members. Early accounts show we've succeeded: According to our November 2016 Tell Dell survey (our internal survey of team members), 82 percent of team members felt inspired. Although our work to integrate teams is ongoing, 81 percent of those surveyed already felt like they were part of the Dell Inc.* team.

The keys to our success have been culture integration and consistent communication — and starting the process months before our first day as a new company.

Following our commitment to having a unified company culture, in the summer of 2016 we initiated development of a Culture Code that drives how we run the business, go to market, work together effectively and provide inspirational leadership. To develop the Code, we received feedback from more than 75,000 Dell and EMC team members about the cultural attributes most important to the success of our new, combined company. A joint Dell and EMC culture task force then analyzed the results, finding our cultures were very similar. In fact, we found that both heritage companies identified the same top five cultural attributes, and in the same order.

These are the shared values of our Culture Code:

- 1 Customers**
We believe our customer relationships are the ultimate differentiator and the foundation for our success.
- 2 Winning Together**
We believe in and value our people. We perform better, are smarter and have more fun working as a team than as individuals.
- 3 Innovation**
We believe our ability to innovate and cultivate breakthrough thinking is an engine for growth, success and progress.
- 4 Results**
We believe in being accountable to an exceptional standard of excellence and performance.
- 5 Integrity**
We believe integrity must always govern our fierce desire to win.

In addition to our values, our Culture Code outlines seven leadership principles: relationships, drive, judgment, vision, optimism, humility and selflessness.

We rolled out the Culture Code and leadership principles globally by incorporating them into the ecosystem of all culture and talent practices.

To gauge how team members felt about the integration process and to address their questions, our internal communications team hosted “Question of the Week” segments on our intranet. We also developed a clear line of communication, from Chief Integration Officer Rory Read to integration team leaders to a global network of more than 2,000 integration ambassadors. The leaders shared frequent updates with the ambassadors, who then disseminated information to their teams. Communication ran both ways, as ambassadors helped leaders understand team members’ common questions and concerns. The ambassadors used our internal social media tool, Chatter, to collaborate with one another and quickly get answers to team members’ questions about topics like benefits and sales quotas.

The integration process was a culture-building exercise in itself. Said Dell Director of Global Employment Brand Jennifer Newbill, “Our work was so collaborative. By the time we reached Day One, it felt like our Dell and EMC teams had been working together for years.”

The integration teams will continue surveying team members, responding to their questions and providing a transparent, open line of communication throughout FY18.

* Dell Inc. comprises our employment and corporate brand, Dell client solutions and Dell EMC infrastructure solutions. Dell EMC is the new brand for infrastructure solutions from Dell and heritage EMC.

Cultivating an inclusive culture with Pride

Our LGBT employee resource group, Pride, is making inroads into new world regions, opening dialogue and increasing our recognition as an equal opportunity employer.

Lesbian, gay, bisexual and transgender (LGBT) people face legal and cultural challenges in many regions of the world, but at Dell we share one global culture of acceptance. One of our outlets for fostering this culture is Pride, our employee resource group (ERG) for LGBT team members and their allies.



Dell's Pride ERG members participating in Panama's Pride parade in July 2016.

Pride is one of 14 [Dell ERGs](#), which connect team members around focus areas such as gender, ethnicity, sexual orientation and background. ERGs provide participating team members with personal and professional development programs, as well as opportunities to use their unique perspective to drive business impact. Pride is one of our fastest-growing ERGs. Much of that growth came through new chapters in locations where identifying as LGBT is not widely accepted.

In FY17, we brought Pride to Dell's Asia Pacific-Japan (APJ) region with the launch of our Sydney chapter. To create the APJ region's first chapter, team members presented executives with the business case for proactively supporting LGBT issues. We brought in an external training company to help leaders understand how cultivating an inclusive culture helps Dell attract and retain the best talent, and helps us better serve our diverse customer base. As a result, the Sydney chapter launch quickly led to the creation of a remote Pride chapter to meet the immediate demand from APJ team members outside of Australia. Further expansion in the region is expected in the coming year.

"Pride makes me feel like I can be a leader within Dell," said Enterprise Technical Training Advisor Isabel Kenner, who serves as Pride's APJ regional lead. "I can offer myself as a person who can be approached with questions, and I can be involved in the development of better policies and practices."

In our Latin America (LATAM) region, the Panama Pride chapter continued to grow not only in membership but also in influence. In FY16, ERG members led Dell to become the first company with a corporate presence at Panama's annual Pride parade, with 40 team members participating. In FY17, Caterpillar and other companies joined our 200-plus marching team members. This year, Pride Panama also launched a learning program designed to deliver computer and English classes to at-risk members of the transgender community. Other Pride chapters and local companies are looking to replicate the initiative. The FY17 launch of Mexico's first Pride chapter helped LATAM grow its overall Pride membership by 51 percent over FY16.

Said Jorge Villarreal, enterprise storage engineer, "Pride is more than an ERG. Pride is a promise. A promise that I can come to work and be myself. A promise that I can still do a great job and still be valued for who I really am: a professional."

Dell's industry leadership in driving workplace equality was recognized with a [2016 Outie Award](#) at the Out & Equal Workplace Summit. At this event, Dell panelists from across the globe were able to share Pride best practices with over 4,000 employees from like-minded companies. We will use our learnings from the event to inform the activities of our more than 28 Pride chapters worldwide.

Governance

Ethical conduct is a deeply entrenched commitment at Dell, starting at the top with Michael Dell and our senior leadership and extending to all team members across the company.

In FY17, we focused on providing our newly expanded workforce with the knowledge and tools required to “win with integrity” as they manage partners, handle data, comply with laws and make the best decisions on behalf of our company and our customers.

Merging global organizations

Within days of Dell’s October 2015 announcement that it would combine with EMC, we appointed an ethics lead and a compliance lead to the integration team. These individuals mapped out processes and timelines for merging the companies’ governance, ethics, and compliance teams and programs.

Within two weeks of our official September 2016 merger, we deployed a unified investigations process. Within three months, we launched a fully merged Ethics Helpline, giving all team members one central place to speak up and report concerns. We conducted a comprehensive analysis of the heritage companies’ Codes of Conduct and found no significant, substantive misalignments. We are integrating these Codes, along with our other policies and controls, and will introduce unified versions in FY18.

“What unites us all are some very important core values. As our company evolves, we’re continuing our strong commitment to engage ethically and win with integrity.”

– Tom Sweet, Chief Financial Officer, Dell

Enhancing our ethical culture

To help all team members internalize our new Culture Code, which outlines our values and leadership principles, we launched a new, game-based educational experience called The Courage Project. The game revolves around our five new culture and values pillars: customers, winning together, innovation, results and integrity. It provides an engaging, interactive and safe environment in which team members address real-life situations and see how making values-based decisions leads to positive business outcomes. Virtually all heritage Dell team members (70,000 total) completed the training by the end of FY17. The Courage Project follows the model of our two other successful game-based trainings: one focused on anti-corruption, the other on data protection, privacy and security. Heritage EMC team members had already completed their own annual training prior to the merger and will be included in unified training processes later in FY18.

Protecting customer and Dell data

We have implemented a strong Global Privacy Program that provides the foundation for protecting personal data worldwide. This program requires every Dell Inc.* entity and team member to protect personal data and only use it for authorized purposes. Our Global Privacy Program, together with our security policies, provides confidence that personal data entrusted to Dell will always be adequately protected.

Like many other companies, Dell is in the process of preparing to meet the EU General Data Protection Regulation (GDPR) requirements when they go into effect May 25, 2018.

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Governance (continued)

Managing sound corporate governance through our Board of Directors

Our [Board of Directors](#) believes we must adhere to sound corporate governance policies and practices. Doing so ensures that Dell Technologies, a privately controlled public reporting company, is governed and managed in the best interests of our customers and shareholders. The Board is responsible for oversight and supervision of Dell's overall affairs, and maintains the following committees to help carry out its oversight responsibilities:

1. Audit Committee
2. Capital Stock Committee
3. Executive Committee

Engaging customers and leaders in compliance

We continued to engage and train Dell leaders on critical compliance topics. At Dell's Worldwide Leadership Meeting, we hosted a breakfast highlighting third-party and channel risk issues for 80 Dell vice presidents and our executive leadership team. A former deputy chief of fraud for the U.S. Department of Justice guided discussion about vetting, onboarding, managing red flags and offboarding partners. Dell's vice presidents in charge of channel and supply chain also provided insights into Dell's strategies for maintaining integrity and compliance in our third-party ecosystem.

We also continued to share our philosophy and programs with customers. The Global Ethics and Compliance Team had an impressive response at our annual Dell EMC World customer conference, where we provided customers with more transparency around our programs and the benefit of Dell's focus on integrity. We also worked with the [Ethisphere® Institute](#) to create a special

Dell edition of Ethisphere Magazine, which was available as e-literature at Dell EMC World, used as sales collateral and also posted on [Dell.com](#). The publication highlighted Dell's ethics and compliance program, as well as our channel and supply chain compliance activities, privacy and data security initiatives, and corporate responsibility programs.

Working with third parties

We continued to expand our compliance efforts within Dell's supply chain as well as among distribution partners, channel partners and other third parties. We introduced a mandatory compliance training for key channel partners to educate them about critical risk topics, including ethics, anticorruption, trade, gifts and entertainment, marketing development funds, and privacy. Internally, we launched a red flag management program that enables us to track partners' behaviors that could eventually lead to ethical violations.

Earning industry recognition

The Ethisphere Institute honored Dell as one of the [World's Most Ethical Companies](#) for the fourth year in a row. Our game-based course on Dell's Code of Conduct, The Courage Project, was also recognized as a best practice by the [Ethics & Compliance Initiative](#).



Materiality and our GRI report

Material issues are high-priority issues that have the potential to impact Dell or the parties that Dell is in a position to affect. The intersection of corporate social responsibility (CSR) and materiality is a powerfully broad mix of business introspection, industry analysis, environmental and community impact review, and stakeholder engagement beyond traditional

business analysts. Through that mix, we are able to identify and mitigate risk while leveraging opportunities that improve our business. This includes helping our customers achieve their goals while improving the environment and well-being for all participants in our value chain.

With the integration of Dell and EMC in 2016, we completed a CSR materiality review to align our priorities. This materiality analysis combines a third-party perspective from [SustainAbility](#) with our own internal review. Through the review we discovered that, as Dell and EMC are in similar industries, many of the heritage companies' priorities were closely aligned and addressed the same core needs. The review gave us the information our combined company needed to bridge the short-term gap while we integrate our organizations and prepare for a full [CSR materiality](#) assessment.

We are planning to complete this assessment using the latest in sustainability materiality best practices, engaging internal and external stakeholders to form the foundation for future efforts. The assessment will not only help us take a deeper look into our combined company, but will also provide a basis for developing 2030 goals and an integrated CSR strategy.

The principles behind our goals

The following tenets helped guide the formulation of our 2020 Plan and the goals we report against:

- Focus on our customers: We will succeed if we keep the customer foremost in our mind, linking our goals back to providing them with value.
- Innovate: Business as usual is not enough. We must reimagine what is possible.
- Scale globally: From managing a complex supply chain to understanding and appreciating the different cultures in which we live and work, we must view our activities with a global lens.
- Be transparent and accountable: Better and more strategic reporting will clarify our impacts and progress each year.
- Lead by example: We will strengthen our work as an advocate and partner for social and environmental change, pushing sustainability more into the mainstream market.
- Welcome collaboration: To achieve our aspirations at the necessary scale, we will need engaged, courageous collaborators.

Our annual GRI online index

In addition to our annual corporate social responsibility report, prepared in accordance with the Global Reporting Initiative (GRI) Standards: Comprehensive option, we provide a [GRI online index](#). The GRI established these guidelines to identify a core set of material issues for inclusion in sustainability reports. The guidelines create a framework that reflects diverse stakeholders' perspectives and is harmonized across various internationally accepted standards. Dell has long been a supporter of such an approach and is proud to support the GRI's work. We have been a GRI Organizational Stakeholder for several years.

By the numbers

Each year we report on material indicators from across our business. Some tie directly to the goals set forth in our 2020 Legacy of Good Plan, while others provide additional insight into other business indicators. We also assess our performance against the Global Reporting Initiative’s (GRI) Standards, and you may find other measurement reporting within our [GRI online index](#).

In September 2016, Dell combined with EMC. We have reflected this merger through combined FY17 Dell and EMC metrics. In some cases (such as emissions), we have also combined data for FY15 and FY16 per industry reporting standards. Additional FY15 and FY16 metrics for heritage EMC can be found in previous [EMC CSR reports](#).

Supply Chain

	Unit of Measure	FY15 (Dell only)	FY16 (Dell only)	FY17 (Dell + EMC)	Comments
Diverse supplier spending	Billions of U.S. dollars	4.07	4.97	4.95	-
Supplier SER audits	Number of total audits	187	352	456	FY15 and FY16 numbers restated to include closure audits
Public sustainability reporting	Percentage of direct materials spend represented by reporting suppliers	N/A	N/A	87	Newly published metric for FY17
Labor & Human Rights					
Young worker protections	% of facilities in compliance per EICC audit	77	91	95	See SER Progress Report for additional details
Freely chosen employment protections	% of facilities in compliance per EICC audit	64	87	87	See SER Progress Report for additional details
Proper wages and benefits	% of facilities in compliance per EICC audit	42	63	68	See SER Progress Report for additional details
Working hours and rest days	% of facilities in compliance per EICC audit	21	40	32	See SER Progress Report for additional details

Supply Chain (continued)

	Unit of Measure	FY15 (Dell only)	FY16 (Dell only)	FY17 (Dell + EMC)	Comments
Health & Safety					
Emergency preparedness	% of facilities in compliance per EICC audit	44	60	58	See SER Progress Report for additional details
Industrial hygiene	% of facilities in compliance per EICC audit	48	74	77	See SER Progress Report for additional details
Occupational injury and illness prevention	% of facilities in compliance per EICC audit	58	72	75	See SER Progress Report for additional details
Occupational safety	% of facilities in compliance per EICC audit	40	64	68	See SER Progress Report for additional details
Environment					
Air emissions	% of facilities in compliance per EICC audit	80	92	88	See SER Progress Report for additional details
Hazardous substances	% of facilities in compliance per EICC audit	43	74	71	See SER Progress Report for additional details
Pollution prevention and resource reduction	% of facilities in compliance per EICC audit	85	91	95	See SER Progress Report for additional details
Wastewater and solid waste	% of facilities in compliance per EICC audit	83	93	91	See SER Progress Report for additional details
Management System					
Legal and customer requirements	% of facilities in compliance per EICC audit	80	89	92	See SER Progress Report for additional details
Management accountability and responsibility	% of facilities in compliance per EICC audit	73	90	93	See SER Progress Report for additional details

Supply Chain (continued)

	Unit of Measure	FY15 (Dell only)	FY16 (Dell only)	FY17 (Dell + EMC)	Comments
Management System (continued)					
Risk assessment and risk management	% of facilities in compliance per EICC audit	69	88	90	See SER Progress Report for additional details
Supplier responsibility	% of facilities in compliance per EICC audit	63	77	88	See SER Progress Report for additional details
Worker feedback and participation	% of facilities in compliance per EICC audit	91	99	99	See SER Progress Report for additional details
Ethics					
Protection of identity and nonretaliation	% of facilities in compliance per EICC audit	79	95	98	See SER Progress Report for additional details
Responsible sourcing of minerals	% of facilities in compliance per EICC audit	92	98	98	See SER Progress Report for additional details

Sustainable Operations

	Unit of Measure	FY15 (Dell + EMC)	FY16 (Dell + EMC)	FY17 (Dell + EMC)	Comments
Emissions (All numbers restated for FY15 and FY16 to account for divestitures at Dell and inclusion of heritage EMC)					
Scope 1 GHG emissions ¹	Metric tons of CO2e	63,300	60,100	61,000	-
Scope 2 GHG emissions (market-based) ¹	Metric tons of CO2e	480,100	494,900	446,800	-

¹ An external assurance of our GHG emissions and the underlying operational energy consumption data is currently in progress. The [assurance statement may be accessed here](#) by July 16, 2017. This report will be updated as needed after July 16, 2017.

Sustainable Operations (continued)

	Unit of Measure	FY15 (Dell + EMC)	FY16 (Dell + EMC)	FY17 (Dell + EMC)	Comments
Emissions (continued) (All numbers restated for FY15 and FY16 to account for divestitures at Dell and inclusion of heritage EMC)					
Scope 2 GHG emissions (location-based) ¹	Metric tons of CO2e	586,600	564,100	564,600	-
Scope 3 GHG emissions (business air and rail travel) ¹	Metric tons of CO2e	167,500	165,100	161,100	FY15 and FY16 do not include Dell rail travel
Scope 3 GHG emissions (supply chain)	Metric tons of CO2e	Dell only: 1,801,646 (82.8% of production spend reporting)	Dell only: 1,866,774 (88.7% of production spend reporting)	*	FY15 and FY16 restated to incorporate improvements in calculation methods and data sets. Subsequent calculations subject to change as additional data becomes available and data quality improves. *FY17 calculation is dependent upon CY16 data, which will be available January 2018
Scope 3 GHG emissions (use of sold products)	Metric tons of CO2e	Dell: 11,590,000 EMC: 2,340,000 (1,638,000)	Dell: 11,220,000 EMC: 1,970,000 (1,380,000)	Dell: 11,240,000 EMC: 1,410,000 (990,000)	All calculations use the International Energy Agency 2016 Worldwide Emissions Factor of 0.52119 CO2e in MT/MWh. FY15 and FY16 restated to reflect updated emissions factors. EMC also provides additional indirect emissions (shown in parenthesis) associated with PUE (power usage effectiveness) impact on data center consumption.
Energy (All numbers restated for FY15 and FY16 to account for divestitures at Dell and inclusion of heritage EMC)					
Electricity consumed (total) ¹	Million kilowatt-hours (kWh)	1,247	1,220	1,202	All electricity purchased or generated onsite
Green electricity consumed ¹	Million kWh	318	214	290	Renewable-source electricity purchased from supplier or generated onsite

¹ An external assurance of our GHG emissions and the underlying operational energy consumption data is currently in progress. The [assurance statement may be accessed here](#) by July 16, 2017. This report will be updated as needed after July 16, 2017.

Sustainable Operations (continued)

	Unit of Measure	FY15 (Dell + EMC)	FY16 (Dell + EMC)	FY17 (Dell + EMC)	Comments
Energy (continued) (All numbers restated for FY15 and FY16 to account for divestitures at Dell and inclusion of heritage EMC)					
Percentage of green electricity ¹	Percentage	25.5	17.6	24.1	-
Other energy consumed ¹	Million kWh	257	243	240	Purchased heating/cooling, liquid and gas fuels used in buildings and company-owned and leased transportation
Total energy consumed ¹	Million kWh	1,504	1,463	1,442	-
Water					
Fresh water use	Cubic meters (1000s)	2,754	2,565	2,405	All facilities globally including leased spaces
Fresh water use (supply chain)	Cubic meters (1000s)	Dell only: 152,958 (46% of production spend reporting)	Dell only: 464,699 (74.7% of production spend reporting)	*	FY15 and FY16 restated to incorporate improvements in calculation methods and data sets. Subsequent calculations subject to change as additional data becomes available and data quality improves. Calculated water withdrawals rose substantially between FY15 and FY16 as a result of improved supplier reporting. * FY17 calculation is dependent upon CY16 data, which will be available January 2018
	Unit of Measure	FY15 (Dell only)	FY16 (Dell only)	FY17 (Dell + EMC)	Comments
Waste					
Nonhazardous waste generated	Metric tons	11,955	11,075	14,965	Manufacturing and fulfillment facilities
Landfill avoidance rate	Percentage	95	97	99	Manufacturing and fulfillment facilities

¹ An external assurance of our GHG emissions and the underlying operational energy consumption data is currently in progress. The [assurance statement may be accessed here](#) by July 16, 2017. This report will be updated as needed after July 16, 2017.

Sustainable Operations (continued)

	Unit of Measure	FY15 (Dell only)	FY16 (Dell only)	FY17 (Dell + EMC)	Comments
Waste (continued)					
Worldwide cumulative e-waste volume takeback and recycling	Million kilograms	642.5	722.0	802.3	FY17 calculation includes February 2016 – January 2017 (FY17) data for Dell and October 2016 – December 2016 (CY16 Q4) data for EMC

Health & Safety

	Unit of Measure	FY15 (Dell only)	FY16 (Dell only)	FY17 (Dell + EMC)	Comments
Recordable injury/illness rate	Cases per 100 full-time employees (FTE)	0.11	0.09	0.10	All figures are calendar years: CY14, CY15 and CY16. Dell rates include global numbers. EMC rates include U.S. and Ireland data only.
DART rate (Days Away, Restricted or Transferred)	Cases per 100 FTE	0.07	0.04	0.05	All figures are calendar years: CY14, CY15 and CY16. Dell rates include global numbers. EMC rates include U.S. and Ireland data only.
Work-related fatalities	Number	0	0	0	All figures are calendar years: CY14, CY15 and CY16. Dell rates include global numbers. EMC rates include U.S. and Ireland data only.

Communities

	Unit of Measure	FY15 (Dell only)	FY16 (Dell only)	FY17 (Dell + EMC)	Comments
Percentage of team members volunteering	Percentage	66	63	44	-
Total volunteer hours	Hours in thousands	713	811	821	-
Children directly impacted through strategic giving programs	Number of children in thousands	657	444	561	-

Communities (continued)

	Unit of Measure	FY15 (Dell only)	FY16 (Dell only)	FY17 (Dell + EMC)	Comments
People indirectly impacted through strategic giving programs	Number of people in millions	3.5	1	1.5	-
Total contributions	Millions of U.S. dollars	32.2	29.6	52.2	-

People

	Unit of Measure	FY15 (Dell + EMC)	FY16 (Dell + EMC)	FY17 (Dell + EMC)	Comments
(All numbers restated for FY15 and FY16 to account for divestitures at Dell and inclusion of heritage EMC)					
Women team members	Percentage	28	28	28	Applies to global operations
Women in management	Percentage	23	24	23	Applies to global operations
People of color — team members (U.S.)	Percentage	27	28	27	Applies to U.S. operations only
People of color in management (U.S.)	Percentage	18	19	20	Applies to U.S. operations only
Employee Resource Group participation	Percentage of employees	Dell only: 17	Dell only: 29	23	Global; FY15 and FY16 data not available for EMC
Employee Resource Group locations	Number of locations	Dell only: 176	Dell only: 255	341	Global; FY15 and FY16 data not available for EMC
Human Rights Campaign Corporate Equality Index score	Score range: 1-100	Dell: 100 EMC: 100	Dell: 100 EMC: 100	Dell: 100 EMC: 100	Dell: 13th year in a row with a score of 100 EMC: 6th year in a row with a score of 100

