

# Eureka CO-CHAIR 2024/25

Circular Value Creation Pilot Initiative  
Design Thinking Workshop 2  
#datatechnologies

05.12.2024

# Introduction

The international Eureka network, which links as many cycles as possible, creates intersections that significantly simplify the implementation of circular processes. To achieve this, we need to think about and discuss a systemic approach, the right data economy, the people who will implement this and the necessary technologies. In order to incorporate the diverse global requirements and objectives, it is necessary to discuss them in an international process with experts from the Eureka member countries and to derive research needs and recommendations for action for policy-makers. From July 1, 2024 to June 30, 2025, Canada and Germany co-chair Eureka. As part of this the vision of circular value creation will be further developed. Individual areas of the vision, so-called vision clusters, will be discussed in several design thinking workshops in order to create the basis for an economic, social and ecological realisation of the vision – research needs and political recommendations are the results in each case. The results will be summarized and leading to an Eureka Call in June 2025.

The following workshop documentation summarizes the results for **#datatechnologies**.



# Design Thinking Workshop 2

## #datatechnologies

### set up

**Location:** Berlin – Grand Hyatt Hotel

**Date:** 05. 12.2024

**Process:** 3-Phase Design Thinking process with a focus on

1. developing a common understanding for the challenge;
2. empathizing with users via pre-scheduled video conferences;
3. defining specific needs regarding the challenge.

## DESIGN THINKING PROCESS

Focus and selected methods

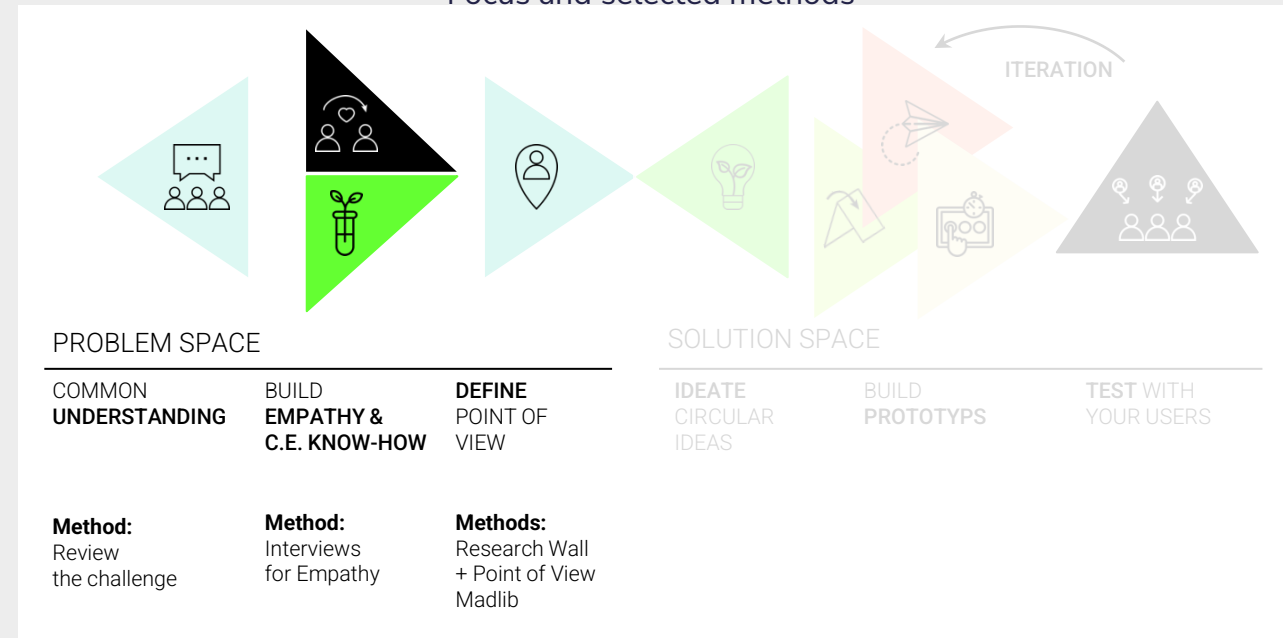


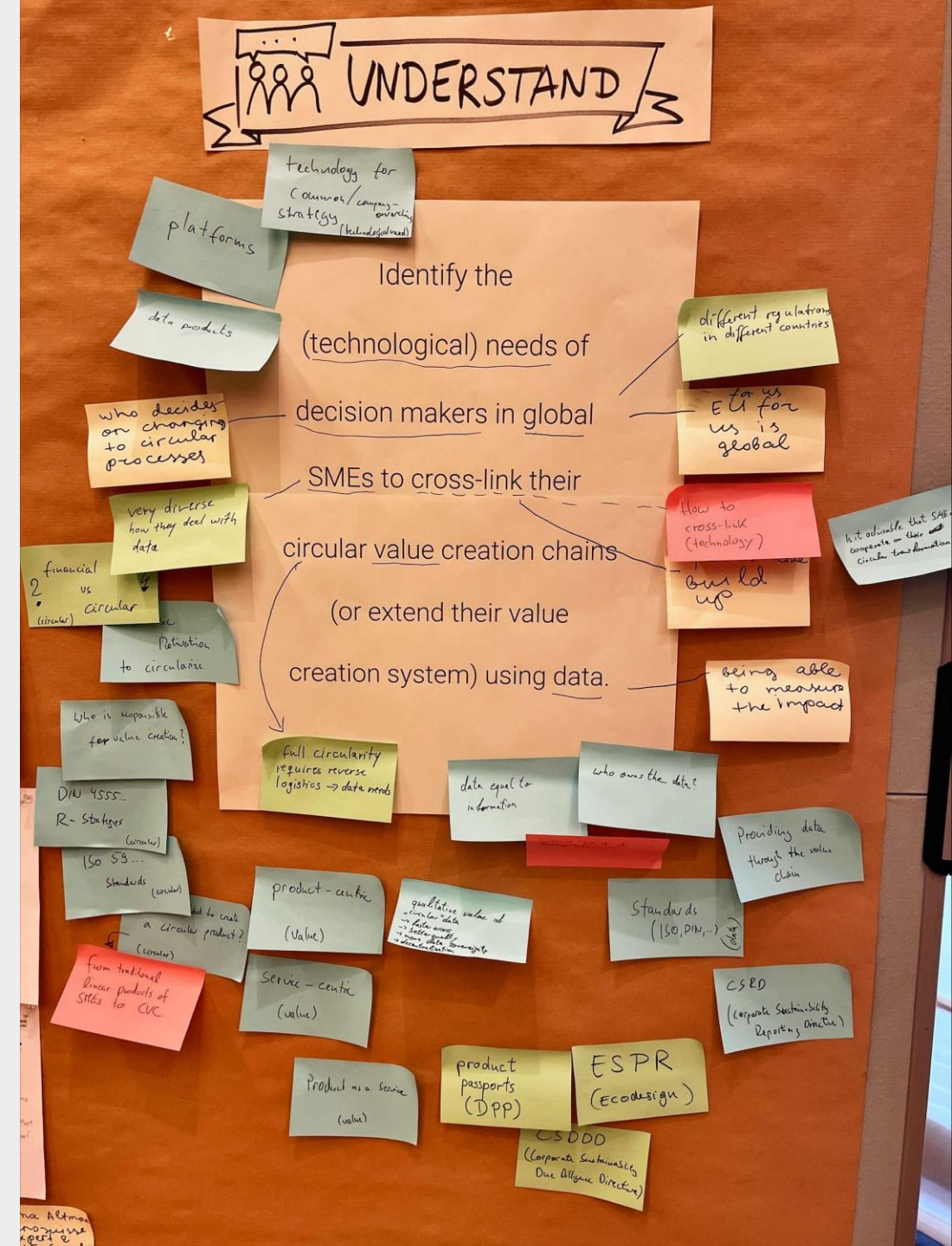
Illustration by Susanne Mira Heinz 2014. CC - BY - SA 4.0.

# Challenge sentence

#datatechnologies

The subject matter experts focused on the following challenge sentence:

**“Identify the (technological) needs of decision makers in global SMEs to cross-link their circular value creation chains (or extend their value creation system) using data.”**





Color Code: Sticky Notes

Quotes/ Key insights from interviews + Ind. Interpretations of subject matter experts → Cluster Summary sentence: SMEs need...

# Define Point of View

Outcome: Research Wall (Overview)

Explanation: Voting → Priority is indicated by sum of all icons given to a "Cluster Summary Sentence"



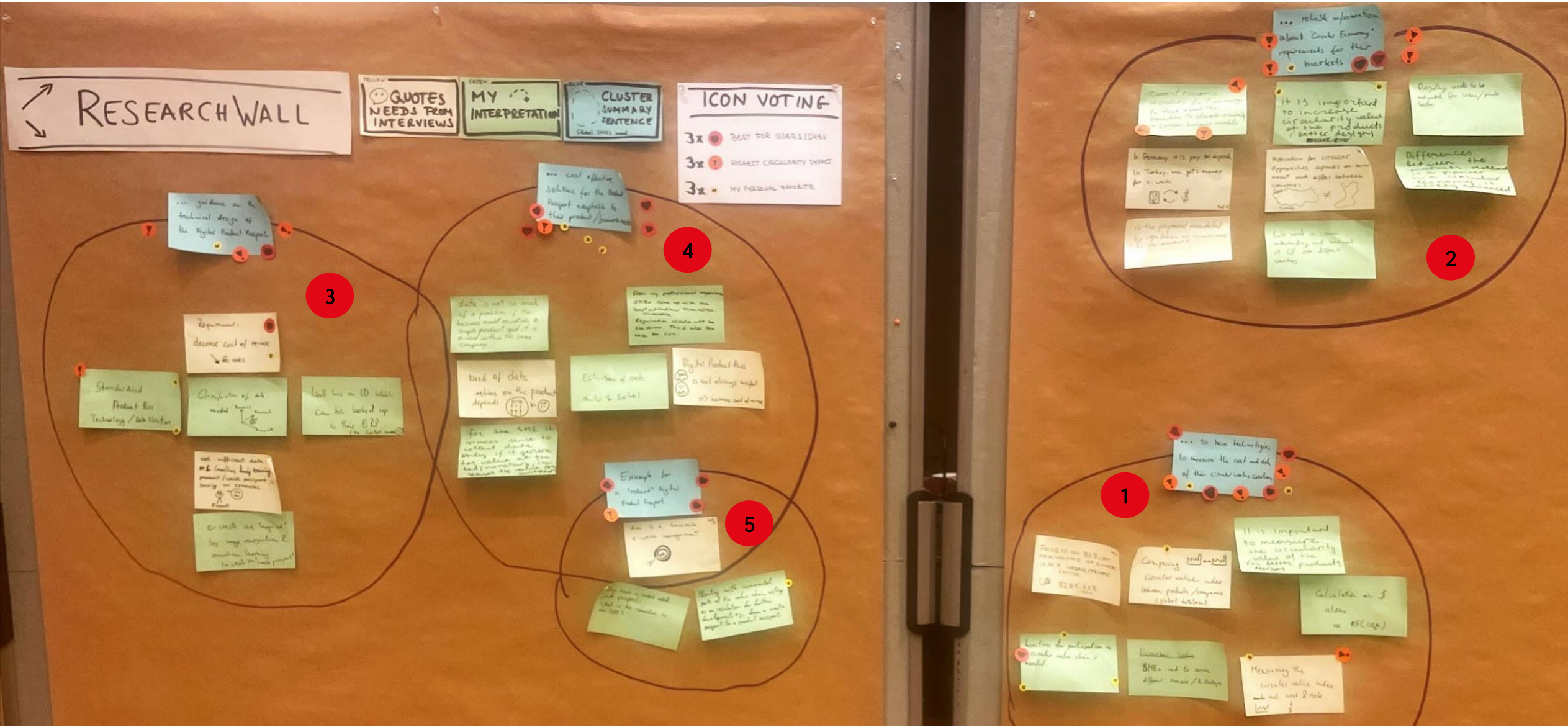
Best for users/SMEs



Highest Circularity Impact



My personal favorite



# Research Wall 1 | 5

## Written version

### Color Code:

Quotes/ Key insights from interviews + Individual interpretations of subject matter experts → Cluster Summary sentence: Global SMEs need...

## Theme: Technologies to measure CVC

1

### Quotes/ needs from interviews

- Focus in on B2B, yet main value of e-waste is in a urban private sector (B2B<C2B)
- Comparing circular value index between products/ companies (global database)
- measuring the circular value index incl. costs and risks

### Individual interpretations of subject matter experts

- it is important to measure the circularity value of the product for better decision
- Calculation on \$ alone (no PCFs {Product Carbon Footprint} CO<sub>2</sub>)
- incentives for participation in circular value chain is needed
- SMEs need to service different scenarios/ R-strategies

→ Concluding summary sentence: Global SMEs need to have technologies to measure the costs and risks of their circular value creation.

# Research Wall 2 | 5

## Written version

### Color Code:

Quotes/ Key insights from interviews + Individual interpretations of subject matter experts → Cluster Summary sentence: Global SMEs need...

## Theme: Sector- and country specific requirements

2

### Quotes/ needs from interviews

- In Germany, it is pay for disposal. In Turkey, one gets money for the e-waste
- Is the payment mandated by regulation or incentivized by the market?
- Motivation for circular approaches depends on environment and differs between countries

### Individual interpretations of subject matter experts

- Current economic incentives do not encourage to think about the transition to climate-neutrality in circular business models
- it is important to increase the circularity value of the products (better design)
- Recycling needs to be motivated for urban/private sector
- Differences between the markets: Holland is a pioneer in a circular economy, it already advanced
- We need a common understanding and treatment of CE over different countries

→ Concluding summary sentence: Global SMEs need reliable information about “Circular Economy” requirements for their markets.

# Research Wall 3 | 5

## Written version

### Color Code:

Quotes/ Key insights from interviews + Individual interpretations of subject matter experts → Cluster Summary sentence: Global SMEs need...

## Theme: Digital Product Passport

3

### Quotes/ needs from interviews

- Requirement: Decrease cost of re-use
- not sufficient data for ML (machine learning) training - product/waste passport is basing on estimates

### Individual interpretations of subject matter experts

- Standardized product pass/technology/data structure
- Classification of data needed
- Wall has an ID which can be looked up in their ERP (no passport needed)
- e-waste are recognized by image recognition and machine learning to create the "waste passport"

→ Concluding summary sentence: Global SMEs need guidance on the technical design of the digital product passport.



# Research Wall 4 | 5

## Written version

### Color Code:

Quotes/ Key insights from interviews + Individual interpretations of subject matter experts → Cluster Summary sentence: Global SMEs need...

## Theme: Differentiation in requirements for product passport (Part 1)

4

### Quotes/ needs from interviews

- need of data depends on the product
- Digital product passport is not always useful → increases cost of re-use

### Individual interpretations of subject matter experts

- data is not so much of a problem if the product model involves a simple product and it is re-used within the same company
- From my professional experience, SMEs come up with the best innovative solution themselves. Regulation should not be the driver. This is also the case for the CVC.
- Estimations of costs similar to EcolInvent
- For the SMEs it makes sense to collect data only if it generates value at the end (monetary, increases the value for the customer)

→ Concluding summary sentence: Global SMEs need cost effective solutions for the product passport adaptable to their product/business needs.

# Research Wall 5 | 5

## Written version

### Color Code:

Quotes/ Key insights from interviews + Individual interpretations of subject matter experts → Cluster Summary sentence: Global SMEs need...

Theme: Differentiation in requirements for product passport (Part 2)

5

### Quotes/ needs from interviews

- Aim is a traceable e-waste management (E-Mol)

### Individual interpretations of subject matter experts

- They have a model called “waste passport” → What is the connection to the DDP?
- Starting with incremental parts of the value chain, acting as an incubator for further development, e.g. from a waste passport to a product passport

→ Concluding summary sentence: Global SMEs need an example for a “reduced” digital product passport.

# Define Point of View



## POV: SME perspective



*"Material and data need to flow in circles."*

CEO of a building material manufacturing company

**NEEDS** technologies to measure the cost and risk for the re-use of her building materials

**IN ORDER TO** shift from a linear to a circular value creation.



## POV: SME perspective



*"I want a product passport, which does not cost extra for me."*

CEO of an SME

**NEEDS** needs cost effective solutions to the product passport

**IN ORDER TO** shift his business model to fully circular.

# Final recommendation of subject matter experts

## Subject Matter Expert: Scientist

chair manager

**NEED** SMEs to understand the need of a circular transformation

**IN ORDER TO** shift to a data-driven circular economy.

## Subject Matter Expert: Scientist

researcher of sustainable product development

**NEED** guidance and freedom to design different DDPs

**IN ORDER TO** help/consolidate SMEs i the shift to SMEs

## Subject Matter Expert: Scientist

scientific officer

**NEED** to understand barriers and possible solutions for circular value chain

**IN ORDER TO** work out policy advice that helps to facilitate the transition to a climate-neutral circular economy until 2045.

## Subject Matter Expert: Industry

innoswiss expert and SME founder

**NEED** circular economy tools

**TO** enable realizing circular economy practices.

## Subject Matter Expert: Industry

Green PLM Consultant

**NEED** to provide technologies to SMEs

**IN ORDER TO** enable them to re-evaluate their linear business model and shift to circularity.

# Contact CVC Core Team

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