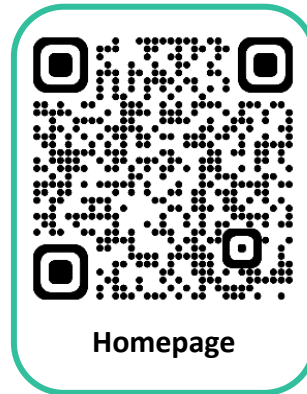


The ScenCi Game

A playful exploration of circular business models

Background:

The ScenCi game was developed as part of a virtual tour across Europe. The tour was showcasing good practices by small and medium-sized enterprises (SMEs) from all sectors covered by the European Circular Economy Action Plan for a transition towards a circular economy. It was organised by the Green Economy Network North Rhine-Westphalia (Germany) and started with the Circular Economy Hotspot in Barcelona (Spain) in 2021. Since then, the tour has stopped in different countries and presented 9 circular economy sectors. At each virtual tour stop, up to five SMEs were invited to present their circular business models. An industry film was created, which can be watched on YouTube, and the homepage provides the opportunity to join the network (see QR codes on the right).



The Game:

The ScenCi game is based on the good practice examples visited during the tour. It is a multi-player scenario game and **allows players to:**

- learn about existing circular business models,
- explore how different circular companies interact with their value chains,
- simulate how these value chains perform under different scenarios.

The game is designed for workshops with circular economy professionals, business developers or students who want to learn about business- or sustainability-related topics (bachelor or master level).

To play the ScenCi game you need one **moderator** who is familiar with the context of circular economy as well as the rules of this game and 4 - 45 **players**, depending on the number of sectors that you want to work with. The estimated playing time is **2,5 hours**.

The ScenCi game **material pack** (description, scenario cards and circular value chain posters) provides the necessary thematic set-up for the game. Additional materials of your choice (e.g., stones, coffee, berries) are needed to run the game successfully (further information on materials provided below).

What you need:

The ScenCi material pack includes:

- 1 **circular value chain poster** (provided as PDF, can be printed in DIN A1)
- 1 **Booklet “Circular economy SMEs across Europe”** with the company and sector descriptions (provided as PDF for print or as download link for players: [see booklet](#))
- 5 **scenario cards** for the sectors plastics, construction, textiles, vehicles & batteries, and food & nutrients (provided as PDF, should be printed in DIN A5)

Additional material you will need:

- A bag full of 3 different items to illustrate losses and gains within the ScenCi game. We recommend using three different natural materials such as stones, coffee, berries, beans, or nuts that can be used or returned after the game. You will need 7x3x5 items for each sector that you play (7 pieces per company for 3 scenarios and 5 companies).
- Pens and paper for the players
- Partition wall and needles or tape, if you want to hang the circular value chain (also possible to place it on the floor)
- You might want to work with different and/or more sectors than the ones provided in the ScenCi game material pack. In that case you need to create additional scenario cards with scenarios adapted for the sectors.

Game structure

The ScenCi game consists of three parts that are completed in a consecutive order. In the first part, players are introduced to the circular value chain and first examples are discussed in the plenum. In the second part, the players are divided into smaller groups to explore a sector under three provided scenarios, and for the final part of the game, all groups come back together to discuss their learnings and experience with the game.

Part 1: Getting familiar with the circular value chain (approx. 30 min)

Objective: Get familiar with the circular value chain and discuss a first set of good practice examples.

Set up: The first part of the ScenCi game is an exploration of the circular value chain in the plenum. In this step, the circular value chain poster (provided with the ScenCi game material, printed in a large format) is put on the floor or a wall or is presented on a large screen so that it is visible to the whole group.

Steps: In the opening, the facilitator describes the circular value chain illustration and encourages the group to share their thoughts about it. The circular value chain is an exemplary illustration that can be developed further with the group. Check the box on the right for an exemplary introduction text about the circular value chain poster. The moderator can use this text or an adapted version of it to start part one of the ScenCi game.

Once the whole group is familiar with the main features of the circular value chain, the moderator distributes five good practice examples from the booklet to the participants. One by one, participants read the descriptions aloud and suggest where the SMEs should be placed in the circular value chain illustration. The choice is then discussed with the group and a final decision is made. Not all business models can be associated clearly with only one part of the circular value chain. The group might decide to place the

Moderator: Hello everyone and welcome to the ScenCi game! Let me introduce you to the circular value chain illustration that you see here. The illustration shows four main parts of the value chain: Design, production, product, and resources. For each one of these main parts of the circular value chain you can find three processes or concepts (written in grey) that are often associated with them. One example would be “integrated product development” which is often associated with design.

Have a look at the circular value chain and let me know what comes to your mind!

- Which differences to a linear value chain model can you recognize?
- Are there other important aspects of a circular value chain that you can't find here?

example in the most suitable spot or in the centre, if the company is seen as fully circular.

Once all five examples have been placed and the participants are satisfied with their location in the circular value chain, the moderator can begin to introduce the second phase of the ScenCi game.

Part 2: Playful exploration of scenarios in sector groups (approx. 50 min)

Objective: Discuss different circular business models of the same sector and compare their performance and resilience under three different scenarios.

Set up:

The second and central phase of the ScenCi game is the playful exploration of circular value chains in sector groups. The participants choose the sector they want to play according to their interests (if not decided up front by the moderator). Each sector group should consist of 3 -5 players and is provided with:

- 4-5 company (business model) descriptions of the respective sector (Plastics, Construction, Textiles, Vehicles & Batteries and Food & Nutrients) from the booklet
- 1 scenario card for the respective sector containing three scenarios describing potential future developments in the fields of law and legislation (Scenario 1), global markets (Scenario 2), and waste management (Scenario 3)
- 3 x 7 items per company to visualise gains and losses in the game (7 items from three different materials, e.g., 7 beans, 7 berries, 7 stones). 5 items per material are placed on each company description. The 2 extra items from each material are put apart. See Figure 1 for an illustration of the set up
- pen and paper to document additional assumptions made

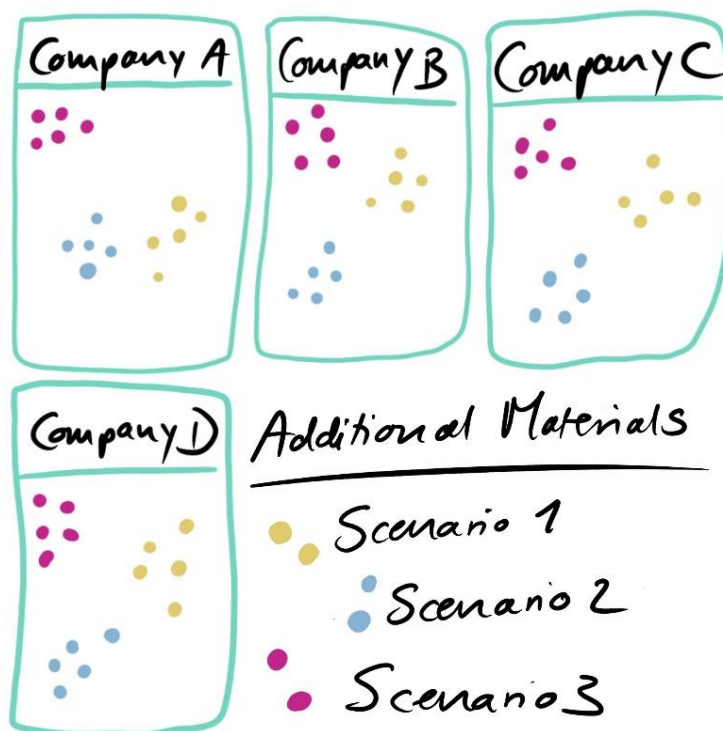


Figure 1: Set up of materials for a sector with four companies to start the ScenCi game

Steps: The moderator introduces the set-up of the ScenCi game and makes sure all groups have their material and know how to use it. The sector groups now enter a phase of autonomous work.

They read the company descriptions and discuss the companies' performance under the three different scenarios. Once they agree that a company wins or loses under a given scenario, they add or remove items of the associated material. The number of items is not meant to represent correct percentages of loss or gain. They rather serve as a visualisation of the company's performance in comparison to the other companies of the same sector and their "illustrated value" can differ from one sector group to another.

The groups can decide to make assumptions on their scenarios or companies' business models to make the gains or losses more specific. It is advisable to write them down to be able to explain them later in part three of the ScenCi game.

Part 3: Discussion in the plenum (approx. 40 min)

Objective: Cross-sector sharing of learnings and take-aways of the sector-specific outcomes.

Set-Up: After all sector groups have run through their three scenarios and decided on the distribution of the associated materials, the whole group comes together and discusses the results with help of the moderator.

Steps: The moderator can determine an order in which the groups present their results. All groups should at least present their thoughts and decisions for one scenario in their sector. Depending on time and the number of sector groups, the moderator can limit the time each group is given for their presentation. The presentations are given at the group tables so that everyone can see the items distributed by the team.

Afterwards, all players come together again, and the moderator asks for general insights and short feedback on the ScenCi game. The discussion should include the following:

- a) what the group has learned about circularity in the value chain
- b) which scenarios they found interesting and why
- c) how they think circular businesses perform compared to companies with a linear business approach.

Possible adaptations of the game

Depending on the storyline and learning you want to create, the game can be adapted, for example, in the following ways:

Adaptations for part 1:

- Other or more good practice examples can be discussed in part 1 of the game. However, keep in mind that you need many good practice examples for part 2.

Adaptations for part 2:

- You could choose other sectors for part 2 according to participants' interests or the focus of an event. In that case, remember that the scenarios should match the respective sectors.
- You could think of other scenarios, e.g., related to topics in your lectures/workshops.

ScenCi copyright and further improvement of the game

The development of the ScenCi game would not have been possible without the strong support of the Ministry for Environment of the German federal state of North-Rhine Westphalia and a European group of circular economy enthusiasts from the Netherlands, Belgium, France, Spain, Poland, Sweden, Scotland, and Germany.

The game and its associated materials are provided through the Green Economy Network NRW and can be used in compliance with copyright law. The ScenCi game is work in progress and will be developed further to be useful in a wider range of environments and to serve various learning purposes. In the meantime, we strongly encourage the use and adaptation of the ScenCi game for your own purposes such as thematic workshops or education.



We would be **delighted to hear from you** about the application of the game, to learn about your experiences with modified scenarios and an extension of good practice examples. Please reach out, share your experiences or pictures, and become part of the ScenCi community!

Contact: Greta Dekker, dekker@knuw.nrw or Tel. +49 211 91316156

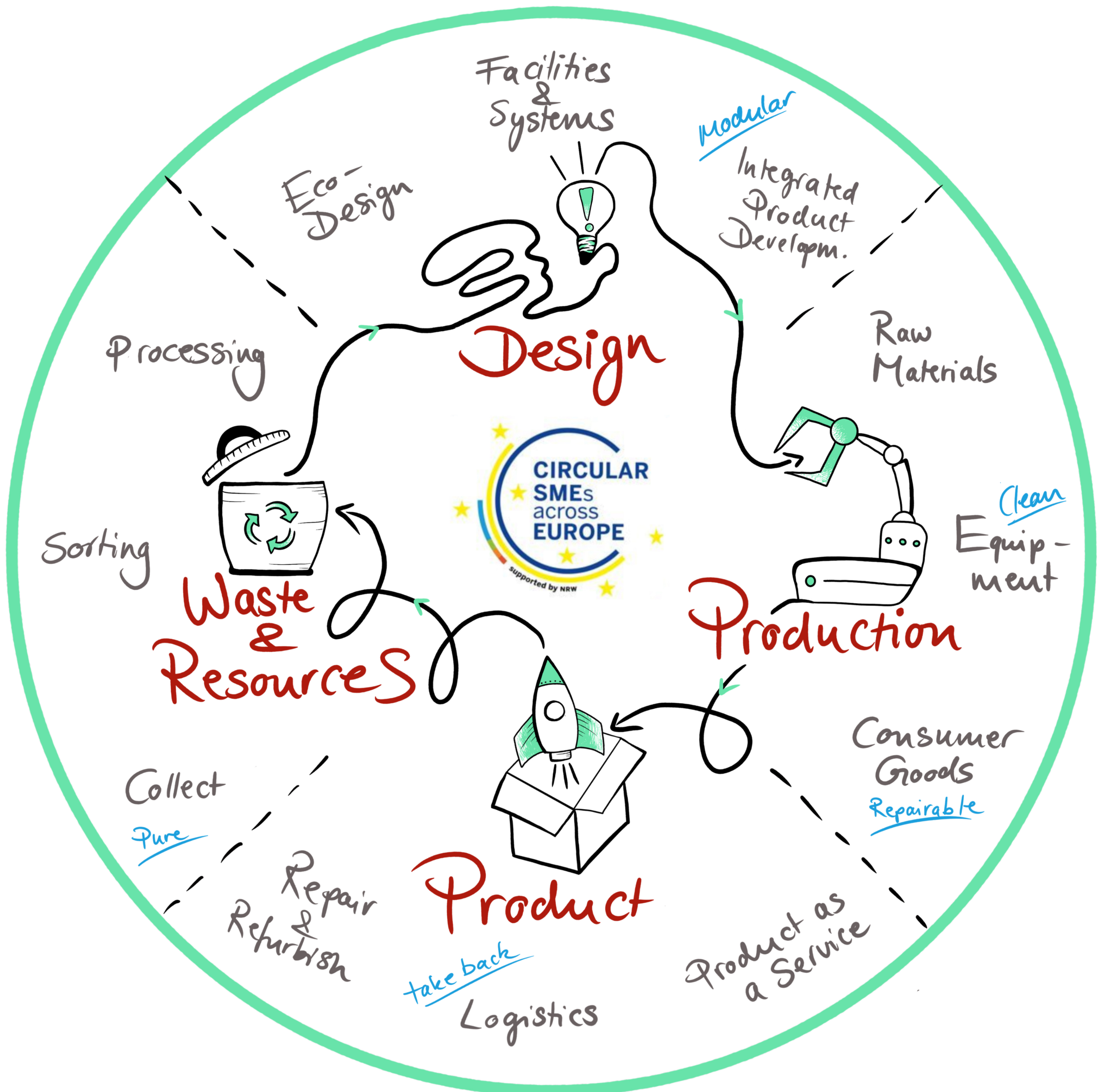


Virtual Tour

CIRCULAR ECONOMY SMEs

across Europe

Good Practices from Barcelona to Bottrop



Scenario Card

Food +
Nutrients



Law and Legislation: Genetically modified organisms are approved in the EU and are heavily subsidised.



Global Markets: Climate change is disrupting the global food web. Products are no longer available and prices are rising significantly.



Waste Management: Food sales and food waste are electronically monitored. Disposal food waste will be fined.

Scenario Card

Vehicles +
Batteries



Law and Legislation: E-mobility is booming. To meet the demand for batteries, the EU has decided that all batteries must remain in the e-mobility sector until they have lost 80% of their performance, before they can be recycled.



Global Markets: The procurement of raw materials for battery production is interrupted and unstable due to climate change and violent conflicts. The available resources are expensive.



Waste Management: The disposal of batteries as waste is no longer allowed in the EU.



Scenario Card

Textiles



Law and Legislation: In the EU, all textiles that are not made from secondary raw materials are taxed double.



Global Markets: Bangladesh and Pakistan introduce strict laws on water pollution. These developments make traditional dye and fast fashion products much more expensive.



Waste Management: Textile shops are obliged to take back their products after use. Disposal as waste is prohibited.

Scenario Card

Construction



Law and Legislation: In the EU, all building materials that are not made from secondary raw materials are taxed double.



Global Markets: Wood for construction purposes is no longer available due to climate change, degraded forests and value chains interrupted by wars.



Waste Management: Construction and demolition waste accounts for more than a third of all waste generated in the EU. The sector is obliged to reduce this figure by 50% in just 5 years.

Scenario Card

Plastics



Law and Legislation: Manufacturers of plastic-based components and products are legally obliged to take responsibility for produced items until they enter another cycle.



Global Markets: Previously available oil reserves can no longer be extracted due to violent conflicts. As a result, oil prices rise so much that the production of primary oil-based plastics becomes too expensive.



Waste Management: Bio-residues have to be used to produce biogas to cope with the gas shortage in Europe and cannot be used to produce bioplastics. Exceptions are possible, but expensive.

