

The background image shows two women riding yellow bicycles on a cobblestone path. They are positioned on the left side of the frame, moving towards the right. The woman on the left is wearing sunglasses and a patterned jacket, while the woman on the right is wearing a dark jacket. They are riding past a harbor where several sailboats are docked. The sun is setting on the right side of the image, creating a warm, golden glow over the water and the sky. The text is overlaid on the image in white, bold, sans-serif font.

BIO AND CIRCULAR FINLAND PROGRAM 2019 - 2022

**‘SAVING THE WORLD WITH BIO AND CIRCULAR SOLUTIONS IS HIGH
VALUE BUSINESS FOR FINLAND’**

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Business Finland



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

FINLAND - THE SUPER-POWER IN SMART & SUSTAINABLE SOLUTIONS

SOLUTIONS

The circular economy provides opportunities for Finland's traditional key industries, but also offers vast unexplored potential for entirely new business.

- Efficient cycles of scarce resources
- Bio-based , recyclable and ecological materials
- From fossil to renewable energy resources
- Nutrient and water cycles
- Towards zero-waste
- Services replacing ownership
- Circular design enabling long life of products and effective material cycles

#1

Finland ranked
the leading
contributor to
humanity

BIO & CIRCULAR ECONOMY SHARE OF BUSINESS FINLAND OBJECTIVES BY 2025

1

Double the R&D investments and exports of SMEs especially in new bio & circular economy and food solutions.

2

Strengthen and renew world class bioeconomy business ecosystems and create new ecosystems and competence in material intensive circular economy and food areas. Business target of 5 billion euros increase.

3

Become the most attractive destination for foreign direct investments in Nordics in forest-based circular bioeconomy.

4

Become the most desired travel destination in Nordics based on genuine relaxing clean green, blue and white nature and urban areas. New value creation boosts virtual and real life consumer experiences.

REDUCE AND REFUSE, RECYCLE AND REPLACE

– PLASTICS ROADMAP FOR FINLAND

- The roadmap is the first step towards a new, sustainable plastic economy
- The first one of its kind — a trendsetter for other countries
- Enormous global business opportunities for companies that offer:
- Advanced recycling solutions for plastic
- Ways to replace oil-based plastics by sustainable bio-based products and biodegradable materials



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.



BIO AND CIRCULAR FINLAND PROGRAM

– FOCUS AREAS

BIOBASED SOLUTIONS

New materials
& products

Replacing fossil raw
materials

Sustainable biobased
solutions

MANUFACTURING IN ACCORDANCE WITH CIRCULAR ECONOMY

Ecodesign, product life
cycle design

Re-manufacturing,
modularity

Sustainable
material choices

Managing materialflows
in
the value chain
& traceability

NEW BUSINESS MODELS

Product as a service
Consumer driven
solutions

Sharing economy

System level solutions

INDUSTRIAL SYMBIOSIS

Sidematerial cycles

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

DIGITAL SOLUTIONS

Sharing platforms

Circular economy
platforms

THEMES OF THE PROGRAM

PLASTICS

Chemical &
mechanical recycling

Replacing plastics
with biopased
materials

TEXTILES

New textile
materials

Overall model for
textile cycle

Textile rent
services

PACKAGES

New packaging
materials

Recycling solutions
for packaging

BUILDING SECTOR

Extended life cycle
(ecodesign, modularity
modifiability)

Recycling and logistics
of demolition materials

Wood construction

Sharing premises



CASE EXAMPLES:



BUSINESS
FINLAND



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.



WOODBASED FIBRES ARE CHALLENGING PLASTIC



Breakthrough in nutrient recycling ecosystem

Goal:

To accomplish the breakthrough in nutrient recycling and to create new Finnish business for international markets

Business spearheads:

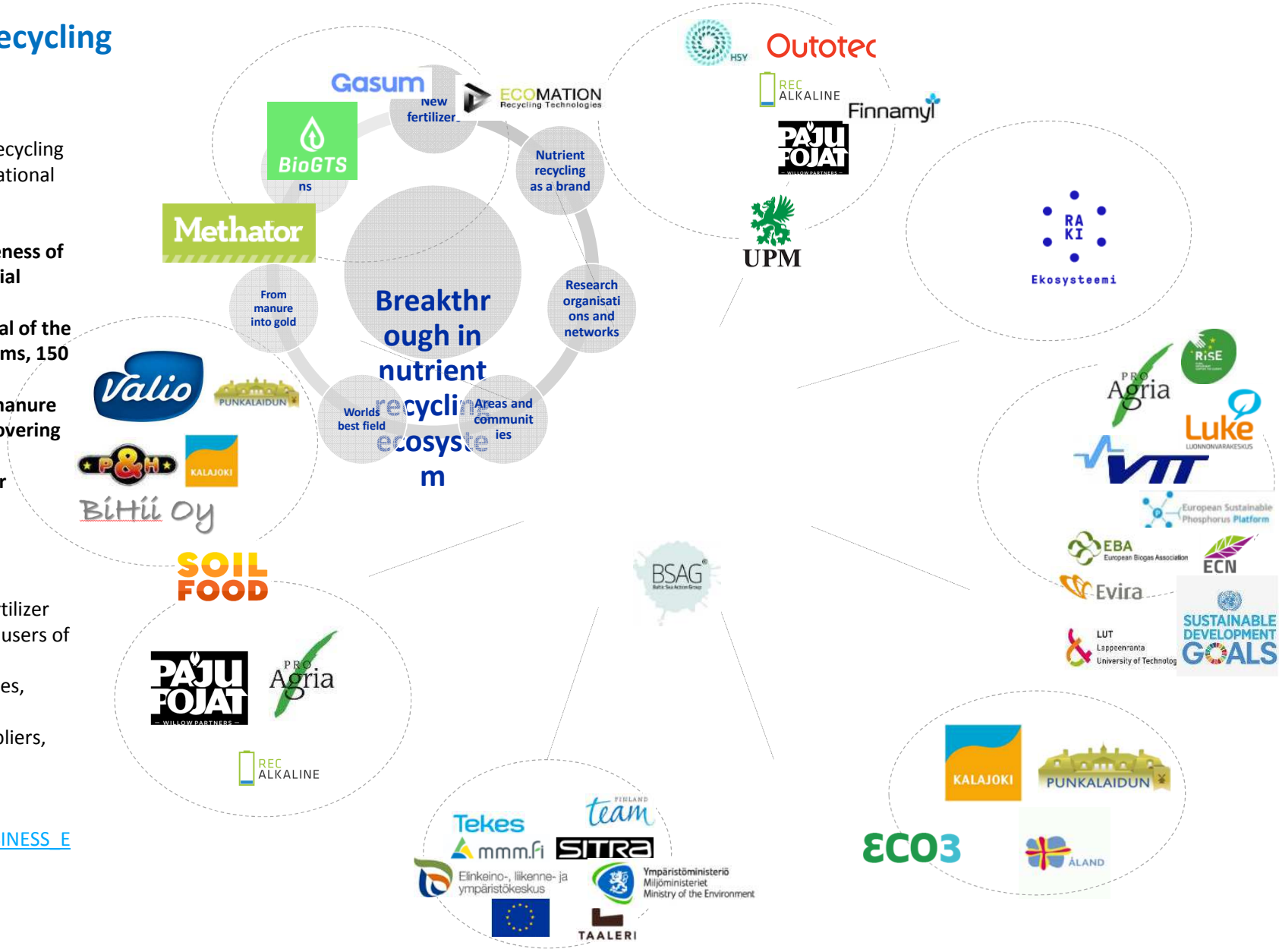
1. Worlds best field: **improving productiveness of the soil, carbon storage, market potential globally 1 mrd. €**
2. From manure into gold: **Market potential of the optimal use of manures nutrients in farms, 150 milj. €**
3. Biogas innovations: **Decomposition of manure and other nutritive substances and recovering nutrients, market potential 17 TWh**
4. Future fertilizers: **New recycled fertilizer industry, market potential 15-50 milj. €**
5. To make recycling of nutrients a brand.

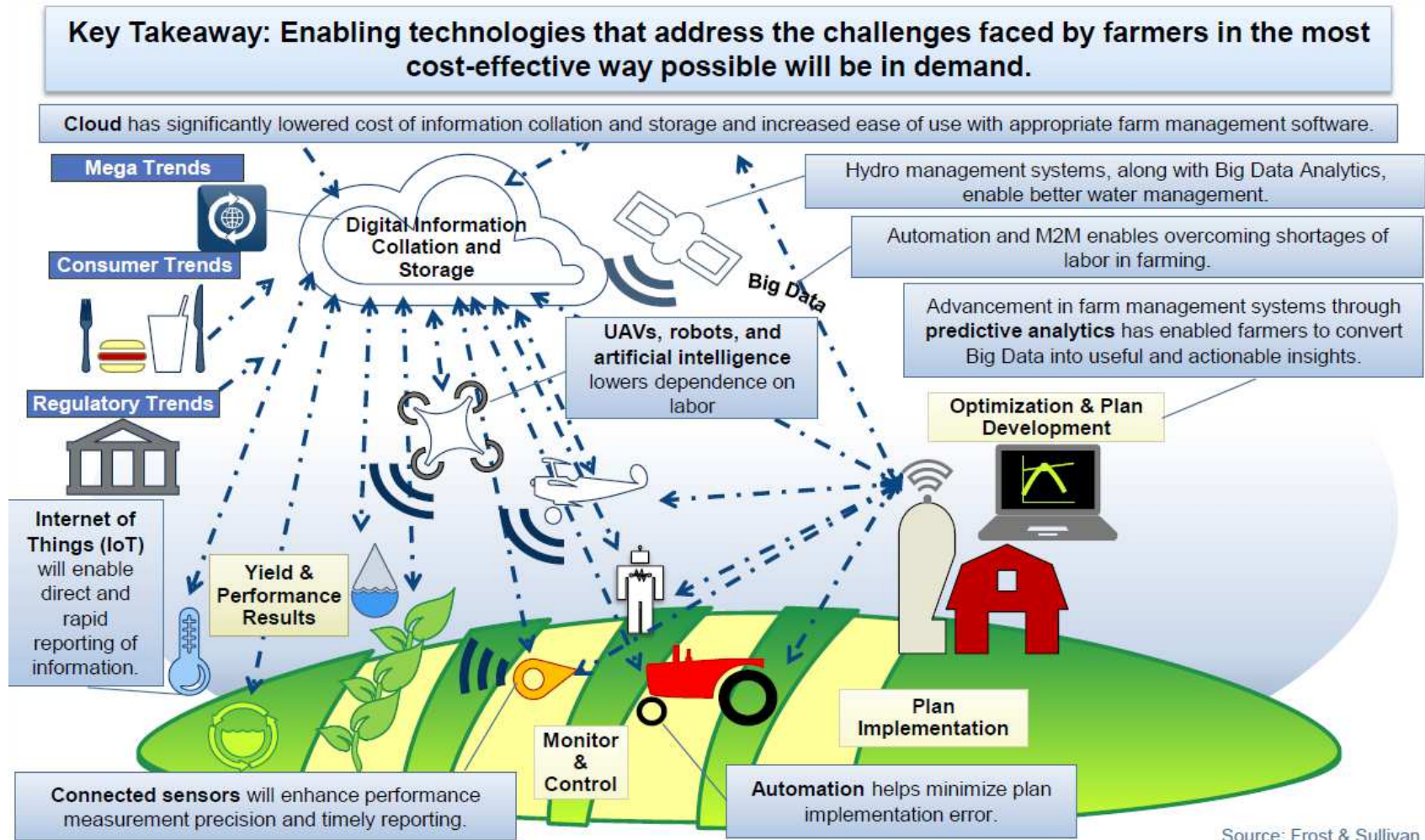
Ecosystem accompanies:

- Biogas technology providers, recycled fertilizer producers, soil improvement actors, end users of nutrition products
- SME's, large scale companies, communities, research organisations
- Raw material producers, technology suppliers, end users

More information:

http://www.bsag.fi/NUTRIENT_CYCLING_BUSINESS_ECOSYSTEM_FI.html





Source: Frost & Sullivan

National and Global Need & Scalability

Intelligent Sea

Connectivity and communication infrastructures needed for e.g. remote operations

Sea Infrastructures

Circular harbors with smooth automated logistics and vessel control

Sustainable ships, cleaner fuels, hybrids and circular waste processes

Renewable smart energy production sites

Modern closed loop fishfarming

Tested solutions and consortiums ready to scale up.

Data is turned into information and utilized for improving maritime governance and policy.

Saving our seas is high value business for Europe

Visions for Sustainable Baltic and Mediterranean Seas and commitments to develop forerunning & coherent marine governance in shore states to compose a foundation for the mission.

Baltic and Mediterranean Seas become lead markets for sustainable modern maritime economy.
Commitment to fulfill the vision by adopting forerunning legislation and innovative sustainable solutions.

Crossborder pilots and demonstrations are set up. They produce data and platforms for new business ecosystems.

The global blue economy, grows twice the rate of the mainstream economy by 2030

Task is to match cutting edge companies with public and private investors

People & Sea & Nature

Adoption of ecological compensation methods

Removing micro pollutants from wastewater

Plastics and phosphorous recovery

Water purification and nutrient circulation

Circular and digital farming to reduce nutrients to sea

Clean seas and shores for people and business

Tourism and recreation

Virtual and mixed reality in tourism

THANK YOU – WE ARE HERE TO HELP

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



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