

SUSTAINABLE RESOURCE MANAGEMENT

The Business Briefing

June 2014

Foreword

Businesses worldwide can achieve trillion dollar savings in little over a decade through effective resource management. Statistics like that make a very compelling business case for a wholesale shift in the way we source, use, re-use and dispose of materials. It will not only save money, it can make you money. And if that's not enough of a case, it contributes to saving the planet.

All businesses can benefit - financially and reputationally - from heeding the recommendations made in our **From Waste to Resources** report on sustainable resource management. Regardless of their starting point every single organisation has the opportunity to make small changes to achieve massive results. 84% of businesses already recognise that better resource management is their biggest opportunity to create value. That mass need help to make it a reality and the remaining 16% need convincing. I am confident that this report will do that job.

This report shows that skilled, experienced and qualified Environment & Sustainability professionals can lead resource management which transforms the face of modern business. The in-depth version of the report provides immersive detail for the professional, speaking their language and directing them towards not just best practice, but innovative new practices. This business briefing speaks directly to those at the decision-making end of business, giving them the scope and potential of what their Environment & Sustainability Professionals can achieve if empowered to make the right changes.

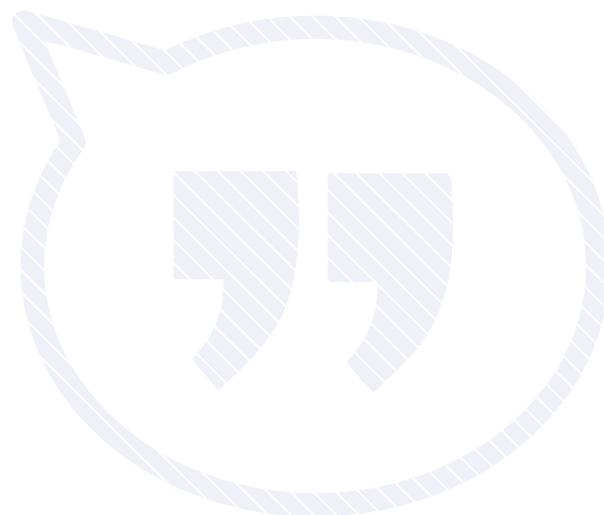
I'm very excited about the publication of this study which has surveyed multiple businesses facets to establish where many sectors and professions are currently reacting to resource challenges. It offers, for the first time, much-needed support, assistance and direction to catalyse action on resource management.

Tim Balcon

CEO, IEMA

The revised **ISO 14001 standard** will deliver a **wake-up call to business**, to enhance resource management action through **embedding lifecycle thinking and value-chain engagement**.

Josh Fothergill, IEMA



In a nutshell...

Price volatility, supply shortages, disruption of supply chains, reputational risks...

Sustainable resource management is an under recognised business critical issue.

But it is also an opportunity, which is already being turned into an advantage by those organisations that have begun to explore its potential. Sustainable resource management delivers clear business benefits:

- **Driving Competitiveness**
- **Managing Business Risk**
- **Enabling Future Markets**

And the rewards are substantial.

Defra identified that over 80% of the £23bn resource efficiency savings available to UK business, derive from smarter raw material use and waste minimisation activities and offer a payback period of less than a year.

Progress is open to all organisations, no matter the size. Our research findings demonstrate that nearly two thirds of SMEs, employing skilled Environment & Sustainability professionals, are already saving over £5000 a year.

So taking action on resource efficiency can improve competitiveness and enhance profitability, rapidly.

Significant global trends are reshaping the way organisations view resources.

Our research has identified that Environmental & Sustainability professionals are already aware of key resource security risks faced by their organisation.

69% of respondents indicated their organisation had identified key materials that were vulnerable to price spikes or supply constraints.

The first step to success is to get your team to review your organisation's progress by completing our **Resource Action Maturity Planner¹ (RAMP)**.

This briefing draws upon our in-depth report on sustainable resource management - **From Waste to Resources²** - which contains detailed analysis, case studies and clear actions to deliver benefits.

IS YOUR BUSINESS MISSING THE OPPORTUNITY?

The real **game changer** will be the **rapid global growth in middle class consumers**, which is predicted to **more than double from 1.9 billion people in 2009 to an estimated**

4.9 billion in 2030³.

Markets are changing, business is changing, resource availability is changing.

So how can **your** business remain competitive? The evolution from waste management to resource management is vital. This briefing demonstrates that opportunities arise when businesses move from a focus on minimising waste production, to a broader approach that explores new business models, drives process and system efficiencies and maximises the value of all materials needed to deliver goods and services.

With the earth's natural resources so limited (and more in demand than ever), the potential rewards for business are worth billions. Not to mention the benefits to the planet.

Significant global trends are reshaping the way organisations view resources: substantial growth in demand for all resources, exceptional demand for materials for technologically advanced products, increasing costs of resource extraction, and increasing constraints on production.

Our research indicates that organisations employing skilled and qualified Environment & Sustainability professionals are already achieving significant benefits by taking action on resource efficiency. Benefits are being achieved by businesses of all sizes and across different sectors. A fifth (19%) of respondents from companies with over a 1000 employees indicated savings of over £1m per year.

The numbers speak for themselves - globally, an estimated US \$trillion saving per annum is achievable by 2025⁴.

3. OECD Development Centre, Working Paper 285 (Kharas, 2010)

4. Towards the circular economy – Volume 3: Accelerating the scale-up across global supply chains (Ellen MacArthur Foundation, 2014)

A 'CIRCULAR ECONOMY'

A 'circular economy' needs all organisations to engage in the transition from waste management to resource management. That means viewing waste and unused/end-of-life products as viable raw materials.

Rather than simply managing waste, progressive businesses are now recognising it as the consequence of an ineffective system.

By understanding the risks and opportunities related to resource management, your business can follow the leaders in resource management, helping to create a more circular and sustainable economy. This report includes examples from leading organisations - Kingfisher, Philips, Ricoh, Rolls-Royce and Unilever - and IEMA members, who are driving the opportunity through their business.

After all, **improving material resource management is good for business** - and the environment. It'll help enhance your bottom line, reduce supply-chain risk, deliver efficiencies and protect corporate reputation.

In 2011, 84% of respondents⁵ ranked better use of resources as the biggest opportunity for organisations to create value through sustainability.

To grasp the opportunity offered by a 'circular economy' there is a need to understand what it means for their business. IEMA has translated the concept into four practical areas of business action:

Resource Efficiency

making the most of material resources while minimising the production of waste

Resource Effectiveness

optimising resource efficiency to avoid environmental harm and drive societal benefits

Resource Security

responsibly sourcing a reliable and affordable supply of materials

Resource Cycling

ensuring unused and end of life materials are returned to productive use.

DRIVING COMPETITIVENESS

We changed **waste** from a business cost of approximately **£80k a year into a co-product that we sell for an annual income in excess of £200k.**

Andrew Maguire, Kepak

Today's successful businesses are rebalancing their activities from bottom-up actions, based on managing waste, to a more top-down resource stewardship approach.

Organisations that grasp the opportunities provided through resource efficiency are rewarded with direct cost savings associated with reduced purchase and waste management costs, and additional business benefits, such as improved sustainability performance; improved resilience to price volatility; and improved staff engagement.

Defra identified that over 80% of the £23bn resource efficiency savings available to UK business, derive from smarter raw material use and waste minimisation activities and offer a payback period of less than a year⁶. So taking action on resource efficiency can improve competitiveness and enhance profitability, rapidly.

Making Savings

Our research indicates that organisations employing skilled and qualified Environment & Sustainability professionals are already achieving significant benefits by taking action on resource efficiency.

Over 500 respondents indicated that their company had achieved the following financial benefits:

- Very large companies: 19% of respondents indicated their company saved over £1m per year.
- Large companies: over 20% of companies saved £100,000 per year.
- SMEs: 63% saved at least £5,000 per year, with nearly 70% of those saving over £10,000 per year.

There is a clear need to ensure financial savings and performance benefits related to resource management actions are captured and reported. This is particularly the case as 97.5% of survey respondents indicated that greater evidence of savings would act as a strong contributory factor to taking future actions.

Case study: Unilever **Making products drive effective resource use in the value-chain**

Most of Unilever's water footprint is created by customer use of its laundry and skin products. One response it has taken is to develop a One Rinse product range for developing markets, where clothes washing is often done by hand. The products ensure detergent residues are removed with a single bucket of rinsing water, rather than the three required for a traditional product. This saves time, effort and money for the customer and allows twice as many clothes to be washed in the same amount of water as standard products.

Creating Efficiency

Improving knowledge related to the use of key materials across the organisation will often identify opportunities to reuse or redistribute materials between processes and teams.

**Paper usage reduced from 29 to 16
tonnes a year predominantly by...
employee engagement.**

Andrew Fletcher, ESP Ltd



All quotations in this publication come courtesy of IEMA Members. Read more about their work at www.iema.net/rm



4

MANAGING BUSINESS RISK

Our research has identified that Environment & Sustainability professionals are already aware of key resource security risks faced by their organisation. 69% of respondents indicated their organisation had identified key materials that were vulnerable to price spikes or supply constraints.

Securing Supply

Maintaining a reliable supply of key materials is crucial to any business. But, since 2000, an increasing array of commodities has seen significant price volatility and constraints in short-term supply – from oil and steel to rare earth minerals (essential to modern communication, electronics and renewable technology)⁷. Recent studies have begun to identify that more common materials may be at risk of future global shortfalls.

For example, a recent Kingfisher report has identified a potential global timber shortfall of up to 30% by 2030⁸. Well managed forests can supply timber over the medium-term, as a naturally regenerative raw material, but there is a risk that increasing global demand could outstrip supply, with the following business consequences:

- Increased prices for timber, paper and related materials
- Disruption to existing supply chains
- Potential for accelerated deforestation

We have identified three key business responses to securing supply of critical materials:

- Research risks & strategic planning
- Supply chain initiatives
- Internal systems improvements

Case study: Rolls-Royce A response to resource security⁹

Rolls-Royce has developed relationships across its operations, resource and waste management service providers and raw material suppliers. Contracts between all parties ensures that the off-cuts, turnings and unused materials related to certain metals and alloys are returned from Rolls-Royce sites back to the original material supplier, via the resource and waste management service provider. By returning an agreed amount of this used, high quality material, Rolls-Royce receives a discount on new material purchases from the same supplier. As such, Rolls-Royce has effectively become part of its own raw materials supply chain, ensuring that it avoids treating key materials as waste within its systems.

7. Resource Security Action Plan (BIS and Defra, 2012)

8. Net Positive – the start of the journey, report for 2012/13 (Kingfisher, 2013)

9. www.iema.net/rm216

*Without a clear view of supply risks and an active and ambitious strategy to manage those risks, **businesses will be increasingly vulnerable to price volatility, supply chain disruption and business continuity risks.***

*Susanne Baker,
EEF and Chair of Materials Security Working Group*

Managing Costs

Our research identified the approach taken to purchasing materials is key to enabling more effective resource management. **Over 75% of organisations employing Environment & Sustainability professionals have some form of green purchasing criteria**, with 25% indicating they apply their criteria to all products purchased¹⁰. To effectively manage the risks and opportunities associated with resource use, organisations must significantly improve their understanding about what materials they purchase and how they purchase them.

Protecting Reputation

Businesses increasingly recognise the reputational risks associated with materials they rely upon. The use of materials, in particular primary materials generated by extraction of virgin supplies (e.g. mining and forest clearance), can have significant environmental and social impacts related to them. A large range of issues can be associated with the virgin materials an organisation relies upon.

That's why the ability to trace, understand and verify the ethical and environmental sourcing of materials is increasingly important (eg. conflict materials and palm oil).

*On average, the **true cost of wasted materials is about ten times the cost of disposal***

WRAP¹¹

*Don't underestimate people's **willingness to engage actively and eagerly in projects where they see no direct benefit for themselves, but do so in the spirit of environmental sustainability.***

Bob Cox, Siemens

¹⁰. Sustainable consumption and production survey (IEMA, 2012)

¹¹. Business Resource Efficiency Guide: Resource Efficiency for Managers (WRAP, 2013)

BOLD AMBITION TO ENABLE FUTURE MARKETS

The circular economy is designed to minimise future reliance on the use of virgin material inputs. In 2013, Accenture and M&S estimated the circular economy to be worth £15-18bn a year to the UK economy¹², achieved through: closed-loop supply chains; extending asset life; promoting re-use, remanufacturing and repairing products; and adapting design for the effective disassembly of products that cannot be salvaged.

Innovative Business Models

Leading companies have embraced the circular economy within their long-term business strategy and have substantive support from senior figures across their business. As a result, they are increasingly identifying profoundly ambitious targets and initiatives that actively seek to disrupt the traditional approach their organisation has taken to resource management.

By developing and bringing to market new business models, products and services, I help my company drive green growth

Mike Robey, WRAP

Strategic Planning

Recognising the strategic importance of the transition from waste to resource led thinking is a vital element of building competitive advantage, business resilience and increasingly, reputational management.

Case study: Kingfisher Group **Bold ambitions driving innovation**

In 2012, Kingfisher Group (Europe's largest home improvement retailer with over 1120 stores) set out its ambition to have 1000 products with closed loop credentials available to consumers by 2020. Working with leaders in the field, they developed a closed loop calculator made up of 10 criteria and a clear scoring system. By early 2014, this process had allowed them to identify that 90 existing products have credible closed loop elements.

Case study: Philips **Tonnes of savings**

Royal Philips (the leading technology company, based in The Netherlands) aims to double the collection and recycling of its end-of-life products and has established a target of using 3500 tonnes of recycled plastic in its products by end of 2015, from a starting point of just 35 tonnes in 2010. By establishing this bold short-term target, Philips has driven the need to implement radical changes in the approach to purchasing materials within its supply chain across the business¹³.

¹². Fortune Favours the Brave (Marks & Spencer and Accenture, 2013)

¹³. www.philips.com/about/sustainability/ourenvironmentalapproach/greeninnovation/closingthematerialsloop.page

Case study: Ricoh **Bold ambitions driving innovation**

Ricoh's strategic response to resource management has been to commit that it will have reduced its overall input of virgin materials by a quarter by 2020. It will achieve this through reuse of parts and products, extending the lifetime of products in its range, through remanufacturing and substitution for lower risk materials. For example, its EcoLine product range takes previously leased copiers, inspects, dismantles, renews components and updates software before selling them as remanufactured products.

The effective use of resources, energy and social capital is a pre-requisite for long-term economic success.

Technology Strategy Board

Capitalising on the Circular Economy

Organisations that are truly committed to taking action to improve resource management are ensuring they have their own objectives and internal commitments in place. The ultimate goal is to deliver products and services with the minimal use of resources, which are derived from systems that avoid generating negative environmental or societal consequences and also provide a net positive contribution to the wider value chain.

By also collecting recycling from our customers, when delivering orders, we have created opportunities to re-engineer the value-chain to better support closed-loops; this helps to differentiate our business in a competitive market.

Toby Robins, Wiles Greenworld



THE ROLE OF THE ENVIRONMENT AND SUSTAINABILITY PROFESSION

We see closed loop innovation as a major business opportunity... to cushion our business from price volatility, to enter new markets and build better relationships with customers and suppliers.

Becky Coffin, Kingfisher (Net Positive)

Our evidence demonstrates that Environment & Sustainability professionals act as change agents to increase knowledge of effective resource management and the circular economy within organisations.

A sustainable and circular economy is the outcome of effective resource management. Environment & Sustainability professionals act to enhance the recognition and understanding of this area among colleagues and across their organisation.

Kingfisher is a prime example of a business that has recognised the need to strategically look at its approach to resource management. Ian Cheshire, Kingfisher's Group Chief Executive, has established a clear vision within its Net Positive initiative - 'We would like to see a world in which creating and using products wastes nothing.'

Our research also found that the initial transition to resource management can often be driven by a small number of staff, or even a single individual. Developing a strong working relationship between the environment/sustainability team and the procurement team within an organisation is a fundamental step in that transition.

To truly manage resources, organisations must understand the impacts, risks and opportunities of the lifecycle of the materials they rely upon. The trend can be clearly seen in the calls from business to see lifecycle thinking embedded in ISO14001.

By bringing lifecycle costing into the conversations between the procurement department and our suppliers, I facilitate innovative approaches to the way we do business.

Clare Day, Skanska

More than 285,000 certified¹⁴ global organisations, and sites will focus on these areas from 2015.

Many organisations employing environment and sustainability professionals have already begun to explore opportunities to improve resource management through engaging their value chain. 39% of respondents indicated their organisation had attempted to apply some aspects of materials re-use within their company's value chain.

MOVING YOUR BUSINESS FORWARD

Six steps to business success:

1. Enable your Environment and Sustainability professionals to catalyse your progress on resource management by developing an action plan identifying departmental and individual responsibilities. Review your progress using IEMA's Resource Action Maturity Planner (RAMP) www.iema.net/rmramp
2. Provide the leadership required to create a positive culture around a clear vision.
3. Involve your entire workforce in resource management initiatives, particularly those in research & development and the design of products and services.
4. Ensure your business maintains a clear understanding of its potential exposure to resource security risks, which are dynamic in their nature.
5. Embrace the circular economy within your long-term business strategy to identify ambitious targets and initiatives that actively seek to disrupt the traditional approach to resource management.
6. Align your systems to deliver effective performance improvements in management of resources (resource data collection & analysis, procurement of materials and control activities across the value-chain).

Most importantly, your business needs to transition its thinking from waste to resource management.

This involves all staff having an enhanced understanding of how sustainable resource management drives growth.

It's within your power to make a massive difference



*It is encouraging to see the discussion around **'Waste to Resource'** advance... to the much more effective approach of **smart innovation and sustainable growth.***

Daan Elffers, EMG CSR Consultancy

Take Action Now: Review how your business is performing

Ask the Environment & Sustainability professionals in your business to conduct an initial review against our simple to use Resource Action Maturity Planner (RAMP).

RAMP will help evaluate your organisation's current progress. Your organisation's next step into Sustainable Resource Management begins here... www.iema.net/rmramp

About the Research & Acknowledgements

This business briefing draws upon detailed analysis of sustainable resource management presented in our report - From Waste to Resources (www.iema.net/rmreport). The research included surveys and workshops that gathered the views of leading environment and sustainability professionals based in, or working with, business.

We wish to thank all parties involved in its development and, in-particular, the following organisations and individuals for sharing case studies of their actions in this business briefing:

- Organisations: Kingfisher, Phillips, Ricoh, Rolls-Royce, and Unilever



Kingfisher



Rolls-Royce

PHILIPS

RICOH

- IEMA members: Susanne Baker (EEF), Becky Coffin (Kingfisher), Bob Cox (Siemens), Claire Day (Skanska), Daan Elffers (EMG CSR Consultancy), Andrew Fletcher (ESP Ltd), Andrew Maguire (Kepak), Mike Robey (WRAP) and Toby Robins (Wiles Greenworld).
Read more about their work at www.iema.net/rm

This business briefing was authored by Josh Fothergill - our Policy & Engagement Lead on Resource Management. He was supported by the following staff: Martin Baxter, Alison Hall, Peter Jones and Katrina Pierce. We would also like to thank David Sandhu, for his copy editing skills, and Ruddocks for the briefing's design and layout.

“ All quotations in this publication come courtesy of IEMA Members. Read more about their work at www.iema.net/rm ”

About IEMA

The Institute of Environmental Management & Assessment (IEMA) is the professional home of over 15,000 environment and sustainability professionals from around the globe. IEMA's role is to support individuals and organisations to set, recognise and achieve global sustainability standards and practice.

Our members lead and deliver sustainability in their organisations at all levels, using IEMA standards as their foundation. Equipped with their extensive knowledge and skills, they improve environmental and sustainability performance and drive competitiveness, productivity, resilience and growth.

Through the services we provide, IEMA members continuously improve their knowledge, their influence and their network so that they can play a leading role in making their businesses more profitable, less wasteful and future-proof.

Through our services, members are able to take advantage of opportunities to enhance professional development, knowledge and skills, input their experiences in the development of policy consultations that get their voice into government and build their own network of contacts and collaborators.

As an organisation we are independent and international, gathering members' views and experience to deliver evidence to Governments, information to business, inspiration to employers and great stories to the media that demonstrate how to transform the world to sustainability.

To find out more, visit www.iema.net.

About IEMA

The Institute of Environmental Management & Assessment (IEMA) is the professional home of over 15,000 environment and sustainability professionals from around the globe.

We are independent and international; delivering evidence to Governments, information to business and inspiration to employers everywhere that demonstrate how to transform the world to sustainability.

- Find out more about IEMA here: www.iema.net/about-us

Institute of Environmental Management & Assessment

Registered Office: Saracen House, Crusader Road, City Office Park, Tritton Road, Lincoln, LN6 7AS, UK.

Tel: +44 (0)1522 540069 | Fax: +44 (0)1522 540090 | E-mail: info@iema.net | Web: www.iema.net

Registered in England and Wales | Vat No. 716 6375 22 | Company Limited by Guarantee Reg. No. 03690916