# THREE C

## Creating Competences for a Circular Economy

3.00 - 3.10 pm: Introduction
3.10 - 3.25 pm: What is a circular economy?
3.25 - 3.35 pm: Opportunities for education ThreeC
3.35 - 4.00 pm: A didactical approach for education for a circular economy

Fontys
University of Applied Sciences

Lesgeven over duurzame ontwikkeling
Didactische handreiking

Schooling for Sustainable Development 6
Rolf Jucker
Reiner Mathar Editors
Schooling for Sustainable Development in Europe
Concepts, Policies and Educational Experiences at the End of the UN Decade of Education for Sustainable Development
Springer

Martin de Wolf | m.dewolf@fontys.nl | +31-8850-74948

## What is a circular economy?

- Why is there need for a circular economy?
- What is the definition of a circular economy?
- Why is there need for a circular economy?
- What are the principles behind a circular economy?
- What are theoretical perspectives on transitions to a circular economy?
- What is the difference between circular economy and linear economy with feedback loops?
- What are other, related schools of thought?

## What are benefits of a circular economy?

- What are the resource savings in a circular economy?
- What is the potential of a circular economy in Europe?
- What is the potential of a circular economy in the Netherlands?
- What is the potential of specific sectors?
- Which types of materials have a high potential for a circular economy?
- Why should I apply circular economy in my business?

## Who are frontrunners in circular economy?

- What are frontrunner regions who are working on circular economy issues?
- What are frontrunner knowledge networks who are working on circular economy issues?
- What are the examples of circular purchasing?
- What are the frontrunner countries which are supporting circular economy?

## Circular economy

## How do I work in a circular economy?

- How do I create a business model for a circular economy?
- How do I implement circular economy in my business?
- How do I create value in a circular economy?
- How do I design in a circular economy?
- How do I manufacture in a circular economy?
- How do I collect waste in a circular economy?
- How do I, as an SME, finance the transition to a circular business model?
- How do I achieve circular purchasing processes?
- How do I assess circularity?
- How do I internalize external costs?
- How do I educate for a circular economy?

## How do we arrive at a circular economy?

- Which policies are already in place supporting circular economy?
- What are elements in a roadmap towards a circular economy?
- How can circular economy be mainstreamed?
- Which policies are still required to support a circular economy?
- How can financial institutions stimulate a circular economy?

## What are barriers for a circular economy?

- ... with regard to business models?
- ... with regard to financing?
- ... with regard to governance?
- ... with regard to technology?
- ... with regard to society?

The aim of this Knowledge Map Circular Economy is to present an overview of the present-day knowledge on circular economy issues. In this knowledge map, publications up to december 2014 have been included. Is there a report or study lacking in answering the current questions, or are other research questions related to a circular economy already answered? In that case, please contact Het Groene Brein.

Per question, a short summary is provided, with more comprehensive answers below. Direct access to the publications is provided via the clickable literature list.
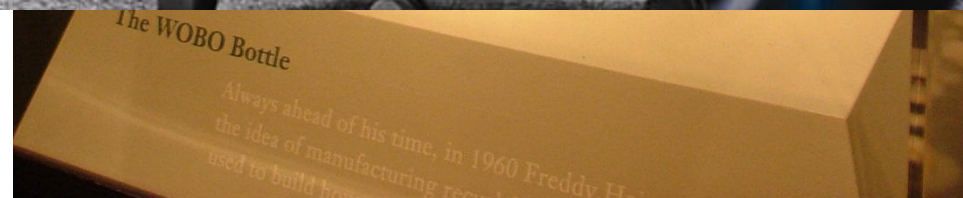
Nederlands

English

Literature list

The WOBO Bottle

Always ahead of his time, in 1960 Freddy Hei...
the idea of manufacturing recyc...
used to build hou...

# Intelligent lighting: designing with responsible consumption in mind

Shifting from a one time sale to a lighting service, means Philips maintains ownership of materials and can offer maintenance and upgrades to customers
**Sponsor's feature**

📷 At the end of the contract period, Philips lighting products can be taken back into their production process again and raw materials be reused. Photograph: Philips

I told Philips: "listen, I need so many hours of light in my premises every year. You figure out how to do it. If you think you need a lamp, or electricity, or whatever – that's fine. But I want nothing to do with it. I'm not interested in the product, just the performance. I want to buy light, and nothing else." This is what I recall from my first encounter with Philips back in 2009. I was at a point of reconsidering lighting to fit

# Which opportunities do you see for education?

## PROJECT DESCRIPTION

The acronym ThreeC project stands for: Creating Competences for a Circular Economy. The project ThreeC aims at integrating the concept of the Circular Economy as an attractive new learning field in European school education. The "Circular Economy" refers to the concept of saving natural resources and to reuse and recycle them. It is a more profound approach than the solely technical (end-of pipe) concepts of waste management sector and focuses on the active participation and capacity building of citizens. It is an increasingly relevant, popular and attractive theme that is being boosted by major economic, ecological and political stakeolders worldwide . Young people need to acquire skills to be able to contribute to and work in a circular economy.

Objectives of the project and end products:

1. To describe set of competences for circular economy content related and contextualised/practice-oriented linked to the reference systems (3 dimensions and 5 levels) of the LEVEL5 validation system.
2. To develop a didactical approach with teaching and assessment strategies to enable teachers to teach their pupils skills in the context of a circular economy (general education).

# Which opportunities do you see for education?

Core competence for education for a circular economy: systems thinking and designing.

Relevant didactical concepts:
- Closing the loop: circular learning process.
- Social transformative learning: collective and particpatory approach, space for different ideas, reflecting on behaviour.
- Head, heart, hands: integrate knowledge, attitude (emotion) and behaviour.

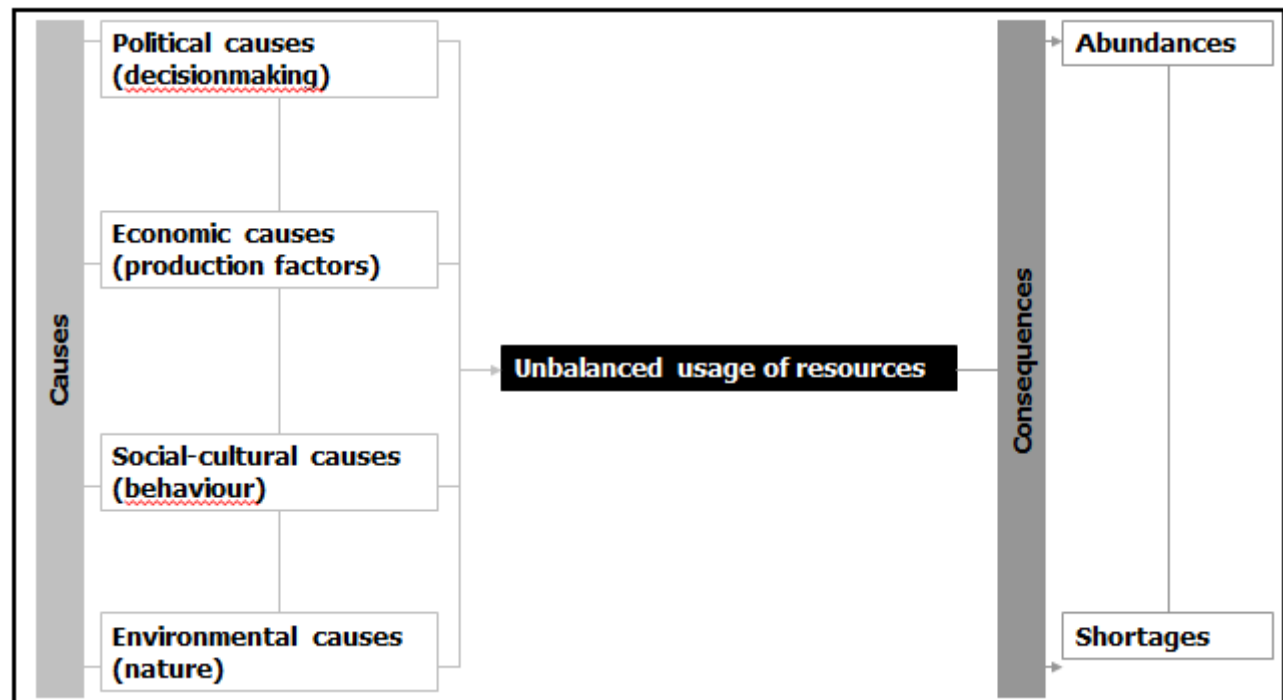![THREE - Creating Competences for a Circular Economy]

# Nine steps as a didactical approach for education for a circular economy

- Attention = feel familiar or wonder [a drinking package in a bird?]
- Understand = define the problem, a question [unpacking the package]
- Relate = feel interconnected, show empathy [how many in your dustbin?]

# Nine steps as a didactical approach for education for a circular economy

- Attention = feel familiar or wonder
- Understand = define the problem, a question
- Relate = feel interconnected, show empathy
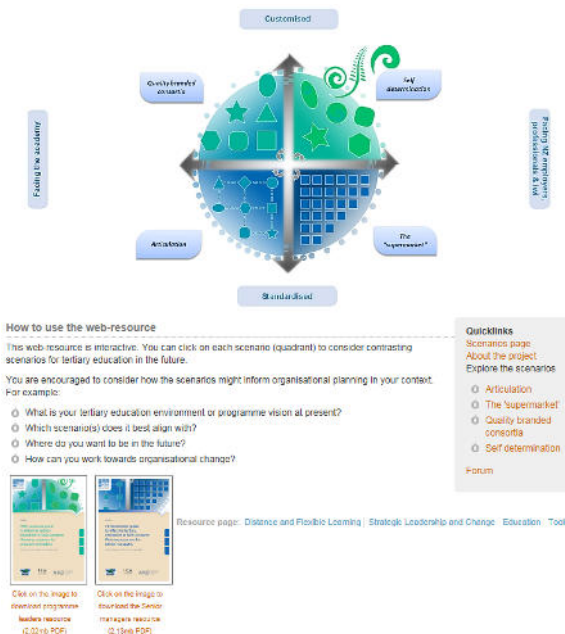- Analyse = systems thinking [what are causes and consequences?]

# Nine steps as a didactical approach for education for a circular economy

- Attention = feel familiar or wonder
- Understand = define the problem, a question
- Relate = feel interconnected, show empathy
- Analyse = systems thinking
- Value = change perspectives [who's right?]

![THREE - Creating Competences for a Circular Economy]

# Nine steps as a didactical approach for education for a circular economy

- Attention = feel familiar or wonder
- Understand = define the problem, a question
- Relate = feel interconnected, show empathy
- Analyse = systems thinking
- Value = change perspectives
- Solve = choose a solution [what's the best option?]

**Nine steps as a didactical approach for education for a circular economy**

- Attention = feel familiar or wonder
- Understand = define the problem, a question
- Relate = feel interconnected, show empathy
- Analyse = systems thinking
- Value = change perspectives
- Solve = choose a solution
- Plan = make a strategic plan
- Act = do
- Reflect = evaluate your actions

[make it authentic]

# Which opportunities do you see for education?

Thank you and good luck!