



David Oudega 4818296

Table of Contents

1. The Research

2. The Design

Housing Shortage in the Netherlands





Dutch housing shortage increases to 400,000 homes -**Capital Value**

The housing shortage will grow to more than 325,000 homes in 2023, which amounts to 4% of the housing stock and is an increase compared to 2022 (279,000). This is revealed by the annual Primos forecast conducted by ABF Research. Due the potential postpo...

Source: Capital Value. (n.d.). Dutch housing shortage increases to 400,000

Map of City of Amsterdam

Amsterdam

Badhoevedorp

Nieuwe Meer

Amsterdam

4



Diemen

Map of City of Amsterdam

E

Badhoevedorp

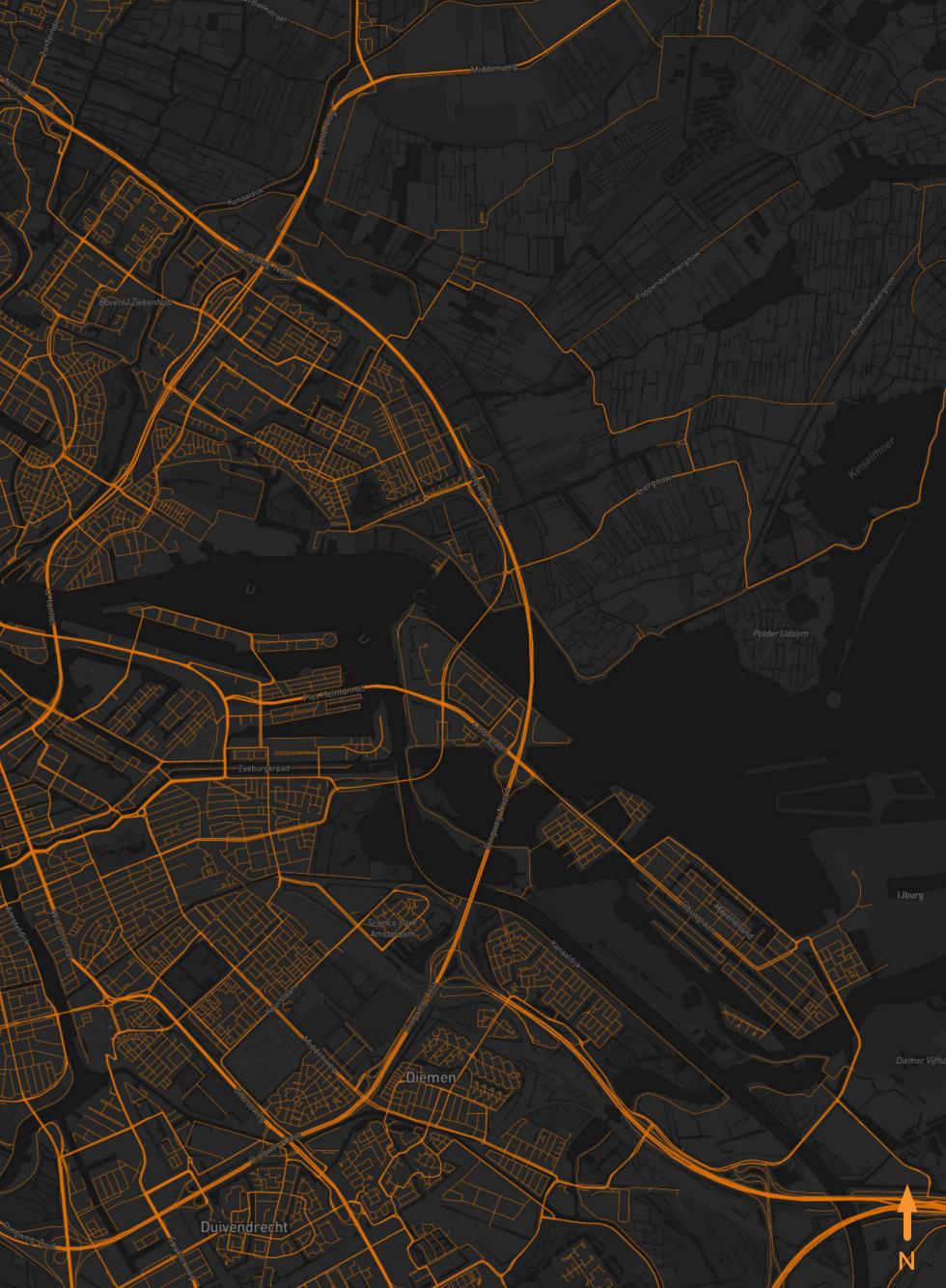
Amsterdam

Universiteit

J LI J LI I

lieuwe Meer

ւ ներաներ



Map of City of Amsterdam

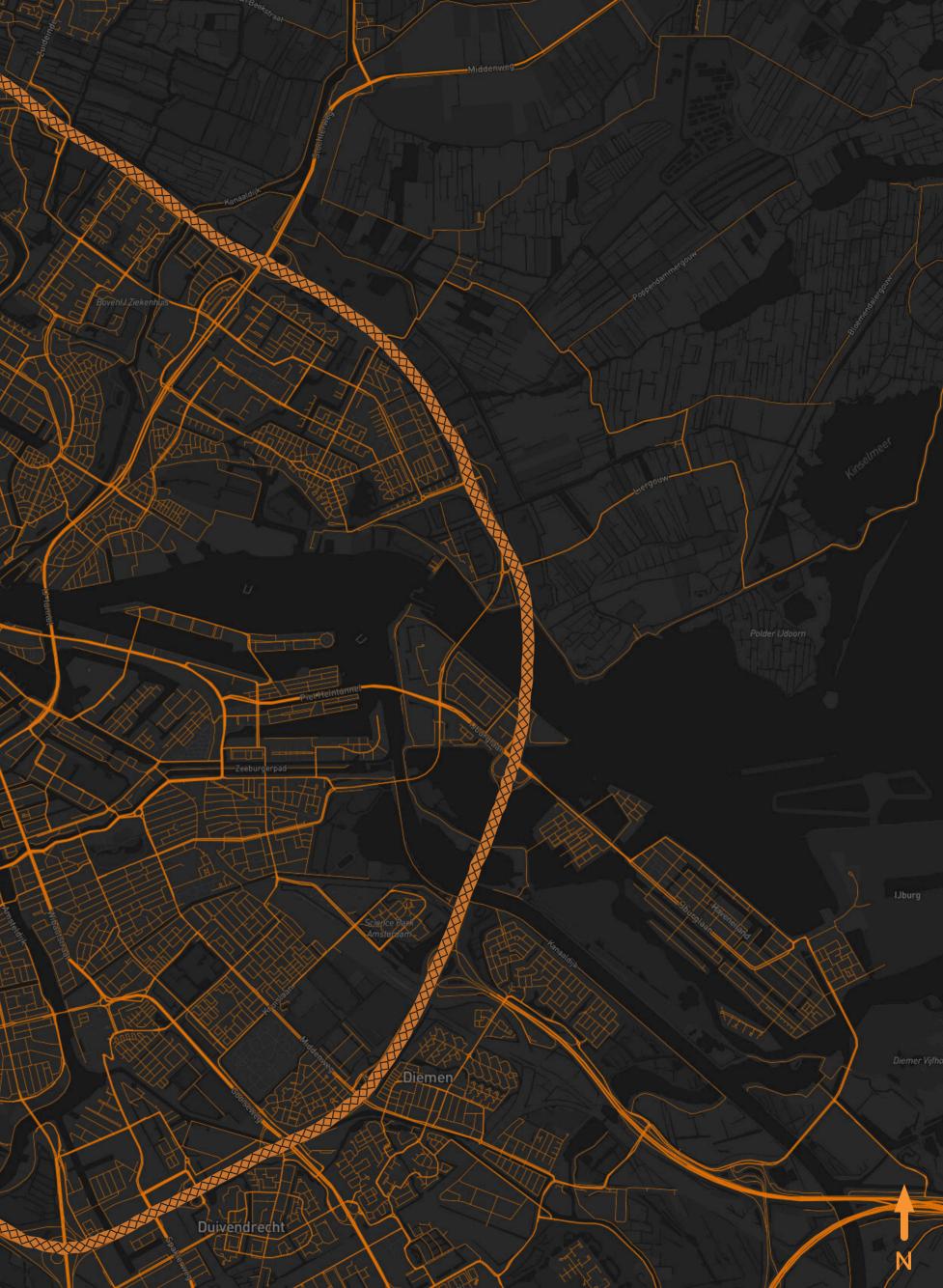
TET L



Badhoevedorp

Nieuwe Me

Amstelp





Vision map of Haven-Stad

225 123

-

Cornelis Douwes 0-1

M

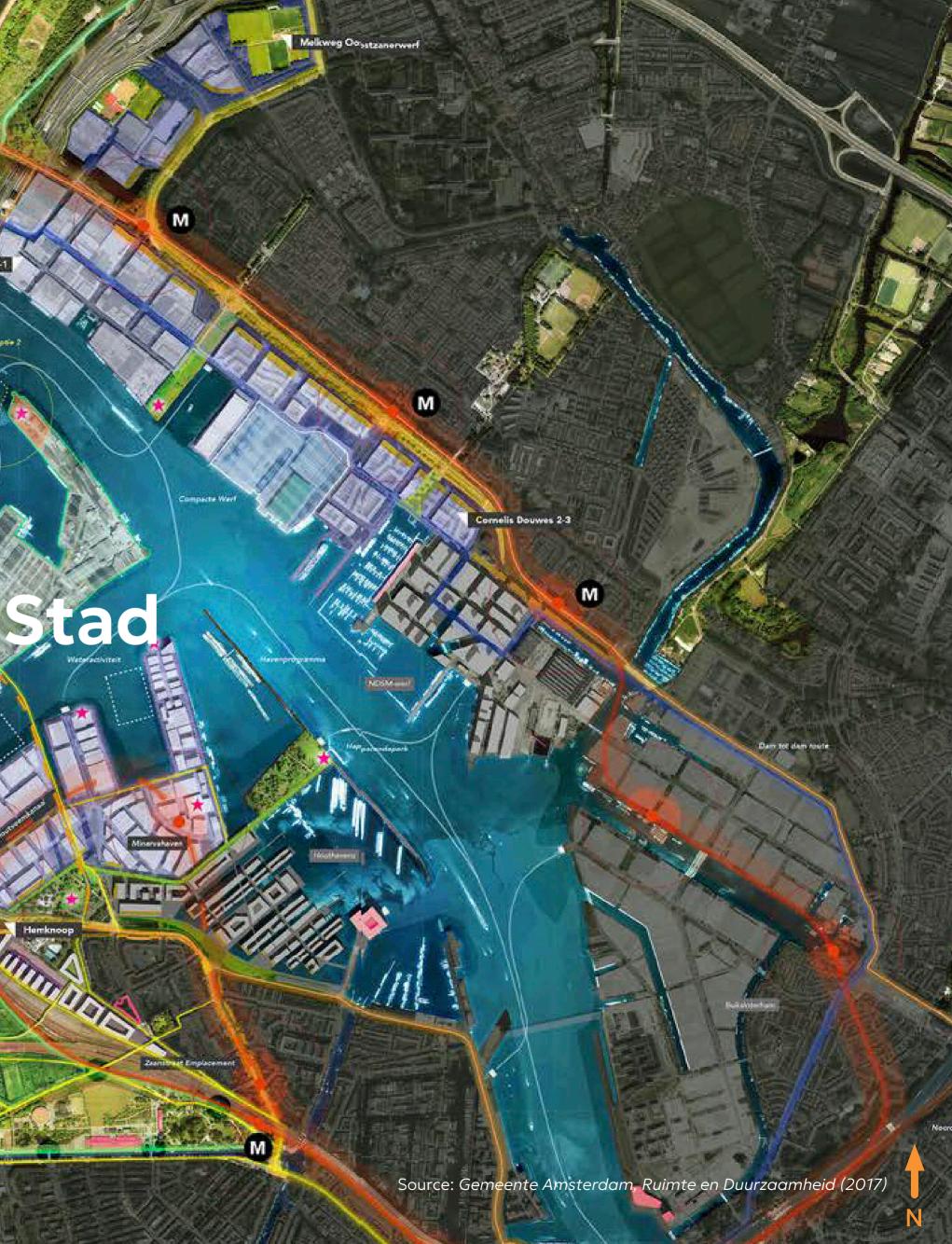
PTM codie .

Coen -en Vlothaven

Haven

I DEGA





Haven-Stad is the largest future urban expansion within the A10 ring road.

70.000 new homes and **58.000** jobs by 2040.



Source: Gemeente Amsterdam, Ruimte en Duurzaamheid (2017)

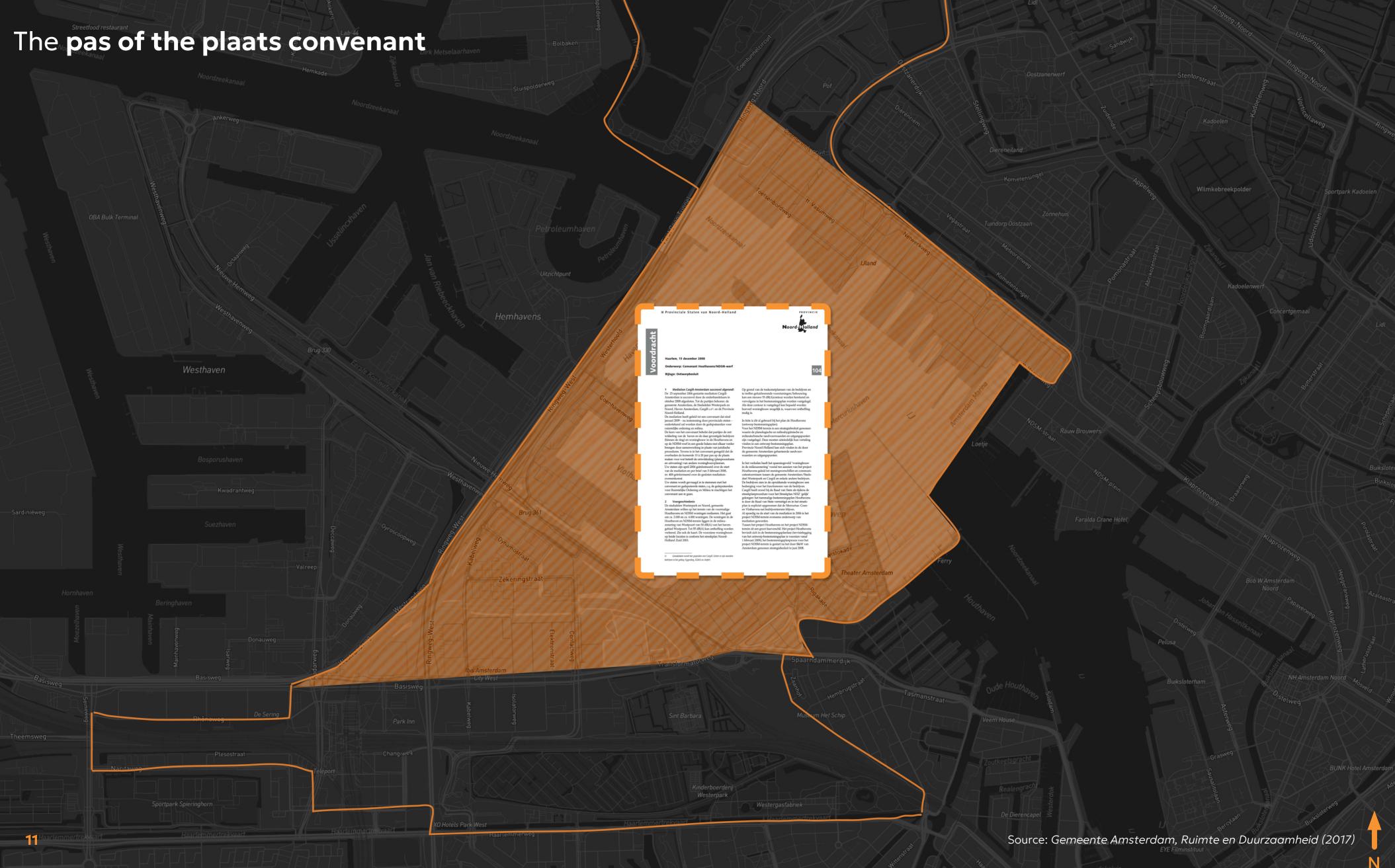
The industry is **no longer willing to cooperate**.



www.portofamsterdam.com

Plan for Haven-Stad (Port City) at odds with interests of port | Port of Amsterdam

The City of Amsterdam's plan to build 70,000 residential properties in and around the port is at odds with the interests of (businesses in) the port.



The number of houses and workplaces in the pas op the plaats area

6900 homes -4600 workplaces

15400 homes 15400 homes

9800homes 7300 workplaces 9600 homes 6400 workplaces

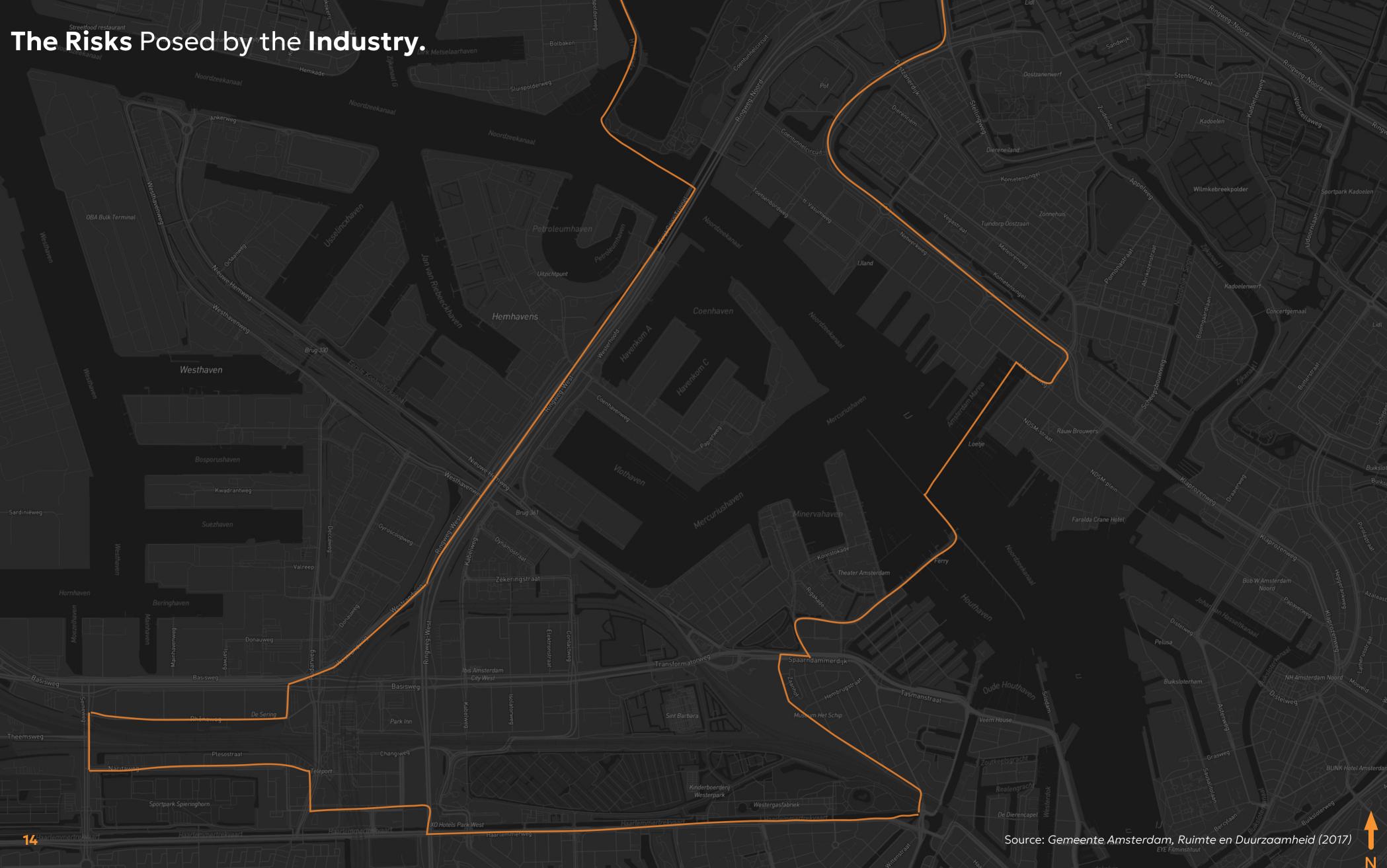
11620 homes
7750 workplaces

Source: Gemeente Amsterdam, Ruimte en Duurzaamheid (2017)

Ν

Research Question

How can housing and industry be harmoniously integrated in a heavy industrial area like Haven-Stad?



Odor pollution

Dirk Metselaarhaven



Noise pollution

16



Dust pollution

Dirk Metselaarhaven

Stuispolderweg

Noordzeekanaal

Petroleumhaj

an Rie beec

Hemhavens

Westhaven

Bosporushaven

Kwadrantweg

lornhaven

Basisweg

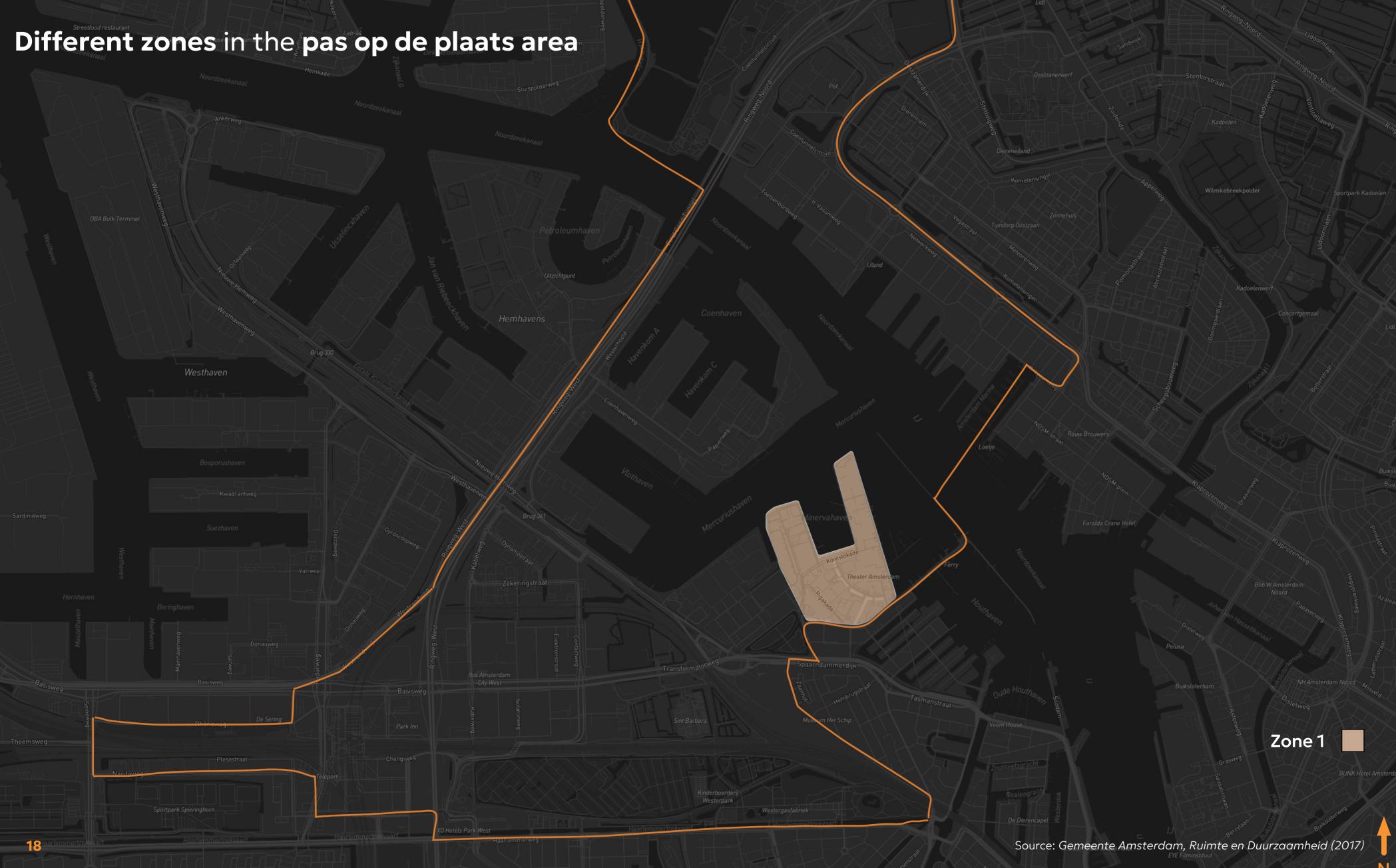
De Sering

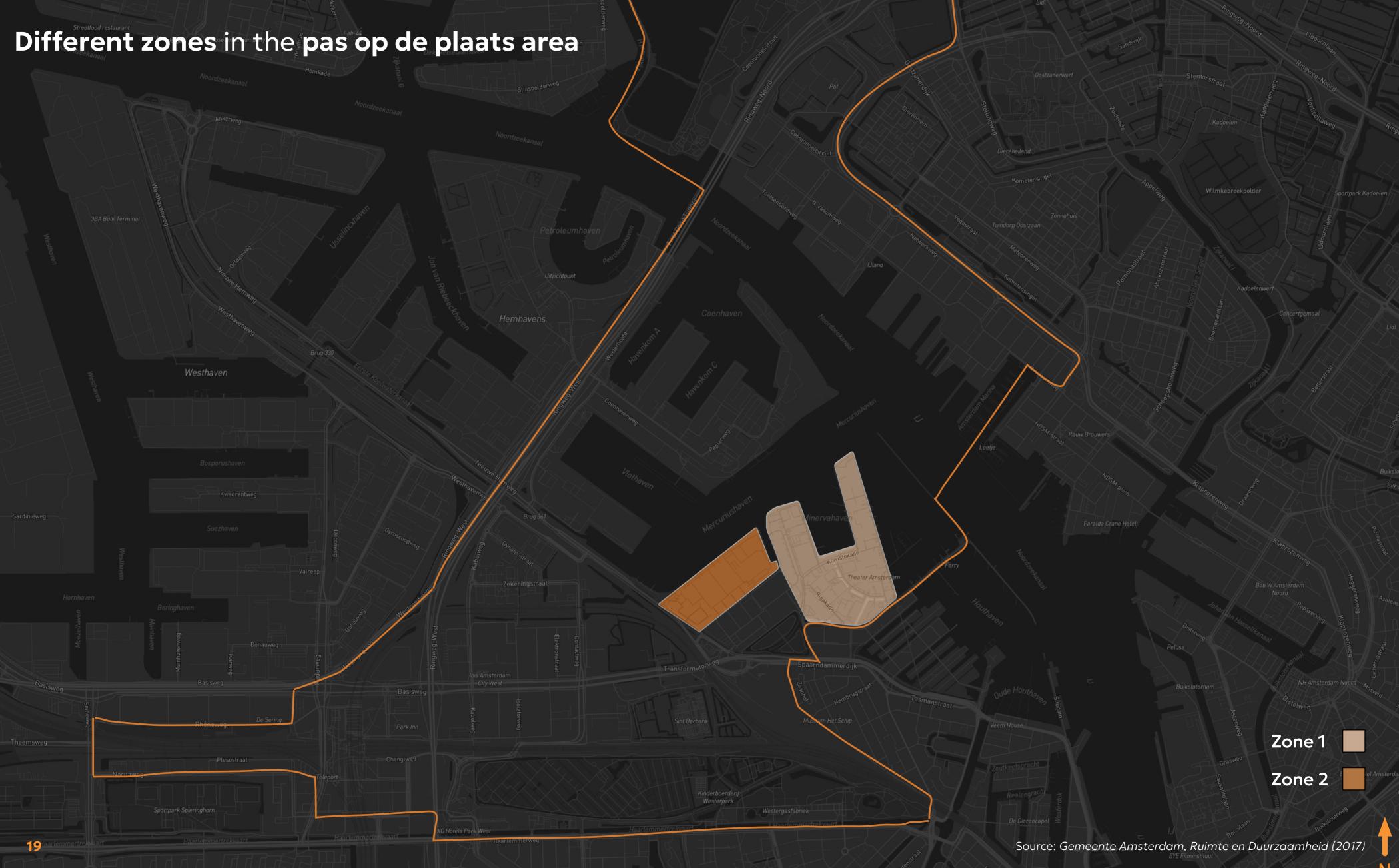
Kingweg

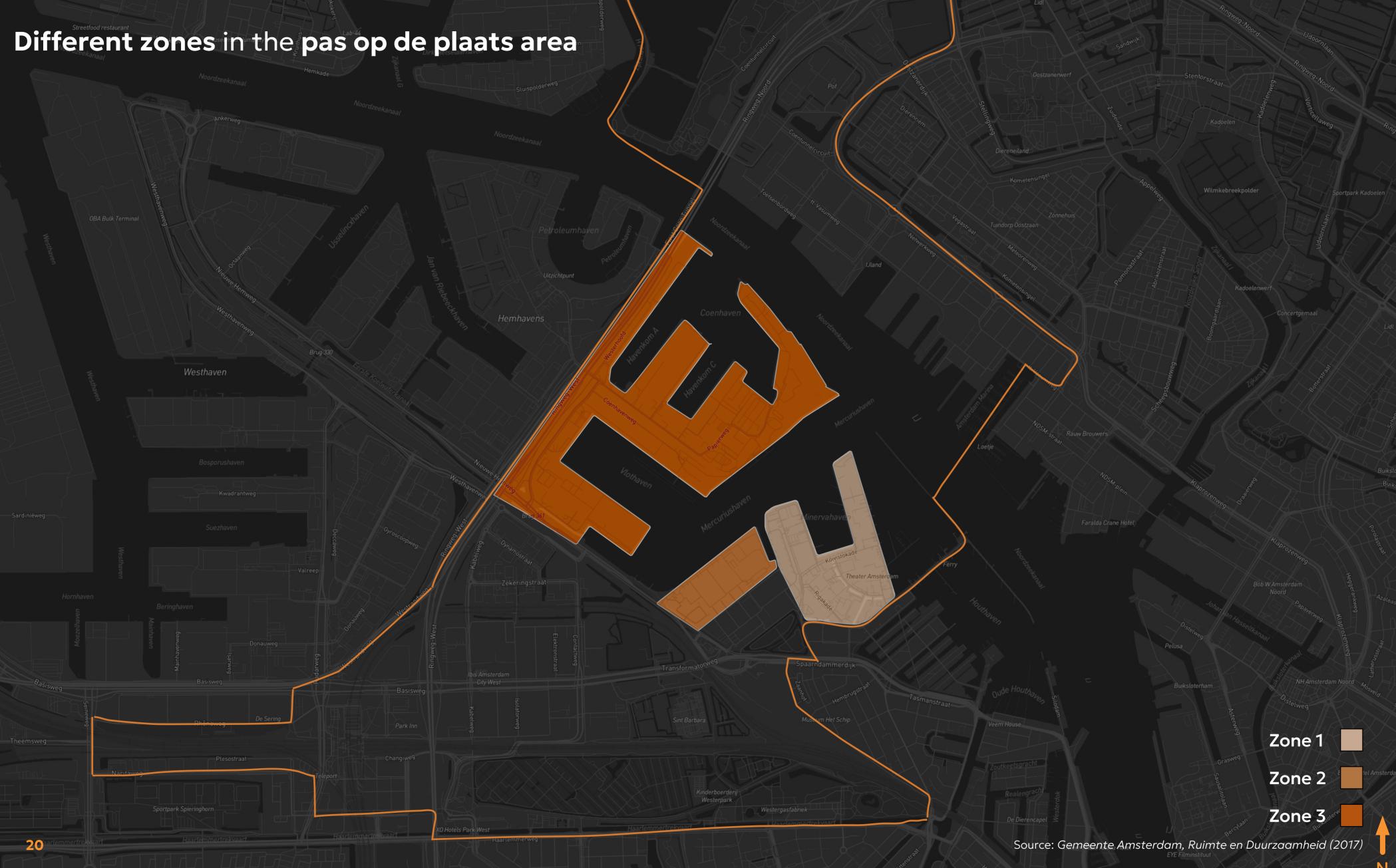
Ibis Amsterdar City West

17









The Hyphen in the Urban Plan Title

Haven – Stad

Who will live her

6

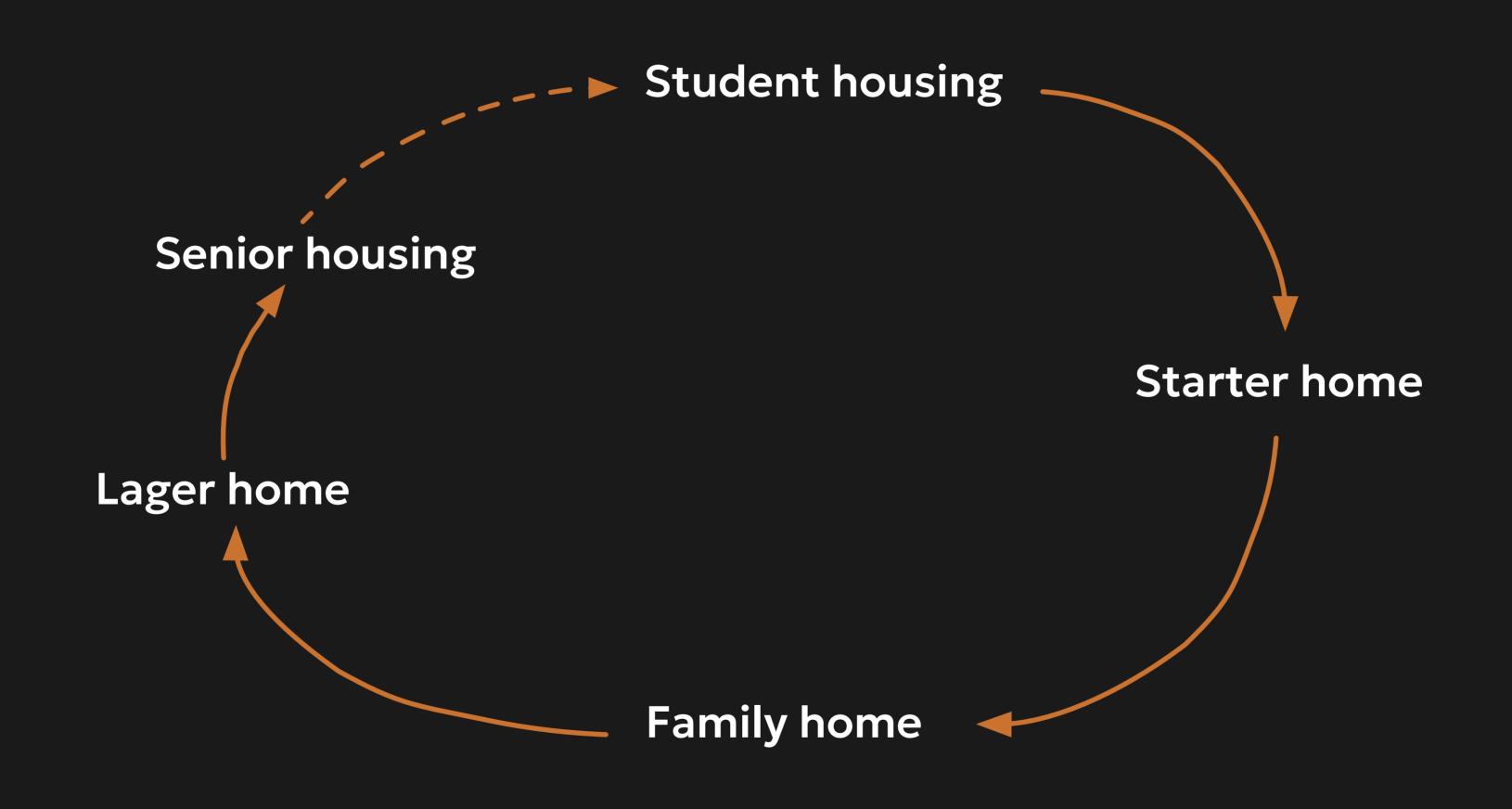
1

-

1 10

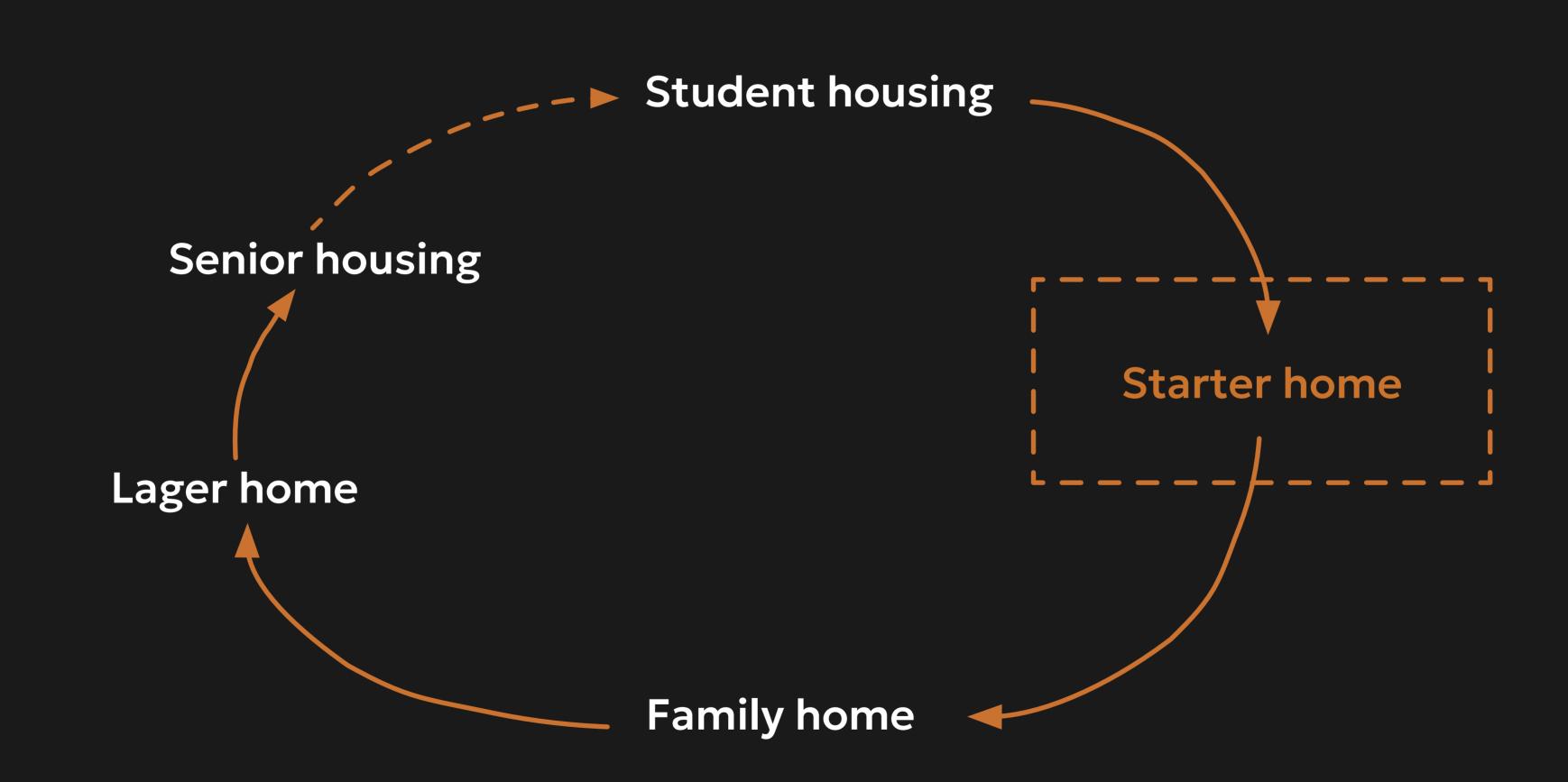


The **Resident Target Groups** Proposed by the **Municipality of Amsterdam**



Source: Gemeente Amsterdam, Ruimte en Duurzaamheid (2017)

The Target Group of This Research



Bouw & Infrastructuur • 22 aug '24 07:24 • Aangepast op 22 aug '24 11:09

Meerderheid starters kan geen huis kopen: 'Pessimisme is terug'

Auteur: Myrthe Koopman

Het lukt ruim driekwart van de starters (77 procent) niet om een huis te kopen. Daardoor blijft die groep vastzitten aan een hoge huur op de huurmarkt en kan ze weinig sparen. Dat blijkt uit de Startersbarometer van Viisi Hypotheken over het derde kwartaal van dit jaar. Hergen Dutrieux, hypotheekadviseur en medeoprichter van Viisi Hypotheken, ziet dat het pessimisme onder starters terug is.



Door MASCHA DE JONG Aangepast: 3 min geleden 3 uur geleden in BINNENLAND

AMSTERDAM - Door gebrek aan huurwoningen – na de sociale huurmarkt kookt nu de middenhuur droog door nieuwe wetgeving – wijken veel volwassenen uit naar hun ouders. De 26-jarige Emma den Hollander keert eveneens gedwongen terug op het oude nest: "Dit hebben wij nooit gewild. Het hele gezin is straks weer samen, ook mijn broertje van 23 verliest misschien zijn studentenkamer. We moeten dan drie woningen in één rijtjeshuis proppen."

Bouw & Infrastructuur • 22 aug '24 07:24 • Aangepast op

Meerderheid starters k kopen: 'Pessimisme is '

Auteur: Myrthe Koopman

Het lukt ruim driekwart van de starters (77 pre

kopen. Daardoor blijft die groep vastzitten aan een noge nuur op ue huurmarkt en kan ze weinig sparen. Dat blijkt uit de Startersbarometer van Viisi Hypotheken over het derde kwartaal van dit jaar. Hergen Dutrieux, hypotheekadviseur en medeoprichter van Viisi Hypotheken, ziet dat het pessimisme onder starters terug is.

'Dit hebben wij nooit gewild'

Nieuwe huurwet een regelrechte ramp: Emma (26) woont weer bij haar ouders

f 🔽 🖸 🗊





Door MASCHA DE JONG

Bouw & Infrastructuur • 22 aug '24 07:24 • Aangepast op

Meerderheid starters k kopen: 'Pessimisme is t

Auteur: Myrthe Koopman

Het lukt ruim driekwart van de starters (77 pro

kopen. Daardoor blijft die groep vastzitten aan een noge naar op de huurmarkt en kan ze weinig sparen. Dat blijkt uit de Startersbarometer van Viisi Hypotheken over het derde kwartaal van dit jaar. Hergen Dutrieux, hypotheekadviseur en medeoprichter van Viisi Hypotheken, ziet dat het pessimisme onder starters terug is.

Donderdag 12 september 2024, 06:00 CEST

'Dit hebben wij nooit gewild'

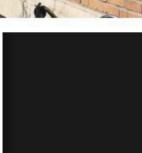
Nieuwe huurwet een regelrechte ramp: Emma (26) woont weer bij haar ouders

Aangepast: 3 min geleden 3 uur geleden in BINNENLAND

f 💟 🖸 🗈 🛤

AMSTERDAM - Door gebrek aan huurwoningen - na de sociale huurmarkt kookt nu de middenhuur droog door nieuwe wetgeving – wijken veel volwassenen uit naar hun ouders. De 26-jarige Emma den Hollander keert eveneens gedwongen terug op het oude nest: "Dit hebben wij nooit gewild. Het hele gezin is straks weer samen, ook mijn broertje van 23 verliest misschien zijn studentenkamer. We moeten dan drie woningen in één rijtjeshuis proppen."





ING Woonbericht: vertrouwen in de woningmarkt blijft stijgen

Bijna de helft van de starters begint later aan kinderen door woningnood



Door MASCHA DE JONG Aangepast: 3 min geleden 3 uur geleden in BINNENLAND

AMSTERDAM - Door gebrek aan huurwoningen – na de sociale huurmarkt kookt nu de middenhuur droog door nieuwe wetgeving – wijken veel volwassenen uit naar hun ouders. De 26-jarige Emma den Hollander keert eveneens gedwongen terug op het oude nest: "Dit hebben wij nooit gewild. Het hele gezin is straks weer samen, ook mijn broertje van 23 verliest misschien zijn studentenkamer. We moeten dan drie woningen in één rijtjeshuis proppen."

Starters op woningmarkt gaan het nog moeilijker krijgen

Tenzij er meer actie wordt ondernomen door overheid en markt.

🖉 Stimuleringsfonds Volkshuisvesting Nederlandse gemeenten 📋 08 mei 2024



SVn maakt zich ernstig zorgen over de woningmarkt. De verwachting is dat de markt - vooral voor starters - de komende jaren verder verslechtert, tenzij er veel meer actie wordt ondernomen door overheid en markt.

aug '24 07:24 • Aangepast op

id starters k ssimisme is t



Netwerklaan 321

Extra aflevering: De



t die groep vastzitten aan een noge nuur op ue 3821 AC Amersfoort weinig sparen. Dat blijkt uit de Startersbarometer van E: communicatie

W: www.svn.nl

n medeoprichter van Viisi Hypotheken, ziet dat het arters terug is.

Onderdag 12 september 2024, 06:00 CEST

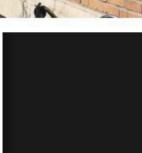
'Dit hebben wij nooit gewild'

Nieuwe huurwet een regelrechte ramp: Emma (26) woont weer bij haar ouders

f 💟 🖸 🗈 🛤



r het derde kwartaal van dit jaar. Hergen Dutrieux,



ING Woonbericht: vertrouwen in de woningmarkt blijft stijgen

Bijna de helft van de starters begint later aan kinderen door woningnood











Guiding Principles in the Design





Vision map of Haven-Stad

CONTRACTOR OF A

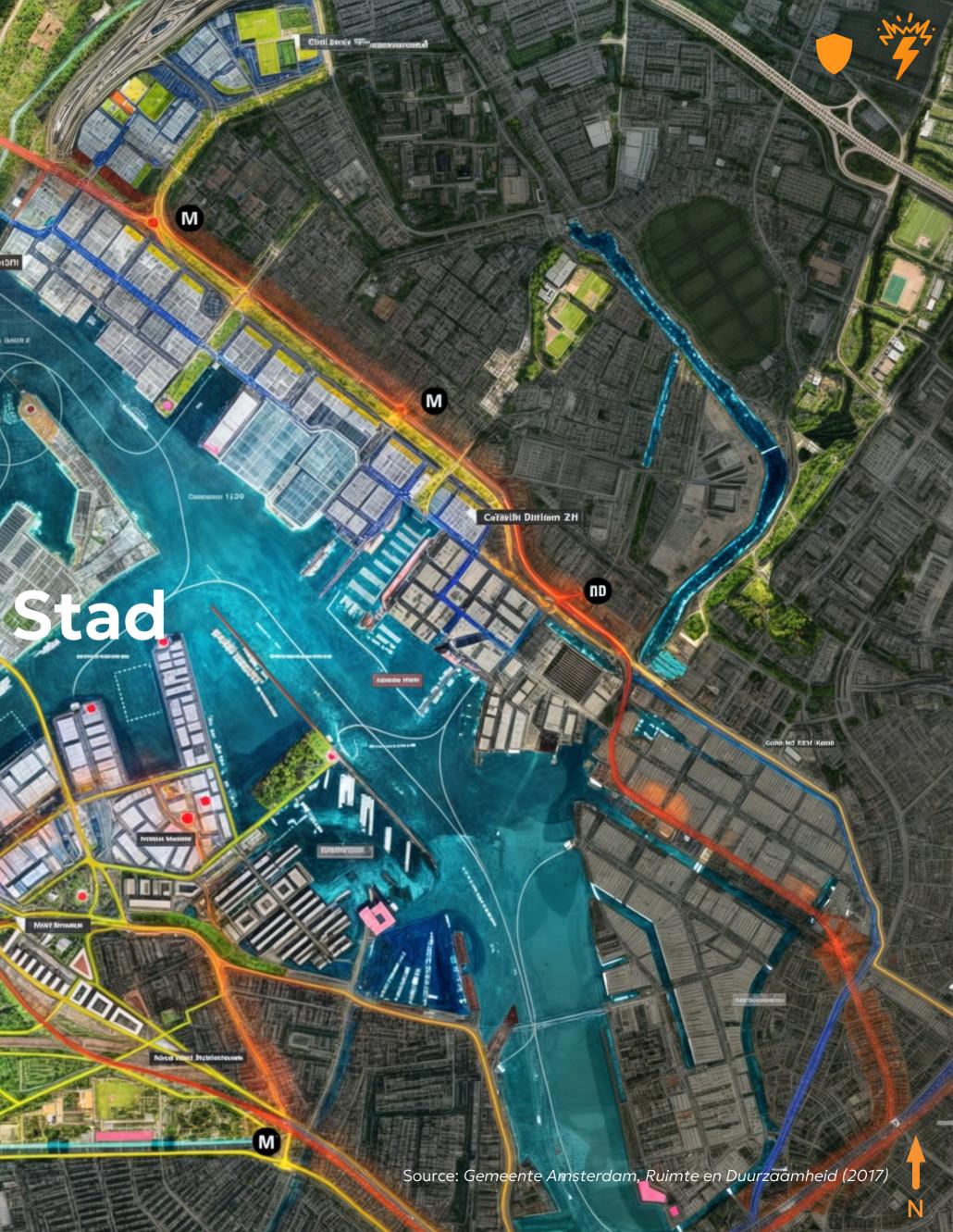


Tek









Intervention in the Masterplan: A Connecting Green Corridor

Motoclor Donnant301





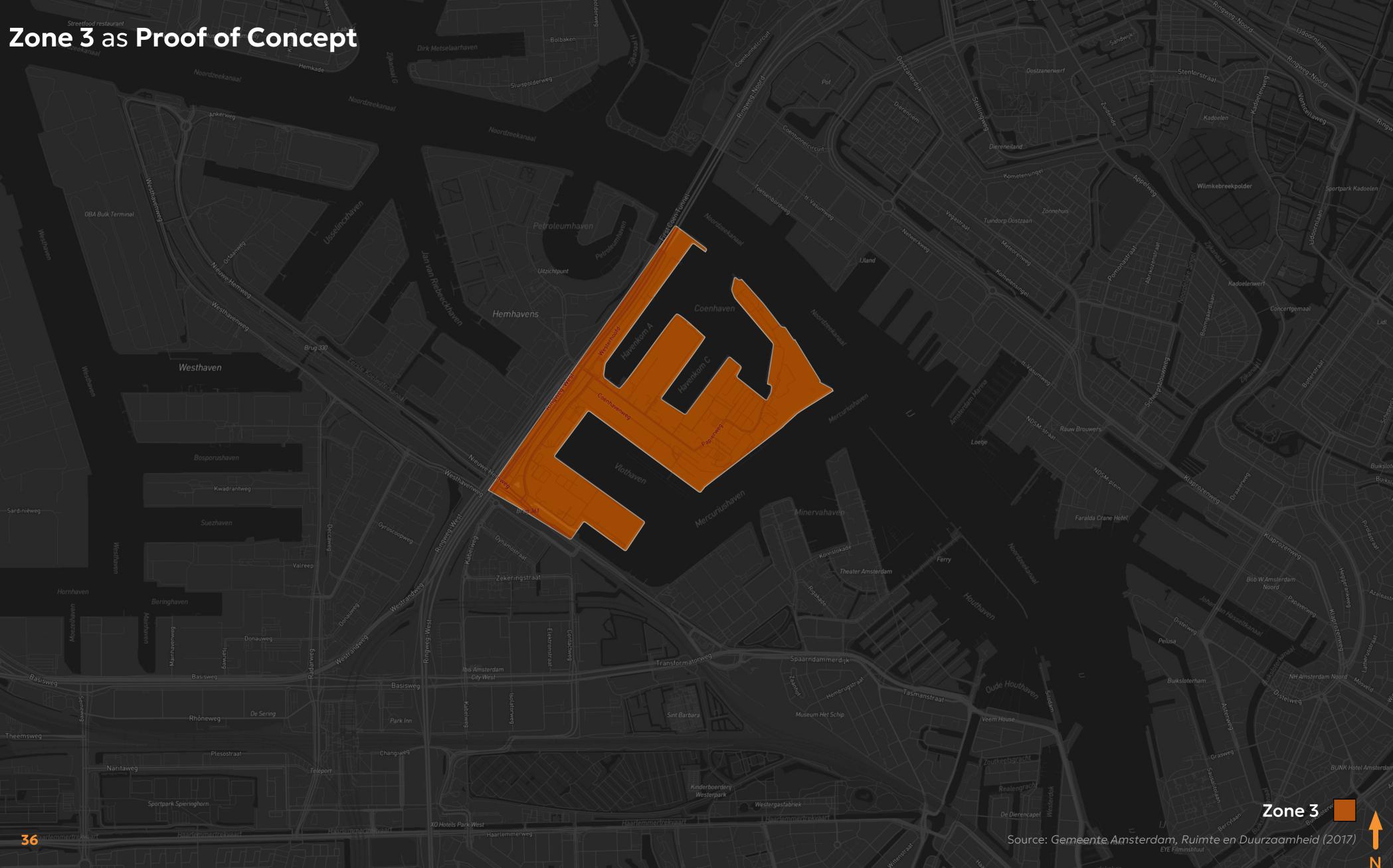


LU.





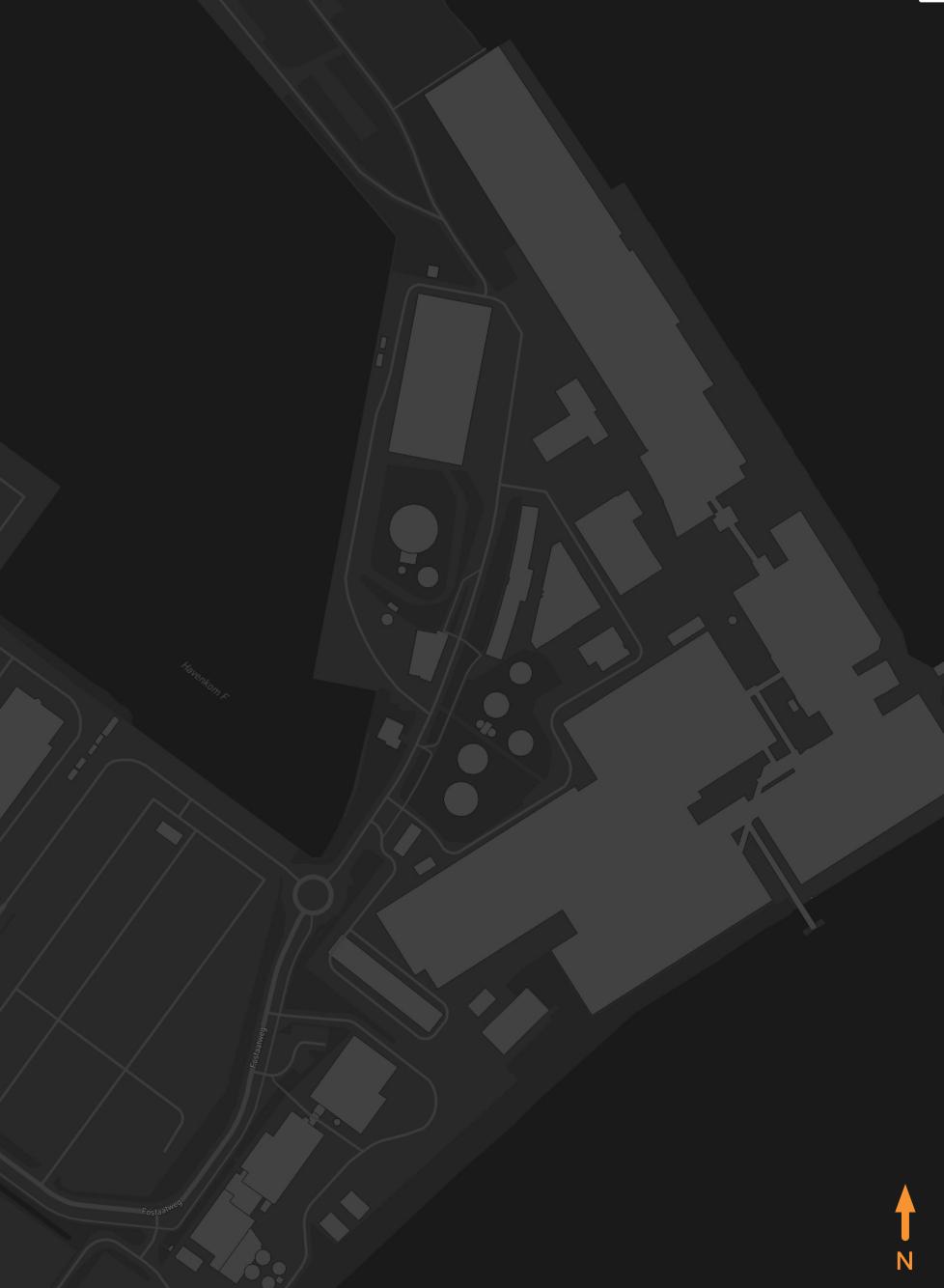




Site Location in Zone 3



Site Location: The Shells in Zone 3

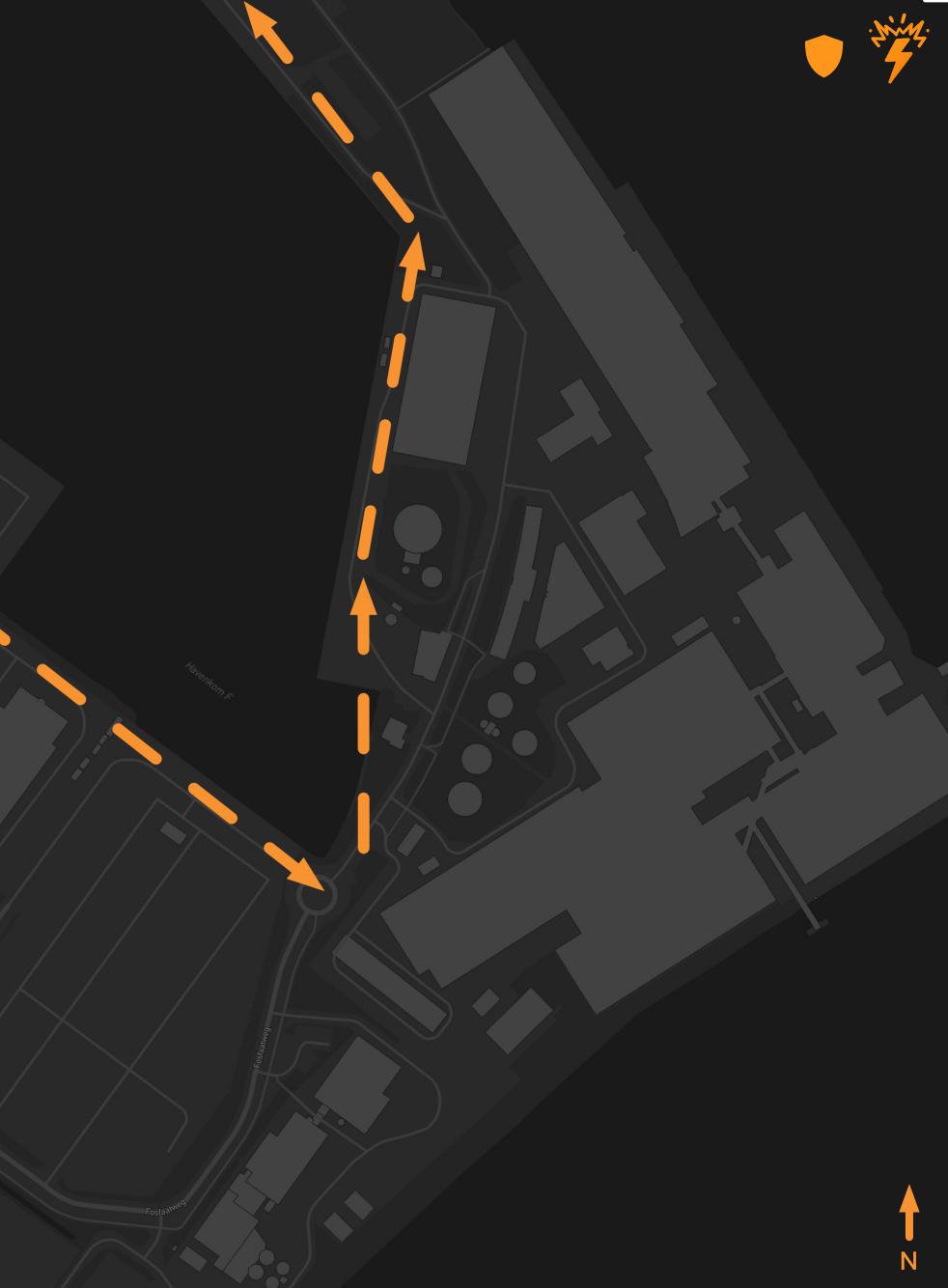


THESHELLS

Routing of the Green Corridor Through the Site

THESHELLS

contraction of the second seco



IntomA

Que Anoino

Contraction of the second

Coenhavenweg

AB

- Statistics



en

oist Mit

THESHELLS

Pler 42

Pallerat

HavenkomC

IntomA

Dist Manual P

Coenhavenweg



en

THESHELLS

HavenkomC

5

55

ATT -

-





ankom A

916 Mailes

55 States

Coenhavenweg

35 Miles



en

THESHELLS

Havenkomc





•[1]

ABKRS

3.2t









N DA

B 1 5 m 80

88

BOUWHUB



N DY

1.....

I LO DE

Cle infra

BOUWHUB

08



Rulesmap - Site

Industrial traffic ••••• Industrial traffic as guest

Resident traffic Resident traffic as guest

THESHELLS





Industrial zone Residential zone















Design Question

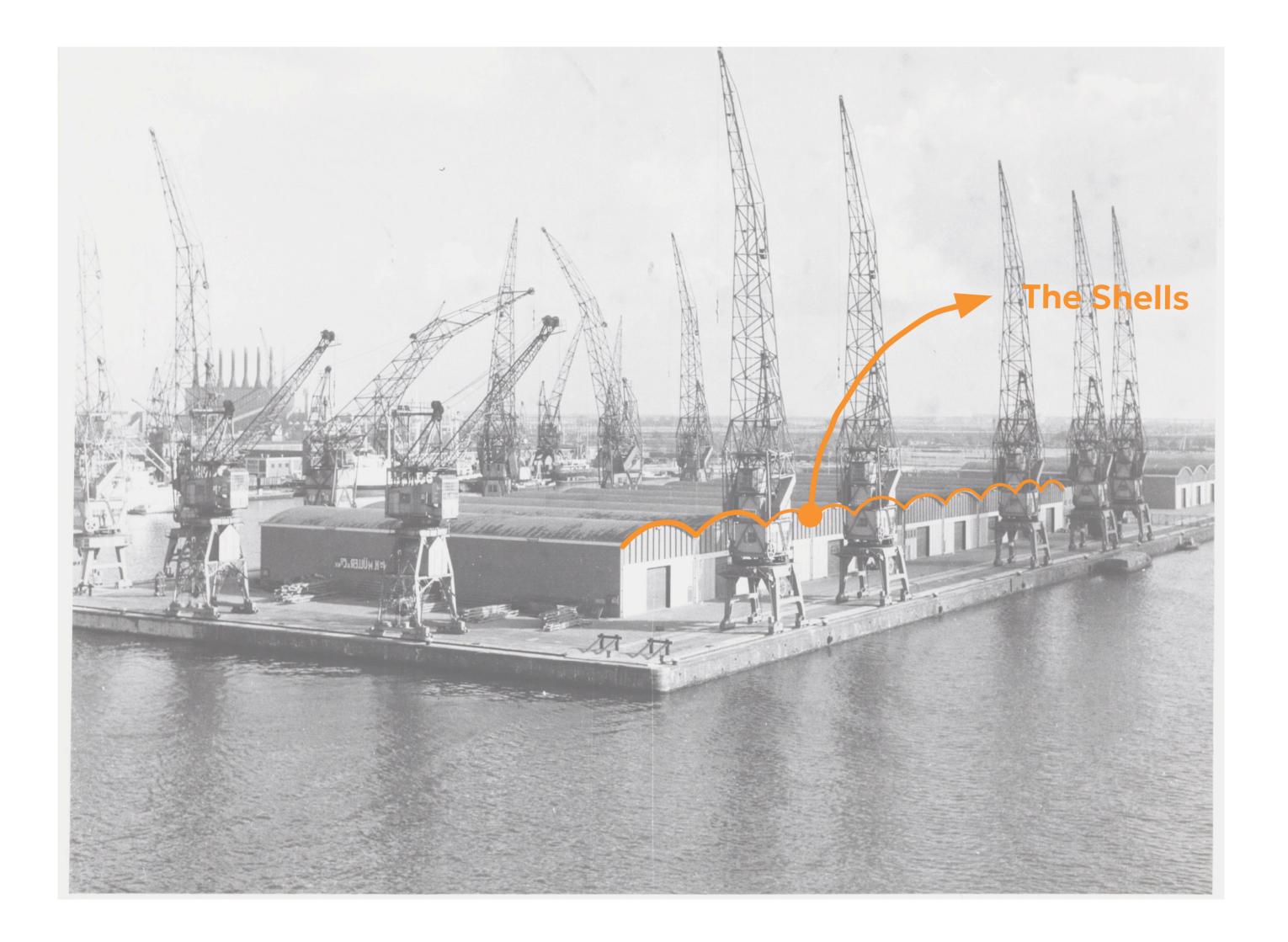
How can design support coexistence and spark interaction between residents and industry?

Archival Photo of the Site



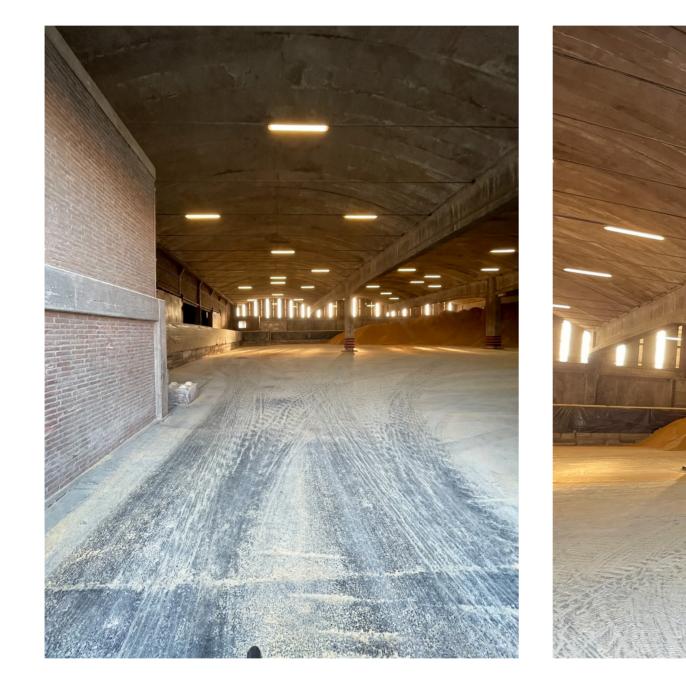


Archival Photo of the Site





Interior of the Existing Industrial Structure







Interior of the Existing Industrial Structure



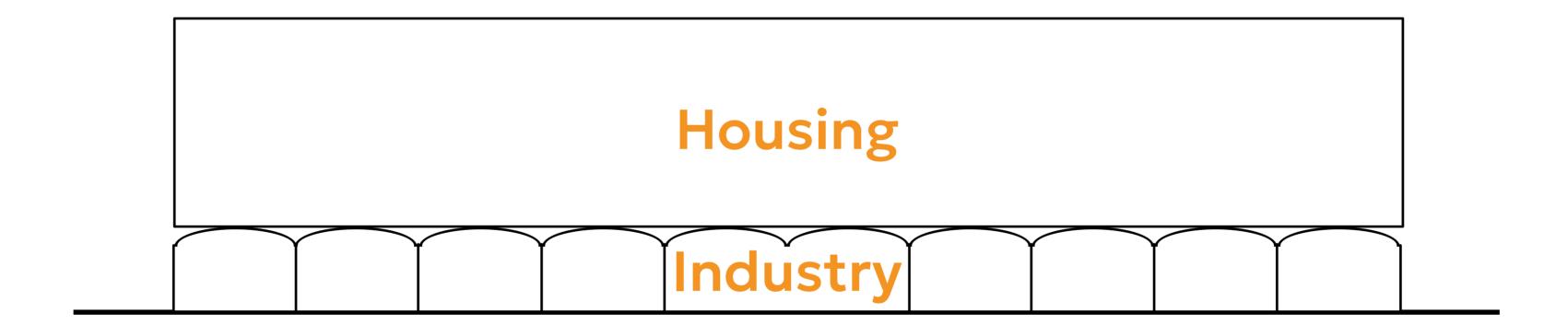


Existing 'Schokbeton' as an architectural quality



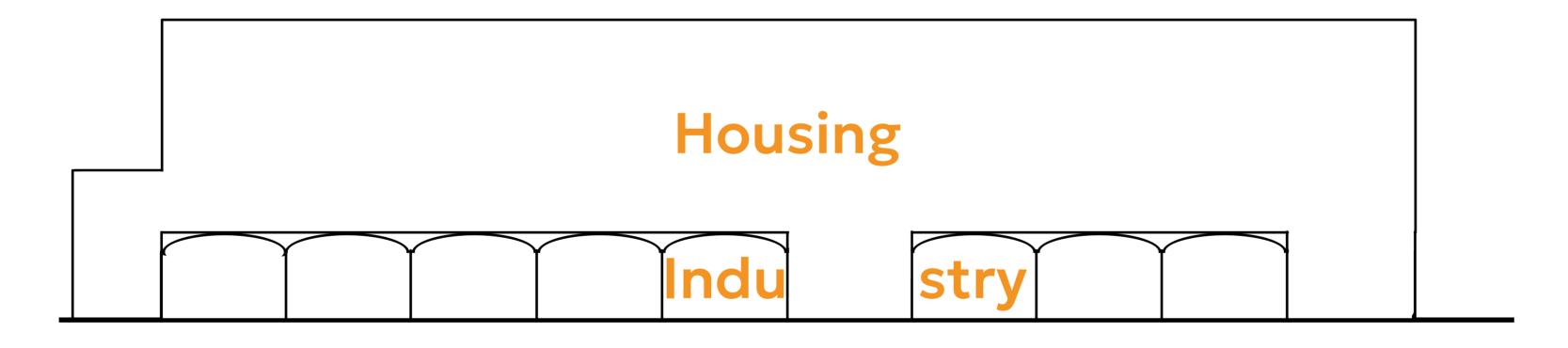
Existing industrial structure





Adding housing on top of the existing industrial structure

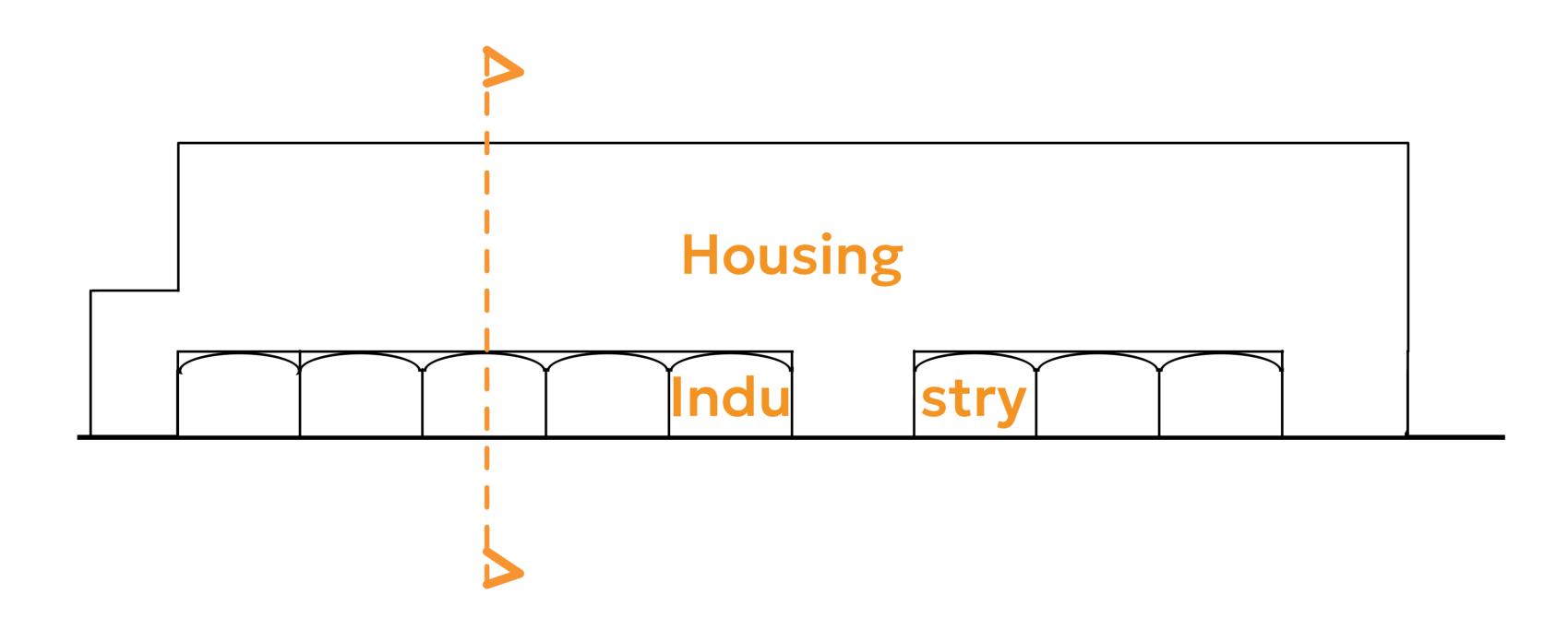


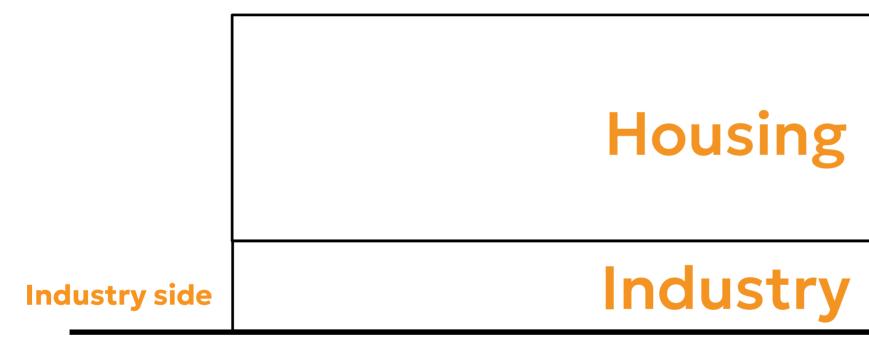


Introducing interaction between residents and industry



,

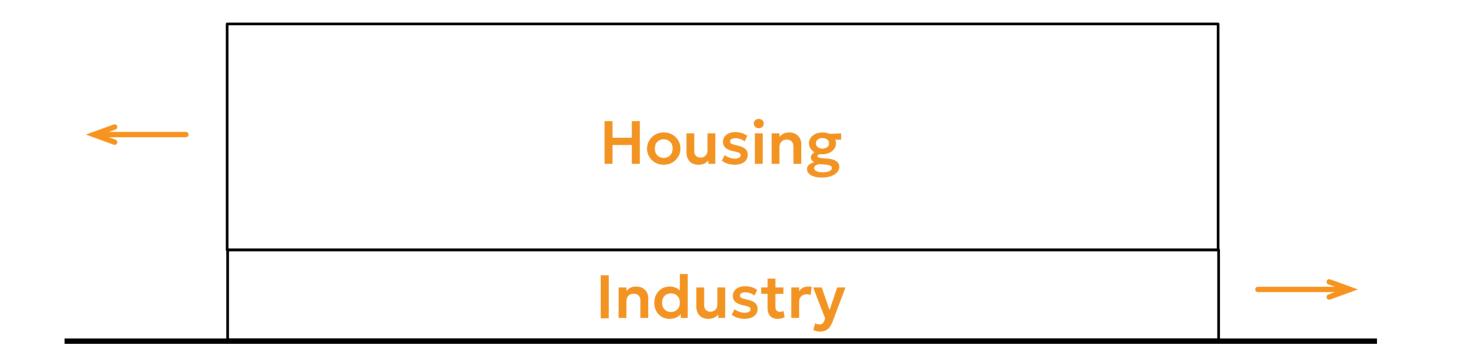




The base



Housing side



Introducing interaction between residents and industry





Shifted volume





The creation of Zone 1

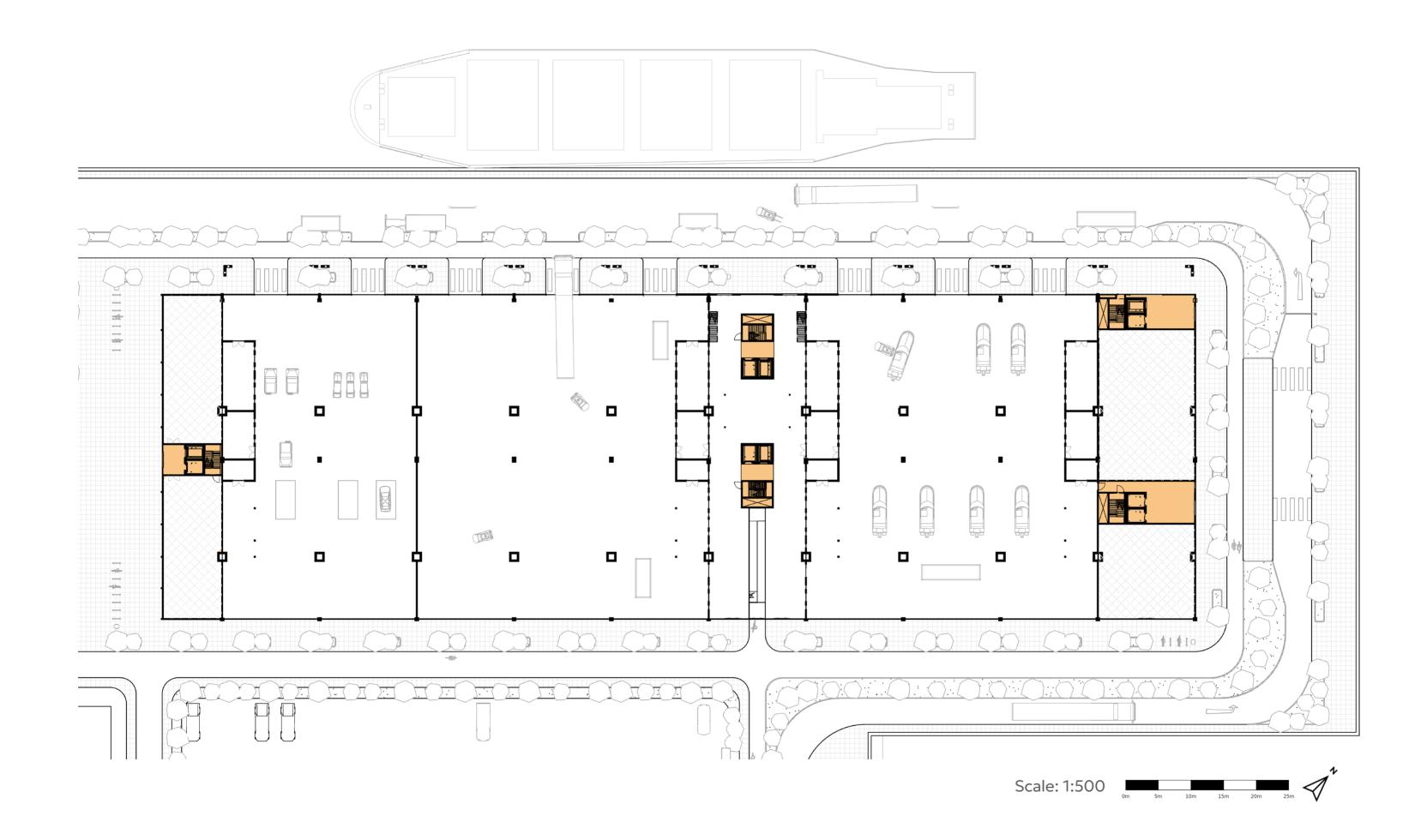




The creation of Zone 2

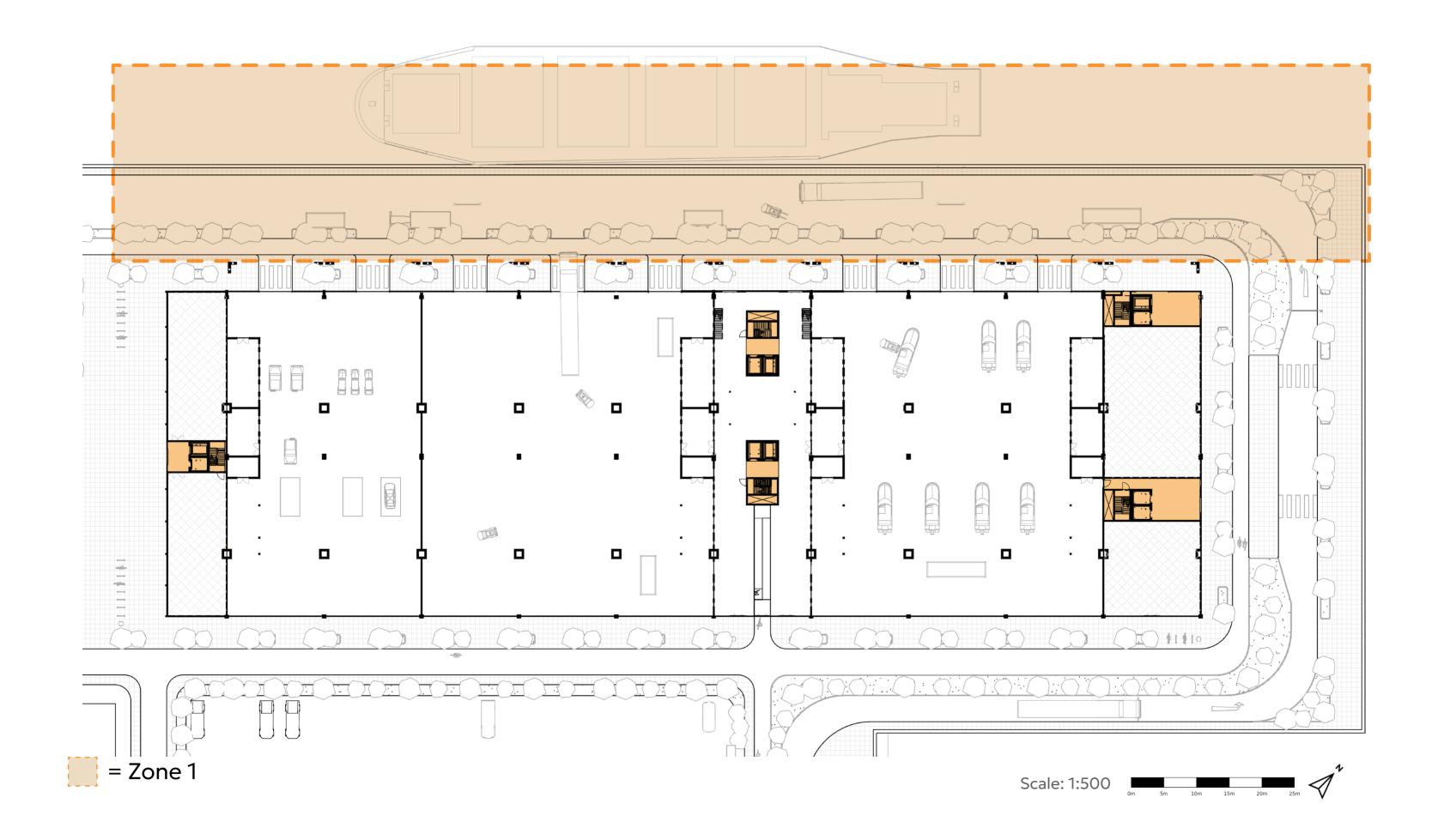


Zoning of the Ground Floor

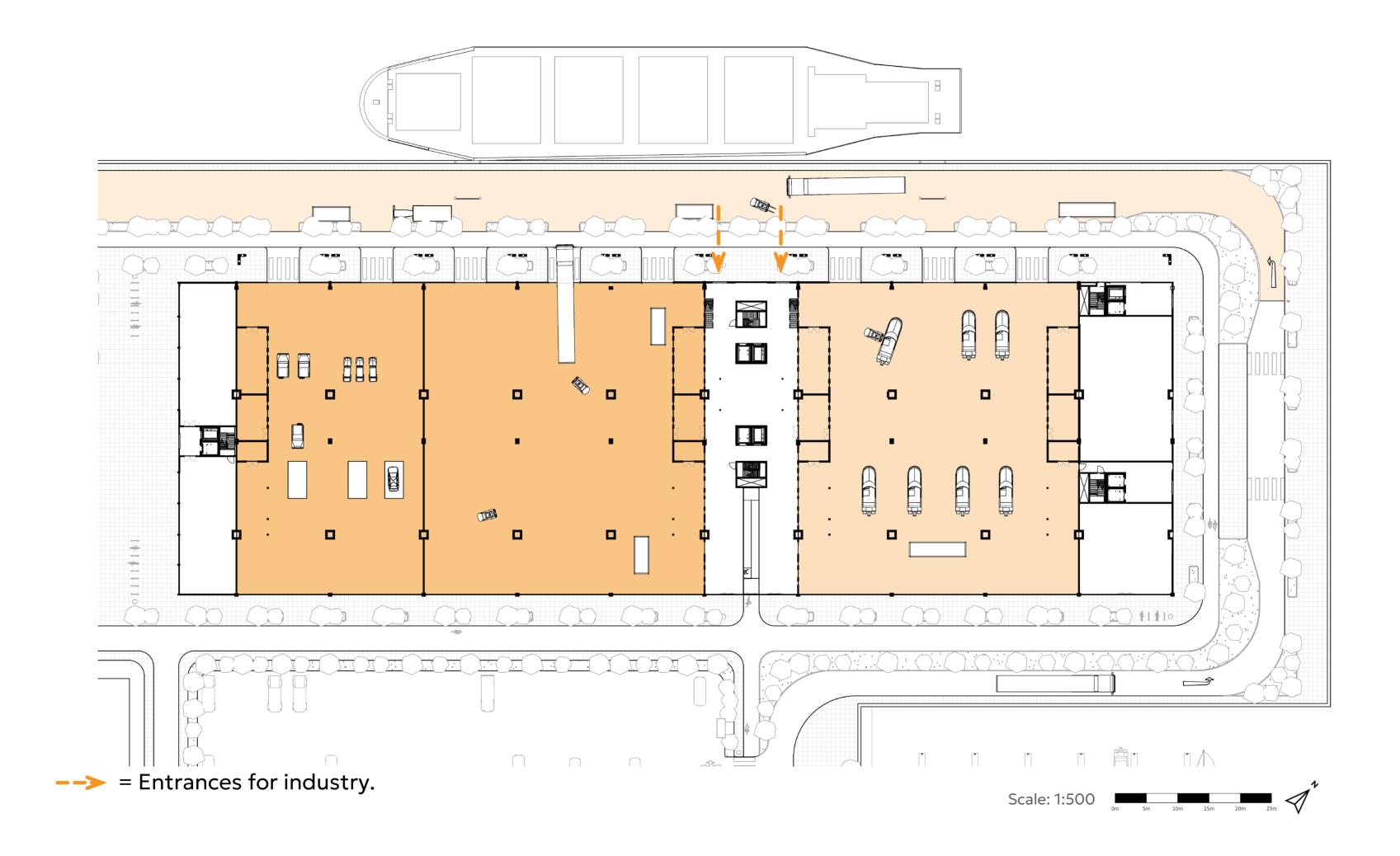


Ground floor

Zoning of the Ground Floor

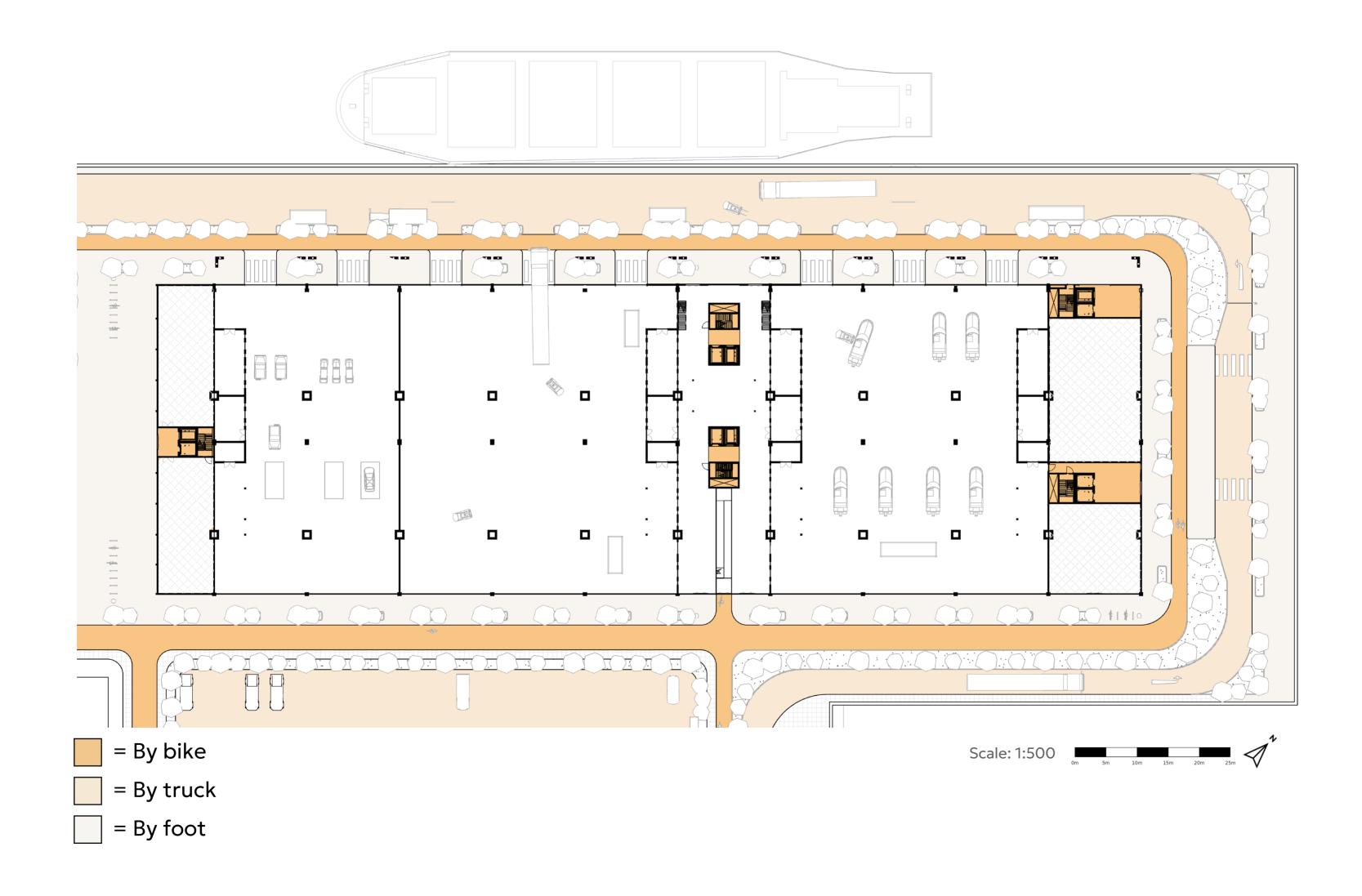


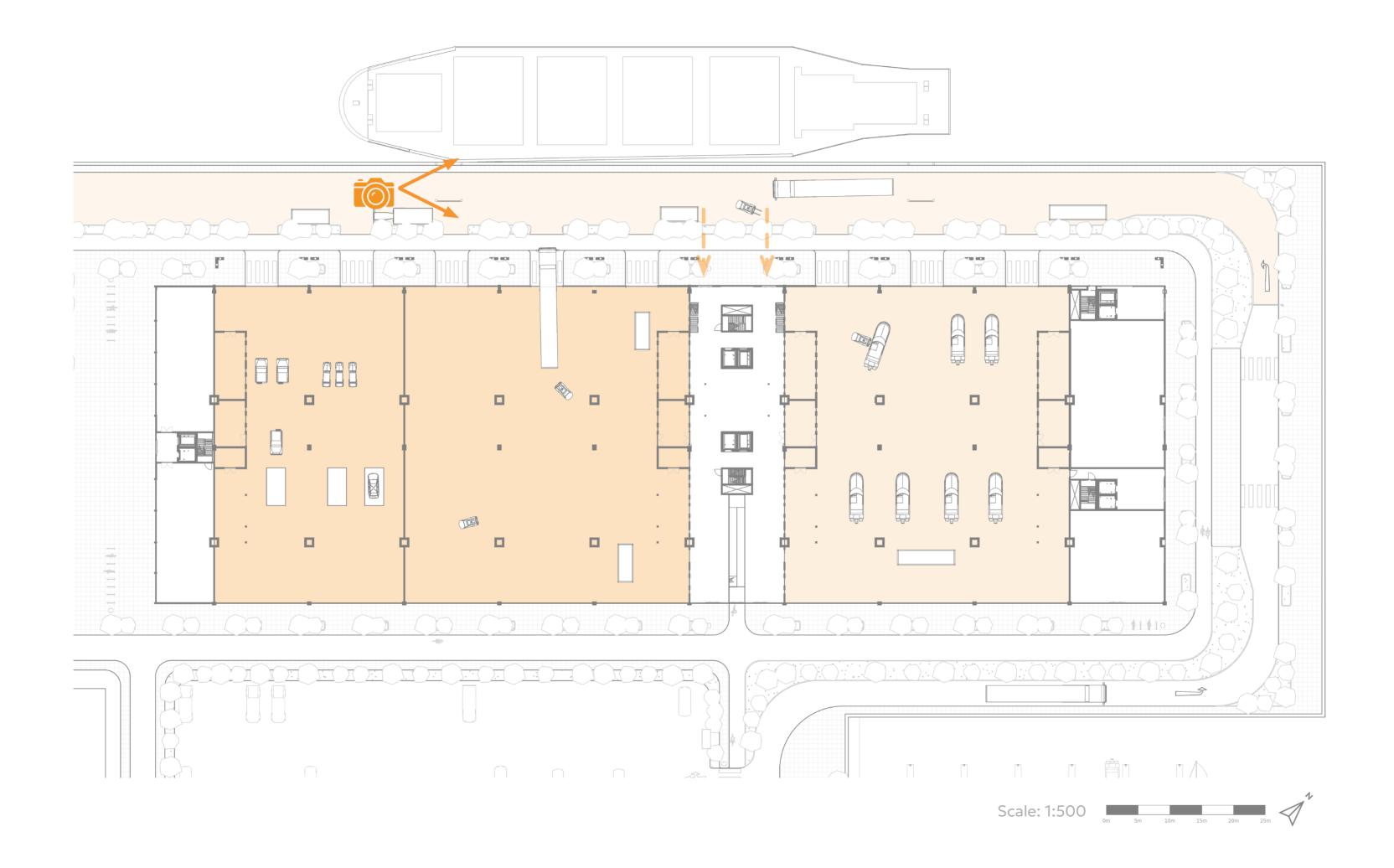






Three Modes of Movement Through the Site

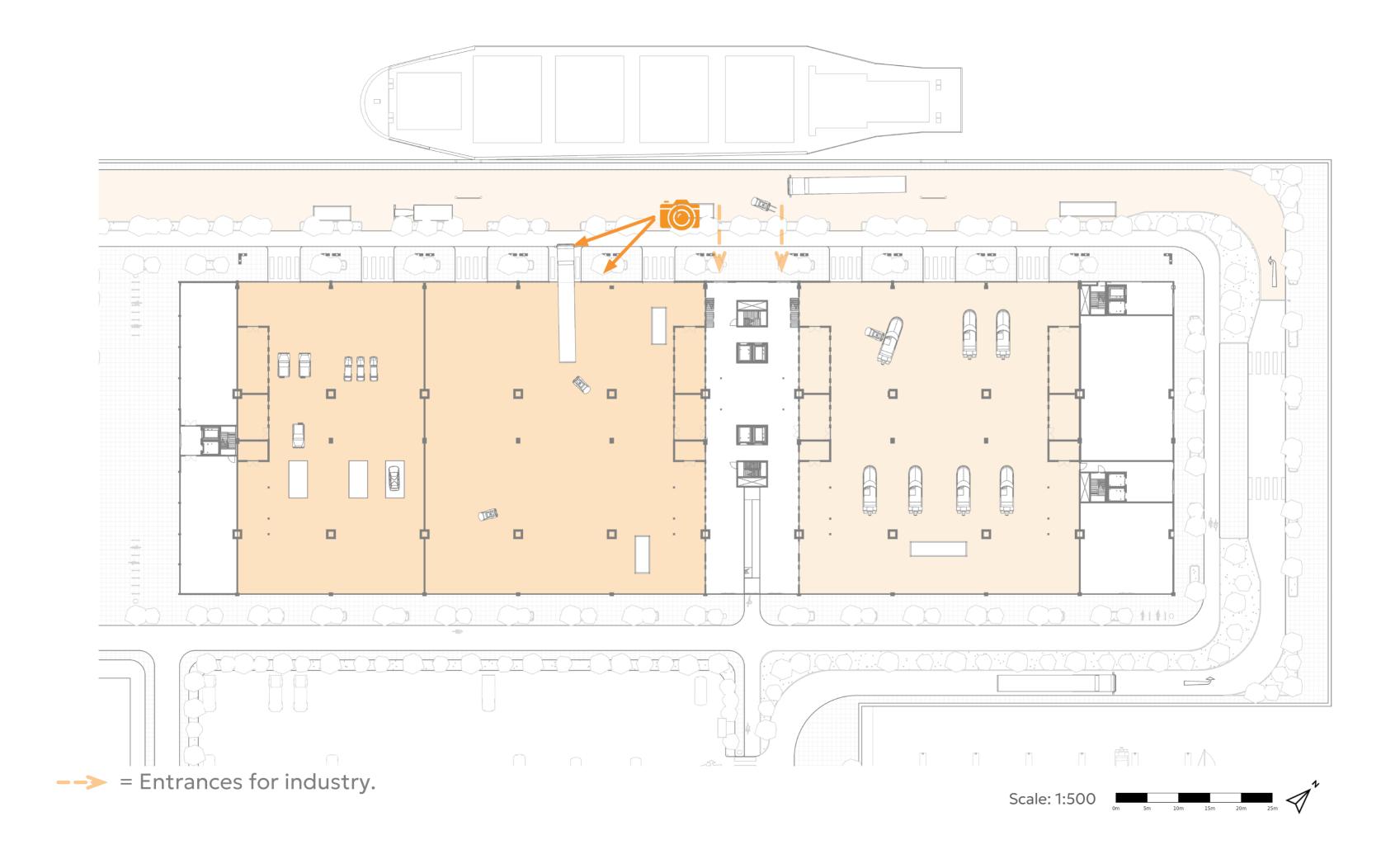








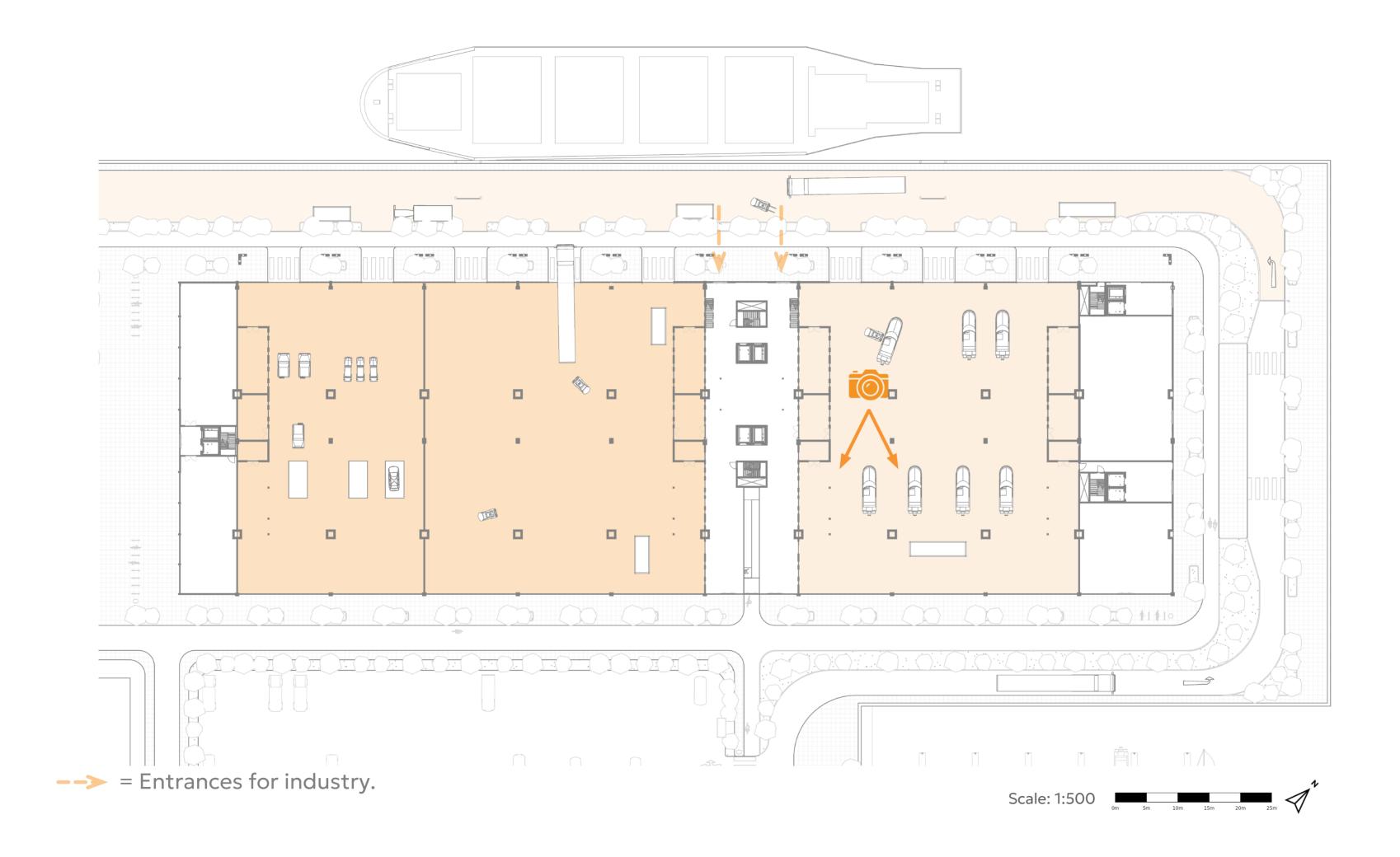










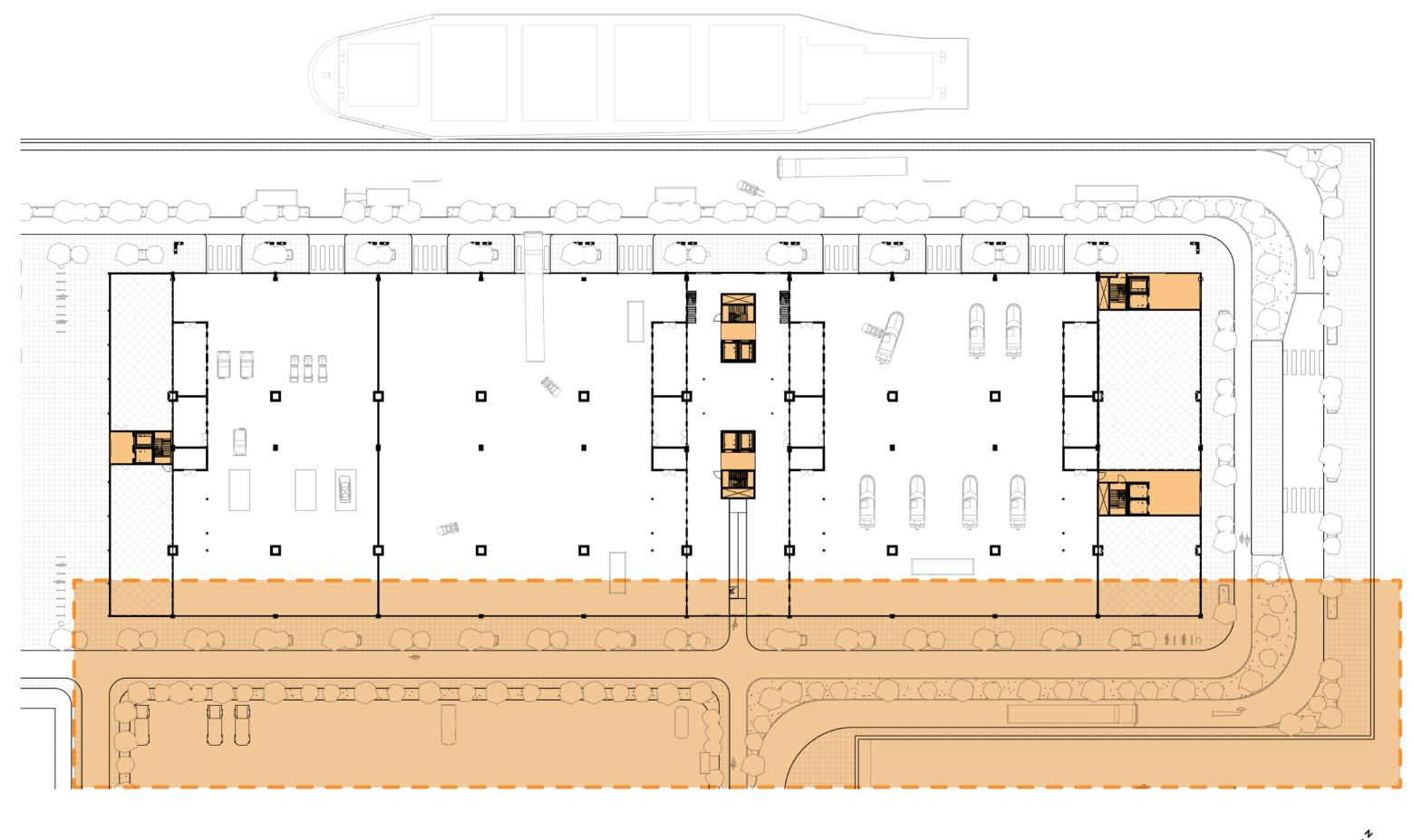








Zoning of the Ground Floor

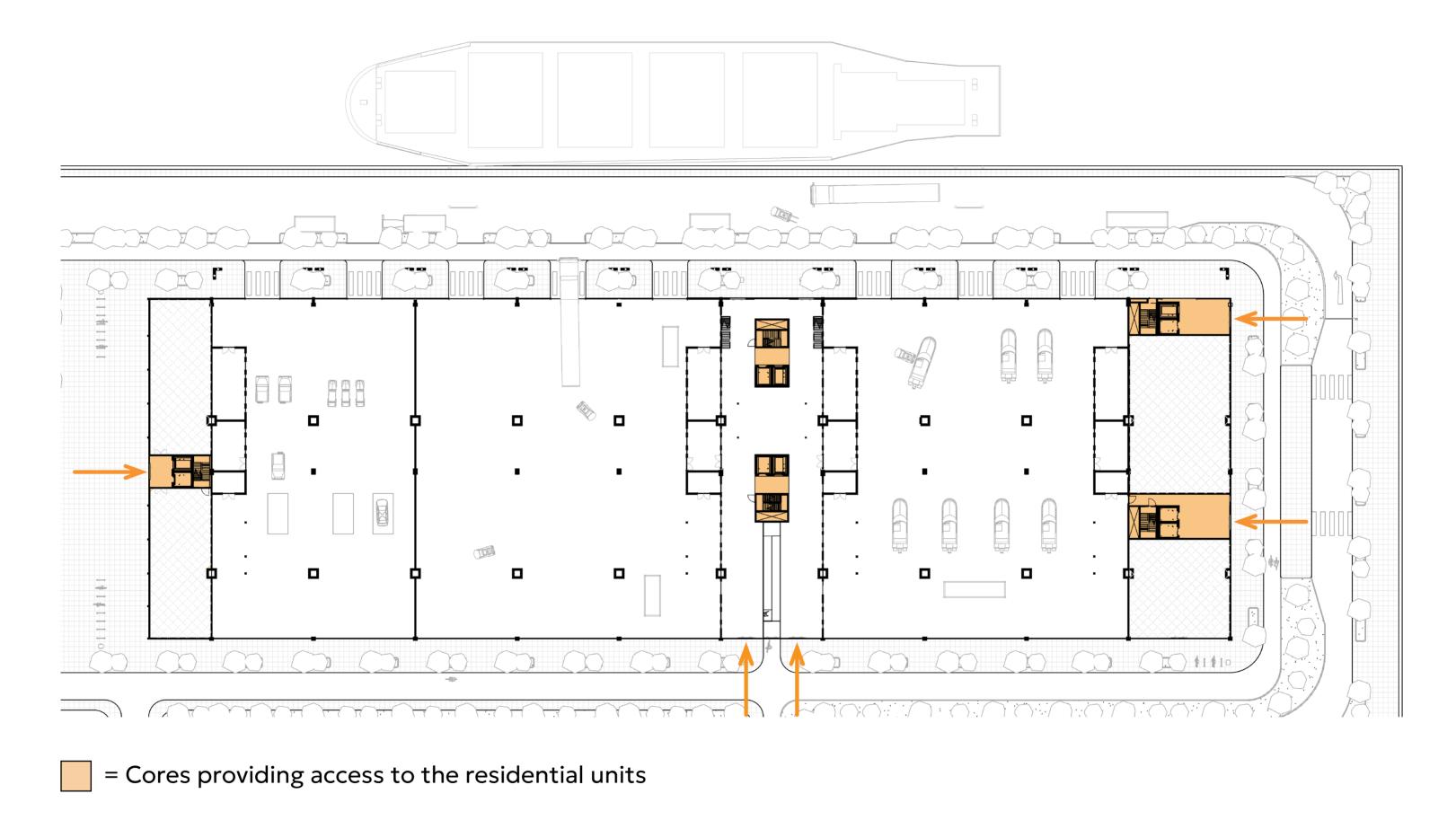


= Zone 2



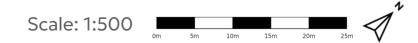


The **Residential Program** at **Ground Floor**

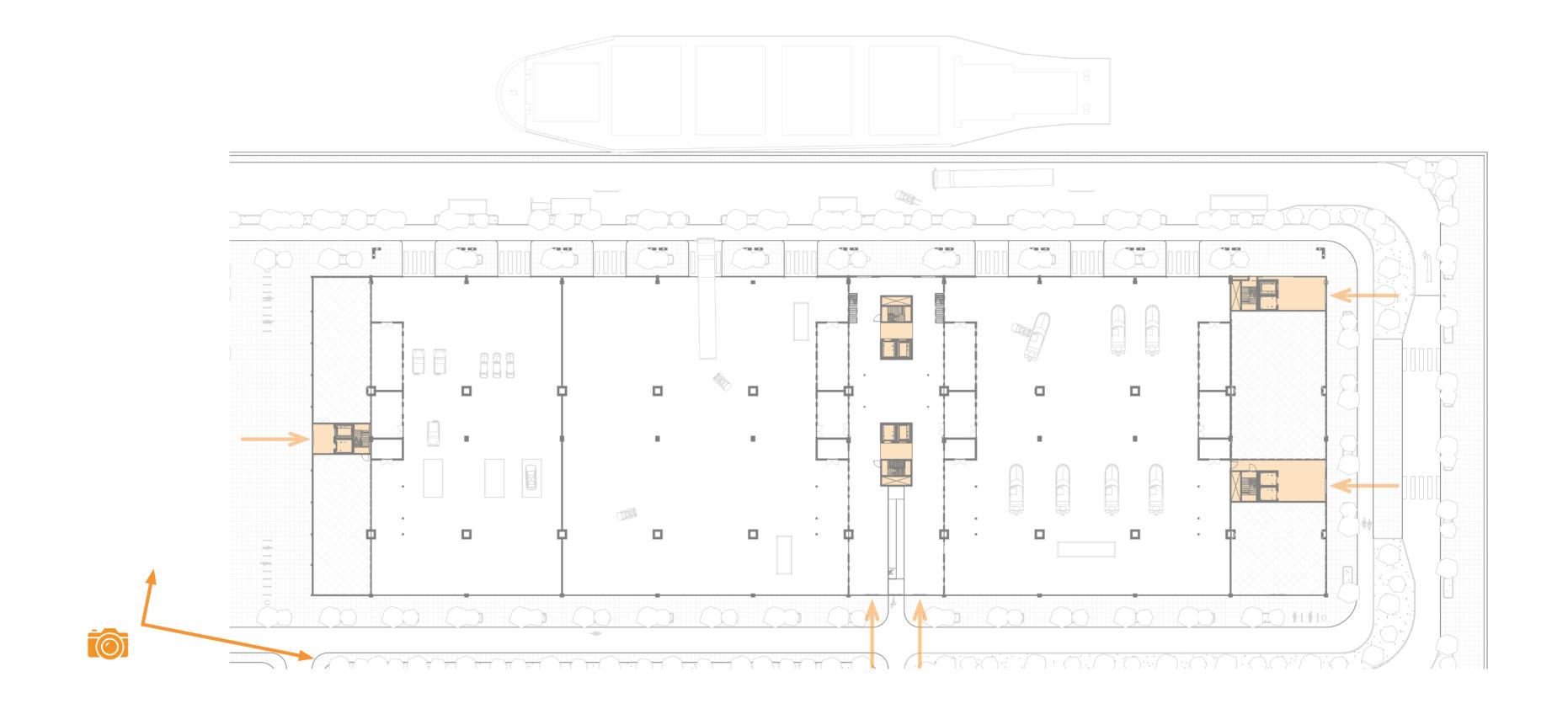


= Entrances for residents.





The **Residential Program** at **Ground Floor**

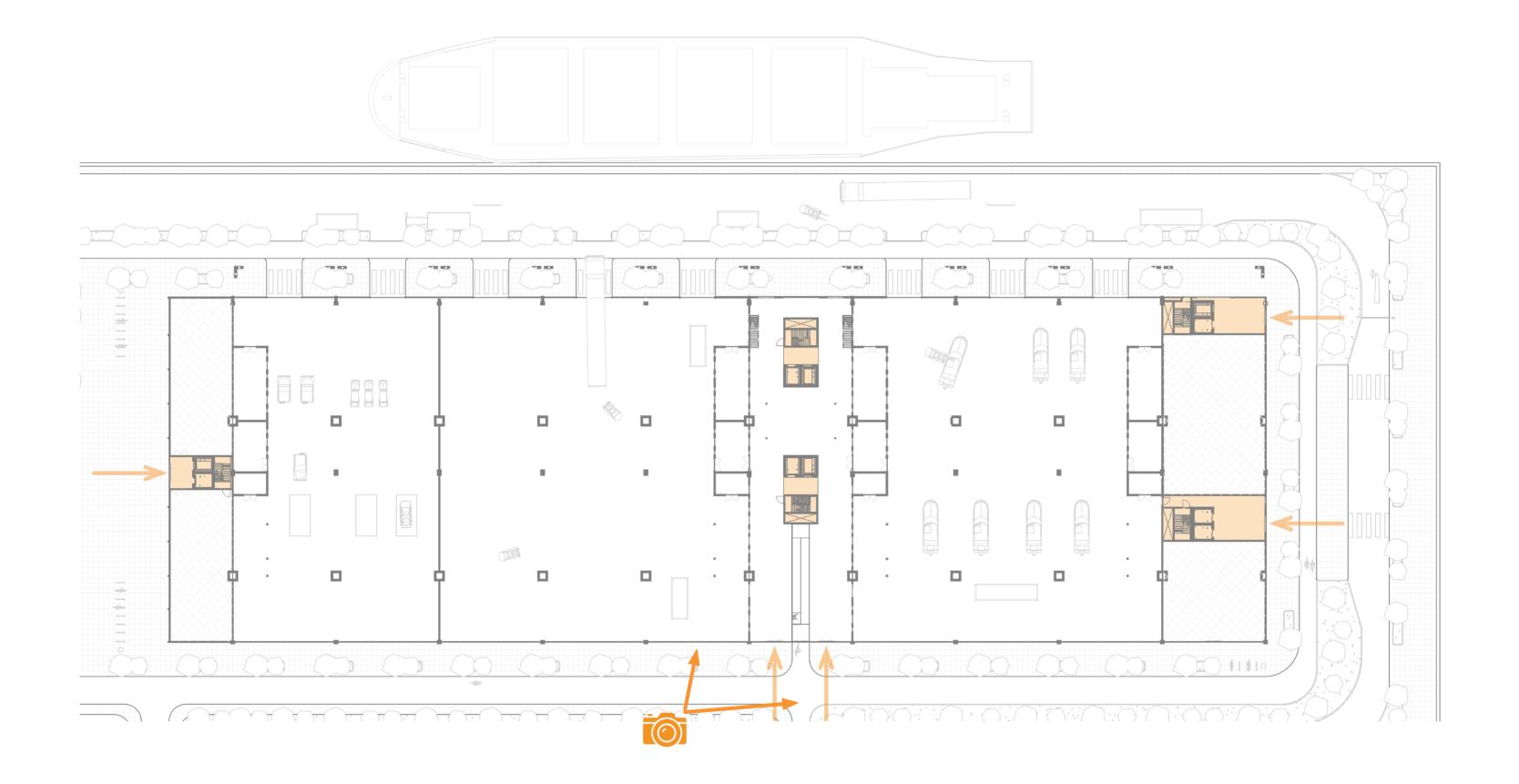




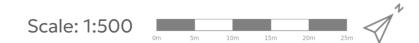




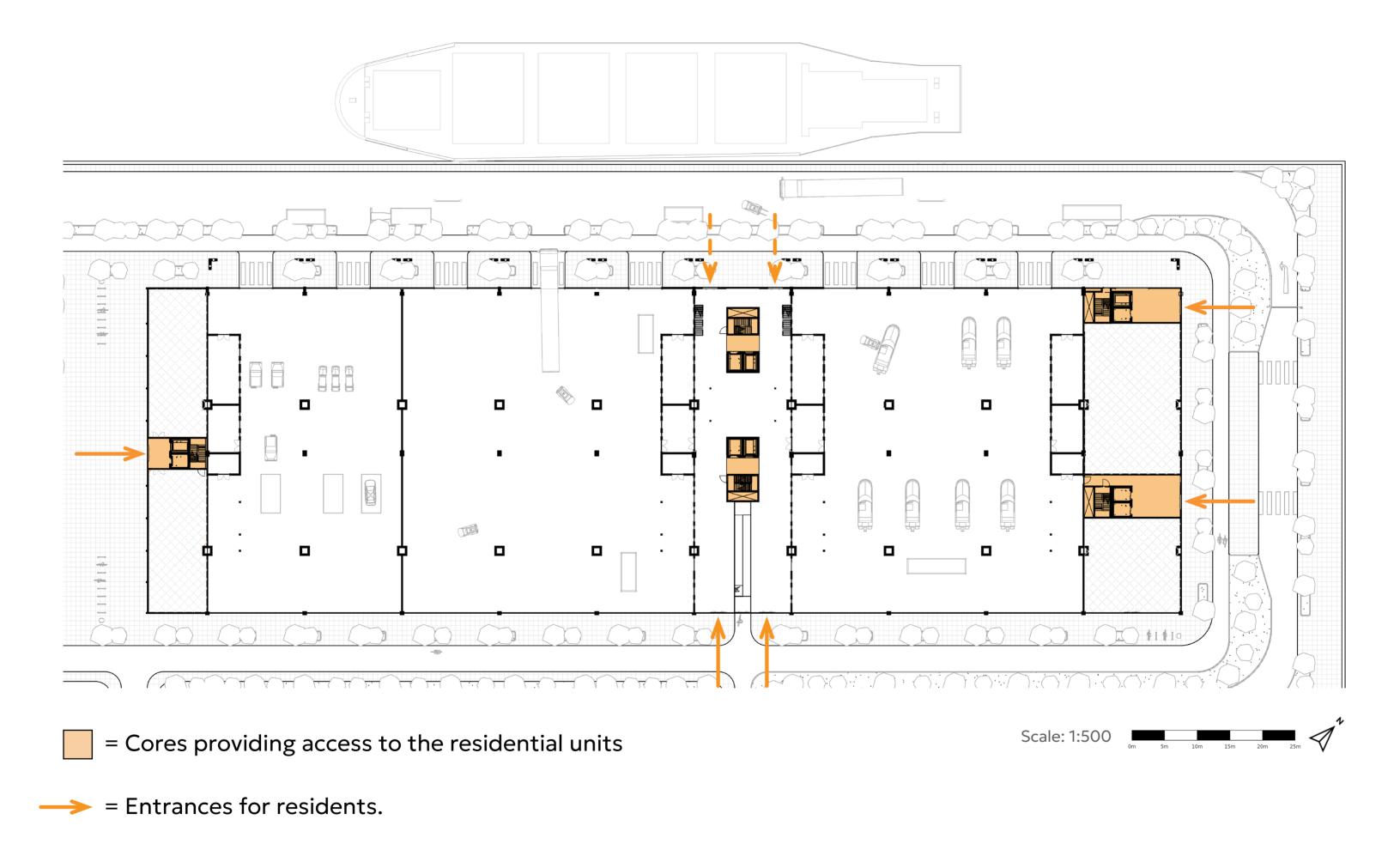
The **Residential Program** at **Ground Floor**





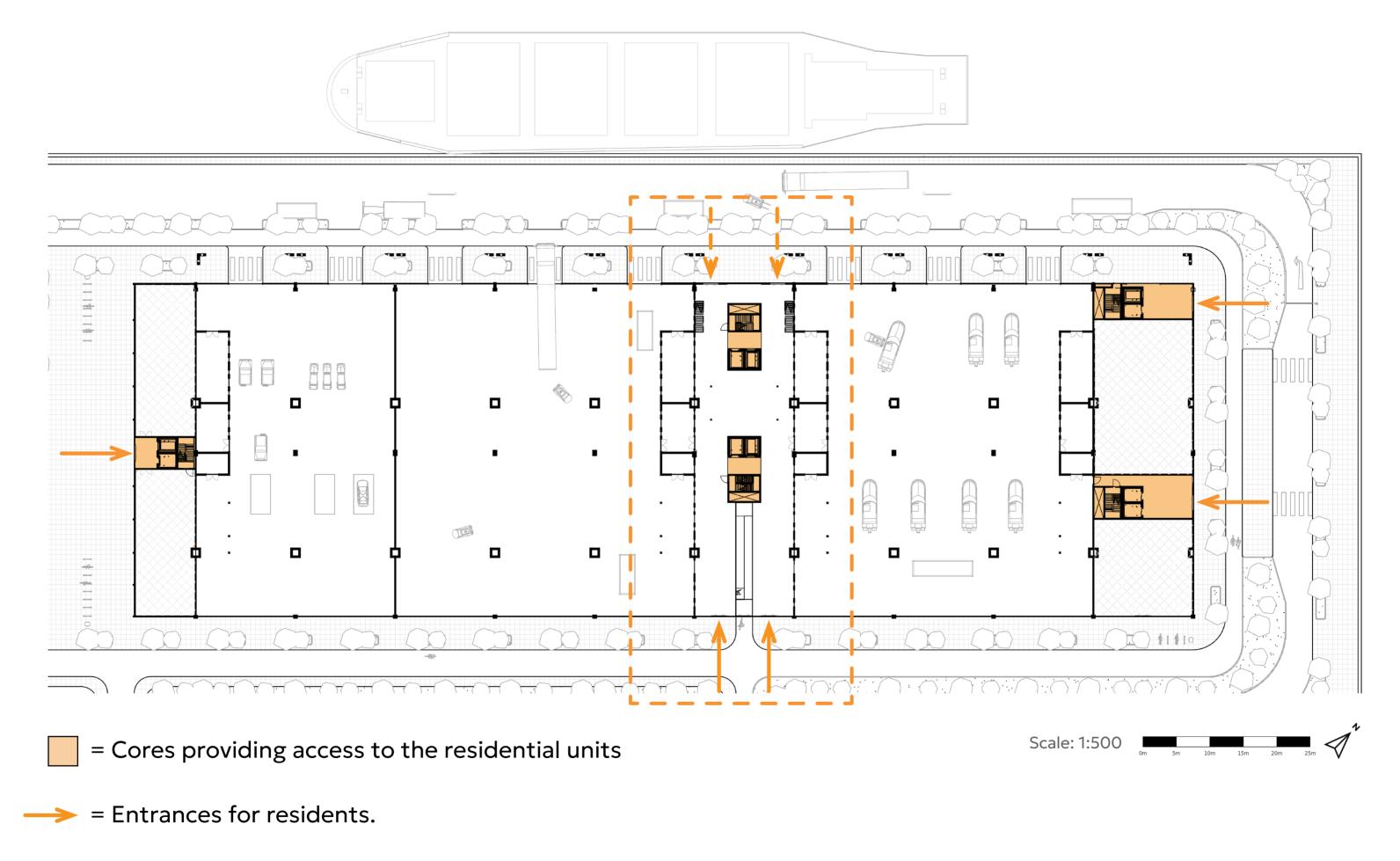






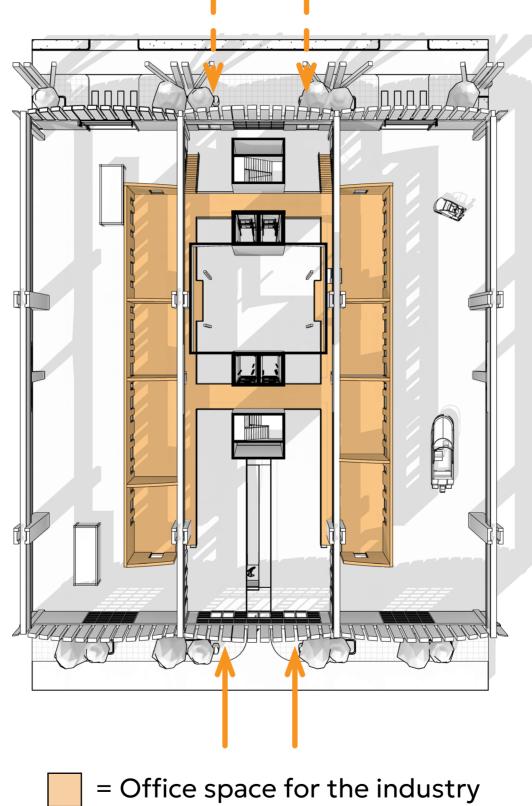
-->> = Entrances for industry.



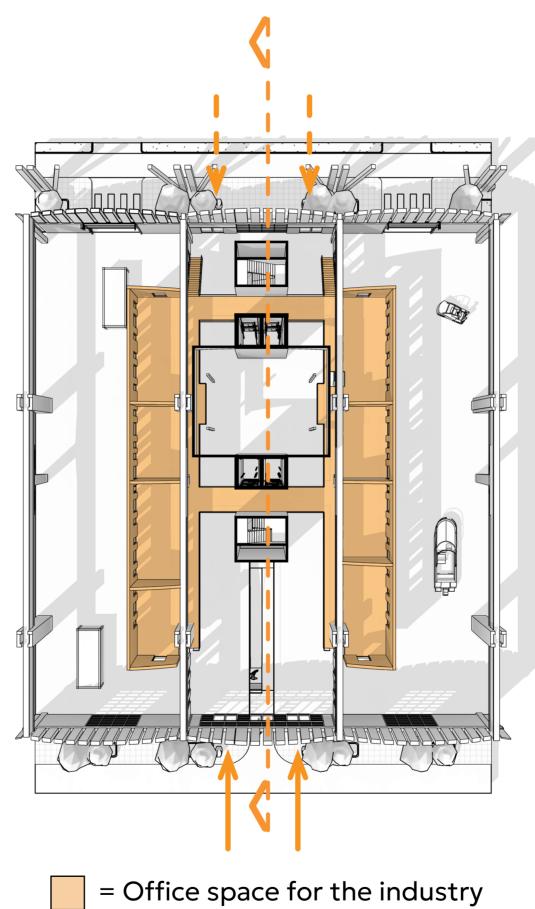


-->> = Entrances for industry.



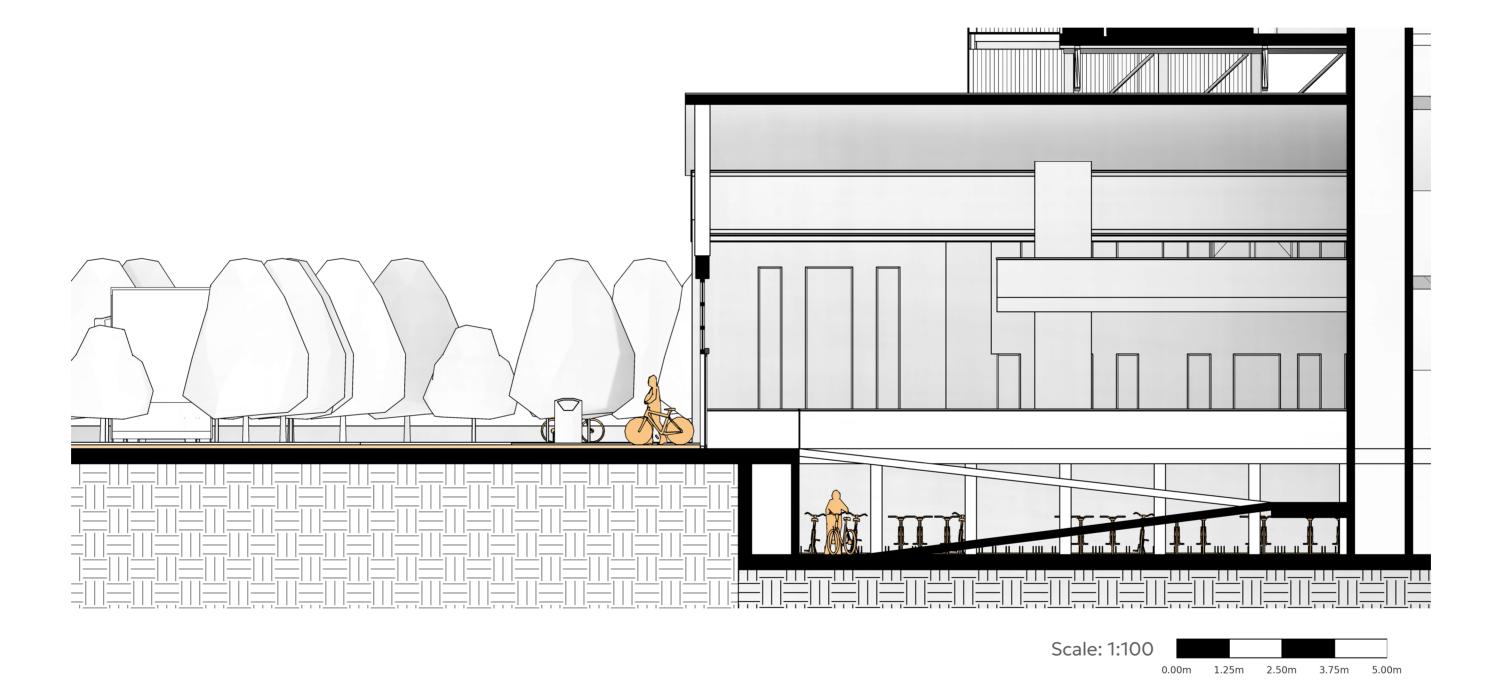




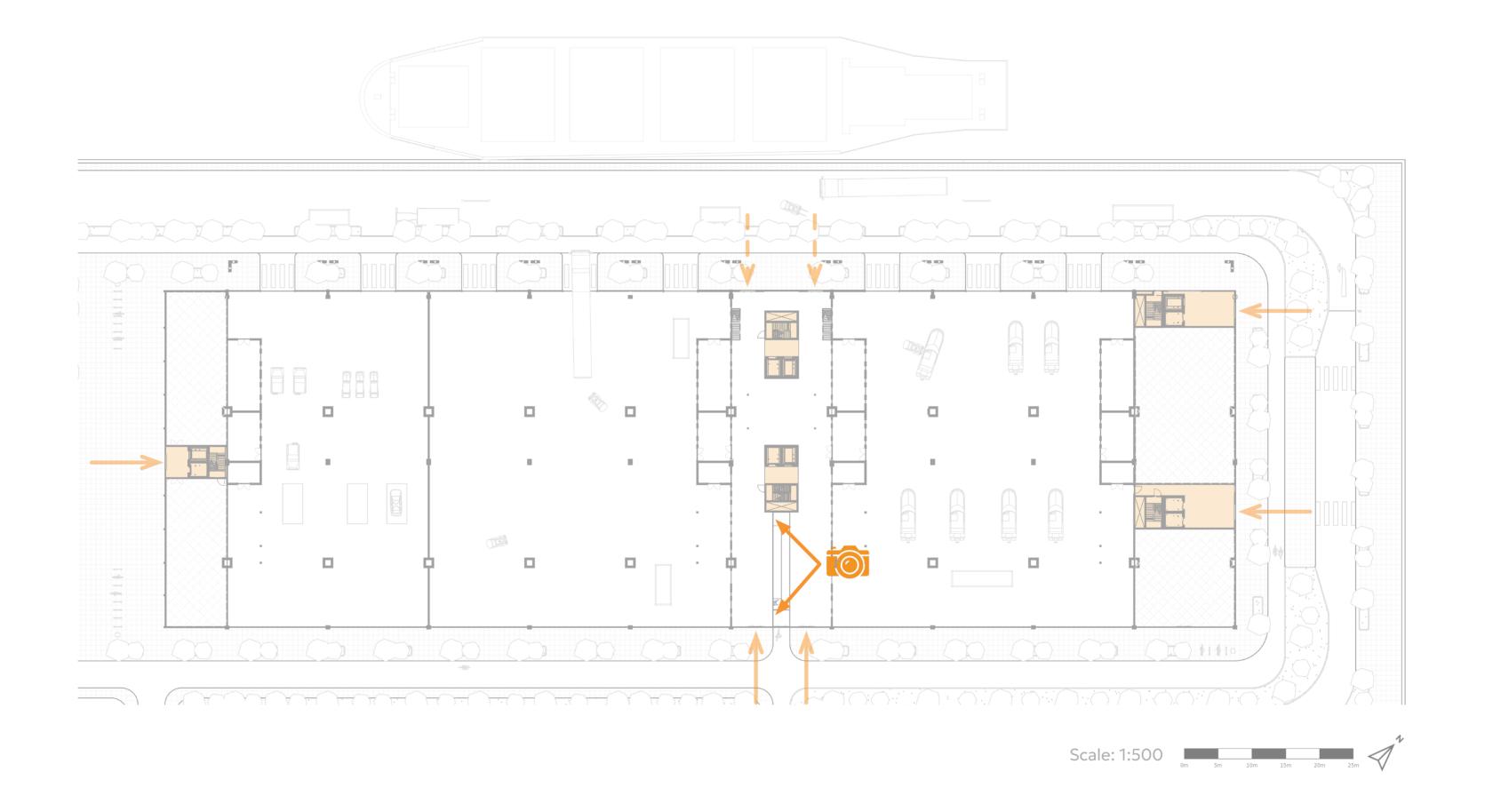




Shared Bicycle Storage at the Main Entrance



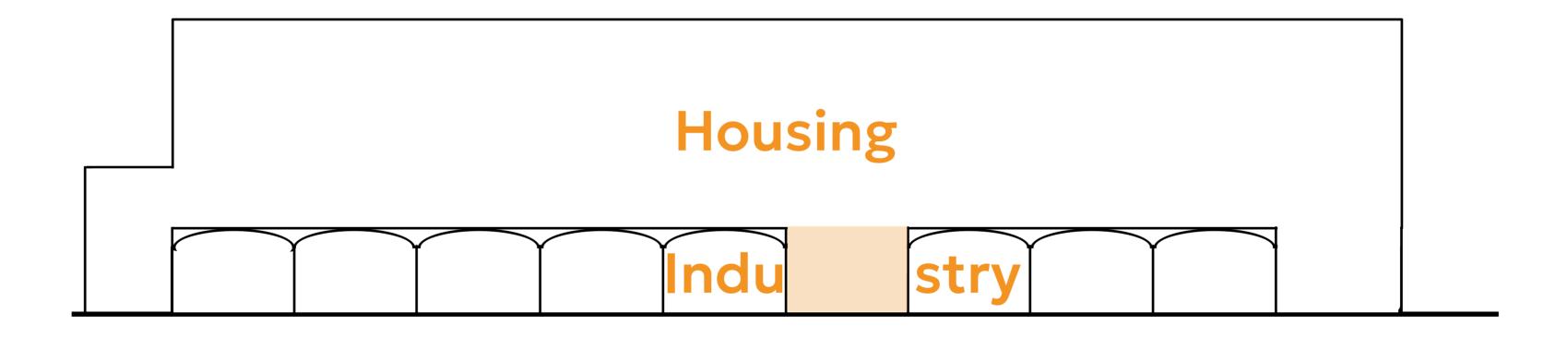






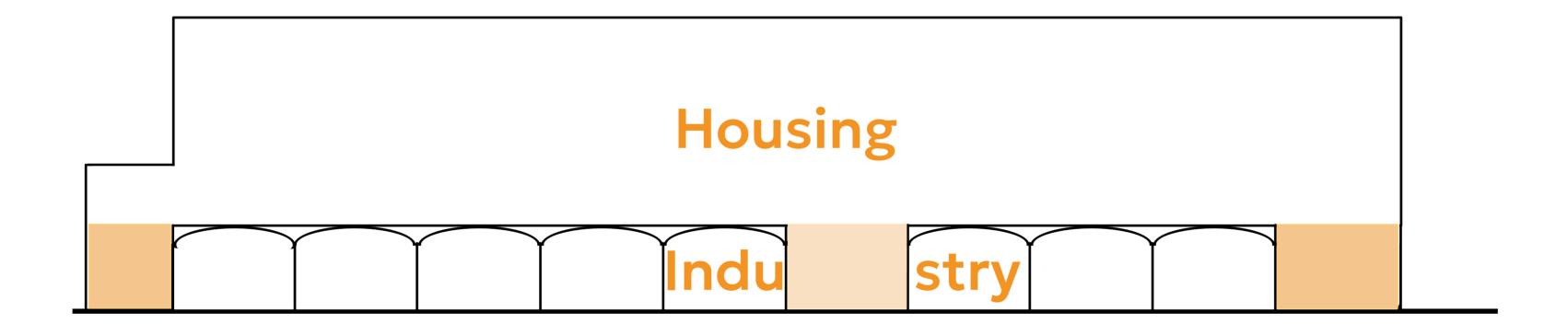


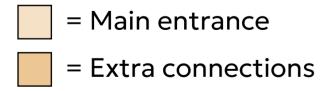






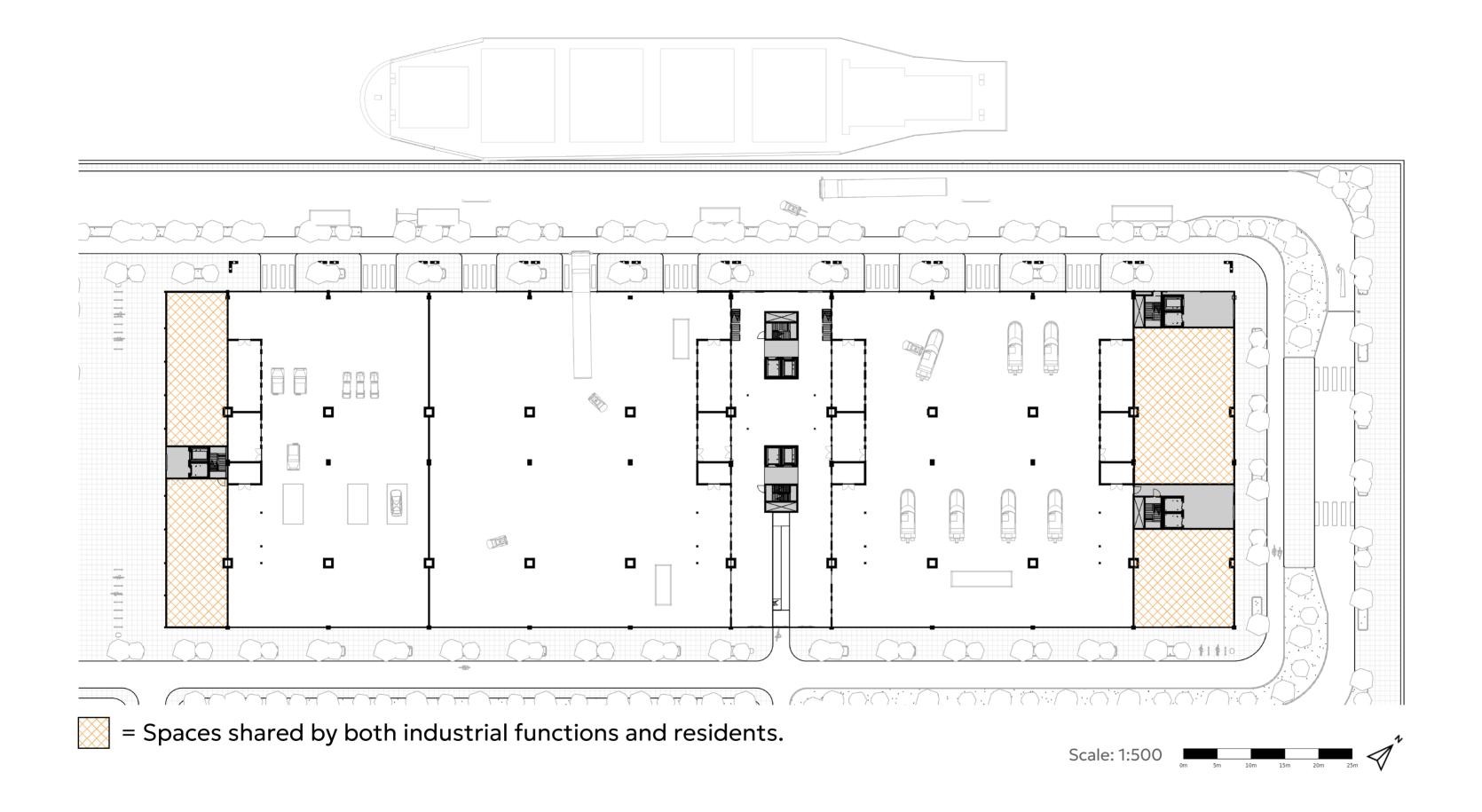






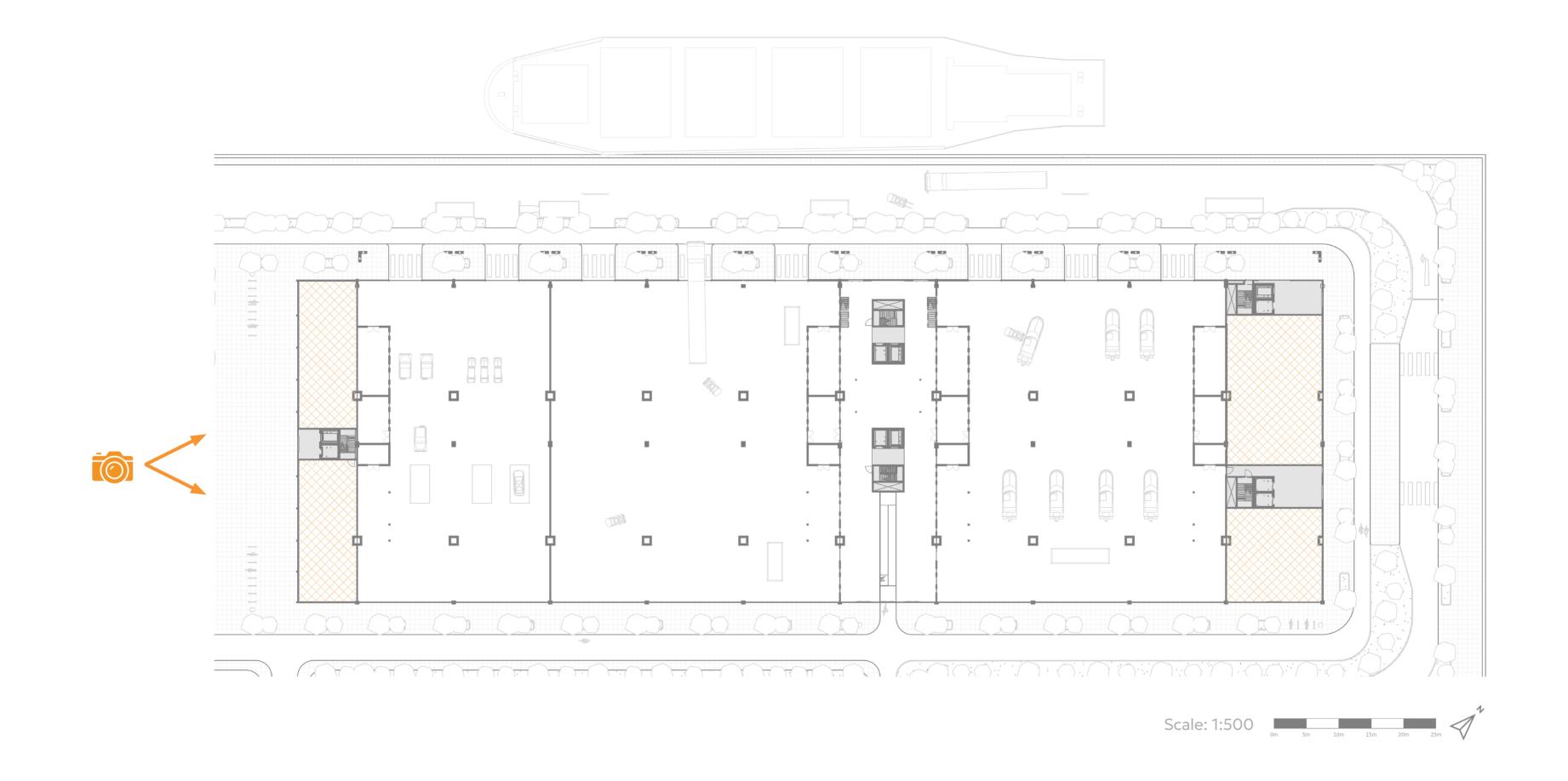


Shared Social Spaces Between Both Users



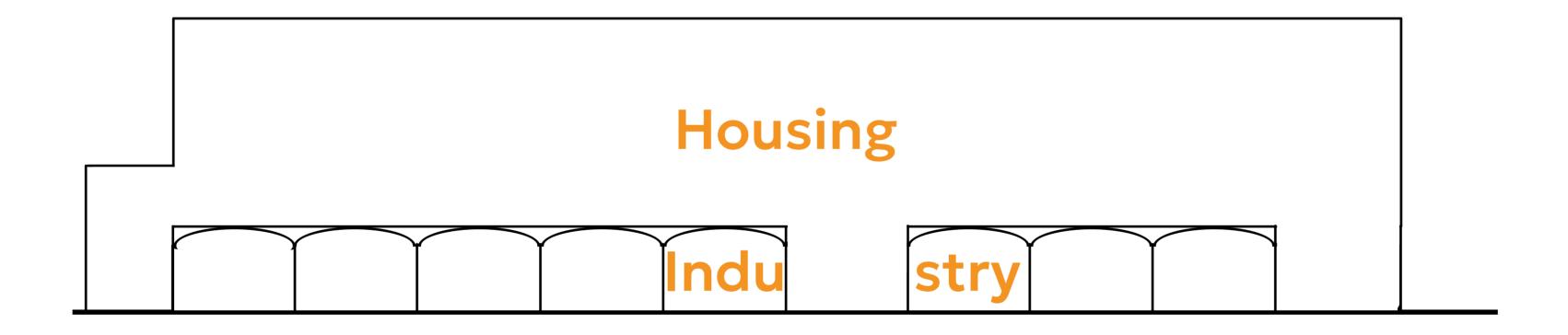


Shared Social Spaces Between Both Users

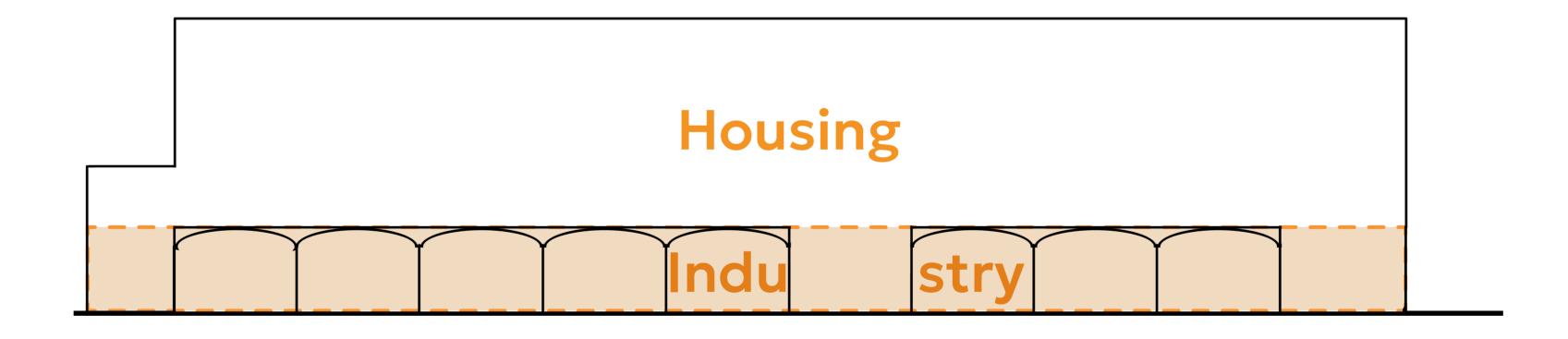






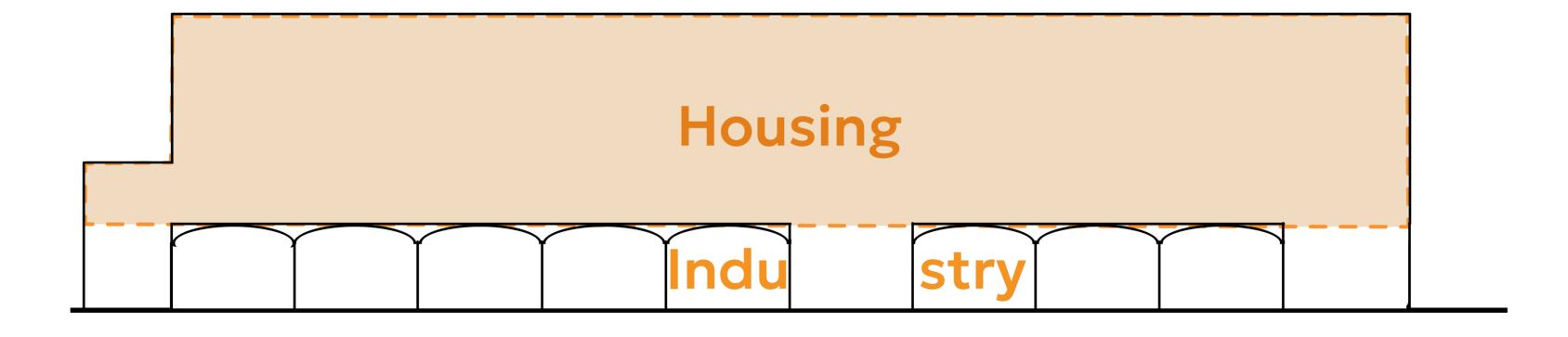






Protection vs Confrontation at industry level

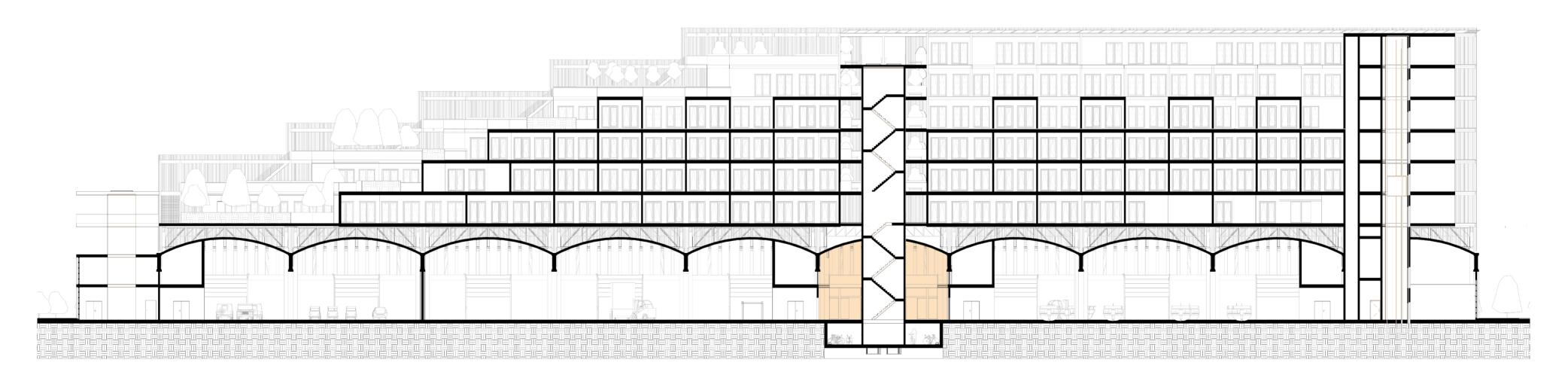


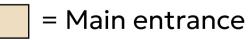


Protection vs Confrontation at housing level

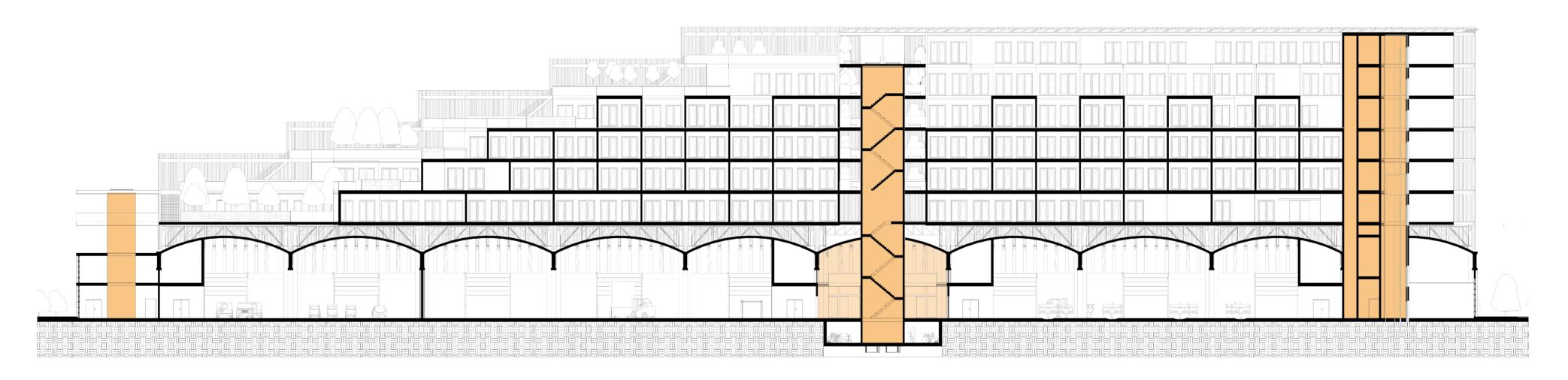


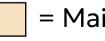
Section: Vertical Access from Ground Floor to Residential Units





Section: Vertical Access from Ground Floor to Residential Units

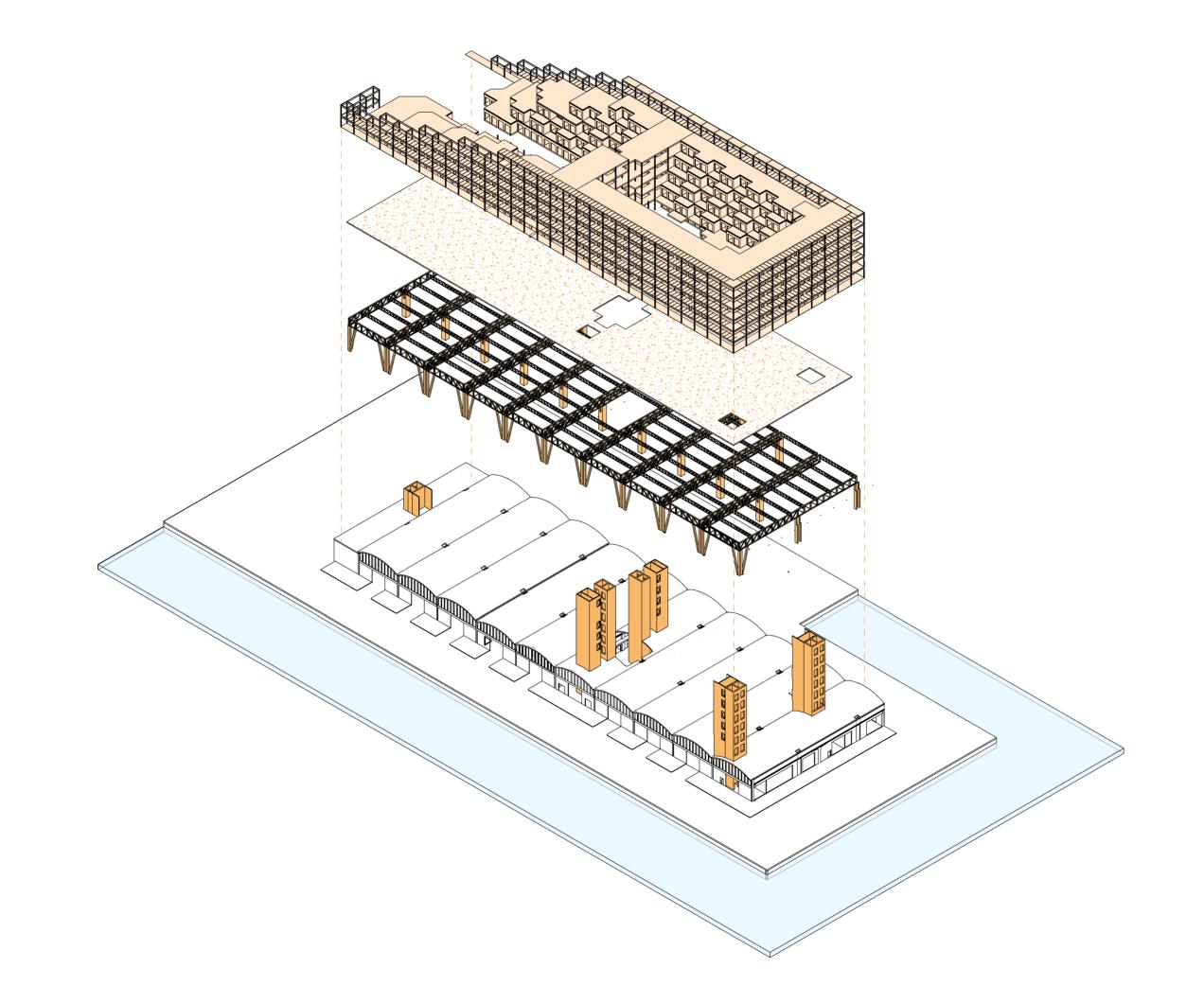




= Main entrance

= The vertical core that contain the elevator shafts, staircases, and service risers.

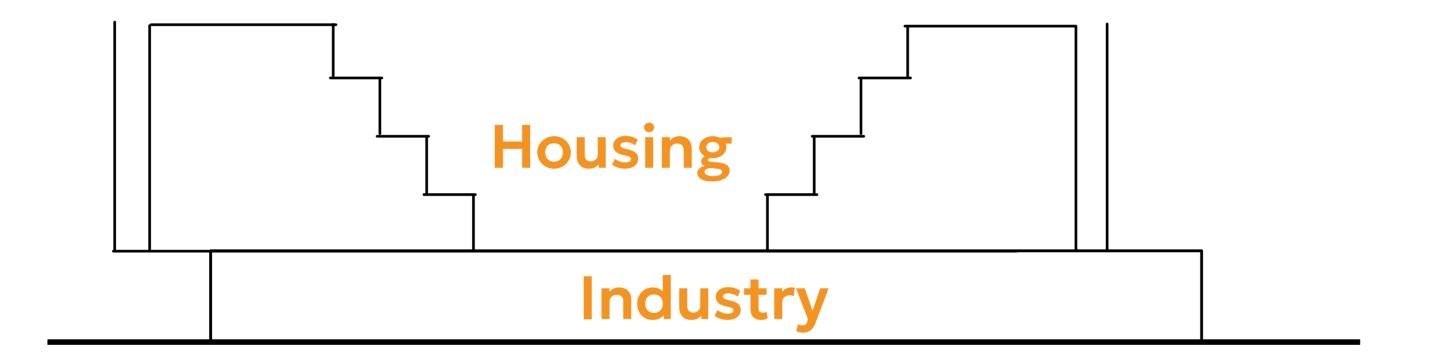
Structural Concept



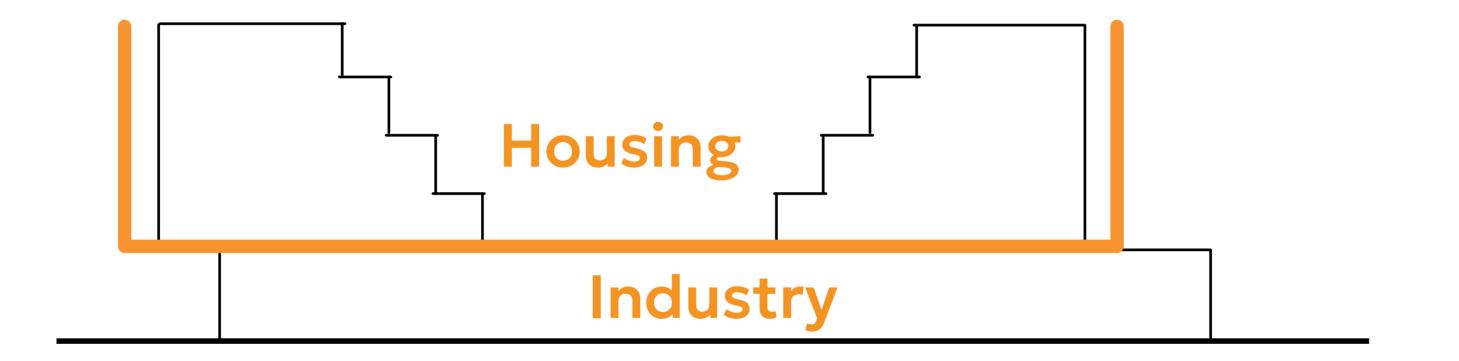






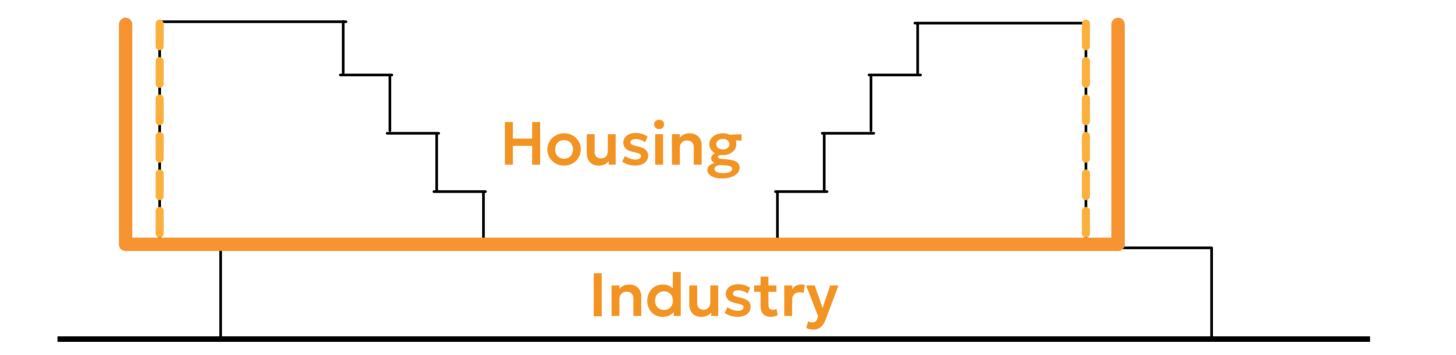






= Shell one: hard shell protects against odor and dust.





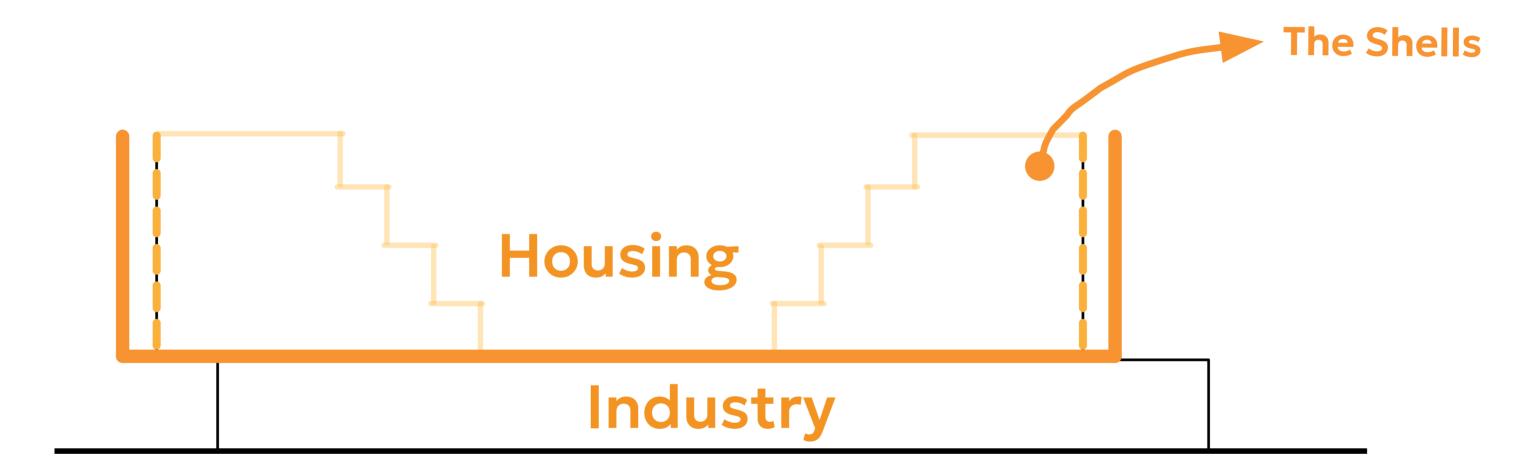
- = Shell one: hard shell protects against odor and dust.
- —— = Shell two: soft shell thats protect againt sounds.





- = Shell one: hard shell protects against odor and dust.
- —— = Shell two: soft shell thats protect againt sounds.
- = Shell three: soft shell that gives conformt.





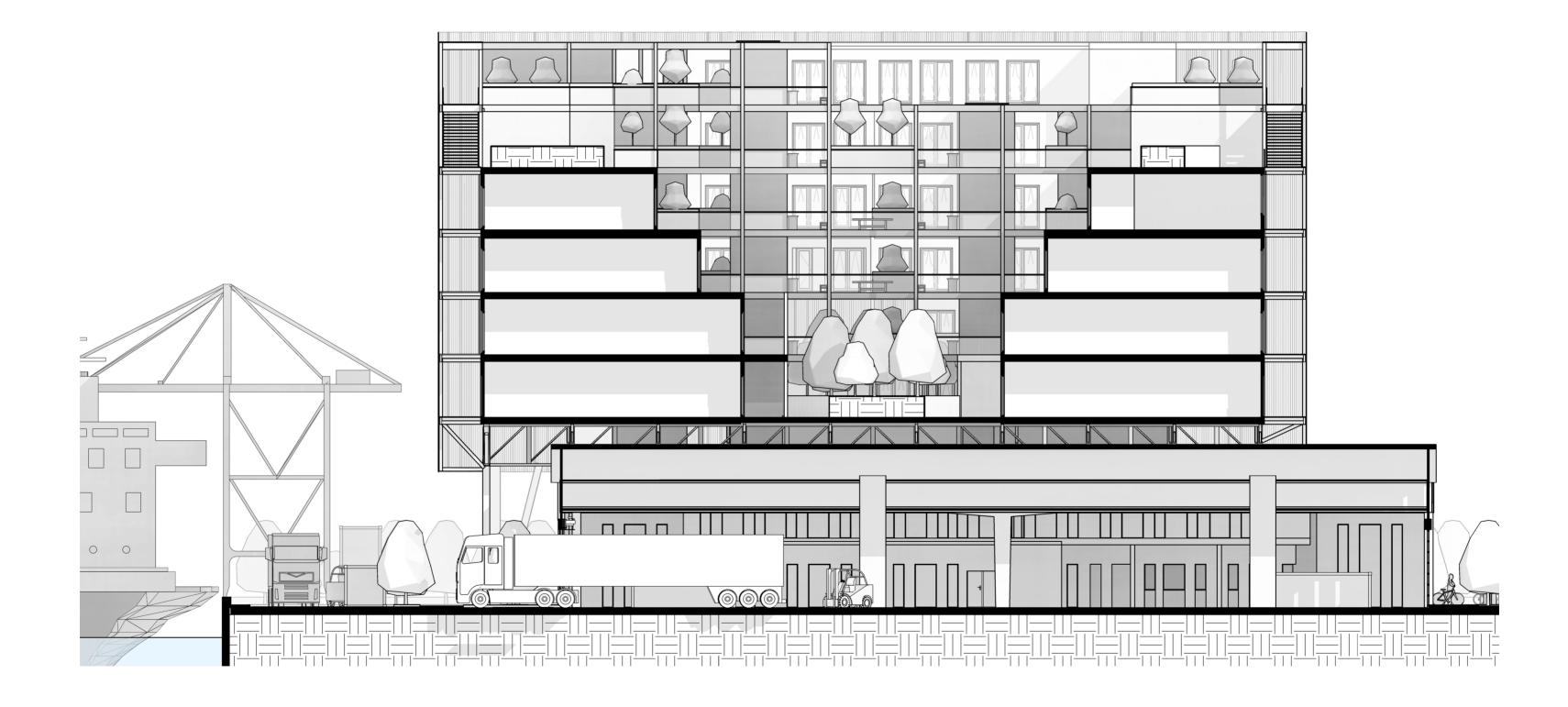
- = Shell one: hard shell protects against odor and dust.
- = Shell two: soft shell thats protect againt sounds.
- = Shell three: soft shell that gives conformt.





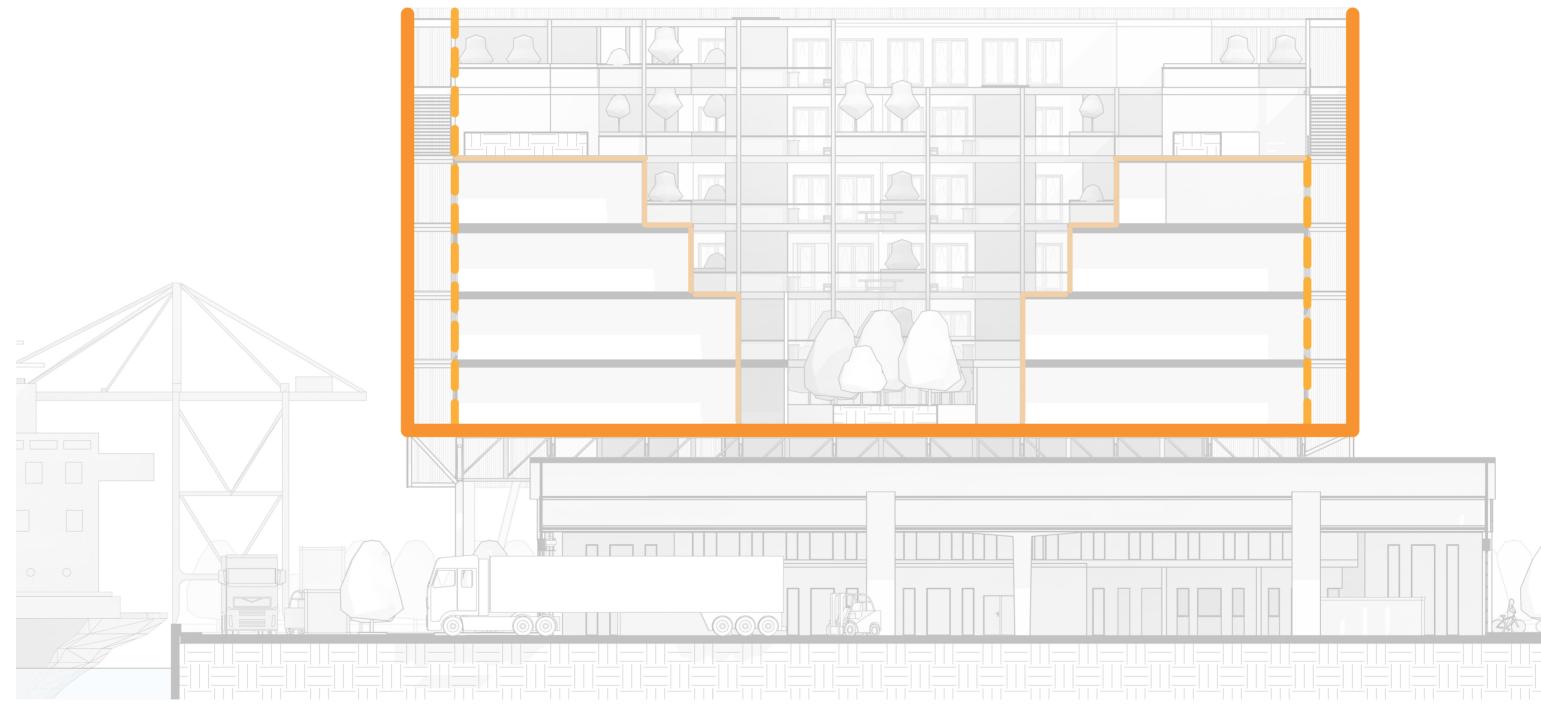


Section of Building





Section with the Design Concept

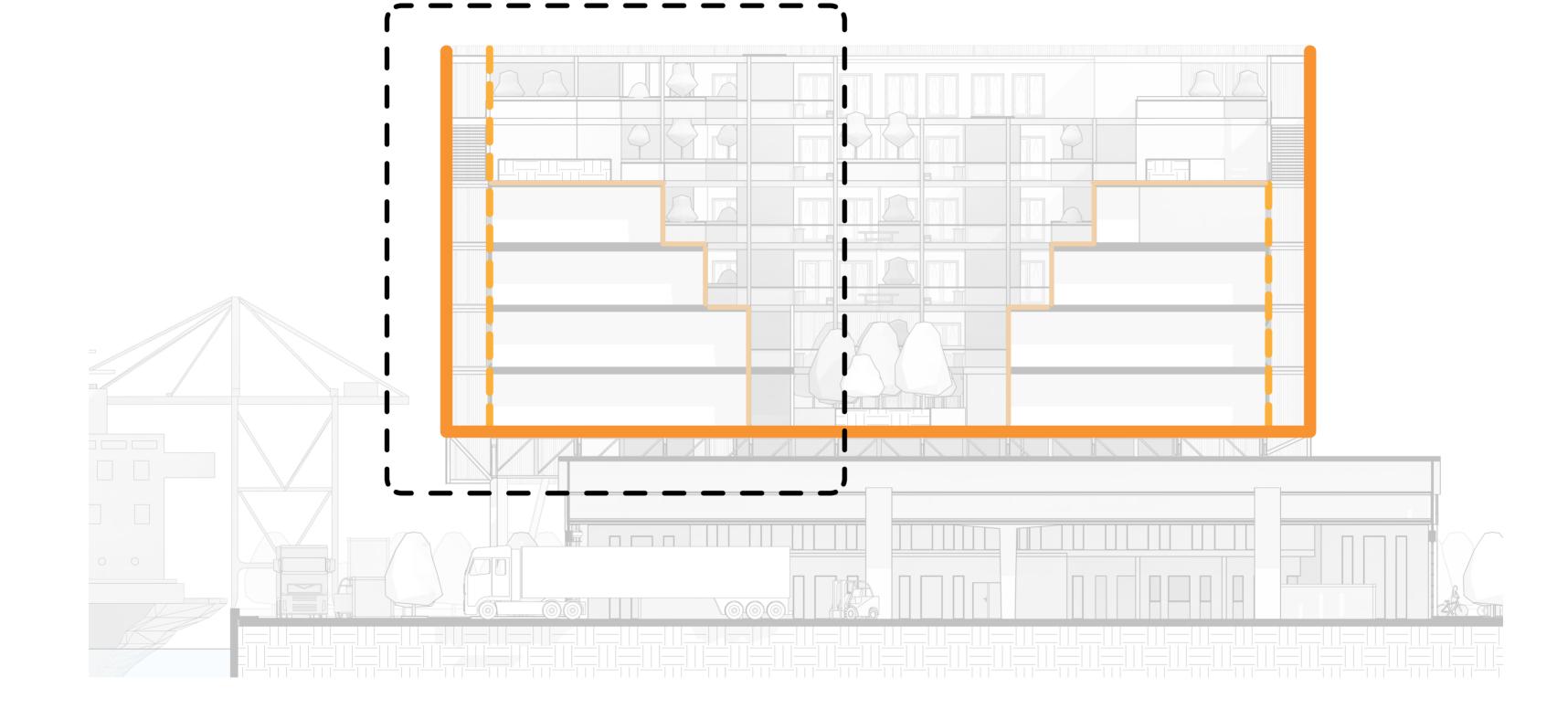


= Shell one: hard shell protects against odor and dust.

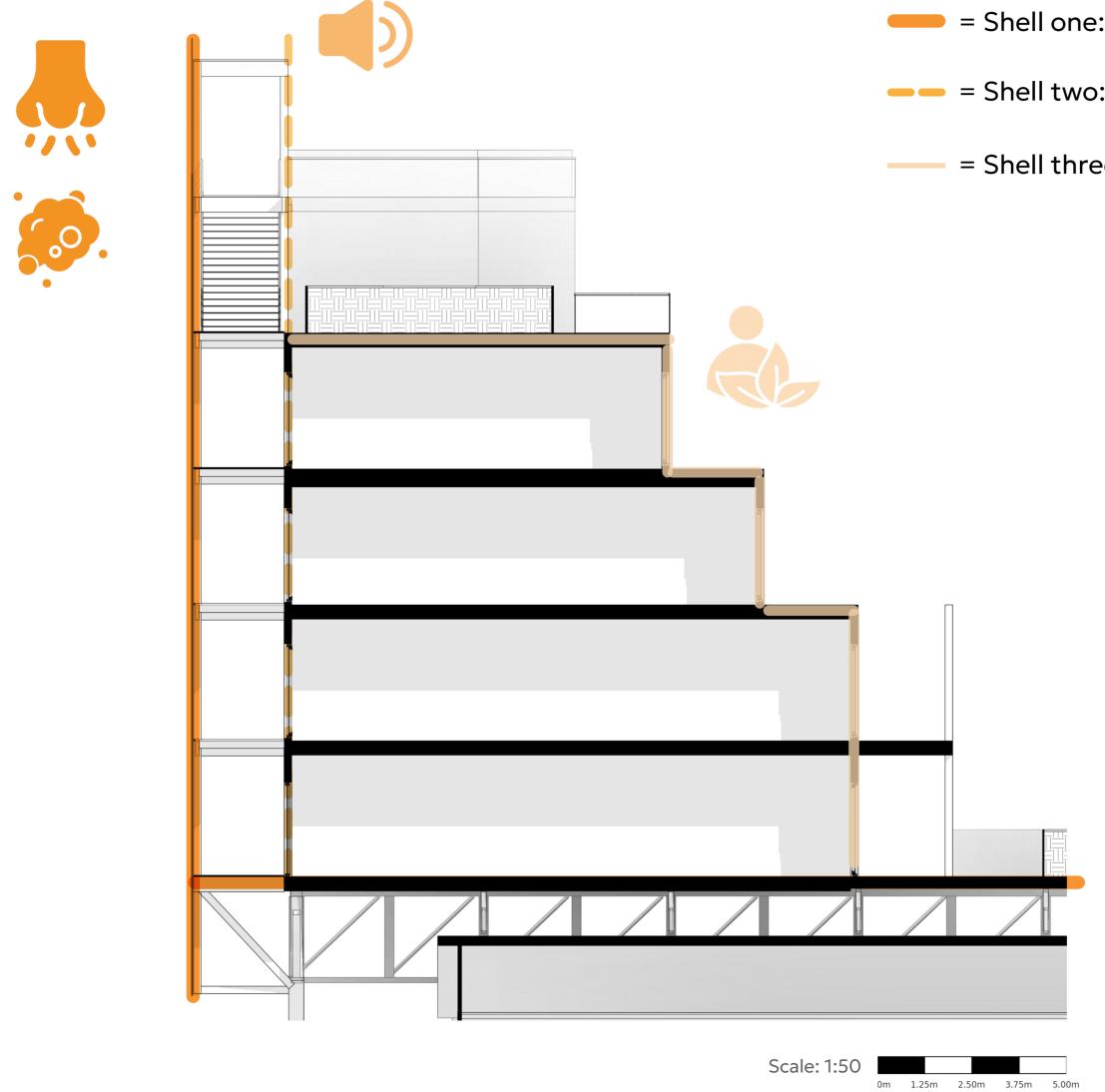
- —— = Shell two: soft shell thats protect againt sounds.
 - = Shell three: soft shell that gives conformt.



Design Principle in Detail



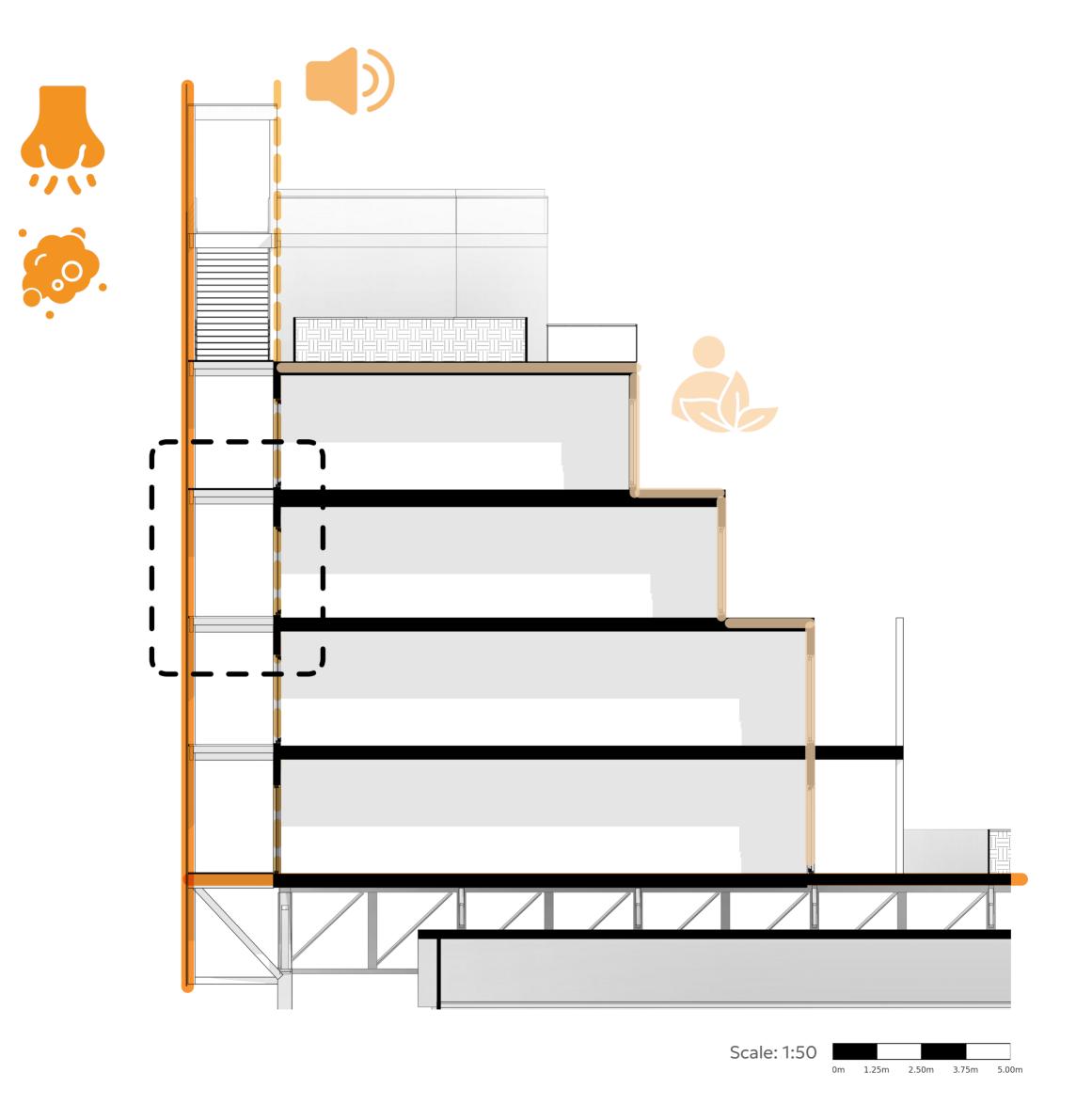
Zoomed-In Section: Triple Shell Strategy





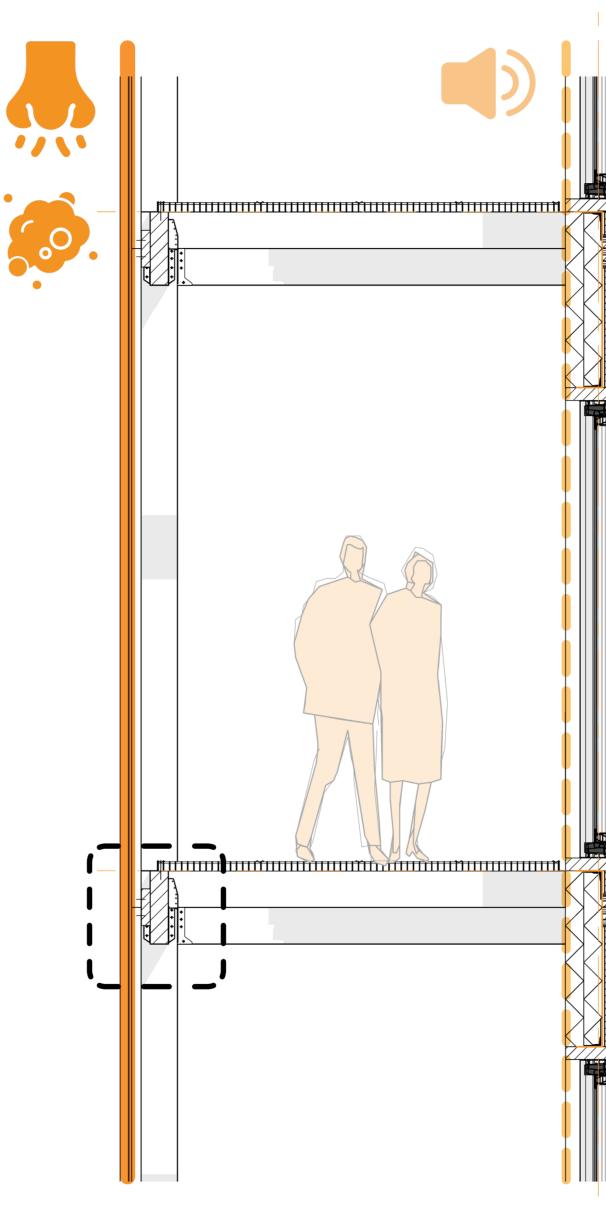
- = Shell one: hard shell protects against odor and dust.
- —— = Shell two: soft shell thats protect againt sounds.

Zoomed-In Section: Triple Shell Strategy



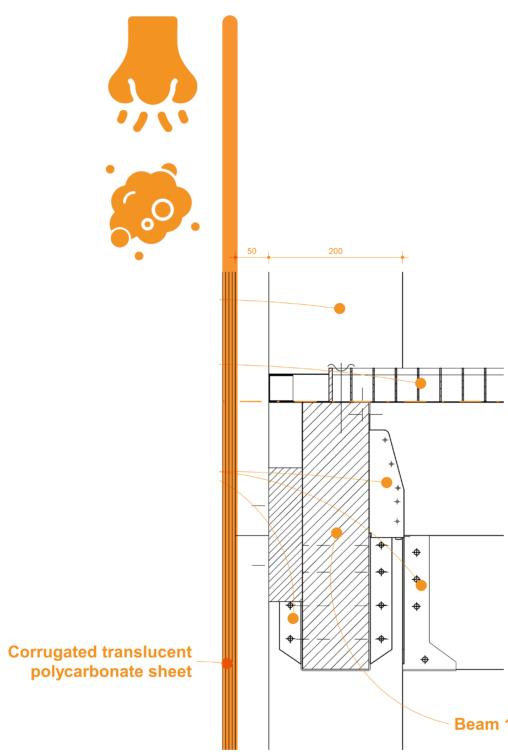


Façade Detail**: Shell One** and **Shell Two**





Detail: Shell One



Scale: 1:5



Beam 100 x 400

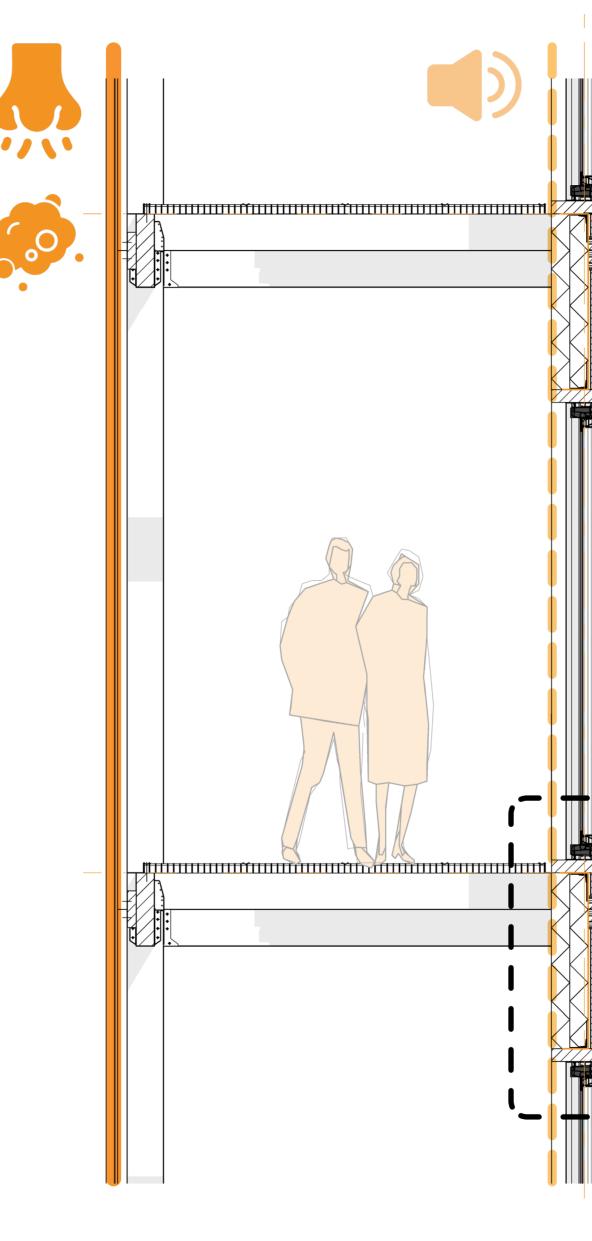








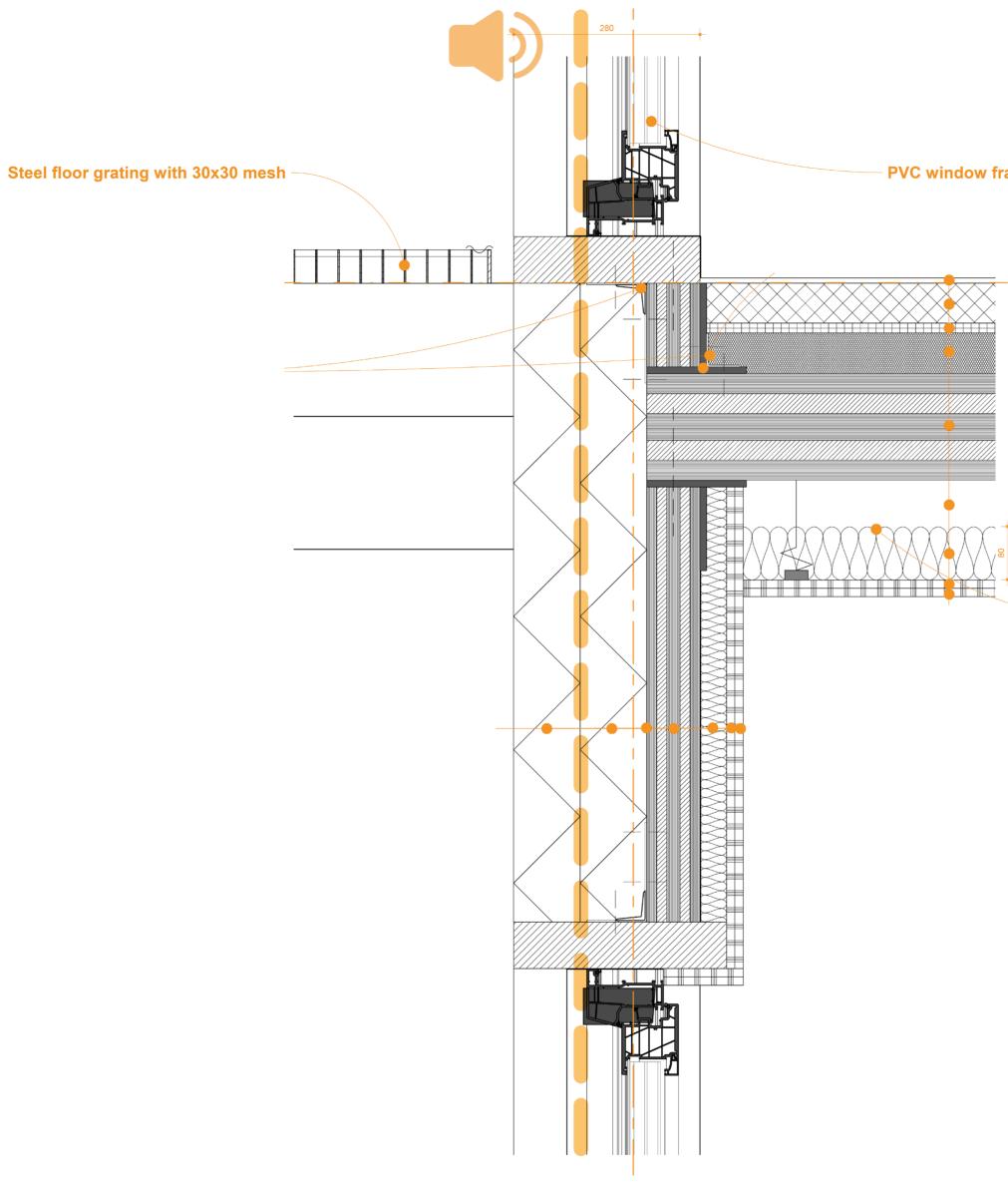
Façade Detail**: Shell One** and **Shell Two**





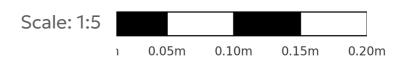


Detail: Shell Two

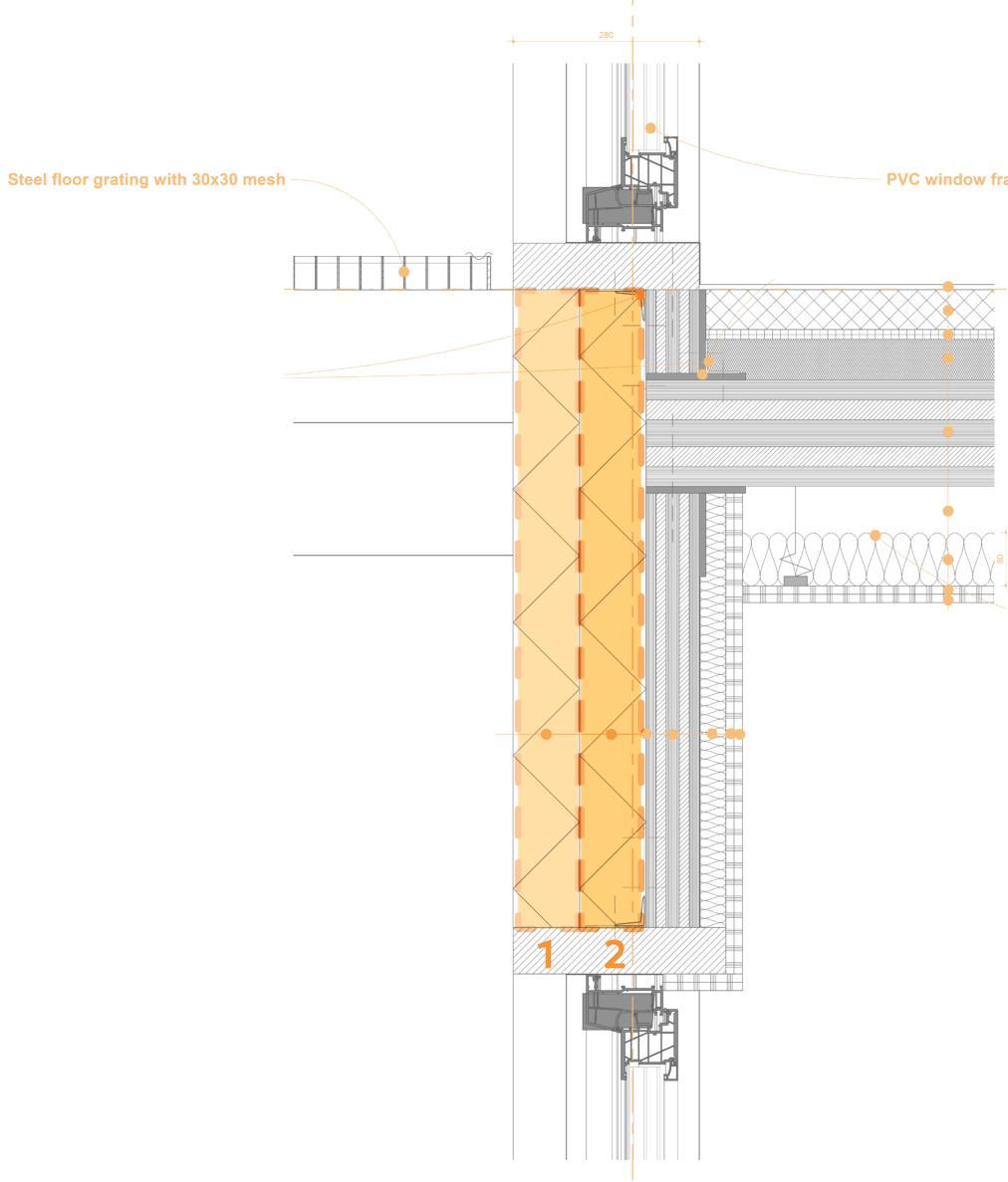




- PVC window frame with triple glazing

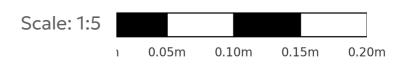


Detail: Shell Two

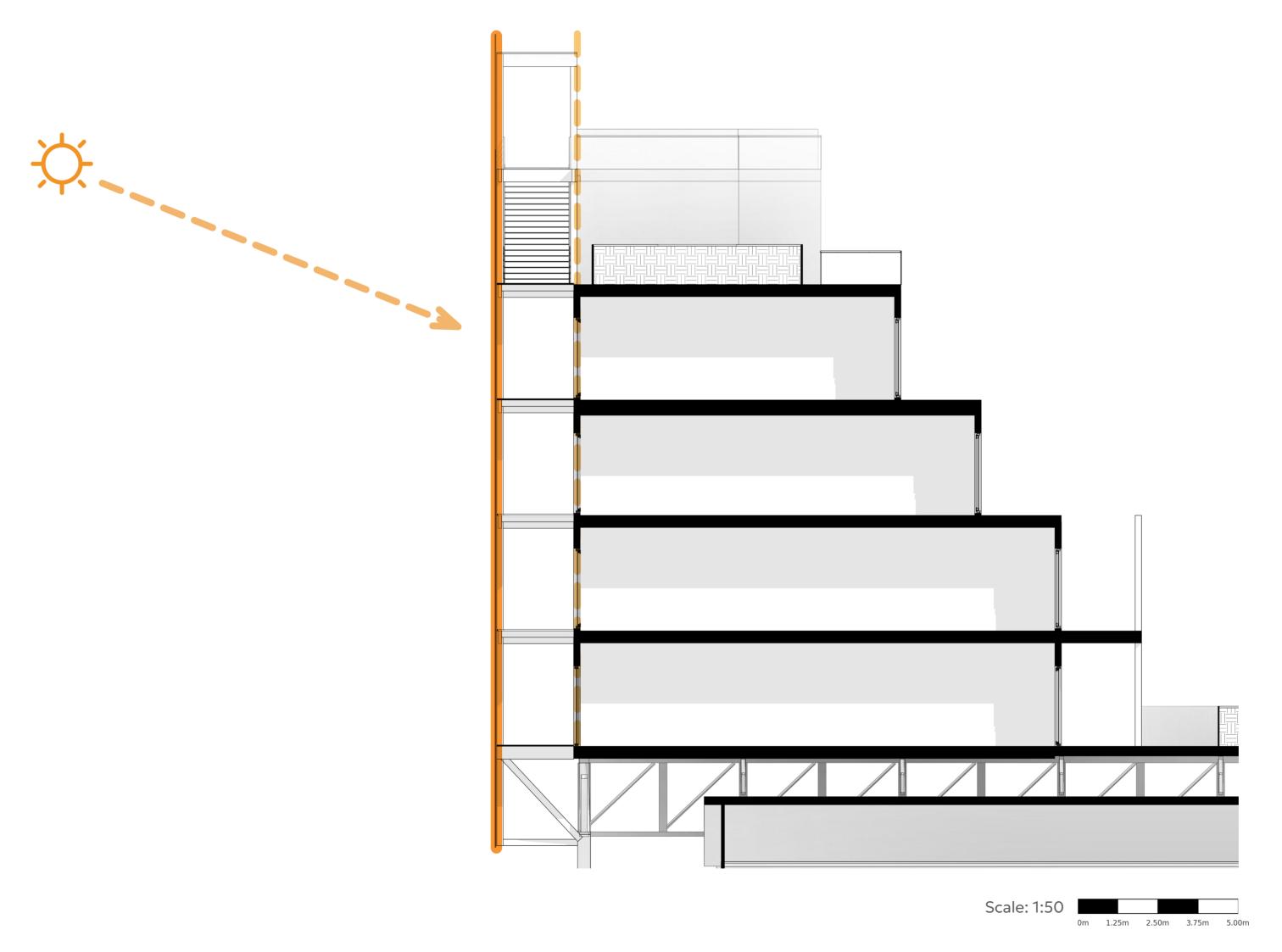




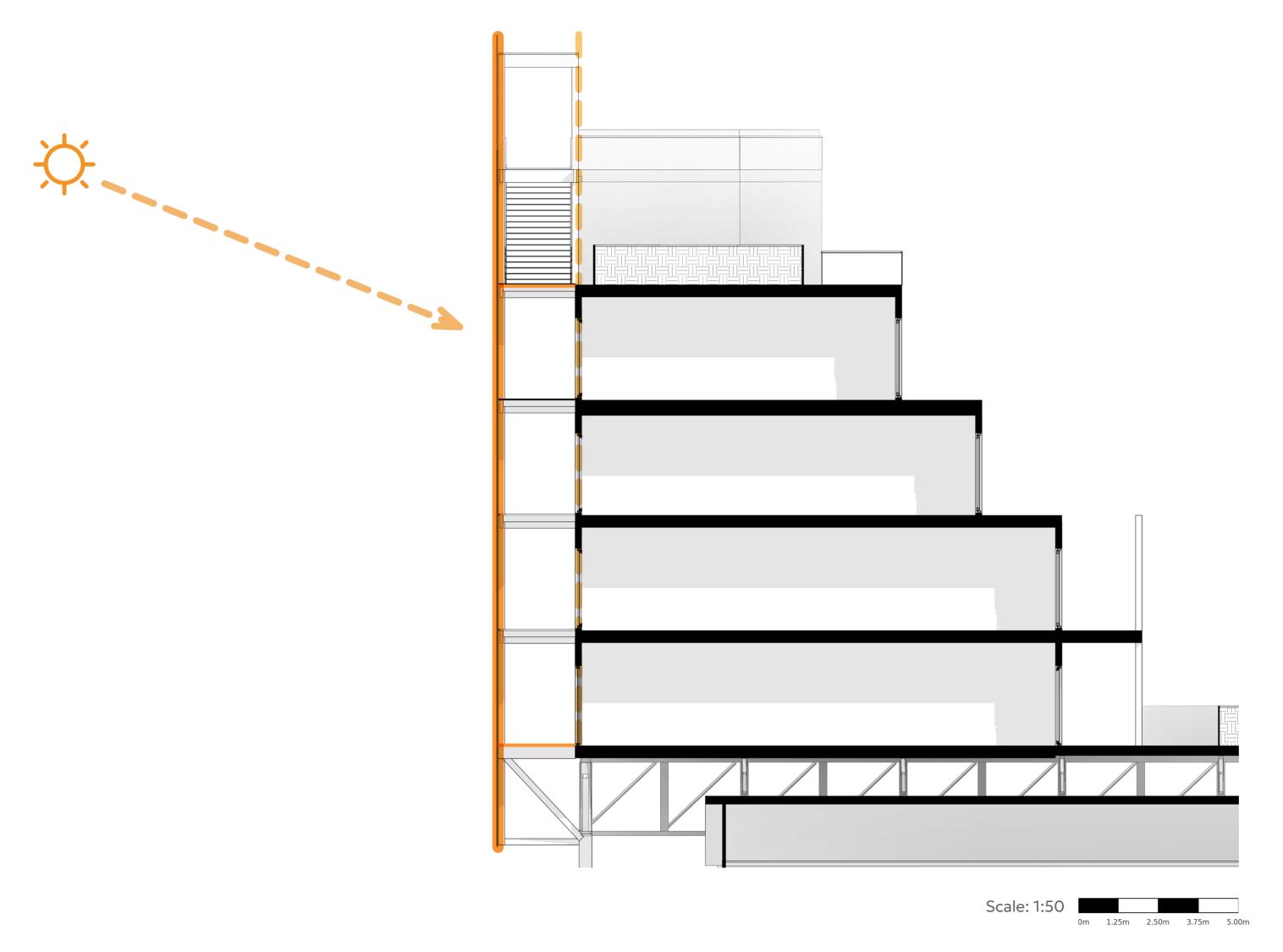
PVC window frame with triple glazing



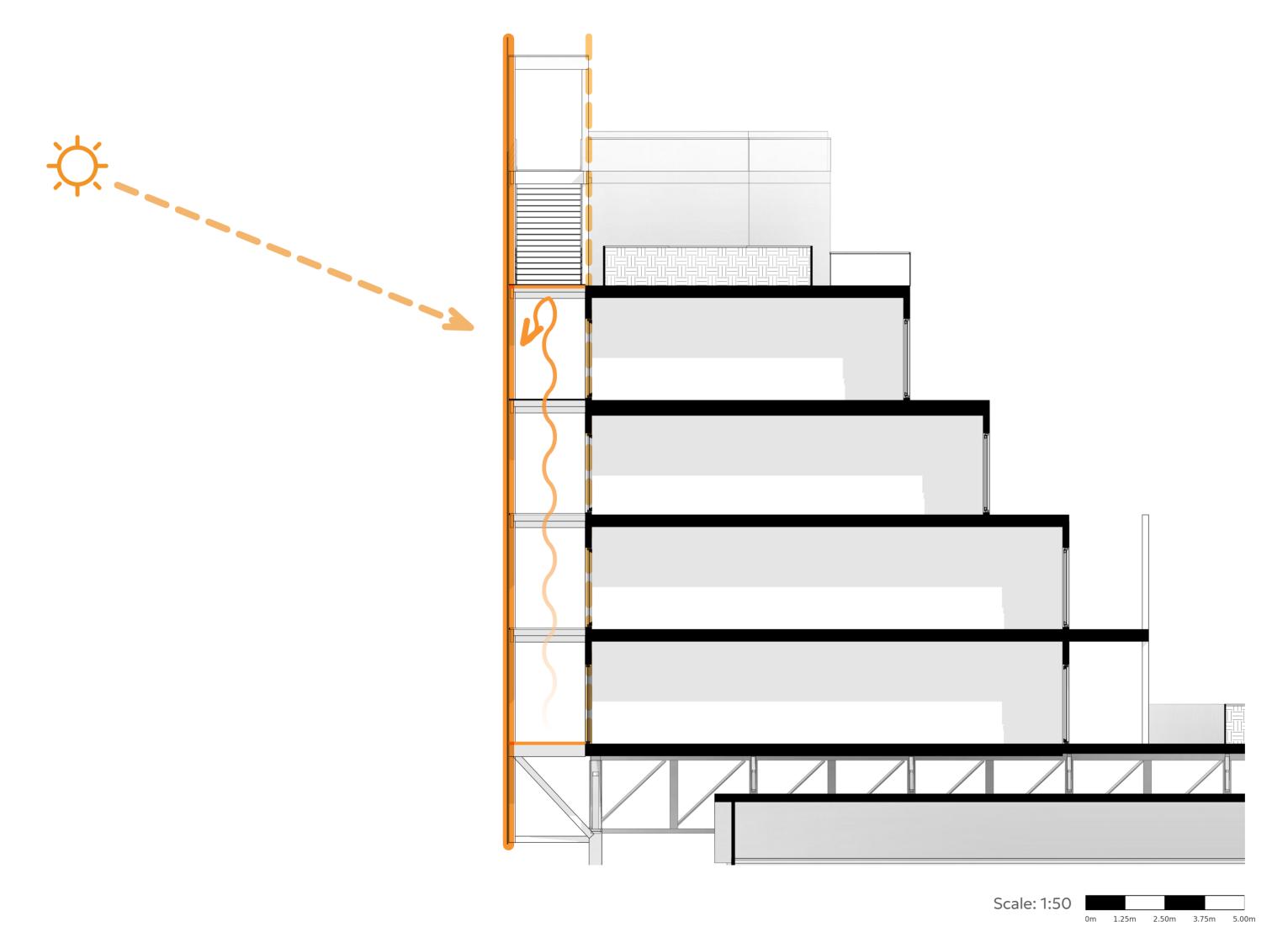




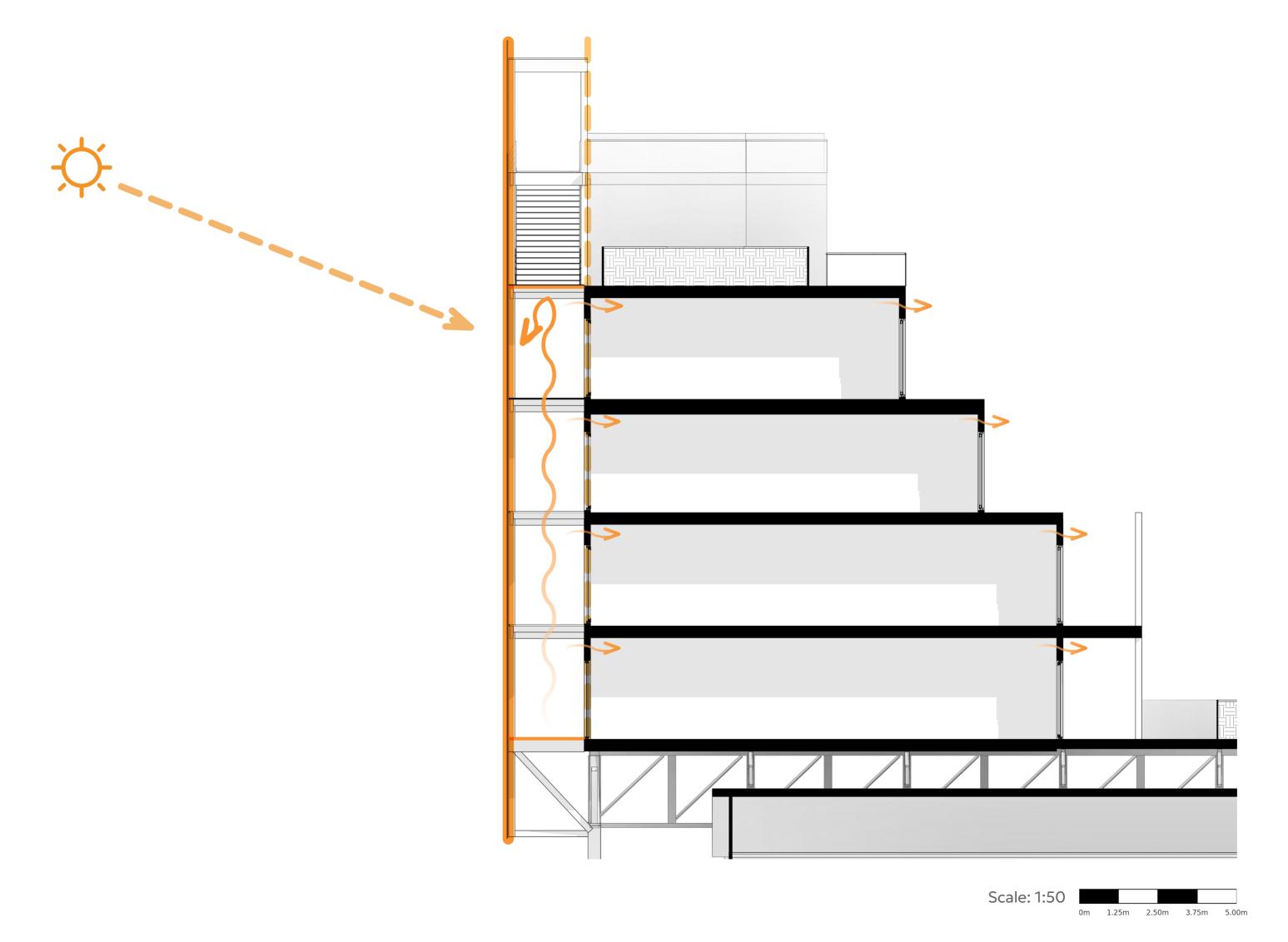








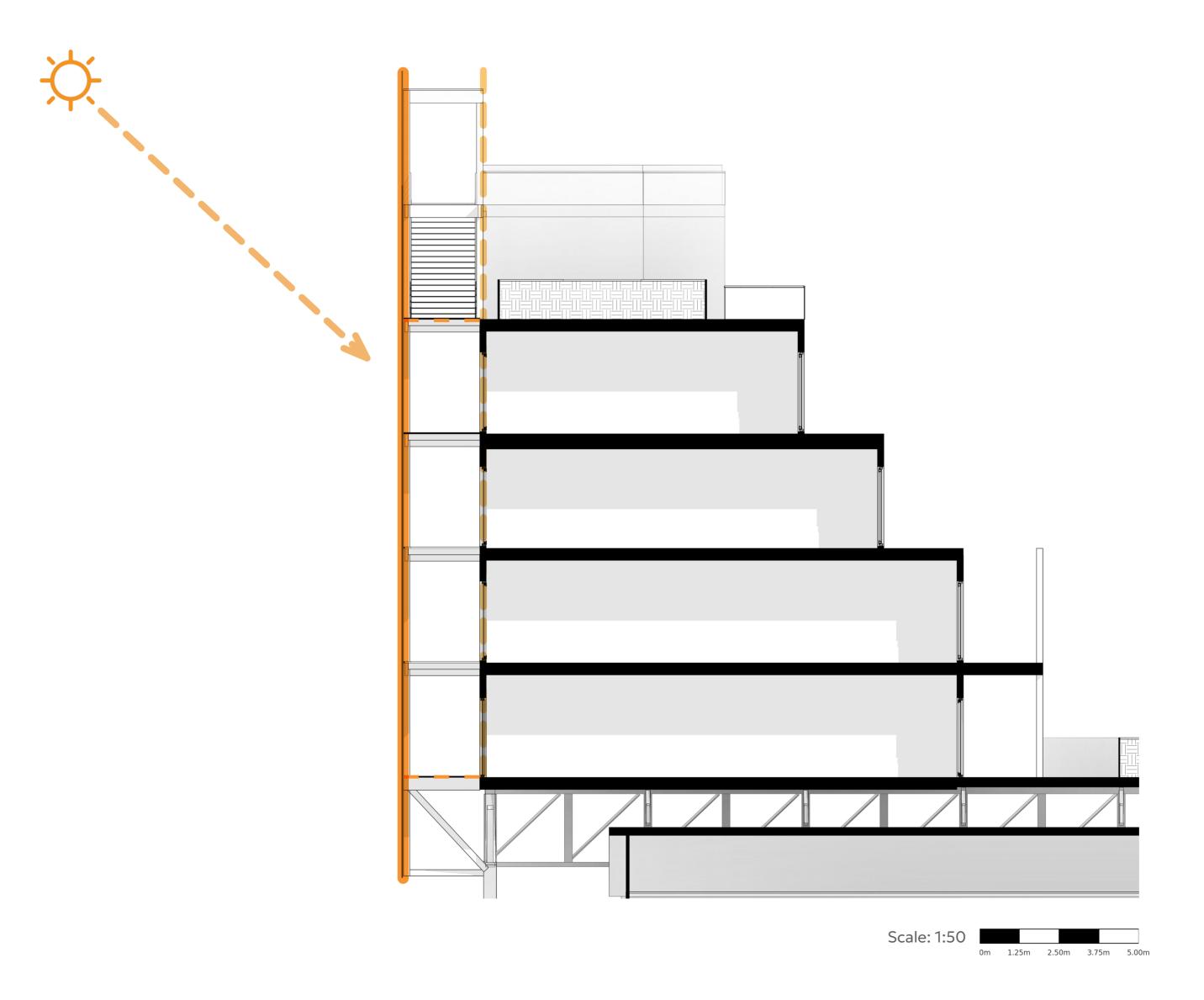




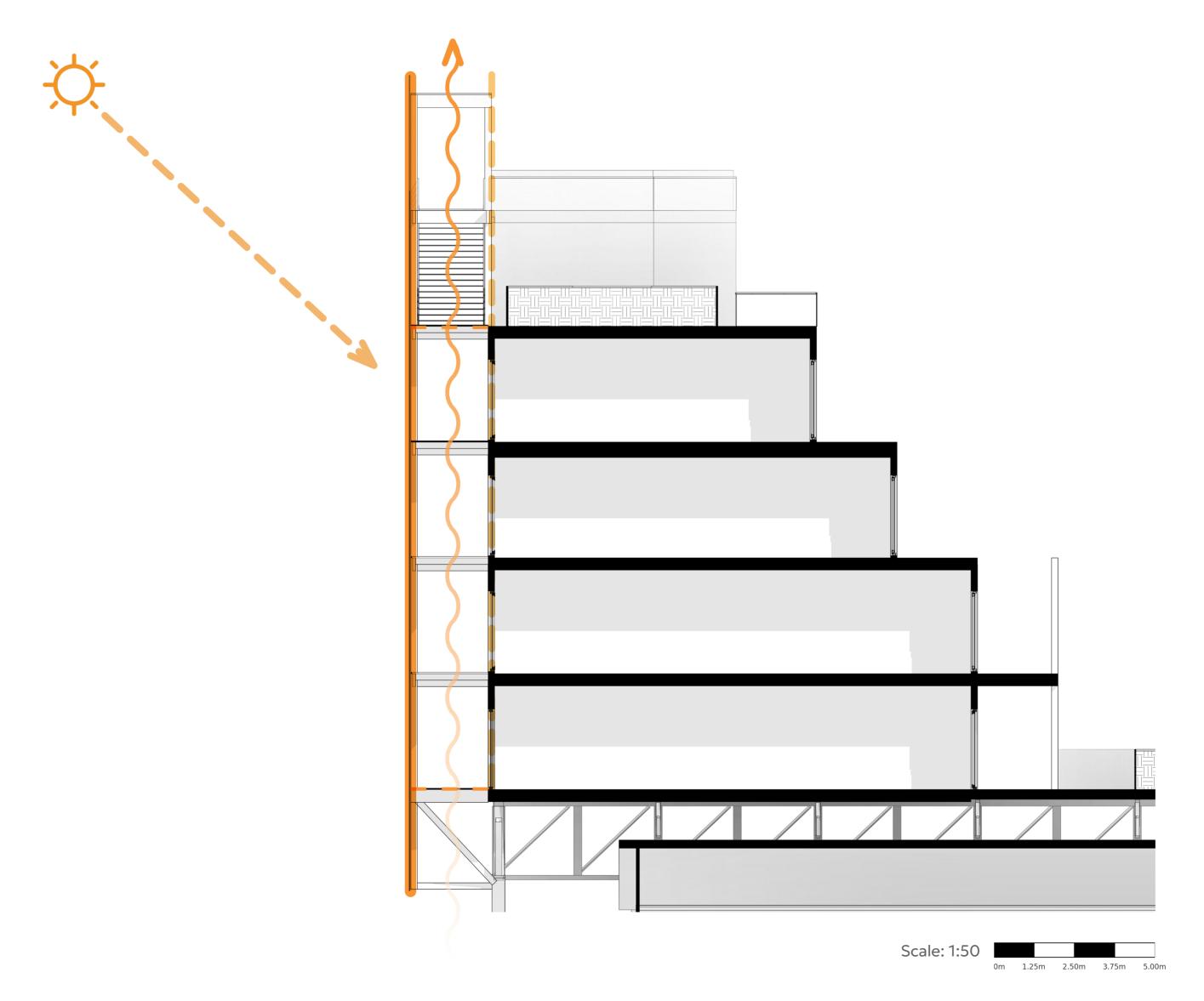




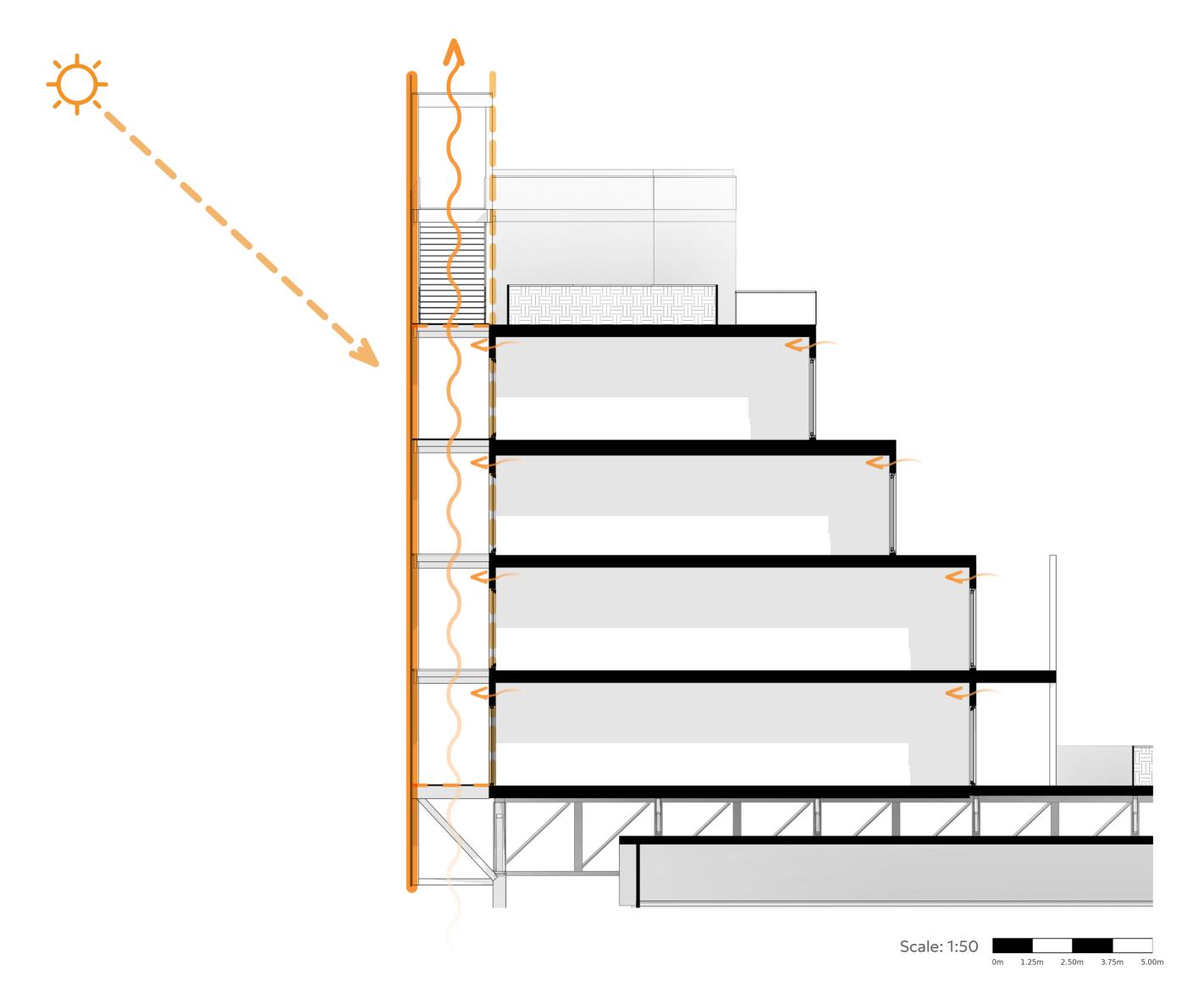






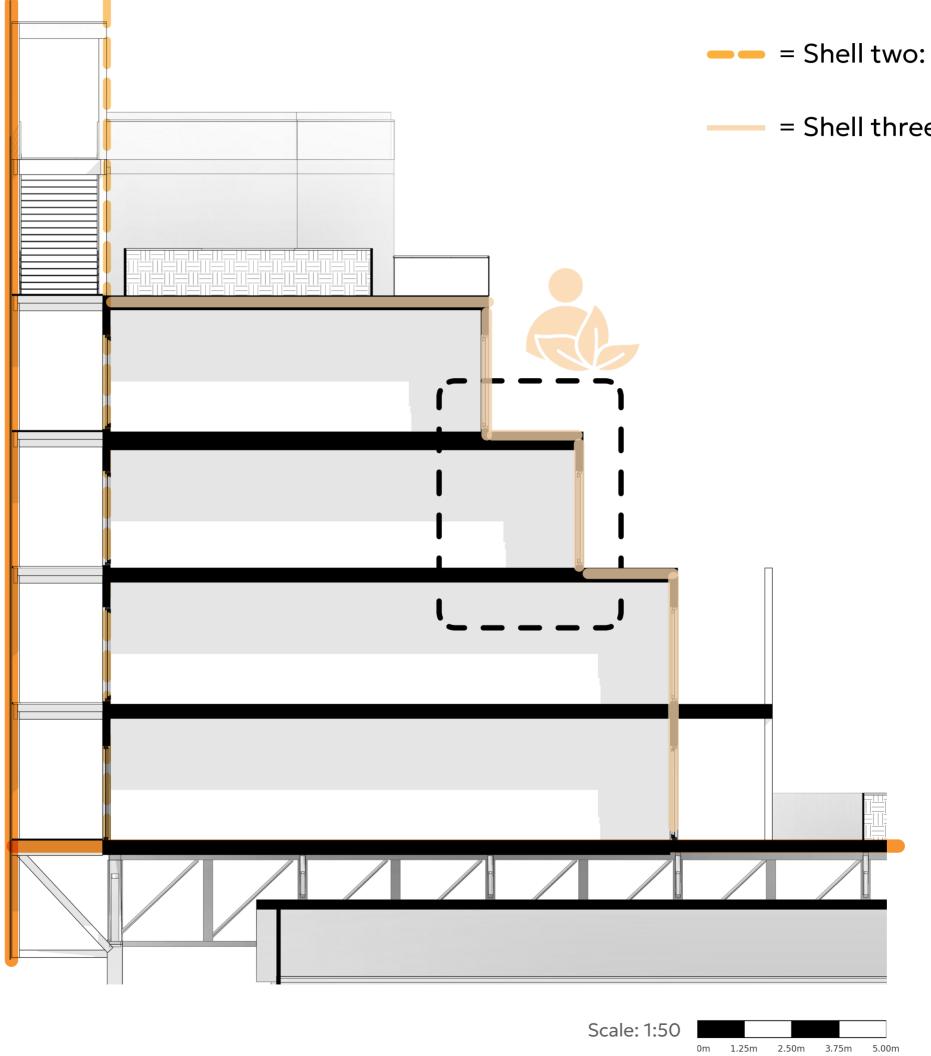








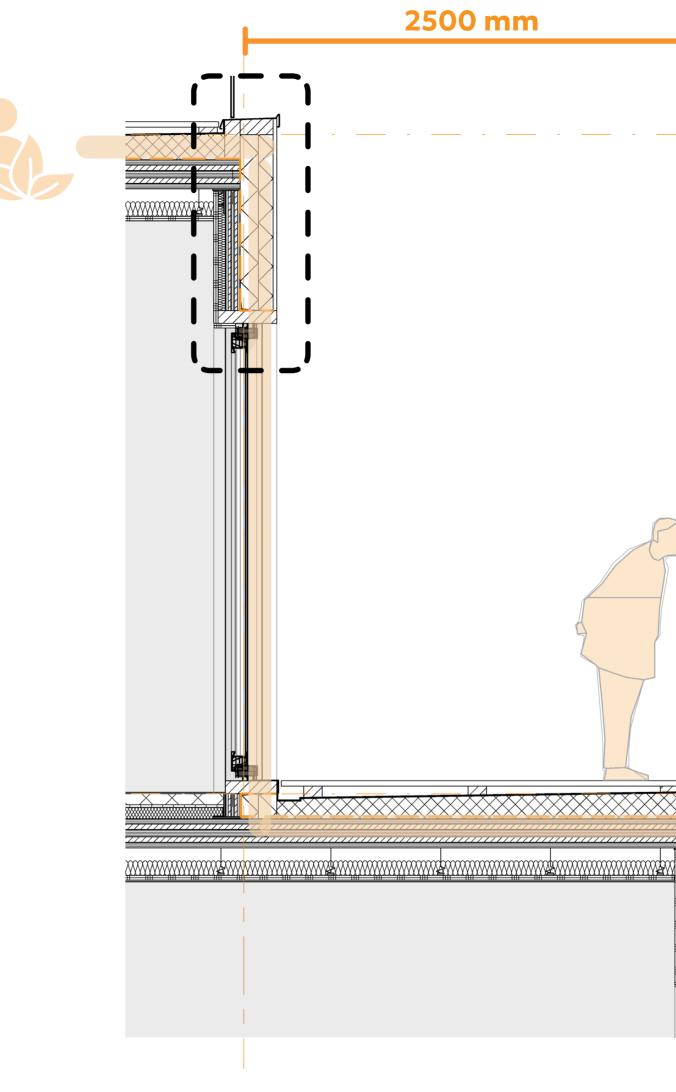
Zoomed-In Section: Triple Shell Strategy



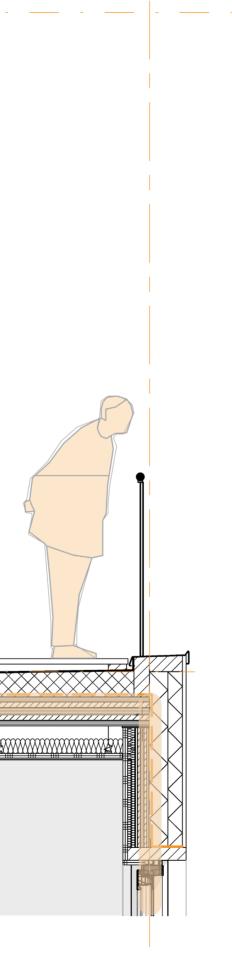


- = Shell one: hard shell protects against odor and dust.
- —— = Shell two: soft shell thats protect againt sounds.
 - = Shell three: soft shell that gives conformt.

Façade Detail: Shell Three

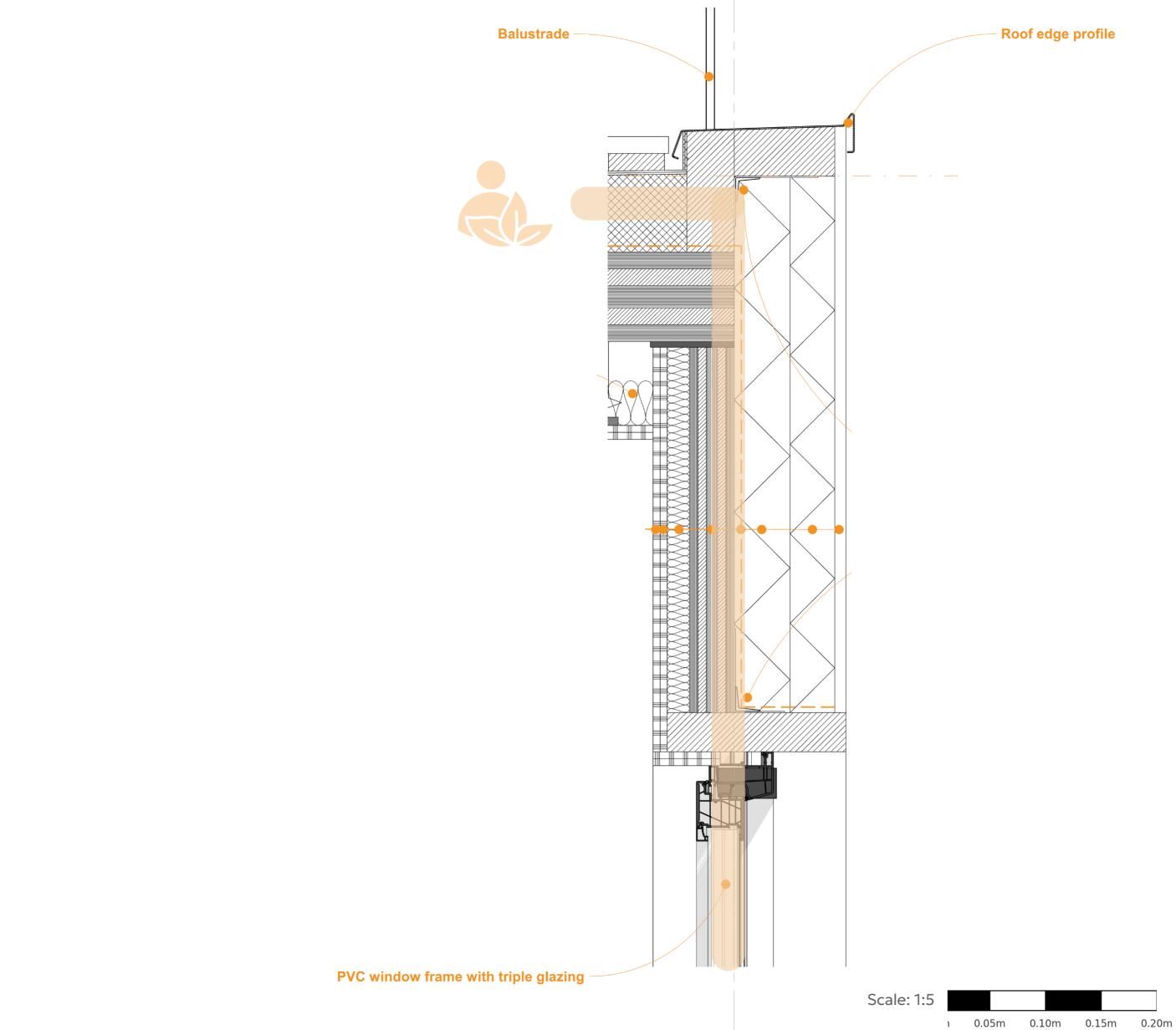




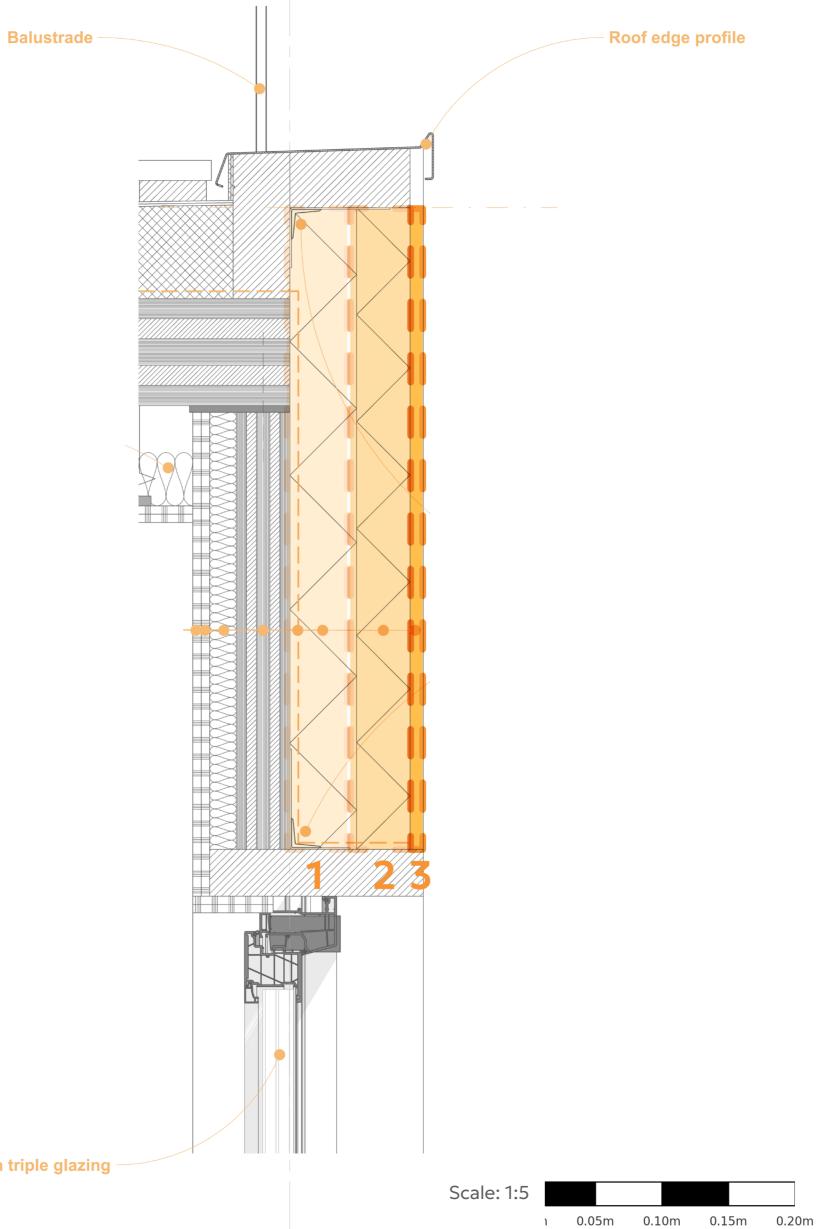




Detail: Shell Three

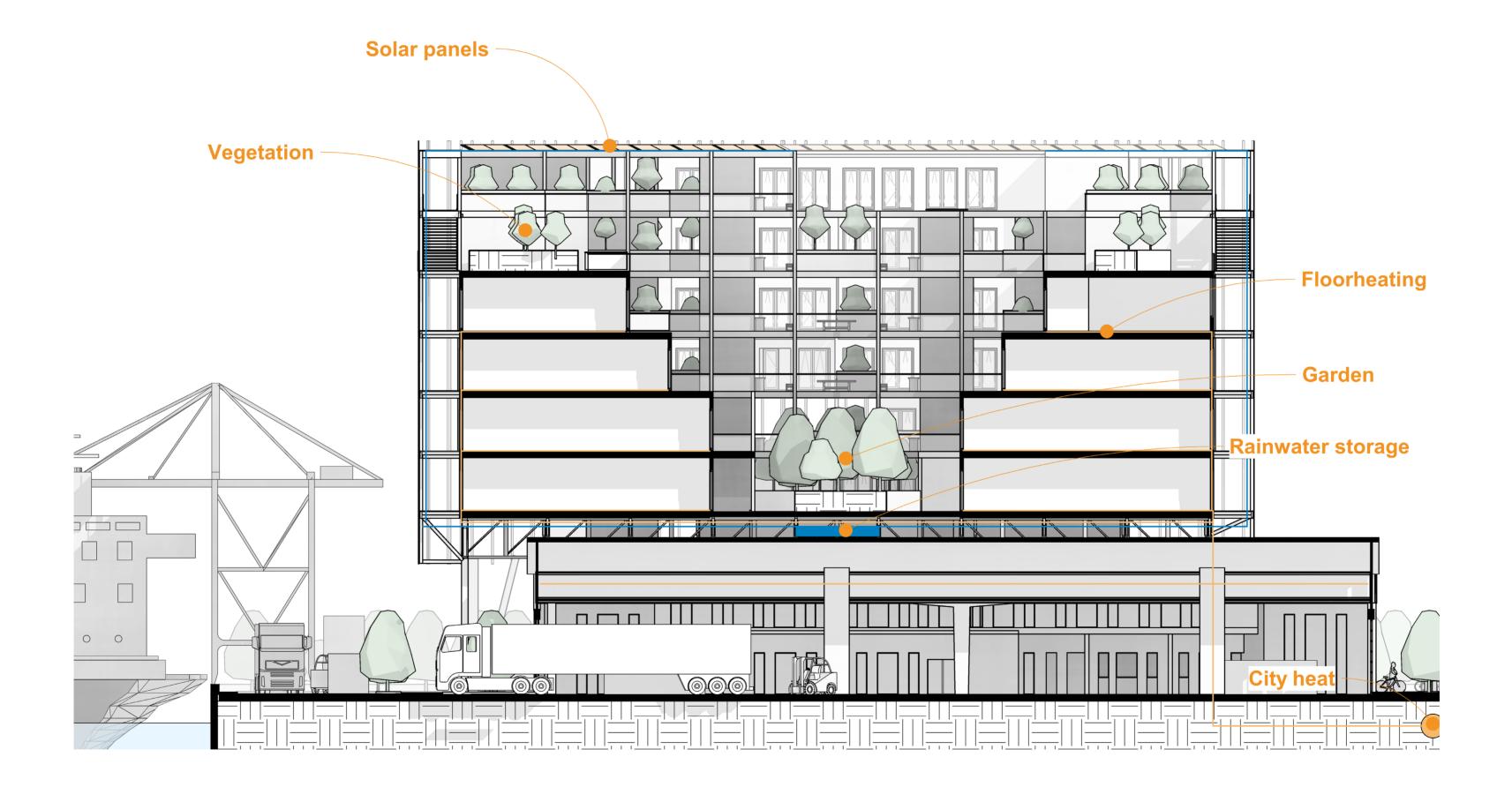


Detail: Shell Three





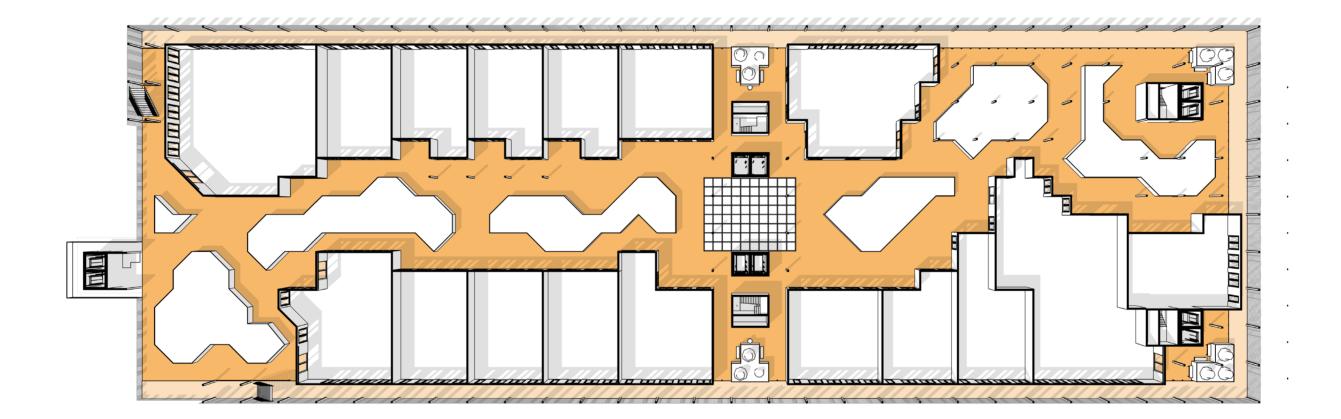
Climate Section







Social Interaction on the Elevated Ground Level



= Gallery area enabling casual encounters between residents.

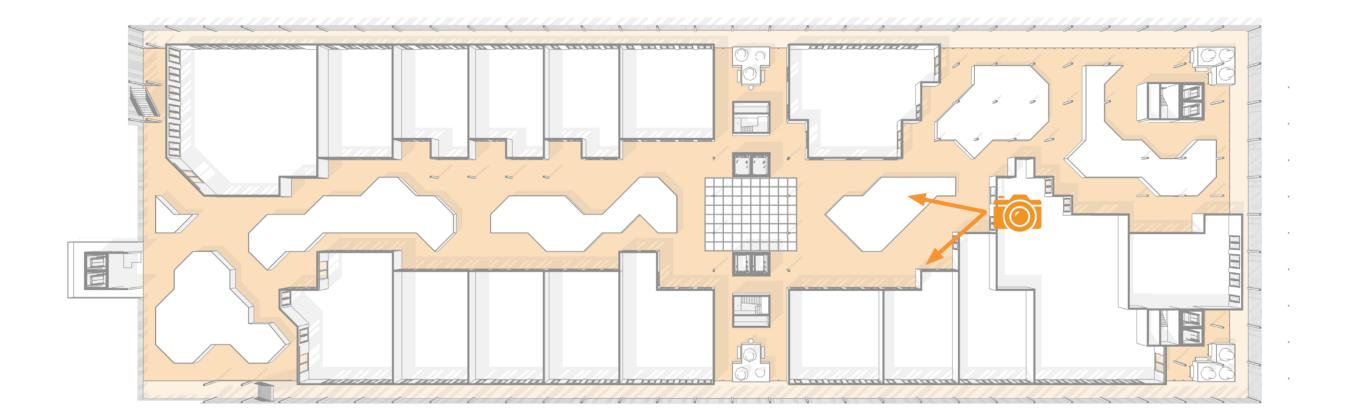


= Central area designed for social interaction and planned gatherings.



Elevated ground level

Social Interaction on the Elevated Ground Level



= Gallery area enabling casual encounters between residents.

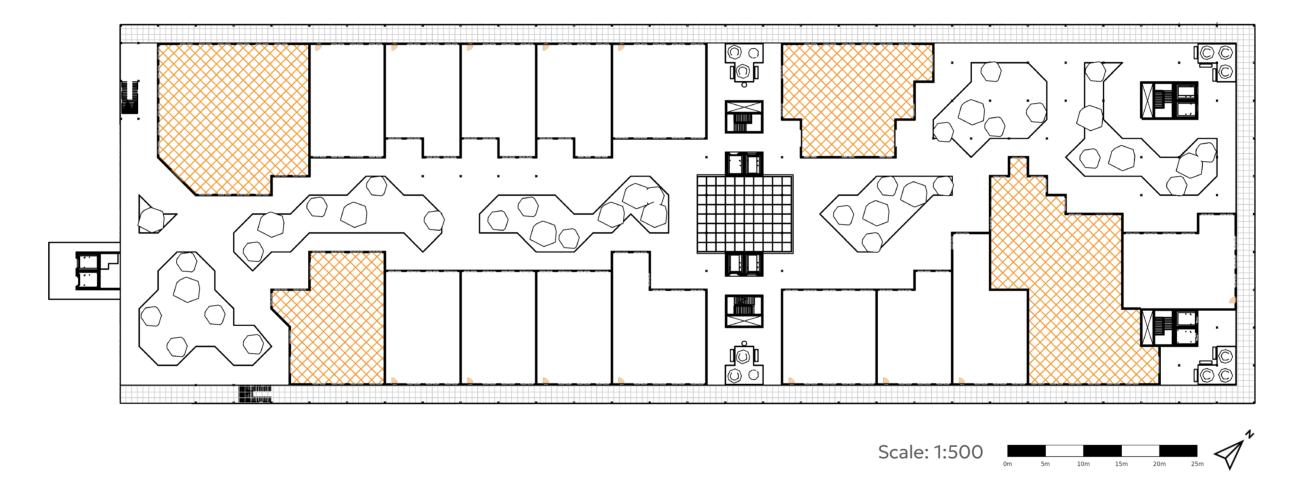
= Central area designed for social interaction and planned gatherings.

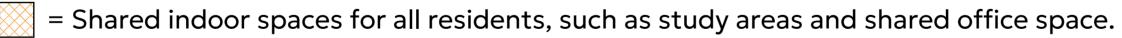


Elevated ground level



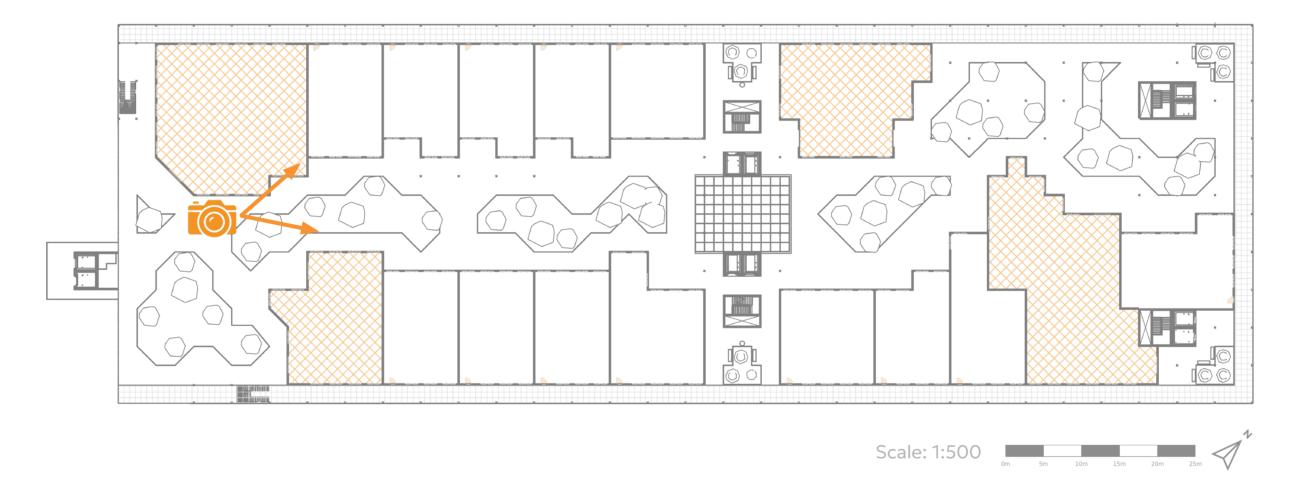
Shared Spaces in the Elevated Ground Level







Shared Spaces in the Elevated Ground Level

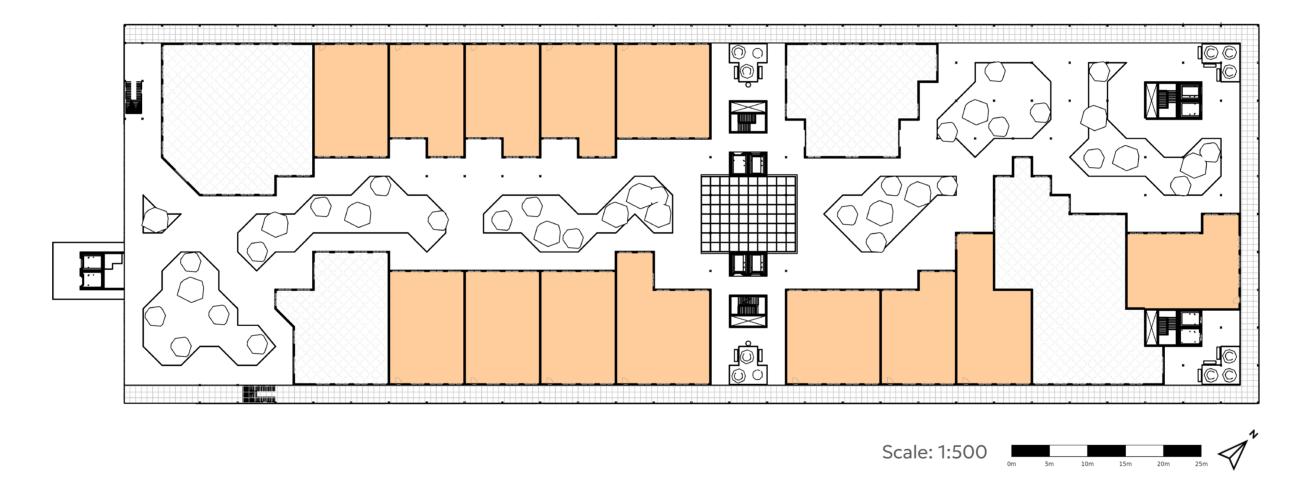


= Shared indoor spaces for all residents, such as study areas and shared office space.





Shared Starters Appartments



= Shared apartments for three starters.



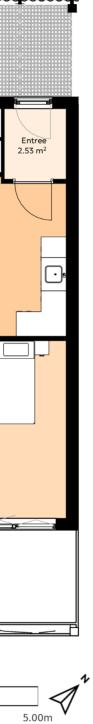
Elevated ground level

Shared Starters Appartments



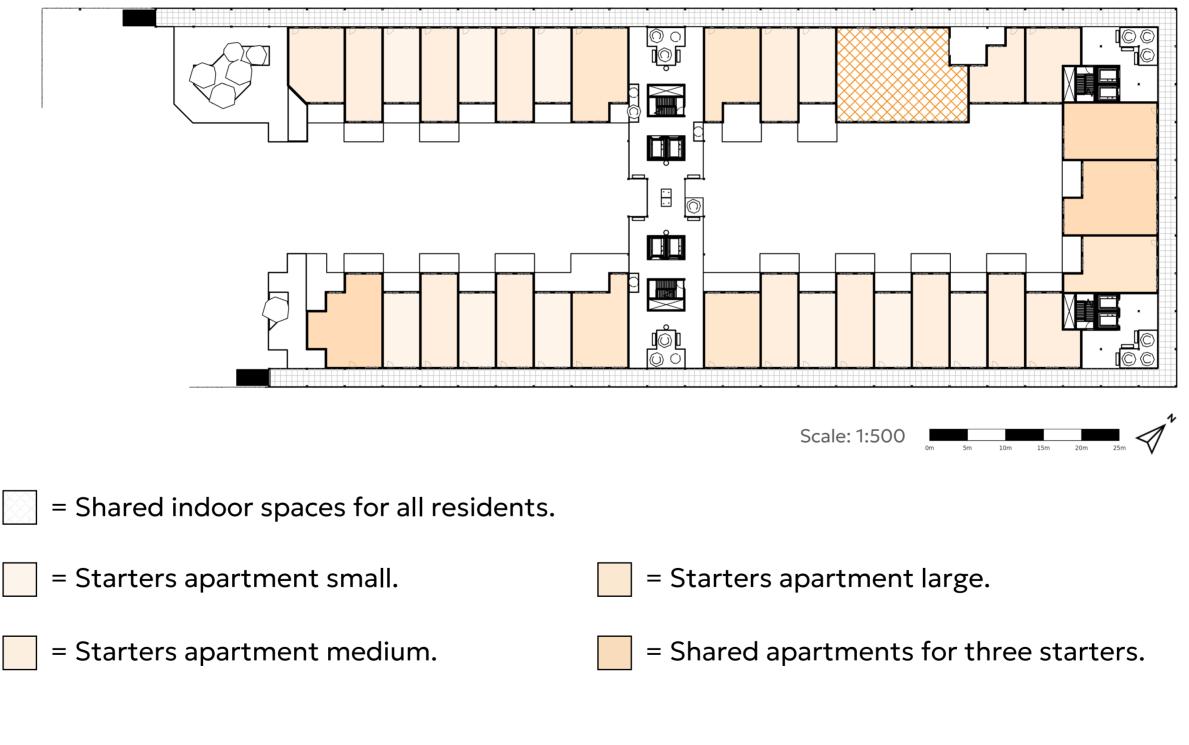






Elevated ground level

Other Starters Appartments



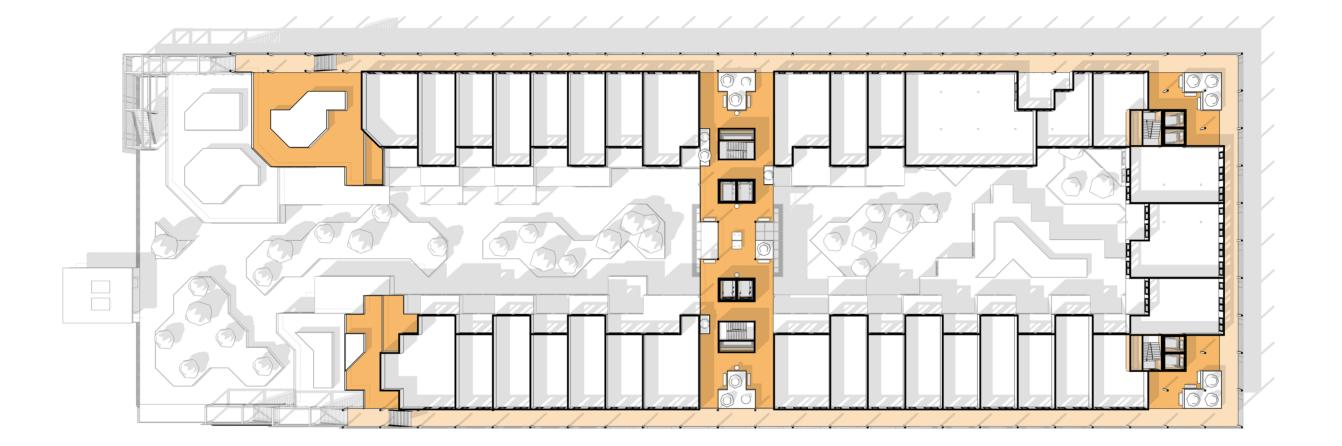


Other Starters Appartments





Social Interaction on the Residential Floors



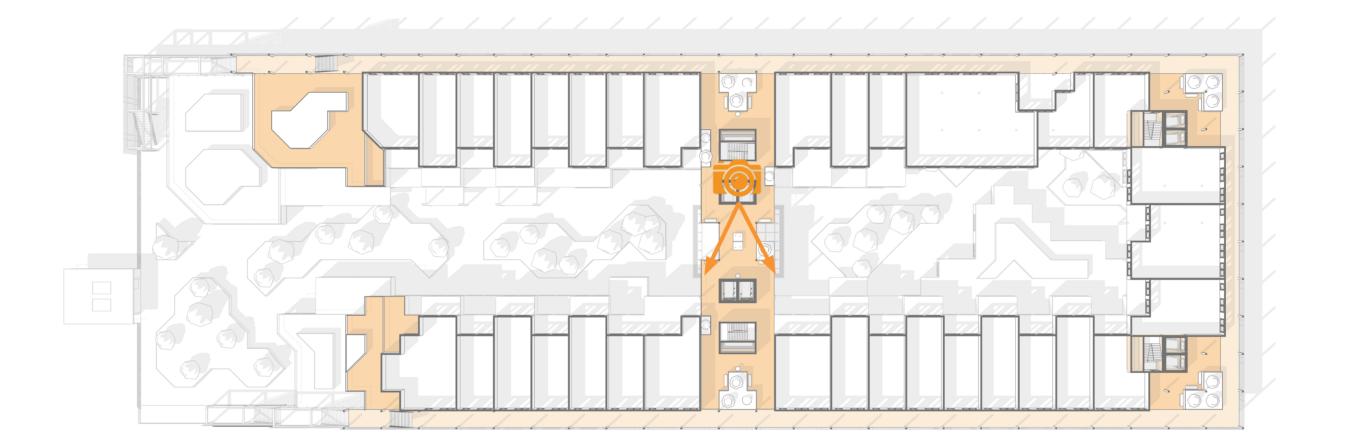
= Gallery area enabling casual encounters between residents.



= Central area designed for social interaction and planned gatherings.



Social Interaction on the Residential Floors



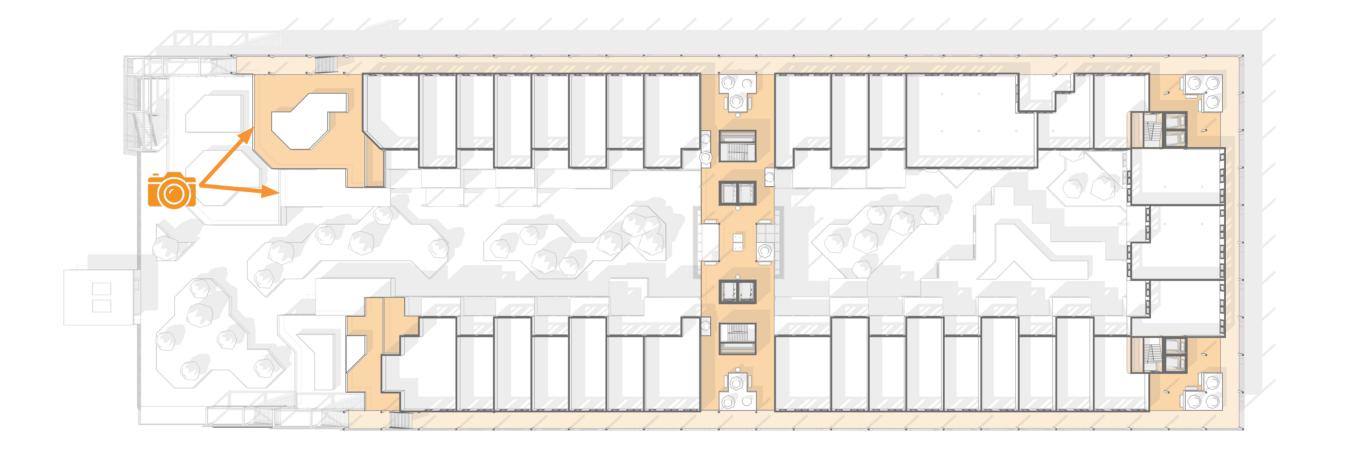
= Gallery area enabling casual encounters between residents.

= Central area designed for social interaction and planned gatherings.





Social Interaction on the Residential Floors



= Gallery area enabling casual encounters between residents.

= Central area designed for social interaction and planned gatherings.





So, by offering physical protection to residents...





...a safe and peaceful inner world emerges.

This makes it possible to introduce housing within the industrial context.

A protective boundary — allowing both to exist side by side.



And finally, they meet — not through separation, but through shared experiences.



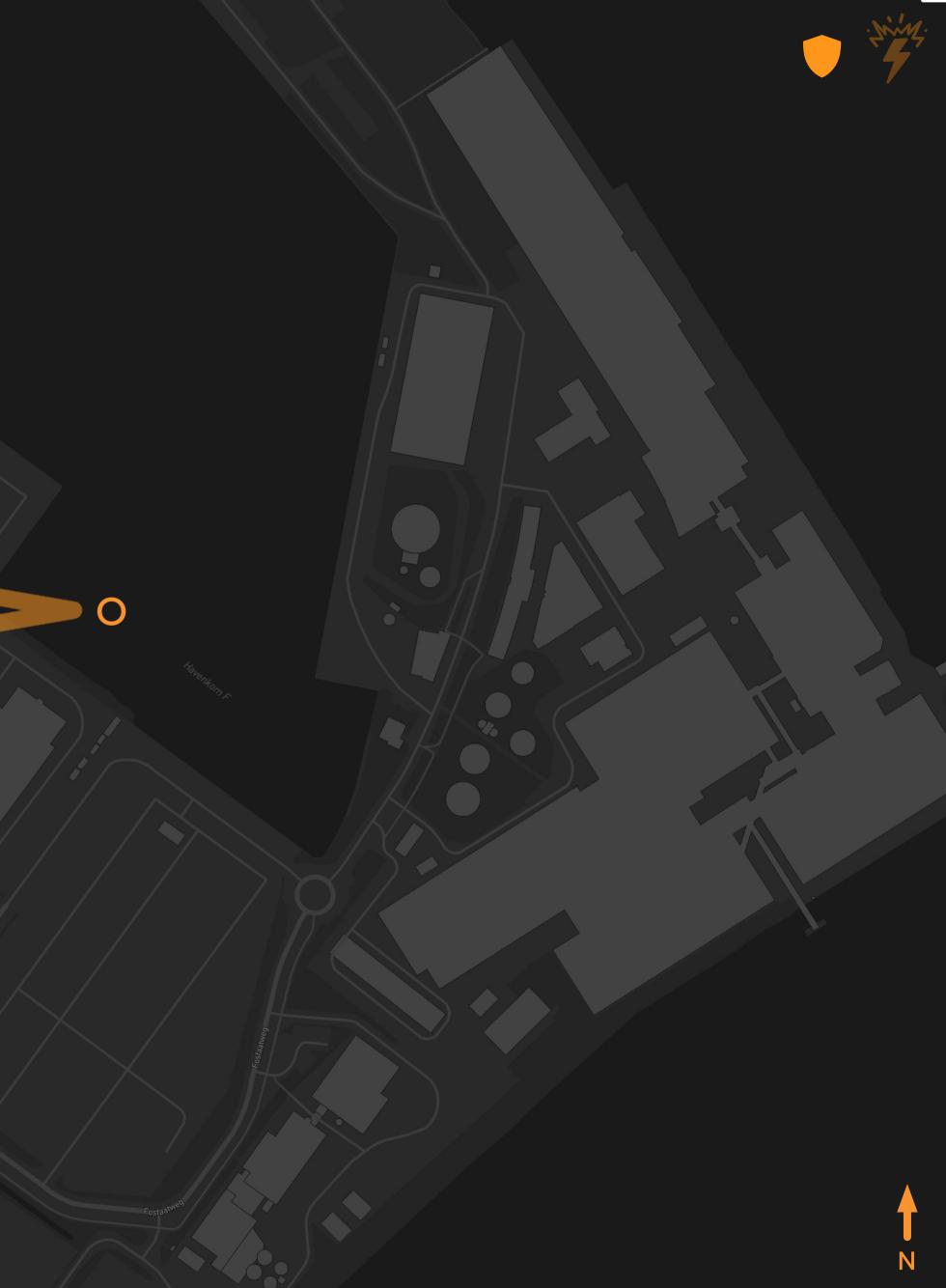


Site Orientation and Dominant Wind Direction

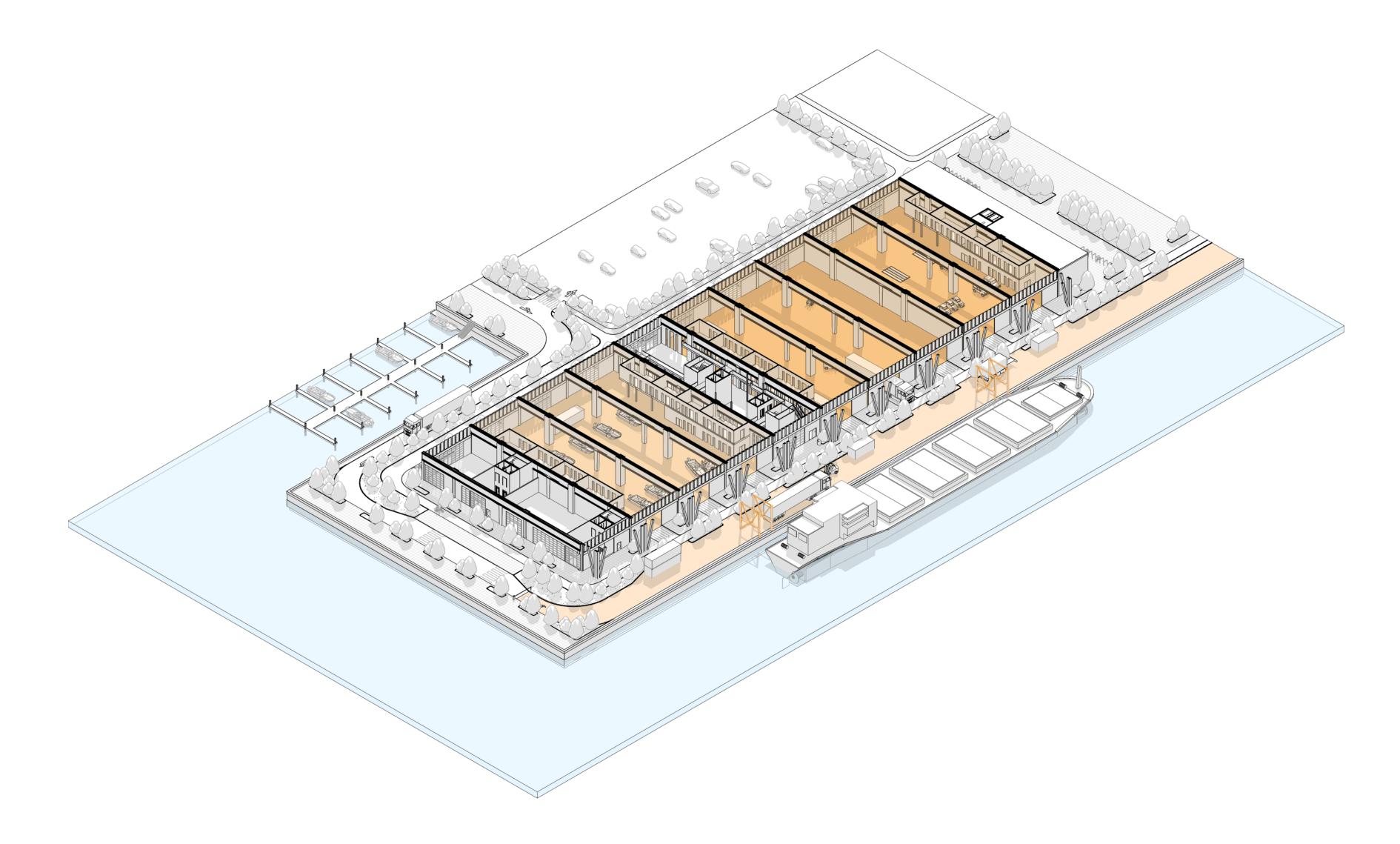
Ν

HE SHELL

W

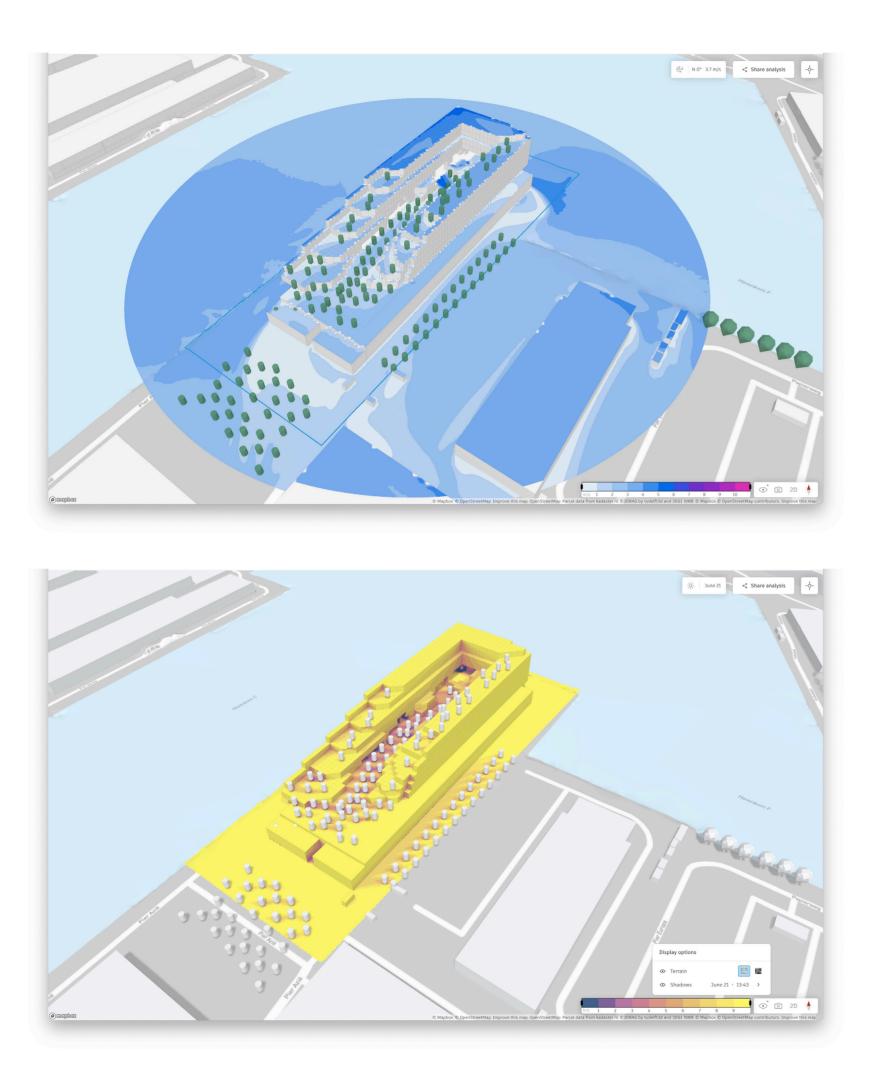


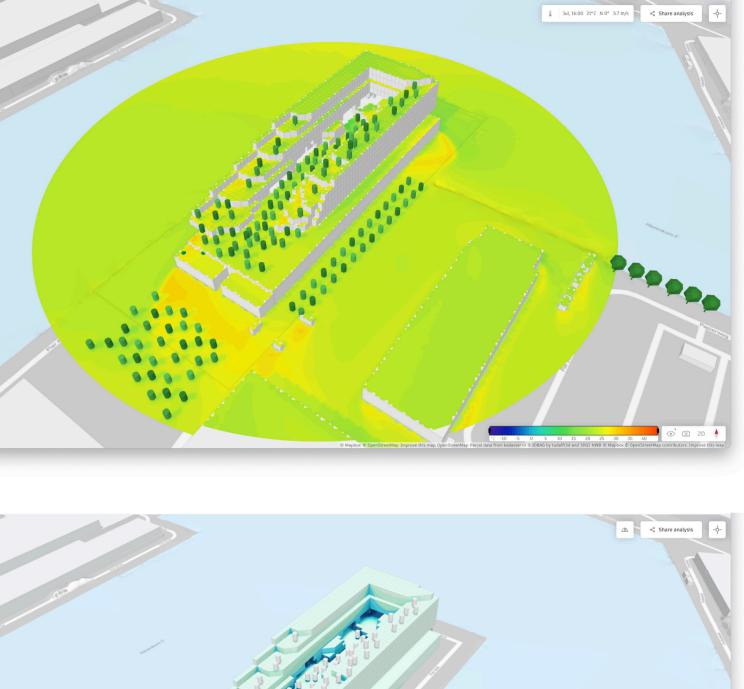
Axo View: Ground Level

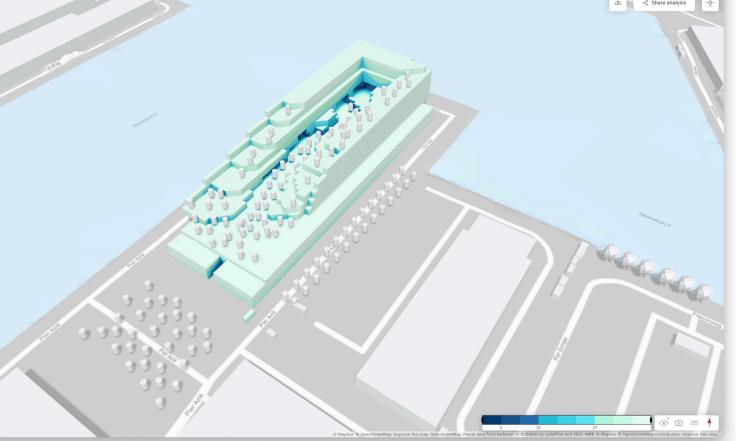




Environmental Simulations to Design the Innervoid







Affordable housing through cooperative structure:



Sells land at reduced price



Cooperative (BWC)

Cooperative (BWC) guarantees 30+ years affordability

Cokopen works because all parties commit to long-term affordability.





Project developer

Developer agrees to rent caps and limited profit

Affordable housing through cooperative structure:



Municipality

Sells land at reduced price



Cooperative (BWC)

Cooperative (BWC) gua-

rantees 30+ years affor-

dability

Developer agrees to rent caps and limited profit



Project developer



Commercial operator

Co-finances the project through rental income from industry and commerce.