



Designing

For

Literacy

'Architecture as a tool for literacy in Rotterdam-Zuid'

“

Architecture goes beyond designing...

“

*It can help address societal challenges
such as low literacy.*

Outline

1. Introduction to low literacy
2. Research
3. Design

Introduction to low literacy

Important letter

VitaGuard Rijkdomlaan 126 1910 FI Eindhoven

Participant workshop Horsten! 5612 AX Eindhoven

Eindhoven, October 2024

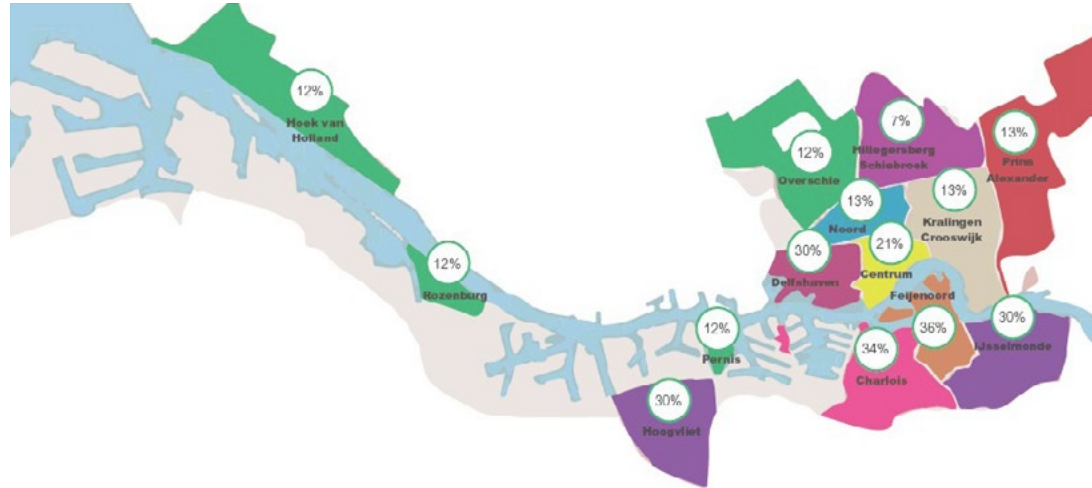
Dear sir/madam,

Within the ever-fluctuating and unfathomable structure of current insurance regimes, in which numerous dormant obligations and procedures are interwoven in a confusing manner, we believe it is inescapable to draw your attention to a number of actions that require your immediate, yet paradoxically undefined, consideration. These actions, forming a labyrinthine symbiosis between administrative formalities and legal underpinnings, must be carried out with the utmost scrupulousness and in utter harmony with the complex and vaguely defined regulatory frameworks...

Source
Eindhoven Engine (2024)

1 in 5 adults is low-literate in Rotterdam

Figure
Percentage of low literacy
per area in Rotterdam
(Gemeente Rotterdam, 2016)



In Rotterdam, **21% of adults** (ages 16 to 65) face challenges with basic reading and writing skills, with low literacy rates especially high in **disadvantaged areas like Rotterdam South**. In the Feijenoord district, this rate reaches **36%** (Dulk et al., 2023; Gemeente Rotterdam, 2016).

What is low literacy?

Low literacy refers to adults who **struggle with reading, writing, math, and digital skills**. This **limits** their ability to fully **participate in society** and can have **negative consequences**, both for themselves and for society as a whole (Halewijn, et al., 2021; UNESCO Institute for Statistics, 2020).

	Low-literate		Not low-literate		
NT1 Dutch as first language	Illiterate	1F	2F	3F	4F
NT2 Dutch as second language	A0	A1-A2	B1	B2	C1-C2
Similar level of education		End of elementary school	End vmbo and mbo 1,2,3	End mbo-4 or havo	End vwo-hbo/wo

Impact of low literacy

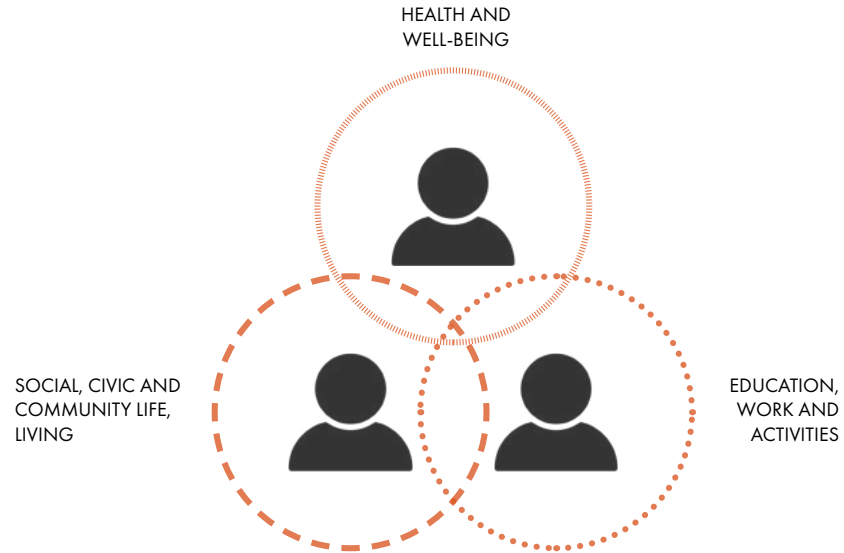


Figure
Impact of low literacy
on various aspects of life
(author, 2024)

A national challenge

“Nationwide, 12% of adults, about **2.5 million** people, are low-literate, **65%** of whom are **native** speakers of **Dutch**.”

(Gemeente Rotterdam, 2016; Kleffens & Smit, 2016; Pointer, 2023; Stichting Lezen & Schrijven, 2018).

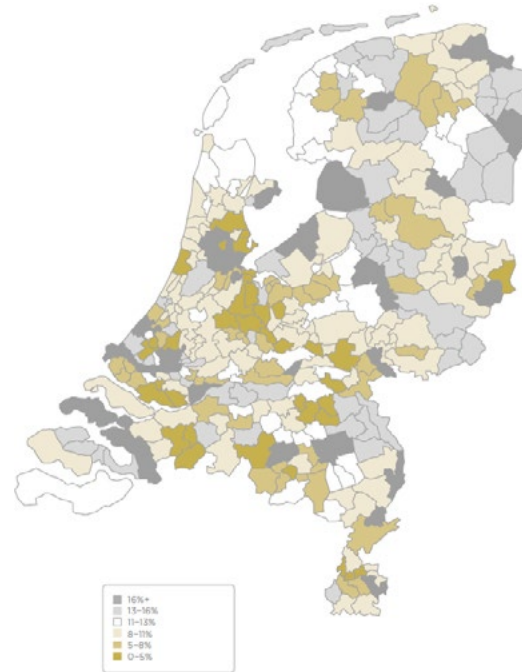


Figure
Percentage of low literacy by
municipality (ROA, 2016)

“Low literacy in the Netherlands is **on the rise** and is a **multifaceted** problem.”

(Van Klei en Smit, 2016)

Main factors rise of low literacy in the Netherlands



Aging population

Aging leads to a **decline in cognitive abilities and language skills**, making those with limited language skills more vulnerable to low literacy.



Education



Migration

Main factors rise of low literacy in the Netherlands



Aging population



Education

Only 31% of students enjoy reading, and **17.9%** of 15-year-olds are **at risk of low literacy** after finishing school.



Migration

Main factors rise of low literacy in the Netherlands



Aging population



Education



Migration

Growing number of people are coming to the Netherlands with **limited reading and writing** skills in their **own language**.

Wicked problem

- Complex social problem
- Hard to reach due to stigmas and social barriers
- Current approaches too limited

Explore broader solutions

*“A successful approach to a persistent problem like low literacy **requires innovation.**”* - Gemeente Rotterdam (2019)

Research

Research question

“Can built facilities, for example in Feijenoord, enable the development of literacy skills among people with limited basic skills?”

Target group



Focus area



Feijenoord

36%

Low-literate

Research methods



Research methods

Target Group



Expert 1 and 2



Residents Feijenoord

Expert



Inge Hootsmans
Researcher low literacy

Feijenoord / Rotterdam



Ed Arnold
Wijkraad Feijenoord



Tom Adriaanse
Taalbeleid Municipality



Dennis Oemar Said
Manager SOL



Teacher primaryschool



Founder Stichting Proteas



Pytrik and Yamina
Welzijns adviseurs Municipality of
Rotterdam district Feijenoord



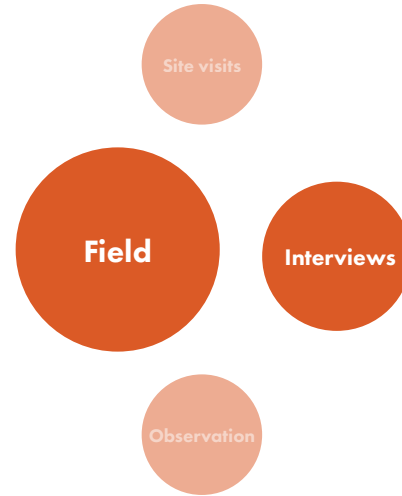
Alexandra and Hendrik
Municipality



SOL Welzijns medewerkers
(HVDW)



Children primaryschool



Reflecting outcome research on Feijenoord amenities



"Every second it takes is also a second I doubt I'm doing it right." - Low literate person

Research output design guidelines

Neighborhood scale



Accessibility

Central location and easy to reach.



Mixed-use facilities

Stimulate synergy and attraction.



Visibility and Low threshold

Recognizable and inviting.



Wayfinding

Clear and intuitive routing.

Research output design guidelines

Building scale



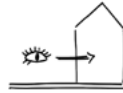
Welcoming

Open building and inviting to interact and meet.



Clear entrance

Visual and clear main entrance.



Transparency

Open character lowering threshold to enter both from outside as well as within the building.



Low threshold

Inclusive and safe spaces.



Visibility of function

Intuitive orientation and understanding of functions.

Research output design guidelines

Interior scale



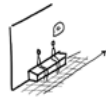
Informal atmosphere
Relaxed and accessible interior that invites learning and interaction.



Simple wayfinding
Use of colors and pictograms.



Inspiring interior
Use of colors and decoration.



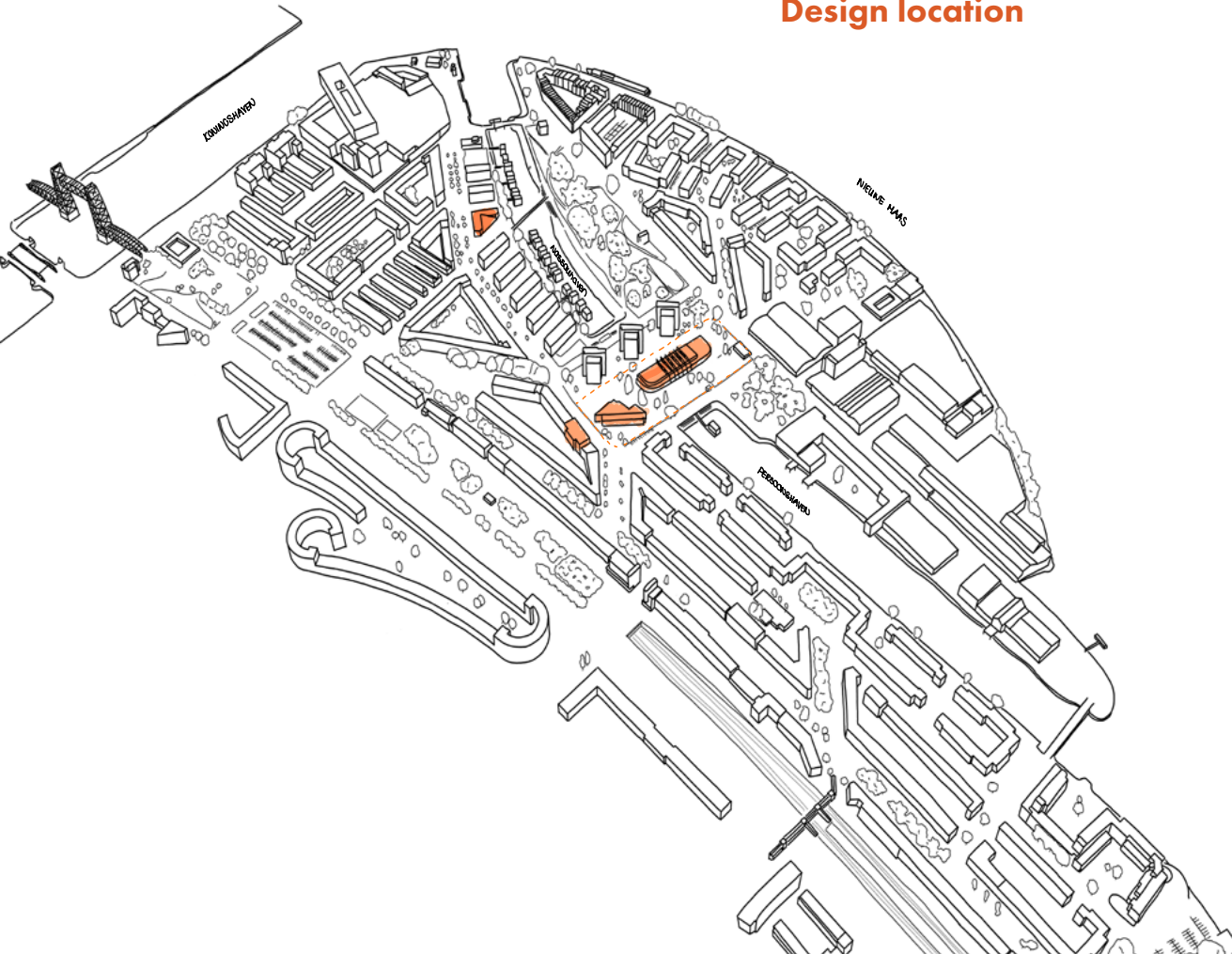
Comfortable seating areas
Informal meeting places and place to retreat.



Clearly visible reception
First point of contact and place to ask questions.

Design

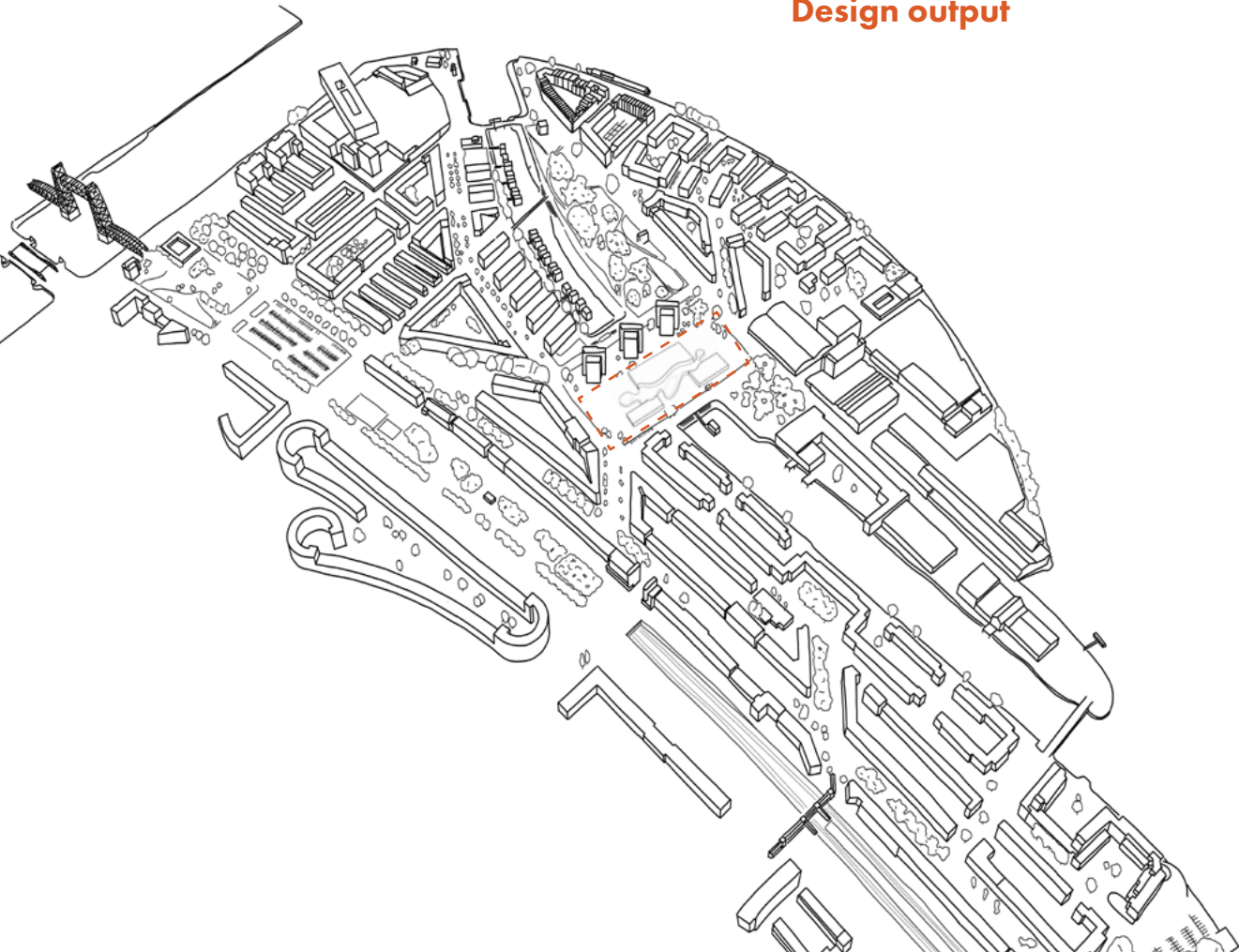
Design location



Actual casus municipality of Rotterdam

The municipality aims to **renew the primary schools, sports hall, and community center** by replacing the outdated buildings and relocating them to a new site at Persoonsdam. The goal is to create a place that holds value for the neighborhood and the surrounding area. This project focuses on establishing a **new social hub** at Persoonsdam.

Design output

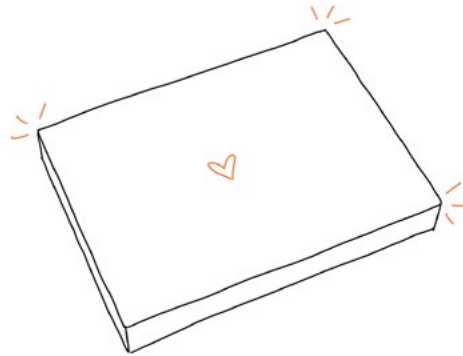


Het Kompas

A **low-threshold**, multifunctional neighborhood building that is **accessible** and **welcoming** to all residents, including those with low literacy skills.

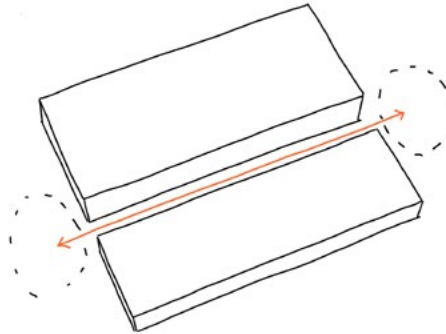
Concept volume

"Social heart of neighborhood"



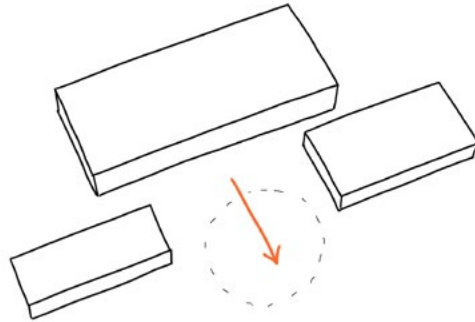
Concept volume

“Connecting both sides of Feijenoord”



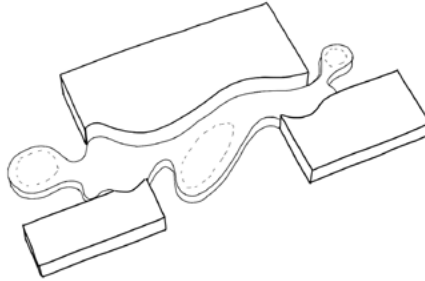
Concept volume

"3 volumes facing waterside"



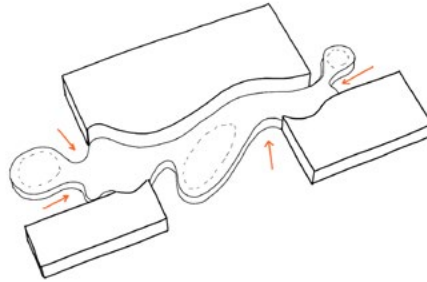
Concept volume

"Connecting volumes"



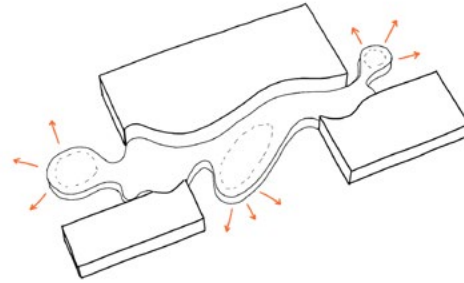
Concept volume

"Accessible from all sides"



Concept volume

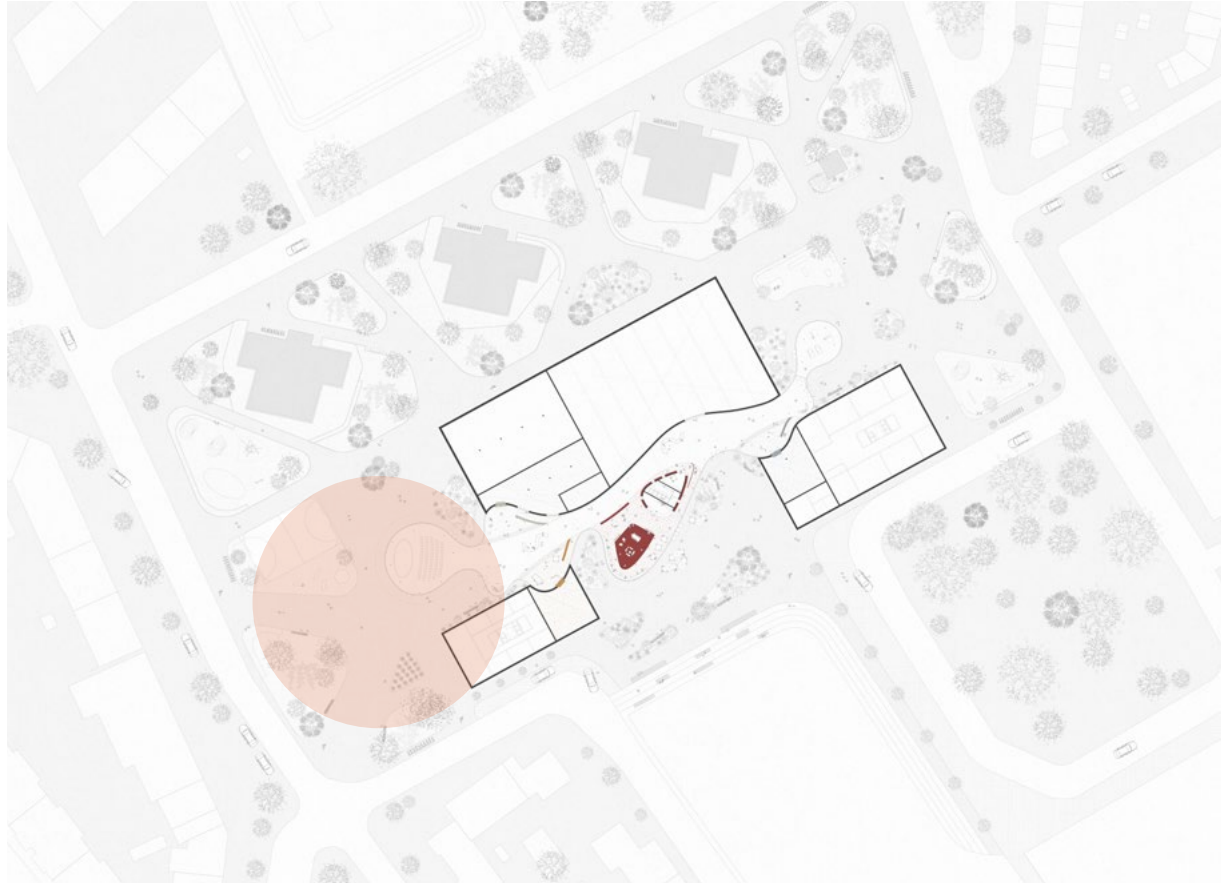
"Shared functions"



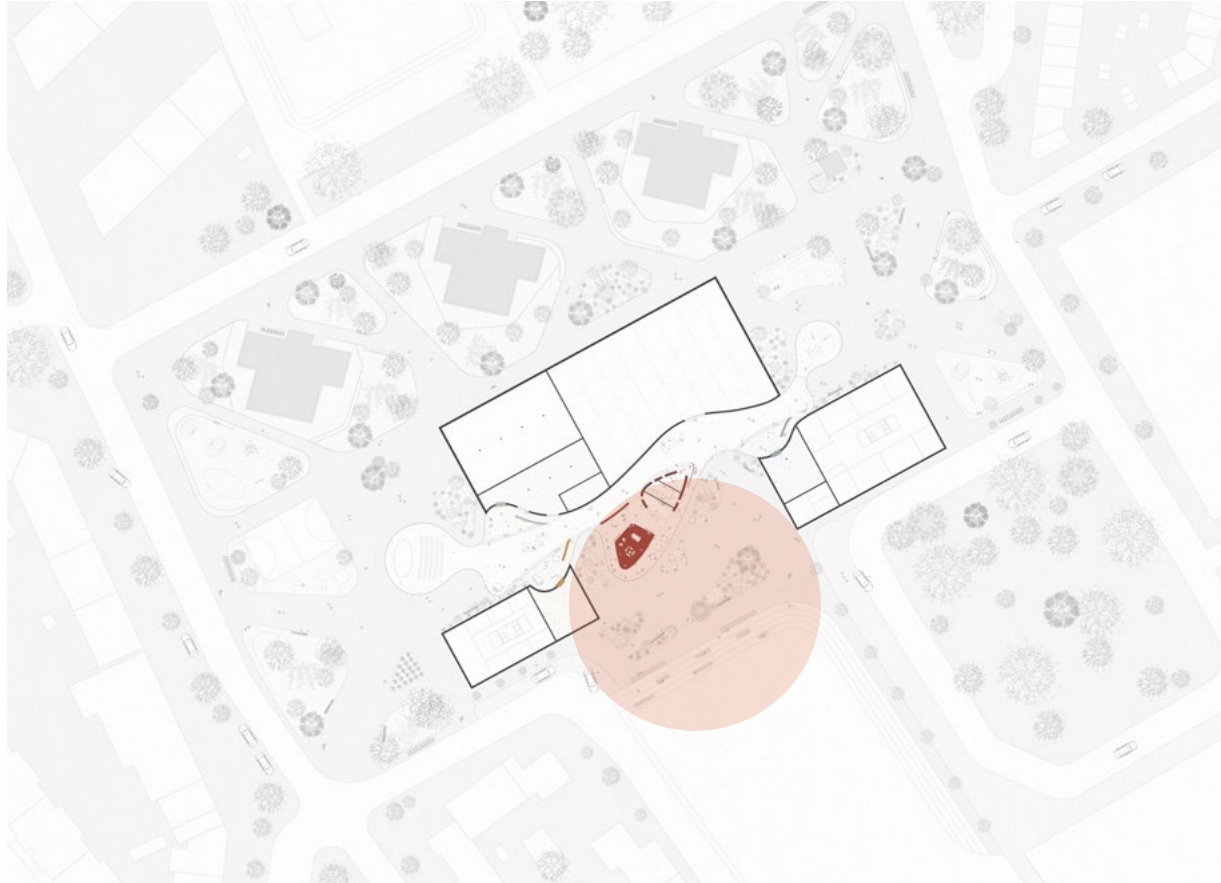
Siteplan



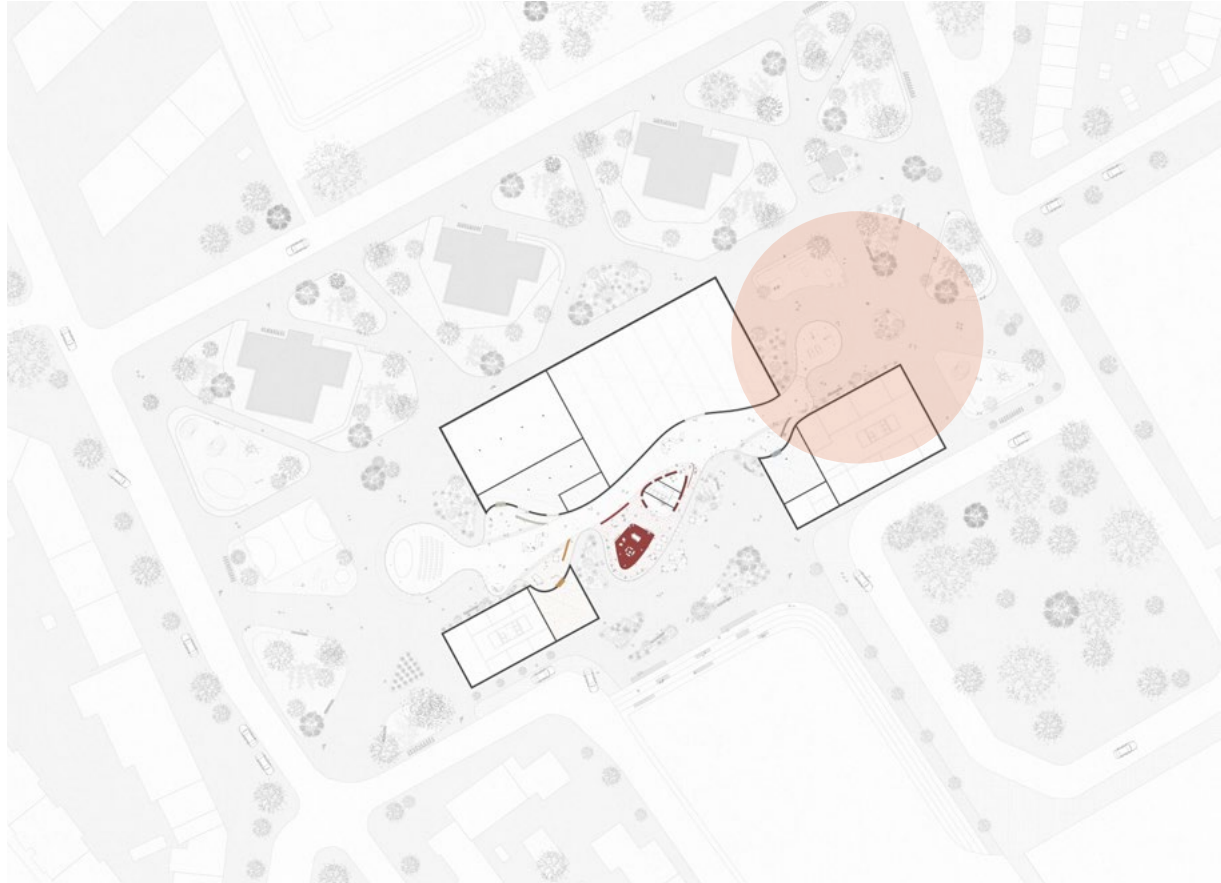
Outdoor program



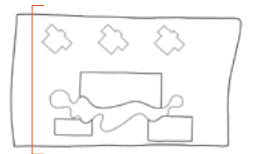
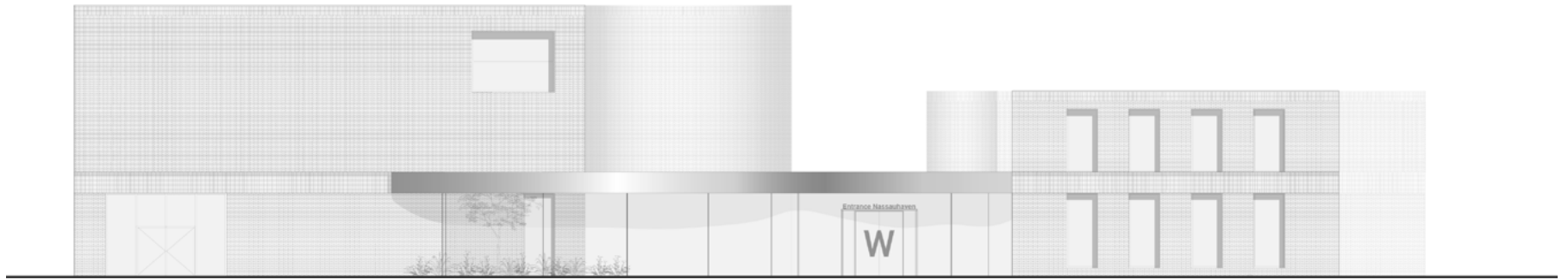
Outdoor program



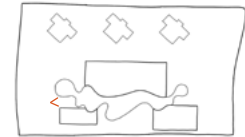
Outdoor program



Contrasting volumes



Guiding people inside

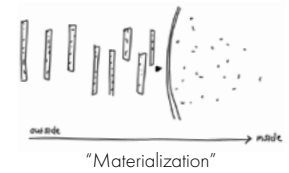


Guiding people inside

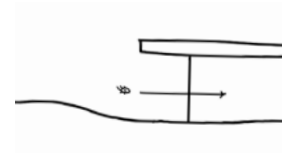


"Natural slope"

Guiding people inside



Guiding people inside



"Transparency"

Guiding people inside



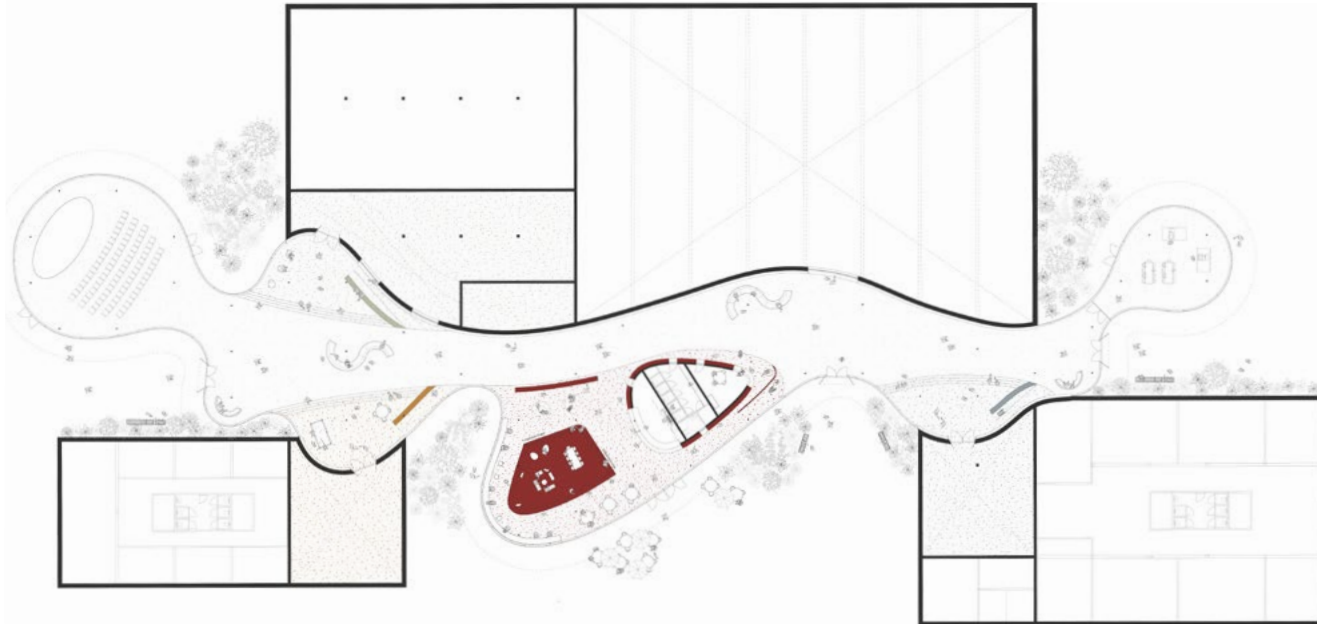
"Roof as shelter"

Guiding people inside

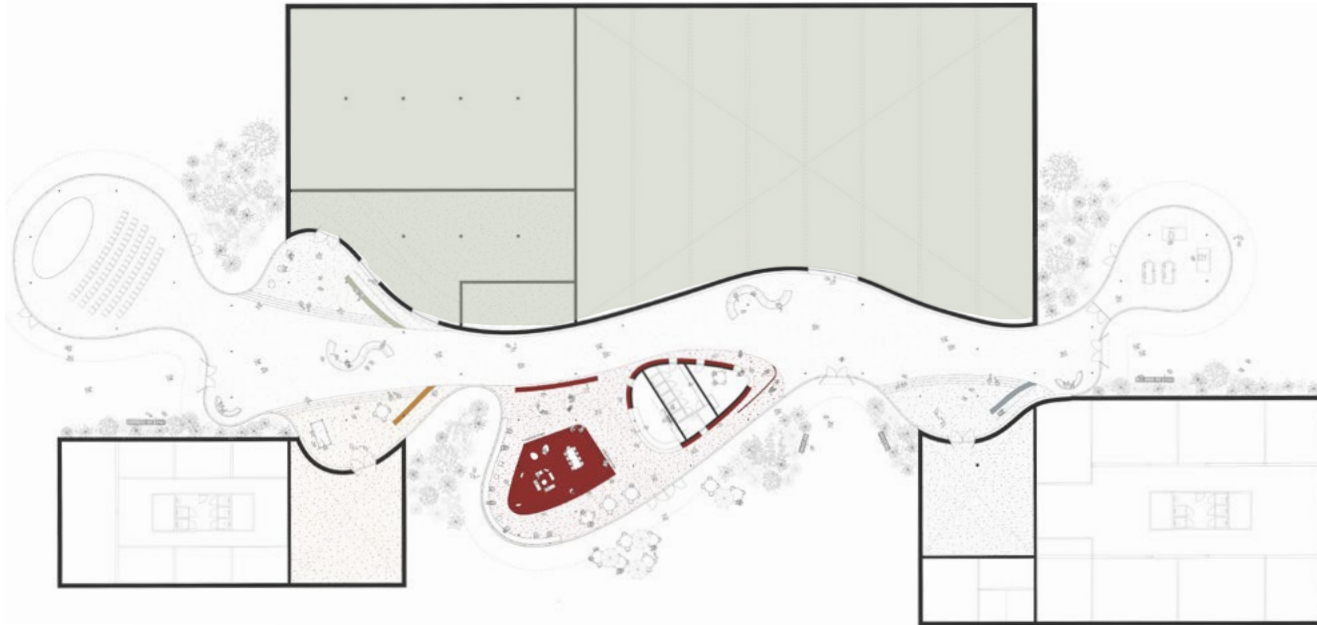


"Inviting doorway"

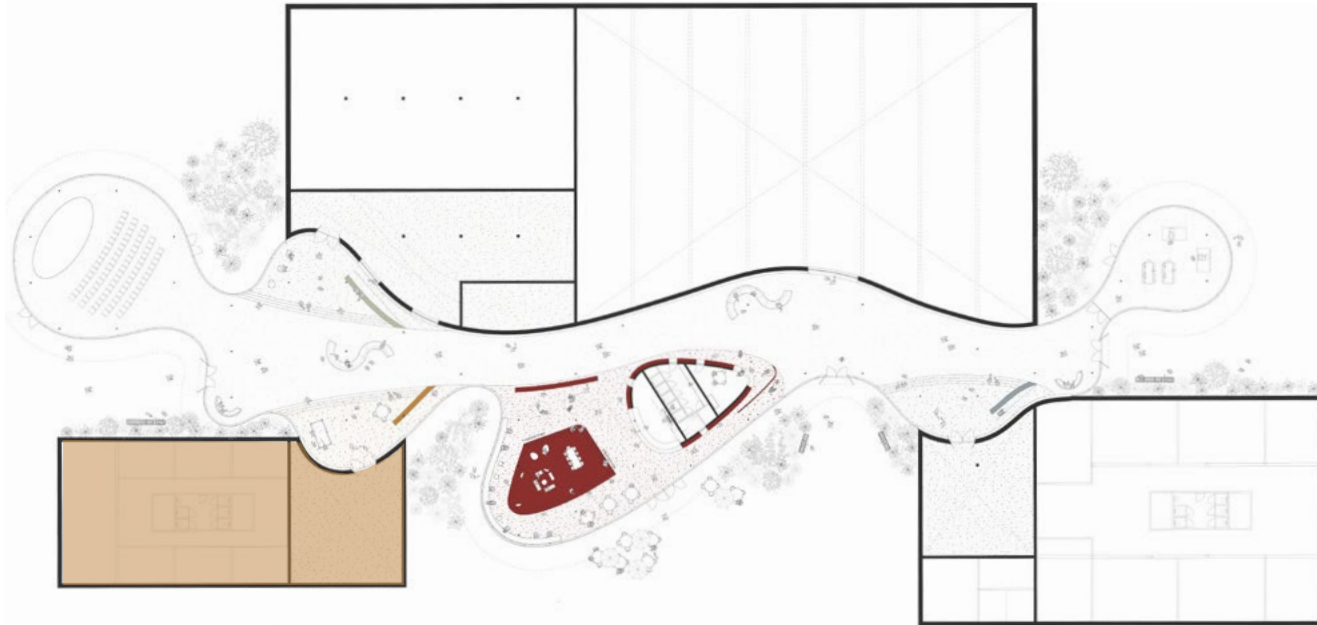
Program



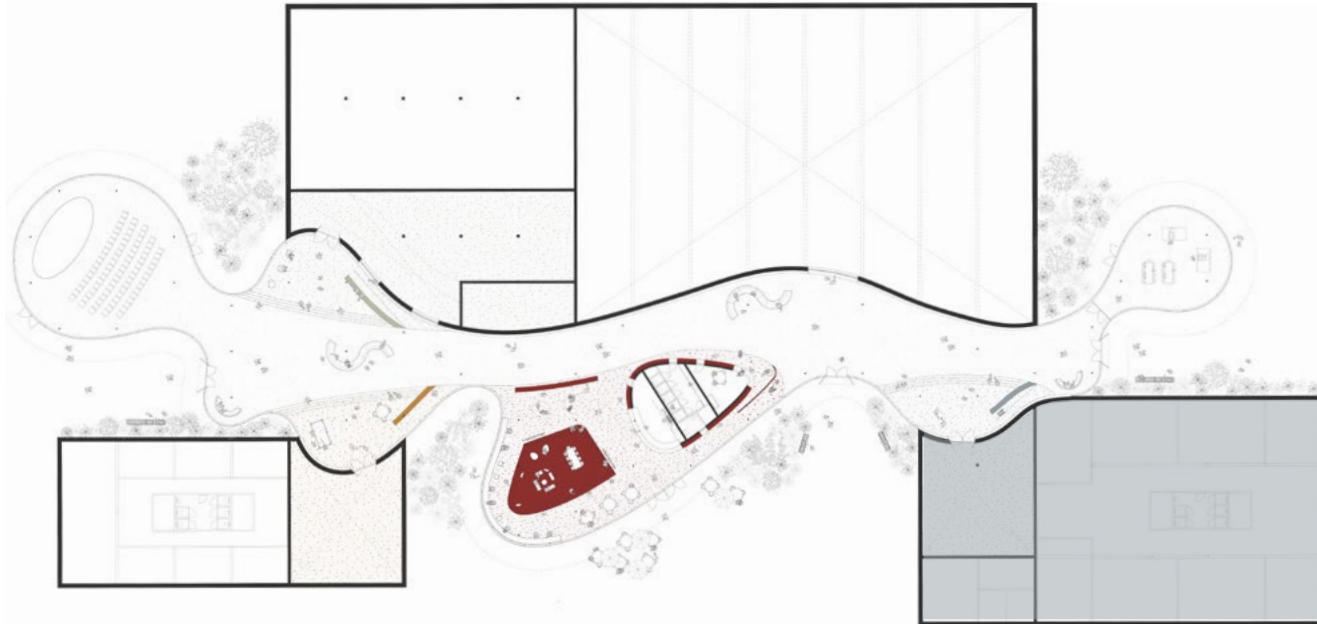
Program



Program



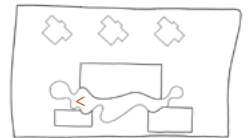
Program



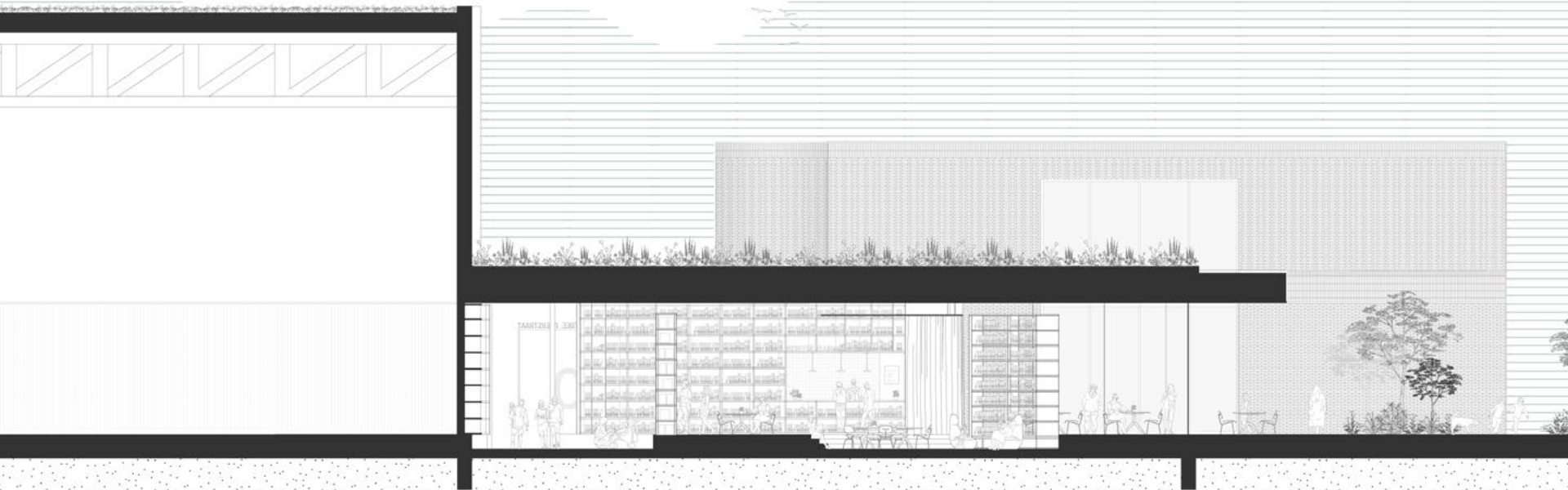
Program



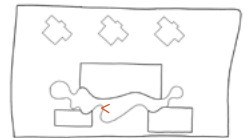
Passage



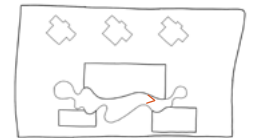
Library; the heart of the building



Materialization interior



Spreading the bookshelves



Transition areas



Transition areas

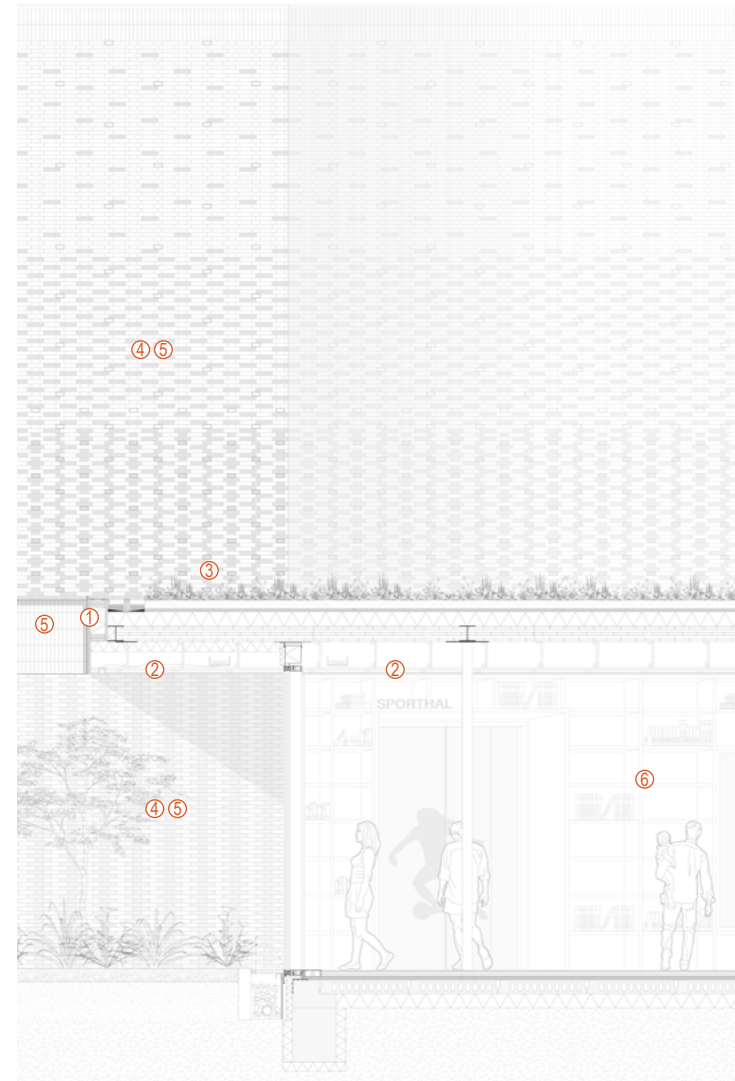


Materialization exterior

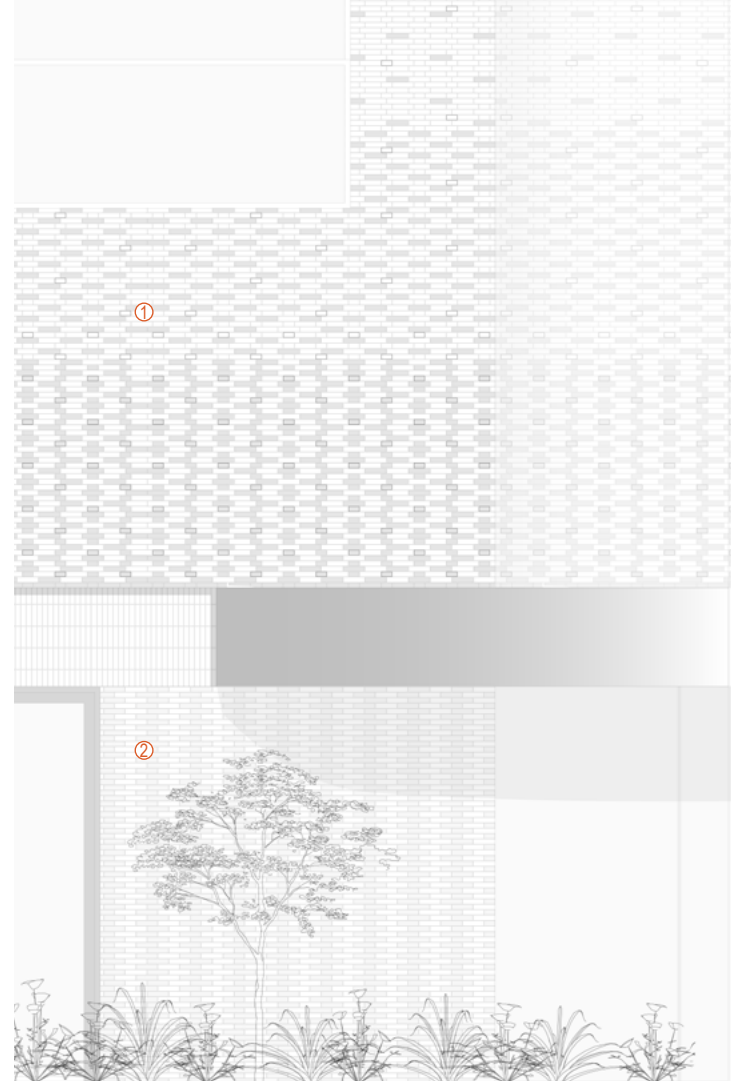


Glass facade scale 1:20

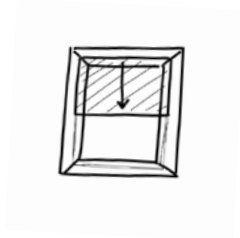
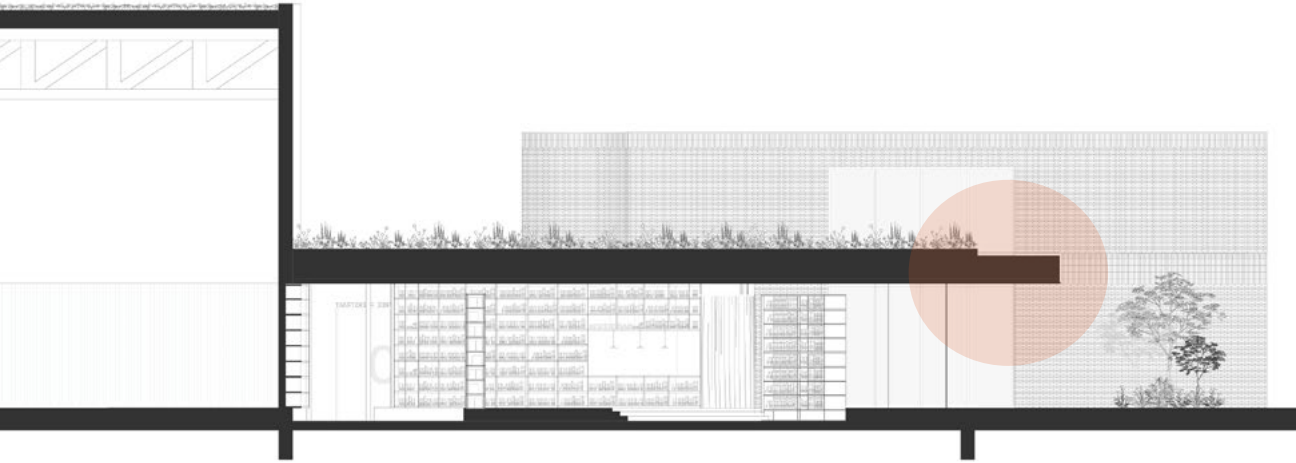
Design



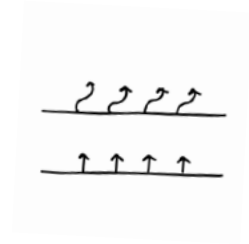
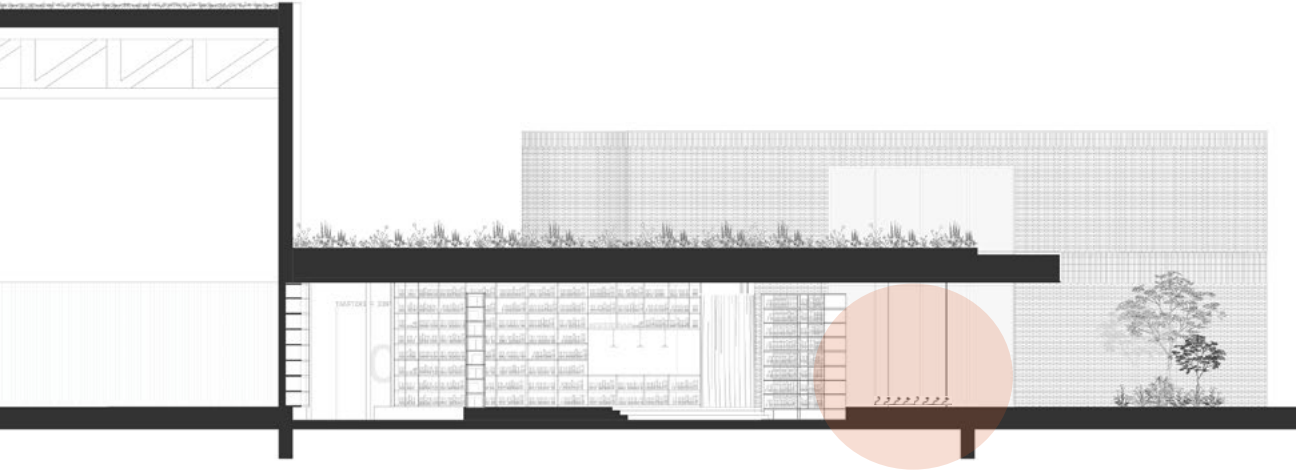
Materialization exterior



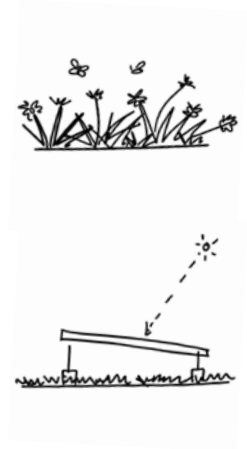
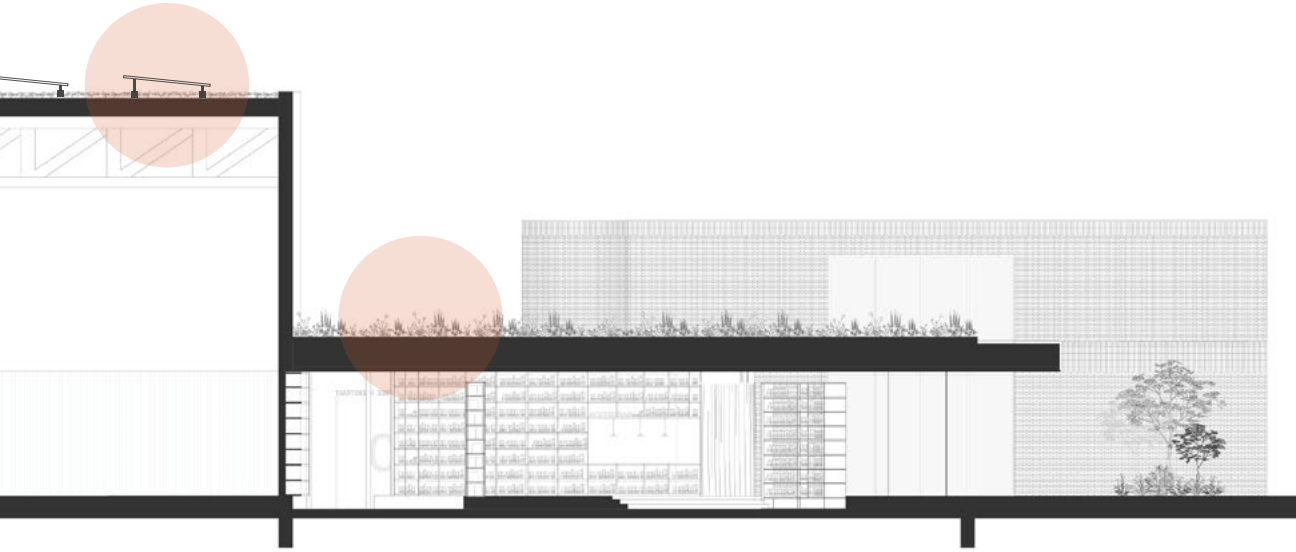
Climate



Climate



Climate



Structure



Broader impact of the design

“Architecture can not only address physical needs, but also be a powerful tool for empowerment, dignity and inclusion.”

Thank you for listening!



Het Kompas provides direction and connection - a place where people shape their path together.

