

AUTONOMOUS SHARED MOBILITY & THE CITIES OF TOMORROW

IMPACT OF SHARED SELF-DRIVING VEHICLES ON THE URBAN FORM OF THE CITY OF
AMSTERDAM

BHAVANA VADDADI
4513762

DOMINIC STEAD
STEFFEN NIJHUIS
ALPER ALKAN

FACULTY OF ARCHITECTURE,

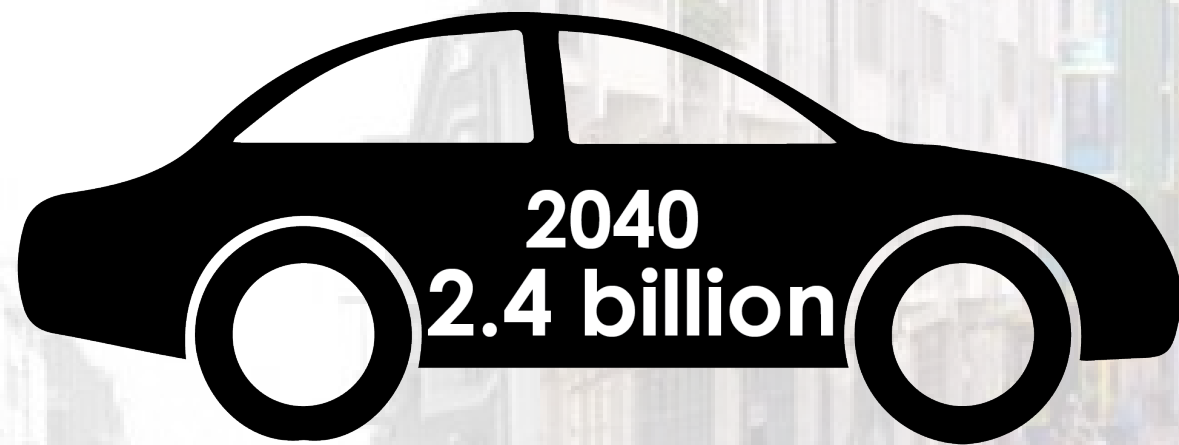
DELFT UNIVERSITY OF TECHNOLOGY

MSC TRACK URBANISM

GRADUATION STUDIO COMPLEX CITIES



2017-50%
2025-58%
2040-63%





80%



70%

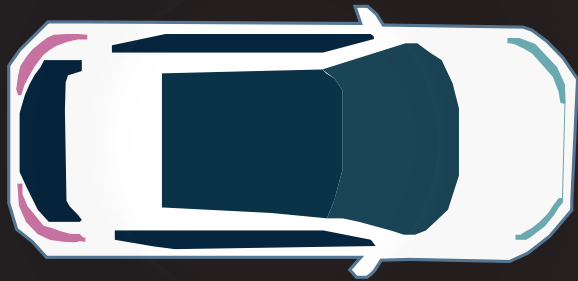


31%



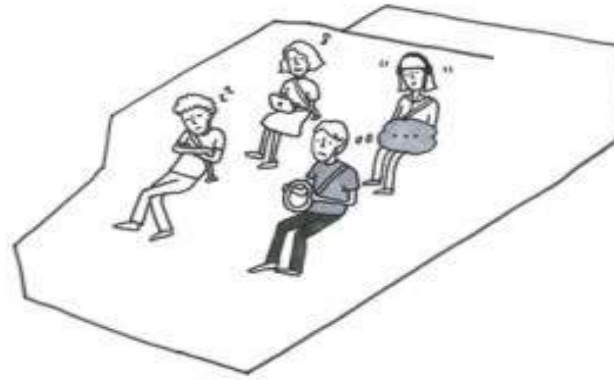
30- 45%

#SELFDRIVINGVEHICLES #CARSHARING #RIDESHARING #COMPLETESTREETS #INTEGRATEDPUBLICTRANSPORT
#CARFREEZONES #SMARTMOBILITY #BIKESHARINGPROGRAMMES
#TRANSITORIENTEDDEVELOPMENT #ONDEMANDMOBILITYSYSTEMS

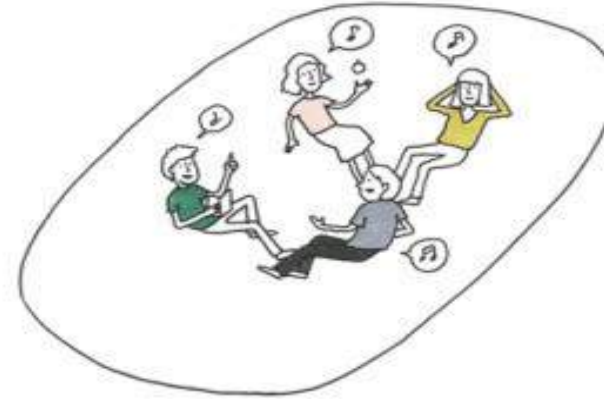


AUTONOMOUS SHARED MOBILITY & THE CITIES OF TOMORROW

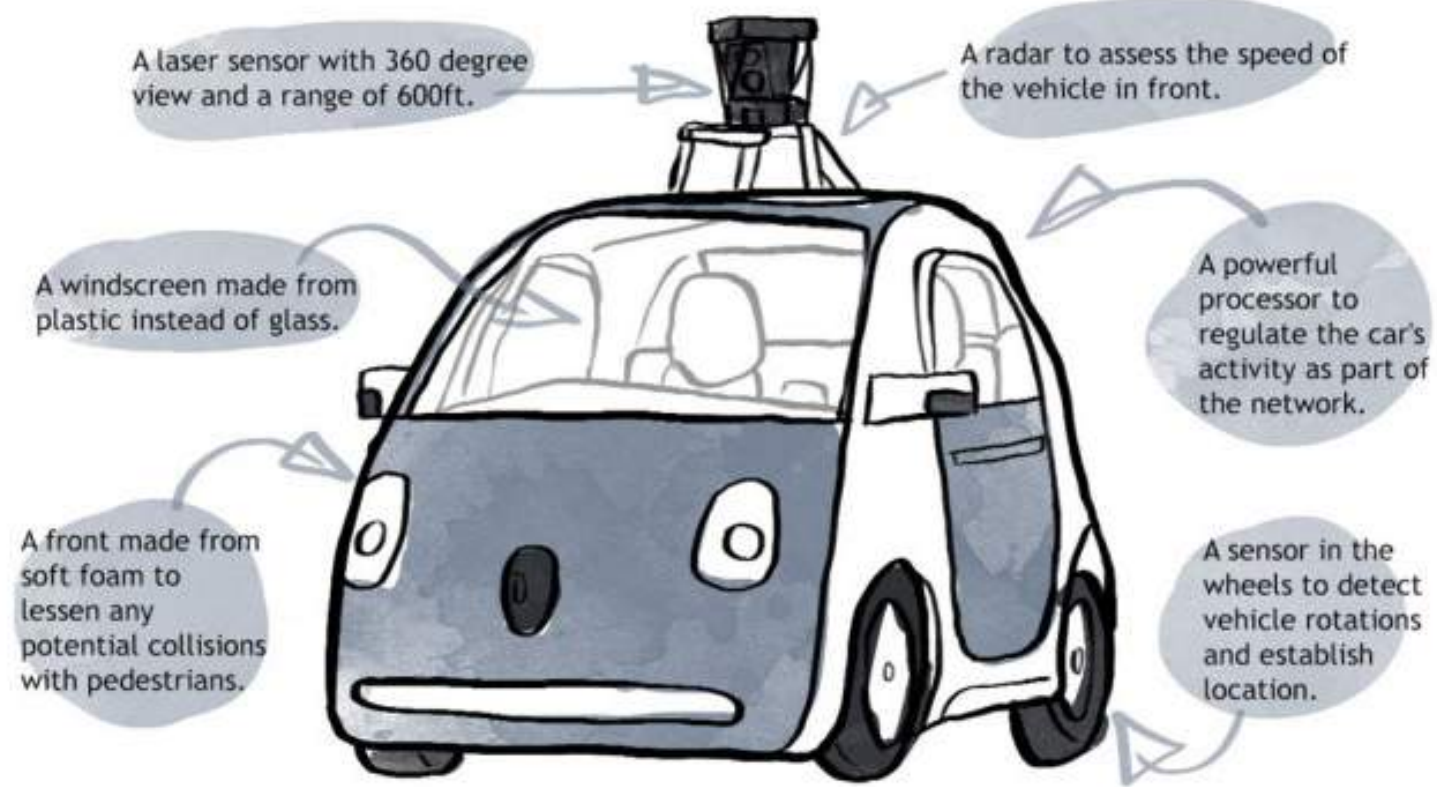
IMPACT OF SHARED SELF-DRIVING VEHICLES ON THE
URBAN FORM OF THE CITY OF AMSTERDAM



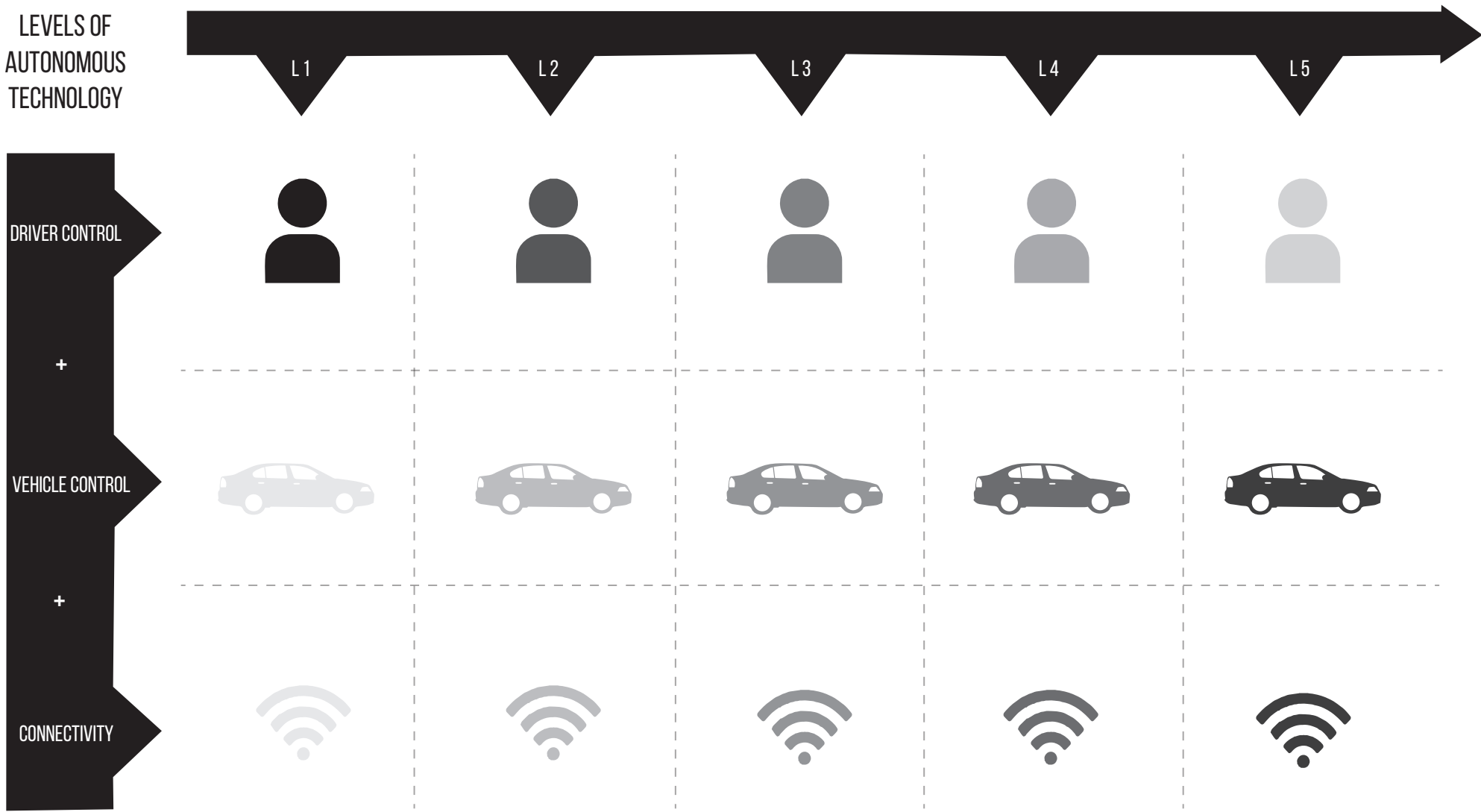
DRIVING STRESS



RIDING DELIGHT



LEVELS OF
AUTONOMOUS
TECHNOLOGY





INCREASED SAFETY



MORE ENERGY EFFICIENT



INCREASED
PRODUCTIVITY



SAFER
MULTITASKING



FEWER CARS ON THE
ROAD



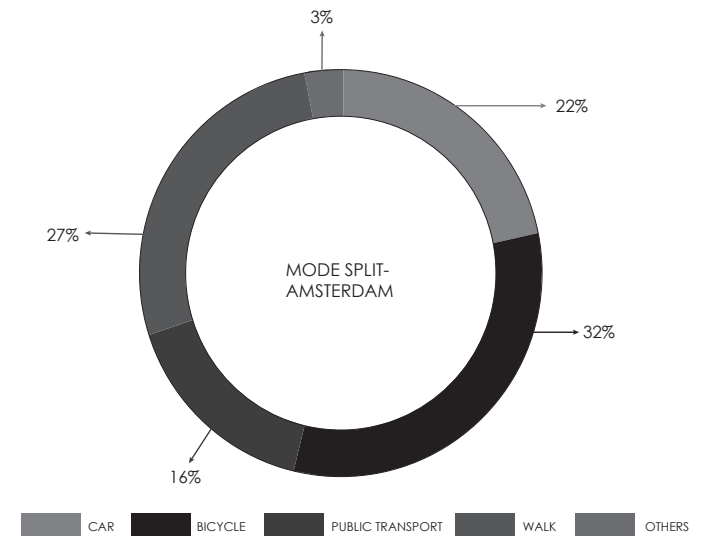
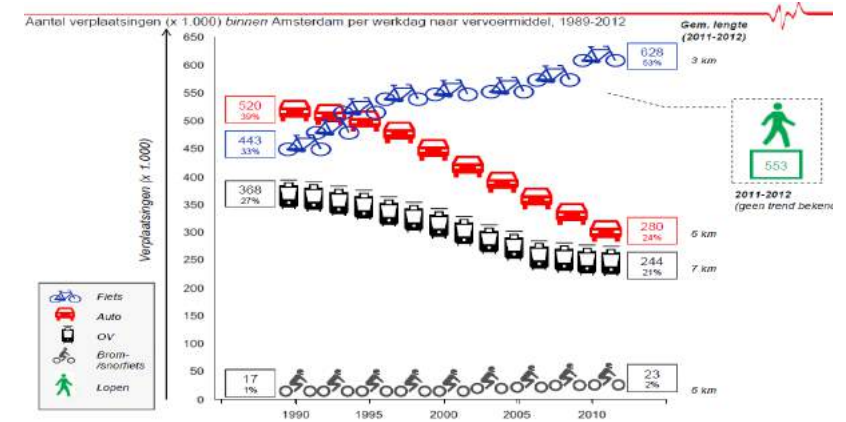
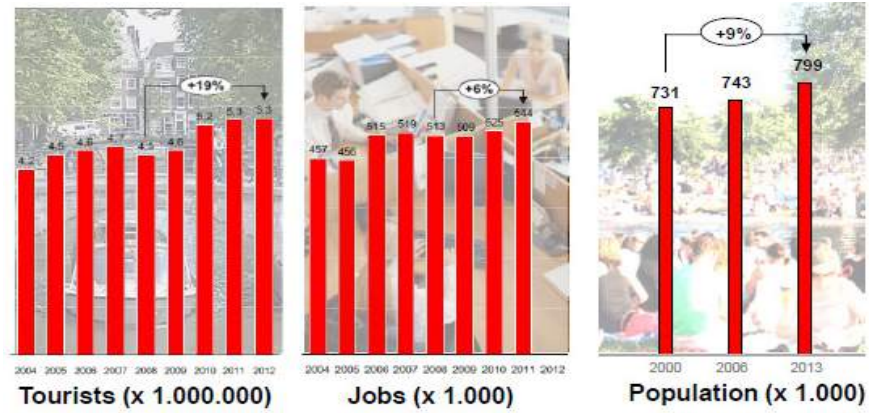
LESS
DEPENDENCE ON CARS

A CHALLENGE?

POLICIES INSURANCE LICENSING URBAN PLANNING LAWS AND LEGISLATIONS SOCIAL ACCEPTANCE











Declaration of Amsterdam

Cooperation in the field of connected and automated driving

14-15 April 2016

EU
2016



GOALS

- DENSIFY
- TRANSFORM
- PUBLIC TRANSPORT ON REGIONAL SCALE
- HIGH QUALITY LAYOUT OF PUBLIC SPACE
- INVEST IN RECREATIONAL USE OF GREEN SPACE AND WATER
- CONVERTING TO SUSTAINABLE ENERGY
- OLYMPIC GAMES, AMSTERDAM 2028



ACTIONS

THE ROLL-OUT OF THE CITY CENTRE

THE INTERWEAVING OF THE METROPOLITAN
LANDSCAPE AND THE CITY

THE REDISCOVERY OF THE
WATERFRONT

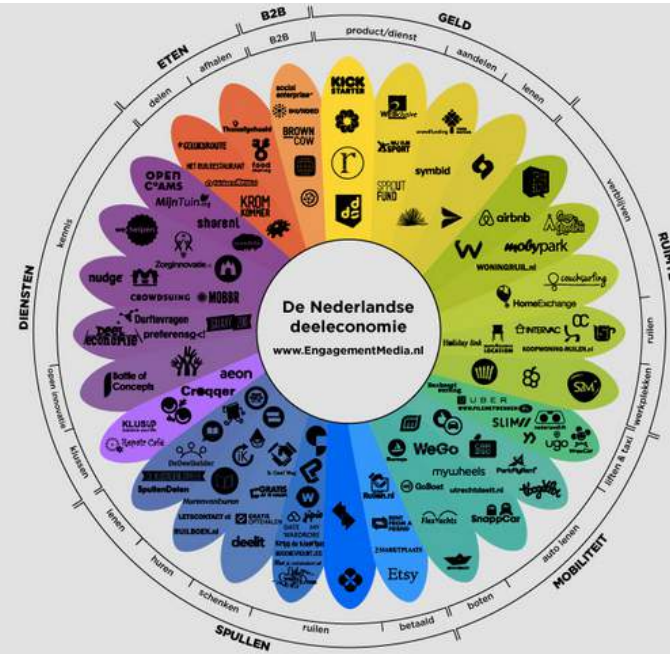
THE INTERNATIONALIZATION OF THE CITY'S
SOUTHERN FLANK

DE NEDERLANDSE DEELECONOMIE v1.0

De deeleconomie, ook wel collaborative consumption genoemd, is een nieuw economisch systeem waarin delen en gezamenlijkheid centraal staan. Het zorgt ervoor dat mensen krijgen wat ze willen op een (kosten)efficiënte manier.

Deze visuele weergave geeft inzicht in de Nederlandse deeleconomie initiatieven en in die internationale initiatieven die uitdrukkelijk op de Nederlandse markt vertegenwoordigd zijn.

Voor een uitgebreid (klikbaar) overzicht kijk op: www.platformsocialbusiness.nl/deeleconomie



Deze weergave wordt u aangeboden door Antal de Wag, Chief Engagement Officer van Engagement Media in samenwerking met Platform Social Business.

Bij de samenstelling van dit prima zijn de volgende uitgangspunten gehanteerd:

- Nederlandse initiatieven
- Internationale platformen met een lokale pagina/blog (Nederlandstalige versie) of een actief Nederlandse aanbod hebben.
- Het platform is actief. Aankondigingen zijn niet opgenomen.

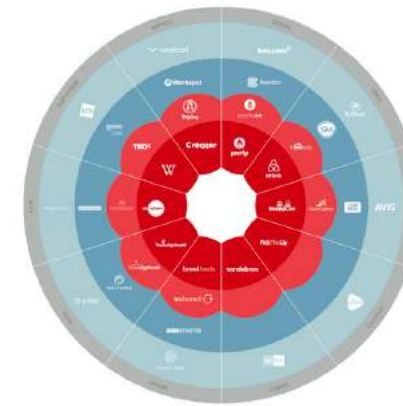


augustus 2014: creative commons licentie:
Naamvermelding - Niet commercieel

Hebt u wijzigingen of staat uw initiatief er niet bij?
Neem dan contact op met antal@engagementmedia.nl

Engagement Media
social • content & community

Collaborative Economy Ecosystem¹²



Traditional Economy



BUSINESS TO CONSUMER
BUSINESS TO PEER

Collaborative Economy



PEER TO BUSINESS TO PEER
PEER TO PEER

N.A.P. Willen Amsterdammers wel met elkaar delen?

Het percentage inwoners dat bereid is spullen of diensten te ruilen of (uit) te lenen



amsterdam
sharing city



Ambassadors Amsterdam Sharing City

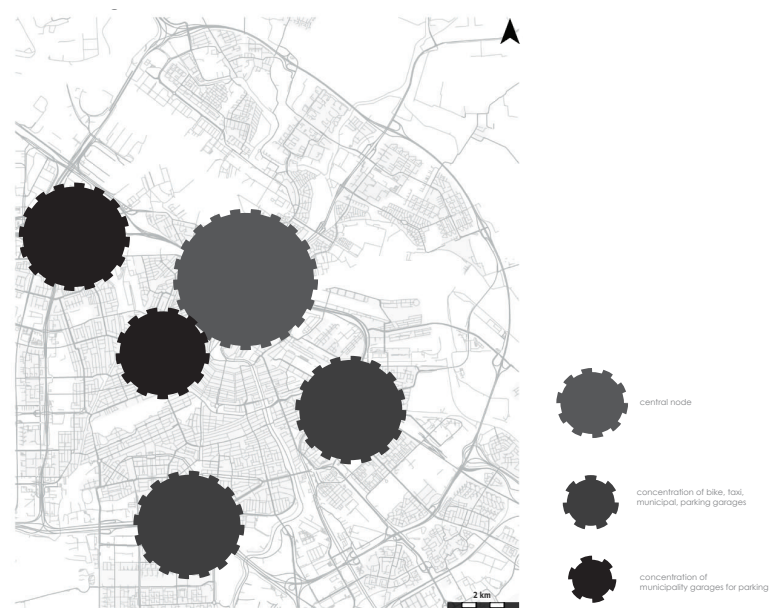
Accenture, Achmea, Airbnb, Amsterdam Airport Schiphol, Amsterdam Economic Board, Amsterdam Smart City, April Rinne, Awareness Initiatives, BlaBlaCar, BrownCow, Community Center, Colruyt, Callien Roodink, City of Amsterdam, Crowdfunder, Crogger, Dasy, Deelit, DriveMoby, FLOWW2, Huizenruil.com, Jipio, Chamber of Commerce, Kennedy van der Laan, Konnektid, MyWheels, Neal Gorentlo, OnePlanetCrowd, Pakhuis De Zwijger, ParkFlyRent, Pawshake, Peerby, REWEAR, Rockstart, Sanda, Seats2Meet.com, Snapper, Social Enterprise NL, THINK 3D Hubs, Thuisafgehaald, Uber, Urgenda, Vandebron, WeHelpen, WithLocals, ZorgVoorElkaar.



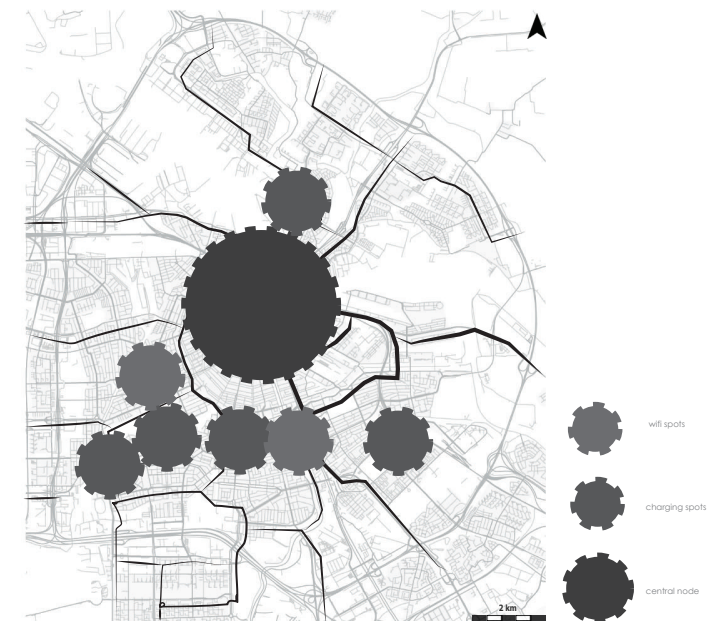
POTENTIAL REDEVELOPMENT ZONES SUGGESTED BY AMSTERDAM 2040



MOBILITY



PARKING



WI- FI AND CHARGING NODES

HOW DO WE PLAN FOR THE FUTURE?

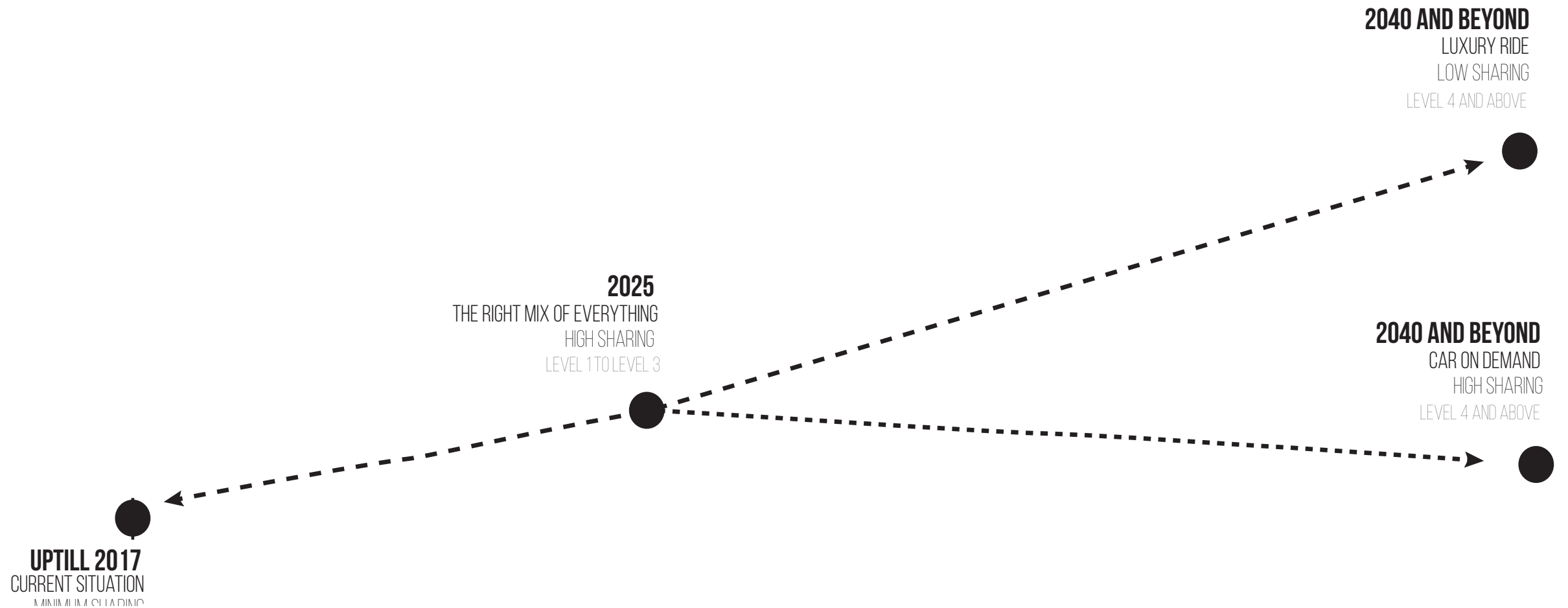
SCENARIO DEVELOPMENT STUDIES

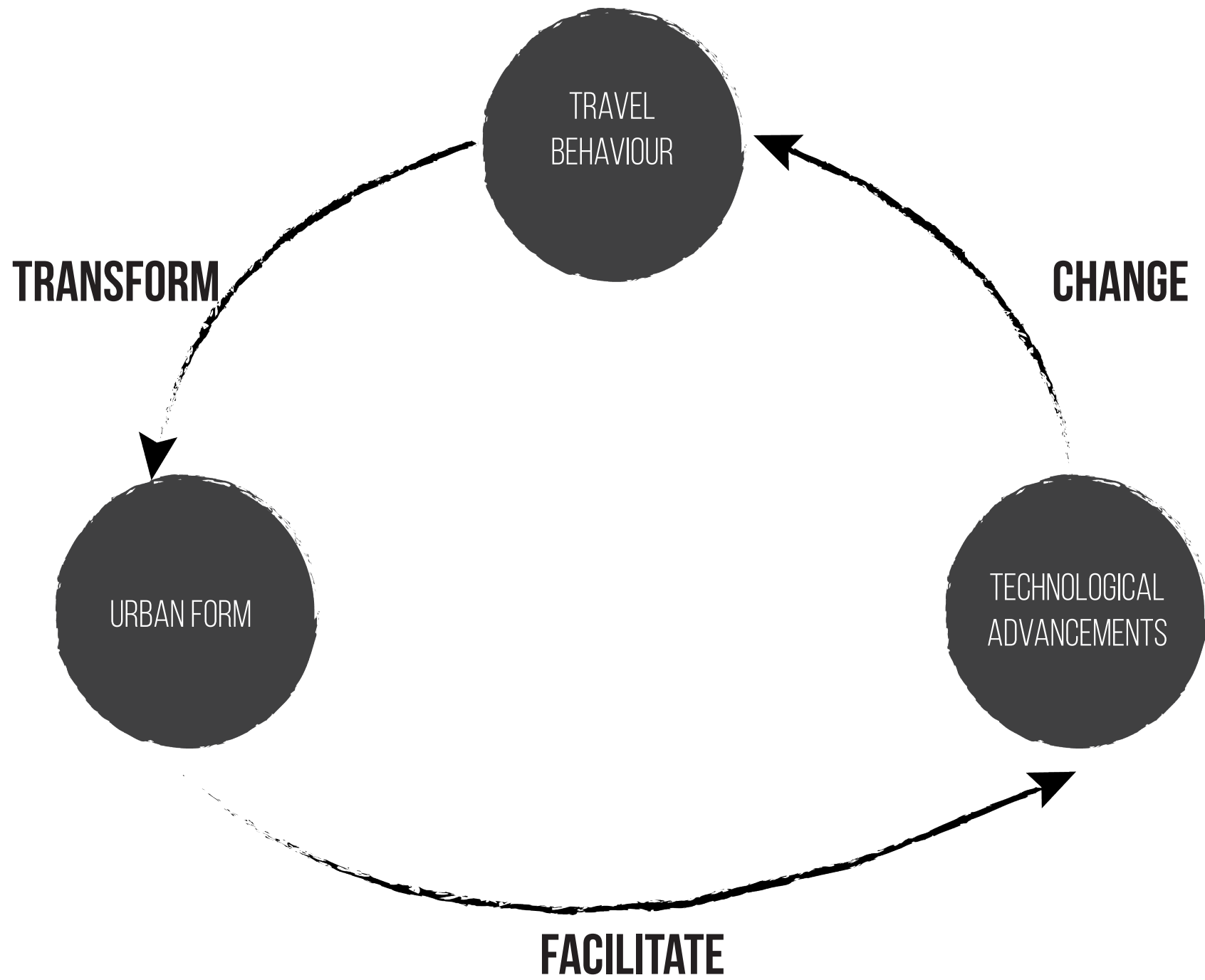
BACKCASTING

HOW CAN SCENARIO DEVELOPMENT STUDIES BE USED AS A TOOL
TO FORMULATE A STRATEGY TO TRANSFORM THE URBAN FORM OF
THE CITY IN THE AGE OF DEVELOPING TECHNOLOGY
OF AUTONOMOUS SHARED VEHICLES?











GOALS

DENSITY

TRANSFORM

PUBLIC TRANSPORT ON
REGIONAL SCALE

HIGH QUALITY LAYOUT OF
PUBLIC SPACE

INVEST IN
RECREATIONAL USE OF
GREEN SPACE AND WATER

CONVERTING TO
SUSTAINABLE ENERGY

OLYMPIC GAMES
AMSTERDAM 2028

**UPGRADING CURRENT
INFRASTRUCTURE TO ADAPT
TO AUTONOMOUS VEHICLES**



amsterdam
sharing city

amsmart**er**dham
city

-  current residential zones
-  potential zones for the development of ASV
-  potential industrial zone for the development of ASV
-  potential green spaces
-  potential public squares
-  potential streets for the development of ASV
-  plusnet car network

ACTIONS

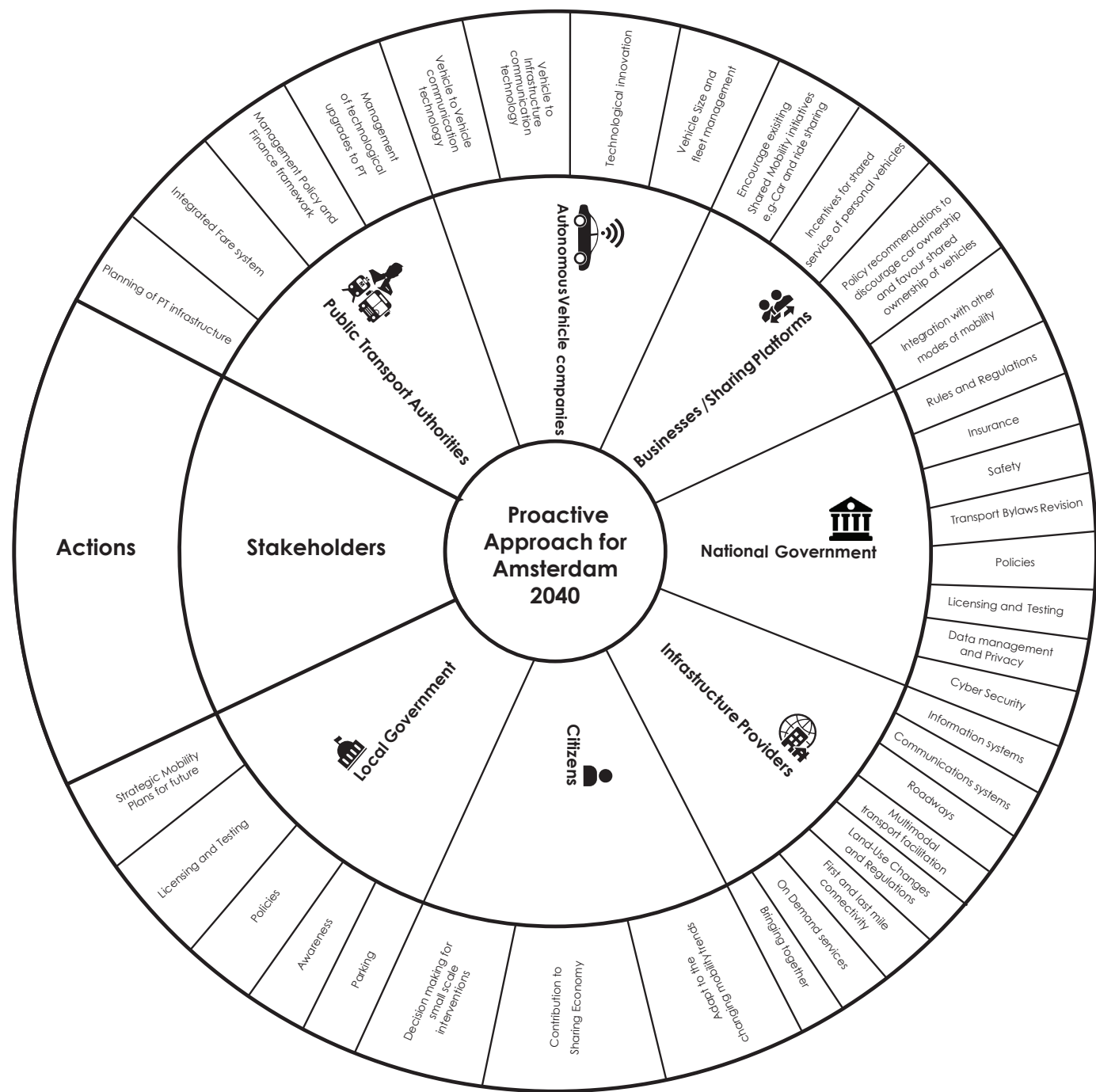
**ADAPTING A PROACTIVE
ROLE IN THE DEVELOPMENT
OF ASV'S**

THE ROLL OUT OF CITY
CENTER

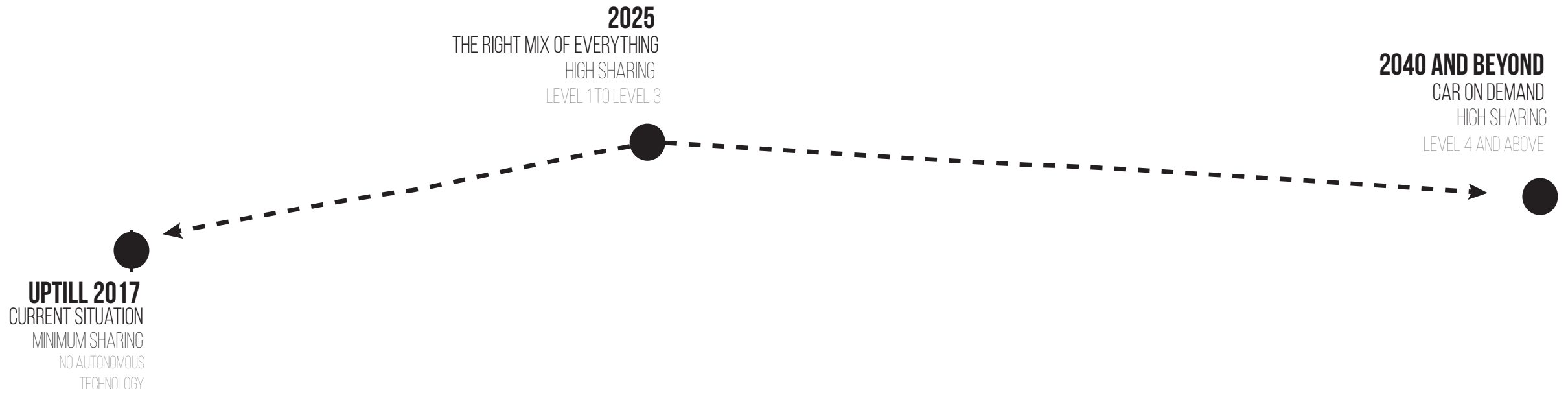
THE INTERWEAVING OF
METROPOLITAN LANDSCAPE
AND THE CITY

THE REDISCOVERY OF THE
WATERFRONT

THE INTERNATIONALIZATION OF
THE CITY'S SOUTHERN FLANK











CO-OPERATION OF PUBLIC
TRANSPORT AUTHORITIES
AND THE AUTONOMOUS CAR
COMPANIES IN TERMS OF
CREATING INTEGRATED
MOBILITY HUBS



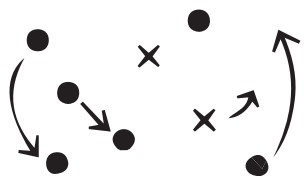
ESTABLISHING IMPROVED MULTI-MODAL
TRANSPORTATION SOLUTIONS IN THE TECHNOLOGY



REGULATIONS ON ROAD
USER AND PARKING
CHARGES



INCENTIVES AND
INITIATIVES TO
ENCOURAGE SHARING
ECONOMY



STRONG MOBILITY
BUSINESS MODELS



PUBLIC AWARENESS AND
ACCEPTANCE



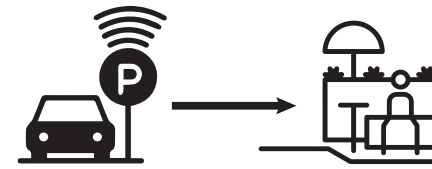
POLICIES AND REGULATIONS TO
PROMOTE NEW FORMS OF
PUBLIC- PRIVATE COLLABORATION



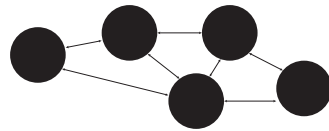
FLEXIBLE
SPACES



TECHNOLOGY
FRIENDLY



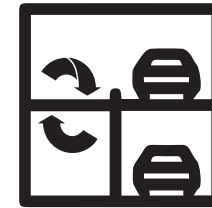
ON STREET PARKING TO ON
STREET PARKLETS



INTEGRATE MULTIPLE ACTIVITIES
IN A SAFE ENVIRONMENT



DECULTTER THE
STREETS



REPOURPOSING EXISTING
CAR PARKS



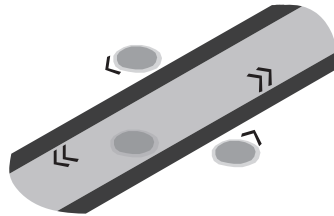
ROAD SENSORS



SURFACE CHARGING
TECHNOLOGY



SMART LIGHTS



DIGITAL SURFACE
WARNINGS



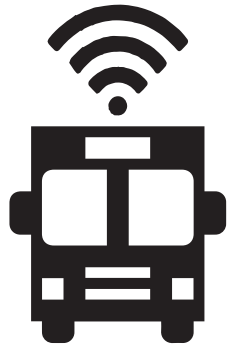
MULTIMODAL APP



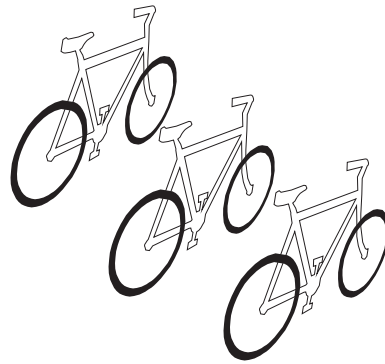
INFORMATION
DISPLAYS



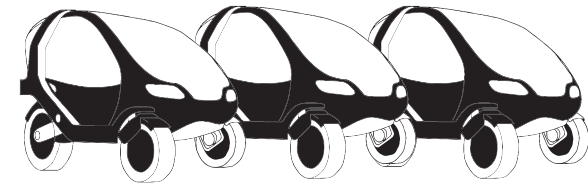
CHARGING STATIONS



DEVELOPMENT OF
AUTONOMOUS
PUBLIC TRANSPORT



BICYCLE SHARING PROGRAM



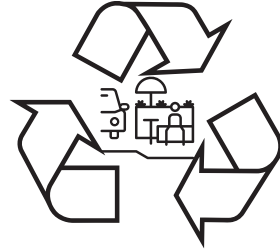
FLEET OF LIGHT WEIGHT AUTONOMOUS
VEHICLES



FLEXIBLE
INFRASTRUCTURE



PARK+RIDE+CHARGE



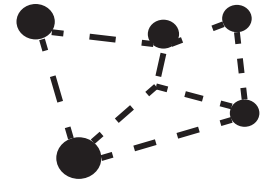
POP UP PUBLIC SPACES



SHARED SPACES

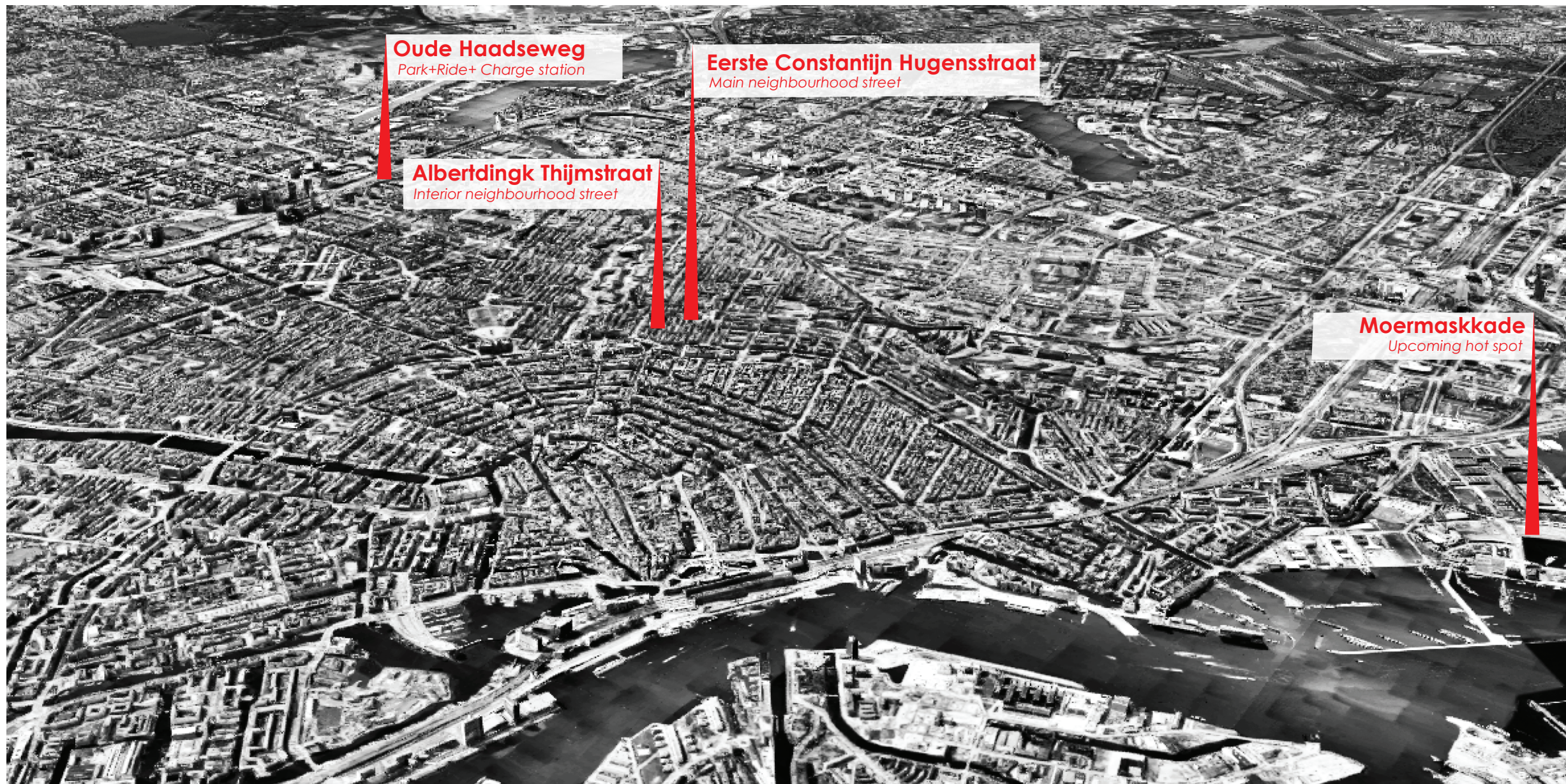


PRIORITY LANES
HOP IN - DROP OFF ZONES



MULTIMODAL HUBS





Oude Haadseweg
Park+Ride+ Charge station

Eerste Constantijn Hugensstraat
Main neighbourhood street

Albertdingk Thijmstraat
Interior neighbourhood street

Moermaskkade
Upcoming hot spot

An aerial photograph of Amsterdam, showing a dense urban landscape with a complex network of streets, canals, and buildings. The city is situated along a large body of water, likely the IJ river. Two specific locations are highlighted with red labels and leader lines. The label 'Oude Haadseweg' is positioned in the upper left quadrant, with a red line pointing to a location in the northern part of the city. The label 'Amsterdam Centraal' is positioned in the lower right quadrant, with a red line pointing to the central railway station area. The overall image is in black and white, providing a historical or archival perspective of the city's layout.

Oude Haadseweg
Park+Ride+ Charge station

Amsterdam Centraal



CO-OPERATION OF PUBLIC
TRANSPORT AUTHORITIES
AND THE AUTONOMOUS CAR
COMPANIES IN TERMS OF
CREATING INTEGRATED
MOBILITY HUBS



ESTABLISHING IMPROVED MULTI-MODAL
TRANSPORTATION SOLUTIONS IN THE TECHNOLOGY



REGULATIONS ON ROAD
USER AND PARKING
CHARGES



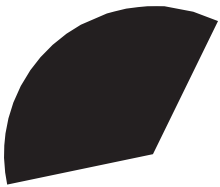
FLEXIBLE
SPACES



TECHNOLOGY
FRIENDLY



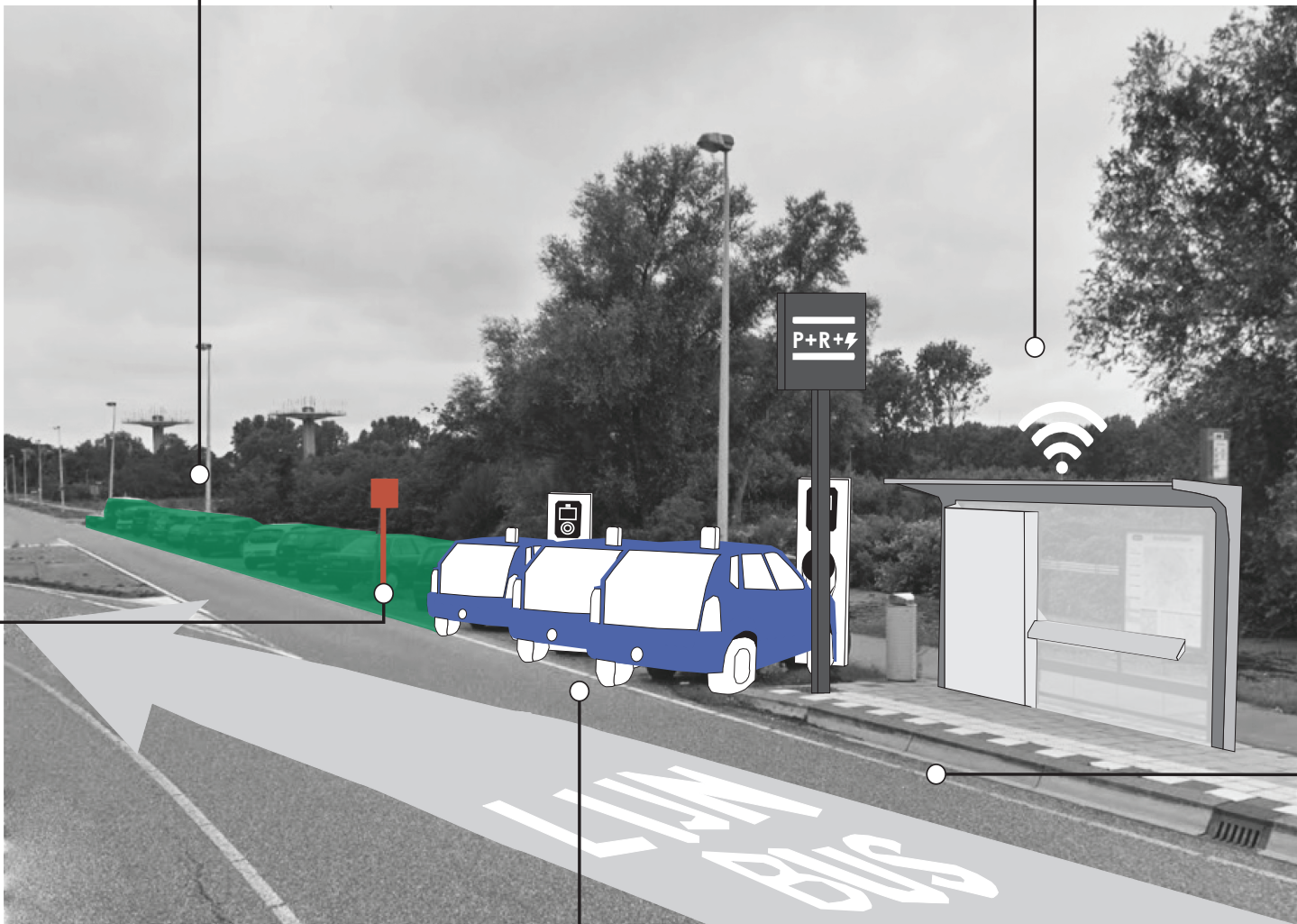
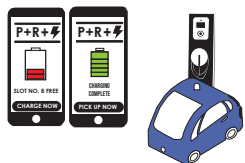
DECULTTER THE
STREETS



APPROXIMATELY 40%
SPACE SAVED FROM
ONSTREET PARKING



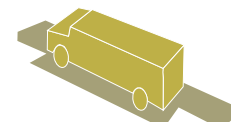
VEHICLE PICK UP AND
DROP OFF AREA



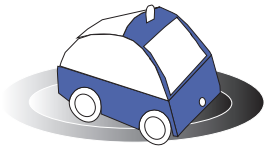
WIFI ENABLED
AUTONOMOUS PUBLIC
TRANSPORT STOP



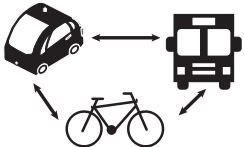
PRIORITY LANES DEDICATED TO
AUTONOMOUS PUBLIC TRANSPORT



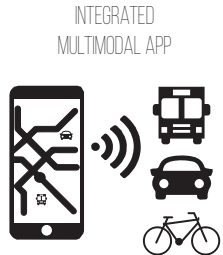
HIGHLY SENSITIVE SENSORS TO
DETECT VEHICLE LEAVING A SPOT
OR ARRIVING AT A SPOT



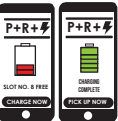
MULTIMODAL INTEGRATION



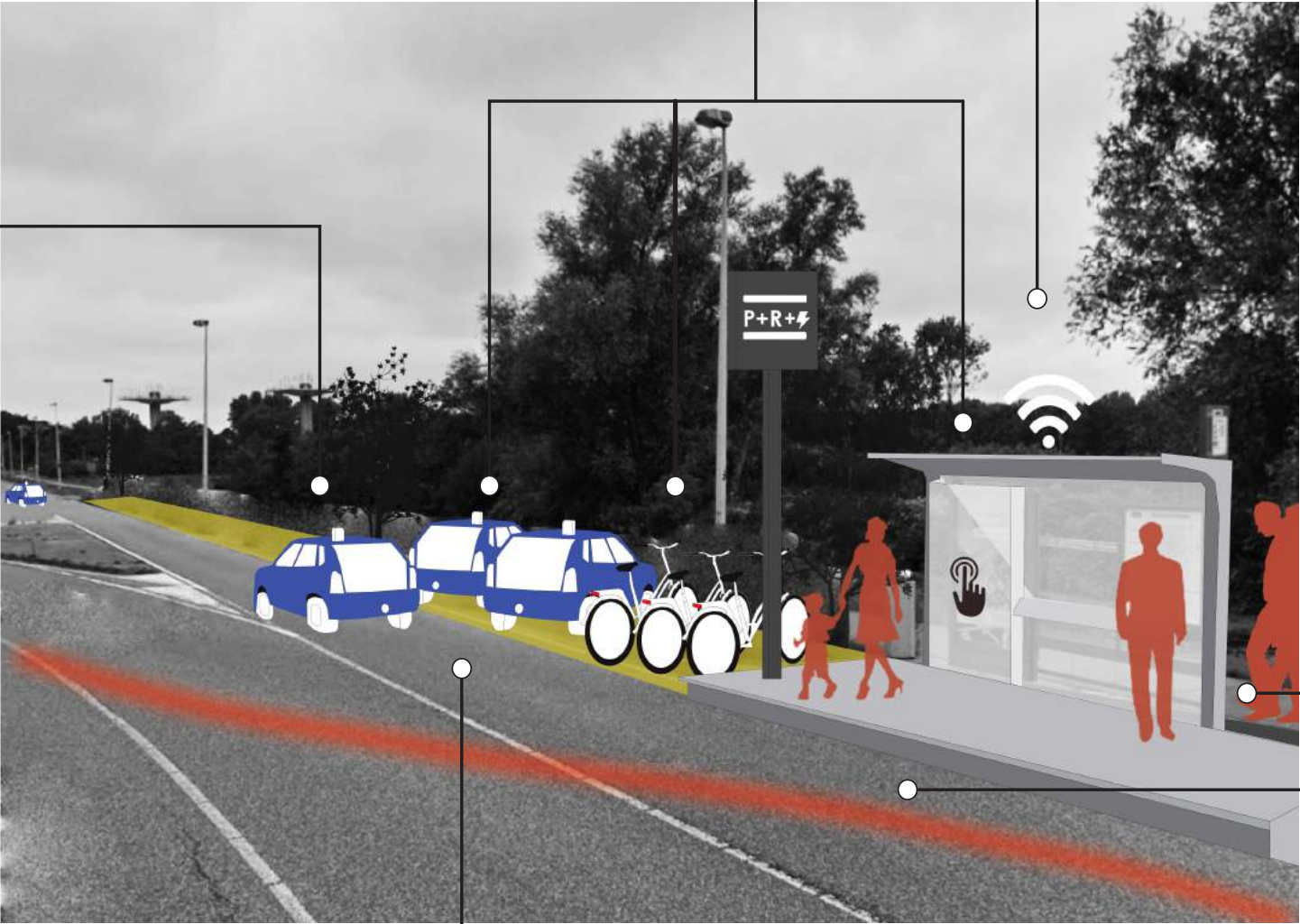
WIFI ENABLED DIGITAL
INTERACTIVE AUTONOMOUS PUBLIC
TRANSPORT STOP

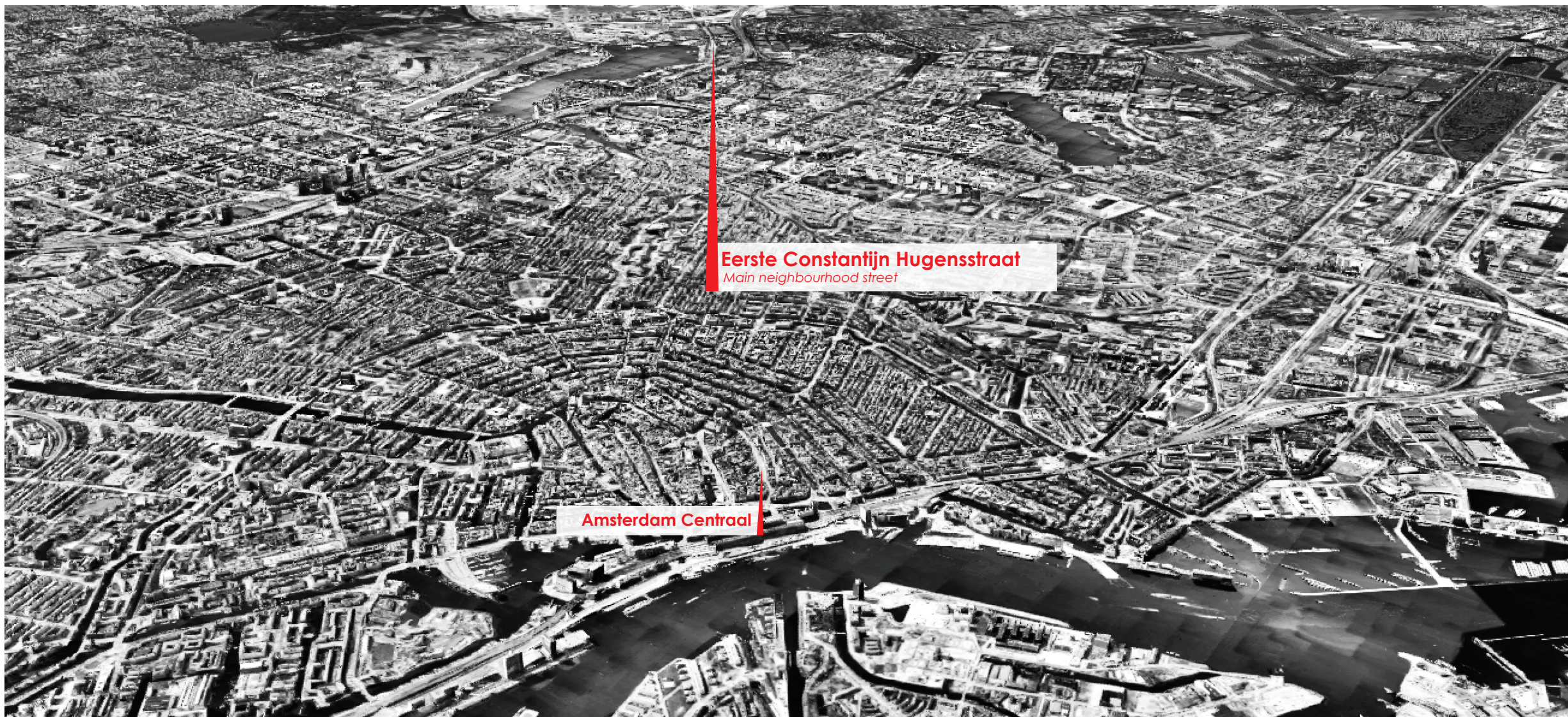


VEHICLE PICK UP AND DROP OFF
AREA



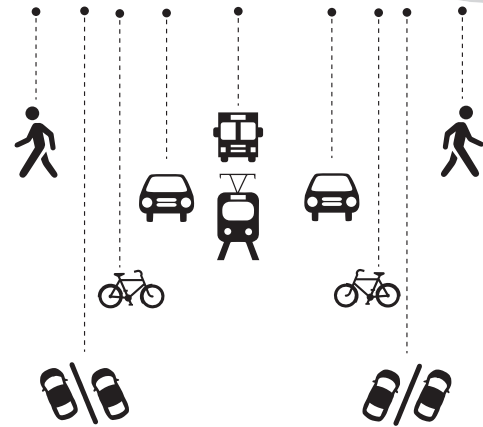
DIGITAL GUIDANCE DISPLAYS ON HIGHWAYS FOR BETTER
NAVIGATION OF ALL THE MODES OF TRANSPORT



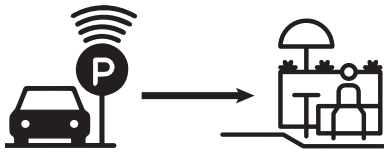


Eerste Constantijn Hugensstraat
Main neighbourhood street

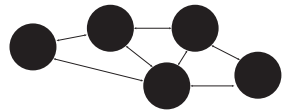
Amsterdam Centraal



ESTABLISHING IMPROVED MULTI-MODAL



ON-STREET PARKING TO GO



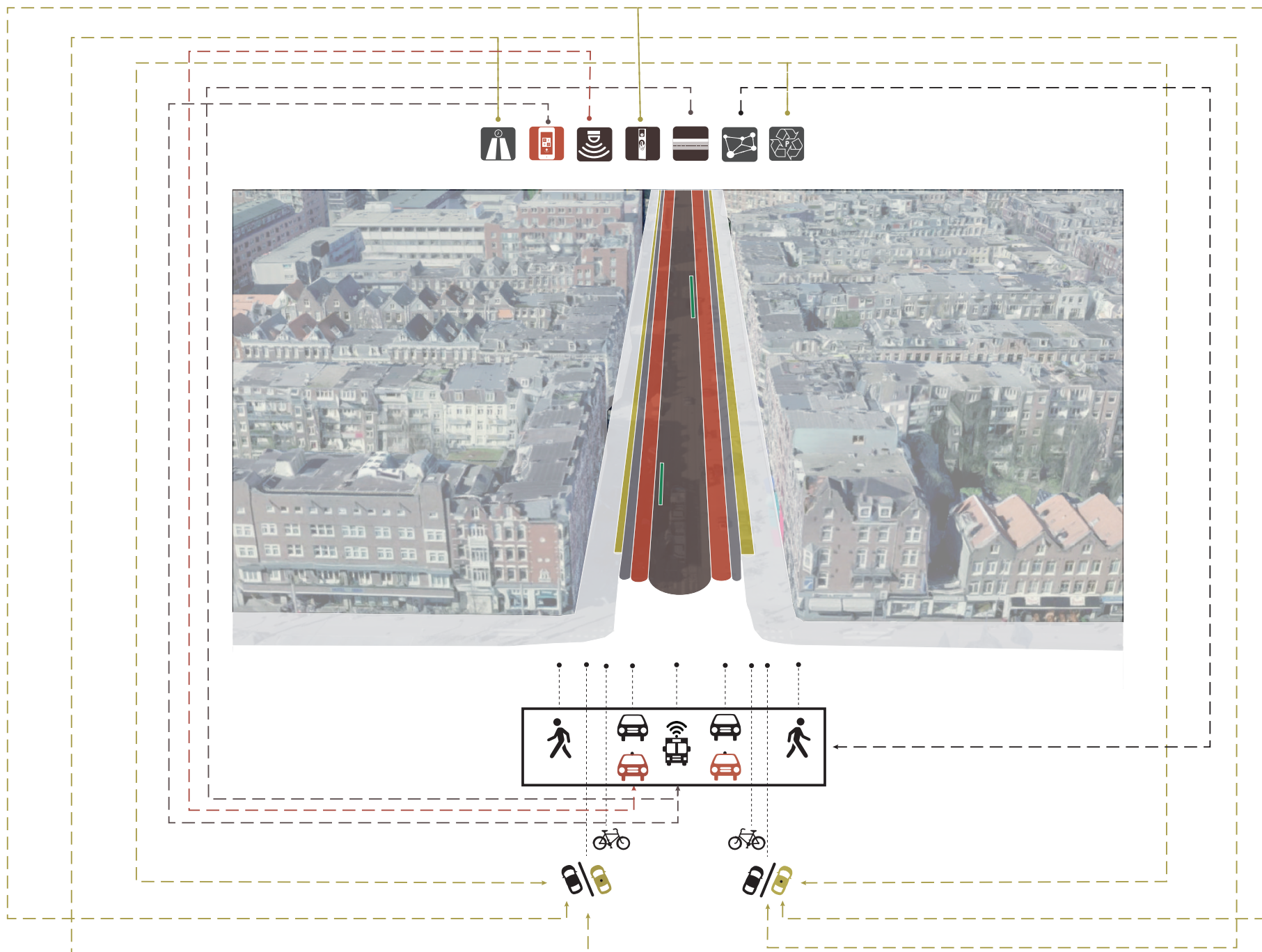
INTEGRATE MULTIPLE ACTIVITIES

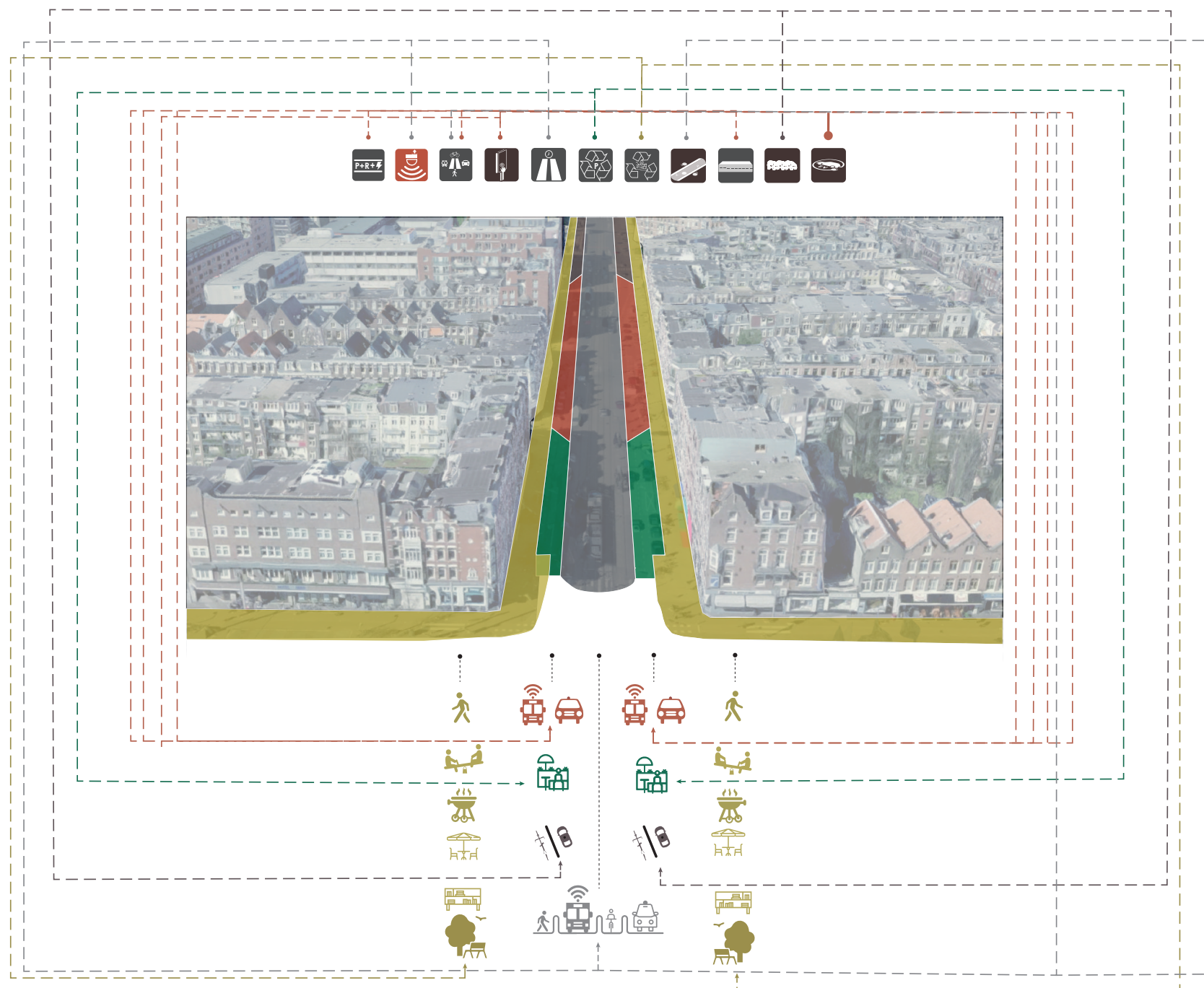


FLEXIBLE

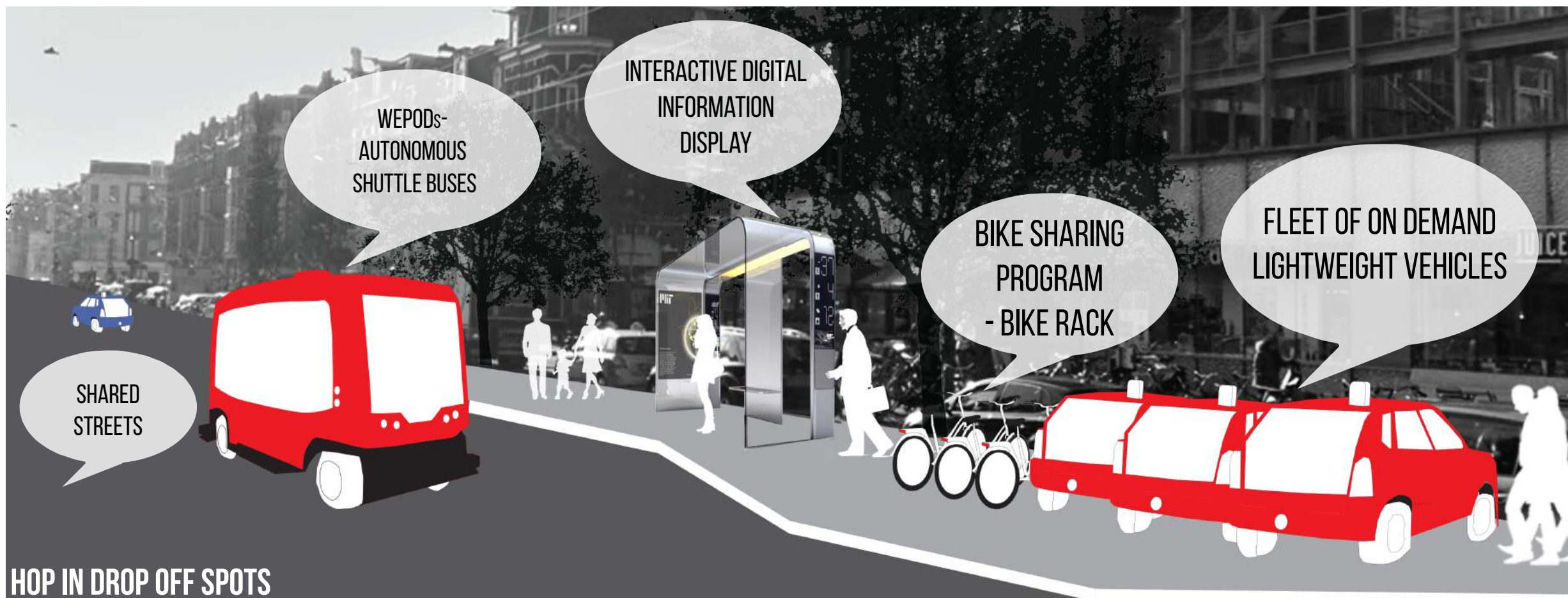


TECHNOLOGY









SHARED
STREETS

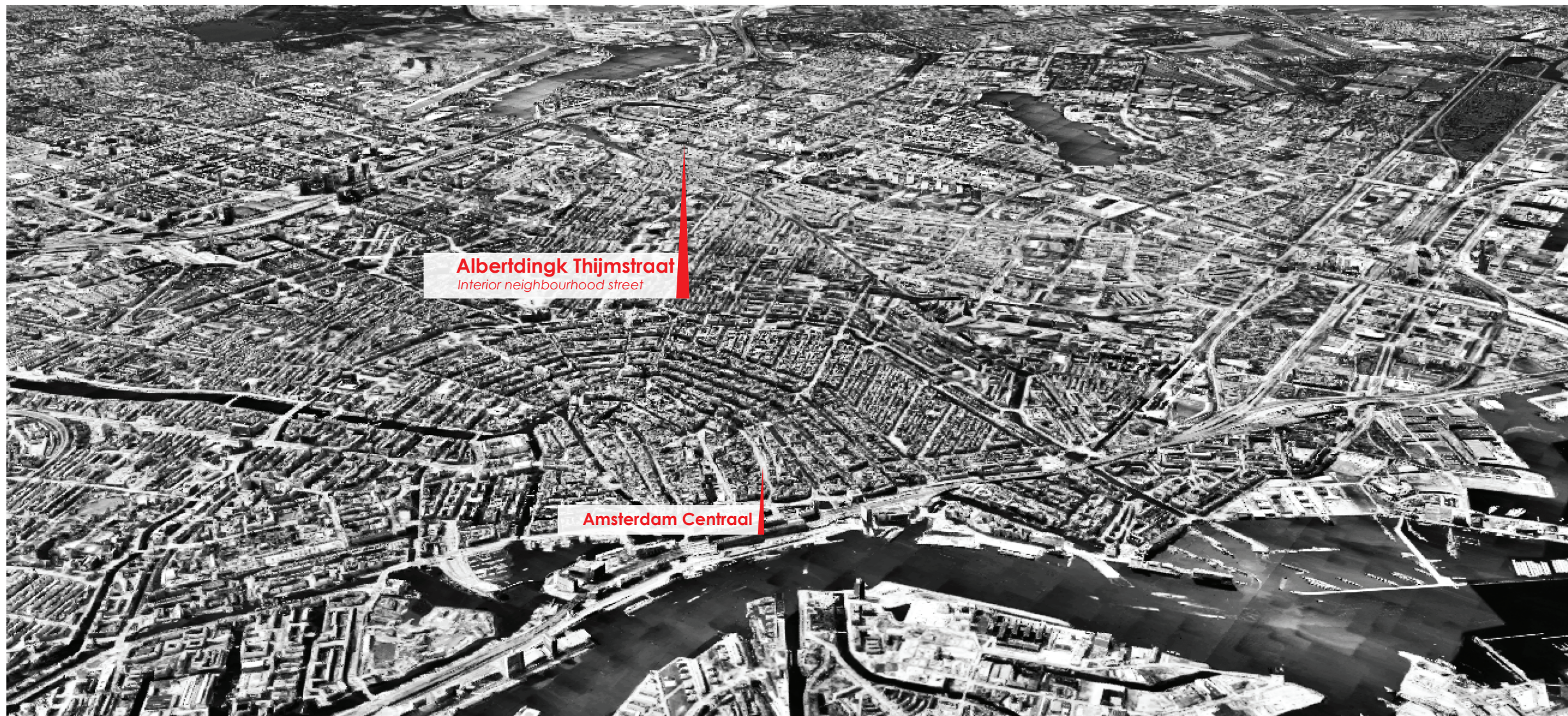
WEPODs-
AUTONOMOUS
SHUTTLE BUSES

INTERACTIVE DIGITAL
INFORMATION
DISPLAY

BIKE SHARING
PROGRAM
- BIKE RACK

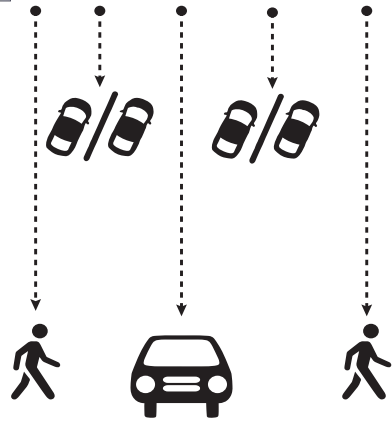
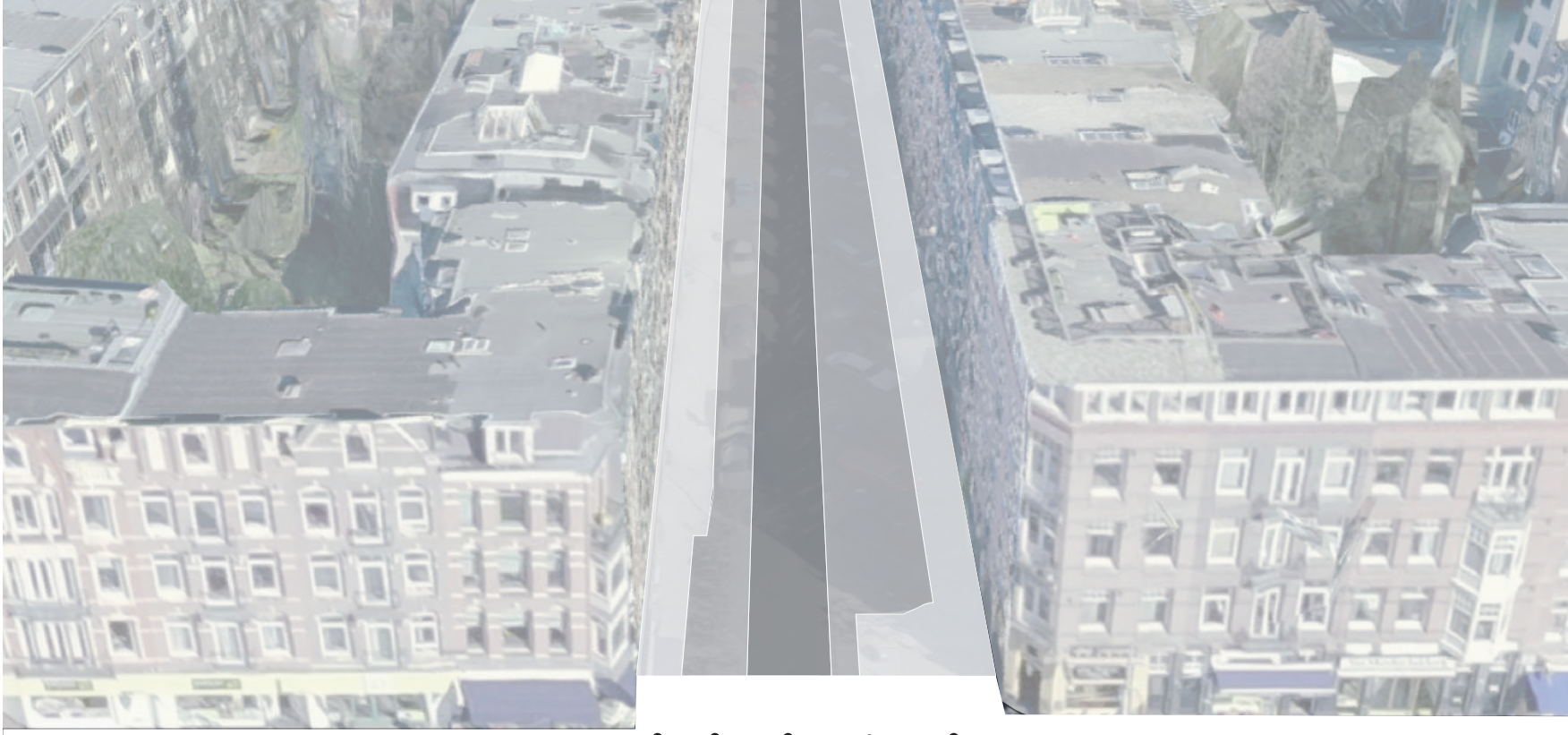
FLEET OF ON DEMAND
LIGHTWEIGHT VEHICLES

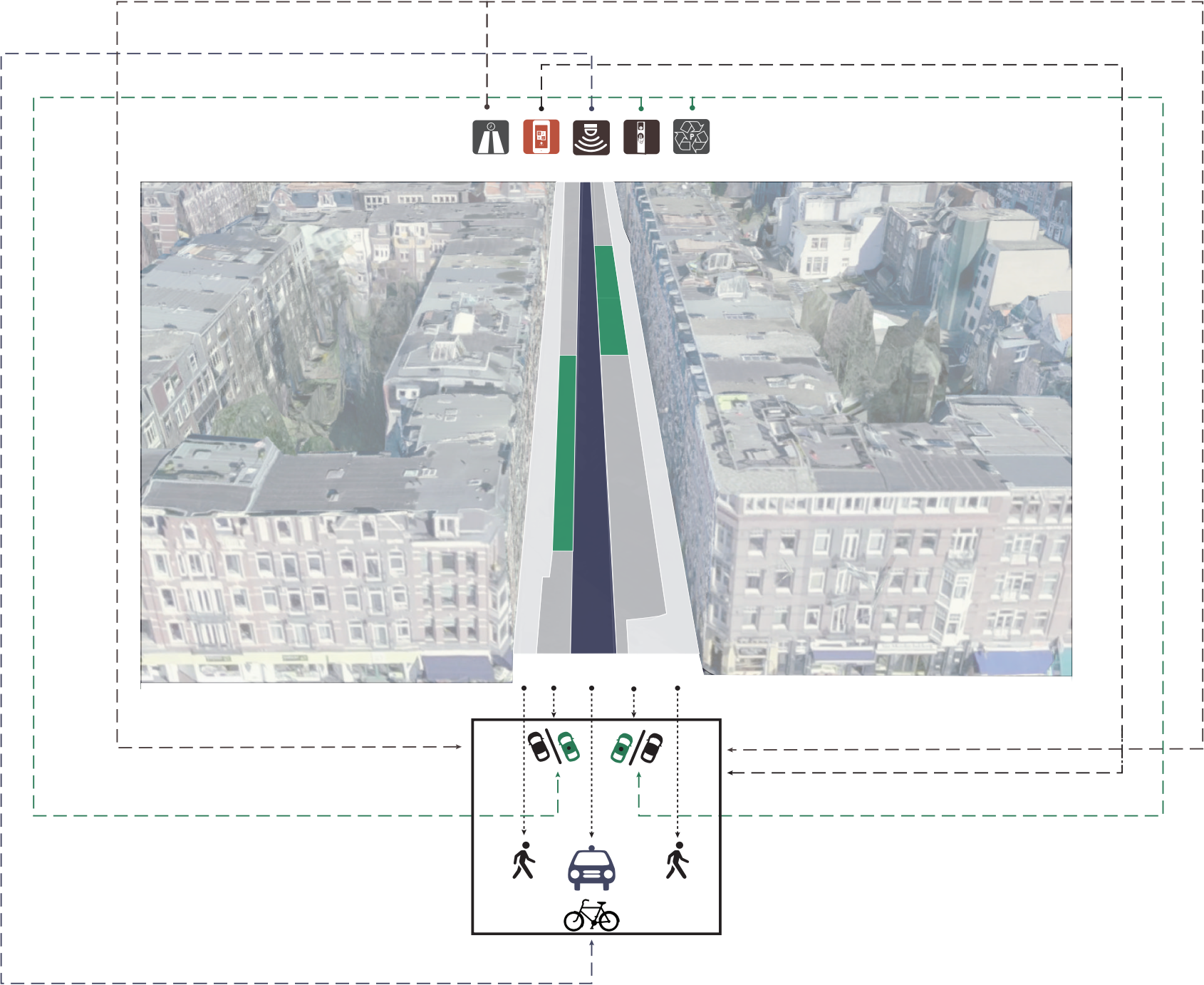
HOP IN DROP OFF SPOTS

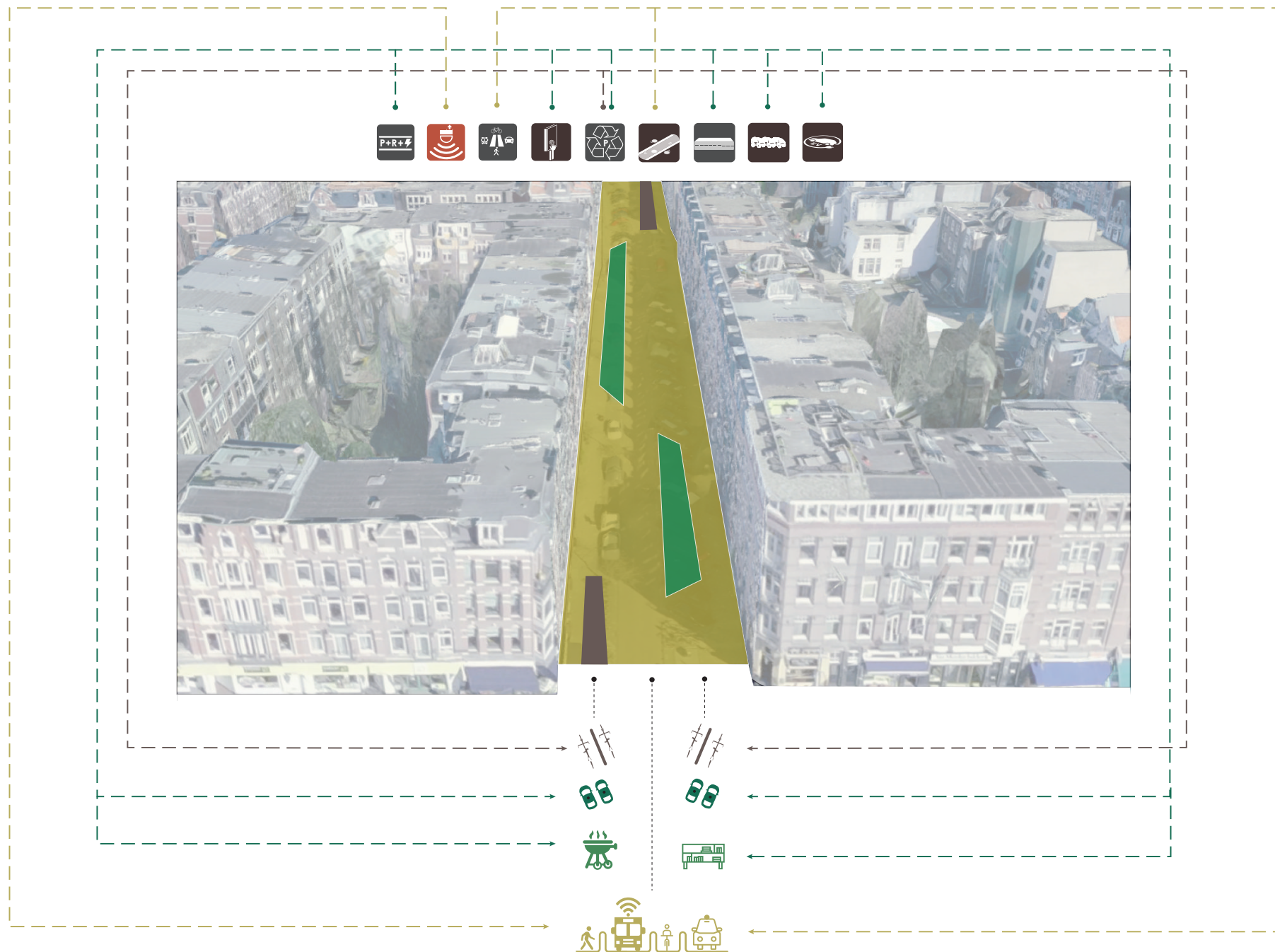


Albertdingk Thijmstraat
Interior neighbourhood street

Amsterdam Centraal











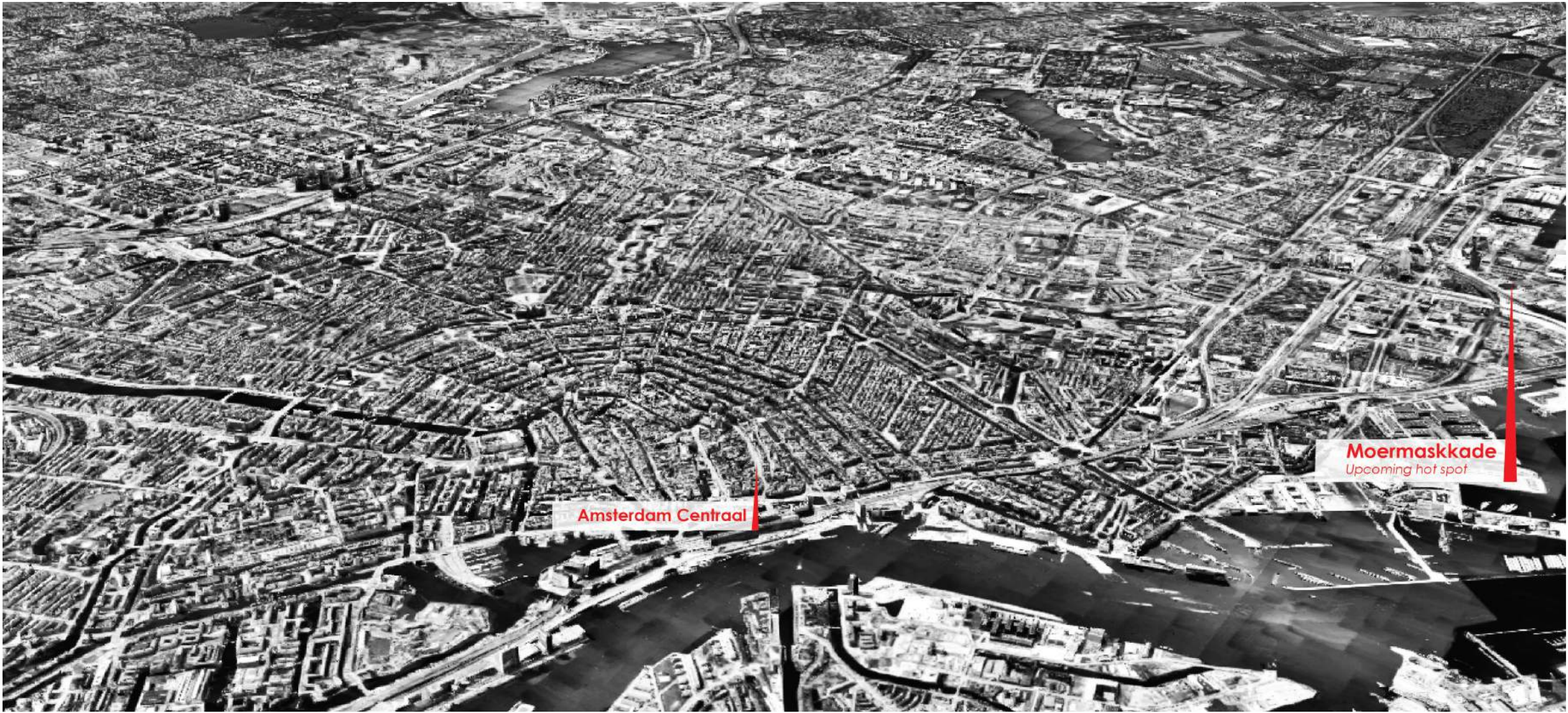
BIKE SHARING
PROGRAM- BIKE
RACKS

OUTDOOR SEATING
SPACES

FLEXIBLE
COMMUNITY
SPACE

SHARED SPACES

NEIGHBORHOOD SPACES



Amsterdam Centraal

Moermaskade
Upcoming hot spot





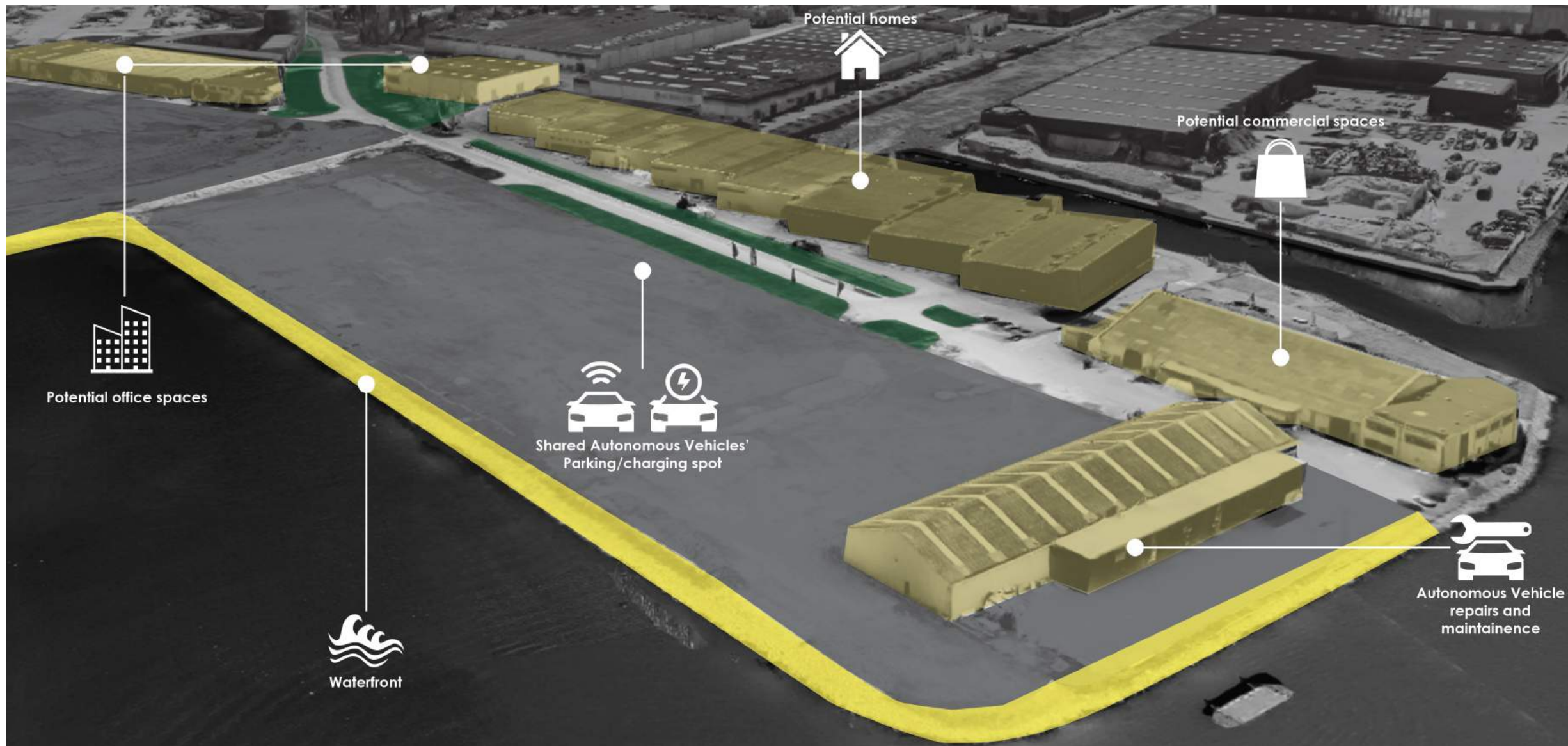
Shared Autonomous Vehicles'
Parking/charging spot

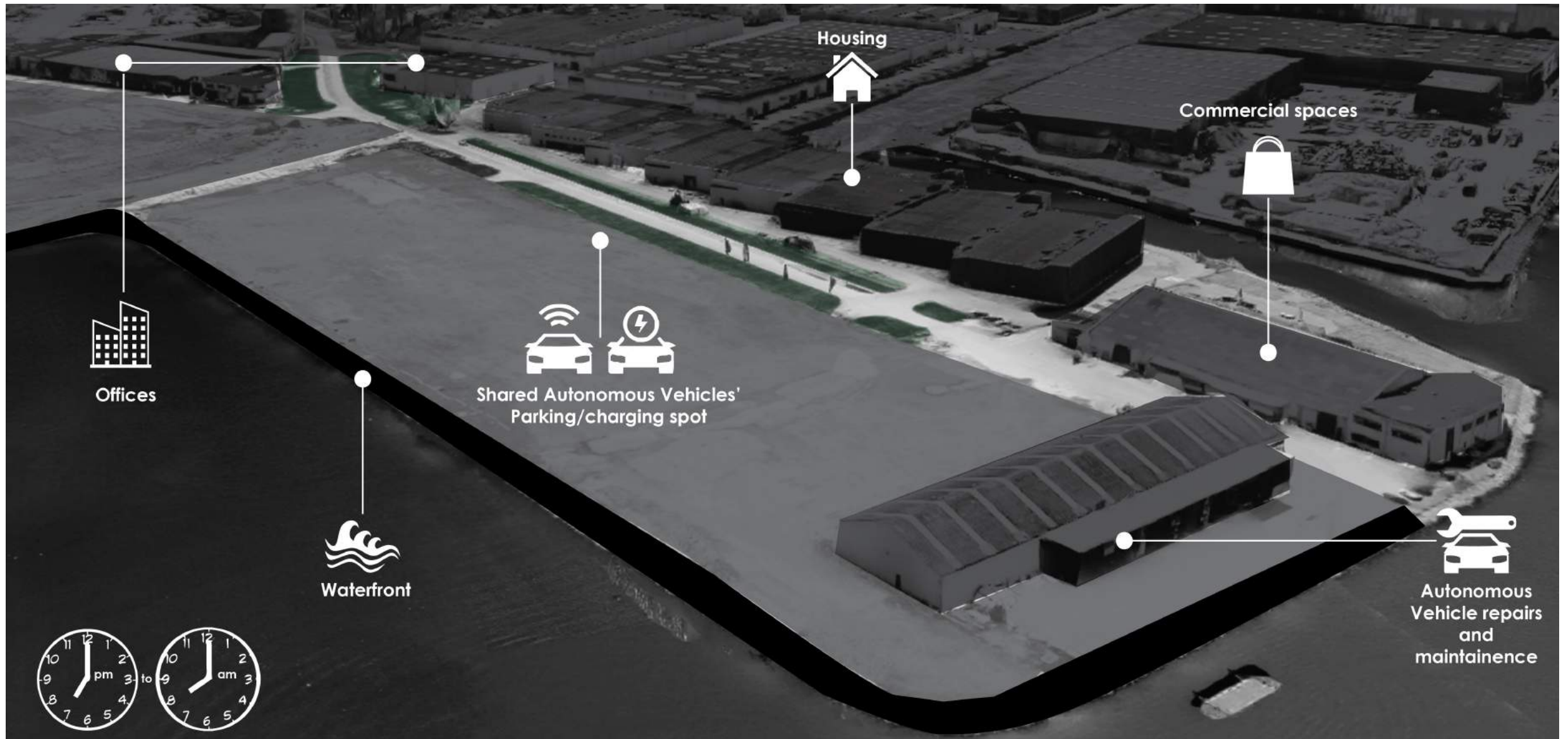


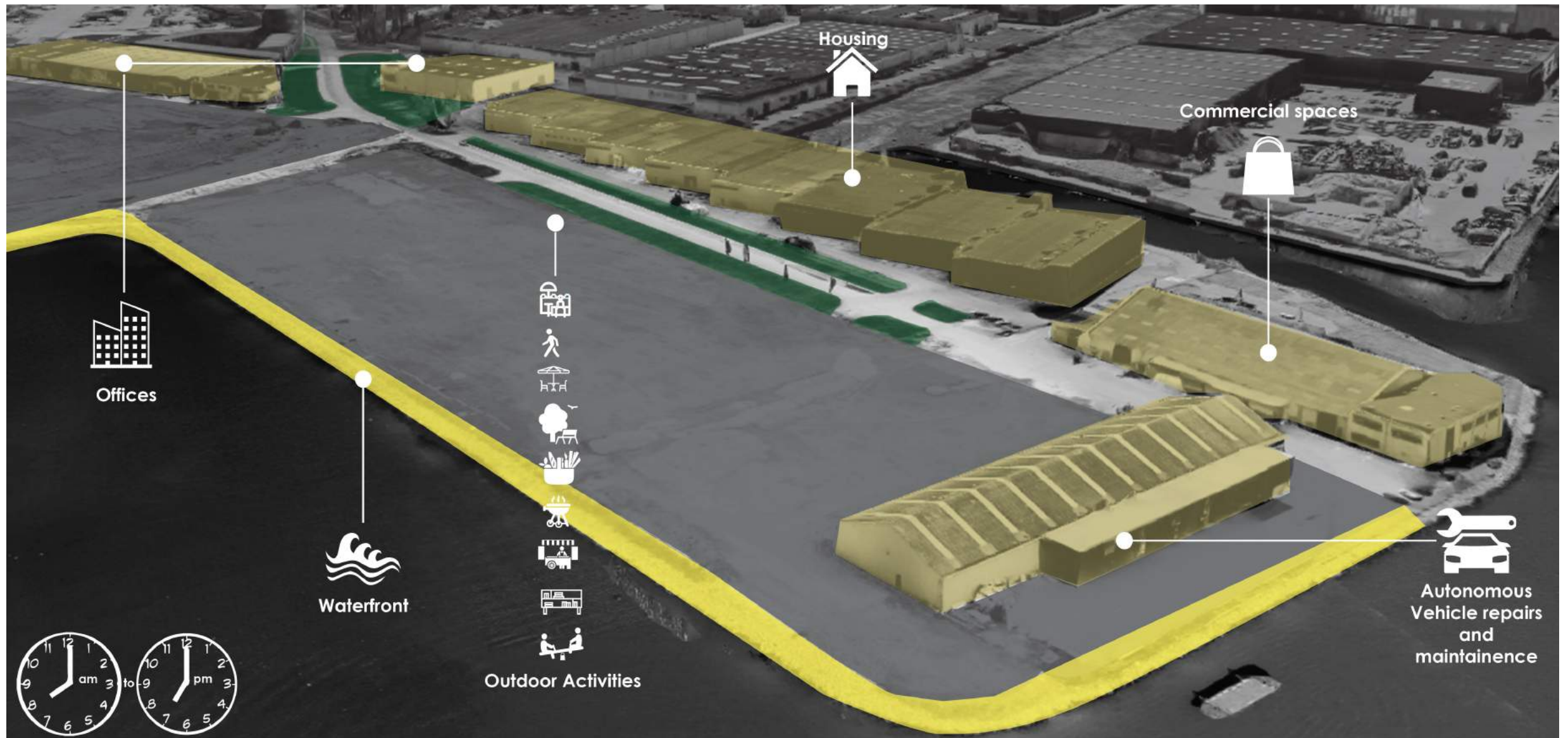
Autonomous Vehicle
repairs and
maintenance



Waterfront







©2018 Google



EMPTY INDUSTRY PLOT





FARMERS MARKET- FLEXIBLE USE OF SPACE

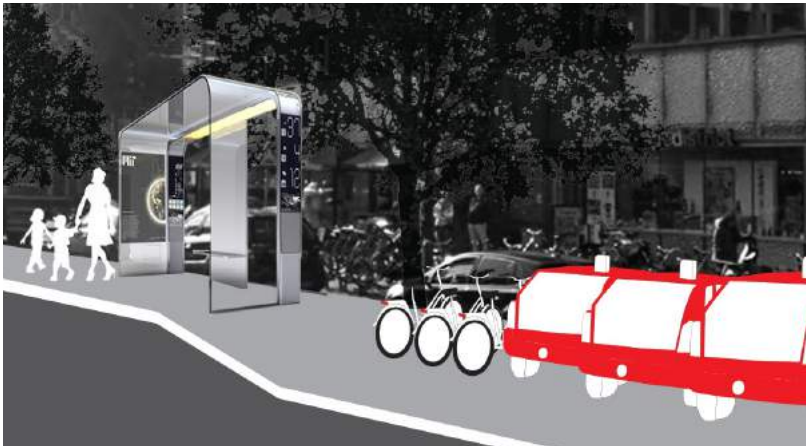


UNDERGROUND PARKING SPACES



NEIGHBOURHOOD PUBLIC SPACE







RIDESHARING
IN THIS CAR

DETAILS

DETAILS

DETAILS

GOODMORNING CHRISTINE!

Navigation app interface showing a map, travel time, and destination.

Alberdingk Thijmstraat
De Nieuwe Internationale School...

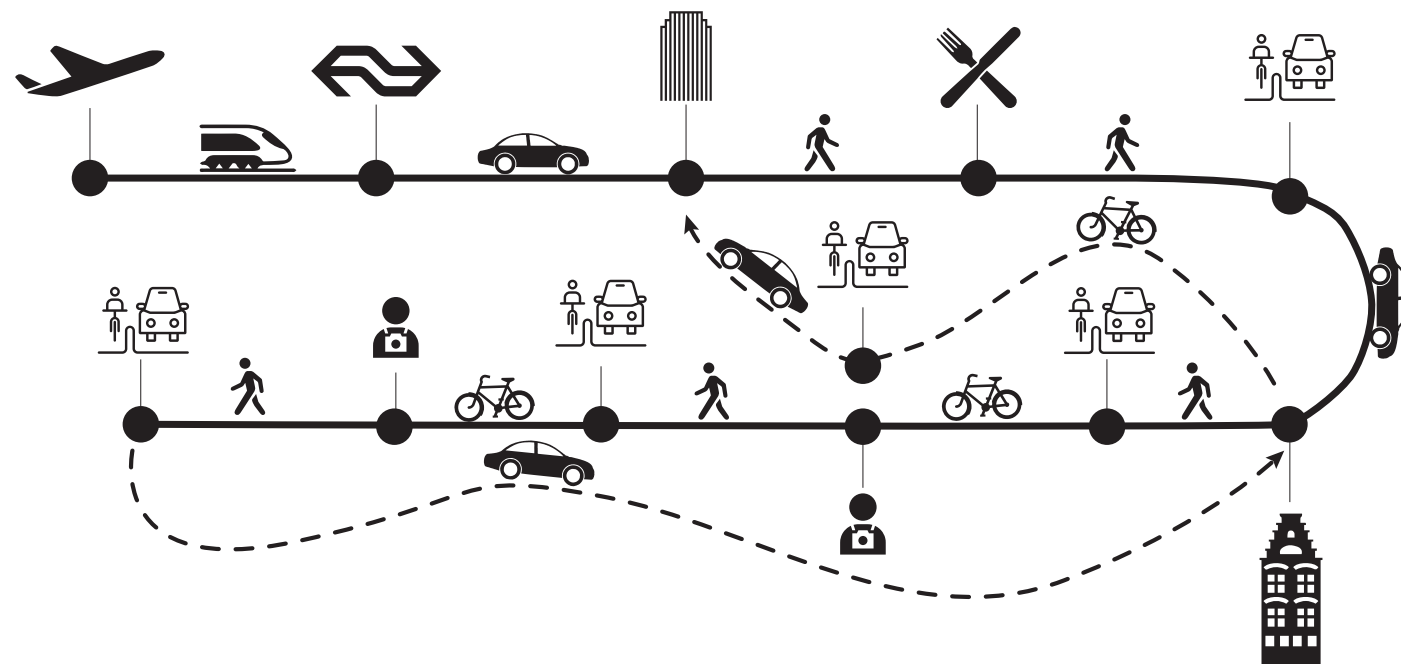
10 min 12 min 18 min 19 min

10 min (1,9 km)
Fastest route, despite the usual traffic

PREVIEW

TIME OF ARRIVAL
08.10

RECOMMENDATIONS:
STARBUCKS COFFEE
1KM AHEAD
★★★★★



TOURIST SPOTS FOR YOU



ANNE FRANK HOUSE



RIJKSMUSEUM



THE VAN GOGH MUSEUM

HELLO ANA!
WELCOME TO AMSTERDAM

Navigation app interface showing a map of Amsterdam with a blue route line. The app displays the starting point 'Centrum' and the destination 'Amsterdam, Rijksmuseum'. It provides travel time estimates: 10 min by car, 22 min by public transport, 27 min by walking, and 10 min by bicycle. The map shows various landmarks and streets in Amsterdam, including De Oude Kerk, Bloemenmarkt, and the Rijksmuseum. A 'PREVIEW' button is visible at the bottom right of the map area.

RECOMMENDATIONS:
CÔTE OUEST
3.3 KMS AHEAD
★★★★★



