

# Circular economy course

**Piia Nurmi 20.8.2019**

Tue 20.8. Theme: Orientation to the project work / contact person for the day: Piia Nurmi

9-11 Orientation to the World Circular Economy Forum and the project work

11-12 *The WCEF in Canada 2020 / Henna Knuutila, Senior Lecturer, TUAS*

12-13 Lunch

13-16 Working on the project

Piia returns at 2pm!

**<https://kiertotalous2.turkuamk.fi/ce-intensive-course/>**

**What did you learn about circular economy yesterday?**



THIS IS HOW WE CREATE A

# Circular economy

IN FINLAND

## Use

The product should be used for as long as possible, it must be serviced and repaired and parts changed when necessary. At the end of its life cycle, the parts or material can be reused in the life cycle of some other product.



## Consumer

Demand creates a supply of sustainable products and commodities. Every consumption decision either takes us towards or away from a circular economy.



## From company to company

Companies will procure and require their subcontractors to provide parts and components that can be easily repaired – instead of fixed and single-use parts. They will also provide maintenance services for the products they sell.

## Retail

Retailers will sell more services instead of goods and inform

## Distribution

## Manufacturing industry

Industry will provide accurate information about



### The life cycle continues in a new loop

At the end of its life cycle, the product and material returns to the loop – in the same life cycle or that of another product. It is impossible or very uncommon for it to become waste.

Initially, Finland's circular economy will grow from the following five areas.

- 1 Sustainable food system**  
Consumers choose food that has been produced through the wiser use of raw materials that starts in primary agricultural production. Emissions and resource consumption will be lower.
- 2 Forest-based loops**  
Finland is a circular bioeconomy leader because of its forestry and forest industry. Global competitiveness will increase with new commercial products, services, co-operation models and digital technology.
- 3 Technical loops**  
Minimising the use of virgin raw materials creates a competitive edge. At the same time, we will maximise the length of material and product life cycles and opportunities for reuse.
- 4 Transport and logistics**  
Transport will develop into a seamless, smart system that uses fossil-free fuels. Mobility as a Service (MaaS), the sharing economy and optimised and clean transport will take mobility to a new level.
- 5 Common action**  
Legislators, companies, universities and research institutes, consumers and citizens, and vibrant regions are all needed to achieve systemic change. Communication and diverse interaction are particularly important when implementing joint action.

## Primary sector

The raw materials are capital for the primary sector. Sustainable solutions are dependent on the protection of raw materials. The aim of a circular economy is to keep Finland vibrant for people and nature.

## Material processing

Process planning will decrease the energy need for processing huge amounts of raw materials and the amount of surplus material. The use of side streams will be taken into consideration in, for example, environmental impact assessments and environmental permit processes.

**what are the most important things to  
develop in our area?**

# things to improve

## Use

- product made very well, not too expensive
- to make consumers more aware of repairing, affordable spare parts available
- more emphasis on do it yourself (DIY)

## Consumer

- build awareness (education, mass media, social media)
- change the consumer behaviour

->consumers would become more service oriented

# things to improve

## Retail

- promoting sharing and renting
- fast service on repairing, guarantee periods

## Material processing

- choosing the right raw materials
  - product specifications: to last long
  - minimizing energy use, maximizing output
  - improvement of process analysis
  - reusing of heat, thermal energy
- 
- look for every possible way to get the most environmentally friendly ideas, research all the time



# things to improve

## Primary sector

- to find the best raw material that can be reused and disposed etc
- to find a better material when there are problems
- alternative ways to grow e.g. food

## C2C, distribution, technical loops

- maximize the use of space
- a third party if needed
- packaging: reuse of packages
- encouraging the customer to use recycled packaging
- time, cost, profit

# Your project work in groups

# What is WCEF?

The World Circular Economy Forum (WCEF) is the global initiative of Finland and the Finnish Innovation Fund Sitra. The WCEF brings together more than 2,000 business leaders, policymakers and experts to present the world's best circular economy solutions. The WCEF examines how businesses can seize new opportunities, gain a competitive advantage through circular economy solutions and how the circular economy contributes to achieving the UN Sustainable Development Goals. We believe that truly competitive solutions are born when business and environment go hand in hand.

The first forum was organised in Helsinki, Finland in June 2017 with 1,600 participants from nearly 100 countries. In 2018, Sitra brought the concept to Yokohama, Japan where more than 1,100 circular economy experts discussed what we need to do to create a true circular economy by 2050. See the outcomes of the WCEF2018 [here](#).

# One WCEF 2019 session

[https://www.youtube.com/watch?v=l4ilFatXQnU&list=PL5XRiYm1aQFOjwEoKVe\\_gob6XQ28IIGMEd&index=2](https://www.youtube.com/watch?v=l4ilFatXQnU&list=PL5XRiYm1aQFOjwEoKVe_gob6XQ28IIGMEd&index=2)