



# THE FUTURE OF PACKAGING DESIGN

Towards a smart and sustainable era

Organized by: the Advanced Design Research Unit and is part of the activities of the Department of Excellence / Department of Architecture of the **University of Bologna**.

It is **patronized by** Comune di Bologna, Politecnico di Torino, Pontifical Universidad Católica de Chile, University of Gastronomic Sciences of Pollenzo.

**Media partner** Italia Imballaggio.

**Sponsor** Conai

Friday, **December 6th 2019**

09:00 - 18:00 -

**Fondazione Golinelli - Opificio**

Via Paolo Nanni Costa 14, Bologna

## **Scientific Committee**

**Flaviano Celaschi**, Università di Bologna

**Clara Giardina**, Università di Bologna

**Silvia Barbero**, Politecnico di Torino

**Erik Ciravegna**, Pontificia Universidad Católica de Chile

**Franco Fassio**, Università di Scienze Gastronomiche di Pollenzo

## Abstract

### INTERNATIONAL SYMPOSIUM

*How does the Packaging sector is changing? How are the buying, using and recycling habits around packaged products switching? How is the industry evolving towards sustainable packaging? What role does technology play in these changes?*

Located in the heart of the Packaging Valley, with this Symposium the **Advanced Design Unit of the Department of Architecture - University of Bologna** wants to map current practices and possible futures, well known paths but also emerging, transversal and relevant issues, in response to the legislative guidelines and ecosystem changes taking place globally. During the day the results of an in-depth **research** on packaging innovations at a global level and the **drivers** that are pushing this sector into the future, will be presented to the scientific and economic community. In addition, there will be the opportunity to listen to **relevant international guest cases**, and to know what they have done and what they are going to do in order to change the world of packaging. Furthermore, space will also be given to the excellences of the Emilia Romagna Region, **the European packaging Valley**. At the time we elaborated **300 case studies** from over **80 national and international Detectors**: new materials, circular processes, the growing role of automation and robotic, new ways to use digitization, the e-commerce revolution, new consumer awareness, are some examples of what we are dealing with.

The Symposium will be the opportunity to launch the establishment of a **Permanent Observatory on Innovative and Sustainable Packaging** based at the University of Bologna, which is essential to accelerate the processes of innovation, the dissemination of knowledge, and to consolidate the network.

## PROGRAM

8.45

Registration

9.15 Welcome Remarks

Antonio Danieli, General Director - **Fondazione Golinelli**

Flaviano Celaschi, Full Professor in Industrial Design - Advanced Design Unit, **Università di Bologna**

9.30 Research Report: The Future of Packaging Design

Clara Giardina, Research Fellow – Advanced Design Unit, **Università di Bologna**

10.00

*Partnering for a Sustainable Future: How connected packaging is driving sustainability and circularity in the consumer products industry*

Simon Jones, SVP Sales Europe & Asia - **EVERYTHING**

10.30

*The state of corporate innovation in packaging*

Tommaso Maschera, Ventures Associate - **Plug and Play**

*Compostable Flexible Packaging*

Micky Kattan, Marketing and Communications Coordinator - **TIPA**

11.00

**Coffee break**

11.30

*Reuse as a Service. How reusable and returnable packaging helps making eCommerce circular*

Christof Trowitz - Business Development - **RePack**

12.00

*Smart-Powered Reusable Packaging*

Petr Báča, Founder & CEO – **MIWA** Minimum Waste

12.30

*Innovation in packaging solutions for the transition towards a Cradle to Cradle Circular Economy*

Agustín Correa L., Research, Development and Innovation Lead – **Triciclos**

13.00 – 14.00

**Lunch Buffet**

14.00

Introduction to Afternoon Session

*The Good Packaging: a systemic and ethical approach to innovation by Design*

Erik Ciravegna, Adjunct Professor School of Design - **Pontificia Universidad Católica de Chile**

14.20

*Conai roadmap for sustainable packaging*

Simona Fontana, Head of the Study Centre and Prevention Area, **CONAI**

***Packaging Valley Case studies***

*Circular plastics: high-quality recycling and the role of ecodesign*

**Aliplast (Hera group)** - Carlo Andriolo, CEO

*Amadori's innovative initiatives for the sustainable packaging*

**Amadori** - Giorgia Mainardi – Innovation

Barilla sustainable Packaging Journey: from the Principles to the Roadmap

**Barilla** - Giacomo Canali, Research Development and Quality Packaging Research and Sustainability Manager

*Coop Experience: material & the circular economy - a multistakeholder approach*

**Coop Italia** - Chiara Faenza, Head of Innovation Sustainability and Values

*Fostering entrepreneurial mindsets as a key for innovation*

**Fondazione Golinelli** - Valerio Pappalardo, Program Manager Training for Entrepreneurship in the School and Business Area

*Shelf Analytics to support strong sustainability*

**Hooro** - Saverio Ermanno Lorè, CEO and R&D Manager

*How digital makes commodities and packaging valuable through consumer engagement, personalization and traceability.*

**Pelliconi** - Matteo Mingardi, Innovation Manager

*Virtual simulations for product development*

**Protesa s.p.a.-Sacmi Group** - Roberto Saponelli, R&D and Research Funding Manager

17.30 Greetings and Conclusions

# MORNING COMPANIES AND PEOPLE

## EVERYTHNG

### Company Description

Identified as a Technology Pioneer by the World Economic Forum and recently named one of the 50 most disruptive companies in the UK, EVERYTHNG connects every physical product to the web with a digital identity. EVERYTHNG's Product Data Management Cloud or Product Cloud enables brands to create products #BornDigital. Its a fully scalable solution that gives every product a unique digital identity the moment it is produced making the item smart, interactive and trackable from the factory floor to the consumer's home to the end of the product lifecycle. EVERYTHNG provides new value for brands, allowing them to meet today's consumer demand for transparency and authenticity while delivering end-to-end supply chain traceability to protect against counterfeits and achieve sustainability goals. EVERYTHNG led the creation of the new GS1 industry standards that have upgraded the world's barcodes and product tags to connect every product to the web. Learn more at <https://evrythng.com> and @EVERYTHNG

### Simon Jones, SVP Sales, EVERYTHNG Europe & Asia Pacific

#### BIO

Simon brings two decades of in-the-field experience helping companies optimize supply chain efficiency and data collaboration. At EVERYTHNG, Simon works with consumer product brands across industries (apparel, beauty, food & beverage, wine & spirits) to embrace digital transformation as a business strategy. With the EVERYTHNG Product Data Management Cloud (Product Cloud) brands can apply data science intelligence on an item by item basis, drive new digital applications, gain visibility into supply chains, and engage with their customers. Simon works with consumer product brands across Europe and Asia to create products #BornDigital with a unique digital identity on the Web making every product smart, interactive and trackable throughout its lifecycle.

#### Abstract

*Partnering for a Sustainable Future: How connected packaging is driving sustainability and circularity in the consumer products industry*

About four trillion physical consumer products are made and sold around the world annually. With more than a hundred million different types of products, from cans of soda to designer shirts, and processed seafood to athletic shoes, that's a lot of stuff coming into the world every year.

While consumers and governments demand more sustainability, brands and manufacturers are struggling to make the digital transformation. A transformation that requires visibility of the supply chain – from the sourcing of materials and ingredients to the product's journey to the consumer, through use and ultimately, disposal.

The challenge is that conventionally the consumer products industry has very limited traceability and visibility of the products they make and sell. EVERYTHING changes this for consumer product brands by creating products #BornDigital. Connected (or born-digital) products give brands a new way to reach and stay connected with consumers -- think of it as an owned or direct media channel to provide consumers with information about product sourcing, sustainability, resale, recycling and more.

Our speaker will share how major consumer product brands are moving the industry one step closer to full circularity. EVERYTHING allows brands to meet today's consumer demand for transparency – providing the end-to-end supply chain traceability and visibility needed to achieve sustainable and circular production goals.

## Plug And Play

### **Company Description**

Plug and Play is the world's largest innovation platform. Based in Silicon Valley, we work with over 325 corporate partners globally and accelerate 1100+ startups per year in 32 global locations and through 16 vertical programs, including New Materials & Packaging and Food & Beverage. Plug and Play is also the world's most active early stage venture capital investor, financing between 220 and 250 startups per year. In April 2019, Plug and Play has opened a new innovation platform in Italy together with Esselunga, Lavazza, Tetra Pak and Unicredit as funding anchor partners.

### Tommaso Maschera - Ventures Associate Plug and Play

#### **BIO**

Tommaso is responsible for Ventures at Plug and Play Italy, where he oversees startup sourcing and investments. A graduate of Columbia University in New York, SciencesPo in Paris and Durham University in the UK, Tommaso's professional background is in consulting and data science.

## TIPA

### **Company Description**

TIPA develops and produces fully compostable flexible packaging. TIPA's technology offers viable solutions for the replacement of conventional flexible plastic, and covers a wide array of applications, ensuring that packaging requirements are met in terms of durability, transparency, print and barrier. TIPA packaging emulates conventional plastic with a certified fully compostable end-of-life, and undergoes the same degradation process as organic

matter. TIPA is tackling the plastic issue with an active preventative solution to end conventional flexible plastic accumulation and pollution.

## BIO

### Yuval Ben-Yehuda is a Sales Manager at TIPA®

Yuval Ben-Yehuda is a Sales Manager at TIPA®, one of the world's leading developers and manufacturers of compostable flexible packaging, founded in Israel in 2010. He leads TIPA® 's sales efforts in the European and Australian markets. Yuval holds a BA specializing in Business Administration and Marketing from IDC Herzliya.

## Abstract Plug and Play + Tipa

*The state of corporate innovation in packaging. A case study: Compostable Flexible Packaging*

Due to growing pressures from regulators and consumers, corporates in packaging and CPGs are increasingly looking at innovations around packaging to better engage customers, drive more sustainable practices, and ultimately stay relevant in a fast-changing environment. Through Plug and Play's innovation platforms in New Materials and Packaging and in Food, we observe growing demand for innovations in areas such as active, smart and sustainable packaging. Startups and scaleups like TIPA, which is working with our corporate partners in our Food and Beverage program in Milan, are showing us the way of the future in key areas like compostable flexible packaging. Here, TIPA's unique compound and film formulations enabling high mechanical barrier and optical properties demonstrate how fully compostable alternatives to polyethylene and polypropylene are possible today for food applications. Similarly, startups working on active compounds embedded in materials to lengthen the shelf life of products and on smart packaging enabling unprecedented applications for customer engagement and supply chain traceability demonstrate new ways in which packaging and materials can further create value for large corporates.

## RePack

### Company Description

RePack has invented and introduced a reusable and returnable packaging system for eCommerce and their consumers. RePacks is an alternative to single use packaging, typically made of cardboard or plastic, and saves almost 100% trash and up to 80% of CO2 emissions. Currently, more than 60 webstores all over Europe have joined the Repacking movement and are offering RePack to their clients as packaging alternative.

RePack was founded in 2011 and has, since then quite some prizes, such as the Nordic Council Environmental Prize 2017, Climate KIC Nordic Venture Cup 2016 and the Hans Sauer Award

2019 (excerpt!). In 2019, RePack has received a 2 Mio. € grant from the EU Horizon 2020 program, that lifts the RePack movement to the next level.

## Christof Trowitz, Business Development – RePack

### BIO

Christof Trowitz has studied industrial engineering and specialized on information systems. Starting his career in traditional industrial environments, he eventually co-founded his first social startup in 2010, developing and distributing special motion pictures for dementia patients at home and in nursing facilities. In 2013 he joined ePages, a SaaS eCommerce platform that is utilized by more than 100.000 webshops. Traveling the Nordic countries, he ran into the Finnish startup RePack, which he was so electrified from, that he joined the team in 2017. He finally found the perfect mix between utilizing his SaaS and eCommerce expertise and his deep desire for making this world greener and more sustainable, so he became RePacks Evangelist for the German speaking countries. Christof is 43 years old, has two kids and lives in Hamburg. He practices Yoga and teaches meditation.

### Abstract

*Reuse as a Service. How reusable and returnable packaging helps making eCommerce circular*

Mankind's annual consumption of resources is much higher than mother Earth can reproduce in the same amount of time. The so called Earth Overshoot Day 2019 was on 29 July – again 3 days earlier than in 2018. We are acting as if we had the resources of 1,75 Earths.

The ever-growing availability of new products in conjunction with global eCommerce is leading to sheer unimaginable masses of packaging waste, and contributes clearly to the worldwide overconsumption of natural resources. eCommerce packaging is mainly made of cardboard or LDPE plastics, that in most cases can – but not necessarily is – being recycled. In fact, only 17% of the plastics that end up in Germany's yellow recycling bins, is finally being recycled.

Recycling infrastructures are well established all over Europe, and these still have potential for optimization, but we must not make the mistake and see recycling as the ultimate solution to treat our trash. There are various alternatives to recycling that do not lead to any trash in the first place!!

One of these alternatives has just reached the eCommerce industry: RePack has introduced a reusable and returnable packaging service for eCommerce, that liberates webstores from the burden of packaging trash. RePack is more than a pure packaging, though. The RePack service has three elements: 1. The packaging itself, 2. a global return infrastructure, and 3. an integrated incentive system for the end-users. RePacks are designed to last at least 20 shopping cycles and are managed in RePacks own central pooling system.

So, how does it work? Consumers that receive their delivery in a RePack, can fold the empty RePack down to letter size, and return it by just dropping it into any postbox. Free of charge and worldwide. As reward for returning it, he or she can even pick a voucher for the next purchase at any of the RePacking webstores.



So far, more than 60 webshops across Europa have joined the RePack community by mostly offering RePack to their clients as an option, so the consumer, in the end, has the ultimate choice, and already leads to a percentage Repack share of 10 – 35%. And end user satisfaction is overwhelming. The webshops that are offering and using RePack have the chance to set a bold statement on sustainability, as they can save up to 80% of packaging related CO2 emissions, and almost 100% of trash.

Our data leads to the conclusion that now, in times of Fridays for Future movement and global climate strikes, consumers are ready for reusable packaging. As we cannot expect Fridays for Future movement go away soon, but getting bigger instead, increasing sustainability pressure on eCommerce players.

It's yet on the webshops to act and make themselves futureproof now, or just react when population or legislation is forcing them to act, later. Strong evidence for RePack and reusable packaging is not just a crazy idea from a tiny country close to the polar circle comes from Zalando and H&M that are currently running first trials with RePack. These trials are done in smaller countries or for certain product or customer groups only, but the seriousness behind it is promising. More seriousness even comes from a current research, that is partly funded by the German Ministry of Education and Science called praxPACK, where the two retailer giants OTTO Group and Tchibo as well as the sustainability marketplace Avocadostore are committed to implement and test reusable packaging in practice. Goal of the project is to identify the current obstacles and find solutions and scaling mechanisms that enable the broad eCommerce market – from micro-retailer to eCommerce giant – to adapt reusable packaging systems easily with a minimum of effort.

Our vision is that eventually, reusable packaging is the new standard and single-use packaging is only second choice.

## MIWA

### Company Description

MIWA has developed a standardized reusable packaging with RFID for distribution of dry and liquid products in bulk; this packaging works in tandem with unique electronic dispensers that are placed in shops. Thanks to data- driven operational efficiency and focus on brand/product quality tracking and communication, the system enables so called packaging- free sales for large brand owners and retailers. MIWA's technology was awarded numerous innovation and social impact prizes and is used as "best practice" in materials published by the UN and EU. With the involvement of both global and local producers and retailers, pilot operations started in several countries in 2019. Further development of the technology includes

solutions for consumer packaging and household management to reach a maximum convenience for shoppers.

## **Petr Báča, Founder & CEO MIWA**

### **BIO**

Petr is an entrepreneur and business leader; he has been working in marketing services and the design industry for over twenty years. His businesses are currently based in the Czech Republic and Russia and operate across Europe. In his former company Cocoon, he worked with corporate clients such as Nestle, P&G, Molson Coors on packaging and product innovation projects. In 2015 Petr found MIWA, a technology company driven by a mission to prevent the creation of waste from single-use packaging.

### **Abstract**

#### *Smart-Powered Reusable Packaging*

The presentation has four parts. In the first part, MIWA system will be introduced as a leading innovation in the field of sustainable packaging.

In the second part, the general issue related to plastic overproduction and pollution will be depicted based on selected facts and numbers. As the main source of information and graphics, the report “Risks and opportunities along the plastics value chain” published by PRI will be used. After this, three solution types or categories related to the plastics problem will be defined: a) improvements in recycling, b) material innovations and c) new delivery models based on reuse. The c) category, to which also MIWA system belongs, can bring very good effects in a relatively short time.

In the third part, the “Convenient environmentalist” concept will be introduced, using the research data of the UCLA Institute as presented on the “Earth Now: Earth 2050 Symposium” 2016. Their data show that a green innovation can only succeed by the consumers if – next to its benefits for nature – it also benefits the consumers themselves: bringing them whether a better performance, better status, health benefits or money savings. MIWA system is an example of how eco-friendly packaging can also bring positives to the retailers (smoother logistics) and the end customers (smart technology).

“The time for reuse is now” is the key message of the fourth part – stressing the potential business benefits of reuse models as formulated in the Ellen MacArthur Foundation’s “Reuse” publication. In conclusion, the speaker explains how MIWA system works in practice.

# TriCiclos

## Company Description

Founded in 2009, TriCiclos is a circular economy engineering company based in Santiago de Chile, with operations and services all across LATAM. The company has been able to vertically integrate different data and expertise inputs gained through the historic operation of more than 210 open-to-the-public recycling stations towards education programs, consultancy, new product development and innovation in a diverse range of industries, leading a regional wave of change towards the Circular Economy.

## Agustín Correa L., Research, Development and Innovation Lead – Triciclos

### BIO

Agustín Correa, is a civil industrial engineer with a degree in mechanical engineering from the Pontifical Catholic University of Chile. From early on in his career he has aimed his projects towards both social and environmental impact with a transversal integration of human centered design. He runs the Research, Development and Innovation lab at TriCiclos, leading projects in the areas of recyclability and material selection, machinery, digital strategies and high-end innovation consultancy.

### Abstract

*Innovation in packaging solutions for the transition towards a Cradle to Cradle Circular Economy*

Agustín Correa L., Research, Development and Innovation Lead - Triciclos

Roughly 40% of nowadays annual plastic production goes into packaging, hence, understanding how different packaging solutions, business models and services can support the transition towards an effective Cradle to Cradle Circular Economy is key. In this speech we will cover TriCiclos expertise ranging from downstream recyclables management solutions, to high-end upstream impact projects where the concept of waste is challenged and deleted for good. This includes the portrayal of the on-field experience interacting with every packaging solution imaginable, a particular human centered ecodesign case for a complex fresh vegetable, the implementation of returnable/refillable models, the development of recyclability index digital platforms and our latest innovation called ReGo, a real-time miniaturized recycling machine, where discarded yogurt cups are transformed and injected into building block-like toys.

## AFTERNOON COMPANIES AND PEOPLE

**Erik Ciravegna**

Adjunct Professor School of Design - Pontificia Universidad Católica de Chile

*The Good Packaging: a systemic and ethical approach to innovation by Design*

“The Good Packaging” is a research project that focuses on the impacts of packages on the market, society, and environment, to promote the design, production, and use of packaging solutions that are not only communicatively effective and technologically advanced, but also more sustainable and socially responsible. This lecture is an attempt to trace some coordinates that inquire about how to develop “good” packages and what is the role of Design in the processes of innovation of the sector, according to a systemic and an ethical approach to packaging.

**CONAI**

Simona Fontana, Head of the Study Centre and Prevention Area, CONAI

*Conai roadmap for sustainable packaging*

Conai presents the roadmap for packaging sustainability. It is a guideline that illustrates the fundamental factors on which a concrete strategy is developed in order to increase the environmental value of packaging. This roadmap is born from the twenty-year experience of supporting companies for the innovations promoted on packaging and the growing attention of consumers on these issues.

**Aliplast (Hera Group)**

Carlo Andriolo, CEO

*Circular plastics: high-quality recycling and the role of ecodesign*

Ecodesign has a key role in ensuring that plastics packaging is actually and widely recycled. Strong awareness in dealing with packaging in the moment it becomes waste, appropriate and widespread collection and selection facilities as well as innovative recycling infrastructures are required, but are not enough to provide real circularity in plastics packaging. Aliplast has been working for more than 30 years in this field and will present some cases of high-quality recycling and really circular plastic packaging.

**Amadori**

Giorgia Mainardi – Innovation

*Amadori's innovative initiatives for the sustainable packaging*

Keeping an eye to the future Amadori - nowadays one of Italy's largest agro-food companies - has developed a dedicated cross functional task force and has pursued 3 different initiatives. The Green Packaging Challenge, a call for ideas for the existing and

potential packaging supplier, Matcher, an initiative at Regional Level focused on innovative solution from the start-ups, and last but not least, our international Acceleration Program.

## **Barilla**

Giacomo Canali, Research Development and Quality Packaging Research and Sustainability Manager

*Barilla sustainable Packaging Journey: from the Principles to the Roadmap*

More than ten years of activities to make our packaging consistent with the Company's purpose: "Good for you, Good for the planet".

An overview on the principles of Barilla sustainable packaging and how we let the principles become reality in our everyday job.

During the presentation we will go through some examples of the activities done in the last years.

## **COOP**

Chiara Faenza, Head of Innovation Sustainability and Values

*COOP EXPERIENCE: material & the circular economy - a multistakeholder approach*

The container is an integral part of the Branded Product and therefore must comply with the same value requirements as the content.

Sustainability is a fundamental value and the commitment for Coop is based on circular economy approach involving and raising awareness upstream of the supplier/stakeholder and downstream of the consumer. The commitment of Coop comes from afar but has been relaunched with the last campaign/project "Coop for the environment" that wants to enhance the distinctive contribution of Coop products and its actions in terms of circularity and sustainability. Coop joined also the Pledging Campaign EU and signed the Circular Plastic Alliance to promote the reduction of plastic materials, increase the diffusion of recycled plastics and stimulate market innovation.

## **Fondazione Golinelli**

Valerio Pappalardo, Program Manager Training for Entrepreneurship in the School and Business Area

*Fostering entrepreneurial mindsets as a key for innovation*

A brief presentation of the activities that Fondazione Golinelli creates, promotes and manages in order to provide an innovative mindset and nurture new generations. A case history on how a packaging challenge with project based learning has brought tangible results, generating new solutions and new talents.

## Hooro

Saverio Ermanno Lorè, CEO and R&D Manager

*Shelf Analytics to support strong sustainability*

Sustainability is one of the biggest challenges for physical retailers especially in Procurement and Supply chain, Logistics and Transportation and Energy consumption areas. New technologies and smart packaging provide to help in this directions.

## Pelliconi

Matteo Mingardi, Innovation Manager

*How digital makes commodities and packaging valuable trough consumer engagement, personalization and traceability*

Pelliconi, global leader manufacturer of metal closures for the beverage sector reinvents its future integrating digital solutions into its products.

## Protesa- SACMI

Roberto Saponelli, R&D and Research Funding Manager

*Virtual simulations for product development*

The necessity to develop products more and more high performance asks for the use of project technics that allow to obtain solutions that can't be reached throughout traditional planning models.

Using technics of numerical simulation, from the start of the planning cycle, is our secret to reduce the time to market.