

POST EVENT REPORT

2ND
RECYCLING
CONVENTION

RECYCLING WEEK 2024



2024

ROME, ITALY

The **2nd World Recycling Convention (Recycling Week 2024)**, held in Rome, showcased a comprehensive exploration of innovations and challenges in the recycling and circular economy sectors. The event brought together key industry figures, policymakers, and experts across various domains, providing a robust platform for discussions on sustainability, waste management, and resource efficiency.

Key highlights of the conference included sessions focused on advancements in e-waste recycling, circular electronics, and strategies for sustainable materials management. The exhibition featured industry leaders showcasing cutting-edge technologies in recycling machinery, urban mining solutions, and sustainable product design, aiming to promote a circular approach across the value chain.

Networking opportunities and panel discussions allowed participants to engage directly with experts on pressing topics such as policy measures for waste reduction, innovations in plastic recycling, and sustainable supply chain practices. The event also emphasized practical solutions, including the integration of AI and robotics in recycling processes and the use of renewable resources like bio-based materials and biofuels derived from waste.



The first day began with a formal registration session and the distribution of badges. Participants gathered in Room 1, ready for the exciting opening of the Keynote Forum.

Keynote Forum: The session kicked off with an introduction, followed by the first keynote titled *"Material Circularity in Shipping"* by Henning Gramann from GSR Services GmbH, Germany. Gramann discussed the challenges and opportunities associated with integrating material circularity within the shipping industry, emphasizing the importance of circular design in reducing waste and enhancing sustainability.

The second keynote was presented by Joseph Dos Santos from Dos Santos International, USA, who delivered a talk titled *"Sandwich Belt High Angle Conveyors in Harmony with the Environment."* He explained the technological advances in conveyor systems and how these innovations align with environmental sustainability goals.

The final keynote in the morning session, *"Building Momentum for Reuse,"* was delivered by Teresa Bradley of Race to Zero Waste, USA. Bradley highlighted the critical role of reuse in achieving a circular economy, focusing on practical strategies for businesses to foster reuse at scale.

Coffee Break: Attendees took a break from the morning's sessions to network and engage in informal discussions in the foyer.



Morning Session: Recycling - Reduce, Reuse, and Recovery

This session was moderated by Henning Gramann, and it covered a diverse range of topics related to recycling technologies and systems for reducing waste and recovering valuable materials.

- **Robert Sekula** of Hitachi Energy Research, Poland, presented *"Challenges with the Recycling of High Voltage Electrical Insulation,"* focusing on the difficulties of recycling materials used in high voltage insulation and the innovative methods being developed to address these challenges.
- **Carlota Hernandez** from INESCOP, Spain, followed with her presentation on *"Optimizing the Glycolysis Process of Polyurethane Foams."* She discussed the advances in foam recycling technologies and their potential for reducing polyurethane waste.
- **Sello Tsebe** from Mintek, South Africa, introduced a fascinating case study, *"Simulation of an Integrated Process Flowsheet to Recover Valuable Metals from Waste Cathode Ray Tubes and Printed Circuit Boards."* This presentation highlighted the growing importance of e-waste recycling and the recovery of metals from electronic waste.
- **Deepakshi Mittal** of the University of Waterloo, Canada, shared her insights on *"Waste as a Resource: Enhancing Resilience and Recycling Economy in Kibera's Informal Settlement."* She discussed innovative approaches to waste management in informal settlements, focusing on enhancing local recycling economies.

The session concluded with a **panel discussion** that allowed for further interaction among speakers and participants, providing an opportunity to delve deeper into the issues raised during the talks.

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Lunch Break:

Attendees enjoyed a break from the discussions to network over lunch at the hotel's restaurants.

Afternoon Session: Plastic & Recycling Technology

This session, moderated by Joseph Dos Santos, delved into advanced recycling technologies, especially in plastic waste management.

- **Steve Maraspin** from MV Labs, Italy, explored *"Plastic Sorting, Artificial Intelligence... and Trenches."* His presentation emphasized the potential of AI to enhance plastic sorting and improve recycling efficiency.
- **Matt Keith** from the University of Birmingham, UK, discussed *"Advanced Recycling of Next Generation Biodegradable Plastics,"* outlining research into biodegradable plastics and their potential to be fully integrated into circular economy systems.
- **Paolo Glerean** of Plastics Recyclers Europe, Belgium, presented on *"A Systematic Value Chain Approach to Boost the Circular Use of Plastics."* Glerean's talk focused on optimizing the entire plastic value chain to improve recycling rates and sustainability.
- **Jan Snow** from ORLEN UniCRE, Czech Republic, wrapped up the session with a talk on *"Dehalogenation and Upgrading of Pyrolysis Products for Petrochemical Applications,"* exploring new methods to make plastic waste more compatible with petrochemical processes.

Following these presentations, a second **panel discussion** took place, further deepening the conversations around the future of plastics and their recycling potential.

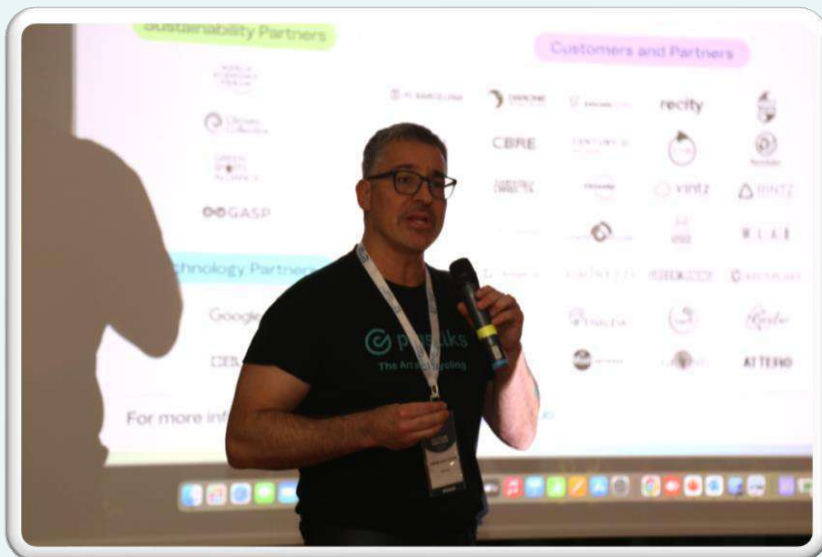
Coffee Break:

Attendees took a brief pause to refresh and engage in informal conversations.

Evening Session: Plastic & Recycling Technology / Recycling - Reduce, Reuse, and Recovery

This evening session, moderated by Hayden Sloan of Race to Zero Waste, explored cutting-edge innovations in both plastics recycling and overall waste recovery strategies.

- **André Vanyi-Robin** of Plastiks, Spain, presented on *"Blockchain-based Verification and Traceability of Plastic Recovery and Recycling to Ensure Transparency and Sustainability Compliance."* This talk highlighted how blockchain technology can revolutionize the tracking and verification of recycled plastics, ensuring that the recycling process remains transparent and sustainable.
- **Thomas Walther** of Baumer hhs GmbH, Germany, spoke about *"The Impact of Pharmaceutical Communication Rules on Recycling Messages and Recycling"*



LCA's. " His presentation addressed the challenges pharmaceutical companies face in communicating recycling information effectively while complying with regulatory constraints.

- **Hakima Mendil-Jakani** from SyMMES Laboratory, France, discussed *"Recovery and Recycling of Nafion Membranes Used in Proton Exchange Membrane Fuel Cells (PEMFCs) Through Green Chemistry."* She explored sustainable methods for recycling membranes used in fuel cells, a key aspect of the growing clean energy sector.

- **Victor Manuel Serrano Martinez** from INESCOP, Spain, concluded the evening session with a presentation on *"Sustainable Footwear Solutions: Integrating Rice Straw Cellulose into TPU and SBR Insoles for Footwear."* His talk introduced innovative methods for integrating sustainable materials into the footwear industry, demonstrating the potential for circular practices in product design.



The day ended with a final **panel discussion**, where speakers and attendees reflected on the insights shared throughout the day.

Day 1 of the 2nd World Recycling Convention was a resounding success, providing attendees with valuable insights into the latest trends, challenges, and innovations in recycling and circular economy practices. The day fostered collaboration and inspired new ideas for overcoming global waste management issues. The conference is poised to continue addressing critical environmental challenges and explore sustainable solutions over the following days.

Day 2 of the 2nd World Recycling Convention

Day 2 of the 2nd World Recycling Convention showcased an inspiring lineup of presentations and discussions focused on advancing recycling technologies and circular economy practices. The day began with Ms. Inna Dewald from Constantia Pirk GmbH & Co. KG, Germany, moderating the Keynote Forum.

The Keynote Forum featured three distinguished speakers:

1. **David Morgan** (Carbon Rivers, USA) highlighted the innovative concept of “Recycling the Impossible: Perpetual Life Cycles for Glass Fiber Composites,” showcasing advanced recycling methodologies for composites.
2. **Denis Rodrigue** (Université Laval, Canada) presented “Recycling of Polyamides: Valorization of Nylon Wastes,” demonstrating the transformation of nylon waste into valuable products.
3. **Dalia Benefatto** (DEVALIA, Italy) discussed “Sustainable Materials for Recycling and How They Contribute to Circular Economy Projects in Textiles and Clothing,” emphasizing sustainability in the textile sector.

Following the Keynote Forum, participants engaged in a networking coffee break, enjoying delicious snacks and discussions on the morning's insights.



The morning session, moderated by Ms. Benefatto, featured an impressive panel including Adrián

Amat Bernabéu (INESCOP, Spain), Simone Tirelli (Faerch Italy S.r.l., Italy), Daniele Pace (Frieden & Partners srl, Italy), and Noemi Cei (Next Technology Tecnotessile, Italy). Topics included:

- A footwear durability index for life cycle assessment.
- Sustainable practices in recycling food trays.
- Innovations in waste gasification.
- Regional industrial-urban symbiosis through the REDOL project.

The session concluded with a lively panel discussion, followed by a lunch break offering time for informal networking.

Afternoon Highlights

The afternoon session focused on **Agriculture and Food Waste Recycling**, with Prof. Denis Rodrigue serving as moderator. Presentations included:

- **Enrico Paris** (CREA-IT, Italy): “Spent Coffee Grounds: From Waste to Energy Source in Thermochemical Processes.”
- **Jenny Rissler** (Lund University, Sweden): “Utilizing Advanced Spectroscopic Tools to Enhance Waste Incineration Ash Use.”
- **M. Cristina Diez** (Universidad de La Frontera, Chile): “Agroindustrial Residues to Improve Sandy Soil Productivity.”
- **Diksha Rana** (Amity University, India): “Evaluating Waste Footprint in Urbanizing Hilly Regions.”

Each talk explored practical solutions for transforming agricultural and food waste into valuable resources.

A coffee break preceded the **Poster Presentations**, which highlighted diverse innovations:



- Precious metal recovery from electronic waste.
- Sustainable hydrogen production.
- Food by-product upcycling for high-value resources.
- Carbon capture and materials development for the concrete industry.

The day concluded with a final panel discussion summarizing key insights and a vote of thanks to the presenters and participants for their invaluable contributions.

Day 2 was a testament to the power of collaborative innovation in addressing global recycling challenges, paving the way for more sustainable practices across industries.



Day 3 Highlights: October 30, 2024

Keynote Forum: Sustainable Innovation for a Greener Future

The final day of the convention kicked off with a dynamic keynote forum. Gunnar Schomaker, from the Software Innovation Campus Paderborn, Germany, delivered a compelling talk on *Sustainable Digital Infrastructures*, highlighting the role of digital solutions in driving environmental sustainability. This was followed by Maurizio Filippo Acciarri from Italy's National Research Council, who presented *The Urgent Shift: Harnessing Renewable Energy for a Sustainable Italy*, emphasizing Italy's critical transition to renewable energy sources for a more sustainable future.

Elza Bontempi from the University of Brescia, Italy, followed with an innovative session on *Innovation in Recovering Strategic Metals from Spent Lithium-Ion Batteries Using Microwave Technology*. Her research showcased cutting-edge technology aimed at improving metal recovery processes in the recycling industry, particularly concerning electronics.



Morning Session: Solutions in Recycling Industries

The morning session, moderated by Schomaker, delved into the solutions emerging within the recycling industry for plastics, paper, glass, and metals. Francesca Chionchio of NextChem Tech S.p.A. in Italy discussed *Innovative*

Approaches in Plastic Waste Chemical Recycling, presenting new techniques for chemical recycling to handle plastic waste more effectively. JT Marburger from Circular Solutions Advisors, USA, addressed the topic *Making Big Events Environmentally Friendly: The Final Four Scores One for Recycling*, offering a case study on integrating recycling practices in large-scale events.



Lukasz Pazdur from the University of Antwerp, Belgium, highlighted *Integrated Chemical Recycling of Polyurethane Waste*, discussing the pathway from model systems to proof-of-concept in recycling complex polyurethane materials. This session underscored the importance of scalability in recycling innovations.

Panel Discussions and Networking

A panel discussion followed, engaging speakers and participants in a vibrant exchange of ideas about the future of recycling technologies. This was followed by a networking lunch, providing attendees with an opportunity to forge new collaborations and partnerships.

Afternoon Session: Technological Advancements & Circular Economy

The afternoon session, moderated by Maurizio Filippo Acciarri, focused on *Technological Advancements in Circular Economy*. Ricardo Estrada from Plastilene Group, USA, explored how *Regulatory Frameworks Can Promote Circularity in Developing Countries*, outlining how governance can stimulate sustainable practices even in regions with limited resources. Valeria Bernardini from Genesis Italy presented on the role of *Thermal Natural Gas Cracking as a Step Towards Energy Clean Transition*, discussing the importance of transitioning to cleaner energy sources for a sustainable future.

Evening Session: Sustainability & Circular Economy in Logistics

The evening session, moderated by Steve Whettingsteel from Krysteline Technologies Ltd, UK,



shifted focus to sustainability within logistics and supply chains. Christi C. McGee of Circular Solutions Advisors, USA, emphasized the importance of *Creating Coalitions and Partnerships Across the Supply Chain* to drive sustainability goals. Bernardo Nicoletti from Temple University, Italy, shared insights on *Reverse Logistics and Recycling: A Winning Approach to Support Sustainability*,

while Hamza Elnawal from the Man-Made River Project in Libya highlighted the critical role of *Water Recycling* in large infrastructure projects.

Irene Dini from the University of Naples Federico II, Italy, concluded the evening with a session on *The Potential of Marine-Based Nutricosmetics*, demonstrating how marine resources could be utilized sustainably for the cosmetics industry.

The event concluded with a final panel discussion, reflecting on the key takeaways from the day and the overall convention. Participants left with a renewed commitment to advancing sustainability and recycling practices, with new insights and connections to drive the global movement towards a circular economy.

The 2nd World Recycling Convention successfully highlighted the importance of innovation, collaboration, and policy in advancing recycling technologies and creating a more sustainable future for all.

Feedback and Outcomes

The 2nd World Recycling Convention was widely praised for its comprehensive agenda, high-quality presentations, and interactive sessions. Feedback from participants indicated a strong appreciation for the diverse range of topics covered and the opportunity to engage with industry leaders. Many attendees noted the valuable insights gained from the keynote forum and expressed interest in implementing the innovative strategies discussed at the event.

Several key outcomes emerged from the convention, including:

- The identification of new trends and technologies that have the potential to reshape the recycling industry.



- Enhanced awareness of the importance of stakeholder collaboration in achieving circular economy goals.
- The establishment of new partnerships and business connections aimed at driving sustainable practices in waste management.

Conclusion

The 2nd World Recycling Convention successfully brought together industry professionals, innovators, and thought leaders to share knowledge and explore solutions to the pressing challenges in recycling and waste management. The event highlighted the importance of innovation, collaboration, and regulatory compliance in advancing sustainable practices. As the industry continues to evolve, the insights and strategies shared at this year's convention are expected to play a significant role in shaping the future of recycling.

The organizers look forward to building on the success of this year's event and continuing to provide a platform for knowledge exchange and collaboration in the years to come.

Overall, Recycling Week 2024 succeeded in fostering dialogue and collaboration among stakeholders, paving the way for actionable insights and strategic partnerships in the recycling industry.

Invitation to the 3rd World Recycling Convention - Barcelona, Spain, October 29–31, 2025

After the successful completion of the 2nd World Recycling Convention in Rome, Italy, we are excited to invite you to the 3rd World Recycling Convention in Barcelona, Spain, from October 29–31, 2025.

This prestigious event will bring together leaders, innovators, and stakeholders from across the global recycling and sustainability industry. Join us for three days of insightful discussions, networking opportunities, and cutting-edge presentations on the latest trends and technologies in recycling, waste management, and sustainable practices.

The 3rd World Recycling Convention will feature:

Industry-leading Speakers: Renowned experts and thought leaders will share their insights on pressing issues facing the recycling industry today.

Workshops & Panels: Interactive sessions designed to foster collaboration and innovative solutions.

Networking Opportunities: Meet key industry players and build connections with professionals from around the world.

Exhibition: Explore the latest technologies, equipment, and services that are shaping the future of recycling.



The venue, located in the heart of Barcelona, will offer a dynamic and inspiring environment for all attendees. We are eager to continue the important conversations and initiatives that began in Rome and build momentum towards a more sustainable future.

For further details on the event, including the agenda and exhibition highlights, visit the official conference page: <https://recycling.thepeopleevents.com/> or write an email to recycling@thepeopleevents.com

