

# Follow-up Conference: APSRG and APMG Report *'Triple Win: The Social, Economic and Environmental Case for Remanufacturing'*

---

**Tuesday, 8 September 2015**

**Attlee Suite, Portcullis House**

**Chaired by Barry Sheerman MP and the Rt Hon Caroline Spelman MP**

## Agenda

---

### Speakers

**David Cornish, Global Sustainability Manager – Resource Efficiency, AkzoNobel Decorative Coatings**

**Ben Peace, Sustainability Lead, The Knowledge Transfer Network (KTN)**

**Dr Winifred Ijomah, Director, Scottish Institute for Remanufacture**

**Nick Cliffe, Lead Technologist – Resource Efficiency, Innovate UK**

## Contents

---

- |    |   |   |        |
|----|---|---|--------|
| 1. | Topic overview  | - | Page 2 |
| 2. | Speaker presentations and question and answer session | - | Page 5 |
| 3. | Attendee list   | - | Page 8 |

## Report Background

Following the All-Party Parliamentary Sustainable Resource Group (APSRG) report '[Remanufacturing: Towards a Resource Efficient Economy](#)' launched in March 2014, which provided a brief overview of remanufacturing in the UK, the APSRG joined up with the All-Party Parliamentary Manufacturing Group (APMG) to conduct a more detailed and in-depth 8 month inquiry into remanufacturing in the UK which was published in December 2014.

This event will be the official follow-up conference to the launch of the second APSRG report on remanufacturing and will enable Parliamentarians, civil servants, and business leaders from both the resource and remanufacturing sector to discuss the key issues raised within the report, look at how industry and Government responded to the report and identify any progress or changes in the industry since the report was launched last year. The event will also provide an opportunity for the waste, resources, and manufacturing sectors to get together to discuss what further policy and industry changes are needed to support the UK remanufacturing industry.



The APSRG and APMG report, '[Triple Win: The Social, Economic and Environmental Case for Remanufacturing](#)' argued that remanufacturing provides valuable economic, environmental as well as social opportunities for the UK, but that further legislative support and UK-based research and development are needed for the industry to grow to its full potential. The report analysed the variety of drivers and barriers of remanufacturing in the UK, and illustrated those industries where remanufacturing is commonplace in the UK as well as those which have potential for growth but are currently struggling. It is only through showcasing these success stories that current best practice can become the standard of the future. The report also addressed underlying business models and their vital role in driving the remanufacturing industry forward, with even the most conservative estimates suggest remanufacturing has the potential of adding £5.6 billion to the UK economy. There are, however, still market and regulatory barriers which impede its uptake.

Remanufacturing can be defined as “**a series of manufacturing steps acting on an end of life part or product in order to return it to a like-new or better performance with a warranty to match**”. This is, however, an academic definition, with no universally

accepted legal definition of remanufacturing having been accepted. The research for this report has suggested that this lack of a legal definition both affects consumer confidence in and prevents trade of remanufactured goods in the UK.

By contrast, the United States is a world leader in remanufacturing and other countries such as China, Japan and Germany are also investing in remanufacturing and removing regulatory barriers or incorporating subsidies. Remanufacturing in the UK is very diverse, spanning across multiple sectors, beyond the traditional automotive, industrial equipment (e.g. pumps, gears) and aerospace industries. Both original equipment manufacturers (OEMs) and third party companies are remanufacturing products such as furniture, white goods, large electronics, cartridges and ink jets, carpets and paints. The UK therefore has the potential to also become a world leader in remanufacturing. Large corporations and Small and Medium Sized Enterprises (SMEs) alike are already recognising the many social, economic and environmental benefits that remanufacturing can have for the UK. However, as the research for this report identified, several of these industries are struggling due to a number of barriers preventing their growth and Government and industry need to work together to address these.

## Policy Context

Sustainable resources policy is a major public policy issue that spans across several departmental agendas and industrial sectors. With rising concerns over resource security, climate change and water shortages, businesses and Governments are increasingly focusing on closing their loops. Efforts of moving towards a more circular economy, however, continue to have a strong focus on developing policies that focus on lower value options in the waste hierarchy, such as disposal and recycling. The APSRG/APMG report argued that more encouragement is needed for options such as remanufacturing, which are placed towards the top tier of the waste hierarchy, encouraging reuse of parts and products with minimal additional input of raw materials.

Remanufacturing is one of the key emerging sectors uniting the resource and manufacturing industry in an effort to close production and consumption loops, while also providing benefits to the end user and advantages to the bottom line of businesses. It also provides substantial environmental savings in terms of raw materials, carbon emissions, water and energy usage. Beyond energy and resource savings, there is a great opportunity to increase economic output and job creation in the UK, in a similar way that the United States have managed to increase the value of their remanufacturing industry by 15% to £26 billion between 2009 and 2011, supporting 190,000 full time jobs.

## Challenges

As a modern industrial concept, remanufacturing continues to be a relatively immature industry, which is still overcoming its own complexity and uncertainty. The APSRG/APMG report highlighted key challenges the industry continues to face and that will need to be overcome for it to achieve its true potential. These include:

- The lack of capital both to leverage research and development, and support start-ups;
- The lack of communication across the supply chain to ensure materials and products are used to their full potential and returned to remanufacturers, and that product/design data is shared to encourage remanufacturing;
- The lack of legal uptake of a definition;
- The lack of consumer confidence in remanufactured products as the concept is relatively unknown;
- The lack of a skilled workforce specific to remanufacturing;
- Low levels of specific design for remanufacture, allowing for disassembly and repair/remanufacture of individual parts and products;

- Low levels of uptake of more circular, innovative business models which support remanufacturing.

## Since the Report Launch in December 2014

The years 2014 and 2015 were immensely exciting for the remanufacturing industry, with the industry receiving increasing media attention. Further, a range of new funding opportunities have been made available both in research and for established businesses, and many policy reports have been making the case for remanufacturing in the waste/resources and manufacturing industries, identifying it as a key player within the circular economy.

Internationally, the appointment of Dr Nabil Nasr, Director of the Rochester Institute of Technology Centre for Remanufacturing, to the United Nations Environmental Program's (UNEP) International Resource Panel in December 2014 is a great success story for remanufacturing, now given the chance to be placed firmly into resource efficiency policy discussions at an international level.

Some key developments in the UK and Europe include:

- 1) **The Scottish Institute for Remanufacture (SIR):** In October 2014, £1.3 million of funding were announced for the Scottish Institute of Remanufacture, a new research Centre with the aim of stimulating innovation and collaboration in remanufacturing across Scotland. The SIR has since announced its first round of funding, inviting applications for the support of collaborative projects between industry and academia in all areas of remanufacture. The SIR funding will vary from £5,000 and £50,000 per project.
- 2) **Special Interest Group for collaboration across the industry:** A consortium of organisations including the Knowledge Transfer Network (KTN), the High Speed Sustainable Manufacturing Institute (HSSMI), the Carbon Trust, the Centre for Remanufacturing and Reuse, the Centre for Process Innovation, Coventry University, the University of Strathclyde, Birmingham University, and University College London already began working together to define potential approaches for collaboration across the industry, Government and academia in 2014. An [online group hosted by KTN](#) has now also been set up, providing members with updates on the latest funding opportunities and a platform for online discussion and networking.

- 3) **European Remanufacturing Network (ERN):** After receiving €1.5 million of funding by the Horizon 2020 framework programme of the European Union earlier in 2015, [the ERM](#) is currently completing a market study and gathering best practice case studies on the diverse remanufacturing industry in Europe. It will also facilitate the formation of a European Remanufacturing Council. Over a project of two years, the ERM aims to encourage new businesses to take up remanufacturing, help existing remanufacturers improve their operations, improve the competitiveness of remanufacturing domestically and internationally, and create greater awareness of remanufacturing in both the public and policy spheres.
- 4) **Resource Efficiency Business Models (REBus):** The EU Life+ funded project providing technical expertise and guidance to develop [REBus](#) is continuously looking for forward thinking businesses to pilot, develop and provide technical expertise and guidance to develop resource efficient, resilient and profitable business model.
- 5) **Zero Waste Scotland (ZWS):** On 28<sup>th</sup> July, ZWS launched an initiative to boost remanufacturing innovation, which will offer investment of around £100,000 over a two-year period for innovative business concepts

that trial or replicate remanufacturing solutions in Scotland. The remanufacturing industry in Scotland is currently estimated to be worth £1.1 billion and employing 17,000, with ZWS estimating the sector could grow by another £620 million by 2020, creating a further 5,700 jobs. The fund is designed to help build the infrastructure and supply of products to feed a growing Scottish remanufacturing sector. The [bidding process](#) is open until 18<sup>th</sup> September 2015.

- 6) **University of Brighton Remanufacturing Standards Project:** With funding provided by the British Foreign Commonwealth Office, [this project](#) led by the University of Brighton and the National Key lab of Remanufacturing will support the development of remanufacturing standards and is running from May 2015 to April 2016.

### Further Reading

[APSRG "Triple Win: The Social Economic and Environmental Case for Remanufacturing"](#)

[APSRG "Remanufacturing: Towards a Resource Efficient Economy"](#)

[Knowledge Transfer Network et al. "Supporting Excellence in UK Remanufacturing"](#)

[Zero Waste Scotland "Circular Economy Evidence Building Programme: Remanufacturing Study"](#)

## Questions for Discussion

1. How effective is current UK and EU policy in the area of remanufacturing and what further cooperation is needed between industry and Government? What should be the new Government's priorities in terms of incorporating remanufacturing into both waste/resource and manufacturing policy?
2. How, if at all, has the policy environment changed since the APSRG/APMG "*Triple Win: The Social, Economic and Environmental Case for Remanufacturing*" report was published in December 2014?
3. Which recommendations from the "*Triple Win*" report need further emphasis and attention from key Governmental and industry stakeholders?
4. Which new projects and industry developments around remanufacturing are notable to draw attention to, since the report launched in December 2014?



## Speaker Presentations

---

### David Cornish, Global Sustainability Manager – Resource Efficiency, AkzoNobel

Mr Cornish opened his presentation by explaining that as a leading chemical company, AkzoNobel has a strong heritage that cares about sustainability; an attitude taken forward to develop the company's "Planet Possible" initiative launched in 2012. Mr Cornish explained that the scale of the challenge faced by businesses to move towards more sustainable business models is systemic and beyond the capabilities of one single business acting alone. Talking about some of AkzoNobel's current work streams, Mr Cornish explained that the company is facing serious difficulties in closing the loop by recycling and remanufacturing paint, largely due to regulatory and financial barriers of handling "waste" paints. Although AkzoNobel has the customer basis in place as well as the finances and technology to turn used paint pots into new paint, the company does not want to be "pushing into boundaries of regulations." Instead, Mr Cornish wants to see regulations simplified to make it easier for companies to be compliant with those regulations and stressed that "regulation is there to stop bad folks from doing bad things", not stop "the good guys doing good things". Mr Cornish wrapped up his presentation by praising the three way partnership AkzoNobel has had with New Life Paints, a small paint recycling and remanufacturing business, and the charity Community Repaint, which passes paint on to local and social projects, stressing that these sorts of partnerships are key to the success of the industry.

### Ben Peace, Sustainability Lead, the Knowledge Transfer Network (KTN)

Ben Peace began by explaining that the main role of the KTN is to link up organisations for mutual benefit and explore innovation opportunities within the UK. Ben Peace then reiterated that remanufacturing represents an enormous opportunity for innovation with economic, social and environmental benefits, but explained that in order to realise this opportunity remanufacturing needs to be distinguished from other aspects of the circular economy and its definition needs to be made clear. Mr Peace explained that remanufacturing is not about tackling refuse recovery and recycling, but about tackling what happens to products at their end-of-life stage and making sure they do not become waste in the first place. Therefore, remanufacturing sits much higher in the waste hierarchy than other resource efficiency processes. Ben Peace continued by outlining the remanufacturing projects that the KTN has been working on, specifically the Special Interest Group (SIG) that KTN established with various partners throughout the UK (details on page 3) alongside its engagement with different parts of the High Value Manufacturing Catapult. The KTN also set up projects worth £4-5 million and built an [online community for the remanufacturing sector](#), that participants can join free of charge. Ben Peace continued by stressing the need to explore further what a UK based Centre of Excellence could look like alongside the KTN's work of setting up collaborative partnerships, clarifying the scale of the opportunity for remanufacturing in the UK and specifically what needs to be done to realise this opportunity. The sector needs to consider what a Centre of Excellence would do; where the sector's specific challenges lie; and what needs to be done to realise the sector's opportunity, and Ben Peace concluded that this is something KTN will be looking at in the future.

### Dr Winifred Ijomah, Director, Scottish Institute for Remanufacture

According to Dr Ijomah, more practical support is needed from government for the remanufacturing industry, as the UK remanufacturing sector is lagging behind both developed and many developing countries, and UK government has not yet identified product recovery as an enabler for future economic competitiveness. Dr Ijomah outlined that there is now a global race to build capacity to exploit emerging opportunities linked to remanufacturing and stressed that Europe is the only region without a Centre for Expertise. Competitor markets to the UK such as China and Germany have been improving their expertise for over 20 years, developing and implementing governmental policies to support the industry and funding research facilities such as the Fraunhofer Institute in Stuttgart. Funding for Centres of Expertise in the UK could facilitate cooperation between the numerous sectors and regions engaged in remanufacturing. Dr Ijomah stressed that product recovery through remanufacturing is a key process in moving towards a more circular economy and that moving to a circular economy is crucial for UK manufacturing to be competitive in the future. Dr Ijomah also outlined the positives - that the UK already has the correct mix of skills, industry, workforce and transport networks, but that its systemic structures and lack of innovative business models provide a weak link to remanufacturing. The sector lacks the capital and expertise to undergo systemic change and tackle technical barriers, and according to Ms Ijomah the Government needs to provide this support. Product recovery policies could include tax breaks, sustainable public procurement targets, and developing uniformity of standards in the reuse and remanufacturing sector to address poor consumer confidence. Dr Ijomah pointed out that the UK has had standards for reuse and remanufacturing for over 7 years but that no one knows about them. Dr

Ijomah then concluded that the UK has a great opportunity to become Europe's leader in remanufacturing, but will play catch up if it is not seized soon.

### **Nick Cliffe, Lead Technologist – Resource Efficiency, Innovate UK**

Nick Cliffe began his presentation by introducing Innovate UK, the UK's innovation agency whose role is to help businesses innovate more quickly by funding and connecting them. Mr Cliffe outlined that specifically related to remanufacturing, Innovate UK aims to raise awareness of the sector outside of its resource efficiency programme. By building an increasing evidence base, Innovate UK aims to encourage its other programmes (such as transport and manufacturing) to engage with, fund, support and promote remanufacturing. The resource efficiency programme has been seeking to capitalise on the financial and environmental opportunities presented by remanufacturing, focussing particularly on the design and end-of-life challenges faced by the sector. Mr Cliffe continued by explaining that Innovate UK is also starting to fund projects that are exploring remanufacturing models outside "their normal comfort zones", providing the example of lighting systems designed for remanufacture which was funded under the "New designs for a Circular Economy" competition. Mr Cliffe elaborated that "if you design a product to be remanufacturable from the get go half of the barriers are removed". Rype Office is another example of where Innovate UK provided design expertise to help develop the company's business around remanufacturing. The Innovate UK "Circular Economy business model" competition in 2015 attracted 45 full applications and 17 of these projects will be offered funding to test and support the proposed business models over the next 6 to 8 months. Further, Innovate UK hopes to run a Stage 2 competition next year to fund full demonstration projects. Mr Cliffe concluded by outlining that in the future Innovate UK will be looking into running joint competitions between the resource efficiency team and the high value manufacturing, transport and/or energy teams as these have access to more funding. Innovate UK will also continue to do more work around design for remanufacturing as this would not just unlock the domestic potential of the industry but also international markets.

### **Summary of Question and Answer Session**

---

**Dr David Greenfield from SOENECS Ltd** asked if investment in remanufacturing should come from businesses or government?

**David Cornish** responded that there is always a case for government to provide financial support because it raises the profile of the causes supported.

**Ben Peace** agreed with Mr Cornish that there is a role for government to invest in the industry especially through bodies such as Innovate UK and the KTN.

**Susanne Baker from EEF** asked if the panel could comment more on the developments of remanufacturing abroad in countries such as China, South Korea and Germany.

**Dr Winifred Ijomah** explained that there is a lot of development going on outside of the UK, including in China, India, the Netherlands, Sweden and Germany, and explained that whilst a lot of this research is supported by experts from the UK, the results and benefits of the research are going elsewhere.

**David Cornish** added that AkzoNobel is based in the Netherlands where the Circular Economy is expected to be at the heart of the agenda during the Netherlands' EU presidency in 2016.

**Seigo Robinson from Oakdene Hollins** raised the concern that customer perception is one of the key barriers to uptake of remanufacturing and to the purchasing of remanufactured goods, and asked whether government should focus on customer sensitisation over R&D funding initially.

**Dr Winifred Ijomah** responded that in the first instance government needs to instate and enforce remanufacturing standards to improve customer confidence in remanufactured products. Dr Ijomah also explained that standards would encourage third party remanufacturers and OEMs to collaborate.

**Ben Peace** agreed that production and warranty standards play a key role in customer confidence, alongside trust in specific businesses.

**David Cornish** agreed with Mr Peace that alongside standards, consumer purchases are based on trust in brands not necessarily technical knowledge of the product.

**Steve Snaith from the British Coatings Federation** added that like with any other products, promoting remanufactured goods is about understanding the target customers and presenting an attractive value proposition.

**Nick Cliffe** explained that this discussion showcases that innovation is needed both at a technical and commercial level.

**Ann Beavis from Premier Sustain** added that providing samples has helped Premier Sustain achieve greater client confidence in their remanufactured furniture.

---

**Dr Winifred Ijomah** agreed with the comments of the panel but elaborated that there is not necessarily enough time to wait for consumers to gain confidence in remanufactured products and that there is an urgency for Government to tax products based on their resource instead of labour profile.

**Chris Woollett from the Bond Group** asked the panel their view on legislation to encourage companies to incorporate remanufacturing targets into their CSR reporting.

**Laura Heywood from Kleenstrike** added that toner cartridge remanufacturers are losing business because the companies leasing printers are not purchasing remanufactured cartridges and asked the panel their views on if her industry can be supported more by including remanufactured cartridge targets in Government procurement procedures.

**David Cornish** responded that one way in which Government procurement can help raise the profile of the industry is through incorporating remanufacturing into its tender process.

**Nick Cliffe** added that Innovate UK runs a programme to link small businesses with local Government procurement issues. Mr Cliffe also pointed out the importance of OEMs and third party remanufacturers working in partnership so that both parties can move forward within emerging business models.

**Dr Winifred Ijomah** reiterated that these partnerships need expertise to be able to deal with the complexity of the issue and to provide systemic solutions.

**Greg Lavery from Rype Office and Lavery Pennell** asked the panel for views on how to reconnect the disconnection between Government remanufacturing purchasing targets such as furniture with the actual performance levels of different Departments as no reports on progress have been published.

**David Cornish** stressed that the signals that come out of Government about remanufacturing need to be consistent and that reporting targets can be fundamental for manufacturers and brand owners in showcasing government support for their industries.

**David Rumble from Bywaters** asked the panel how the remanufacturing sector might be impacted by the changing oil prices.

**Nick Cliffe** responded that some of the new circular economy approaches will be able to decouple the supply chain from exposure to such temporary volatility of raw materials.

**David Cornish** agreed with Nick, adding that the AkzoNobel sustainability plan was initially built upon shortages of a key raw material and escalating raw material prices.

## Attendee List

---

Alison Furness	AkzoNobel Decorative Paints
Josephine Arendorf	AkzoNobel Decorative Paints
Mike Hague-Morgan	Autocraft Drivetrain Solutions
Ellen Daniels	British Coatings Federation
Tom Bowtell	British Coatings Federation
Tania Morrill	British Coatings Federation
Steve Snaith	British Coatings Federation
David Fatscher	BSI Group
Maria Varbeva-Daley	BSI Group
Graham Willson	BTMA Ltd
Seigo Robinson	Centre of Remanufacture & Reuse
Pat Jennings	CIWM
David Workman	Confederation of Paper Industries
Peter Cottrell	Department for Business, Innovation and Skills
Dr Stuart McLanaghan	Eden21
Luke Nicholls	edie.net
Matt Mace	edie.net
Susanne Baker	EEF, the manufacturer's organisation
Toni Waters	Environmental Services Association
Libby Forrest	Environmental Services Association
Mili Parekh	Foresight Group LLP
Dr Michael Gell	Greenclick
Helen Goodman MP	House of Commons
Dr Alan Whitehead MP	House of Commons
Simon Barnes	HSSMI
Caroline Guest	HSSMI
Dick Elsy	HVM Catapult
Prof Chris Coggins	Independent Expert
Laura Heywood	Kleenstrike
Tracey Rawling Church	Kyocera
Greg Lavery	Lavery Pennell
Maxime Furkel	Lexmark
Jennifer McDowell	Lloyds Banking
Dr Ian J. Graham	Loughborough University
Paul O'Donnell	Manufacturing Technologies Association
Robin Latchem	MRW Magazine
Keith Harrison	New Life Paints
Seigo Robinson	Oakdene Hollins
Kelly Mandy	Palm Recycling
Paul Wormald	Peter Brett Associates LLP
Laura Owen	Policy Connect
Anne-Marie Benoy	Policy Connect
Michael Folkerson	Policy Connect
Toby Moore	Policy Connect
Louise Young	Policy Connect
Event sponsor	



Clare Morley	Policy Connect
Peter Jones	Policy Connect
Ann Beavis	Premier Sustain
Phil Oram	Premier Systems
Tom Richardson	Salvation Army Trading Company Ltd
Trevor Shaw	Salvation Army Trading Company Ltd
Simon Duddy	Shanks
Dr David Greenfield	SOENECS
Paula Edwards	The Bond Group
Chris Woollett	The Bond Group
Nick Hussey	The Manufacturer
Nicholas W. Hughes	University College London
Ian Bamford	University of Cambridge
Lucy Singleton	Valpak
Ray Parmenter	Veolia
Vicky Midgley	Veolia
Antoine Causse	Veolia
Lottie Mew	Veolia
Paul Levett	Waste Transition Ltd
Rob Maslin	We All Design
Sarah Clayton	WRAP

## The APSRG

---

The APSRG is the leading forum informing the debate between parliamentarians, business leaders and the sustainable resource community on the crucial policy issues affecting sustainable resource management in the UK.

Through its parliamentary events, policy briefings, and research programme, the Group provides an invaluable forum of knowledge and platform for engagement in this vital field at a time when the sustainability agenda is of pressing importance; facilitating relationship building and generating a forward-thinking policy debate.

For further information please visit [policyconnect.org.uk/apsrg](http://policyconnect.org.uk/apsrg) or alternatively please contact the Group direct at [apsrg@policyconnect.org.uk](mailto:apsrg@policyconnect.org.uk) or on 020 7202 8573.

## The APMG

---

The APMG is a cross-party coalition of Parliamentarians and manufacturing industry organisations that works to develop new industrial policy ideas, critique existing government decision-making around manufacturing, communicate with Parliament the importance of a well-balanced productive economy, and help the manufacturing community better engage with the policy process.

With renewed political focus on the need to rebalance the UK economy and begin the 'march of the makers', the APMG seeks to ensure that policies and programmes to support the manufacturing sector achieve consensus from all parties, and across industry.

For further information please visit [policyconnect.org.uk/apmg](http://policyconnect.org.uk/apmg) or alternatively please contact the Group direct at [apmg@policyconnect.org.uk](mailto:apmg@policyconnect.org.uk) or on 020 7202 8586.

---

The views expressed in this document are those of the APSRG alone and do not necessarily reflect the views and opinions of the speakers and organisations involved.

### Not for distribution

All contents © All-Party Parliamentary Sustainable Resource Group | All-Party Parliamentary Manufacturing Group 2015

For further information please contact [apsrg@policyconnect.org.uk](mailto:apsrg@policyconnect.org.uk) or [apmg@policyconnect.org.uk](mailto:apmg@policyconnect.org.uk)