

The Maritime Mile

A SUSTAINABLE SPORTSCAPE IN AMSTERDAM



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P5 | 5th of July 2019
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Research and BT tutor | Marcel Bilow

contents



introduction



research



design



introduction



research



design





Droogterecord 1976 gesneuveld

Het is nu droger dan het in 1976 op 25 juli was. Het neerslagtekort bedroeg toen gemiddeld over het land circa 257 millimeter.

ANP 25 juli 2018, 7:20



BEELD TAMMY VAN NERUM

Zwembaden langer open wegens hitte

Een deel van de buitenbaden in Amsterdam heeft wegens de hitte de openingstijden aangepast.

Het Parool 24 juli 2018, 12:59

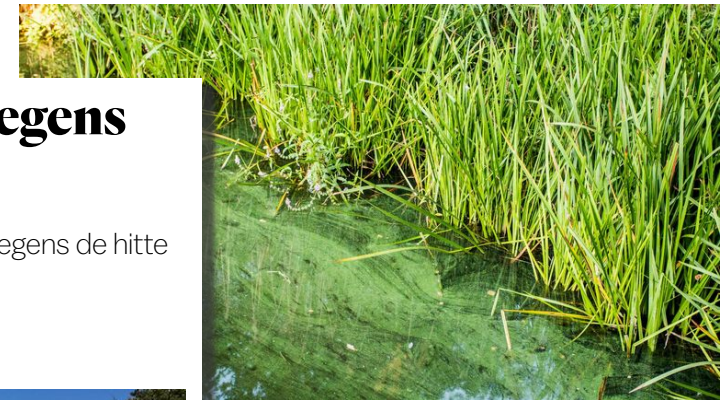


Het Flevoparkbad blijft de komende dagen open tot 19.00 uur. BEELD MARCO KEYZER

Uitzonderlijk warm water perfecte habitat voor blauwalg

Diepe wateren in en om Amsterdam (zoals de Slotterplas, Nieuwe Meer, Gaasperplas, Ouderkerkerplas en Noorder IJplas) zijn sinds de eerste metingen in 1982 zelden zo warm geweest. Blauwalgen kunnen zich geen betere habitat wensen.

Josien Wolthuizen en Roelf Jan Duin 26 juli 2018, 12:23



BEELD JESPER BOOT



problem



introduction



research



design



problem

Also, the **public space**, specifically parks, is used more and more for daily sports activities.

- Gemeente Amsterdam | Gebiedsplan Centrum Oost 2017 & Trendrapport Stad 2016

The **need** for sports, especially among young people, **is large**.

- Verkenning Marineterrein Amsterdam 2017

“Sport creates a healthy city, **encourages** the **interaction** on the terrain, with its surroundings and the city.”

- Bureau Marineterrein



introduction



research



design



problem

need for intensively used and
multifunctional accommodations

demand for sport structures
integrated into the living and
working environment, **in the public
space**

- Sportspace

cherish sports in the middle of
neighbourhoods. ... they can
contribute to the social cohesion

- Urhahn Urban Planning & Strategies

PROPOSAL FOR AN OPEN AIR GALLERY AND SKATE PARK
SHIFT ARCHITECTURE URBANISM
ROTTERDAM



introduction



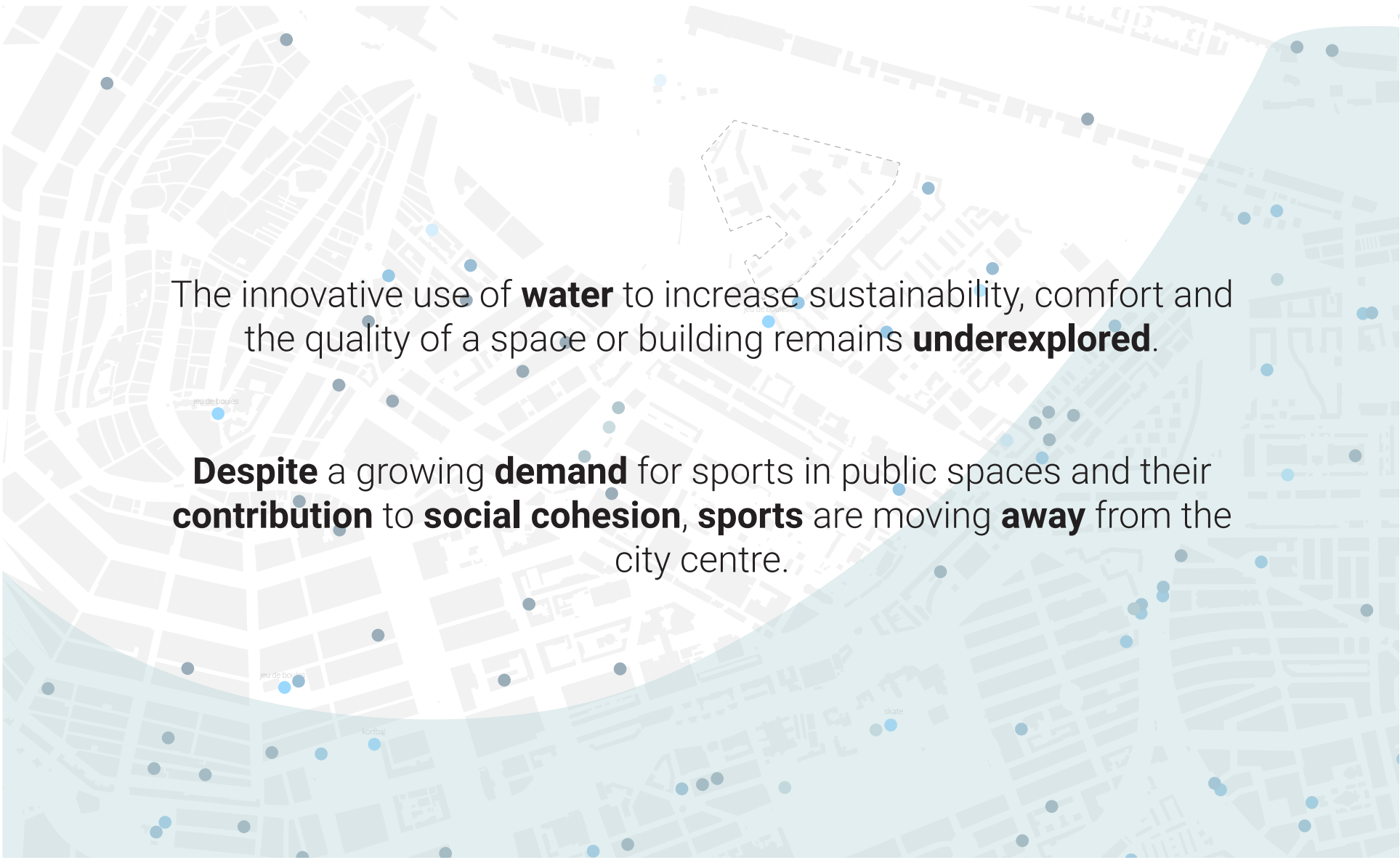
research



design



problem statement



The innovative use of **water** to increase sustainability, comfort and the quality of a space or building remains **underexplored**.

Despite a growing **demand** for sports in public spaces and their **contribution** to **social cohesion**, **sports** are moving **away** from the city centre.



Research

research question



How can **water** be used in an **innovative** way to contribute to the **sustainability** of a building but also help **boost** the **image** of water and the **experience** of the location or building that the solution is applied to?



introduction



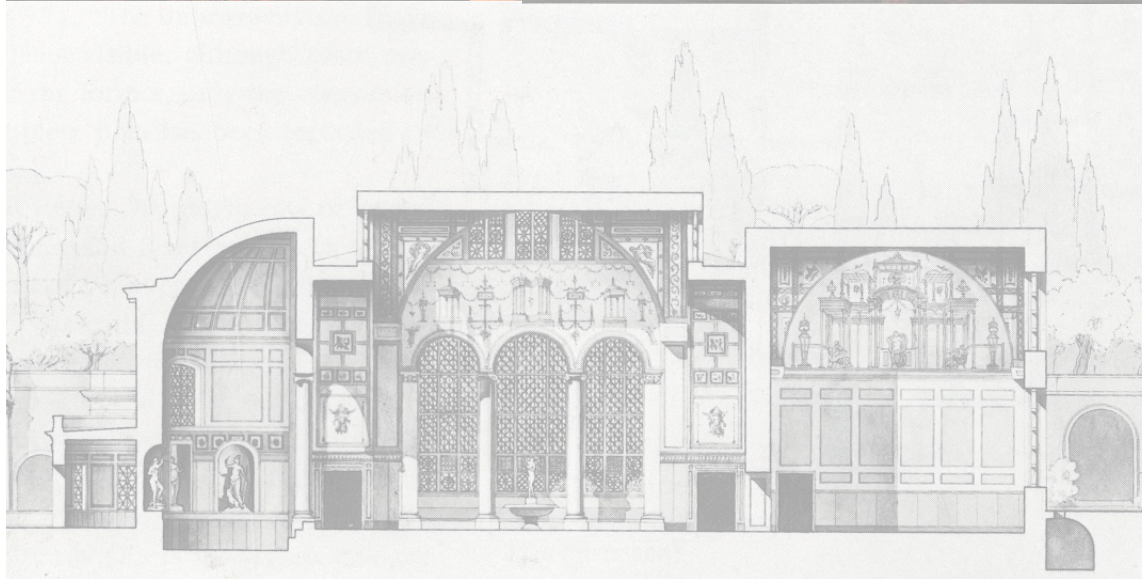
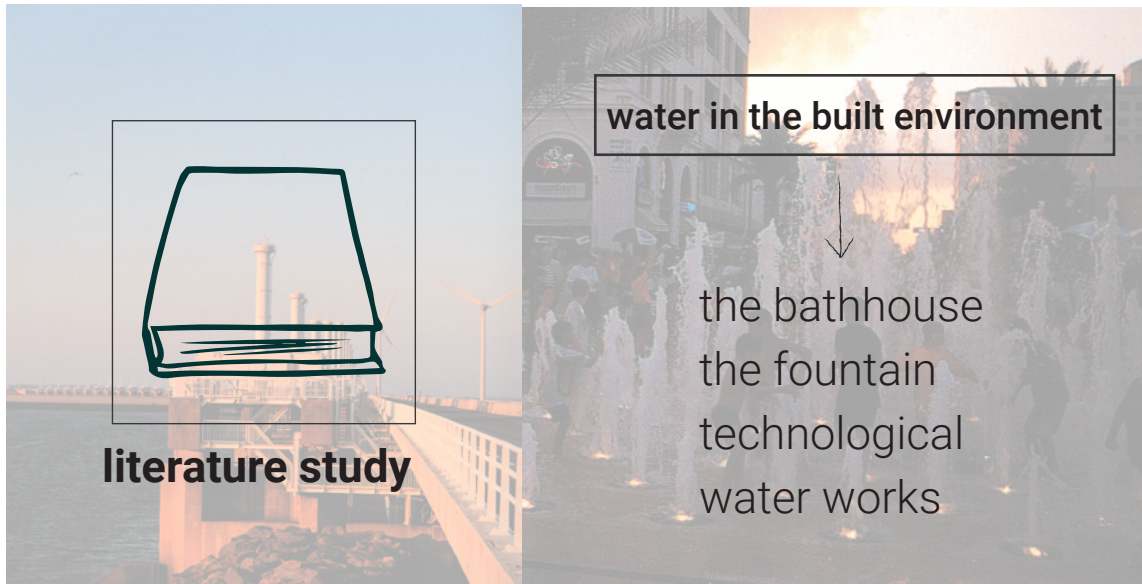
research



design

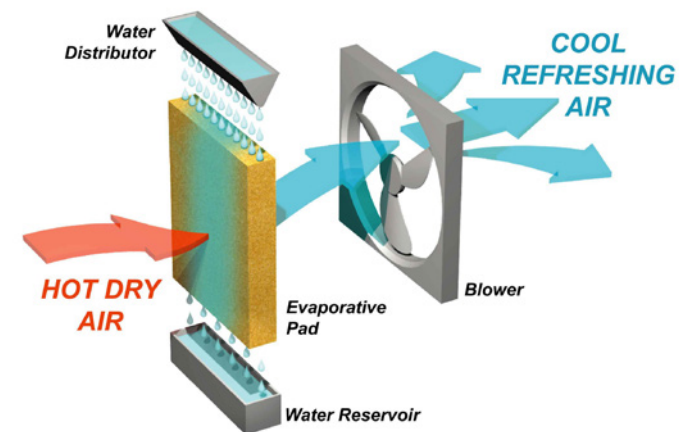


methodology



evaporative cooling

how it
works
then
now



introduction



research



design



methodology



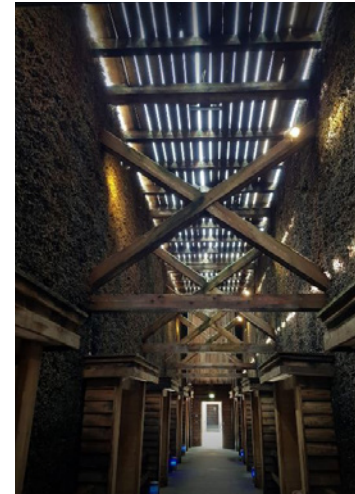
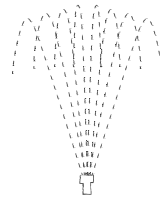
case studies



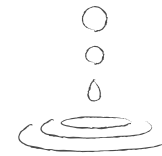
Alhambra
and
Generalife



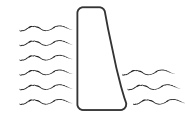
Lovejoy and Keller
Fountain



Gradierwerk Bad
Salzuflen



The Dutch
Delta Works





ALHAMBRA & GENERALIFE



introduction



research



design





ALHAMBRA & GENERALIFE



introduction



research



design





LOVEJOY FOUNTAIN



introduction



research



design





GRADIERWERK



introduction



research



design





OOSTERSCHDELDE STORM SURGE BARRIER



introduction



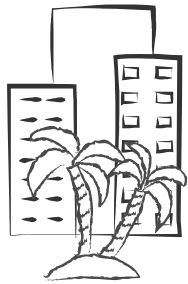
research



design

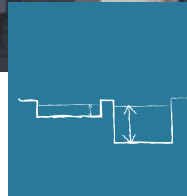


conclusion



URBAN OASIS

- aesthetically pleasing
- comfort
- refreshment
- calming feeling
- opportunities for recreation



Through:

- interaction
- routes
- different depths
- and heights
- sound
- scent
- view



conclusion



INNOVATION



- solving a problem
- innovative technology to deal with water
- (play &) learn

Often combined with:

- large scale
- landscape design
- accessibility
- promotion of technology



introduction



research



design



design guidelines | water

functions



(daily) need: adding a facility that fulfills a basic need intensifies the use of the facility



showers: people that are exercising outdoors can be tempted to go inside a building if the building contains accessible showers



drinking water: a drinking fountain can attract people that are exercising outdoors to a building it is close to

senses



evaporative cooling: the evaporation of water can provide a cooling effect



refreshment: immersing oneself directly into water can provide a cold or refreshing feeling



sound: the sound that water makes can be experienced as calming. different 'types' of water make different sounds



varied display of water: different ways of displaying water have a different effect on the experience of people

aesthetics



display of water: displaying water in various ways can be fascinating to look at



nature: a(n abstract) representation of nature, such as a waterfall or slope can be experienced as pleasant by users



size: a large size can be perceived as impressive



innovation: the fact that something is new, that it was previously unknown can be attractive to people

interaction



route: creating a route through or over water can encourage interaction with it



depth: the depth of the water can influence the interaction with it. a shallow pool can encourage playing or dipping ones feet in it



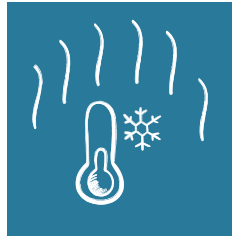
water type: the way water is displayed affects the way people interact with it. jets can be more playful and a pool more calming



accessibility: a water structure that is accessible from the inside can fascinate and have a learning aspect



design guidelines | water



evaporative
cooling



refreshment



varying displays
of water



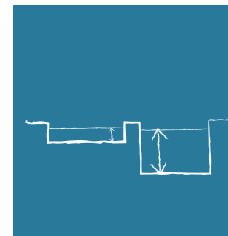
route through
water



in- and outdoor
showers



outdoor
drinking taps



different water
depths



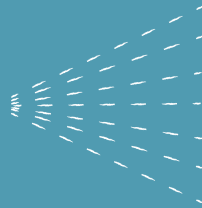
water from
inside



types of water display



flow: water flowing through a containing element



spray: water dispersed as small droplets



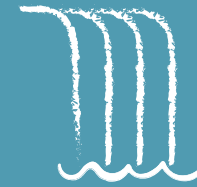
droplets: small bits of water, dripping



cascade: water falling in steps from a high to a low level



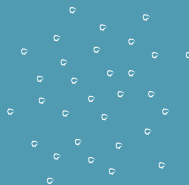
steam: mist that forms from hot water



waterfall: water dropping from a high to a low level



pool: large surface of water



mist: very fine collection of water particles



torrent: a wild stream of water



frothy mass: a foam of white bubbling water



jet: a stream of water forced out under pressure

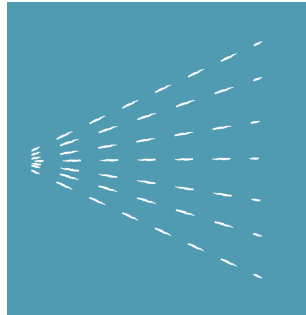


types of water display



flow

surroundings



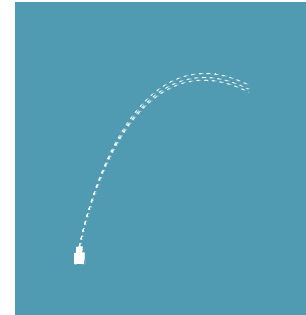
spray

portals



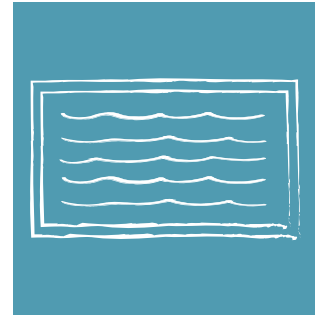
cascade

squares/
fountain



jet

squares/
fountain



pool/pond

building (roof)



introduction



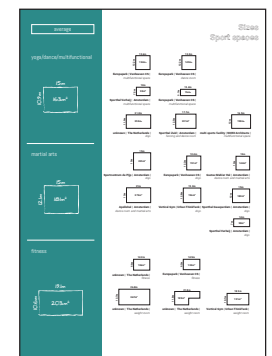
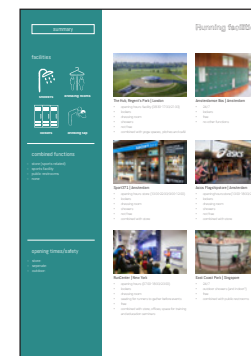
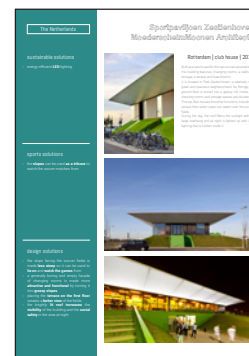
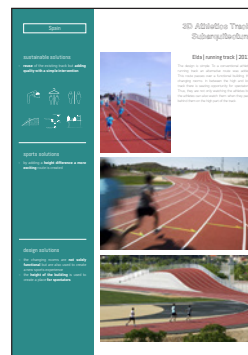
research



design



case studies



introduction



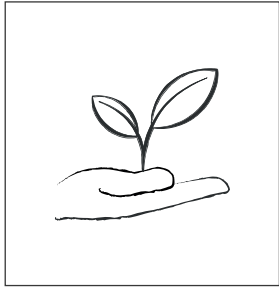
research



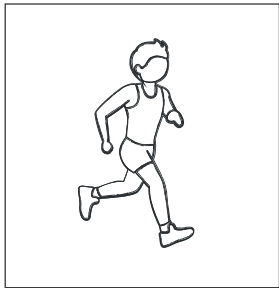
design



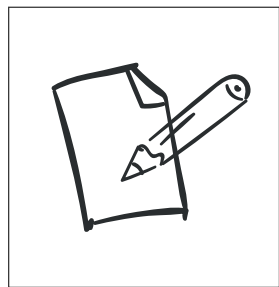
case studies



sustainable solutions



sports solutions

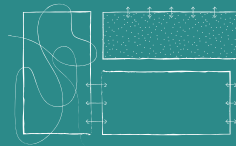


design solutions

Spain

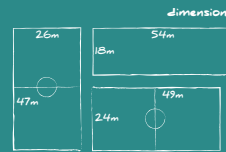
sustainable solutions

- light structure: **minimal use of materials and resources**
- by making use of the **natural daylight**, less artificial lighting is needed and energy is saved



sports solutions

- polycarbonate **filters the natural light**, bringing visual nuisance for the users to a minimum



design solutions

- using the **properties of the material**: the light fixtures fit perfectly into the grooves of the corrugated sheet metal
- creating a **visual connection** between the indoor sports hall and the exterior and the covered sports pitch
- keeping the **lower part** of the covered pitch **open** to create a connection with the outside but **covering the top part** to create the feeling of being inside and provide shelter from the elements



Pavelló Municipal d'Esports NAM Arquitectura

Vila-Seca | sports hall | 2017



During the renovation of this sports facility, the main volume was kept, but refurbished with a new roof. Around the building, a porch, made of steel and corrugated sheet metal, was added. The outdoor pitch was also covered with a similar lightweight structure, creating a space that makes the user feel like they are indoors but can function as an outdoor space, where people can walk by, sit on a bench, watch and join in.

Part of the base of the building, made from prefabricated concrete plates, was replaced with glass to make the sports more visible from the outside.

Materials and constructive resources were kept to a minimum, using steel, polycarbonate, glass and wood. The polycarbonate filters the natural light and insulates against solar radiation with air cavities.



design guidelines | sport

facilities



restrooms: fulfills a basic need of users, they can stay longer



changing rooms: users can change and shower, larger chance on stay before or after doing their sports



drinking water: fulfills a basic need for people (who are exercising)



lighting: users can make (safe) use of the facilities at night too



lockers: storage for belongings - useful for people who come from further away or from work



showers: often available in changing rooms but can be separate function - practical for sporters from far away

building



different heights: create multiple roof spaces, make the top roof easier to access, alternative route



lowered into the ground: this can keep the overall building height low, making the roof easier to access



roof with function: this creates extra space but it is also accessible to anyone at any time



outdoor indoor hall: a covered pitch protects from the elements but remains accessible to everyone



facade with function: accessible to anyone at any time, creates an extra function/opportunity for sports



height difference



ladder: easy way to get up, but requires a bit more motivation than stairs



climbing grips: these can be a fun way of getting up a wall, but require more skill and time than stairs



stairs: a common, straightforward and generally safe way to get to a different level



steps: steps of different sizes are a playful alternative to stairs and encourage playing and sitting



ropes: a challenging way to get up, not for everybody, adventurous, encourages exploring



slopes: an easy way to get up, the gentler the more accessible, with grass it seems parklike

organisation

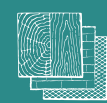


multifunctional space: allows more intensive use of the facility and attracts more (different) users

colours and materials



colour: can be used to create different zones or pull people their attention



material: can be used to create different zones but also to encourage different activities

movement



route: can connect two places/buildings, guide the user and thus encourage to use facilities



stepping stones/playful elements: can encourage (young) users to move and play, prolong their stay



outdoor fitness equipment: accessible any time by anyone, allowing sports outdoors

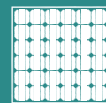


trampoline: a different and fun way of moving, also a way to overcome height differences

sustainability



energy generation: energy generated by the use of the building or facility



solar panels: to harvest electricity



introduction



research



design



design guidelines | sport



facilities

route

building



changing rooms



drinking tap



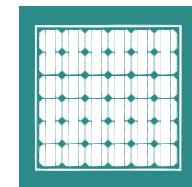
playful elements



colour



multifunctional
spaces



solar energy
collection



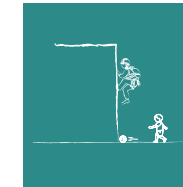
lockers



showers



outdoor fitness



colour



indoor outdoor
space



ropes



trampoline



introduction



research



design



The Maritime Mile



Marineterrein, Amsterdam



introduction



research



design



Marineterrein, Amsterdam



introduction



research



design



Marineterrein, Amsterdam



used as a shipyard | INNOVATION as a constant



introduction



research



design



Deel Marine Etablissement voor het eerst toegankelijk

De Voorwerf, het historische gedeelte van het Marine Etablissement aan de Kattenburgerstraat dat eeuwenlang was afgesloten, is sinds vanmorgen open voor publiek. De rest van het marineterrein blijft afgesloten.

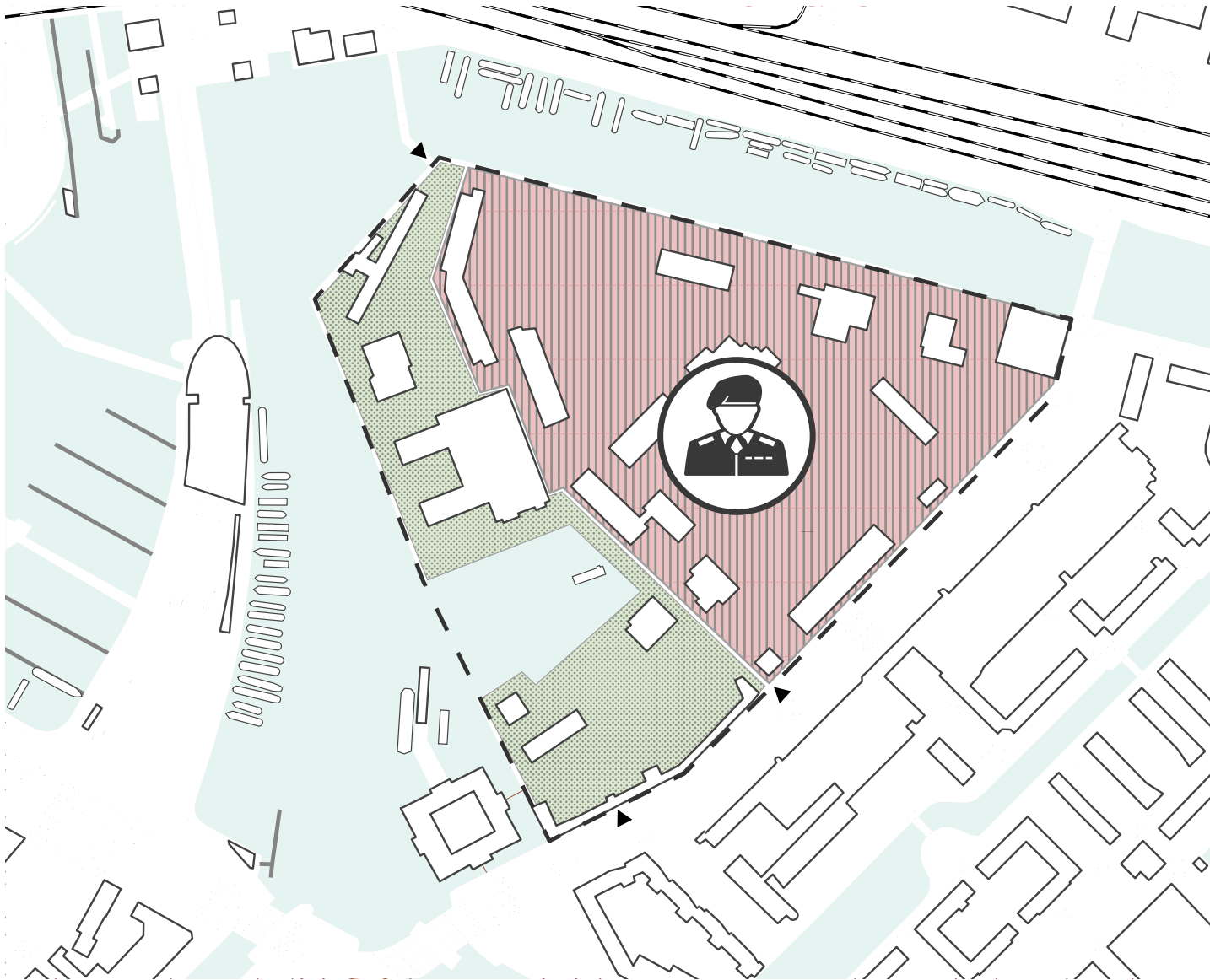
Rob Rombouts 1 april 2015, 10:24



Het Marineterrein, vlak achter het Scheepvaartmuseum. BEELD MATS VAN SOOLINGEN



after opening



introduction



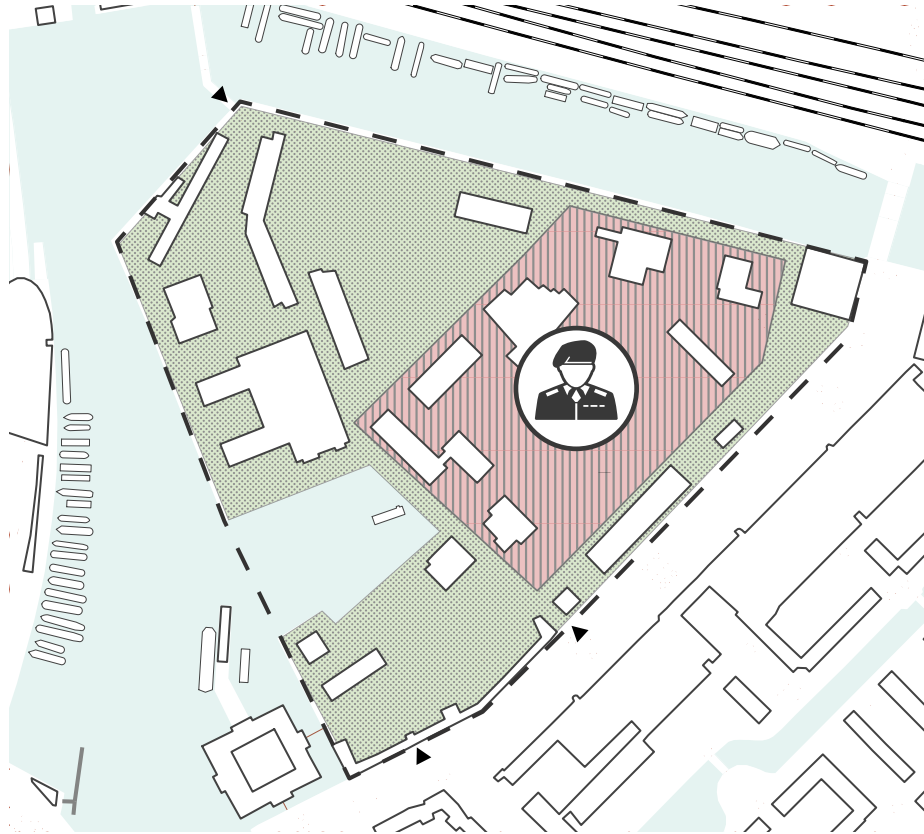
research



design



future scenario



current situation



2-5 years from now



introduction



research



design



zones



source: Strategienota voor het Marineterrein, 2013 (p. 14)



introduction



research



design



zones



source: Strategienota voor het Marineterrein, 2013 (p. 13)



introduction



research



design



schools in the city



introduction



research



design



schools in the city



introduction



research



design



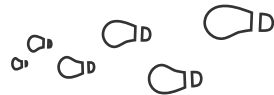
user

Casper (63)



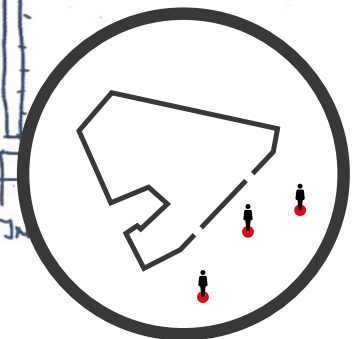
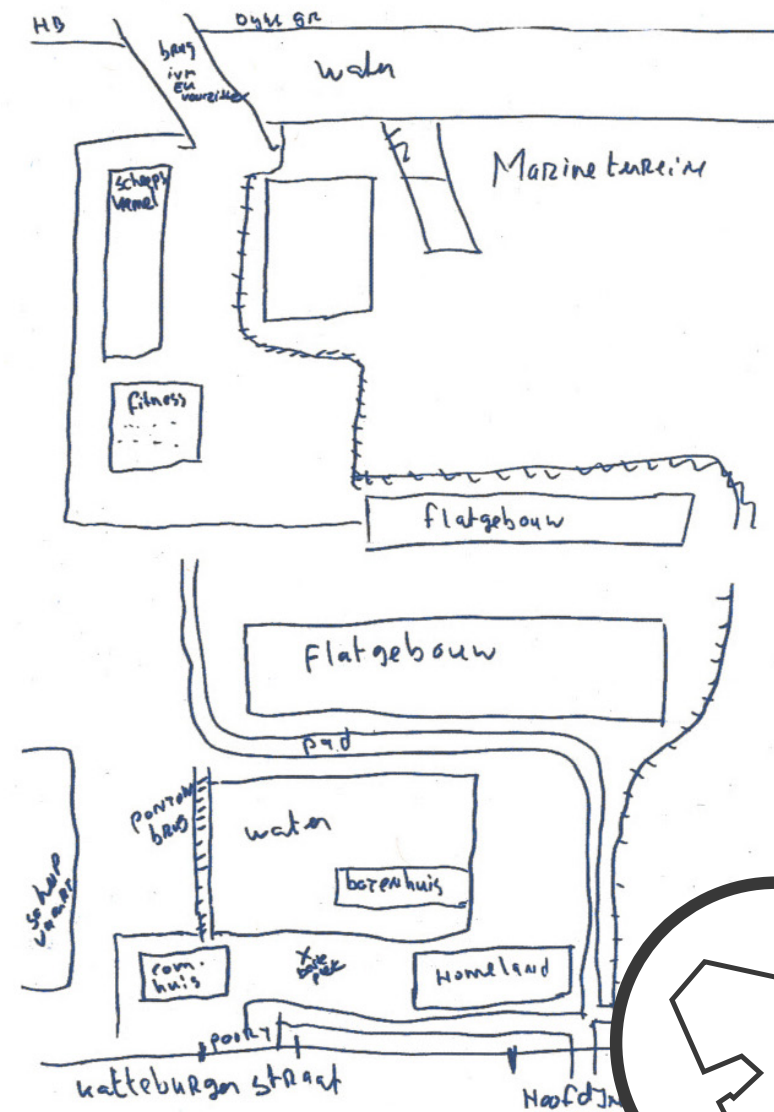
Met de wandelclub, waar ik sinds mijn pensioen lid van ben, lopen we vaak over het terrein. Mijn favoriete plek is de kade naast Homeland, daar geniet ik van het uitzicht.

walking club



often walks around the area

enjoys the view



introduction



research



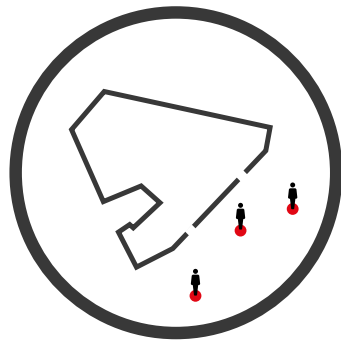
design



users



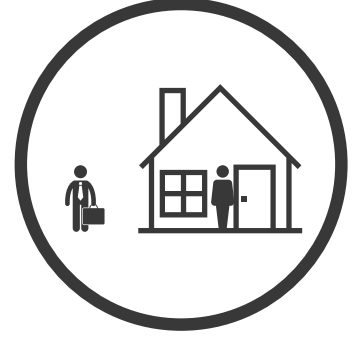
marine



'neighbours'



schools



new inhabitants



Marineterrein context



monumental



upgraded



introduction



research

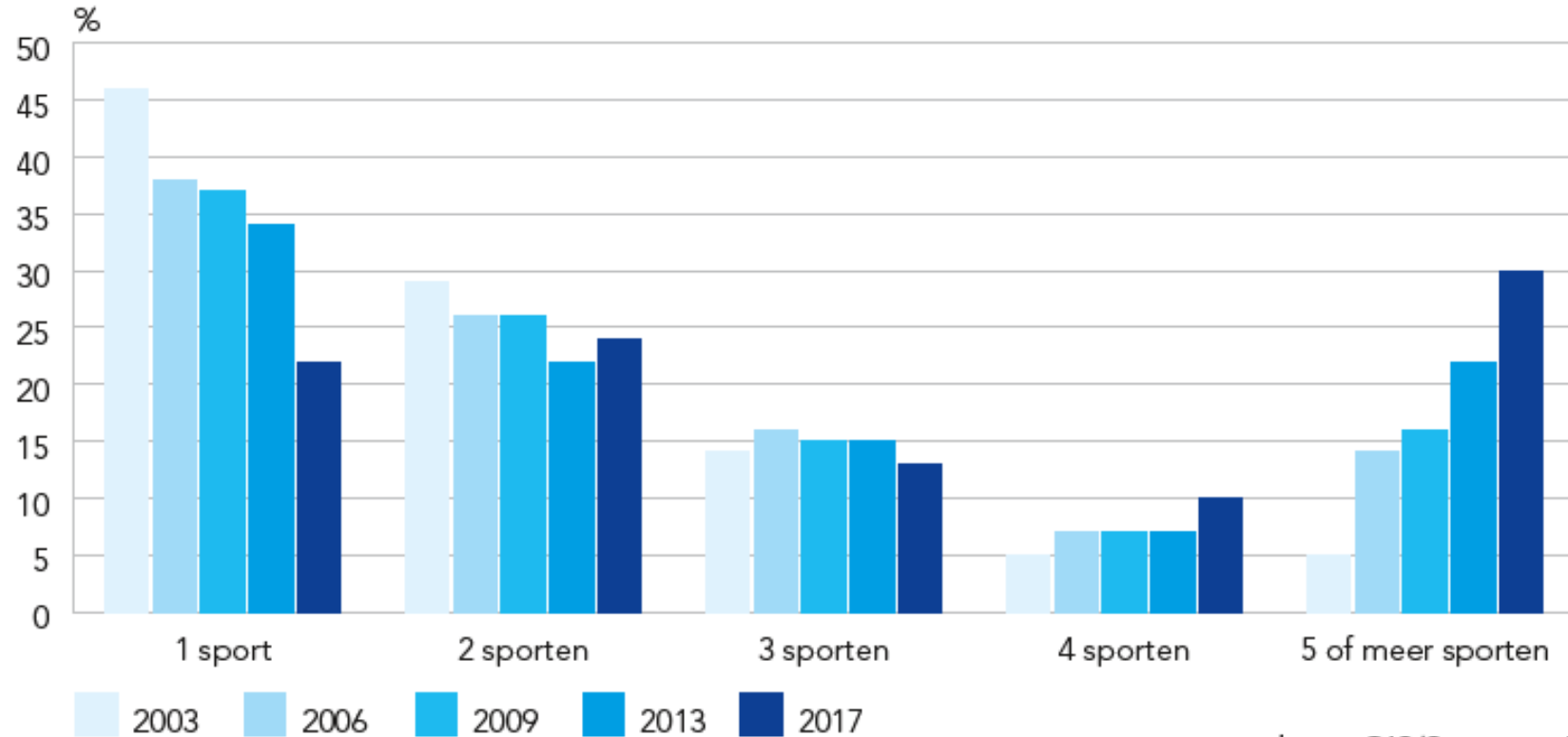


design



trends in sports

Aantal sporten dat sporters beoefenen, 2003-2017 (procenten)



bron: OIS/Sportmonitor



introduction



research

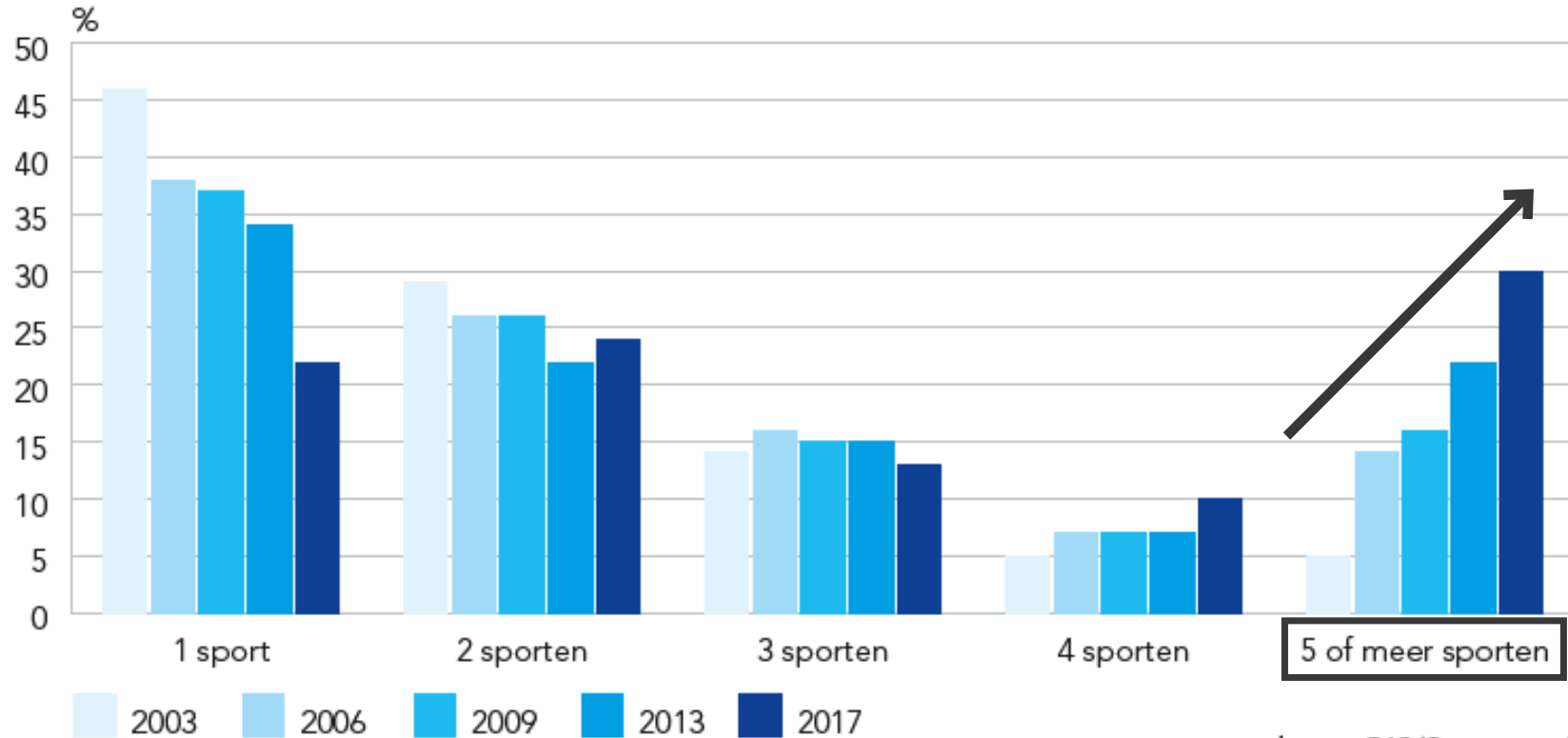


design



trends in sports

Aantal sporten dat sporters beoefenen, 2003-2017 (procenten)



bron: OIS/Sportmonitor



multiple sports



introduction



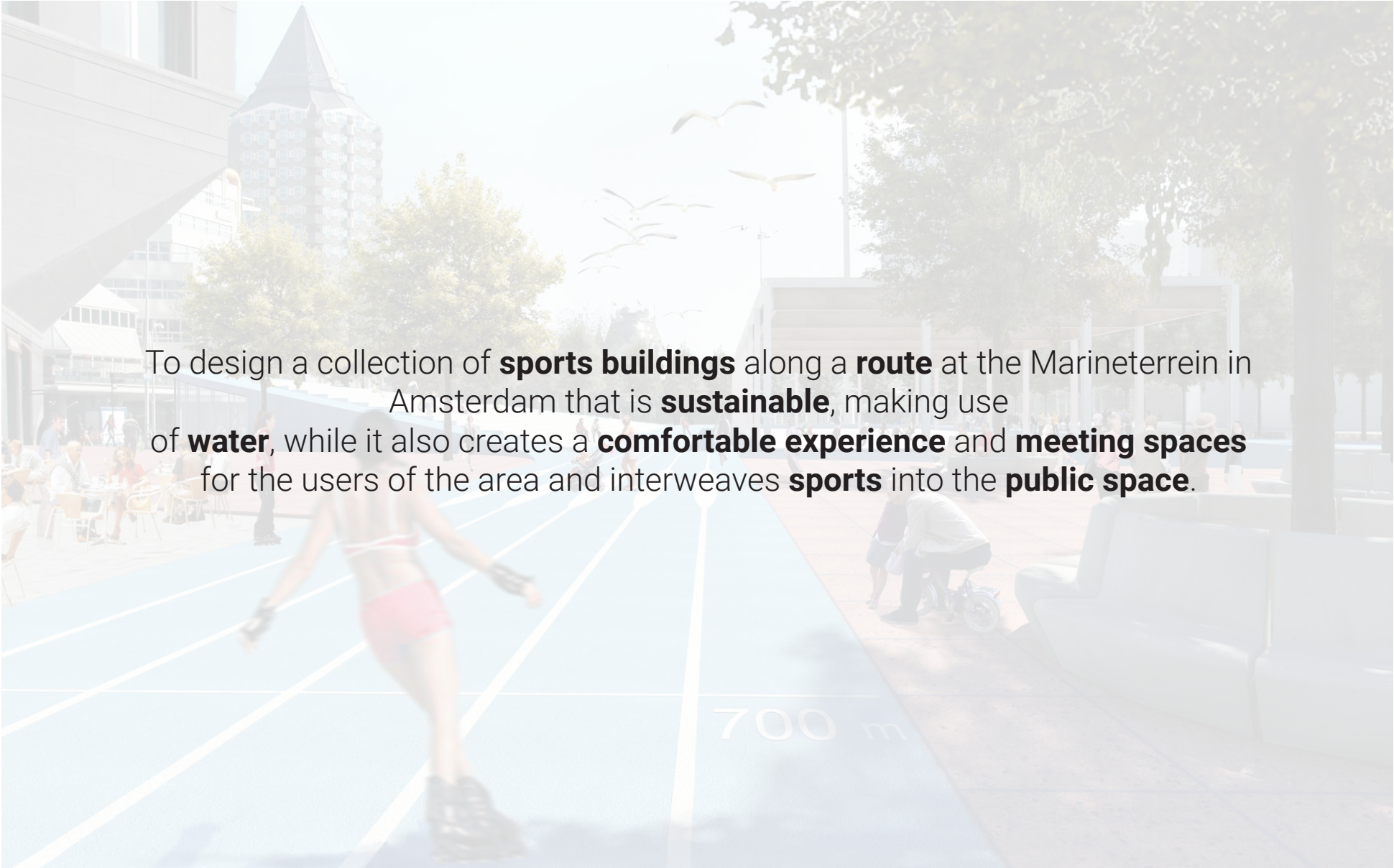
research



design



design goal

An architectural rendering of a waterfront public space. In the foreground, a woman in a red sports top and shorts is running on a blue track. To the right, there are modern grey sofas and a person with a bicycle. In the background, there are trees, a modern building with a distinctive tower, and seagulls flying in the sky. The text is overlaid on the center of the image.

To design a collection of **sports buildings** along a **route** at the Marineterrein in Amsterdam that is **sustainable**, making use of **water**, while it also creates a **comfortable experience** and **meeting spaces** for the users of the area and interweaves **sports** into the **public space**.



introduction



research



design



TREES IN THE AREA



introduction



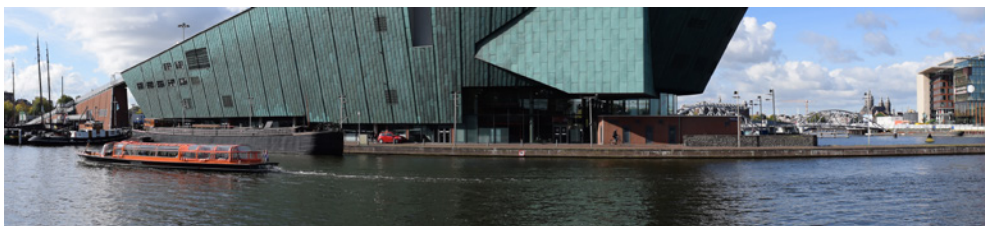
research



design



WATER IN THE AREA



introduction



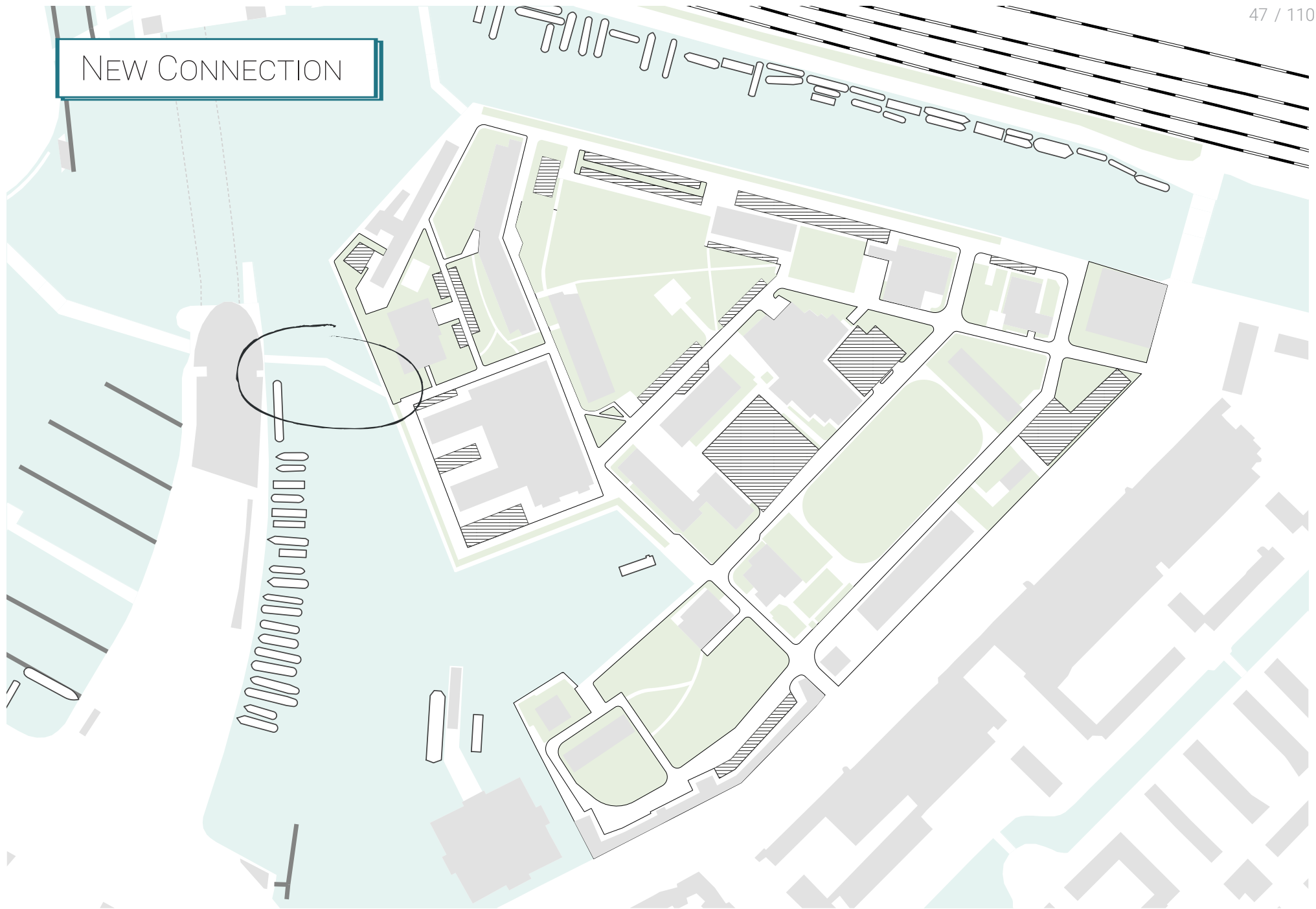
research



design



NEW CONNECTION



introduction



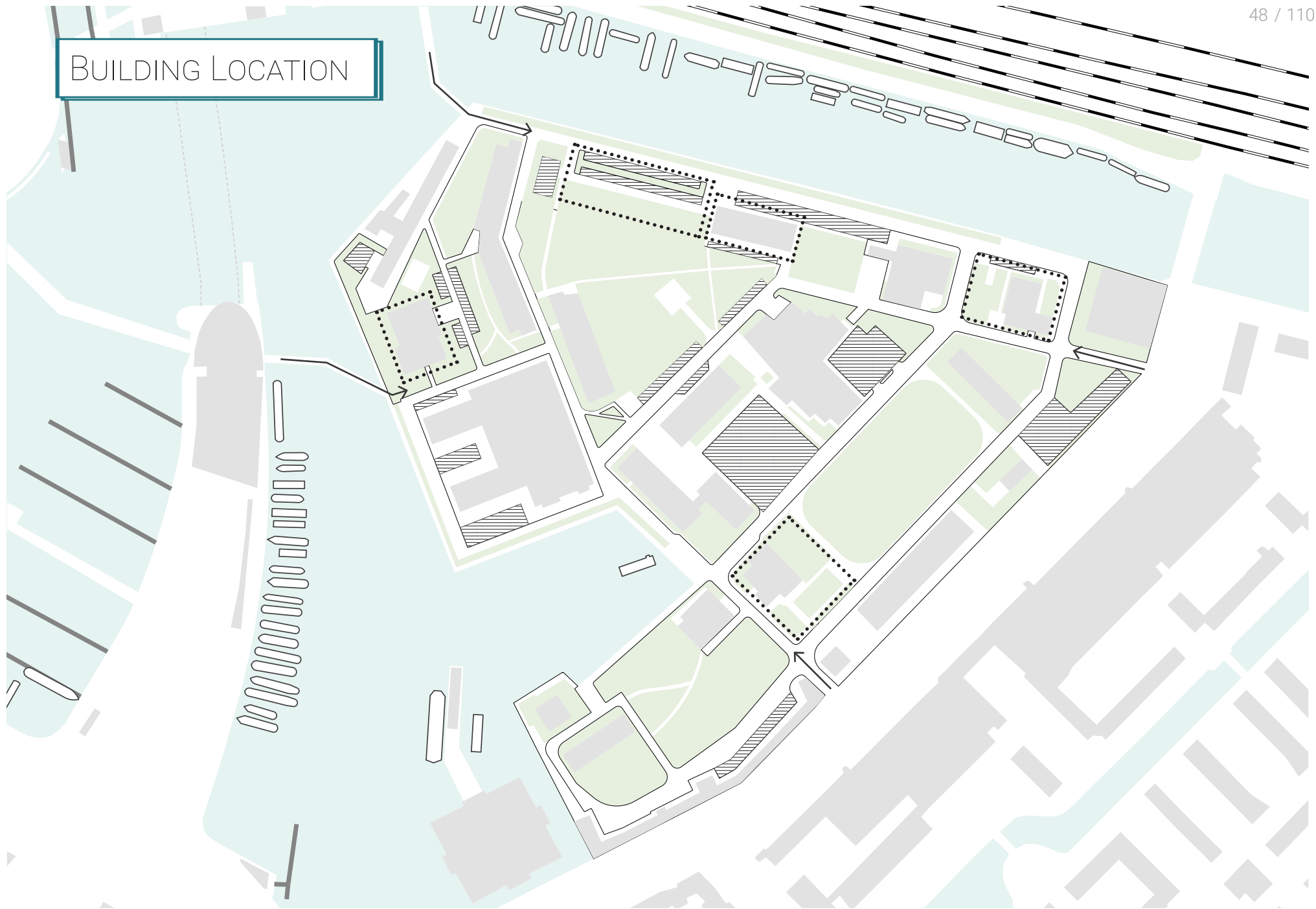
research



design



BUILDING LOCATION



introduction



research



design



BUILDING LOCATION



introduction



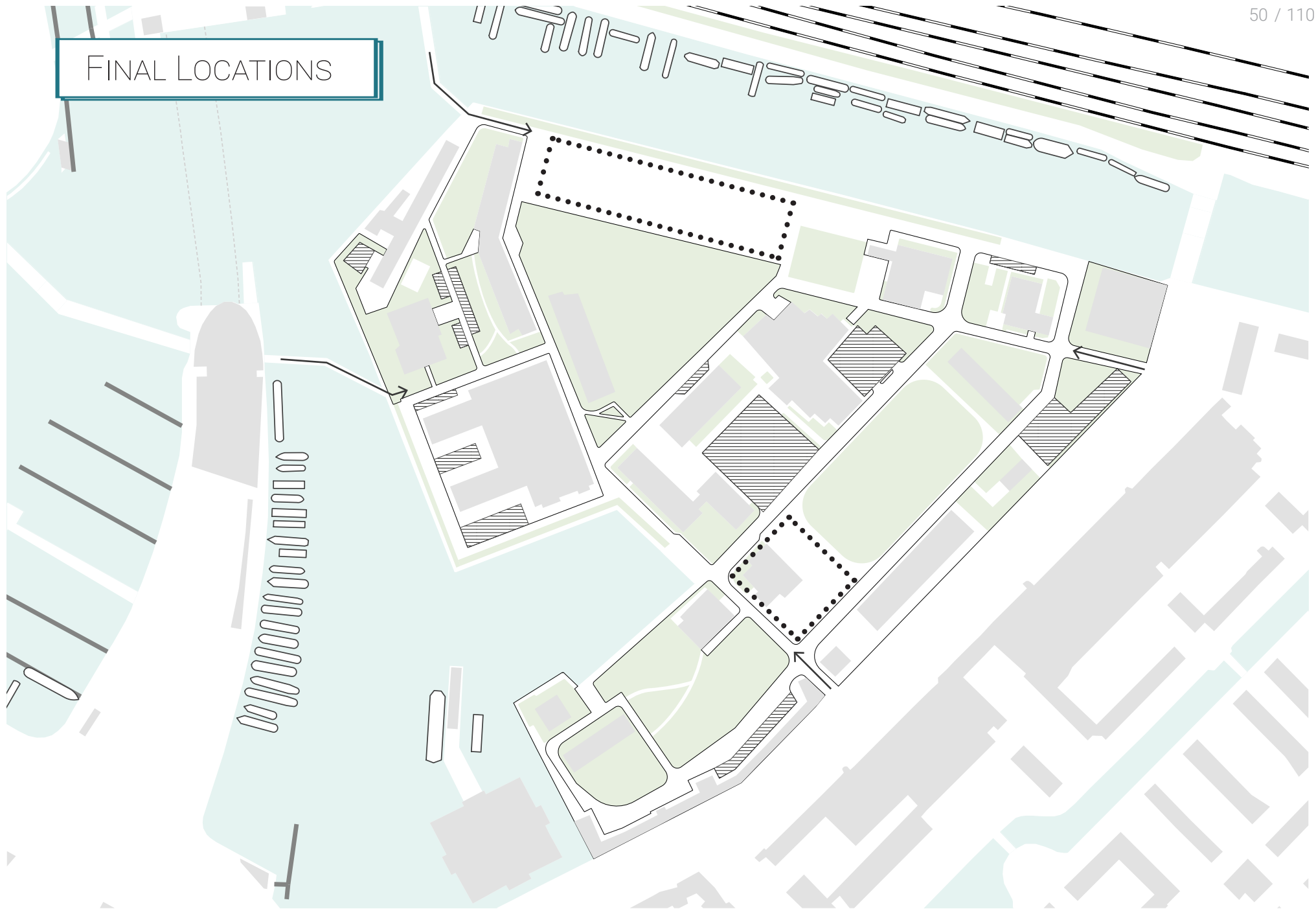
research



design



FINAL LOCATIONS



introduction

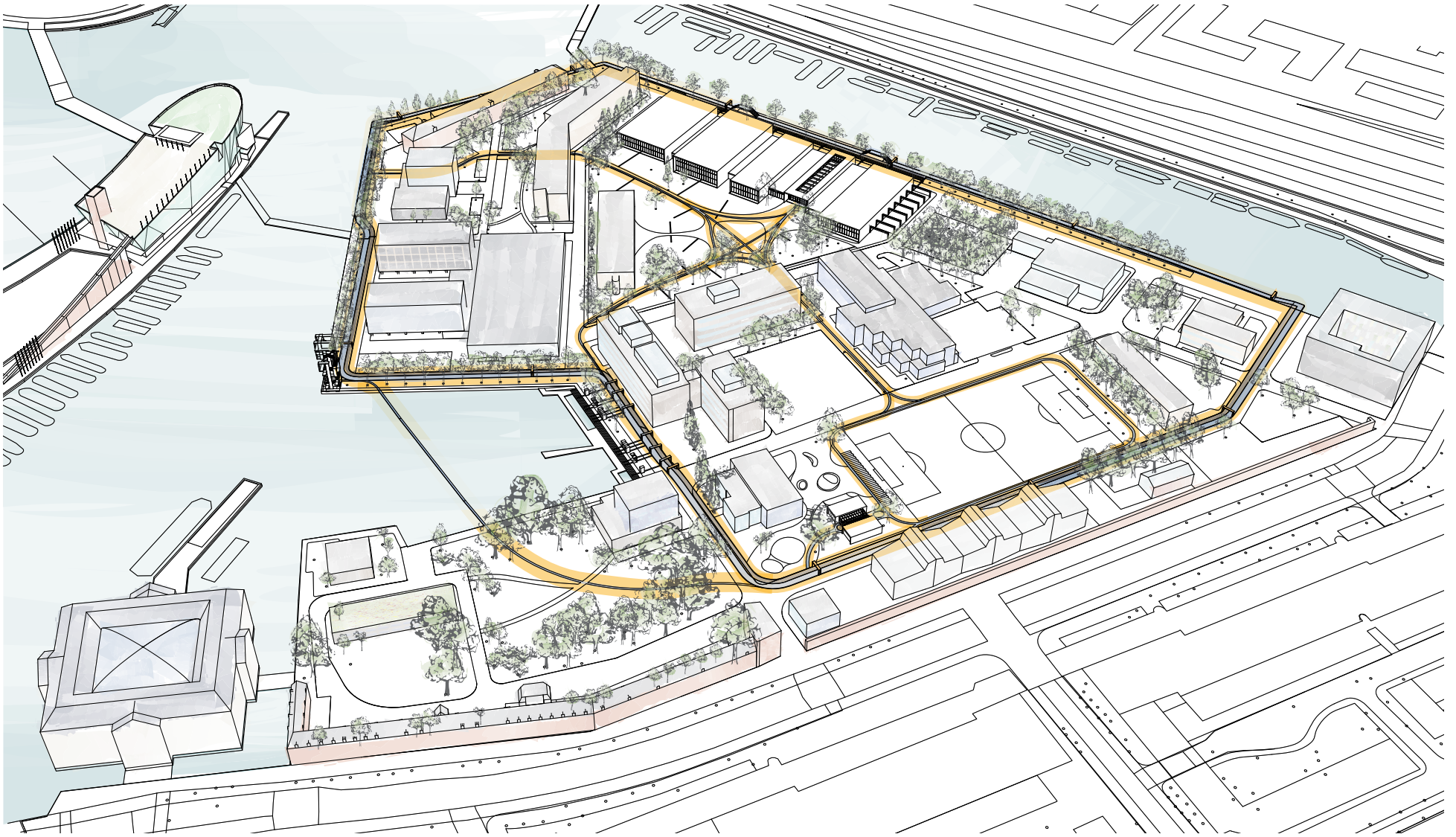


research

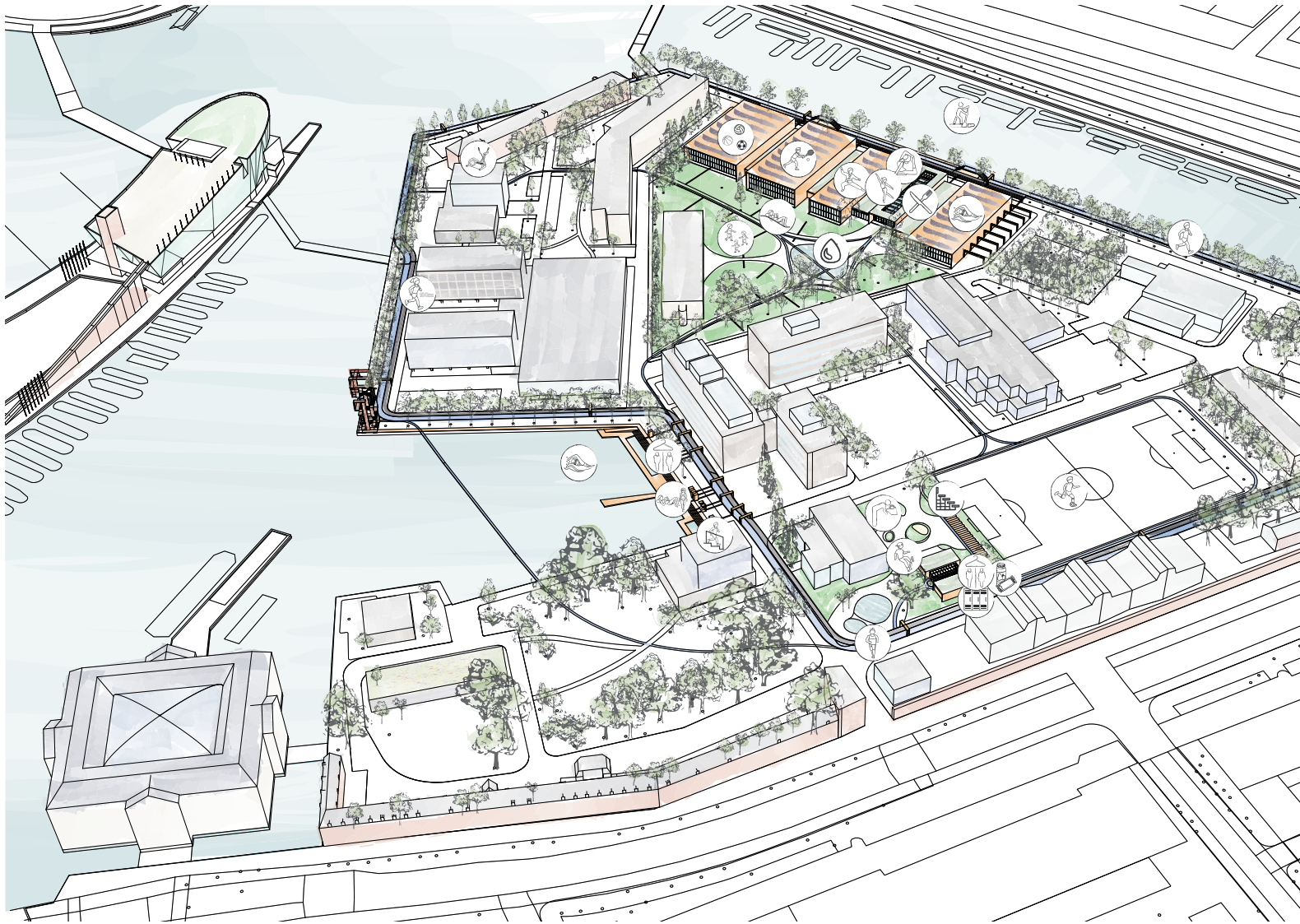


design





program



-  running
-  sprint track
-  swimming
-  SUP
-  padel
-  combi field
-  yoga
-  dancing
-  martial arts
-  athletics
-  football
-  skateboarding
-  bootcamp
-  outdoor fitness
-  sunbathing
-  relaxing
-  playing
-  tribune
-  lockers
-  changing rooms
-  drinking tap
-  café
-  kiosk
-  water playground



introduction



research



design



-  running
-  sprint track
-  swimming
-  SUP
-  padel
-  combi field
-  yoga
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-  kiosk
-  water playground



LONG USE

INDOOR



SHORT USE

INDOOR
OUTDOOR

MIXED/CONSTANT USE

OUTDOOR



-  running
-  sprint track
-  swimming
-  SUP
-  padel
-  combi field
-  yoga
-  dancing
-  martial arts
-  athletics
-  football
-  skateboarding
-  bootcamp
-  outdoor fitness
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-  café
-  kiosk
-  water playground



MULTI SPORTS HALL & SWIMMING

SPORTS



multi sports field



padel



yoga



dance

multifunctional space



martial arts



fitness



swimming



paddleboarding

AUXILIARY



café-restaurant



dressing rooms



lockers



drinking tap (outside)



tribune

CHANGING FACILITY

AUXILIARY



kiosk



dressing rooms



lockers



drinking tap



tribune

OUTSIDE

SPORTS



running



skateboarding



football



bootcamp



playing



relaxing



outdoor fitness



sprint track



swimming



paddleboarding



sunbathing



introduction



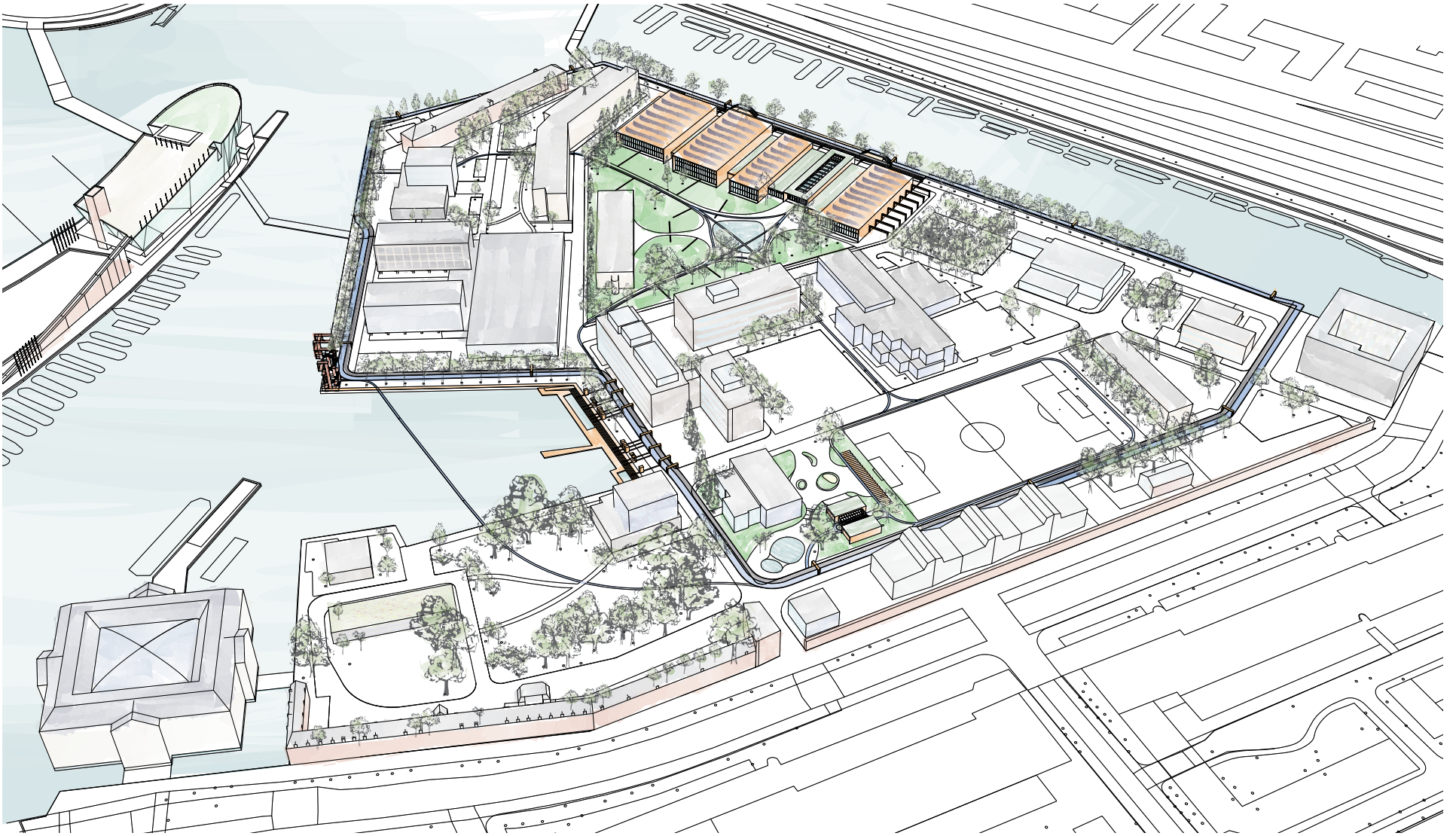
research



design



The Maritime Mile



introduction



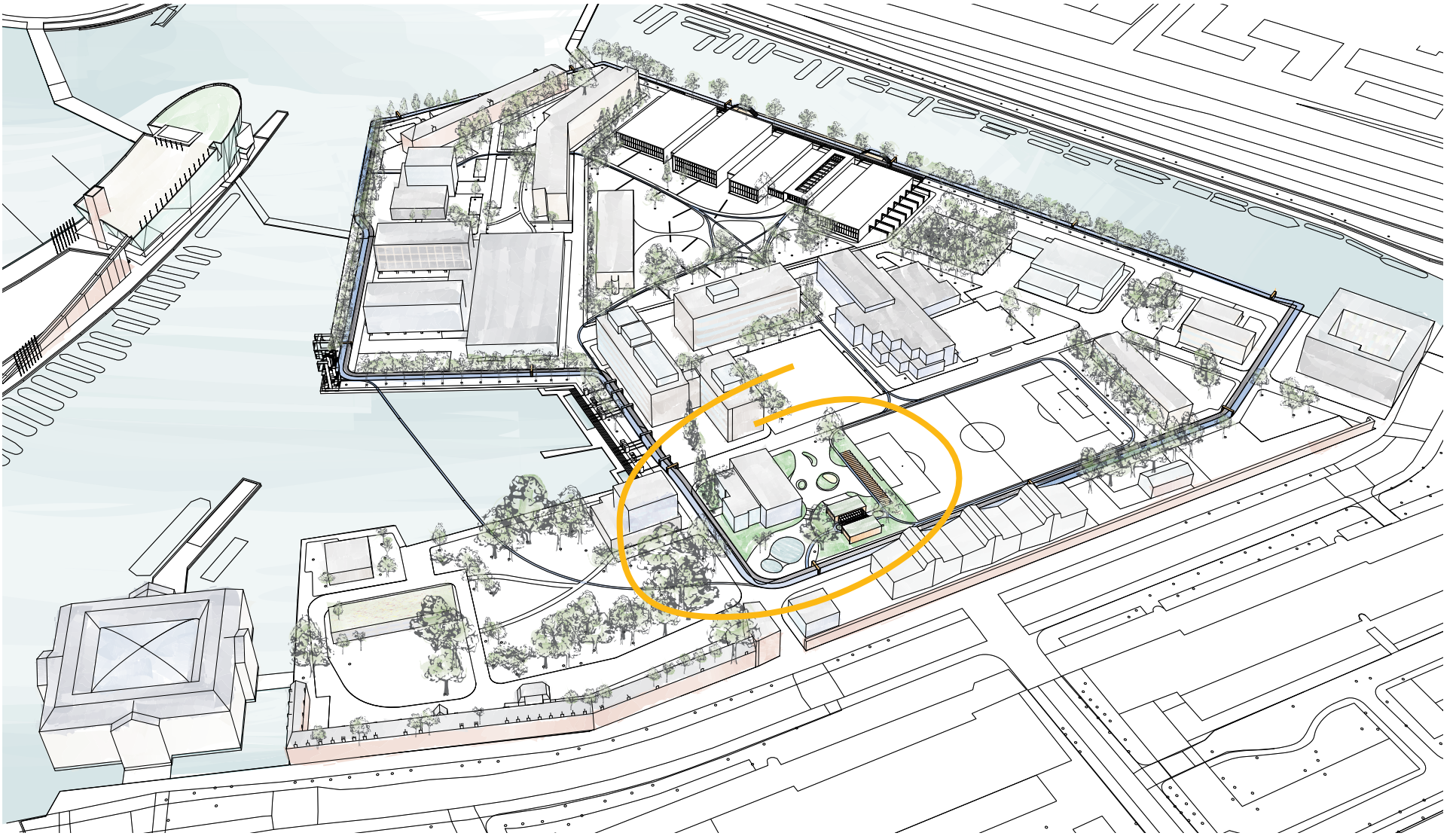
research



design



the pit stop



introduction



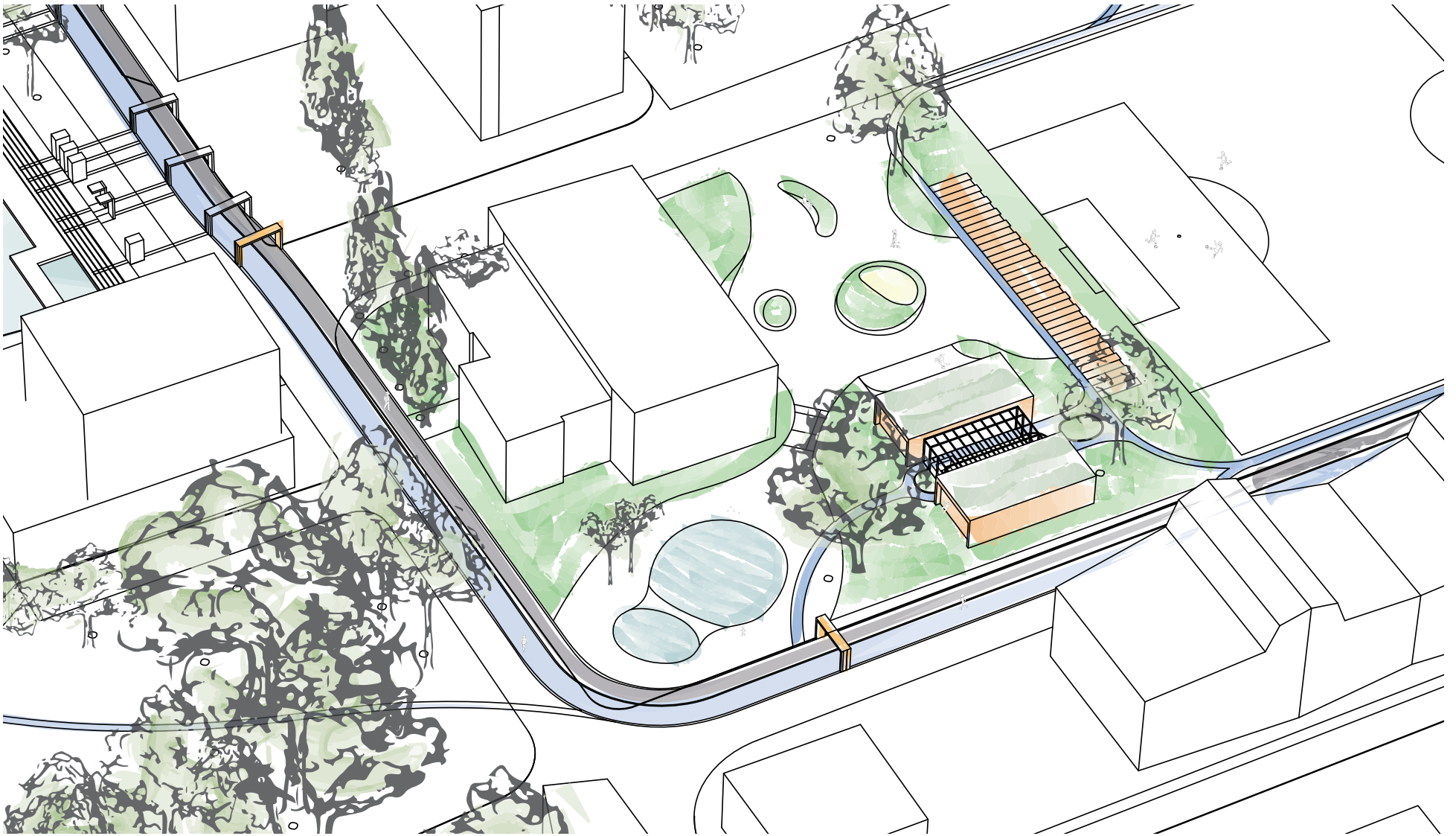
research



design



the pit stop



introduction



research

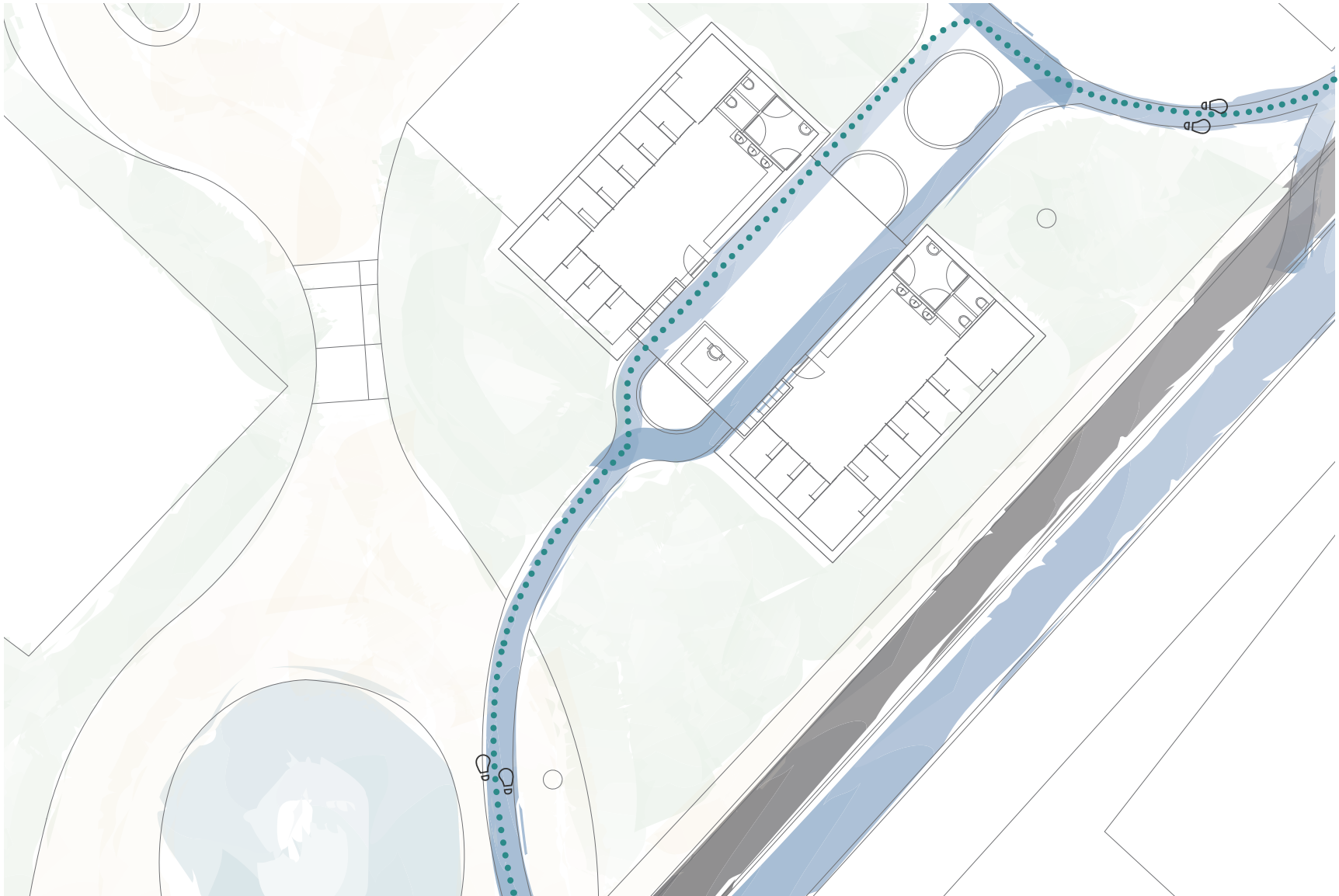


design



the pit stop

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introduction



research

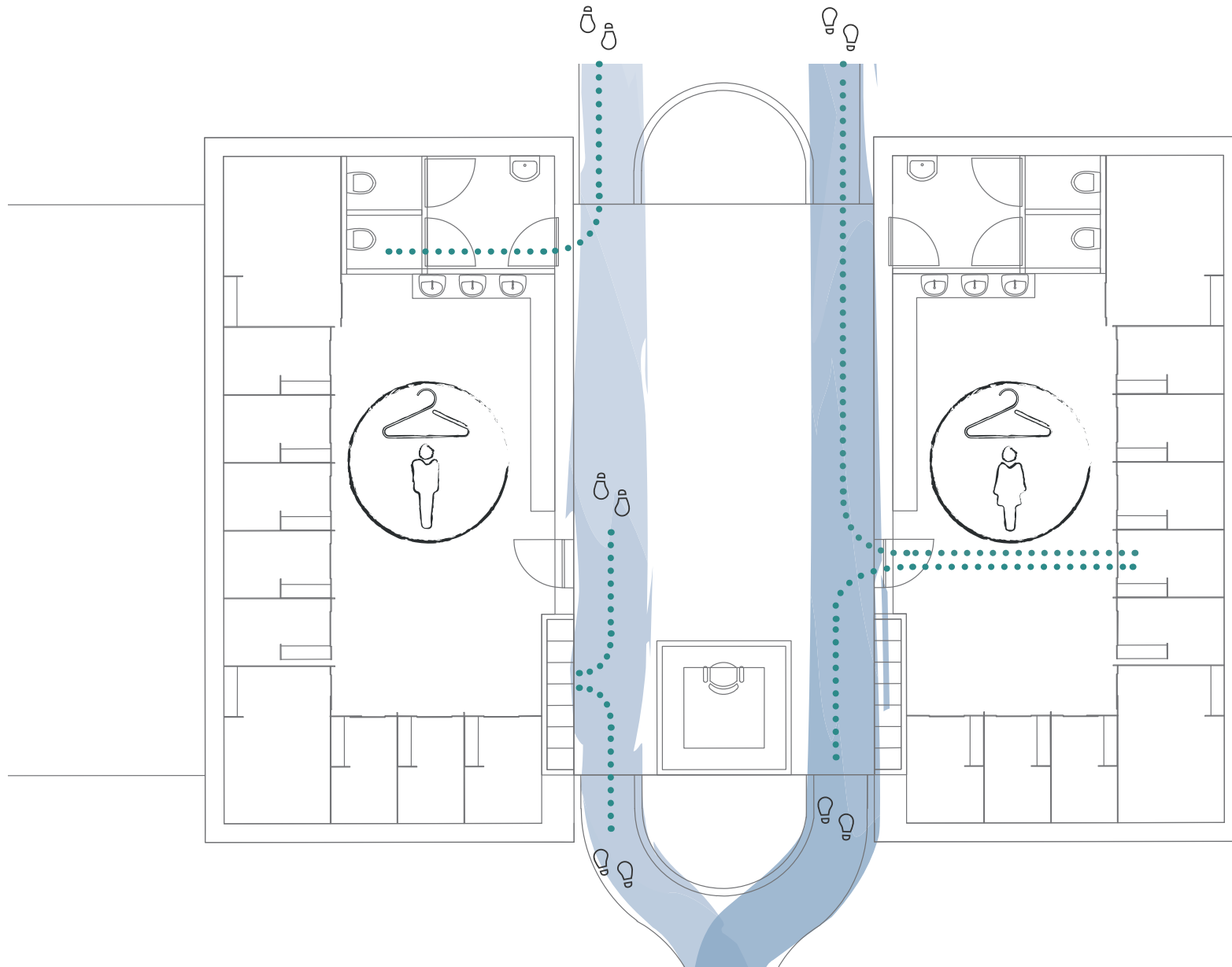


design



the pit stop

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introduction



research



design



the pit stop

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introduction



research



design



the pit stop

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introduction



research

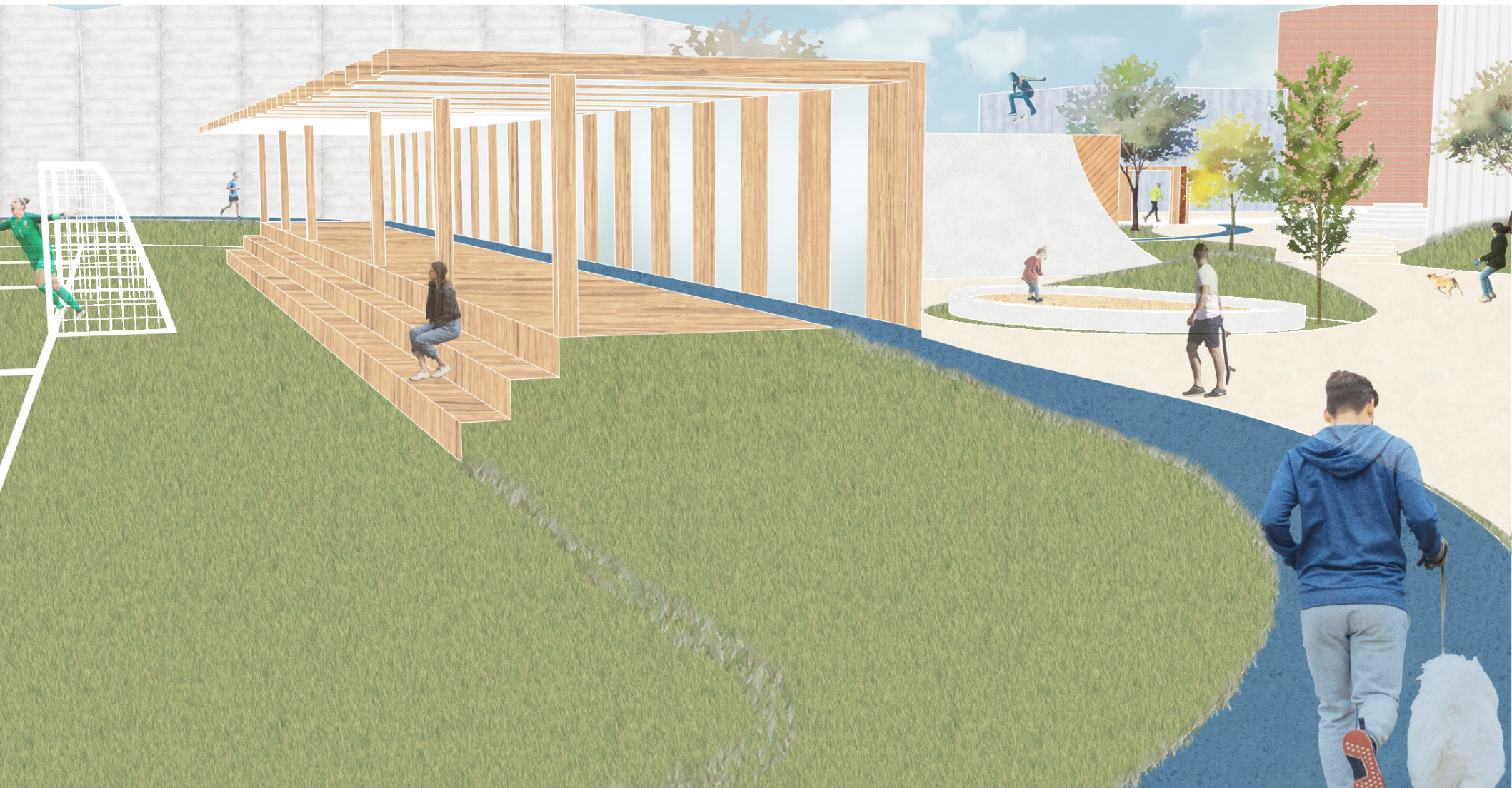


design



the pit stop

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introduction



research



design



along the water

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introduction



research



design



along the water

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introduction



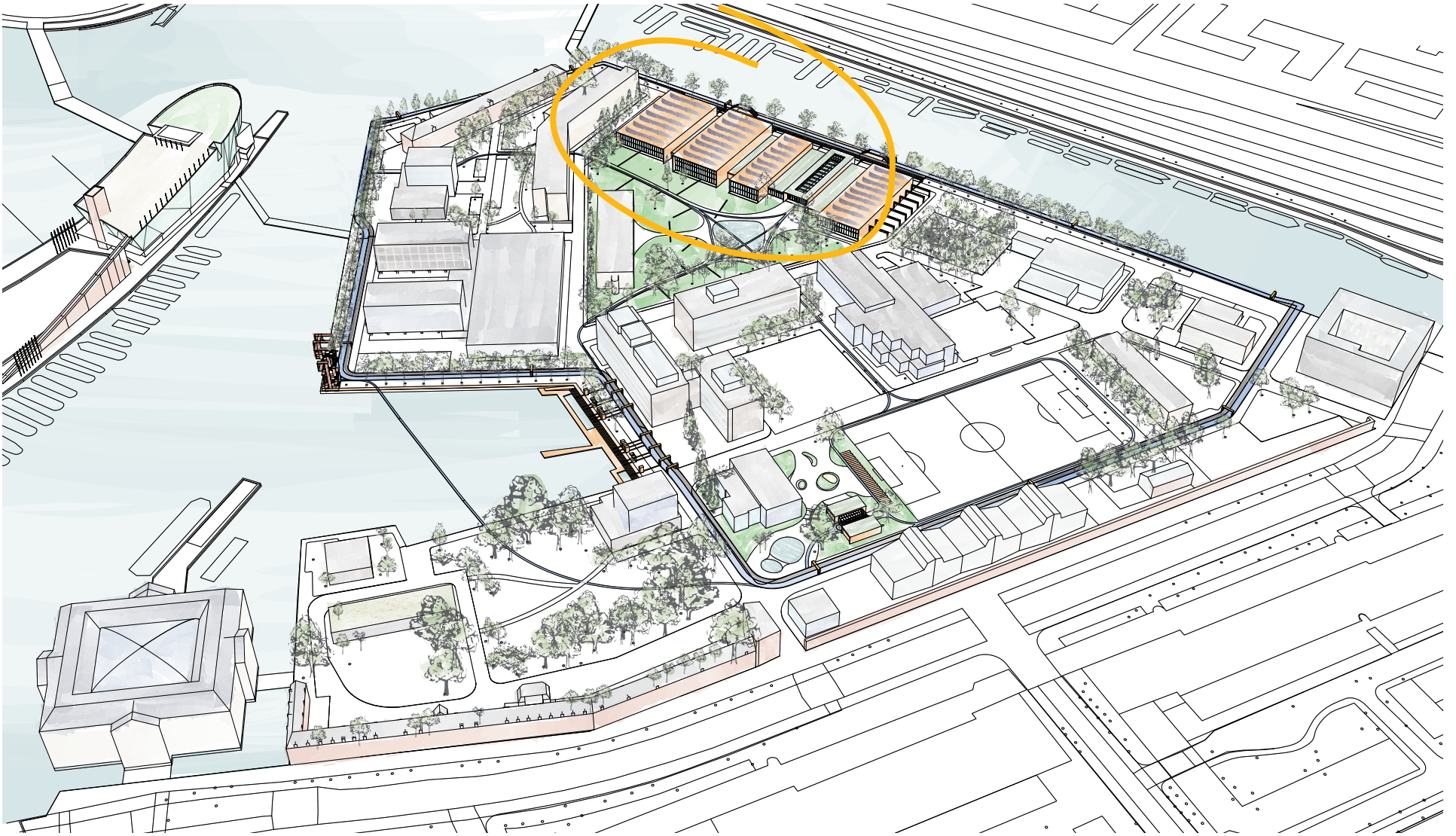
research



design



multisports building



introduction



research



design



multisports building

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introduction



research



design



multisports building

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introduction



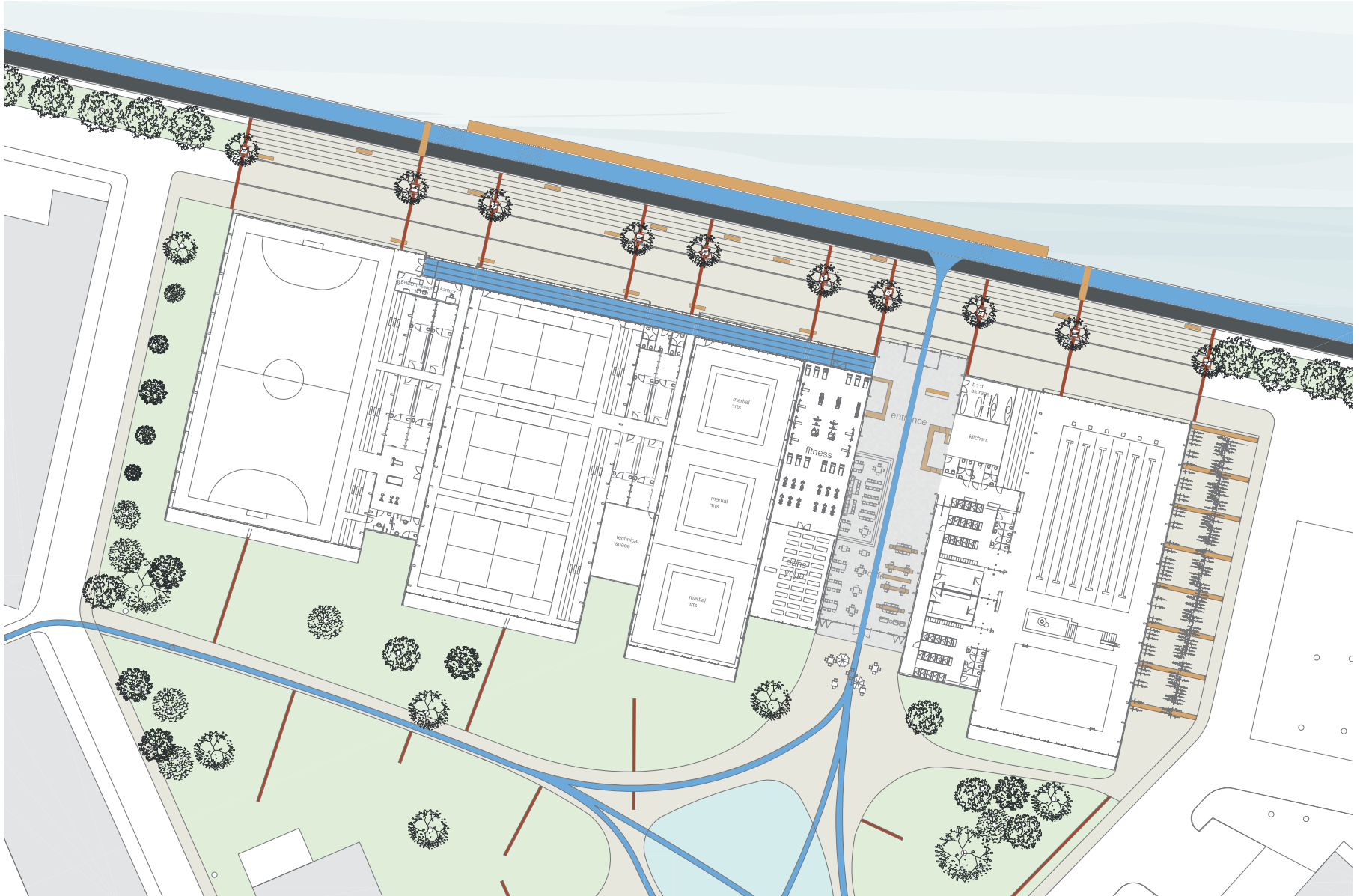
research



design



multisports building



introduction



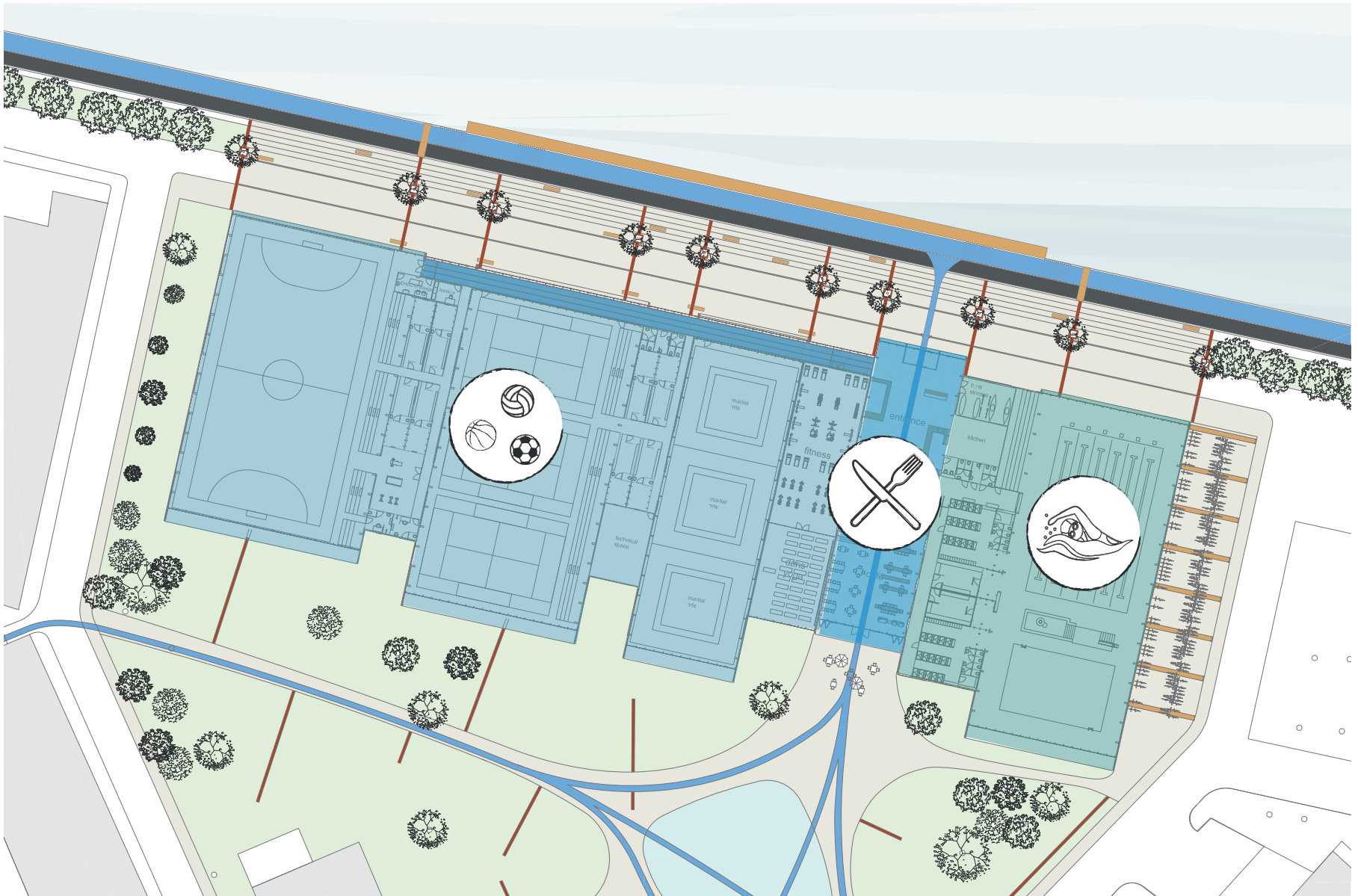
research



design



multisports building



introduction



research



design





introduction



research



design



padel courts

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introduction



research



design



swimming pool

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introduction



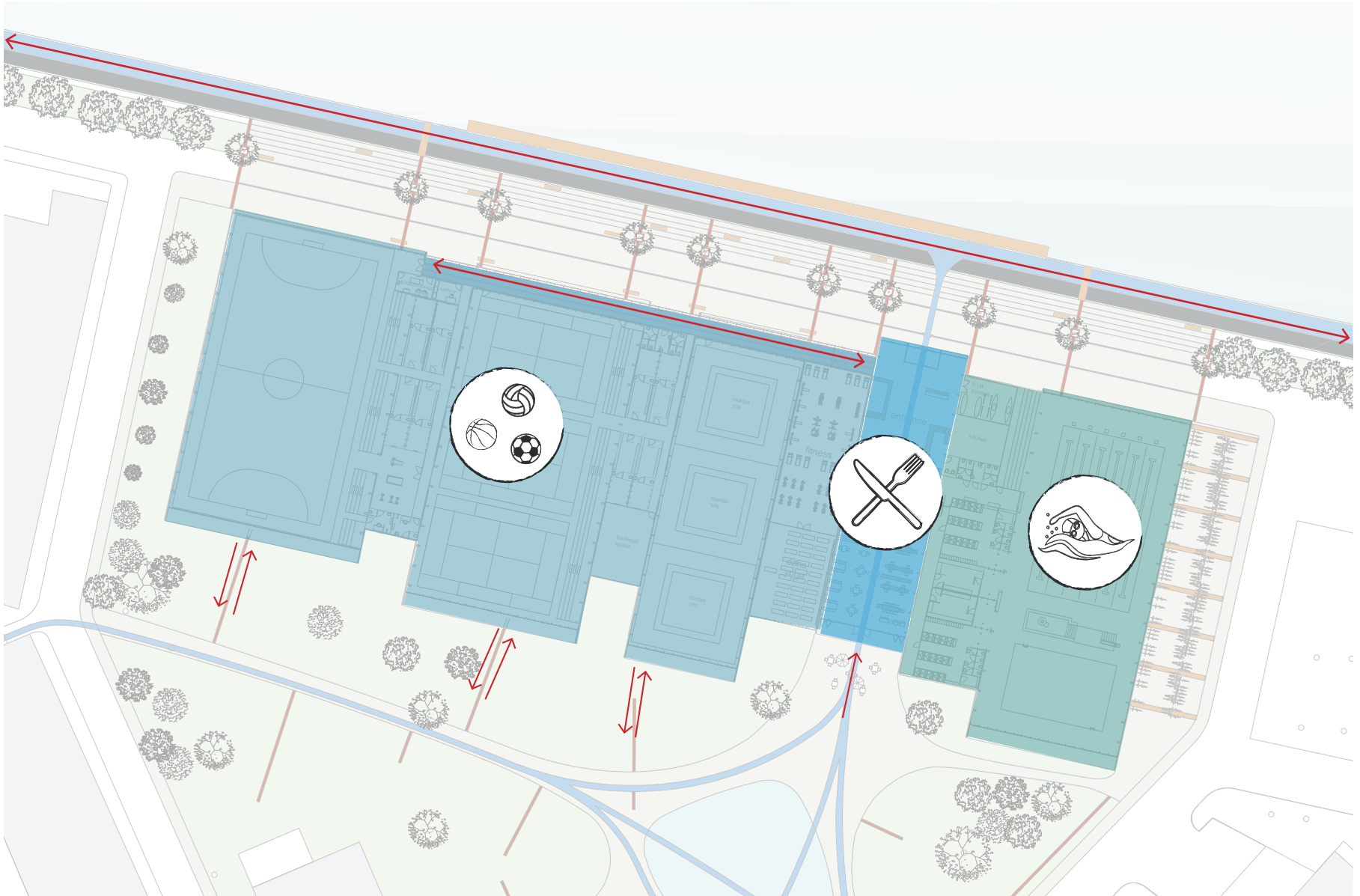
research



design



multisports building



introduction



research



design





corridor



introduction



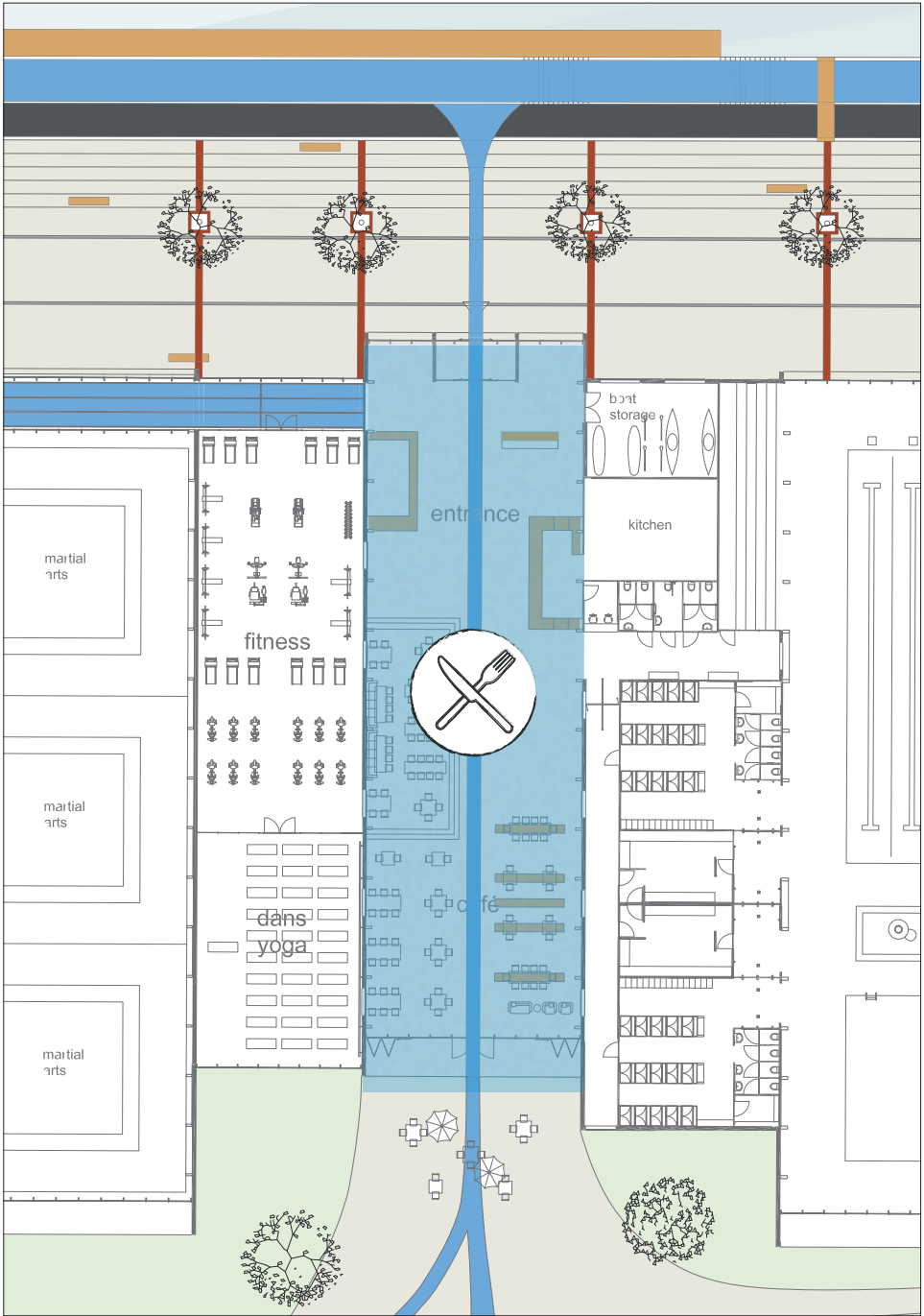
research



design



entrance





introduction

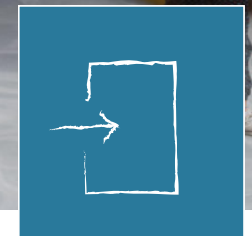
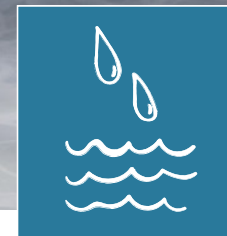
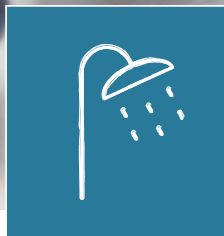


research



design





introduction



research



design



entrance | portals

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introduction

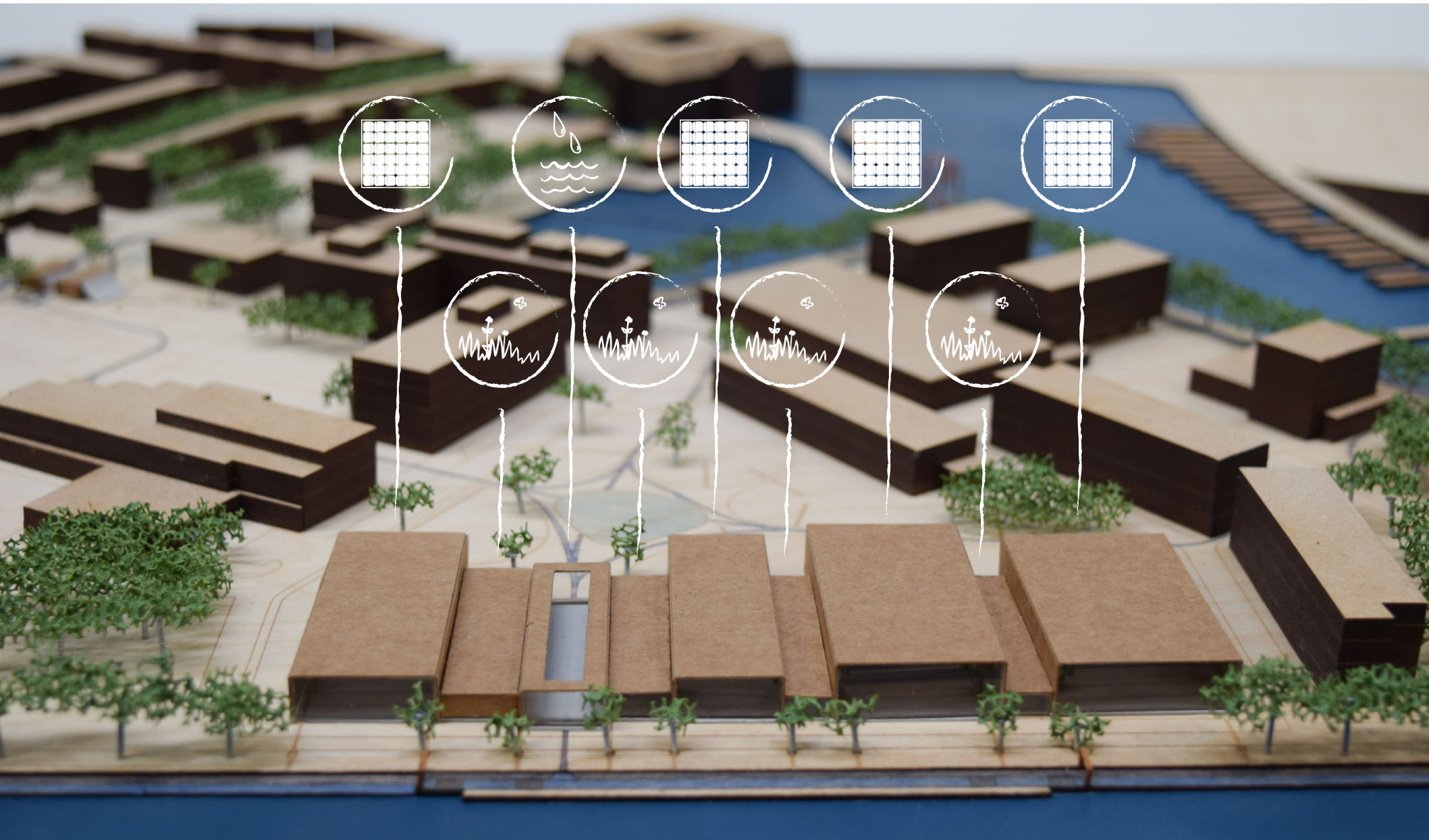


research

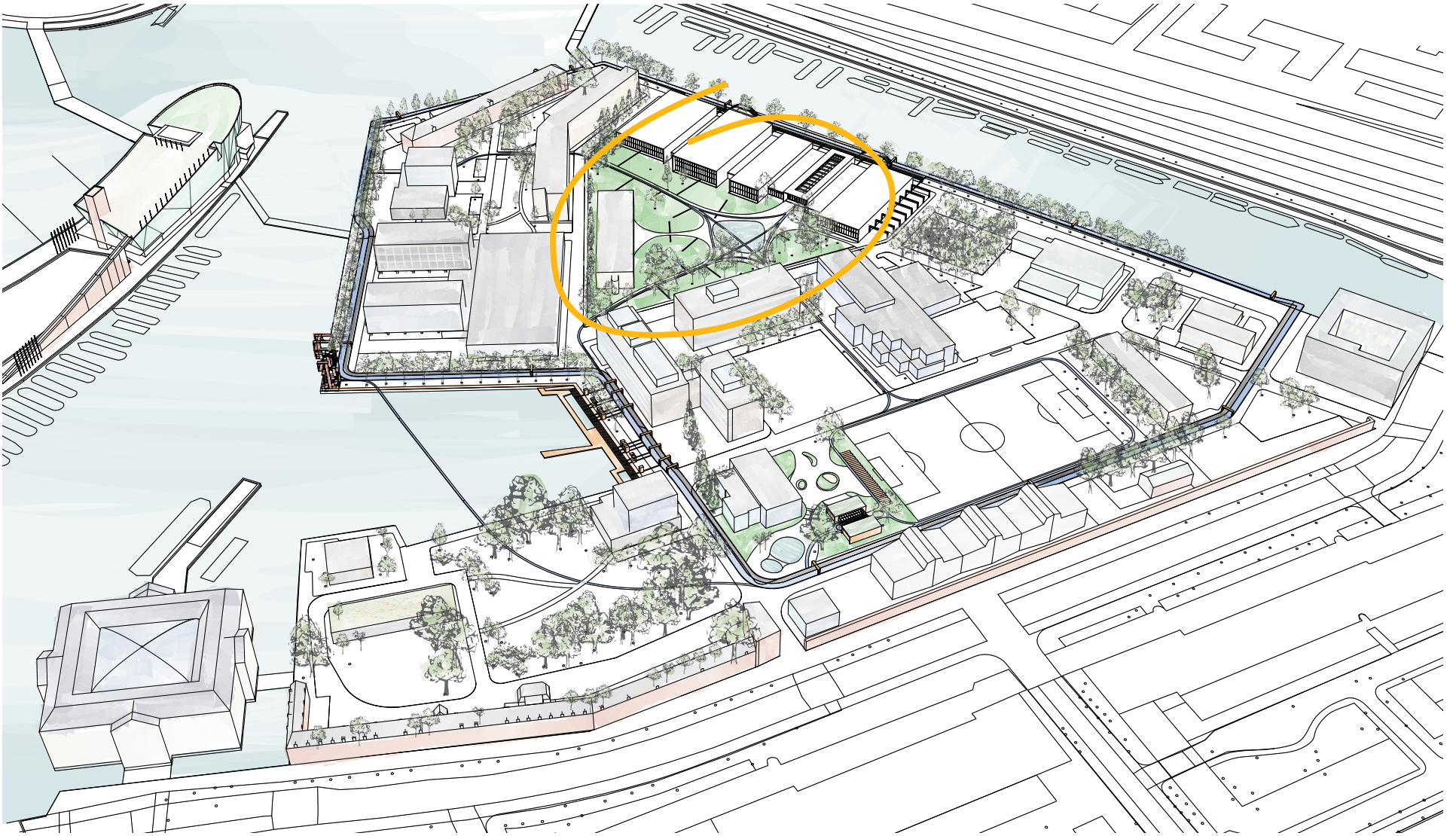


design





play, park and plaza



introduction



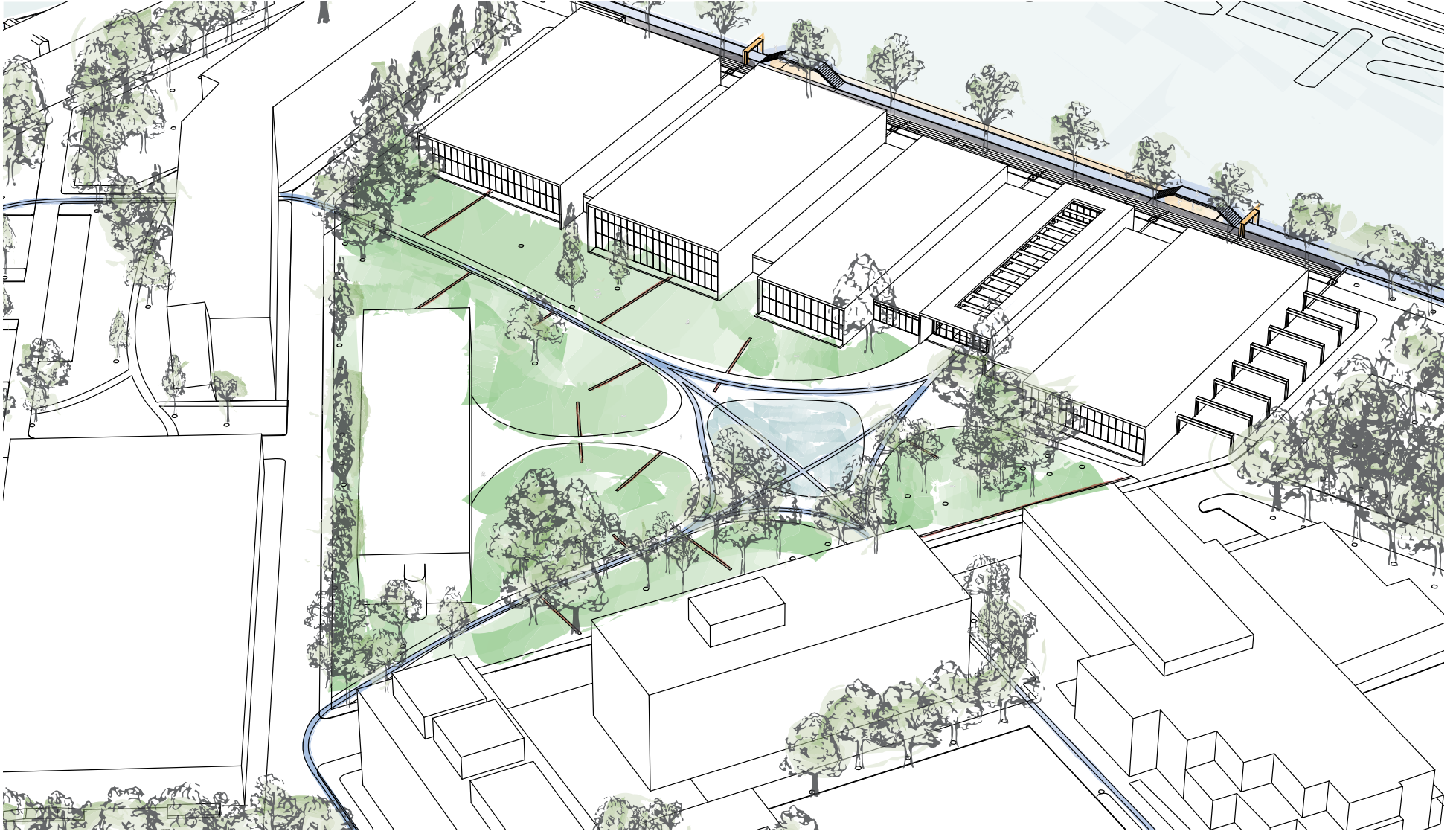
research



design



play, park and plaza



introduction



research



design



play, park and plaza



introduction



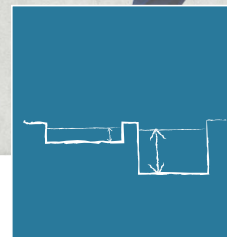
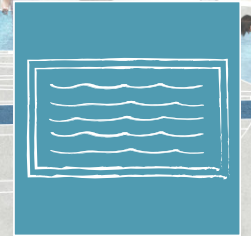
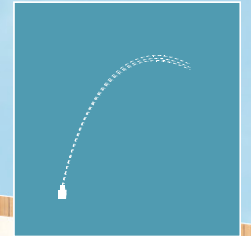
research



design



play, park and plaza



introduction

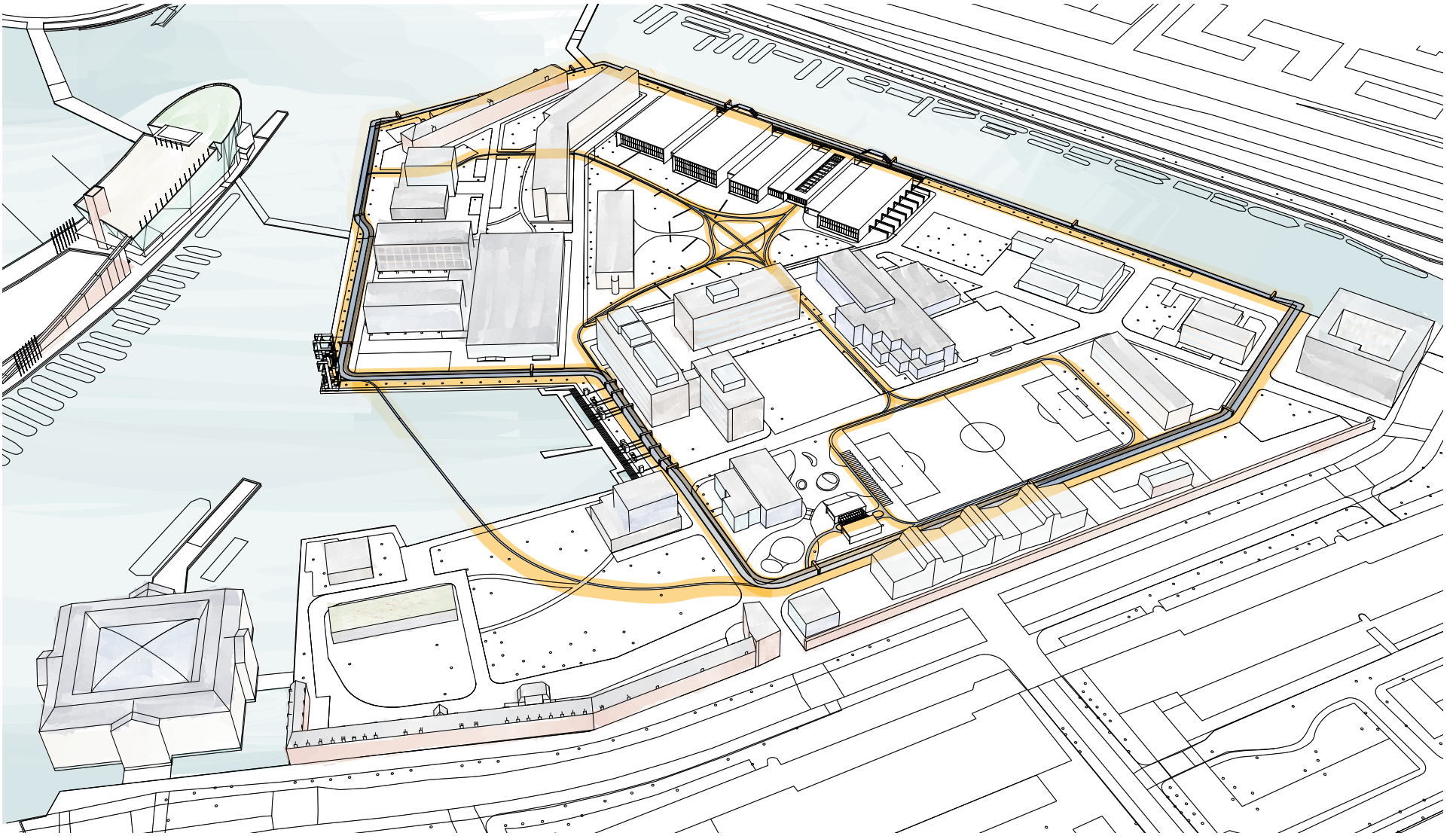


research



design







introduction

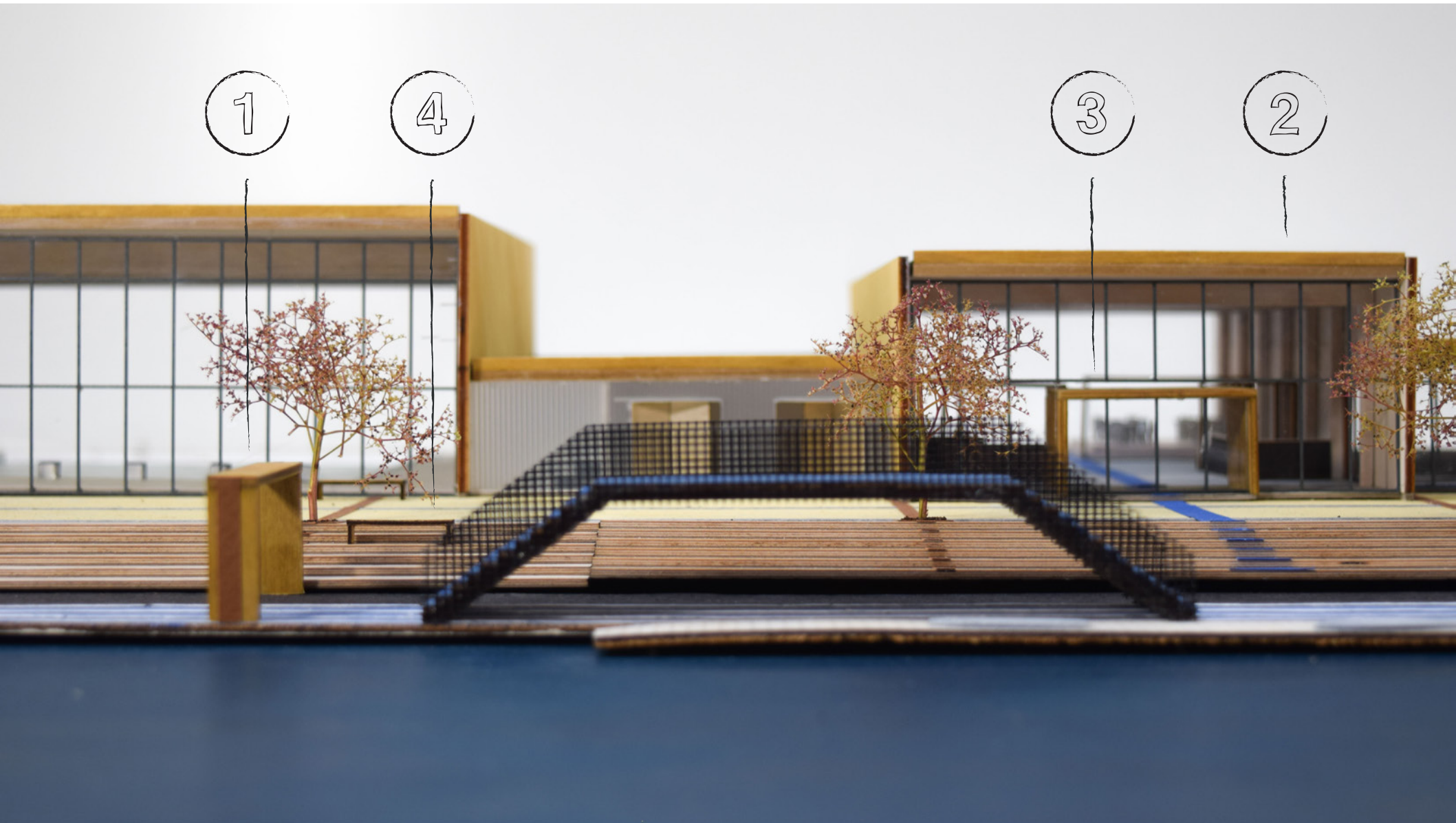


research



design





introduction



research



design



along the water

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introduction



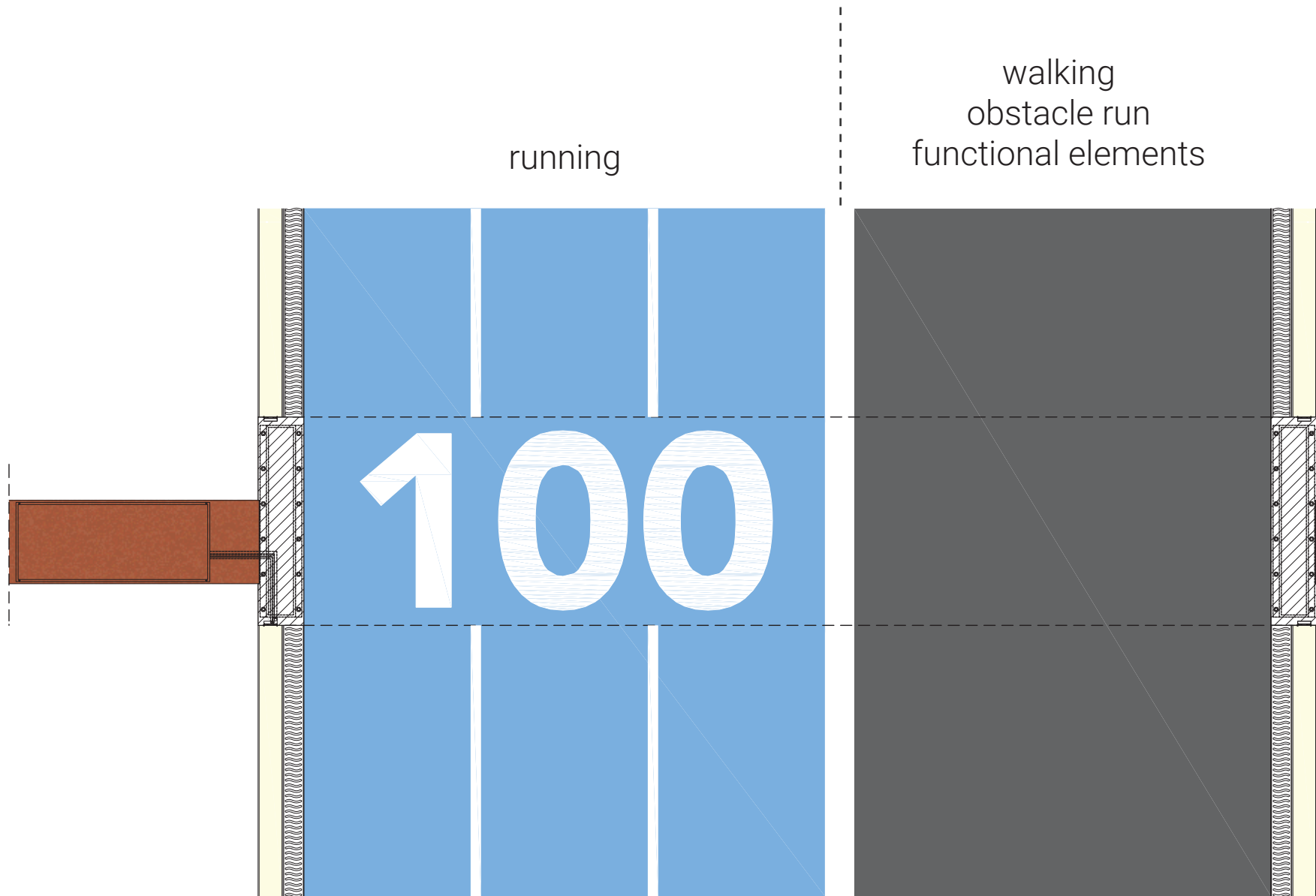
research



design



route division



introduction



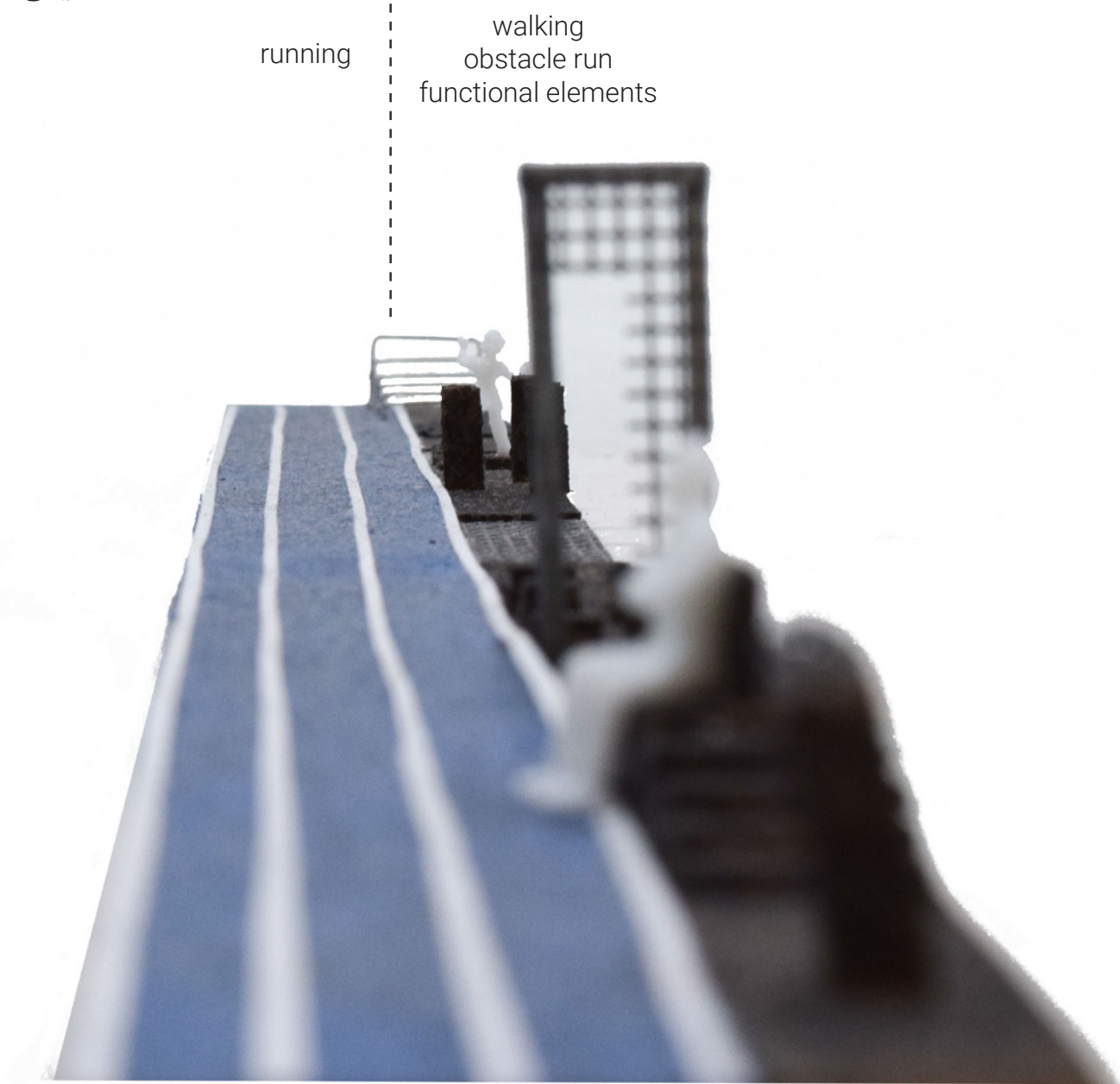
research

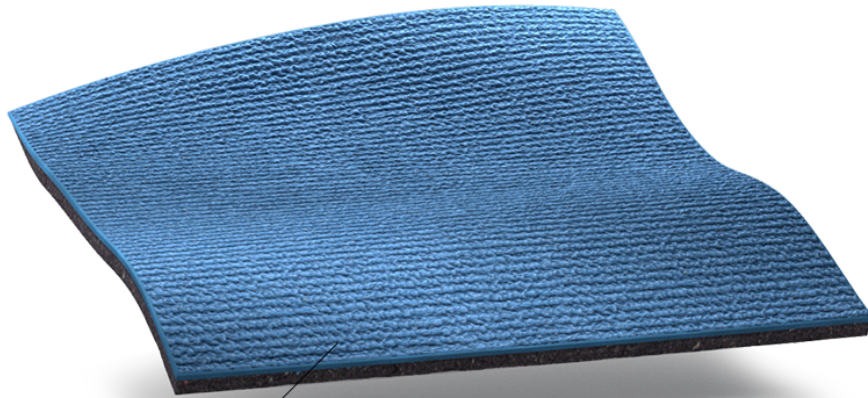


design



route division





NIKE GRIND RUBBER



NIKE GRIND RUBBER



introduction



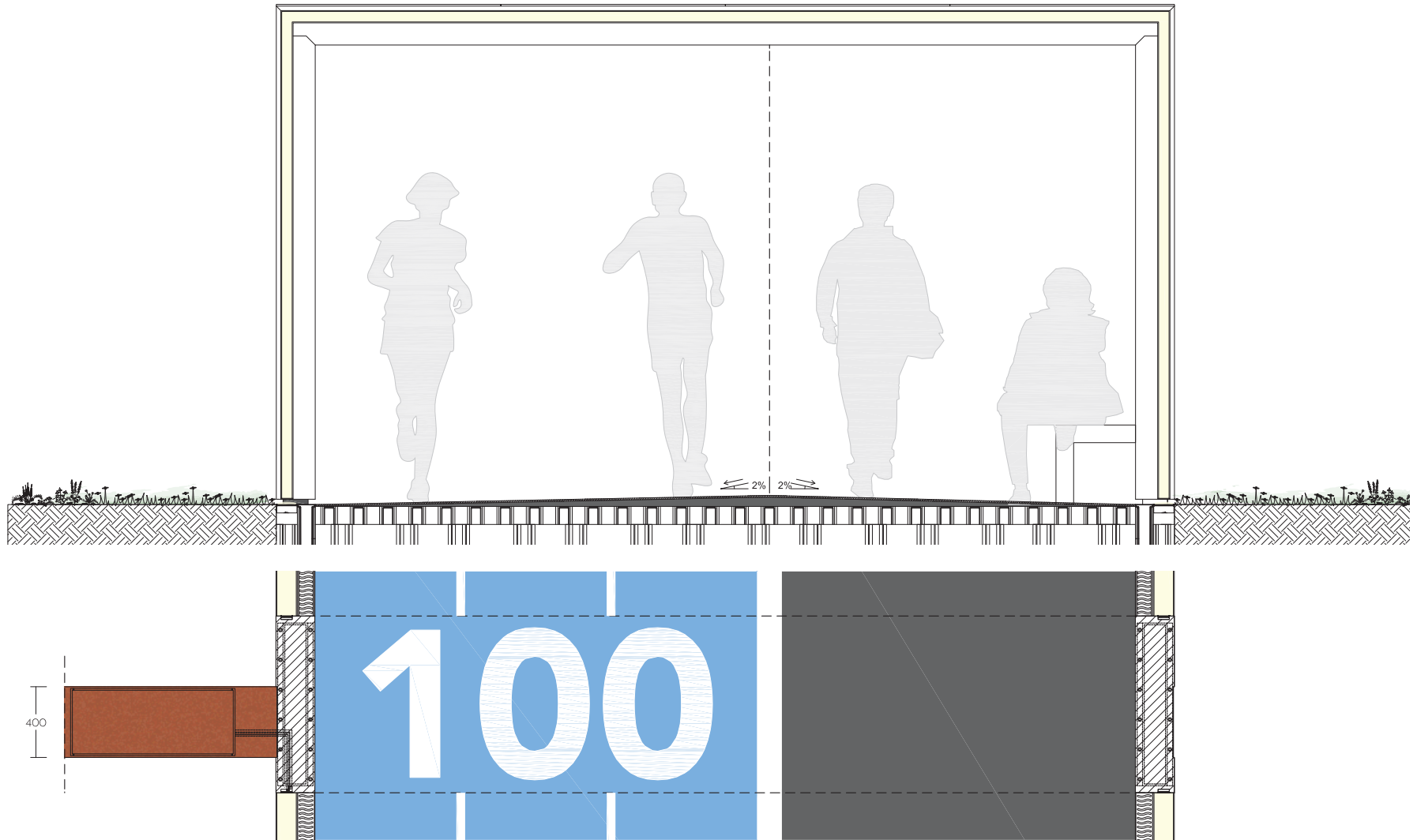
research



design



portals | experience



introduction

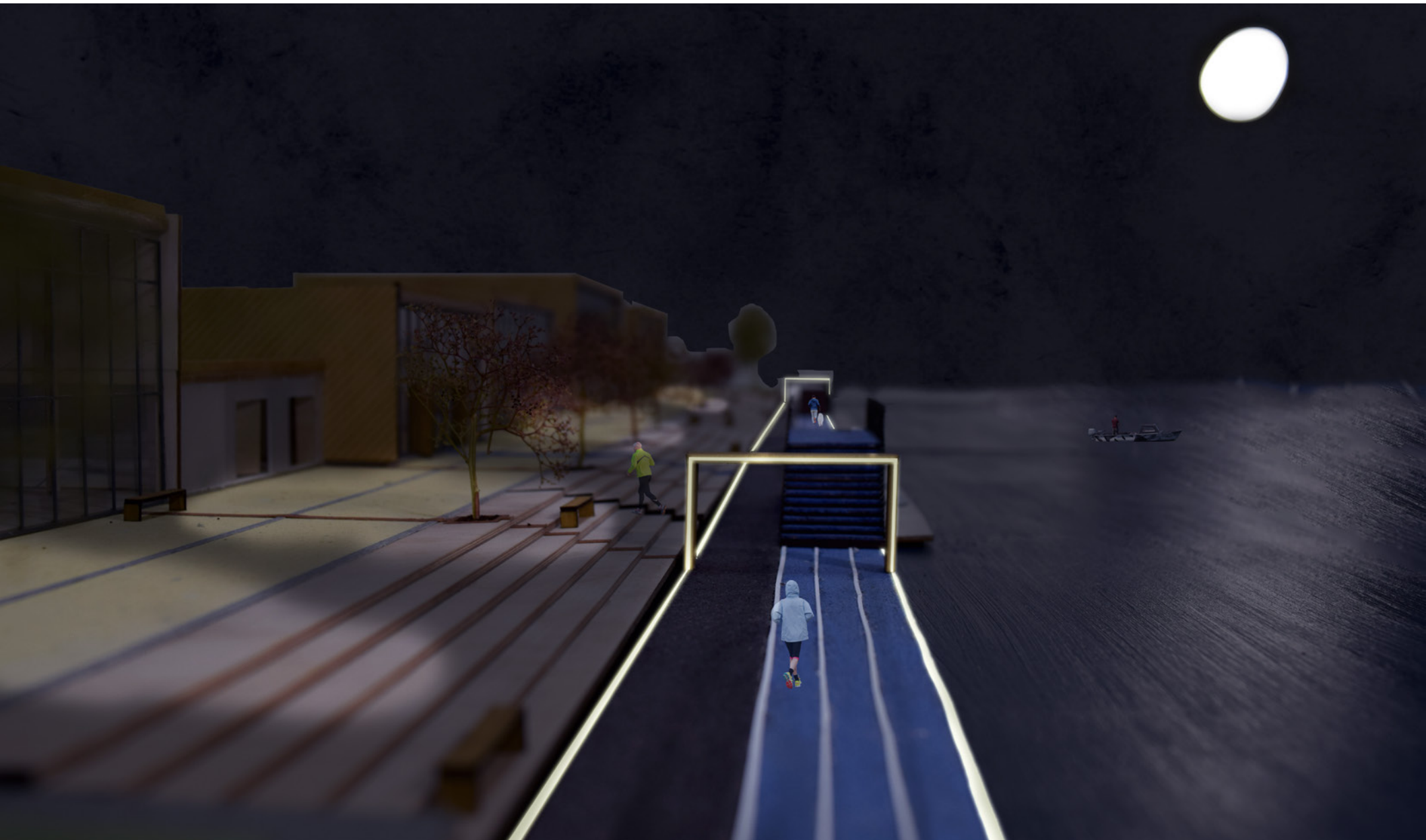


research



design





introduction

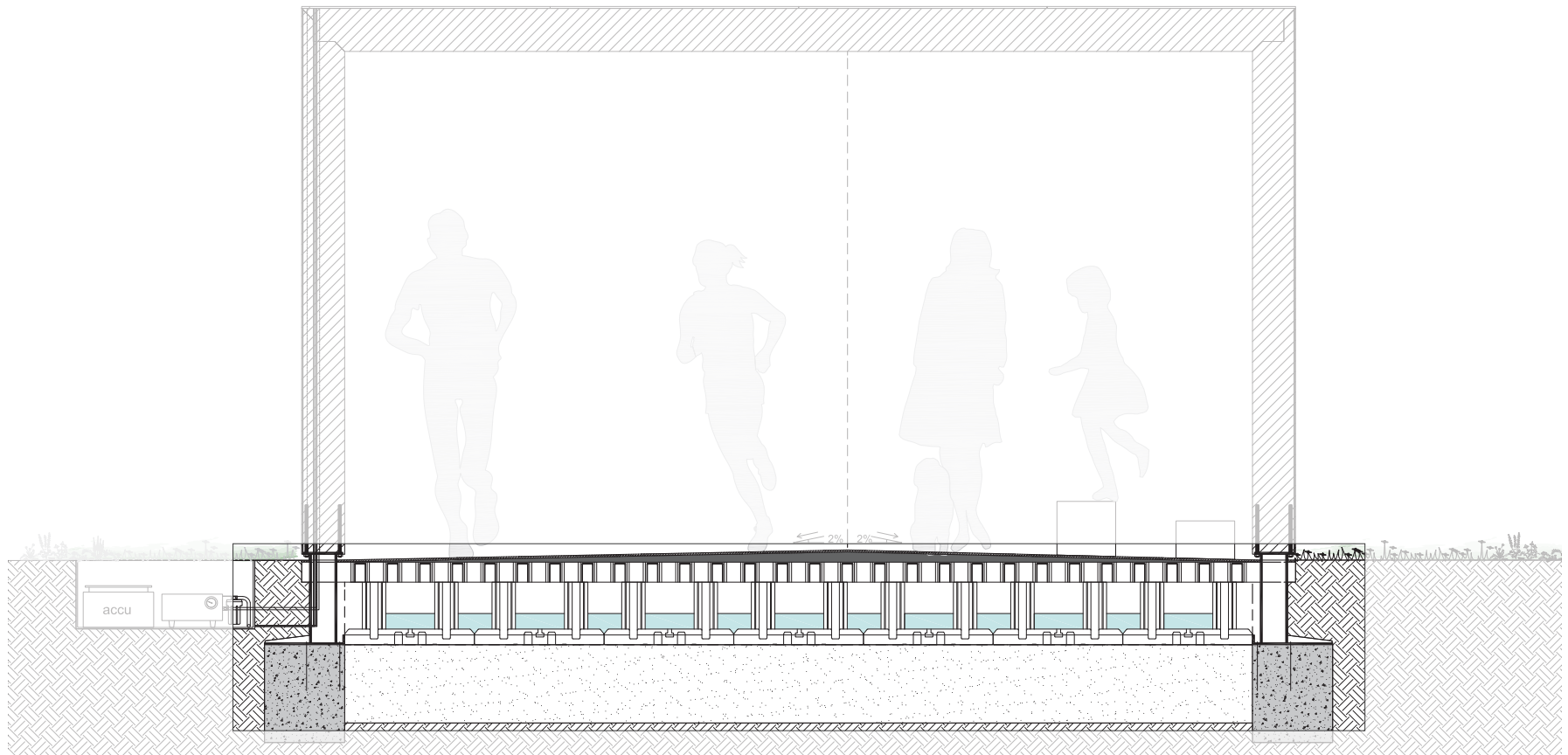


research



design





portals | road elements



introduction



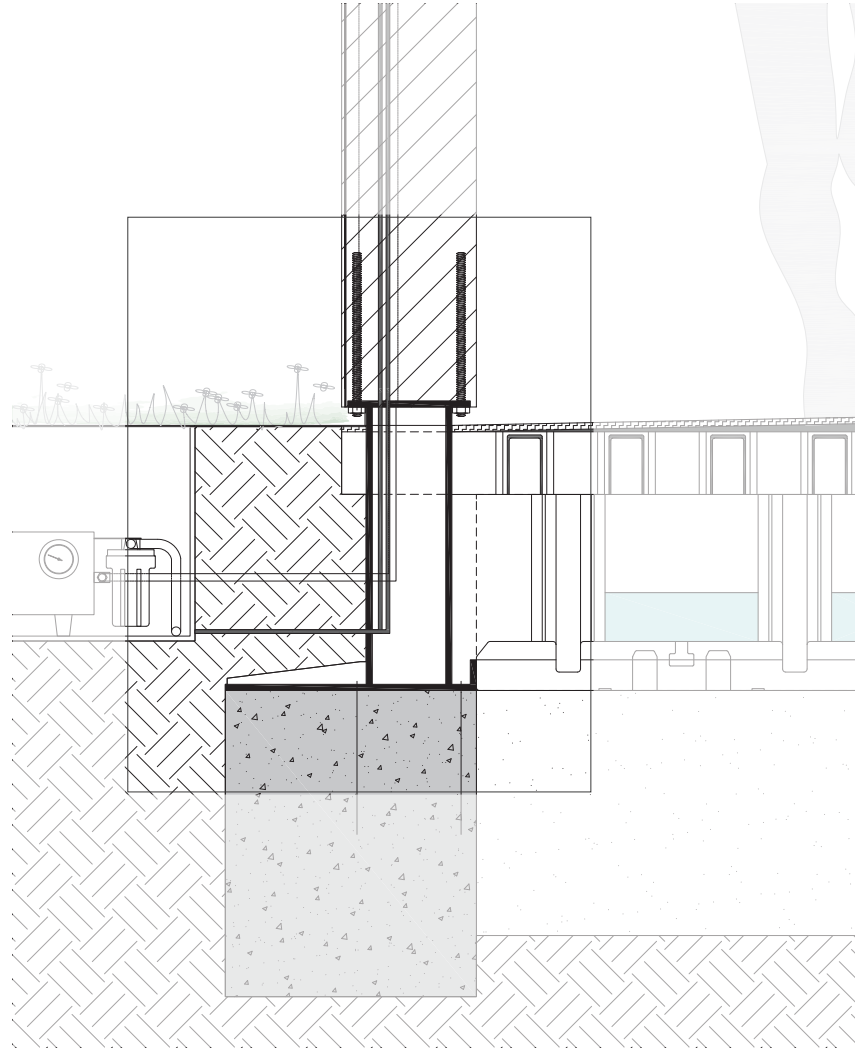
research



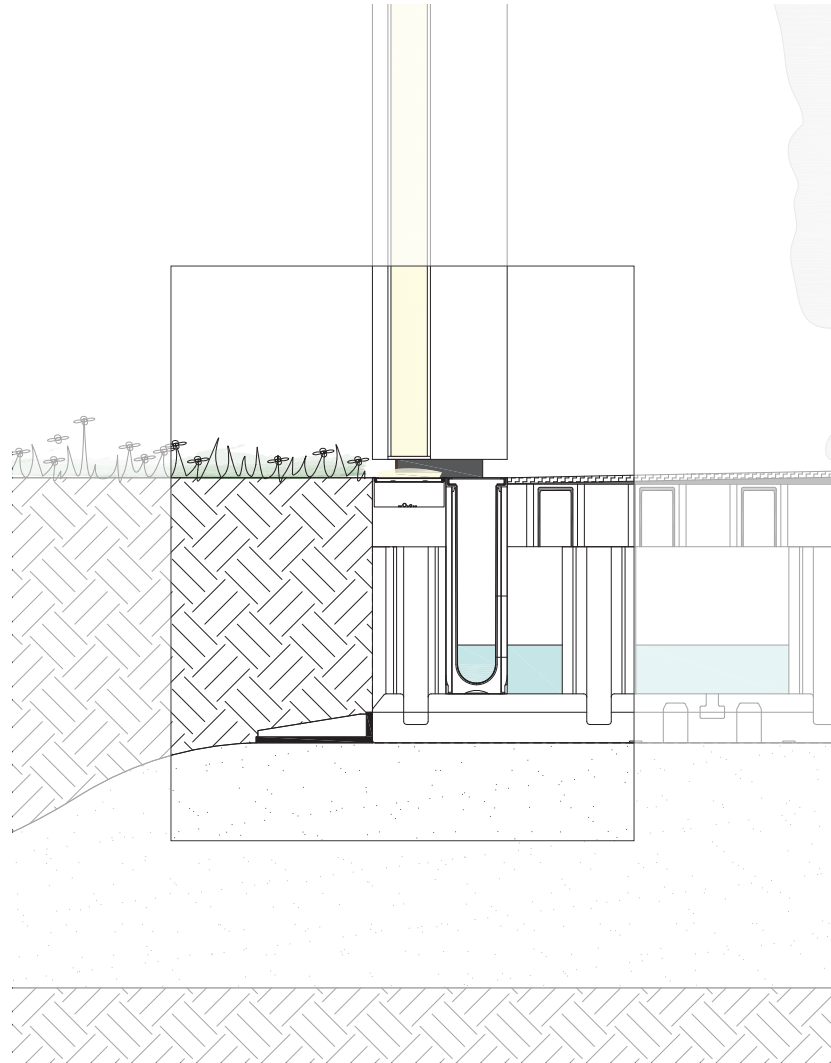
design



portals | construction



portals | construction



introduction



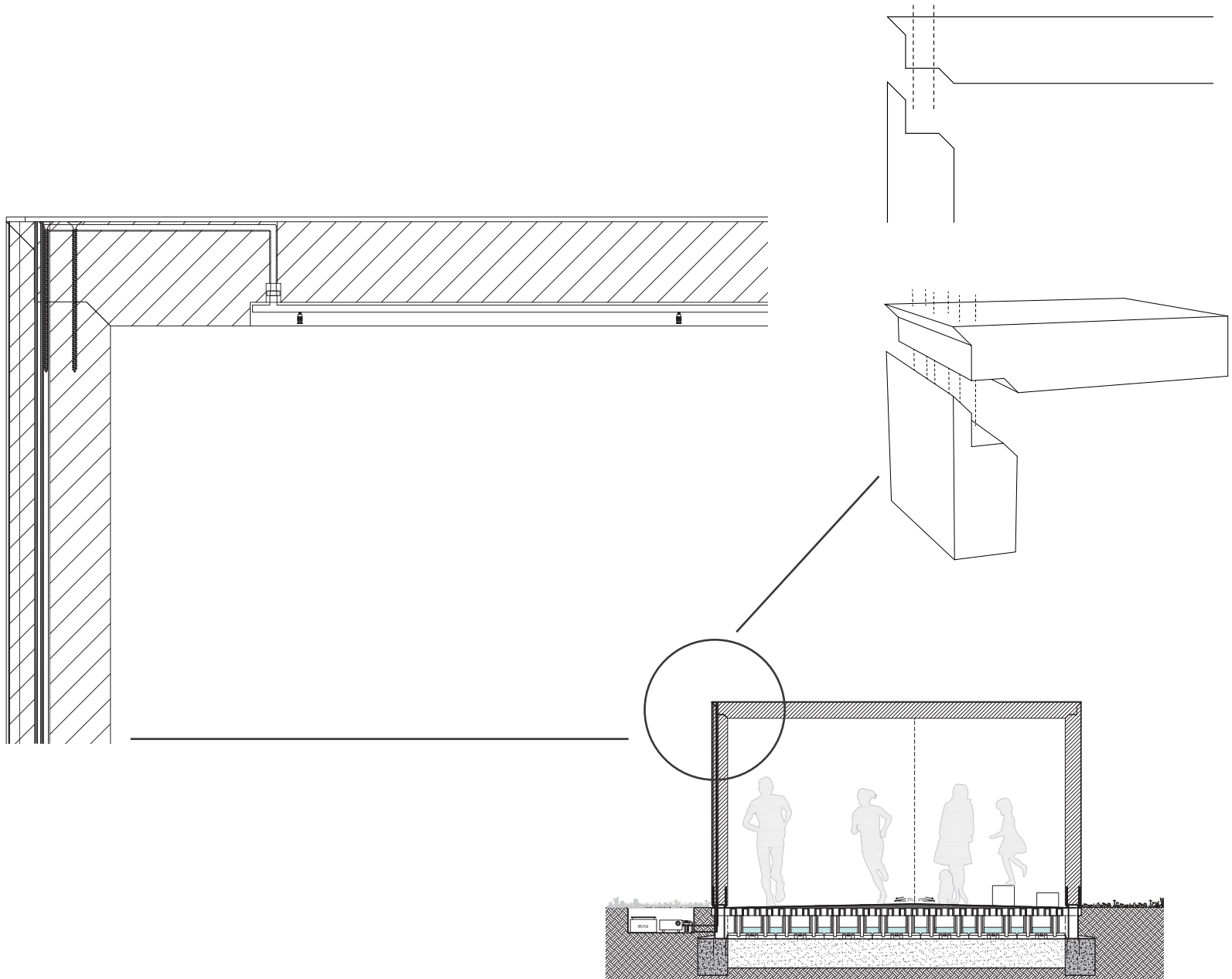
research



design



portals | water & sun



introduction



research



design





introduction



research



design



route | diving tower

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introduction



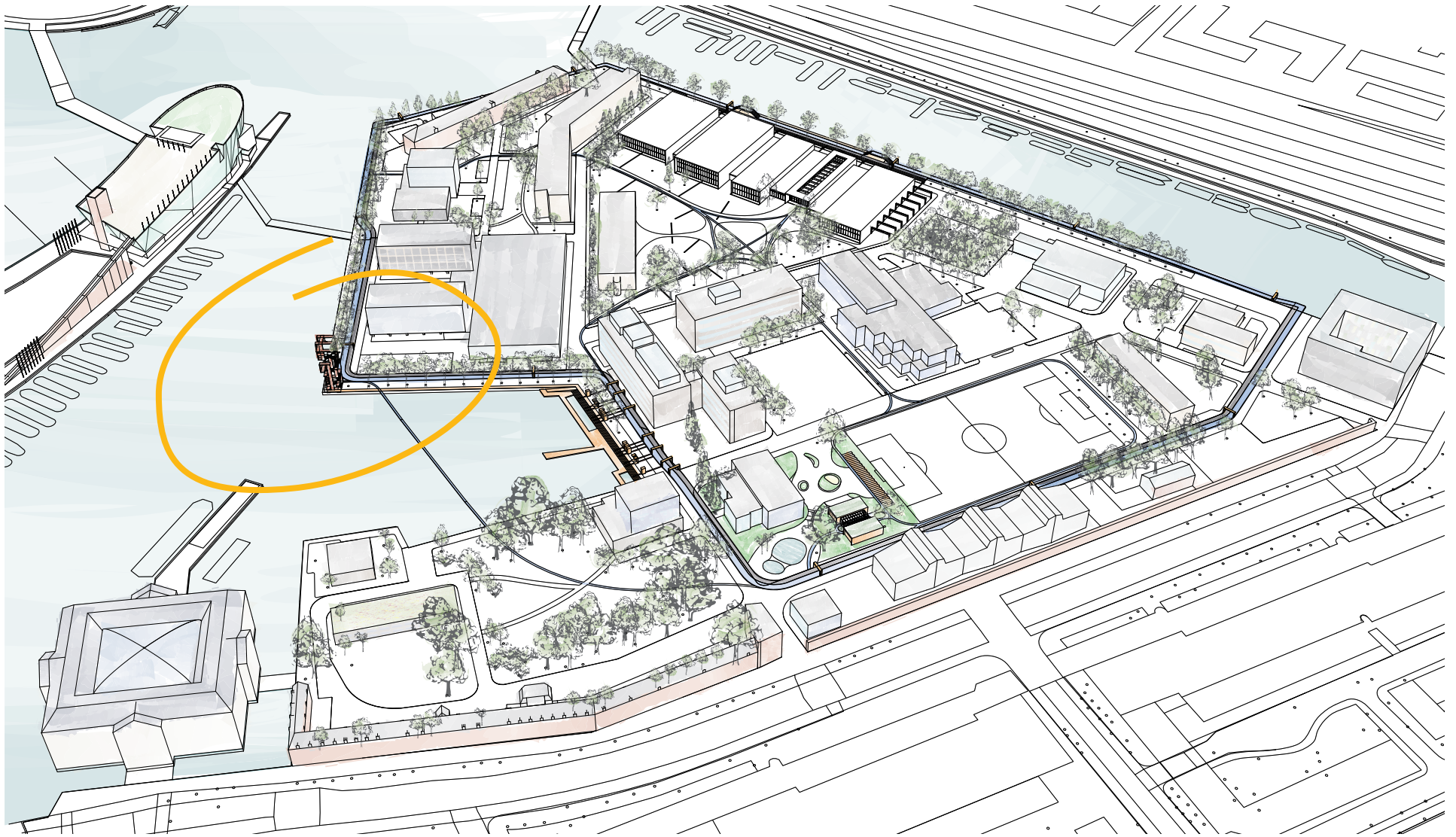
research



design



diving tower



introduction



research

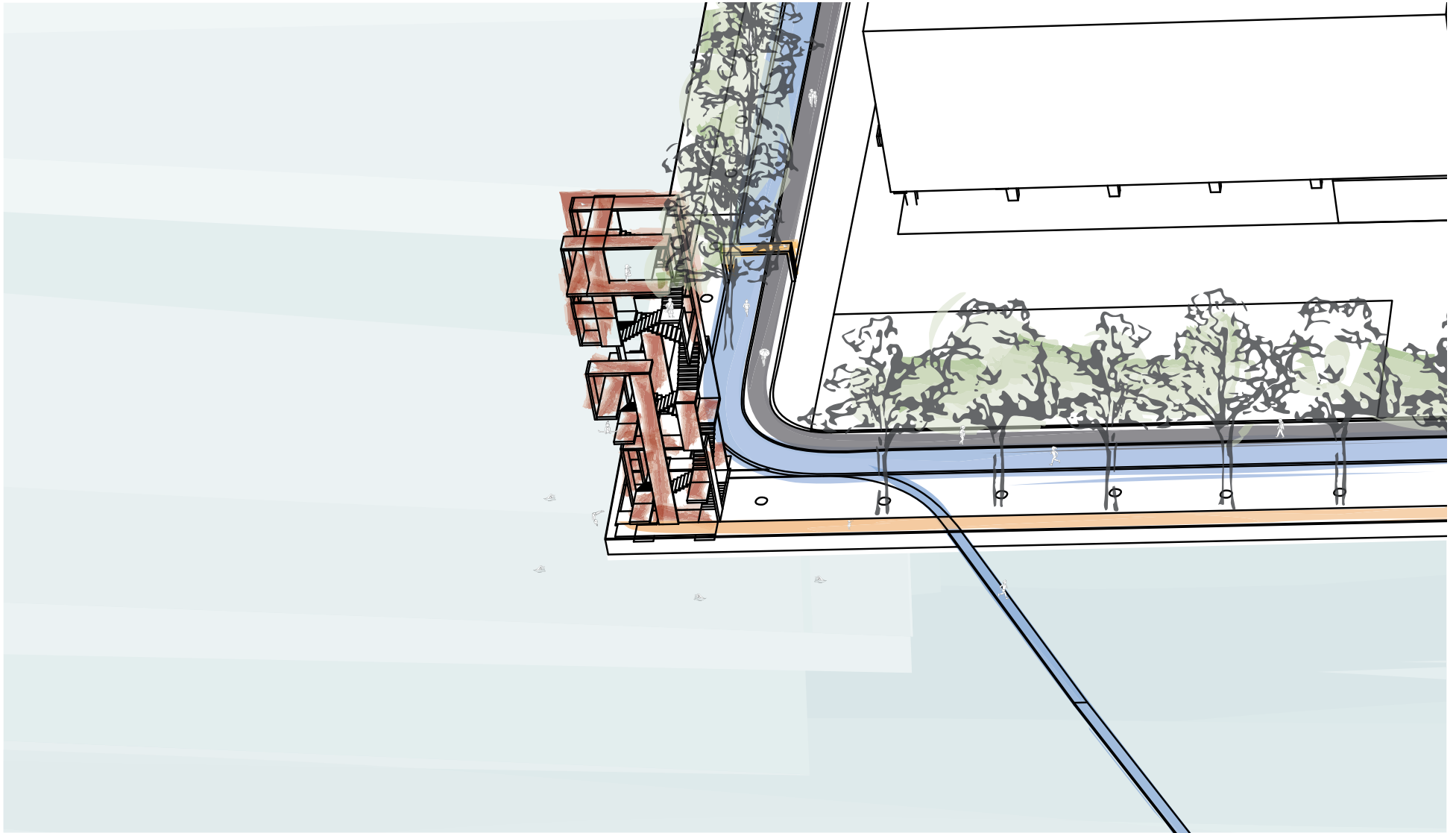


design



diving tower

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introduction



research



design



diving tower

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introduction



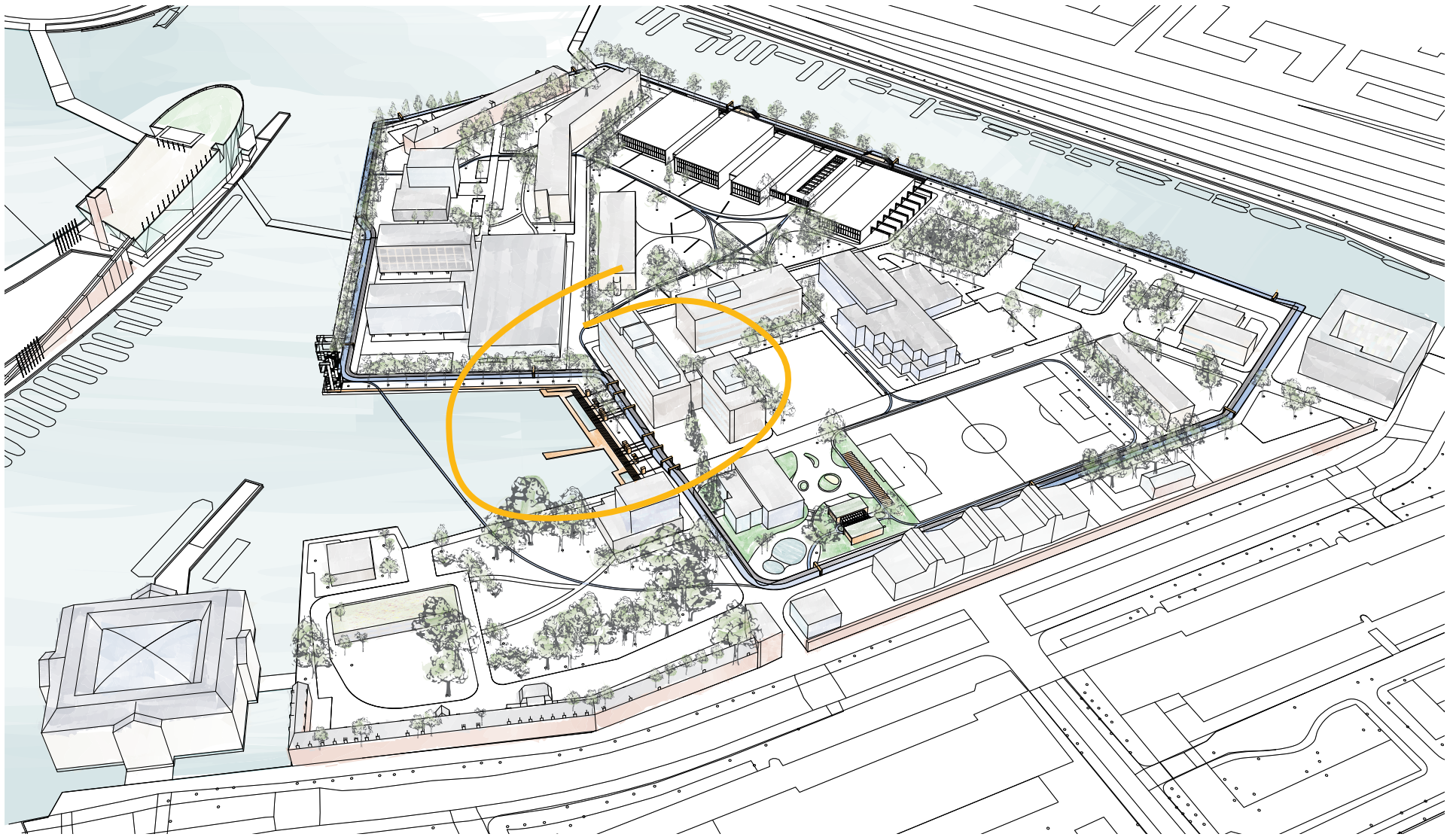
research



design



swimming dock



introduction



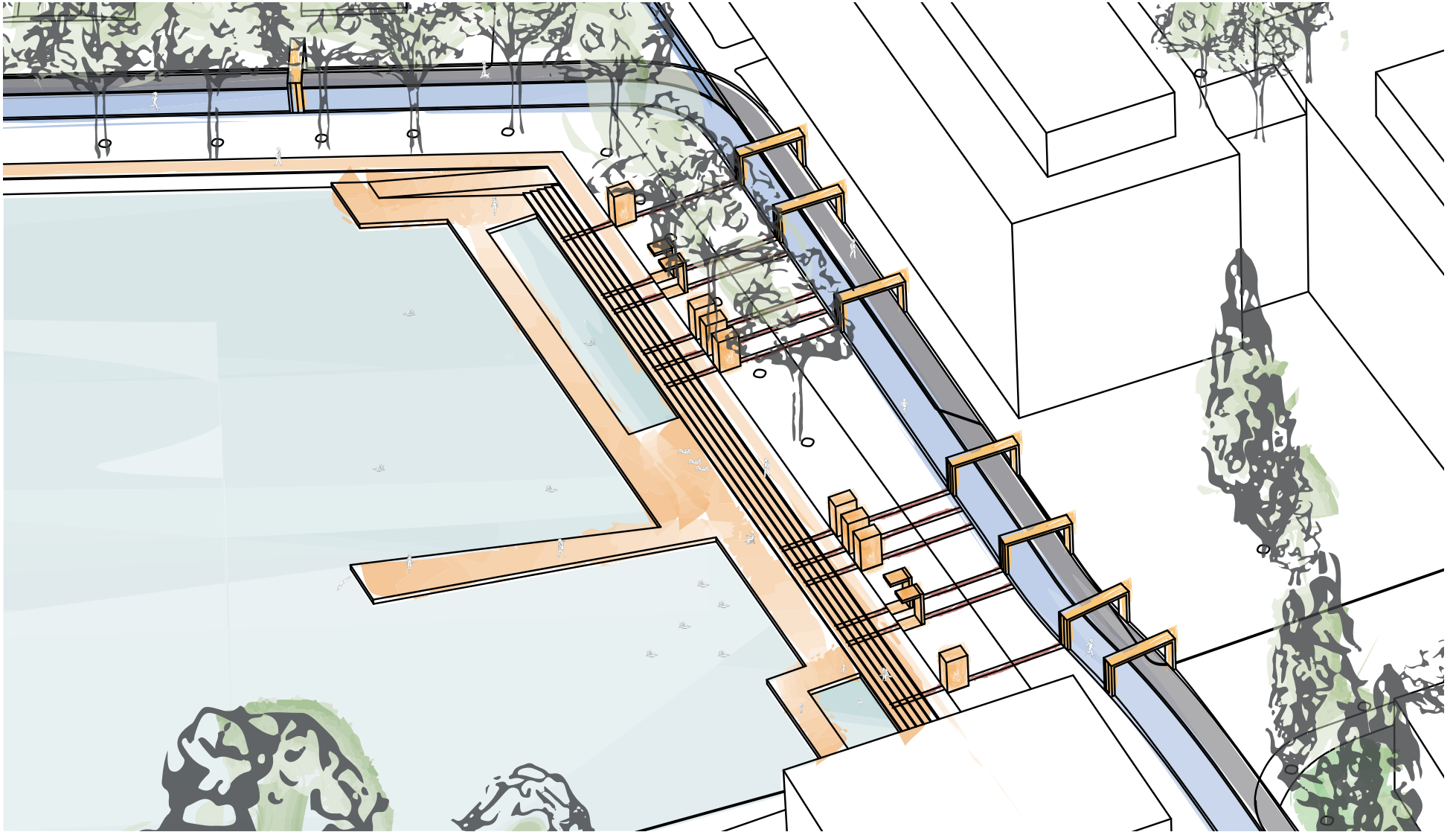
research



design



swimming dock



introduction



research



design



swimming dock



introduction



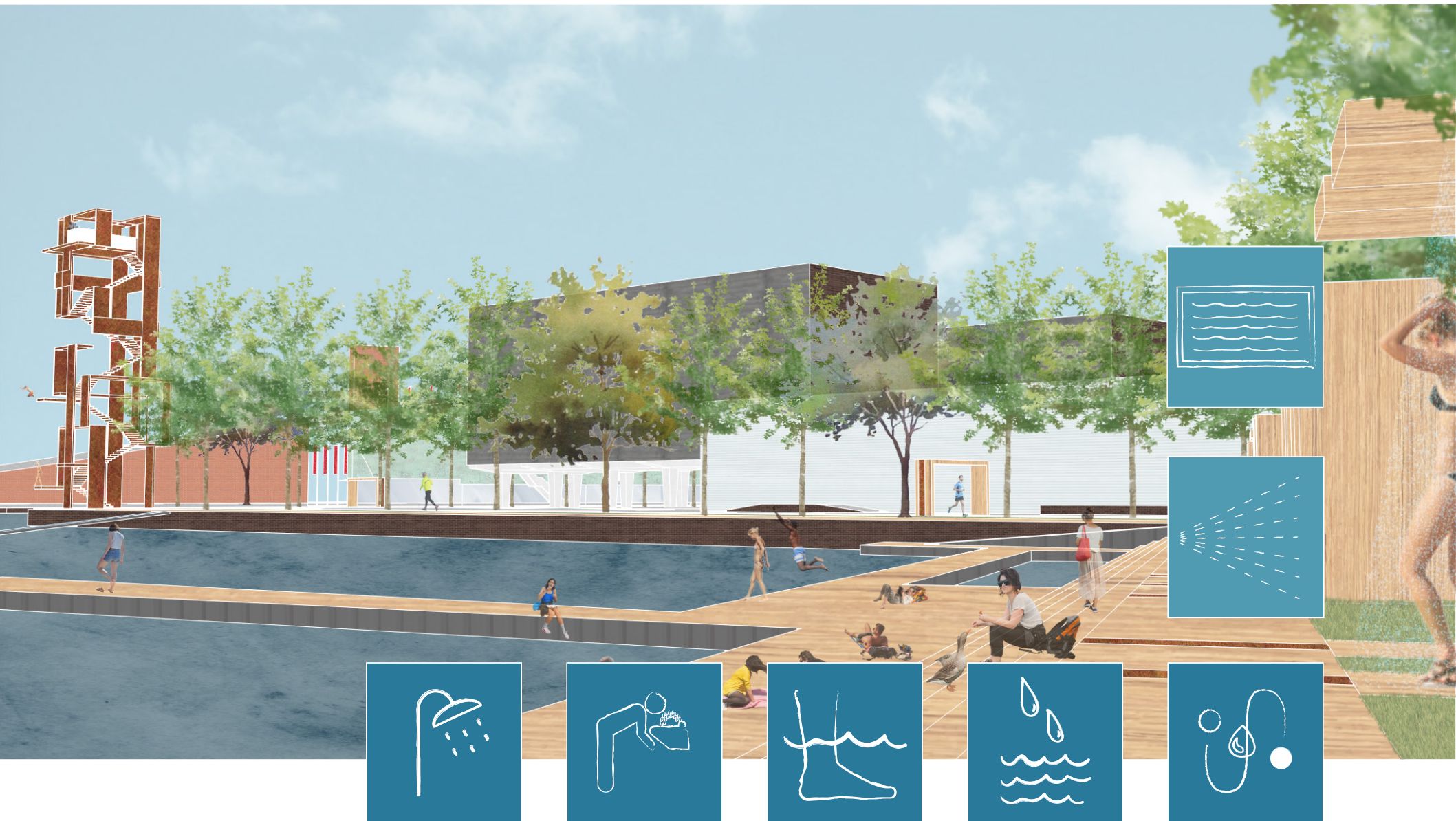
research



design



swimming dock



introduction

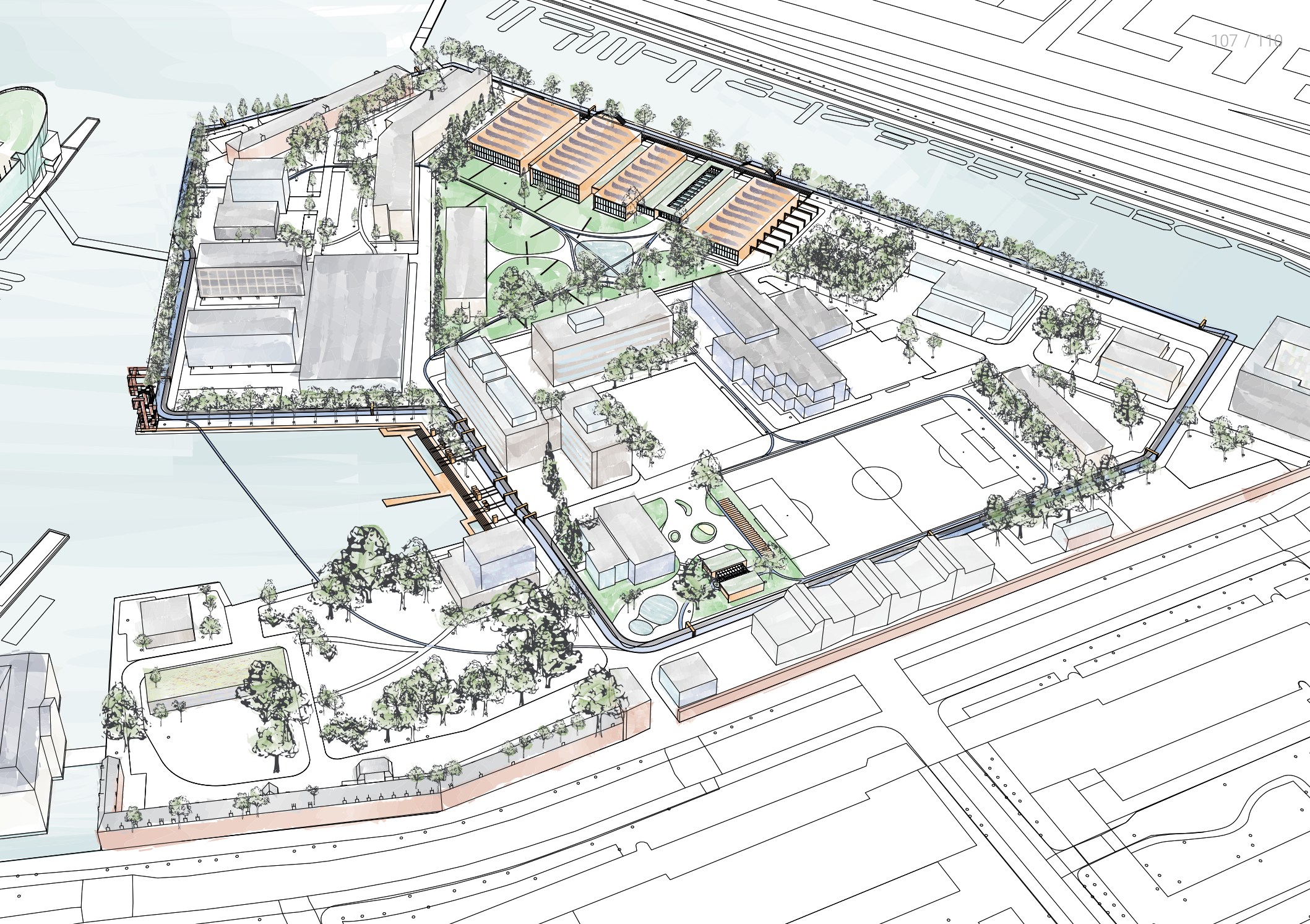


research



design





introduction



research



design



The Maritime Mile



introduction



research



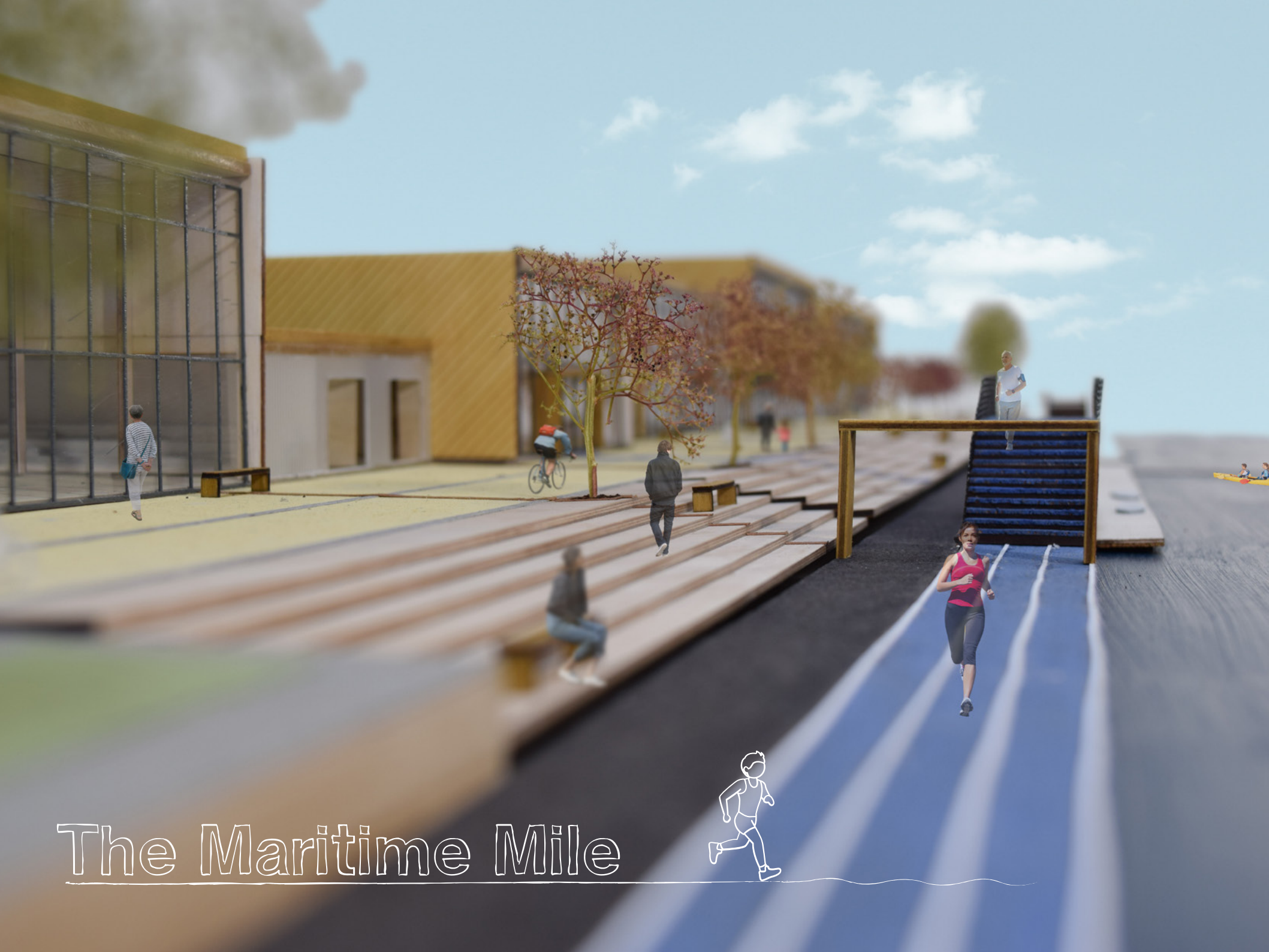
design



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The Maritime Mile

