

Marineterrein Amsterdam Living Lab

Inner City test ground for a Sustainable Living Environment



Photo by FABRICations



Location

Marineterrein Amsterdam
Kattenburgstraat 5, Amsterdam

Site Characteristics

- Ongoing experiments on water, energy, mobility, sensing, and circularity
- In proximity (1.5 km) of Amsterdam Central Station, a major multi-modal mobility infrastructure hub.
- Private and sheltered character because the 5-ha terrain can only be accessed by two points, a main gate and a bridge.
- The site is publicly accessible, but privately owned (by the Government of the Netherlands).
- Conformance to GDPR guidelines.
- Permits for (temporary) buildings are required.
- Home to a vibrant community of 60+ innovative companies and educational institutes.

Contact

Leendert Verhoef
Program Lead Living Labs
Leendert.verhoef@ams-institute.org
Apply: www.living-lab.nl



Mission

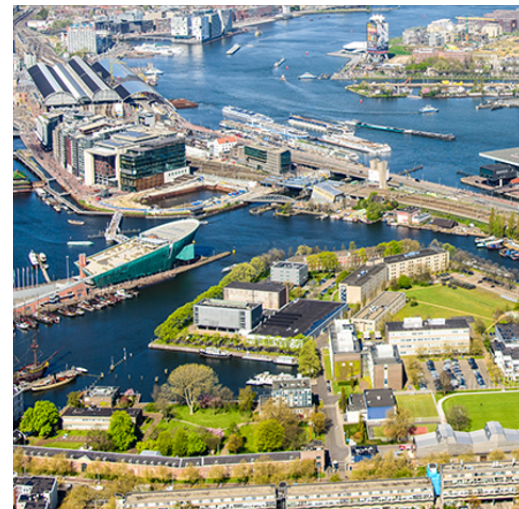
The Marineterrein Amsterdam has the ambition to become a future-proof city district featuring open innovation, accessible and flexible living and working space, unique housing, sports, recreation, and greenery. Because of its secluded character, regulations and central location in the city, the Marineterrein Amsterdam Living Lab offers interesting possibilities for scientific research into new solutions for urban challenges.

Innovation themes

- Smart Mobility (incl. autonomous boating)
- Responsible Sensing
- Water and Waste Reprocessing
- Urban Energy
- Greening the City

Experimentation facilities

The Marineterrein Amsterdam Living Lab is available for researching, experimenting and testing in a real-life setting. You will find areas for testing, both land and in the water basin, at docks and on road. There is an infrastructural backbone (power, data, water, wastewater, auxiliary), which makes the set-up of (pilot) tests relatively easy. The infrastructure also ensures the test areas can be interconnected. Various sensor systems are installed, virtual reality (VR) and a digital twin are under development, and an IoT backbone is being set-up.



How to apply?

Applying for an experiment can be done through the website of [Marineterrein Amsterdam Living Lab](http://www.living-lab.nl) (www.living-lab.nl). AMS Institute can assist in tailoring the experiment and including the location in your subsidy proposals. Pending your grant application at Dutch or European agencies, you can get an option to a lot at the terrain. We will process your application within a month after full submission.

What does it cost?

Monthly fees apply for experiments, with reduced fees for AMS Institute partners (TU Delft and WUR). Student experiments are for free. Active engagement and inclusion with other experimenters and the community is preferred.

Living Lab Organization

The Marineterrein Living Lab is a collaboration between Bureau Marineterrein and AMS Institute, with support of Amsterdam Smart City and NEMO. These partners are closely connected to science, city, public, and industry.



Examples of projects

Roboat

Roboat is the world's first major research programme on autonomous floating vessels in metropolitan areas. The autonomous vehicle can create a more dynamic infrastructure and offers new opportunities for transporting people and goods while sensing Amsterdam's canals at the same time. Currently, a full-scale prototype of Roboat at Marineterrein Amsterdam Living Lab is under testing, and a waste collecting, and delivery unit is under development. This experiment is a collaboration between Massachusetts Institute of Technology (MIT) and Amsterdam Institute for Advanced Metropolitan Solutions (AMS Institute).

Shuttercam

Based on the notion that citizens currently can not directly know or see if and when cameras in public space are monitoring them or not, this experiment tests 3 different camera prototypes. All of these camera setups strike a balance between the right of citizens to walk around freely and unobserved, and the required data for a city to operate. This experiment is an initiative of Responsible Sensing Lab, a collaboration between the City of Amsterdam and AMS Institute.

Space for Food

A big part of innovation in space technology revolves around finding smart, efficient and circular ways to establish a life support system for the astronauts going on the trip. Can space technology provide circular solutions for cities as well? Municipal wastewater has great resource potential for nutrients and water reuse. Here space tech is used in an urban context to extract nutrients and water from wastewater for food production. The Space for Food project explores the potential and scalability of applying space technology for applications in urban contexts. This experiment is a collaboration between (amongst others) AMS Institute and the European Space Agency (ESA).

Bio Receptive Concrete

To develop a climate-proof and livable environment we need to integrate more green in the design of cities. Concrete is a common building material in cities and for this purpose a bio-receptive concrete is developed and tested at Marineterrein Amsterdam. The aim is to apply this concrete as a layer on existing but otherwise bare concrete surfaces. By doing so these bare surfaces will over time be transformed into moss overgrown 'living' surfaces. This experiment is a collaboration between Respyre, AMS Institute, WUR and TU Delft.

