

PRELIMINARY PROGRAMME

CIRCULAR MATERIALS CONFERENCE

Chalmers Conference Centre, March 7-8 2018

Game Changers and Disruptors

Industrial and Scientific Progress
in the Circular Use of Materials

PRELIMINARY PROGRAMME DAY 1 - WEDNESDAY 7:th MARCH 2018

07.40-08.30 **Registration and refreshments**

08.30-10.00 **Plenary Session 1: The challenge of transformation in a material world**

Venue: RunAn

Chair: Peter Woodward, Facilitator, Quest Associates Ltd

Conference welcome

Karin Andersson, Acting Vice President of Research Education, Chalmers University of Technology

Introduction – Aims process, e-opinion polling

Peter Woodward, Facilitator, Quest Associates Ltd

The Role of the of the Circular Economy in the Emerging Material Resource Challenge

Janez Potočnik, Former EU Commissioner for Science and Research and for the Environment. Currently a Co-Chair of UNEP International Resource Panel – IP

Circular IKEA and future materials

Malin Nordin, Head of the Circular IKEA Direction, IKEA of Sweden AB

The Circular Economy Action Plan continues to shape the European Commission's agenda

Michał Kubicki, Policy Officer, European Commission

Panel debate with audience participation

Panel members: Janez Potočnik, Co-Chair of UNEP International Resource Panel – IP, Malin Nordin, Head of the Circular IKEA Direction, IKEA of Sweden AB, Michał Kubicki, Policy Officer, European Commission, Magnus Huss, Director general, IKEM, Christian Ekberg, Professor, Chalmers University of Technology

10.00-10.30 **Refreshments**

10.30-12.00 **Plenary Session 2: Meet the Disruptors**

Venue: RunAn

Chair: Peter Woodward, Facilitator, Quest Associates Ltd

How can we improve the recycling of WEEE? Are we prepared to take our responsibility?

Rasmus Bergström, Managing Director, Stena Technoworld

Driving circular design through business model innovation

Eelco Smit, Director Sustainability, Philips

Smart metal components – a key enabler for higher value material loops

Raul Carlsson, Research Engineer, Process and Demonstration, Swerea SWECAST

Future adaptivity of material use – and some first steps

Axel Edh, Senior Strategic Advisor Environment at Research and Development, Volvo Car Group

All circles start somewhere – raw material choice is key

Erik Lindroth, Environment Director, Tetra Pak

Panel debate: Looking for insights and transformation success factors

Introduction to key afternoon themes

Opportunity to brief and sell afternoon sessions to the whole audience

12.00-13.00 **Lunch - including poster/ exhibition area**

13.00-14.50 **Breakout Session 3: Innovation Deep Dive 1** (3 parallel sessions, A, B, C)

3A: Reuse and Remanufacturing

Venue: RunAn

Chair: Mona Arnold, Tech Lic., MBA, VTT - Technical Research Centre of Finland

Remanufacturing in Europe - Opportunities and state of the Art

David Peck, Senior Research Fellow, Circular Built Environment and Critical Materials, TUDelft + QA

How to step up reuse and remanufacturing:

This is what entrepreneurs need to know more about

Susanne Fischer, Research Fellow, Research Unit Circular Economy, Wuppertal Institute

Talking from experience: Bringing reuse networks to life

Markus Meissner, Senior Consultant, Pulswerk GmbH

How can a producer responsibility organization support reuse?

Guro Kjørsvik Husby, CCO, Norsirk
The Norwegian EPR organization for WEEE with a target of 20% reuse of electronic waste

Valtra Remanufacturing - machinery production as environmentally friendly and profitable business

Jari Luoma-Aho, Marketing Manager, Valtra Aftersales

Reuse of interior building materials in office premises - experiences from ongoing case studies

Carl Jensen, Senior project manager, IVL Swedish Environmental Research Institute

Panel discussion

3B: Research and innovation ConverStation Cauldron

Venue: Scania

Chair: Peter Woodward, Quest Associates Ltd

- choice of ConverStations. These are simultaneous roundtable presentations given by specialists in materials research to a group of 8-10 interested participants. The format is a 10-minute presentation and a 20-minute roundtable discussion. Each ConverStation is repeated 3 times to a different group.

Product circularity – industry tests of a novel metric

Marcus Linder, PhD, RISE

Modelling recycling in Product Environmental Footprints

Tomas Ekvall, Dr. (Adj. Prof.), IVL

The crucial role of optical sorting in bottle-to-bottle recycling

Thomas Neureiter, Segment Sales Manager for Plastics, Bühler

How do we reach the vision of Buildings as Material Banks?

Lisa Elfström, COO, SundaHus i Linköping AB

Circular recycling of cotton fibers recovered from polyester/ cotton textile blends

Hanna de la Motte, Research Scientist, RISE

Investigation of REE separation and simultaneous Ni-based powder production from NiMH battery waste by spray pyrolysis

Burçak Ebin, Researcher, PhD, Chalmers University of Technology

Novel chemical recycling method for valuable metals in batteries - experiences from the Colabats project

Mark Foreman, Chalmers University of Technology

The Role of Metallurgy for Circular Material based Society and Economy

Johan Eriksson, SwereaMefos

Extended Producer Responsibility for Solar Photovoltaic Panels: Practices and Challenges from Collective vs. Individual Producer Responsibility Cases

Sunanda Mehta, Manager - EPR, Karo Sambhav Pvt. Ltd

Educating Society for a Circular Economy: Potential and Challenges

Jessika Luth Richter, Research Associate, International Institute for Industrial Environmental Economics, Lund University

3C: Closing the loop with Plastics and chemicals

Venue: Palmstedt

Chair: Nils Hannerz, Head Circular Economy & Industrial Bioeconomy, IKEM – Innovation and Chemical Industries in Sweden

Taking the European Chemical Industry into the Circular Economy

Ann Dierckx, Sustainable Development Manager, European Chemical Industry Council (Cefic)

50/50 – the effect of chemical industry as downstream industries go circular

Philipp Buddemeier, Principal Director, Accenture Strategy

The "chemical recycling" of residual waste: an industrial-scale case study of transition to a Circular Economy

Alex Miles, Director, Commercial Development, Europe, Enerkem

Thermal recycling of plastic – disrupting the downcycle

Martin Seemann, Department of Space Earth and Environment – Associate Professor in Energy Conversion, Chalmers University of Technology

Refinery for plastic recycling

Elin Hermansson, Project Manager, Chemical Industries Stenungsund

Closed Loop Plastics and Circular Economy

John A. Ortiz, Director of Product Stewardship, HP

Sustainable plastics material

Åsa Stenmarck, Climate and sustainable cities – Waste, IVL Swedish Environmental Research Institute

Panel discussion

14.50-15.20 Refreshments

15.20-16.05 **Plenary Session 4: Financing the circular materials Economy**

Venue: RunAn

Chair: Peter Woodward, Facilitator, Quest Associates Ltd

Presentations on finance/investment opportunities

RE:Source – advancing innovative solutions for the circular transition

Johan Felix, Innovation Manager, Strategic Innovation Programme, RE:Source

Investing in innovation & early stage startups

Louise Brudö, Head of Startup Acceleration, Chalmers Ventures

Business case:

Scrap tire rubber for new tyres: Tyres are meant to go round and round

Sam Visaisouk, CEO, Tyromer Inc

16.05-17.30 **Plenary Session 5: The E-Waste Tragedy**

Venue: RunAn

Chair: Peter Woodward, Facilitator, Quest Associates Ltd

In connection with the film “The E-Waste Tragedy”, which will be introduced by the Director Cosima Dannoritzer, a panel will discuss environmental issues, the need for better guidelines, harmonizing definitions, legislative frameworks, penalties and what it takes to achieve more coherent multi-stakeholder cooperation.

Panel discussion

Panel members: Cosima Dannoritzer, Director, Rasmus Bergström, CEO Stena Technoworld, Eelco Smit, Director Sustainability Philips, Joost de Kluijver, Director, Closing the Loop

17.30-18.45 **Reception Session 6: Networking reception - hosted by Recipo**

Venue: Exhibition area

Relaxed drinks reception with a ‘talk to me because...’ twist to encourage contacts and networking

18.45 **Bus Transfer to Gothia Towers**

19.00 **Dinner at Imagine, Gothia Towers**

PRELIMINARY PROGRAMME DAY 2 - THURSDAY 8:th MARCH 2018

07.40-08.30 **Registration and refreshments**

08.30-10.00 **Plenary Session 6: Distinctly Nordic - Future Technologies for the Circular Economy**

Venue: RunAn

Chair: Peter Woodward, Facilitator, Quest Associates Ltd

The Distinctive proposition and the potential of Nordic Leadership

Key note speaker - Representative of Nordic Council of Ministers
Anders Geertsen, Head of Department, Nordic Council of Ministers

Preserving material value for a circular economy

Per Klevnäs, Materials Economics AB

Circular Manufacturing Systems - an emerging paradigm in the context of Circular Economy

Amir Rashid, Assistant Professor, Head of Manufacturing and Metrology Systems, Royal Institute of Technology (KTH)

Development and application of a Circular Economy analysis framework

Vibeke Stærkebye Nørstebø, Research Manager of Operation Research Group, SINTEF Technology and Society

Thermolysis in material recycling – system solutions for converting wastes into chemicals, fuels, materials and energy

Anja Oasmaa, Principal Investigator and Principal Scientist, VTT - Technical Research Centre of Finland

Panel discussion on what Nordic leadership can contribute to Circular Economy

Panel members: Anders Wijkman, Chairman, The Swedish Recycling Industries' Association, Mona Arnold, Tech Lic., MBA, VTT, Vibeke Stærkebye Nørstebø, Research Manager of Operation Research Group, SINTEF, Amir Rashid, Assistant Professor, Head of Manufacturing and Metrology Systems, KTH

10.00-10.30 **Refreshments**

10.30-12.00 **Breakout Session 7** (*continues on the next page*)

7A: New business models for a Circular Economy

Venue: Palmstedt

Chair: Tomas Haglund-Flemström, Director Nordic Sustainability Strategy, Accenture

The five generic circular economy business models are thriving as they bring together the principles of design thinking, new disrupting technologies and the ambition to create infinite resource loops. Accenture and friends go through the business models, technologies, five circular consumer preferences and key capabilities to combine to build fast scaling business models that respond to ongoing changes in the market.

The basic numbers of circularity: 3 Drivers, 4 Linear Wastes, 5 Circular Business Models and 5 Consumer pledges replacing 4Ps with 3 Technologies

Tomas Haglund-Flemström, Nordic Director Sustainability Strategy, Accenture

How 5 circular models beat 1 successful recycling loop – Danish WEEE learnings

Kristopher Hvidsteen, Sustainability Strategy Lead Denmark, Accenture

7B: Metals from Secondary Sources/Critical Minerals

Venue: RunAn

Chair: Lennart Gustavsson, Chairman, Georange

Maximizing recoveries through world-class technology

Ing-Marie Andersson Drugge, Director Strategy and Technology, Boliden

Digitalizing the Circular Economy – Fairphone as an example

Markus Reuter, Director, Helmholtz Institute Freiberg for Resource Technology

Increasing the recovery of critical raw materials (CRM) from WEEE. Ecodom Italian trial: From innovative collection to innovative treatments

Luca Campadello, Projects, Researches & Data Mining Manager, ECODOM

Mine tailings valorization potential as raw materials for reaction-sintered mullite-based ceramics

Marjaana Karhu, Research Scientist, VTT - Technical Research Centre of Finland

Exercise: Applying the 5 business models on your business**Building 5 Circular Capabilities – learnings from the world leading Circular multinational**

Anna Belvén Töndevold, Accenture and Eleonora Tieri, IKEA

Upcycling of electrical and electronic waste – save the functionality!

Kristoffer Gramnaes, Project Manager Circular Economy, Chalmers Industriteknik

Material design strategies for secondary raw materials and residues with case examples

Päivi Kivikytö-Reponen, Research Team Leader, Machine Health, VTT - Technical Research Centre of Finland

Circular Economy of recycling Li-ion batteries

Martina Petranikova, Assistant professor, Chalmers University of Technology

Panel discussion

12.00-13.00 **Lunch - including poster/exhibition area**

13.00-14.30 **Breakout Session 8: Innovation Deep Dive 1**
(3 parallel sessions, A, B, C)

8A: Theme WEEE

Venue: Palmstedt

Chair: Norbert Zonneveld, Executive Secretary, European Electronics Recycling Association (EERA)

Economics of WEEE treatment in Europe

Norbert Zonneveld, Executive Secretary, European Electronics Recycling Association (EERA)

Increased collection and reuse of electronics

Hanna Ljungkvist, Senior Project Manager, IVL Swedish Environmental Research Institute

GDPR – General Data Protection Regulation – Consequences for the WEEE sector. How do I prepare my organization?

Johan Hagelin, Management Consultant, Agima

Chemical regulation for EEE – what are the challenges for producers when it comes to compliance?

Magdalena Salomonsson, Compliance Manager, Recipo

Environmentally differentiated producer responsibility fees – a way of promoting resource-efficient electronics?

Anna Fråne, Waste Engineer and Project Leader, IVL Swedish Environmental Research Institute

Panel discussion**8B: Textile transformation**

Venue: RunAn

Chair: Peter Woodward, Quest Associates Ltd

100% Circular - towards a sustainable fashion future

Felicia Reuterswård, Sustainability Manager, H&M Hennes & Mauritz Sweden AB

Textile recycling – challenges and potential

Lisa Schwarz Bour, Researcher/Project Manager Textiles, Swerea IVF

Conditional Design – the power of design to synthesize

Adrian Zethraeus, Project Manager, Re:textile

Collection of textiles in multi-family buildings – a pilot project in Gothenburg

David Dalek, Business development Manager, Renova

Solving complex textile recycling - from ideas to piloting

Ali Harlin, Professor, VTT - Technical Research Centre of Finland

Panel discussion**8C: Automotive Action/ Batteries for Electric Cars - Challenges, Opportunities and Outlook**

Venue: Scania

Chair: Kristina Eriksson, El-kretsen

Right drivers for a well-functioning battery lifecycle – how new circular business models in Automotive support

Tomas Haglund-Flemström, Nordic Director Sustainability Strategy, Accenture

Sustainable collection, aftermarket and recycling of lithium-based vehicle batteries

Max Björkman, Project Manager, Chalmers Industriteknik

Title to be confirmed

Emma Nehrenheim, Head of Environment and Recycling, NorthVolt

The Electric Car, as it should be?

Pavel Calderon, Innovation Manager, Abtery

How will a high utilization of electric vehicles in fleets affect the life cycle of batteries and provide new opportunities for material circularity?

Jenny Lang, Lead Engineer Energy Storage, NEVS - National Electric Vehicle Sweden

How can knowledge of life cycle emissions of EV batteries help us achieve circularity?

Mia Romare, Project Manager, IVL - Swedish Environmental Research Institute

Panel discussion

14.30-14.50 **Refreshments**

14.50-15.45 **Plenary Session 9: Radical thinking for a circular economy**

Venue: RunAn

Chair: Peter Woodward, Facilitator, Quest Associates Ltd

Radical thoughts/perpectives on the conference theme

Business (models) for circularity

Joost de Kluijver, Director, Closing the Loop

Using machine learning to empower automation within reverse logistics

Johanna Reimers, CEO, Refind Technologies AB

Circular Materials – real-life examples and challenges

Dag Duberg, Nordic Sustainability Manager, Tarkett

Circular Materials at work

Thomas Sörensson, CEO, Scandinavian Enviro Systems AB

How much critical raw material is there in the European urban mine?

Pascal Leroy, Secretary General, WEEE Forum

15.45-16.30 **Plenary Session 10: Maintaining the momentum**

Venue: RunAn

Chair: Peter Woodward, Facilitator, Quest Associates Ltd

Session introduction

Peter Woodward, Facilitator, Quest Associates Ltd

Investing in the circular economy

Jamie Butterworth, Partner, Circularity Capital LLP

Visionary keynote speech:

Materials Economics - the Solution for the Society and the Climate Challenge?

Anders Wijkman, Chairman, The Swedish Recycling Industries' Association

Key conference messages

Panel conversation on maintaining momentum

Closing remarks

16.30 **Close**