

FUTURE
BUILT



Grønn
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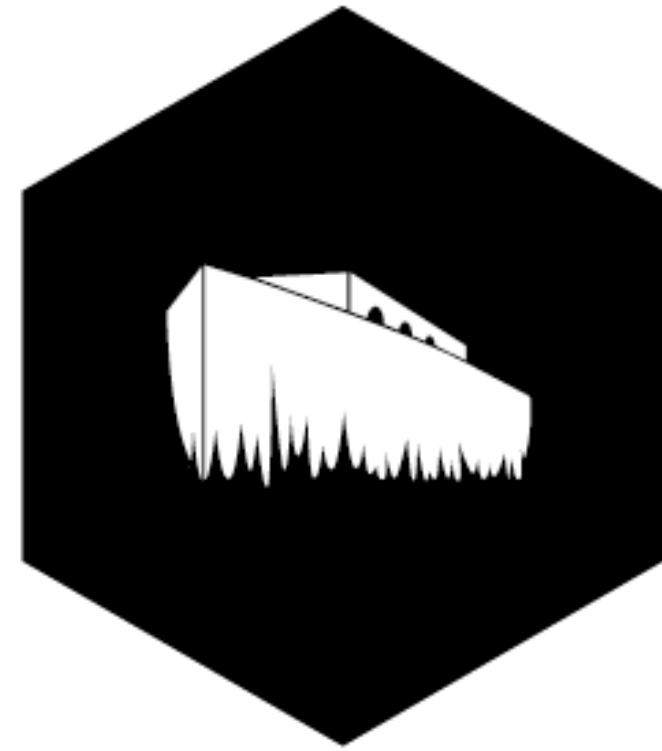
Snøhetta

Inspirational Projects from the Netherlands.
20th June 2018



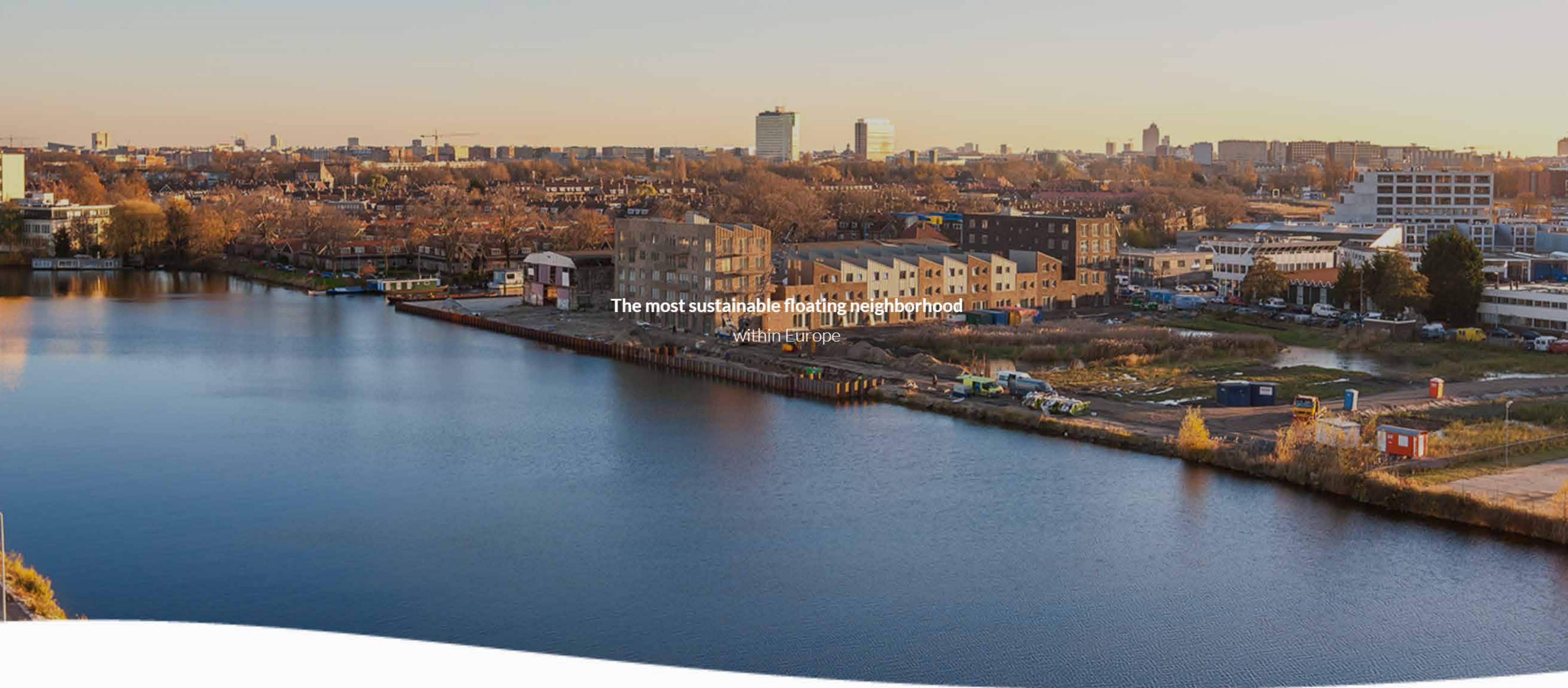
Schoon Schip

AMSTERDAM



SchoonSchip, Amsterdam, the Netherlands



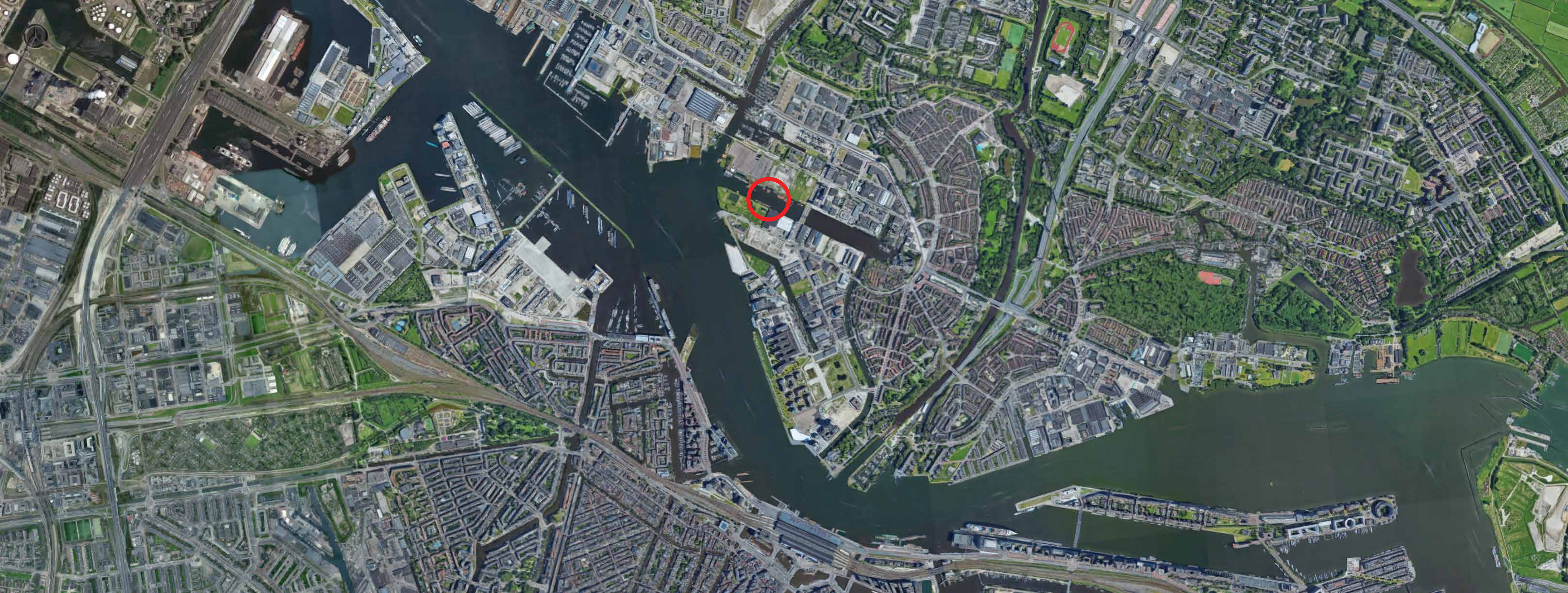


The most sustainable floating neighborhood
within Europe

Where

What

How



Where

Johan van Hasselkanaal, a side canal from the IJ-river. In the years to come this will be the home of a floating neighborhood project. Literally, Schoonschip can be translated as clean ship.



105

—
INHABITANTS



500

—
SOLAR PANELS



30

—
WARM WATER PUMPS



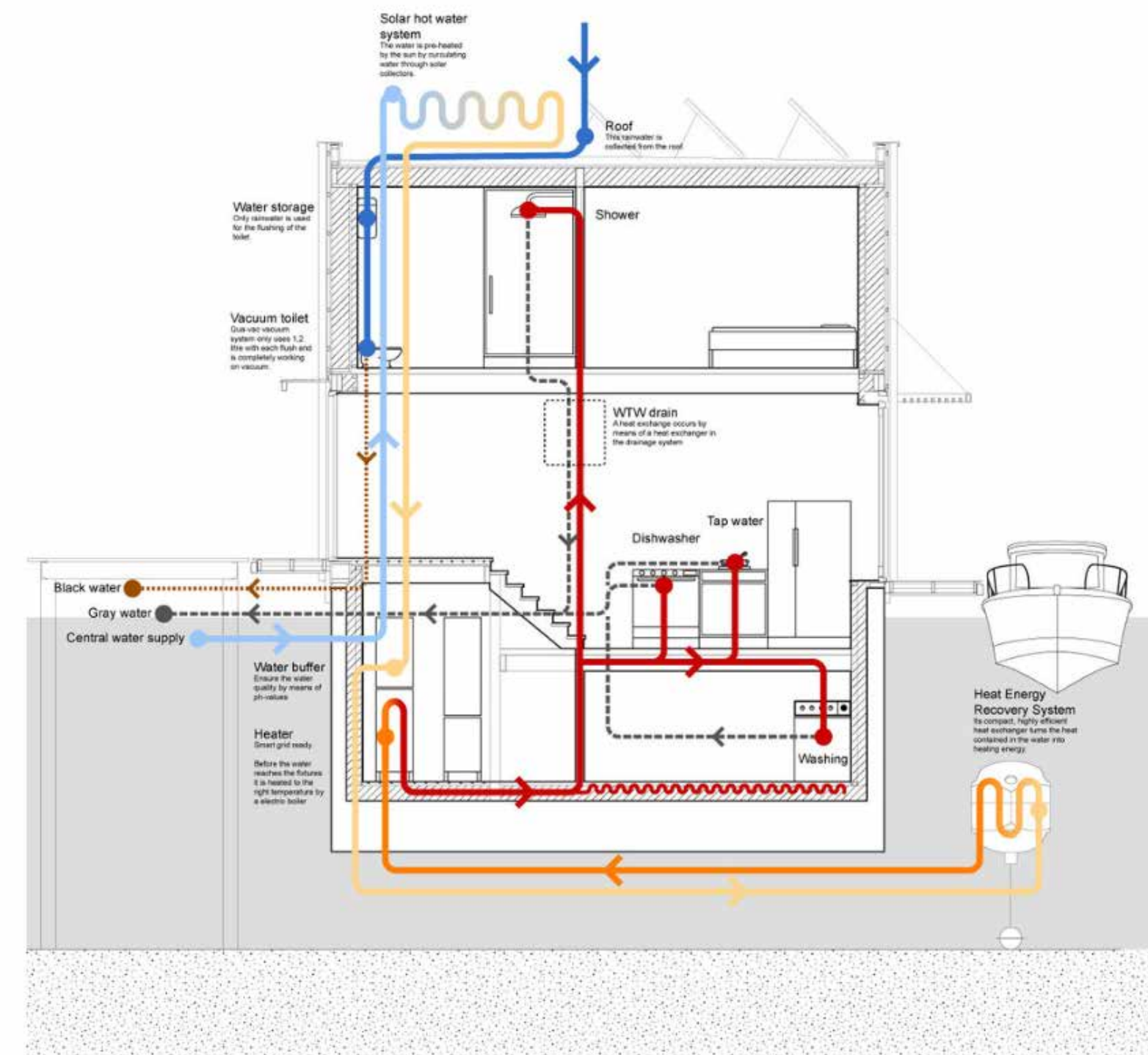
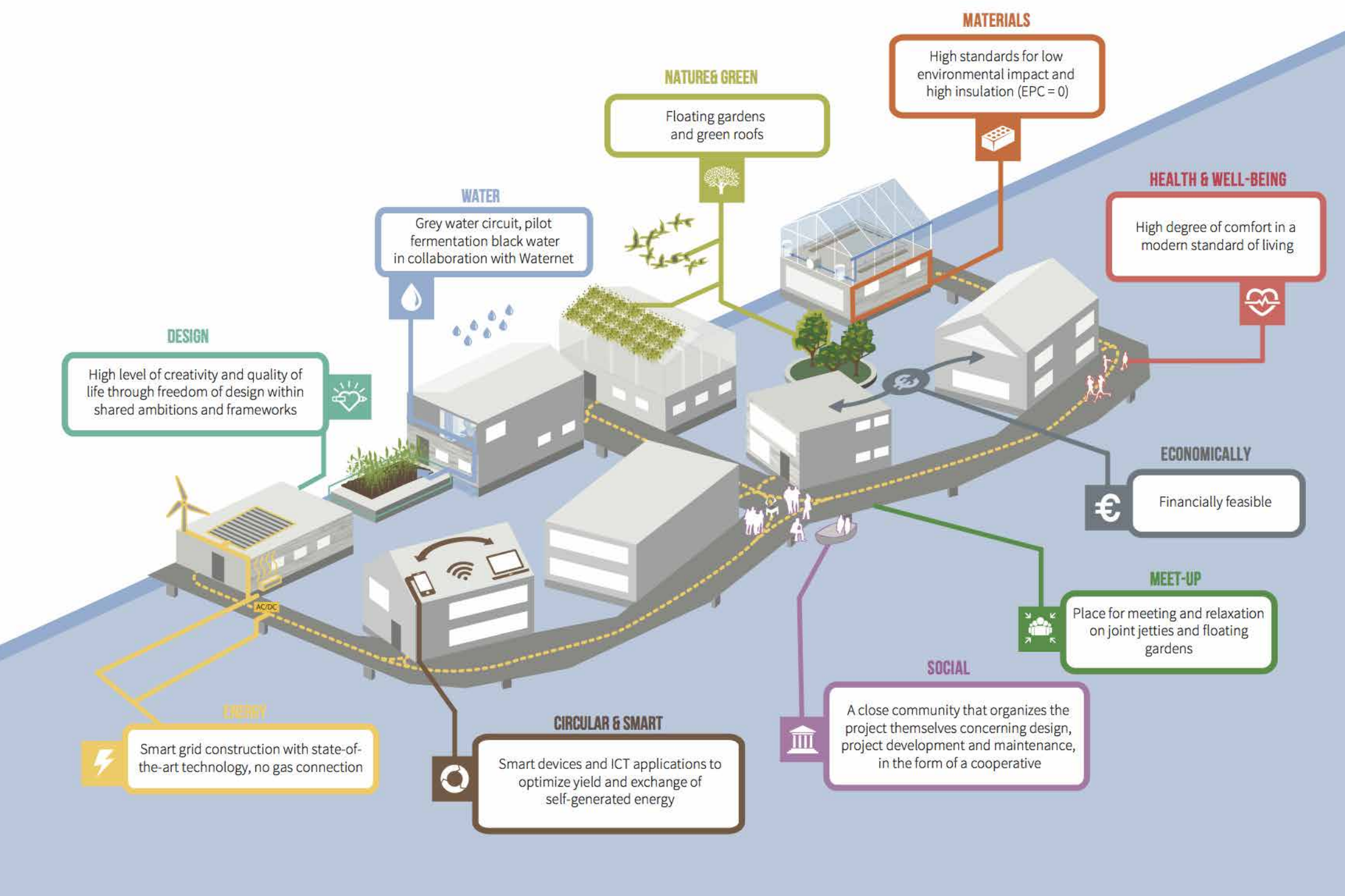
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USE OF GAS

What

The neighborhood consists of homes for 46 households and a community center on 30 floating plots. The first of the water homes will be realized in 2018, and by 2020 the most sustainable floating neighborhood in all of Europe, with in total 46 households and more than 100 inhabitants, will become a reality!

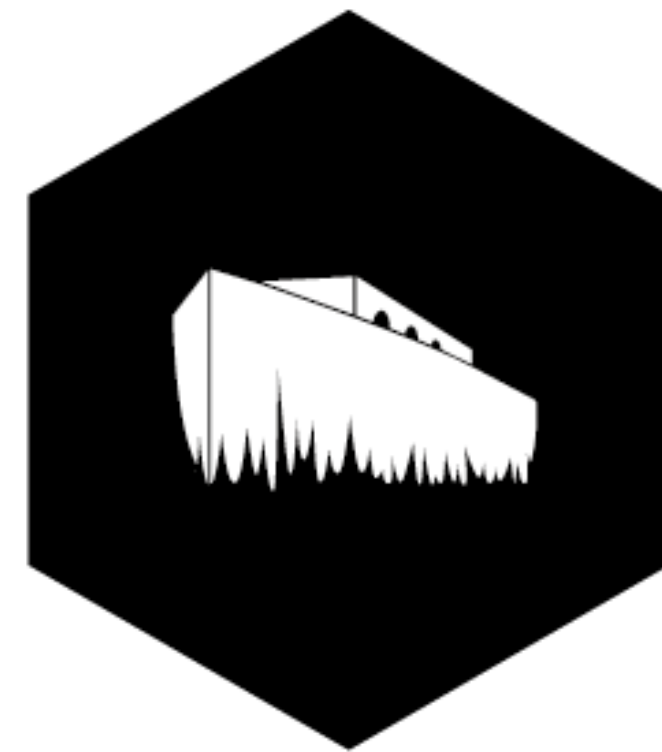
Schoonschip is being developed in Buiksloterham, a neighborhood in Amsterdam-North where the robustness of old industry meets new sustainable building projects



- The water homes are well-insulated (EPC (Energie Prestatie Coëfficiënt) = maximal zero) and will not be connected to the natural gas network.
- The heat will be generated by water pumps, which extract warmth from the canal water, and passive solar energy will be optimized.
- Tap water will be heated by sun boilers in warm water pumps; all showers are equipped with installations that recycle the heat (WTW).
- We are producing our own electricity with photovoltaic solar panels. Every household has a battery in which temporarily unneeded energy can be stored.
- All water homes are connected to a communal smart grid. This smart grid makes it possible to trade energy efficiently amongst the households. 46 households will share only one connection to the national energy grid!
- Gray water (i.e. washing machine) and black water (i.e. toilet) will be 'flushed' by a separate source of energy. Waternet will eventually include us in their pilot project, which delivers the toilet water to a bio-refinery, in order to ferment it and transform it into energy.
- All homes will have a green roof covering at least one third of the roof's surface.

How

De Ceuvel, Amsterdam, the Netherlands



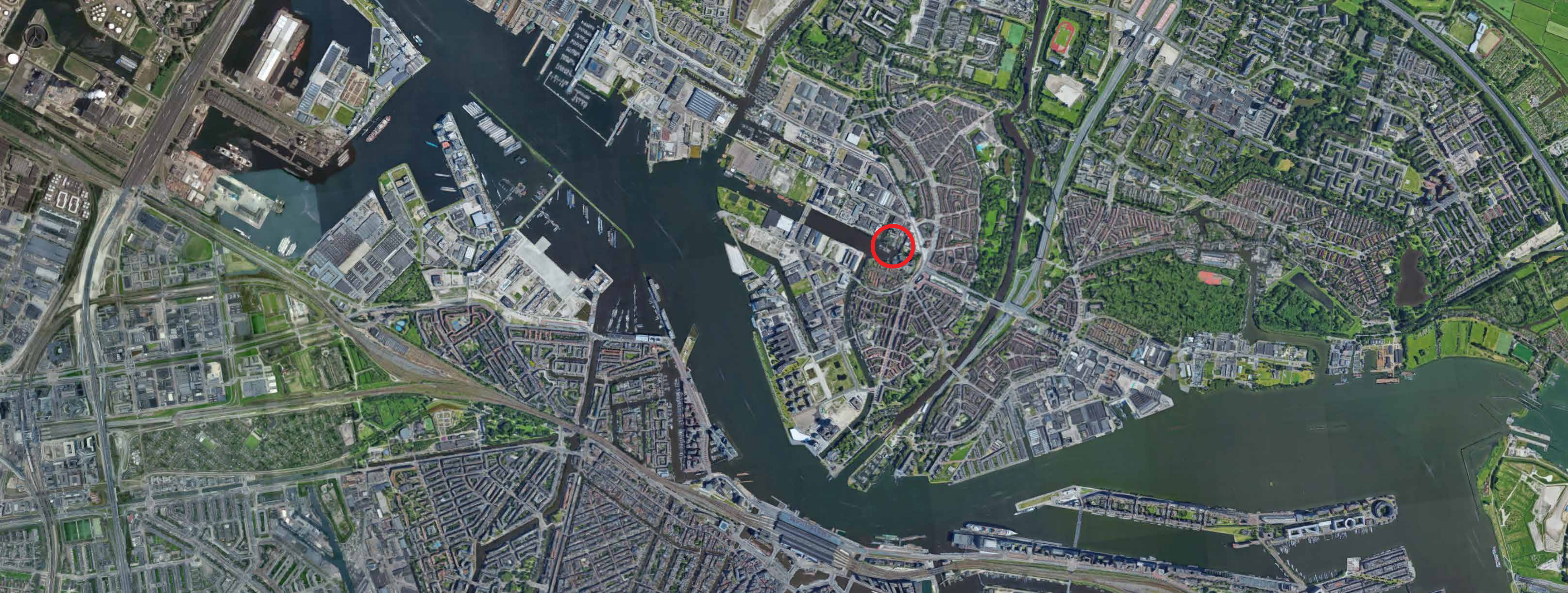


WELCOME TO DE CEUVEL

Where

What

How



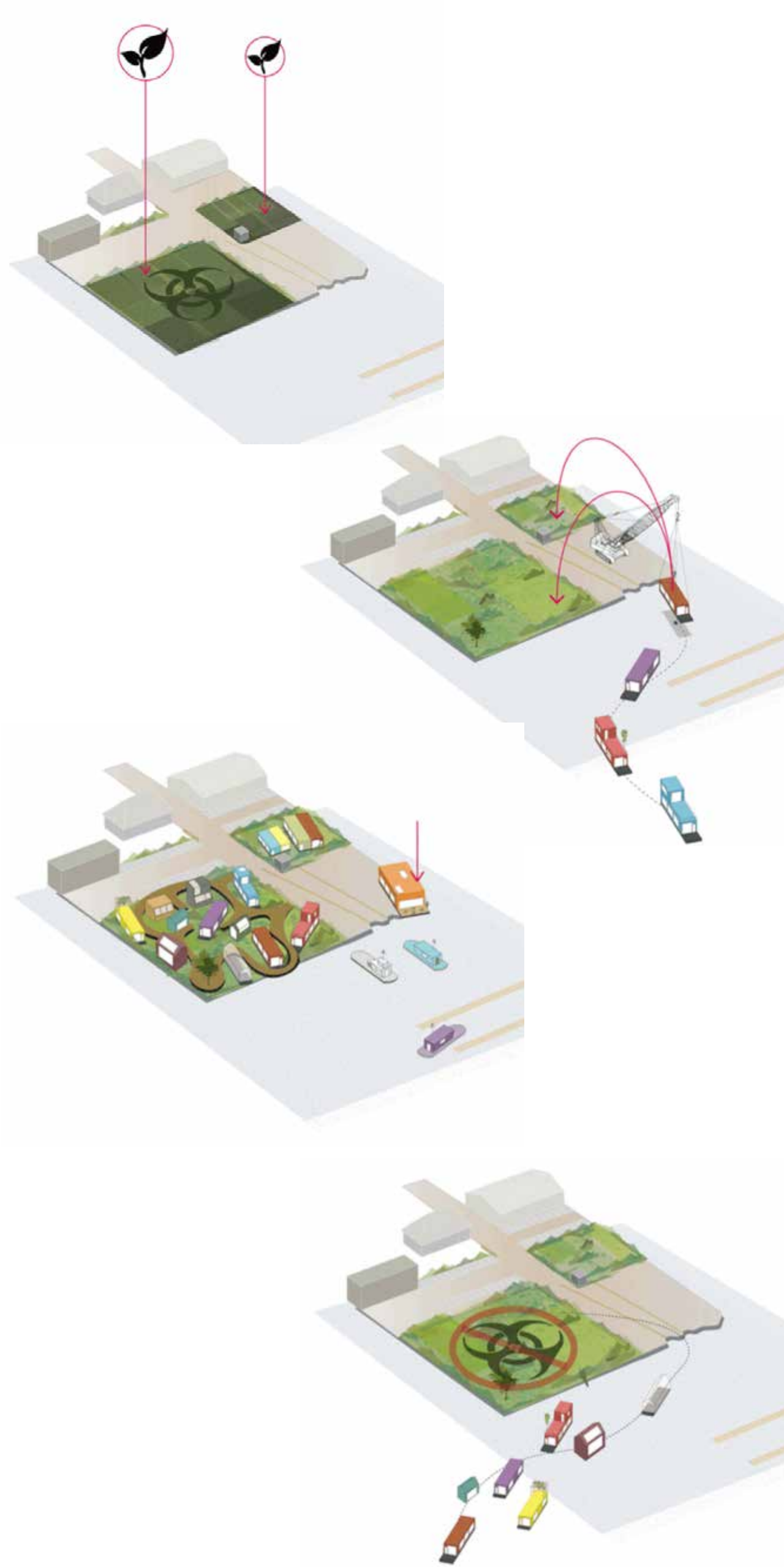
Where

De Ceugel is an award-winning, sustainable planned workplace for creative and social enterprises on a former shipyard on the Johan van Hasselt kanaal off the river IJ in Amsterdam.



What

On the former shipyard we have realized one of the most unique urban experiments in Europe. Old houseboats have been placed on heavily polluted soil, the workspaces have been fitted with clean technologies and it has all been connected by a winding jetty. Around the houseboats phyto-remediating plants work to clean the soil. De Ceugel is not only a “forbidden garden” which will leave behind cleaner soil, but also a playground for sustainable technologies. Through experimentation, we are as energy self-sufficient as possible and process our own waste in new, innovative way.



- **CIRCULAR BUIKSLOTERHAM**
De Ceuvel is situated in the old industrial area Buiksloterham and is one of the pioneers in the transformation of this polluted zone into a sustainable residential area. Metabolic together with the Municipality of Amsterdam, several real-estate developers, Waternet and many others involved in BSH have signed the Manifest Circular Buiksloterham.
- **COMPOST TOILETS**
Due to the pollution of de Ceuvel grounds, it was impossible to dig in order to lay a sewage system. Instead, each boat on De Ceuvel is equipped with a compost toilet. Waste is collected and pre-composts in the toilets before it is brought to our tumbling composter for further composting.
- **HEAT EXCHANGER**
Each office boat has a heat pump and an air-to-air heat exchange ventilation system. As warm air leaves the boat, over 60% of the heat is captured and circulated back inside.
- **HELOPHYTE FILTERS**
We process wastewater from kitchen sinks in decentralized helophyte filtration systems placed adjacent to each office-houseboat. Helophyte filters are simple constructions built using different layers.
- **PHYTOREMEDIATION**
Like many areas of Buiksloterham, the area underneath de Ceuvel is polluted by almost a century of heavy industry. Normally such polluted ground is removed and mixed with clean ground, thus moving the problem to another space. At de Ceuvel, a 'forbidden garden' was designed by DELVA Landscape Architects using plants that are known to be particularly good at absorbing these pollutants through their roots.
- **SOLAR ENERGY & THE JOULIETTE**
De Ceuvel is equipped with over 150 Photovoltaic (PV) panels that generate energy from the sun. The panels are installed on the majority of the office boats and produce around 36.000 kWh of power yearly.
- **STRUVITE REACTOR**
Organic waste streams including food and human waste contain nutrients necessary for plant growth. The effective use of these nutrient streams as fertilizer for urban agriculture can help close the nutrient cycle on local and urban levels. At de Ceuvel, we investigate methods for recovering nutrients from urine.
- **THE BIOGAS BOAT**
Café de Ceuvel is currently building the world's very first Biogas Boat. This boat has the ability to convert organic waste into biogas that will be used to cook with in the restaurant. In this way, de Ceuvel is taking its next step towards its mission to close as many loops as possible and to reduce its waste production, contributing to an increasingly sustainable circular economy.
- **UPCYCLING**
De Ceuvel has been built largely out of recycled materials. Old houseboats that would have been demolished have been upcycled into creative, energy-efficient workspaces, using secondhand materials from all over the Netherlands. And of course, we make sure to separate all our waste: glass, plastic, paper, organic waste, and rest.
- **AQUAPONICS GREENHOUSE**
The greenhouse is the key to recycling nutrients at De Ceuvel. The greenhouse at De Ceuvel produces vegetables and herbs for Cafe de Ceuvel using a closed-loop aquaponics system combining fish and vegetable production.

How

ROEF, Amsterdam, the Netherlands





ROEF

**THE HIGHEST FESTIVAL
OF AMSTERDAM**

Where

What

How



Where

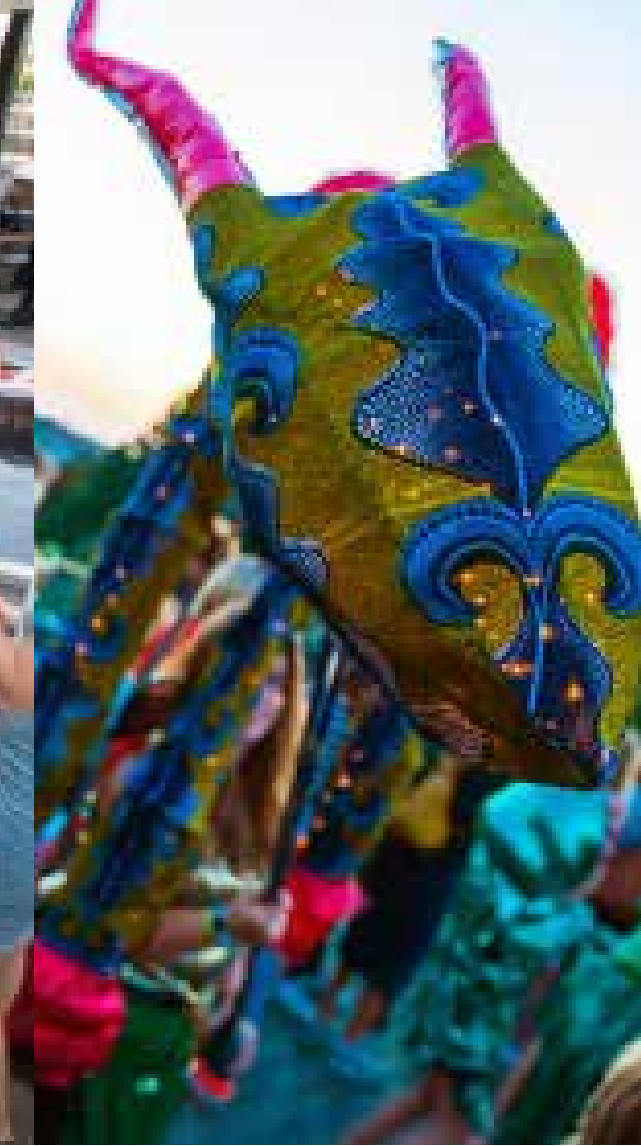
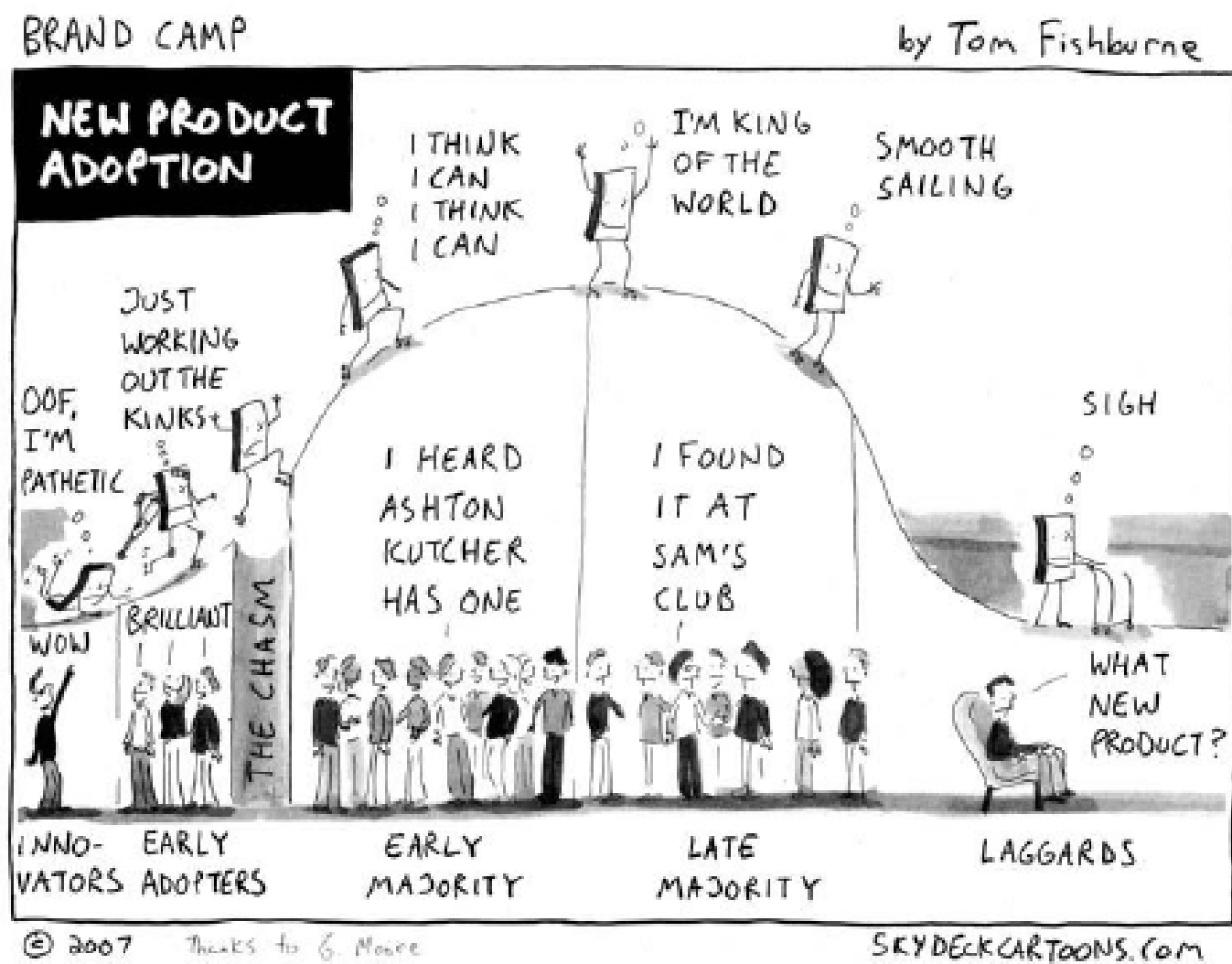
ROEF Amsterdam 2018 is situated on 20 Roofs throughout the city of Amsterdam. This ever growing festival activates the people to rethink the roof as such. Done in a festival way.



A roof top festival with inspirational talks, music, theater, dj's, campsite, food and performances. Amsterdam roofs play an important role in making the city more green, the reduction of CO2 emissions and in other areas around the climate. It is not for nothing that the municipality of Amsterdam offers subsidies to green roofs. We want the whole of Amsterdam to be greened, so that our city is clean and climate neutral and will become an example for the world.

With ROEF we want to be a catalyst, so that more use is made of the roof landscape. Here we show first of all what is possible with the unexplored roof landscape (show). Every year we ensure that more roofs are taken into use and participate in ROEF (grow). And ultimately we want to connect roofs with each other and the 'ground level' (connect) so that a fully-fledged rooftop park is created. Our own unique version of the New York Highline, which instead of an old metrotrace, follows the lines of large roofs taken to the Knowledge Mile.

What



The festival stimulates innovation and offers a unique view of the city and the possibilities that the use of roofs offers. We want to encourage as many people as possible to use their roof in a sustainable manner. For this they have to become acquainted with the possibilities, but also, above all, wonder. We therefore choose a festival with lots to see and experience!

The process through which the process of innovation progresses is well defined in The Law of Diffusion of Innovation, by Everett Rogers. In this law Rogers describes how new products or innovations spread over a population. The theory states that each product goes through different stages. First it is the innovators who get started with the product, then when the first teething problems are out, the early adapters come. Then, follow, if your product speaks adequately to the control, the early majority and the late majority. Finally, people who really hate everything that is new. The innovative use of roofs is still in its infancy and is somewhere between innovators and early adopters. Our festival offers programs for all groups, taking into account the different needs.

The innovators: This group is looking for practical tools, what are the possibilities, where can you buy things, what can you do yourself and how, what can you buy. These people come to the symposium for practical tools to get started.

Early adopters: The group looks for inspiring examples, triggers to do things themselves, step-by-step plans and help. We offer this at the symposium, but also on different roofs that offer an in-depth program.

Early majority and late majority; festival, first acquaintance, lure with fun things and by chance show what the possibilities are.

Our program entuses all visitors, from home and abroad, and informs them about the possibilities that the roof landscape offers them.

How

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Inspirational Projects from the Netherlands.

Thank You!