

The background image shows two women riding yellow bicycles on a cobblestone path. The woman on the left is wearing sunglasses and a patterned jacket, smiling. The woman on the right is wearing a dark jacket and is looking forward. They are riding past a harbor with several sailboats docked. The sun is setting in the background, creating a warm, golden glow. The bicycles have a yellow basket with the 'FILLARI' logo on the front.

# Business Finland bio- ja kiertotaloutta vauhdittamassa Accelerating Bio and Circular economy

'SAVING THE WORLD WITH BIO AND CIRCULAR SOLUTIONS IS HIGH VALUE BUSINESS FOR FINLAND'

2019 – 2022

Jutta Kauppi

Head of the Bio and Circular Finland program

Business Finland

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# BUSINESS FINLAND MISSION IS GROWTH, RENEWAL AND SUCCESS

**Promoting** Innovation  
Promoting Exports  
Attracting investments and  
travelers

## Tools

- Research and innovation funding
- Guidance and coaching
- Networking and contacts
- Expertise and vision of our domestic and International networks
- Theme choices and programs



# Framework for Bio and Circular economy

## BUSINESS

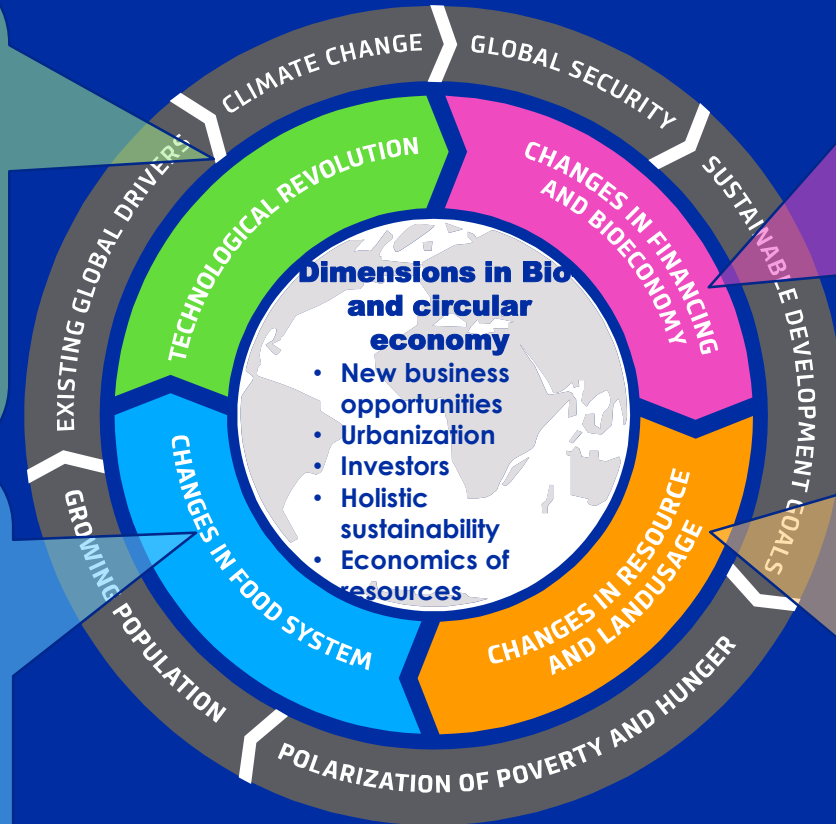
## FINLAND

**DRIVERS:** Artificial intelligence-Deep and machine learning, cloud- and satellite based technologies, remote monitoring-leading to precise resource efficiency

Technologies enabling the rapid transformation;  
 • Mastering carbon balance  
 • Biomass & Fractions markets

**DRIVERS:** New production chains rise. Disruption in bio- and circular economy means new products, services and platforms coming into market

• Growing need to control GHG emissions  
 • Changing production systems-carbon neutral  
 • Changing consumer attitudes  
 • Concern on human-animal health  
 Jutta Kauppi



**DRIVERS:** Circular and Bioeconomy brings new opportunities for companies and investors in global markets.

- Investments shifting towards Bio- and circular economy
- Sustainability & Economical indicators rise
- Competition between sustainable use of resources and making profit is getting harder

**DRIVERS:** Demand for sustainable cities and smart specialisation of areas, rapid changes in land usage, transformation of water-food systems

- Next generation of resource efficiency -Precision circular economy
- Population growing rapidly in urban areas



# BIO AND CIRCULAR FINLAND

## VISION

- Finland is showing the way for solving global challenges and Finnish bio and circular solutions are utilized globally.

## PURPOSE

- Develop competitive Finnish bio and circular based solutions and ecosystems which solve grand challenges and have huge potential to known global markets
- Enhance the export growth of Finnish bio and circular solutions and ecosystems.
- Combine Ecosystem networks in bio and circulareconomy in a new way
- Promote Finnish bio and circular excellency for investors and actors in global networks



# BIO AND CIRCULAR FINLAND PROGRAM

## – FOCUS AREAS

### BIOBASED SOLUTIONS

New materials  
& products

Replacing fossil raw  
materials

Sustainable  
biobased solutions

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### MANUFACTURING IN ACCORDANCE WITH CIRCULAR ECONOMY

Ecodesign, product  
life cycle design

Re-manufacturing,  
modularity

Sustainable  
material choices

Managing material  
flows in  
the value chain  
& traceability

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### NEW BUSINESS MODELS

Product as a service  
Consumer driven  
solutions

Sharing economy

System level  
solutions

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### INDUSTRIAL SYMBIOSIS

Sidematerial cycles

New business and  
appreciation of  
materials (New  
business and  
increased value of  
the materials)

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### DIGITAL SOLUTIONS

Sharing  
platforms

Circular  
economy  
platforms

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# THEMES OF THE PROGRAM

## PLASTICS

Replacing fossil based materials with biobased materials

Enhancing recyclability of plastic products

Chemical & mechanical recycling

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## TEXTILES

New textile materials

Overall model for textile cycle

Textile rent services

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## PACKAGES

New packaging materials

Recycling solutions for packaging

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## BUILDING SECTOR

Extended life cycle (ecodesign, modularity, modifiability)

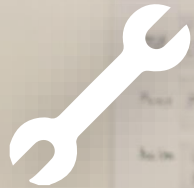
Recycling and logistics of demolition materials

Wood construction

Sharing premises

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# CIRCULAR ECONOMY BUSINESS MODELS



**PRODUCT  
LIFE-EXTENSION**



**PRODUCT  
AS A  
SERVICE**



**SHARING  
PLATFORMS**



**RENEWABILITY**



**RESOURCE  
EFFICIENCY  
& RECYCLING**



Source: Sitra



# PROGRAM SERVICES



## FUNDING

Funding for development of circular solutions and building and performing joint projects.



## NETWORKS

Enabling building circular economy networks and ecosystems, which allow co-creation of products and services.



## IDENTIFY OPPORTUNITIES

Help in identifying and testing b-to-b and b-to-c international market opportunities for circular solutions.



## DEVELOP & RENEW

Sparring for developing capabilities e.g. utilizing circular economy business models and developing marketing skills.



## GO GLOBAL

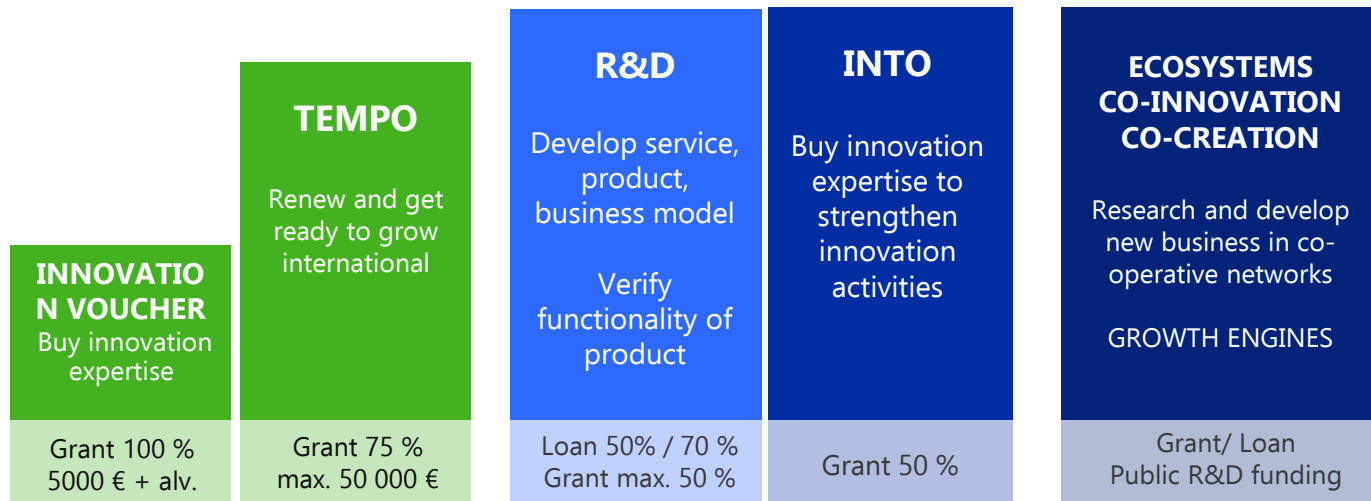
Business Finland global network helps you in entering new markets. Here we offer e.g. funding, export trips, delegations and finding partners.



## SCALE YOUR BUSINESS



# FUNDING SERVICES IN BRIEF



**THE AMOUNT OF FUNDING DEPENDS ON THE NEEDS & RESOURCES OF COMPANY**

**R&D AND ECOSYSTEM FUNDING POSSIBLE ALSO FOR LARGE COMPANIES**

**RESEARCH, PILOT AND GO GLOBAL RESEARCH, DEVELOP, RENEW AND GROW**

**NETWORKS**

# PROGRAM HAS HAD A QUICK START

## 1. PROJECTS FUNDED OVER 48 MILLION EUROS

- Check funded projects [here](#)
- Examples:
  - GRIFFIN REFINERIES - [Plastic Waste Refining Ecosystem](#)
  - UPM – [Wood-to-biomedical - platform for building a new Finnish ecosystem](#)
  - CARBO – Carbon neutral milk chain
  - FORTUM - [FORBEST](#)

## 2. EXPORT ACTIVITIES UNDER PREPARATION 2019

- Mining (in co-operation with new mining association)
- Waste to Value (Europe) with Smart Energy program
- Wood from Finland (China, India as an option)
- Plastics & Packages (GILT, Pia)
- Innovative bio & circular solutions (GILT)





A paved road with a dashed white line down the center, flanked by green grass and trees, with a large white arrow pointing forward.

# **CASE EXAMPLES:**

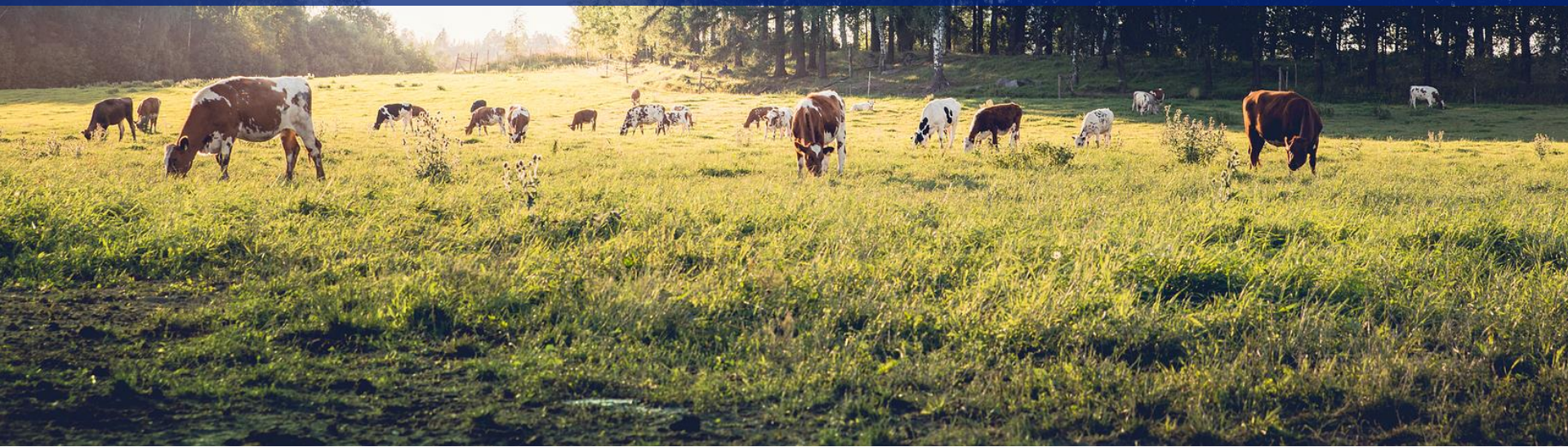


## **Fortum ForBest – More Environmentally Friendly Textiles from Wood**

Fortum is developing high-value products from agro residues and woody biomass to replace the use of fossil and other environmentally taxing raw materials.

## CARBO – Towards Carbon Neutral Milk Chain

Valio's vision is to develop a carbon neutral milk chain based on the Finnish grasslands. This CARBO project and the ecosystem that is created aims at radical reduction of greenhouse gas emissions in milk production chain by utilizing different technologies as well as development of long-term carbon sinks in grasslands.



# **WHO TO CONTACT**



# CONTACT US

If you have a bio and circular economy business solution or product idea, don't hesitate to contact us:



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**PROGRAM HAS HAD  
A QUICK START AND YOU CAN CONTINUOUSLY JOIN  
WITH OUR ACTIVITIES**

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**BUSINESS  
FINLAND**

# **SAVING THE WORLD IS HIGH-VALUE BUSINESS**

Finland leads the way towards  
Circular Economy



**Thank You**