



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



Aalto University

Aalto Sustainability Hub



- 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

2nd 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

Multidisciplinarity

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



Interdisciplinarity

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”



Transdisciplinarity

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? **and recycling**

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 a 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, 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

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>

Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P., Trow, M., 1994. The New Production of Knowledge: Dynamics of Science and Research in Contemporary Societies. Sage, London.

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