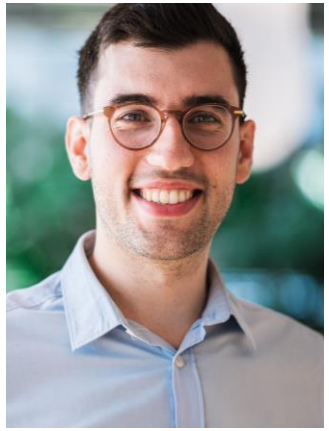
CIRCULAR DESIGN FORUM

SUMMIT 2023

Hosted by Accenture, Furnify, Partners for Innovation

Daphne Menheere
Design Research
Lead



Francesco De Fazio
Sustainability
Designer Engineer

Janina Nieper
Circular Designer

Jos Vlugter
Circular Economy
Consultant

Accenture Industry X · **Industrial Design**

FURNIFY

Partners for Innovation

FACILITATORS FOR THE PHYSICAL EVENT

Sophie Laude
Sr. Product Designer
Accenture

Noortje Duijzer
Industry X intern
Accenture

Baptiste Sene
Sr. Circular Design Engineer
Accenture

The goal of today is

Connecting!

Agenda

Time (CET)		Activity
9:00	9:30 AM	Badge collection and Summit Welcome
9:30	11:30 AM	Tour of the DDW23 exhibition and coffee speed dating session
11.30	11:45 AM	Keynote: A look back at 2023
11:45	12:30 PM	Keynote: Knowledge Streams recap
12:30	1:30 PM	Lunch
1:30	2:30 PM	Circular Challenges presentation
2:30	4:00 PM	Solving Circular challenges in smaller groups
4:00	5:00 PM	Circular Challenges outomes
5:00 PM onwards		Drinks

Look back at 2023

The first successful pilot during DDW22

25

25 Organizations joined.
Manufactures, Design firms,
Universities and Research institutes

100+

Over 100 experts were present,
physically and virtually

3

3 key topics were discussed: systemic design, behaviour change, design for repair

9

9 great presenters:
Metabolic, PVH & onUp, VanBerlo, TU Delft, Partners for Innovation, EGGS Design, Philips, Microsoft, Fairphone

Lot’s of things happened since then…

Many new joiners since the first Summit!

STUDIO ELK

B/S/H/

CIRCULEREN

Danfoss

Versuni

hmd. The Home of Nokia Phones

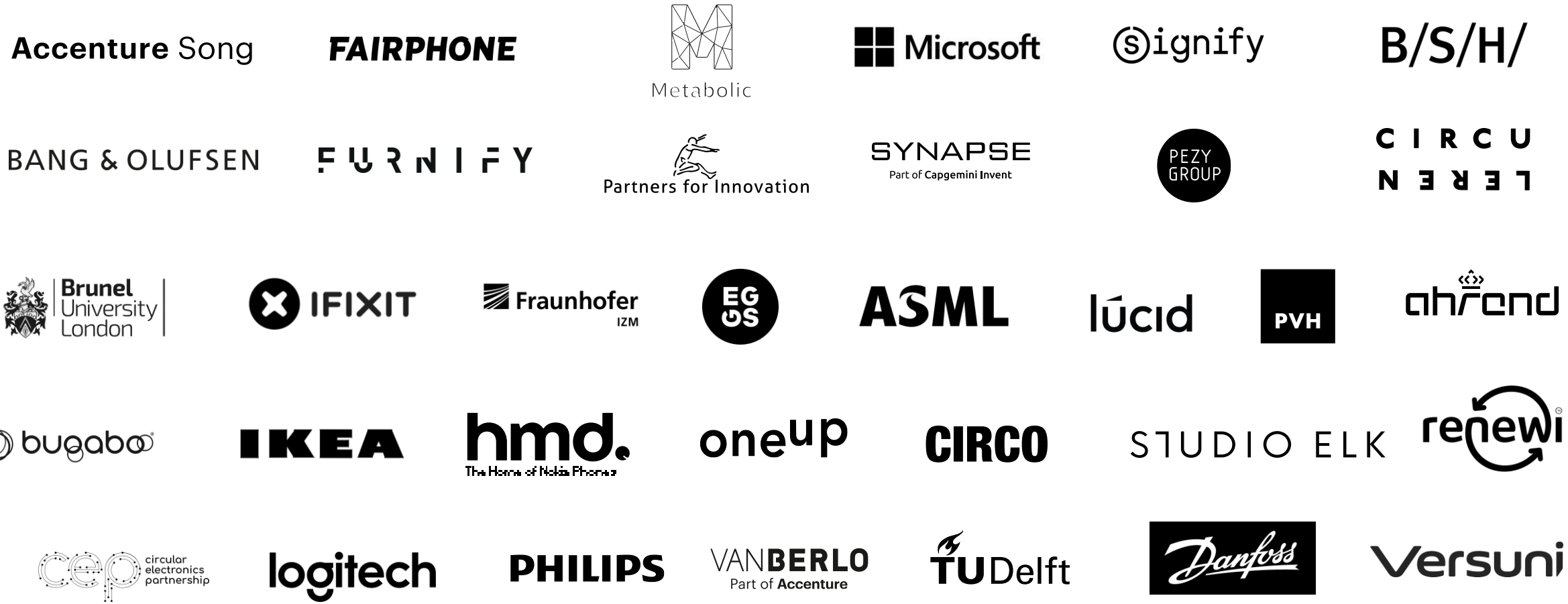
ASML

lucid

ahrend

renewi

35 members


Accenture Song
FAIRPHONE
Metabolic
Microsoft
signify
B/S/H/
BANG & OLUFSEN
FURNIFY
Partners for Innovation
SYNAPSE
Part of Capgemini Invent
PEZY GROUP
CIRCULEREN
Brunel University London
IFIXIT
Fraunhofer IZM
EGGS
ASML
lucid
PVH
ahrend
bugaboo
IKEA
hmd.
The Home of Nokia Phones
oneup
CIRCO
STUDIO ELK
renewi
circular electronics partnership
logitech
PHILIPS
VANBERLO
Part of Accenture
TU Delft
Danfoss
Versuni

VanBerlo is now:

Accenture Industry X · **Industrial Design**

Industrial Design embedded in Industry X

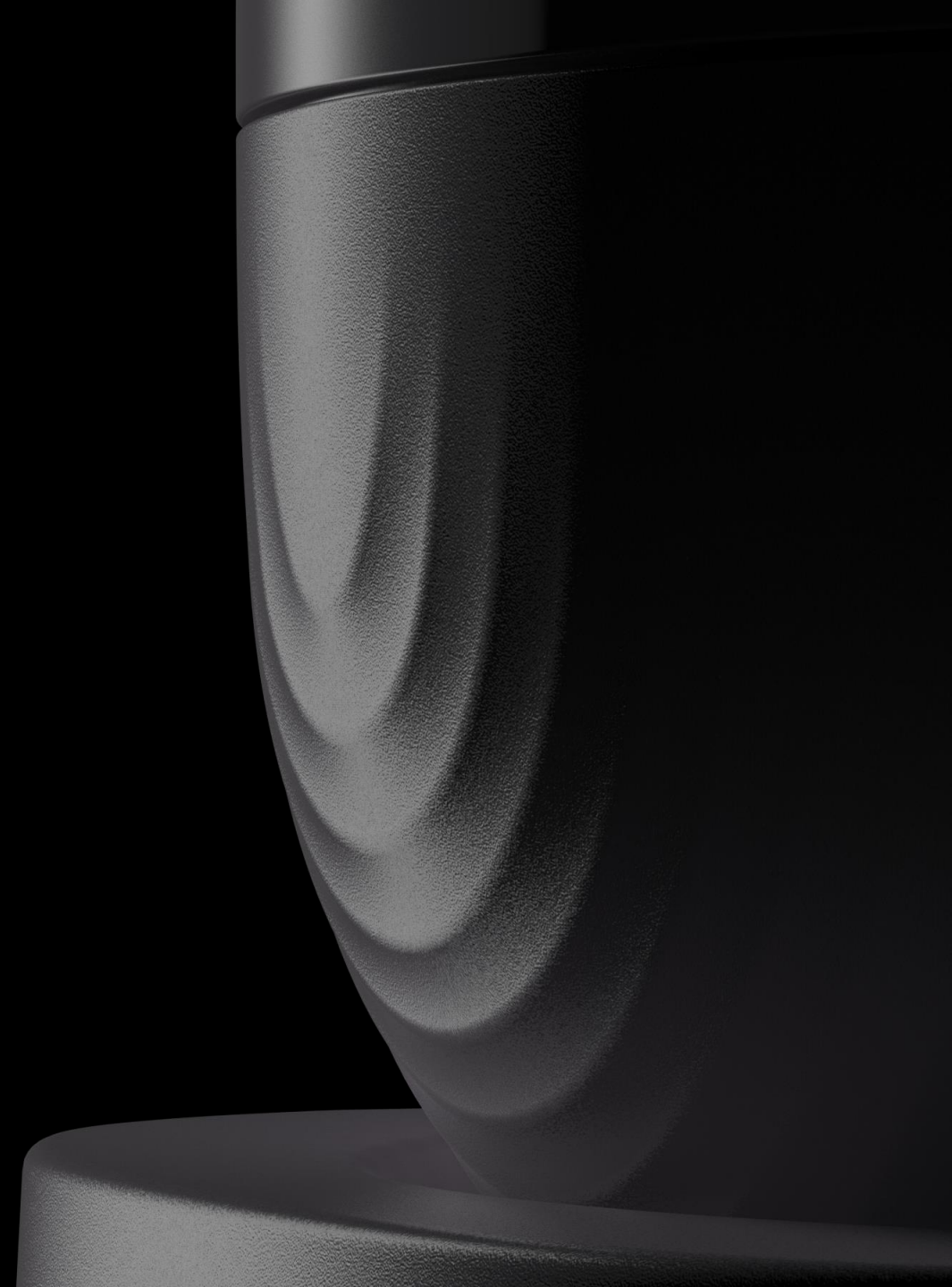
Our mission is to design for a better world, for people, planet and business

By combining our expertise in data, digital, and physical product design, we can help our clients to reimagine their products and create **exceptional customer experiences that drive growth and competitiveness**

Designing Sustainable North Stars

A new approach to design sustainable products

Design guide available to all CDF members later this year

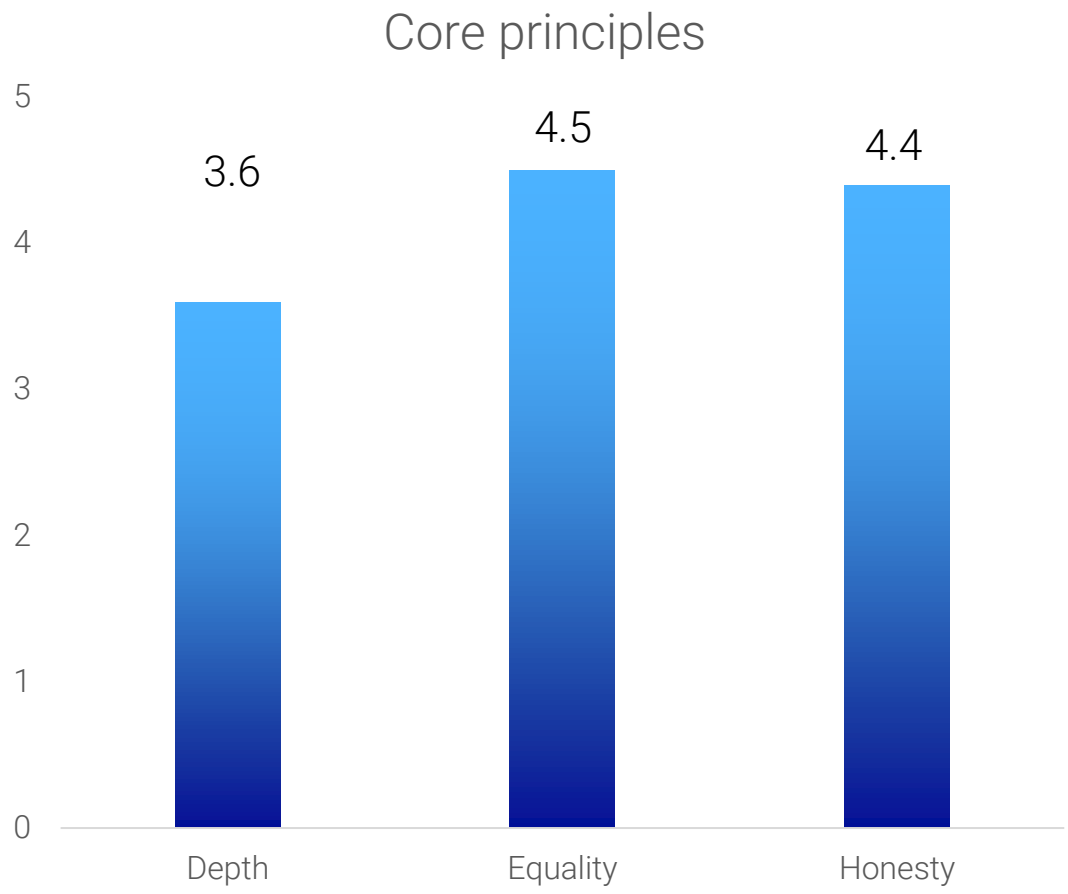


Some data about this year

6 sessions

48 participants on average

4.2/5 Average score



A big thank you to the organizing committee of 2023!

Brunel University London

Partners for Innovation

EGGS

CIRCO

FURNIFY

circular electronics partnership

Microsoft

Fraunhofer IZM

oneup

TU Delft

logitech

PEZY GROUP

VANBERLO Part of Accenture

PHILIPS

CIRCULEREN

We need your help!

Reach out if you have any feedback/ideas for next year's activities

Join our core organizing team

Share knowledge on the LinkedIn group

Knowledge Streams Recap

Janina Nieper
Circular Designer

FURNIFY

KS Systemic Design

Hosted by **EGGS, Part of Sopra Steria**

Supported by **Accenture Industry X Industrial Design**

Industrial Designer

Anna Gebala

EGGS, Part of Sopra Steria

The Team

Chief Creative Officer

Jan Walter Parr

EGGS, Part of
Sopra Steria

Service Designer

Kristine Lundteppen

EGGS, Part of
Sopra Steria

Service Design Strategist

Rina Strydom

Accenture
Industry X

Sustainable Designer & Strategist

Alicia Ville

Accenture
Industry X

Industrial Designer

Anna Gebala

EGGS, Part of
Sopra Steria

Session set-up

We see the potential of applying systemic design while working with the circular economy. It enables us to look beyond the product or service and to see the connections and processes along the entire lifecycle and system.

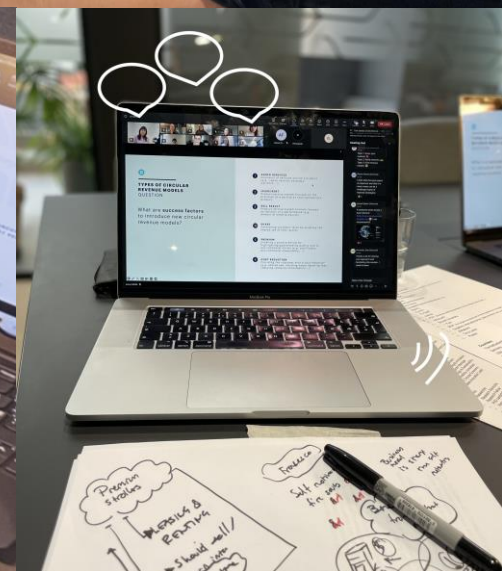
The goal of the session was to provide an introduction to the systemic design but also broaden the knowledge for more experienced participants.

Session set-up

The focus of the session was on the key challenges encountered when applying systemic design in circular value streams.

Agenda:

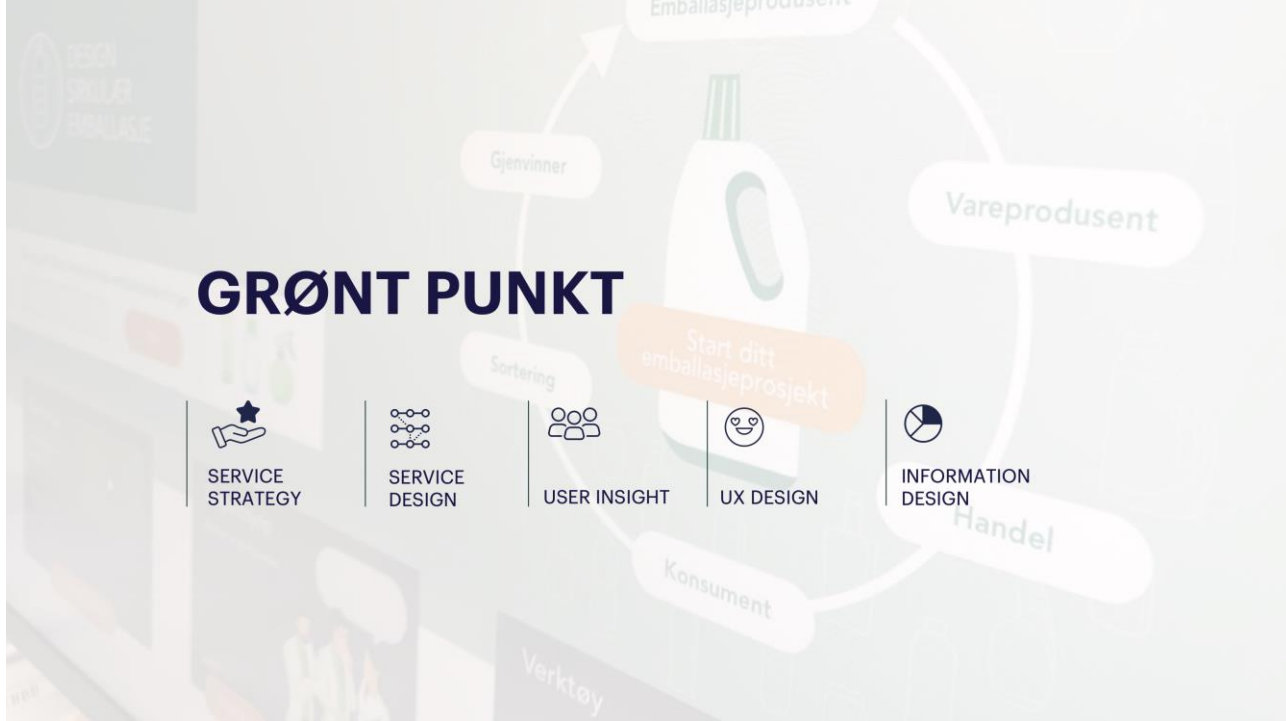
- A brief introduction to systemic design
- Case sharing
- Exercise - Drawing flows
- Discussions

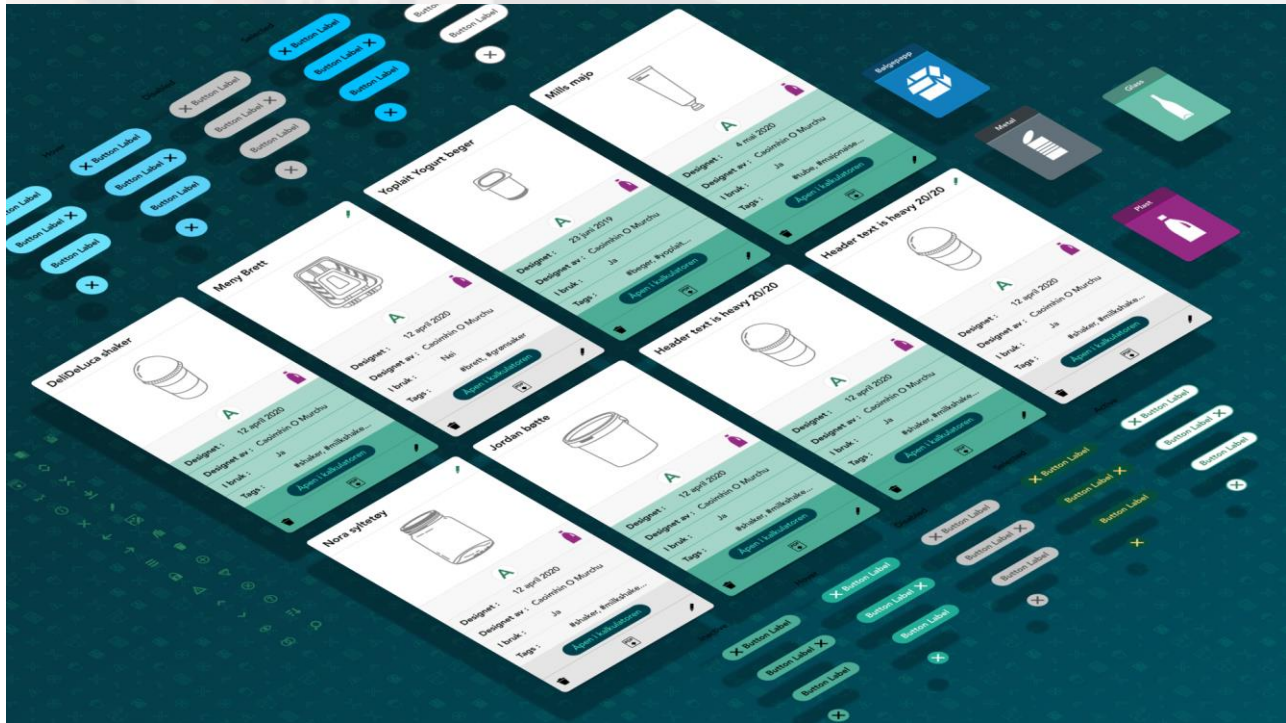


Introduction & Case Sharing

The session started with a brief introduction to systemic design to create a common understanding of the use terms. As the next step, a Gront Punk project was presented to go more in-depth. The case included methods used from gathering insights with interviews, crafting interventions, created concepts, and their validation.

Here you can read more about the case.
https://eggsdesign.com/work/case/calculated-design-for-sustainability





Exercise – Drawing flows

Through the exercise, we explored how system thinking can be applied to visualize flows toward enabling circular economy models. The circular strategies we used were: material strategies, network types, and revenue models

Discussion

The third of the session was a semi-structured discussion. It covered 3 topics: Know Your Material, Build Networks, and Find Revenue Models. As a base for the discussion, we described each strategy and gave examples from our work.

CIRCULATOR
THE CIRCULAR BUSINESS MODELS MIXER

https://www.circulator.eu/

INTERACTIVE SESSION OVERVIEW

DISCUSS Hearing from your point of view and challenges. Reflecting on how systemic design viewpoint can help us tackle the climate collapse.

TOPIC DISCUSSION VOLUNTEERING By indicating your interest in one of the specific topics, we can give each other the opportunity to share.

This is an open platform, and any thoughts are welcomed. We want to learn from each other. Please share questions for the panel topic in the chat window.

Topic 1.
KNOW YOUR MATERIAL

Which drivers or blockers of the different material strategies have you experienced?

Topic 2.
BUILD NETWORKS

How do companies you know build circular networks?

Topic 3.
FIND REVENUE MODELS

What are the success factors to introduce new circular revenue models?

TYPES OF MATERIAL STRATEGIES
QUESTION

Which **drivers or blockers** Of the different material strategies have you experienced?

1. **REUSE**
The common use of a product (or product parts) spread over sequential timeframes.

2. **SUBSTITUTE**
Replace scarce / toxic / high impact material with more sustainable alternative.

3. **REDUCE**
Decreasing the amount of material used for a given product.

4. **REPAIR**
The correction of a specified fault to prolong the product's lifetime.

5. **RECYCLE**
The valorization of industrial production residues or materials from end-of-life products into the same or other production chains

6. **REMANUFACTURE**
Return product /component to original specifications (remanufacturing) or to satisfactory working conditions (refurbishment).

Takeaway 1: How Can We Unlock the Circular Economy?"

By employing systemic design methods, it can be beneficial in the following ways:

1. Providing an overview of the current state (‘as it is').
2. Identifying barriers, drivers, and relationships within the ecosystem.

Examples of barriers include economic factors, regulatory restrictions, technological challenges, or resistance to organizational change

EGGS, Part of Sopra Steria

Takeaway 1: How Can We Unlock the Circular Economy?"

Reflections from the participants on factors that can drive the shift towards a circular economy include:

- Concrete Key Performance Indicators (KPIs)
- Emotional Engagement
- Regulations
- Market Demand
- Consumer Demand
- Compelling Storytelling
- Product Rankings

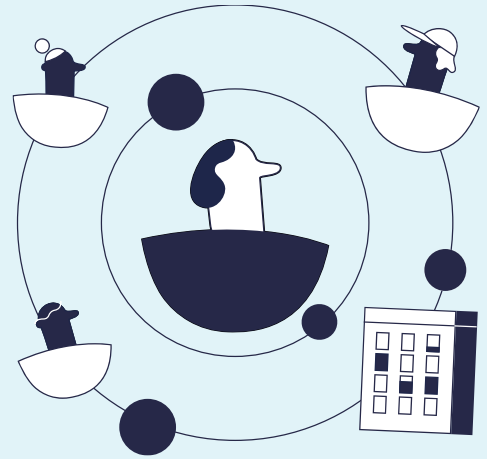
EGGS, Part of Sopra Steria

Takeaway 2: Build Networks

- Solving problems independently can be overwhelming for a single organization.
- Internal policies and intellectual property (IP) hinder collaboration.
- Neutral entities, like Circular Design Forum, can help overcome IP barriers.

Networks like CDF:

- Facilitate collaboration among companies.
- Drives innovation for a sustainable, circular future.



TYPES OF CIRCULAR NETWORKS
QUESTION

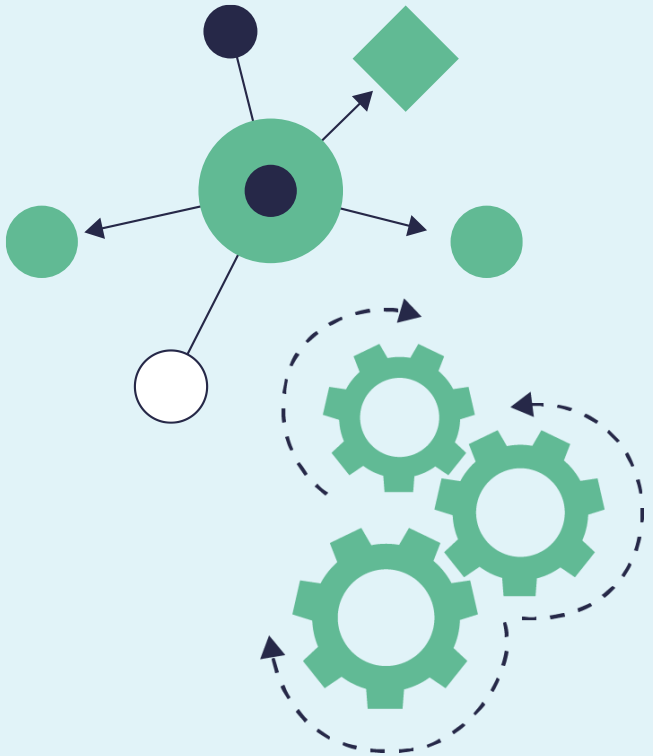
How do companies you know build circular networks?

1. **INDUSTRIAL SYMBIOSIS**
   The waste stream of one becomes input of another
2. **TAKE BACK SYSTEM**
   Logistics for taking back end-of-life products from the customer
3. **PLATFORM**
   An online or on-site solution to facilitate matching of supply and demand of materials or assets
4. **LOCALIZATION**
   Organizing the physical flows of resources and products on a local scale
5. **VALUE NETWORK**
   Collaboration between companies, government, communities, NGOs to achieve a common goal
6. **KNOWLEDGE PARTNERSHIPS**
   Collaboration with competence environments to achieve goals

Takeaway 3: Organizing the session

Participants are humble while filling in the pre-session questionnaire. Feel free to go further in-depth and share more details of the case and methods.

Collaborate while organizing the session. Inviting more speakers will make the session more interesting but it will also decrease the workload of the being the organizers.



KS Sustainable Materials

Hosted by **Furnify**

Supported by **Circu Leren**

Circular Consultant & Designer

Janina Nieper

Furnify

The Team

Circular Consultant & Designer

Janina Nieper

Furnify

Circular Accelerator

Clarice van den Berg

Furnify

Managing Director

Sabrina van Dongen

Furnify

Founder

Marije Remigius

Circu Leren

Session set-up

The goal

- Deep-diving into different methodologies of assessing materials
- Hybrid set-up

- Outline

➢ Introduction round
➢ Systems thinking by Metabolic
➢ Limits of LCA by 2050 Materials
➢ Intermatter by Circu Leren
➢ Discussion

What was your most surprising feedback?

Human hair

Abundant, regenerative, and cleans up oil spills

Yumiko Henneberry, TU Delft

3 main takeaways that everyone should know

1. Thinking in Systems
2. Prioritizing impact
3. Simplifying LCA

Takeaway 1: Thinking in Systems

Also with the materials we choose.

Example Copenhill

Intended:

+ Solve the waste problem by providing heat and electricity by burning waste

Causing:

- Heavy dependence on waste for electricity and heat
- Less incentive for reuse and recycling
- System lock-in as Denmark now imports waste

Source: Metabolic, Dora Xu

Takeaway 2: Prioritizing impact

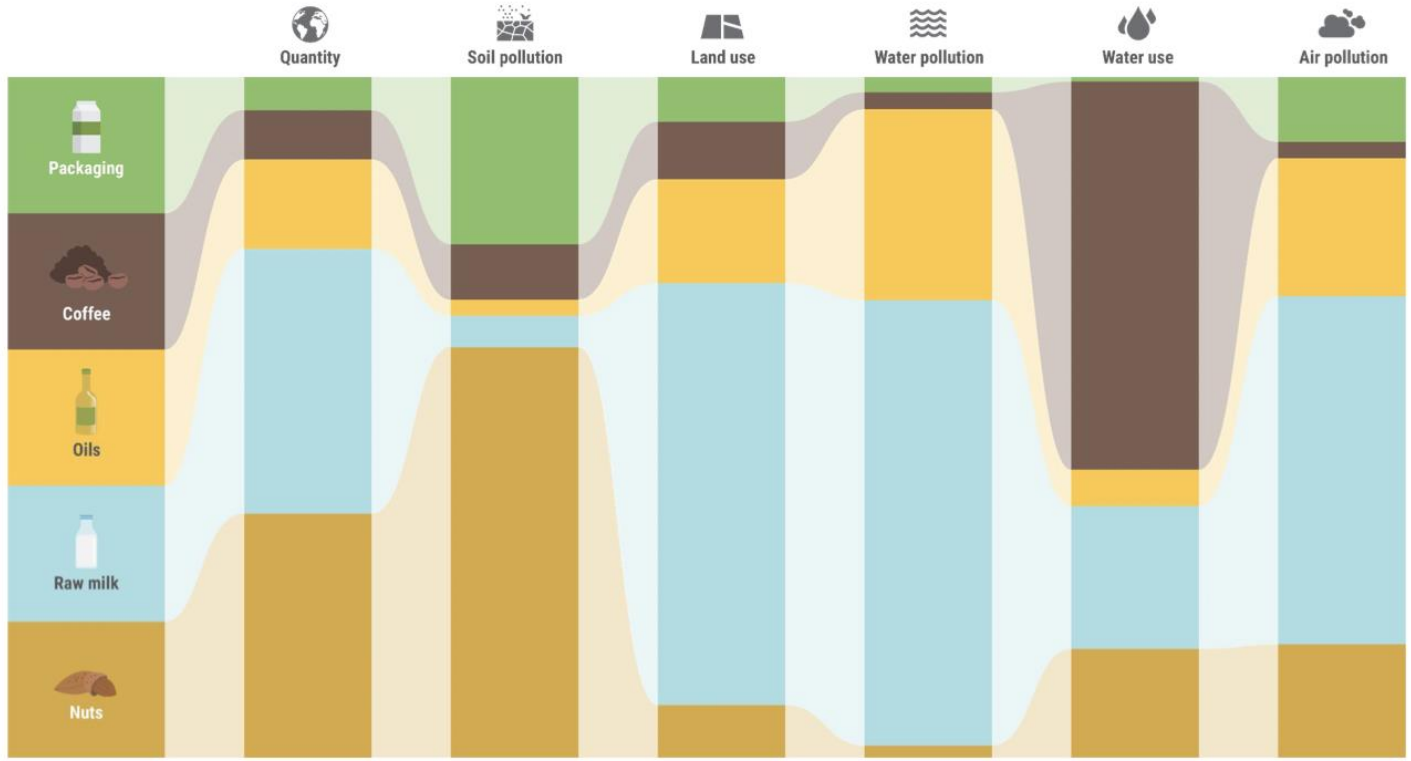
After identifying hotspots of a material, prioritizing impact matters.

It depends on the context you are in.

Different impact on

- soil pollution
- land use
- water pollution
- water use
- air pollution

Prioritize!



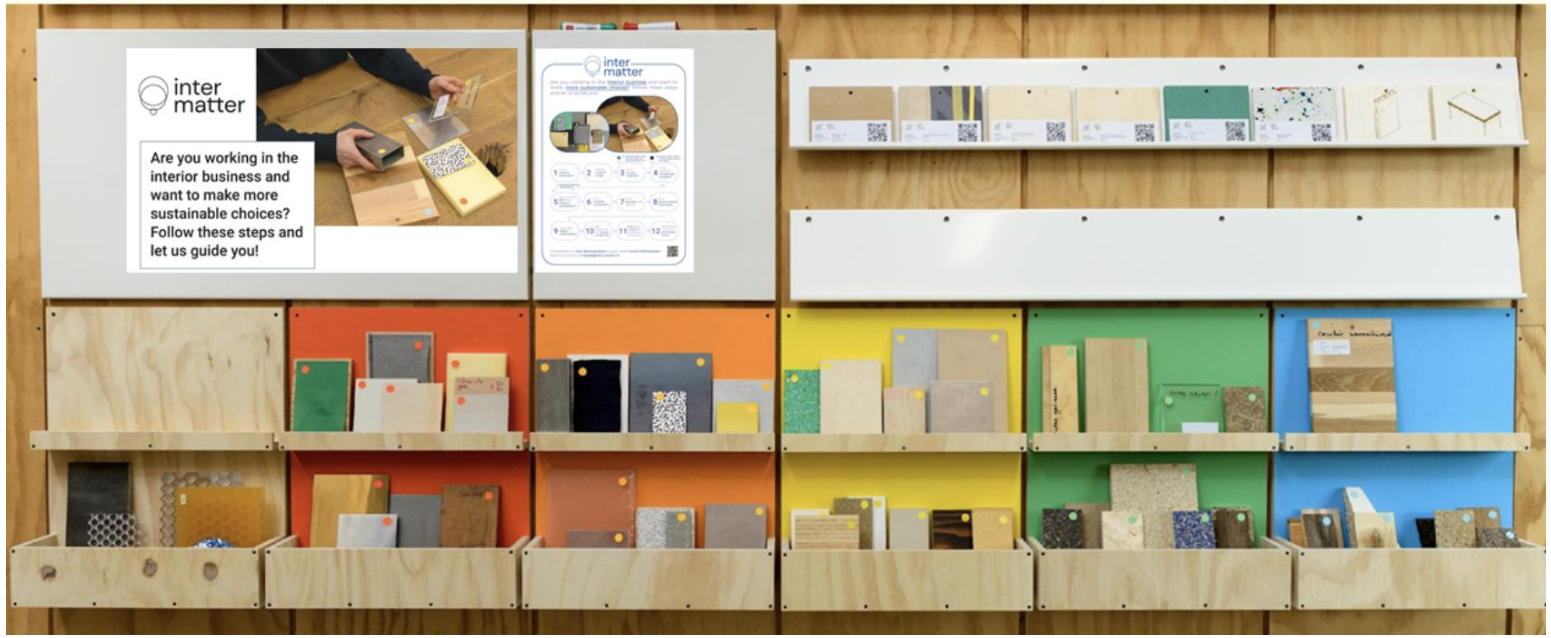
Source: Metabolic, Dora Xu

Takeaway 3: Simplyfing LCA

Clients want to know what is the “best material”

Simplifying material choices matters. In “good” and “bad” categories

Intermatter tool by Marije Remigius, Circu Leren



Source: Circu Leren, Marije Remigius

What's next?

2nd KS 2024? Applied case studies

We connect via the LinkedIn Group 'Circular Design Forum'

Report Sharing a summary of the KS with the Circular Design Forum

Share Sharing new developments of materials through the LinkedIn Group

Feedback We would like to hear from you about how to keep shaping this KS to deliver the most value to the community

KS Repair

Hosted by **Accenture, Microsoft & Logitech**

Supported by **TU Delft & Philips**

Sustainable Design Engineer

Francesco De Fazio

Accenture Industry X Industrial Design

The Team

Sustainable
Design Engineering
consultant

Francesco De Fazio

Accenture Industry X
Industrial Design

Director of NPI
Design for Repair

Jason Brown

Microsoft
Devices

Sr. Sustainability
Engineering Scientist

Yi-Hsieh Wang

Logitech
CP&G

Sustainability Engineering
Program Manager

Kevin Sheridan

Logitech
CP&G

Circular Product Design
consultant

Sharina Ligtelijn

Philips
Engineering Solutions

Sustainability Engineer

Lotte Fonteijne

Philips
Grooming & Beauty

Session setup

In this first sharing session, we addressed four key topics related to repair.

Repair scoring systems

TU Delft

Design approaches

B&O
HMD Global

Aligning Incentives around product longevity

Framework

Traceability and its relevance for repair

Circularise

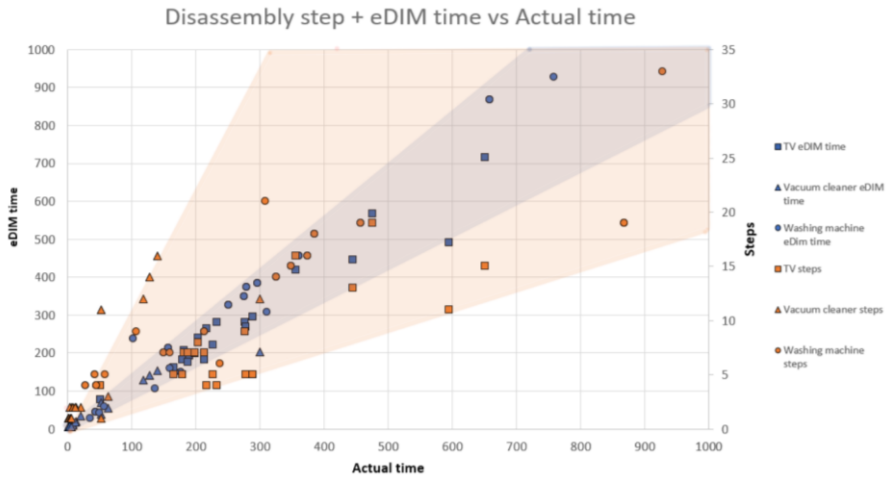
Repair scoring systems

Sagar Dangal
PhD researcher, TU Delft

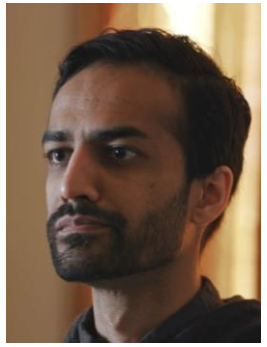
TU Delft

As part of the EU funded PROMPT program, Sagar and team evaluated the reliability and viability of repair scoring systems which have been introduced in Europe.

Critera	FRI					JRC					Ifixit		
	Sub criteria	Smartphone		Vaccum cleaner		Sub criteria	Smartphone		Vaccum cleaner		Sub criteria	Smartphones	
		weight	total criteria weight	Weight	total criteria weight		weight	total criteria weight	Weight	total criteria weight		Weight	total criteria weight
Ease of Disassembly	Disassembly step	10%		10%		Disassembly step	25%		18%		Disassembly time	21%	
	tools required	5%	20%	5%	20%	tools required	15%	55%	18%	55%	Path of entry	21%	55%
	Fastners type	5%		5%		Fastners type	15%		18%		Tools required	13%	
Informaiton availability	Type of information (REP, CON)	20%		20%		Type and cost of information (PRO, CON)	15%		18%		Availability of repair information	13%	
	Information on update type	10%	35%	-	40%	-	-	15%	-	18%	Visual cues	4%	17%
	Remote assistance availability (REP, CON)	5%		20%		-	-		-		-	-	
Spare part availability	availability over time (PRO, RET, REP, CON)	15%	20%	15%	20%	availability over time	-	15%	9%	18%	Availabiltiy over time	5%	21%
	Delivery time (PRO, RET, REP, CON)	5%		5%		who is spare part available to	15%		9%		Who is spare part available to	17%	
Spare part price	Ratio between part and product price	20%	20%	20%	20%	-	-	-	-	-	-	-	-
Software aspects	Software reset (PRO,REP, CON)	5%	5%	-	-	availability over time	15%	15%	4.5%	9%	-	-	-
	-	-		-	-	Free avaiablity of update	-		4.5%				
Health and saftey	-	-		-		-	-	-	-	-	Tools risk	2%	4%
							-	-		-	Puncture risk	2%	
Repair endorsement	-	-		-		-	-	-	-	-	Repair allowed by	4%	4%



Aligning incentives around product longevity



Nirav Patel
Founder and CEO, Framework

framework

How to aligning consumer and business incentives, by creating a repairable product and a successful business model.

Device makers incentives:
- Maximise profit
- Minimize costs
- Minimize risks

Design	Manufacture	Sell		

Consumers Incentives:
- Product longevity

		Sell	Use	EOL

Ideal scenario: incentives aligned through the value chain

Design	Manufacture	Sell	Use	EOL

Bang&Olufsen design approach to enable repair

Jakob Bergstrøm Graabæk
Sr. Specialist Mechanical Engineering

Kresten Krab-Bjerre
Creative Director

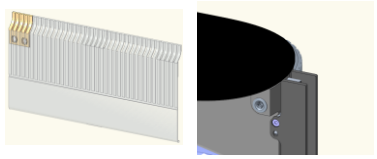
Mads Kogsgaard Hansen
Head of Product Circularity

BANG & OLUFSEN

Bang & Olufsen presented how their design process works and how they address longevity, serviceability, repairability and upgradeability.

Adaptable design, as sound bar and as stand.

Standard screen interface



Reversible joints

Upgradable horizontal size and aesthetics

Road to Repair: Nokia G22

Adam Ferguson
Global Head of Insight and Product Marketing, HMD Global

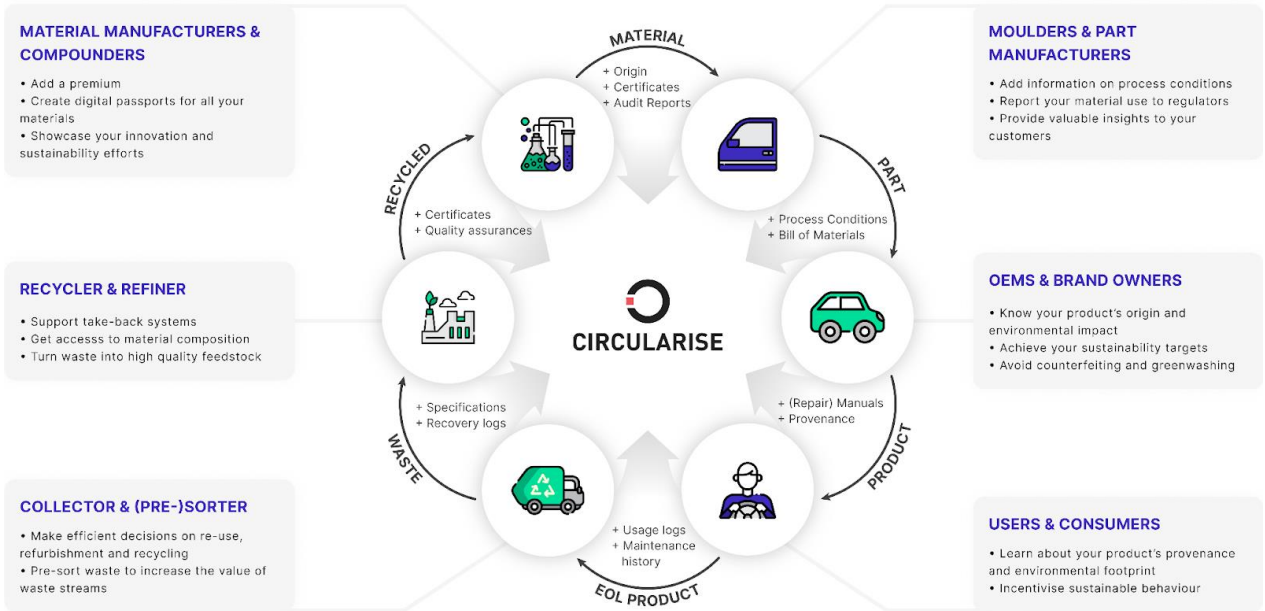
hmd.
The Home of Nokia Phones

HMD told us about the ongoing achievements and challenges in developing repairable smartphones in the sub €200 segment.

Traceability and its relevance for repair

Thomas Nuyts
Head of Sales, Circularise

Thomas from Circularise presented about the transformative potential of DPPs in driving sustainable practices, fostering collaboration, and realizing the vision of a circular economy within these industries.



What's next?

Based on this first session we defined two next steps:

- We organized a monthly informal online call (Currently on pause) which we would like to expand with more experts
- We will organize a second session next year, to tackle other topics connected to repair.
- Behavior change was mentioned multiple times. We will connect with the KS Behavior Change to explore how this overlap could be address in their session.

KS Circular Business Models

Hosted by **oneUp**

Supported by **Studio Schop & Versuni**

Sr. Venture Builder

Ezgi Karabat

oneUp

The Team

Anastasia Khusid

Director of R&D

oneUp

Founder

Sofie Schop

Studio Schop

Venture Builder

Chiara Schlösser

oneUp

Sr. Venture Builder

Ezgi Karabat

oneUp

Refurbishment Sustainability Development Manager

Malva Groothuis

Versuni

Venture Builder

Martine de Haan

oneUp

Venture Builder

Roberto Pozo

oneUp

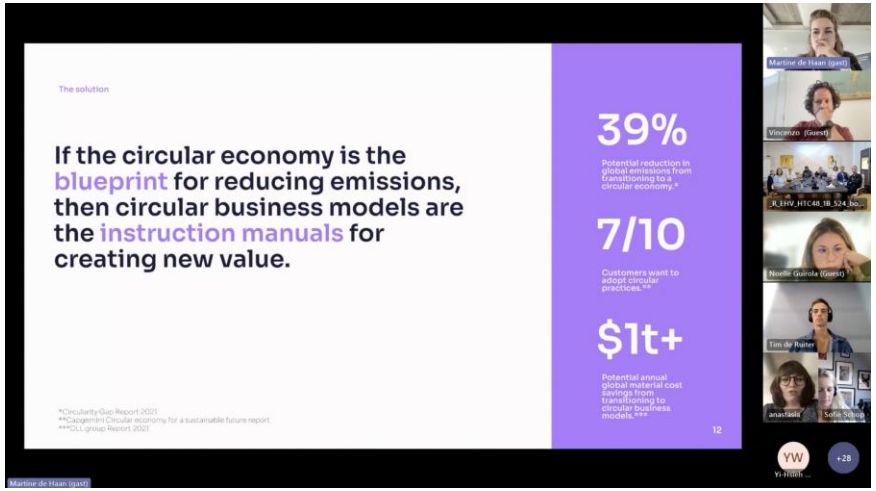
Session Setup

Gaining the Circular Business Model Advantage

How to engage in the innovation opportunity of our time

The session had six parts, including an introduction and conclusion, and lasted for 2.5 hours. **We conducted it entirely online to ensure a consistent experience for our 35+ attendees.**

Innovating circular business models is tough, but we simplified it by providing **a clear step-by-step method to minimize risks and a practical roadmap.** We also shared **real-world case studies from Versuni and oneUp** to show that **a systemic approach can create desirable, feasible and viable circular business models.**.



The FUTURE

The Circular Economy could generate $4.5 trillion of additional economic output by 2030 and $25 trillion by 2050.*

*Accenture

The PRESENT

However, companies experience several **dilemmas** when working on circular business models.

DILEMMA 1
Bridging the Say-Do Gap

DILEMMA 2
Doing well vs Doing good

DILEMMA 3
To Scale or not to Scale

The BIG QUESTION

How can circular business model innovation process help overcome major circular economy dilemmas?

DILEMMA 1
Bridging the Say-Do Gap

Reducing my environmental impact from fashion overconsumption

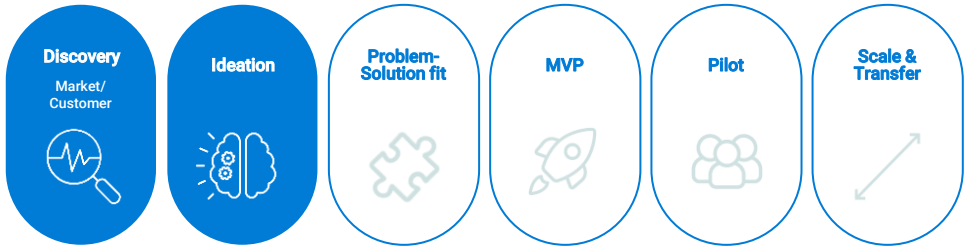
VS

Having new clothes for each occasion, without spending too much $$ and/or cluttering my closet

How to overcome the Say-Do gap?

Build things that solve real pain for potential customers. Even if it is a circular product or service.

You can do this in the first two steps of the process.



DILEMMA 2
Doing well vs Doing good

Circularity = Less consumption = Less profit, right?

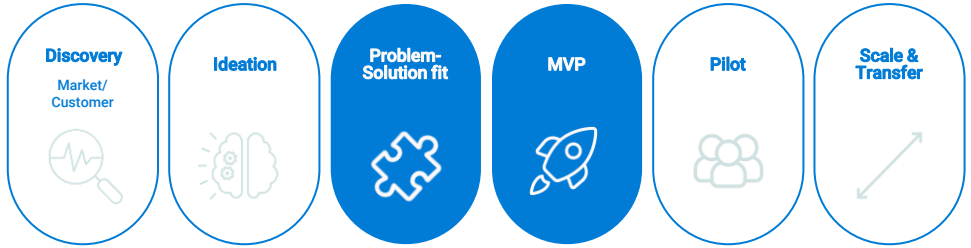
How to balance the positive impact and still generate profit?

How to solve the doing well vs doing good dilemma?

We de-risk business models in a structured way by generating learnings via research and experiments.

Building business cases to track your impact vs profit would be the key to ensuring you do good while doing well.

You can do this in the 3rd and 4th steps of the process.



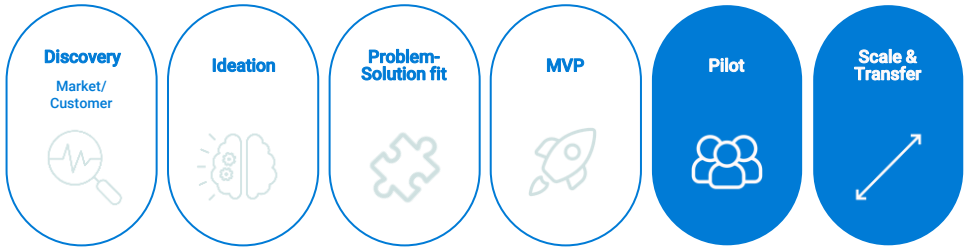
DILEMMA 3

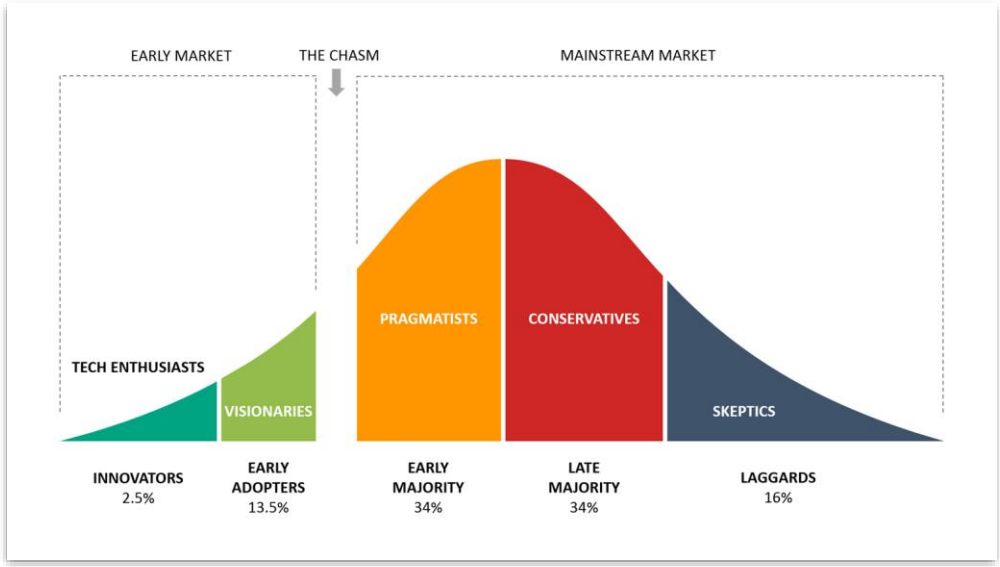
To Scale or not to Scale

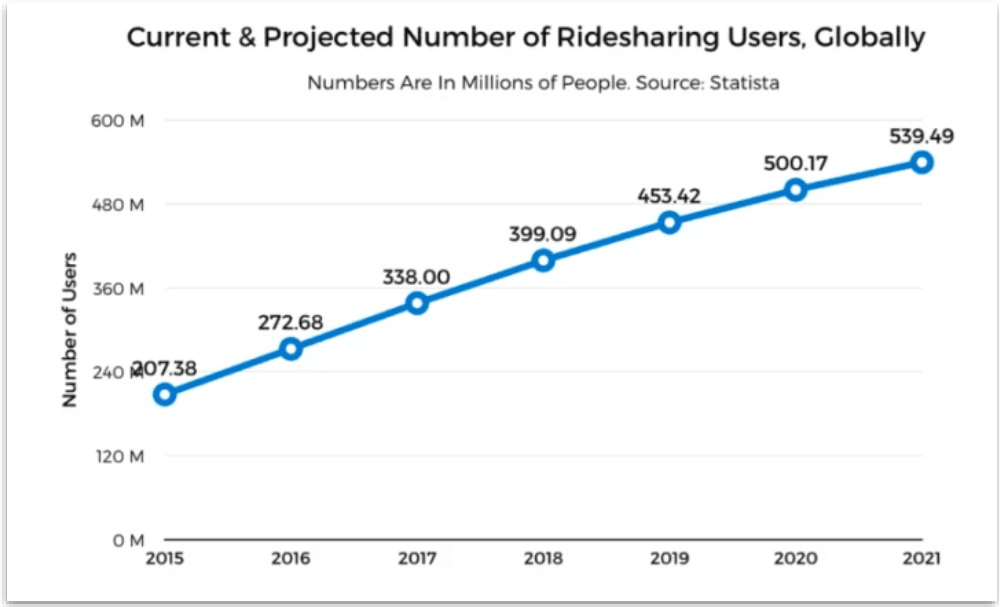
Can circular business models scale?

Prove that the solution delivers value to many customers, both in terms of acquiring /activating them and retaining them.

You can do this in the last two steps of the process.







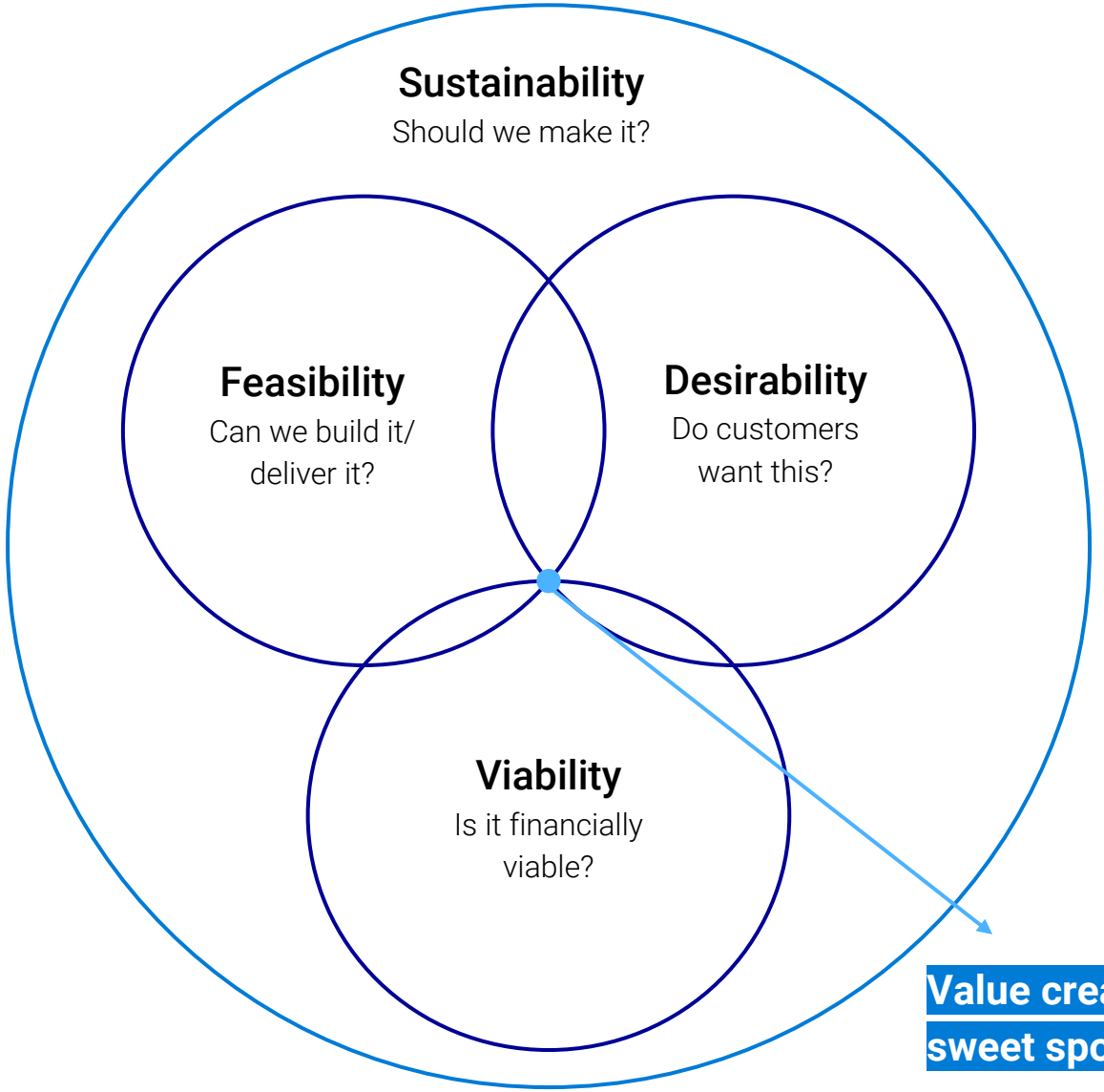
Source

What's next?

In this session, we have discussed **a high-over process** for circular business models.

In the next sessions and meetings, we would like to answer the remaining questions by going through the **details of this approach and discussing the challenges faced further.**

We also would like to dedicate a session for **innovation/impact accounting for circular business models.**



Feel free to reach out!

If you have topics and questions you want covered in the knowledge stream, or you just want to chat about circular business models, drop us a message!

Ezgi Karabat
oneUp
Sr. Venture Builder

ezgi@oneup.company

Chiara Schlösser
oneUp
Venture Builder

chiara@oneup.company

Sofie Schop
Studio Schop
Founder

sofie@studioschop.com

Malva Groothuis
Versuni
Refurbishment Sustainability Development Manager

malva.groothuis@versuni.com

KS Circular Metals

Hosted by **Brunel University London**

Research Fellow

Alessio Franconi

Brunel University London

Circular Metals' Panellists

Principal Consultant

Rachel Waugh

Oakdene Hollins

Innovation Designer

Marco Limani

Electrolux Professional

Senior Sustainability Engineer

Luke Bloodworth

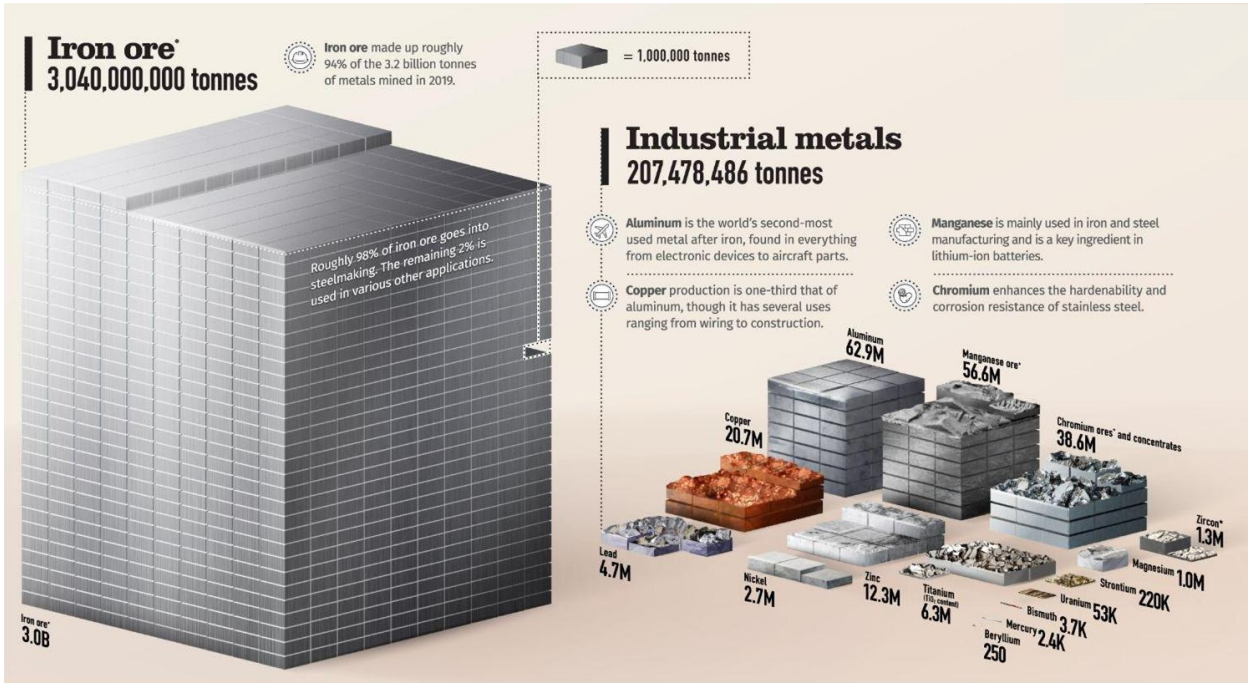
Jaguar Land Rover

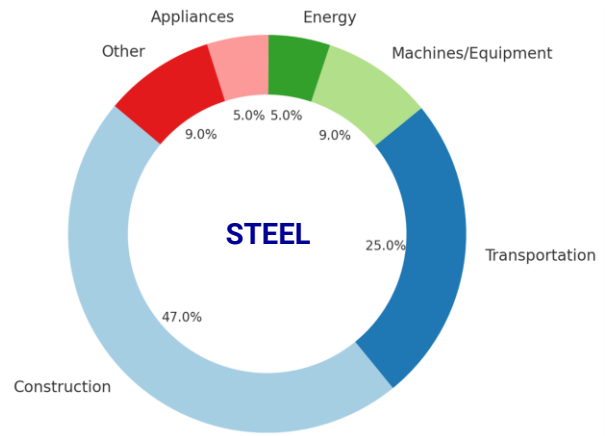
Session set-up

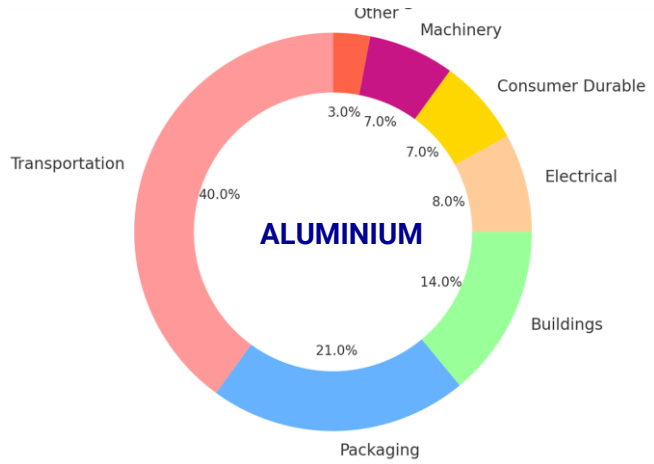
Steel and aluminium, accounting for 10% of global CO2 emissions, play a vital role in the transition towards a circular economy.

The metals industry can reduce emissions by 60% through energy efficiency, but the remaining 40% can only be achieved through supply chain management, which requires much more difficult design and business model adjustments.

We invited three companies that are dealing with steel and aluminium to discuss how they are addressing this challenge and implementing strategies to transition to a circular metal economy.







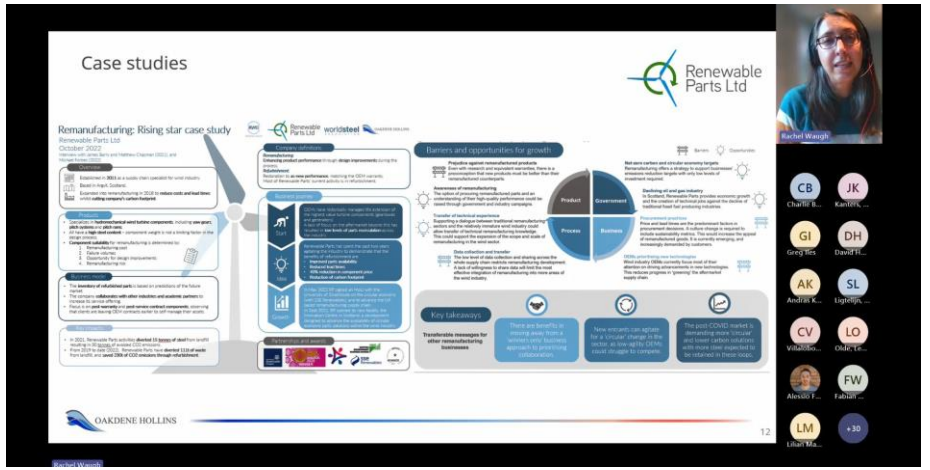
What was your most surprising feedback?

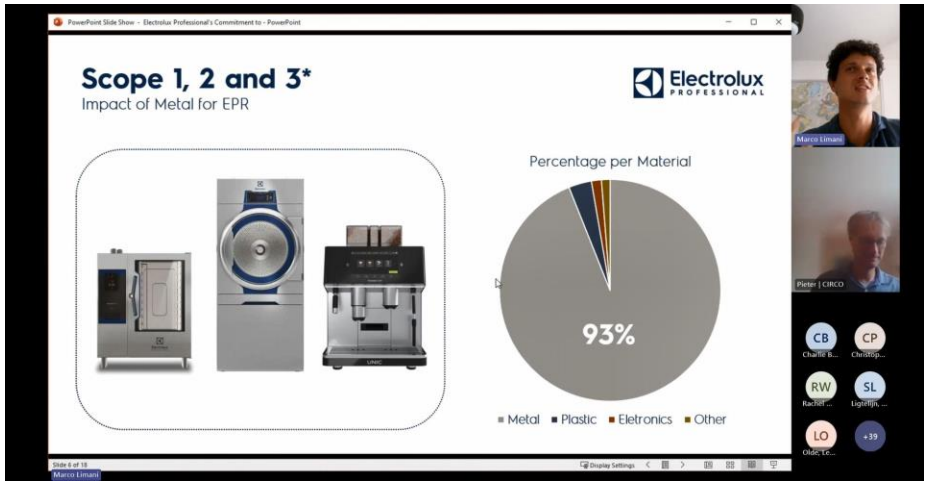
One of the organisations represented at the session has a long-term aim of aluminium recycling in a closed-loop system.

The company is propelled by design, and its products are iconic and luxurious.

Given that the company sees no other circular business model other than "recycling more" as a viable long-term solution, this indicates that design is both the solution and the obstacle.

This highlights the imperative need to broaden our circular design horizons while simultaneously combating “circular products for a slightly better society”.



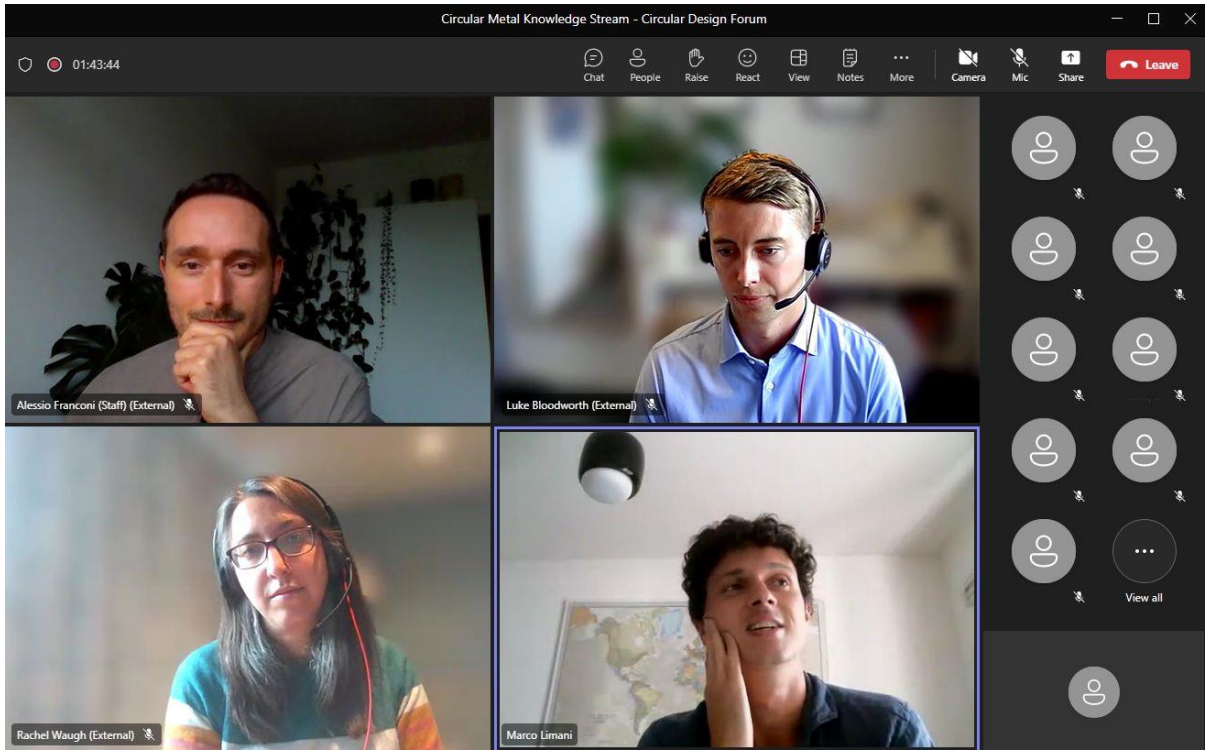


3 main takeaways that everyone should know

1. Initiate the transition to a circular model by conducting pilot experiments on existing linear or imperfectly circular products.

2. Securing executive buy-in is vital; small-scale projects can serve as powerful proof-of-concept initiatives, encouraging further investment in circularity.

3. Knowledge transfer plays an essential role in a successful transition, with a particular emphasis on sharing technical solutions for circular implementation.



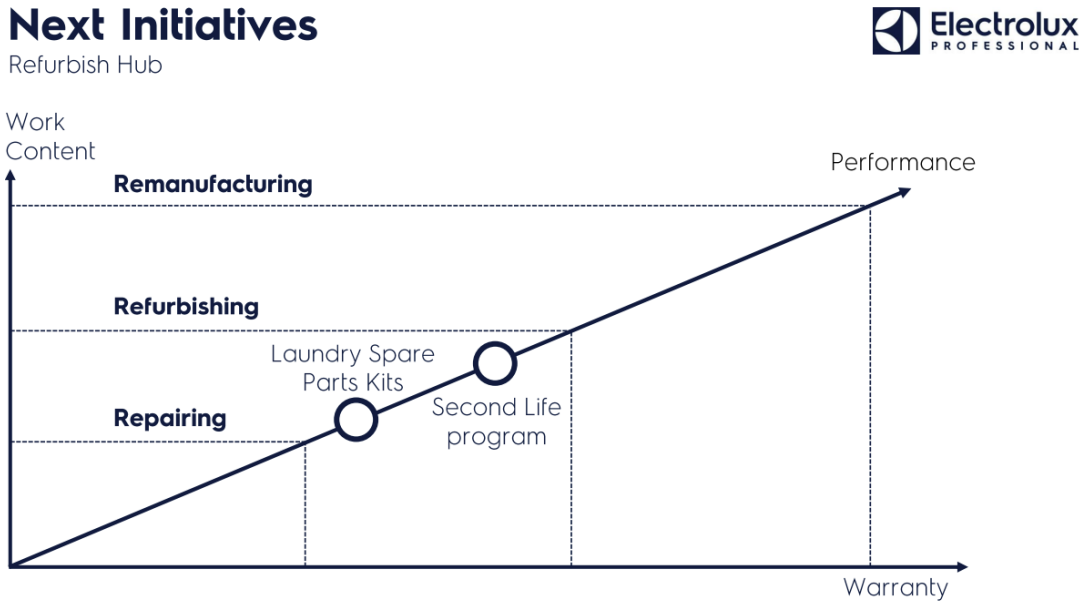
Takeaway 1: Pilot Experiments as a Circular Launchpad

Initiate the transition to a circular model by conducting pilot experiments on existing linear or imperfectly circular products.

Electrolux effectively extended the life cycle of their professional washing machines through the simple replacement of some elements of the product.

This not only extended the product's utility but also provided valuable insights for the development of a more comprehensive circular strategy, influencing both future product design and business models.

Takeaway 2: Small Projects, Big Impact on Circularity

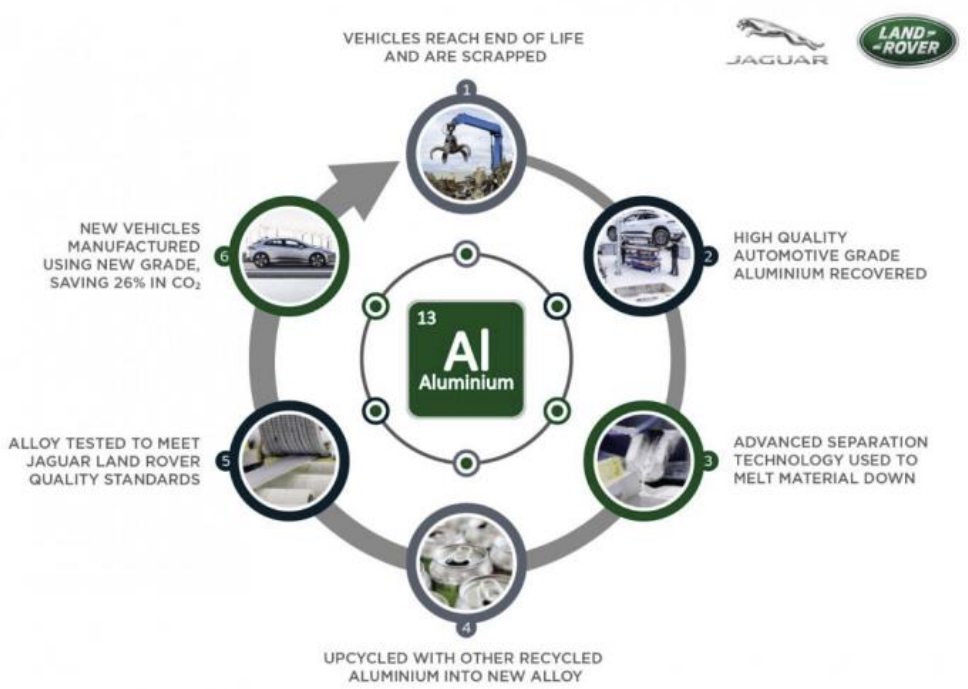


Securing executive buy-in is vital; small-scale projects can serve as powerful proof-of-concept initiatives, encouraging further investment in circularity.

Electrolux dimostrated how launching smaller, focused projects aimed at incorporating circular principles can demonstrate the viability and benefits of a circular approach.

These projects can act as catalysts inside the company, generating interest and support from key stakeholders, thereby unlocking additional resources and investment for more ambitious circular strategies in the future.

Takeaway 3: Knowledge Transfer - The Catalyst for Transformation



Knowledge transfer plays an essential role in a successful transition, with a particular emphasis on sharing technical solutions for circular implementation.

Jaguar Land Rover's shift to an upcycling system benefitted significantly from an extended period of collaborative research with Brunel University London, focused on optimizing metal recovery processes.

This symbiotic relationship between academic research and practical implementation has the potential to radically transform a company's business model, underscoring the critical role that knowledge transfer plays in the journey toward CE.

What’s next?

“*I hear and I forget. I see and I remember. I do and I understand*”

It would be highly beneficial not just to hear presentations, but also to witness these circular implementations in action.

One idea could be to organize "**Circular Economy Tours**," where we visit nearby companies to engage in discussions directly in front of the experiments and initiatives they've undertaken for transitioning to a circular economy.

Coming soon!

KS Substances of Concern

Hosted by **Delft University of Technology**

Coming soon: 30th November 2023

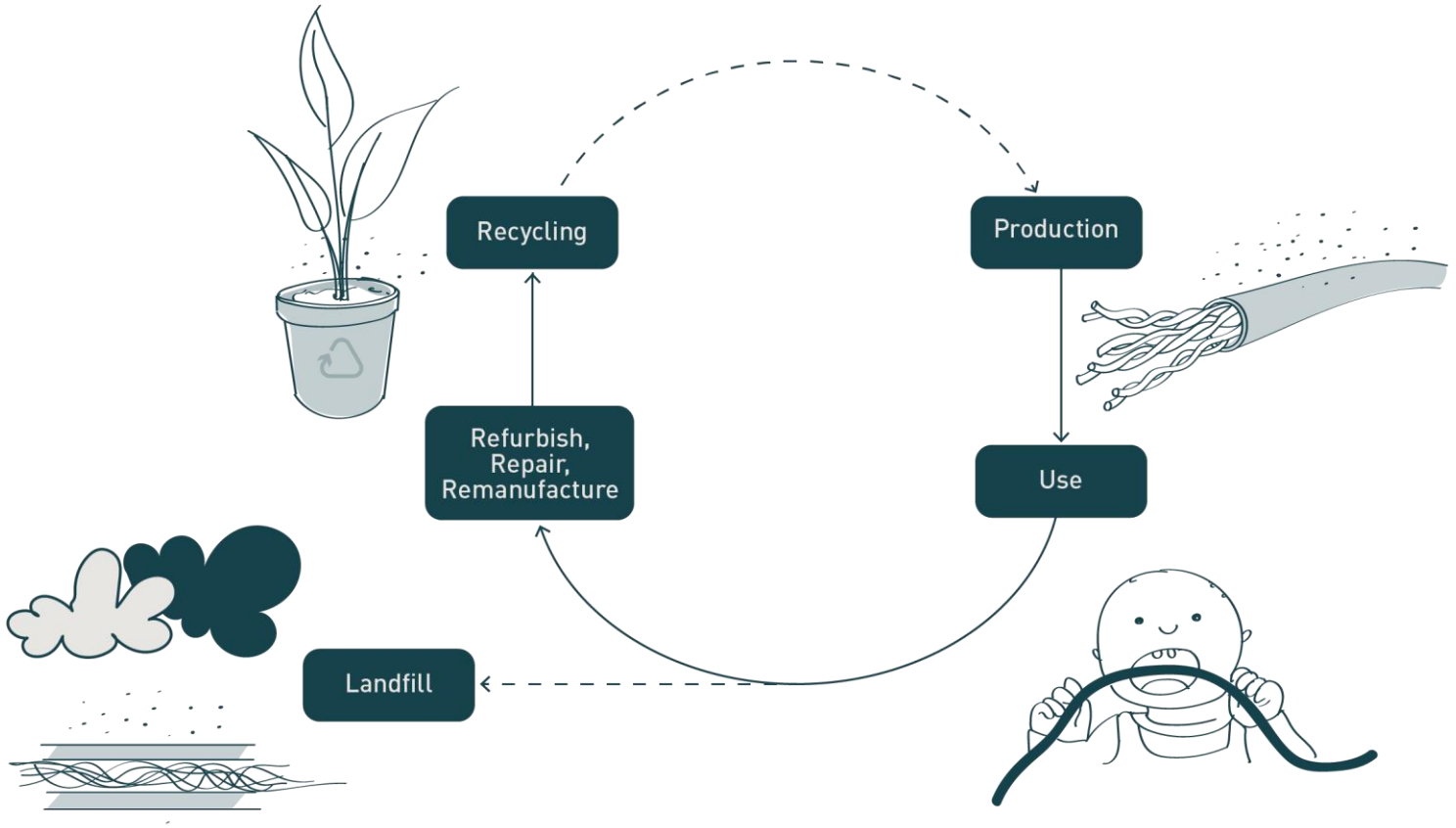
PhD Candidate

Julieta Bolaños Arriola

Delft University of Technology

Substances of Concern (SoC)

SoC in the Circular Economy



Session set-up

What is the role of product design in mitigating the risks of SoC across the lifecycle of products?

During the session we will:

- Share research results on cases.
- Discuss methods and strategies to deal with SoC from the product design perspective.
- Discuss challenges for industry, and existing and upcoming policies.

Coming soon!

KS Recycling

Hosted by **Pezy Group**

Supported by **Microsoft & Philips**

Coming soon: 19th December 2023

Product Developer

Naomi Atmopawiro

Pezy Group

The Team

Circular Design Lead

Thijs Feenstra

Pezy Group

Product Developer

Naomi Atmopawiro

Pezy Group

PL CMF @ Recycling Expert

Mark-Olof Dirksen

Philips

Sustainability Engineer

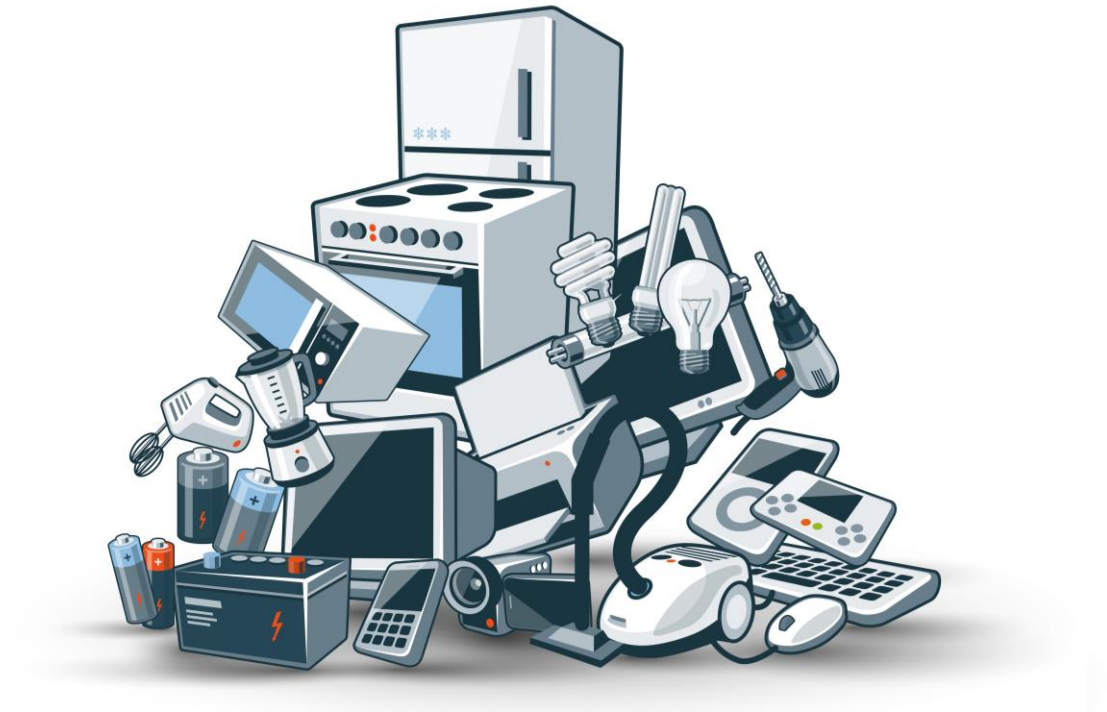
Christopher Seely

Microsoft

Session set-up

The goal

- Show different tools to assess recyclability of a product
- Share insights on designing for and from recycling



Session set-up

The agenda

Introduction

- Design for Recycling of e-products
  - How are e-products flowing through the recovery system?
  - Different categories

Philips

- DforRecycling tool for WEEE cat. 04 – automated
- DfromRecycling applied to commercial products

Microsoft

- Metrics and methods for calculating recyclability
- How to incorporate recyclability into circularity metrics
- Closed Loop vs Open Loop. Where is the value?
- Tips for engaging with engineers on recyclability

Pezy Group

- Assessing DforRecycling qualitative methods
- Contradictory: Defining recyclability at early stage
- Design for Shredding

What's next?

Based on the level of interest, a live session will be organised on how to assess recyclability of a product.

Location Pezy Group Groningen, the Netherlands
Date TBD based on interest

Coming soon!

KS Behavior Change

Hosted by **Partners for Innovation & EGGS**

Coming soon: 31st January 2024

Circular Economy Consultant

Flora Poppelaars

Partners for Innovation

KS Behaviour Change

Main session on: *January 31st 2024*

What is it about?

Let's dive into the depths Design for Behavioural Change and together share insights on several topics such as: different levels of interventions, behavioural principles, ways to remove barriers, design principles for divestment, consumer acceptance of recycled goods and ethics.

For whom is it relevant for?

This is for anyone who works with product, business or service development and wants inspiration and hands-on tips for how to change user behaviour to be more sustainable. It is also for people who are new to the topic and want to learn more about it.

Possible activities during the session

- 3-4 case study presentations
- Discussion of key insights, reflections and challenges

Organizing team

EGGS

Partners for Innovation

KS Behaviour Change

Case Study:

Consumer acceptance of r-plastics in EEE

First insights from the Horizon Europe project INCREACE

- Which *barriers* and *drivers* do EEE brand owners experience and how do they navigate them?
- How to bridge the attitude-behaviour gap: which *strategies* for enhancing consumer acceptance do EEE brand owners employ?
- What are remaining *knowledge gaps*?

Image credit: Logitech Brio 300 webcam (Logitech, n.d.)

KS Behaviour Change

Case Study:
Using behaviour change principles to reduce vessel energy consumption

Insights from working with Kongsberg maritime

- Using behavioural principles to design the user interface
- Designing to create trust
- Designing to change habits

Circular Challenges

Jos Vlugter
Circular Economy
Consultant

Partners for Innovation

Circular Challenges

The goals

~~Solving the challenges~~

Connecting and explore possible follow up's

Having a good time together!

Ahrend

Ownership in a Circular Economy

Product Manager
Workspaces & Materialisation

Lizzy Stuyfzand

Ahrend

Innovation Manager

Jesper Belonje

Ahrend

Ahrend: Ownership in a Circular Economy

Setting: Offline only

Context

Since the late eighties, Ahrend was one of the early adapters of the eco-design principle. In 1992 we launched our first eco-design chair. Fortunately, nowadays, eco-design has become mainstream.

In 2017 Ahrend introduced FaaS, Furniture as a Service Model. Thankfully, more and more furniture brands are adapting FaaS models. In 2021 we opened our Circular Hub in Veghel where products return to be refurbished for its next lifecycle. As early adaptors circular design & business models, at Ahrend, we are always looking for solutions beyond today's circular challenges towards a circular economy.

Ahrend: Ownership in a Circular Economy

Setting: Offline only

Challenge

Rethinking the role of ownership and design to create a sustainable, restorative, regenerative future: how can we create a positive impact design roadmap?

Nowadays, the industry is focused on “sustainability” and reaching net-zero goals to reduce our negative impact on the planet. According to the Circularity Gap Report 2023 by Circle Economy, we can only provide 70% of people’s needs within the safe limits for the planet of the materials we currently use. Within the office furniture industry, design is currently focused on reuse, lifecycle extension, and recycled materials to reduce the impact on the planet. But what are the design questions of tomorrow towards a shift of reducing negative impact to increasing positive impact?

For example: What is the role of the designer in an era where material extraction does not exist anymore, and we can only work with reused materials? Or, how do you design a product in an era where products not only provides benefits for the user, but also returns social- and/or environmental benefits its surrounding system?

Ahrend: Ownership in a Circular Economy

Setting: Offline only

Session activities

Creating a positive impact design roadmap

We will run the workshop in a “Socratic brainstorm” setup. The group will be divided into three to brainstorm about how to design a product for the following three topics: 1) Sustainable design , 2) Restorative design 3) Regenerative design. After the brainstorm, each group presents the outcomes of their topic.

After the presentations, we will plot the different cases into a “positive impact design roadmap” as a group.

The goal of a Socratic discussion is not to reach a consensus, but rather to help the participants to develop their own critical thinking skills and to gain a deeper understanding of the topic at hand.

Danfoss

Quantifying circularity to drive innovation

Sustainability Integration Manager

Lina Psarra

Danfoss

Danfoss: Quantifying circularity to drive innovation

Setting: Offline only

Context

Circularity is based on both **qualitative metrics**, like design for disassembly, modularity etc. but also **quantitative metrics** like recycled content and extended lifetime. How to we ensure that both these metrics can be combined in a tool that could help drive innovation further? How can we ensure reliable data sources for the quantitative metrics and reliable and objective assessment for the quantitative ones. What is the experience from other companies working with such metrics?

Danfoss: Quantifying circularity to drive innovation

Setting: Offline only

Challenge

During the session we expect to dig deeper into the following problems:

Qualitative metrics can generate different results and conclusions based on who performs the assessment. How can we ensure that the assessments are done in an objective manner by the different people? Examples of qualitative metrics will be shown and the main challenges will be analysed

For the quantitative metrics valid and reliable data is often missing so companies are often relying on industry average values and theoretical figures (e.g. theoretical recyclability - which can be significantly different than what happens in reality). How to develop more realistic metrics, based on reliable data? How to work across the value chain (e.g. with waste handling companies, suppliers and customers) and with other peers to further develop knowledge on such metrics and drive innovation towards products with actual improved performance on such metrics? Commonly used information sources will be shown and main challenges will be presented. Participants can share their experience with working with such metrics.

Danfoss: Quantifying circularity to drive innovation

Setting: Offline only

Session activities

The session will be split into four parts:

1. Short presentation of the work we have been doing in Danfoss with qualitative and quantitative metrics (short demo of our tools)

2. Challenge on the qualitative metrics

3. Challenge on the quantitative metrics

4. Open discussion on ways we could work together moving forward to solve the challenges and other next steps.

Signify

Closing the loop on lighting

Designer

Lilian Marijnissen

Signify

Design Manager

Laura Taylor

Signify

Signify: Closing the loop on lighting

Setting: Offline only

Context

Lighting in a supermarket isn't just about making food visible. It also showcases the supermarket's values and improves the shopping experience.

In this case, NewGreen Supermarket plans to open two new stores—a small local one and a high-end large store, while closing their old one. NewGreen wants Signify to create a lighting plan for these new stores.

Since NewGreen prioritizes reducing waste in their offerings and operations, they've asked Signify to explore options for handling the old lighting products from the closing store responsibly. This means they want to find an eco-friendly way to deal with the old lighting products.

Considerations:

- With most of the lighting not being end of life
- Electronics being the critical parts
- Some of the lighting has service tags, to read out product information
- The lighting was managed using a digital control system that stores lifetime data

Signify: Closing the loop on lighting

Setting: Offline only

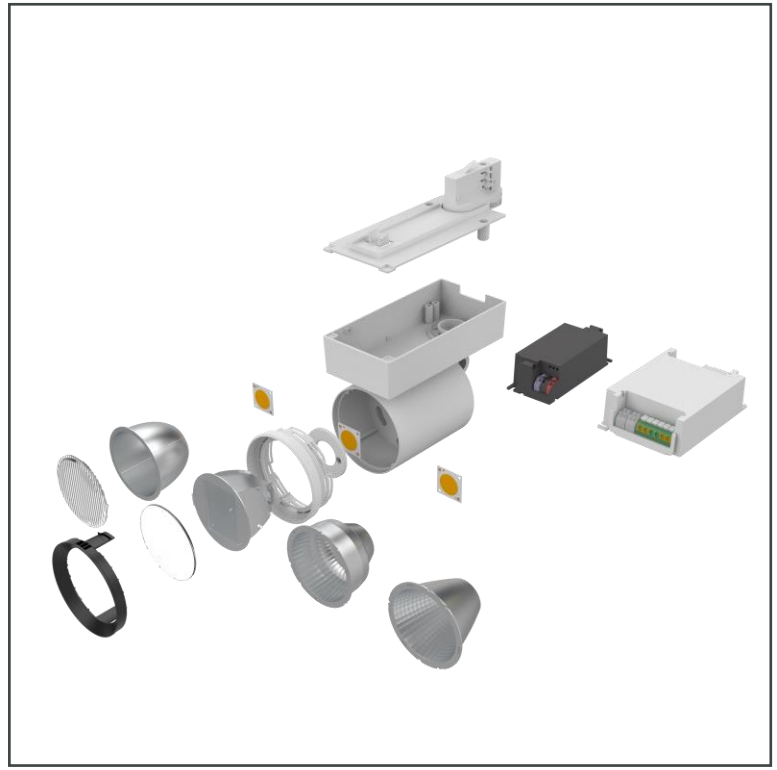
Challenge

How might Signify work together with NewGreen to reduce waste by taking responsibility for the old lighting products in a circular way?

The challenge for Signify is to close the loop in a way that maximizes the value of old lighting products (e.g. re-using, re-furbishing, re-manufacturing…) in a way that is appealing for NewGreen and is good for Signify's business.

Barriers to be overcome:

- Doubts about reliability of second-use products
- Today's products may not be designed with re-usability in mind
- The value chain is a traditional linear flow and not set up for circular practices
- Parts from old products typically go into recycling processes and not circular ones



Signify: Closing the loop on lighting

Setting: Offline only

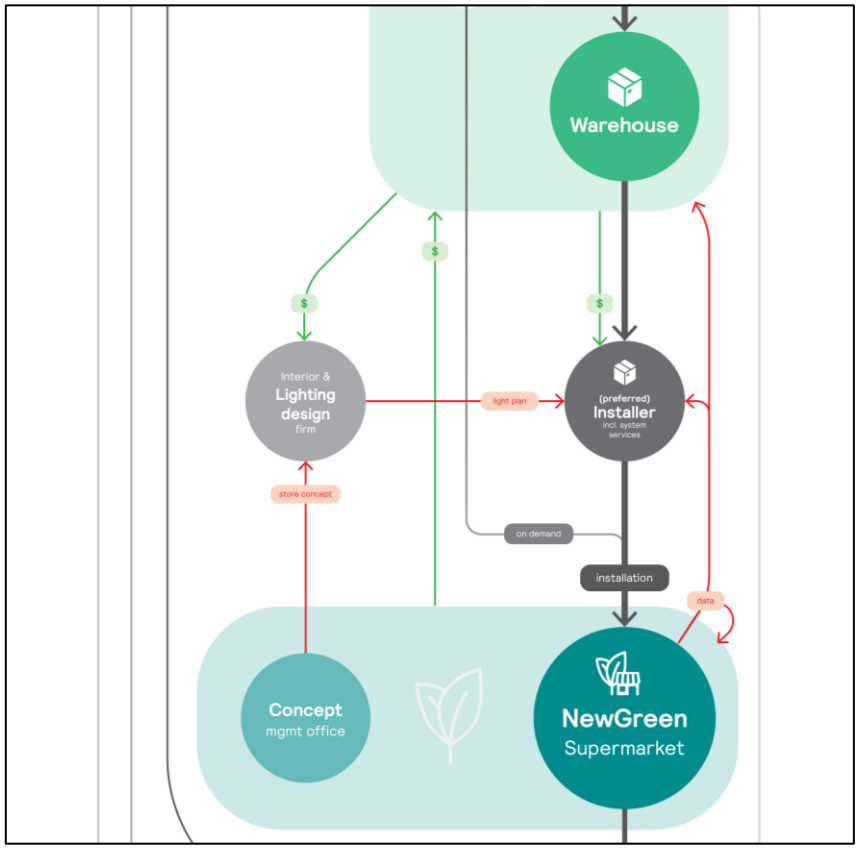
Session activities

Explore and understand the current flow (goods, money and data)

Explore new flows that close the loop in different ways

Within each new flow:

- Spot opportunities and challenges for all the steps (collection, evaluation and further processing of lighting products and parts).
- Identify changes in the value chain with eg room for partners, new business ventures
- Indicate how data can enable the flow



Bang & Olufsen

Lifetime value proposition for consumer electronics

Head of Product Circularity & Portfolio Planning

Mads Kogsgaard Hansen

Bang & Olufsen

Sustainability Lead

Caroline Cawley

Bang & Olufsen

Bang & Olufsen: Lifetime value proposition for consumer electronics

Setting: Offline and Online

Context

At Bang & Olufsen we have taken a strategic decision to lead and inspire a movement towards a future where consumer electronics are designed, produced, and used in a more long-lasting and circular way. We are approaching this ambition through our Cradle to Cradle Certified Program, where we are committed to apply Cradle to Cradle Design Principles to our product portfolio across product categories.

However, to unlock the full potential of this transformation, it is not enough to just design our products for this. We also need to find ways to shape consumption and user patterns in a way that meaningfully will promote a future where 'buy less, buy better and expect it to last' will be a key element of buying decisions. We also would see explorations needed with in more circular value propositions and business/revenue models to capture the full potential of our design effort. This could be consumer behaviour linked to 'Lifetime-extending services' (such as service, repair, upgrade and customization), second-life reselling, remanufacturing our even products-as-services.

Bang & Olufsen: Lifetime value proposition for consumer electronics

Setting: Offline and Online

Challenge

Besides designing long-lasting and circular products, exploring value propositions, business models and shaping user patterns will be key elements of buying decisions. How can we unlock the full potential of the circular products and systems by creating value propositions that are based on a total lifetime value logic as a key driver of desirability for tomorrow's music and design loving consumers?

Bang & Olufsen: Lifetime value proposition for consumer electronics

Setting: Offline and Online

Session activities

In this session, we will explore the experience of B&O users of Headphones (Online) and Speaker (offline).

We will leverage a user journey map to highlight touchpoints, painpoints, pain relievers and opportunities to generate a comprehensive “total lifetime value proposition” appealing to users & viable for B&O.

You will be asked to provide your own experience as a user of headphones/speaker and technical expertise on how to make such proposition appealing to end users.

If time allows, product design & revenue considerations may be explored to enrich the concept.

TU Delft

Design reusable packaging that you keep on using

PhD Candidate

Xueqing Miao

TU Delft

Professor in Design for Sustainable Consumer Behavior

Ruth Mugge

TU Delft

TU Delft: Design reusable packaging that you keep on using

Setting: Offline and Online

Context

Driven by a desire to counter single-use packaging waste, consumer interest in reusable packaging is increasing. While consumers generally recognize the environmental advantages of reuse, their actual reuse behaviours vary widely and can unintentionally undermine sustainability efforts. Reusable packaging typically employs resource-intensive materials to ensure longevity. These items are supposed to be used frequently over a long duration to be more environmentally friendly than their single-use equivalents. However, consumers may acquire reusable items excessively, forget about them, leave them unused, or prematurely discard them, inadvertently diminishing the potential environmental benefits of reuse.

To address these unintended behaviours, we invite design solutions for reusable packaging to cultivate enduring reuse behaviour.

TU Delft: Design reusable packaging that you keep on using

Setting: Offline and Online

Challenge

The challenge is to design reusable packaging in a way that consumers desire to continue using it over a long period. In this challenge, we encourage you to break free from the constraints of traditional packaging format and envision packaging as a product with an extended lifespan, stimulating your reuse behaviour through its unique design interventions. The interventions you create can be as diverse as your imagination allows. They can be static or dynamic, physical or digital, seamlessly integrated into the packaging's form and function or included in the overall packaging system.

TU Delft: Design reusable packaging that you keep on using

Setting: Offline and Online

Session activities

1. **Set the stage** : Welcome and introduce the design challenge
2. **Get into the topic** : Participants discuss various product packaging in supermarkets that could be interesting for reusable packaging
3. **Uncover opportunities**: Introduce various design strategies to inspire creative thinking. Present different “How might we” (HMW) questions
4. **Brainstorming and ideation**: Participants brainstorm innovative interventions for packaging to stimulate reuse behaviour and prolong packaging lifetime. Write and sketch as many ideas as possible.
5. **Strategy interpretation**: Discuss how to interpret your design strategies and give them names.
6. **Presentation**: Summarise all your ideas and present the best concept(s).

Fairphone

Credible product claims on recycled materials

Circular Material Chains Innovator

Thea Kleinmagd

Fairphone

Fairphone: Credible product claims on recycled materials

Setting: Online only

Context

Sourcing recycled materials is a powerful way to motivate recycling. It is especially crucial when the demand market for the recycled materials is the key bottleneck in increasing the recycling rate (e.g. plastics, aluminum for high-end applications). Therefore, Fairphone works with our suppliers to integrate recycled materials since 2019 (Fairphone 3) , however, claiming these materials as recycled is not straightforward.
Primary and recycled materials are often physically or chemically indistinguishable, and there are currently no reliable, accurate and reproducible methods available for directly measuring the recycled materials content in a product. Therefore, the verification of recycled materials content is based exclusively on documentation.
At the beginning, when only very few material suppliers got third-party certifications, we took the time and effort to track the sources of recycled content, combining our investigations with self-declarations of material and component suppliers. Nowadays, thanks to policies and strategies such as the EU green deal and net-zero goals as well as sustainability awareness, all different industries including textiles, constructions, and electronics sectors start moving closer to secondary materials markets, many brands claim that there are recycled content in their products, and new challenges appear.

Fairphone: Credible product claims on recycled materials

Setting: Online only

Challenge

It’s not just one challenge, it is many challenges to get to a credible recycled material claim.

To name a few:

- How does one make sure the recycled content one is claiming is actually in the product?
- How does one choose the best suited recycling certification?
- How does one obtain the certification in a resource efficient manner?
- How does one make sure the certification helps contribute to increasing the pool of recycled materials available (with its current setup and transparency)?

Fairphone: Credible product claims on recycled materials

Setting: Online only

Session activities

We want to bring together the knowledge (gaps) of different companies and industries on the topic of recycled materials certifications.

We will discuss:

- the certificates participants are aware of
- the perceived robustness and reasons for this perception
- reasons why specific certifications have been chosen
- experiences with 3rd party audits
- if there is a way to obtain certificates in a time and resource efficient ways
- availability of good digital solutions

oneUp

Barriers to Scaling Circular Business Models

Venture Builder

Chiara Schlösser

oneUp

Senior Venture Builder

Ezgi Karabat

oneUp

→ ONLINE

oneUp: Barriers to Scaling Circular Business Models

Setting: Online only

Context

Companies exploring circular initiatives face substantial hurdles in reducing initial costs, streamlining complex supply chains, accessing technical expertise, and optimizing production processes. These challenges hinder scalability and result in high prices for early-stage circular products.

oneUp: Barriers to Scaling Circular Business Models

Setting: Online only

Challenge

How might we develop innovative strategies to effectively reduce start-up costs, simplify complex supply chain alignments, bridge gaps in technical expertise, and optimize production processes, in order to overcome the barriers of low volumes and high prices in early-stage circular initiatives?

→ ONLINE

oneUp: Barriers to Scaling Circular Business Models

Setting: Online only

Session activities

1. Understanding the Challenge
2. Ideation and Solution Generation
3. Solution Evaluation
4. Sharing Your Solutions

Metabolic

Circular business models enabled through sector wide data-sharing

Commercial Lead

Omar Ali

Metabolic

Sustainability consultant

Joris Bouwens

Metabolic

→ ONLINE

Metabolic: Circular business models enabled through sector wide data-sharing

Setting: Online only

Context

The digital and physical worlds are increasingly intertwined. Unlocking the circular potential of the collective wealth of data can reshape product life cycles, redefine sustainability metrics, and open new avenues for collaboration. The challenges and concerns, preventing these developments are rooted in the limitation of our current system. Data protection is held up for competitive reasons, and the technical solutions to facilitate it require collective investment. By exploring how the data from across your sector can enable circular business models we intend to shift the narrative towards a growth mindset with regards to data for circularity.

→ ONLINE

Metabolic: Circular business models enabled through sector wide data-sharing

Setting: Online only

Challenge

Identify circular business models that will be enabled through sector wide data-sharing.

→ ONLINE

Metabolic: Circular business models enabled through sector wide data-sharing

Setting: Online only

Session activities

Part 1: Tailored Business Cases for Data Sharing

Part 2: Intrinsic Drivers and Unique Challenges

Part 3: Co-creating Best Practices & Innovative Collaborations

Consolidation & Looking Ahead

Circular Challenges Outcomes

Offline session

The challenge

B&O: Creating value propositions for long-lasting, circular products

Besides designing long-lasting and circular products, exploring value propositions, business models and shaping user patterns will be key elements of buying decisions. How can we unlock the full potential of the circular products and systems by creating value propositions that are based on a total lifetime value logic as a key driver of desirability for tomorrow’s music and design loving consumers?

Offline session

New ideas & insights

B&O: Creating value propositions for long-lasting, circular products

- Building trust towards the product and the brand is crucial in the purchase of new or second-hand products.
- Trust is built through data availability over the product (total playtime, last maintenance date etc.)
    - Tryout phase, product passport facilitated by external assessor, subscription platform (B2B such as airbnb)
- Personalisation can postpone the point of obscolescnece

- B&O should also stay in touch with its users' need over time (10 years), knowing when the product should be updated, maintenanced etc.
- This can be enabled by Ai, smart homes etc.
- The products could also offer flexibility to accomodate the users needs over the lifetime

Key take-aways

B&O: Creating value propositions for long-lasting, circular products

- Trust in product's quality (in first or second lifetime) is paramount and can be enabled via data
- Progressive ownership (subscription, tryout phases, installements) can help users building trust in the product over time
- As users' needs change, the product should too. Design & connectivity can enable flexibility over time.

Online session

The challenge

B&O: Creating value propositions for long-lasting, circular products

Besides designing long-lasting and circular products, exploring value propositions, business models and shaping user patterns will be key elements of buying decisions. How can we unlock the full potential of the circular products and systems by creating value propositions that are based on a total lifetime value logic as a key driver of desirability for tomorrow’s music and design loving consumers?

Online session

New ideas & insights

B&O: Creating value propositions for long-lasting, circular products

New insights into premature obsolescence:

1. how **poor customer service** can result in premature obsolescence

2. fit & comfort create an increased risk that a product **does not fulfil expectations**: how do we enable online buyers to overcome this?

3. how do we '**boost**' our products that it **competes** with the 'new' products
    a. how do we overcome perception that **secondhand** headphones are not **hygienic**

Online session

Key take-aways

B&O: Creating value propositions for long-lasting, circular products

1. **Poor customer service**:
    - streamlining the process and better response options
    - offering transparency throughout the entire processes

2. **Hardware and emotional obsolescence**
    - Proactive premium experience
        - Free replacement of certain elements (battery, ear cushions)
        - Ear cushions replacement: reach out from B&O
    - Buy-back by the company, money to get a new one

Offline session

The challenge

Danfoss: Quantifying circularity to drive innovation

To assess circularity, we need both qualitative metrics (e.g. design for disassembly) and quantitative ones (e.g. recycled content). How can we combine both qualitative and quantitative metrics in one single tool to drive innovation? How can we develop more pragmatic metrics, based on actual and reliable data?

New ideas & insights

Danfoss: Quantifying circularity to drive innovation

- Metrics are important in trade off between sustainability and costs. Translating sustainability into economics to balance business case. However, it is very difficult to do it.
- Metrics today are often focused on reporting rather than on guiding design
- Comparative assessment is important to monitor incremental improvements (new gen. vs old gen.)
- User tests can sometimes simplify the assessment: instead of trying to find ways of describing success, you simply observe it or not. However, there is subjectivity.
- It is important to measure also if the end outcome is actually achieved, not just the potential
- We should consider consumer interpretation of metrics when developing indexes that are used for public communication (e.g. new repair labels)
- There are already some initiatives in the fashion industry working on standardizing circular frameworks

Key take-aways

Danfoss: Quantifying circularity to drive innovation

- Most indicators are often lagging indicators rather than leading indicators: defining a future roadmap instead of creating compliancy check lists
- Before starting any standardized metric, we should check what topic should be assessed
- Type of metrics nature evolves depending on when you need to use them: qualitative early in the process and quantitative at the end of the process
- Standardization across an industry has the main value of creating internal targets defined based on externally set targets
- We could develop a general framework and then derive category specific standards
- Metrics can also become counter productive if not adapted to specific case studies
- Aggregating too many and different indexes together might lead to missleading results. It might be wiser to create: topic specific metrics, create general standards for each topic, derive it into category specific metrics.
- Next steps could be to: engaging in sharing frameworks, define a general reference and then translate it into specific ones for each categories.

The challenge

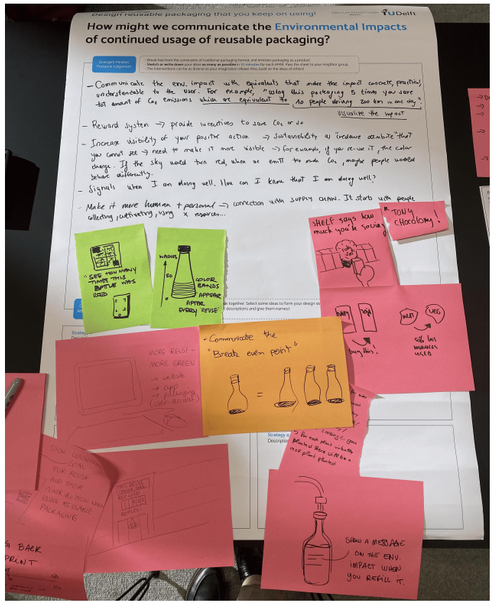
TU Delft: Designing reusable packaging that actually gets reused

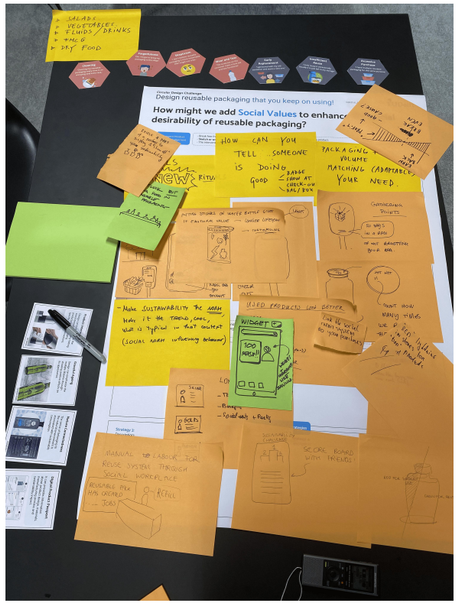
To determine sustainable benefits, reusable packaging must be reused multiple times. However, consumers may acquire reusable items excessively, diminishing the potential environmental benefits of reuse. How do we design reusable packaging in a way that consumers desire to continue using over a long period of time?

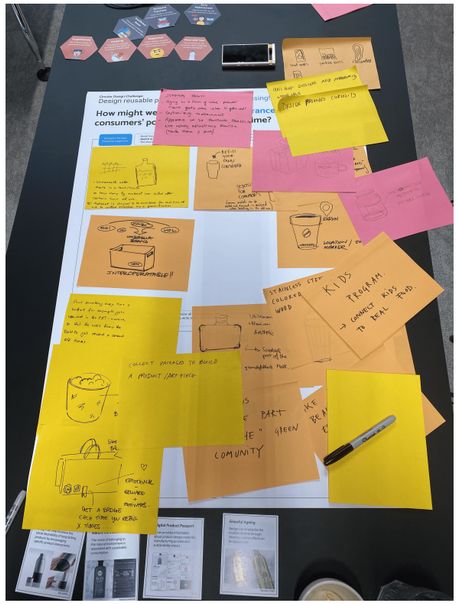
New ideas & insights

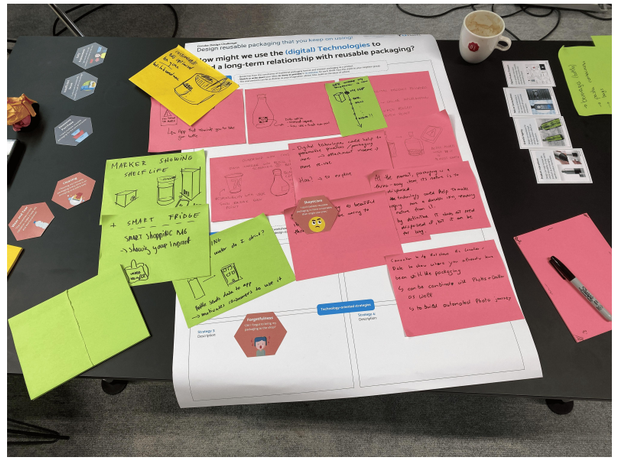
TU Delft: Designing reusable packaging that actually gets reused

- Integrated with the checkout system and incentives. -> Being a part of the reuse community.
- Enhance the visibility and understandability of the impact -> Connect people in the supply chain.
- Connect wear and tear with visual environmental impact -> Show how consumers are doing good
- By educating kids from a young age -> Reuse as a norm instead of an exception









TU Delft: Designing reusable packaging that actually gets reused

- A key question is how reuse can become the norm rather than an exception
- Community and social relations are key in moving towards reuse
- Making the impact more relevant to consumers' daily context
- There still are many paths to explore

The challenge

TU Delft: Designing reusable packaging that actually gets reused

To determine sustainable benefits, reusable packaging must be reused multiple times. However, consumers may acquire reusable items excessively, diminishing the potential environmental benefits of reuse. How do we design reusable packaging in a way that consumers desire to continue using over a long period of time?

New ideas & insights

TU Delft: Designing reusable packaging that actually gets reused

- **HMW use digital technologies to build long term relationships with reusable packaging?**
  - Refill sensing and rewards system: automatic registration of number of refills, through store data, payment info, RFID chips, etc.
- **HMW use social values to enhance the social desirability of reusable packaging?**
  - Emphasise additional benefits to the individual consumer: economic, convenience, etc.
- **HMW use the packaging's appearance to trigger positive emotions over time?**
  - Customization by consumers. Packaging changes with reuse: for instance with e-ink?
- **HMW communicate the environmental impact of continued use of reusable packaging?**
  - Make it tangible: environmental impact 'close' to consumer's own context.

Online session

Key take-aways

TU Delft: Designing reusable packaging that actually gets reused

- Input for design guidelines for reusable packaging

TU Delft

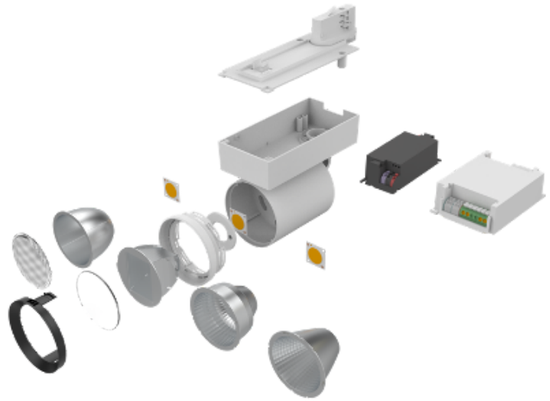
Offline session

The challenge

Signify: Creating a vision to reuse “old” lighting at the end of LaaS contract

A high-end supermarket branch, which is using Signify’s “light as a service”, will close soon; two new branches will be opened in the same area. Signify owns and it is responsible for taking out the “old” lighting.

How can Signify best collect and evaluate the state and potential of the used lighting it owns (as part of a contract), so that we can maximize what flows back into projects or other value streams? How can Signify encourage customers to use refurbished products?



signify

Offline session

New ideas & insights

Lifecycle of beam light: 10 000 hours (6 years)

Brands or types of supermarkets has defined light recipes

The supermarket (client) does not usually know about the technical light setting etc. But will notice if it change

Signify: Creating a vision to reuse “old” lighting at the end of LaaS contract

1. Scan product and asses stock with installing

- Collect and evaluate on site while removing products
- Sorting plan of what type of products and requirements is needed for reuse
- Have additional smartphone or technology with AI and scanning of product connect back to product reuse list
- Enable installers with technology scanning

2. Secondary location for refurbishing and inventory management

- But rather connect refurbishing with warrantee repair workshop (understand the different components)
- Dont conbined refurbishing with factory (make for new ones)

3. Secondhand market for a smaller scale, to give full refurbished service

- Second location for storing and inventory of quality check of products
- Data base therer will be tracking what is ready to be reinstalled or what is available
- Additional secondary data base available for public (small resale) or events pop-ups

4. Transparency bill of material for components for other industries

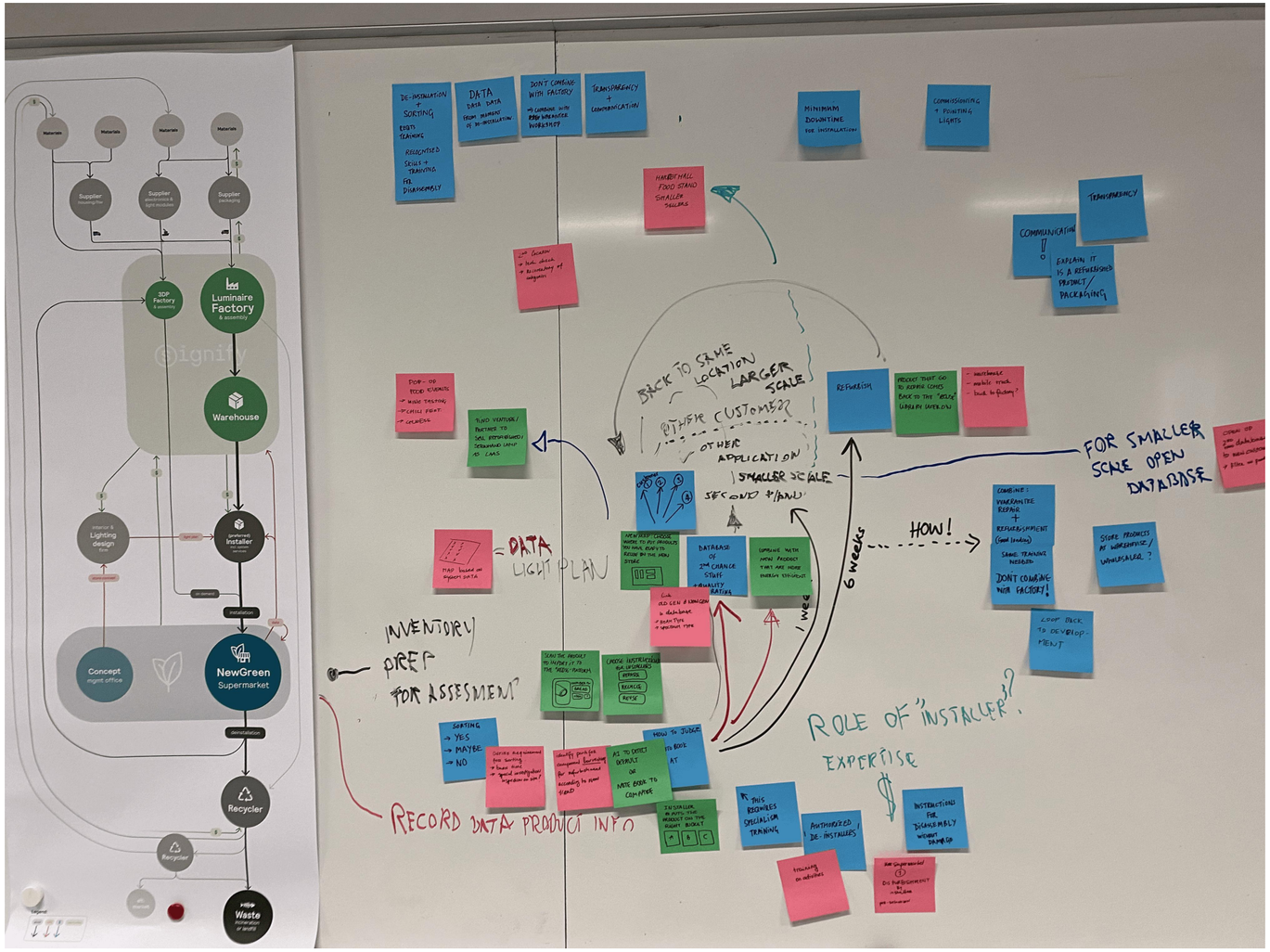
- Find solutions for components
- Tracking data to understand product need and components for redesign
- Transparency is key when working with refurbishing
- Partners of retailers need to also give value feedback

5. Create predictability in contract and timelines through incentives

- Discount to stick to original plan of laas
- Investigate better what the typical behaviour is of types of stores
- Shops change to quickly

6. Modular design for replaceable of components only is the north star

- by scanning and registering components at install (material passport) to be able to predict functional requirements for modular



Key take-aways

Signify: Creating a vision to reuse “old” lighting at the end of LaaS contract

- Data tracking is important for the moment of installation, combining different types of information (serialisation of component). Scanning on site of installation and un-installing.
- The **predictability of product variety and usage** base on need archetypes is need to be able to provide 'just-in-time' reuse.
- Organise the reverse logistic by **combining refurbishing location** with the **warrantee repair center** to ensure the understanding of product components of reuse instead of new product production.
- As first steps focus on finding data by with scanning and registering components at install (material passport) to be able to predict functional requirements for **modular design** as the end vision.

signify

Offline session

The challenge

Ahrend: Envisioning the flow of resources in a fully circular future

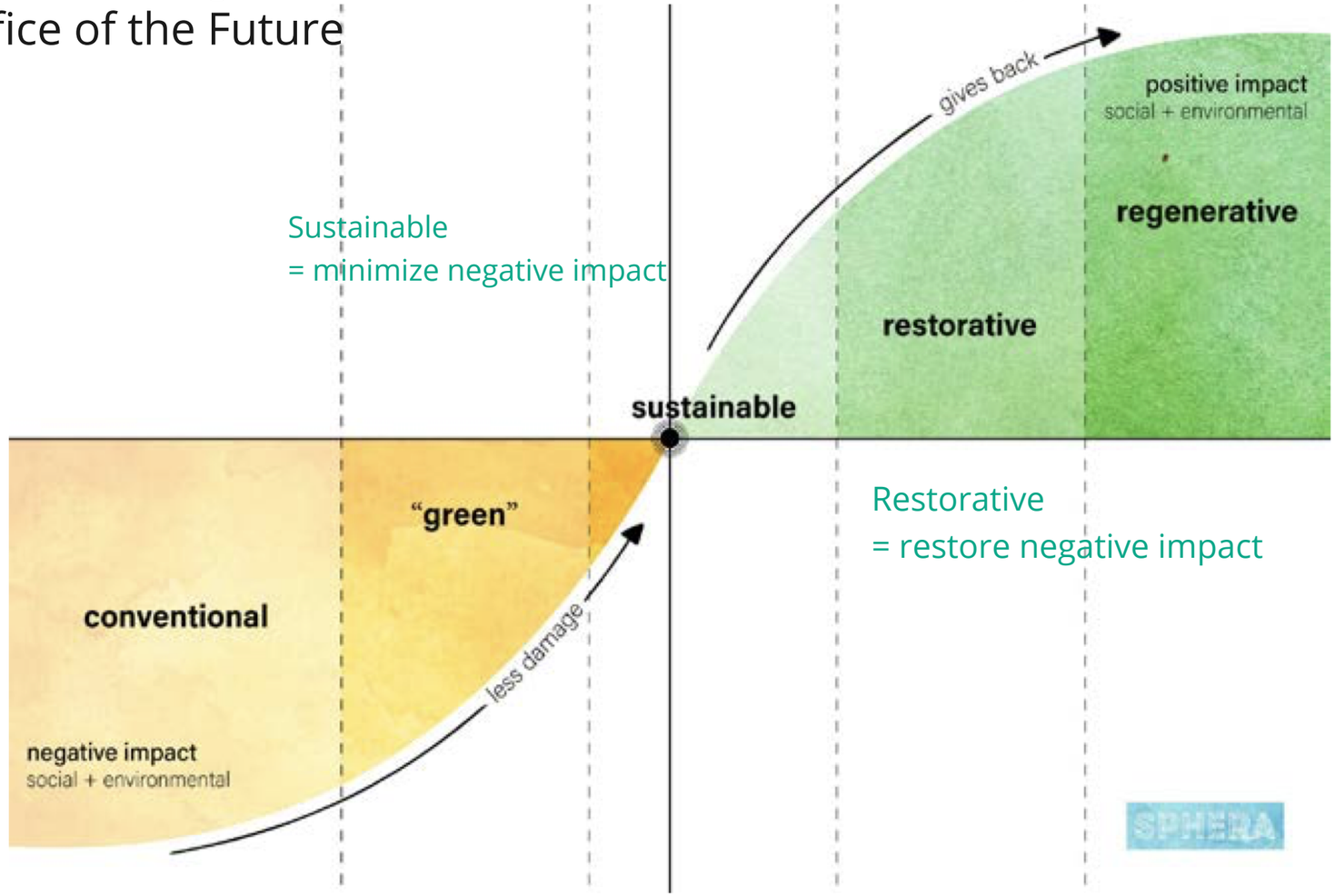
What does lifecycle management mean and how does it look in an era where virgin material extraction does not exist anymore, and all materials are used in our products on the planet? How will the concept of “ownership” evolve? How will the relation between value chain stakeholders evolve and how will information be exchanged to enable a full circulation and reuse of materials?

New ideas & insights

Ahrend: Envisioning the flow of resources in a fully circular future

Within the Office of the Future

- Insights



Sustainable
= minimize negative impact

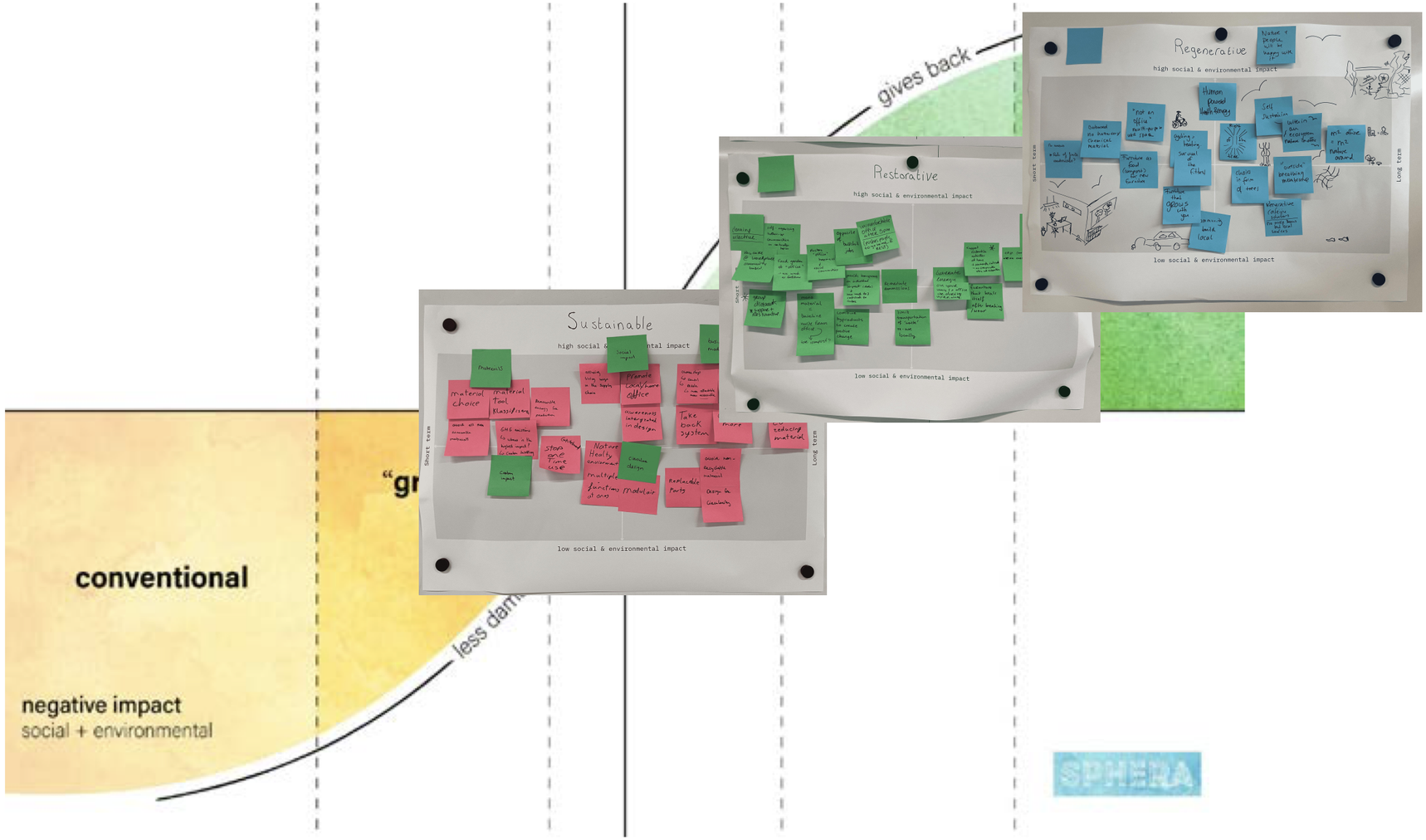
Regenerative
= make positive impact

Restorative
= restore negative impact

Offline session

Key take-aways

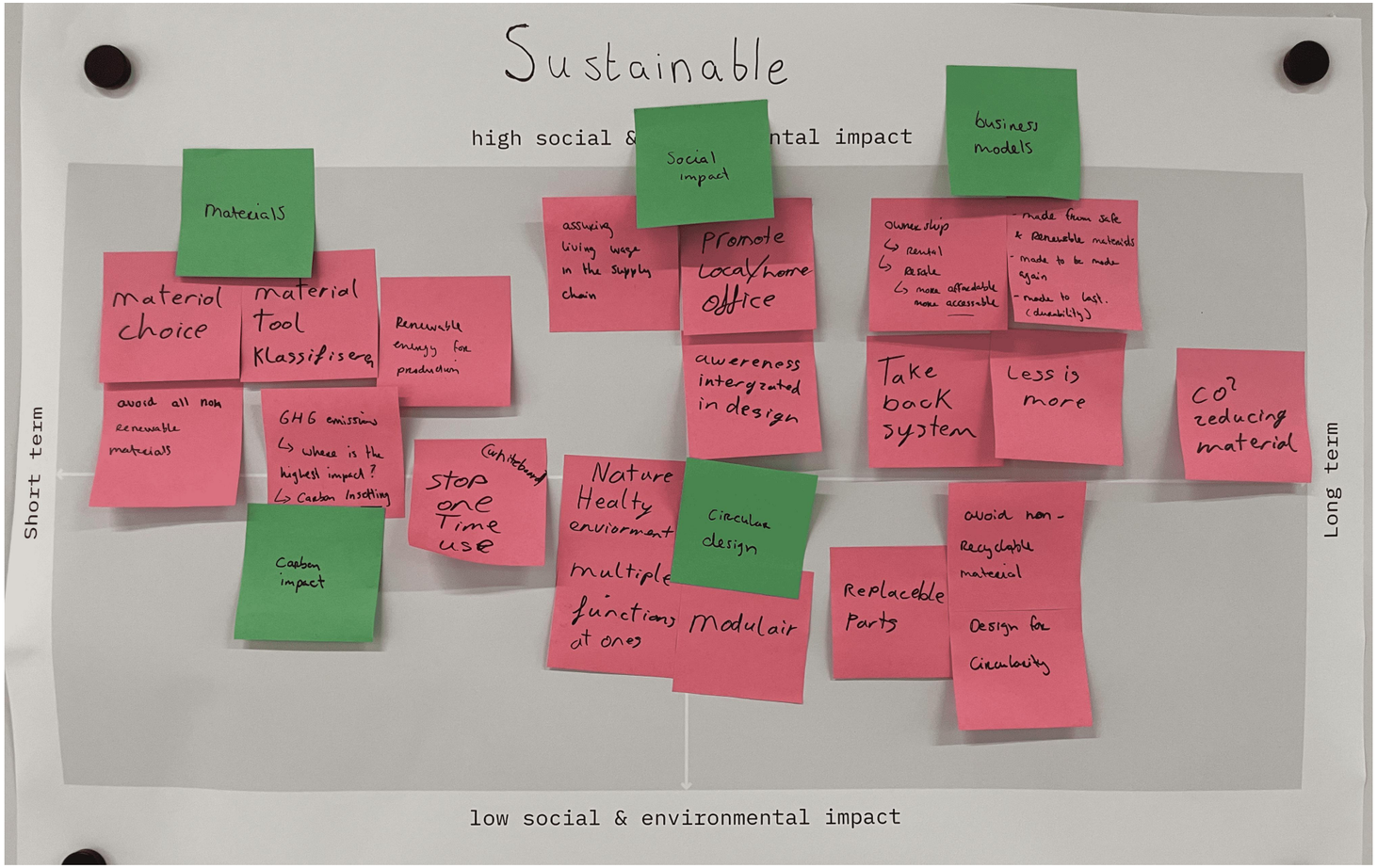
Ahrend: Envisioning the flow of resources in a fully circular future



Offline session

Key take-aways

Sustainable Future of the Office



- Promote local office/home
- Materials:
    - Avoid single-use
    - Renewable
    - Circular
    - Less is more
    - Multifunctional

Key take-aways

Restorative Future of the Office

- Community based
  - sharing cleaning facilities
  - Food garden at office
- Uncomfortable afte 17h
- Materials:
  - Mono materials
  - Wastestreams (sawdust -> compost)
- Transport:
  - Generate energy through travel
- Furniture that heals itself
- Using excess heat for office

Key take-aways

Regenerative Future of the Office

- Use office 24/7 adaptable design
- Furniture that grows with you
- Use bodyheat to heat building through excercise
- Materials
  - Materials that grow itself instead of what we produce
  - Sustainable sourcing

Online session

The challenge

OneUp: Tackling challenges of early-stage circular initiatives implementation

In early stages of circular initiatives implementation, companies face difficulties such as high costs, complex supply chains or lack of technical expertise. How might we develop innovative strategies to effectively tackle these difficulties and overcome barriers in early-stage circular initiatives?

Teammembers:
Ezgi
Antonio
Maaike
Dionne
Theresa Marie
Antonia

Challenge

A sustainable fashion startup is dedicated to creating a circular fashion ecosystem, where clothing items are designed, produced, used, and recycled in a closed-loop system. Despite their commitment to circularity, they face the challenge of high production costs associated with sustainable materials and eco-friendly processes, resulting in elevated prices for their clothing items. They seek innovative circular strategies to **make their line of sustainable organic cotton fashion more affordable** to a wider audience while maintaining the integrity of their circular model.

oneup

New ideas & insights

OneUp: Tackling challenges of early-stage circular initiatives implementation

- **Ideas**

Partner up, work with partners that use similar supply chains.

Partner

Partner Up.

find co-investors

Explore collaboration & Cocreation, re-used and re-paired textiles, to lower the price. Or upcycling of clothing.

Processes

Optimising the Supply Chain & reducing costs

Piloting as first with alternatives (second hand)

Scaling up (big challenge,

Minimise waste

Rental services

Alternative business models

As a service

Alternative places for selling

Sell clohting via alternative products, to peer, low key.

partner with designers to make the price of one clothing line higher, and other one cheaper line.

Long term subcription on clothing

Acces subsidies & grants, get funding (governmental, open)

oneup

R DESIGN FORUM

Partner with fashion designers to create a highend clothing line with eco materials (costs will be compensated by selling price)

Pilot a Rental service (garment as a service) model, to spread the cost to the customers interested

Key take-aways

OneUp: Tackling challenges of early-stage circular initiatives implementation

- **Key take-away 1**

Incorporating a circular ecosystem into the fashion industry is a **daily challenge**, primarily due to costs, market factors, and regulations. These costs include expenses for research and development, materials, establishing a supply chain (which is not yet well-established), and acquiring new equipment.There is a constant question of to who you are competing with as well, because of materials.

- **Key take-away 2**

Partnering up in the fashion industry seems to be essential to strengthen each other and split costs (and broader) to be able to implement solutions around circularity.

- **Key take-away 3**

The solution should have multiple layers (high-end and rental service), to make it accessible. Also some funding should come from subsidies.

- **Key take-away from the groups**

1) There are similarities across other industries (quantity, funding, Supply chain)
2) Set-up from the brainstorm.
3) Learning from other industries / sectors and compare.

Online session

The challenge

Metabolic: How can we leverage and scale up data sharing to promote circular models?

How can companies leverage data sharing as a driver to develop new circular earning models? How can data sharing scale up to encompass larger ecosystems and value chains across industries? What policies would best facilitate and encourage companies to share data to develop circular business models? What are the biggest hurdles of data sharing and how to overcome them?

Metabolic

New ideas & insights

Metabolic: How can we leverage and scale up data sharing to promote circular models?

CHALLENGE	material and energy waste outflows	Know-how within the organization to execute	measuring impact	data secrecy	Responsibility, liability	Community & Culture: How can we get people to truly engage?
OPPORTUNITIES	on demand business models to replace demand forecasting	Pre-competitive collaboration via coalitions, consortiums, and working groups	new policies and standardization of existing frameworks and regulations	**Culture of Sharing** Why are we so afraid of sharing data cross industry?	Decentralized responsibliity	
DATA LEVERAGE	help understanding the demand, fulfillment request can be on an as-needed basis rather than trying to read the minds of consumers	Remove the sense of scarcity and competition while collectively influencing consumer behaviour	Data to back up the business models. Tools: WBCSD Digital product Passport Mapping, https://cirpassproject.eu/ - one of the first to be in place, https://www.sap.com/germany/products/scm/green-token.html	improve product longevity, repairability, and overall quality	responsibility of waste manageemnt when from one actor (municipality) ia reframed as an opportunity to smaller actors	

Metabolic

Online session

Key take-aways

Metabolic: How can we leverage and scale up data sharing to promote circular models?

- Key take-away 1 - **It is about reframing it as an opportunity**
  - Data Sharing and by-waste as an opportunity. 100% Fish
  - Data as a way to strengthen your brand.

- Key take-away 2 - **Guidelines and structure to allow data sharing**
  - IP safe policies/protocols for cross-industry, cross-regional collaboration
  - Pilots/experimental approach as a way to gather information for feedback loops
  - Done is better than perfect! We don't have to have all the answers to get started

- Key take-away 3: **How do we truly engage?**
  - Why are we not using already existing tools?
  - Why is there a lack of community-building around platforms.
  - Cultural changes within organizations (or community leverage) require new narratives
  - Next Generation Internet: redefining the way the internet is built; part evolutionary, part revolutionary approach on topics like privacy, user choice, inclusion, and decentralisation

Metabolic

Online session

The challenge

Fairphone: Making credible claims on recycled materials

More and more manufacturers are starting to use recycled materials. However, how do you make sure the recycled content claimed is actually present in the product? In the recycling industry, there are various suppliers and third-party involved, using different certifications and verifications. How can we track and ensure our suppliers are actually providing recycled content? What certifications can we use to ensure claims are substantiated?

FAIRPHONE

Online session

New ideas & insights

Fairphone: Making credible claims on recycled materials

- Chemically recycled plastics and biobased recycled materials are hard / impossible to trace through testing.
- EU is likely to move towards 3rd party verificatied certifications to check claims on recycled content.
- 3rd party verified certifications appears to not be widespread.
- The current dominant method is using supplier certificates > trust based.
- Trust relationship with supplier depends on 1) transparancy into the feedstock and the stability of the source and 2) location of the supplier.
    - EU suppliers already comply to strict regulations, less so for East asia.
- 3rd party verification introduces costs. This may be a barrier for SMEs
- PolyCE design for recycling guideline document touches upon certifications and substances of concern.

FAIRPHONE

Online session

Key take-aways

Fairphone: Making credible claims on recycled materials

- Using a new recycled polymer increases your lead time.
- Fundamental understanding of product functions and use case is required to know where to apply recycled content.
- Certifications help with a strong sustainability claim in the market > can justify extra costs
- Everyone still has questions regarding recycled content certifications > new knowledge stream?

FAIRPHONE

Thank you
and see you next year!