



BIOMIMICRY AND PACKAGING

This Co.Project set out to identify key challenges participant organizations face within the area of plastics packaging. The Co.Project went on to use these scenario case studies to iteratively create a design tool that can support organizations more broadly in solving packaging challenges through the lens of biomimicry.



Initiation Date: March 2016

Completion Date: March 2017

Public Disclosure of Outputs: August 2017

BIOMIMICRY 3.8

Nicole Hagerman Miller

Managing Director

Nicole.Miller@biomimicry.net

HEINEKEN MEXICO

Blanca Idalia Brambila Perez

Sustainability & CSR - CM - Heineken Mexico

blanca.brambila@cuamoc.com

DELL

Jim Quirke

Packaging Specialist

Jim_Quirke@dell.com

WITH ADDITIONAL CONTRIBUTIONS FROM:

Steelcase and H&M

WHAT CIRCULAR ECONOMY CHALLENGE DID THE CO.PROJECT TRY TO SOLVE?

This Co.Project worked to reducing packaging waste, particularly looking at opportunities to reduce materials while maintaining structural integrity, along with opportunities to apply system thinking to solve for distribution and recyclability challenges.

WHAT WAS THE SCOPE OF THE CO.PROJECT?

Overcoming packaging waste is a global challenge that impacts the majority of businesses today, each with a unique set of challenges and needs. Rather than try to address the needs of one company, this Co.Project aimed to develop a toolkit to support individuals or teams across all industries as they work to meet circular design goals for packaging.

WHAT WAS THE CO.PROJECT OUTCOME?

The Co.Project team developed a toolkit that offers individuals and teams an opportunity





to expand the circular design ideation process through biomimicry (innovation inspired by nature) - delivering an inherently sustainable design process to support circular design. In testing the toolkit teams were able to generate new ideas and think through a fun and engaging process that delivered many ah-ha moments and new concepts.

The Co.Project also developed a scoping Guide and workbook to serve as a self guided tool to help users unpack design challenges/opportunities and identify the primary function(s) of a product, process or system. By identifying the function you can effectively identify, use and applying biological models to unlock new ideas that can drive innovation. The scoping guide was the origin of the toolkit and later evolved into a stand alone tool.

KEY LEARNINGS:

- The toolkit activities demonstrates the value of biomimicry as an innovation tool for companies interested in exploring the practice to support circular design.
- The biological models became a way for teams to mitigate perceived risks around “new” ideas or concept.
- Gamification of the biomimicry brainstorming allows a team to explore new thinking and democratize the conversation around innovation challenges and opportunities.
- The teams with greater role diversification had higher probability for successful integration.
- Users found it to be an effective employee engagement tool with their teams.
- Having the process facilitated by biomimicry professionals can speed up

the process. After a one-hour session, companies were able to identify strategies to take back to their R&D teams.

OUTPUT

Title:

Biomimicry Innovation Toolkit for Packaging

Nature:

A card deck, workbook, supporting printouts, and video presentation (to guide users)

Description:

The interactive toolkit includes ideation activities, examples and case studies that enable team to create new ideas, concepts or processes to support circular design goals for packaging (through the use of biological intelligence).

Intended use:

The toolkit is designed to help individuals or teams expand their thinking, create new (inherently sustainable and circular design) innovation, through the understanding and application of existing biological model.

TOOLKIT ACCESS & NEXT STEPS

Those interested in packaging innovation are encouraged to use the Toolkit and to share their concepts boards.

For those interested in a physical copy of the toolkit and card deck, please contact Biomimicry 3.8.

The toolkit can also be accessed [here](#) following the instructions in the file.

As part of the ongoing learning, please complete the feedback form found in this file to share your user experience with Biomimicry.



TO FIND OUT MORE, PLEASE CONTACT:

Nicole Hagerman Miller

Managing Director

Nicole.Miller@biomimicry.net

Miranda Schnitger

CE100 Project Manager

miranda.schnitger@ellenmacarthurfoundation.org

ELLEN MACARTHUR FOUNDATION

The Ellen MacArthur Foundation was created in 2010 to accelerate the transition to a circular economy. The Foundation's work focusses across five areas: insight and analysis, business and government, education and training, systemic initiatives, and communication. The Foundation collaborates with its Global Partners (Danone, Google, H&M, Intesa Sanpaolo, Nike, Philips, Renault, Unilever) and its CE100 network (Corporates, Universities, Emerging Innovators, Governments & Cities, and Affiliate organisations), to build capacity, explore collaboration opportunities, and to develop circular business initiatives.

CE100

The Circular Economy 100 is a pre-competitive innovation programme established to enable organisations to develop new opportunities and realise their circular economy ambitions faster. It brings together corporates, governments and cities, academic institutions, emerging innovators and affiliates in a unique multi-stakeholder platform. Specially developed programme elements help members learn, build capacity, network and collaborate with key organisations around the circular economy.

CO.PROJECT

Co.Projects are opportunities for formal pre-competitive collaboration between CE100 members. They are driven by members, for members and their focus can range from research initiatives to pilots to toolkits. Co.Projects leverage the CE100 network with the aim of exploring opportunities and overcoming challenges which are commonly and collectively faced by organisations making the transition to a circular economy, and which organisations may not be able to address in isolation.

To discover more projects, click these buttons

