

Opening Plenary

Monday, September 30, 2019

MAIN SEMINAR HALL, FINLANDIA-HALL

14:00-15:30 JOINT FINNISH EU PRESIDENCY EVENT - OPENING PLENARY

Chair and Moderator: **Tomi Korhonen**, Executive Director of Communications, Business Finland

Conference opening

- **Jari Partanen**, State Secretary to the Minister of Economic Affairs, Finland
- **Antti Peltomäki**, Head of Representation of the European Commission in Finland and previous Deputy-Director General of DG GROW
- **Julien Guerrier**, Director, Executive Agency for Small and Medium-sized Enterprises (EASME), European Commission

KEYNOTE SPEECHES:

- **Jocelyn Blériot**, Executive Officer, Ellen MacArthur Foundation
- **Dirk Jan van den Berg**, Chairman of the EIT Governing Board: Empowering Europe's Research and Innovation to Support Transition to Low-carbon, Climate-resilient Circular Economy
- **Maurizio Gattiglio**, Executive Vice-President, Prima Industrie S.p.A., Vice Chairman of MANUFUTURE ETP: Circular Economy Business Models for the Manufacturing Industry

15:30-16:15 COFFEE AND NETWORKING. Poster sessions and exhibition stands are active

16:15-17:45 POLICY LEVEL PANEL: THE WAY TO SUSTAINABLE AND CLIMATE-RESILIENT CIRCULAR ECONOMY

Climate smart circular farming practices supporting sustainable transition

- **Hanna Mattila**, Specialist, Carbon-Neutral Circular Economy, Sitra
- **Jean-François Soussana**, Vice President for International Policy, INRA

Electric mobility – how services support the Circular Economy

- **Karen Hanghøj**, EIT RawMaterials
- **Andy Zynga**, EIT Food

Potential of Artificial Intelligence for a Circular Economy

- **Dr. Peter Dröll**, Director, Prosperity, DG Research and Innovation, European Commission
- **Willem Jonker**, EIT Digital

Moderated Panel Discussion

17:45-20:00 BUFFET DINNER. Poster sessions and exhibition stands are also active

Joint Finnish EU Presidency Event Closing

Tuesday, October 1, 2019

MAIN SEMINAR HALL, FINLANDIA-HALL

15:30-16:30 JOINT ADJOURN

Chair and Moderator: **Tomi Korhonen**, Business Finland

Closing the Conferences and the Event with a joint synthesis, bringing up also messages from previous relevant events and building up a way forward by delivering key messages for different actors for building up a path to sustainable and resilient circular economy-based society and industry.

- **Sarisha Agarwal**, 10 years, student from Ressu International School at Helsinki
- **Paula Havaste**, Theme leader of Heureka, the Finnish Science Centre: Outcomes from Childrens' Workshop
- **Jyrki Katainen**, Vice-President of the European Commission, Jobs, Growth, Investment and Competitiveness: The Role of Science, Manufacturing and Innovation in Boosting Jobs, Growth and Competitiveness – A Sustainable Way for the EU
- **Terhi Lehtonen**, State Secretary to the Minister of the Environment and Climate Change: Priorities of the Finnish EU Presidency 2019
- **Closing of the Finnish EU Presidency Event**

MANUFUTURE 2019 Conference

Tuesday, October 1, 2019

FINLANDIA-HALL, HELSINKI, FINLAND

09:00-10:45

OPENING PLENARY: FROM HORIZON 2020 TO HORIZON EUROPE

Chair and Moderator: **Jarmo Heinonen**, Senior Director, Business Finland

Opening Welcome Address

• **Teija Lahti-Nuutila**, Executive Director, Business Finland

Keynotes

- **Arto Metsänen**, CEO & President, Glaston Oyj, Finland: Through Vision, Innovation and Cooperation to Breakthrough Transformation
- **Prof., Dr. Peter Post**, Vice President, Corporate Technology Advisor, Festo AG & Co. KG, Germany: The Future of Intelligent Industrial Manufacturing: Autonomy, Interoperability, Sustainability
- **Dr. Peter Dröll**, Director, Prosperity, DG Research and Innovation, European Commission: Manufacturing in Horizon Europe

The MANUFUTURE Story

- **Prof. Heinrich Flegel**, Chairman of MANUFUTURE ETP: MANUFUTURE 2030 Vision and Action Plan
- **Joaquim Menezes**, Chairman of EFFRA, President of ISTMA Europe: The Impact of Research Partnerships
- **Klaus Beetz**, CEO, EIT Manufacturing: Bridging the Innovation Gap

Celebrating 15 Years of MANUFUTURE ETP

• **José Caldeira**, MANUFUTURE ISG Chair

10:45-11:15

COFFEE AND NETWORKING

11:15-12:45

MAIN SEMINAR HALL:

A1. ARTIFICIAL INTELLIGENCE -RESEARCH AND INNOVATION NEEDS FOR THE INDUSTRY

Chair and Moderator: **Pekka Ala-Pietilä**, Chairman of the EU's High-Level Expert Group on Artificial Intelligence (AI HLEG), Chairman of the Board of Huhtamäki and Sanoma, Member of the Supervisory Board of SAP

- **Prof. Daniel Brissaud**, Grenoble INP, France: AI for Manufacturing
- **Dr. Michael May**, Head, Technology Field Analytics & Monitoring, Siemens AG, Germany: AI in the Industrial Ecosystem
- **Dr. Riikka Virkkunen**, Member of EFRA Board, Research Manager, Digitalizing Industry, VTT Technical Research Centre of Finland: AI in Agile and Cognitive Manufacturing Industry
- **Dr. François Monnet**, Executive Vice President, Executive VP, Corporate R&I Public & External Affairs, Solvay. Vice President, Board of SPIRE: Needs for Hybrid AI in Process Industries: Roots, Hopes, Constraints
- **Dr. Ruth Kerrigan**, Director, R&D, Integrated Environmental Solutions (IES), Ireland: How AI and Emerging Digital Technologies will Influence the Future of the Energy Management Sector in the Built Environment

Moderated Panel Discussion

Conclusions, incl. European Commission's concluding observations by Dr. Peter Dröll

Session rapporteur: **Željko Pazin**, Executive Director, European Factories of the Future Research Association -EFFRA)

SEMINAR ROOM B:

B1. MANUFACTURING EUROPE: TOWARDS AN EU-INNOVATION AND EDUCATION SYSTEMS FOR MANUFACTURING AND THE SOCIETY

Chair: **Gintaras Vilda**, Vice Minister, Innovation and Industry 4.0, Ministry of the Economy and Innovation, Lithuania

- **Keynote: Prof. George Chryssolouris**, EIT Manufacturing: Knowledge Delivery Mechanisms - The Teaching Factory Paradigm
- **Ennio Chiatante**, Head of Digital Transformation Projects, Comau, Italy: Future Skills Emerging from Manufacturing Digitalization
- **Katerina Sereti**, EIT Head of Section Stakeholder relations, EIT: Experiences from the implementation of EIT RIS across Europe
- **Prof. Minna Lanz**, MANUFUTURE NRTP Chair, Tampere University: Versatile Skills Development Methods for the Needs of Digitized Manufacturing Industry
- **Luis Carneiro**, INESC TEC: Citizens as Active Members of the new Manufacturing Paradigms

Moderated Discussion & Conclusions

Session rapporteur, **Prof. Esko Niemi**, Aalto University)

MANUFUTURE 2019 Conference

Tuesday, October 1, 2019

FINLANDIA-HALL, HELSINKI, FINLAND

12:45-14:00 LUNCH AND NETWORKING

14:00-15:30

MAIN SEMINAR HALL:

A2. CIRCULAR MANUFACTURING AND SUSTAINABILITY

Chair: Ane Irazustabarrena, Programme Director, Business Development, Industry & Transport Division, TECNALIA, Spain

- **Keynote: Prof. Tullio Tolio**, Politecnico di Milano, Italy: De- and Remanufacturing for Manufacturer-centric Circular Economy
- **Gwenole Cozigou**, Director, Industrial Transformation and Advanced Value Chains, DG GROW, European Commission: EU Policies for Circular Manufacturing and Raw Materials
- **Jari Luoma-aho**, Valtra Inc., Finland: Remanufacturing in Global Tractor Business
- **Giacomo Bonaiti**, CEO, Rivierasca S.p.A, Italy: Circularity for Composite, the FiberEUUse Project
- **Teresa Sessa**, R&D Manager, Relight SRL, Italy: Recovery of Key-metals from Waste Electric and Electronic Equipment in Circular Economy

Moderated Discussion & Conclusions

Session rapporteur: **Dr. Eeva Järvenpää**, Tampere University

SEMINAR ROOM B:

B2. EMERGING AND DISRUPTIVE TECHNOLOGIES IN MANUFACTURING

Chair and Moderator: **Dr. Patricia Wolny**, Project Manager, Project Management Agency Karlsruhe (PTKA), Production, Services and Work, Karlsruhe Institute of Technology (KIT), Germany

- **Osh Agabi**, Founder & CEO, Koniku Inc., USA: Next Generation Manufacturing for Synthetic Biology: Why Experience is still Critical
- **Prof. Dr. Alexander Sauer**, Fraunhofer IPA, Germany: Inspiration, Integration, Interaction – the Convergence of Technical, Digital and Biological Systems
- **Dr. Anna Davidsson**, Research and Advanced Engineering, Manufacturing Engineering, Volvo Car Corp., Sweden: Managing Perceived Production Complexity
- **Bie Van de Vloet**, Director, Campus Strategy, Janssen Pharmaceutica, Belgium: Personalised Medicine at Affordable Cost – A Manufacturing Challenge
- **Dr. Harri Kulmala**, CEO, DIMECC Oy, Finland: Beta Testing Paves the Way to Disruptive Customer-Driven Innovation in Manufacturing Industry
- **Dr. Max Lemke**, Head of Unit, Technologies and Systems for Digitising Industry, DG Connect, European Commission: Importance of Ecosystems

Moderated Discussion & Conclusions

Session rapporteur: **Dr. João Reis**, Research Associate, University of Porto, Portugal

Joint Finnish EU Presidency Event Closing

Tuesday, October 1, 2019

MAIN SEMINAR HALL, FINLANDIA-HALL

15:30-16:30

JOINT ADJOURN

Chair and Moderator: **Tomi Korhonen**, Business Finland

Closing the Conferences and the Event with a joint synthesis, bringing up also messages from previous relevant events and building up a way forward by delivering key messages for different actors for building up a path to sustainable and resilient circular economy-based society and industry.

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CE 2019 Conference

Tuesday, October 1, 2019

SEMINAR HALL, HELSINKI

9:00-10:30 SYSTEMIC CHANGE TO CIRCULAR ECONOMY AT DIFFERENT SECTORS AND OPERATIONAL LEVELS

Chair: **Per Mickwitz**, chair of EEA Scientific Committee

- **Hans Bruyninckx**, executive director, European Environment Agency (EEA): Knowledge, skills and governance approaches for systemic transitions
- **Massimiano Tellini**, Intesa Sanpaolo: Sustainable financing supporting the transition to the Circular Economy
- **Leena Aarikka-Stenroos**, professor and CICAT2025 research consortium leader, Tampere University TAU: Circular economy catalysts accelerating the systemic change

Arnoldas Milukas (Head of Unit, Executive Agency for Small and Medium Enterprises (EASME), European Commission) will join the panel discussion.

10:30-11:15 COFFEE AND NETWORKING Poster sessions, exhibition stands are active and hands-on elementary school workshop.

11:15-12:45 TRADE-OFFS AND SYNERGIES BETWEEN CIRCULAR ECONOMY AND OTHER ENVIRONMENTAL GOALS.

Chair: **Hans Bruyninckx**, executive director, European Environment Agency (EEA)

- **Sari Kauppi**, Finnish Environment Institute and Margareta Wahlström, VTT Technical Research Centre of Finland: What kind of barriers can hazardous substances cause for the circular economy and, case demolition and recycling of construction materials
- **Tomasz Okruszko**, Warsaw University of Life Sciences (SGGW): Closing the loops on nutrient losses – Bonus Return
- **Enni Ruokamo**, Finnish Environment Institute: Circular economy and climate change mitigation.
- **Leen Gorissen**, Studio Transitio: Biodiversity in a circular economy – How can they benefit each other?

Pavel Misiga (Head of Unit, DG RTD, European Commission) will join the panel discussion.

12:45-14:00 LUNCH AND NETWORKING Poster sessions, exhibition stands are active and hands-on elementary school workshop.

14:00-15:30 LOW-CARBON CIRCULAR ECONOMY IN CITIES

Chair: **Tanja Suni**, Ministry of the Environment

- **Ester van der Voet**, Leiden University: Urban metabolism – how and why cities leak
- **Erkki Verkasalo**, Natural Resources Institute Finland: Sustainable wood construction chains and cascading approach in the circular economy
- **Johannes Kisser**, Alchemia-Nova GmbH (Austria): Circular buildings – demonstrating technical and biological cycles

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Sustainable Innovation 2019 Conference

Tuesday, October 1, 2019

TERRACE HALL (1ST FLOOR)

9:00-9:15 WELCOME AND OPENING

Moderators: **Marja-Liisa Meurice**, EIT Food; **Olli Salmi**, EIT Raw Materials; **Marko Turpeinen**, EIT Digital
Speakers: **Willem Jonker**, CEO, EIT Digital; **Andy Zynga**, CEO, EIT Food

9:15-10:45 INNOVATION FOR CIRCULAR CITIES

Moderator: **Olli Salmi**, EIT RawMaterials

The modern city is a kaleidoscope: constantly changing, amazingly diverse and sometimes disturbingly chaotic. It is also where most of human consumption happens, and where most of our greenhouse gas emissions are generated. Can we design our cities in a way that brings the best quality of life to the citizens while avoiding negative socio-environmental impacts both locally and globally? What if we made food out of thin air, near your home, ecologically? Or if we could have our goods served at our front door by autonomous low emission vehicles? What if new houses, roads and bridges emerged without noise, dust or other nuisances?

By joining this session, you will get the best answers to exactly these questions. We'll bring you the latest innovations that are just around the corner to be implemented in our cities, by leading experts and entrepreneurs.

- **Arnold Tukker** (Leiden University): Physical Accounts of Raw Materials in Cities
- **Pasi Vainikka** (Solar Foods): Food Out of Thin Air
- **Heikki Hintikka** (Foller) and Anu Seisto (VTT): Minimizing Food Waste The Smart Way
- **Marke Kallio** (Metso Minerals): Future of Urban Construction: Silent, Clean and Circular
- **Simo Säynevirta** (ABB): Digital Twins and Circular Economy
- **Jean-Philippe Bellaiche** (EIT Digital): Last Mile Autonomous Delivery
- **Anders Wijkman** (EIT Climate-KIC): Transformation to net-zero requires a Systemic Approach

10:45-11:15 COFFEE AND NETWORKING

Poster sessions and exhibition stands are active.

11:15-12:45 INNOVATORS OF THE FUTURE

Moderator: **Marko Turpeinen**, EIT Digital

One of the guiding principles of EIT is that "there is no innovation without education". This session showcases the integration of innovation and education at EIT activities. The session focuses on two main areas where EIT is making a difference: (1) Impact on University Education Renewal and (2) Impact on Wider Society Learning.

We will discuss how EIT integrates innovation and entrepreneurship in its education programmes through presenting some of highlights of our education programmes and student experiences. We will also illustrate examples of how EIT reaches out to the society at large: especially with special programmes towards high school students and learning to innovate through gamification.

- **Timo Nyberg** (EIT Digital): EIT Digital Summer Schools, linking students to industry
- **Armida Torreggiani** (RM@Schools): Raw MatTERS Ambassadors at Schools
- **Mikael Fogelholm** (University of Helsinki) and **Tomi Erho** (VTT): EIT Food Innovation Launch – Games of Foods
- **Vincent Kuo** (VXT Research) and **Martyna Szydłowska** (Fractuscan): "From EIT student to entrepreneur"-fireside chat with entrepreneurial EIT student alumni

12:45-13:45 LUNCH AND NETWORKING

Poster sessions and exhibition stands are active.

Sustainable Innovation 2019 Conference

Tuesday, October 1, 2019

TERRACE HALL (1ST FLOOR)

13:45-15:15 AGILE AND SUSTAINABLE INNOVATION – SCALING UP!

Moderator: **Marja-Liisa Meurice**, EIT Food

Building on technological and digital capabilities like AI, focusing on Consumer Trust and Traceability and looking for opportunities in several business sectors are the common factors for these highly interesting Start-ups who will tell their story. What happens when these agile and innovative start-ups need to scale-up? What role large companies and EIT has been playing? What compromises are necessary for sustainable future?

Join us in this future oriented session to discover transversal, agile, sustainable and innovative Start-ups with High-tech demonstrations of robotics and IoT.

Experience a lively Start-up panel – “Me and EIT” – sharing experiences and impact of being part of EIT Community

EIT Digital:

- **Jussi Suomela**, Partner, GIM Robotics, Sensible 4 – GIM Robotics, Sensible 4 are experts in all subsystems related to mobile robotics, including positioning, mapping, navigation, environment perception, mechatronics design and artificial intelligence. They have decades of experience in integrating autonomous functions to existing machines.

EIT Food:

- **Ykä Marjanen**, Co-Founder and Business Development Manager, Grain Sense – GrainSense develops the first truly hand-held device for grain quality measurement. For the first time, farmers, seed producers and plant breeders will be able to rapidly measure the key parameters of their crops in the field and make decisions that can improve profitability. We are bringing a major improvement to food production and logistics. Our hand-held device measures the protein, moisture, oil, and carbohydrate content of cereal grains and other crops.

- **Linda Grieder**, Founder & CEO, Rethink-Resource, Switzerland – Rethink-Resource: Turning Waste into Opportunities. RethinkResource creates an online marketplace where producing and processing companies can trade their side and waste streams. This combination of a marketplace and community is a platform solution that allows active users to emerge as industry leaders with respect to resource stewardship.

EIT Raw Materials:

- **Matti Järveläinen**, CEO, ColloidTek – ColloidTek, Every liquid has a fingerprint. Collo is an innovative solution that changes the way the industry operates with liquids. It is about liquids fingerprinting through suspension analysis.

15:15-15:20 WRAP-UP AND CLOSING

Moderators: **Marja-Liisa Maurice**, EIT Food; **Olli Salmi**, EIT Raw Materials; **Marko Turpeinen**, EIT Digital

Joint Finnish EU Presidency Event Closing

Tuesday, October 1, 2019

MAIN SEMINAR HALL, FINLANDIA-HALL

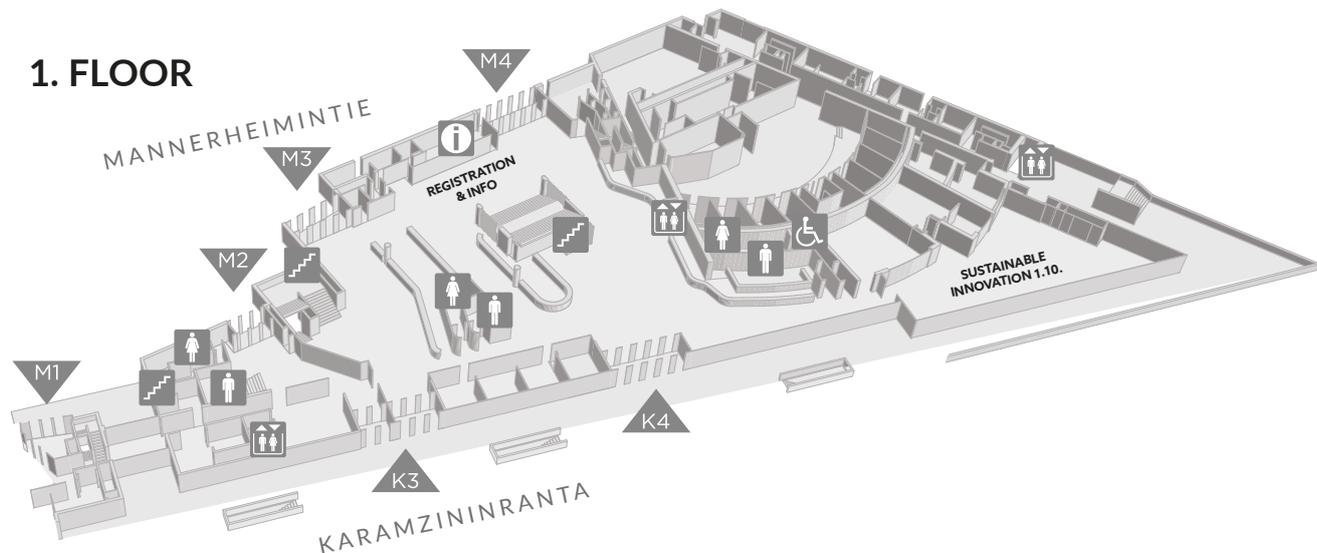
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1. FLOOR



2. FLOOR



MANUFUTURE CONFERENCE SESSIONS 1.10.

11:15-12:45 (A1)

**Artificial Intelligence - Research and Innovation
Needs for the Industry**

14:00-15:30 (A2)

Circular Manufacturing and Sustainability

11:15-12:45 (B1)

**Manufacturing Europe: Towards an EU-Innovation
and Education Systems for Manufacturing
and the Society**

14:00-15:30 (B2)

**Emerging and Disruptive Technologies in
Manufacturing**

EXHIBITION AREA

1. VTT
2. Turku University of Applied Sciences
3. Academy of Finland
4. Lune Group Oy Ltd
5. European Chemicals Agency
6. City of Lappeenranta
7. EIT
8. Pure Waste Textiles
9. UPM Responsibility
10. CLIC Innovation Oy
11. Finnish Environment Institute
12. Future Materials Norwegian Catapult Centre
13. EFFRA