



Smart growth in the Circular Economy

Realising the opportunities in
Fortune Favours the Brave

Actions & case studies
to help unlock new
value from better
resource management



New
product
ideas



Optimise
efficiency



Optimise
operation



Engage
customer



Minimise
maintenance



Improve
bottom line

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Foreword

Whatever sector or profession you are in, there are risks to manage and opportunities to grab in the circular economy, and the case for action gets stronger every day.

Resource risks are growing making security of supply for critical resources ever more difficult as increased demand and competition from powerful emerging economies such as China and India build. As a result, resource costs and volatility in markets are rising, as countries try to protect their interests. This situation is compounded by huge inefficiencies in how we use resources. Global waste production has doubled since 2000 and is set to double again by 2030. As a result, the EU and others are tightening the rules on waste and recycling in an effort to get businesses to better manage resources.

While these are challenging times, adversity and opportunity are closely aligned.

Technology is already changing everything in the 21st Century. Business models for new ways to access products and services are being made possible at a pace that will finish many companies and open doors for many more. Adopting circular economy principles and practices is an important strategy for getting and staying at the head of the curve. With the circular economy set to be worth €500bn by 2025 the potential is huge. How are you going to capitalise? This guide sets out to help you navigate the risks and seize the benefits of the circular economy, taking a practical approach to working with different teams within your business. Over the next few months Business in the Community will be rolling out our programme to support innovation and practical action to help bring the circular economy to life. We would be delighted if you would like to get involved.

Stephen Howard LVO
CEO, Business in the Community



Background

Why

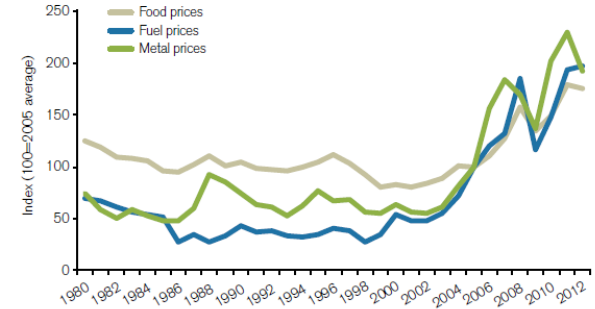
For most of the twentieth century the vast majority of global resource consumption was situated within the few relatively advanced economies of North America and Europe. However, as economies in the rest of the world have begun to catch up and demand for resource intensive products and services has at the same time grown there is increasing pressure on, and competition for, the raw materials and commodities we need to support our modern lifestyles. (Source: Lee et al (2012) p.5)¹.

According to the World Bank, global waste production has doubled since the turn of the millennium and is predicted to double again by 2030².

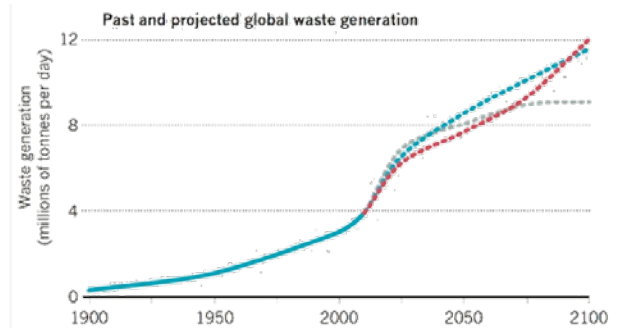
Scale of the problem

Elsewhere, newspapers warn that competition from disruptive business models is playing havoc with traditional ways of doing business and governments are introducing legislation to force businesses to better account for the resources that they are using. Clearly business as usual is neither economically nor environmentally sustainable. Leading companies are therefore looking at how they can secure long term, sustainable sources of the raw materials they need. Even more fundamentally, they are re-examining their approach to delivering products and services in a way that will reduce the impact of resource competition and scarcity on their business. This is allowing them to take a lead at tapping into €250-500 billion opportunity that's expected to be available by 2025³.

Figure 1.3: Resource prices: Indices for fuel, food and metal commodities, 1980–2012



Source: Chatham House based on IMF (2012).



A scenario that assumes current demographic and per capita waste production trends will continue (blue line) projects waste to peak sometime after 2100, as does a scenario with even greater population growth (red line). Only a scenario with a smaller, wealthier world population and more environmentally-friendly consumption behaviors (grey line) enables peak garbage to occur this century. Image via Nature/Hoornweg et. al.

¹Lee et al. (2012). Resource Futures. [Online]. December 2012. Available from <http://resourcefutures.org> [Accessed 23rd Oct 2015]

²Hoornweg, D. and Bhada-Tata, P. (2012). What a waste: A global review of solid waste management. March 2012. <http://web.worldbank.org> [Accessed 23rd Oct 2015].

³The Ellen MacArthur Foundation. (2015). Towards the Circular Economy Vol. 2: opportunities for the consumer goods sector. January 2015. Available at <http://www.ellenmacarthurfoundation.org/publications>. [Accessed 23rd Oct 2015].

Background

What

Enter the Circular Economy. The Ellen MacArthur Foundation describes this as 'an economy that's restorative and regenerative by design'. Within a circular economy practitioners work tirelessly to keep products, components and materials at their highest utility and value at all times. The ultimate aim is to eliminate the concept of waste entirely.

Clearly, businesses are at very different stages with regards to the progress that they have made in this area. For those that are at the very start of the journey the priority should be to get a comprehensive overview of their resource and waste impacts. For others, the focus will be to experiment with innovative new business models such as remanufacture, servitisation and hi-tech recycling. The best performers will continue to differentiate themselves by fully integrating the principles of the circular economy into their business models, and revolutionising the way that they interact with their customers and end consumers.

How

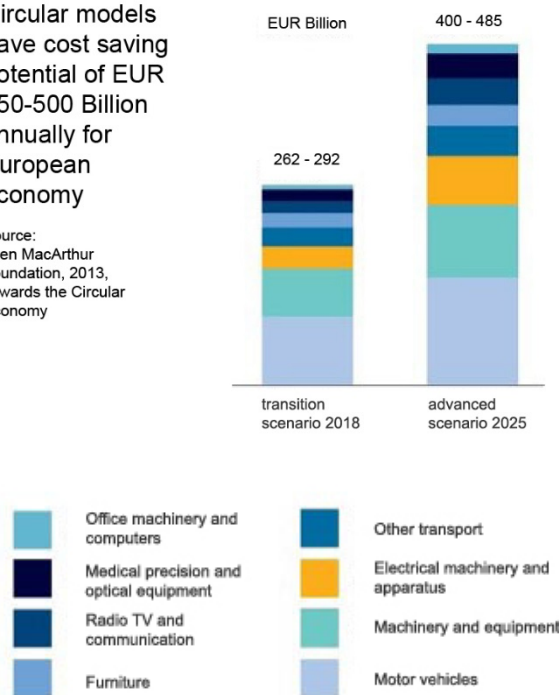
Working out how to move forward is usually the most challenging part of the process. While each business will have to find its own distinct path to becoming more 'circular', lessons can be learned by looking at what other companies are doing.

The framework set out in this guide aims to help more companies to engage in circular economy thinking, setting out the questions that businesses will need to ask themselves to make progress and providing examples of good practice to stimulate ideas. Its aim is to promote debate and dialogue within and between companies operating right across the value chain, from primary producers through to retailers and service sector organisations. Our hope is it will give you the confidence that you need to take your company on towards realising the opportunities outlined in [Fortune Favours the Brave](#)*.

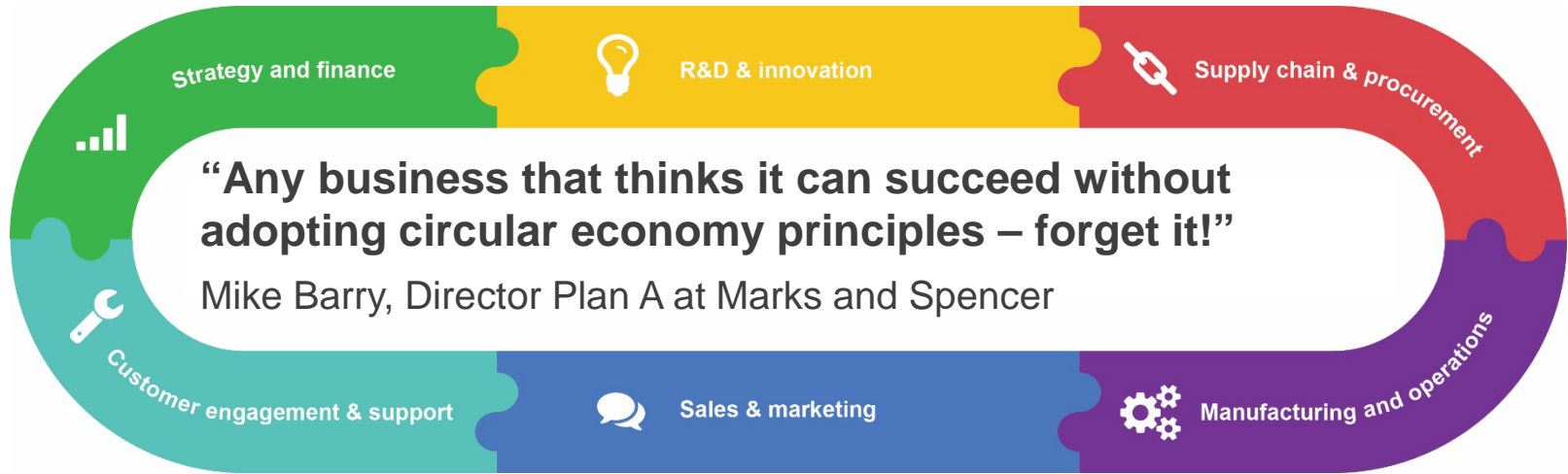
Towards economic and ecological value creation

Circular models have cost saving potential of EUR 250-500 Billion annually for European economy

Source:
Ellen MacArthur
Foundation, 2013,
Towards the Circular
Economy



* www.bitc.org.uk/our-resources/report/fortune-favours-brave



Click!

What business area would you like advice on?



Strategy & finance

Improve bottom line

3 actions

1

Evaluate products and markets and consider circular economy impacts on your business.

In developing strategy analyse options for changing your business model to exploit circular economy opportunities.

2

Recover the cost of your waste.

Monitor your financial systems closely to track the true cost of waste to your business. This includes the value of assets you have invested in, replaced – but not recovered.

3

Consider the benefits of reusing resources in your supply chain.

Would circular economy options reduce your exposure to higher prices and supply volatility? Often, retaining ownership of resources (rather than going to your supplier) protects you from materials becoming scarce and expensive.

1

Evaluate products and markets and consider circular economy impacts on your business.

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Case study Sky



Taking a lifecycle approach to products and services

In developing your strategy, look for circular economy options that will enhance profitability, while reducing your resource footprint.

The Challenge

Sky has taken a holistic approach to assessing the core products and services it provides to customers and applied circular economy principles to reduce the use of natural resources, through an innovative product life cycle assessment and changes to customer service and operations. From a Life Cycle Assessment of its products, Sky found its biggest use of natural resources is electricity consumption from customers' use of set-top boxes.

The Solution

Working across its value chain Sky set out to improve the energy efficiency of its products. It had made them smaller and lighter and built in features such as an auto-standby, which sets the box to standby mode after four hours of inactivity during the day and turns it off at night. Along with a recent extension to the length of time eco mode is on for overnight, this saves Sky's 11.5 million customers in the

UK and Ireland around £25.5 million a year in bills and cuts CO2 emissions by 122,700 tonnes per annum. Alongside this, removing the need for ancillary products has saved 800,000 kg CO2 emissions a year. Reducing the amount of cable needed for Sky's newest router means it has saved enough cable to stretch 1.5 times the length of Great Britain. It has also replaced its 96-page printed user manual with an online version, saving over 16 truckloads of paper a year. Designing the box so the software can be updated remotely has also helped make it more reliable and durable.

All Sky's products are reused or recycled in UK. The company has saved around £7 million in the last three years through repairing and refurbishing boxes, generated revenue of £1 million a year from recycling and built stronger relationships in its supply chain.

2

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Case study PwC



Old assets have value

PwC's 'Going Circular' programme has cut costs and carbon, created jobs and unleashed innovation.

The Challenge

Having achieved zero waste to landfill in 2012, PwC set a target to achieve 100% reuse and recovery, and to halve its material consumption whilst simultaneously growing the business, by 2017. It required fresh thinking in operational strategy, and empowering managers to set up new practices.

The Solution

Making collaboration for sustainability performance improvement a key part of supplier contracts set a tone for change: used cooking oil from the restaurants is now being converted into biofuel for PwC's tri-generators; archive files are being recycled into hand towels for the washrooms; all unwanted furniture is donated to charities and social enterprises; any food waste is collected and recycled together with new, compostable food packaging introduced to all restaurants in UK offices; laptops, PCs and mobile phones are 100% refurbished for resale, or recycled - as is all glass, metal and plastic. In fact, one of the few remaining items not recycled

is external, composite food packaging which has no market solutions as yet, so is incinerated with energy capture.

Moreover, PwC achieved a recycling rate of between 95-100% in the strip-out and fit-out of its two largest London offices (one a new building and one a retrofit) by commissioning pre-fabricated, cut-to-measure materials, and responsible waste management.

The Benefits

Removing desk-side printers and replacing them with multifunctional printer-copier hubs has enabled a 55% reduction in paper use since 2007, avoiding over £1m in costs. Recycling IT waste generates around £500,000 per annum and, with around 5,600 tonnes of waste diverted to more circular solutions this year, the firm also avoided around £465k in landfill taxes - amply offsetting the modest costs and resource required to set up better solutions across the board. Many of the reuse solutions, meanwhile, are providing valuable work experience and jobs for disadvantaged groups.

3

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Would circular economy options reduce your exposure to higher prices and supply volatility? Often, retaining ownership of resources (rather than going to your supplier) protects you from materials becoming scarce and expensive.

Case study

UK Container Maintenance (UKCM)



How old skips saved £200 million

Julian and Emma Elston identified that businesses within the waste industry were spending millions of pounds each year on new waste containers when old units could be recycled and refurbished to full working order.

Background

Emma and Julian were swiftly rejected by banks when they pitched the idea of setting up a business to recycle old waste containers. Undeterred, they risked everything to get UK Container Maintenance (UKCM) off the ground. Operating from a back bedroom, UKCM secured Trafford Council as its first client.

The business

UKCM restores and uses old waste containers that are between 40 and 50 years old and then sells them back to businesses. For a third of the cost of replacing an old container, UKCM restore the old unit to better than new condition.

The benefits

This cost-effective solution benefits local authorities and companies by helping to support tight budgets, CSR policies and the environment.

Having been established for over 17 years, UKCM has saved its customers over £200m with the repair and refurbishment of a massive 1.2million wheeled containers. Customers are delighted with UKCM's workmanship and the service they offer from their Cheshire-based mobile refurbishment centre. Their clients include waste recycling companies Veolia, Biffa, SITA, Viridor and Eastern Shires Purchasing Organisation (ESPO), NHS Trusts and luxury car manufacturer Bentley.



R&D & innovation

New product ideas

3 actions

1

Consider alternative ways of offering customers your product.

Could you offer a service model, where customers buy the outcome of your product rather than the product itself? Could some of the product be reused with refillable or replaceable components that contain fewer resources? This gives customers flexibility but can also be highly lucrative. Remember the days when companies bought their own photocopying machines?

2

Bring together people with ideas and an appetite to do things differently.

Train dedicated 'innovation teams', responsible for finding new ways to deliver your product or service using fewer resources.

3

Apply 'circular economy' thinking across your business.

Think of each section as part of a circle, with resources used as lightly as possible, from sourcing raw materials through to manufacturing, sales and reuse. Consider both commercial and environmental benefits.



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Case study

Philips & CasSombroek



Let there be light, right where we need it

Thomas Rau decided to look for an alternative to expensive conventional lighting. He developed Pay per lux, an innovative lighting plan that has reduced energy costs and given businesses greater control over how lighting is used.

The challenge

For businesses, a change of lighting usually means another load of costly new electrical components that eventually need to be replaced and disposed of. Thomas Rau decided to look for an alternative for his architectural design agency.

The solution

The agency didn't need every part of their office illuminated throughout the day. Philips worked with CasSombroek to create a new type of lighting plan where businesses pay only for the light employees need. This was achieved by adapting an existing LED system so that it could be adjusted to illuminate only the area where the

light was needed. A room sensor and controller reduced energy use further by dimming or brightening artificial light in response to movement or daylight. It was a staggering insight into how little lighting an office actually needs.

The benefits

The company now has much more control over its energy bills. They only pay for the light they need. Maintenance was included. Philips also have a partner who replaces, collects and recycles used components.



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Case study Asda



Bringing suppliers together to share learning and maximise opportunities

Over 90% of Asda's environmental impact lies within its supply chain. Asda has created an online tool which enables suppliers to share information about how to make their businesses more efficient and reduce their dependency on natural resources.

The solution

The Sustain and Save Exchange (SSE) is an online tool, supported by live events, which helps Asda's suppliers reduce their impact on the environment. It is a free source of information for suppliers and enables them to share best practice and identify ways of using resources more efficiently.

The SSE was piloted in January 2011. Since then, it has attracted 1,050 members – 72% of the businesses which supply Asda's fresh, chilled and frozen products. In 2014

members visited 17,000 times. Suppliers have saved over £4 million and invested £8.3 million since 2013. SSE members have shared over £81 million of savings and investments they have made, by contributing case studies to SSE.

The SSE has built trust and created shared value through knowledge. Suppliers keep the savings they unlock, while Asda funds the SSE. For every £1 invested by Asda, its suppliers make over £4 of savings. This protects the supply chain for the future.



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Case study

Jaguar Land Rover



Same product, fewer resources

Luxury automotive brand Jaguar Land Rover has applied circular economy principles across a range of products to reduce their environmental impact and protect the supply of finite resources.

The challenge

Jaguar Land Rover has embraced on an extremely ambitious challenge. To design and build a cutting edge new Land Rover using 50% recycled aluminium. A car that would offer the same level of luxury and power using fewer resources.

The Solution

Jaguar Land Rover use a '**lifecycle analysis programme**' to identify ways to using fewer resources, source more sustainable materials and reduce waste.

- Working with the REAL CAR initiative and drawing on decades of expertise within the company to identify a method of re-melting scrap aluminium. The result was a Land Rover made of 50% aluminium, producing a car that is 428kg lighter and significantly more fuel efficient. The recycled aluminium requires just 5% of the energy needed to smelt raw aluminium.
- To reduce waste and recirculate scrap materials, the company has implemented a 'closed loop recycling

policy', which returns all surplus metal to the company's supply chain.

- The roof of the new car was lowered by 26mm and hydrophobic glass fitted, making the car more aerodynamic with no impact on comfort inside the car.
- Working collaboratively with a premium leather supplier, sustainably produced leather was sourced for the interior
- Thanks to the lighter aluminium body, the engine could be downsized without any loss in performance, further reducing carbon emissions and increasing fuel efficiency
- 9.5 kg of recycled plastic was used inside and out.
- The company is now looking at sustainably sourced wood to produce a model with premium interior features. They are now working to a target of 75% recycled aluminium for future Land Rover models.



Supply chain & procurement

Optimise efficiency

3 actions

1 Undertake a broad evaluation of your whole supply chain. Small changes can lead to massive savings financially and environmentally.

Do you need everything you buy? Are there alternatives which require fewer resources, or which make reuse and recycling easier and less expensive? Look right down your supply chain. Where are your biggest losses? Is your waste someone else's asset? Could that waste be avoided through a small, cost-effective change?

2 Think of waste as an opportunity. New markets, new relationships, new life cycles.

Does the waste associated with your products have commercial value? Is waste hurting your bottom line? What is the real cost of waste right down your supply chain? Work with suppliers to identify the biggest waste reduction opportunities. Offer incentives, such as longer contracts, for suppliers who can help you find viable, cost effective solutions.

3 Investigate options within your supply chain to return packaging, damaged products and other assets through reverse logistics.

Explore opportunities to put back in to your supply chain and get more value from essential materials. Consider new markets for packaging, used products and other reusable assets.



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Case study

The Co-operative Group



Small change, big difference

The Co-operative Group worked in partnership with WRAP to achieve more than £100,000 in cost savings. Invisible on the shop floor, reducing potato screening sizes by just 1% led to higher yields, lower transport costs and reduced water and electricity usage.

Research

WRAP supported research identified that between 5% and 10% of potatoes in the company's supply were being screened out, ending their journey in low value markets, such as animal feed.

Solutions

Changing the screen size from 45mm to 43mm meant 5% more King Edwards potatoes (equivalent to 1000 tonnes) were being sold by retailers.

Impact

- More than £100,000 in cost savings
- Between 5 and 10% more potatoes reaching high value markets
- More efficient packaging, helping to reduce transport costs, packaging waste and emissions. The 45 tonnes of avoided packaging waste alone saved the business £40,000 a year
- Irrigating fields using a 'trickle tape' method reduced water usage by 30%.



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Case study

Greencore Group



Tackling the true cost of waste

Greencore Group, a leading supplier of own-brand food items to major supermarkets, worked in partnership with Sainsbury's to reduce food and packaging waste during the production and distribution of fresh sandwiches. Their success produced a replicable, scalable model for any business looking to reduce waste in their supply chain.

- Greencore worked in collaboration with a packaging system supplier and fresh meat producer. Careful planning in the early stages was a key part of the project's success.
- A project team with the required skills was created. This was divided into three sections; a steering committee, a core team responsible for mapping where improvements could be made and a support team, who would help with logistics and extending the project's reach.
- All production methods were scrutinised
- A detailed map of Sainsbury's supply chain was drawn up, quantifying how much waste was being produced and identifying opportunities for cost savings
- Interviews were conducted with staff at all levels to identify the root causes of waste.

Impact

- The 17 projects will reduce food and packaging waste by more than 1,680 tonnes a year, with a further 110 tonnes of household waste eliminated.
- Improved relationships between sections of the company's supply chain
- Greater awareness of waste among members of staff
- The scale of the project continues to grow. Greencore are rolling out a similar approach in three large sandwich factories. Sainsbury's found the approach so useful that it is applying it to other sandwich and chilled desserts suppliers.

"We are committed to unlocking opportunities to reduce waste across our supply chains. This project is a great example of partnerships and wider collaborations delivering direct improvements that can be replicated in other areas of our business."

Stuart Lendrum, Head of Sustainable & Ethical Sourcing
Sainsbury's



3

Investigate options within your supply chain to return packaging, damaged products and other assets through reverse logistics.

Explore opportunities to put back in to your supply chain and get more value from essential materials. Consider new markets for packaging, used products and other reusable assets.

Case study Recofloor



Bringing waste full circle

Realising the commercial benefits of recycling, Altro and Polyflor set up Recofloor.

The vinyl flooring sector is worth an estimated £1.8 billion, producing a volume of 273 million square metres. WRAP helped the industry identify a massive business opportunity.

When vinyl flooring is fitted, a significant volume is wasted through “off-cuts”. The industry realised they could achieve substantial cost savings if they had a cost-effective method of collecting and recycling this high quality waste product.

The solution

Working with members of the UK Resilient Flooring Association, [WRAP set up collection trials](#) with flooring contractors and construction companies to work out which types of collection worked best. Issues like collection contamination, collection volumes and best collection routes were identified and resolved.

Two major manufacturers saw the commercial benefits of recycling these high quality offcuts. Altro and Polyflor set up a collection company called [Recofloor](#), operated by Axion Recycling. Recofloor promotes and manages collections of flooring off-cuts to supply Altro and Polyflor with good-quality material to recycle. The scheme also recycles low-quality materials into other markets to avoid them being sent to landfill. It has now established a network of 64 national drop-off points and 650 collectors across the UK and Ireland.

Impact

Since Recofloor was established in 2009, it has collected over 2,500 tonnes of vinyl flooring (925,000m² - roughly the area of 130 football pitches) and reduced their customer's disposal costs by up to 75%. The project has also provided Altro and Polyflor with a high quality source of raw materials for the manufacturing of new products.



Manufacturing & operations

Optimise operation

3 actions

1

Develop a baseline of waste across your business.

How much is there? Are there crucial materials included in that waste? What is the cost of managing and disposing of waste? Measure the cost of handling different materials.

2

Explore opportunities to reduce the use of materials, components and products.

Could you reduce costs by aligning needs with use, and therefore reducing waste hot spots, recovering inputs, components and products for your own use or from customers?

3

Assess the environmental impact of inputs, components and products.

For high impact areas, trial solutions aimed at reducing their impact, including reuse, remanufacturing and recycling.



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Resource
Arla



Using raw materials sustainably makes business sense.

WRAP estimates that UK companies could save £23 billion per year by changing inefficient processes and managing water, energy and raw materials more efficiently. How much could you save?

Getting to grips with the challenge and opportunity

Working with WRAP, Arla Dairies worked collaboratively to identify where their greatest opportunities to increase efficiency exist. The team implemented a systematic approach to waste prevention through a process of diagnosis, implementation, execution and sustainment of results, using a plan-do-check-act methodology.

An intervention team was brought together to look at waste at a high level across one of Arla's production facilities. The team created a mass and energy balance that looked at all inputs and outputs from a financial perspective. Their analysis showed that the site generated – 23,000 tonnes of liquid and sludge and 700 tonnes of solid waste.

The mass and energy balance enabled Arla to create a system boundary map that then enabled the team to identify key hotspots throughout the production process by populating a 'big picture map'. This then enabled the team to prioritise five of the most significant hotspots for maximum impact.

Each key problem had a dedicated team member to assess the work area, understand the current situation, set targets and evaluate the root causes of the problem that could be addressed through an action plan and follow up plan.

The process has led to a high level of ownership within the business, with each project having a management sponsor and the whole site is now engaged in thinking differently to tackle waste.



2

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Could you reduce costs by aligning needs with use, and therefore reducing waste hot spots, recovering inputs, components and products for your own use or from customers?

Case study Bandvulc



Circular business models are highly profitable, as well as being necessary for future growth

Bandvulc is an independent re-treading and tyre management company with an annual turnover of £58 million. It developed two sustainable business models, which significantly increased turnover and reduced their impact on the environment.

Building a case

Working with WRAP, Bandvulc developed a way to incentivise customers to return both heavy goods and smaller van vehicle tyres, to generate significant financial and environmental benefits.

The solution

An incentivised return model gives customers the option of returning used tyres in exchange for cash, a voucher or a discount on a new purchase. Returned products are then refurbished and re-sold creating new revenue, while saving valuable resources. Bandvulc sells the tyres to heavy goods vehicle dealers and incentivises their return for re-treading and resale, or re-use in service contracts. Bandvulc are working towards a similar scheme for van tyres.

The benefits

- [Bandvulc's incentivised return scheme](#) has generated new revenue in excess of £10 million in the first three years.
- The model also provides significant environmental savings, conserving finite raw materials and reducing carbon missions.

"The financial model really helped us to understand the proposition and make decisions."

Ryan O'Connell, Director, Bandvulc



3

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Case study

Thames Water



Business results with global impact

Producing fertiliser from sewage is saving the planet whilst reducing bills for Thames Water customers – a classic win win.

The challenge

The UK alone uses 138,000 tonnes of phosphate fertiliser a year. Mineable reserves of phosphorus, in countries like Morocco, the US and China, are set to be completely depleted in 100 years, according to some experts, while others say peak phosphorous will occur as early as the mid-2030s, making it scarce and expensive.

The price of phosphate fertiliser has already increased by 500% since 2007.

Thames Water invested in a £2m nutrient-recovery reactor, the first of its kind in Europe. The site now produces much purer, sanitised fertiliser from wastewater coming out of Slough. This sustainable source of phosphorous, the key ingredient in fertiliser, is a welcome alternative to mining dwindling reserves of non-renewable phosphate rock.

The benefits

- With the new facility up and running, Thames Water expects to save up to £200,000 a year, which is being spent on clearing mineral deposits in local pipework.
- Operational savings are expected to have a positive impact on customers' bills
- The new reactor will also improve the quality of treated effluent leaving the sewage treatment works, reducing nutrient levels and reducing algae growth in rivers and streams, which sucks oxygen out of watercourses which is needed by plants, fish and other wildlife.

"This is a classic win win. We are producing eco-friendly steroids for plants, while also tackling the costly problem of struvite fouling up pipes at our works."

Piers Clark, Commercial Director, Thames Water



Sales & marketing

Engage customer

3 actions

1

What do your customers really want?

Identify different ways of meeting their needs through services, remanufacturing and helping them resolve issues with products at the end of their life. Explore ways for your marketing team to test your ideas.

2

Circular models mean ongoing relationships with customers.

Review post sale interaction with customers for potential services or cross selling of products or bundled packages. Assess benefits compared with the cost of new customer recruitment.

3

Consider options to align sustainability with the best in customer service.

Are there sustainable customer service models you could use for particular products or services? Could these give your customers added value? Could they add an additional USP or competitive advantage to your brand?



1

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Case study Globechain



Find a good cause for your waste

By working with its clients to find new homes for their unwanted stock, Globechain is able to provide social as well as economic benefits.

Many companies have assets - such as furniture, fittings and equipment they no longer use and want to pass on to a good cause but don't know how. Instead, they end up scrapping the items, losing the value of the items and the opportunity to use their waste to benefit a good cause and reduce their environmental impact. Major barriers include the time and resources required to find a good outlet and set up collection, as well as the space needed to store the unused items.

Globechain was founded to help companies manage and donate their used assets in a simple way. Companies can choose whether businesses, charities or individuals can access the items and the Globechain platform provides a direct connection to organisations that want the items, including a list of 10,000 sources and outlets.

Globechain's clients include the Arcadia Group, Nando's and St Barts NHS, who have all successfully redistributed unwanted equipment to charities and social enterprises for reuse or sale. Items redistributed include working IT equipment, kitchen equipment, store fittings, office furniture, medical equipment, flooring, garden equipment and sports equipment



2

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Review post sale interaction with customers for potential services or cross selling of products or bundled packages. Assess benefits compared with the cost of new customer recruitment.

Case study Veolia



Waste – a resource in the wrong place

Veolia has embraced circular thinking to create new solutions with its customers and has reaped the benefits in the process.

In 2012 it became clear that Veolia was facing a number of threats with their operating environment changing at an exponential rate. A 'business as usual' attitude simply wouldn't allow them to respond to the immediate challenges ahead. In light of these challenges Veolia transformed from a waste, water and energy company into a pioneering environmental solutions provider. It offers bespoke, closed-loop solutions to customers such as turning their food waste into fuel, garden waste into compost and waste and wastewater into energy. For example, through recycling wastewater back into a manufacturing process, Veolia reduced one customer's water footprint by 75%.

Through these innovative, closed loop solutions Veolia is helping customers to keep materials such as wastewater, plastics and waste detergent in circulation and create

renewable energy from waste, generating electricity to power 600,000 homes. As a result, they generate 21 times more energy than is consumed and save more carbon than is emitted.

Veolia have also moved up the waste hierarchy by preventing resources becoming waste in the first place; for example saving 120 million litres of oil and 585,000 tonnes of carbon emissions through plastics recycling. This has generated £158.5 million (19% of revenue) through circular products that were previously seen as waste, £344 million from services that reduce customers' environmental impacts and more than £50 million from selling energy and fuel recovered from waste. 20% of Veolia's revenue currently comes from circular economy activities and they have a target to increase this to 40% by 2020..



3

Consider options to align sustainability with the best in customer service.

Are there sustainable customer service models you could use for particular products or services? Could these give your customers added value? Could they add an additional USP or competitive advantage to your brand?

Case study Ricoh UK



A fresh approach to customer service

Happy customers and bigger profits, while treading lighter on the environment – a reality for Ricoh, made possible by those friendly voices on the telephone.

The challenge

Ricoh UK (RUK), a global supplier of office imaging equipment and IT solutions, was keen to reduce the cost and environmental impact of sending engineers to repair their products. They needed a solution that would increase profitability and sustainability, without having a negative impact on customer satisfaction.

The solutions

Ricoh UK adopted a policy to increase the number of customer issues which could be resolved remotely by customer services agents. In 2012, 13.5% of issues were resolved by 'remote fix'. By 2014 this had increased to 15.6%, cutting CO2 emissions by 1,800 tonnes, saving 220,000 litres of fuel equivalent to £750,000. They now have a target of 20% by 2016.

In the first 6 months of 2015 this process also saved £1.25 million on spare parts – an average of £200,000 a month – and is projected to save £ 2.5 million by the end of the year. As well as saving money, allocating engineers to customers has also improved customer satisfaction. Service engineers have been able to build a greater

rapport with their customers and spend less time travelling between jobs. As a result, response times have improved and service engineers are now meeting their service level agreements in 92% of cases, up from 77%. Overall, customer satisfaction ratings have increased from 87% in December 2012 to 92% in March 2015.

Ricoh UK is also recirculating more components back into the supply chain, reducing dependency on virgin raw materials and saving money. The company receives rebates from Ricoh Europe for the reuse and recycling of consumables, which offsets logistics and processing costs. Between 2012 and 2014, RUK received £700,000 in rebates for returning recyclable parts.

Impact

- More than 220,000 litres of fuel saved, equivalent to £750,000 in cost savings and 606 tonnes of CO₂ emissions avoided.
- Ricoh monitored customer's responses closely throughout the project and found that customer's really liked the changes. Customer satisfaction improved from 87% in 2012 to 92% in 2015.



Customer engagement & support

Minimise maintenance

3 actions

1

Work with your supply chain to develop a clear product take-back strategy.

Could your customer service team help customers with waste disposal and recover value by getting old products put back? If you don't have the capacity within your supply chain, consider working with another section of the business or explore possibilities with an external partner.

2

Develop clear communications to support customers in recycling products and creating new life cycles for essential resources.

Make it as easy as possible for your customers to understand options and opportunities to take back your products once they're finished with them.

3

Develop a product tracking system to understand where your products are and who is using them.

Use data to streamline customer support and engagement activities, and advance take back / other opportunities for post use handling of products and packaging (either directly or through network of managed partners).



1

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Case study

Brother Industries



Making it easy for customers pays dividends

By ensuring sustainability is at the heart of every decision it makes Brother Industries has reaped benefits for its bottom line

Brother Industries UK (BIUK) is the UK arm of global company Brother Group. It employs around 140 people at its Recycling Technology Centre in Wrexham which has become a specialist site for toner recycling, sharing expertise and knowledge throughout the company.

As a major supplier of toner cartridges in the UK, Brother sought to reduce the amount of toner cartridge ending up in landfill.

Offering free postage Brother increased the number of toner cartridges returned from 80,000 in 2005 to 1.7m in 2013, lowering environmental impact by over 40%. The programme has diverted 7,300 tonnes of waste from landfill and reduced costs to Brother by £4m through saving 55% on parts costs, 96% of which are now recovered.

Working with logistics providers to maximise distance and space has reduced costs by 25% for the returns scheme.

BIUK is addressing the circular economy, demonstrating that reusing resources does not mean compromising on quality, and that sustainable thinking can streamline and improve business operations and create bottom line savings.

"Circular economy practices keep the wheels turning at Brother. By extensive parts reuse we succeed in terms of financial sustainability, resulting in an explosion of interest in recycling goods."

Dave Lawrence, Senior Manager
Brother Industries (UK)

2

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Case study Argos



Old gadgets, new life

Argos capitalised on a massive, hidden opportunity for the electronics sector

Building a case

WRAP's 'Switched On to Value' report identified that there were millions of unused electronics in British households. These devices, which contain finite resources the business needs, are worth an estimated £1 billion.

Argos wanted to create a new trade-in service for customers to recycle unwanted electronic devices.

"Millions of devices, mobile phones and tablets are sitting in people's homes languishing and depreciating, most of which end their life in a landfill."

Nadeem, HRG/Argos

The challenge

- Development of an online tool for customers to value their used devices
- Finding the right partner to research demand for a trade-in service
- Set up and prove the value of a reverse-logistics operation

- Mobilise people with the skills, knowledge and equipment to transport, dismantle and reprocess used electronic products.

Testing the potential

Argos began testing their convenient walk in service in a small number of busy high street locations, where customers could receive a gift voucher in exchange for their unwanted device.

The future

Argos has now launched its hugely popular 'Gadget trade-in' service in 788 UK stores.

"We have found an opportunity to use resources differently and improve our environmental credentials, while increasing customer loyalty, footfall and spend." Megan, HRG/Argos

"We have something that works; it has scalability, commercial potential and the ability to add credibility to our brand."

Nadeem, HRG/Argos



3

Develop a product tracking system to understand where your products are and who is using them.

Use data to streamline customer support and engagement activities, and advance take back / other opportunities for post use handling of products and packaging (either directly or through a network of managed partners).

Case study Rolls Royce



Recycling materials for a better world

Recycling programme at Rolls Royce is saving resources, energy and money.

The challenge

The aerospace industry relies upon exotic metals such as rhenium, hafnium, tantalum, and titanium, to make the alloys that go into today's advanced aero engines. Rolls-Royce uses over 20,000 tonnes of these alloys each year. As part of their efforts to preserve finite resources and safeguard the environment, Rolls-Royce is continually working to recycle as much metal as possible.

The solutions

To encourage recovery, recycling and reuse of waste metals in manufacturing, Rolls-Royce has adopted 'Revert' - its recycling programme across all manufacturing facilities, in over 100 locations around the world. The program consists of processes to remove coatings, segregate materials by alloy type, and remove contaminants. Unserviceable engine parts and waste metals from machining and casting processes are recovered and processed through the Revert programme; enabling them to be returned to aerospace grade alloys and reused.

The benefits

As a result of the Revert programme, almost half of a used aero engine can now be recycled to a standard where the quality of the recovered material is so high that they can be safely used again to make a new engine as part of a fully closed loop system. Using Revert saves over 20,000 MWh of energy each year, which is equivalent to powering 1.8 million homes for a day, and saves 9,000 tonnes of carbon dioxide when compared to using virgin material.

Revert is making a big difference. Rolls-Royce is reducing demand for raw materials, uses less energy, produces fewer emissions and saves costs.

What next?

We hope that you have found this guide useful and have found some ideas for your own journey to realise the opportunities within the circular economy.

This is the first step in Business in the Community's programme to help bring the circular economy as part of our campaign to promote smart growth by helping businesses to increase their value and wider economic contributions in ways that lead to better resource use, nurture healthy ecosystems and tackle climate change.

Over the next few months we will be co-creating a vision of what success will look like over the next ten years and building our first three year collaborative action plan to work with our members and wider networks to achieve that vision.

For details of how to get involved in working with us to deliver a new business as usual please get in touch. We very much look forward to working with you.

Get started today

- Identify one of the actions to start with and think through how you can engage people across your business to develop new opportunities to create value in a circular way.
- Contact environment@bitc.org.uk to get involved with ideas sharing and collaborative problem solving across our network.
- Visit www.bitc.org.uk/environment to find out more about BITC's 'Smart Growth' campaign and how you can get involved.

Keep in touch

Email: environment@bitc.org.uk

Phone: 0207 566 8650

Twitter: @BITCenvironment

Further resources

www.wrap.org.uk/content/rebus

www.wrap.org.uk/foodfutures

www.wrap.org.uk/content/scap-2020-commitment

www.wrap.org.uk/content/business-resource-efficiency-hub


www.wrap.org.uk/courtauld2025

www.anthesisgroup.com/tag/circular-economy

Thank you

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