

# **Going Green – CARE INNOVATION 2023**

May 9 – 11, 2023 Parkhotel Schönbrunn, Vienna (Austria)



Tuesday, May 9, 2023

| 09.00 – 18.00 | Registration (Parkhotel Schönbrunn, 1130 Vienna, Hietzinger Hauptstraße 10-14)  |  |  |
|---------------|---|--|--|
| 10.30 - 12.00 | Opening and Keynote Presentation (Room 1 & 2)   |  |  |
|               | Welcome and Opening         B. Kopacek, Conference Chair         NTT's Challenges in Space, Environment and Energy to Realize a Resilient Society         Y. Maeda, NTT Space, Environment and Energy Laboratories, JP  |  |  |
| 12.00 – 13.30 | Lunch Break   |  |  |
|               | Room 1<br>Market-driven Developments  | WEEE Management  |  |
| 13.30 – 15.30 | <ul> <li>A study on environmental impact assessment in a drastic future pioneered by ICT</li> <li>X. Zhang, NTT Space, Environment and Energy Laboratories, JP</li> <li>Metrics for Energy Efficiency of Data Centres</li> <li>HP. Siderius, Netherlands Enterprise Agency, NL</li> <li>Sustainability and circularity of electric vehicles' battery electronics: design, function and composition study</li> <li>L. Talens Peiro, Autonomous Univ. of Barcelona, ES</li> <li>Definition, classification, and mapping of pervasive electronic products</li> <li>H. Steiner, A. Jandric, S. Salhofer, Univ. of Natural Resources and Life Sciences, AT; C. Zafiu, H. Böni, EMPA, CH</li> <li>Improved sales forecasting methods for new-released products and a support model for additional production decisions using forecasting</li> <li>H. Kanagaki, Univ. of Tokyo, JP</li> <li>Deglobalization or how can manufacturing regionalization not only boost Circular Economy but also mitigate risk of product shortage?</li> <li>P. Carminati, Lexmark, CH</li> </ul> | <ul> <li>Electronics recycling and the Circular Economy: A dream or a reality?</li> <li>M. Costache, GreenWEEE International, RO</li> <li>Mainstreaming the Costs of Going Circular - Bottlenecks and Solutions</li> <li>P. Singhal, S. Sehgal, S. Aggarwal, Karo Sambhav, IN</li> <li>Electronics Recycling, the ultimate &amp; challenging step in its circularity - an end-processor's viewpoint</li> <li>S. Art, Umicore, BE</li> <li>Interim findings from multiple innovation projects in the WEEE sector</li> <li>P. Leroy, WEEE Forum, BE</li> <li>A new approach to recycling and recovery rates to promote circularity and sustainability in WEEE recycling</li> <li>A. Wehrli, K. Remmen, EMPA, CH</li> <li>Governance of the Circular Economy for the electronics industry: What role do e-waste management standards play?</li> <li>M. Toal, KU Leuven, BE</li> </ul> |  |
| 15.30 - 16.00 | Coffe   | e Break  |  |

Tuesday, May 9, 2023

|               | Room 1  | Room 2   |
|---------------|---|--|
|               | Towards Sustainability  | Efficient recovery processes of Precious Metals from European<br>end of life resources with novel technologies - Technologies<br>developed by 4 EU funded projects PEACOC & FIREFLY, Pheidias<br>& Lydia   |
|               | Connecting ICT with nature - a holistic view on target setting and impact assessment<br>P. Tanskanen, J. Isoaho, S. Kallio, A. Rezaki, Nokia, Fl                                    | PEACOC (HORIZON Europe) - "Pre-commercial pilot for the efficient recovery of Precious Metals from European end of life resources with novel low-cost technologies":   |
|               | <b>Epson Dry Fiber Technology: Circularity in Paper and Textile Recycling</b><br>H. Ohlsson, Epson, DE  | <b>Objectives and concept of the PEACOC project</b><br>N. Akil, PNO Innovation, BE   |
| 16.00 – 18.30 | New assessment method for corporate value including ESG issues<br>toward well-being society   | <b>Unlocking value in Iow-grade PCBAs</b><br>P. Andre, Univ. of Liege, BE  |
|               | M. Hara, NTT Space, Environment and Energy Laboratories, JP<br><b>REthinking Electronics</b>  | Innovative separation technologies for WEEE valorization<br>F. Di Maio, TU Delft, NL   |
|               | Ecotron: Creating value with sustainable electronics  | Microwave assisted leaching of PGMs from EoL autocatalysts.<br>F. Kukurugya, Vito, BE  |
|               | Decreasing environmental footprint with printed electronics   | Gas-Diffusion Electrocrystallization<br>L.F. Leon, Vito, BE  |
|               | Reducing electronic waste created by printed circuit boards through<br>additive printing onto novel substrates<br>J. Kettle, S. Zhang, R. Mukherjee, K. Grant, Univ. of Glasgow, UK | Selective recovery of PGMs from spent autocatalyst using deep eutectic<br>solvents<br>M. Ibanez, Tecnalia, ES  |
|               |   | FIREFLY (HORIZON Europe) - "Flexible, predictive and renewable<br>electricity powered electrochemical toolbox for a sustainable transition of<br>the catalyst-based European chemical industry"<br>S. Thayumanasundaram, Vito, BE                              |
|               |   | The Pheidias and Lydia EIT Raw Materials Upscaling projects:<br>"Recovering Platinum Group Metals from Automotive Catalysts and Fuel<br>Cells/Electrolyzers using a Universal Hydrometallurgical Process"<br>I. Yakoumis, MONOLITHOS Catalysts & Recycling, GR |
| 19.30         | Dinner at typical Viennese Heuriger   |  |

### Wednesday, May 10, 2023

| 08.00 - 18.00 | Registration (Parkhotel Schönbrunn, 1130 Vienna, Hietzinger Hauptstraße 10-14)   |   |  |
|---------------|--|---|--|
|               | Room 1   | Room 2  |  |
| 08.30 – 10.30 | Circular Product Design and New Business Models  | Workshop: From recyclability to circularity assessment –<br>Methods, Metrics and Monitoring   |  |
|               | Designing for short or long cycles? - A discussion on critical trade-offs in circular product design<br>A. Mestre, Univ. of Lisbon, PT   | The interactive workshop aims at collecting perspectives on the status of measuring circular performance of products, identifying use-cases, opportunities, and challenges as well as barriers. The input provided during the   |  |
|               | Barriers to the circular design of invasive laparoscopic instruments with electronic components<br>T. Hoveling, J. Faludi, C.A. Bakker, TU Delft, NL   | workshop will feed into the development of a data management and monitoring framework for future assessments.   |  |
|               | Modular smartphones – potentials and limits<br>M. Proske, E. Poppe, N. Nissen, M. Schneider-Ramelow, Fraunhofer IZM, DE  | What is the status and pathway of harmonization and   |  |
|               | <ul> <li>Product-as-a-service for critical raw material efficiency, market security, and resilience: current challenges, possible solutions and research questions</li> <li>T. Sakao, E. Sundin, J. Vogt Duberg, Linköping Univ., SE</li> <li>P. Golinska-Dawson, TU Poznan, PL</li> <li>J. Hidalgo Crespo, A. Riel, Univ. Grenoble Alps, FR</li> <li>J. Peeters, KU Leuven, BE</li> <li>A. Green, D. Cassidy, Compliance and Risks, IE</li> <li>F. Mathieux, European Commission JRC Ispra, IT</li> </ul> | <ul> <li>standardization for the assessment product's circular performance?</li> <li>What metrics help to guide circular product design and product life-<br/>cycle management?</li> <li>What are data requirements and data management strategies to<br/>assess circular product performance?</li> <li>K. Remmen, A. Wehrli, EMPA, CH</li> </ul> |  |
|               | When are Connectivity PSS feasible in Infrastructure ICT?<br>K. Grobe, S. Jansen, ADVA Optical Networking, DE  | V. S. Rotter, TU Berlin, DE   |  |
|               | The road toward a resource-efficient economy needs key resources and<br>new roles for orchestrating the implementation of a sustainable business<br>model: the case of small household equipment sharing<br>H. Kooli-Chabane, Univ. Paris Nanterre, FR<br>O. Pialot, Toulon Univ., FR<br>C. Kuszla, OMNES Education, FR  |   |  |
| 10.30 - 11.00 | Coffee Break   |   |  |

### Wednesday, May 10, 2023

|               | Room 1  | Room 2   |
|---------------|---|--|
|               | Green Deal – Connecting the dots of EU legislation initiatives and its impact to corporate compliance programs  | Plastics Recycling   |
| 11.00 – 13.00 | <ul> <li>Regulatory instruments – holistic view on Taxonomy, Eco-crime, Market Surveillance, CS3D, CSRD but also material compliance under e.g. REACH</li> <li>M. Schneider, Assent Compliance, DE</li> <li>EU policy making mechanism</li> <li>S. Andrews, Assent Compliance, NL</li> <li>Compliance management 2.0 - managing through the regulatory jungle</li> <li>M. Piotrowski, Assent Compliance, DE</li> <li>Outlook DPP, ESPR, Batteries, etc – regulatory demands at the horizon affecting supply chain engagement</li> <li>M. Schneider, S. Fortunato-Esbach, Assent Compliance, DE</li> <li>Understanding your new legal obligations and potential liabilities under emerging EU Digital Themed regulations which defines a wide range of software applications as products, which require an unprecedented amount of new data collection to meet the numerous reporting obligations</li> <li>R. Takhar, Assent Compliance, NL</li> <li>S. Fortunato-Esbach, Assent Compliance, DE</li> </ul> | <ul> <li>Adding new plastic types to the list of plastics recycled from WEEE <ul> <li>C. Slijkhuis, MGG Polymers, AT</li> </ul> </li> <li>Challenges and opportunities using innovative technologies for recycling plastics containing flame retardants <ul> <li>M. Schlummer, L. Strobl, S. Wagner, Fraunhofer IVV, DE</li> <li>L. Tange, ICL-IP, NL</li> </ul> </li> <li>Advanced sorting classification models based on Raman spectroscopy and chemometrics to improve WEEE plastics recycling</li> <li>A. Pocheville, I. Uria, P. Espana, O. Salas, GAIKER, ES</li> <li>T. Caris, A.R.C. Neiva, Coolrec, NL</li> </ul> <li>Automated spectroscopic analysis of non-valorised plastics from WEEE <ul> <li>S. Van den Eynde, S. Waumans, T. Dimas, D.J. Diaz-Romero, I. Zaplana, J. Peeters, KU Leuven, BE</li> </ul> </li> <li>Alkaline sulfide leaching of antimony bearing fire resistant plastics - Closing the loop between plastics and minerals <ul> <li>M. Simao, Univ. Liege, BE</li> </ul> </li> <li>Circular Economy Concepts for Fuel Cells</li> <li>S. Grieger, J. Oehl, Fraunhofer IWKS, DE</li> <li>F. Sauer, MAIREC Edelmetallgesellschaft, DE</li> <li>K. Kramer, Electrocycling, DE</li> <li>T. Wannemacher, Proton Motor Fuel Cell, DE</li> <li>E. Schulte, KLEIN Anlagenbau, DE</li> |
| 13.00 – 14.00 | Lunch   |  |

|               | Room 1   | Room 2   |
|---------------|--|--|
|               | Legislation Updates  | Advanced Recycling Technologies  |
| 14.00 – 16.00 | The Challenges of Regulating the Circular Economy for EU/EEA Member<br>States: Between pioneering and wait-and-see approaches<br>E. Maitre-Ekern, Univ. of Oslo, NO<br>Market Surveillance and the Ecodesign Directive<br>R.D. Huulgaard, A.M. Bundgaard, Aalborg Univ., DK<br>Convergence: How Circular Economy, Sustainability and Climate Change<br>are influencing Compliance paradigms and driving organizational change<br>in the Corporate Technology sector<br>J. Johnson, Cisco Systems, US<br>Emerging EPR type policies in North America region and how does it<br>compare with EU legislation<br>F.P. Mosciatti, Landbell Group, DE<br>America Invented the Throwaway Economy, and Right to Repair Is Trying<br>to Fix It<br>E. Chamberlain, K. Wiens, iFixit, US<br>Mexico Circular Economy and Waste Management updates<br>E. Perrier, ORBIS Compliance, US<br>Evolution of EPR for Enabling Circularity<br>P. Singhal, S. Sehgal, S. Aggarwal, Karo Sambhav, IN | <ul> <li>EC funded Project ALR4000 - Preliminary outcomes and case study <ul> <li>L. O'Donoghue, Votechnik, IE</li> </ul> </li> <li>NEW-RE Neodymium and Rare Earth from Waste Recycling <ul> <li>V. Corbellini, A. Accili, L. Campadello, Erion, IT</li> </ul> </li> <li>A short comparative overview on the precious metals hydrometallurgical recovery from spent autocatalyst and spent photovoltaic panels <ul> <li>I. Birloaga, F. Veglio, Univ. of L'Aquila, IT</li> </ul> </li> <li>The emergence of NdFeB-magnet recycling from an innovation systems perspective <ul> <li>M. Koese, S. van Nielen, R. Kleijn, Leiden Univ., NL</li> </ul> </li> <li>Comparison of the analytical methods ICP-MS and XRF for the analysis of PC motherboards <ul> <li>A. Jandric, C. Zafiu, F. Part, S. Salhofer, Univ. of Natural Resources and Life Sciences, AT</li> </ul> </li> <li>Improving the recycling of embedded electronics in passenger vehicles (Project EVA II) <ul> <li>M. Capelli, C. Marmy, EMPA, CH</li> </ul> </li> </ul> |
| 16.00 – 16.30 | Coffee Break   |  |

|               | Room 1  | Room 2   |
|---------------|---|--|
|               | Information Management (Digital Product Passport)   | 3R and Automated Dismantling   |
| 16.30 – 18.30 | <ul> <li>Circular Economy and Sustainable Product Development Case Study: A Digital Portal for product information delivery and potential for Product Digital Passport</li> <li>D. Poon, Cisco Systems, US</li> <li>Digital Product Passports: the key to end gadget hoarding and ensure responsibility</li> <li>R. Koppelaar, EcoWise Ekodenge, UK</li> <li>As less as possible and as much as necessary: WEEE recycler's information needs and technical requirements in context of the digital product passport</li> <li>E. Wagner, E. Poppe, M. Schneider-Ramelow, Fraunhofer IZM, DE</li> <li>D. Baumgärtel, M. Malzacher, I. Budde, Circular Fashion, DE</li> <li>Proof of concept for traceability of recycled gold using a blockchainbased digital product passport (DPP)</li> <li>F. Hänel, A. Dymek, R. Rainoldi, M. Dos Santos, iPoint-systems, DE</li> <li>Data exchange platform for a green, detectable and directly recyclable lithium-ion battery</li> <li>F. Hänel, M. Dos Santos, iPoint-systems, DE</li> <li>Digital Twin for Circular Economy - Literature Review and Concept Presentation</li> <li>J. Mügge, Fraunhofer IPK, DE</li> </ul> | <ul> <li>How did Product Value Retention Processes Perform During Supply Chain Disruption?</li> <li>D. Fitzsimons, European Remanufacturing Council, BE</li> <li>Mobile phone reuse businesses in Japan and an estimation of the their environmental load reduction effects</li> <li>M. Matsumoto, AIST, JP</li> <li>C. Clemm, Fraunhofer IZM, DE</li> <li>H. Awazu, J. Tominaga, NewsedTech, JP</li> <li>Design and evaluation of a robotic unscrewing station for the non-destructive semi-automated disassembly of EoL electronics</li> <li>M. Piessens, M. Abdelbaky, C. Zhou, Y. Wu, B. Engelen, D. De Marelle, J. Peeters, KU Leuven, BE</li> <li>A Cobot Based Application For PCB Disassembly</li> <li>L. Gandini, P. Rosa, S. Terzi, Politecnico di Milano, IT</li> <li>Computer vision based defect detection in color and depth images for electrical and electronic equipment (EEE) reuse: a case study for laptops Y. Wu, C. Zhou, W. Sterkens, M. Piessens, D. J. Diaz-Romero, W. Dewulf, J. Peeters, KU Leuven, BE</li> <li>Envisioning the potential reuse and repair of electric vehicle batteries L. Talens Peiro, M. Sanclemente Crespo, X. Gabarrell i Durany, Autonomous Univ. of Barcelona, ES</li> <li>M. Fervorari, M. Colledani, Politecnico di Milano, IT</li> <li>F. Alarte, B. Alvarez, ENVIROBAT, ES</li> </ul> |
| 20.00         | Reception by the Mayor of Vienna at the City Hall (Wappensaal, Rath   | aus, entrance: 1010 Vienna, Lichtenfelsgasse 2, Feststiege 2)  |

# Thursday, May 11, 2023

| 08.00 - 14.00 | Registration (Parkhotel Schönbrunn, 1130 Vienna, Hietzinger Hauptstraße 10-14)   |   |  |
|---------------|--|---|--|
|               | Room 1   | Room 2  |  |
|               | Life Cycle Assessment  | Interdisciplinary team up to escape the rare earth trap   |  |
| 08.30 – 10.30 | <ul> <li>Design aspects and environmental impacts of using Wide Gap based semiconductor technology in consumer chargers</li> <li>S. Glaser, Vienna Univ. of Technology, AT</li> <li>A. Diaz, ECODESIGN company engineering @ management consultancy, AT</li> <li>M. Makoschitz, AIT Austrian Institute of Technology, AT</li> <li>Comparative LCA of a pluggable SIM card and an eSIM: Methodological considerations when assessing digital services</li> <li>D. Sanchez, K. Schischke, Fraunhofer IZM, DE</li> <li>T. Szolkovy, Giesecke+Devrient Mobile Security, DE</li> <li>Leasing and Refurbishment of Electronics: A Sustainable Business Model?</li> <li>Two LCA case studies of consumer electronics</li> <li>P. Murphy, Logitech, IE</li> <li>Methodological Concepts for Calculation of Avoided Impacts of ICT Systems</li> <li>A. Andrae, Huawei Technologies, SE</li> <li>A model for LCA of Internet-of-things applications</li> <li>N. Ullrich, F. Piontek, C. Herrmann, Sphera Solutions, DE</li> <li>Simplified-LCA-based optimum EEE lifetime analysis</li> <li>K. Grobe, ADVA Optical Networking, DE</li> </ul> | <ul> <li>Nanostructured magnets with tuneable properties by severe plastic deformation <ul> <li>A. Bachmaier, L. Weissitsch, S. Wurster, Erich Schmid Institute of Materials Science of the Austrian Academy of Sciences, AT</li> <li>Bulk rare earth free permanent magnets <ul> <li>Weissitsch, S. Wurster, A. Bachmaier, Erich Schmid Institute of Materials Science of the Austrian Academy of Sciences, AT</li> </ul> </li> <li>Electric machine design and system-level optimization for reduced rareearth material usage <ul> <li>Marth, G. Bramerdorfer, Johannes Kepler Univ. Linz, AT</li> </ul> </li> <li>Lose your bearings and magnets: Possibilities to reduce magnetic material in the life cycle of bearingless disposables</li> <li>W. Gruber, Johannes Kepler Univ. Linz, AT</li> </ul> </li> <li>The potential of new magnet grades for a more sustainable electric machine production <ul> <li>A. Bachmaier, G. Bramerdorfer, E. Faigen, M. Benner, E. Marth, A. Kovacs, M. Gusenbauer, T. Schrefl, Erich Schmid Institute of Materials Science of the Austrian Academy of Sciences, AT</li> </ul> </li> <li>Multiscaling strategies in computational magnet design <ul> <li>M. Gusenbauer, H. Özelt, A. Kovacs, J. Fischbacher, T. Schrefl, CD Lab for magnet design through physics informed machine learning, AT</li> </ul> </li> <li>Global production networks of rare earth permanent magnets: From labbased research, development and innovation to industrial-scale production</li> <li>E. Faigen, M. Benner, A. Bachmaier, G. Bramerdorfer, E. Marth, A. Kovacs, M. Gusenbauer, T. Schrefl, Univ. of Vienna, AT</li> </ul> |  |
| 10.30 – 11.00 | Coffee Break   |   |  |

# Thursday, May 11, 2023

|               | Room 1  | Room 2  |
|---------------|---|---|
|               | Towards Circularity   | Challenges in e-waste recycling in the Global South   |
| 11.00 – 13.00 | <ul> <li>Silicon as a carbon-free reductant: Yellow phosphorus production from phosphoric acid</li> <li>A. Okamoto, S. Kashiwakura, S. Kosai, E. Yamasue, Ritsumeikan Univ. JP</li> <li>Ecodesign as a business element for ensuring future competitiveness and changing business model</li> <li>A.X. Saeidiani-Rädler, S. Rädler, AC Rädler Umwelttechnik, AT</li> <li>Characteristic Analysis of Elderly Workers for Human-Centric Production Systems</li> <li>K. Hayakawa, Y. Kishita, S. Kondoh, S. Shirafuji, Y. Umeda, Univ. of Tokyo, JP</li> <li>M. Nishio, Toyota, JP</li> <li>DISTENDER EU project: Integrating mitigation and adaptation strategies to climate change risks at local level through a participatory process</li> <li>R. San Jose, J.L. Perez-Camano, TU Madrid, ES</li> <li>Developing Architecture-based scenario design methodology for platformenabled circular economy business: A case study of waste collection system</li> <li>M. Tsunezawa, T. Hirota, K. Sugiyama, K. Tasaka, KDDI Research, JP</li> <li>Y. Kishita, Y. Umeda, Univ. of Tokyo, JP</li> <li>Research on the Contribution of Local Communities to Decarbonization T. Obara, K. Tanaka, Univ. of Tokyo, JP</li> </ul> | Opening remarks and StEP introduction<br>20 years of international cooperation in WEEE management in<br>developing and emerging economies<br>Heinz Böni, EMPA, CH<br>Challenges in e-waste management in the Caribbean<br>S. Salhofer, Univ. of Natural Resources and Life Sciences, AT<br>Challenges of e-waste management in India<br>P. Singhal, Karo Sambhav, IN<br>Implementation of co-working space concept for incorporation of e-waste<br>informal sector<br>D. A. Wehrli, A Social Impact Startup, CH |
| 13.00 – 14.00 | Lunch   |   |

# Thursday, May 11, 2023

|               | Room 1   | Room 2  |
|---------------|--|---|
| 14.00 – 16.00 | Sustainability Assessment  | Resource Management   |
|               | Miniaturization in infrastructure ICT equipment - environment vs.<br>functionality<br>K. Grobe, ADVA Optical Networking, DE  | Promoting circular economy through resource-efficient electronic<br>recycling across Latin America<br>A. Cueva, C. Hernandez, S. Alhilali, K. Ives-Keeler, B. Casanas, UNIDO United<br>Nations Industrial Development Organization, AT  |
|               | size assessment<br>M. Billaud, D. Sanchez, M. Proske, C. Clemm, L. Stobbe, N. Nissen, M.<br>Schneider-Ramelow, Fraunhofer IZM, DE  | Toolbox - Transforming Informal E-Waste Scrap Yards into Formalized<br>Recycling Sites in Ghana<br>M. Spitzbart, C. Stolzenberg, V. Johannes, R. Baldwin Asiedu, F. Acheampong,<br>Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), DE  |
|               | LCA<br>T. Heckmann, O. Vetter, C. Herrmann, A. Saraev, Sphera Solutions, DE  | <ul> <li>Waste compensation as a financing mechanism for electronic waste collection in Africa</li> <li>A.M. Alvarez, Closing the Loop, NL</li> <li>Scenario analysis towards sustainable lithium-ion battery circulation system</li> <li>R. Sun, Y. Kishita, F. Tao, Y. Umeda, Univ. of Tokyo, JP</li> <li>C. Scheller, S. Blömeke, T. Spengler, C. Herrmann, TU Braunschweig, DE</li> <li>Finnish perspective on nickel in EV batteries lifecycle - system dynamic modelling of demand, waste generation, and effect of recycling and reus</li> <li>P. Slotte, E. Pohjalainen, J. Hanski, P. Kivikytö-Reponen, VTT, FI</li> </ul> |
|               | to Green Growth and "Sobriety by Design" rationalized business<br>processes: an illustration of through the Artificial Intelligence sector<br>C. Gans Combe, Inseec Business School, FR<br>J. Yun Jun Kim, W. Mouhali, A. Baccar, Y. Rakotondratsimba, ECE Paris |   |
|               | Evaluating energy consumption in distributed recycling system for plastic wastes using home-based 3-D printers in Japan<br>H. Mizoguchi, S. Kosai, S. Kashiwakura, E. Yamasue, Ritsumeikan Univ., JP   |   |
| 16.00 – 17.00 | Closing Session (Room 1)   |   |

| How can ICT enable Circular Economy Business<br>Models?  | Circular Economy in practice in the Electric and<br>Electronic sector  | Paving the way for innovative Circular Economy<br>products and services in the electronic and<br>automotive sectors: Lessons learned and way<br>forward  |
|--|--|--|
| Introduction to C-SERVEES<br>V. Vert Belenguer, AIMPLAS, ES  | Introduction to C-SERVEES<br>F. Aparicio, AIMPLAS, ES  | General animation & Welcome<br>I. Carracedo Fernandez, AIMPLAS, ES   |
| Introduction to the Circular Economy Business<br>Models in C-SERVEES<br>M. Osmani, Loughborough Univ., UK  | Introduction to the Circular Economy Business<br>Models in C-SERVEES<br>M. Osmani, Loughborough Univ., UK  | An introduction to C-SERVEES Circular Economy<br>Business Models' Innovation & PSS demonstration<br>M. Osmani, Loughborough Univ., UK  |
| The C-SERVEES digital information exchange platform<br>T. Oberhauser, Circularise, NL<br>How will the Circularise web application enhance  | Implementation of the C-SERVEES Circular Economy<br>Business Models in the demonstrations<br>A.I. Diaz, GAIKER, ES   | How ICT tools can help in implementing Circular<br>Economy Business Models?<br>T. Oberhauser, Circularise, NL  |
| value chain transparency?<br>T. Oberhauser, Circularise, NL  | <b>The TV and washing machines demonstrations</b><br>Ö. Ünlüer, Arcelik, TR  | S. Fozza, RINA-C, IT   |
| How will the Soltel platform foster public information<br>exchange?<br>J.C. Liebana, Soltel, ES<br>How will the RINA-C logistics tool improve circularity?<br>S. Fozza, RINA-C, IT<br>Implementation of the C-SERVEES Circular Economy | Lessons learnt from the ALM (monitoring equipment<br>used in telecoms) demonstration<br>K. Grobe, ADVA Optical Networking, DE<br>The printer and toner cartridges demonstration<br>P. Carminati, Lexmark, CH<br>Results of the optimization and validation (technical, | Panel discussion "How did the C-SERVEES Circular<br>Economy Business Models work in practice?<br>Demonstrations on TVs, ALMs, printers and toner<br>cartridges and washing machines"<br>M. Liberati, PNO Innovation, IT; A.I. Diaz, GAIKER, ES; Ö.<br>Ünlüer, Arcelik, TR; K. Grobe, ADVA Optical Networking,<br>DE; P. Carminati, Lexmark, CH; HC. Eberl, European<br>Commission DG RTD   |
| Business Models in the demonstrations<br>A.I. Diaz, GAIKER, ES   | economic, environmental performance) of the<br>demonstrations<br>F. Aparicio, AIMPLAS, ES  | Panel discussion "Resource-efficient Circular<br>Product-Service Systems (ReCiPSS) and how large-<br>scale implementation of circular manufacturing<br>systems in the electronics / white goods and<br>automotive sectors can lead to a stable circular<br>economy in the EU"<br>A. Farazee, KTH Royal Institute of Technology, SE; A.<br>Mihelic, Gorenje, SI; M. Wagner, C-ECO, DE; R. de<br>Bruijckere, Signifikant, SE; HC. Eberl, European<br>Commission DG RTD |
|  |  | Panel discussion "Policy-relevant results and insights<br>for the Circular Economy, jointly provided by C-<br>SERVEES and ReCiPSS"<br>F. Rosasco, RINA-C, IT; J. Koller, Fraunhofer IPA, DE; Ö.<br>Ünlüer, Arcelik, TR; M. Furkel, Lexmark, BE; A. Mihelic,<br>Gorenje, SI; M. Wagner, C-ECO, DE; O. Chassais,<br>European Commission DG ENV   |

# **Evening Program**

#### Dinner at a Viennese Heuriger

Tuesday, May 9, 2023 19.30

The real Viennese "Heurige" or wine taverns. Numerous songs have been dedicated to them; they have served as a backdrop for many films. However, in the legendary comfortable atmosphere, they primarily offer the Viennese and their guests entertainment, fine Viennese wines and the fitting culinary accompaniment. A place in which to feel good, in which everyone is warmly welcome. The real Viennese Heurige, in which only Viennese wines are served, are identified by a bunch of pine branches and by the word "Ausg'steckt" written on a board, which simultaneously shows when the tavern is open.

However, the word "Heurige" does not just describe the tavern itself, but also the wine from the current vintage, which – in accordance with tradition - may be so-called until 11 November (St Martin's Day). Alongside the pleasant wine by the glass, the Viennese Heurige also offer their guests fine wines sold in "Bouteillen" (0.75 litre bottles), reflecting the richness of the variety and the special Viennese climate, and corresponding glass and tableware.

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Location: Bio-Weingut und Heuriger Zahel Entrance: 1230 Vienna, Maurer Hauptplatz 9 www.zahel.at/en/ Tram Station "Maurer Hauptplatz" (60)

#### Reception by the Mayor of Vienna in the City Hall Wednesday, May 10, 2023 20.00

The Reception by the Mayor of Vienna will take place in the Vienna City Hall, one of the most splendid landmarks amongst the numerous monumental buildings along Vienna's Ring Road. Designed by Friedrich Schmidt (1825 – 1891), it was erected between 1872 and 1883. The architecture of the Ringstraße is dominated by Historicism. The City Hall was built in Gothic style, with a tower similar to Gothic cathedrals.

Today the City Hall is the head office of Vienna's municipal administration. More than 2000 people work in the building. Visitors are stunned by the magnificent appointments of the state rooms, which frequently provide an atmospheric backdrop to various events such as concerts or balls.

Location: Wappensaal, Rathaus Entrance: 1010 Vienna, Lichtenfelsgasse 2, Feststiege II Underground Station "Rathaus" (U2), Tram 2 "Rathaus", Tram 1 or D or 71 "Rathausplatz, Burgtheater"

# **iNEMI** Workshop on Roadmapping Technology for Electronics Circularity

The International Electronics Manufacturing Initiative, iNEMI, invites you to participate in an informative and interactive half-day roadmapping workshop on the future of circularity for electronics, in association with CARE INNOVATION 2023 in Vienna, Austria. The workshop will share insights on the topic, from the new iNEMI Roadmap and from industry generally. There will be an opportunity to brainstorm in an open dialog with other experts, the future requirements and challenges surrounding circularity in electronics hardware.

### Agenda:

- Overview of Circularity in Sustainability Electronics in the iNEMI Roadmap: Carol Handwerker, Purdue University.
- Circularity in Electronics Industry Perspectives speaker TBC
- Brainstorming Future Trends in Circularity for Electronics– moderator Francis Mullany, iNEMI.

Presentations and a workshop report will be shared with participants after the event. Workshop outcomes will be incorporated into <u>the online iNEMI Roadmap</u>.

### Logistics:

- Location Parkhotel Schönbrunn, Vienna, Austria
- Time 14:00-17:30 CET Monday 8 May 2023
- Registration free, but as places are limited, please register here before 24 April: <u>https://forms.office.com/r/anDaHHp5Ew</u>