



# CENTRINNO EXPERTS FOCUS GROUP

Workshop #3 Circularity

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# **CIRCULARITY FOR ALL MAKERS AND THEIR ROLE IN CIRCULAR URBAN ECOSYSTEMS**

# A GLIMPSE INTO THE PAST

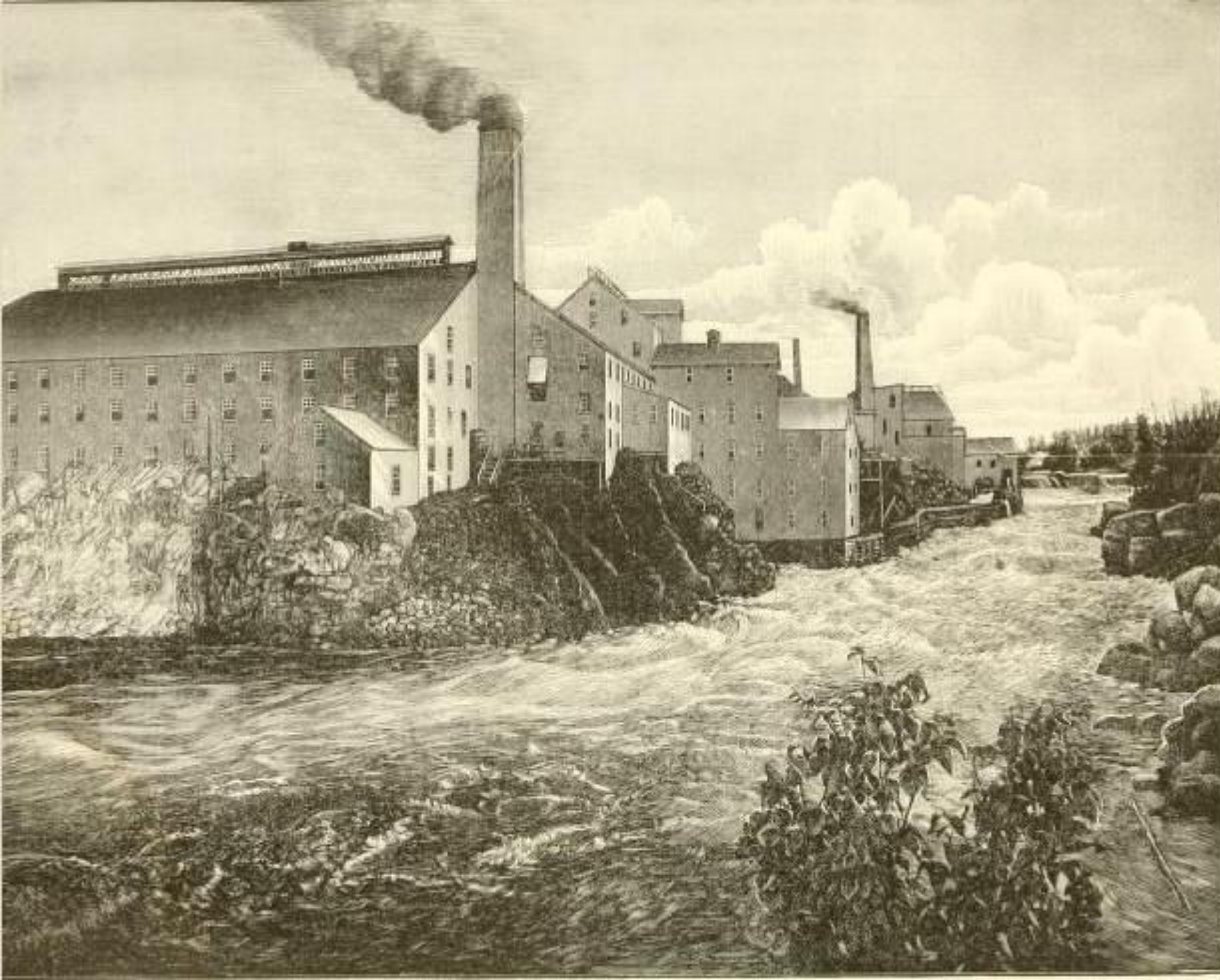
URBAN CIRCULARITY  
DURING  
(PRE)INDUSTRIAL  
TIMES



# London (1860s)







**Saw mill  
(1860s)**



# Rag- and-bone men





# Emptying of "sludge" in Paris





# From sludge to fertilizer





# TWO LESSONS FROM THE PAST

## 1

Circular ecosystems in cities used to be highly **decentralized** and involved a lot of different stakeholders



# TWO LESSONS FROM THE PAST

## 2

What we “value” as a resource is dependent on the culture and context that we are in



# CIRCULARITY TODAY

THE RISE OF CIRCULAR  
ECONOMIES IN  
POST-INDUSTRIAL CITIES



# CIRCULAR ECONOMY TODAY

## THE LINEAR ECONOMY an unsustainable model




## THE CIRCULAR ECONOMY beyond zero waste





# CITIES AND THE CIRCULAR ECONOMY

- **City governments** start committing to a transition to a circular economy
- **75** signatories of public declaration to become circular
- Many more globally create global **strategies** to circularity

The graphic features a dark blue background with a golden, spiraling architectural structure in the upper right corner. A pink rounded rectangle contains the text 'Name of City'. Below this, there are two sections of text, each preceded by a pink rounded rectangle containing a heading. The first section is a paragraph of text, and the second is a list of three bullet points. The third section is another list of four bullet points, preceded by a pink rounded rectangle with a heading.

**European Circular Cities Declaration**

Name of City

In light of the socio-economic impact of the current crisis and of the ongoing climate emergency, we take this opportunity to commit to a circular recovery and a more resilient future. A systemic shift to a regenerative economic model is fundamental to achieving climate neutrality, fostering a thriving society, and keeping resource consumption within planetary boundaries.

A circular city is one that promotes the transition from a linear to a circular economy in an integrated way across all its functions in collaboration with citizens, businesses and the research community. This means in practice fostering business models and behaviour which decouple resource use from economic activity by maintaining the value and utility of products, components, materials and nutrients for as long as possible, in order to close material loops and minimise harmful resource use and waste generation. Through this circular transition, we seek to improve human wellbeing, reduce emissions, protect and enhance biodiversity, and promote social justice, in line with the Sustainable Development Goals.

**We believe that**

- Transitioning from a linear to a circular economy is central to our efforts to decouple economic growth from resource use, and achieve a climate neutral, fair and prosperous society
- Local and regional governments have a critical role to play in achieving the systemic and transformative change required and must work actively with all levels of government and stakeholders from civil society, the private sector and the research community in this mission
- Providing a shared, common vision of a circular city can help ensure we are all travelling in the same direction

**We welcome the opportunity this declaration provides to**

- Show leadership in choosing a resource efficient, low-carbon and socially responsible development path
- Demonstrate our commitment to act across our administration
- Collaborate with a group of like-minded, ambitious local and regional governments
- Benefit from access to implementation support of expert organisations from across Europe



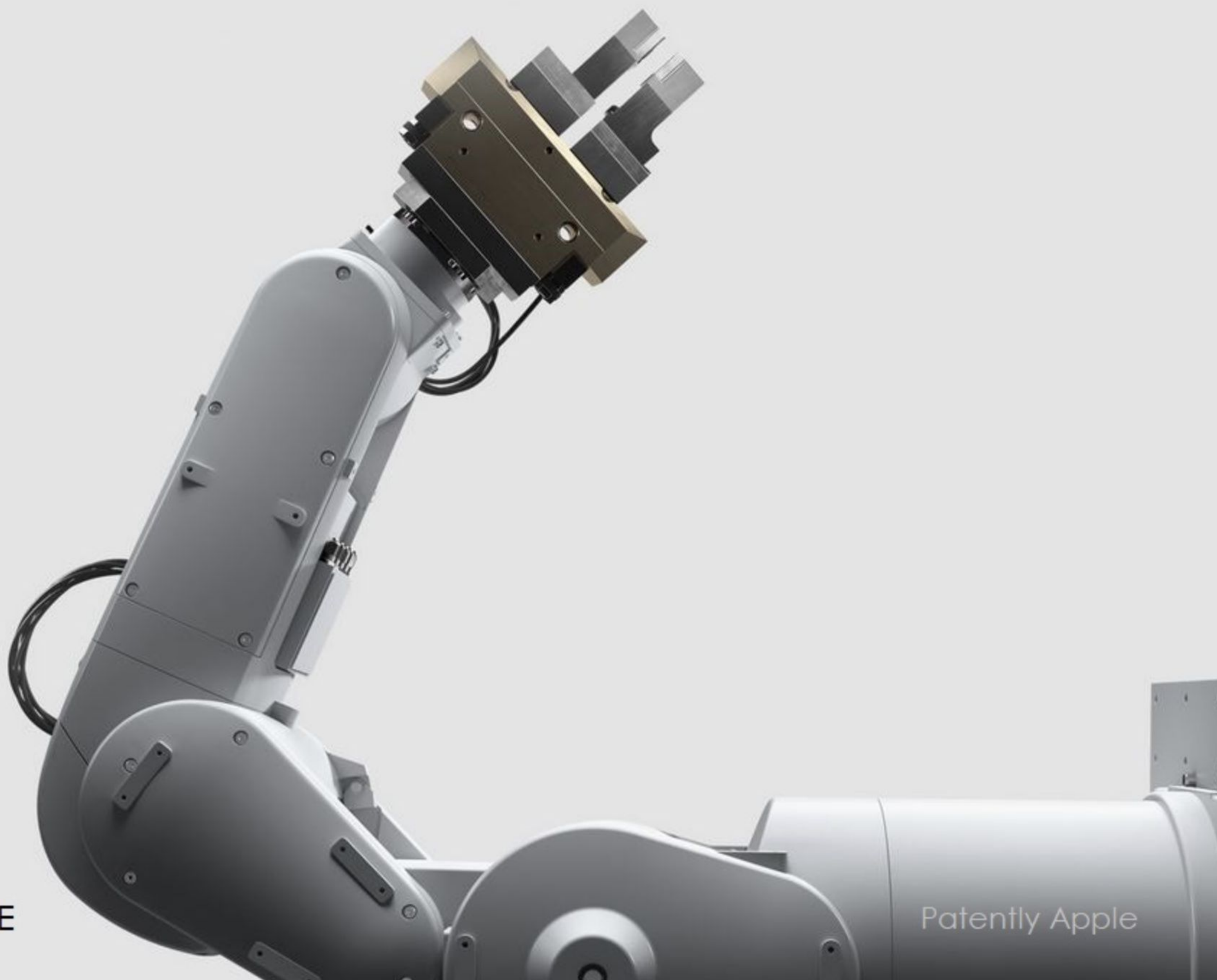
Up to

200

iPhone devices  
disassembled per hour

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Meet Daisy, our newest  
disassembly robot, which  
can recover more of the  
valuable materials stored in  
old devices.

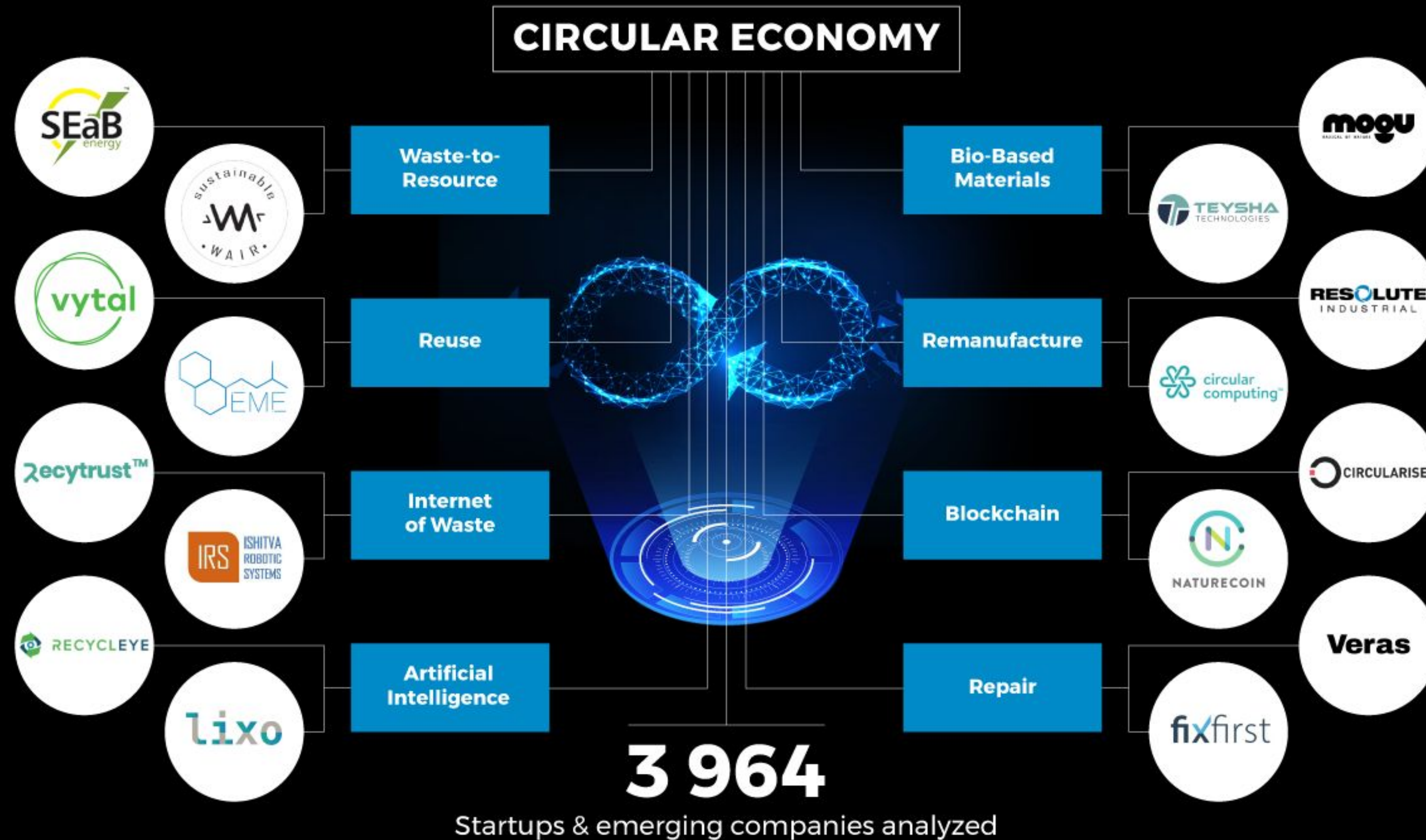


CLICK ON IMAGE TO ENLARGE

Patently Apple



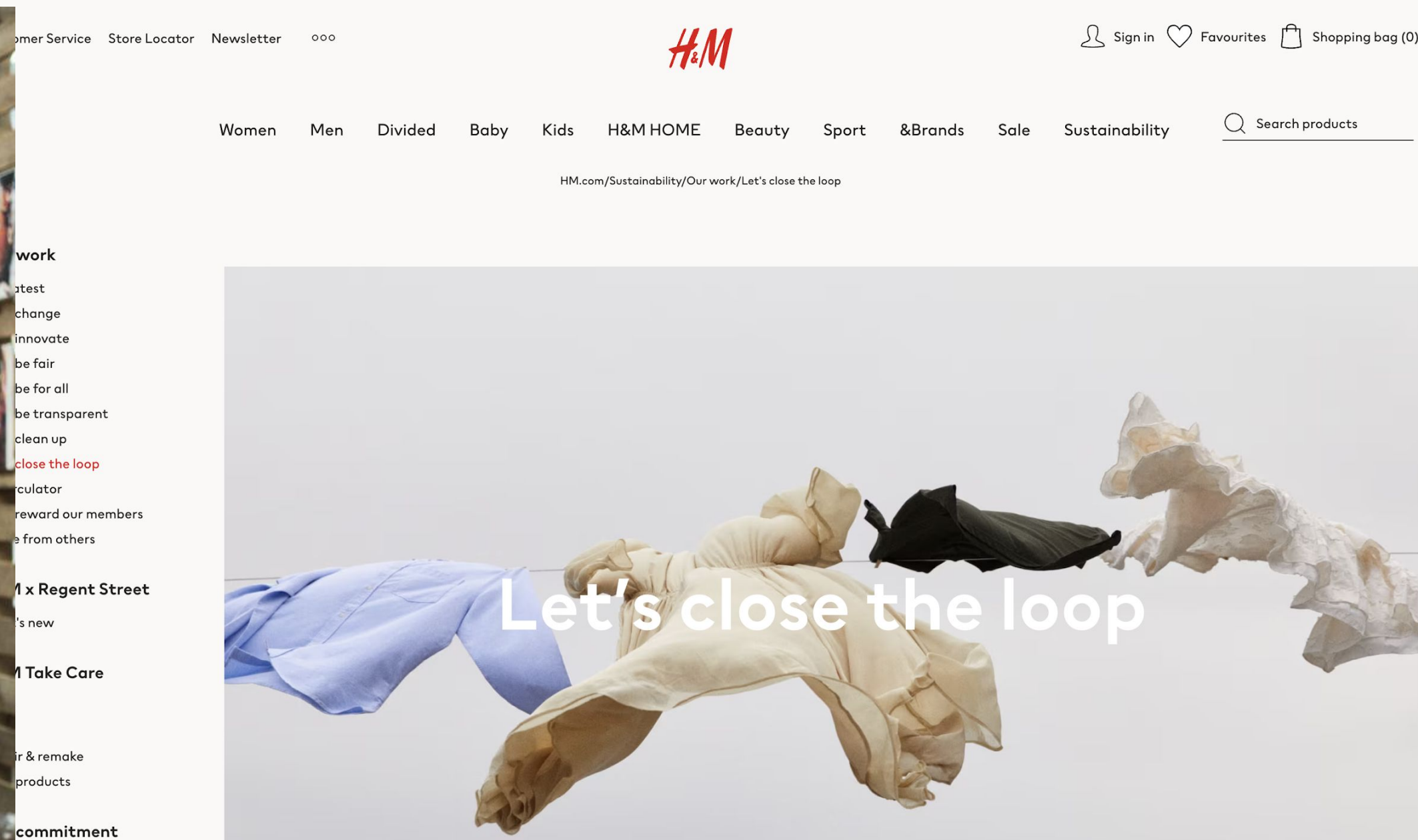
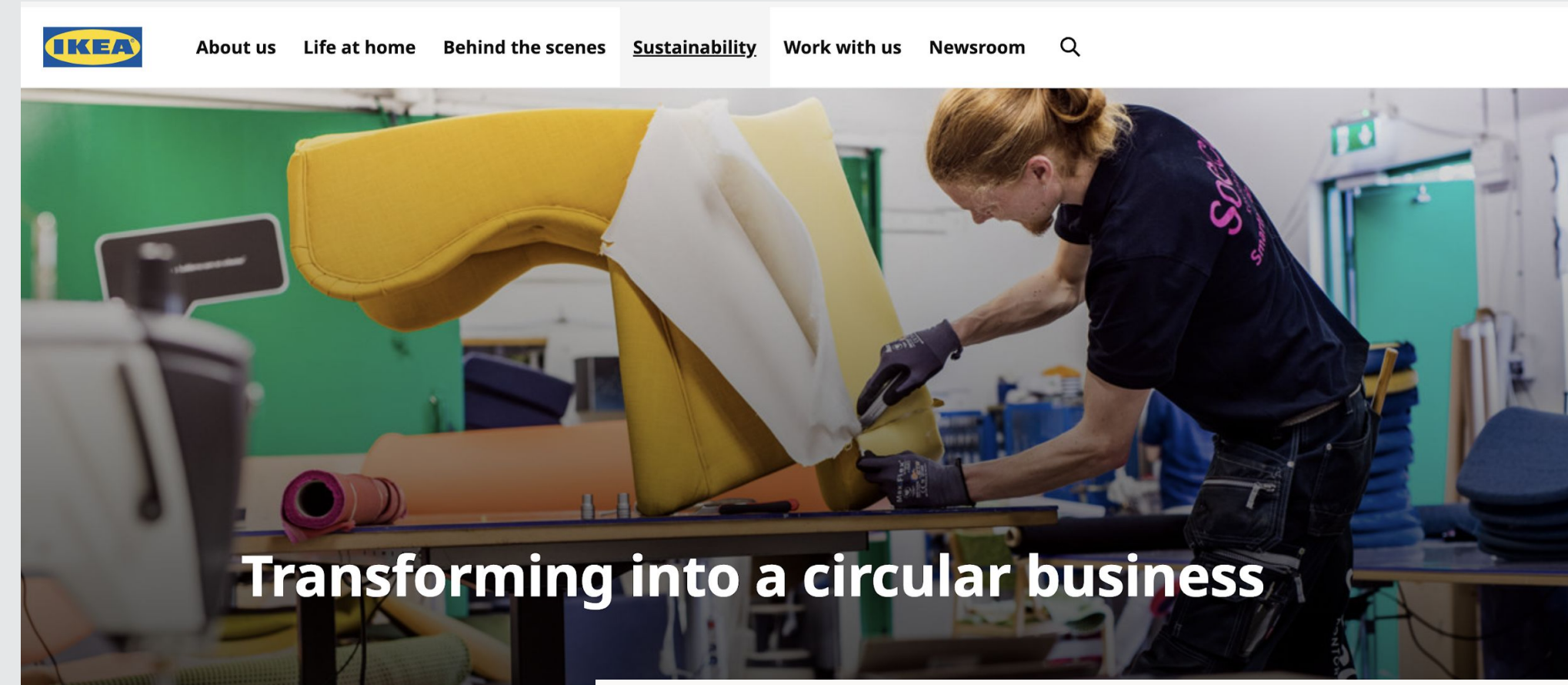
# Top 8 Circular Economy Trends & Innovations in 2023



Data provided by **StartUs insights** | January 2023



# WHO IS LEFT OUT?





# WHO IS LEFT OUT?





# CIRCULAR CITIES NEED SPACES FOR PRODUCTION, REUSE, REPAIR AND RECYCLING CLOSE TO WHERE PEOPLE LIVE





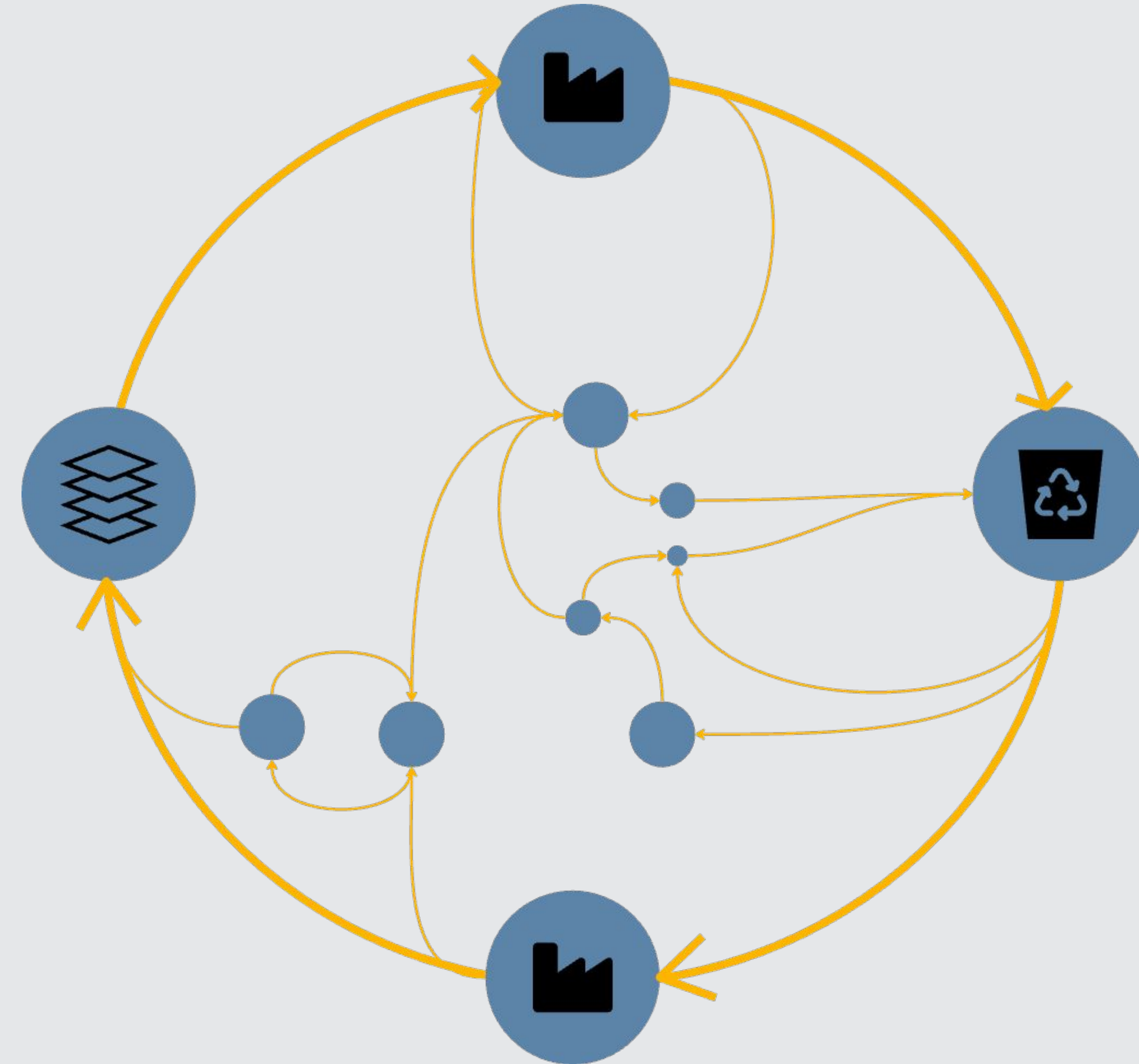
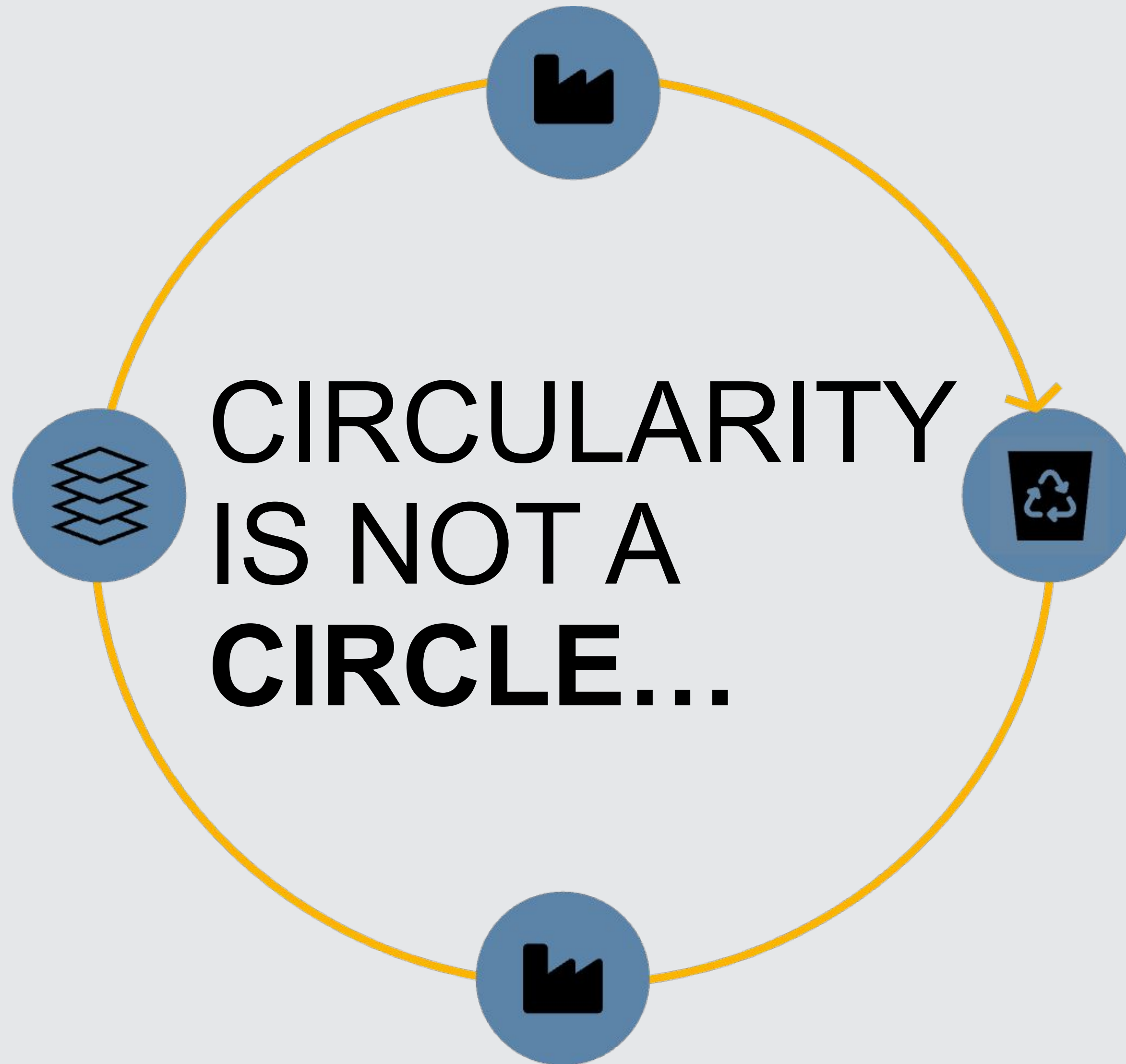
# THE CIRCULAR TRANSITION NEEDS *NEW* AND *OLD* SKILLS!





# IN CENTRINNO..

# ...BUT A WEB





# IMPLEMENTING CIRCULARITY IN CENTRINNO PILOTS



ALL NINE  
PILOTS  
STARTED WITH  
A SIMPLE  
QUESTION

WHO AND  
WHAT IS  
ALREADY  
HERE?



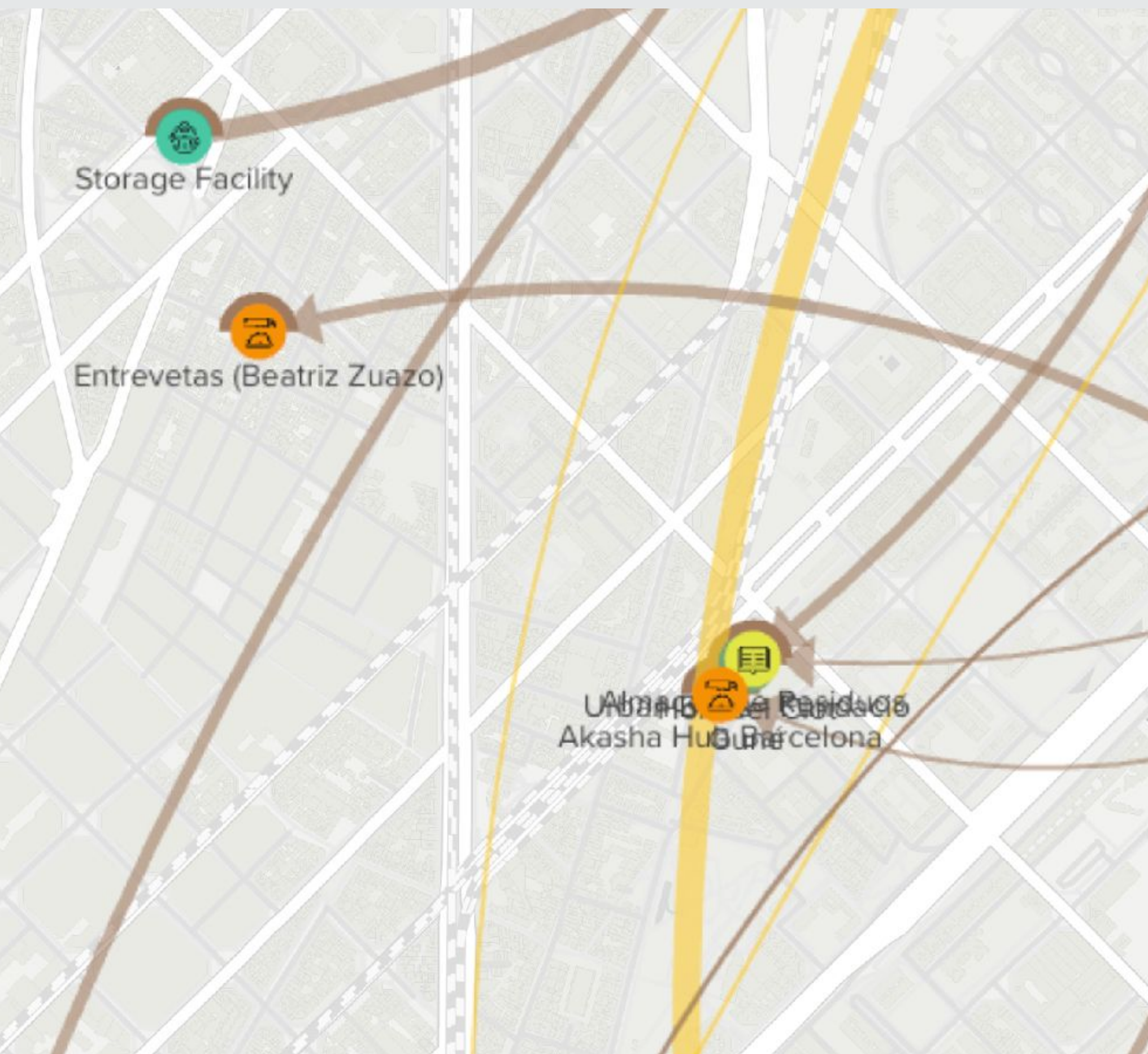
# GROUNDING A CIRCULAR TRANSITION IN LOCALLY AVAILABLE RESOURCES, SKILLS & INFRASTRUCTURE





# THE CENTRINNO CARTOGRAPHY

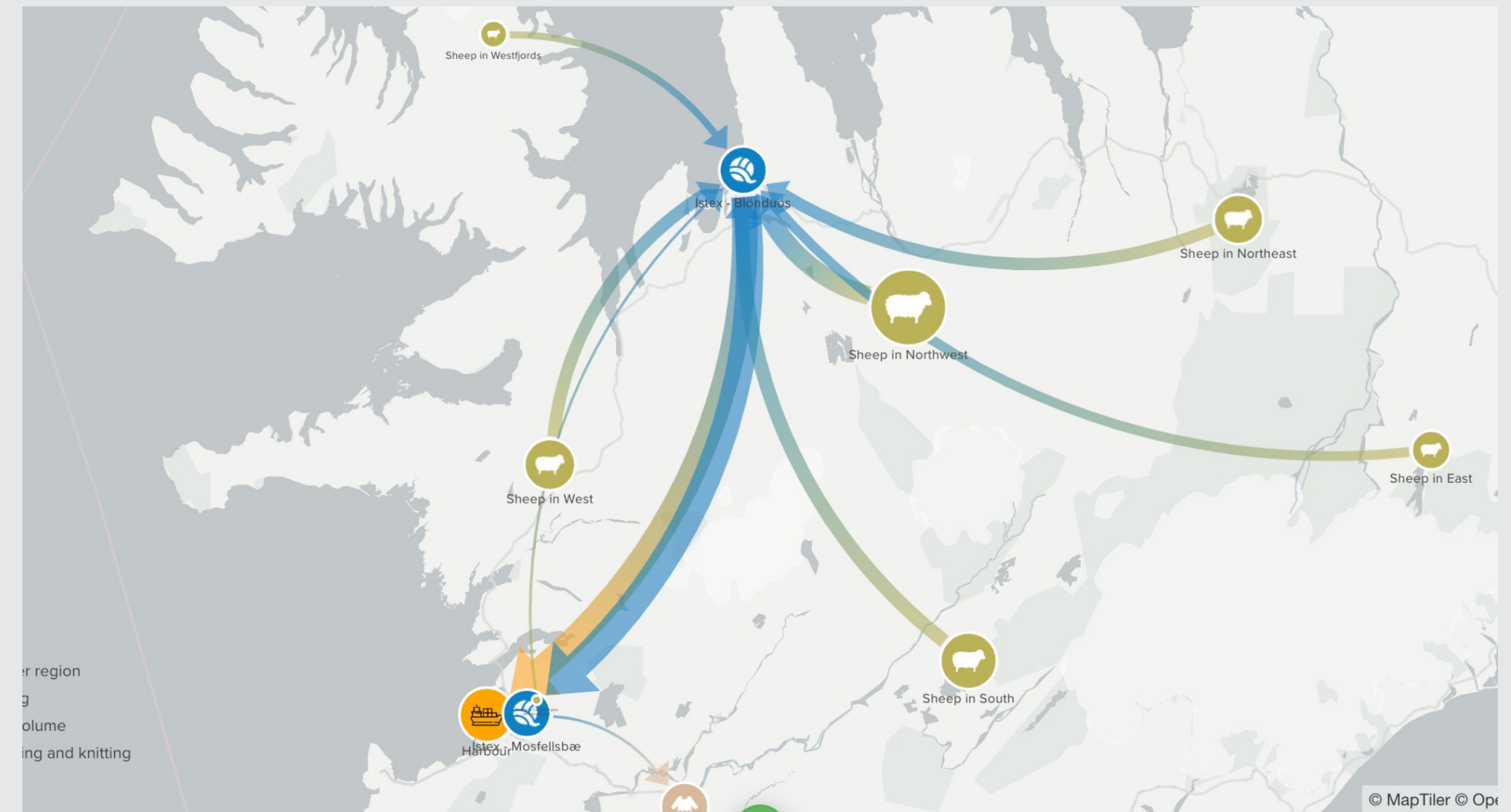
Mapping the often  
forgotten makers of  
urban circular  
economies





# THE CARTOGRAPHY IN A NUTSHELL

1. **Map** local stakeholders in a simple spreadsheet through surveys
2. **Create** resource inventories of existing knowledge, waste streams and infrastructure
3. **Visualize** these stakeholders in a spatial map
4. **Showcase** existing and potential connections between stakeholders





# HOW DOES THE CARTOGRAPHY HELP PILOTS?



# Visualizing stakeholders and their resources/ needs helps in engagements with policy makers

Overview Discussions

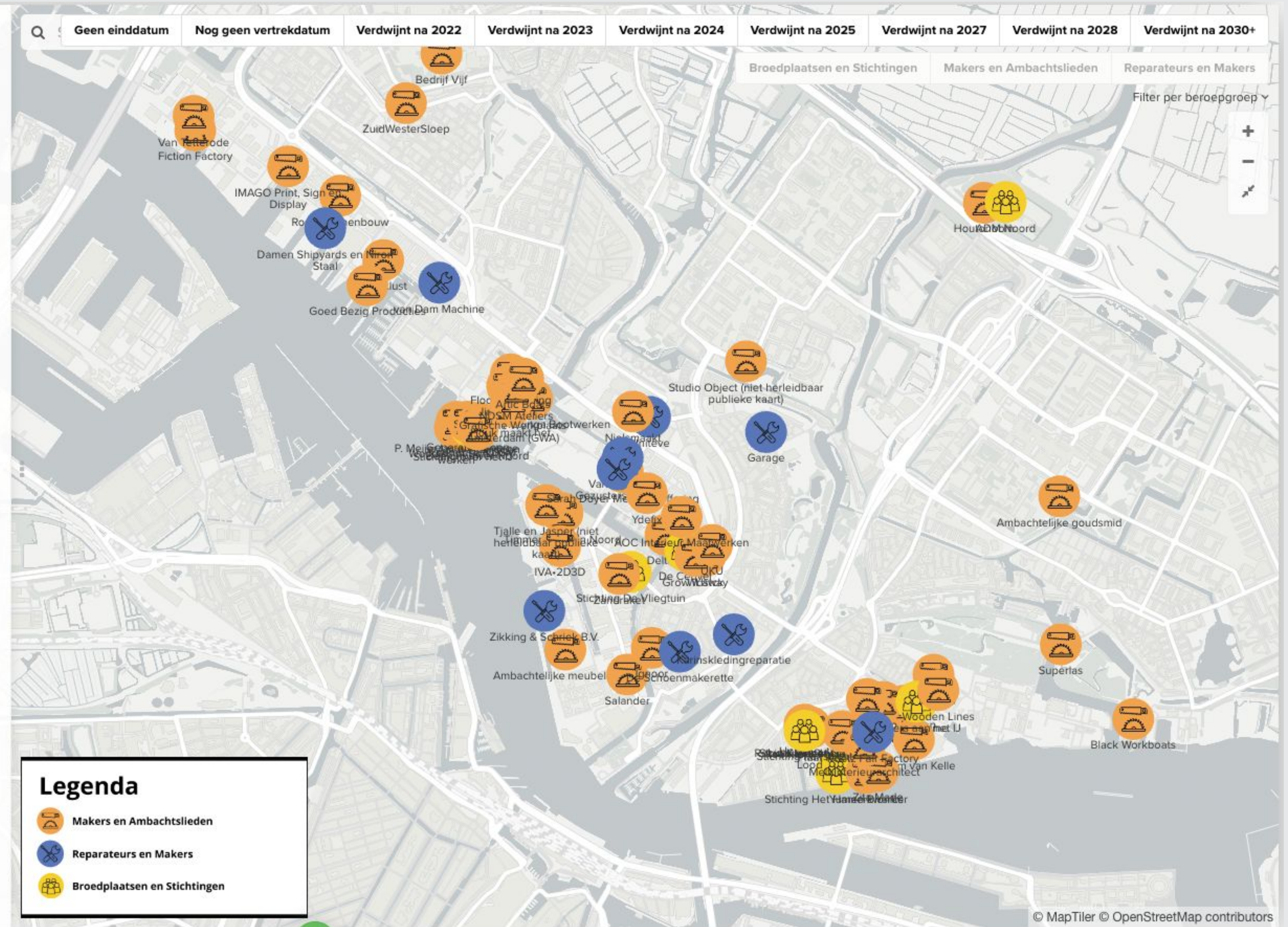
## Amsterdam's Urban Ecosystem Map



In the Amsterdam Noord industrial area, a number of makers, creatives and designers have been mapped. They were asked how long they can retain their spaces, which is shown on the map. By clicking the different buttons on the top, the expected number of years until having to leave the area can be unveiled per maker.

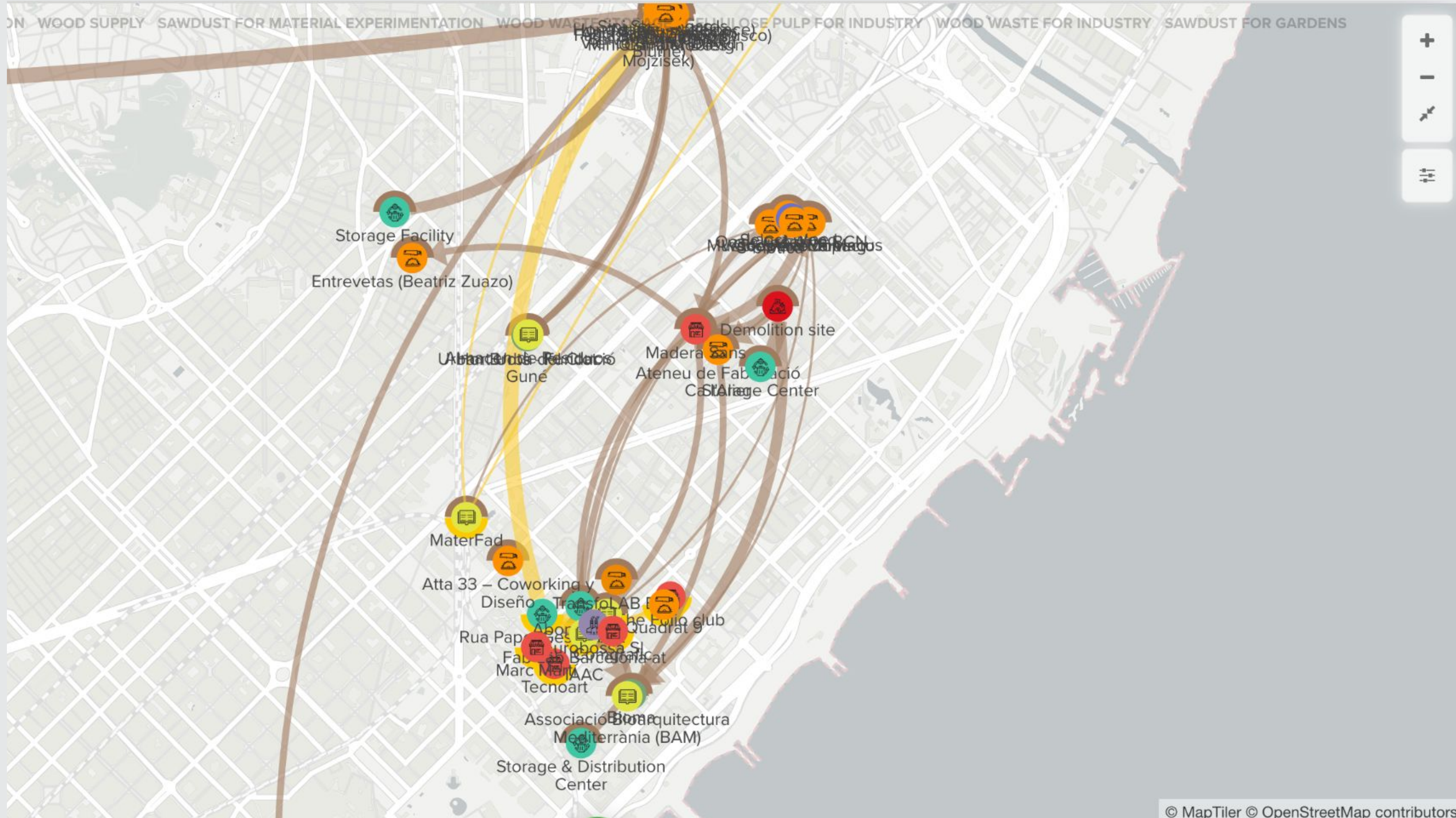
It becomes clear from this overview that very few makers are likely to remain over the coming 8 years.

#centrinno-cartography-amsterdam-internal | permalink





# Having a map with all local stakeholders allowed pilots to draw potential connections for circular synergies





# Taking the time to collect bottom-up data on local resources leads to new connections, ideas and deep knowledge on the community





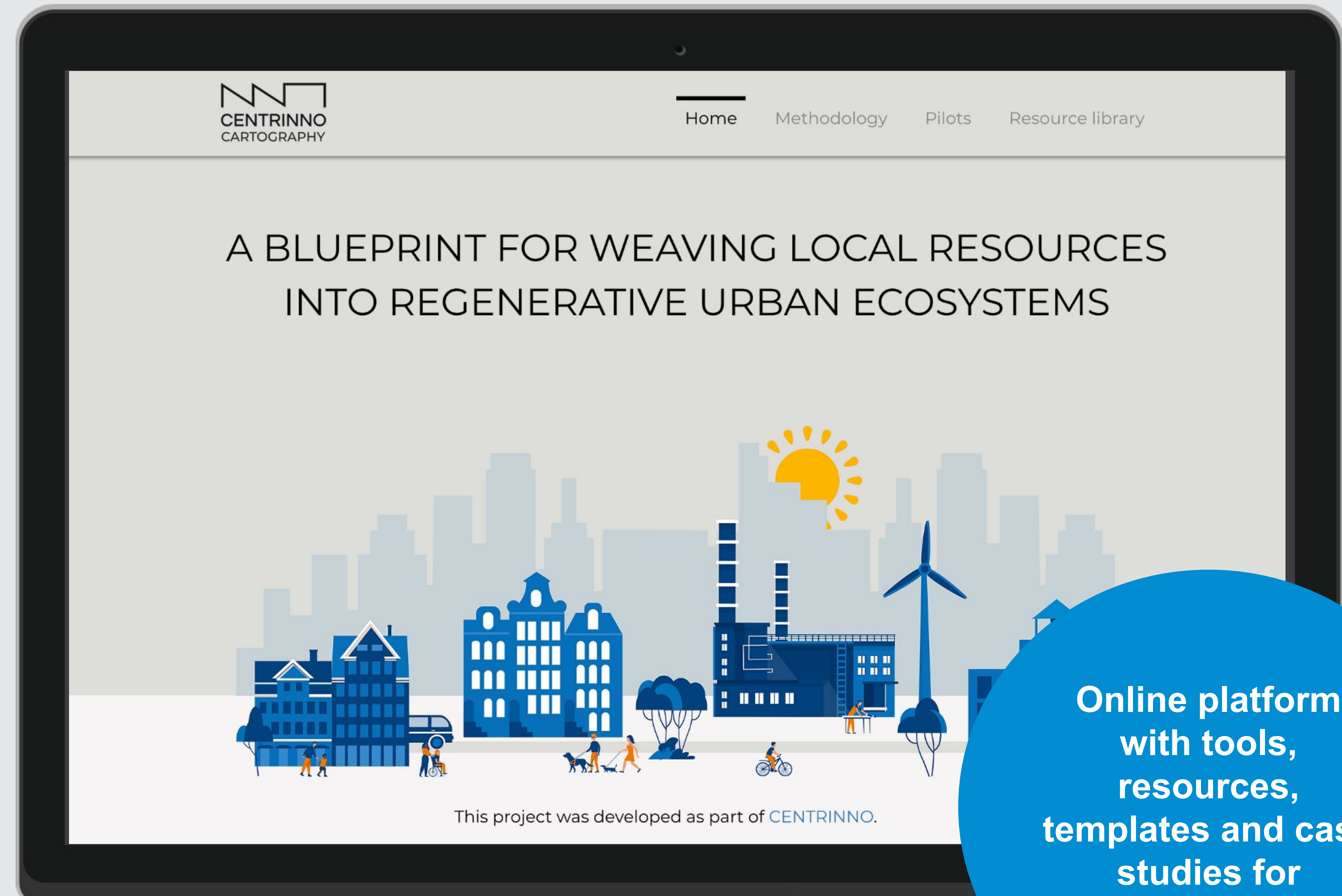
# WHO IS IT FOR?

The Cartography is a tool for everyone who is facilitating the development of local circular communities

- Fab City Hubs
- Policymakers
- Circular economy consultants



# HOW CAN YOU REPLICATE THE CENTRINNO CARTOGRAPHY?









# STEP 2 - MAPPING URBAN CHALLENGES

**Instructions**

Let us look at the ecological and social challenges within your city. How much do you know about the health of local waters, biodiversity and soils? How well is your city doing on sustainable energy and materials usage, compared to other cities? Which social, economic and cultural problems are the most pressing?

If you do not know the answers, don't worry! In this activity, all you need to do is map any challenges that you already know.

- Per area, take an urban challenge card if it matters to your context and place it in the planetary boundary graphs
- Add new challenges as you need
- Add comments and specifications
- Vote or discuss on the top priorities (if you know them)



Surrounding the central diagram are eight data tables, each with a header and a grid of cells. Each table is color-coded to match its corresponding segment in the diagram:

- Water:** Header 'Water', grid with 4 columns and 2 rows.
- Land Use:** Header 'Land Use', grid with 4 columns and 2 rows.
- Biodiversity:** Header 'Biodiversity', grid with 4 columns and 2 rows.
- Air Quality:** Header 'Air Quality', grid with 4 columns and 2 rows.
- Social Inequality:** Header 'Social Inequality', grid with 4 columns and 2 rows.
- Energy:** Header 'Energy', grid with 4 columns and 2 rows.
- Materials:** Header 'Materials', grid with 4 columns and 2 rows.
- Urban Heat Island:** Header 'Urban Heat Island', grid with 4 columns and 2 rows.

Workshop templates with easy research activities to identify and map local urban challenges

**Instructions**

In the next step, you can create a semi-quantitative baseline of your cities ecosystem. For each of the challenge areas, we selected two red colors to give us a better idea of your urban context, using data.

Apart from the quantitative research activity, you can have space below to keep track of other research findings, such as local newspaper articles, studies, graphs, maps or images around the challenge.

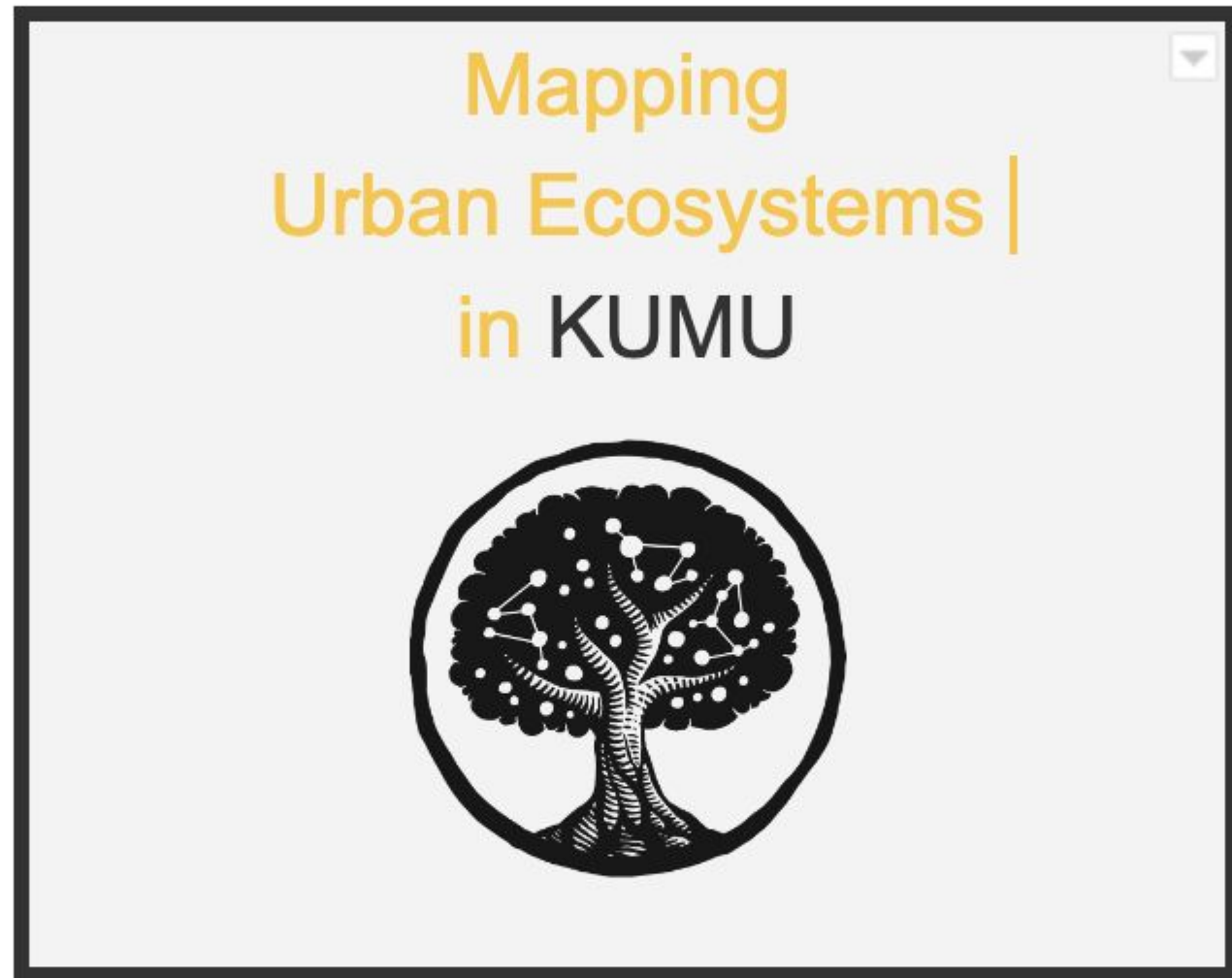
This is an open space to invite you to dig deeper into the local context, to understand the social, ecological, cultural and economic challenges that characterize your Fab City. There is a need to fill out every single part of the Dashboard. You can also start with one or two areas and keep on working on this board over time.



Two additional data tables, each with a header and a grid of cells, similar in format to the ones in Step 2. A zoom level indicator at the bottom right shows '3%'.







Mapping your ecosystem in KUMU\_TEMPLATE

File Edit View Insert Format Data Tools Extensions Help

100% | \$ % .0\_ .00 123 | Arial | 10 | B I A

G4 | fx Description

	A	B	C	D	E	F	G	H	I	J
1	<b>Stakeholder Data Entry Sheet</b>									
2	<b>General Information</b>									
3										
4	<b>Unique ID</b>	<b>Stakeholder name</b>	<b>Stakeholder type</b>	<b>Tags</b>	<b>Sector</b>	<b>Role in the circular economy</b>	<b>Description</b>			
5	1	Test 1	Industrial manufacturing							
6	2	Test 2	New & old crafts							
7	3	Test 3	Creative industries							
8	4	Test 4	Resource recovery							
9	5	Test 5	Retail & trade							
10	6	Test 6	Urban farming							
11	7	Test 7	Community spaces							
12	8	Test 8	Governance							
13	9	Test 9	Education							
14	10	Test 10	Other							
15	11	Test 11	Environmental initiatives							
16	12	Test 12	Research & innovation							
17										
18										
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21										
22										
23										

Add a description of your stakeholder. What is the story that they tell? What do they do? The description will be publicly shared in your KUMU map

**In-depth guide to set up a stakeholder map in KUMU + google sheet replication template**



**CENTRINNO Cartography Replication Template** Public Your Circular Ecosystem Map Your Circular Ecosystem - Spatial Map FRENZI-LEILA

**Overview** Discussions

THIS IS YOUR STAKEHOLDER MAP - ADD A DESCRIPTION HERE

[#your-circular-ecosystem-map | permalink](#)

Search

**Legend**

- Creative Industries
- Industrial manufacturing
- Retail & trade
- Resource recovery
- Urban farmers and food growers
- Community spaces
- Governance
- Education
- Other

Community spaces Creative industries Education Environmental initiatives Governance

Industrial manufacturing New & old crafts Other Research & innovation Resource recovery Retail & trade

Research & innovation Urban farming

© MapTiler © OpenStreetMap contributors

Help Feedback You updated description for map Your Circular Eco...

**KUMU replication template that can be linked to your stakeholder map**



Workshop  
template to  
explore  
circular  
opportunities  
with  
stakeholders

# FINDING CIRCULAR OPPORTUNITIES WORKSHOP





# Early outcomes

- Lessons learned/ open questions:
- Creating awareness as important starting point
- Balancing interests and moving between scales: Connecting grand challenges to local needs
- Upscaling: defining the role of makers in circular systems
- Anticipated impact
- etc.





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