

# Towards Carbon Neutral Circular Economy Society - How to get there?

Finland's road map to the circular economy 2.0

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Natural resources

Circular economy solutions in the mining, process and manufacturing industry

Hybrid and composite materials

Digitalization

Smart cities

Energy

Mobility

Transition from fossil-based resources to bio-based resources

# Hybrid and composite materials

# Digitalization

## Smart cities

# Energy

# ~~Mobility~~

# Transition from fossil-based resources to bio-based resources

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.



## Consumer

Consumer demand creates a supply of sustainable products and commodities.



## From company to company

Companies will procure and require their subcontractors to provide parts that can be easily repaired – instead of single-use parts.

## Retail

Retailers will sell services instead of goods and inform customers about maintenance and repair services, environmental impacts, materials and further use in the final phase of the life cycle.

## Distribution

Transport co-ordinated between different sectors, renewable fuels and jointly owned transport equipment will be used in distribution.

***A circular economy is an economic model of the future, in which natural resources are used within the Earth's carrying capacity.***

## Primary sector (raw materials sector)

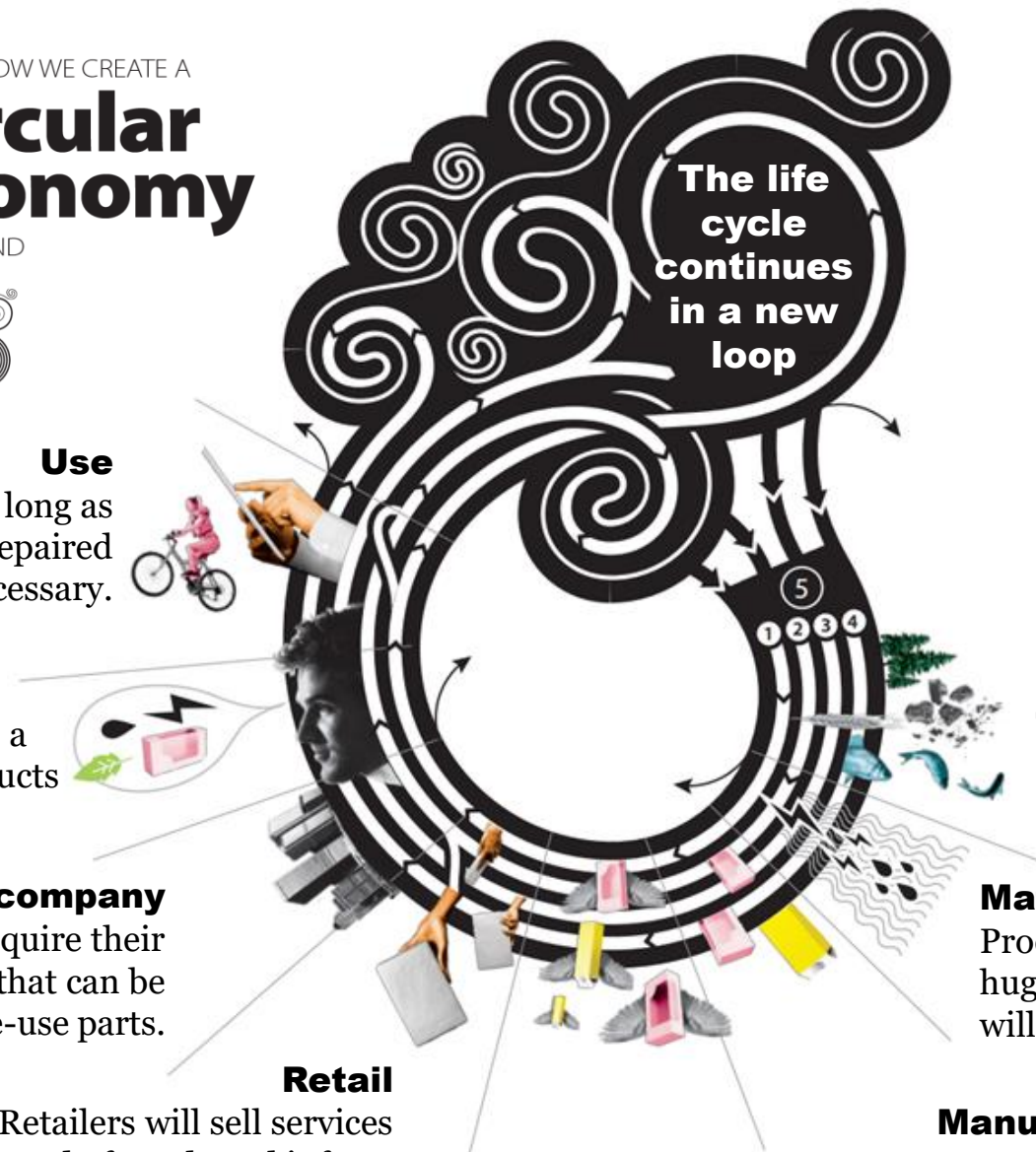
The raw materials are capital for the primary sector. Sustainable solutions are based on the wise use of raw materials.

## Material processing

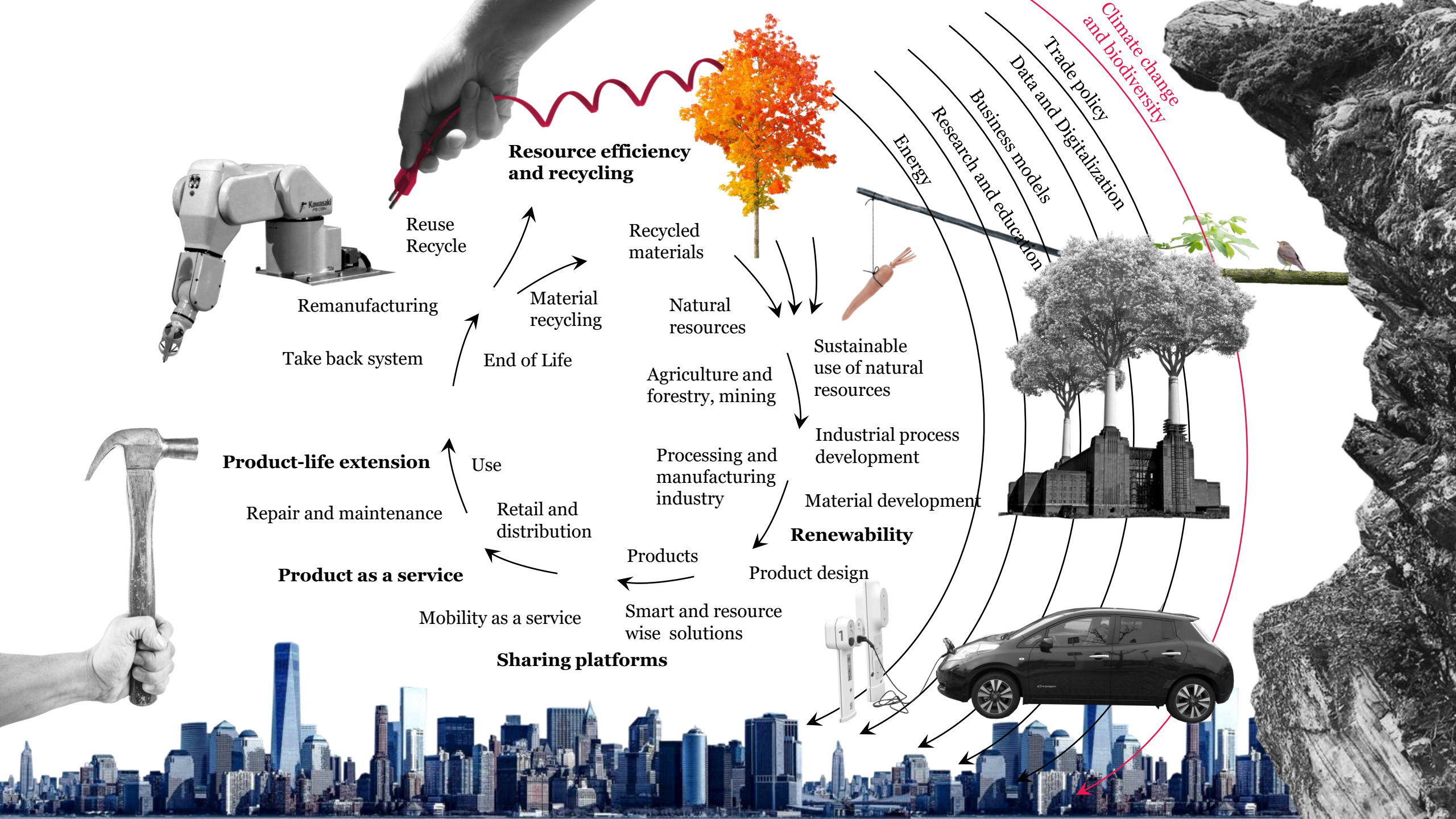
Process planning will reduce the energy needed to refine huge amounts of raw materials. The use of side streams will be taken into consideration.

## Manufacturing industry

Long-term products that can be repaired and maintained will be brought onto the market. Materials will be separated at the end of the product's life cycle.







# The most interesting companies in the circular economy in Finland and the Playbook – How to get there?

A list of the companies compiled to showcase Finland's most inspiring examples of the circular economy!

Sitra is using the list as a way to challenge Finnish companies to meet the changing needs of the world.



The criteria for getting on the list are getting tougher. Check out here [who made the cut!](#)



The playbook is tailored to the companies in the Finnish manufacturing industry, giving detailed examples how to integrate circular economy business models in the following sub-sectors: Machinery & Equipment, Marine, Energy and Transportation

<https://www.sitra.fi/en/publications/circular-economy-business-models-manufacturing-industry/>





LEGISLATION AND  
POLICY INSTRUMENTS

INDUSTRIAL BUSINESS CASES  
- Circular economy solution

Investments

Ramp up and  
commercializing

Series of large scale pilots  
- Same function and  
different environment  
- Different function and  
same environment

Laboratory  
scale testing

Applied research  
and innovation

Basic research

Need for circular economy  
solution and business

Enabling (Administrative): The fluent permit processes

Enabling: Funding and investments

Target: Saving natural resources and decrease CO<sub>2</sub> emissions

EDUCATION

SITRa

# **The equal rights to true information and knowledge**

How to integrate the carbon neutral circular economy education in the school system?



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# The equal rights to true information and knowledge

How to integrate the carbon neutral circular economy education in the school system?

We will need many kinds of professionals also in the future - however, all of us will be circular economy specialists as well. We will have the understanding about limited natural resources and we know how to integrate circular economy solutions into our every day decisions and routines.

[Circular economy teaching](#) for all levels of education

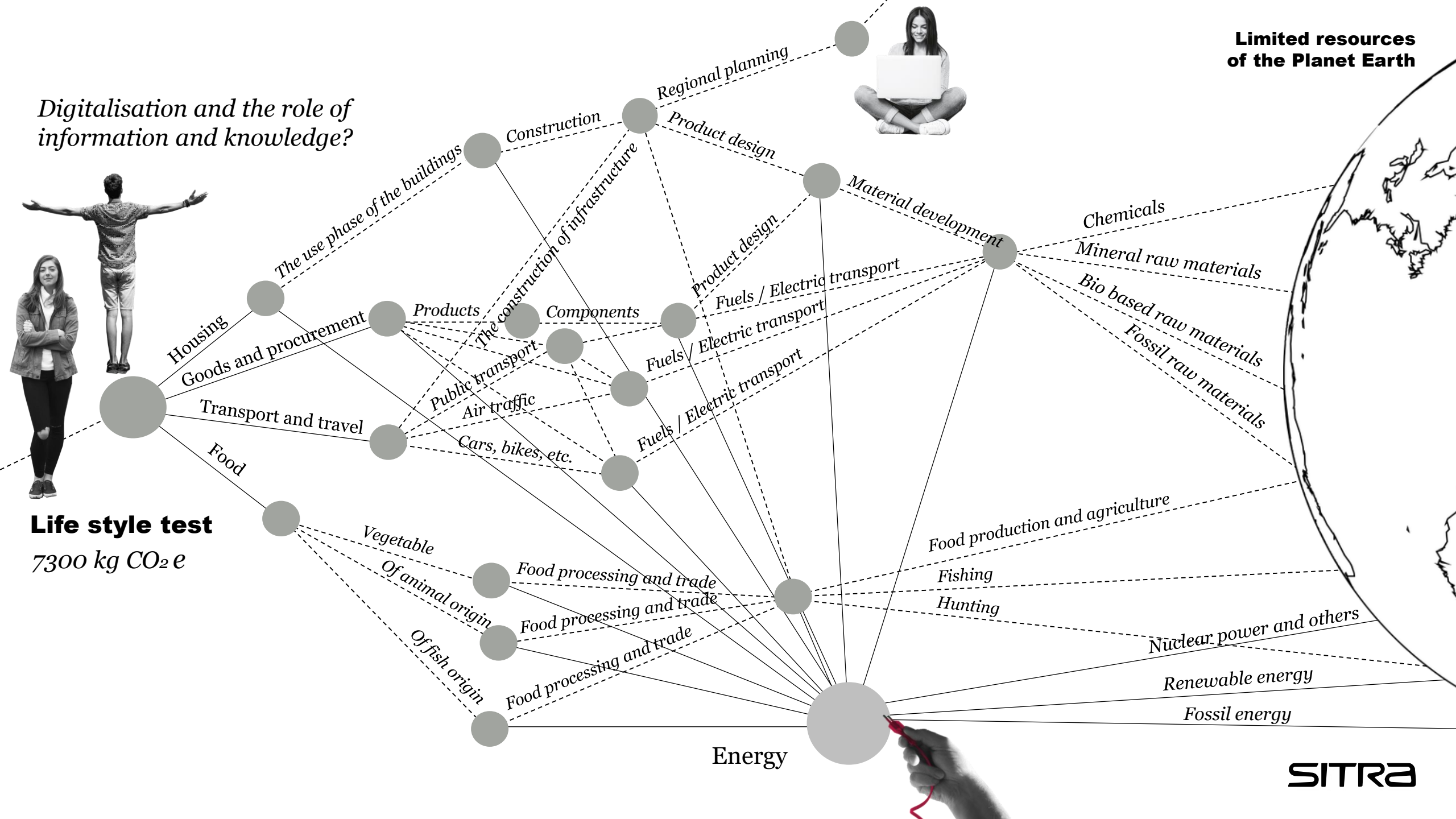
How to make the circular economy part of the national education system – [Tips](#) from Finland



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*Digitalisation and the role of information and knowledge?*

**Limited resources of the Planet Earth**



## Ecological reconstruction

### The use of natural resources

The development and implementation of carbon neutral circular economy solutions

### The vitality of the planet Earth

The development and implementation of the actions to save nature and the planet Earth's vitality

## The Balance?



# Thank you!

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