

# Leading the cycle Finnish road map to a circular economy 2016–2025

Making Finland a circular economy pioneer Find out more about how this change will happen in Finland

# Finland wants to be a pioneer

The world needs pioneering solutions to ensure that economic growth and increased wellbeing are no longer based on the wasteful use of natural resources. Finland intends to create sustainable well-being and success via a carbonneutral circular economy over the next 5 to 10 years. A circular economy maximises the use of materials and retains their value in the loop for as long as possible: rather than offering products, the foundation for earnings will be services and intelligence-based digital solutions.

# The circular economy is a group effort

Participants from an extensive cross-section of Finnish society have collaborated to produce the world's first national road map for the transition to a circular economy. The change requires co-operation across sectoral and industrial boundaries: the most attractive opportunities for new operating methods and lengthening material loops are often found in these areas between different sectors

# A jackpot in terms of jobs and income for the national economy

A circular economy will provide the Finnish economy with several percentage points worth of added value, which translates into billions of euros, by 2030. According to the Club of Rome, it would create more than 75,000 jobs in a country of 5.5 million people. The road map specifies the tangible actions needed to stimulate growth, investments and exports. The infographic shows how these are divided into five groups, based on Finland's existing strengths.

## We need more bold operators

Finnish organisations are already implementing the first projects outlined in the road map, which was only released in September 2016. Finns have been challenged to take action that supplements the road map. We want pioneers to take part in this work. Join forces with other Finns to create the world's best circular economy solutions!

# THIS IS HOW WE CREATE A Circular economy IN FINLAND

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## Use

The product should be used for as long as possible, it must be serviced and repaired and parts changed when necessary.

Consumer

Demand creates a supply of sustainable products and commodities.

single-use parts.

## 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

### Retail

Retailers will sell more 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.

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:

### Sustainable food system

Consumers choose food that has been produced through the wiser use of raw materials that starts in primary agricultural production. Nutrients are recycled.

#### (2)Forest-based loops

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 and maximising the length of material and product life cycles create a competitive edge.

#### (4)Transport and logistics

Transport will develop into a seamless, smart system that uses fossil-free fuels.

#### (5 Common action

Legislators, companies, universities and research institutes, consumers and citizens, and vibrant regions are all needed to achieve systemic change.

### **Primary 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 decrease the energy need for processing huge amounts of raw materials. The use of side streams will be taken into consideration.

### Manufacturing industry

Distribution

Transport co-ordinated between

different sectors, renewable fuels and

jointly owned transport equipment

will be used in distribution.

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

# The first steps in the road map to a circular economy

# Finland offers the kind of complete solutions the world is looking for.

# Regional co-operation brings sustainable local food to everyday life

The foundation for a new, sustainable food system lies in the choices made by large procurement units. For example, kitchens in public institutions such as schools and hospitals use locally produced foods that promote nutrient recycling.

# Valuable and rare materials are carefully recovered for re-use

Second-generation processing technologies will provide added value to the materials contained in electrical and electronic devices. The development of a demonstration plant is based on maximising the value of recovered materials.

# Finland becomes a global host nation for the circular economy

In June 2017, Sitra will host the World Circular Economy Forum 2017 in Helsinki. This event will present the world's best circular economy solutions, which will meet the UN's sustainable development goals while aiming for economic and employment growth.

# Open data creates low-carbon and smart transport

A low-carbon and smart transport system that can be replicated elsewhere in the world will be developed in the Helsinki metropolitan area. The Smart & Clean project will turn transport into service concepts based on the use of open data and infrastructure.

# Forest industry bioproducts move from labs to trials

New products obtained from the forest that can replace fossil fuels require more extensive testing outside the laboratory in order to be commercialised. Companies from different sectors will collaborate to produce them on an industrial scale and seek international funding.

# Companies use production and community side streams

A model exists for wide-ranging cooperation that will promote industrial symbiosis and the circular economy. A concept developed in the Kemi-Tornio Arctic region will be tested in the northern parts of Finland, Sweden and Norway.



# Read more on the report website: sitra.fi/leadingthecycle

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