



TREASoURcE

Local circular economy solutions to global challenges - Exclusive look at the first results from TREASoURcE demos

Welcome to the webinar!

Before we start, please make sure



Your speakers are turned on



Keep your mic muted if you are not speaking



To ask questions, use the Teams chat at any time or raise your hand virtually during the Q&A



Please note that the webinar will be recorded



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Session agenda

Biobased side streams

- | | |
|---------------|--|
| 14:00 – 14:05 | Session opening
<i>Jelizaveta Krenjova-Cepilova, TalTech</i> |
| 14:05 – 14:35 | Circular business models in Pirkanmaa region
<i>Jaana Koivisto, Ekokumppanit</i> |
| 14:35 – 15:05 | Promoting the use of biobased side streams: stakeholder engagement activities overview
<i>Jan Bakke, Østfold & Jaana Koivisto, Ekokumppanit</i> |
| 15:05 – 15:20 | Promoting the use of biobased side streams: policy recommendation overview
<i>Nora Berglund, MTK</i> |
| 15:20 – 15:35 | Supporting the replication of the systemic CE solutions for biobased side streams: TREASoURcE Replication Handbook and KiertoaSuomesta.fi marketplace
<i>Kaisa Sibelius, Forum Virium Helsinki & Nora Berglund, MTK</i> |
| 15:35 – 16:00 | Q&A session |



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Speakers



Jelizaveta Krenjova-Cepilova
Research Fellow
TalTech
Session host



Jaana Koivisto
Project Manager
Ekokumppanit



Jan Bakke
Project Manager
Østfold



Nora Berglund
Project Specialist
MTK



Kaisa Sibelius
Project Manager
Forum Virium Helsinki



TREASoURcE

The treasure in resources



Start
01.06.2022

Duration
4 years

Total budget
9,9 M€

Consortium
16 partners + 1 AE
Coordinator VTT

CCRI project

TREASoURcE aims to initiate systemic change by developing technologies and systemic circular economy (CE) solutions in cities and regions for currently underutilized or unused plastic waste, end-of-life electric vehicle batteries and bio-based side and waste streams.

Implementing these solutions together with companies, societies (including citizens, consumers, communities and regional actors) and experts in the field is expected to significantly increase product and material circulation in the Nordic and Baltic Sea Regions.

Project objectives



Systemic Circular Economy Solutions

Key Value Chain Demonstrations



Circular plastics



Circular batteries



Circular biobased side and waste streams



Stakeholder Engagement Demonstrations

Local and regional economies and actors have a big role in **TREASoURcE**. The implemented demonstrations will formulate new value chains and business opportunities reaching through the urban-rural settings. The combination of the cities and regions will enable large reach and bigger impact and boost the replicability and scalability potential of the developed solutions.

Demonstration areas

Finland, Norway, Sweden, Denmark

Replication areas

Estonia, Latvia, Lithuania, Poland, Northern Germany



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Circular business models in Pirkanmaa region

Jaana Koivisto, Ekokumppanit



KVC-DEMOS: Circular biobased side and waste streams for biogas and fertilizers

Objectives

- To find ways of use and business opportunities for currently unused biobased side and waste streams. In particular, we focus on side streams of agriculture and forestry
 - Focus on biogas production and nutrient recycling
- **Powering local economies through circular bioeconomy**

Main activities

- The project develops a digital marketplace for biobased side and waste streams.
 - [KiertoaSuomesta.fi](https://kiertoasuomesta.fi), CircularFinland.fi
 - Piloting will be done in Finland and the model will be replicated in other regions
- Rural-urban symbiosis model will be developed to strengthen local circularities





Circular bioeconomy

- In circular bioeconomy biowaste or other biobased side streams are reused for example as energy or by recycling their nutrients.
- TREASoURcE project focuses in particular on biobased side streams from **agriculture and forestry**.
- The value of all side streams is not yet fully understood and, especially in agriculture significant quantities of biobased side streams are not fully exploited.





Examples of biobased side streams

A Biobased side stream refers to all biomass that is not utilized in the main production of a farm (KiertoaSuomesta.fi)

Agricultural side streams	Forestry side streams
Manure	Logging waste
Sludge	Stumps of trees
Urea	Energy wood
Contaminated feed	Wood chips
Grassland	Sawdust
Straw	Wood bark
Wetland vegetation	Fiber sludge
Weeds, other unused vegetation	Black lye
Lake reeds, dredging spoil	Ash
Garden and vegetable waste	



Examples of users of side streams

- **Biogas plants**
- Biochar production
- **Recycled fertilizer manufacturers**
- Biorefineries
- Cosmetics industry, natural products
- Alcohol industry
- Pharmaceutical industry
- Chemical industry
- Other farms



Local circular bioeconomy

The local perspective is important because transporting most biomasses over long distances to a biogas plant is neither economically nor ecologically sustainable.

Distances for profitable transport:

- Manure (sludge) < 10 km
- Manure (dry) < 20 km
- Grass feed < 25 km
- Fats < 60 km

(Manu Hollmén/ProAgria)



Biogas and circular fertilizers



- Biogas is formed when micro-organisms decompose organic matter under oxygen-free conditions.
- Biogas usually contains 40-70% methane and about 30-60% carbon dioxide.
- Biogas is a valuable, renewable biofuel and energy source.
- In addition to biogas, the digestion process produces a digestate containing nutrients and organic matter suitable for fertilizer use.
- Biogas can be used (for example)
 - Transport fuel (requires a refinery unit)
 - Heat and power generation



Growing demand for biomethane across the EU

- Between 2035 and 2040, domestic biomethane and e-methane production volumes could be sufficient to meet domestic demand, and there would also be enough renewable gas for export. There will be demand for biomethane in the EU. In the future, a significant proportion of gas is expected to be transported as liquefied gas, but the EU's integrated gas network will also create new opportunities for Finnish operators.
- Finland has a large variety of biomasses that could be used sustainably in biogas production. The potential for biogas production is estimated at more than 20 terawatt-hours, but the techno-economic potential with current technology is just over 10 terawatt-hours. In addition, the production of synthetic renewable methane can also make use of the biogenic carbon dioxide recovered from biomethane processing. In 2022, biogas production was 1 TWh, of which biomethane accounted for 22%.

Press release, Suomen Biokierto ja Biokaasu (Finnish Biocirculation and Biogas) Published: 10.05.2024



Examples of biomasses for biogas production

Biogas can be produced by digesting almost all organic waste:

- Biowaste from households
- Sewage sludge
- Manure
- Industrial side streams (e.g. food industry)
- Crop side streams

In Finland, statistical data on biomass can be found in the Biomass Atlas (Luke).

TREASoURcE project has carried out more detailed biomass inventories for municipalities in Pirkanmaa. We have primarily mapped manure, as their biogas process produces digestate, which is an excellent organic fertilizer.





Recycled fertilizers

- As fossil raw materials become scarcer and the price of fertilizers more expensive, there is a great need for recycled fertilizers.
- The raw materials used in the production of recycled fertilisers include municipal sewage sludge and biowaste from, for example, food industry side streams.
- The biogas process produces digestate residue, which can be used to produce recycled fertilisers.
- In Finland, legislation defines quality and safety requirements for fertilizer products. Waste materials must be hygienised or treated in other ways to ensure the safety of fertilizers. (Finnish Food Authority).
- Recycled fertilizers are not just substitutes for fertilizers made from fossil raw materials, but can also improve the condition of the soil.



Pirkanmaa region in Finland, the primary demonstration area



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- There are 19 regions in Finland.
- Pirkanmaa (Tampere) Region has the second largest population in Finland (532 671 inhabitants in 31.12.2022).
- More than 9% of the Finnish population is living in the Tampere region.
- The area covers about 4% of the Finland's land area.
- Pirkanmaa has 23 municipalities, the smallest (Juupajoki) with just under 1 800 inhabitants and the largest (Tampere) with over 250 000 inhabitants.
- Replication of the local business models in Estonia

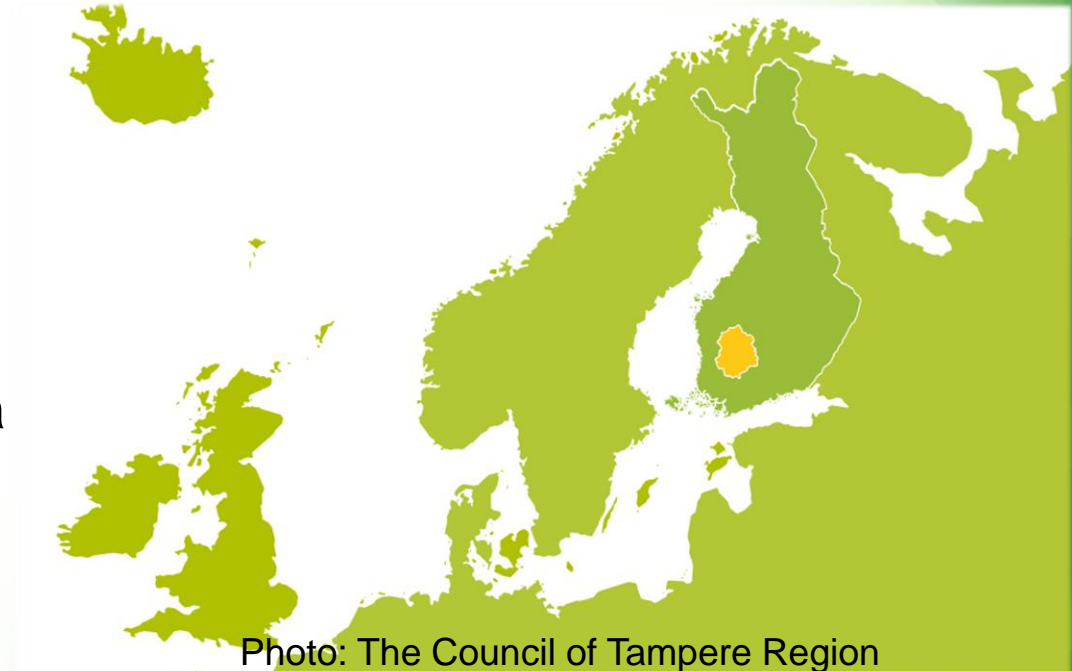
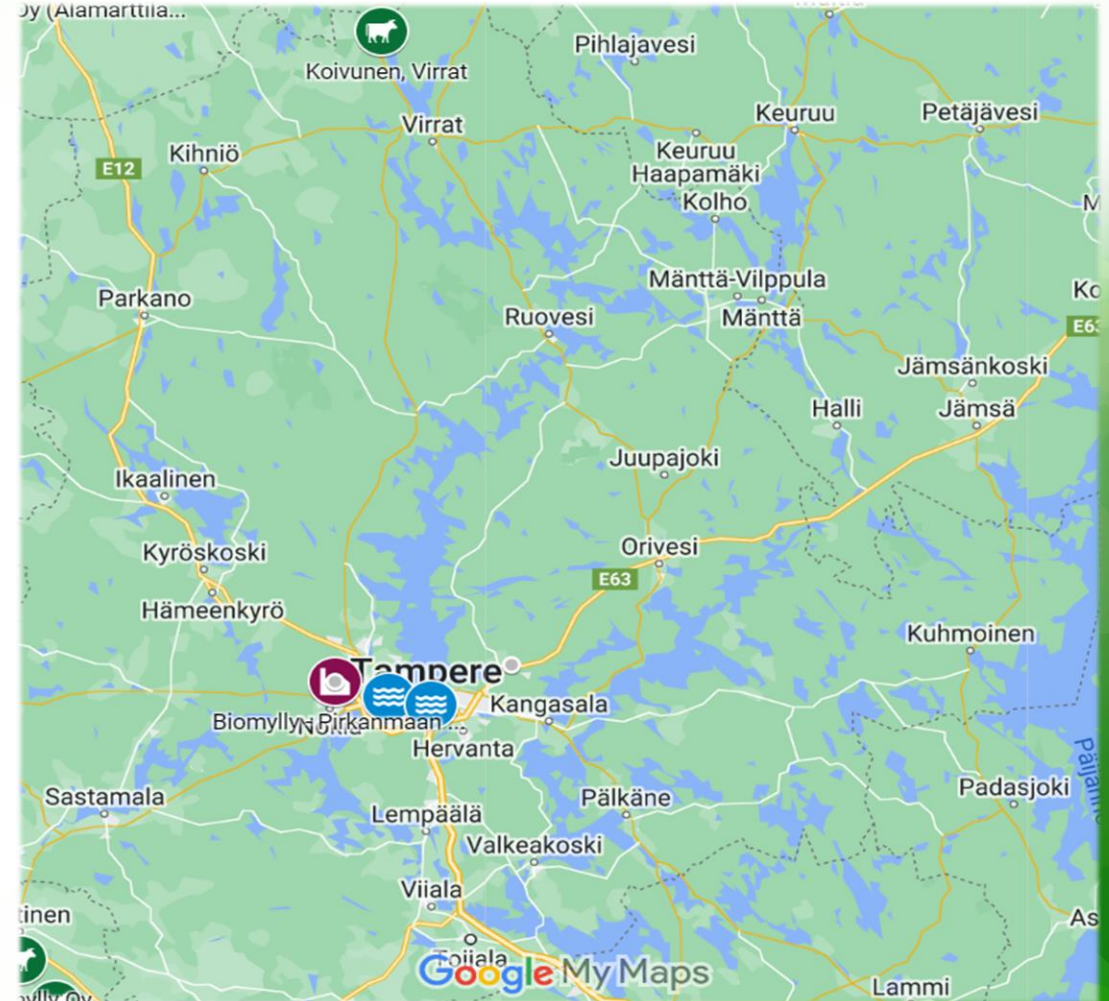


Photo: The Council of Tampere Region



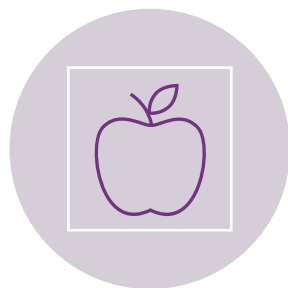
Biogas plants in Pirkanmaa region

- The Finnish Biocycle and Biogas Association maintains a map of Finnish biogas plants
- <https://biokierto.fi/>
- In Pirkanmaa:
 - Pirkanmaan Jätehuolto Oy's (waste management company) Biomyllä processes, among other things, collected biowaste
 - Sludge digesters at two wastewater treatment plants in Tampere
 - One farm-scale biogas plant
 - Landfill gas collection





Working with the municipalities



TREASoURcE project has promoted local bioeconomy models, biogas construction and recycled fertilizer production in cooperation with municipalities in Pirkanmaa.



Municipalities are important stakeholders as their role is to promote local vitality.



Collaborative models require someone to take the lead. Municipalities are public utility actors for whom this is inherent.



By promoting circular bioeconomy and biogas plant construction in their area, municipalities can reduce their carbon footprint.

Powering local economies through circular bioeconomy



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May 2024

BIOMASSES

Potential agricultural, forestry and urban side and waste streams are mapped

STAKEHOLDERS

Different actors producing side streams are identified and value chain forming is demonstrated

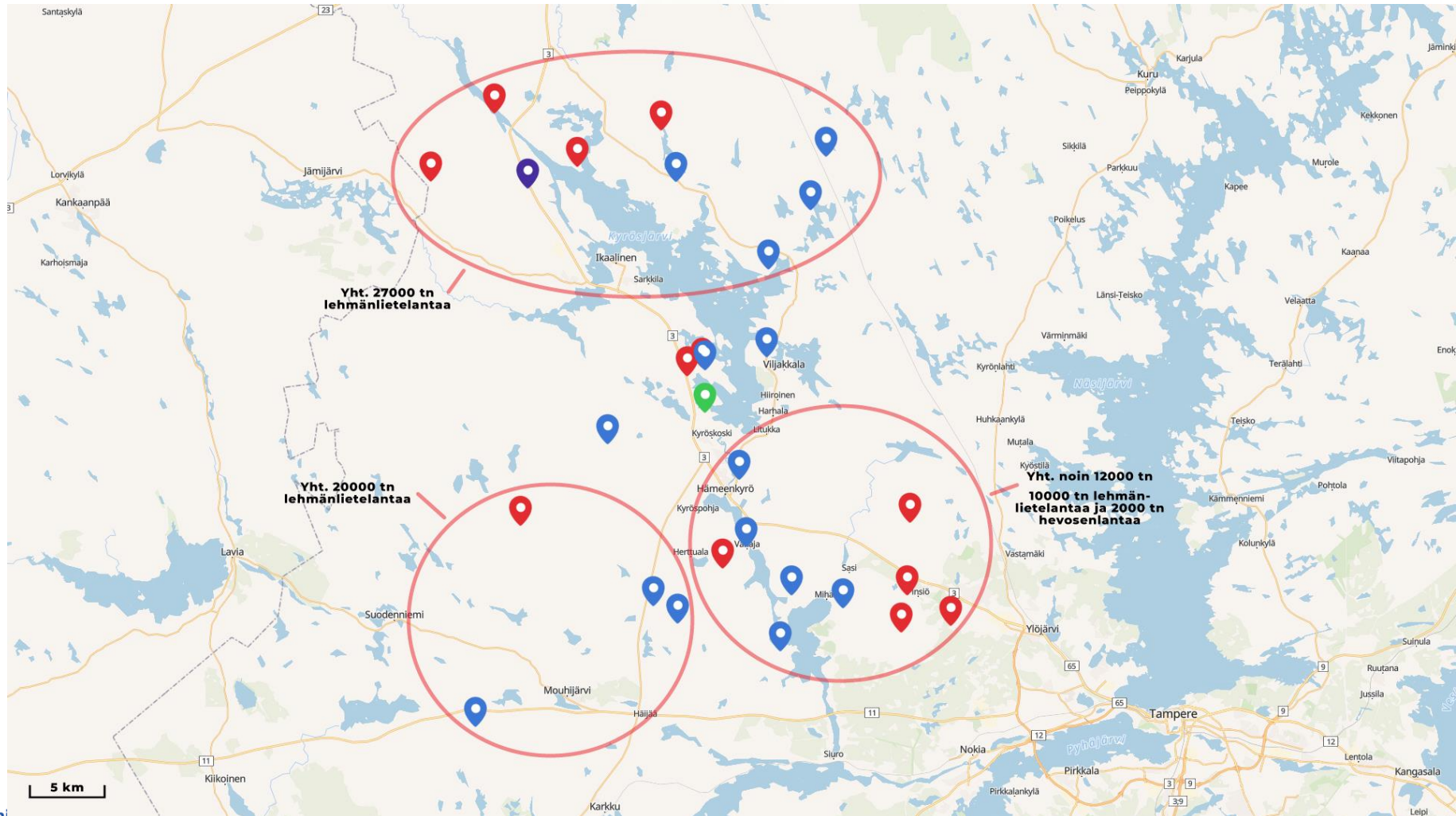
BUSINESS MODELS

New kind of cooperative models will be exploited such as biogas cooperatives. Review of the best collaboration models for farmers, municipalities and businesses.



Local biomass mapping in Pirkanmaa

(Anne Kärkkäinen, Ekokumppanit)





Stakeholders

- Municipalities
- Farmers interested in providing side streams but also those interested in recycled fertilizers
- Industry, especially the food industry
- Logistics operators
- Biogas plant construction companies
- Biogas use and potential buyers





Business models

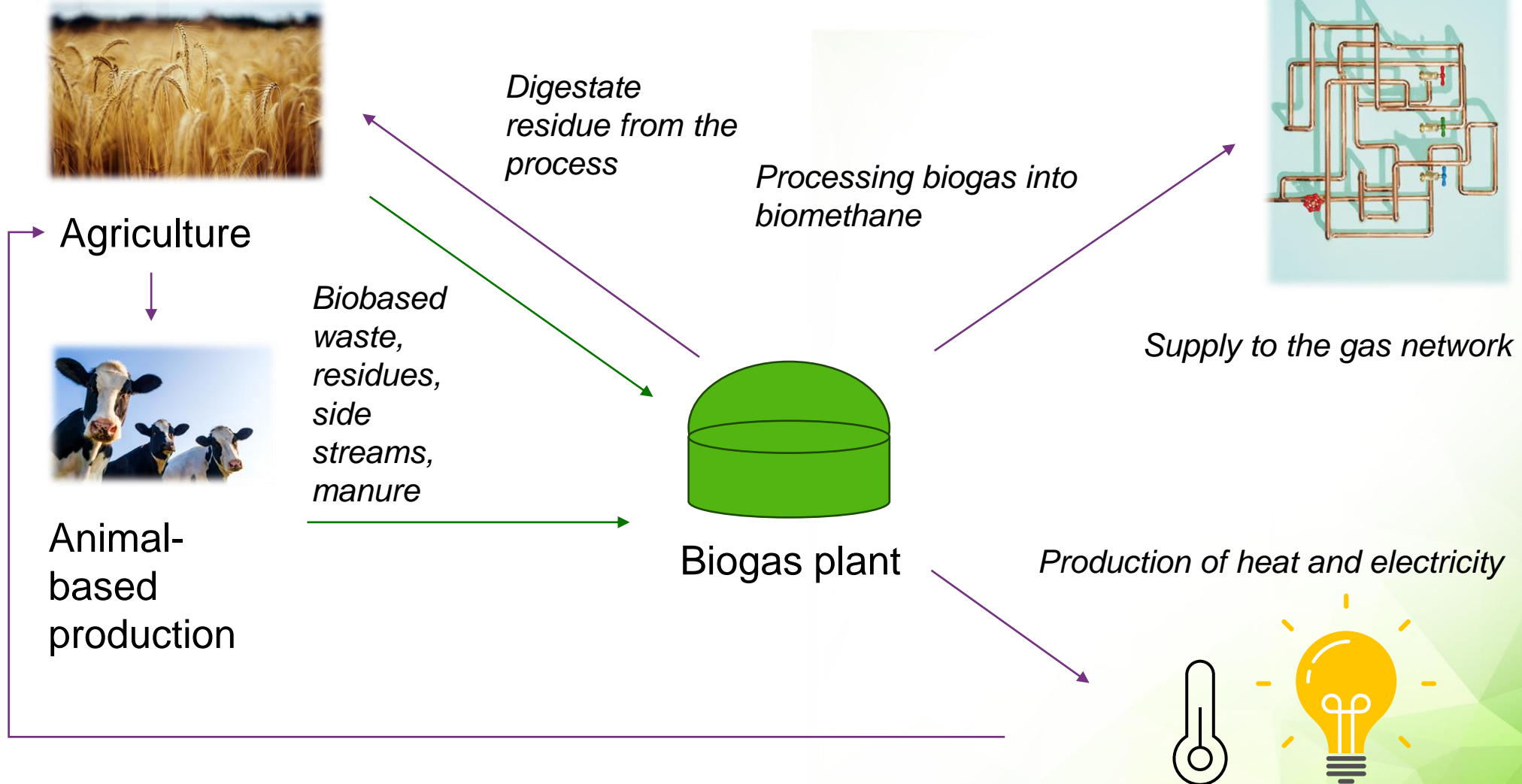
- New kind of cooperative models will be exploited such as biogas cooperatives
- Profitability calculations
- Biogas markets, sales channels
- Review of the best collaboration models for farmers, municipalities and businesses



Local Bioeconomy Model



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Example for local business model

Farmers set up a joint venture to build and manage the biogas plant.



Farmers feed side streams into the biogas process.
In return, they receive biogas and the digestate from the biogas process.



The biogas is also processed for sale and the revenue is used to cover the investment and operating costs of the biogas plant.

Some farmers may not want to be shareholders of the joint venture.



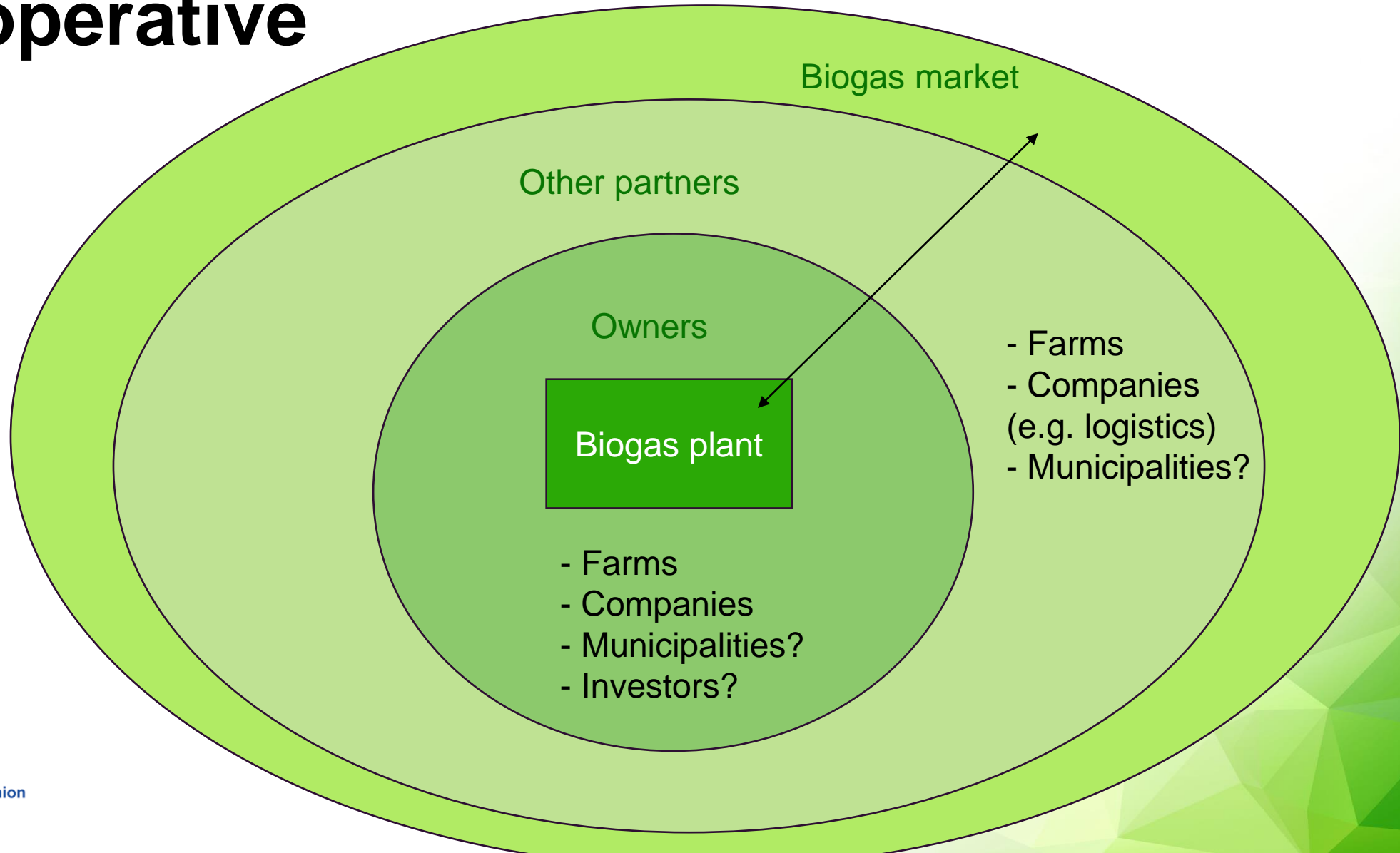
Many biogas plants have a gate fee that the manure donor pays to the biogas plant.

Cooperatives can also manage local food shops selling food grown with the biogas plant's fertilizers.

Biogas cooperative



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Benefits for farmers

- Not all agricultural side streams are currently used. This approach allows farmers to recycle these side streams.
- Fertilizer prices have reached very high levels. The digestate from the biogas process is a cheaper and more ecological fertilizer.
- Biogas digestate produced from agricultural side streams is an organic fertilizer.
- Farms can use biogas to produce heat and energy for their own use.
- Farms can get income from the sale of refined biogas.





Benefits for municipalities

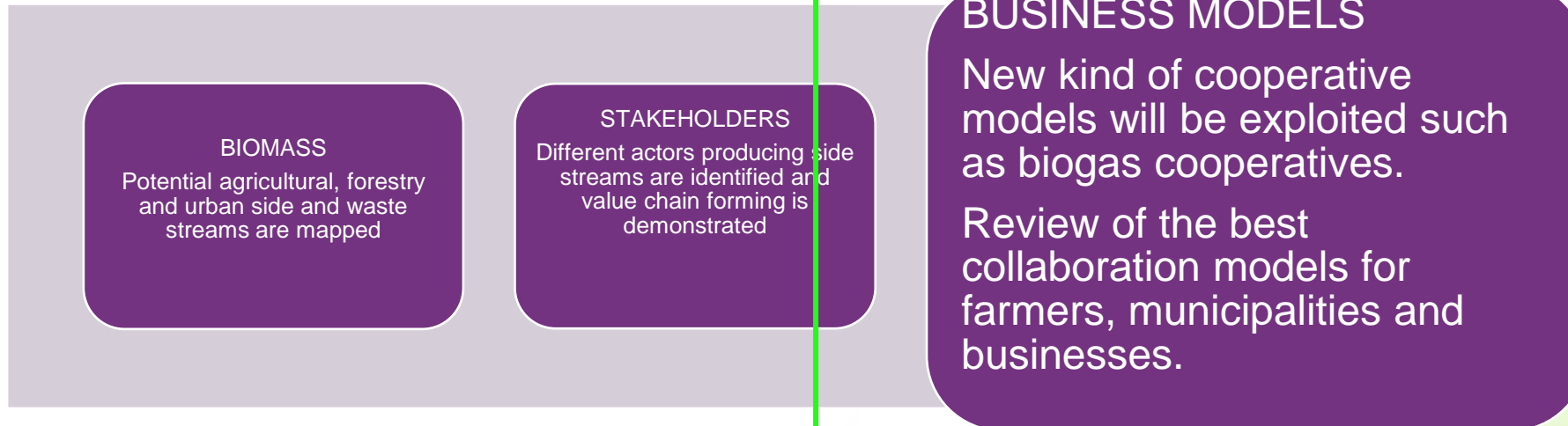
- The biogas plant will provide renewable energy.
- Municipalities can themselves use the renewable energy produced in a biogas plant (e.g., using biogas cars).
- Local bioeconomy model brings new opportunities for local businesses.
- Municipalities gain image benefits by promoting the use of renewable energy in their area.

Powering local economies through circular bioeconomy – Next steps



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May 2024





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Thank you!



Promoting the use of biobased side streams: stakeholder engagement activities overview

Jan Bakke, Østfold

Jaana Koivisto, Ekokumppanit

Stakeholder engagement



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- **Engage stakeholders with aim to facilitate CE collaboration, innovation and solutions**
 - Businesses, decision makers, consumers, local communities, procurers and event organizers
- **Method: 5 parallel stakeholder engagement demonstrations**
 - Workshops, digital CE solutions, hackathons, fixing workshops, seminars, procurement recipes, cultural- and sports events





Objectives

- Learn from stakeholders and understand their perspectives, perceptions and positions in the CE transition
- Strengthen the decisionmakers capability of enabling CE
- Build knowledge and stakeholder capacity to ensure they understand the benefits of CE and can participate in implementing CE on different stakeholder levels



Public – private collaboration for new recycling practices at events



CE-practices in events

TOUR OF SCANDINAVIA
-BATTLE OF THE NORTH-



UCI  **WOMEN'S WORLDTOUR**

CE-practices related to zero-waste and climate friendly concepts





Recycling trailer for handling waste at mobile events

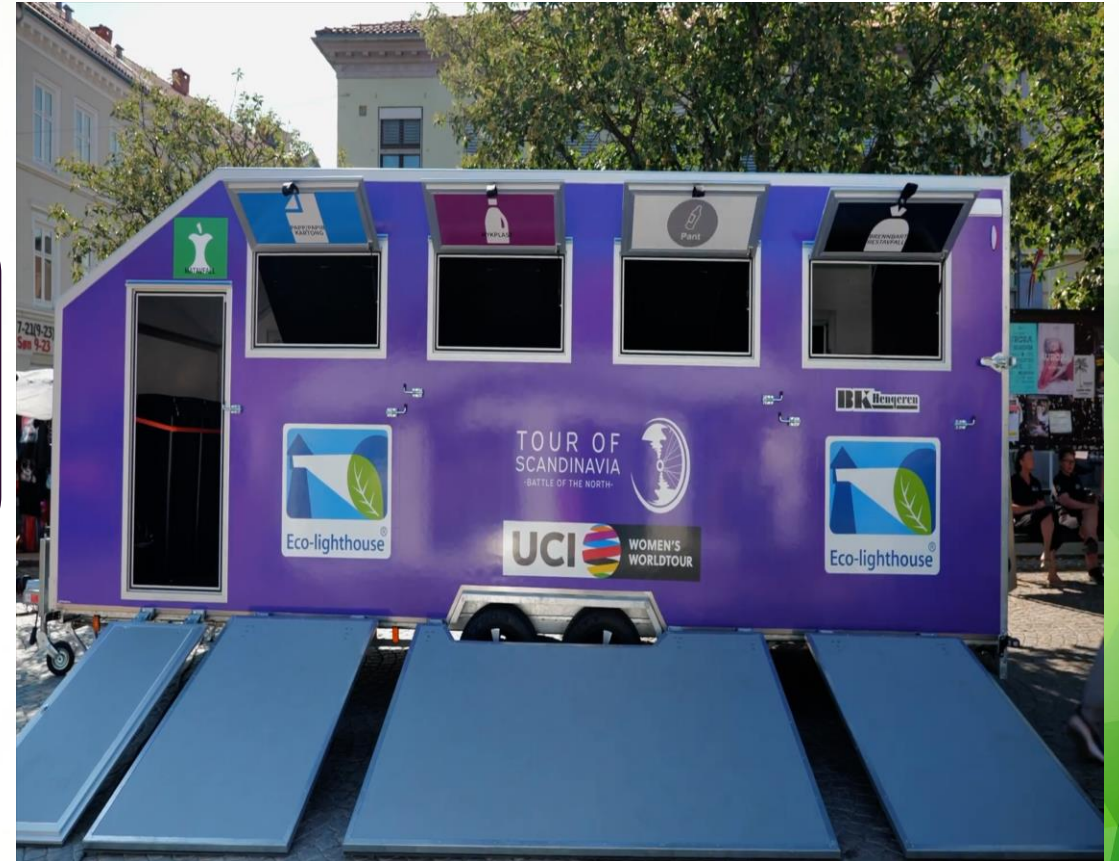
Eco lighthouse - certification

Tour of Scandinavia – event organizer



County of Viken - event funder

BK– Trailer, local business





Demonstrated results

- ❖ Recycling trailer demonstrated and used at events in connection with the Tour of Scandinavia
- ❖ Rented to 8 other events
- ❖ Recycling fun - show on recycling directed towards children and general audience demonstrated in connection with three events for the race





Effects of the recycling trailer

New **expectations** & standards for practices at events

Increases amount of **recycled food waste**



Local job creation & business models

Educational program for schools in process





Example of stakeholder engagement in Pirkanmaa region

Objective: to promote the local circular bioeconomy, in particular the production of biogas and recycled fertilizers

Biobased side & waste stream ecosystem



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Mapping of stakeholders





The role of municipalities

- We found that when it comes to developing local bioeconomy models, municipalities have a key role to play.
- Municipalities are public utilities with an interest in developing local vitality.

Municipalities and cities recognize their own strengths and work successfully together with their citizens and partners in a changing environment. The municipalities of the future will be vibrant, carbon-neutral, crisis-resilient, international and linguistically sustainable (Association of Finnish municipalities: Action Plan 2024).

- In Finland, municipalities are also responsible for land use and planning



Mapping of
the relevant
stakeholders



Tour of
municipalities
in the region



Cooperation
with the
municipalities

Closer cooperation with four municipalities



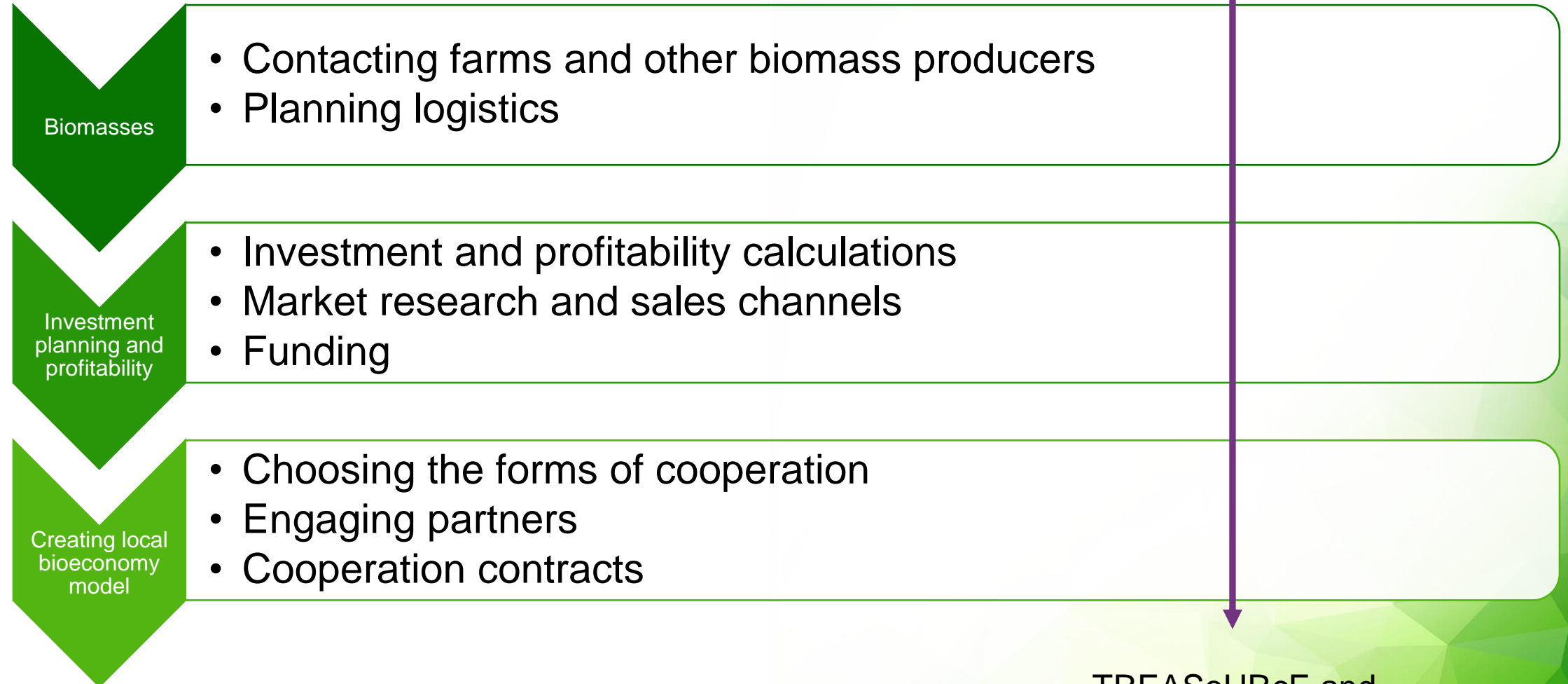
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- After the Pirkanmaa municipalities tour, deeper cooperation on biogas studies was started with four municipalities
- Mänttä-Vilppula, Orivesi, Hämeenkyrö and Urjala
- These are all small municipalities (approx. 4,000-10,000 inhabitants), located more than half an hour from the city of Tampere



Main steps of the process



TREASoURcE and municipalities together



Successful cooperation

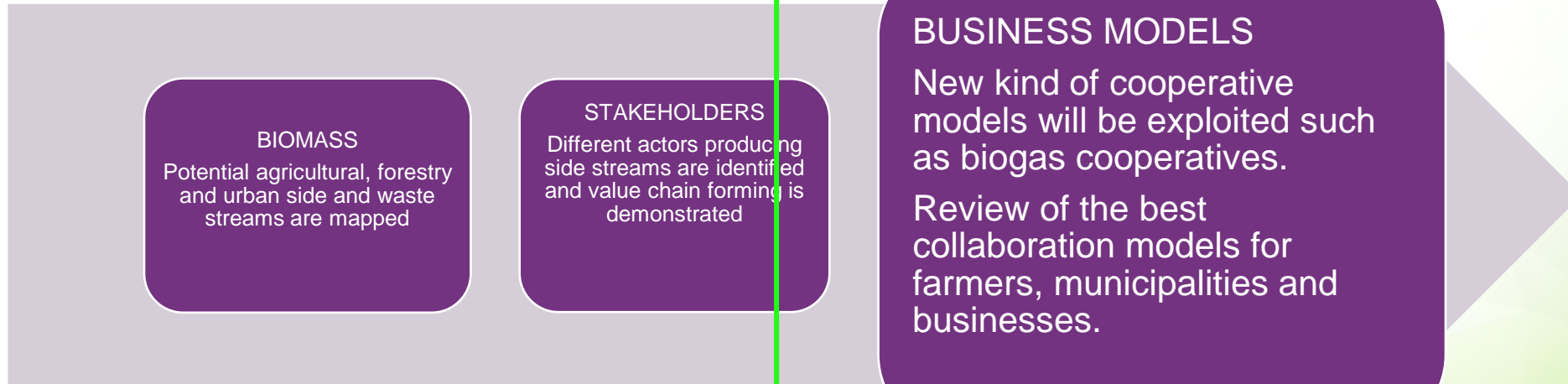
- The municipality is committed to contributing to the achievement of the target
- The municipality has the resources to participate in the studies, as they are the best experts in their area
- Ongoing communication between TREASoURcE and the municipality, with regular progress reports from the project
- Communication and information to citizens is also very important
- The best way to reach the targets is if the municipality already has climate targets in its strategies
- 96 municipalities in Finland are already part of the *Hinku* network (carbon neutral municipalities)
- Biogas construction and recycled fertilizer production contribute to achieving carbon neutrality in municipalities

Powering local economies through circular bioeconomy – Next steps



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May 2024



Biogas in synergy with el – webinar for municipal technical sections

- Example of a stakeholder event in Østfold, Norway

Objective:

provide key lessons and capacity building on how to succeed with transition to biogas and battery-electric vehicles and machinery in municipal technical sections



Biogas and electricity vehicles in municipal technical sections

- ❖ Cleaning and clearing of roads, green areas, sewage and waterworks
- ❖ Vehicle and machinery fleets with considerable emissions
- ❖ Many perceived barriers and uncertainties on the possibility for transition to biogas and electricity
- ❖ Few capacity building activities towards these sections





How to succeed with transition to el and biogas in municipal technical sections

- Present the collective experience from one municipality with extensive knowledge: municipality of Trondheim
- Cover a variety of function
- Lessons on organizational process, adaptations made to succeed, costs, procurement criteria, planning the procurements
- Systemic approaches to learn from?





Key lessons – systemic approach and costs

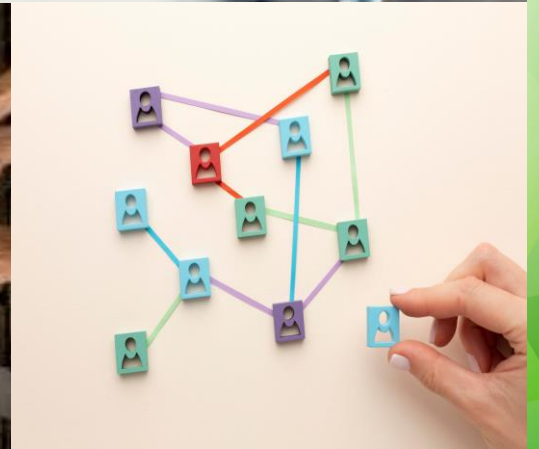
- ❖ Clear routine requiring procurement of vehicles & machinery on electricity, biogas or hydrogen when available and meeting requirements – dispensation possible
- ❖ Political ambitions and policy on the transition
- ❖ Designated funds for transition to renewable solutions that municipal units can apply for
- ❖ On average 15-25 000 Euros (ca 15%) extra investment cost for biogas models compared to models on diesel
- ❖ Investing in battery-electric versions costly in the short run – available municipal extra funding needed



Key lessons on process

Ambition: introduce battery-electric and biogas heavy vehicles as soon as they are available

- **Success criteria:**
Willingness to pilot, try out new solutions and adapt along the way
- Respecting and using the technical employees' know-how to find new solutions, adapt specifications & wait for new models when needed





Key lessons market availability & operational needs

- Biogas trucks mostly available as standard in the same models and types as diesel, machinery less common
- User feedback positive – biogas vehicles easy to use
- Use **market dialogue** to find suppliers of machinery where biogas is not considered a likely option
- Procure biogas vehicles on liquid gas (LGB) for more intensive operational needs





Key lessons - adaptations to succeed with the transition

- ❖ Professional safety assessments to ensure safe operations of vehicles on liquid biogas
- ❖ In early phases of introducing biogas and electric vehicles:
 - Keep **back-up solutions** on diesel or make back-up agreements with subcontractors
- ❖ **Rethink** solutions to specifications
- ❖ Prioritize suppliers with **local service network**





Other results and next steps

- ❖ Transmit results, routines and environmental criteria to guidance material to provide recipes for municipalities
- ❖ Collaboration and validation with national procurement guidance bodies
- ❖ Local meetings between municipal politicians, municipal administration and private transportation companies on facilitating use of biogas vehicles





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Promoting the use of biobased side streams: policy recommendation overview

Nora Berglund, MTK

WP1

CE framework analysis and actions to enhance CE



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Objectives

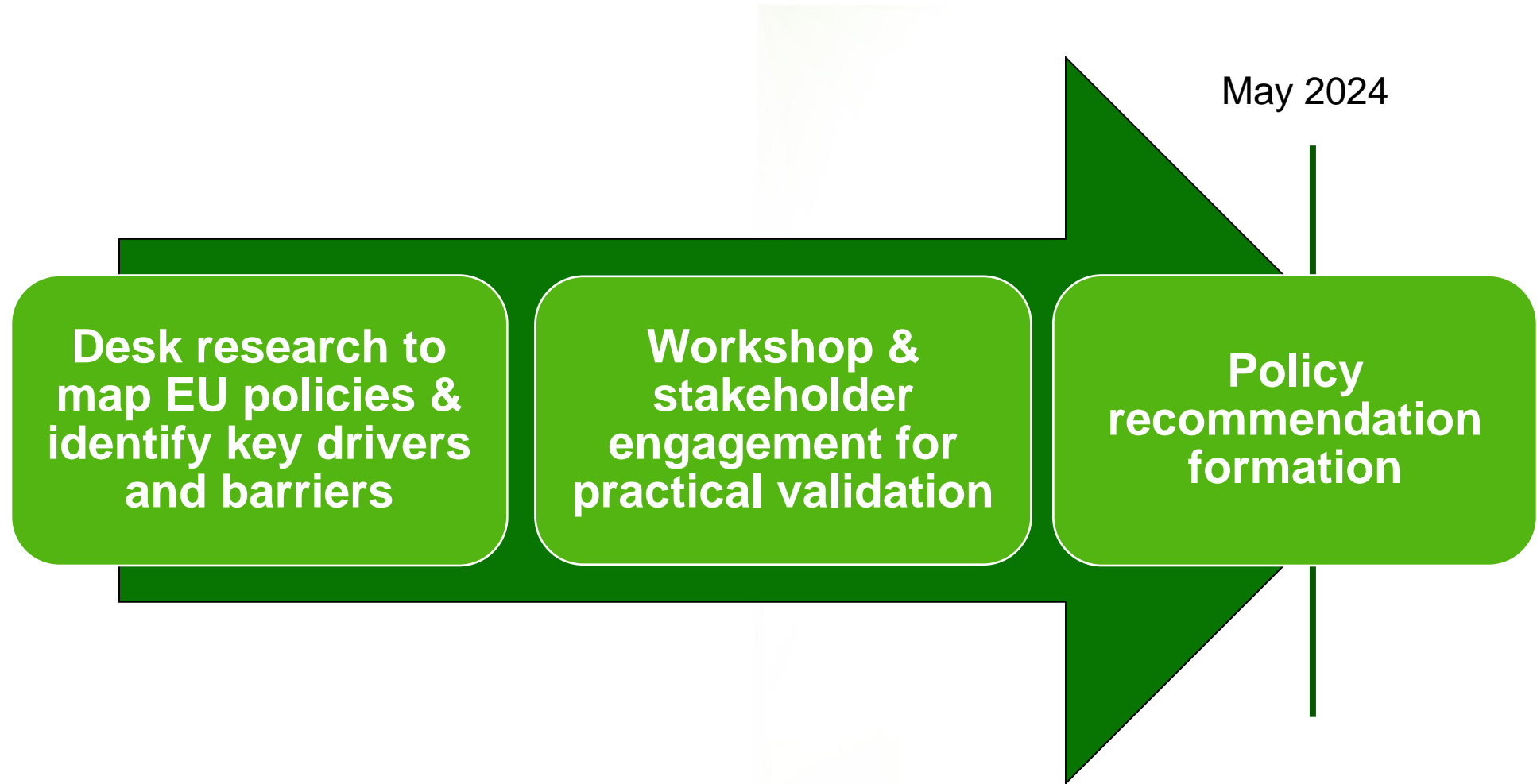
- Provide an assessment of how the key value chains can be optimized in the territorial clusters, from both national and regional perspectives.
- Identify opportunities & barriers for circular strategies in the Key Value Chains (KVCs).
- Map national & regional material flows & relevant value chains to provide a baseline for the demos & replication in WPs 3-6.

Main activities

- T1.1 Analysis of current CE strategies, roadmaps & action plans.
- T1.2 Material flow mapping & value chain & optimization of the key value chains.
- **T1.3 Mapping of regulatory frameworks to identify potential bottlenecks for CE in the KVCs.**
- T1.4 Review the state-of-the-art of technologies & best practices for circular strategies in the KVCs.



T1.3 Mapping of regulatory frameworks





T1.3 Policy instruments assessed

Name of policy instrument
Animal By-products Regulation
Bioeconomy Strategy
CEN/TR 13097 2010 Characterization of sludges. Good practice for sludge utilisation in agriculture
Chemicals Strategy for Sustainability
The Data Protection Law Enforcement Directive
Data Protection in the EU Institutions and Bodies
Digital Compass: the European way for the Digital Decade
Digital Decade Policy Programme 2030
EcoDesign Directive
EN ISO 20675:2021 Biogas production, conditioning, upgrading and utilization.
EN 16751:2016 “Bio-based products - Sustainability criteria”
EN 16760:2015 Bio-based products - Life Cycle Assessment
EU AI Act

Name of policy instrument
EU Biodiversity Strategy for 2030
EU Cybersecurity Act
Farm to Fork Strategy
Fertilising Products Regulation
The General Data Protection Regulation (GDPR)
Green Paper on the Management of Bio-waste in the EU
Landfill Directive
New Circular Economy Action Plan
Renewable Energy Directive
Regulation on electronic identification and trust services - eDIAS regulation
Sewage Sludge Directive
Urban waste-water treatment Directive
Waste Framework Directive



Policy recommendations

- Three themes for bio sector
- Introduction
- Barriers / drivers
- Case study
- Recommendations



Complexity and low predictability of policy instruments

Diverse value chain

Regulatory changes - challenges

Bureaucracy burden

Simplify and stabilize regulations

Complexity and low predictability of policy instruments - recommendations

1. Stabilize the regulatory framework for the biobased industry
2. Implement national biogas programs
 - Biogas production & nutrient recycling
3. Provide agricultural investment support for recycled materials
4. Increase resources for counseling services to navigate policy and funding
5. Provide comprehensive advisory services for farmers about circular practices



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Case: Investment aid for farms is not granted for equipment made from recycled materials

- Farmers in Finland are eligible for investment aid from the Ministry of Agriculture and Forestry
 - E.g., for new constructions, and energy investments
 - Support ranges from 30-50%
- Aid does not cover equipment made from recycled or reused components
 - E.g., repurposed batteries to store solar energy
- Incentive only for new equipment, hindering circular economy



Sewage sludge utilization and wastewater treatment

Nutrient recovery potential

Possible contaminants

Regulations impact recovery

Research and incentives



Sewage sludge utilization and wastewater treatment

1. Enact a stricter Sewage Sludge Directive to encourage use of sludge
2. Ensure funding for long-term research on sludge-based fertilizers
3. Provide incentives for technological development in nutrient recovery
4. Establish clear regulatory framework for sewage sludge use
5. Coordinate updates of the Urban Wastewater Treatment Directive with Sewage Sludge Directive to avoid regulatory overlap
6. Provide resources for campaigns on toilet etiquette



Lack of incentives for biogas in Finland

Enhanced self-sufficiency

Developing biogas sector

Profitability concerns

Political impact, stability



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Lack of incentives for biogas in Finland - recommendations

1. Update and ensure continuation of the national biogas program
2. Continue investment grants for biogas plants
3. Ensure funding for research into nutrient recycling
4. Increase the distribution obligation for transport fuels
5. Maintain subsidies for gas-powered heavy transport vehicles
6. Strengthen the role of biogas in emission regulation for heavy vehicles and maritime transport



Next steps

- Project deliverable D1.3 will be submitted on 31.5.2024, published in June
- Policy briefs / White paper to be developed from D1.3



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Supporting the replication of the systemic CE solutions for biobased side streams: TREASoURcE Replication Handbook and KiertoaSuomesta.fi marketplace

Kaisa Sibelius, Forum Virium Helsinki & Nora Berglund, MTK



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The Replication Handbook

- A goal of the project is to create and share replicable practices and relevant learnings based on the activities and findings of the project.
- The Handbook will be a comprehensive guide that ties in TREASoURcE's key results.
- The content is divided in the three key value chains: Plastic, Batteries, and Bio

Replication Handbook

HOME ABOUT RECYCLE BEST PRACTISES USE CASES FEEDBACK SEARCH Q Main site

Ideas are recyclable.

Research and replicate. This Handbook will guide you in making the right decisions and provide advice from your perspective.

Please note! The site is in early development phase and we like to receive your [feedback](#).

Circular plastics

Capture the value: create added value from non-circulated plastic by optimising recycling technologies and collection.

[Explore solutions for plastics](#)

EV battery reuse

Evaluate possibilities and potential for use of second life EV batteries as building blocks for energy storage systems.

[Explore solutions for batteries](#)

Bio streams

Power the local economies through new circular bio-economy investments and new business possibilities for rural producers.

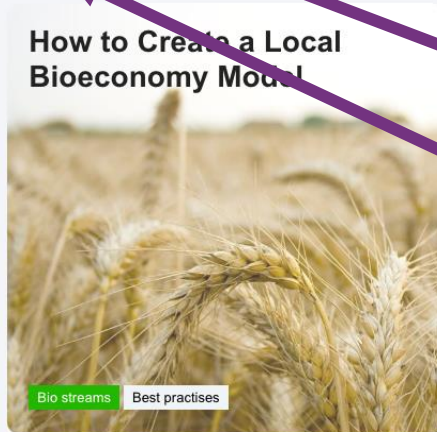
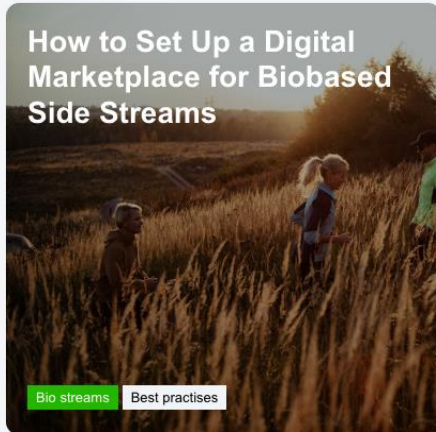
[Explore solutions for bio streams](#)



Bio streams

What's your industry? Administration Agriculture Business Citizens Education Municipalities NGOs

What type of information are you interested in? Best practises Use cases



- The Handbook is a living document and will be developed until the end of the project.
- Use cases
-> "How we did it"
- Best parctises
-> "How to do it"



Structure

- The content is divided into the three key value chains:



Circular plastics

EV battery reuse

Bio streams

Solutions for...

- Into the different viewpoints:

Administration

If you represent city, municipality, public procurer or other public entity.

[Explore solutions for administration](#)

Business

Here you can find info how to improve the sustainability of your company or businesses.

[Explore solutions for business](#)

Agriculture

Check this section if you are a farmer, primary or other rural producer.

[Explore solutions for agriculture](#)

Citizens

Read more about solutions for consumers and households.

[Explore solutions for citizens](#)

NGOs

This part is dedicated for associations and other non-governmental organisation.

[Explore solutions for NGOs](#)

Education

Here is collected materials for educational purposes for different levels.

[Explore solutions for education](#)

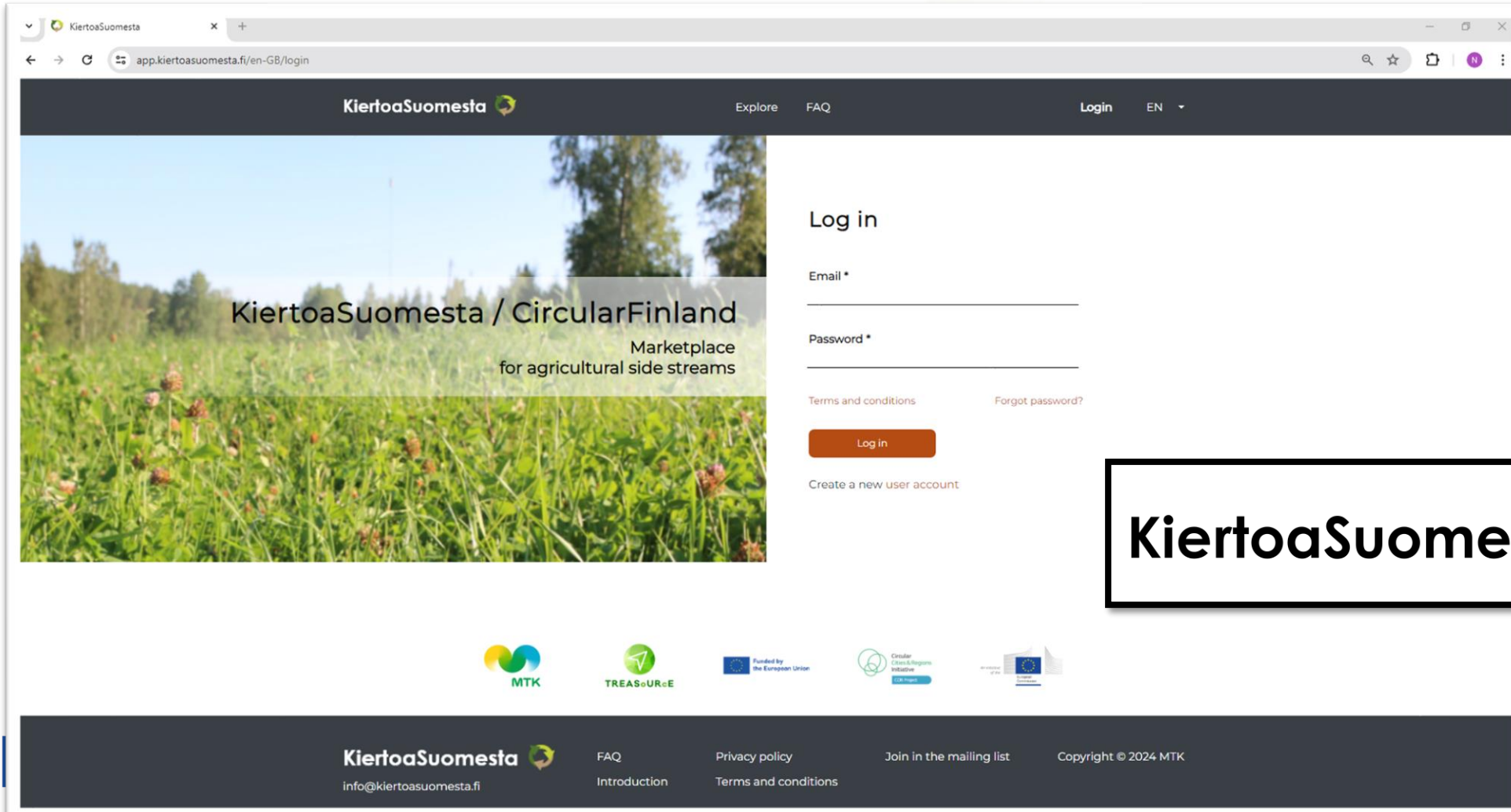


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Please visit the site and provide your feedback

handbook.treasure.eu

Case: Digital marketplace for biobased side and waste streams



The screenshot shows the login page of the KiertoaSuomesta website. The browser address bar displays 'app.kiertoasuomesta.fi/en-GB/login'. The page features a dark navigation bar with the KiertoaSuomesta logo, 'Explore', 'FAQ', 'Login', and 'EN' options. A large banner image of a field with flowers is overlaid with the text 'KiertoaSuomesta / CircularFinland Marketplace for agricultural side streams'. The login form includes fields for 'Email *' and 'Password *', a 'Log in' button, and links for 'Terms and conditions' and 'Forgot password?'. Below the form is a link to 'Create a new user account'. The footer contains logos for MTK, TREASoURcE, the European Union, and the Circular Cities & Regions Initiative, along with contact information and copyright details.

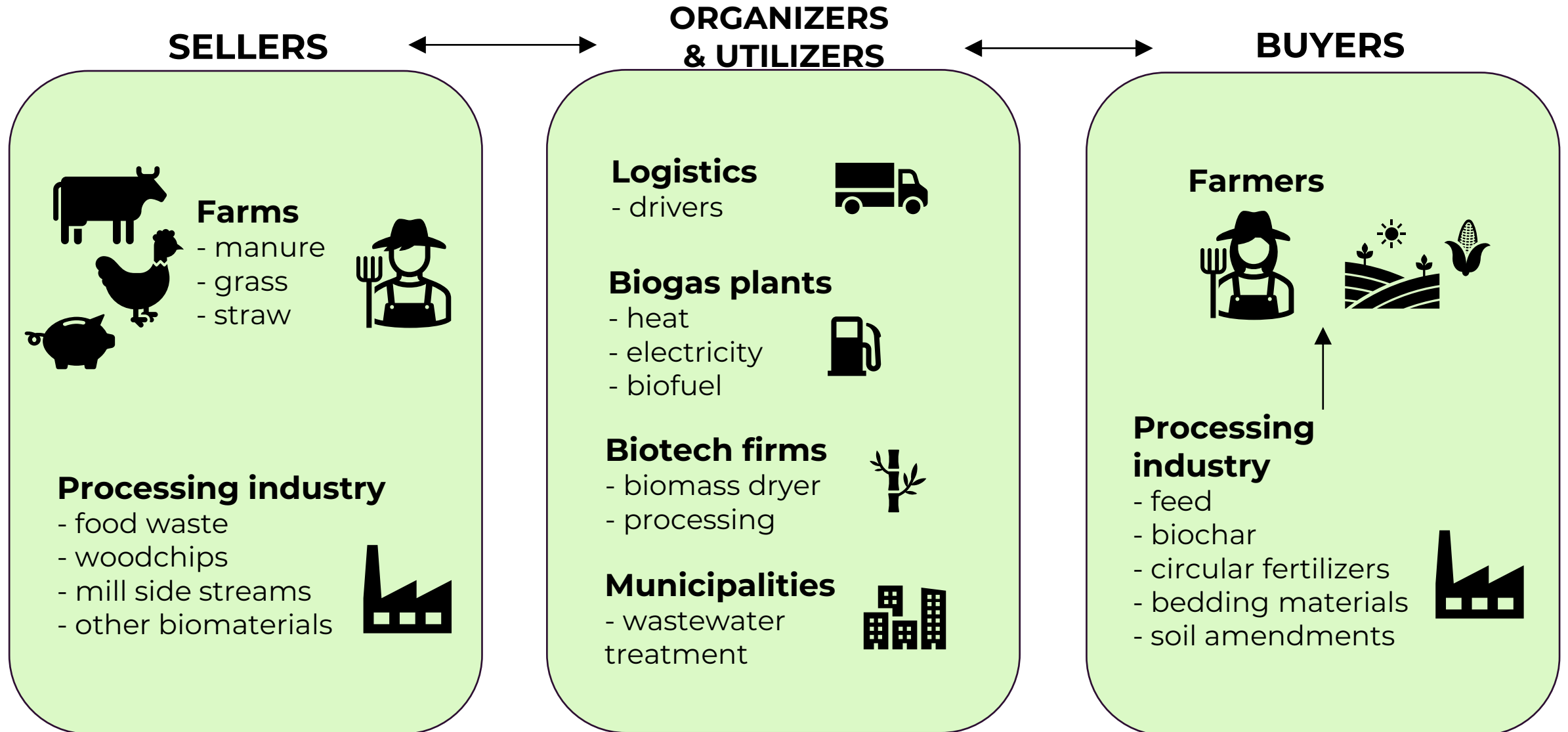
KiertoaSuomesta.fi 



Multiple benefits for the users of the site

- Economic benefits
- Business diversification
- Waste disposal -> cleaning benefit
- Environmental advantage
- New customers and partners
- Learning

KiertoaSuomesta.fi brings together a wide range of stakeholders



Find more about the marketplace from Replication Handbook

<https://handbook.treasure.eu/use-case-finland-biobased-side-streams/>

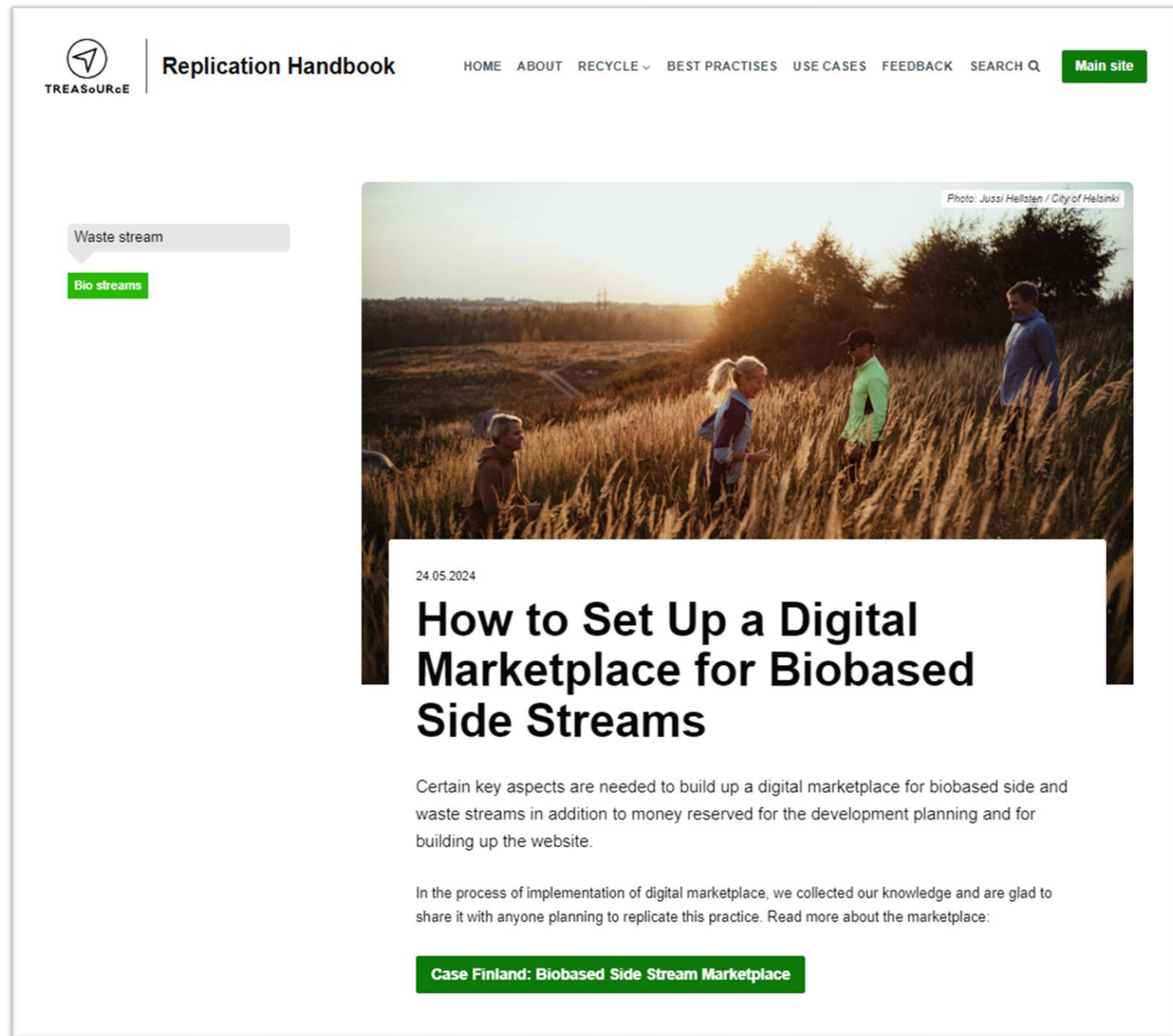


The screenshot shows the 'Replication Handbook' website. The header includes the TREASoURcE logo, the title 'Replication Handbook', and navigation links: HOME, ABOUT, RECYCLE, BEST PRACTISES, USE CASES, FEEDBACK, and SEARCH Q. A 'Main site' button is in the top right. On the left, there are two filter buttons: 'Waste stream' and 'Bio streams'. The main content area features a large image of a sunflower field with a photo credit 'Photo: Jussi Hellsten / City of Helsinki'. Below the image is the article title 'Case Finland | Marketplace for biobased side streams' dated 16.04.2024. The authors are listed as Riina Kärki and Nora Berglund, MTK. The article text describes the digital marketplace 'KiertoaSuomesta.fi' (Circular Finland) developed by the TREASoURcE project in summer 2023 to promote biobased side streams from agriculture, forestry, industry, and municipalities. It aims to create new business opportunities and increase the functionality of the circular economy in biomaterials utilization. The text also mentions the future circular bioeconomy must be based on efficient use of raw materials and local resources, with the TREASoURcE project supporting market development for biobased side and waste streams through a newly launched digital marketplace. A green button at the bottom of the article reads 'Best practises: How to set up a marketplace for biobased side streams'.

Setting up a digital marketplace

- Background research
- Organization
- Governance
- Legislative aspects
- Finance
- Stakeholders

<https://handbook.treasure.eu/how-to-set-up-a-digital-marketplace-for-biobased-side-streams/> -



The screenshot displays the 'Replication Handbook' website. At the top left is the 'TREASURE' logo. The main navigation bar includes 'HOME', 'ABOUT', 'RECYCLE', 'BEST PRACTISES', 'USE CASES', 'FEEDBACK', and 'SEARCH Q', with a 'Main site' button on the right. A sidebar on the left shows 'Waste stream' and 'Bio streams' options. The main content area features a large image of people in a field, with a caption 'Photo: Jussi Hellsten / City of Helsinki'. Below the image is the article title 'How to Set Up a Digital Marketplace for Biobased Side Streams' dated '24.05.2024'. The article text states: 'Certain key aspects are needed to build up a digital marketplace for biobased side and waste streams in addition to money reserved for the development planning and for building up the website. In the process of implementation of digital marketplace, we collected our knowledge and are glad to share it with anyone planning to replicate this practice. Read more about the marketplace:'. A green button at the bottom of the article reads 'Case Finland: Biobased Side Stream Marketplace'.



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Thank you!



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Q&A

Please use the chat or
raise your hand virtually to ask questions



TREASoURcE

Thank you

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our website treasource.eu

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