

TheCircularEconomist



Sustainability | Future Ready Enterprise | Energy Efficiency | Legacy of Good

Dame Ellen's \$1 billion voyage around the circular economy.

One of the loudest voices shouting through the fog surrounding the circular economy right now.

Enabling Future Ready working with desktop virtualization.

Reducing energy use and costs while driving productivity.



Circular Economy spiralling up the agenda.

Pope Francis, Bank of England Governor Mark Carney, music producer Will.i.am and round-the-world yachtswoman Dame Ellen MacArthur.



Inspiring positive change through our Legacy of Good.

Dell's ambitious Legacy of Good 2020 plan might just change the world. That, certainly, is its intention.

Smart cities reach turning point on circular economy thinking.

Sustainable solutions sought as populations expand and resources diminish.

Welcome to The Circular Economist.

'Who are circular economists?' you may well ask. They are the future-ready decision makers looking to create a world of positive change in business practices to sustain the earth and everything in it, and on it, for future generations. They are people who recognise that if we fail to prepare – we prepare to fail.

In these pages you will find a snapshot of current initiatives towards a circular economy. These are initiatives that aim to replace a linear 'take, make, dispose' economic model that relies on large quantities of cheap, easily accessible materials and energy; with a model that is restorative and regenerative by design, and aims to keep products, components, and materials at the highest levels of utilisation and maximise their value at all times.

The circular economy is an essential component of Dell's company vision. Dell believes that technology plays a vital role in the transition to a circular economy, and this is embodied in our purpose; to deliver technology solutions that help people everywhere to grow and thrive.

You will see in these pages the social, economic and environmental potential of adopting future-ready technology such as desktop virtualization. You will also learn about Dame Ellen MacArthur's Circular Economy 100 programme, a worldwide alliance of companies focusing on commercial opportunities from circular economy initiatives.

We also feature Repair Cafés, an initiative to reduce marine litter, and end with a profile on the company that printed this publication – which is made from 100% recycled paper.

You will hear a common theme, with many voices asking the current generation of business leaders to think about their legacy, and to make it a legacy of good. The good news is that this can be achieved while at the same time creating a future-ready workforce: flexible, mobile and secure, with reduced power consumption and operating costs.

It's time to think big. It's time to act. It's time to be a circular economist.

David Angwin

Marketing Director,
Dell Cloud Client-Computing.

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Dell was recently incorporated into the Ellen MacArthur Foundation's Circular Economy 100 – an innovation programme established to enable organisations from across the economy to develop new opportunities and realise their circular economy ambitions faster.



Circular Economy spiralling up the agenda.

Pope Francis, Bank of England Governor Mark Carney, music producer Will.i.am and round-the-world yachtswoman Dame Ellen MacArthur. Just a small selection of big names promoting the circular economy and issues surrounding sustainability and recycling.

Television, radio and the printed press are featuring more and more stories with quotes from high-level, high-profile leaders speaking about the future of the planet.

Big business, government and corporations are concerned about the impact of energy use – and its ever-increasing cost – and these concerns are driving the circular economy up the economic and political agendas. People are beginning to sit up and take notice.

Addressing the powerful insurers of Lloyd's of London in The City, Bank of England Governor Carney said: 'Research tells us with a high degree of confidence that in the northern hemisphere, the last 30 years have been the warmest since Anglo-Saxon times. Indeed, eight of the 10 warmest years on record in the UK have occurred since 2002.

'Atmospheric concentrations of greenhouse gases are at levels not seen in 800,000 years and the rate of sea level rise is quicker now than at any time over the last two millennia,' he said. 'Evidence is mounting of man's role in climate change. Human drivers are judged extremely likely to have been the dominant cause of global warming since the mid-20th century,' he added.

'Our societies face a series of profound environmental and social challenges.

'The combination of the weight of scientific evidence and the dynamics of the financial system suggest that, in the fullness of time, climate change will threaten financial resilience and longer-term prosperity.

'While there is still time to act, the window of opportunity is finite and shrinking.

'Others will need to learn from Lloyd's example in combining data, technology and expert judgment to measure and manage risks,' he said.

The 2015 United Nations Climate Change Conference – to be held in Paris from November 30 to December 11 – will work towards plans to curb carbon emissions and encourage the funding of new technologies,' said Mr Carney.

'We will need the market to work alongside in order to maximise their impact.

'With better information as a foundation, we can build a virtuous circle of better understanding of tomorrow's risks, better pricing for investors, better decisions by policymakers, and a smoother transition to a lower-carbon economy.

The Pope is another key stakeholder for the circular economy, pushing it up the agenda. 'The earth, our home, is beginning to look more and more like an immense pile of filth' is just one of 63 tweets by Pope Francis on climate change. 'What kind of world do we want to leave to those who come after us, to children who are now growing up?' was another.

'Climate change should be the thing that we are all worried and concerned about as humans on this planet, how we affect the planet, our consumption, and how we treat the place that we live in.' Those words are from former Black Eyed Peas front man Will.i.am, addressing the Oxford Union on climate change, a subject he has also written songs about.

Will.i.am already runs a non-profit organisation aiming to improve the lives of children by 'providing education, opportunity and inspiration'.

His circular economy interests include laptops, robots and mobile phones, especially the cameras they use.

Celebrity endorsement, backed by foundations and innovations, is clearly beneficial to the campaign for a circular economy. The rising number of such influential people is helping local people and organisations make a global impact on energy consumption and climate change.



Lights out: Street lamps in Amsterdam have been upgraded to allow municipal councils to dim the lights based on pedestrian usage.

Turning point for 'smart cities' on circular economy thinking.

Decision makers in charge of our cities have got their work cut out for them. As well as dealing with the environmental, social and economic problems caused by more and more people moving into cities, they are having to find and develop new sustainable solutions to the problems caused by the influx.

'Sustainable' is the key word there. Sustainable energy, water, methods of production, storage and distribution, transport, housing and – most importantly – waste management. Using energy more efficiently; reducing costs; lowering carbon footprint; and improving working environments are all on the 'To Do' list of those in charge.

Populations are expanding, resources are diminishing and today's linear economic model is running out of time. This is dawning on producers of goods and services as well as those using those goods and services.

The circular economy message is hitting home with people who count – and who we count on – to bring about necessary changes in thinking, purchasing, using and recycling.

'Post-2008, the concept of green growth has gained international support among policy makers as a means of reconciling the ongoing need for economic growth set within environmental limits,' said Professor Martin Charter, Director of the Centre for Sustainable Design at the University for the Creative Arts.

'This thinking has now filtered down into a range of national, regional, and city government initiatives as illustrated in the recent report by the Global Green Growth Institute,' said Professor Charter.

Cities – where 70 percent of the world's population will live by 2050 (according to UN World Urbanisation Prospects) – face major climate change impacts. 'Climate change is moving back into the spotlight. In September 2014, there were major demonstrations in New York and London over the need for action over climate change in parallel to United Nations Climate Change Summit in New York,' he said.

Hollywood movie actor and environmental activist Leonardo Di Caprio was appointed the United Nations Messenger of Peace. He spoke on climate change to raise its media profile in the lead-up to the 2015 United Nations Framework Convention on Climate Change (UNFCCC) in Paris.

Is the circular economy at a turning point?

'Some cities may embrace the change and transform (for example Copenhagen); and some may react or rebel against it. If we are to achieve more resilient, resource efficient, low carbon economies and societies, we will need to break away from conventional ways of doing things to the creation of new models of – for example – consumption and production,' said Professor Charter.

For cities to get smarter, those at the top and those at the bottom need to be drivers of change. 'Smart cities are a techno-centric concept, and a key issue will be how we move beyond technological discussions to explore how civil society and citizens can engage and involve themselves in the process of making cities smarter, more sustainable, and importantly, livable,' said Professor Charter.

Only then can city dwellers benefit from those big decisions being made correctly.

Dame Ellen's \$1 billion voyage around the circular economy.

One of the loudest voices shouting through the fog surrounding the circular economy right now is round-the-world yachtswoman Dame Ellen MacArthur. The 39-year-old retired sailor, who lives in Cowes on the Isle of Wight, set up her charitable foundation in 2010. She works tirelessly to get the circular economy turning ever-more quickly.

Dame Ellen's work with founding partners B&Q, BT/Cisco, National Grid and Renault has triggered many circular economy initiatives looking at more than \$1 billion in resource savings and new revenues.

'Ellen MacArthur's involvement, particularly focused on the circular economy, has been the most explosive growth by any environmental organisation in 25 years,' said Professor Martin Charter, Director of The Centre for Sustainable Design.

'She's got into a lot of boardrooms doing talks about leadership, boardrooms where lots of CEOs are yachting people so they love her.

'She is seeing all the right people and she is so forensic. She has a team of about 30 people and knowledge partners who gain high-level accessibility, big meetings. They have acquired a credibility within the business community.

'They are hugely influential in this debate,' said Professor Charter.

The Ellen MacArthur Foundation Circular Economy 100 programme is a worldwide alliance of companies focusing on commercial opportunities from circular economy initiatives.

Dell has joined the program and will work with global business leaders to develop new approaches as to how companies manufacture goods. Dell also aims to identify new partnership opportunities and contribute best practices that help businesses and society accelerate the shift to a circular economy.

Since 2013, Dell has incorporated more than 21 million pounds of recycled plastics from sources including water bottles and CD cases as it continues to work towards a goal of using 50 million pounds of recycled materials by 2020.

Bringing about the circular economy may not be plain sailing, but Ellen MacArthur's message is racing around the world just as fast as she used to sail around it in her yacht. Only this time, she's not alone.

We are sailing: Dame Ellen MacArthur has triggered many circular economy initiatives looking at more than \$1 billion in resource savings and new revenues.



We're truly inspired by what's possible: Michael Dell.

If you want to know about an organisation, you must first learn all you can about the leader of that organisation. That person is the one driving the ethos, values, ambition and who stands for everything the organisation stands for.

Meet Michael Dell. The collective efforts of his employees earned Dell the Accenture Circular Economy Pioneer Award, the Keep America Beautiful Vision for America Award and ISRI's (Institute of Scrap Recycling Industries) Design for Recycling Award. Dell was also listed among the world's most ethical companies by the Ethisphere Institute.

'As we prepare for a future with 9.6 billion people in it, it's imperative that we take a good, hard look at the impact we individually and collectively have on the earth we share,' says Dell in his company's 2015 Corporate Social Responsibility Report.

'We're proud of the efforts we've made and truly inspired by what's possible in the years ahead.'

'Yes, 9.6 billion people sharing the planet is daunting, but technology – the very thing we live and breathe here at Dell – is a big part of the solution. Technology is underpinning revolutionary science, healthcare, education and environmental innovations and breakthroughs, and it's just the beginning. I'm excited to see what the future holds and the important role Dell and our customers will play in it.'

Dell is a company that provides technology products for the consumer, education, enterprise, and government sectors. Dell markets third-party software and hardware, and IT services. The circular economy is an essential component of the company's vision. From product design, packaging and shipping through

recycling and reuse, Dell is finding ways to minimise its impact on the environment and communities.

Dell instigated a major redesign of its engineering, industrial design, procurement, logistics and marketing, resulting in post-consumer recycled plastics being used in its products. Dell also developed the OptiPlex 3030, the first computer made using certified closed-loop recycled plastics.

Working in over 78 countries to help consumers find better ways to make their technology last longer, Dell is also using its position as one of the leading global technology vendors to move standards, infrastructure and international policies toward a circular economy.



Find freedom with the office of the future.

The office as you know it is history. Replaced by coffee bars, airport lounges and workers' homes. Staff are being set free from the chains of their office, so to speak, into a world where they can access their data safely and securely wherever they might be.

Enabling this level of flexibility while maintaining security is not without its challenges.

Dell cloud client-computing uses client virtualization technology to enable this increasingly mobile environment by offering secure, reliable access to applications and content any time, anywhere, on any device.

Learn more here: bitly.com/dell-office

Taking off: Today's working environment is increasingly mobile with people demanding secure, reliable access to apps and content.

Enabling Future Ready working with desktop virtualization.

Ensuring employees can be as productive as possible in today's highly mobile environment, with an ever increasing range of devices, many of which are employee owned, creates challenges for organisations who have previously only had to deal with fixed desktops, mobile workers with laptops, and corporate owned mobile phones.

The good news is that there is an existing, mature technology that addresses these challenges while also reducing power consumption and maximising useful service life – which are both key to achieving a circular economy. This technology is known as client or desktop virtualization.

Desktop virtualization is not new. It's been around a long time, been called many different names and is widely adopted. Dell cloud client-computing uses the latest developments in converged infrastructure, cloud computing and client devices to deliver desktop virtualization benefits to customers around the world.

Let's take a look at some of this technology's benefits in more detail:

Improved security

Data on devices at the edge of the network will always be harder to secure than data maintained on centralised servers. By moving data to the centre – in a private, hybrid or public cloud – cloud client-computing simplifies data security and management and makes compliance with regulatory requirements far easier. Using virus-immune thin clients at the desktop further strengthens security for end-user computing.

Cloud client-computing also simplifies security for user-owned devices (BYOD) by providing secure access while never putting data on the device.

Reduced energy usage

Virtualization has been used for many years in the datacentre to improve resource utilisation and achieve significant reductions in power usage.

Cloud client-computing uses the same approach for end-user computing by moving most of the compute power to the datacentre. This enables available compute resource to be shared across many users and much higher levels of resource utilisation to be achieved.

By combining this with energy efficient thin clients on the desk, which use up to 90% less power than a dedicated PC, a well-designed implementation will result in significant power savings even when increased power requirements in the datacentre are taken into account.



Extended service life

Thin clients have no moving parts. With data residing in the datacentre a spinning disk for local storage is not required, and convection cooling means no fan. As a result they are highly reliable and can achieve a service life of 5-10 years. This reduces desktop refresh cycles and the resources needed for new hardware.

Simplified management

Centralising desktop and application management combined with less complexity at the edge of the network can have a big impact on management and desktop support workloads.

Application deployment that would have previously taken days or weeks, can be achieved in minutes or hours. With cloud client-computing, organisations will often deploy an application upgrade out-of-hours so that when users login the following day everybody has the new application available with no loss of productive working time.

Centralised management and less complex devices on the desk means that desk-side support visits can often be eliminated; reducing costs and getting the user productive again more quickly.

Flexible and mobile

People work better where they're most effective. That could be at home, remotely, at a customer's address, beside a patient or out in the field.

Cloud client-computing environments enable this to happen fast and effectively, boosting workforce satisfaction, reducing unnecessary travel and its environmental impact, and delivering a more sustainable customer service model.

Future Ready

The lower cost per computing 'seat' versus traditional desktop computing models means that more 'seats' can be deployed for the same budget, more quickly and more affordably than before.

That's more computing power in the hands of a growing workforce for less investment, making them Future Ready for the challenges and opportunities that lay ahead.

For more information on Dell cloud-client computing visit Dell.co.uk/wyse or @WyseEMEA

Dell's Legacy of Good inspires positive change.

Dell's ambitious plan might just change the world. That, certainly, is its intention.

'Dell has made great progress across its global business ecosystem in its efforts to use the technology we produce for good,' said Trisa Thompson, vice president of corporate responsibility at Dell.

'We're committed to this ongoing work and share our results to both create and inspire positive change in business practices', she said.

It represents the culmination of nearly 18 months of self-reflection, customer dialogue, industry and stakeholder engagement, and a deep examination of Dell's entire value chain.

Within it, three areas – environment, communities and people – form a high-level organising principle for all Dell's corporate responsibility work. Adding value in these areas flows directly from Dell's stated ambition to enable people everywhere to grow and thrive and reach their full potential.

Now the world's largest technology recycler with take-back programmes in 78 countries, Dell has recovered 1.42 billion pounds of used electronics; 172.6 million pounds in 2015. The company is nearly three-quarters of the way to its ambitious 2 billion pound 2020 goal.

Dell expanded funding for the KIDS Cloud Initiative, which provides doctors and researchers a secure, cloud-based virtual collaborative portal to analyse and discuss data such as tumour characterisations and seamlessly map those to drug databases

in order to develop and agree on personalised treatment plans for individual patients in real time.

New solar-powered learning labs in Africa provide technology access to poor communities in an innovative way that can be applied globally.

Since 2009, Dell has avoided more than 31 million pounds of packaging and saved more than \$53 million by reducing materials.

Dell was the first technology company to market with packaging created from all of the following: captured greenhouse gases, wheat straw, mushroom and bamboo. The company goal is to achieve waste-free packaging by 2020.

'We are laying out a new vision that extends well beyond what Dell can do alone,' said Chairman and CEO Michael Dell. 'It's about capturing the innovative ways our customers are using Dell technology to do good in the world.'

'That could mean dramatically reducing carbon emissions with our cloud solutions, or predicting and guarding against severe weather patterns with our high-performance computing capabilities, or delivering solar-powered classrooms to remote regions of the world with our energy-efficient virtual desktops,' he said.

More information: See Dell's Legacy of Good Plan visit Dell.com/2020
Or join the conversation [@Dell4Good](https://www.facebook.com/Dell4Good) [Facebook.com/dell](https://www.facebook.com/dell)



Dell's Learning Labs replace scarce electricity with more readily available solar power, then add energy-efficient Dell Wyse technology.

Solar-powered classrooms give students chance to shine.

Education is a human right and technology can have a dramatic impact on a child's engagement, so Dell strive to find new ways of expanding access to technology-enabled learning environments, especially in remote regions with extremely limited facilities and connectivity.

Dell's Learning Labs take scarce electricity out of the equation and replace it with more readily available solar power, then add energy-efficient Dell Wyse technology.

The company has solar-powered Learning Labs in South Africa and Nigeria. Three thousand underprivileged students are now learning in 10 of these Learning Labs.

The Learning Labs use Dell cloud-client computing technology to deliver learning and productivity applications to students. As more is learnt about specific requirements, Dell has changed the technology being deployed, moving from Wyse zero to thin clients, in order to further enable children in STEM (Science, Technology, Engineering and Mathematics) subjects including coding and graphics work. They've also been built with fresh air-cooled servers, more suited to hotter climates.

Today, it only takes six solar panels to power a classroom of 10 thin client stations for an entire day and well into the evening. Using solid state technology with no moving parts in the desktop clients ensures a long service life and good reliability in areas where technical help is very limited. The thin clients connect to a central PC or server which has built-in classroom management software, allowing a teacher to view each student's work and guide them individually. Internet access is enabled through a cellular, WAN or satellite connection.

Container classrooms bring technology and connectivity to hard-to-reach rural populations, opening up a world of opportunity.

Bringing technology and connectivity to these hard-to-reach rural populations opens up a world of opportunity for them, extending their horizons from their local town or village to a view of the world. Internet access allows these students to connect to students in other countries, bringing about unique areas of collaborative learning.

In Nigeria, Dell worked with Computer Aid International to deploy the solar-powered classroom and with Camara to deliver teacher-training. In South Africa, partner SHAWCO provided the training and curriculum.

Dell's goal, as part of its 2020 Legacy of Good Plan, is to help three million students directly, and support 10 million people indirectly, to grow and thrive by 2020.





It's a wrap: Dell make packaging from wheat straw, rapidly renewable bamboo, mushrooms and even methane emissions.



It's a wrap: wheat straw, mushrooms and bamboo lead way to waste-free packaging.

Packaging's primary purpose is to make sure a product gets to you safely. And in most cases, after the excitement of the unboxing, that packaging becomes waste to you: a problem you must deal with – something you have to get rid of. Of course, it doesn't just 'go away,' so what that packaging is made of makes a world of difference when it comes to the environment.

And whether you're dealing with a few boxes and cushions or a major refresh, Dell is working to make sure you get waste-free packaging that can be easily recycled.

In an example of how the circular economy can drive both economic and environmental benefits, Dell is buying wheat straw (the stalks left over after the harvest) from farmers in China, pulping the material with a highly efficient enzyme, and mixing it with recycled cardboard to make new boxes and cushion materials. These wheat straw-based materials are sustainably sourced and completely recyclable – just like regular corrugate cardboard or other molded paper products.

The environmental benefits are many. The wheat straw is otherwise often burned, creating downwind pollution in cities like Shanghai.

The enzyme Dell's supplier uses is based on the digestive processes of a cow and uses 40% less energy and 90% less water than the usual process for pulping wood fibres. The cushions replace packaging that was often made out of petroleum-based foams and, being recyclable, the wheat straw packaging materials can go straight into customers' usual recycling stream.

Wheat straw packaging is just one of the ways Dell is tapping into nature for innovative solutions. The company also creates packaging from rapidly renewable bamboo (which can grow back at up to an inch per hour), from mushrooms (grown in the shape of cushions and fed agricultural waste) and even methane emissions (creating a carbon-negative plastic used for some bags). These are all helping the company toward its goal of waste-free packaging by 2020.

Today, two out of three shipments arrive in waste-free packaging (sustainably sourced and 100% recyclable or compostable), including 92% of notebook shipments and all tablets.

Communities re-learning the three Rs at Repair Cafés.

The wheels of change come in many different sizes. Repair cafés represent the circular economy's smaller wheels but their aims are linked absolutely to those of the players in the bigger picture – the three Rs: Re-use, Repair and Recycle.

Repair Cafés give communities space to fix household items in a collaborative way, using each other's expertise. They build greater social cohesion and see new hands learning old trades.

'Share the repair' is a catchphrase used by regulars at the cafés as they fix their vacuum cleaners, hedge trimmers, lights, baby buggies and bicycles – even clothes.

Broken products, beyond repair in themselves, are 'upcycled' into something new that can fill a different role or provide a new function.

One such café in Farnham, Surrey, is run from a church. One of 18 in the UK, it is linked to the local University for the Creative Arts, whose students and lecturers are regular visitors.

Professor Martin Charter, Director of The Centre for Sustainable Design at the university says that the café's popularity is growing, attracting more than 40 customers per month. The café is tackling issues around its marketing and

insurance, and expects numbers to keep swelling. The ethos fits well with Farnham's status as a Craft Town and a Transition Town, looking to uphold values responding to climate change, economic instability and world resources.

Everybody wins at the repair café. Product owners get their repairs done – or advice on how and where to get them done. Volunteers get the satisfaction of 'intergenerational skills transmission' with the local population. And people come away realising that the circular economy philosophy is a good idea. It diverts waste from landfill and is a money spinner prolonging the life of products, preventing the need for new ones.

There are many similar initiatives surrounding the café. UCA are working with five re-use charities in Hampshire, repairing furniture and selling it on to disadvantaged groups. There are also innovation workshops generating income and increasing the upcycling system.

Taking their broken items to town for a free fix once a month will soon be as normal to Farnham people as going shopping.

And they will remember the three Rs: Re-use, Repair, Recycle.

Fishermen trying to stem the tide of marine litter polluting the globe.

The circular economy message does not just apply to land-based organisations. Our seas and their precious resources also need protecting from the linear economy model. The good news is that fishing communities are now beginning to collect marine litter and waste to turn into new products with an EC-funded project called the Circular Ocean.

The world's oceans are awash with plastics forming vast, toxic islands shaped by ocean currents. This waste kills thousands of sea creatures and fish and damages the planet's water environment and ecosystem.

Some of the toxins in these plastics never degrade completely – and even end up as part of the fish and seafood we eat.

Marine litter is also one of the clearest symbols of a resource inefficient economy. Valuable materials pollute beaches and damage the environment instead of being recycled.

In pursuit of innovative, sustainable approaches to processing, recycling and repurposing this waste, Circular Ocean will develop, share and test new solutions and opportunities among northern European and Arctic regions. This will benefit remote, coastal regions by developing green economies using waste resources, driving eco-innovation, generating efficient and environmentally responsible businesses.

The project will look for possible synergies for eliminating, collecting, reprocessing and creating new value out of discarded nets and other debris.

Marine litter causes serious economic damage too, especially for coastal communities, tourism, shipping and fishing. According to the European Union, potential clean-up costs were assessed at almost €630 million per year.

Launching later this year, the project has grabbed the interest of celebrity musician and creative innovator Will.i.am, who is making thread for shoes and clothes from reclaimed fishing nets.

The health of the world's oceans is at stake. Our next 'big catch' needs to be all the dangerous waste poisoning our oceans.



The Circular Economist's print company puts sustainable principles into practice.

Wells Printing of Bath, Somerset – the company that printed this brochure – is a fine example of circular economy principles being put into practice. Sales Director Mark Stewart joined the family business in 2001 and is still as passionate as ever about sustainability and the environment.

'Wells is my family business. In 2012 we purchased our brand-new site and invested in the very latest technology throughout all departments with quality, reduced power consumption and waste, maximising our overall efficiency,' said Mark.

'We use 100% renewable energy, are ISO 14001 accredited (since 2007), hold FSC & PEFC accreditation and we have used vegetable based inks as standard for over 12 years,' he said.

'We have an excellent understanding of recycled products as we have proactively promoted these for over 15 years.'

Wells are certified to produce 100% recycled paper and no bleaches or detergents are used. Most recycled paper has already been through an original bleaching process so no further bleaching is required. The papers are 'de-inked' to maintain their whiteness but Wells also offer a recycled paper which doesn't even undergo this process - possibly the greenest paper there is.

Wells recognise the environmental concerns over print production and take them very seriously. They use 100% renewable energy to power the printing plant and have done for the past 10 years. They use vegetable-based inks and recycle all their cartridges, paper and cardboard waste – sending nothing to landfill. They have been ISO14001 certified since 2005, ensuring that they continually reduce the environmental impact of their business on the local and wider environment.

'Wells is constantly watching the horizon for new processes, equipment and technology to help keep us on the leading edge of creating an eco-friendly working environment, decreasing our footprint and being a good partner to our community,' said Mark.

Wells' environmental policy means being a responsible corporate citizen in protecting the environment, committed to complying with accepted environmental practices, including the commitment to meet or exceed applicable legal and other requirements. They strive for continual improvement in their environmental management system to minimise the creation of waste and pollution.

'We are committed to working hand in hand with the Forestry Stewardship Council (FSC) and Sustainable Forestry Initiative (SFI) to preserve our natural forest resources.

'We manage our processes, our materials, and our people under the defined scope of commercial printing to reduce the environmental impact associated with our work,' said Mark.



Printed on 100% recycled paper using vegetable oil based inks and 100% renewable energy

For more information on Dell Cloud Client-Computing visit:
Dell.co.uk/wyse or [@WyseEMEA](https://twitter.com/WyseEMEA)

For more information on Dell's Legacy of Good Plan visit:
Dell.com/2020 or join the conversation [@Dell4Good](https://twitter.com/Dell4Good)
[Facebook.com/dell](https://www.facebook.com/dell)



The power to do more