PLASTIC FREE WORLD

CONFERENCE & EXPO | EUROPE

Industry Solutions for a World **FREE** From Plastic Waste

THE GREENER MANUFACTURING SHOW

EUROPE

Europe's Leading Event For Environmental and Sustainable Manufacturing Solutions

CONFERENCE PROGRAMME

TRACK 01

Eliminating Plastic Waste

TRACK 02

Retail & Consumer Goods Packaging

TRACK 03

The Greener Manufacturing Show Conference

THE GREENER MANUFACTURING SHOW CONFERENCE

10-11 November 2021

Cologne, Germany

plasticfree-world.com

greener-manufacturing.com

TRACK 01

Eliminating Plastic Waste

DAY1: NOVEMBER 10, 2021

9:00 AM - 12:30 PM (CET) OPENING PLENARY AND KEYNOTE SESSION

9:00 am (CET)
PLASTICS, CIRCULAR ECONOMY AND EUROPE'S ENVIRONMENT – A PRIORITY FOR ACTION

Lars Mortensen
EEA Expert - Circular Economy, Consumption and Production, EUROPEAN ENVIRONMENT AGENCY

Plastics play an essential role in modern society, but also lead to significant impacts on the environment and climate. Reducing such impacts while retaining the usefulness of plastics requires a shift towards a more circular and sustainable plastics system. This talk tells the story of plastics, and their effect on the environment and climate, and looks at their place in a European circular economy. It is based on the report of the European Environment Agency (EEA): Plastics, the circular economy and Europe's environment — European Environment Agency (europa.eu). The talk also tells the story about how COVID19 has changed amounts of single use plastics in Europe, in particular face masks and gloves, as well as plastic packaging for take-away and online shopping, based on an EEA briefing: Impacts of COVID-19 on single-use plastic in Europe's environment — European Environment Agency (europa.eu).

TRACK 02

Retail & Consumer Goods Packaging

DAY1: NOVEMBER 10, 2021

9:00 AM - 12:30 PM (CET) KEYNOTE SESSION

9:00am (CET)
EXTENDED PRODUCER RESPONSIBILITY, CIRCULAR ECONOMY, MARKET ACCESS SERVICE IN EUROPE, WASTE COMPLIANCE, RECYCLING

Wojtek Swietochowski
Head of Global Sales, LANDBELL AG

Legislative enforcement and practical application of German Packaging Act contribute hugely to a new packaging design. Modulated Fees (§21), educational programme, high collection targets for 2022 and new applications for secondary raw materials: only few elements on the way to the circular economy. International multi-waste-stream compliance scheme acts as a partner for industry to deliver more innovative solutions. Circulation of packaging and products that cannot be eliminated or reused involves collection, sorting and recycling. However, this process comes at the net cost for practically all products in most geographies. The only proven and likely pathway to ensure dedicated, ongoing, and sufficient funding at scale is a fee based EPR scheme.

TRACK 03

The Greener Manufacturing Show Conference

DAY1: NOVEMBER 10, 2021

9:00 AM - 12:30 PM (CET) OPENING PLENARY AND KEYNOTE SESSION

09:00am (CET)
RECENT DEVELOPMENTS OF THE BIOECONOMY IN EUROPE AND ELSEWHERE- PERSPECTIVES FOR CONTRIBUTING TO A POST-COVID RECOVERY

Dr Christian Patermann
"Father of European bioeconomy", Former Director EU Commission and Advisor to the German Government on bioeconomy matters.

9:25am (CET)
HOW CLIMATE TARGETS CAN DRIVE INNOVATION

Bettina Siggelkow
Program Manager EcoCircle, CLARIANT

Achieving climate targets requires the full value chain to change the product portfolio toward more sustainable and circular products. Value-chain collaboration and extended product design criteria, focusing beyond application properties, also to their ability in improving the CO2 footprint, can drive innovation significantly. But what are the requirements to achieve a transition in the portfolio? What does it take internally, and which competencies need to be leveraged? Based on examples, I will show potential drivers and innovations, supporting customers in reducing their Scope 3 emissions.

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TRACK 01

9:25 am (CET)
STEALTH, HEALTH AND WEALTH

Siân Sutherland
Co-Founder, A PLASTIC PLANET

A plastic snapshot covering impact, invisibility and innovation with a glimpse into a future we can all accelerate towards with optimism.

9:50am (CET)
ACCELERATING A CIRCULAR PLASTICS ECONOMY THROUGH PARTNERSHIPS

Kristin Hughes
Director of the Global Plastic Action Partnership and Member of the Executive Committee, WORLDECONOMIC FORUM

he dramatic increase in global plastic waste and pollution has become one of the greatest environmental crises of ourtime, with around eight million tonnes of plastic waste leaking into the ocean every year. By assembling a diverse andinfluential coalition of allies dedicated to addressing this challenge, the Global Plastic Action Partnership (GPAP) hasforged a powerful multistakeholder platform to accelerate impact at the global and national levels. Learn more about howGPAP is harnessing the convening power of the World Economic Forum to form impactful partnerships, create alignmentamong diverse initiatives and guide an inclusive transition to a circular economy for plastics.

TRACK 02

9:25am (CET)
MOVING FORWARD WITH NEW, SCALABLE SOLUTIONS

Jürgen Dornheim
Director Corporate Packaging Sustainability & Innovation, PROCTER & GAMBLE

Major global brand owners are facing a variety of challenges in the context of sustainability and their individual environmental footprints. Procter & Gamble is developing products according to the latest findings regarding environmental compatibility, taking into account the changing expectations of customers, and ultimately also meeting the various legal requirements worldwide. Procter & Gamble will give an insight into areas in which the future for today's customers and future generations is being shaped.

9:50am (CET)
DISRUPTING THE PUBLISHING INDUSTRY WITH SUSTAINABILITY AND TECHNOLOGY

Martina Bonnier
Editor in Chief, VOGUE SCANDINAVIA

David Ekberg
Executive Vice President, Packaging Solutions Division, STORA ENSO

Vogue Scandinavia is disrupting the publishing industry in many ways and aim to become the most modern magazine and a sustainability leader in the industry. To achieve these goals, Vogue Scandinavia formed a strategic partnership with Stora Enso. In Plastic Free World Conference, Vogue Scandinavia and Stora Enso will share how they are creating eco-friendly fashion media together.

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9:50am (CET)
TO BE ANNOUNCED

Mesbah Sabur
Founder, CIRCULARISE

Juergen Henschel
Director & GM Engineered Materials EMEA, UL

10:15 AM - 10:45 AM (CET)
COFFEE BREAK

10:45am (CET)
TO BE ANNOUNCED

Petri Laakso
CEO, SOLETAIR POWER

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10:15 AM - 10:45 AM (CET)
COFFEE BREAK

10:45am (CET)

EUROPEAN PLASTIC POLICIES: STATE-OF-PLAY

Werner Bosmans
Directorate General Environment, EUROPEAN COMMISSION

Challenges linked to the production, consumption and end-of-life of plastics can be turned into an opportunity for the European Union and the competitiveness of the European industry. Tackling them through an ambitious strategic vision, covering the entire value chain, can spur growth, jobs and innovation. It can also reaffirm European leadership in global solutions and help us make the transition towards a low-carbon and circular economy, while providing citizens with a cleaner, safer environment.

11:10am (CET)

THE BASEL CONVENTION AMENDMENT ON PLASTIC WASTE AND ITS RELEVANCE TO INDUSTRY

Rolph Payet
Secretariat, BASEL, ROTTERDAM AND STOCKHOLM CONVENTIONS

During the Basel Conference of the Parties in April/May 2019, governments amended the Basel Convention to include plastic waste in a legally binding framework to make global trade in plastic waste more transparent and better regulated, while also ensuring that its management is safer for human health and the environment. At the same time, a new Partnership on Plastic Waste was established to mobilize business, government, academic and civil society resources, interests and expertise to assist in implementing the new measures, to provide a

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10:15 AM - 10:45 AM (CET)
COFFEE BREAK

10:45am (CET)

THE 3L INITIATIVE - COLLECTS PLASTIC FROM RIVERS IN ASIA TO PREVENT OCEAN PLASTIC

Karsten Hirsch
CEO & Co-Founder, PLASTIC FISCHER

The Cologne-based Startup was founded in 2019 as the first company to focus on rivers to prevent marine plastic pollution. The social enterprise creates social and environmental impact by using locally built, and very simple (low-tech) technology. This approach allows Plastic Fischer to carry out the services at low-cost. The operations in India and Indonesia are financed by European corporations that want to contribute to solving the global plastic crisis. Organisations can finance Plastic Fischer's operations per ton of plastic collected and processed. The whole process is third-party verified.

1:30pm (CET)

HOW DOES PACKAGING SUSTAINABILITY INFLUENCE CONSUMERS' PERCEPTION OF A PRODUCT, AND HOW CAN THIS BE POSITIVELY SHAPED BY INVOLVING PACKAGING DESIGNERS AT AN EARLY STAGE?

Claudia Rivinius
Marketing Director, STI GROUP

Packaging is the first touchpoint for a product and therefore significantly impacts product perception. This presentation will explain which aspects of packaging development to take into account, how packaging can be made more sustainable, and what the supply chain considerations are, from cradle to cradle. It will also explain how to sustainably inspire shoppers at the POS, how to make your POS presence more

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11:10am (CET)

CHEMICALS STRATEGY FOR SUSTAINABILITY AND CIRCULAR ECONOMY: TOWARDS NON-TOXIC MATERIAL CYCLES

Luis Carretero Sanchez
Legal officer, EUROPEAN COMMISSION

In a clean circular economy, it is essential to boost the production and uptake of recycled materials and ensure that both virgin and recycled materials and products are always safe. This will require a combination of actions upstream to ensure that products are safe and sustainable-by-design, and downstream to increase the safety of and trust in recycled materials and products. The creation of a well-functioning market for secondary raw materials and the transition to safer materials and products will also require solutions for a number of issues, in particular the lack of adequate information on the chemical content of products. The presentation will focus on the actions that the European Commission is implementing (or will implement in the future) with the aim of ensuring that information on chemicals is always available and that substances of concern in products and recycled materials are minimized.

11:35am (CET)

GREENING VALUE CHAINS THROUGH CIRCULAR BUSINESS MODELS

Lars Mortensen
EEA Expert - Circular Economy, Consumption and Production EUROPEAN ENVIRONMENT AGENCY

This talk looks at green manufacturing focusing on how to ensure more circular and sustainable manufacturing for consumption in Europe. Plastic and textiles are explored as examples of sectors with high environmental and climate impacts from manufacturing. The talk explores

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set of practical supports – including tools, best practices, technical and financial assistance. Dr Payet will reveal the latest in regard to the Basel Convention Plastic Waste Amendments.

11:35am (CET)

THE CURRENT STATE AND FUTURE OF PLASTIC TAXES

Michelle Carvell
COO, LORAX EPI

There is a growing movement around the world to tax plastic packaging, whether it be to fill budget gaps left by COVID-19 or to bolster infrastructure for recycling. Plastic taxes have already been passed in many places, including the UK, Italy and the EU, and are being proposed around the globe at national and regional levels. Taxes are based on different policies in each country, such as recycled content or amounts recycled, and can have a major impact on cost of goods for many packaging systems. As part of our presentation, Lorax EPI will give examples of what these taxes may cost brand owners and provide a global update on current statuses of various plastic taxes under development.

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sustainable, how to credibly communicate your ecological commitment at the POS, how to set up a display in just a few seconds and save not only time but also CO2, and how Alpro convinces retailers with its climate-neutral display.

11:35am (CET)

THE BEAUTY OF CIRCULARITY- COTY'S CLOSED-LOOP CRADLE-TO-CRADLE TRANSPORT PACKAGING SYSTEM

Volker Maier
Global Luxury Engineering Leader and Engineering Director, COTY

A global beauty company and member of the Ellen MacArthur "Circular Economy 100 Network",COTY will share their experience with a circular innovation project at their bottling plant in Cologne (Germany), which combines the use of secondary organic feedstock and digital technology within a closed-loop system. Their highly scalable pilot project substantiatesthe business case for a cradle-to-cradle (C2C) approach for industrial transport packaging. It turned out to be an engine for innovation, collaboration, and growth for all partners in the C2C value cycle. In addition to listed benefits backed-up by production data, COTY will illustrate the scaling potential across different supply chains, industries and regions.

TRACK 03

the role of circular business models as a means to enable technical, social and business model innovation in manufacturing. It looks at enablers for innovation and circular business models, including policy enablers, education and consumption. It builds on a recent briefing by the European Agency (EEA) on circular business models A framework for enabling circular business models in Europe — European Environment Agency (europa.eu) and recent EEA studies on plastic: Plastics, the circular economy and Europe's environment — European Environment Agency (europa.eu) and on textiles: Textiles in Europe's circular economy — European Environment Agency (europa.eu) and Plastic in textiles: towards a circular economy for synthetic textiles in Europe — European Environment Agency (europa.eu).

12:00 pm (CET)

CCU IN THE EU CONTEXT

Anastasios Perimenis
Secretary General, CO2 VALUE EUROPE

This presentation will explain the potential of CCU to contribute to EU's 2030 and 2050 climate goals and provide an overview of projects, funding support and the policy context for CCU in Europe.

12:30 PM - 1:30 PM (CET)
LUNCH BREAK

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12:00pm (CET)

PANEL DISCUSSION: TAXES, BANS AND PRODUCER RESPONSIBILITY - WHAT IS THE RIGHT POLICY MEASURE FOR IMPROVING PLASTIC OUTCOMES?

David Newman
Managing Director, BIO-BASED AND BIODEGRADABLE INDUSTRIES ASSOCIATION (BBIA)

Michelle Carvell
COO, Lorax EPI, USA

Berry Wiersum
CEO, SAPPI EUROPE

Werner Bosmans
DG Environment, EUROPEAN COMMISSION

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12:00pm (CET)

PANEL DISCUSSION: FIBRETECH 2.0 – EMULATION OF FOOD-GRADE PLASTIC PACKAGING FORMATS AT SCALE

Michael Laermann
Managing Director, REASON & RHYME

Volker Maier
Global Luxury Engineering Leader and Engineering Director, COTY

Tahsin Dag
CEO, PAPACKS

Timo Porsch
CEO, PERIPLAST

Stefan Wolyniec
CEO, BUSHPLANET

Panelists from three industries (food, beauty, packaging) discuss their experience with fiber-based materials from secondary feedstock combined with organic barrier coatings and modern injection molding techniques to replace conventional plastic packaging with new formats that are recyclable, compostable, and certified food-safe. Their showcase will feature the emulation of plastic transport trays, cosmetic cream jars and coffee capsules made from aluminum.

TRACK 03

1:30 PM - 2:55 PM (CET)
PRODUCTION OF SUSTAINABLE CHEMICALS AND LOW-CARBON CHEMICALS

1:30 pm (CET)

CATALYST FOR INNOVATION - ETHANOL-BASED 1,3 BUTADIENE FOR SYNTHETIC RUBBER

Dr Sandra Hofmann
Technology & Innovation Director, Synthetic Rubber, TRINSEO

Vladimir Trembovolsky
CEO, ETB CATALYTIC TECHNOLOGIES

The supply of raw materials is about to be revolutionized in the pursuit of sustainable feedstocks that support a circular bioeconomy. The development of new generation materials will only take place through collaboration within the existing value chain and with new technology providers, considering the principles of green chemistry. To this end, Trinseo - a global materials company, and ETB - a start-up developing unique catalysts for new, sustainable and bio-based processes, have partnered to understand what is required for the production of bio-based, high-purity 1,3-Butadiene, derived from ethanol as a ubiquitous, safe chemical.

1:55 pm (CET)

ARTIFICAL PHOTOSYNTHESIS – SPECIALTY CHEMICALS FROM CO2

Martin Demler
Project Manager, Defossilation, EVONIK CREAVIS GMBH

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12:30 PM - 1:30 PM (CET)
LUNCH BREAK

1:30 PM - 5:00 PM (CET)
TECHNOLOGIES & SOLUTIONS DIRECTLY ELIMINATING PLASTIC

1:30pm (CET)
GROWING CONSUMER DEMAND FOR PLASTIC REDUCTION

Jeremy Schwartz
Chairman of The Board, KANTAR

1:55pm (CET)
SMART DESIGN FOR SUSTAINABLE AND CIRCULAR SOLUTIONS

Jonathan Demierre
Team Section Lead - Circular and Sustainable Product Engineering, HELBLING

How products and systems are designed is key to address sustainability challenges, such as climate change, plastic waste, loss of biodiversity, or resource depletion. Using life cycle thinking and a holistic approach is key to minimize the environmental impact of the products that we use every day. The design of sustainable products is a multi-criteria and multi-parameter optimization in which many aspects needs to be considered such as the targeted markets and consumers, the manufacturing process, and the product end-of-life. A few practical examples will illustrate how a sustainable and circular design approach can make the difference.

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12:30 PM - 1:30 PM (CET)
LUNCH BREAK

1:30 AM - 5:00 PM (CET)
ELIMINATION OF PROBLEMATIC OR UNNECESSARY PLASTIC PACKAGING

1:30pm (CET)
BUILDING SUSTAINABLE PLASTIC-FREE BRANDS

Lorenz von Seherr
Geschäftsführer, PLANTBASE GMBH

(Almost) anyone can sell natural cosmetics. Being truly sustainable and still developing innovative and helpful products, on the other hand, is not so easy. PlantBase has turned the cosmetics world upside down. The combination of innovative, plastic-free products and packaging and dealing with new digital challenges at the same time was the decisive success factor for PlantBase. Why it is becoming increasingly important to combine sustainable ideas with thoughtful strategic thinking?

1:55pm (CET)
CLOSING THE LOOP CASE STUDY FOR THE RETAIL INDUSTRY – FROM CORRUGATED WASTE TO SHOPPING BAGS

Marco Macorati
Head of Sustainable Business Solutions, MONDI

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2:20 pm (CET)
PANEL DISCUSSION: LOW-CARBON CHEMICAL PRODUCTION DRIVEN BY CONSUMER DEMAND

Christopher vom Berg
Sustainability Assessment, Policy and Strategy, NOVA-INSTITUTE

Arne Kätelhön
managing director, CARBON MINDS

Friedrich Fries-Henrich
CIRCULANIA

2:45 PM - 3:05 PM (CET)
COFFEE BREAK

Coffee served in the Exhibition Hall **Level 1**

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2:20pm (CET)

PATHWAYS TO A CIRCULAR PLASTIC PACKAGING SYSTEM IN GERMANY

Sophie Herrmann
Partner, SYSTEMIQ

Dr. Bernhard Bauske
Senior Advisor Marine Litter Reduction Programme, WWF DEUTSCHLAND

Plastics are both an amazing material and an epitome of the current, linear production and consumption model. While plastic pollution abounds in the Global South, plastic packaging systems in the Global North, including Germany, equally remain fundamentally linear and wasteful: more than half of the waste is still waste-to-energy incinerated, and of the other half most is exported, or open-loop recycled. While the need to transition towards a circular economy has been made abundantly clear by many, this study addresses how such a vision can become reality. We show that waste volumes can be reduced by 40%, virgin consumption by over 60% and waste to energy-incineration by over 70% until 2040.

2:45 PM - 3:15 PM (CET)
COFFEE BREAK

TRACK 02

2:20pm (CET)

PANEL DISCUSSION: THE COMPOSTABLE CONUNDRUM - WHEN IS IT THE RIGHT TIME TO USE A COMPOSTABLE MATERIAL?

Siân Sutherland
Co-Founder, A PLASTIC PLANET

David Newman
Managing Director, BBIA

Marco Ricci
Coordinator, CONSORZIO ITALIANO COMPOSTATORI

Werner Bosmans
Directorate General Environment, EUROPEAN COMMISSION

Harmen Spek
Innovation & Solution Manager, PLASTIC SOUP FOUNDATION

This panel of experts will discuss : • The confusion on compostables • Chicken or egg • Food waste collections from 2023 • Future opportunities

TRACK 03

3:05 PM - 4:20 PM (CET)
DECARBONISING AND CREATING LOW CARBON PRODUCTS

3:05 pm (CET)

DECARBONIZING PRODUCTS BY UNDERSTANDING HOW YOUR PRODUCTION IMPACTS YOUR CARBON FOOTPRINT

Alexandra Karnig
Business Operation Lead, DOCONOMY

To capture the essence of the 2030 calculator, which provides oversight to what in your production affects the carbon footprint the most.

3:30 pm (CET)

ALUMINIUM – MATERIAL OF CHOICE FOR SUSTAINABLE PRODUCT SOLUTIONS

Andy Doran
Senior Manager, Sustainability and Recycling Development, NOVELIS EUROPE

Aluminium has a key role in the transition to a climate-neutral and circular economy. It is lightweight and, despite other materials, infinitely recyclable – without loss of quality. The lowest carbon and most sustainable aluminium is recycled aluminium. At Novelis, we are building on the infinite recyclability of aluminium to make circularity happen, bringing the aluminium back into the loop to manufacture new high-quality products, from beverage cans to automotive, in line with our Purpose of Shaping a Sustainable World Together. Novelis' low carbon, sustainable aluminium solutions help our customers to achieve their own sustainability goals, reduce emissions and preserve our precious natural resources. The most effective way to reduce the carbon footprint of the aluminium used in final products is to

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3:15pm (CET)

REPLACING SYNTHETIC FIBRES THROUGH OPEN INNOVATION AND FLEXIBLE TECHNOLOGY: HOW WE DEVELOP FUNCTIONAL CELLULOSE FIBRE SOLUTIONS FOR HIGH-PERFORMANCE APPLICATIONS

Ilka Kaczmarek
Innovation Manager, KELHEIM FIBRES GMBH

Our vision is to use our cellulosic fibres to enable the production of fully biodegradable solutions with performance comparable to products containing synthetic fibres. Fields of applications where the replacement of synthetic fibres can be achieved thanks to our innovative solutions include disposable Hygiene products (Femcare, Adultcare, Babycare, (flushable) wipes), functionalized textiles, reusable Hygiene Products (e.g. period panties).

3:40pm (CET)

TECHNOLOGICAL OPTIONS TO MAKE PLASTICS CIRCULAR

Dr Christian Haessler
SVP & Head of Circular Economy Program, COVESTRO

Christian will give a presentation on technolgical Options to make palstics circular. in thsi respect, the well established way of chemcia Recycling pkays an important role and the Technology Needs to be further developed, including the collecting, sorting and seperating of plastic waste so that the amount of mechnical recycled plastic can be increased.

TRACK 02

2:50 PM - 3:20 PM (CET)
COFFEE BREAK

3:20pm (CET)

REPLACING PLASTICS IN E-COMMERCE PACKAGING: THE FUTURE OF SUSTAINABLE PACKAGING DESIGN

Elizabeth Staab
Rigid Packaging Global Marketing Manager, H.B. FULLER

As e-commerce embarks on its next wave of exponential growth, fulfillment centers and CPG brands are seeking to create sustainable, innovative packaging design to provide a competitive edge. This presentation will share how H.B. Fuller's breakthrough, patent-pending, bio-based Sesame Evolution tear tapes are causing e-tailers to reimagine easy opening solutions for e-commerce packaging using plastic alternatives. Learn why packaging components, including tapes and adhesive, are critical to thoughtful, sustainable e-commerce packaging design. Discover how H.B. Fuller Sesame Evolution PSA tear tapes support sustainable packaging goals by enhancing the unboxing experience and reducing plastic while also adding more usable fiber to the recycling stream.

Coffee served in the Exhibition Hall **Level 1**

TRACK 03

maximize the recyclability and recycled content. We look forward to working with all partners along the value chain to progress on our pathway to net carbon neutrality, and help make aluminium the material of choice now and for future generations.

3:55 pm (CET)

FEEL THE CHEMISTRY AT PORT OF ANTWERP: STRATEGIC PARTNERSHIPS THAT CREATE INSPIRING OPPORTUNITIES

Dries Vangheluwe
Advisor Business Development, PORT OF ANTWERP

This presentation will explore the challenges and opportunities within the chemical industry and how companies are investing their resources to develop new technologies. Ports can play a pivotal role in the recycling landscape.

4:20 PM - 6:00 PM (CET)
DESIGNING AND MANUFACTURING WITH SUSTAINABLE MATERIALS

4:20 pm (CET)

NAVIGATING YOUR WAY TO MAKING YOUR PRODUCTS CIRCULAR

Efrat Friedland
Founder, MATERIALSCOUT

You have probably heard about the few successful case studies of brands that proved circular economy can indeed lead to business growth. However, transferring their strategies to your own products can be overwhelming. How to create a truly circular product? Where to begin? Is sourcing sustainable materials

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4:05pm (CET)

SUSTAINABLE MASTERBATCH SOLUTIONS FOR PLASTIC CONVERTERS

Omri Mazar
Product Manager, TOSAF GROUP

Tosaf has made it a priority to find more sustainable practices in Plastics Manufacturing. I would like to elaborate on four different segments and present solutions in each of the segments: • Recycle enablers – solutions that ease processing of recycled raw materials and improve it properties and performance. • Recyclable solutions – various high-performance additive and color solutions that do not compromise full recyclability. • Solutions for the biodegradable and bio-compostable polymer systems • Efficiency boosters – indirect solution to reduce overall raw material, energy, time, and labor demand.

TRACK 02

4:10pm (CET)

ADAPTING THE SUPPLY AND DEMAND ON RPET BY RETHINKING AND WEIGHT LIGHTING OF PLASTIC BOTTLES USING AN ARTIFICIAL INTELLIGENCE PLATFORM

Dr Katharina Eissing
CEO, DIGIMIND

With the commitment of major companies to a circular plastic economy, the demand for rPET has doubled to 1.1 billion pounds in 2021 while the actual production is just 333 million pounds. There is a huge opportunity to redesign and reduce the weight of the packaging without affecting the performance, thus addressing the rPET supply shortage. New technologies such as digital twin and AI are capable of solving this challenge.

END OF DAY 1

TRACK 03

enough? What exactly are sustainable materials? What about the supply chain? Packaging? Maintenance, repair and recycling? So many things to consider, and what story could you eventually communicate? Materialscout will draft a roadmap, seasoned with some case studies, to help you better plan your route to circularity.

4:45 pm (CET)

HOW CAN A COMPANY PRODUCE SAFE AND SUSTAINABLE PRODUCTS USING NO HAZARDOUS CHEMICALS?

Sonja Haider
Senior Business and Investors Advisor, CHEMSEC

Moving away from hazardous chemicals is an important step toward a more sustainable business, and substitution of problematic substances is the best way to reduce the use. Two tools for a more progressive chemicals management are presented here. The SIN list is a scientifically based list of substances that fulfill the SVHC criteria, and therefore points out the future regulated chemicals. It is used by businesses and organizations all over the world in the chemicals management system as the (M)RSL or similar list. In addition to knowing what to not use, it is important to identify the alternatives to use instead. ChemSec Marketplace is a global online platform for safer alternatives to hazardous chemicals, where suppliers can submit advertisements for safe and sustainable products.

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TRACK 01

4:30pm (CET)

PANEL DISCUSSION: FROM "PLASTIC OCEANS" TO "PLASTIC WASTE FREE OCEANS" BY 2050! HOW CAN WE GET FROM THE OLD CRIME STORY TO A NEW REALITY?

Henrik Langholf
Zukunftsmoderator/
Future Facilitator,
ZUKUNFTSMODERATION

Marko Kärkkäinen
Chief Commercial Officer -
Global, CLEWAT INC.

Uwe Amrhein
Foundation Manager -
Polyproblem Project - Plastics
& the Environment, RÖCHLING
FOUNDATION

Frank Schweikert
Managing Board, GERMAN OCEAN
FOUNDATION

The global movement for a smart use of (no) plastic is one of the most fascinating and successful happenings towards more sustainability. Where ever you go, consumers are reducing their plastic foot print, companies are developing material innovations, communities are optimizing their recycling systems, national and international networks are researching on new standards for the circular economy, governments are setting new frames through objectives and laws.

END OF DAY 1

TRACK 03

5:10 pm (CET)

EXPLORING THE USE OF SMART MATERIALS IN ENABLING MORE SUSTAINABLE SOLUTIONS

Angela Smits
Technology Development
Manager, CRODA EUROPE LTD

As a company that is committed to sustainability, Croda's purpose is to deliver Smart Science to Improve Lives. Croda's Smart Materials business creates sustainable solutions for a range of polymer applications. Our Smart Materials include bio-based polymer additives and polymer building blocks that bring not only performance benefits such as slip, anti-scratch and durability to a range of high-end applications, but many additional sustainability benefits too. During this presentation we will demonstrate how putting sustainability at the forefront of material design decisions can result in high-performance, sustainable ingredients that meet the challenging demands of environmentally conscious brand owners and OEMs. Our Smart Materials solutions offer a range of intrinsic and end-use sustainability benefits that include low to zero carbon-footprint materials, enabling lightweighting, more efficient polymer processing, in-use carbon savings and solutions to reach CPE goals.

END OF DAY 1

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DAY2: NOVEMBER 11, 2021

9:00 AM - 12:30 PM (CET)
MULTI-FACETED TOOLS FOR ESTABLISHING PLASTIC'S FOOTPRINT AND TRANSPARENCY OF THE SUPPLY CHAIN

9:00am (CET)
USING AI TO MAP, TRACK AND REDUCE LITTERING - EVERYWHERE

Alexander Dilnot-Smith
COO, ELLIPSIS EARTH

Ellipsis Earth can identify items of mismanaged litter by harnessing the power of machine learning and AI thus creatingheatmaps and pinpoints to target and reduce the high density areas of litter. Successful anti-littering campaigns and havebeen introduced using Ellipsis Earth data in BCP Council (UK), Glasgow Council (UK), Sorrento (Italy), Amiens (France),Galapagos Islands (Ecuador) and the River Ganges (Bangladesh and India).

9:25am (CET)
TOOLBOX TO EVALUATE THE BIODEGRADATION OF PLASTIC MATERIALS IN THE OPEN ENVIRONMENT

Dr Miriam Weber
Managing director, HYDRA MARINE SCIENCES GMBH

Biodegradable plastic materials are increasingly being discussed as an alternative for conventional non-biodegradable plastic and as a mitigation strategy against plastic pollution, especially for items with an intentional input (e.g. seed coating, etc.), with a high potential of loss (e.g. mulch film, etc.) and where loss is intrinsic to use

TRACK 02

DAY2: NOVEMBER 11, 2021

9:00 AM - 12:30 PM (CET)
ACHIEVING 100% OF PLASTIC PACKAGING REUSABLE, RECYCLABLE, OR COMPOSTABLE

9:30am (CET)
NEW SUSTAINABLE FOOD CONTACT MATERIALS & GLOBAL REGULATORY & COMPLIANCE CHALLENGES

Marco Scialpi
Food Contact Material Global Business Development Manager & FCM Senior Expert, TÜV INTERNATIONAL GMBH

The presentation will provide an overview of international FCM legislation, TUVR product testing and DINCERTCO certification scheme requirements for sustainable products (biobased, biodegradable, compostable and recyclable materials) and related migration safety challenges.

9:25am (CET)
SUSTAINABLE PACKAGING AS A MATTER OF WILLPOWER, NOT OF LEGISLATION - BEST PRACTICE OF SUCCESSFUL EUROPEAN RETAILERS

Georg Raffael Spindler
Manager Speciality Applications & Analytics, LENZING AG

The presentation will explain how Lenzing and PACKNATUR joined forces to shake up the way we pack fresh fruits and vegetables, and how retailers have benefited from showing the will to change. LENZING for Packaging surrounds food and other goods in naturally durable and biodegradable fibers that are of botanic origin

TRACK 03

DAY2: NOVEMBER 11, 2021

9:00 AM - 10:15 AM (CET)
TECHNOLOGIES ENABLING EFFICIENT ENERGY MANAGEMENT

9:00 am (CET)
CERTIFICATION AND THE IMPORTANCE OF VERIFIABLY GREEN MANUFACTURING

Jos Tuinenburg
Senior Consultant, THE INTERNATIONAL REC STANDARD

The use of renewable energy sources is becoming a relevant aspect of any manufacturing process. Whether it is renewably produced products such as cars or commodities like aluminum that create them, the importance of renewable energy verification and certification is undoubtedly a valuable step for the future of any manufacturing process. The importance of standardization in energy verification systems is significant to ensure processes and expectations in one country are the same as in another. For this reason, the International REC Standard has worked with governments, stakeholders, market parties, end users and their supply chains to standardize the methodology, usage and claims related to energy procurement from renewable sources. In this presentation you will learn about the background, process and implementation of renewable energy sources for your operations and in your broader industries.

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(e.g. abrasion of aquaculture nets, textiles, tiers, etc.). The question for society is how to deal with biodegradable plastic known to end up in the open environment. We present options for biodegradation testing schemes showing several scenarios. They are based on the delicate balance of either high informative value and decreased costs.

9:50am (CET)
UNDERPINNING ESG CLAIMS WITH TRACEABILITY

Douglas Johnson-Poensgen
Founder & CEO, CIRCULOR

Circulor, Total Energies and Recycling Technology recently announced their work together to track waste plastic into new polymers, including the attribution of embedded CO2 footprint to materials. This presentation will explain how this was done and share lessons applicable to the wider plastic circular economy.

10:15 AM - 10:45 AM (CET)
COFFEE BREAK

Coffee served in the Exhibition Hall **Level 1**

TRACK 02

and certified safe for food contact. Sustainably produced and fully compostable after use, LENZING cellulosic fibers are suitable for a varied range of packaging applications, from single-use botanic nets to reusable bags. In close cooperation with producers, Lenzing AG has developed environmentally sustainable single-use nets and reusable bags for fruits and vegetables made from LENZING Modal fibers of botanic origin and certified as compliant with recognized safety standards for food contact. Responsibly produced in line with Lenzing's commitment to sustainability, these vibrantly colored nets are becoming increasingly popular as a compostable substitute for plastic bags and nets that are derived from non-renewable sources and contribute to the pollution of the environment.

9:50am (CET)
THE FUTURE FOR FLEXIBLE PACKAGING / ELIMINATING PLASTIC PACKAGING WASTE WITH CIRCULAR SOLUTIONS

Betül Türel Erbay
Sustainability & Business Development Director, ELIF PACKAGING

Our packaging is part of the solution to future challenges. However, one of the biggest challenges for sustainability so far is the various processes of collecting and sorting the packaging waste and how to include them in the cycle in order to create a real circular economy. The appreciated model for the global economy is changing and developing from a linear to a circular economy. Therefore, the whole supply chain should be aligned with the standardization of recycling processes both nationally and internationally.

10:15 AM - 10:45 AM (CET)
COFFEE BREAK

TRACK 03

9:25 am (CET)
AI-POWERED DIGITAL TWINS IN MANUFACTURING PLANTS TO OPTIMIZE ENERGY CONSUMPTION

Ralf Haller
Executive Vice President Sales & Marketing, NNAISENSE

Self-optimizing/learning third-generation AI-powered digital twins will enable us to save energy. In data centers, up to 40% energy savings in the cooling systems could be achieved. This talk will describe how these AI-powered digital twins work in manufacturing facilities.

9:50 am (CET)
A NEW PARTNERSHIP OF GREENER ENERGY AND SMARTER INDUSTRY

Thomas Walter
Managing Director, EASY SMART GRID

As renewables take over the role of fossils, more energy storage is needed. Fortunately, energy flexibility can substitute electricity storage to a large degree and at a much lower cost. However, converting temporal flexibility into 'virtual' batteries and those into financial benefit also requires a fresh approach to energy management. The presentation will cover the innovative energy management by local energy markets as well as likely impacts on future production and products.

10:15 AM - 10:35 AM (CET)
COFFEE BREAK

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10:45am (CET)
GIVING NEW LIFE TO OLD MATTRESSES

Marie Buy
EMEAI Sustainability Leader, DOW POLYURETHANES

Every year, millions of old mattresses are discarded and stack up in landfills or end up in incinerators. This mattress disposal problem has escalated over the years to become a global issue that requires an innovative solution and collaborative approach. This presentation will discuss Dow's groundbreaking RENUVA™ Mattress Recycling Program". By engaging the value chain and through an advanced recycling process, the program will recycle polyurethane foam from end-of-life mattresses and turn it into RENUVA™ polyols for use in new mattresses and other applications.

11:10am (CET)
MOVING TOWARDS SUSTAINABLE AND TRANSPARENT SUPPLY CHAINS THROUGH CERTIFICATION

Hanna Buck
Program Manager & Sustainability Expert, CONTROL UNION

Is your business taking responsibility for its plastics impact? Do you have a robust process in place to back up your claims around plastics? With pressure to reduce plastic usage coming from both consumers and governments, a certification against a trusted plastics standard is of great value to businesses. Now more than ever companies need to prove the ways in which they are recycling, cutting the use of plastic and adopting alternative, compostable, materials through a credible certification process. This presentation will give an insight into which plastic-related certifications are available, the benefits of having a certification and basic procedures of certifications to move towards more sustainable and transparent supply chains.

TRACK 02

10:45am (CET)
FROM PLASTIC TO PURPOSE – A MOVEMENT BEYOND TRADITIONAL SUSTAINABILITY

Robin Guillaud
Executive Vice President, AHLSTROM-MUNKSJO

Johan Lunabba
VP Group Sustainability & Public Affairs, AHLSTROM-MUNKSJO

The world has moved forward with the sustainability initiative known as the "War on Plastic Pollution." The team at Ahlstrom-Munksjö is taking it a step further – by implementing our "from Plastic to Purpose" movement. "from Plastic to Purpose" goes beyond traditional sustainability.

11:10am (CET)
STRETCHING PAST BOUNDARIES – ADVANTAGE STRETCHWRAP AS THE SUSTAINABLE PAPER ALTERNATIVE FOR PLASTIC STRETCHWRAP

Marco Macorati
Head of Sustainable Business Solutions, MONDI

Mondi's customer-centric approach, EcoSolutions, supports customers to achieve their sustainability goals and commitments in a fact-based manner that benefits end consumers and the planet. Mondi is uniquely positioned to provide customers with paper and packaging that is fit for purpose using paper where possible, plastic when useful. To ensure our products are sustainable by design, all our activities are based around three actions: replace, reduce, recycle. 1) Replacing packaging and materials with solutions that take product requirements and sustainability into account. 2) Reducing

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10:35 AM - 11:55 PM (CET)
USING NOVEL MATERIALS TO IMPLEMENT A TRULY CIRCULAR ECONOMY

10:35 am (CET)
FROM CITRUS PEEL TO PEF PLASTICS – SUGAR-ACID-BASED HIGH-YIELD FDCA

Jouni Lattu
Customer Account Lead, VTT

The shift from fossil-based to renewable plastics requires novel ways of producing monomers. New technologies developed at VTT enable the use of pectin-containing agricultural waste, such as citrus peel and sugar beet pulp, as raw material for renewable monomers like FDCA. Aldaric acids obtained from the waste streams are stable intermediates for the production of FDCA (2,5-furandicarboxylic acid), one of the monomers of PEF, offering significant advantages compared with common routes. The stable aldaric acids bring high process yields and thereby enable an overall cost-efficient manufacturing platform. PEF is a renewable alternative to fossil-based PET with superior barrier properties. Utilizing pectin-containing waste streams opens up new possibilities for the circular economy of plastics.

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11:35am (CET)
TECHNOLOGIES AND INCENTIVES FOR RECOVERY OF PLASTIC RECYCLABLES

Ayoola Brimmo
Co-Founder & COO, CYCLED

12:00pm (CET)
PANEL DISCUSSION: SEALIVE (STRATEGIES OF CIRCULAR ECONOMY AND ADVANCED BIO-BASED SOLUTIONS TO KEEP OUR LANDS AND SEAS ALIVE FROM PLASTICS CONTAMINATION)

Amparo Verdu
Head of Novel Materials Formulation Unit, ITENE

Sam Deconinck
Deputy Lab Manager, OWS

Patrick Gerritsen
Managing Director, Bio4Pack

Decoupling plastic production from fossil feed-stock and creating a circular plastics economy are essential to achieving European Union climate, energy and sustainability goals. Approximately 12 million tons of plastic waste ends up in our oceans and contaminates our land every year. While there has been a recent shift toward the use of bio-based plastics, these materials have limitations and are not easy to recycle using current technologies. SEALIVE will address all these challenges with a vision to to reduce plastic waste and contamination on land and in seas by boosting the use of biomaterials and contributing to the circular economy with cohesive bio-plastic strategies.

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overall environmental footprint and the volume of raw material used through design, operational efficiency and raw material choices. 3) Designing packaging and materials that are optimized for recycling. How do we identify the most sustainable solution for our customers? We follow the five-steps process. 1) Challenge: How can we become more sustainable? Make packaging reusable, recyclable, biodegradable? Reduce total carbon footprint? Optimize the supply chain? We challenge and identify the objectives with our customers. 2) Analyze: All touchpoints in a product lifecycle can have an impact, such as technical requirements, supply chain, end-consumer expectations, legislation, geography, waste management and recycling. 3) Identify: We identify the areas where the packaging can have an impact and design solutions according to our sustainable product criteria. 4) Demonstrate: We join forces with internal and external application centers and certification bodies to verify that sustainable impacts have been achieved. 5) Review: A product currently reviewed as sustainable may be viewed differently tomorrow. Legislation changes, technological breakthroughs happen – we review our solutions and create packaging that is sustainable by design today and tomorrow. With our ever-changing marketplace, customer demands, health and hygiene risks, the need for an agile, sustainable business that works with stakeholders to be fully sustainable is no longer an ask, it is a must. In this presentation we will talk about how our sustainability approach successfully transitions to a new norm of sustainable products in a global environment where the demands are the new standard that needs to be achieved. We will tell our story, backed up with collaborations with major FMCGs, retailers, NGOs (EMF), recyclers and other knowledge partners. There is no single route to sustainability, the silver bullet doesn't exist – we believe in a collaborative approach supported by facts and figures.

11:35am (CET)
CONCERTED EFFORTS IN UNLOCKING CIRCULARITY

Dr Julien Renvoise
Global Circularity Manager, Plastics, TRINSEO

The presentation will discuss proven closed-loop recycling technologies for food packaging. Plastic packaging materials and waste face increasingly

TRACK 03

11:00 am (CET)
AUTOMATIC BIODEGRADATION ANALYSERS

Andrej Holobar
General manager, ECHO INSTRUMENTS

Bioplastics can be naturally biodegradable in various ecological environments such as compost, sewage wastewater, sea or algae environments of sweet or salt waters. For this reason, it is very important to have suitable laboratory methods and equipment to simulate different degradation conditions. It is also desirable that the experiments can be performed in one instrument with different setups. In algae simulating sea or natural water environments it is very important to have good conditions that simulate natural environments. Algae are aquatic, photosynthetic organisms that occupy a broad range of habitats across all latitudes; they are widespread in freshwater, marine and terrestrial ecosystems. Algae are the most important group of organisms participating in the circulation of matter and energy in ecosystems. For the biodegradation experiments, green microalgae Chlorella vulgaris (CCAP 211/11S) are often used. C. vulgaris is selected as a test organism because of its easy cultivation, its common presence in the environment, fast growth and short generation time as well as good performance in different types of wastewater. The synergy between bacteria, typically heterotrophic species, that use organic matter and O2 for growth while releasing CO2, and photosynthetic autotrophic microalgae, which use CO2 and sunlight for growth, incorporating nutrients (nitrogen, phosphorous), allows for better efficiencies in water pollutants removal. The question of how this system works in biodegradation of bioplastic is very important for ecologists, researchers and producers of bioplastics. With the help of a modular respirometer, environmental conditions can be changed to simulate natural environmental conditions during biodegradation. With such a design it is possible to make a test of degradation process in the solid (compost) and the liquid phase (sea water, wastewater or algae). The tests are run in real time, whereas the production or consumption of gases (oxygen, carbon dioxide or others, CH4, NH3, H2S) are being monitored. It is an illusion to expect that the waste bioplastic will appear only at the designated places. Bioplastics, which decompose in the compost, can

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12:30 PM - 1:30 PM (CET)
LUNCH BREAK

1:30 PM - 5:00 PM (CET)
END-OF-LIFE OPTIONS FOR PLASTIC AND VALORISING WASTE

1:30pm (CET)
THE ENTIRE CIRCULARITY SOLUTION OF PET

Christian Crépet
Executive Director, PETCORE EUROPE

Presentation Description: 1-PET is safe and sound 2- Refill at home, on the go and through bottle crates recognition within a RDS. 3- Re-use through compaction with RVM (reverse vending machines) through a RDS. 4- Mechanical Recycling 5- Chemical recycling by depolymerization. 6- CO2 performances.

1:55pm (CET)
PLASTIC WASTE INTO PURE PRODUCTS - THE NEXT GENERATION OF CHEMICAL RECYCLING

Daria Frączak
R&D Manager, CLARITER

Awareness of the global plastic waste issue has grown in recent years resulting in many regulatory and voluntary initiatives. The COVID-19 pandemic showed the importance of polymers as valuable materials that are very hard to substitute. Chemical recycling is a plastic waste treatment process complementary to mechanical recycling. Clariter offers this next generation, unique and complex technology that transforms plastic waste into high-quality, pure and ready-to-market products that are

TRACK 02

stringent sustainability targets on a global basis. To realize the vision of a circular economy, chemical recycling plays a vital role in decreasing fossil resource depletion and plastic waste as a whole. The presentation will cover chemical recycling technology, among others, to illustrate the infinite recyclability of polystyrene. It is a technology that unlocks circularity and helps create a truly sustainable future for food contact applications. The transition to a circular economy requires the concerted efforts of the whole value chain. The styrenics value chain has a particularly large role because of such technology and polystyrene's unique properties.

12:00pm (CET)
PANEL DISCUSSION: EPR AS SUSTAINABLE MODEL TO ENSURE PROPER TREATMENT OF PLASTIC PACKAGING (PANELLISTS TO BE ANNOUNCED)

Joachim Quoden
Managing Director / Lawyer, EXPRA - EXTENDED PRODUCER RESPONSIBILITY ALLIANCE

Nicole Bendsen
Secretariat of the PREVENT Waste Alliance, GIZ

Xin Chen
WWF

This session will explain the principles of extended producer responsible and respective EPR systems that can ensure the proper treatment of (plastic) packaging so that only a few plastics leak into the environment. This is achieved by establishing and running sustainable and efficient collection, sorting and recycling systems with accompanying communication and awareness campaigns backed up by anti-litter initiatives and support for companies to design their packaging in a sustainable way, leading to drastically less landfill and litter. The principles will be demonstrated by best practices from the field, meaning the work of various EPR systems in Europe and abroad.

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also be found in rivers or seas, therefore it is important to understand what impact this plastic has on our environment. For this reason, it is necessary to determine the degree of biodegradation of bioplastics in various environments, where the bioplastic waste can be found in nature. With such an approach, we can determine the influence of bioplastics on the environment and thus prevent the pollution of our natural world.

11:25 am (CET)
PANEL DISCUSSION: HOW TO SCALE UP FAST, DO'S AND DON'TS

Errit Bekkering
Business Development, CHEMPORT EUROPE

Gerard Nijhoving
SENBIS POLYMER INNOVATIONS BV

Willemijn Witteveen
Director Business Development Renewable Chemicals, AVANTIUM

Marco Schoneveld
General Manager Germany, VEPA FURNITURE FACTORY

The world urgently needs to speed up the transition towards green chemistry. How do we scale-up sustainableinnovations, so they actually make an impact on CO2 emissions and reduce the need of fossil feedstock? The panel willdiscuss the learnings from their own breakthrough technologies. How do you go about finding funds? How do you managethe risks during the scale up phase? How do you create an integrated chain with like-minded partners without losingspeed? How do you further develop technology and at the same time meet financial expectations? How can an (regional) ecosystem support your business? The panellists share their advice on what to do and what not to do.

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not blended with petrochemical streams, so come 100% from recycling. Clariter's aliphatic solvents, white oils and paraffin waxes fulfil the highest industry standards and can be used directly in many applications.

2:20pm (CET)

INCREASING THE UPTAKE OF RECYCLED MATERIALS BY BUSINESSES - A REVIEW OF BARRIERS, ENABLERS AND CIRCULAR BUSINESS MODELS

Malou van der Vegt
Researcher and lecturer circular economy, UNIVERSITY OF APPLIED SCIENCES UTRECHT

The presentation will cover the various barriers and enablers for recycling (for the total plastic industry and all types of products). The aim is to provide practical insights into the current situation in industry and to provide an overview of the barriers and enablers for the uptake of recycled plastics by businesses and other actors along the value chain. Findings are based on the outcomes from several workshops done in the Netherlands, Germany, of the United Kingdom and Belgium, as part of the Interreg project TRANSFORM-CE. Throughout the presentation, practical examples of circular business models will be given, with lots of inspiration to stimulate the uptake of recycling by businesses. Such examples will have a direct link to the outlined barriers and enablers. In summary, the barriers and enablers for recycling and the practical examples from industry will allow others to determine the steps that are needed to increase the uptake of recycled materials by businesses.

2:45 PM - 3:15 PM (CET)
COFFEE BREAK

TRACK 02

12:30 PM - 1:30 PM (CET)
LUNCH BREAK

1:30 AM - 5:00 PM (CET)
PLASTIC PACKAGING FOOTPRINT AND SUPPLY CHAIN TRANSPARENCY

1:30pm (CET)

LOWERING THE PLASTIC PACKAGING FOOTPRINT – CHANGE THE WAY YOU WALK, NOT JUST YOUR SHOES

Willemijn Peeters
Founder, Searious Business, Netherlands

Searious Business is a social enterprise committed to accelerating the circular economy for plastics. In this presentation, Willemijn Peeters will discuss how packaging can be designed with recycling in mind, how coordination across the supply chain promotes efficiency in the system, and how recycling alone will not solve the pollution crisis. Sometimes the whole system needs to be changed, not just the packaging.

Lunch served in the Exhibition Hall **Level 1**

TRACK 03

11:55 PM - 12:55 PM (CET)
LUNCH BREAK

12:55 PM - 2:40 PM (CET)
REDUCING AND AVOIDING WASTE IN THE PRODUCTION PROCESS

12:55 pm (CET)

SCOPE 3 FOR LARGE SUPPLY CHAINS USING AI: HOW TO START, AND WHAT GOOD LOOKS LIKE

Ed Maclean
Co-founder, ECONSCIA

All serious sustainability and ESG strategies need to include Scope 3 emissions, but it is one of the most difficult areas to tackle. Complex supply chains are often faced with huge data complexities and can take years to build up the reporting process. Most companies just need to get started, somewhere. Fortunately, machine learning / AI technologies can help companies to move much faster on this data challenge, and gain much deeper insight into their impact. Scope 3 is often described as a journey, and laying a strong data foundation is key for any company to get started, as well as companies maturing in their space. Ed Maclean, CEO and founder of econscia, will present an overview of modern technology approaches to emissions and sustainability strategy, and how companies can set up for success at any point in their Scope 3 journey.

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3:15pm (CET)

CONNECTING THE DOTS: HOW CIRCULARITY OF PLASTICS WILL GET US TO CLIMATE NEUTRALITY

Tara Nitz
Global Positioning & Advocacy Circular Economy, COVESTRO

The aim to become Fully Circular at Covestro is closely interlinked with the Goal set also by the Paris Agreement, the European Union and in many more jurisdictions to become climate neutral. Circularity is playing an indispensible role to reach this Goal. The more we circulate carbon in products through a Circular Economy, mechanical and chemical Recycling and the use of alternative raw materails instead of fossil raw materials, the more emissions we avoid and by closing the carbon Loop are getting closer to climate neutrality. Making pastics circular reduces not only the Plastics footprint but also the scope 3 footprint of end and consumer products, therby contributing to climate neutrality throughout the value cycle. I will aim to contribute to the discussion by highlighting those connections and the preferred policy options to build a climate-neutral CE for Plastics.

3:40pm (CET)

PLASTIC CREDITS - FRIEND OR FOE? RETROSPECTIVE OF RECENT MARKET DYNAMICS

Ina Ballik
Senior Project Manager ValuCred, YUNUS ENVIRONMENT HUB

There is a growing movement towards increasing plastic recycling rates, in particular by consumer goods companies who are facing intense pressure to reduce the environmental impact of their waste packaging. A variety of measures are being explored, including reduction of packaging, increasing recycled and recyclable content of packaging, the use of biodegradable material, packaging returning schemes, etc.

TRACK 02

1:55pm (CET)

PACKAGING & CIRCULAR ECONOMY. THE IFCO RPCS CASE

Michael Pooley
CEO, IFCO SYSTEMS GMBH

There are examples of packaging that are made to be shared and reuse. IFCO is the leading company of Reusable Plastic Containers (RPCs) for fresh produce. We manage a pool of 314 mio RPCs for about 1,7 billion trips a year, since 1992. Our crates are made of one only material (PP5), and used between 30 and 120 times before repaired or granulated to create new IFCO RPCs so that nothing is wasted.

2:20pm (CET)

THE POWER OF COOPERATION TO ACHIEVE CLIMATE-NEUTRAL GLASS PACKAGING

Vanessa Chesnot
Senior Product Policy Manager, FEVE

By 2050 the container glass industry aims to achieve a major revolution in the way glass is produced that is fit for a circular and climate neutral economy. We are proud to produce healthy, reusable and infinitely recyclable closed loop packaging. It is inert and always remains healthy and safe for food grade packaging no matter how many times it is recycled. But the container glass industry needs to address carbon emissions. The presentation will provide an opportunity to learn about concrete initiatives such as the Close the Glass Loop, The Furnace for the Future and the Glass Hallmark that the European Glass Packaging industry is putting in place to address sustainability and climate change, achieve a Circular Economy and discuss how partnerships across industrial value chains can help industry innovate and decarbonise.

TRACK 03

1:20 pm (CET)

NOTHING TO WASTE – CLOSING THE PRODUCTION WASTE LOOP WITH SIZE REDUCTION EQUIPMENT

Martin Friz
Managing Director, WEIMA

There is one step that almost any mechanical recycling or waste treatment processes have in common: shredding. We will have a closer look at the technology behind size reduction and best practices.

1:45 pm (CET)

RESULTS OF INSPIREWATER – HOW TO REACH CIRCULARITY IN THE WATER MANAGEMENT OF THE INDUSTRY

Staffan Filipsson
Research Lead, SWEDISH ENVIRONMENTAL RESEARCH INSTITUTE (IVL)

Industries that manufacture things like steel, pulp and paper, chemicals and oil and gas are some of the world's biggest users of water. These companies use water for everything from fabricating to processing, washing, diluting, cooling, and transporting. For example, steel manufacturers often take water from nearby waterways to cool down their equipment. However, with increasing concerns about water availability and quality, many processing-based companies are looking for new, sustainable solutions for more efficient water use. The EU-funded INSPIREWater project might have an answer. The goal of INSPIREWATER was to help companies in the process industry achieve sustainable water treatment solutions. By bringing together technology providers, globally leading steel and chemical manufacturing companies, research organizations, and subject matter experts, the project developed new technologies for reducing water and energy consumption, the use of chemicals, and the amount of waste. Behind

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4:05pm (CET)

PANEL DISCUSSION: INNOVATIVE FINANCING MECHANISM FOR WASTE MANAGEMENT – PLASTIC CREDITS: RISKS & OPPORTUNITIES

Mira Nagy
Advisor for Sustainable Waste Management and Circular Economy, DEUTSCHE GESELLSCHAFT FÜR INTERNATIONALE ZUSAMMENARBEIT (GIZ) GMBH

Ina Ballik
Senior Project Manager ValuCred, YUNUS ENVIRONMENT HUB

Claudia Bunkenborg
Managing Director, RODIEK & CO. GMBH

Iulia Pojum
Plastics and Solid Waste Project Manager, BV RIO

Henning Wilts
Director Division Circular Economy, WUPPERTAL INSTITUTE FOR CLIMATE, ENVIRONMENT, ENERGY

As reaction to the plastic pollution, Plastic Credits are emerging as a new means to finance plastic waste management in low- and middle-income countries through performance-based payments. This panel will discuss advantages, limitations and challenges based on the experiences of a pilot project and discussion paper by the PREVENT Waste Alliance.

END OF CONFERENCE

TRACK 02

2:45 PM - 3:15 PM (CET)
COFFEE BREAK

3:15pm (CET)

SUSTAINABLE PACKAGING INNOVATION: FOOTPRINT REDUCTION THROUGH ENGINEERED POLYSACCHARIDES

Christian Lenges
Venture Director, IFF

Polysaccharides are important biopolymers with a wide range of industrial and consumer product applications. Momentum is building for the selection of inherently sustainable material choices manufactured in more benign processes but without compromising established product performance. At the same time, increased focus is placed on material and process innovation that also enables green-house gas avoidance or even removal. For many applications, this is driving the need for new material innovation aligned with a circular economy future while also avoiding undesired end-of-life characteristics. New material innovation will need to scale efficiently while also be derived from fungible feedstocks to meet industrial application needs. IFF Health & Biosciences has developed a biocatalysis based material platform technology through the enzymatic polymerization of sucrose. The underlying enzymatic polymerization process offers the opportunity to design unique polysaccharide structures which provide numerous performance advantages across formulated products. This presentation will focus on the status of this bioprocess development, the sustainability advantaged integration within existing biorefineries and key application opportunities to enable sustainable packaging applications.

TRACK 03

INSPIREWater's success is its use of a holistic approach to water management – one that includes life cycle thinking, resource efficiency, key performance indicators, and new technologies. For example, the project developed a generic water management framework that the process industry can integrate into existing corporate management structures. The water management model is a simple and flexible method that industry can use to find efficient ways to reduce water and chemical use, along with the production of wastewater. The project also developed new technological solutions, many of which were demonstrated in real-world settings. For example, in the steel industry, the project demonstrated a simple yet robust technology for removing metal particles. In addition, INSPIREWATER demonstrated a more complex solution for recovering both water and chemicals in the stainless-steel manufacturing process. Here, the team had to overcome the challenge of recovering chemicals from the water in the industry's heavily oxidized environment. The collaboration between the companies and the researchers was the driving force behind the project's success. The smooth collaboration between all the project's partners developed practical tools that the process companies can use to improve their water usage. The water management model is currently available for use by the processing industry, although researchers are exploring its potential application in other industries.

Coffee served in the Exhibition Hall **Level 1**

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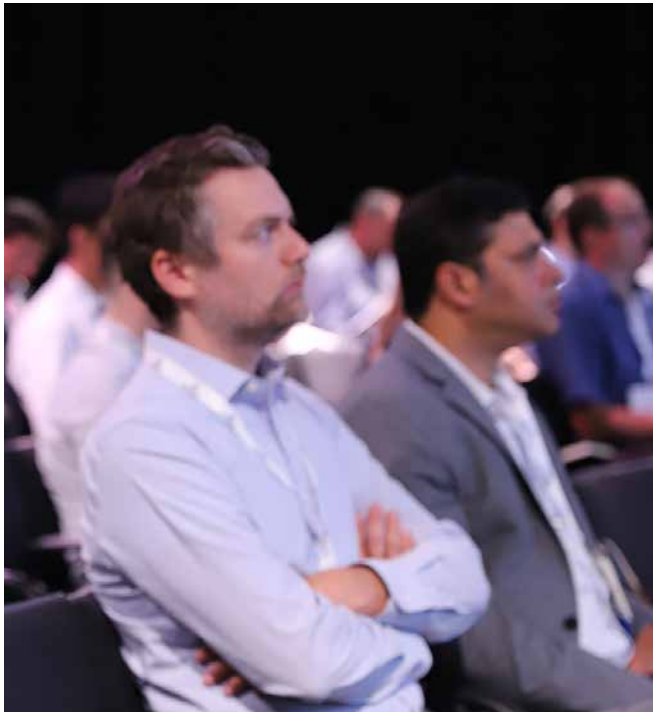
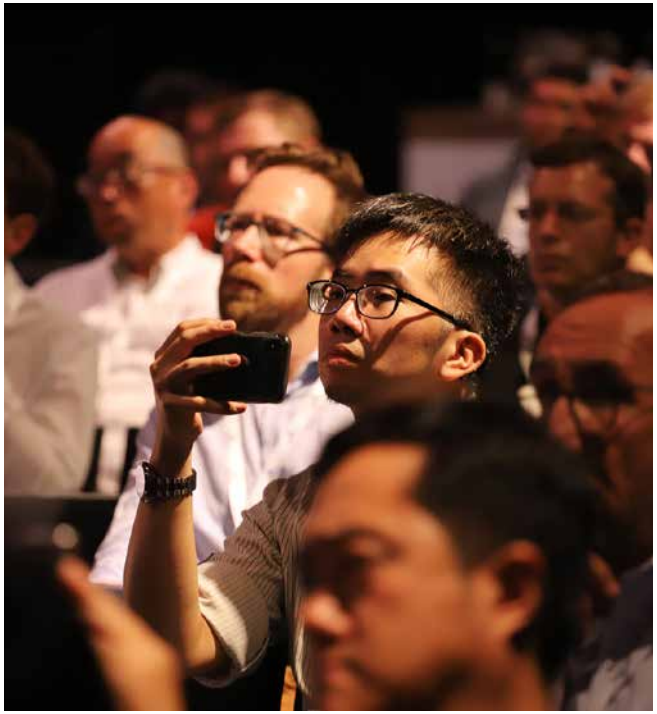




TRACK 02

3:40pm (CET)

APK'S NEWCYCLING: UPDATE ON TECHNOLOGY DEVELOPMENT, LOW-EMISSIONS RECYCLATES AND LATEST PROJECTS

Kristy-Barbara Lange
Head of Public Affairs, APK AG

APK AG is an innovative plastics recycler whose Newcycling process enables the plastics and packaging value chains to meet two major challenges of today's plastics economy: increase quality of plastic recyclates and keep emissions low. In the first half of 2021 APK plans to realise a major campaign at its industrial-scale Newcycling plant in Merseburg (8,000 t/a) using post-consumer waste from flexible plastic film streams as input material. The presentation will share news on insights gained on quality of recyclate, purification potential and emissions reduction potential. Furthermore, the presentation will map the potential contribution of advanced physical Recycling Technologies to the European Commission's 2025 and 2030 targets.

TRACK 03

2:10 pm (CET)

PANEL DISCUSSION: EXPLORING HOW DIGITAL TECHNOLOGIES CAN BE USED TO TRACK MANUFACTURING SUPPLY CHAINS AND SECOND LIFE OF MATERIALS TO EASE THE GLOBAL CLIMATE CRISIS

Ellen Cary
Head of Sustainability, CIRCULOR

Douglas Johnson-Poensgen
Founder & CEO, CIRCULOR

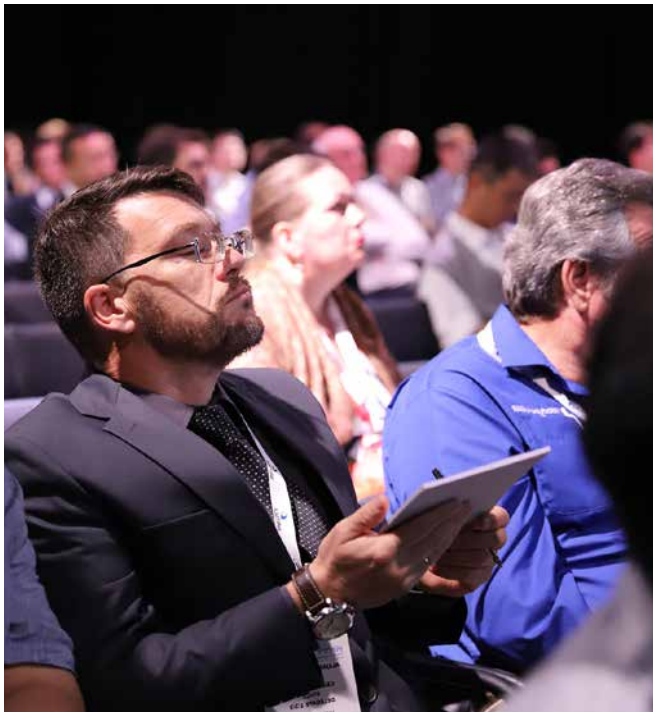
Severine Lalande
Investment Principal, TOTALENERGIES VENTURES

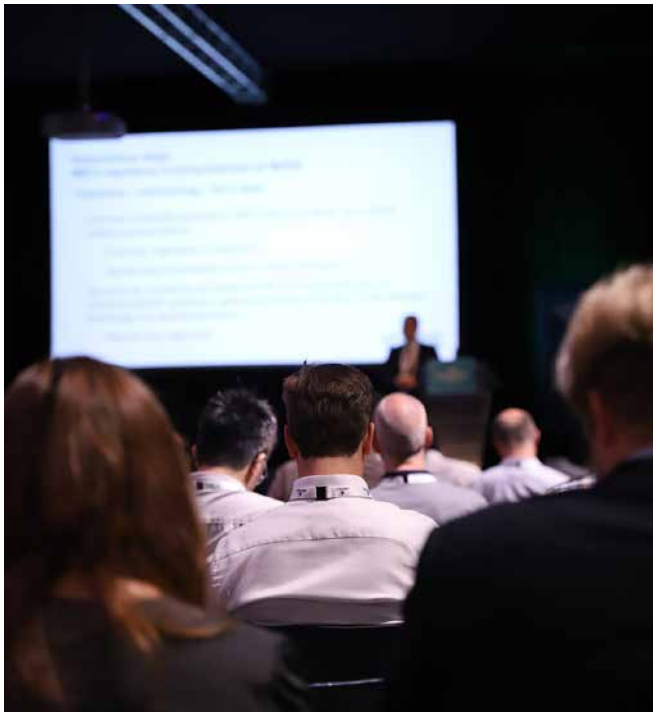
Andy Doran
Senior Manager, Sustainability and Recycling Development, NOVELIS EUROPE

Ulla Hueppe
Head of Sustainability Adhesive Technologies, HENKE

The spotlight on materials traceability and circular economy solutions is growing. The panel will discuss how manufacturers can track the first and second life of materials to ease the global climate crisis, and the importance of calculating the embedded carbon at each production, recycling and end-of-life stage. They will also explore how the digitalization of supply chains, which has never existed before, can provide regulatory compliance and resource security in the EU. They will talk about use cases in the EV battery space and also the evolution in plastics recycling, green steel and beyond.

CONFERENCE PROGRAMME & SPEAKERS SUBJECT TO CHANGE – CORRECT AS OF 09.11.2021





TRACK 02

4:05pm (CET)
PANEL DISCUSSION: TECHNOLOGIES IN THE RECYCLING LANDSCAPE

Kristy-Barbara Lange
Head of Public Affairs, APK AG

Jürgen Dornheim
Director Corporate Packaging Sustainability & Innovation, PROCTER & GAMBLE

Luis Hoffmann
Technologist Polymer Recycling, SULZER CHEMTECH LTD

Oliver Borek
Managing Director, MURA TECHNOLOGY LIMITED

The presentation will outline the different contributions of different technologies and clarify what is chemical and what isphysical recycling and which processes can achieve specific aspects of a circular plastics economy, and by when.

END OF CONFERENCE

TRACK 03

2:40 PM - 3:00 PM (CET)
COFFEE BREAK

3:00 PM - 4:20 PM (CET)
CHEMICALS IN A CIRCULAR ECONOMY

3:00 pm (CET)
CHEMISTRY IS GOING CYCLIC – CLOSING THE LOOP FOR A SUSTAINABLE FUTURE

Miguel-Angel Fernandez
Vice President & Head of Verticals Chemicals, Glass, Oil & Gas, SIEMENS

3:25 pm (CET)
TRANSITIONING TOWARD A CIRCULAR ECONOMY WITH ADVANCED RECYCLING TECHNOLOGIES

Inari Seppä
Technology innovation director and EU circular economy advocacy leader, EASTMAN

The limitations of traditional recycling technologies and the economic challenges facing the planet currently present significant roadblocks in tackling the global plastic waste crisis. To truly transform into a global circular economy for plastics, the acceptance and implementation of advanced recycling technologies are critical. While there is no single solution to solve this growing crisis, there are innovations and technologies from the industry to help. The presentation will explain the ins and outs

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TRACK 03

of advanced recycling – a technology 101, the pros and cons, which advanced technologies work best for which materials, the infrastructure challenges that need to be overcome to get more chemical recycling technologies operating at scale, and what you can do to be part of the solution.

3:50 pm (CET)

PANEL DISCUSSION: CHEMICAL WASTES – HOW TO CLOSE THE LOOP?

End-of-life chemical materials such as plastics and mixed municipal solids waste have been traditionally regarded as valueless rubbish to be disposed of at minimum cost. This perception is rapidly changing, and these wastes are increasingly seen as a low-cost resource for chemical synthesis or energy generation. This leaves the question about the best use of these materials. Should we seek full closure of the loop for new chemical production or prioritize lower-cost alternatives that can be implemented immediately?

Jonathan Wagner
Programme Lead, Centre for Circular Chemical Economy, LOUGHBOROUGH UNIVERSITY

Carlos Monreal
CEO, PLASTIC ENERGY

Babette Pettersen
VP, Europe, LANZATECH

Pieter Imhof
Senior Business Developer Circular Economy & Environment, TNO

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4:20 PM - 5:40 PM (CET)
WASTE RECOVERY AND VALORIZATION

4:20 pm (CET)
CARBON CAPTURE, UTILISATION AND STORAGE (CCUS) NET-ZERO FOR INDUSTRY – USING COMPLIANCE AS A SPRINGBOARD

Simon Gandy
Technical Director, SLR CONSULTING

James Martin
Associate Consultant, SLR CONSULTING

4:45 pm (CET)
HOW TO TRANSFORM LANDFILL WASTE INTO A BRIGHTER FUTURE FOR MANUFACTURING

Jack Bigio
Co-founder and CEO, UBQ MATERIALS

Jack Bigio, co-founder and CEO of UBQ Materials shares how UBQ has converted waste – a gross environmental liability - into the most climate positive thermoplastic on the market. The company is closing the loop between production, consumption, and waste with a singular solution – the UBQ™ material. A universal, drop-in material that substitutes oil-based resins, wood or minerals in everything from car parts, furniture, supply chain logistics and even 3D printing - the potential for UBQ™ is ubiquitous. Sustainability has never been so simple or economically viable. The same price,

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TRACK 03

same process, same products have a revolutionary environmental impact when made with UBQ™. Manufacturers now have the power to divert waste, protect finite natural resources, offset greenhouse gas emissions, and advance clients' environmental goals at no additional cost. This is the dawn of a new era - one where industry is leading the change and pioneering initiatives for a cleaner future.

5:10 pm (CET)

PANEL DISCUSSION: TRACING SUSTAINABLE MANUFACTURING USING BLOCKCHAIN

Mesbah Sabur
Founder, CIRCULARISE

Thomas Nuyts
Global Product Manager Advanced Materials, DOMO CHEMICALS

Antoon Versteeg
Project Lead Innovation Research, PORSCHE

John Fox
Innovation and Digital Solutions, COVESTRO

END OF CONFERENCE

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For further information and general enquiries please contact us via email or phone:

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PLASTIC FREE WORLD CONFERENCE & EXPO EUROPE

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Cologne, Germany