

Co-developing the transformation to reuse of plastics in Finland

Hanna Salmenperä, Finnish Environment Institute

Project title: Re-thinking plastics in a sustainable circular economy – PlastLIFE SIP



Beneficiaries: Finnish environment institute and MoE, City of Helsinki, Natural Resources Institute, 4 companies, 5 Universities, 2 Universities of Applied Sciences, 2 NGOs

Total Budget: 19 926 307 €

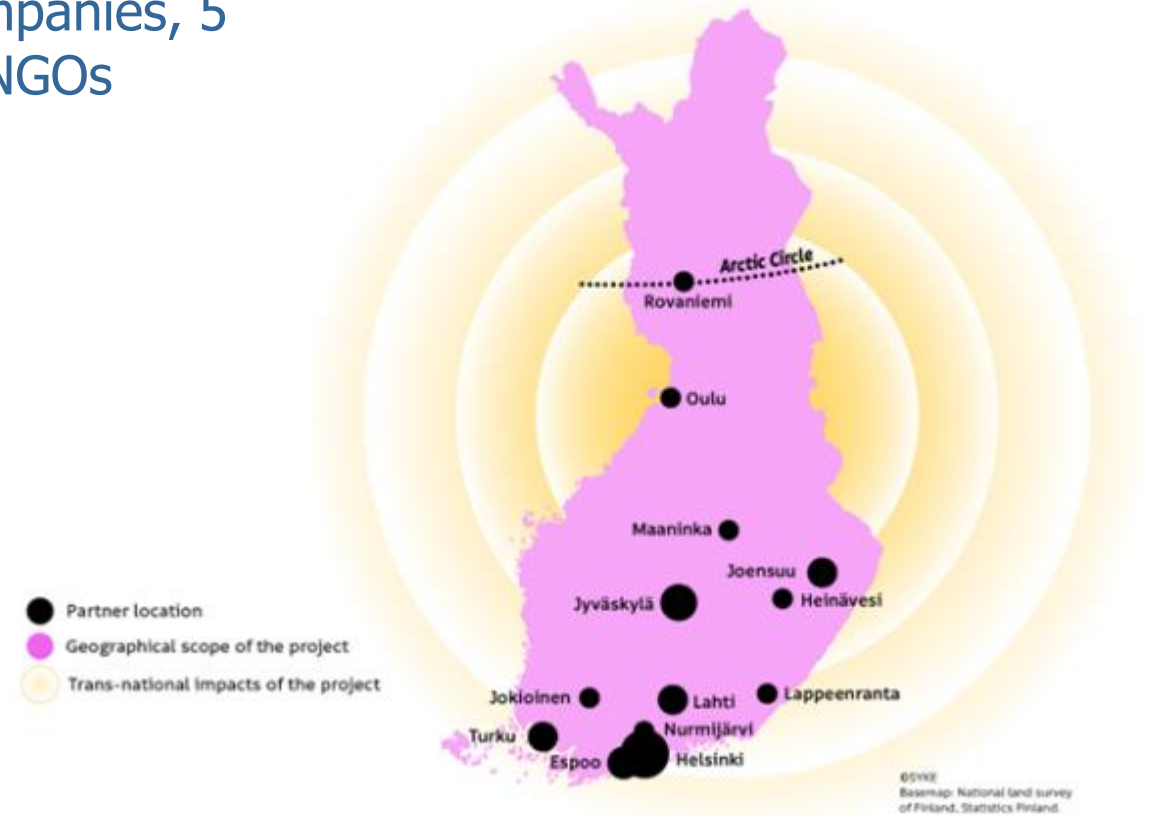
(Max) LIFE grant: 60%

Duration: 1.12.2022-30.11.2029

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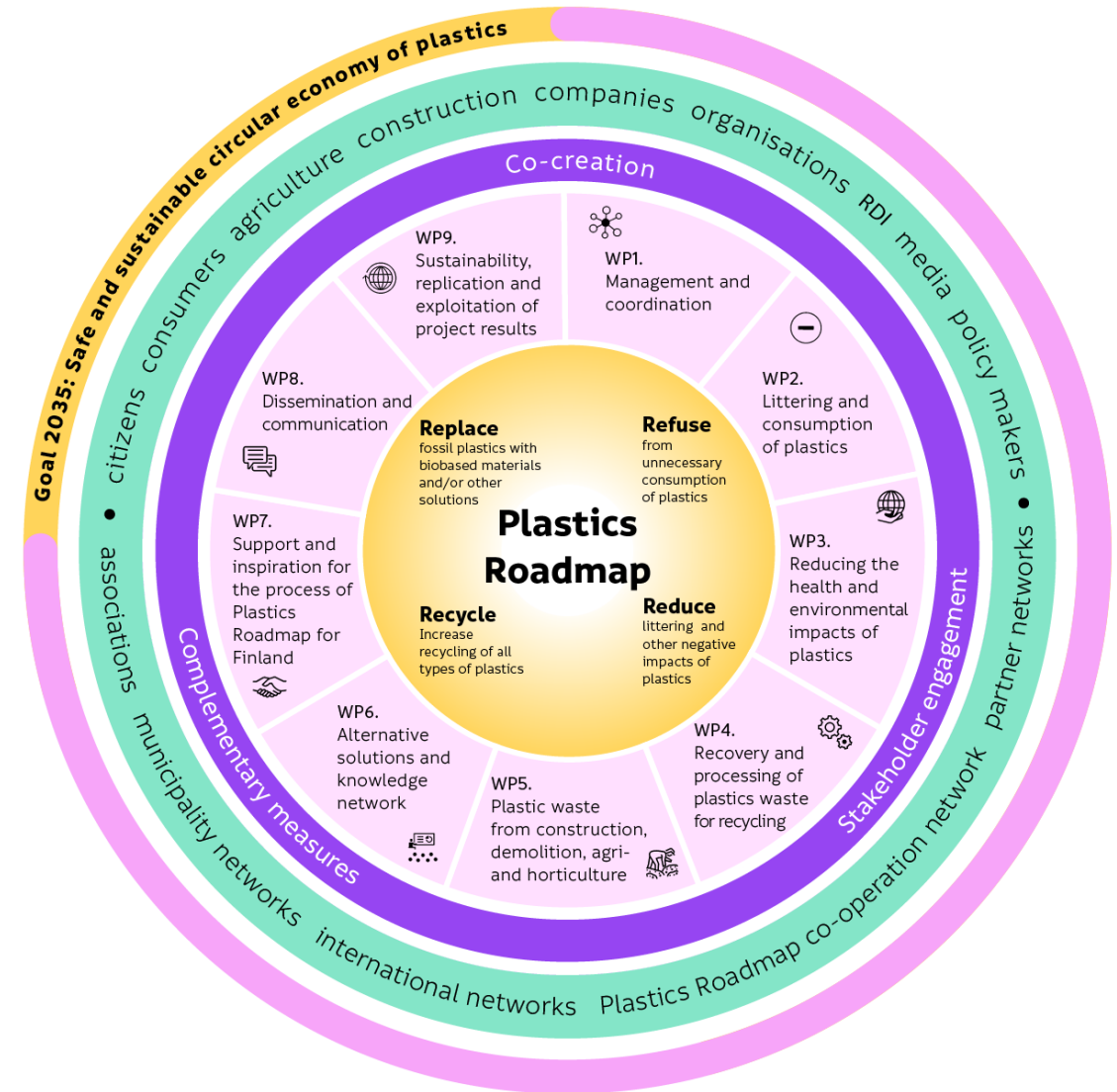
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PlastLIFE enhances the implementation of the Plastics Roadmap for Finland (PRfF)

Objectives of the project:

- to reduce the environmental damage, litter and unnecessary plastic consumption,
- to boost the efficiency of plastic recycling,
- to replace fossil raw materials and utilise recycled plastics,
- to develop the analysis and risk assessment of harmful substances in plastic waste.



How we do it?



Expected outcomes



Recycling of plastics as well as use of recycled materials has increased:

Recycling rate of plastic packaging %, Baseline value: 42% in 2019. Target value: 55% in 2034.



Coastal littering has decreased by 50 % (to maximum of 25 litter items per 100m of coastline) by 2034.



The amount of waste has decreased:

Amount of MSW kg/person, Baseline value: 629 kg/person in year 2021. Target value: ≤ 629 kg in 2034



Knowledge on plastic (amounts, impacts, and risks) has increased.



GHG emissions related to plastic waste treatment have decreased

from 156,000 to 78,000 tons of CO₂-eq. per year.



Results are channeled into national policy-making and legislation.

Case: Transition arena on promoting reuse of plastics

- The transition to CE requires bringing together the perspectives and actors of several sectors of society.
- Co-creation experiment on reuse of plastics (spring 2024).
- Pilot created transition paths (2025 – 2045) with various measures.
 - **Question: What needs to happen in society for change to start? Who is responsible for the actions?**
- The method has been used in Finland, e.g. for energy policy evaluation.
- Aalto university's toolset 'transition pathways canvas'

3 theme groups:

- Replacing single-use plastic **consumer packaging** with reusable packaging
- Replacing single-use plastic **transport packaging** with reusable packaging
- Reuse of **consumer products** containing plastic



Photos: Greencupfinland.fi
& Stock.adobe.com

Case: Transition arena on promoting reuse of plastics

Photos: Annika Markuksela

Vision for the work: Reducing single use and overconsumption of plastics by reusing them

Aims:

- Increase understanding of the possibilities and limitations of reusing plastics
- Identify issues needing development
- Impetus to reuse experiments
- Network and exchange information
- Form key messages!
- Implement PRfF and serve for its update



- Syke and the PlastLIFE co-ordinated
- Four workshops & extra discussions
- 20 Participants and 7 facilitators: experts and developers from companies, research institutes, municipalities, communities, governmental agencies

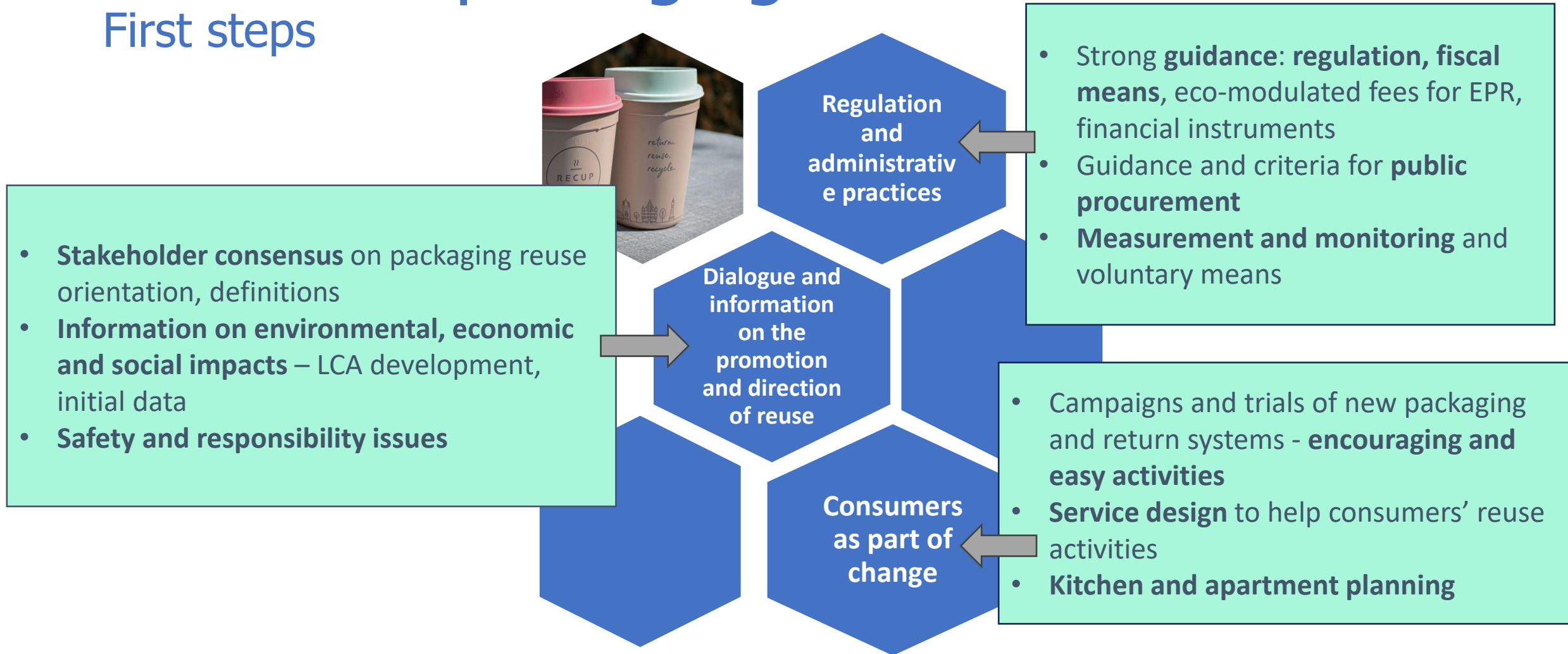
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Basis for the transition paths: Barriers and drivers of reuse

- Weak steering and incentives
- Cheap and short-lived products
- Investments in single use and recycling
- Challenges in business models, scaling and profitability
- Rules of the game, player field, infrastructure are missing
- Negative consumer attitudes
- Information gaps
- Monitoring the amount of reuse
- Definitions and terms unclear
- New legislation and goals on the horizon
- Pioneering companies point the way
- Standardization
- Accessibility (packaging) and availability (products)
- Durable products
- Growing environmental awareness at home and in the workplace
- Accumulation of knowledge and research involving collaboration

Consumer packaging 2024 – 2035

First steps



Consumer packaging 2030 – 2045

Following steps

- **Financial instruments** to reduce the single use, ban on using disposable cups and plates at events, EU standards, new quantitative targets
- **Incentives for companies** to commit to the system
- **Accessibility:** Urban planning to consider return systems

Research and development

The introduction of reuse systems

- Pilots on new technologies, materials, concepts, traceability, digitization, (also refill)
- **Financial instruments**
- **Cooperation** even between competing companies, emphasis on trade and the horeca sector
- **Learning** from practices, experiments and models of other countries



Key messages

- **Reuse is an opportunity, not a threat.** Dialogue is needed to resolve conflicts of interest.
- **Effects of reuse:** Solutions based on the environment, economy, safety and social effects must be sought through multidisciplinary and cross-sectoral cooperation.
- **Experiments and innovations:** To develop return systems and reuse on an industrial scale, experiments are needed in broad cooperation. The important role of trade. Companies should be supported with the novel financial instruments.
- **Citizens' key role:** Household participation must be supported with incentives, services, communication and attitude education.
- **Incentives and regulation:** Strong policy instruments, goal setting and information are needed to strengthen reuse and long-life products, but also to reduce the attractiveness of new, short-lived goods.

Photos: Stock.adobe.com



Learnings: Transition arena on promoting reuse of plastics

Photos: Annika Markuksela

From the process

- Transition arena work served well the aims
- Co-creation requires **strong commitment** of participants and organizers
- **Time-consuming and laborious** process vs possibility to delve deeper into the subject

Implementation of the results from 2025 on

- Reports, policy brief, websites, scientific article (in process)



- PRfF update 2025-26
- Ongoing renewal of waste act > CE act
- Continuation in PlastLIFE: New pilots and co-operation activities



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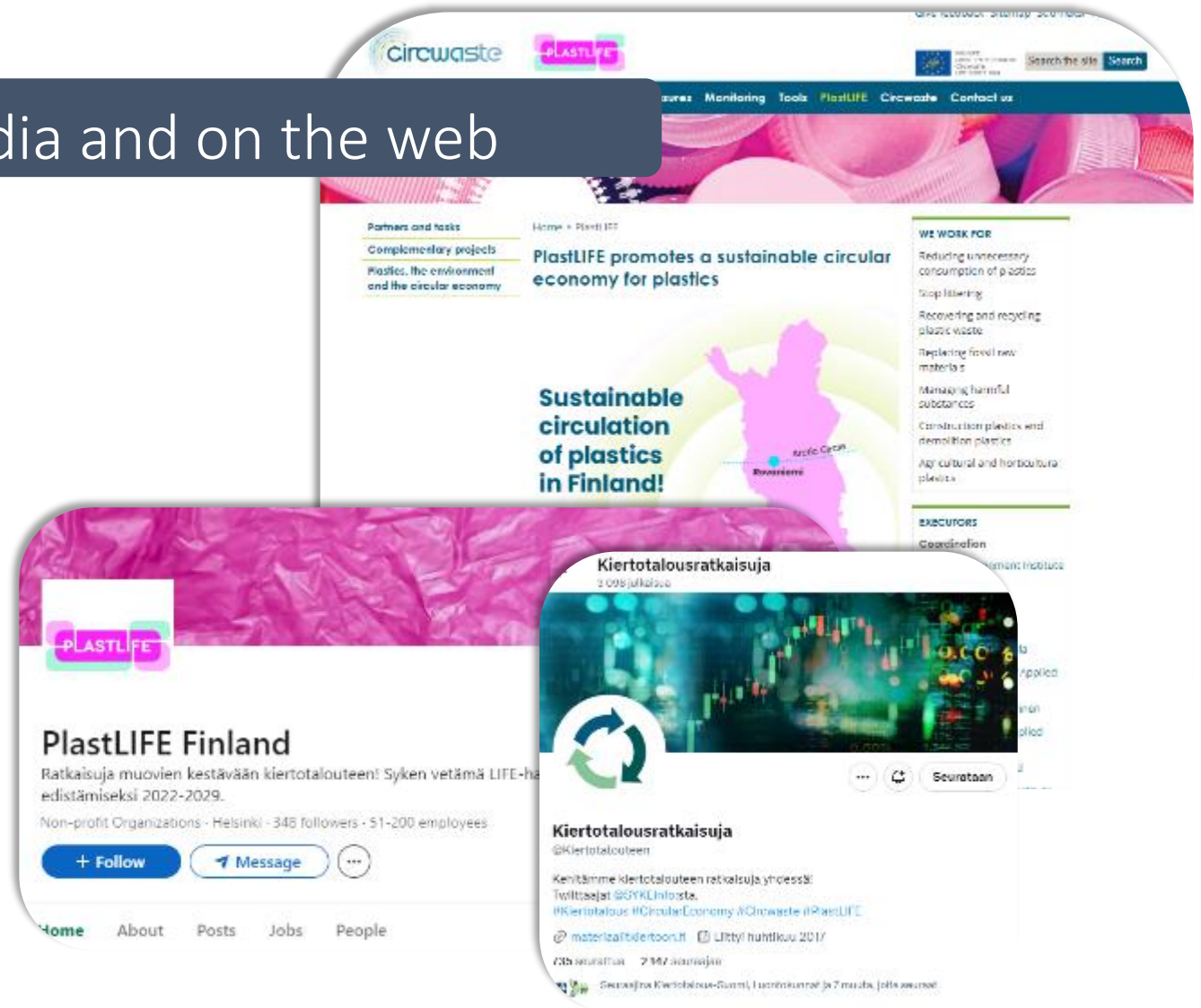
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CIRCWASTE

towards circular economy in Finland

Beneficiaries: Finnish Environment Institute and 23 partners (companies, universities, research institutes, municipalities, regional councils)

10 Co-financers

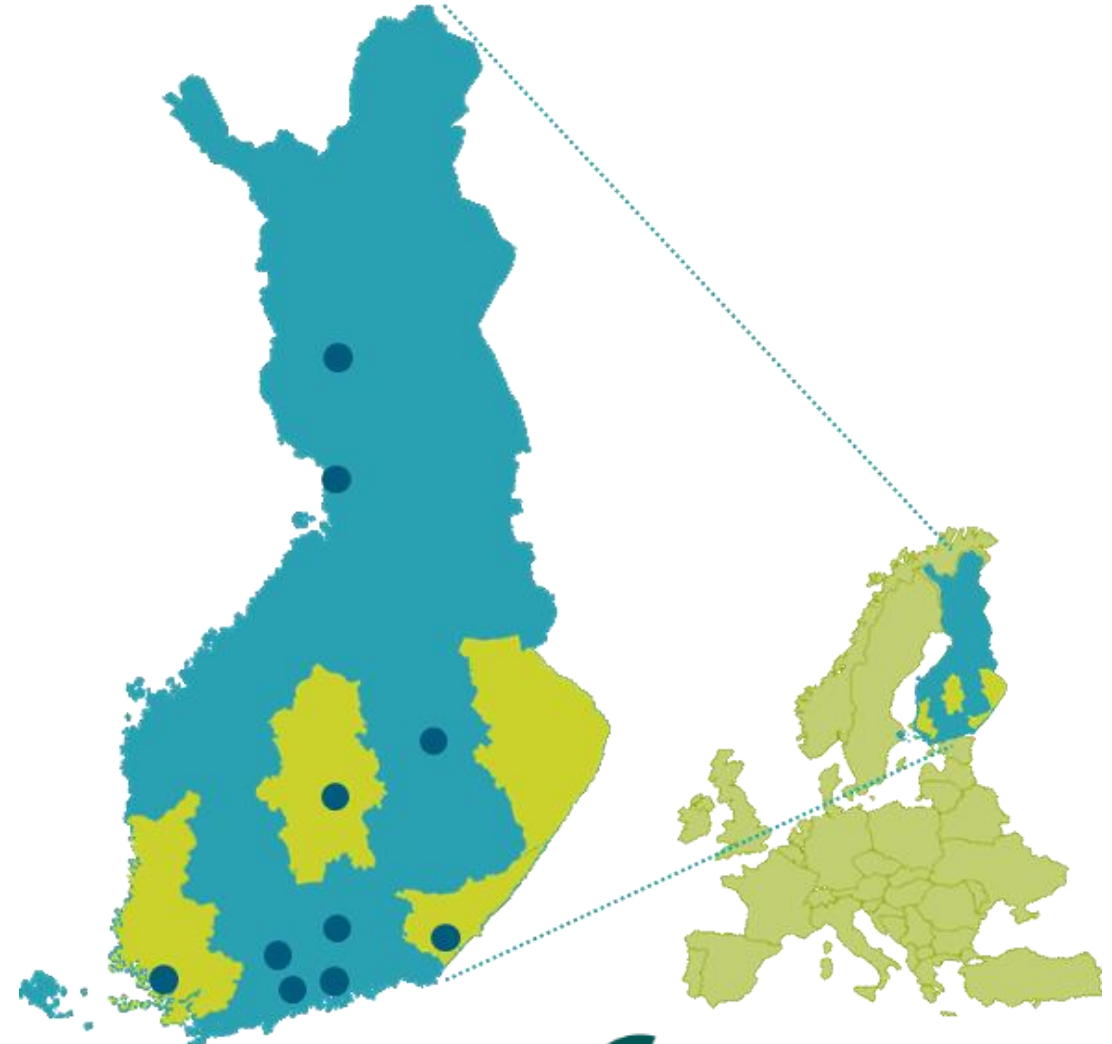
Total Budget: 18 799 605 €
(Max) LIFE grant: 60 % (11,1 m€)

Duration: 2016 – 2023

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Hanna Salmenperä & Tuuli Myllymaa



Circwaste – mainstreaming circular economy

Objectives:

- To implement the targets of national waste plan
- To support the systemic change towards more circular economy in Finland
- To launch processes for networking, activation and committing into common targets
- To analyse results and efficiently communicate and disseminate project results and best practices to Finland and other EU

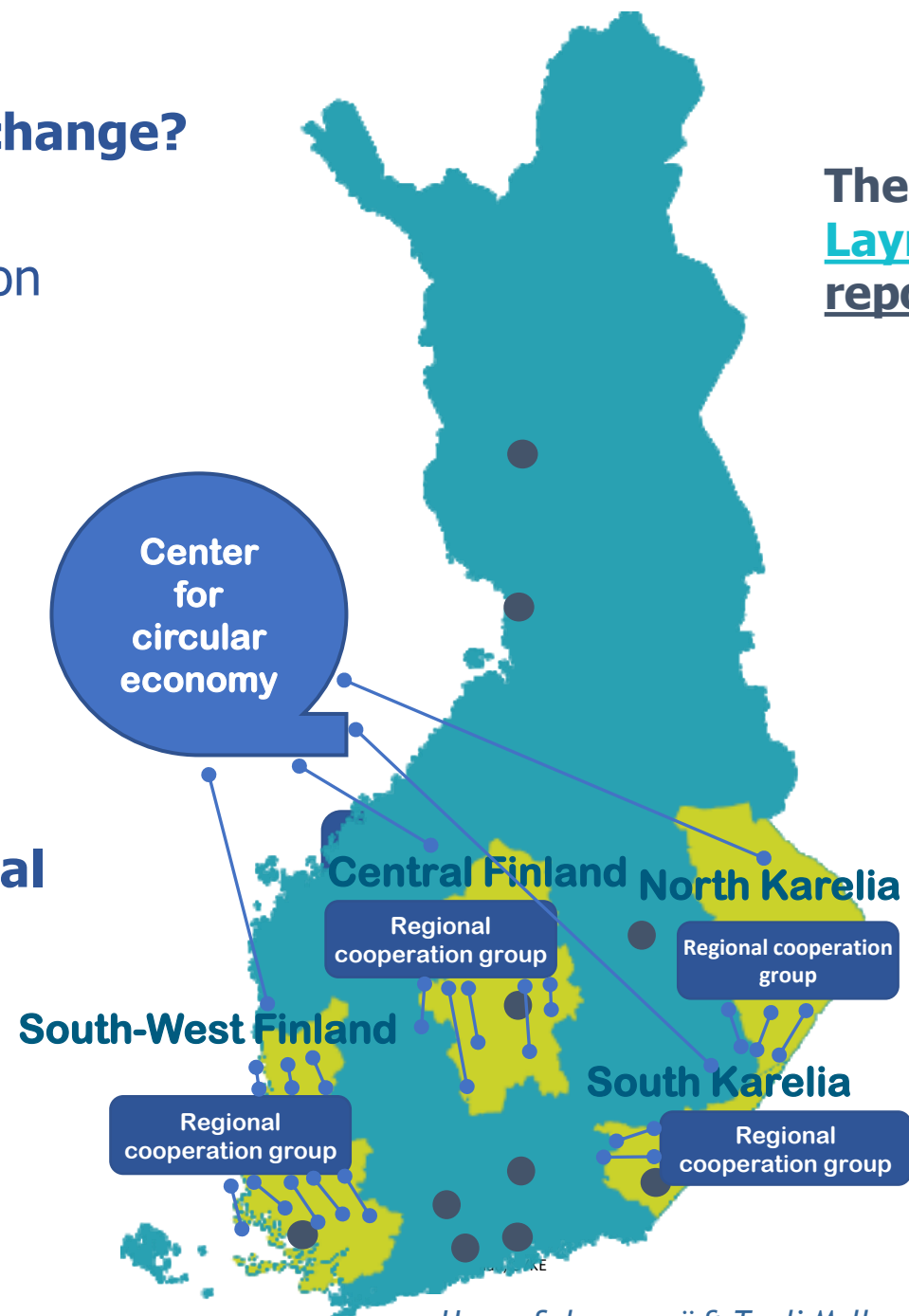
Outcomes and messages:

- Recycling can be enhanced by **regional committing** (positive indicator trends in waste amounts) and setting **regional recycling targets** in legislation
- **Human resources planning** in decreasing use of natural resources (e.g. mass coordinator)
- **Circular economy criteria in procurements**
- **Digital tools** for municipalities and citizens (map-based portal for repair and maintenance services)

CIRCWASTE: How to make systematic change? Cooperation and commitment

- **Center for circular economy:** Information exchange, dissemination and analysis of results
- **Studies and pilots** of 23 partners
- **Regional cooperation groups:** Regional activation and commitment to **circular economy targets with regional roadmaps**
- 10 Forerunner municipalities, committed to **circular economy targets** with **municipal roadmaps**
- **Collection of best practices** in open www.sustainabilityleap.fi -database

The results:
[Layman's report](#)



Case: RENET – a network for REUSE

- **Reuse** has not established its role in the society – the industry is **fragmented and non-uniform in its quality**
- **Aims** were to
 - Increase **co-operation**
 - Promote **competence and employment**
 - Increase **research and knowledge**
 - Act as an **interest organisation**
- Study on developing reuse networks
- RENET work included
 - **Guidance** for natural resource savings calculation of reused products
 - Reuse barometer to generate **information about the sector.**
 - **Self-assessment model** for reuse operators.
 - **Peer learning** dates



Coordinator of the Case: Helsinki
Metropolitan Area Reuse Centre Ltd.

Case: RENET – a network for REUSE

Learnings:

- a lot of **work, trust building and transparency** > actors of reuse were happy about the **networking opportunity** > over 20 members
- To be a powerful influencer about 100 **more members are needed** in the next 5 years.
- A representative of RENET is a member of MoE's co-operation group for waste and CE

Photo: Timo Alanko



RENET organizes events and discussions for reuse professionals

More information

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Project website in English: <https://www.kiertotalousratkaisuja.fi/en-US/Circwaste>

Web portal on circular economy solutions: <https://www.kiertotalousratkaisuja.fi/en-US>

X: @kiertotaloutteen, #circwaste

More results:

Layman´s report: [Circular economy NOW! Solving the problem](#)

Monitoring data on circular economy: <https://www.materiaalitkiertoon.fi/en-US/Monitoring>

Database on good practices: www.sustainabilityleap.fi/en

Best practice summary reports (CircBriefs) and other publications:

<https://www.kiertotalousratkaisuja.fi/en-US/Current/Publications>

Video clip: [Waste management in Finland](#)

Thank you!

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