

TOWARDS AN OLYMPIC LEGACY FOR ALL

**regeneration oriented design principles
for olympic legacy
enhancing the social sustainability of the host city**

**Olaf IJzerman - 4064240
MSC GRADUATION PRESENTATION**



THE EVENT



THE AFTERMATH



THE AFTERMATH

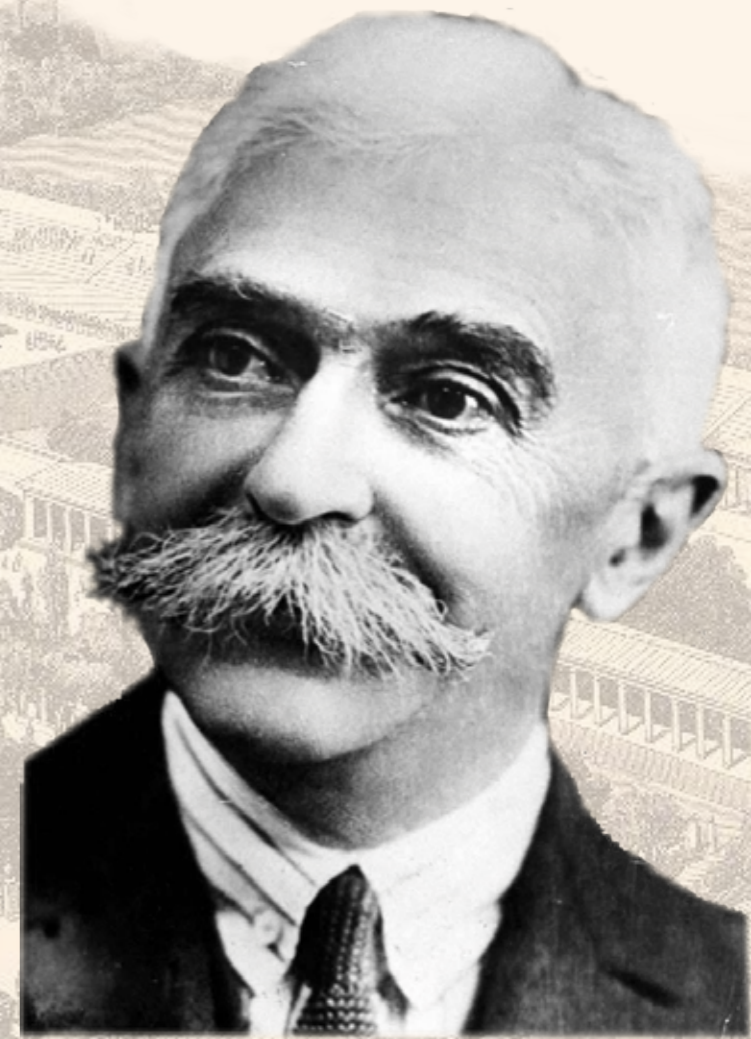


THE AFTERMATH

the fundament of the Olympics

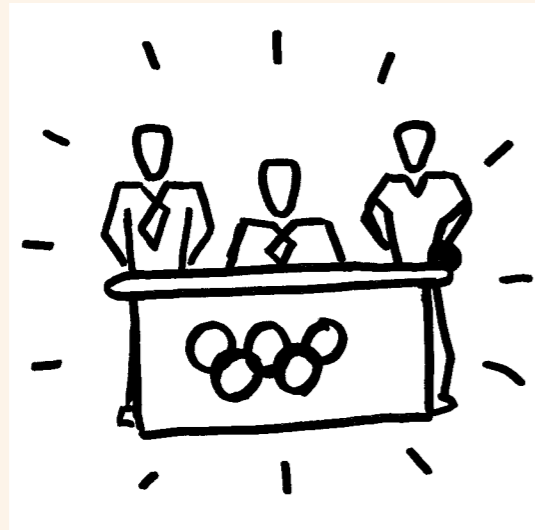
**“SPORT AND EFFORT TO INCREASE
THE STANDARDS OF HUMANKIND”**

**Baron Pierre de Coubertin,
initiator of the Modern Olympic Games**



involved actors DURING the event

the best games ever

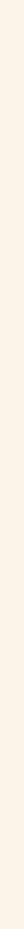


IOC

best image of the city



HOST-CITY



CITIZENS

involved actors **AFTER** the event



IOC

improve city
redevelopment



HOST-CITY

improve my
daily life





CITIZENS

the mega-event syndrome





IOC
HOST-CITY
CITIZENS

affected by consequences




OVERPROMISING OF BENIFITS
overestimating positive effects of mega-events
(by IOC & host-city)

-  Misallocation of resources
-  Loss of trust with citizenry



UNDERESTIMATION OF COSTS
Actual-Budget is bigger than planned budget
(by host-city)

-  Misallocation of resources
-  Profiteering
-  Subpar construction quality
-  Budget shortfalls




EVENT TAKEOVER
Event priorities become planning priorities
(by host-city)

-  Events needs displace infrastructure needs
-  Oversized infrastructure
-  Unfinished infrastructure



PUBLIC RISK TAKING
Public takes risk for private benefits
(by host-city & citizens)

-  Public funds for limited or no public benefits
-  Profiteering





RULE OF EXCEPTION
Suspension of regular rule of law
(by host-city)

-  Displacement
-  Reduced public oversight
-  Limited public participation




ELITE CAPTURE
Inequitable distribution of resources
(by host-city & citizens)

-  Spatially uneven urban landscape
-  Gentrification

EVENT FIX
Mega-events become seemingly quick fixes for major planning challenges
(by host-city)

-  Event determines national priority for funding
-  Bypassing of regular planning proces
-   Waste of resources on event as lever for urban development

IOC	HOST-CITY	CITIZENS
	●	●
●	●	●
	●	●
		●
	●	●
●	●	●
		●
		●
	●	●
		●
		●
	●	●
	●	●
	●	●

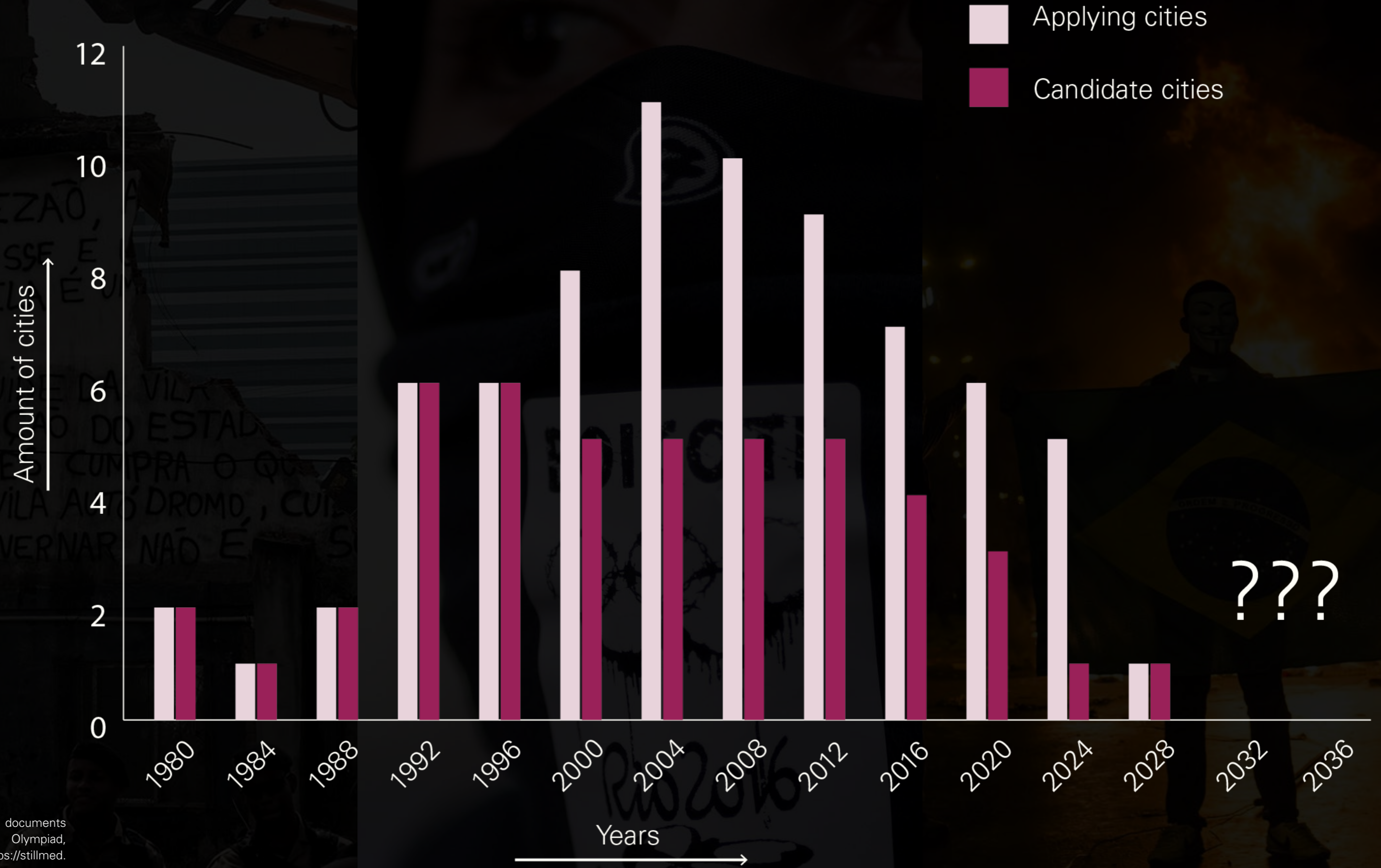
-  Spatial issue
-  Social issue
-  Financial issue

Müller, M. (2015a). *The mega-event syndrome: Why so much goes wrong in mega-event planning and what to do about it.* Journal of the American Planning Association, 81(1), 6-17.

image before the Olympic Games



decreased interest in organising the Olympic Games



my solution to the problem

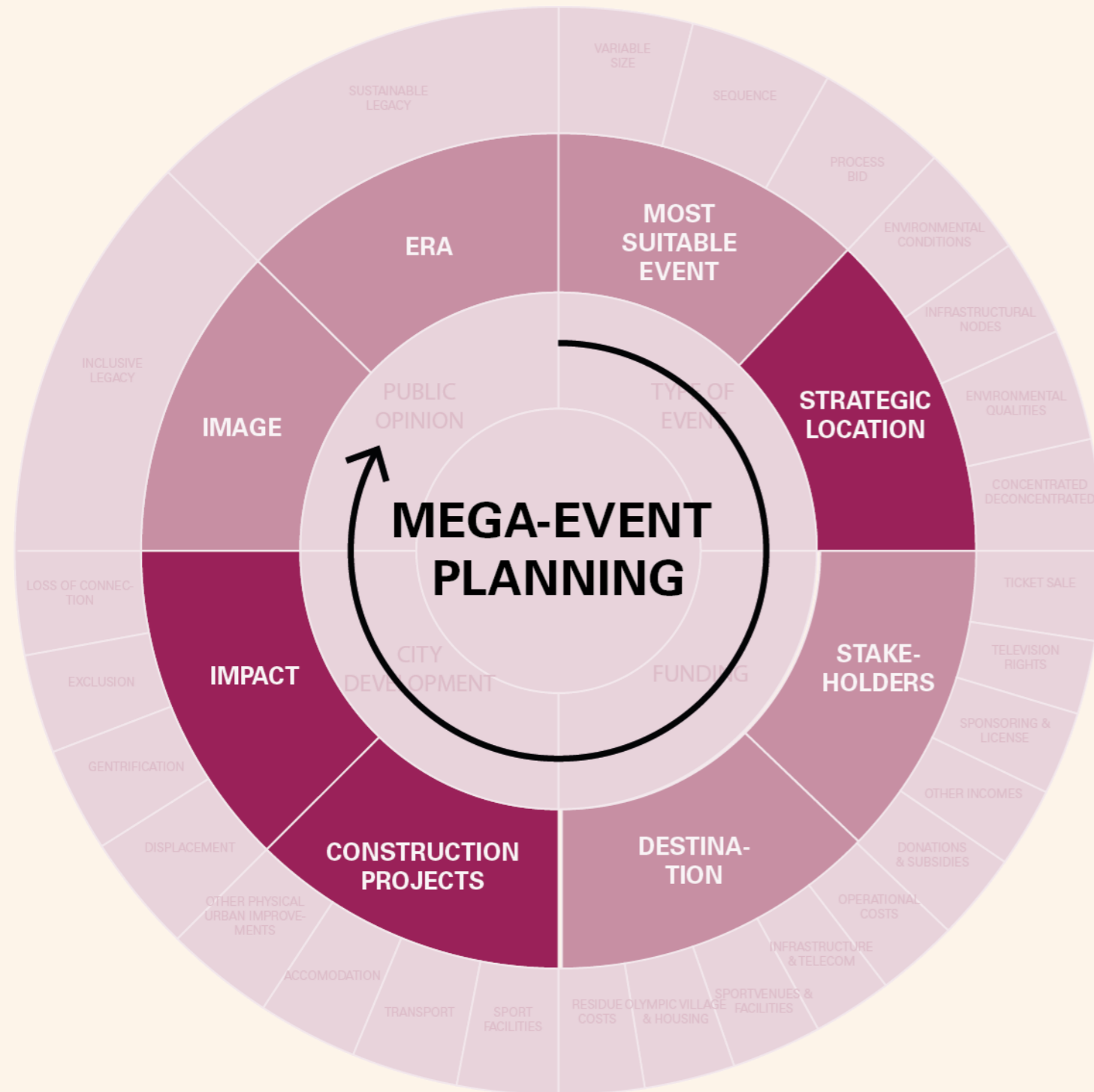
CITIZEN FIRST

towards enhancing the citizen - towards sustainability



- **education**
- **employment**
- **health & safety**
- **housing & environment**
- **identity**

within mega-event planning

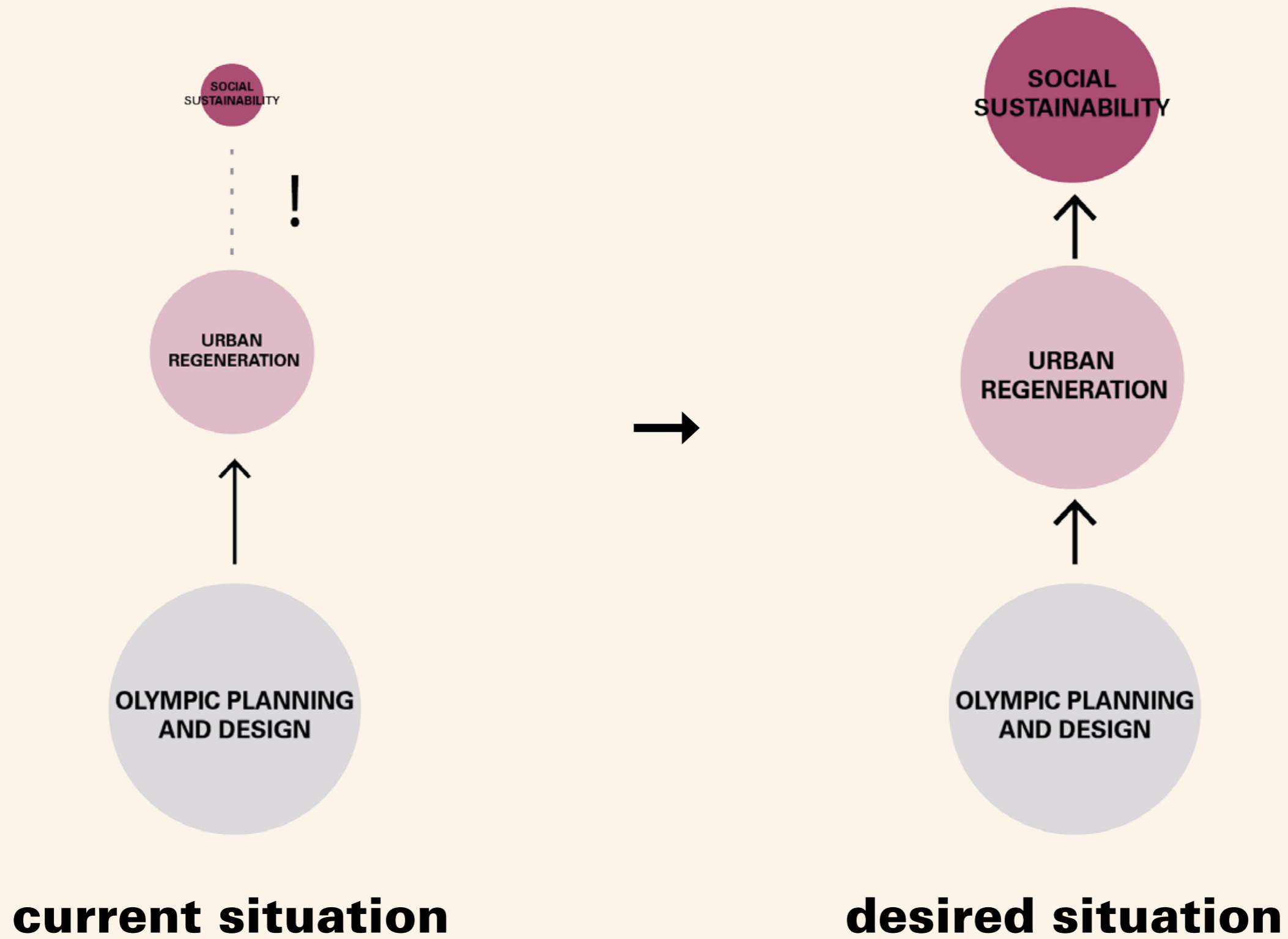


- location

- construction projects

- impact

overall aim for the Olympic Games



social sustainable Olympic design

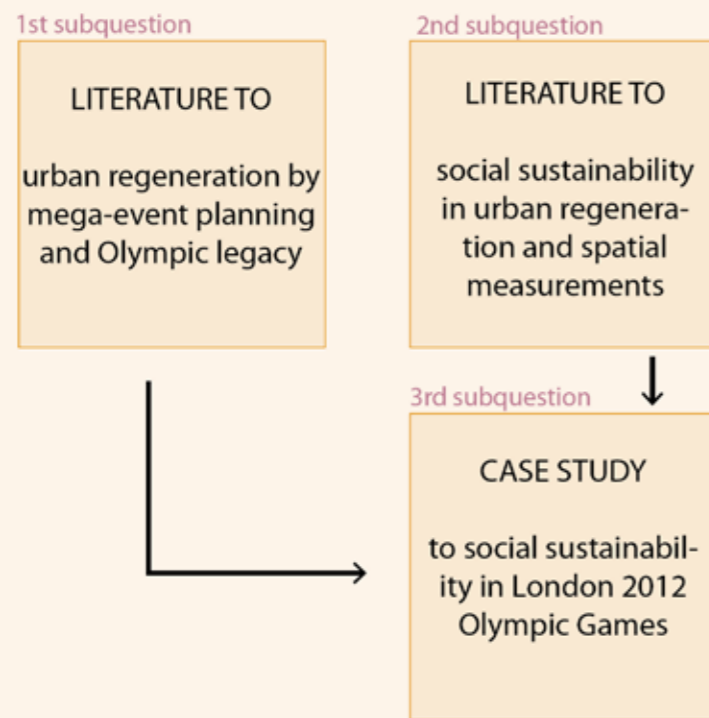
**To define A SET OF DESIGN PRINCIPLES THAT
ENABLE OLYMPIC LEGACY TO ENHANCE THE
SOCIAL SUSTAINABILITY for regeneration of the
host-city.**

“How can spatial design principles aiming for urban regeneration within Olympic legacy planning and design enhance the social sustainability of the city?”

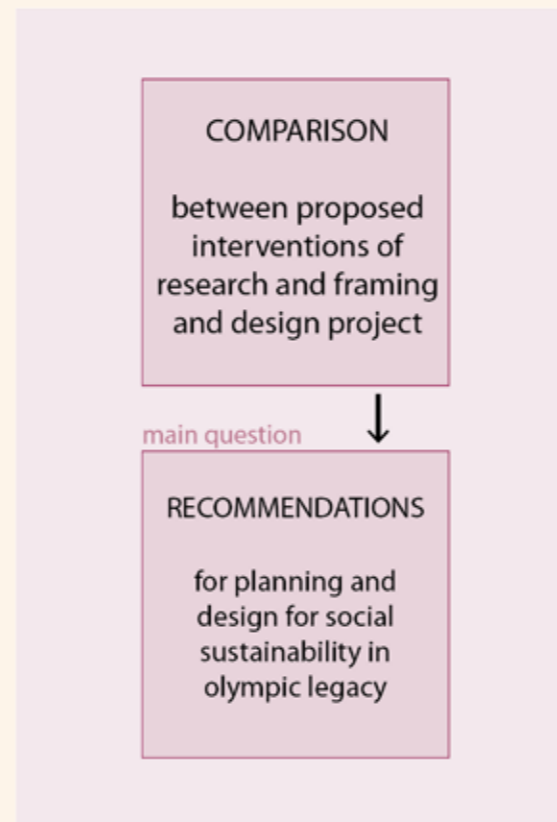
1. - How can Olympic planning and design enhance urban regeneration?
2. - How does urban regeneration enhance social sustainability?
3. - How can social sustainability of the host city be enhanced in olympic planning and design?

Method to the project

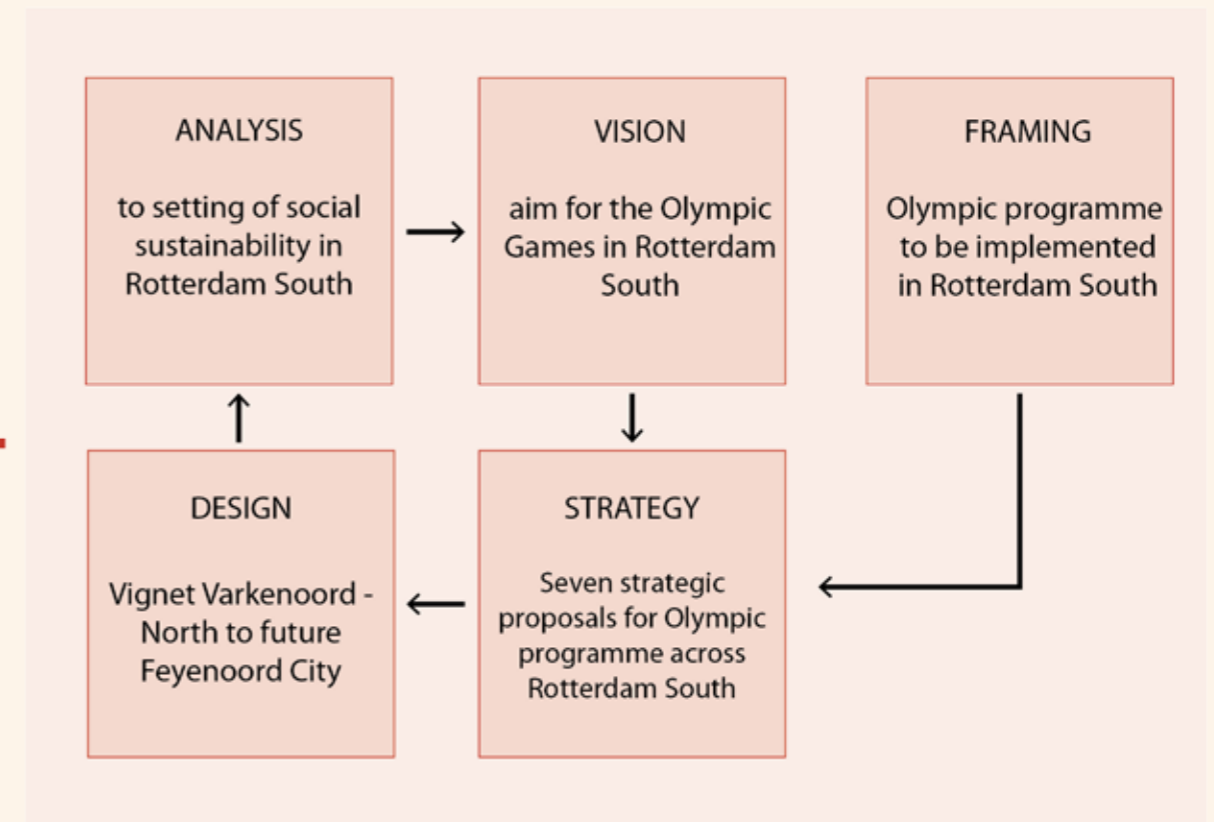
1. RESEARCH AND FRAMING



EVALUATION



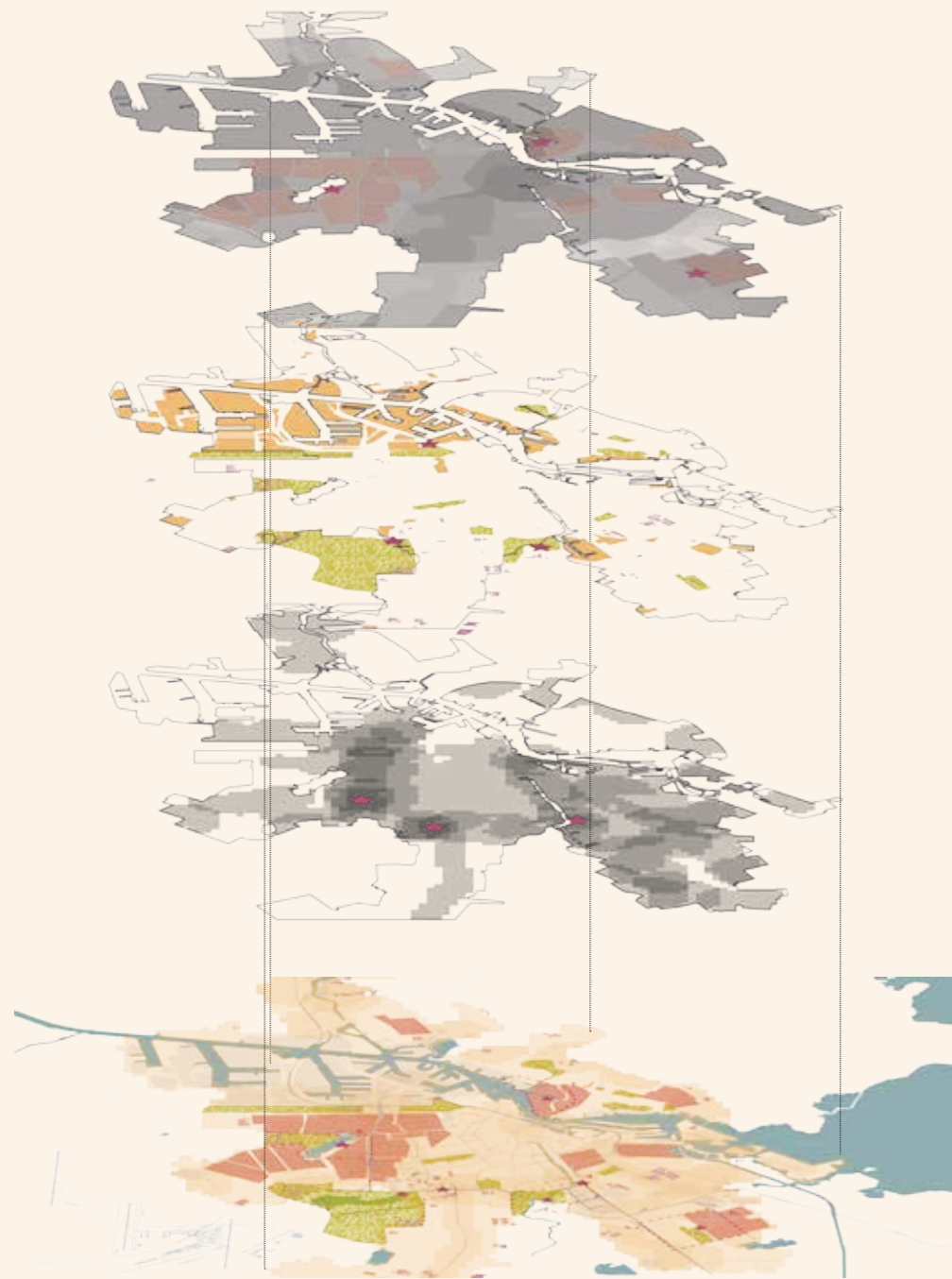
2. DESIGN PROJECT 3rd subquestion



place for a next Olympic Games in the Netherlands

spatial analysis to Amsterdam and Rotterdam

Amsterdam



Socio-economic situation

- Unemployment
- Weight (obesitas)
- Vacancy
- Problematic neighborhoods

Occupation of space

- Urban parks
- Industrial areas
- Sport facilities

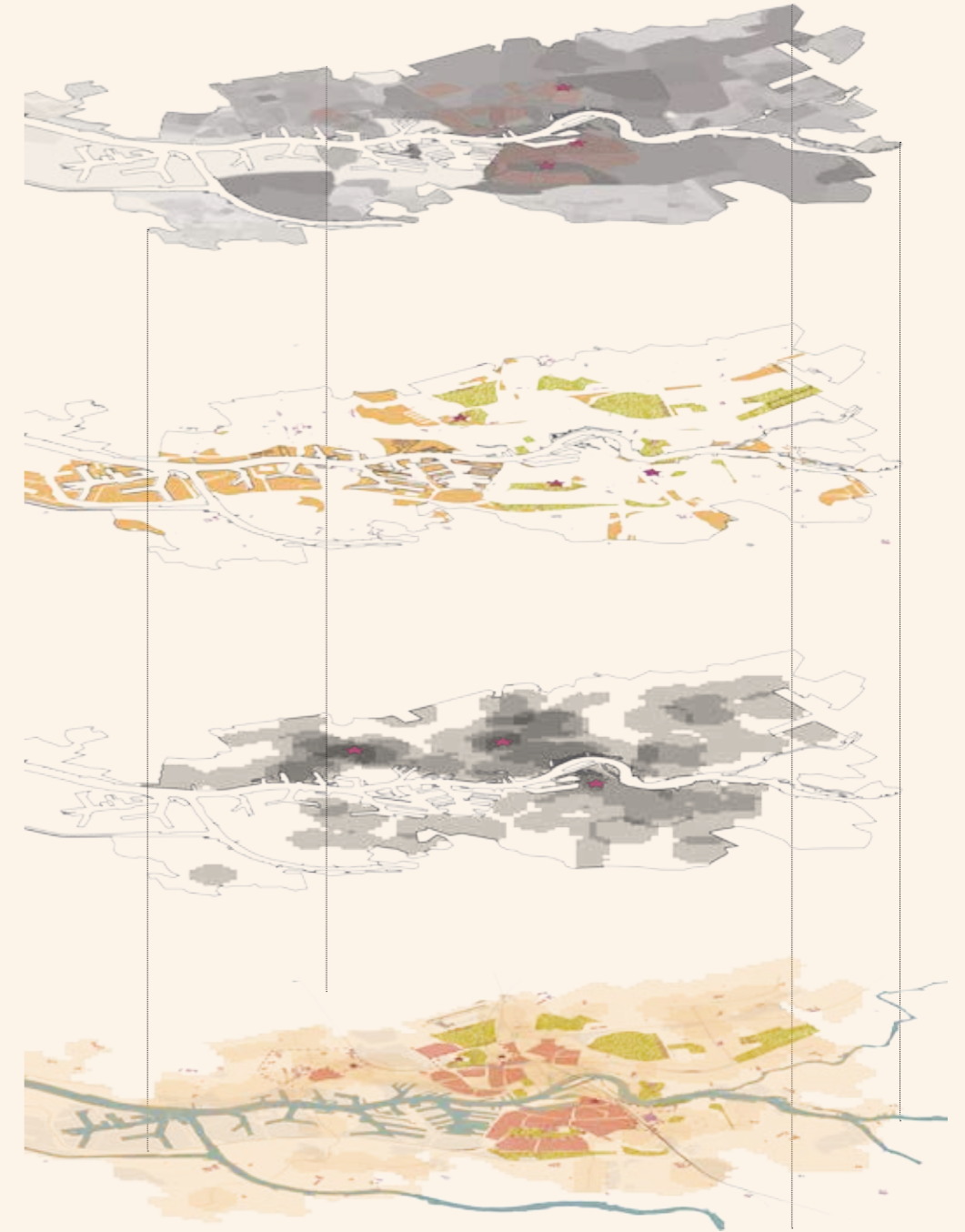
Accesibility

- Unemployment
- Weight (obesitas)
- Vacancy
- Problematic neighborhoods

Possible place for Olympics

Taking in account the availability of a socio-economic goal, space and good accesibility

Rotterdam

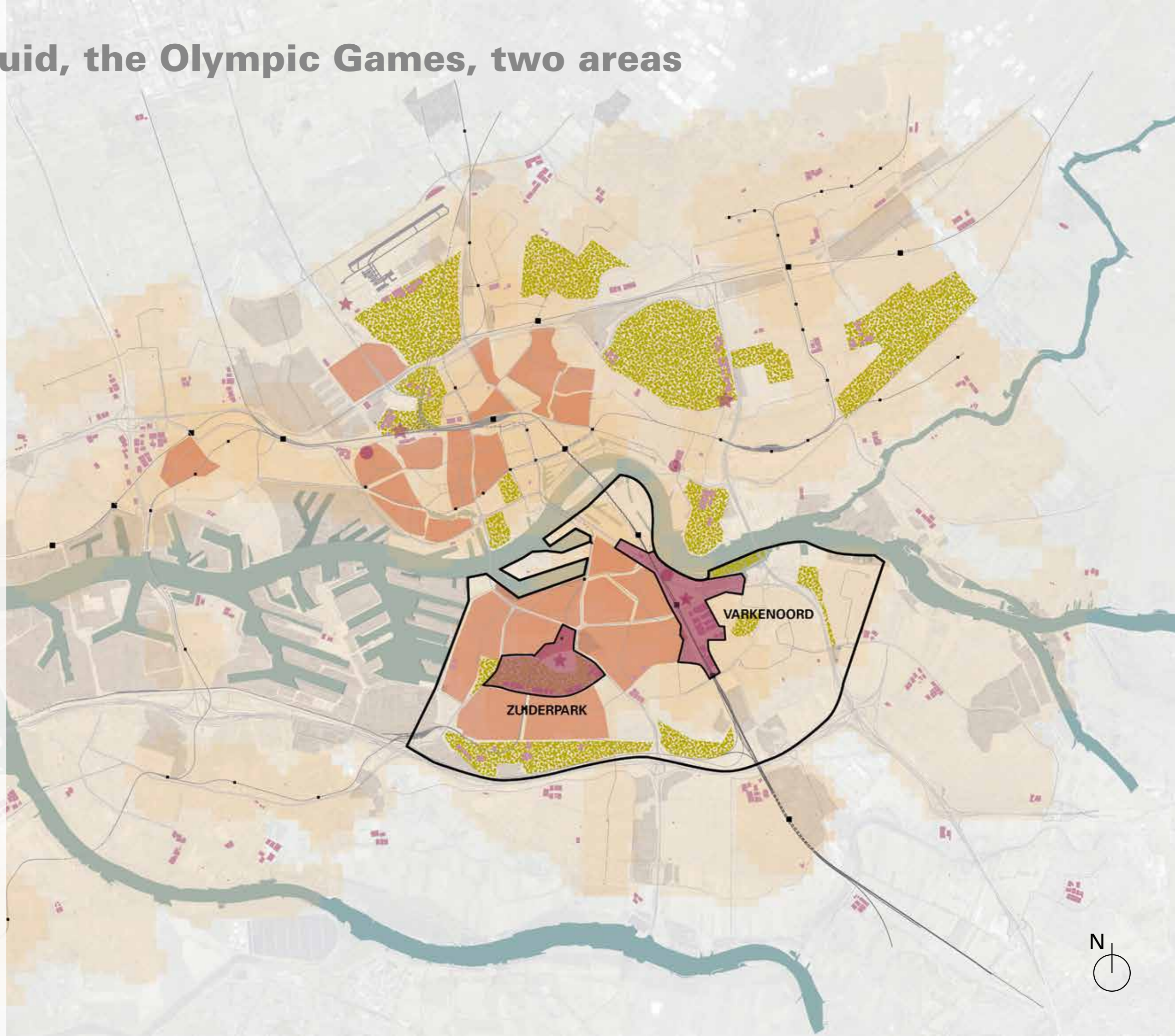


Rotterdam Zuid

Rotterdam Zuid, the Olympic Games, two areas

LEGEND A0: 1:5000 N ↑

- Industrial areas
- Green spaces
- Sport complexes
- Socio-economic deprived neighborhoods
- River Maas
- Strategic area
- Design locations
- Possible places for the Olympics
- Degree of accessibility by large public transport
- Highway
- Public transport line
- Tram/Metro/Train station





Rotterdam Harbor



Zuiderpark



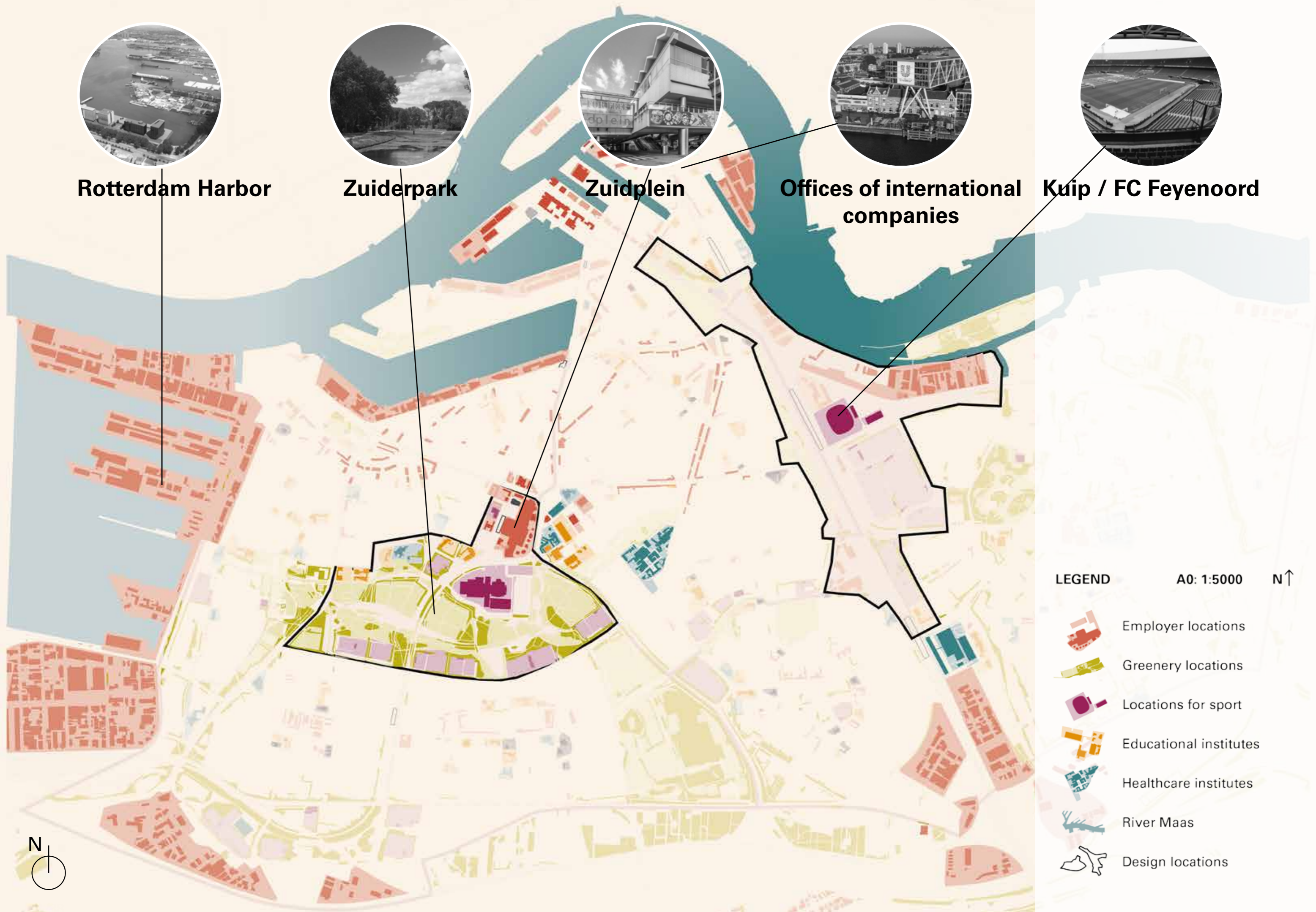
Zuidplein



Offices of international companies



Kuip / FC Feyenoord



LEGEND

A0: 1:5000

N ↑

-  Employer locations
-  Greenery locations
-  Locations for sport
-  Educational institutes
-  Healthcare institutes
-  River Maas
-  Design locations





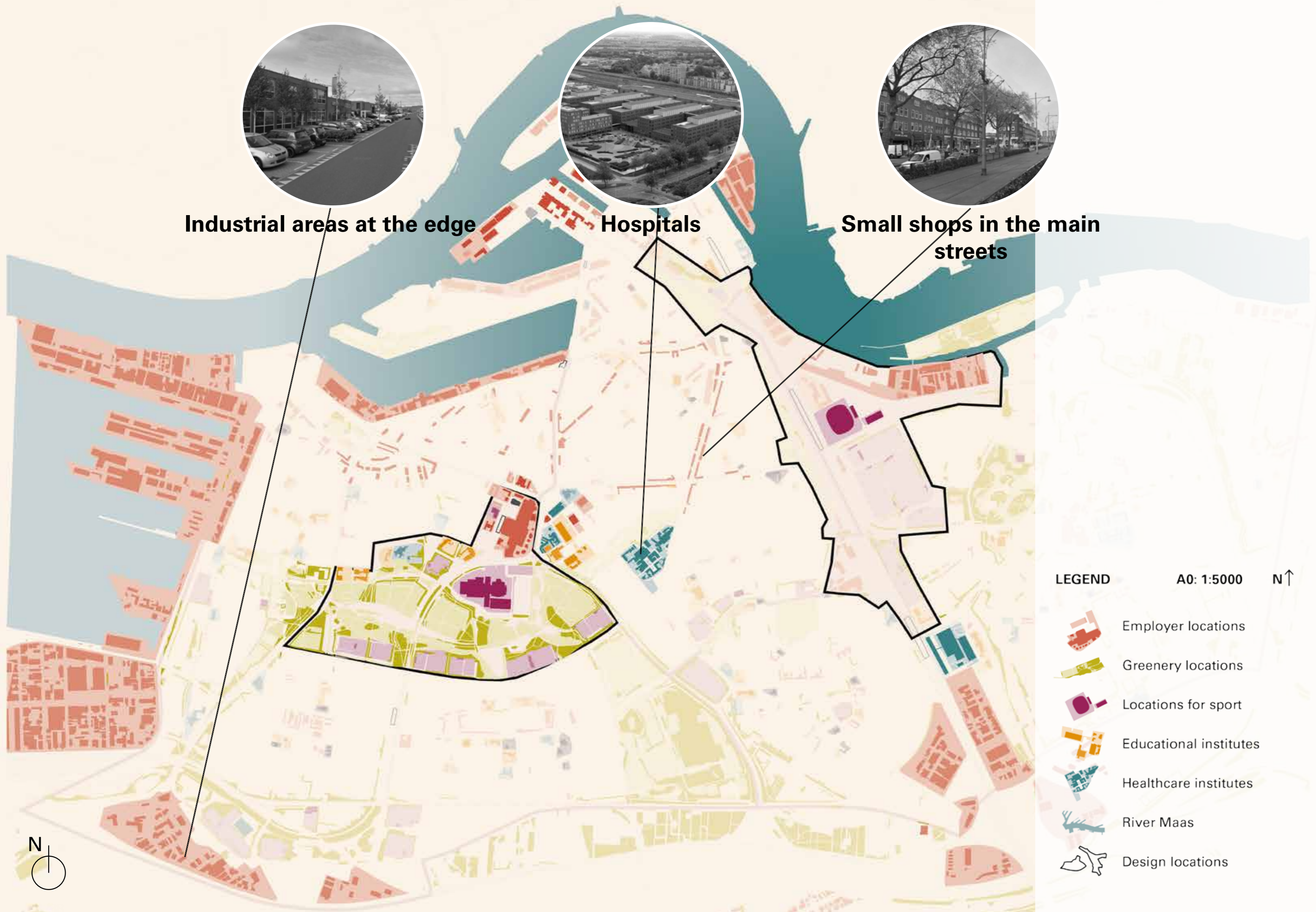
Industrial areas at the edge



Hospitals



Small shops in the main streets



LEGEND

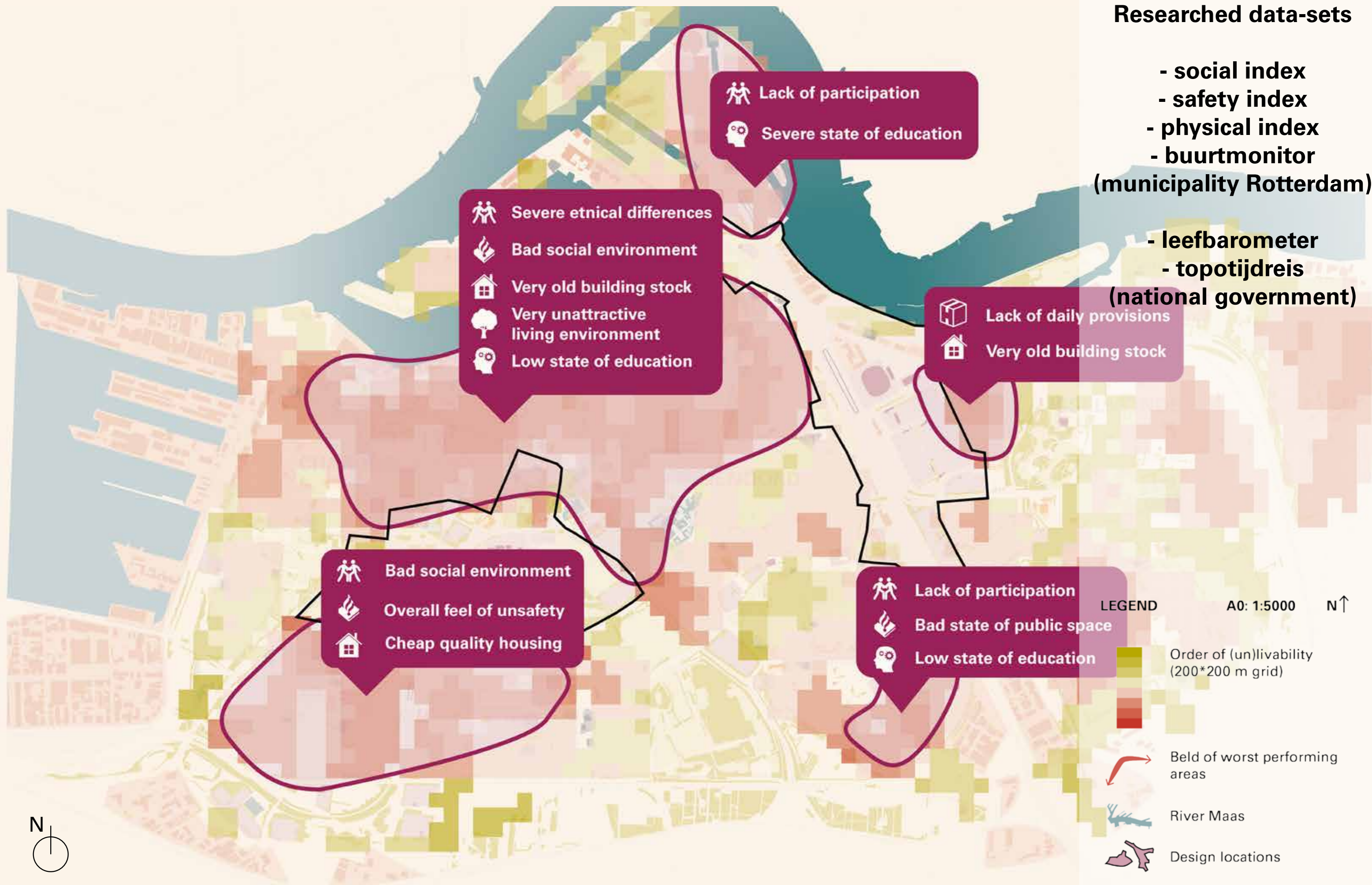
A0: 1:5000

N↑

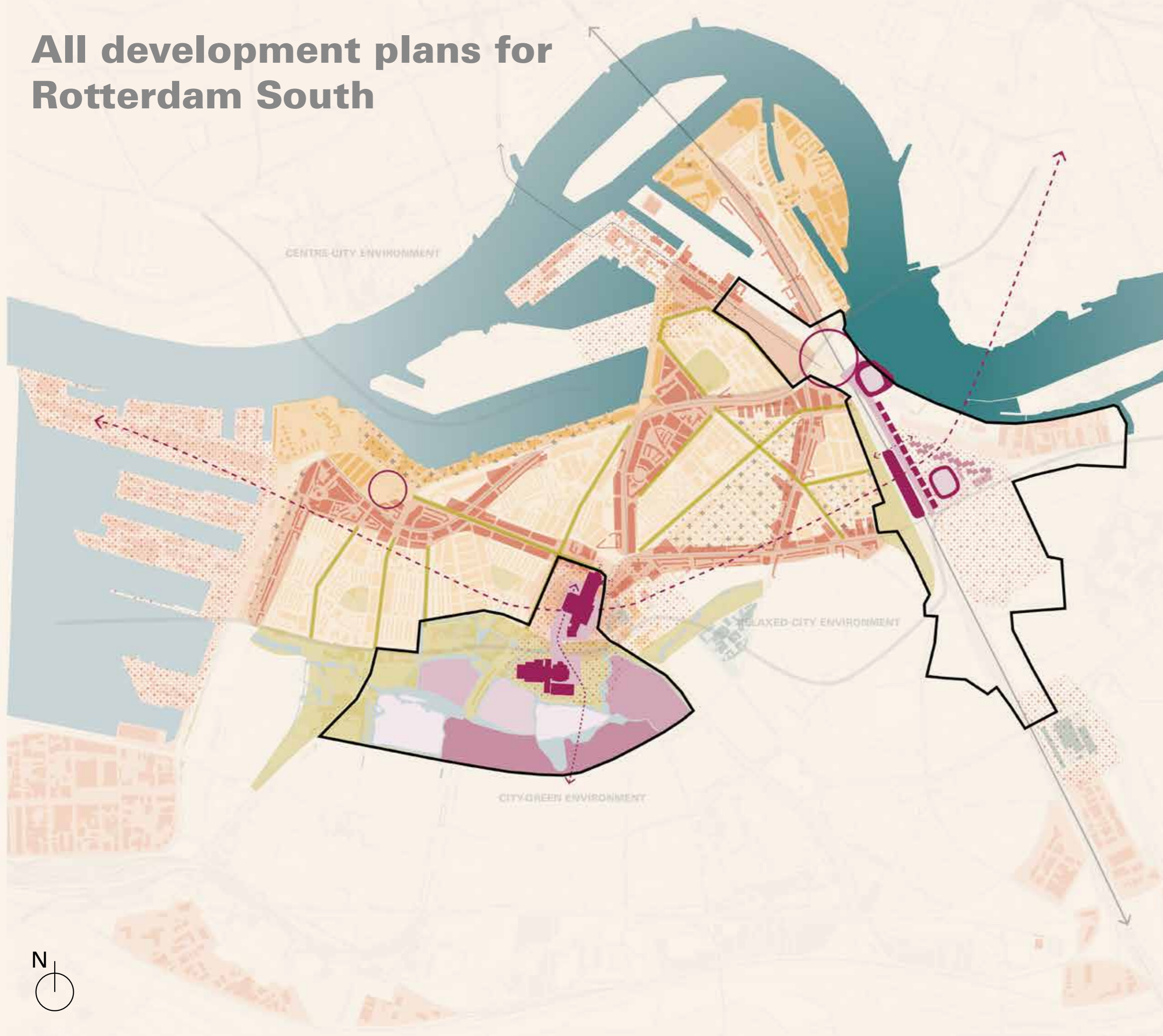
-  Employer locations
-  Greenery locations
-  Locations for sport
-  Educational institutes
-  Healthcare institutes
-  River Maas
-  Design locations



Focuspoints of socio-economic problems



All development plans for Rotterdam South



Regeneration projects

- Nationaal programma Rotterdam Zuid
- Hart van Zuid
- Feyenoord City
- Plan Zuiderpark

LEGEND A0: 1:5000 N↑

City development

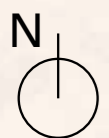
- Environmental targets
- Living along the river
- Living in the city
- Living relaxed
- Transformation area's

Focus areas

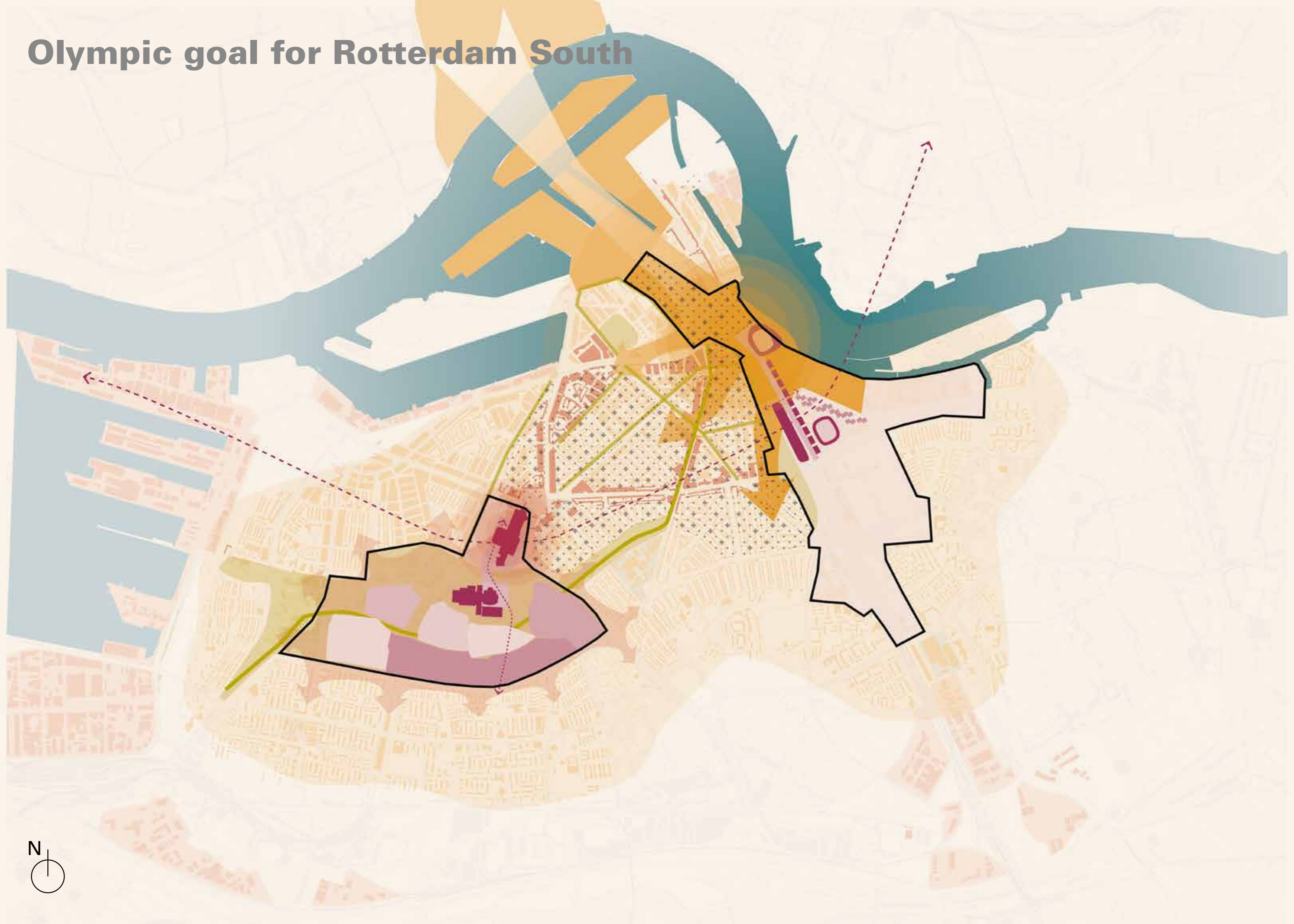
- Regional commercial cluster
- Priority employment clusters
- Riverfront
- Green corridors

Key-projects

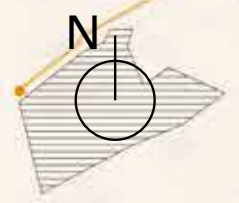
- Intercity station
- Metroline
- Hart van Zuid
- OMA - new Kuip
- Trouble areas NPRZ
- North-South axis
- Diversification park



Olympic goal for Rotterdam South



Olympic strategy for Rotterdam South



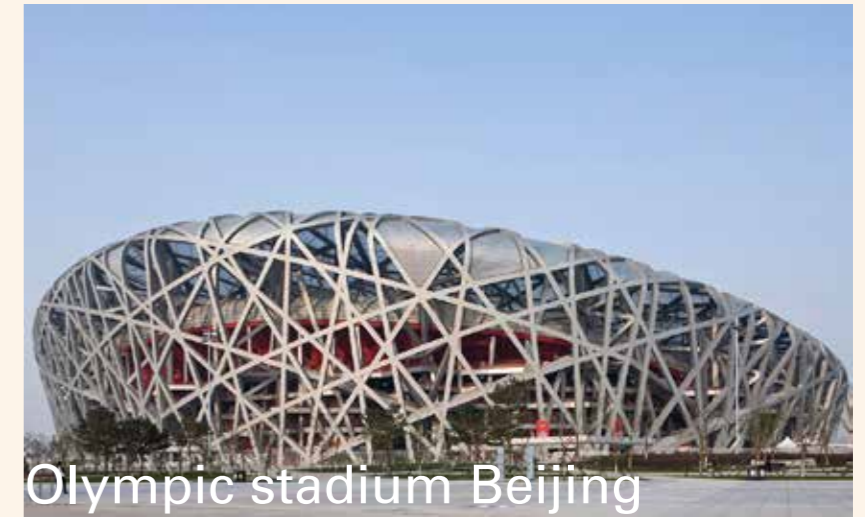
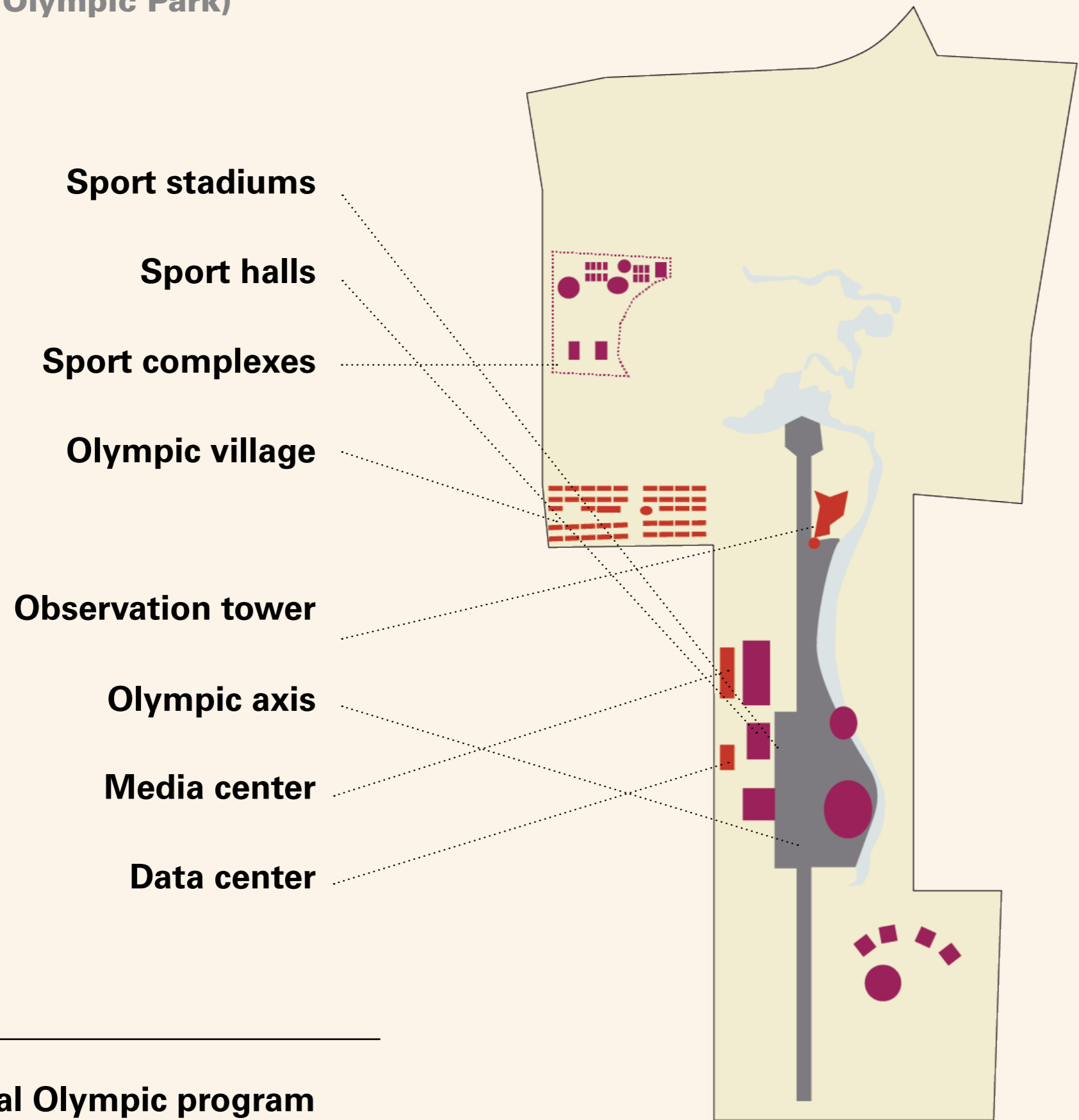
Olympic design for Varkenoord North

(Post Game situation)



Overview of the Olympic park

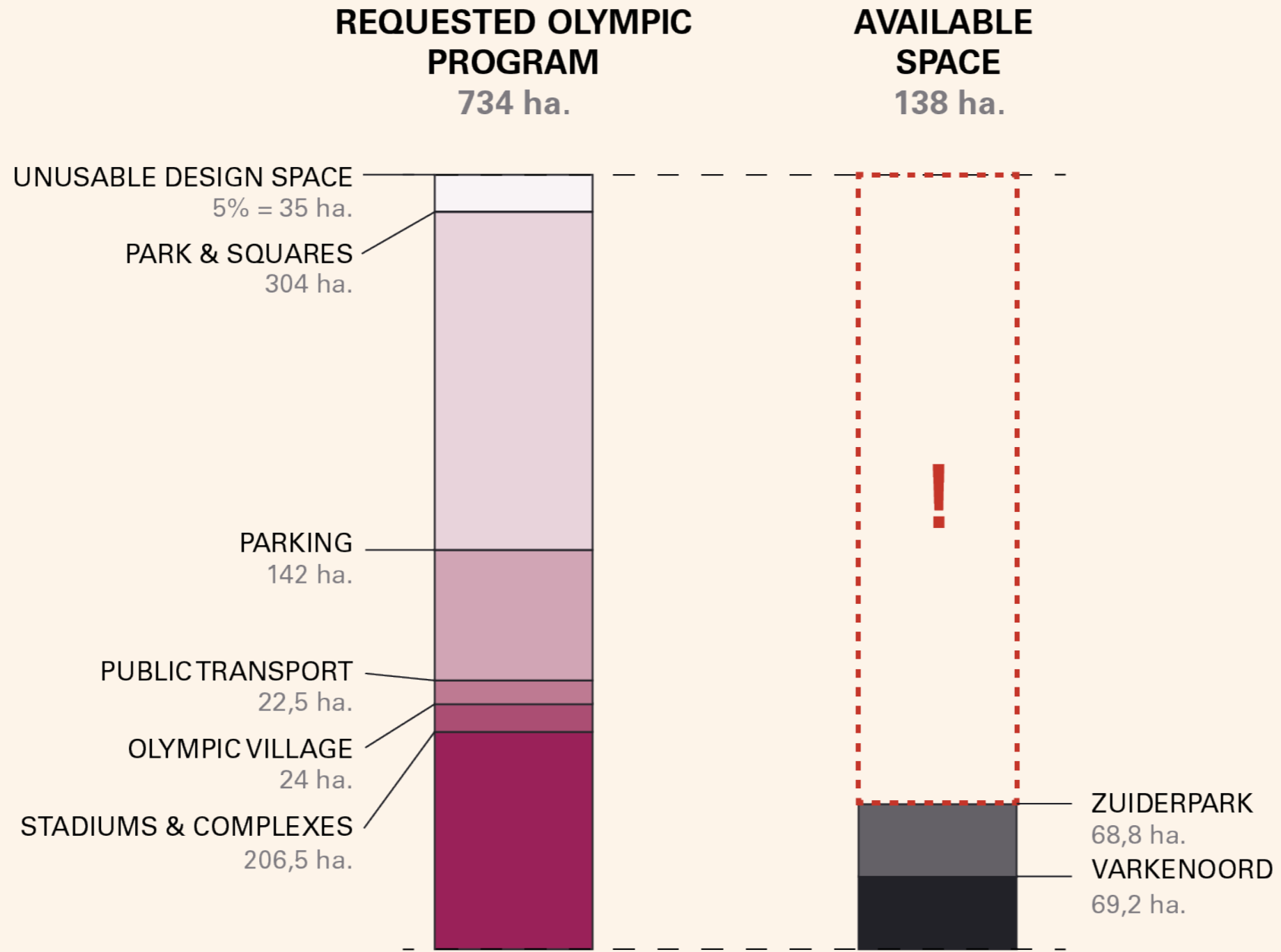
(Beijing Olympic Park)



Total Olympic program
799 ha.

programmatic mismatch

Requested program to available space



keep all local attached and hard to replace program

within Zuiderpark and Varkenoord



housing



community gardens

LEGEND

A0: 1:5000

N↑

-  Employer locations
-  Greenery locations
-  Locations for sport
-  Educational institutes
-  Healthcare institutes
-  River Maas
-  Design locations

use open space, existing sport venues and industrial areas within Zuiderpark and Varkenoord



event halls



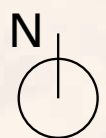
open park structures

LEGEND

A0: 1:5000

N↑

-  Employer locations
-  Greenery locations
-  Locations for sport
-  Educational institutes
-  Healthcare institutes
-  River Maas
-  Design locations



excel model to compare programmatic demand and offer

Space demand

Olympic Games - Program of requirements Decision model											
sport	program	part	additional number	consist.	former size	size	externalit	security space	solution space	adusted size	requested
							perc	perc.			
support						99				102,65	150,95
	olympic village		stories high							40,65	
		Olympic housing		8 stories		24		0	5	25,2	
		Training				3		0	5	3,15	
		Service		2 stories		3		0	5	3,15	
		Parkspace		20 percentage	30	6		0	0	6	
		Road		10 percentage	30	3		0	5	3,15	
	International zone									26,25	
		Media				4		0	5	4,2	

Space offer

existing	name	program	additional info	additional formulas	size	non-usable/not-prefered	non usable space	usable space
						perc.		
Varkenoord	total				216			108,475
	216							
	else		percentage	size other part	34,55		31,325	3,225
		streets			25,8	100	25,8	0
		green structures	25	25,8	6,45	50	3,225	3,225
		water			2,3	100	2,3	0
	build space				125,3		62,9	62,4
		housing complex			5,8	100	5,8	0
		housing public space			7	100	7	0

olympic program in the Netherlands

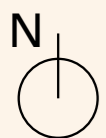


LEGEND

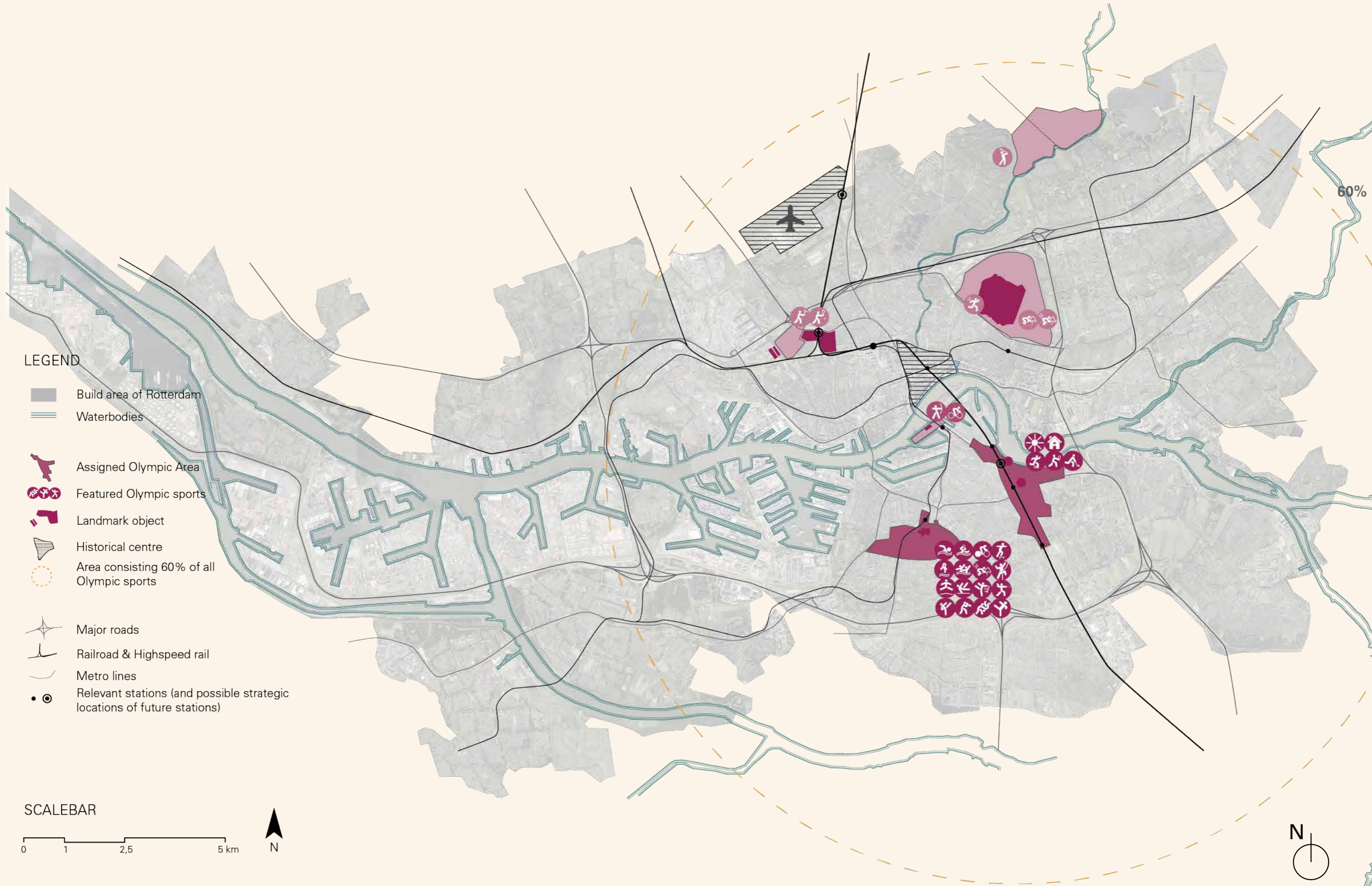
-  Territory of The Netherlands
-  Waterbodies
-  Assigned Olympic Cities
-  Featured Olympic sports
-  Olympic areas
-  Area consisting a certain percentage of Olympic sports (Heurkens, 2005)
-  Relevant highways
-  Relevant railroad & Highspeed rail
-  Relevant airports

SCALEBAR

0 25 50 100 km



olympic program in Rotterdam

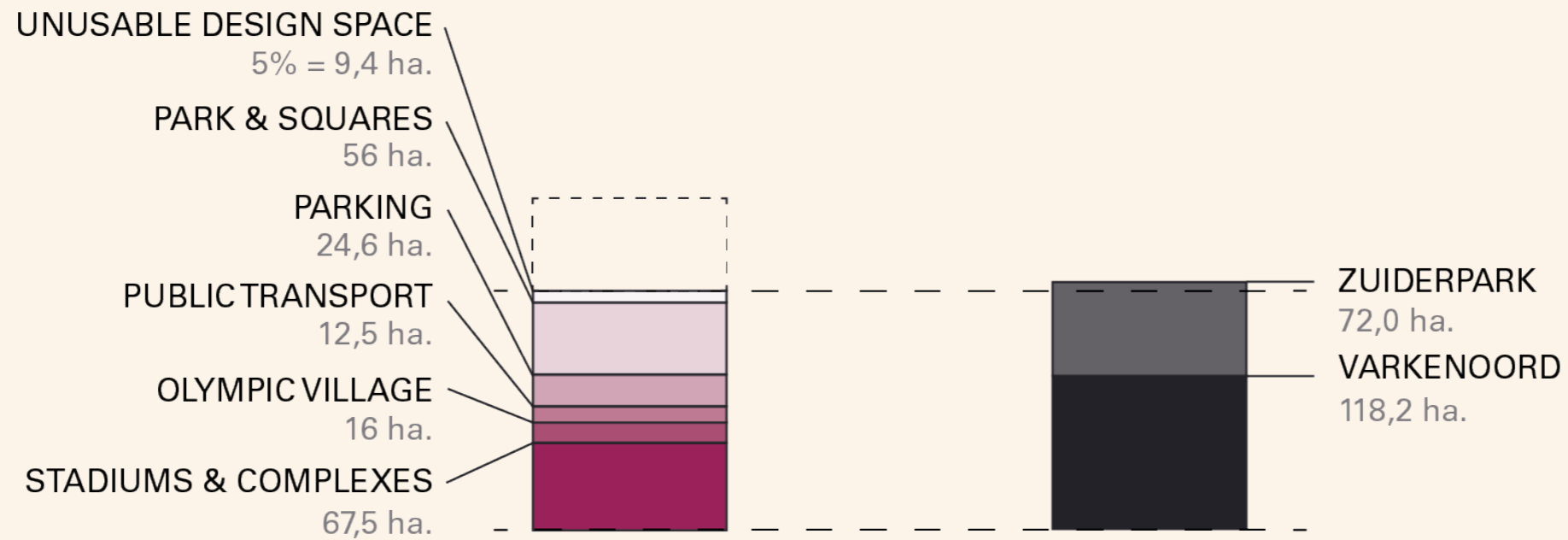


Programmatic match

Requested program to available space

REQUESTED OLYMPIC PROGRAM
185,4 ha.

AVAILABLE SPACE
190,2 ha.

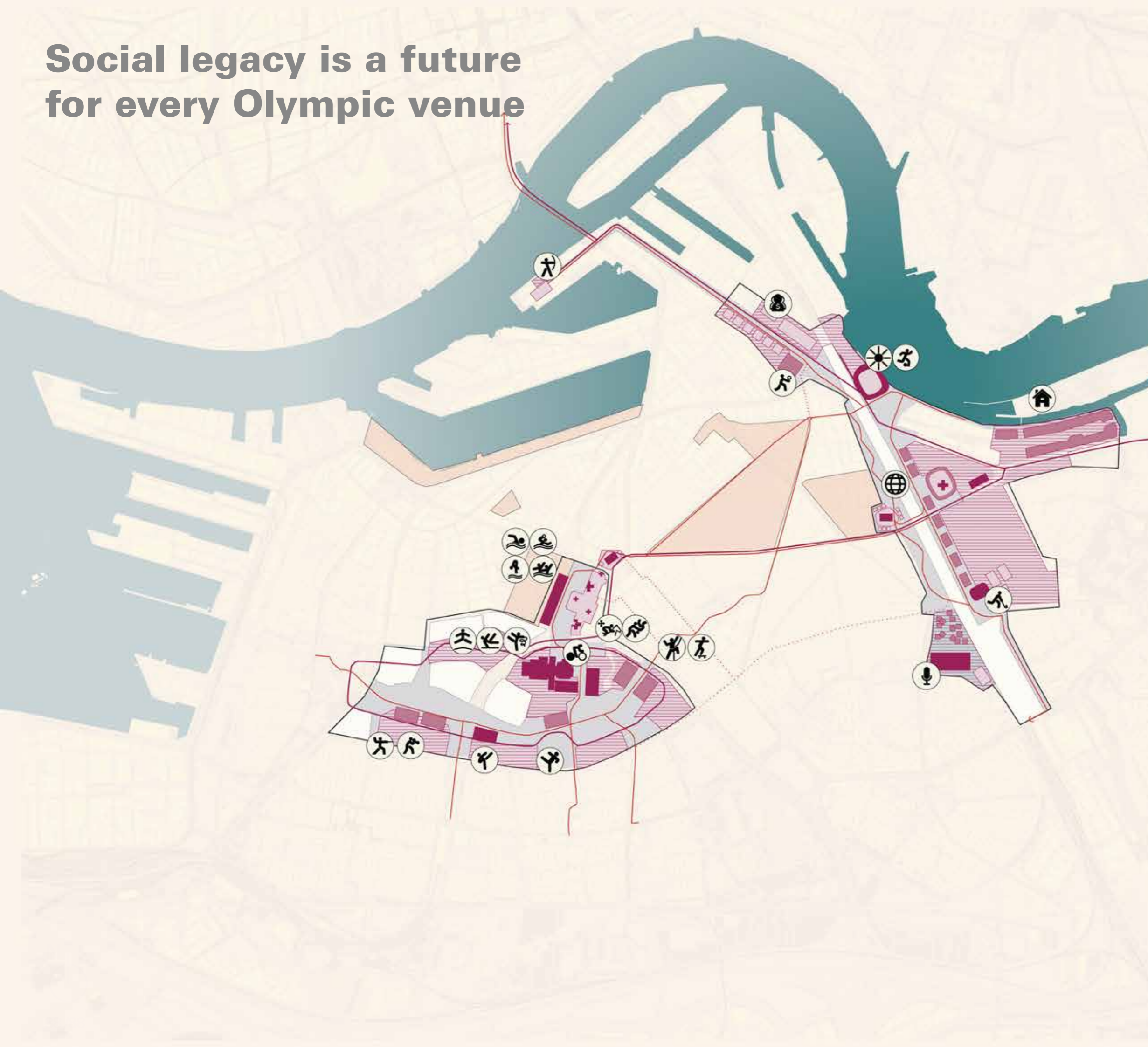


Programme of Requirements

For the Olympic Games in Rotterdam South

- **Relocation of all industrial buildings on both Olympic sites**
- **Olympic village - average 12 stories high**
- **Solve 48.4 hectare parking space elsewhere**
- **Reduce space for railway by 20%**
- **Reduce space for several sportcomplexes by 20%**

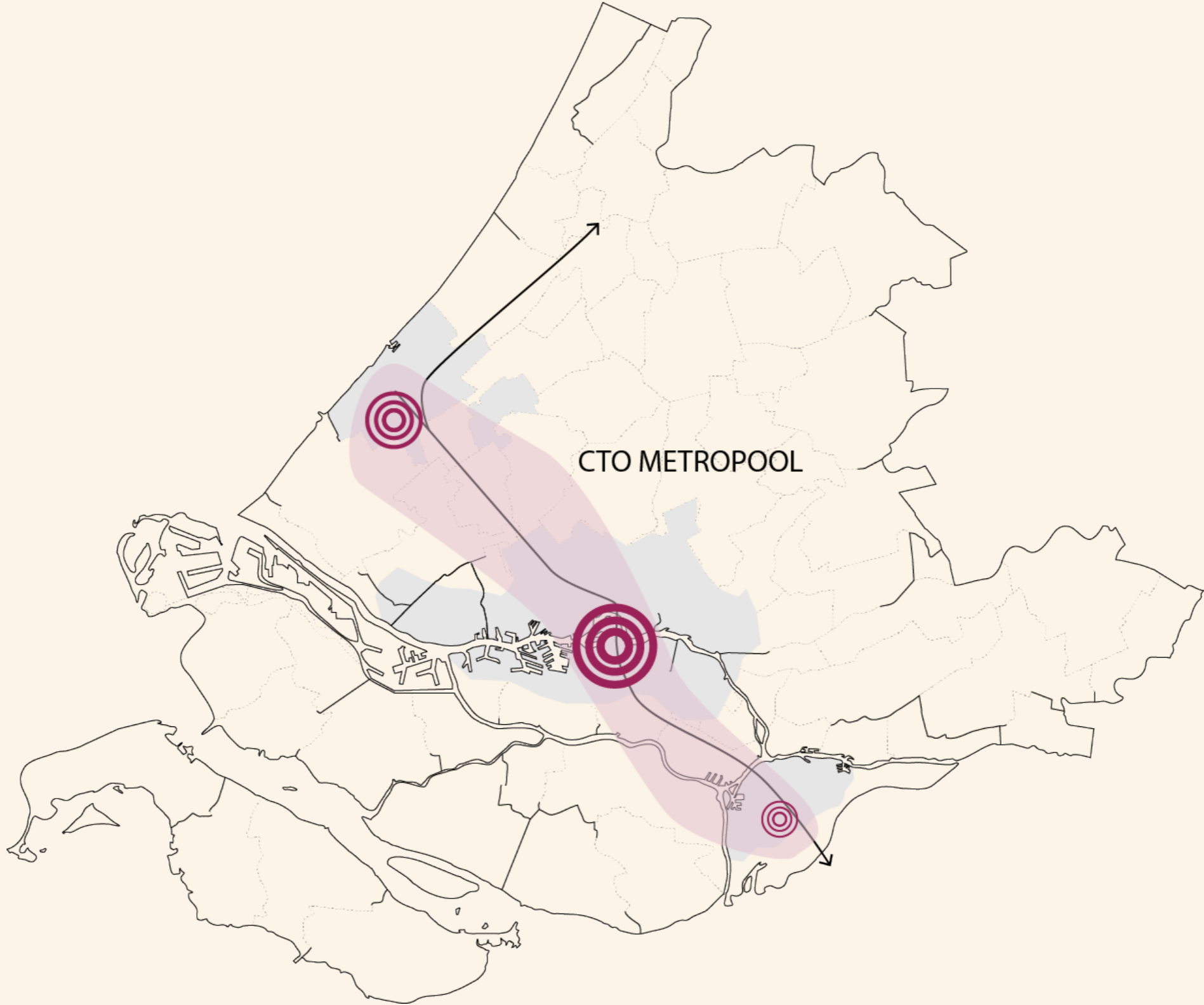
Social legacy is a future for every Olympic venue



LEGEND A0: 1:5000 N↑

- Olympic locations
- Temporary structure
- Structure to be converted
- Permanent structure
- Upgraded structure
- Performed sports
- Opening/closing ceremony
- Olympic village
- Public zone/International zone/Media zone
- Public/visitors area
- Athletes area
- Private area
- Hotel + event areas
- Visitors flow
- Athletes flow

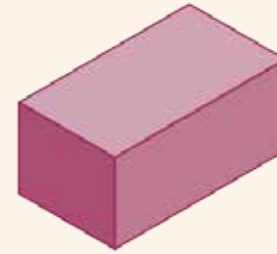
A position in the new CTO Metropool



A destination for every Olympic venue

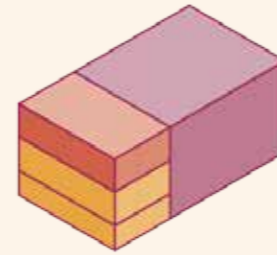
Olympic programme permanent

- Olympic stadium
- Hockey stadium
- Ahoy Multisport Hall
- Ahoy existing halls



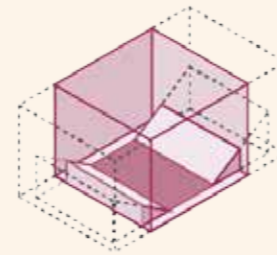
Olympic programme converted from the inside

- Olympic hall
- Broadcast centre
- Olympic village
- Media village



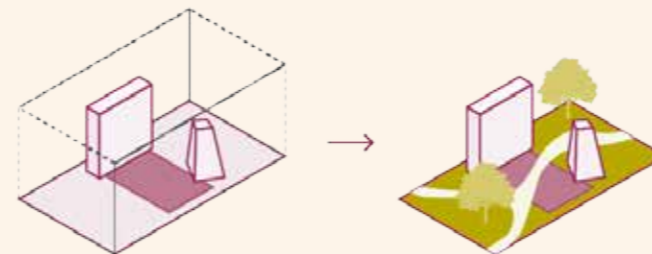
Olympic programme converted from the outside

- Taekwondo hall
- Aquatics centre
- Kuip stadium



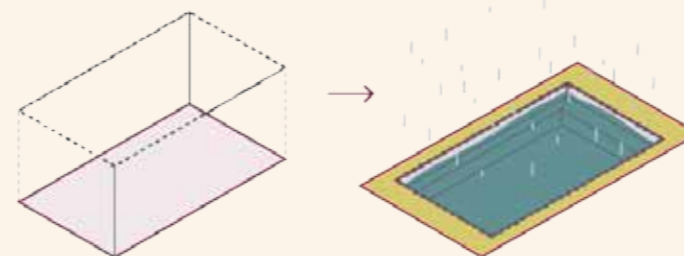
Temporary programme to leisure opportunity

- Climbing hall
- Skating hall
- Olympic plazas
- Training areas






Temporary venue to landscape structure

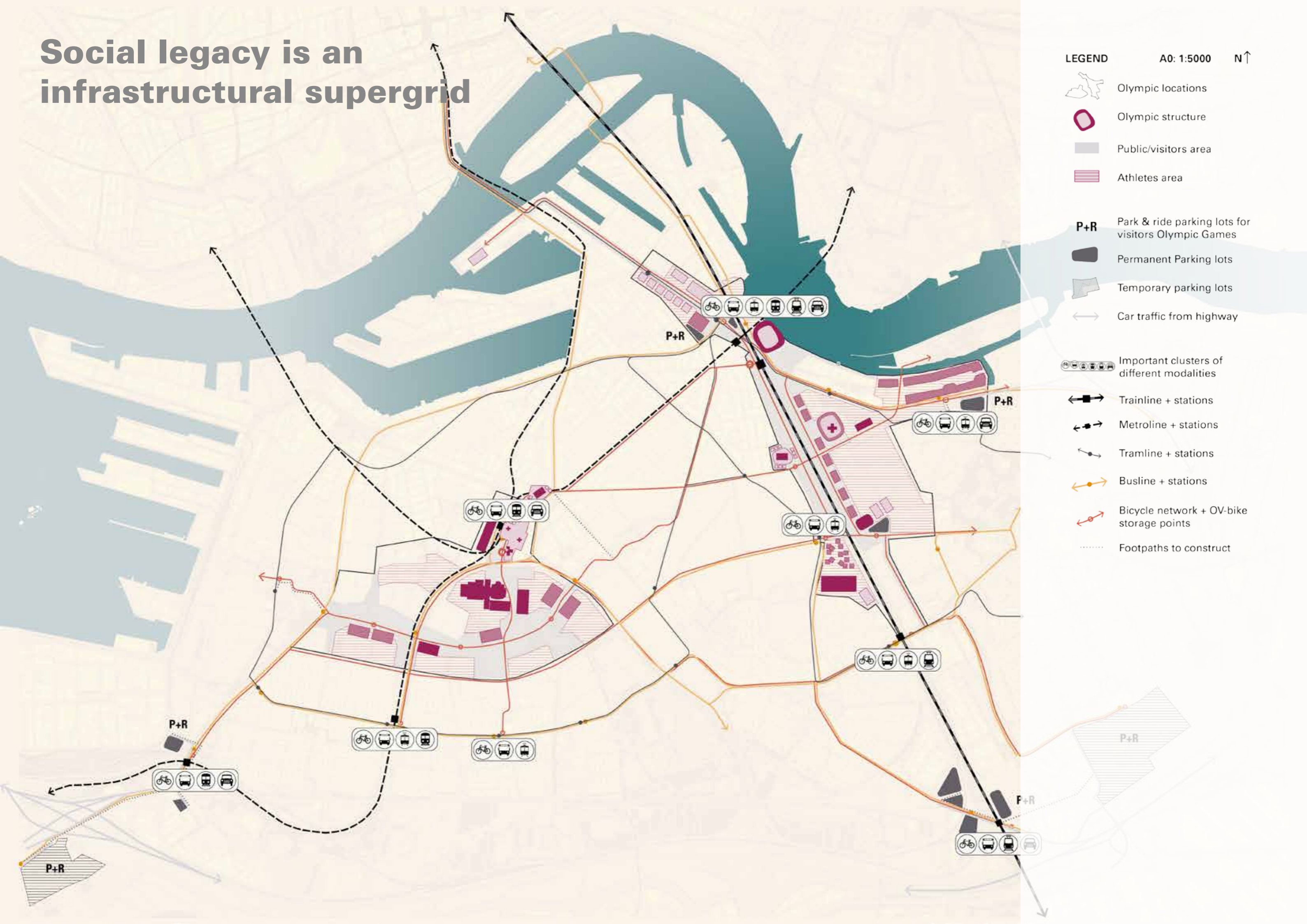
- Archery range
- Logistic pavilions
- Boxing hall
- Fencing hall
- Karate hall



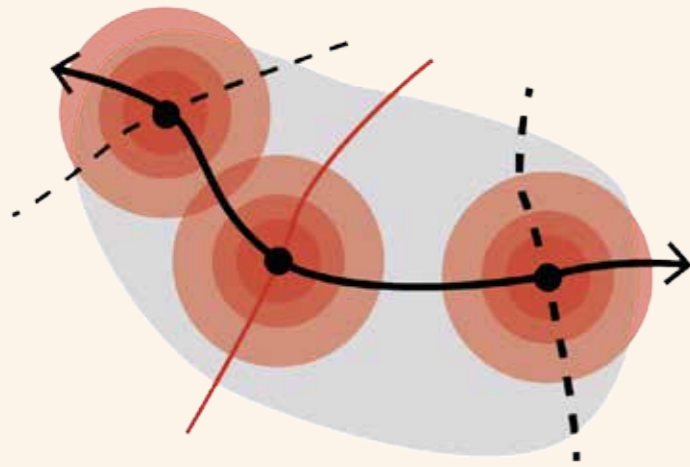
Social legacy is an infrastructural supergrid

LEGEND A0: 1:5000 N↑

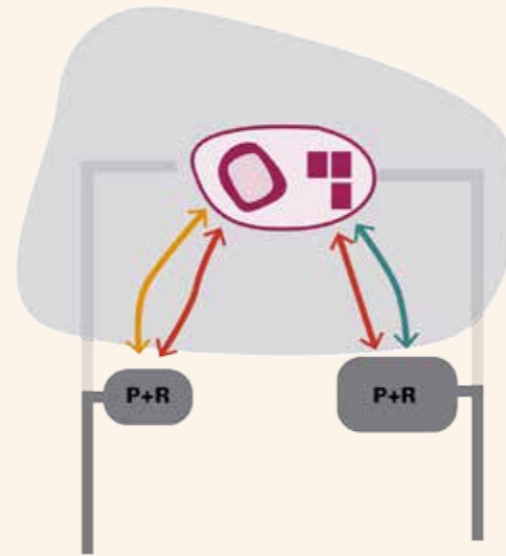
-  Olympic locations
-  Olympic structure
-  Public/visitors area
-  Athletes area
- P+R** Park & ride parking lots for visitors Olympic Games
-  Permanent Parking lots
-  Temporary parking lots
-  Car traffic from highway
-  Important clusters of different modalities
-  Trainline + stations
-  Metroline + stations
-  Tramline + stations
-  Busline + stations
-  Bicycle network + OV-bike storage points
-  Footpaths to construct



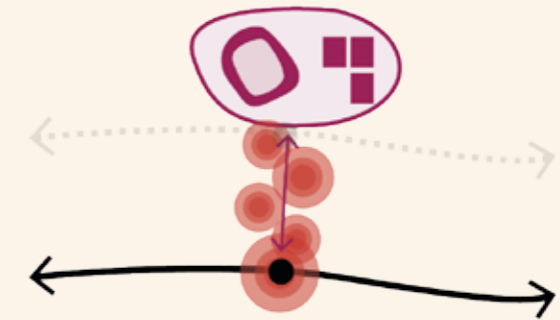
Advantages of a supergrid



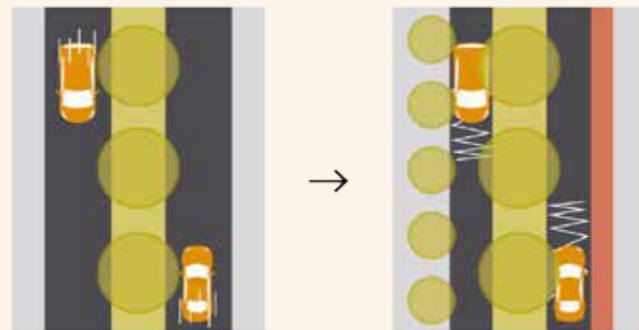
**Increased connectivity
by adding transport
modes at a node**



**Less foreign cars
in the urban structure**



**More profit for local
stores by guided
visitor flows**

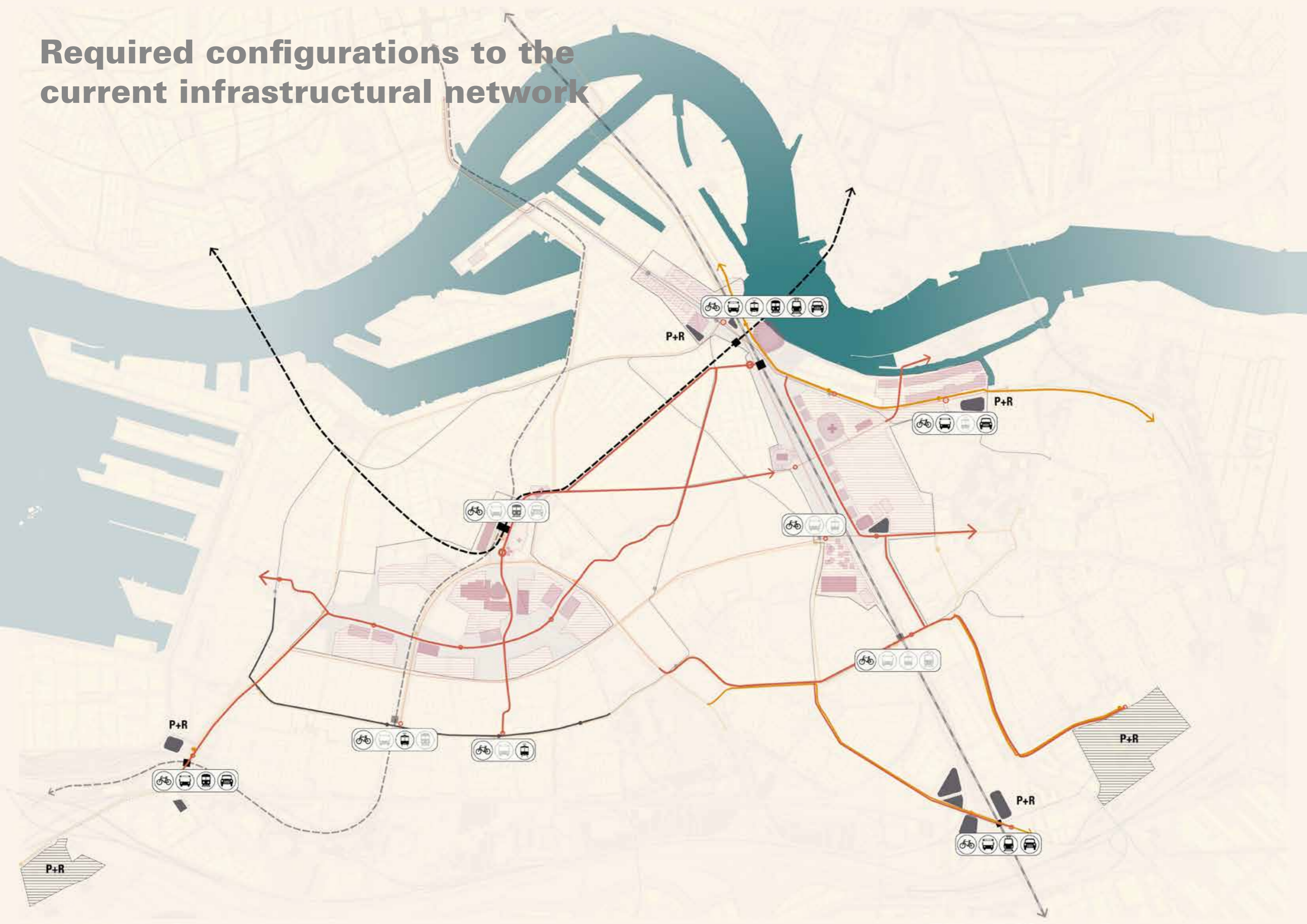


**Reduction of car lane width
to benefit slow traffic**



**Offering more
transport possibilities
to the inhabitants**

Required configurations to the current infrastructural network


















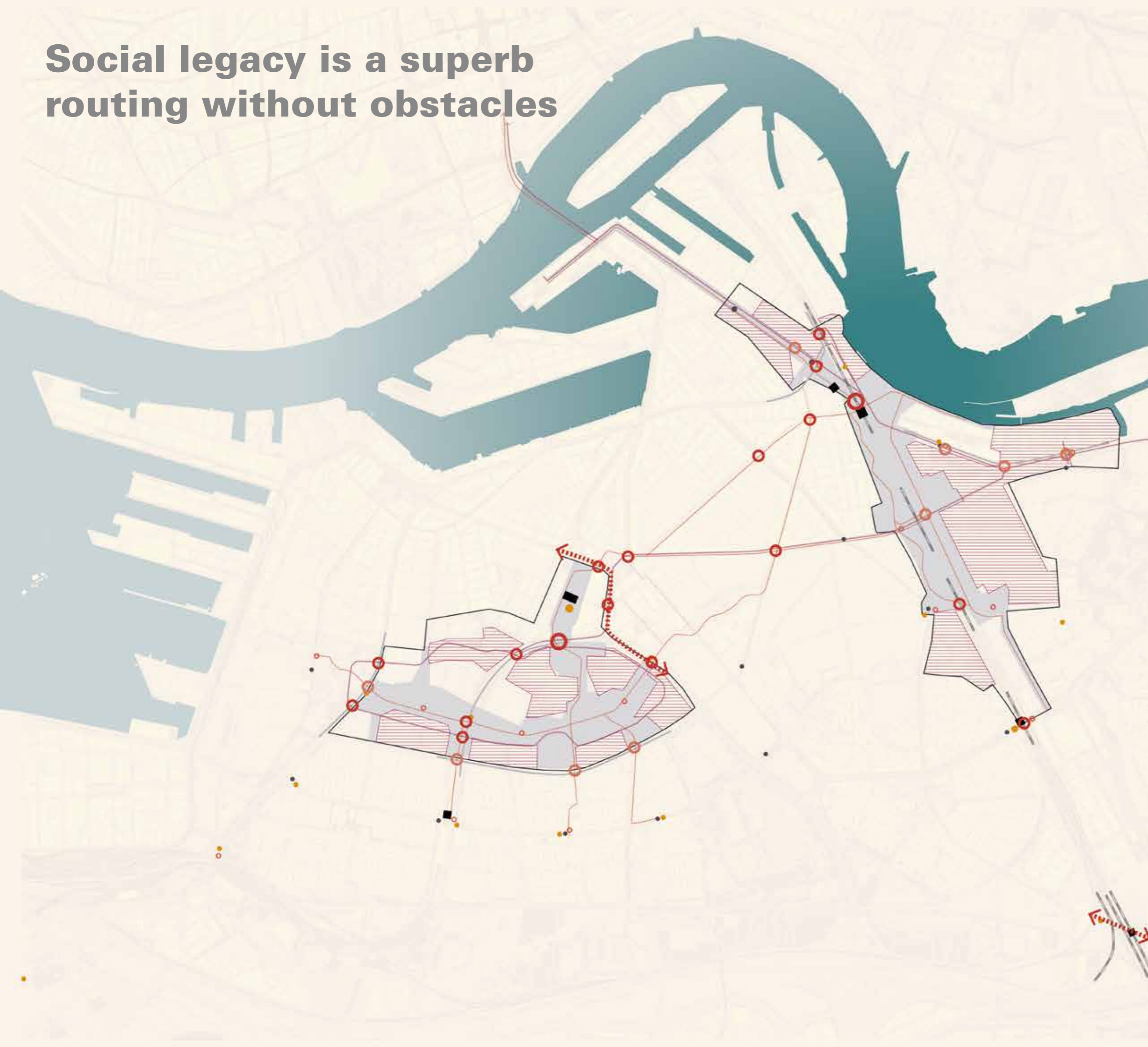
Social legacy is a superb routing without obstacles

LEGEND

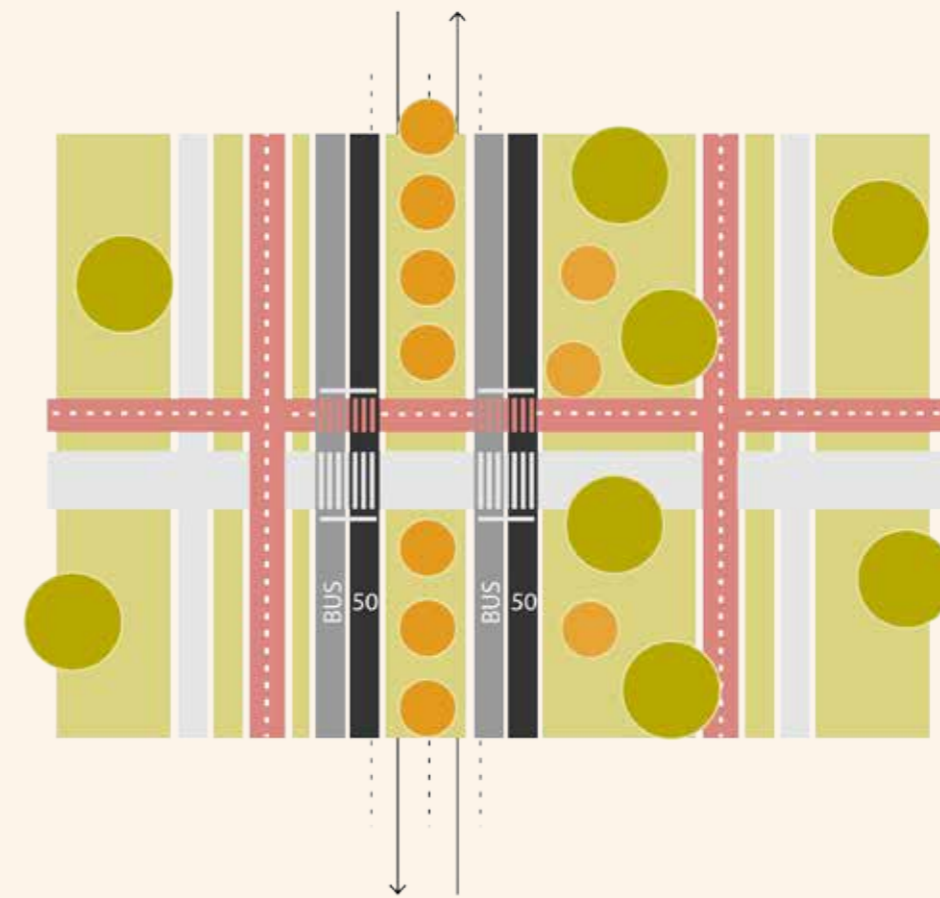
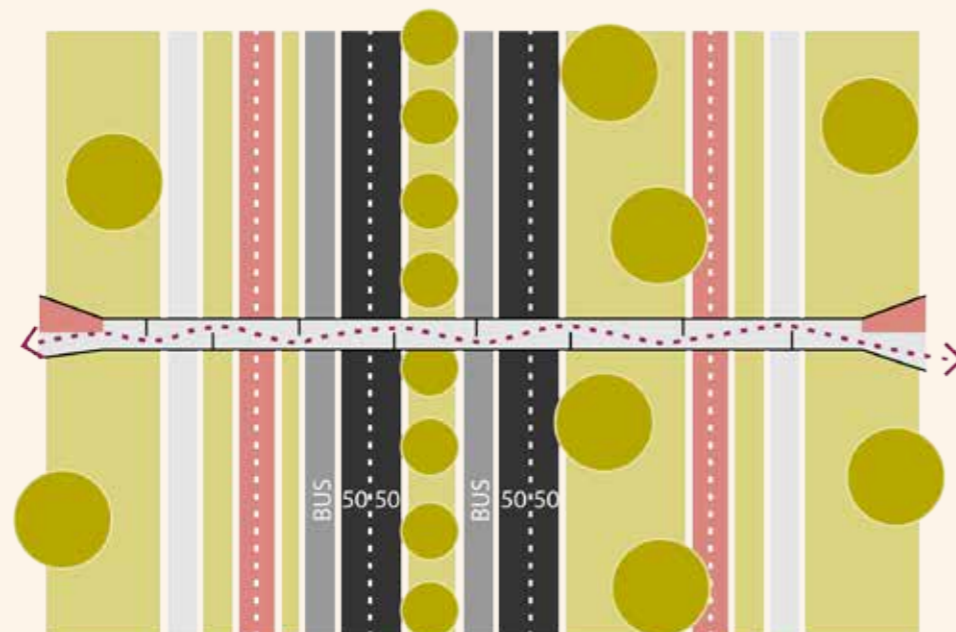
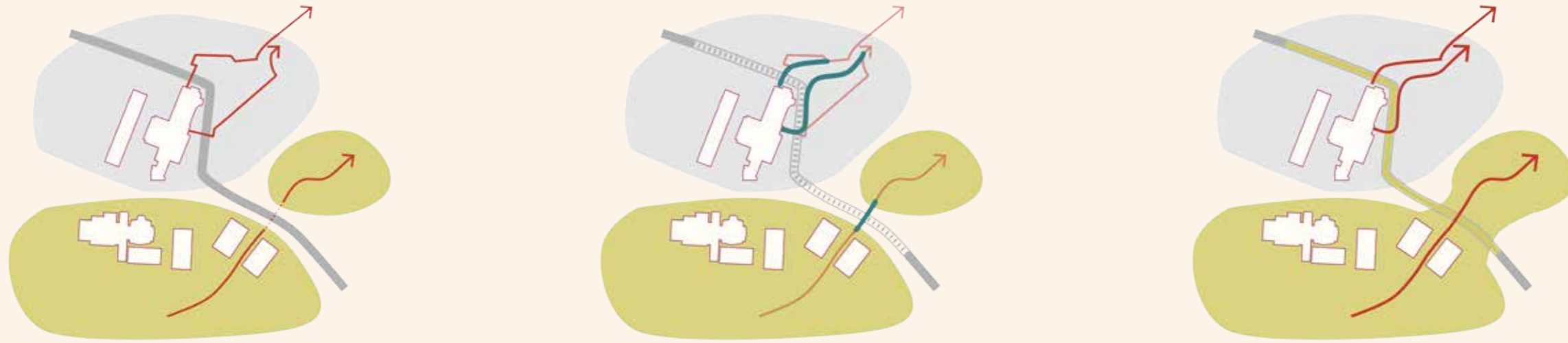
A0: 1:5000

N↑

-  Olympic locations
-  Public/visitors area
-  Athletes area
-  Redesign of most important crossings
-  Redesign of important crossings
-  Redesign of less important crossings
-  Tunnel required
-  Important clusters of different modalities
-  Trainstation
-  Metrostation
-  Tramstation
-  Busstation
-  OV-bike storage
-  Visitors flow
-  Athletes flow

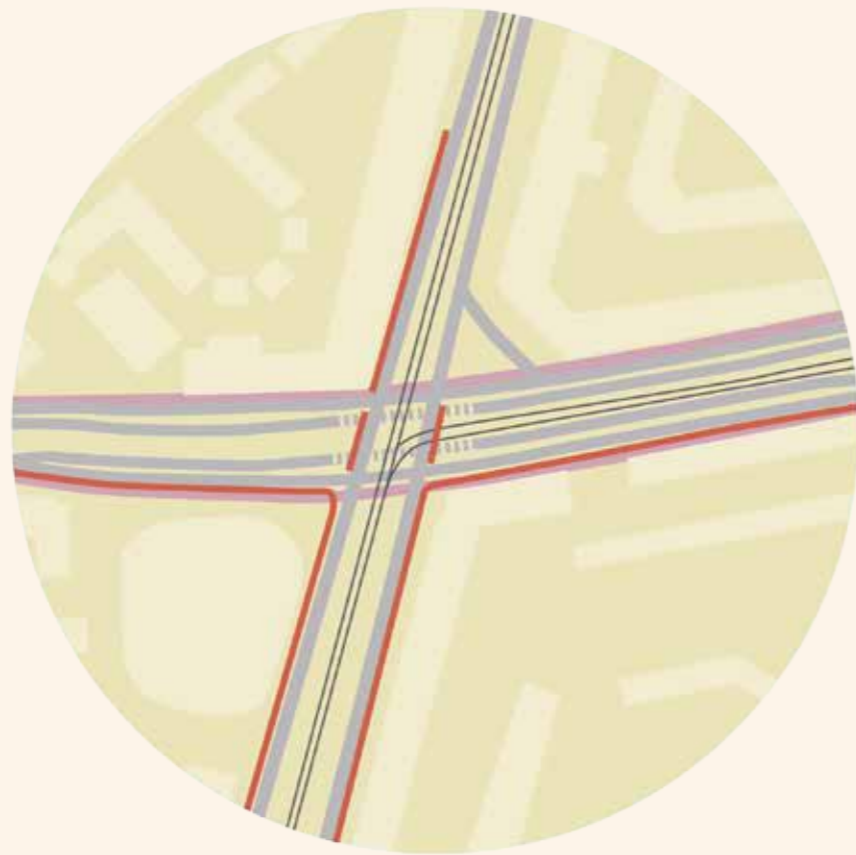


Improved environment around Zuidplein



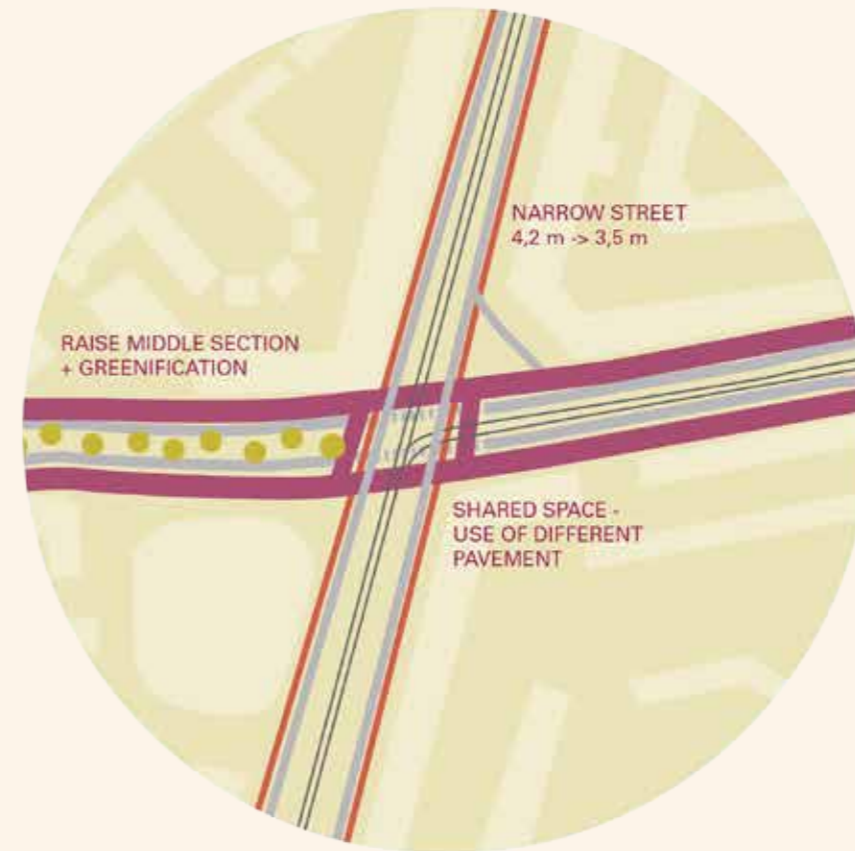
Increased accessibility by redesign crossings

LOCATION
ZUIDERPARK



LOCATION
VARKENOORD

LOCATION
ZUIDERPARK

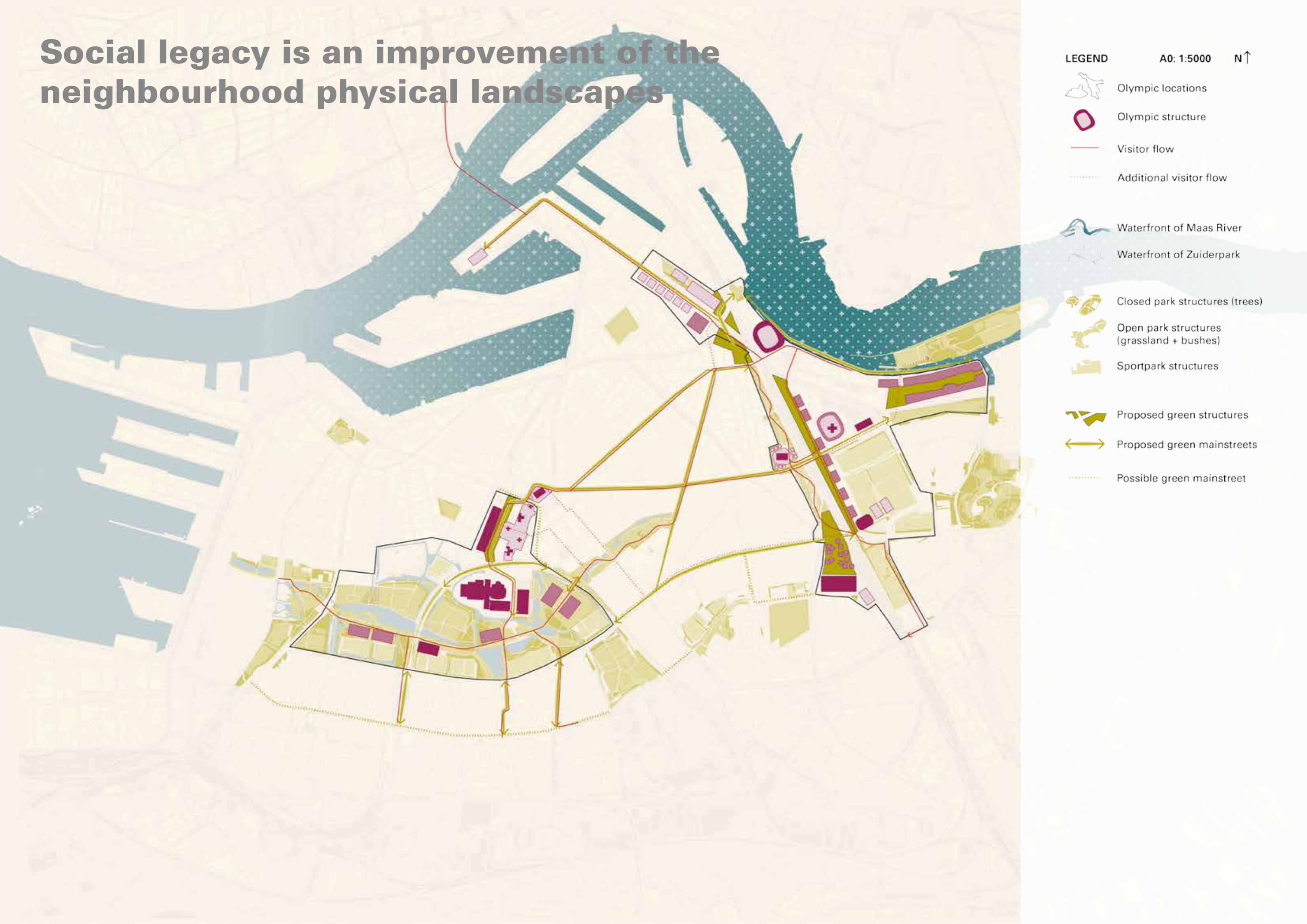


LOCATION
VARKENOORD

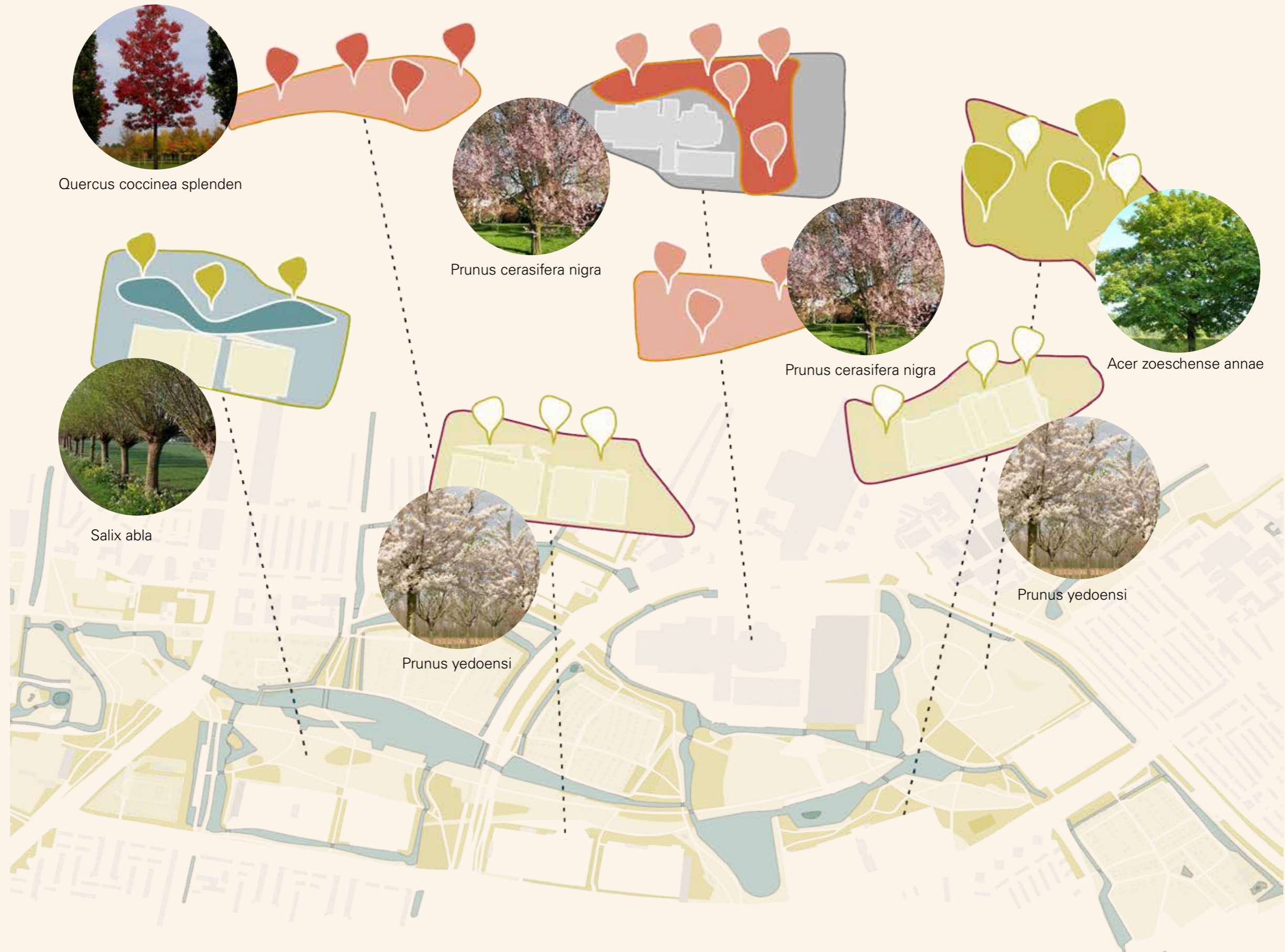
Social legacy is an improvement of the neighbourhood physical landscapes

LEGEND A0: 1:5000 N↑

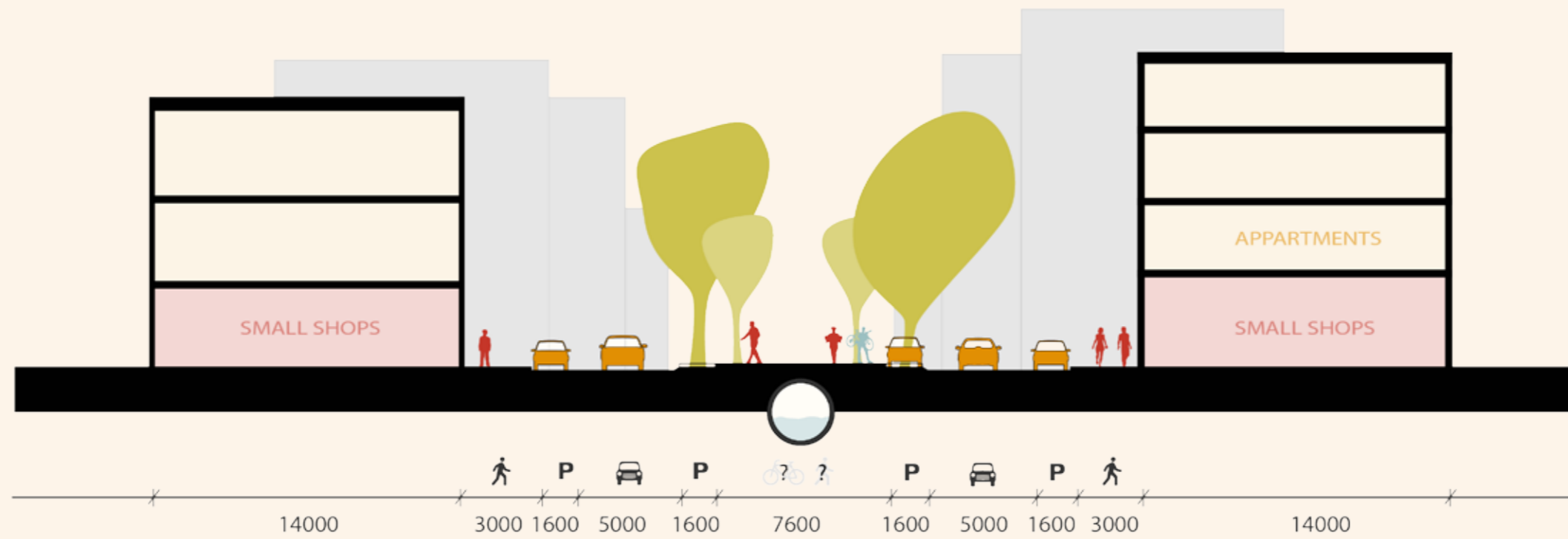
-  Olympic locations
-  Olympic structure
-  Visitor flow
-  Additional visitor flow
-  Waterfront of Maas River
-  Waterfront of Zuiderpark
-  Closed park structures (trees)
-  Open park structures (grassland + bushes)
-  Sportpark structures
-  Proposed green structures
-  Proposed green mainstreets
-  Possible green mainstreet



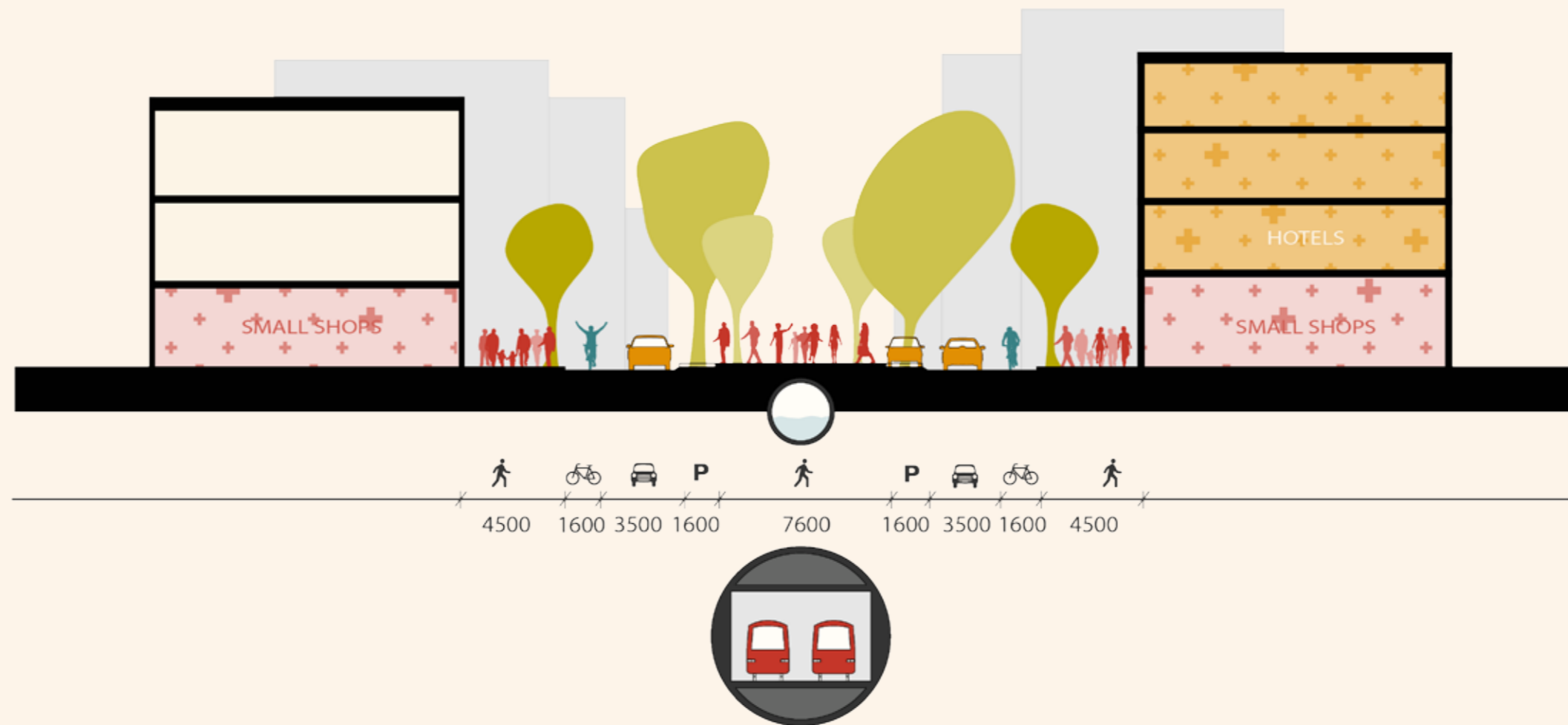
Increased identity and environment of Zuiderpark



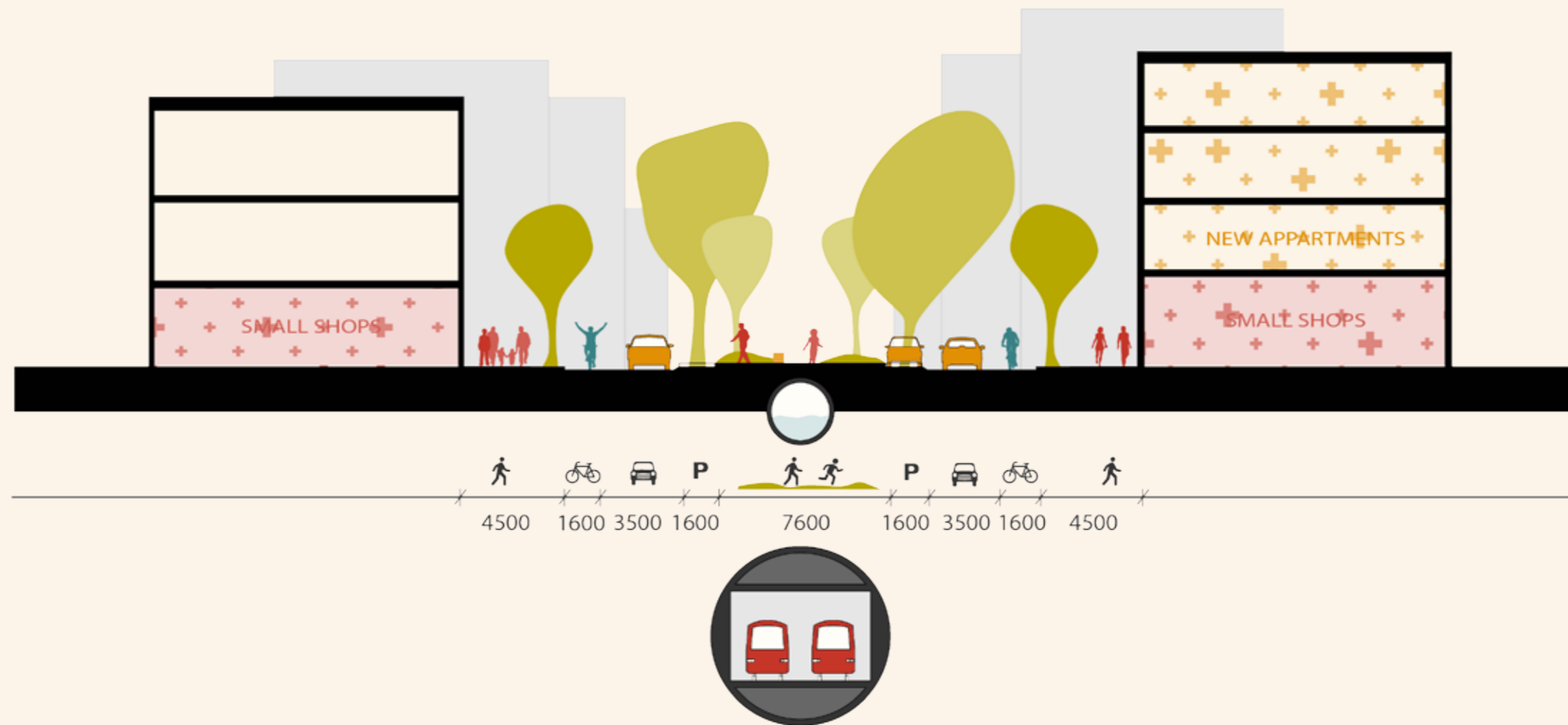
Configuration of the mainstreets



Configuration of the mainstreets



Configuration of the mainstreets



Social legacy are initiatives to start moving in the neighbourhood public space

LEGEND

A0: 1:5000 N↑

-  Olympic locations
-  Shops/office related structures
-  Education related structures
-  Health related structures
-  Olympic plaza's
-  Relaxed green spaces
-  Allround sport spaces
-  Educative sport spaces
-  Showcase sport spaces
-  1st priority: directly to Olympic walking routes
-  2nd priority: central positions in degraded neighborhoods
-  3rd priority: Urban spaces in non degraded neighborhoods
-  Walking route
-  Jogging route
-  Running route
-  Bicycle route



A set of playscapes with different intensities



Showcase and multi-functional spaces



Educational and encouraging spaces

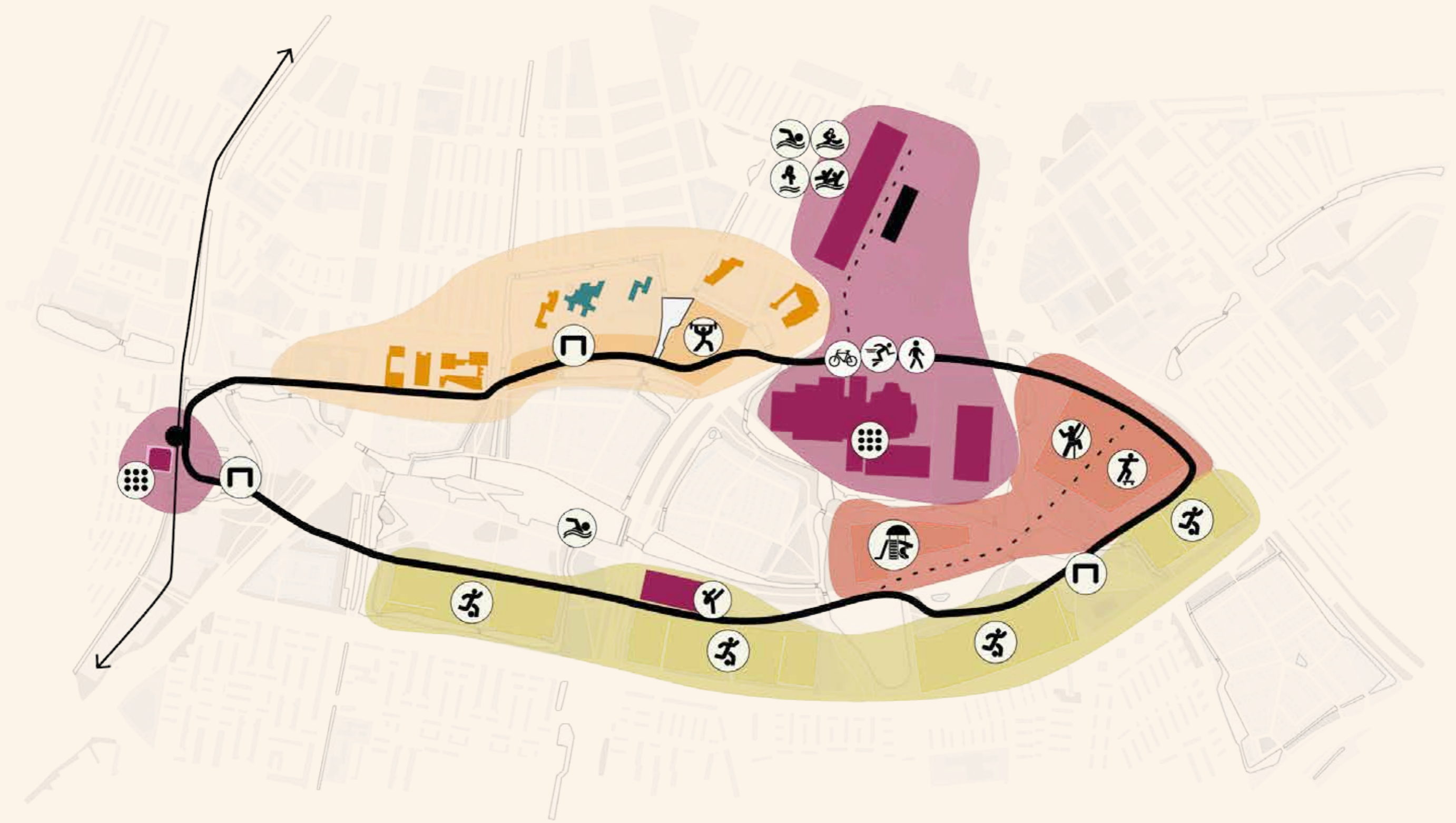


Allround sport spaces



Relaxed and motivating spaces






A view of Zuiderpark in 30 minutes



Social legacy is a transformation from commercial to social

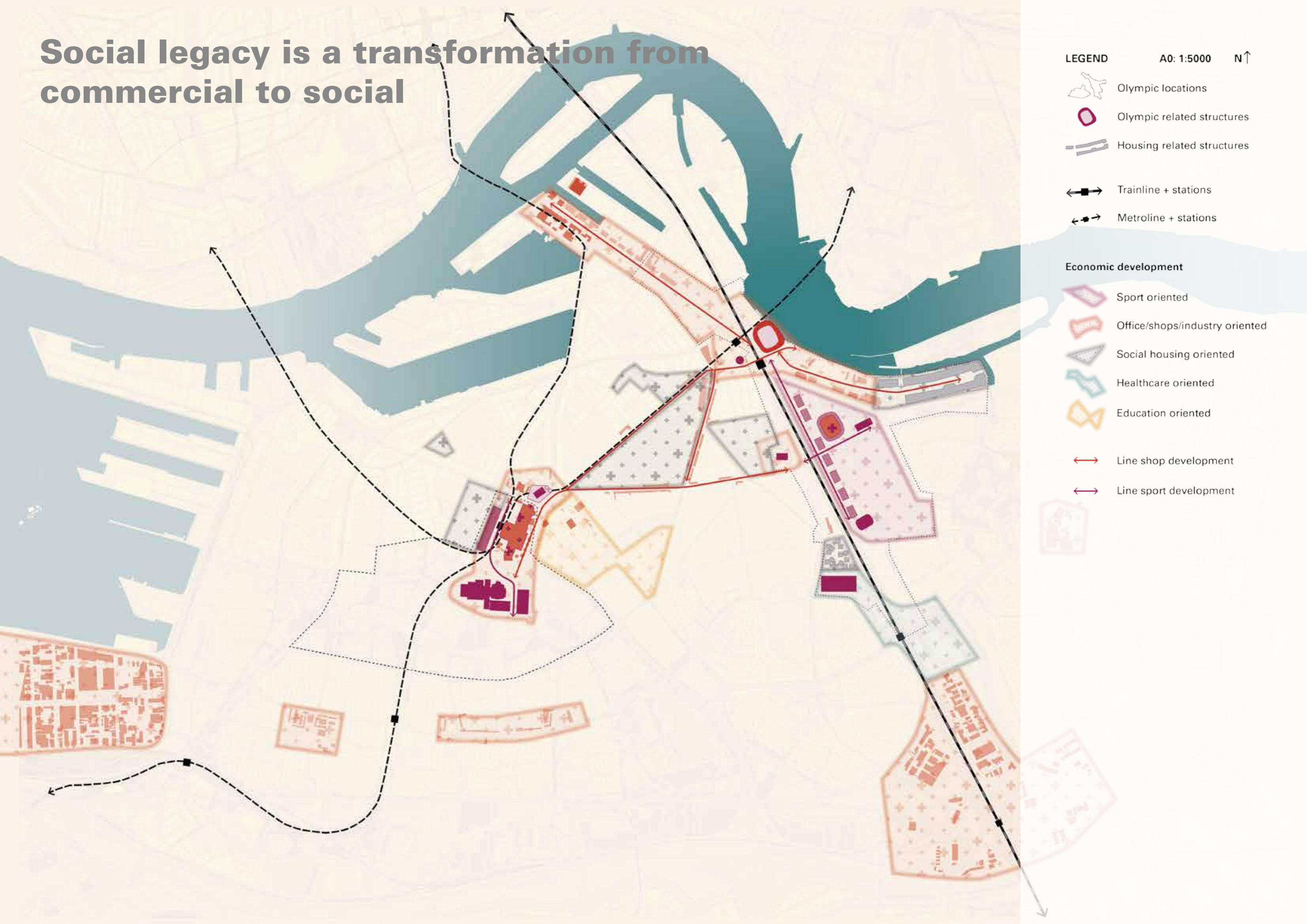
LEGEND

A0: 1:5000 N↑

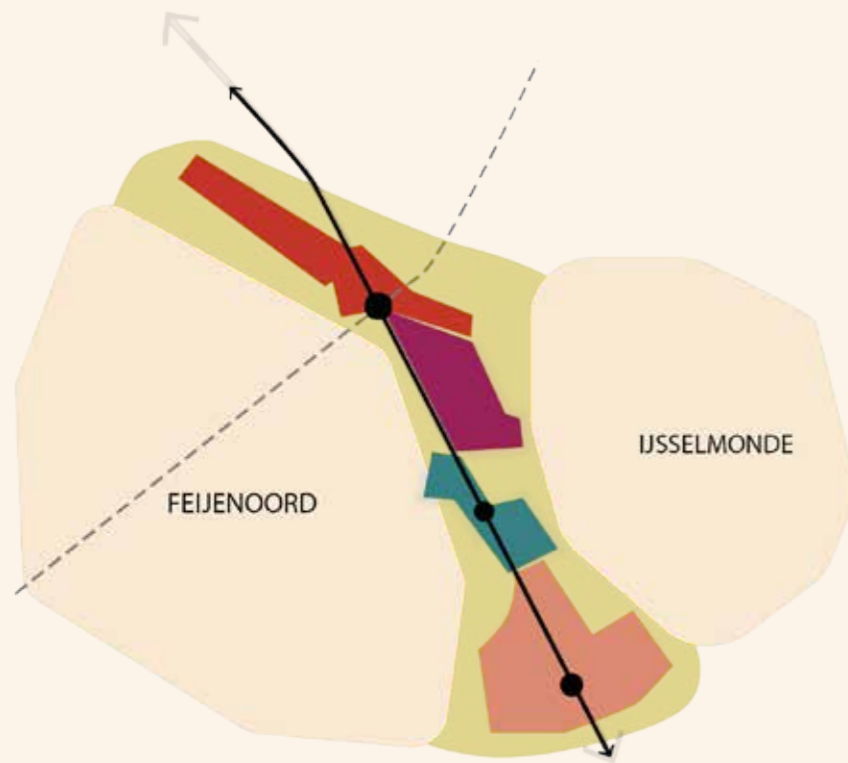
-  Olympic locations
-  Olympic related structures
-  Housing related structures
-  Trainline + stations
-  Metroline + stations

Economic development

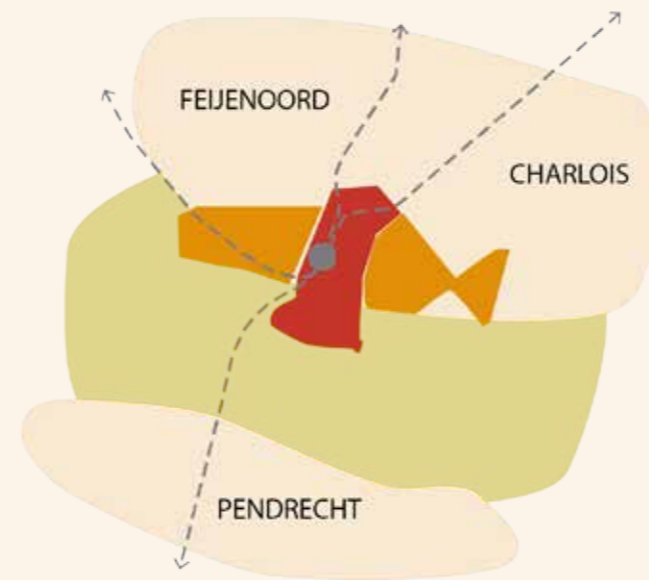
-  Sport oriented
-  Office/shops/industry oriented
-  Social housing oriented
-  Healthcare oriented
-  Education oriented
-  Line shop development
-  Line sport development



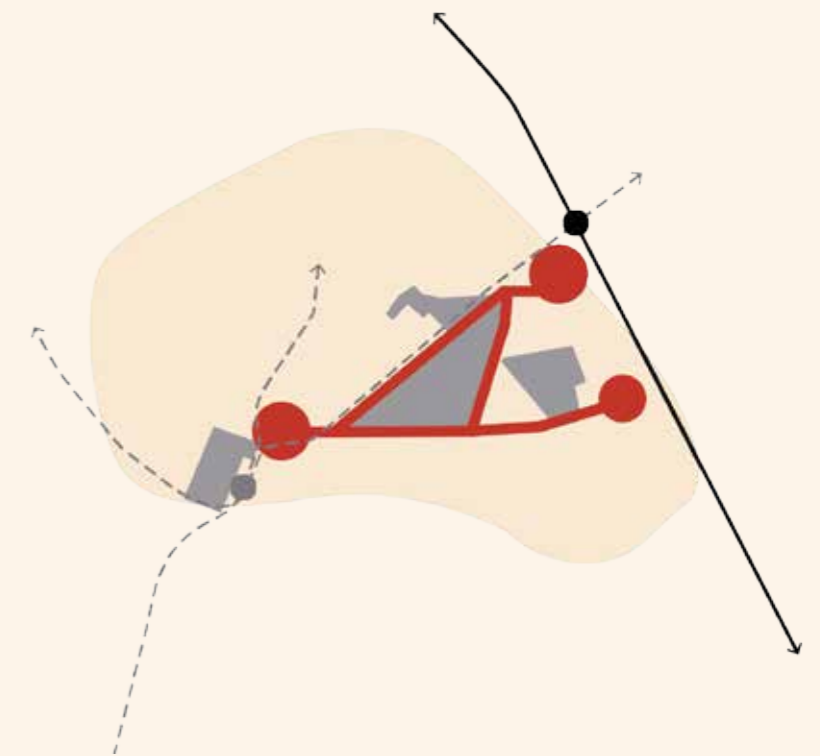
Three important employment clusters



Employment axis around railway



Shopping and educational district



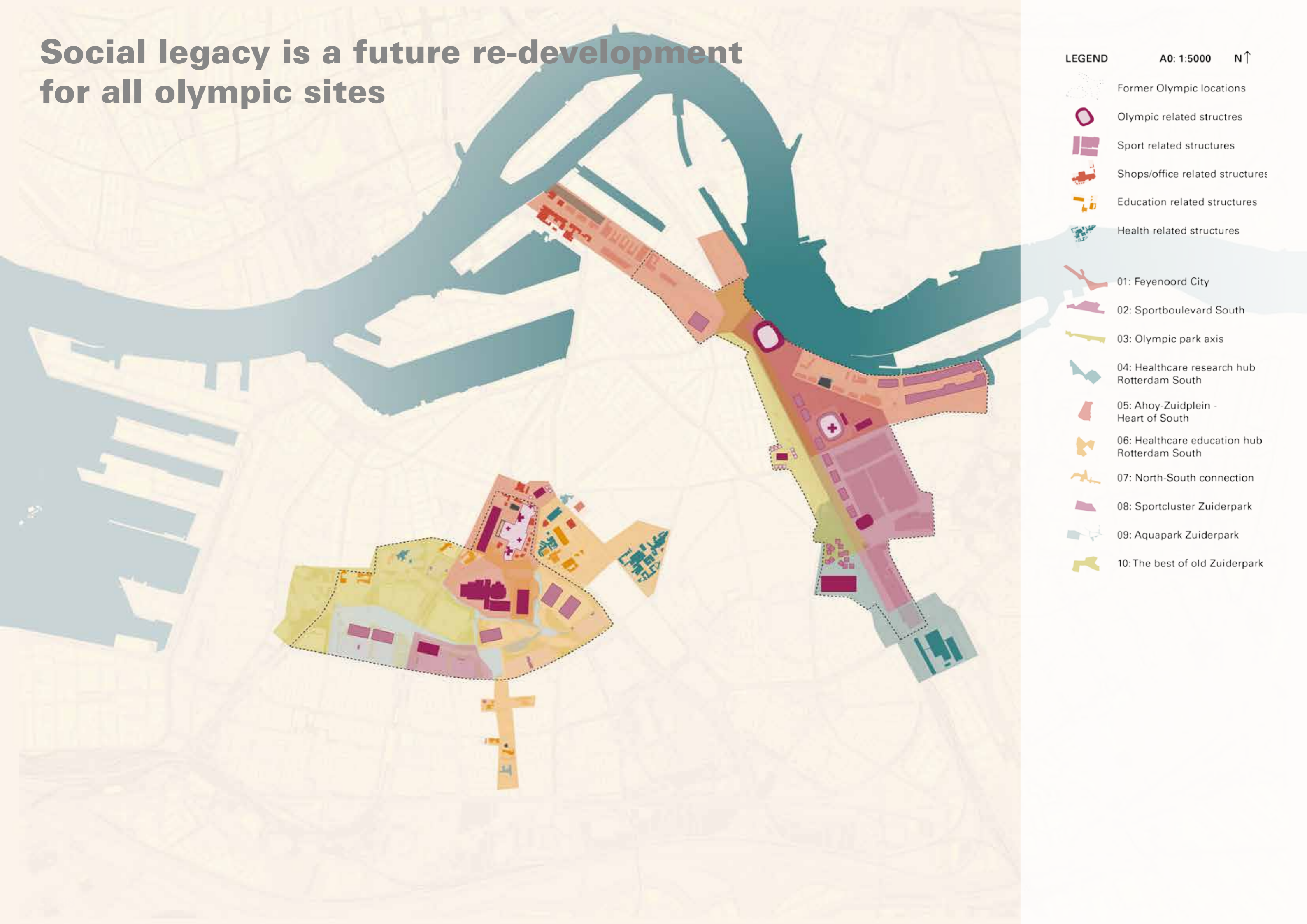
Local shops and connective nodes

Social legacy is a future re-development for all olympic sites

LEGEND

A0: 1:5000 N↑

- Former Olympic locations
- Olympic related structures
- Sport related structures
- Shops/office related structures
- Education related structures
- Health related structures
- 01: Feyenoord City
- 02: Sportboulevard South
- 03: Olympic park axis
- 04: Healthcare research hub Rotterdam South
- 05: Ahoy-Zuidplein - Heart of South
- 06: Healthcare education hub Rotterdam South
- 07: North-South connection
- 08: Sportcluster Zuiderpark
- 09: Aquapark Zuiderpark
- 10: The best of old Zuiderpark



situation prior to the Olympic Games

(London Olympic Park)



**Stratford railway depot
& industrial park**



Development of the Olympic park (London Olympic Park)



London 2012 Olympic Park



Post-Olympic planning (London Olympic Park)



**Queen Elizabeth Olympic Park
redevelopment**



A future identity for both Olympic sites

Overview of all vignettes



The social Olympic strategy for Rotterdam South

LEGEND

A0: 1:5000

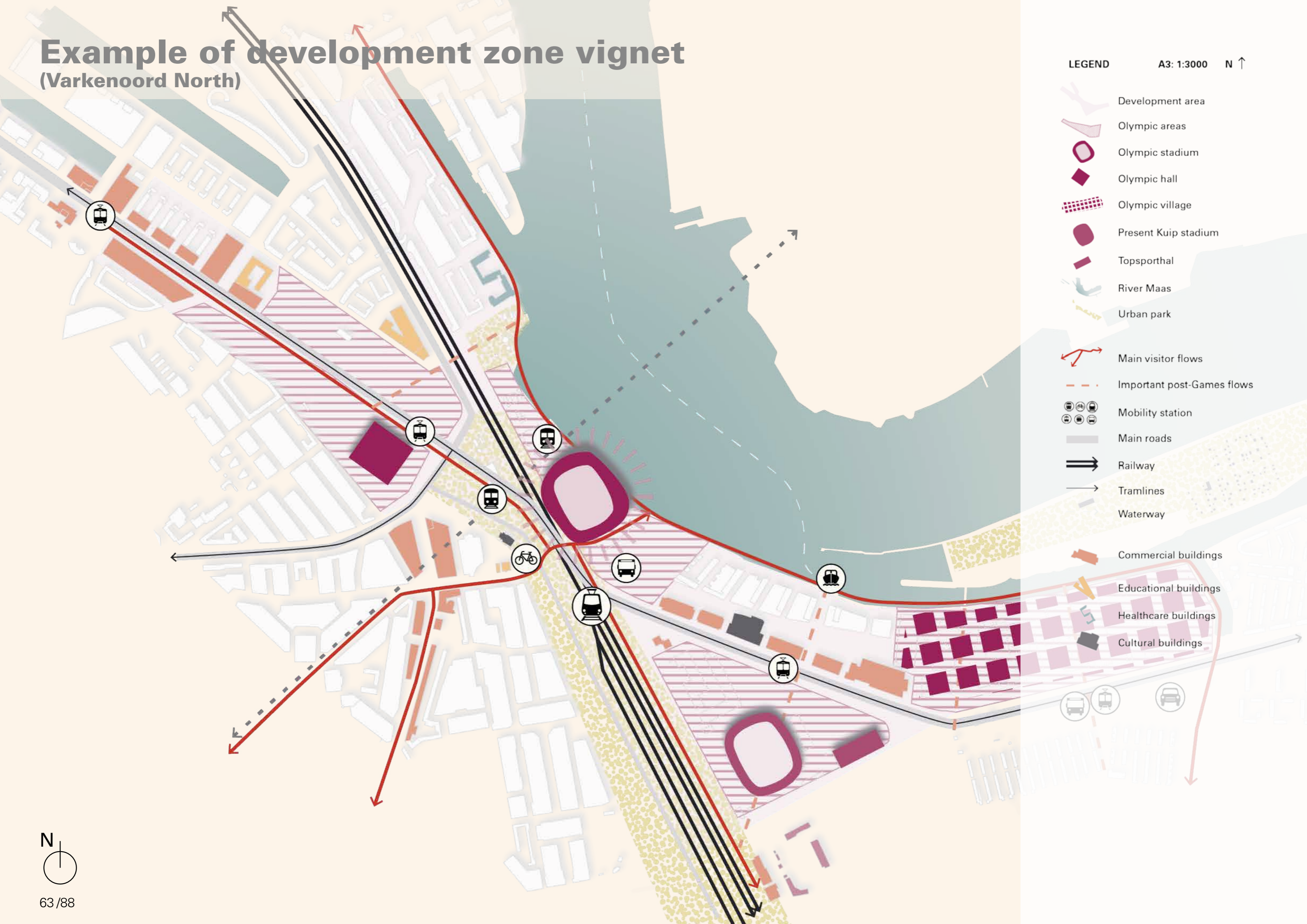
N↑

-  Olympic locations
-  Sport program
-  Sport oriented structures
-  Economic oriented structures
-  Education oriented structures
-  Healthcare oriented structures
-  Housing oriented structures
-  Focus aspect of a development area
-  New park
-  New green lane
-  Permanent Parking lots
-  Temporary parking lots
-  Trainline + stations
-  Metroline + stations
-  Tramline + stations
-  Busline + stations
-  Bicycle network + OV-bike storage points



Example of development zone vignet (Varkenoord North)

LEGEND A3: 1:3000 N ↑



- Development area
- Olympic areas
- Olympic stadium
- Olympic hall
- Olympic village
- Present Kuip stadium
- Topsporthal
- River Maas
- Urban park
- Main visitor flows
- Important post-Games flows
- Mobility station
- Main roads
- Railway
- Tramlines
- Waterway
- Commercial buildings
- Educational buildings
- Healthcare buildings
- Cultural buildings

Development aim for Varkenoord North

Aim for Varkenoord

Current situation



Feyenoord city - SPORT & CITY ENVIRONMENT



Varkenoordse viaduct



Colloseumweg



Veranda



Stadionweg

A future for all Olympic venues



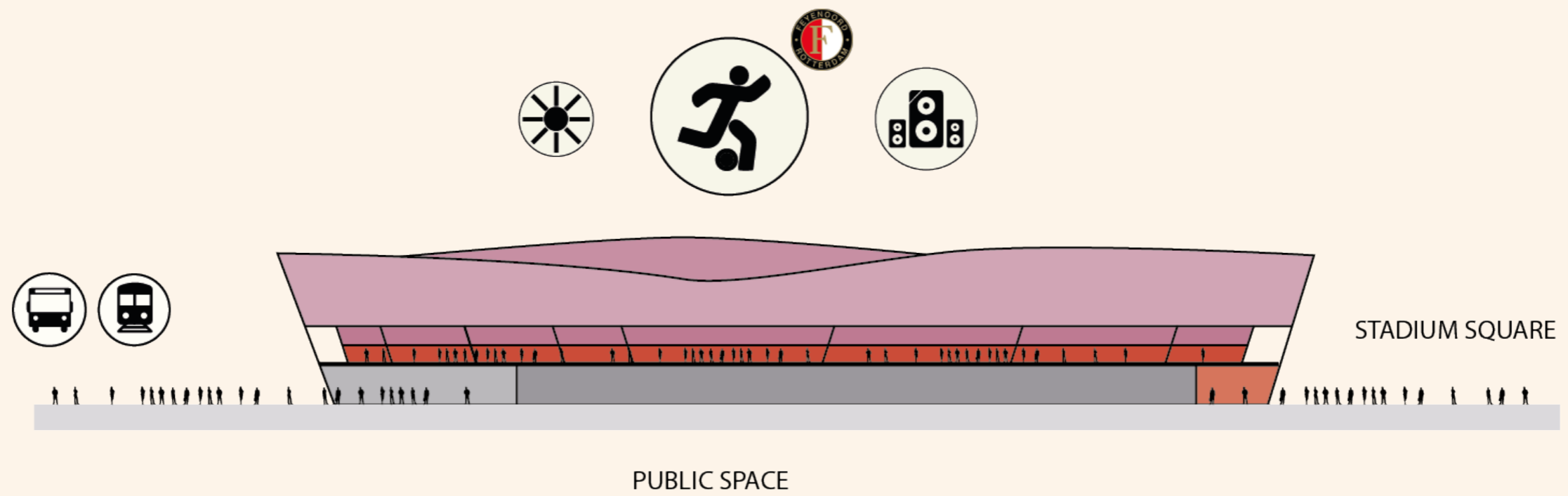
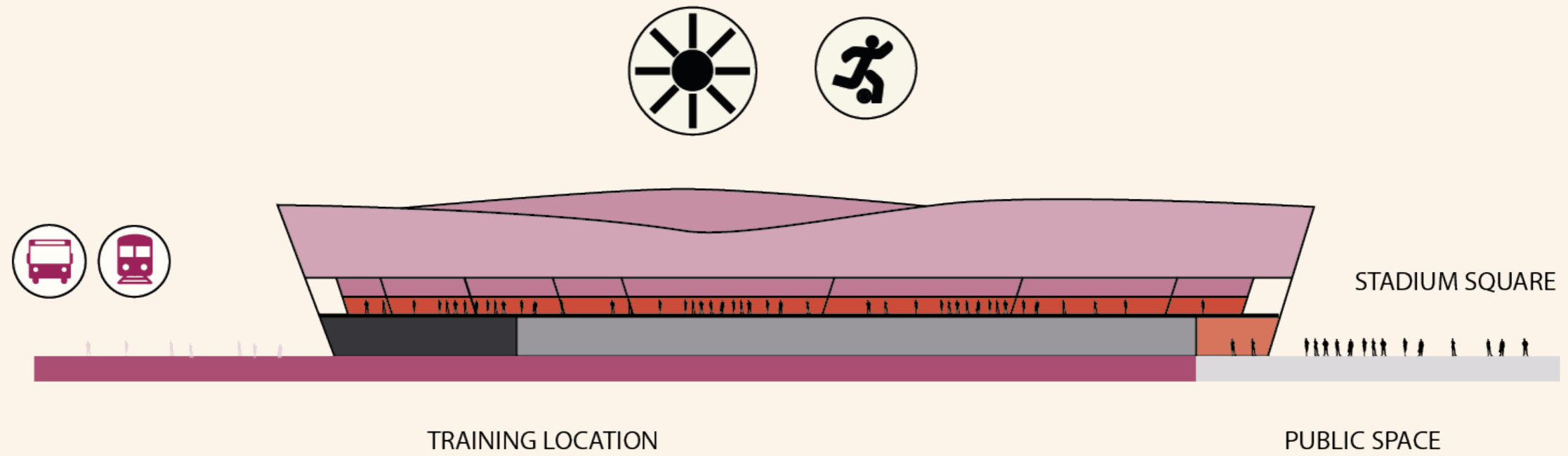
OLYMPIC HALL - converted
SERVICE COMPLEXES - temporary

OLYMPIC STADIUM - permanent
TRAININGSFACILITIES - temporary

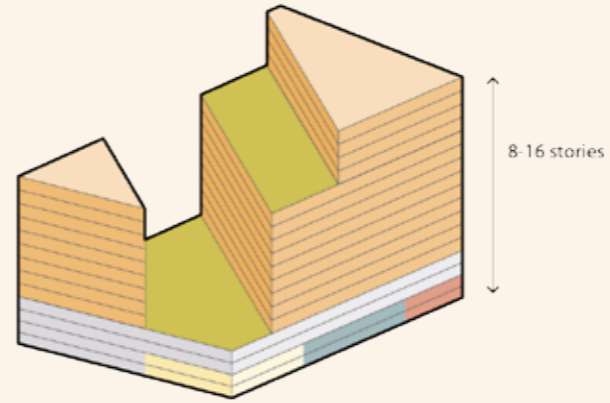
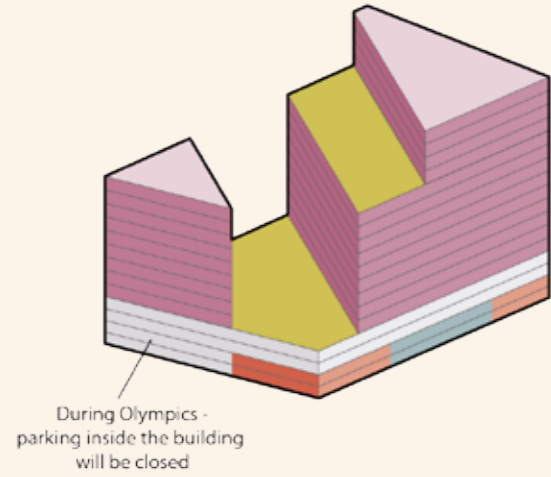
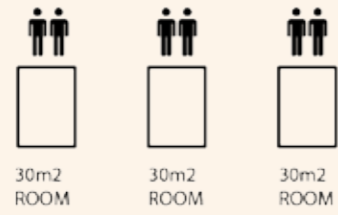
KUIP STADIUM - converted
SPONSOR ZONE - converted

OLYMPIC VILLAGE - converted
VILLAGE PARK - permanent

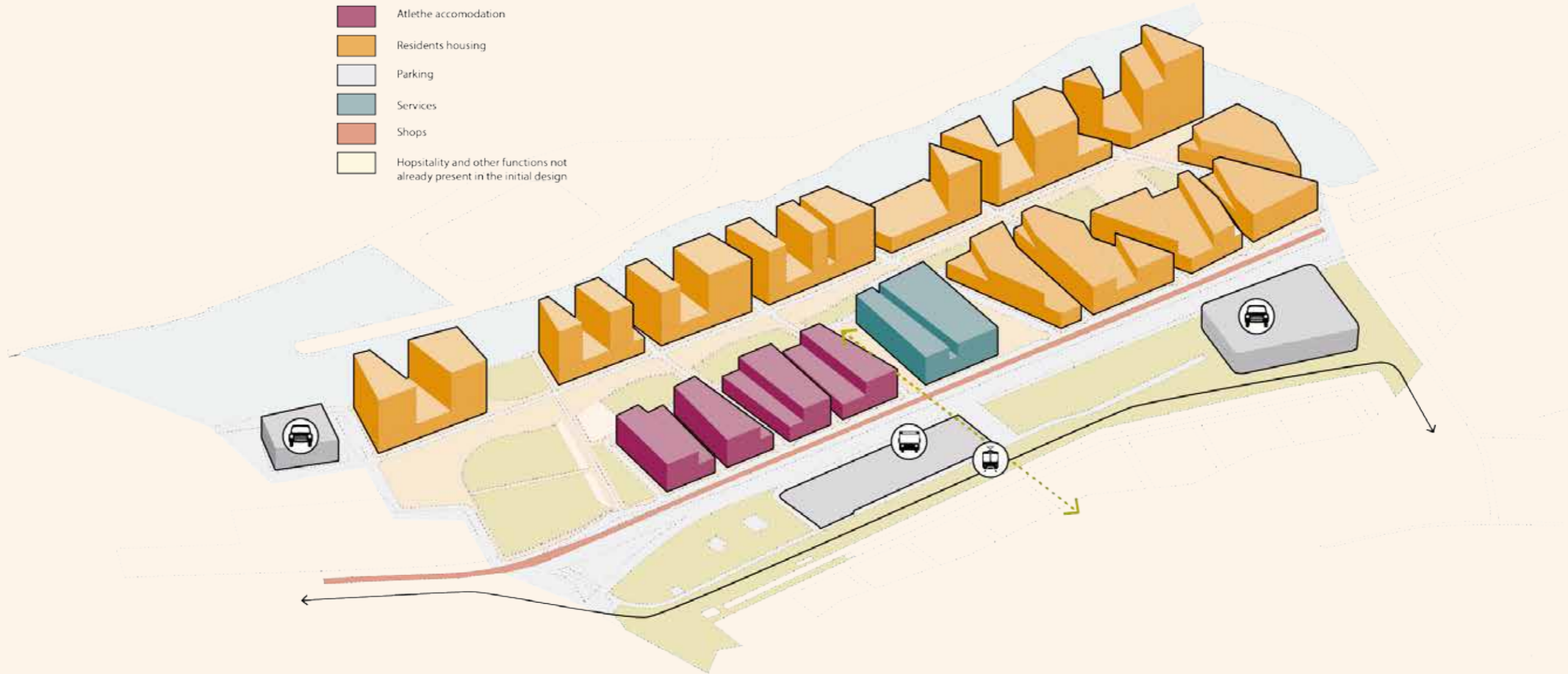
A permanent occupation of the stadium



Switch from athletes to inhabitants

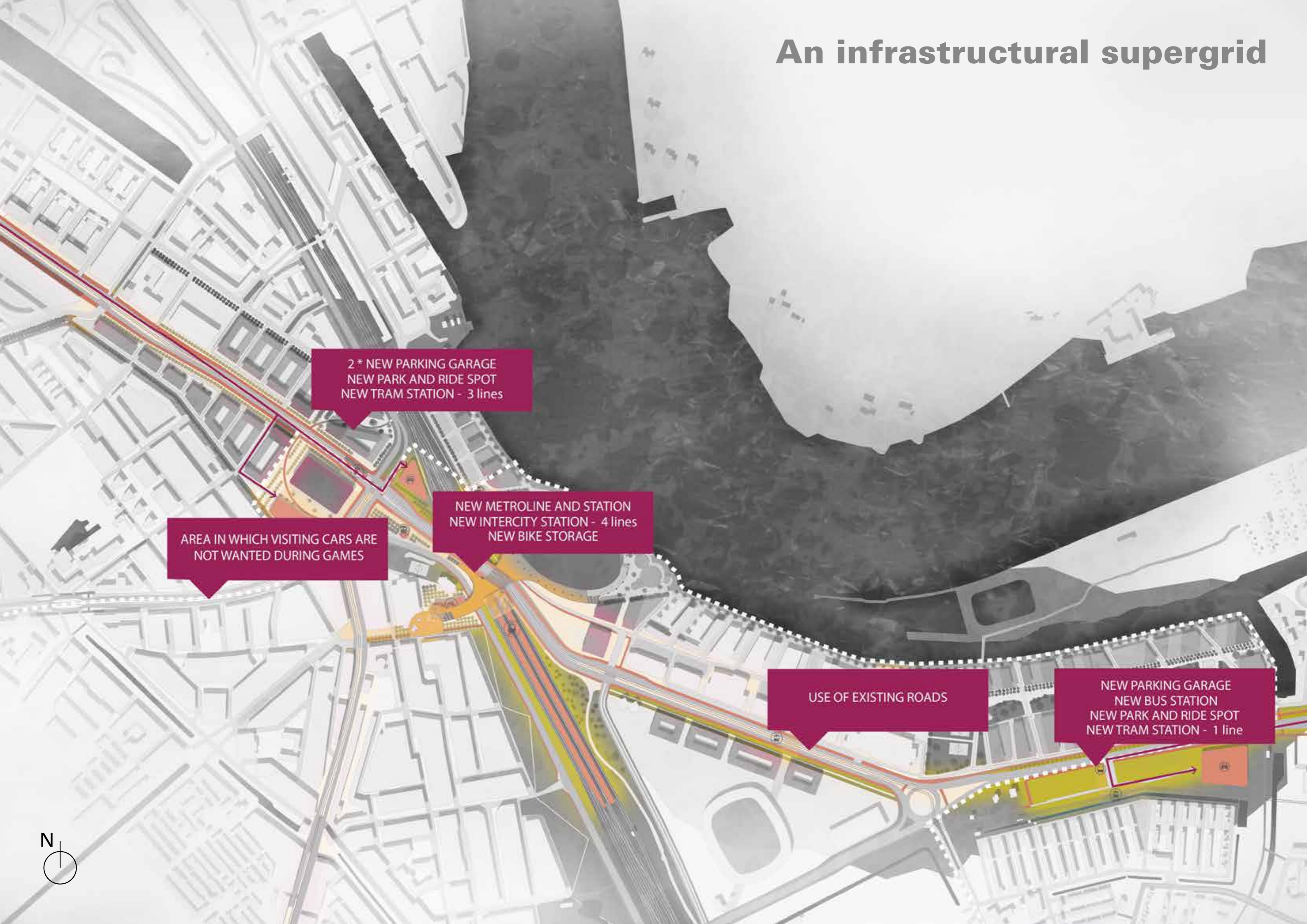


- Atlethe accomodation
- Residents housing
- Parking
- Services
- Shops
- Hospitality and other functions not already present in the initial design





An infrastructural supergrid



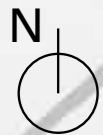
2 * NEW PARKING GARAGE
NEW PARK AND RIDE SPOT
NEW TRAM STATION - 3 lines

AREA IN WHICH VISITING CARS ARE
NOT WANTED DURING GAMES

NEW METROLINE AND STATION
NEW INTERCITY STATION - 4 lines
NEW BIKE STORAGE

USE OF EXISTING ROADS

NEW PARKING GARAGE
NEW BUS STATION
NEW PARK AND RIDE SPOT
NEW TRAM STATION - 1 line



A superb routing



SMOOTH TRANSITION BETWEEN
TUNNEL AND LANGE HILLE DIJK

NEW CROSSING TO OLYMPIC HALL

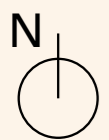
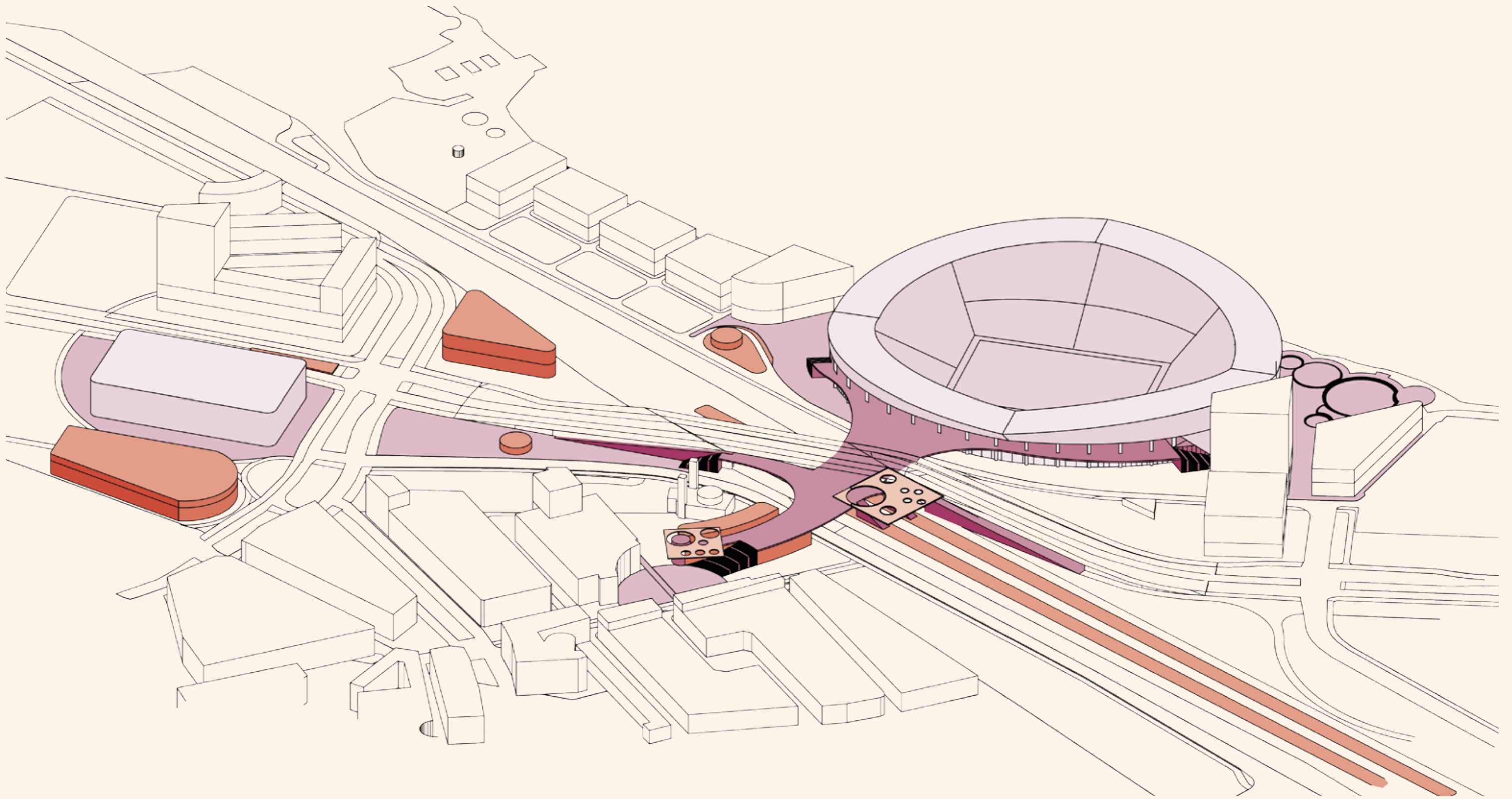
URBAN BRIDGE BETWEEN STADIUM
AND NEIGHBORHOODS
ENTRANCE TO TRAINSTATION AND
BRIDGE TO BUS/TRAM/METRO

NEW CROSSING TO OLYMPIC PARK
AND SPORT BOULEVARD

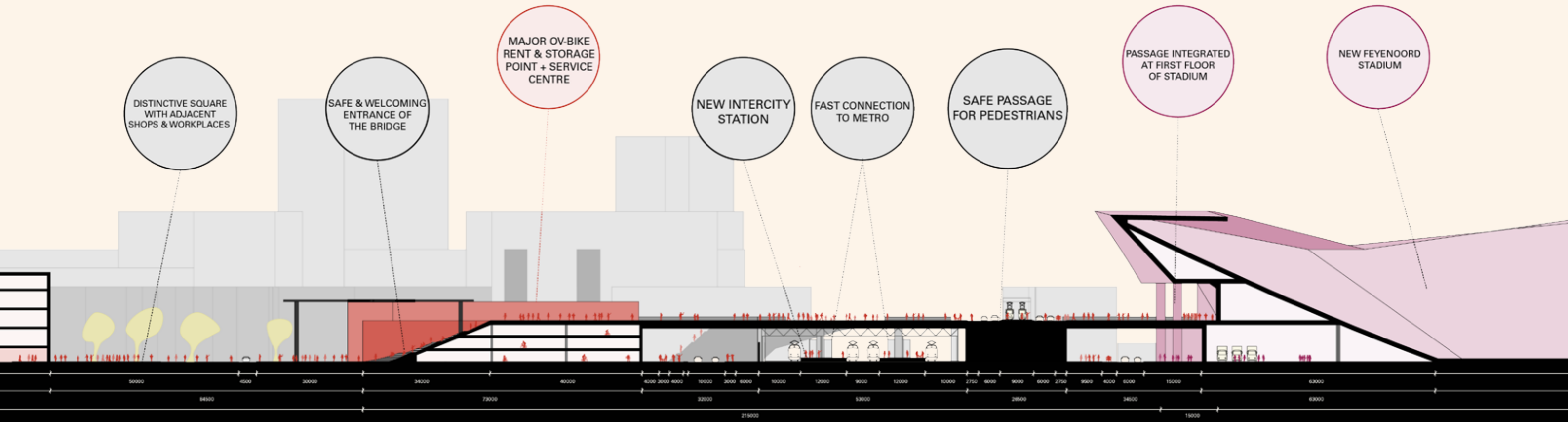
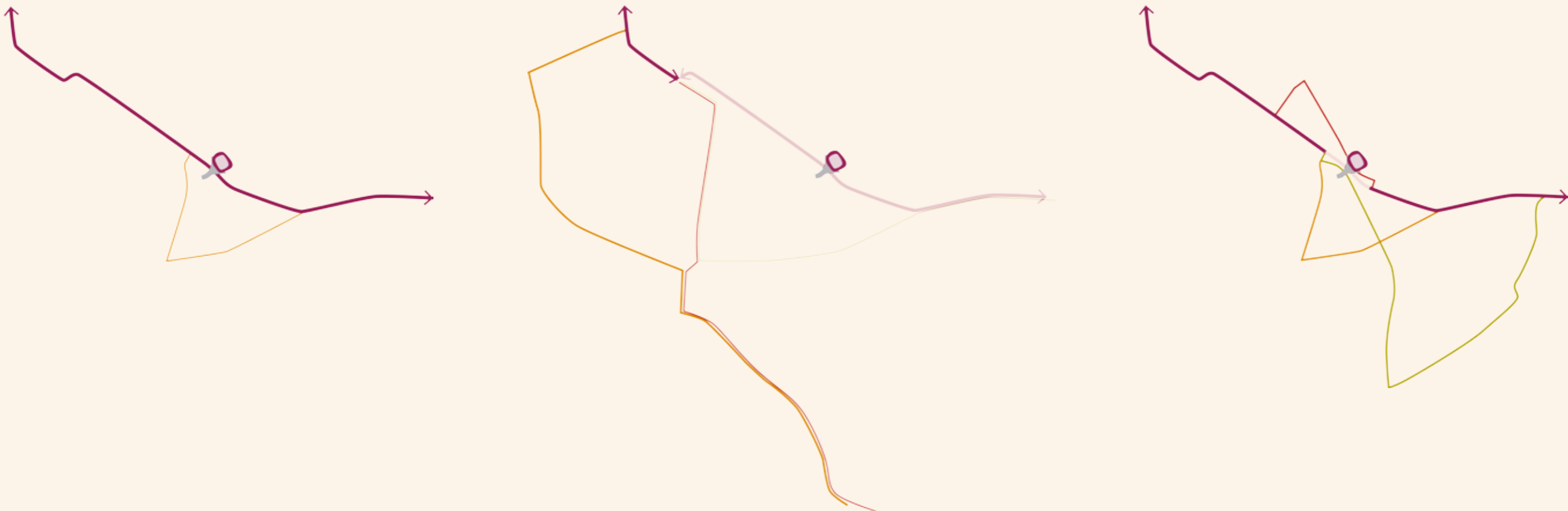
TRANSFORMATION OF EXISTING
CROSSING

NEW CROSSING BETWEEN
OLYMPIC VILLAGE AND SPORTDORP

Urban bridge as multi-transport node



Urban bridge as neighborhood connection





STATION ZUID

Neighbourhood physical landscapes



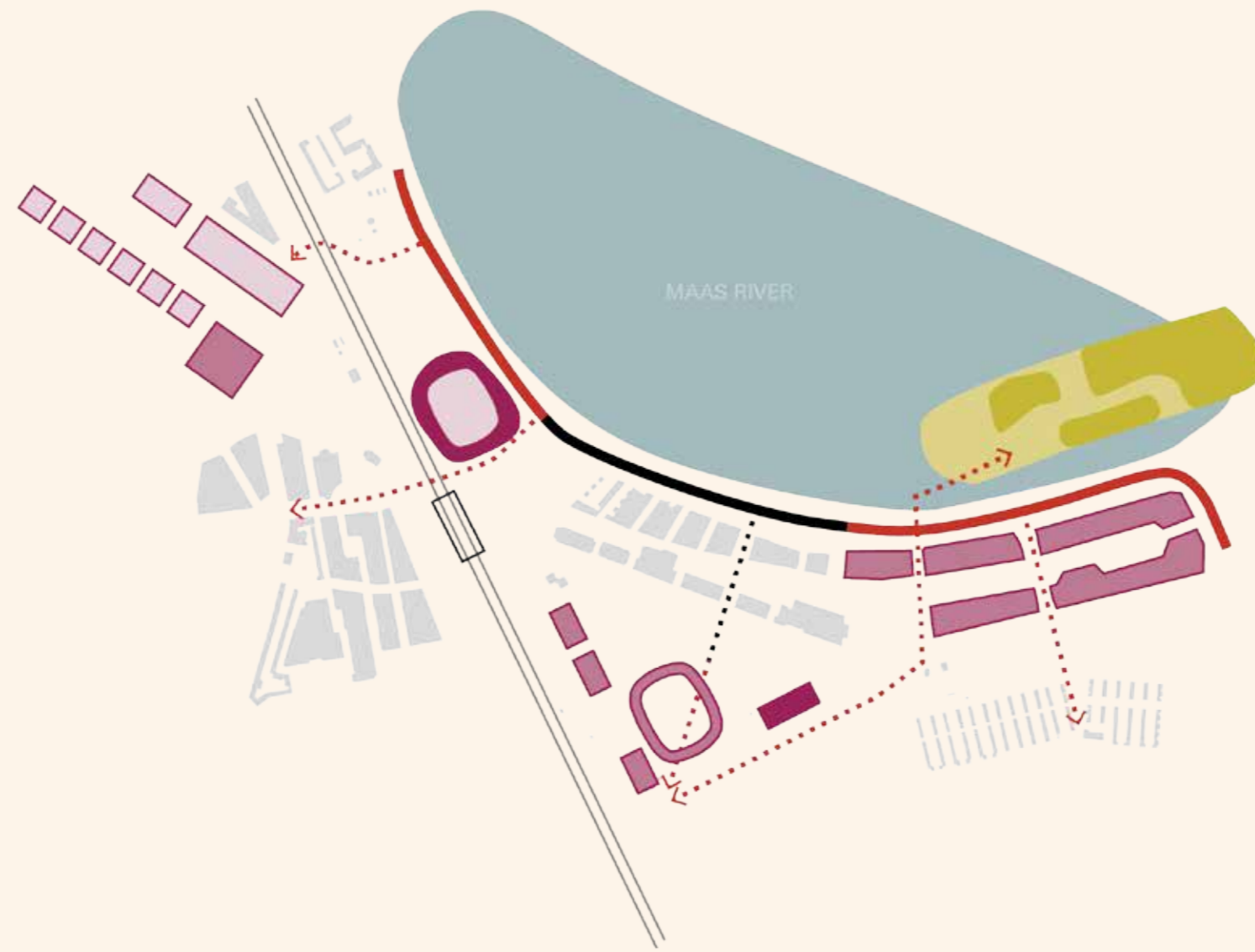
EXTENSION OF PARK THROUGH
A PATCHWORK OF TREES

EXTENSION OF VERANDA
BOULEVARD

TRANSFORMATION OF
EXISTING PARK TO OLYMPIC PARK

NEW PARK FOR SPORT BOULEVARD,
FORMS SECOND PART OLYMPIC PARK

OLYMPIC PARK FORMS LINK IN
URBAN AND GREEN STRUCTURE



OLYMPIC VILLAGE

ENHANCED VERANDA - BOULEVARD

TEMPORARY PROGRAM AT BOULEVARD

KUIP STADIUM

EXISTING VERANDA

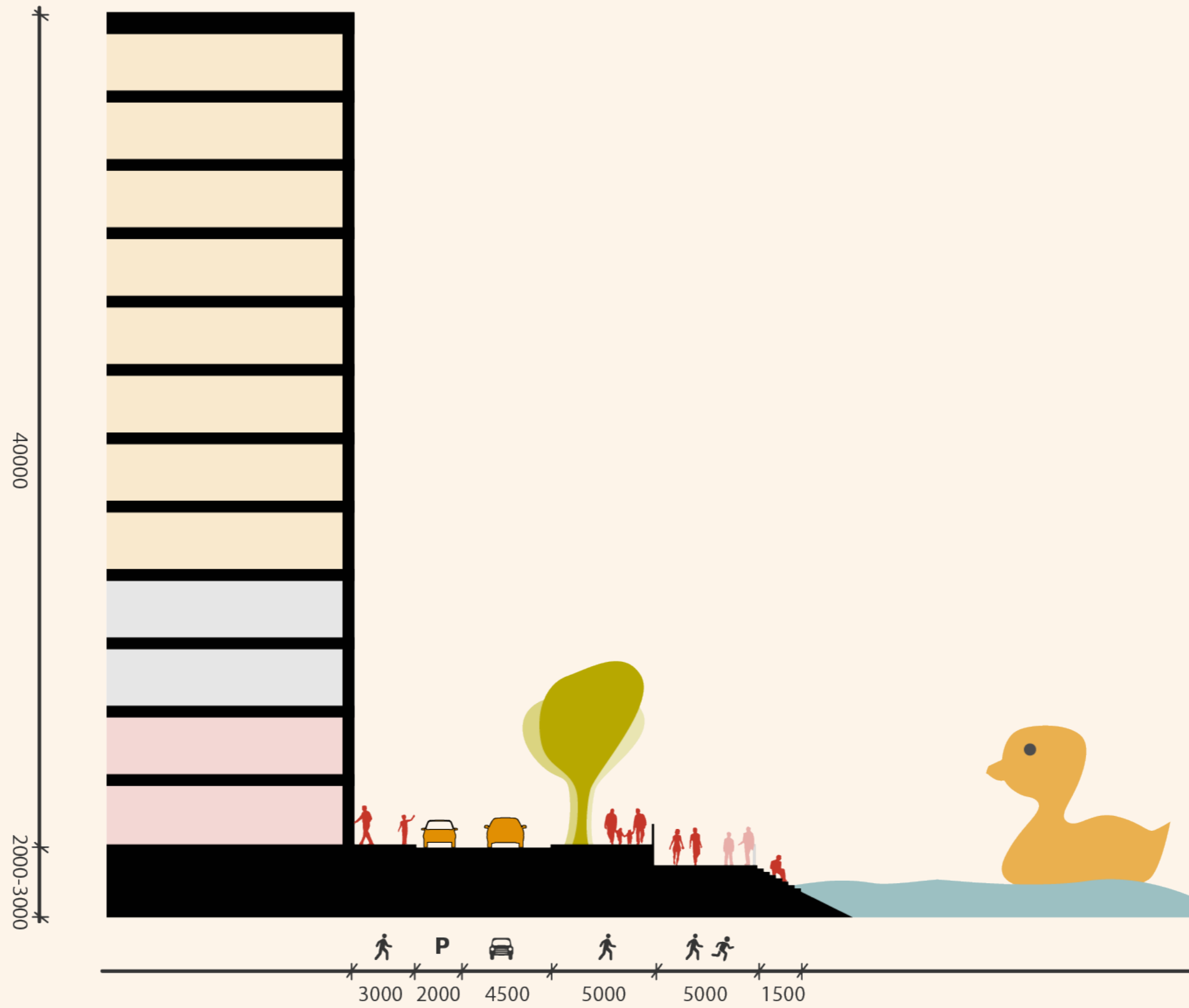
OLYMPIC SQUARE

FUTURE FEYENOORD STADIUM

OLYMPIC HALL

LAAN OP ZUID





Motivating initiatives in public space



AROUND OLYMPIC HALL -
PLAYSAPES

OLYMPIC SQUARE - DIFFERENT
STAGES FOR MULTIPLE SPORTS

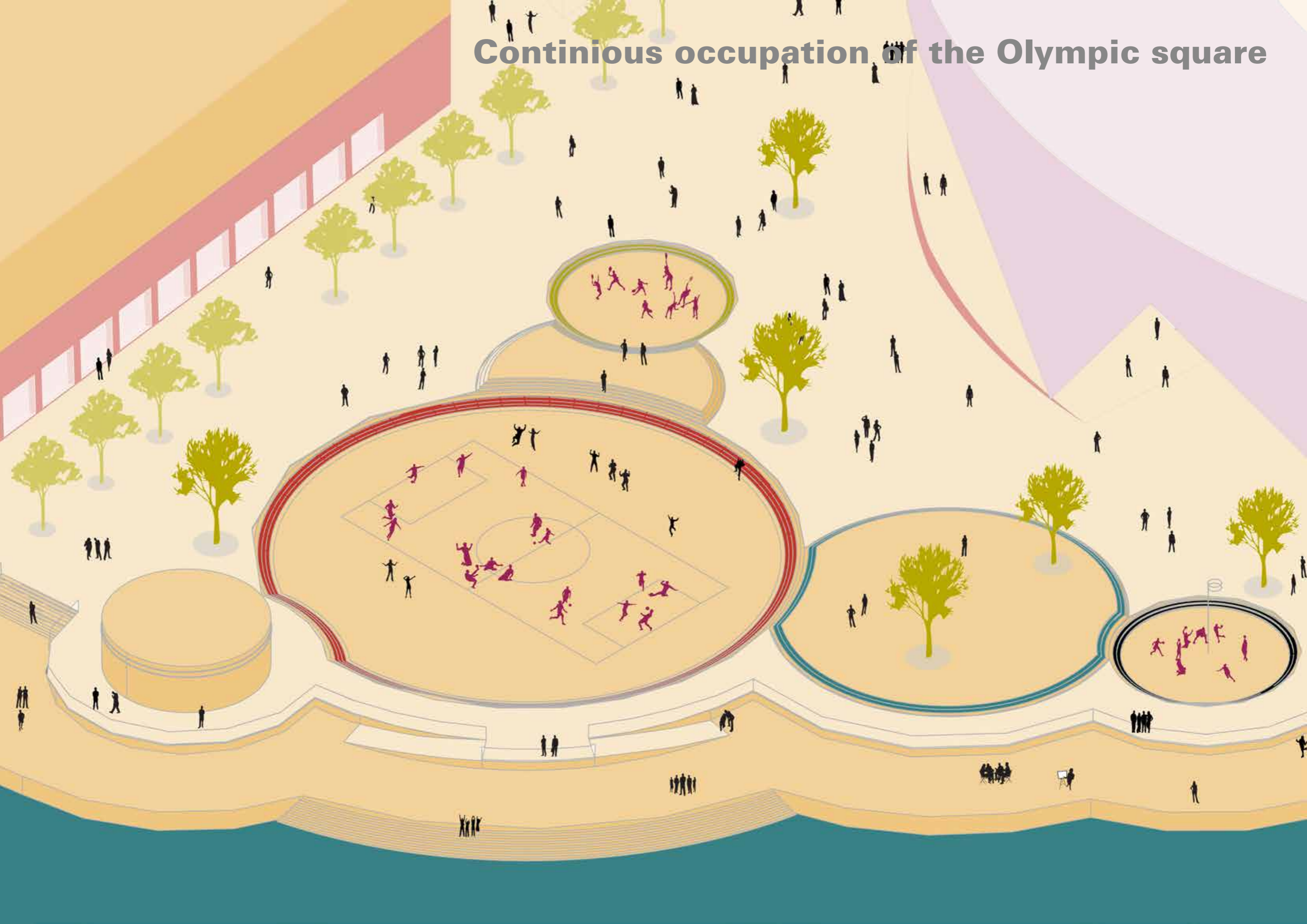
VERANDA BOULEVARD - INTENSIVE
SPORT LANE

PARK OLYMPIC VILLAGE - ALLROUND
SPORT FACILITIES

OLYMPIC PARK - SMALL ACTIVATING
CONSTRUCTIONS

NEW SPORTIVE SCHOOL SQAURE

Continious occupation of the Olympic square





Commercial to social



MIXED USE BUSINESS DISTRICT
AROUND OLYMPIC HALL

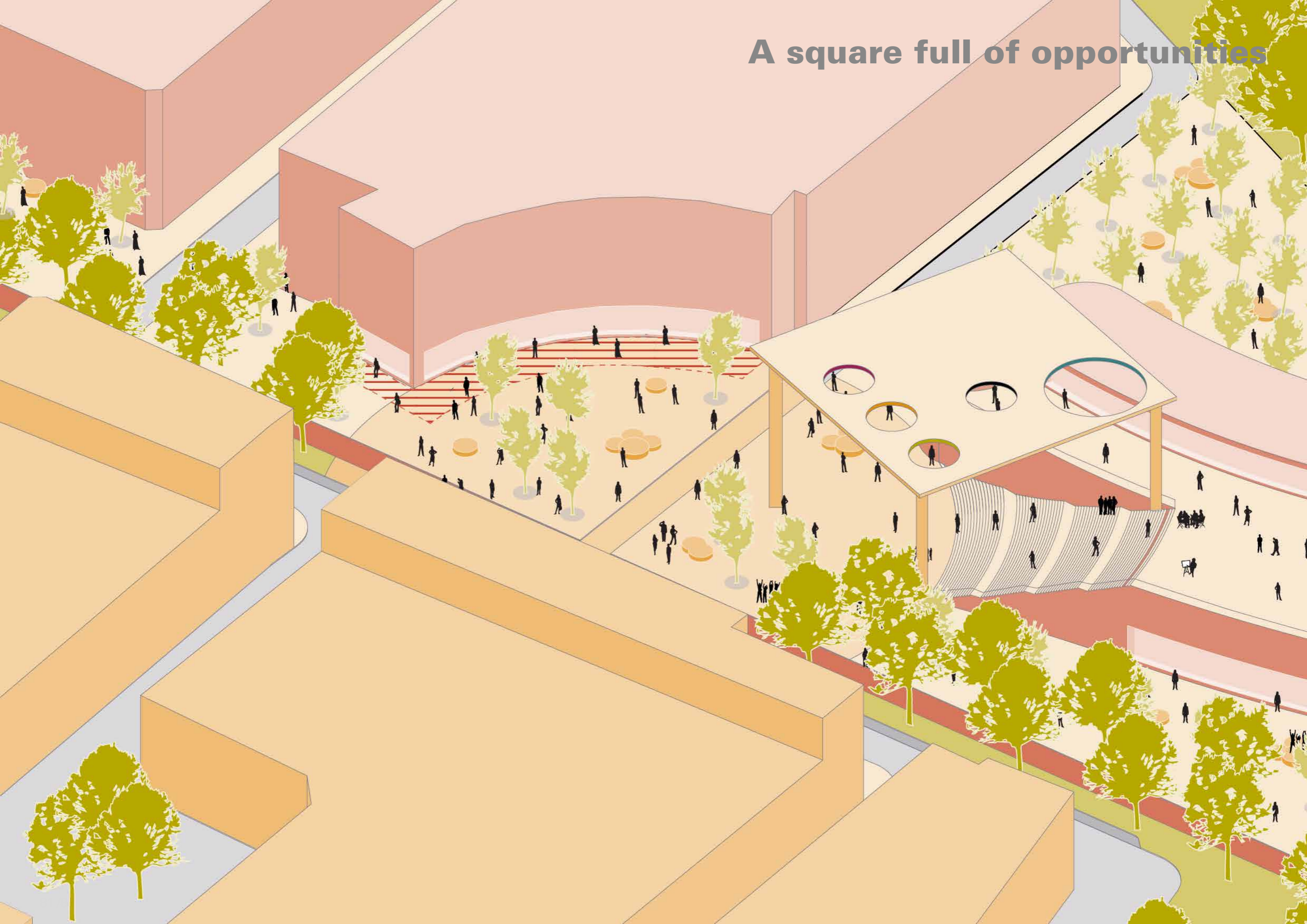
BUSINESS DISTRICT AROUND OLYMPIC
STADIUM AND INTERCITY STATION

SQUARE WITH TRAINSTATION SERVICES
AND LOCAL ORIENTED SHOPS

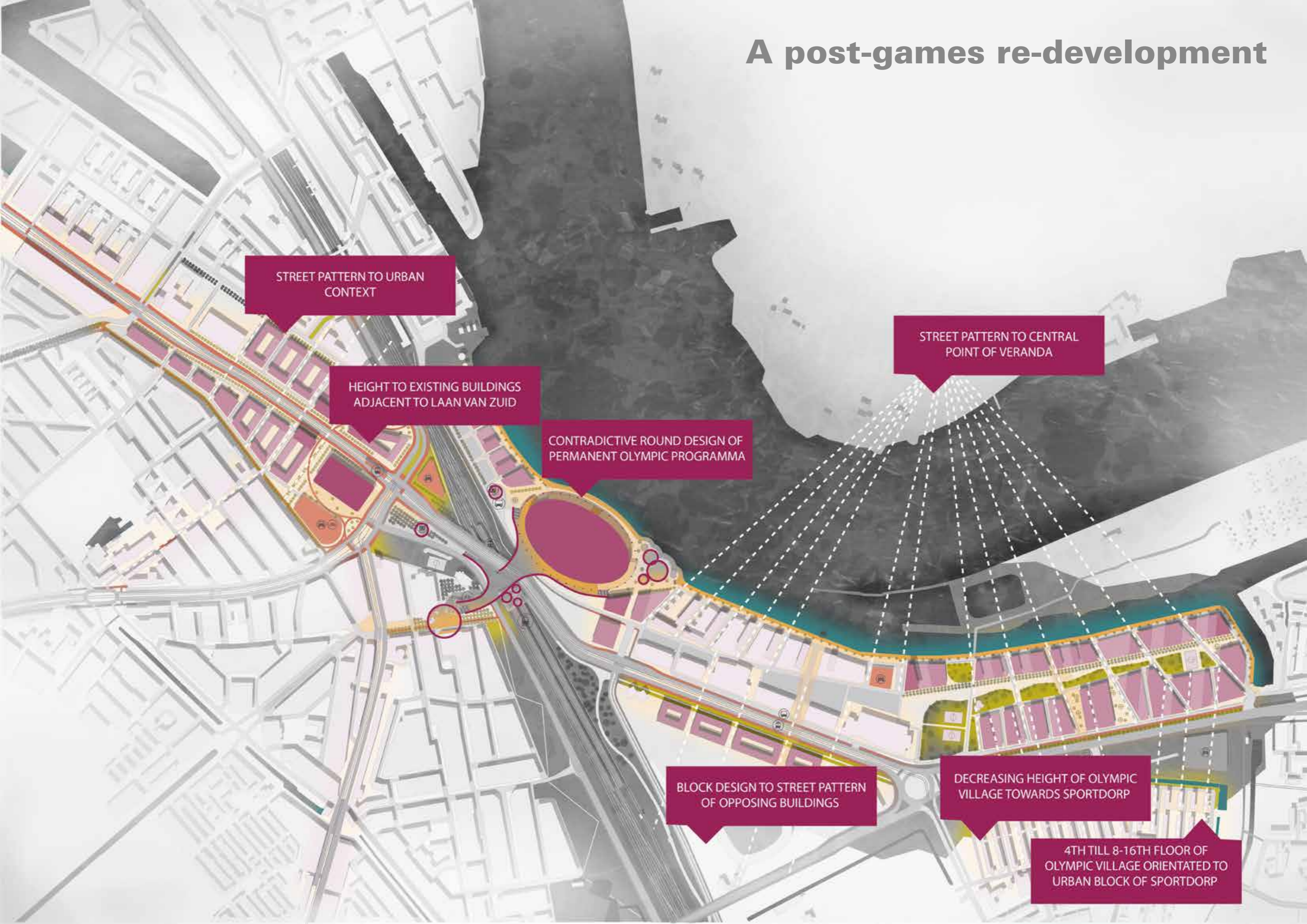
SHOPS IN EXTENSION TO THE VERANDA

NEW COMMUNITY CENTRE

A square full of opportunities



A post-games re-development



STREET PATTERN TO URBAN CONTEXT

HEIGHT TO EXISTING BUILDINGS ADJACENT TO LAAN VAN ZUID

CONTRADICTIVE ROUND DESIGN OF PERMANENT OLYMPIC PROGRAMMA

STREET PATTERN TO CENTRAL POINT OF VERANDA

BLOCK DESIGN TO STREET PATTERN OF OPPOSING BUILDINGS

DECREASING HEIGHT OF OLYMPIC VILLAGE TOWARDS SPORTDORP

4TH TILL 8-16TH FLOOR OF OLYMPIC VILLAGE ORIENTATED TO URBAN BLOCK OF SPORTDORP

2032: The Olympics



2040: The legacy of the Olympics



Conclusion of the project - a collection of encountered design principles (collected in a separate book)



Description of a social problem in the spatial Olympic program



Proposition of a intervention in the spatial Olympic program



Social legacy potential of the proposed design intervention



TOWARDS AN OLYMPIC LEGACY FOR ALL

An architectural rendering of an Olympic village and stadium complex. The scene is viewed from an elevated perspective, showing a large, circular stadium with a green field in the center, surrounded by a dense grid of white, rectangular buildings. A prominent road or railway line runs through the center of the complex. The background features a body of water and a forested area.

QUESTIONS?

Olaf IJzerman - 4064240
MSC GRADUATION PRESENTATION