

SUSTAINABLE FOOD SYSTEM

**Turku Summer School 2022
Circular Economy**



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 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 provide a more sustainable basis for the transfer of products and materials.

Manufacturing Industry

Industry will receive accurate information about the materials it uses, so that they can be identified and separated at the end of the product's life cycle. Long-term products that can be repaired and maintained will be brought onto the market.



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 wise 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.

Sustainability & Food

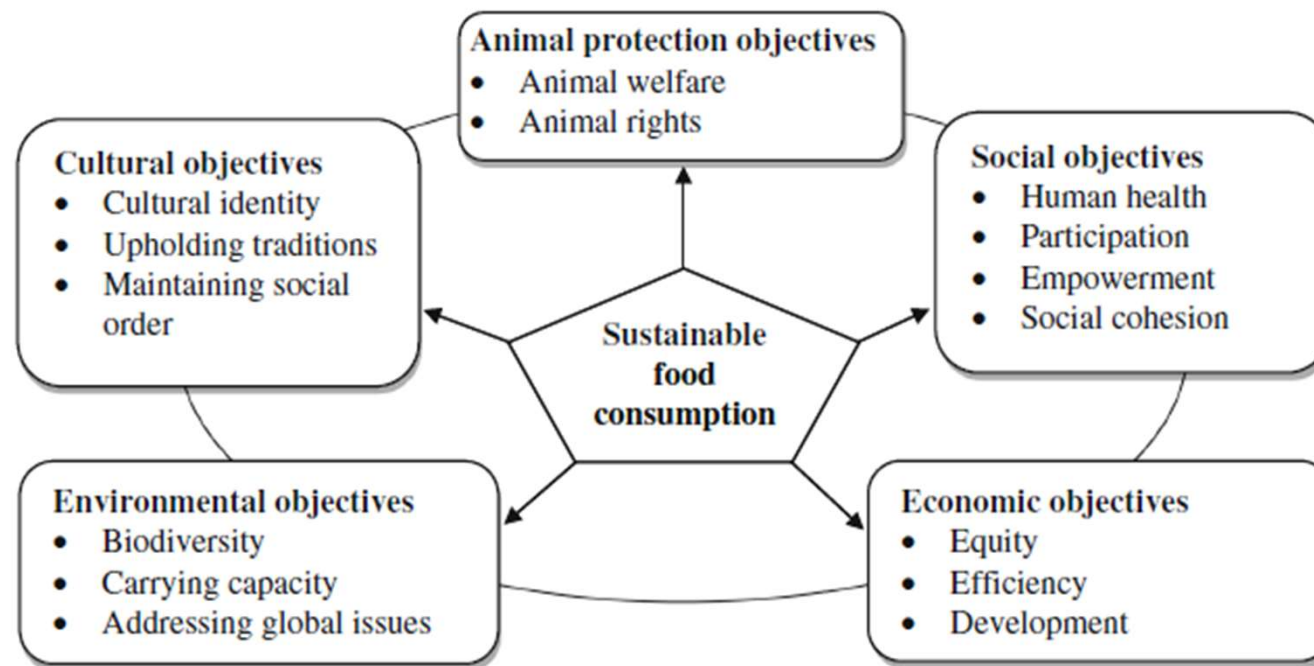


Fig. 1 Dimensions of sustainability in relation to food consumption (objectives are collected and modified from: Munasinghe 1992; Goodland and Daly 1996; Maxwell and Slater 2003; Rawles 2010)

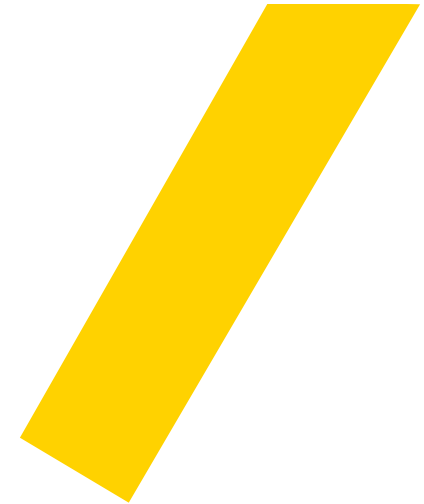


**How to overcome the obstacles
presented?**

We need

1. strategic,
2. tactical and
3. operational governance activities for enabling a transition towards plant-based diets.

financing research, taxation, prohibition on advertising certain products, support to help the transition, creating nudges etc.



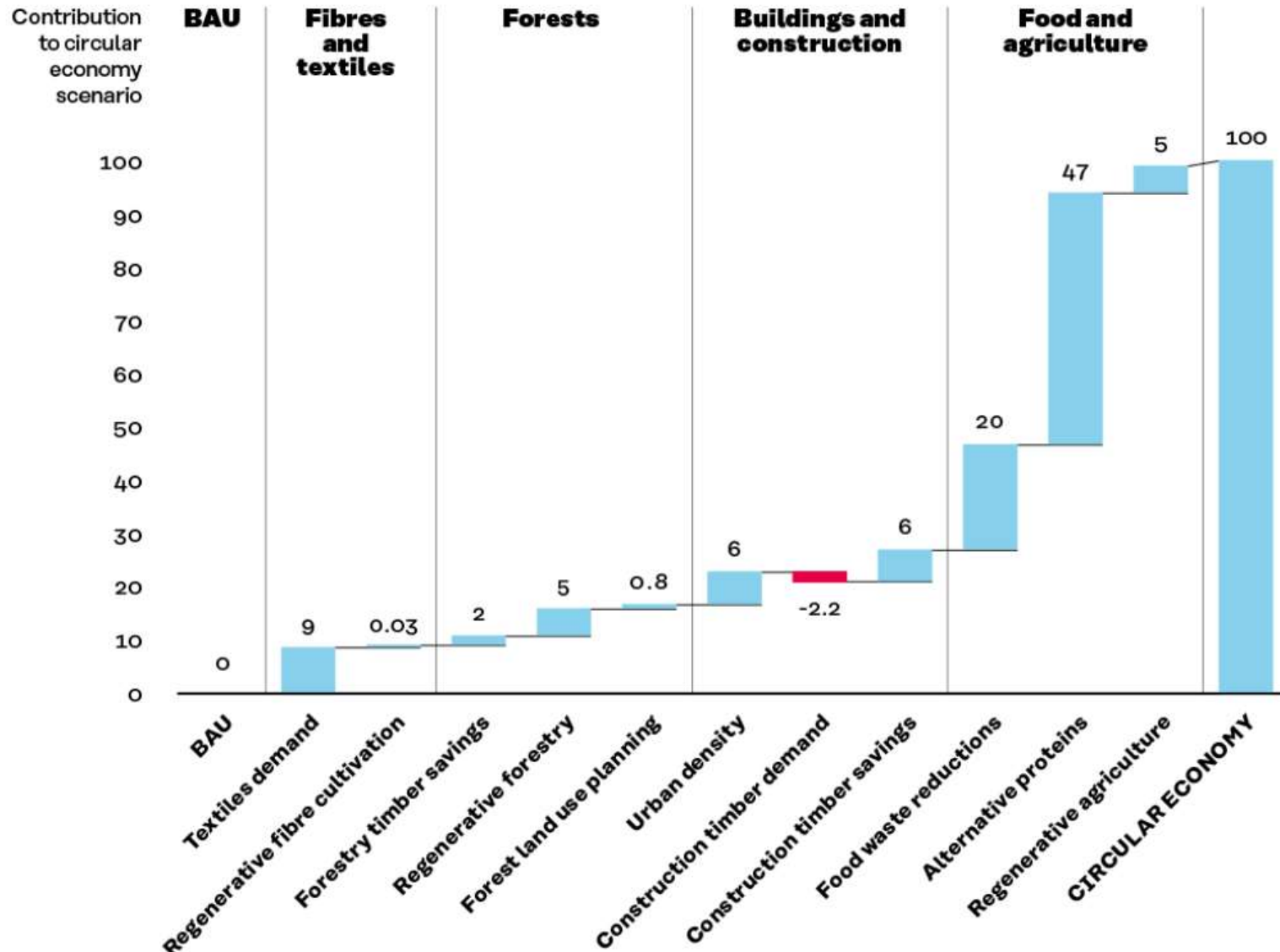
How can the food system be fixed?

Here are just 4 examples:

- 1) Biotechnics
- 2) New ways of production
- 3) Processing
- 4) Digitality & servicalisation



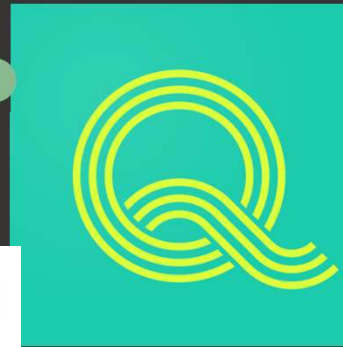
Alternative food system?



The future of food industry

- By taking circular business action, meat consumption will fall by 50 % and dairy consumption by 67 % by 2035 (Sitra)
- 50% of vital land is used for agriculture > from this 77% is used for animal-originated production
 - However, only 18% of calories produced globally, come from this source
- Animal-originated products have a great impact on the environment and climate, so throw-away practices should be especially considered with these products
 - Households produce about half of all food waste
 - Finland aims at halving the amount of food waste by year 2030
 - ❖ By taking circular business action, food waste will fall by 50 % by 2035 (Sitra)

meeat.



Vöner[®]
Plant based food

beanit



**GOLD &
GREEN**[®]



Key Partners



Who are our Key Partners?
Who are our key suppliers?
Which Key Resources are we acquiring from partners?
Which Key Activities do partners perform?

MOTIVATIONS FOR PARTNERSHIPS
Optimization and economy
Reduction of risk and uncertainty
Acquisition of particular resources and activities

Who helps you?

Key Activities



What Key Activities do our Value Propositions require?
Our Distribution Channels?
Customer Relationships?
Revenue streams?

CATEGORIES
Production
Problem Solving
Platform/Network

What do you do?

Value Propositions



What value do we deliver to the customer?
Which one of our customer's problems are we helping to solve?
What bundles of products and services are we offering to each Customer Segment?
Which customer needs are we satisfying?

CHARACTERISTICS
Newness
Performance
Customization
"Getting the Job Done"
Design
Brand/Status
Price
Cost Reduction
Risk Reduction
Accessibility
Convenience/Usability

How can I help you?

Customer Relationships



What type of relationship does each of our Customer Segments expect us to establish and maintain with them?
Which ones have we established?
How are they integrated with the rest of our business model?
How costly are they?

EXAMPLES
Personal assistance
Dedicated Personal Assistance
Self-Service
Automated Services
Communities
Co-creation

How do you relate?

Customer Segments



For whom are we creating value?
Who are our most important customers?

Mass Market
Niche Market
Segmented
Diversified
Multi-sided Platform

Who is satisfied?

Key Resources



What Key Resources do our Value Propositions require?
Our Distribution Channels? Customer Relationships?
Revenue Streams?

TYPES OF RESOURCES
Physical
Intellectual (brand, patents, copyrights, data)
Human
Financial

What are you, and what do you have to do?

Channels



Through which Channels do our Customer Segments want to be reached?
How are we reaching them now?
How are our Channels integrated?
Which ones work best?
Which ones are most cost-efficient?
How are we integrating them with customer routines?

CHANNEL PHASES
1. Awareness
How do we raise awareness about our company's products and services?
2. Evaluation
How do we help customers evaluate our organization's Value Proposition?
3. Purchase
How do we allow customers to purchase specific products and services?
4. Delivery
How do we deliver a Value Proposition to customers?
5. After sales
How do we provide post-purchase customer support?

What medium do they use?

Cost Structure

What do you give?

What are the most important costs inherent in our business model?
Which Key Resources are most expensive?
Which Key Activities are most expensive?

IS YOUR BUSINESS MORE
Cost Driven (leanest cost structure, low price value proposition, maximum automation, extensive outsourcing)
Value Driven (focused on value creation, premium value proposition)

SAMPLE CHARACTERISTICS
Fixed Costs (salaries, rents, utilities)
Variable costs
Economies of scale
Economies of scope



Revenue Streams

What do you get and how?

For what value are our customers really willing to pay?
For what do they currently pay?
How are they currently paying?
How would they prefer to pay?
How much does each Revenue Stream contribute to overall revenues?

| | | |
|---|---|--|
| TYPES Asset sale Usage fee Subscription Fees Lending/Renting/Leasing Licensing Brokerage fees Advertising | FIXED PRICING List Price Product feature dependent Customer segment dependent Volume dependent | DYNAMIC PRICING Negotiation (bargaining) Yield Management Real-time Market |
|---|---|--|

