

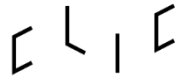


4Recycling

# 4Recycling Ecosystem – Tackling the Plastics Challenge Together

Launch Event  
Helsinki, Finland  
23.1.2020





## *"Facilitating sustainable growth"*

# CLIC Innovation Ltd - a non-profit cluster management organization

### Shareholders of CLIC Innovation



- CLIC is a public-private partnership (PPP)
- Our owners are multinational companies and research organisations present in Finland
- CLIC boosts cross-sectoral and cross-organizational research and innovation co-operation
- The scope and focus of our work is based on global business needs and opportunities facilitated by science



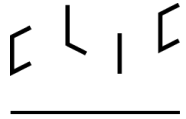
# Agenda for the day

09.30 – 09.50	Welcoming words and introduction to the Plastics challenge, Jatta Jussila, CEO, CLIC Innovation
09.50 – 10.00	What is 4Recycling?, Teija Laitinen, Head of Bioeconomy, CLIC Innovation
10.00 – 10.35	BIC Vision 2050 and SIRA 2030, from Horizon 2020 towards Circular Biobased Europe, Esa Laurinsilta, Director, Strategic Partnerships, Technology, UPM
10.35 – 10.55	Break
10.55 – 11.30	Starting a Green Journey Together, Raffaele Scoccianti, R&D Open Innovation Manager, Procter & Gamble
11.30 – 11.40	Instructions for workshops
11.40 – 12.15	Workshop, part 1
12.15 – 13.15	Lunch
13.15 – 14.15	Workshop, part 2
14.15 – 15.00	Wrap-up of the event
15.00	End of the day



# Our goal for today

- To bring together, cross-sectorally, different organisations to share views on the Plastics Challenge
- To create an understanding of the first steps needed on our joint journey to solve the Plastic Challenge
- To create an understanding of the most challenging tasks and, on the other hand, most attractive business opportunities related to solving the challenge
- To find out the first needs for new knowledge and knowhow

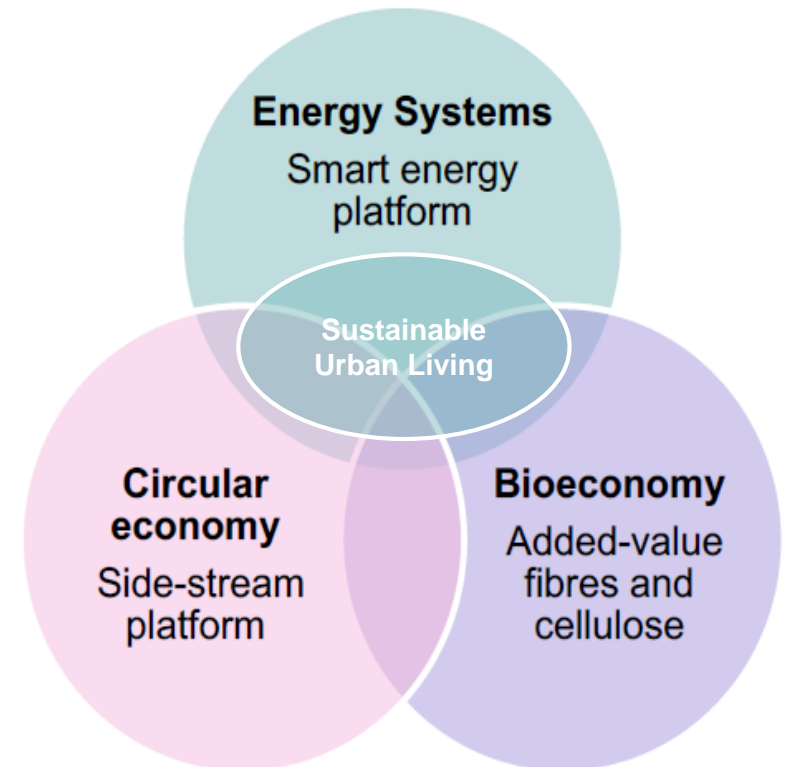


Facilitating sustainable growth

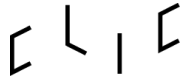


4Recycling

# Background for 4Recycling



CLIC's thematic focus areas



# The way towards a sustainable future

includes actions to

## Minimize the environmental footprint of industries

- Broadening the raw material base to include more
  - Recycled materials
  - Bio-based materials
  - Sidestreams
  - $\text{CO}_2 + \text{H}_2$
- Improving material and energy efficiency
- Use of low-emission electricity and heat

## Increase the positive handprint of industries

- Ecodesign of products
- Making recycling possible!!!







# Our vision

- **4Recycling** aims at shaping the carbon-based material market to fulfil the global sustainability goals.

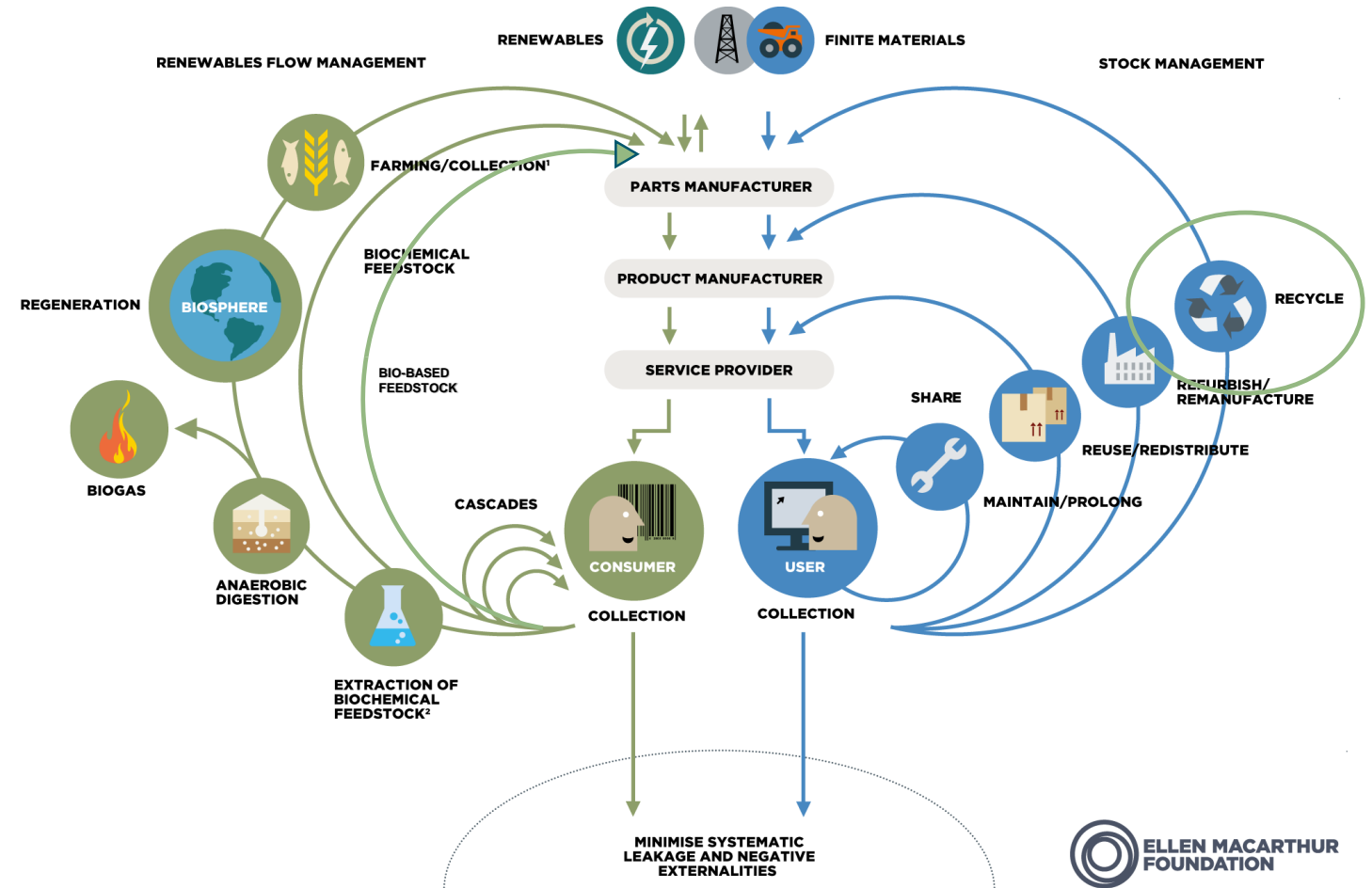
1 Hunting and fishing

2 Can take both post-harvest and post-consumer waste as an input

## SOURCE

Ellen MacArthur Foundation  
*Circular economy systems diagram* (February 2019)  
[www.ellenmacarthurfoundation.org](http://www.ellenmacarthurfoundation.org)

Drawing based on Braungart & McDonough,  
Cradle to Cradle (C2C)



# Our overall goal

- To develop a sustainable material market for carbon-based materials that is supported by a sustainable material recycling system
- In this target market:
  - ✓ There is growing demand for products made of recycled and bio-based raw materials
  - ✓ Bio-based materials are increasingly used in applications and products in which the added value is at optimum
  - ✓ All products and materials circulate in a cascade manner
  - ✓ The recycling system operates efficiently meaning also that proper motivation and capabilities of customers to take part in recycling are in place

In accomplishing the goal, cross-sectoral co-operation is crucial.



4Recycling

# 4Recycling in practice

Teija Laitinen  
Head of Bioeconomy  
CLIC Innovation

CLIC



# 4Recycling

- **4Recycling** is an innovation ecosystem targeting at solving the Plastics Challenge.
- The ecosystem strives to build new solutions for enhanced recycling of plastics and to develop bio-based materials to replace plastics.





Facilitating sustainable growth



4Recycling

# Join us!

The ecosystem is open for organisations interested in finding new business or in building new competences in plastics' recycling and bio-based alternatives.

These organisations have initially supported 4Recycling:

**ANDRITZ**



**fortum**

**KEMIANTEOLLISUUS**

**kemira**

**BUSINESS  
FINLAND**



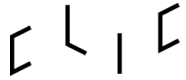
**NESTE**



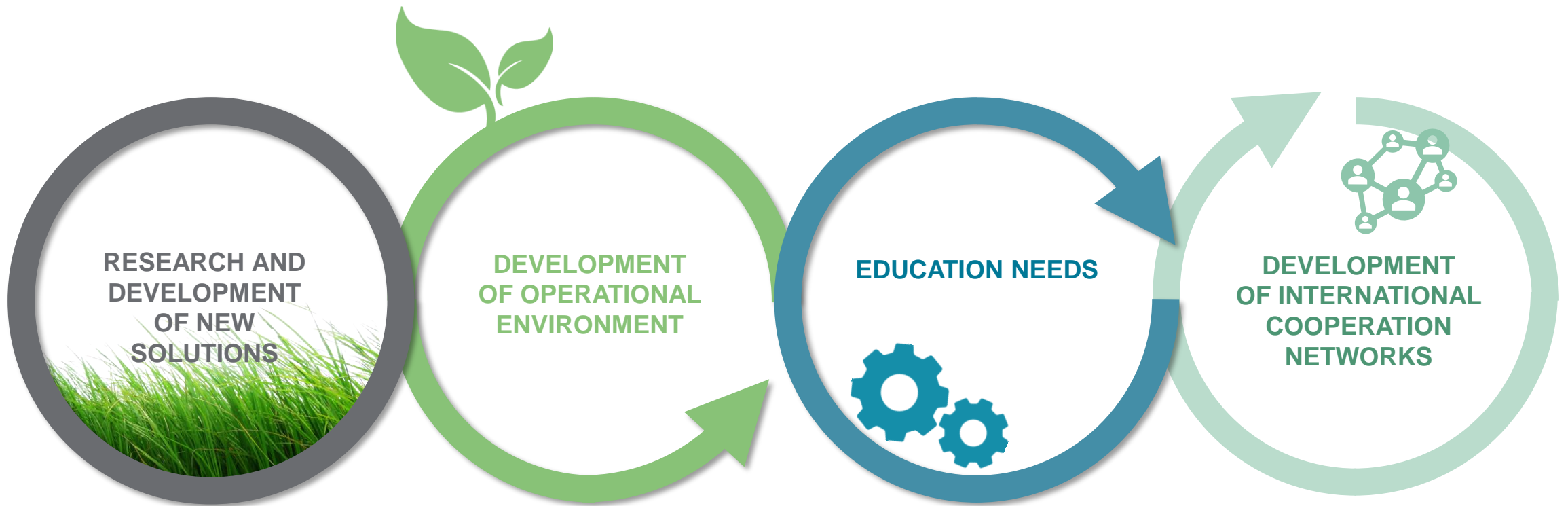
# 4Recycling will

- **Create** a common Vision and Roadmap to tackle the challenges and to capture the opportunities in plastics' recycling and bio-based material business.
- **Facilitate** cross-sectoral co-operation to jointly carry our market shaping activities for better operational environment
- **Identify** knowledge gaps and prepare needed collaborative RDI projects to fill the gaps.
- **Connect** with selected international actors and collaborators
- **Collect** information on public projects and relevant actors in Europe





# Development needs

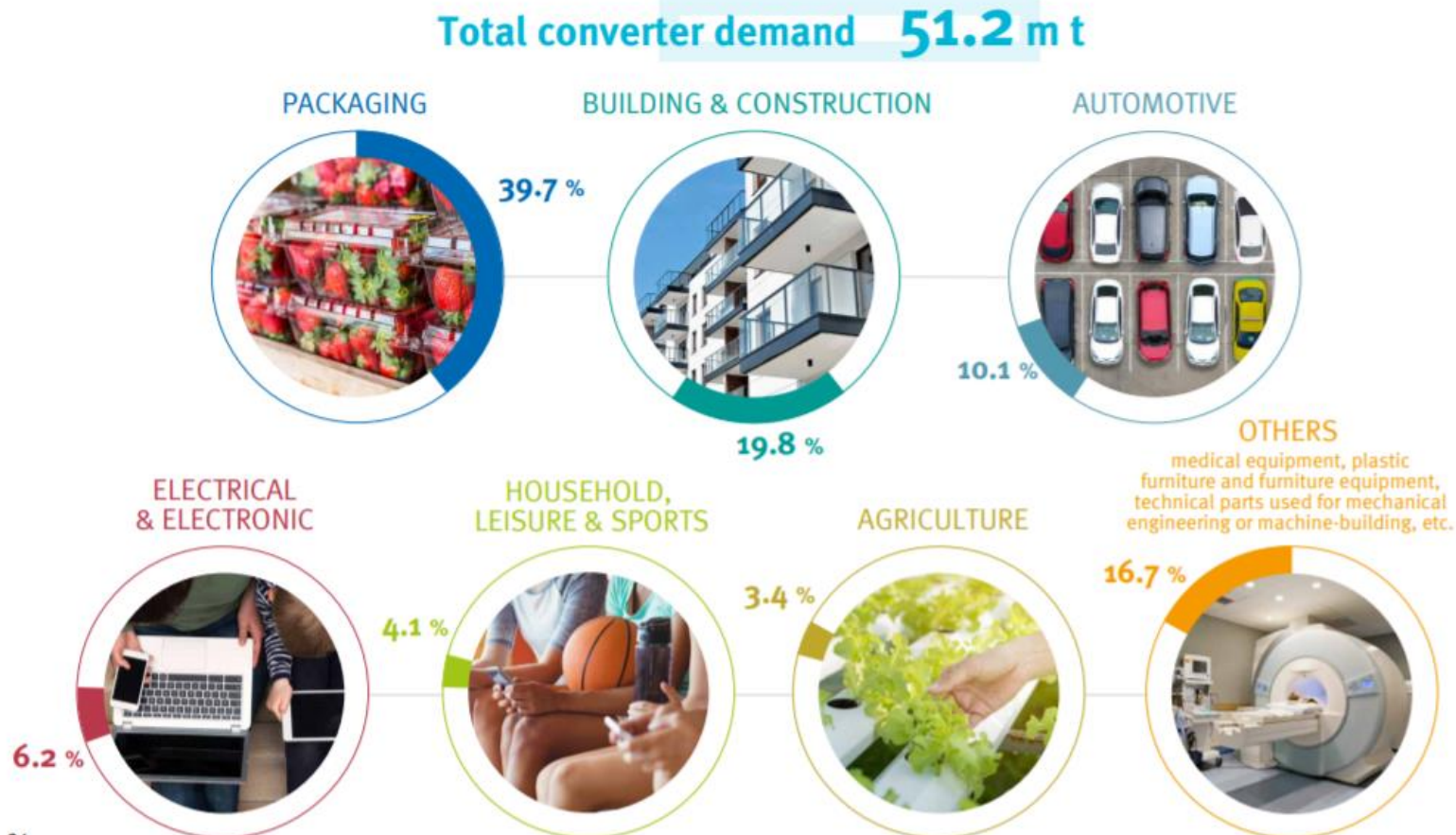




## Plastic converter demand main market sectors

Distribution of European (EU28+NO/CH) plastic converter demand by segment in 2017.

Source: PlasticsEurope Market Research Group (PEMRG) and Conversio Market & Strategy GmbH



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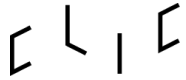
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# 4R recycling kick-off event group work

CLIC Innovation Oy  
9.1.2020





# Group work objectives

- Start work on common vision
- Map the key issues/problems of interest
- To find spear head projects
- Start work on shared project roadmap
- Map participants' willingness to contribute
- Map critical success factors for problem solving

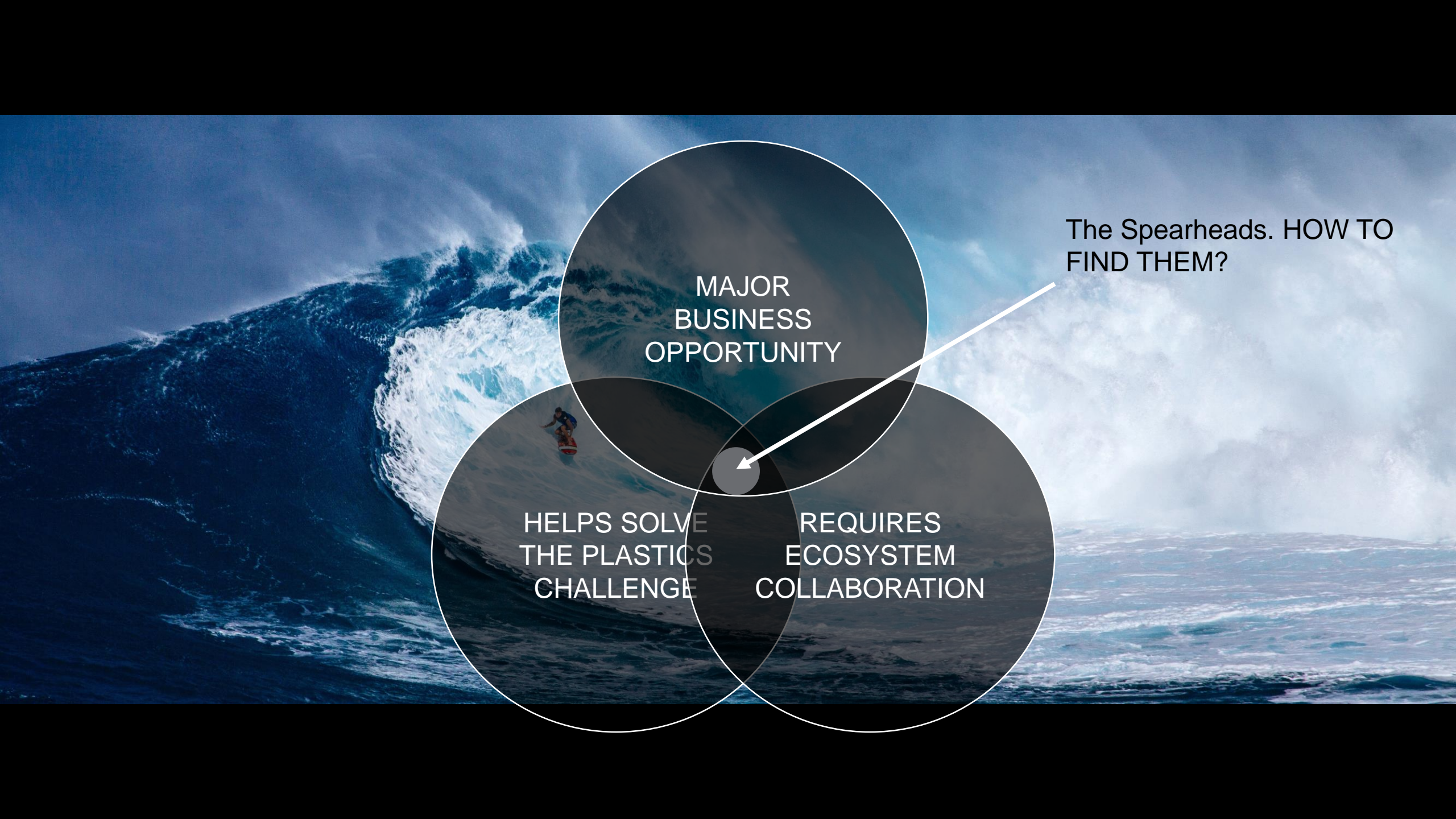
# 4Recycling - The Big Opportunity

Growing markets for packaging and other uses of plastics

+

Growing concern for sustainability of our existence

→ Growing demand for sustainable solutions



MAJOR  
BUSINESS  
OPPORTUNITY

HELPS SOLVE  
THE PLASTICS  
CHALLENGE

REQUIRES  
ECOSYSTEM  
COLLABORATION

The Spearheads. HOW TO  
FIND THEM?

# Disciplines dilemma

Perspectives, terminology, goals, logics

Business Leaders	→ Shareholder interests, business KPIs
Politicians	→ Voters' interests & motivators
Scientists	→ Accuracy & objectivity; underlying truth

# Solution to get started

Vision requires meaningful debate and meaningful debate requires a shared understanding and roadmap towards the vision

Shared principles to accept: Focus, simplification, preference for movement, trust in shared benefits

Shared solutions should result in maximum impact with minimum complexity

# What happens next after group work?

- We at CLIC analyze all the opportunities and share the challenge descriptions
- Ideas can be fed to:
- CLIC Project booster process
  - **30.3.** CLIC ProjectBooster 3.0: “Circular economy”, Design Sprint (4Recycling & Water themes & Green E2)
  - **14.5.** CLIC ProjectBooster 3.0: “Circular economy”, ProjektiBoosteri työpaja 1
  - **5.6** CLIC ProjectBooster 3.0: “Circular economy”, ProjektiBoosteri työpaja 2
- Other development paths in other ecosystems or networks
- Identified projects under planning with companies or research institutes



Thank you!

CLIC