



Scottish Institute for  
**REMANUFACTURE**  
Reuse, Repair and Reconditioning

## Opportunities in Remanufacturing and the Circular Economy

Scottish Institute for Remanufacture Annual Conference

Wednesday 22nd May 2019, Technology and Innovation Centre, Glasgow

### Speakers

#### Introduction

##### ***Paul Cantwell, Knowledge Exchange Fellow for the Scottish Institute for Remanufacture***

Paul Cantwell joined the Scottish Institute for Remanufacturing back in November 2018 as the Knowledge Exchange Fellow & Business Development Manager. He has an engineering degree with honours from Loughborough University. Paul initially worked in research for aerospace as a corrosion engineer before moving to the Oil and Gas industry, where he has spent the majority of his career working for Pipeline Technip and Heerema Marine Contractors as the lead coatings engineer in subsea pipeline installations. In February 2014 Paul joined the Advanced Forming Research Centre, leading on the development of a one-stop-shop for this industry to: engage effectively with the High Value Manufacturing Catapult; access the latest industrial scale manufacturing equipment; collaborate with leading experts in academia, research organisations and technology innovators.

Paul is on part secondment to the Scottish Institute for Remanufacturing.

Since joining the SIR he is leading on High Value sector engagement, looking to identify sector specific programs, building sector roadmaps and identifying program opportunities for the SIR network to engage with. Paul is also leading on the development of the sustainability model for SIR's continuation.

#### Sector Presentations

##### ***Tariq Dawood, Senior Engineer, EDF Energy R&D UK Centre; "An Asset Owners Perspective of Innovation in Support of the Circular Economy – Opportunities for Onshore/Offshore Wind"***

Dr Tariq Dawood is a Lead Engineer and Expert for Offshore Wind Asset Management within the EDF Energy R&D UK Centre. He has more than 15 years' experience in the power industry working on different types of assets including nuclear generation, onshore wind and offshore wind. Presently he is responsible for the strategic coordination of the Asset Management and O&M innovation activities in support of the offshore wind ambitions of EDF Group.

##### ***Richard Esson, Decommissioning Solution Centre Manager, The Oil and Gas Technology Centre; "Sparking Reuse"***

As manager of the Decommissioning, Solution Centre, Roger is leading the team to identify, fund and support the development and deployment of technology that drives down the cost of decommissioning. Roger has more than 20 years' experience in the oil and gas sector and has held a variety of leadership positions within companies ranging from SMEs to tier 1 contractors. Before joining the Oil & Gas Technology Centre, he was Chief Executive of Decom North Sea. Roger played an active role in the execution of several of the UK's most significant decommissioning projects including; MCP01, North West Hutton and Brent Delta.

**David Scott, BeYonder Ltd;** *“Can we use CE thinking to provide solutions that will save the planet without damaging inclusive growth?”*

David is a Director of BeYonder Ltd., a Glasgow-based textile manufacturer specialising in prototyping, sampling and short production runs for ethical product designers. BeYonder was founded in early 2013 as a profit for purpose organisation and was one of the first employers to commit to the Living Wage and the Scottish Business Pledge. The company has fully committed to the Scottish National Performance Framework.

### **Technology presentations**

**Dr Andreas Reimer, Advanced Forming Research Centre;** *“AFRC Strategic Programme in Remanufacturing”*

Dr Andreas Reimer is a Manufacturing Engineer in the AFRC and University of Strathclyde. He joined the AFRC in 2014 as Post Graduate Researcher and soon become a Manufacture Engineer in 2016. He has an Engineering Doctorate in machining optimisation and has more than 10 years of research experiences in Machining, AM and Remanufacturing. Andreas is well experienced with various Remanufacturing projects and delivered them successfully in collaboration with SME’s. Currently, he is co-ordinating the AFRC’s Remanufacturing theme and is developing innovative applications and collaboration projects with local companies on across Scotland’s various manufacturing sectors.

The AFRC has five large-scale research themes, one of which is remanufacturing, which aims to reduce wastage and enhance Scotland’s manufacturing competitiveness.

**Ross Harris, University of Strathclyde;** *“An evaluation of the DAFT Model for Inspection practices”*

My name is Ross Harris. I am a PhD Student at the University of Strathclyde, DMEM studying sustainable engineering, in particular focusing on improving operational features of Automotive Remanufacturing. I studied both my Undergrad in Product Design and Innovation and my PostGrad in Product Engineering Design at Strathclyde with the aim of developing my technical knowledge and design concepts in order to work within a high powered design firm in the UK. However due to the increasing issues surrounding climate change and demising material resources I decided to shift my focus after my Masters to Sustainable Engineering concepts and so approached Dr Winifred Ijomah about doing a PhD in the field of Remanufacturing.

I am currently in the write up stage of my PhD, with the last few aspects being finalised before submission.

**David Ferguson, KTP Associate, Turner Icen;** *“M-HAS wind turbine condition monitoring system”*

Dr David Ferguson is a KTP Associate working with Turner Icen on failure detection algorithm development of their M-HAS wind turbine condition monitoring system. M-HAS is a highly customised yet lower cost monitoring system which can be retrofitted to any wind turbine to provide the wind farm operator with the information required to make key maintenance and procurement decisions. The presentation will give a brief overview of the system and how it can contribute to a circular economy through its ability to aid in the procurement process.

***Dr Sam Vitesse, Edinburgh Napier University; “Utilising 3D printable leather composite materials towards repair, reuse and increased longevity of leather products”***

Dr Samantha Vitesse is a Reader in Design at Edinburgh Napier University running their Critical and Contextual Studies programme. Her research is cross disciplinary working with material science, microbiology, psychology and tourism.

Paul Kerlaff is the course leader in Interior and Spatial design at Edinburgh Napier University with research in sustainable materials and modular design solutions.

Denise Milne is Research Assistant and PhD candidate at Edinburgh Napier University who also runs her own digital craft workshops 'Wee Replicators', innovating in the use of 3d pens.

### **Support for circular economy**

***Paul McSweeney, CEO, Zero Net Services; “The consumer and the Circular Economy - what's in it for them?”***

Paul McSweeney, CEO & Founder of ZeroNet Services. 25 year veteran of the IT and system integration industry. Spent 6 years in foundation role creating and building the ZeroNet cloud-based software platform and establishing a commercial basis for the business. The ZeroNet is the world's first intelligent, virtual reverse logistics platform designed to facilitate a paradigm shift in resource efficiency by optimising how post-consumer products and materials are recovered from the household. It has been designed with the Circular Economy in mind and has substantial corporate support from many leading global brands.

***Karen McFadden, Business Development Manager, Catax; “Catax: Helping Circular Business Owners Understand their Tax Relief Opportunities”***

“Hi everybody, my name is Karen McFadden and like you, I love my job. Why? Well... have you ever had a letter through your door that reads “tax rebate”? Now imagine your company getting this rebate too. That’s right- My role is to go into UK based companies and help them understand if they are entitled to claim tax back through a variety of government initiatives called: Research & Development, Capital Allowances and Patent Box tax relief.

And not only is my job amazing, Catax have got to be the best company I’ve ever worked for. They believe in their staff, they are trusting, dynamic and most importantly bold. They love new ideas being brought to the table and they encourage the UK team to become as involved in the Circular Economy as possible.

Having been involved in this field for the last 6 months, it astounds me how impactful some of these companies are yet they are not being made aware of the tax relief they can claim. Enter Catax. My mission is to spread the word on these fantastic incentives and to help as many businesses claim as possible.”

**Colin Kennedy, Manufacturing Sector Manager, Zero Waste Scotland; “Circular Economy Business Support”**

Colin has a key role in supporting Scottish Manufacturing by driving sustainable change within the sector and enabling companies to realise the opportunities for growth and development associated with adopting circular economy business practices.

### **Funding fireside discussion**

**Andrew Dickson, Programme Manager, Zero Waste Scotland**

Drawing on over 20 years of experience, Andrew Dickson is Programme Manager for Zero Waste Scotland’s Circular Economy Investment Fund. Andrew started his career in 1997 in Research & Development and product applications in the food manufacturing sector before moving into Research & Development in the organics recycling industry in 2000. Following a number of years working with industry and the private sector, Andrew joined Zero Waste Scotland in 2009.

He oversees the provision of Zero Waste Scotland’s £18m Circular Economy Investment Fund – a major SME focussed grant programme that aims to deliver and support innovative and transformational projects in Scotland that will accelerate the transition from a linear to circular economy, and underpins Zero Waste Scotland’s vision.

**Dr Abi Hird, Manufacturing Team, KTN, Innovate UK**

Abi is part of the Manufacturing team in KTN, which helps manufacturers to innovate and innovators to manufacture. It does this by making targeted links to the right knowledge, partners, facilities and funding.

Abi’s career as a Design and Manufacturing Management academic fuelled her passion for impactful innovation, building relationships and knowledge transfer. With a focus on improving decision making and productivity, Abi led a number of successful multi-partner research projects across a range of manufacturing sectors including medical devices, shipbuilding, defence, automotive, aerospace, food and drink, fashion and textiles.

Abi has a Doctorate in Systems Engineering (2013) and an MEng in Product Design Engineering (2008) from University of Strathclyde.

**Diane Duncan, Head of Low Carbon and Clean Technology, Highlands and Islands Enterprise**

*Diane is Head of Low carbon and clean tech at Highlands and Islands Enterprise. Her organisation is responsible for economic and community development for an area which covers half the geography of Scotland (about the size of Belgium) and has 90 inhabited islands and around 10% of Scotland’s population.*

*She has worked in HiE for almost 18 years in a variety of roles. She joined in 2001 as head of education and skills to support the work to set up the regional university and manage the modern apprentice programmes. She was promoted into the role of head of regional infrastructure and brought to this role. Her interest in resource and energy efficiency, low carbon and sustainability.*

*Diane is a keen sailor and followed EllenMcArthur's path as she developed and launched her circular economy model to the world. She is an advocate of remanufacturing approaches and how resources can be reused and improved as they are placed back in the system. Designing out toxicity of harmful 'nutrients' is something she believes is at the core of this important industrial agenda.*

***Ian Carstairs, Scottish Enterprise***

Ian Carstairs is the manager of Scottish Enterprise Sustainability Specialist team. The role of his team is to support companies to improve their environmental performance while gaining a business benefit through enhanced efficiency, increased sales and improved competitiveness & resilience. Ian also has responsibility for managing the SMAS North Region team

***Richard Esson, Decommissioning Solution Centre Manager, The Oil and Gas Technology Centre;***

As manager of the Decommissioning, Solution Centre, Roger is leading the team to identify, fund and support the development and deployment of technology that drives down the cost of decommissioning. Roger has more than 20 years' experience in the oil and gas sector and has held a variety of leadership positions within companies ranging from SMEs to tier 1 contractors. Before joining the Oil & Gas Technology Centre, he was Chief Executive of Decom North Sea. Roger played an active role in the execution of several of the UK's most significant decommissioning projects including; MCP01, North West Hutton and Brent Delta.

*Facilitate by Paul Cantwell, Scottish Institute for Remanufacture*

**Summing up the day**

*Paul Cantwell, Scottish Institute for Remanufacture*