

TEHDASSAARI

INNOVATION DISTRICT

A concept by **CIRECO**
Circular Economy

Where **the economy** **of the future is** **taking shape**

We're transforming the historic factory site of Nokia Finland into a new hub for circular economy innovation. Come join us!

Twin crises — people & planet

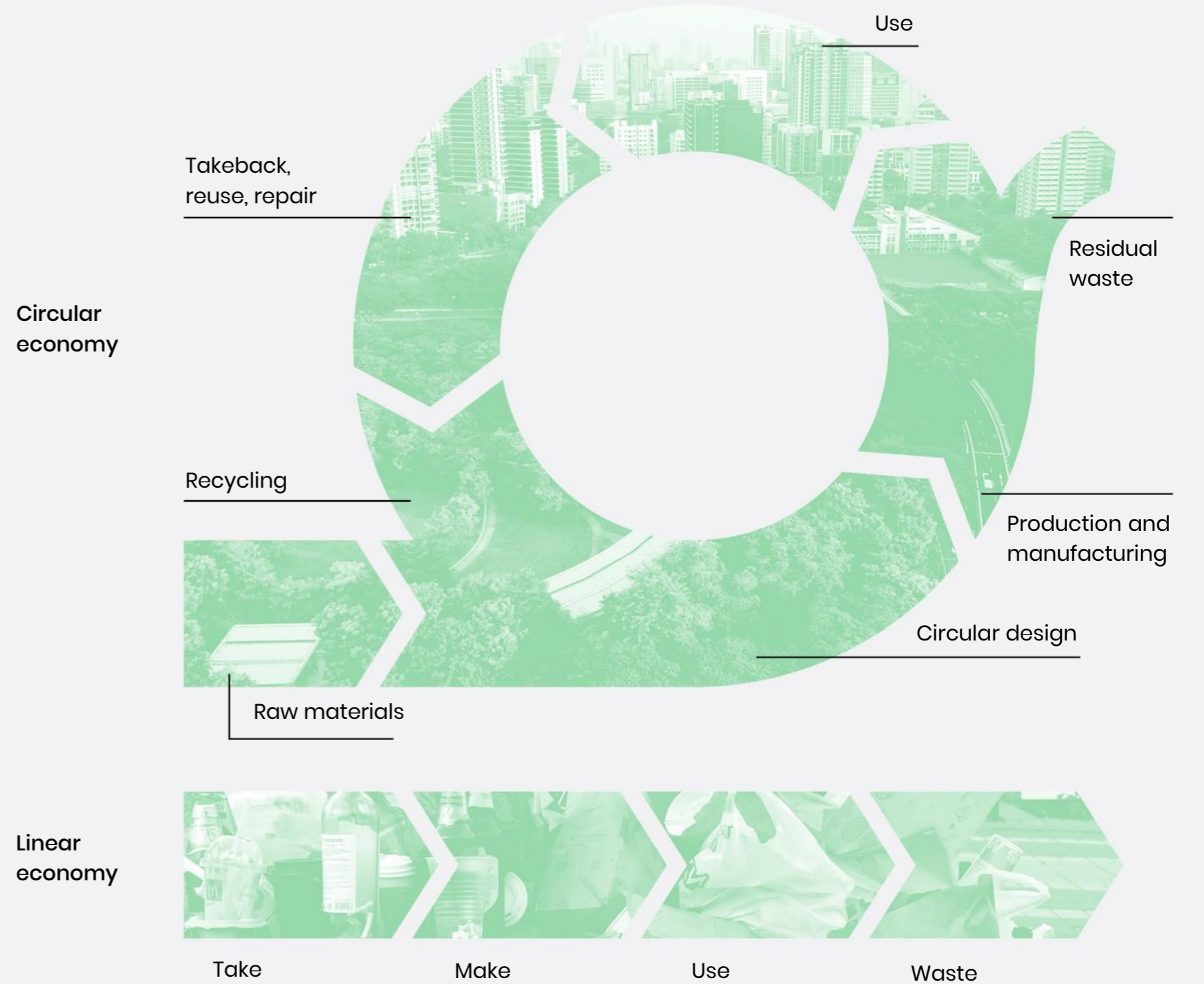
Towards the middle of the century, as the world's population approaches 10 billion, the global building stock is expected to double in size.

Buildings are currently responsible for 39% of global energy related carbon emissions: 28% from operational emissions, from energy needed to heat, cool and power them, and the remaining 11% from materials and construction.

We are facing twin crises in our cities: of social inequality and environmental degradation. To keep our planet liveable for future generations, we must transform our built environment to be more inclusive, liveable and affordable.

We are Cireco

Cireco is a new kind of developer for the circular economy. We foster high-quality area development and infrastructure projects that produce zero emissions, use bio-based materials, and are circular by design



We decided to take action in our own backyard

Tampere

Nokia



Tehdassaari

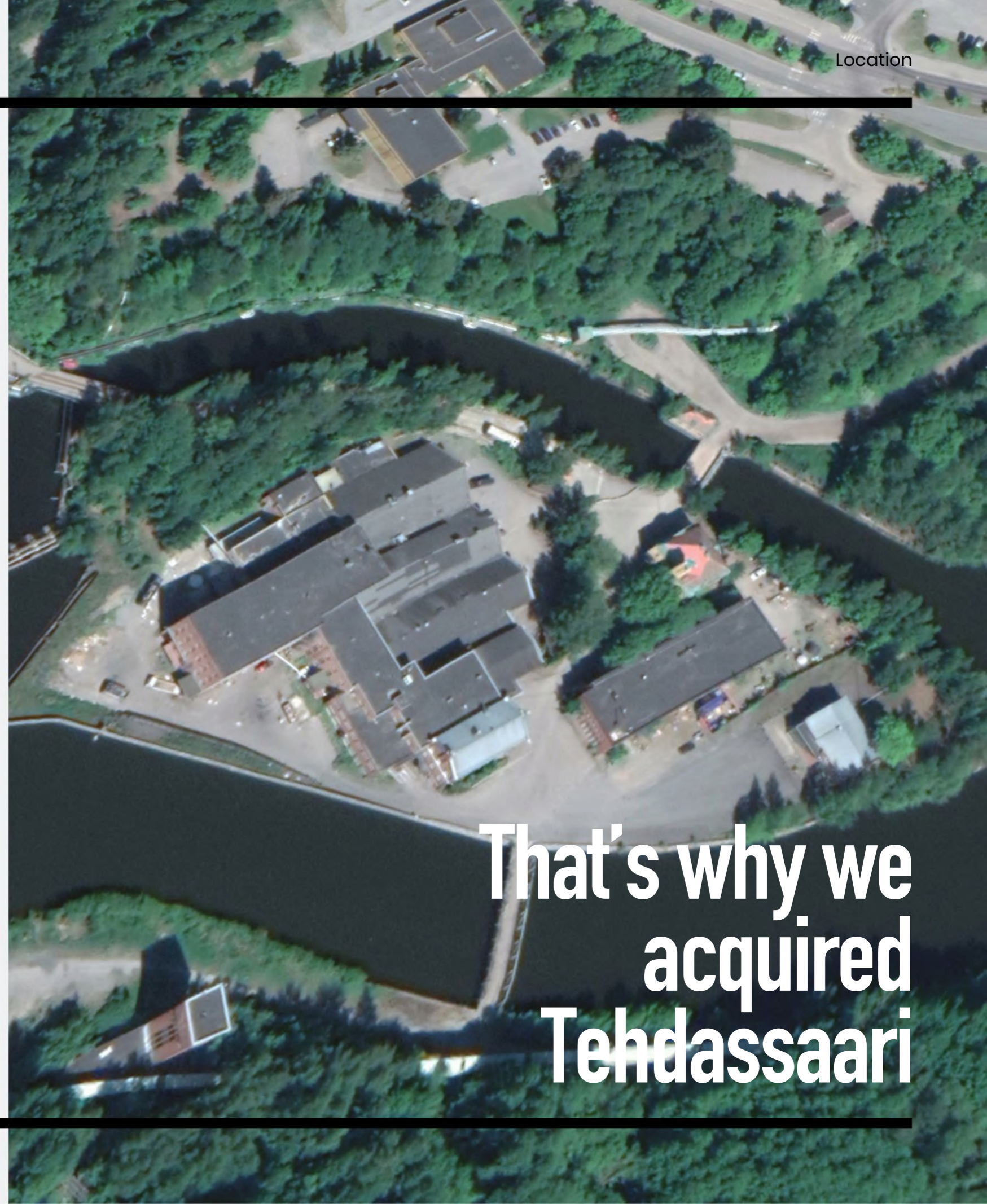
Distances

Tehdassaari–Nokia Railway Station: 1km

 6 min  13 min  14 min

Nokia–Tampere: 15,5 km

 24 min  31 min  51 min



That's why we acquired Tehdassaari

Tehdassaari has a long history

1.0

1750–1830 First industrial revolution

The first Industrial Revolution was mostly confined to Britain. It industrialized the manufacture of textiles and began to move production from homes to factories. Steam power and the cotton gin played an important role. In Finland, the bank of the Nokia river – the future Tehdassaari – is still an undisturbed area overgrown with wild nature.

2.0

1850–1913 Second industrial revolution

In the second Industrial Revolution new technologies were introduced, like electrical power and telephones, and production was standardised. Industrial activity began by the Nokia river in 1868, when Fredrik Idestam established the country's fourth groundwood mill. The Nokia company was founded in 1871 as a pulp mill and was long associated with rubber and cables.

3.0

1950–2000 Third industrial revolution

Beginning in the 1950s, the third industrial revolution brought semiconductors, mainframe computing, personal computing, and the Internet – the digital revolution. In Tehdassaari the red brick buildings housed the factories' headquarters and production plant from 1922 to 2001, producing board, paper and sulphite cellulose.

The fourth industrial revolution moves us from a linear to circular economy

4.0

2000 - Fourth industrial revolution

We now find ourselves in the early stages of another industrial revolution, one with the potential to radically transform our society, our economy and our relationship with resources.

Key features



Open design
Design as code,
code as design



Digital fabrication
From centralised
to distributed
manufacturing



Automation
Taming complexity,
eliminating repetitive
work, threatening
jobs



Data
Internet of things,
enabling us to
understand and
control the
performance of
products and places

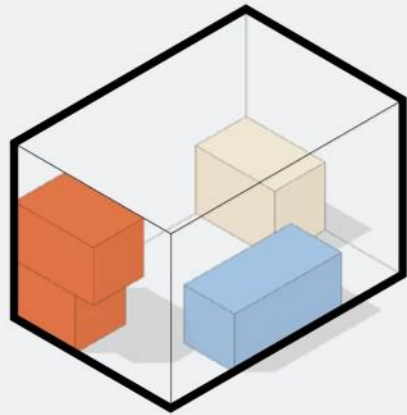


Tehdassaari will be an **innovation district** for circularity

“If we could build an economy that would use things rather than use them up, we could build a future.”

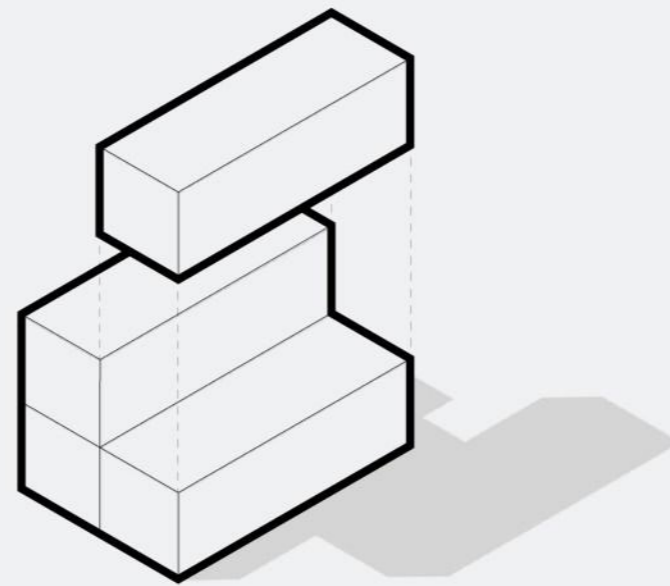
– Ellen MacArthur

Circular innovation across domains



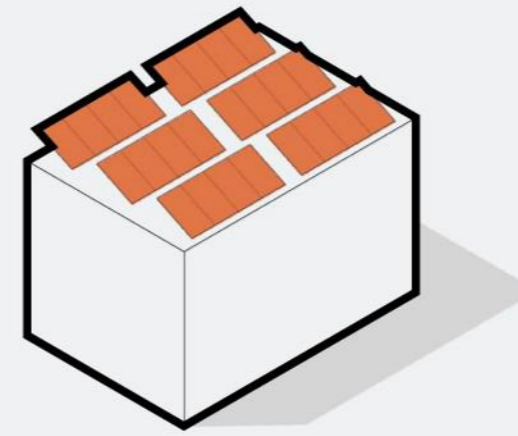
Flexibility

We aim to meet the needs of the present while being ready for future uses. By designing a fixed structure with modular interior elements, we can adapt to changing market demands. This means minimum investment into remodelling in the future with maximum use of space.



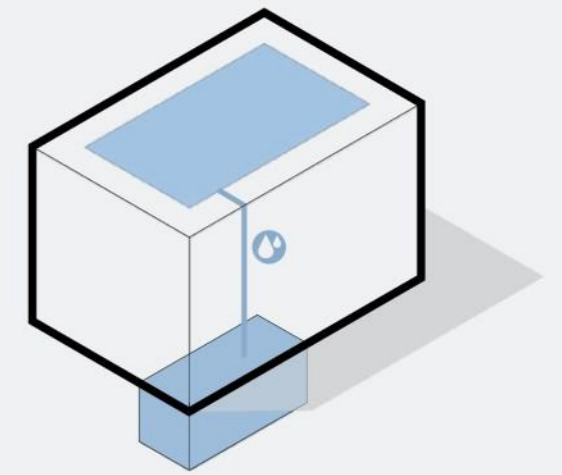
Disassembly

New structural solutions enable elastic development of the block, and recycling of building components. Design for disassembly from the concept stage allows us to minimise demolition waste and keep the residual value of materials throughout their whole life cycle.



Energy

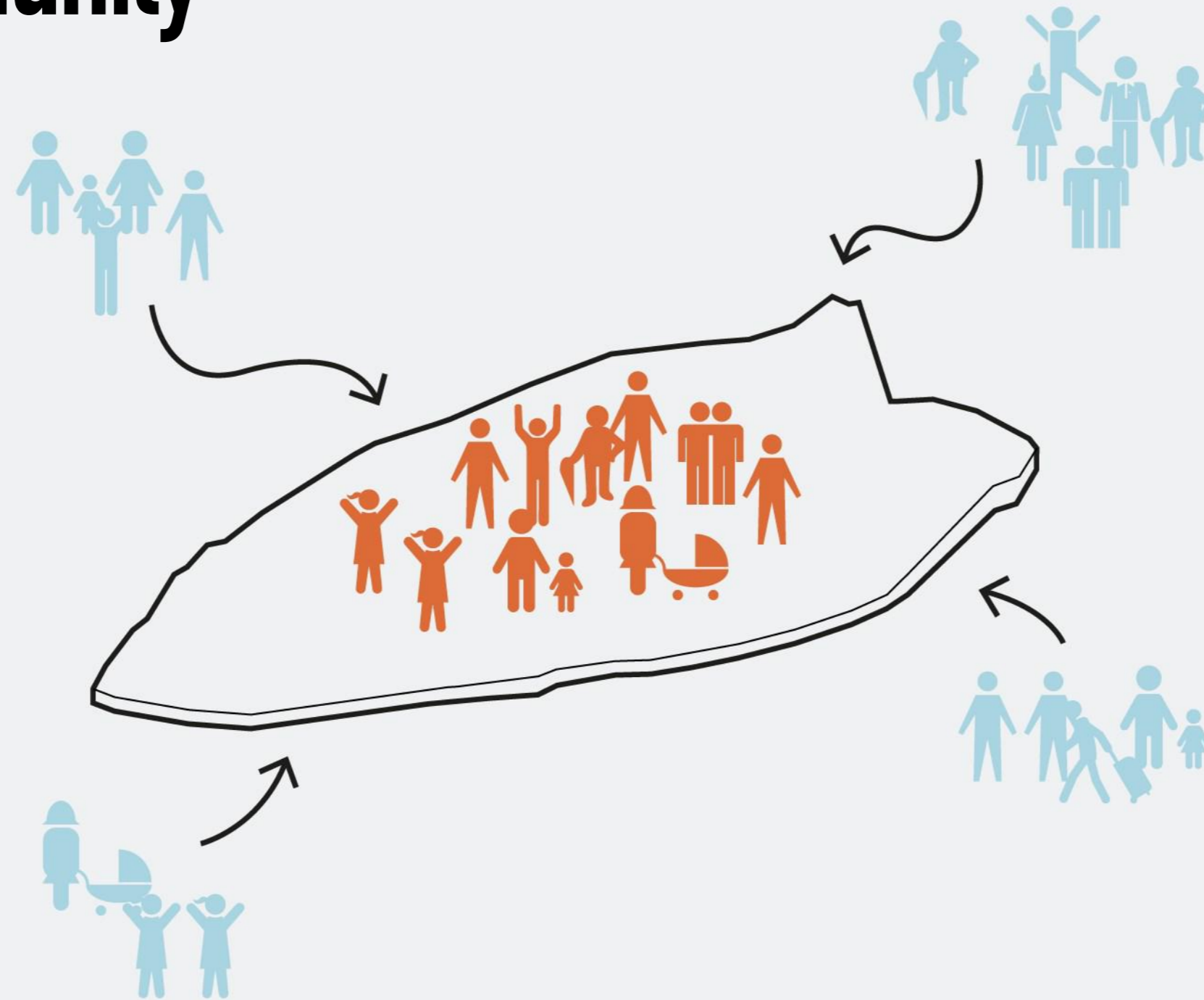
We analyse local conditions to identify the most sustainable energy production solution available. We harness energy from renewable sources such as ground heat, sun, wind or water using innovative solutions, at the same time as minimizing demand from buildings.



Water

We implement water saving technologies such as rainwater collection through microfiltration, grey water reuse or vacuum drains. Combining systems saves money on operations, while using local potential generates savings on water treatment and transportation.

We do it together with a strong community



Opening the island to the public

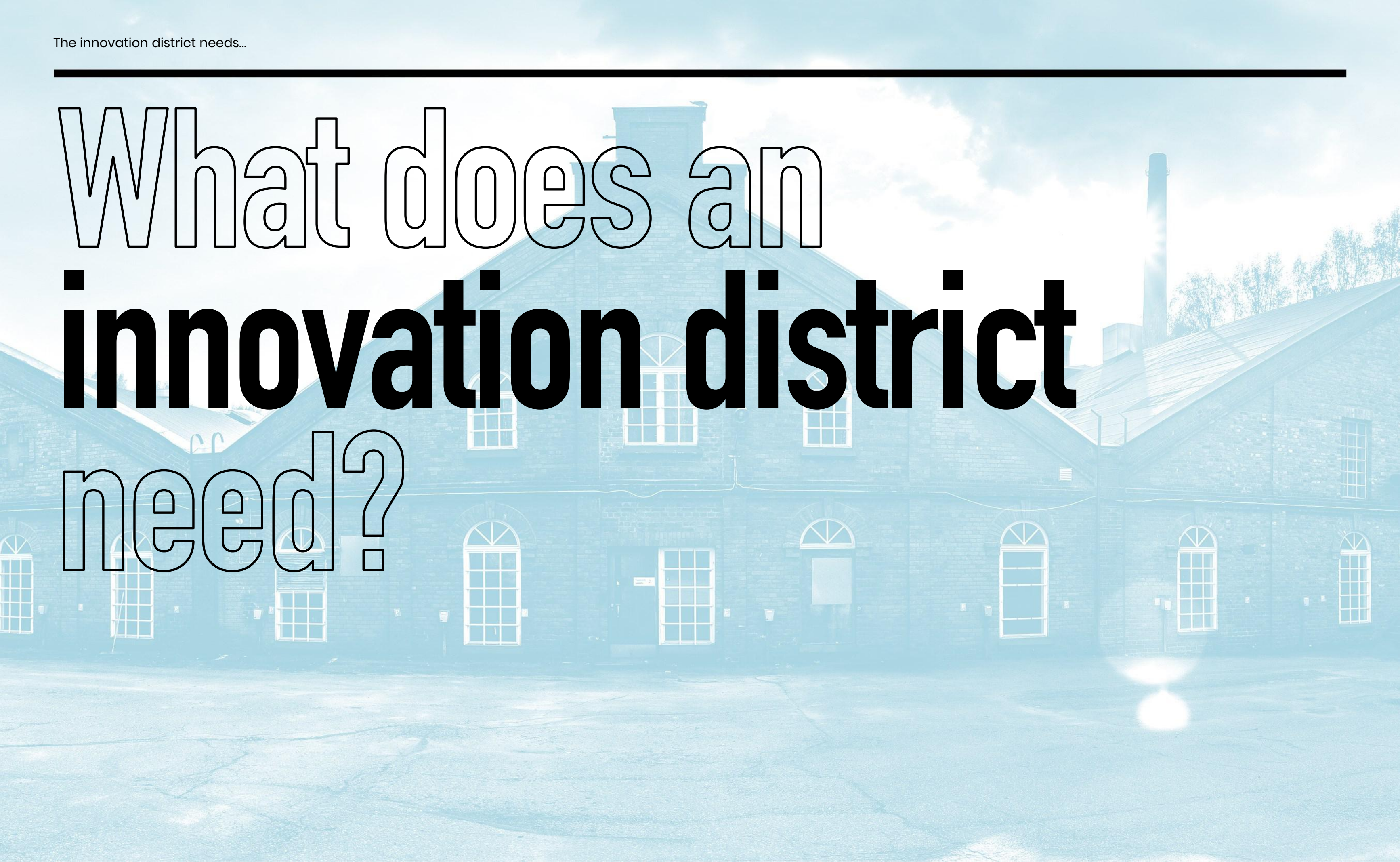
After being privately owned for a long time, we now open Tehdassaari to the public! Amazing nature, historical background, and new events and activities will make Tehdassaari a destination to visit on weekends, be there on a regular basis for work, or come occasionally for a circularity workshop.

Building a strong community

We want to bring pioneering people together to realize our dream. By involving the community in the development of the island we strengthen the connection between people and place. And co-creation does not stop there; the community remain active placemakers of the innovation district buildings and public spaces over time.

The innovation district needs...

What does an **innovation district** need?



1

Open manifesto

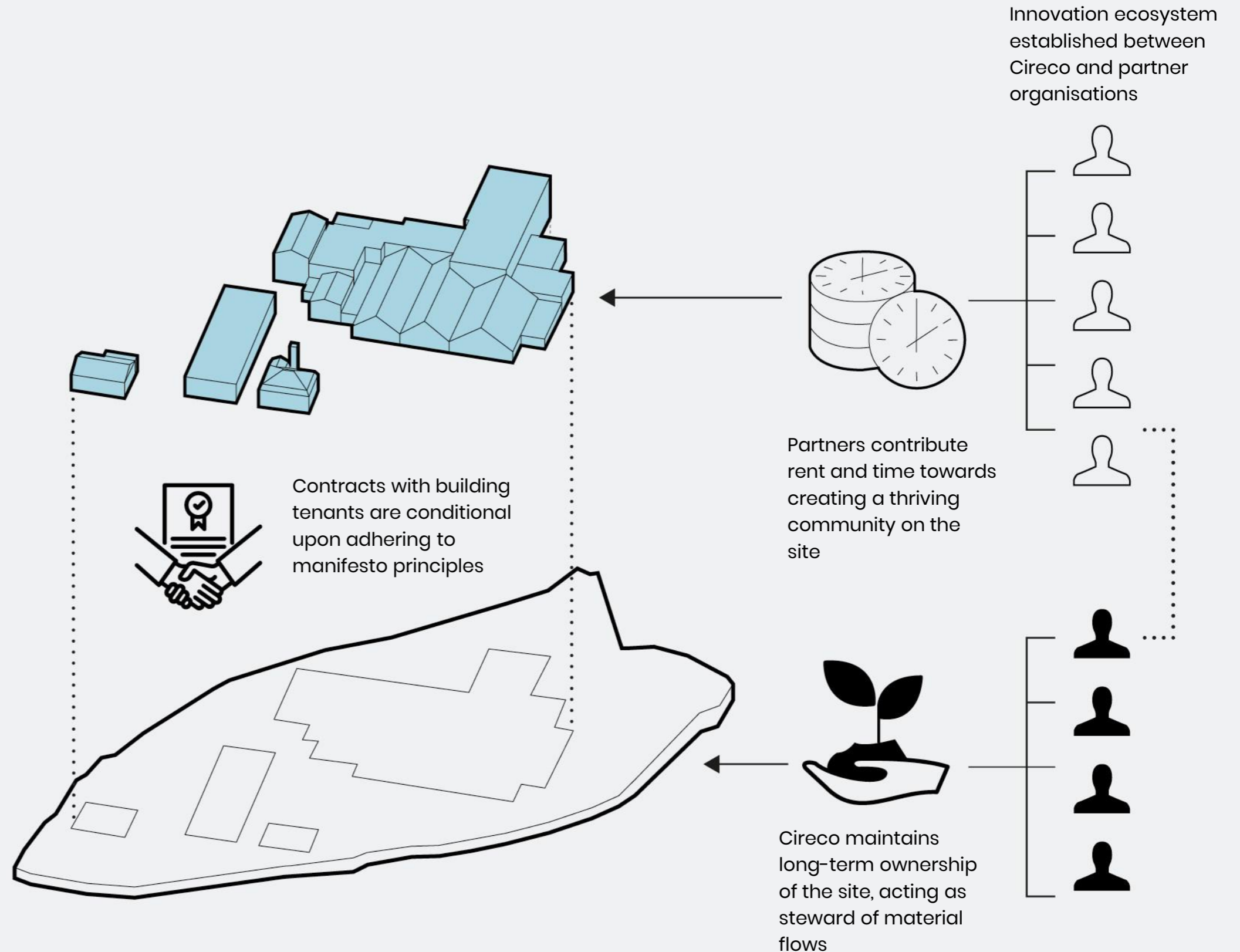
We will transform Tehdassaari from yesterday's linear economy into tomorrow's circular economy using a set of transformative principles. If you join us on our mission, you'll co-create our manifesto with us.



2

Business model for long-term value creation

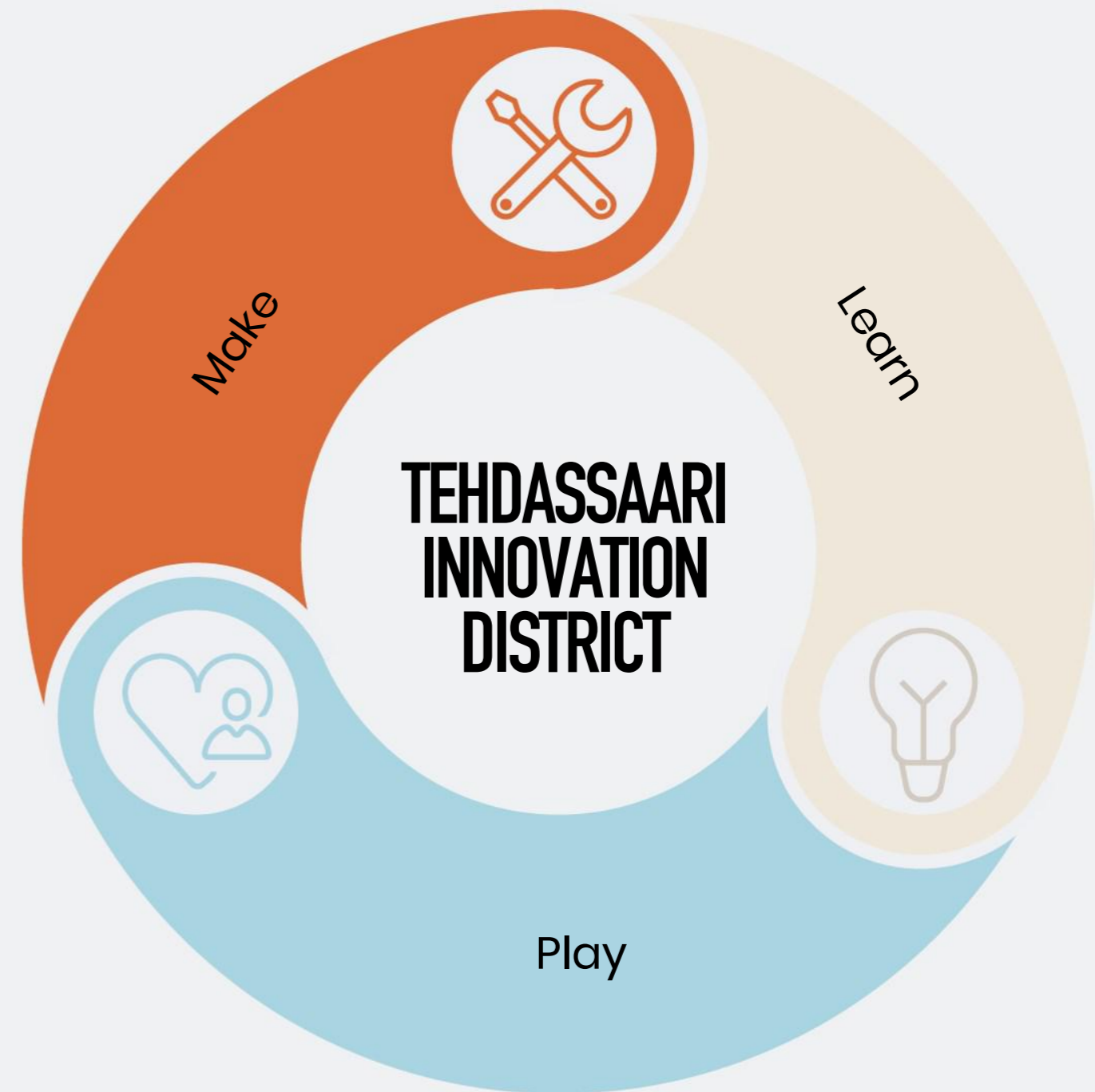
By retaining ownership of both land and buildings and renting space according to our manifesto, Cireco guarantees social and ecological value creation in perpetuity.



3

Spaces in which people make, learn and play

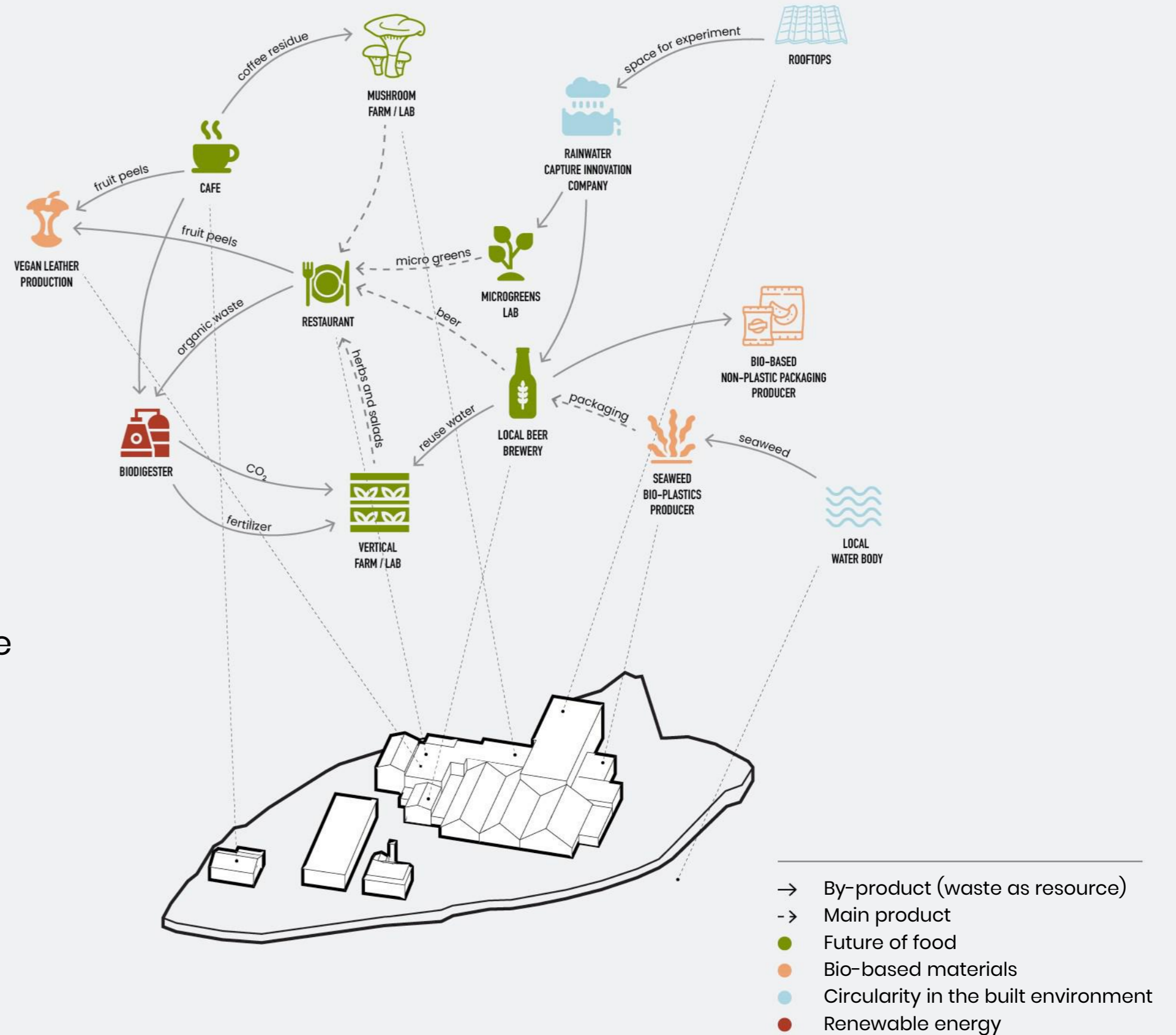
By combining making, learning and playing on the island, we create an destination that is much more than just a workspace. On-site facilities like a gym, wellness centre, bio food cafe, and art gallery all contribute to a platform for eco-social wellbeing.



4

Circular by design

We identify local potential by analysing material flows in the surrounding region and identifying under-utilized waste. Reusing these resources on site enables us to close loops and reduce our environmental impact.

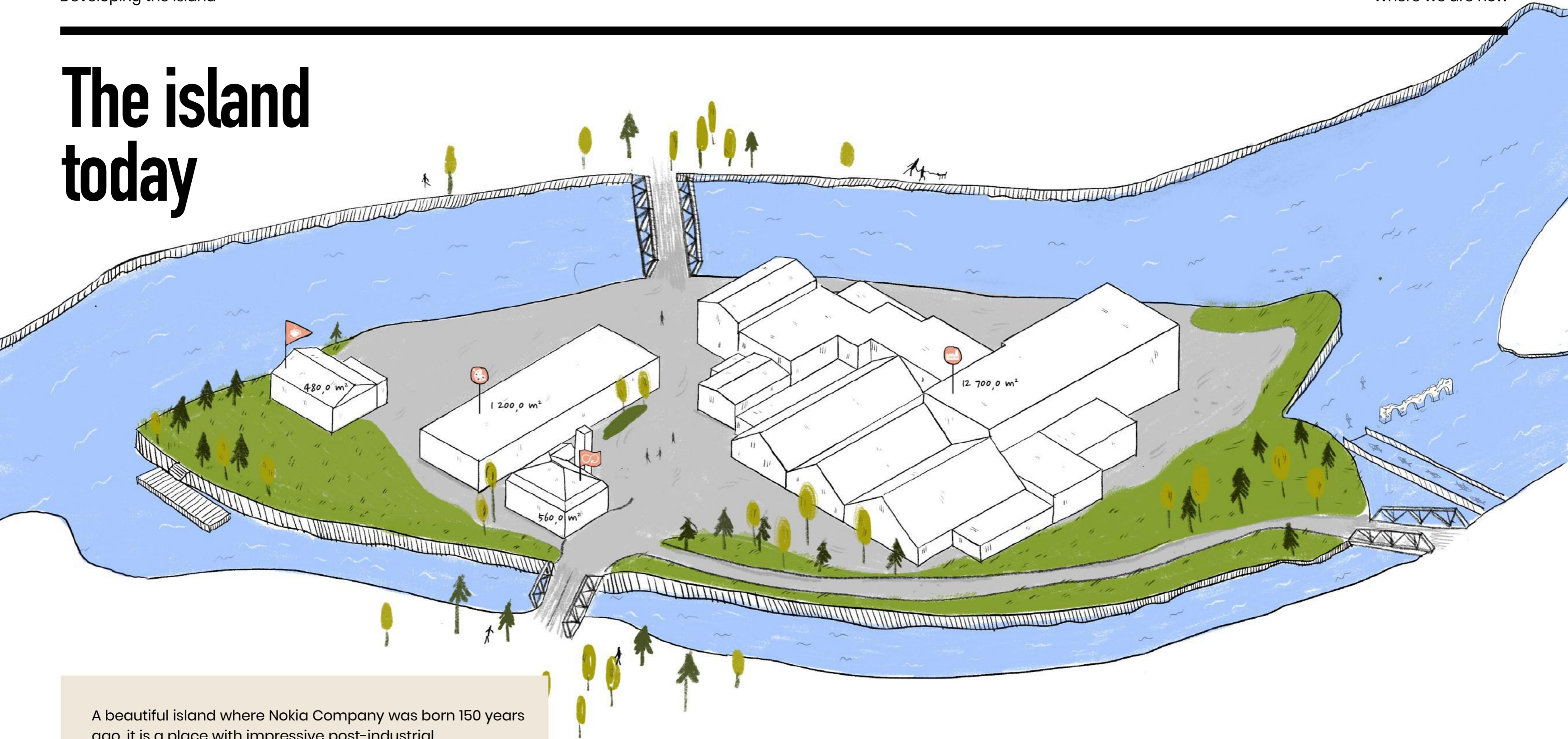


How do we
develop the island?

“The future is not a destination – it is
a direction.”

– Ed Catmull

The island today



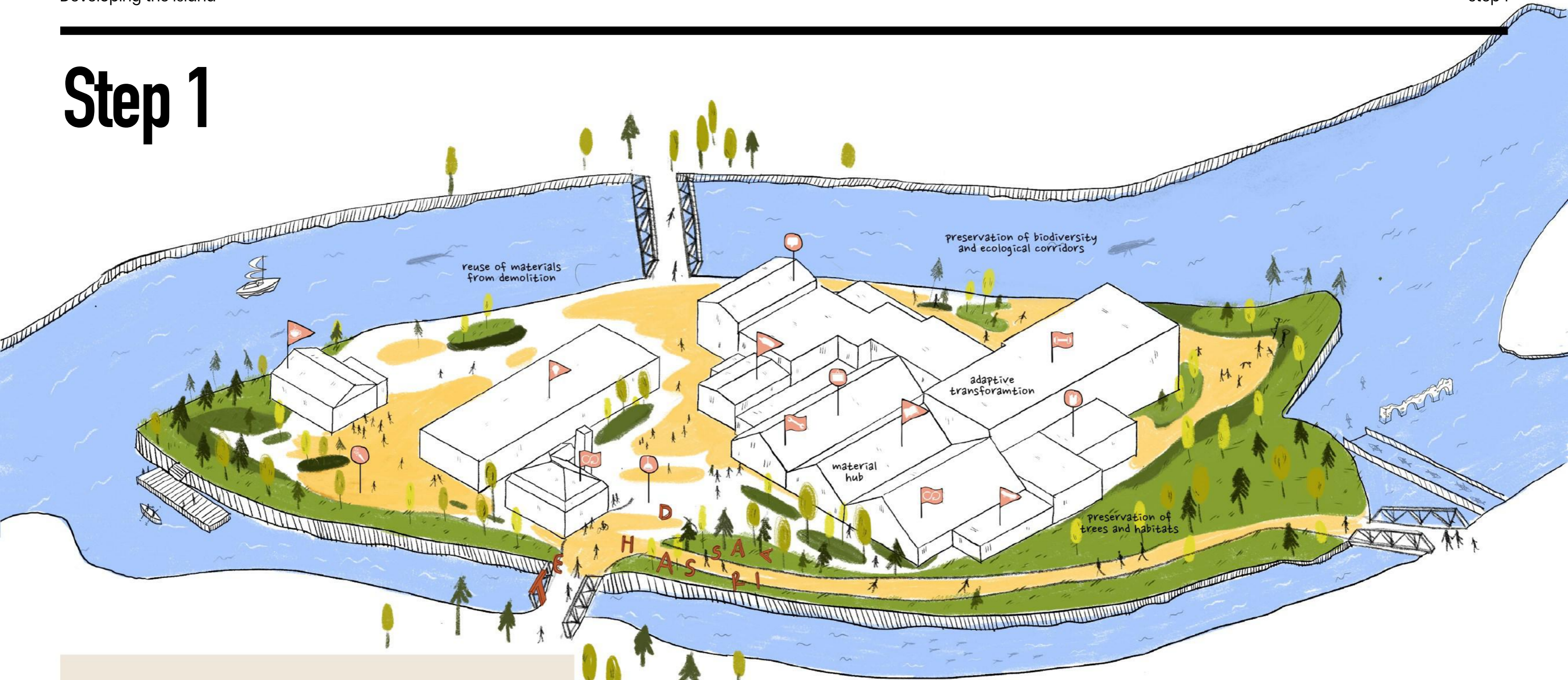
A beautiful island where Nokia Company was born 150 years ago, it is a place with impressive post-industrial architecture. The heritage won't be forgotten, but there is space for change and innovation. Preserving the historic brick buildings and the nature that took over the river banks would be a great start to a new chapter of Tehdassaari.

- ☕ Maya's café
- 🏭 Workshop
- 🔗 Cireco
- 🏠 Factory building

A destination for all



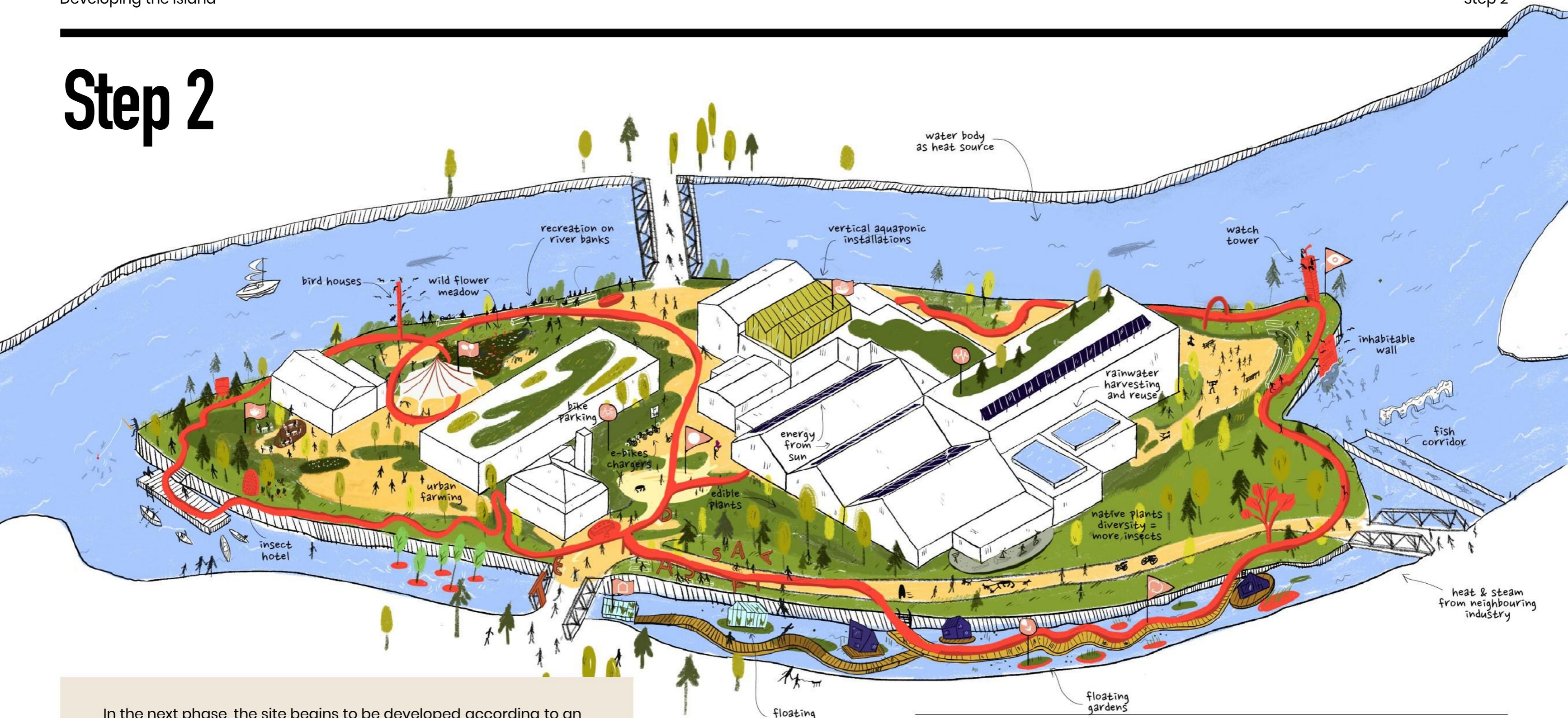
Step 1



The transformation has begun and we welcome visitors from Nokia and Tampere to the island everyday. They can explore, have a coffee or attend a wide variety of events. Moving towards a more circular future for the island means taking out hard pavings and seeding more green and biodiversity, forming new public spaces for outdoor activities, events and community installations.

- | | | | |
|-------------------|-----------------------|-------------------|------------|
| Art cafe | Flea market | Repair cafe | Gym |
| Local food market | Conferences & meeting | Vocational school | Bar |
| Creative space | Brewery | Cireco | Skate park |
| Cireco HQ | Art gallery | | |

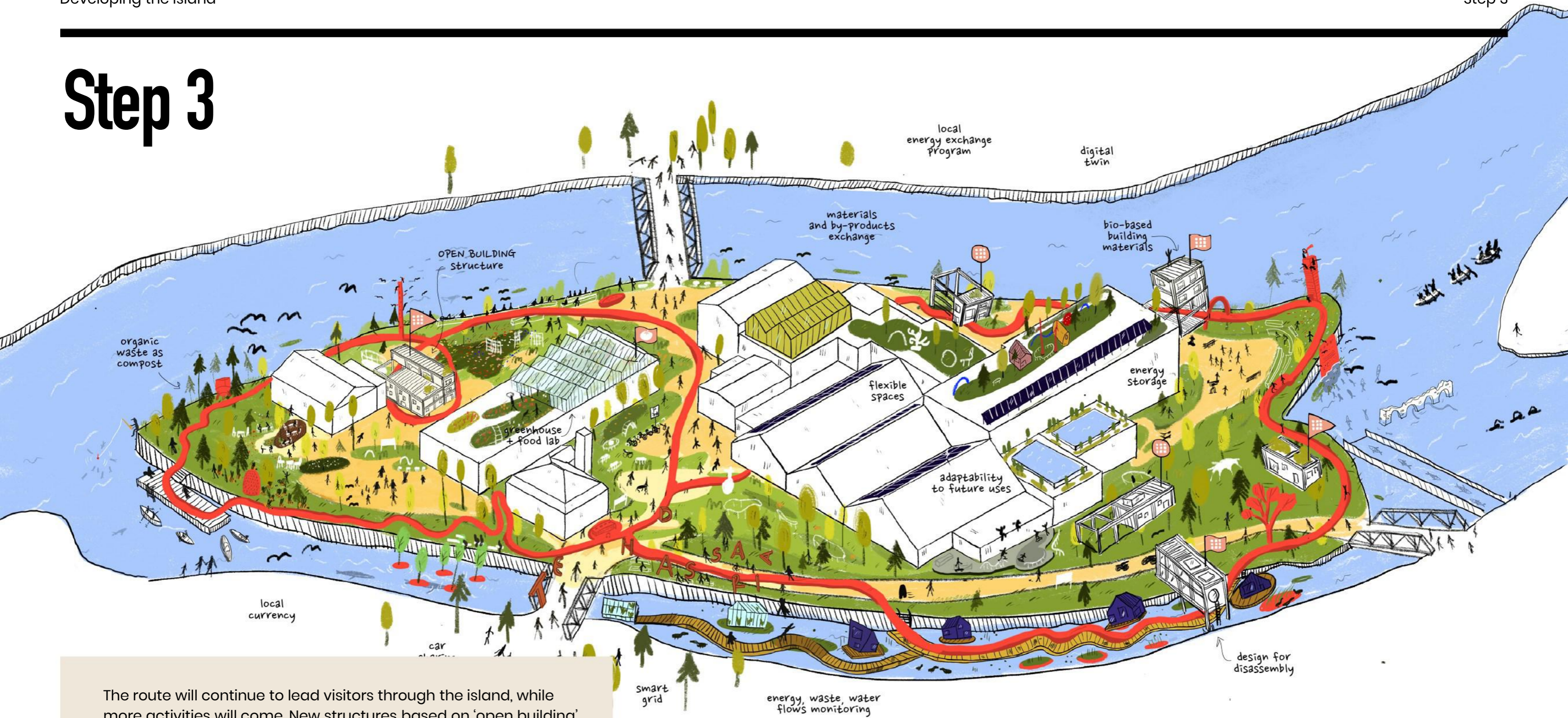
Step 2





In the next phase, the site begins to be developed according to an adaptive urban framework and the Living Lab opens its workspaces to first tenants. An interactive educational route is placed around the island, a way to explore the latest innovations in circular economy. Along the route visitors interact with floating gardens, inhabitable walls, watch tower, insect hotels and more.

- | | | | | | |
|---|----------------------|---|--------------------|---|----------------|
|  | Coffee garden |  | Main square |  | UN SDG's route |
|  | Event space |  | Rooftop restaurant |  | Watchtower |
|  | Bike parking |  | Living lab | | |
|  | Floating greenhouses |  | Floating garden | | |

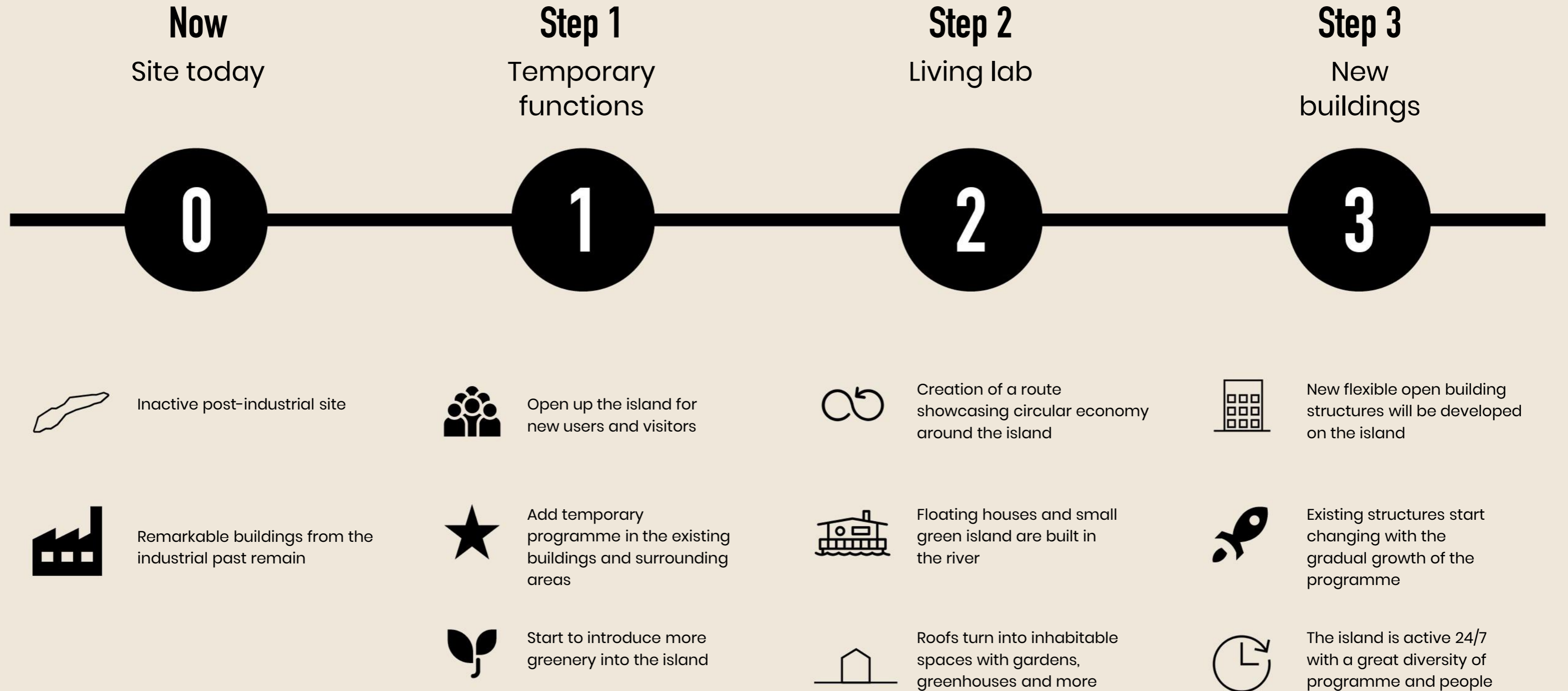
Step 3



The route will continue to lead visitors through the island, while more activities will come. New structures based on 'open building' principles are built around the edges of the island, made with bio-based materials which allow for constant adaptations to new functions in the future. The Living Lab is fully developed, flourishing with innovative start-ups and entrepreneurs inspired by the potential of the island and its capacity for constant evolution.

-  Greenhouse & Food lab
-  Open building structure

Roadmap



A place to experiment



Join us and
become a
partner!

**“The path to big systemic change is
collective action.”**

- Gloria Feldt

Join us

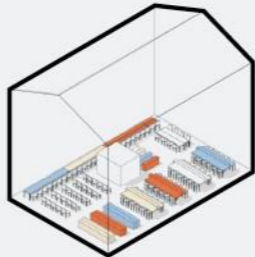
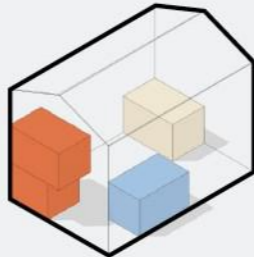
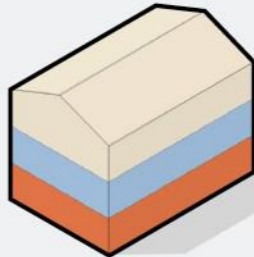
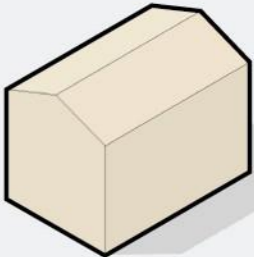
A vibrant working place

A place for unexpected synergies



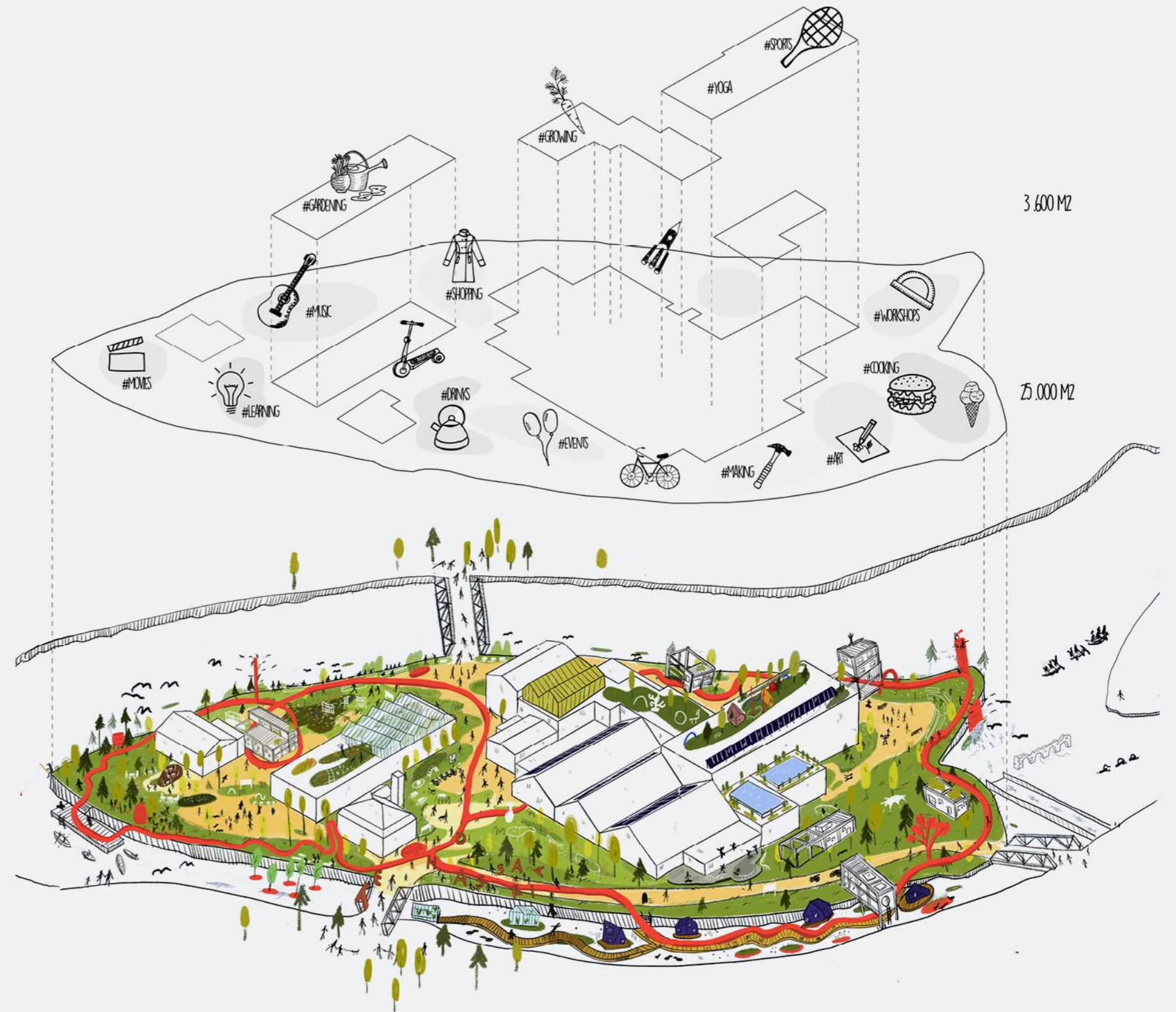
Choose a space...

Are you a circular economy innovator? Whether you're an individual entrepreneur, a start-up or an established institution, we have space for you on the island.

	XS	S	M	L
				
	Shared, furnished workspace	m3 of space in a shared area	Private workspace in a building	Entire building in the island
24/7 access	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Private access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Customisable space	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Access to meeting rooms	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Private meeting rooms	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Printing service	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Tool rental service	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Use of kitchen	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Storage space	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Internet connection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Access to free events	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Restaurant & cafe	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

... or a place!

Waterfronts, sunny courtyards, leafy gardens, and even rooftops are ideal places for innovations and events to pop up. By offering these public spaces to our partners to develop we create an active neighbourhood centred on people and planet alike.



Be part of the process

In contrast to a traditional development process, our approach involves lots of community participation. We believe everyone should be agents of change. Join us to co-design our dream together!



Become a partner

Join us in our mission of transforming Tehdassaari into an innovation district for circularity. Our growing ecosystem includes companies, universities and institutions alike. Get involved!



TEHDASSAARI INNOVATION DISTRICT

JOIN US ON OUR MISSION

A concept from: **CIRECO**
Circular Economy

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