

Circular Economy Workshop Series

# Building Circular Economy Language Skills

## The Project

# CIRCULAR ECONOMY

## WORKSHOP SERIES

A forum for knowledge sharing in circular economy and cross-disciplinary communication for successful collaborations

### 1st: Business Hooks for Closing Loops

Oct 1, 2019, 13:30-16:30  
Väre F102

### 2nd: The Dilemmas of Disassembly

Nov 5, 2019, 13:30-16:30  
Sähkömiehentie 4 J

\*A group will be leaving from Brooklyn Cafe at 13.10

### 3rd: Building Circular Economy Language Skills

Nov 12, 2019 9:30-12:30  
Väre M202

# The Team



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# Workshop Agenda

1. Summary of previous workshops
2. Superpowers sharing exercise
  - Presenting your pair to your group
3. Defining different multidisciplinary terminologies

----- Break -----

4. Language technique: “Why” and “How” questions
  - Glossary exercise
  - Circular economy ideation exercise
5. Design your circular solution
6. Feedback





# 1st workshop

## ***Business Hooks for Closing Loops***

- Circular Economy (CE) Definition
- Business Model Canvas
- CE Visualizations
- Circular Business Model Canvas for CE



- Kuusakoski excursion experience sharing
- Hands-on dismantling of circuit boards
- Learning about a mobile phone's materials
- Electronic waste & recycling potential

## 2<sup>nd</sup> workshop

### ***The Dilemmas Of Disassembly***

# Superpowers - Create your Avengers Team

## **Pick 1 color**

associated with  
your background

## **Team up**

Create a team of 4 with at  
least 3 different colors

## **Write down:**

What are your superpowers?  
(key expertise & skills)

**Business**

**Design**

**Engineering**

**Others**



# Superpowers sharing

- **Introduce yourself:**

Present yourself to your pair in 2 mins, then switch. Try to cover these questions:

1. Who are you?
2. What are your background and research interest?
3. What are your superpowers?

- **Share with the group:**

Present your partner to the team in 30 seconds



# Discussion

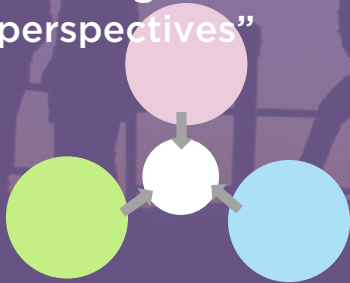
How easy or difficult  
was it to understand  
your partner?

How does your  
vocabulary differ from  
that of your partner ?

# Definition

## Multidisciplinary

“a situation in which more than one discipline work separately on the same issue, considering it from different perspectives”



## Interdisciplinary

integrating knowledge and methods from two or more disciplines to “advance fundamental understanding or to solve problems, the solutions to which are beyond the scope of a single discipline”



## Transdisciplinary

where researchers from different disciplines “surpass their separate conceptual, theoretical and methodological orientations to create a unity of intellectual frameworks”



8 mins

## Sharing your experience with interdisciplinary teamwork

What disciplines have you worked with?

What kind of project?

What challenges? What was interesting?

What did you learn?



**Time for  
a 10 mins break**  
Enjoy some  
refreshments!



# Why are language skills for interdisciplinary teamwork needed?

- **The complexity and novelty of the circular economy** model raises challenges that ask for solutions **from experts in different disciplines**  
Sauvé et al., Environ. Dev. 17, 48-56.
- Interdisciplinary science has a **positive influence** on knowledge production and innovation  
Gibbons et al., 1994; Rhoten and Pfirman, 2007; Schmickl and Kieser, 2008
- Interdisciplinary collaboration prerequisite is **efficient communication** between experts from different research fields for them to be able to integrate sector-specific knowledge **effectively**, to discuss research topics with **full understanding**, and to **exchange ideas**.  
Marra et al., J. Cleaner Prod. 194 (2018) 800-812

# Ask Questions

“How” and “why” questions are open-ended and invite subject to share about his/her own knowledge and perspective.

## Especially “How” and “Why”

- Can also inspire one to reflect on the “how” and “why” of an issue and how to explain those aspects to you.
- Ask as many follow-up “whys” or “hows” that will help you better grasp a matter and understand the root of a problem - or solution.



# Circular Economy Glossary Exercise

2 mins/word

- Pick a term associated to your superpower color, then explain it to your group
- Your group members can ask 5 questions to better understand your teammate's explanation.
- <https://www.ceguide.org/Glossary>

## Value Proposition

A value proposition is an easy-to-understand reason why a customer should buy a product or service from that particular business. A value proposition should clearly explain how a product fills a need, communicate the specifics of its added benefit and state the reason why it's better than similar products on the market.

*Fairphone's value proposition: "We've created the world's first ethical, modular smartphone. You shouldn't have to choose between a great phone and a fair supply chain."*



## Eco-design

Eco design is both a principle and an approach. It's design principle that calls for the minimization of negative environmental and health impacts across a product or service's life cycle.

*Example: Adidas-Parley shoes and clothes were born out of a partnership between the sports company and the eco-awareness organization. They came up with a design-conscious solution to fight the plastic pollution problem and its impacts on the marine environment*



## Urban Mining

Process of extracting useful materials from city waste stocks.

*Rare Earth Metals: The electronics people often throw away are a viable source of rare earth metals, and these electronics are all over cities across the planet. So, people are now using urban mining as a means of collecting electronic waste and reclaiming the rare earth metals from these unwanted electronics*



# Example Planned Obsolescence

2 “why”

2 “how”

1 “what”

- What is planned obsolescence?
- Why do companies do it?
- How do they do it?
- Why do customers install updated software?
- How can we get rid of it?



# Circular Economy Glossary Exercise

2 mins/word

Ask 5 questions to better understand your explanation. The questions should include:

- 2 “why” questions
- 2 “how” questions
- 1 “what” question





# Takeaway!

**When working with different disciplines, you will realize that there are many terms that you feel comfortable working with, and others less.**

- Prepare before working in an interdisciplinary team: is there any vocabulary that I need to explain? Be prepared to answer the five questions.
- Flashcards: make – or imagine – flashcards that can help explain. It needs to include a definition, example, and visual. Visual resources can help e.g.: [thenounproject.com](https://thenounproject.com), [flaticon.com](https://flaticon.com)
- Ego vs clear communication

# Design your circular solution

## Mash-Up: 4 superpowers + 4 terms + 1 product

Combine cards to ideate a circular solution for the selected example product

1. As a group, select a product/service
2. Put your team's superpowers and word cards next to the product.
3. **Brainstorm a circular idea:**
  - What superpowers can each of us contribute?
  - Draw relationships and connections



# Design your circular solution

## Guiding questions:

1. What is the problem to be solved?
2. What is your proposed solution and how does it work?
3. How does your solution contribute to the circular economy?

**20 mins teamwork**

**3 mins presentation**

**Be as visual as possible!**



**It's show time!**  
**Explain your team idea in 3 minutes**



Aalto University

Aalto Sustainability Hub

**Discussion**

**How did the superpowers  
& glossary exercises  
support your teamwork?**

# Key takeaways!

1. Share your skills & expertise with your team members at the onset of the project
  2. Interdisciplinary collaboration is fruitful to tackle complex & multidimensional challenges such as those of the circular economy
  3. Be aware of the language that you use:
    - Explain clearly using examples & visuals
    - Actively ask questions to fully understand your teammate's language
- It is better to understand and be understood than to prove your field-specific knowledge
4. Effective communication is a key element for successful interdisciplinary collaboration, but there are also other important factors such as motivation and leadership

# We appreciate your feedback!

What could  
be improved

What was  
interesting?

What would  
you like to  
learn more in a  
future  
workshop?



**Thanks for participating!**  
**Questions and comments?**



# References

- Bader, Carrie and Jaeger, Margarete, "What Makes an Interdisciplinary Team Work? A Collection of Informed Ideas, Discussion Prompts, and Other Materials to Promote an Atmosphere of Collaboration, Trust, and Respect" (2014). Innovative Practice Projects. 42. <http://commons.pacificu.edu/ipp/42>
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- Rhoten, D., Pfirman, S., 2007. Women in interdisciplinary science: exploring preferences and consequences. Research Policy 36 (February (1)), 56–75.