HEALTHY NEIGH BOUR HOODS

Evi Goedemans

A research and design project investigating the impact of automated mobility on urban health in residential neighbourhoods in Almere

P5 Presentation
28 June 2019

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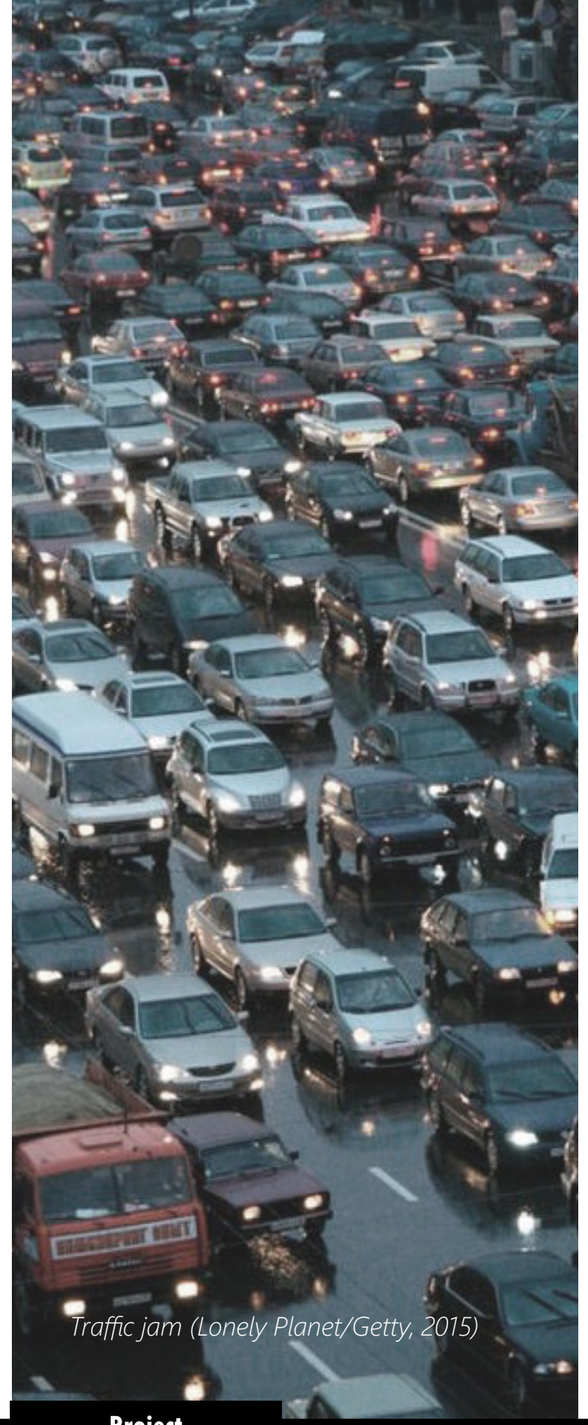


Traffic jam (Lonely Planet/Getty, 2015)

Suburban development (ANP, 2012)

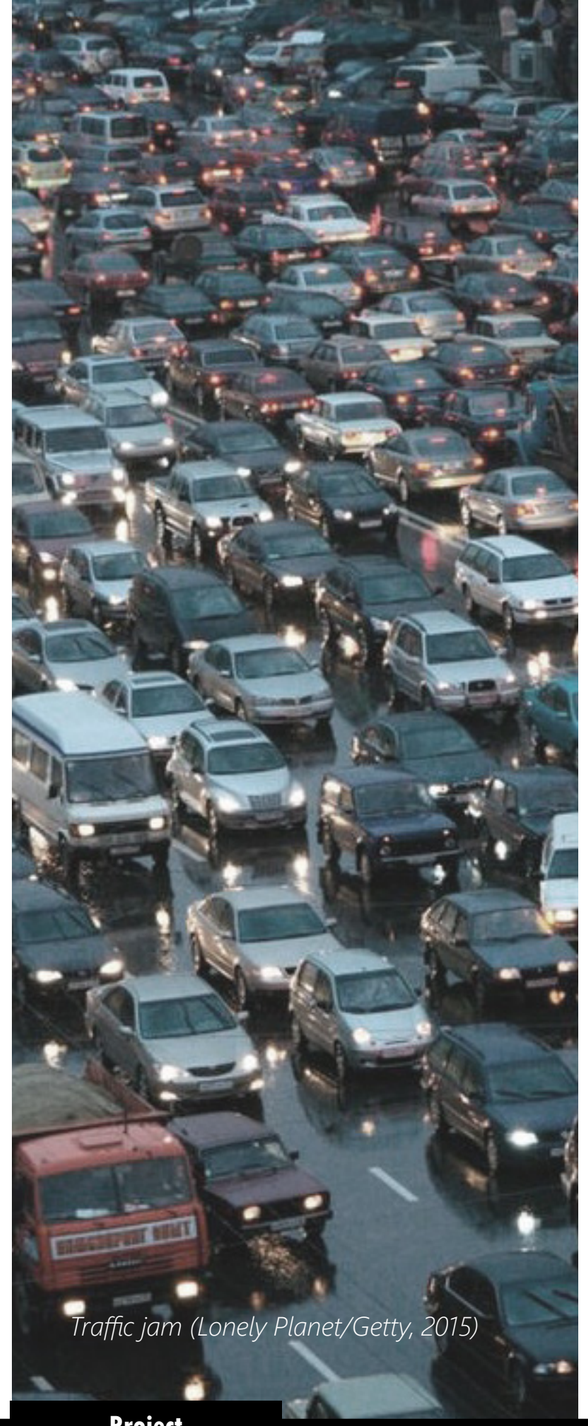
Office - sedentary lifestyle (Ramirez, 2017)

PROBLEM FIELD

Mobility & urban health

> Growing mobility
> Suburban development
  - car dependency
> Sedentary lifestyles

PROBLEM FIELD



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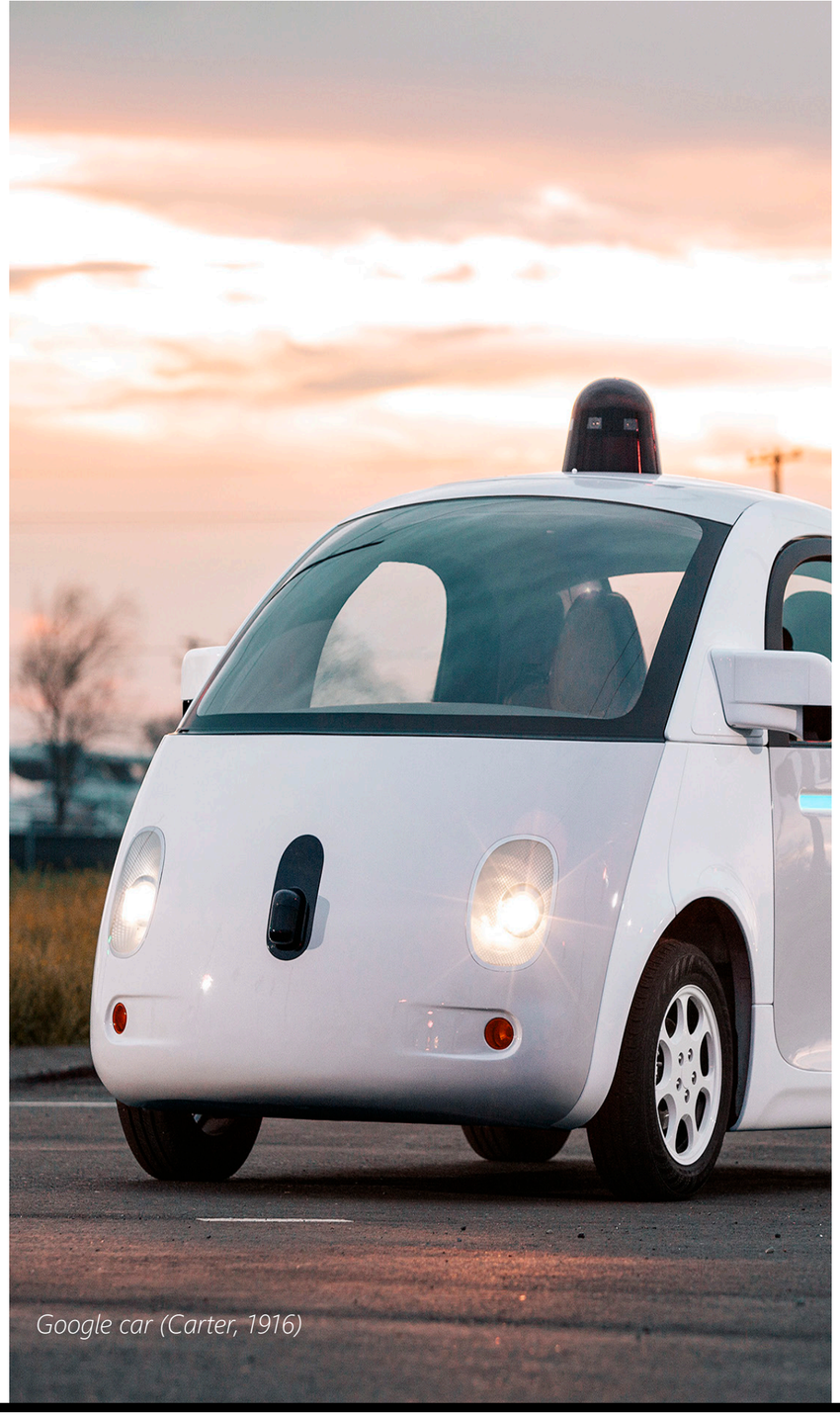
Suburban development (ANP, 2012)

Office - sedentary lifestyle (Ramirez, 2017)

Automated mobility (Kornwitz, 2017)



Google car (Carter, 1916)

> **A new chance?**
The implementation of automated mobility can contribute to improving urban health in residential neighbourhoods

> The aim is to **improve urban health** in residential neighbourhoods, by using automated mobility as catalyst

HYPOTHESIS & AIM

"How can the implementation of automated mobility contribute in improving urban health, in residential neighbourhoods in the city of Almere?"

RESEARCH QUESTION

AMBITIONS

1. The healthy neighbourhood gives ample space to the slow traffic (cyclist and pedestrian), and the fast traffic will not be dominant.

2. The healthy neighbourhood triggers and invites to move and meet.

3. The healthy neighbourhood is a sport- and play-ground.

4. The healthy neighbourhood comprises a healthy and clean environment, it is sustainable, resilient and climate proof.

5. The healthy neighbourhood is accessible, and everyone is included.

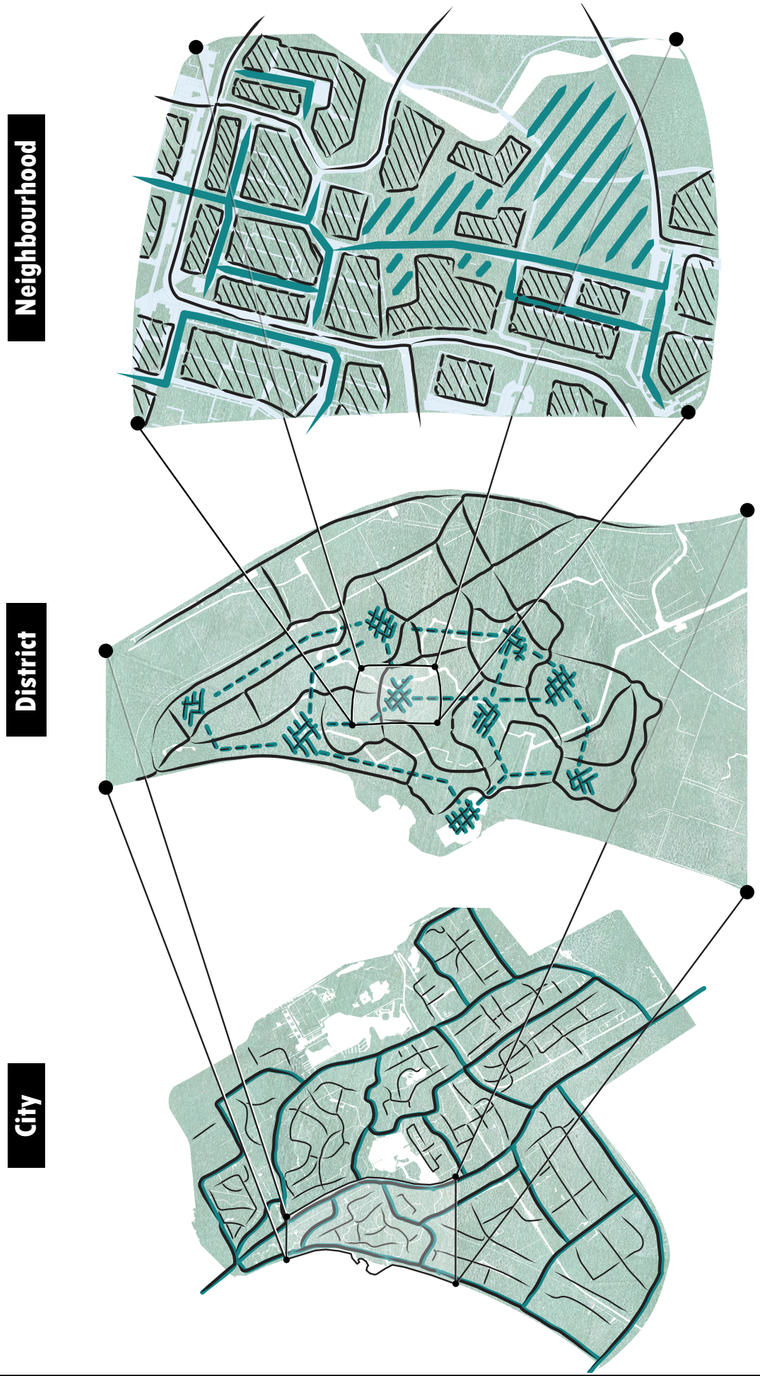
RECOMMENDATIONS

3 steps

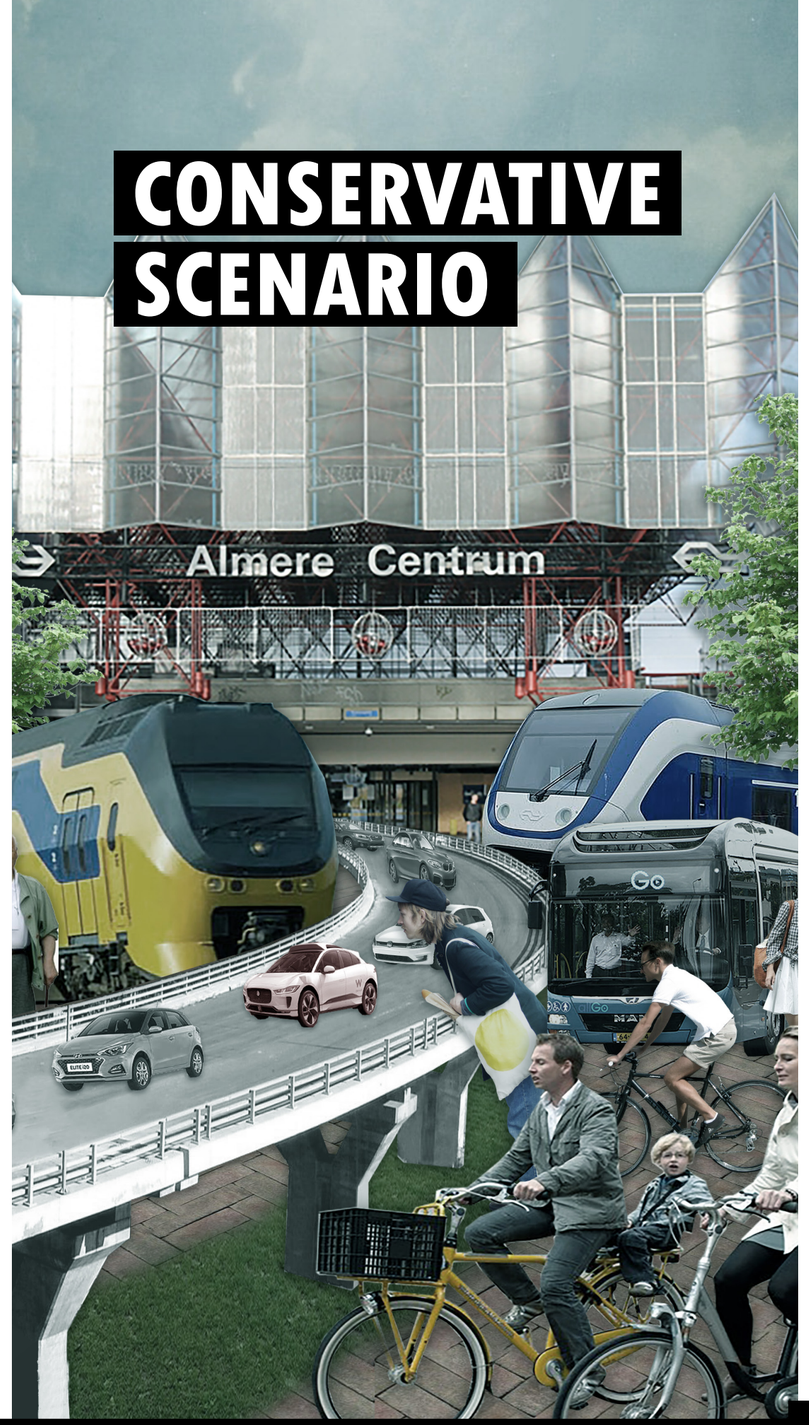
> **City**
Fast traffic around the neighbourhood - slow traffic gets the full priority

> **District**
The disentanglement of the networks - new areas for the community - connected by strong slow traffic routes

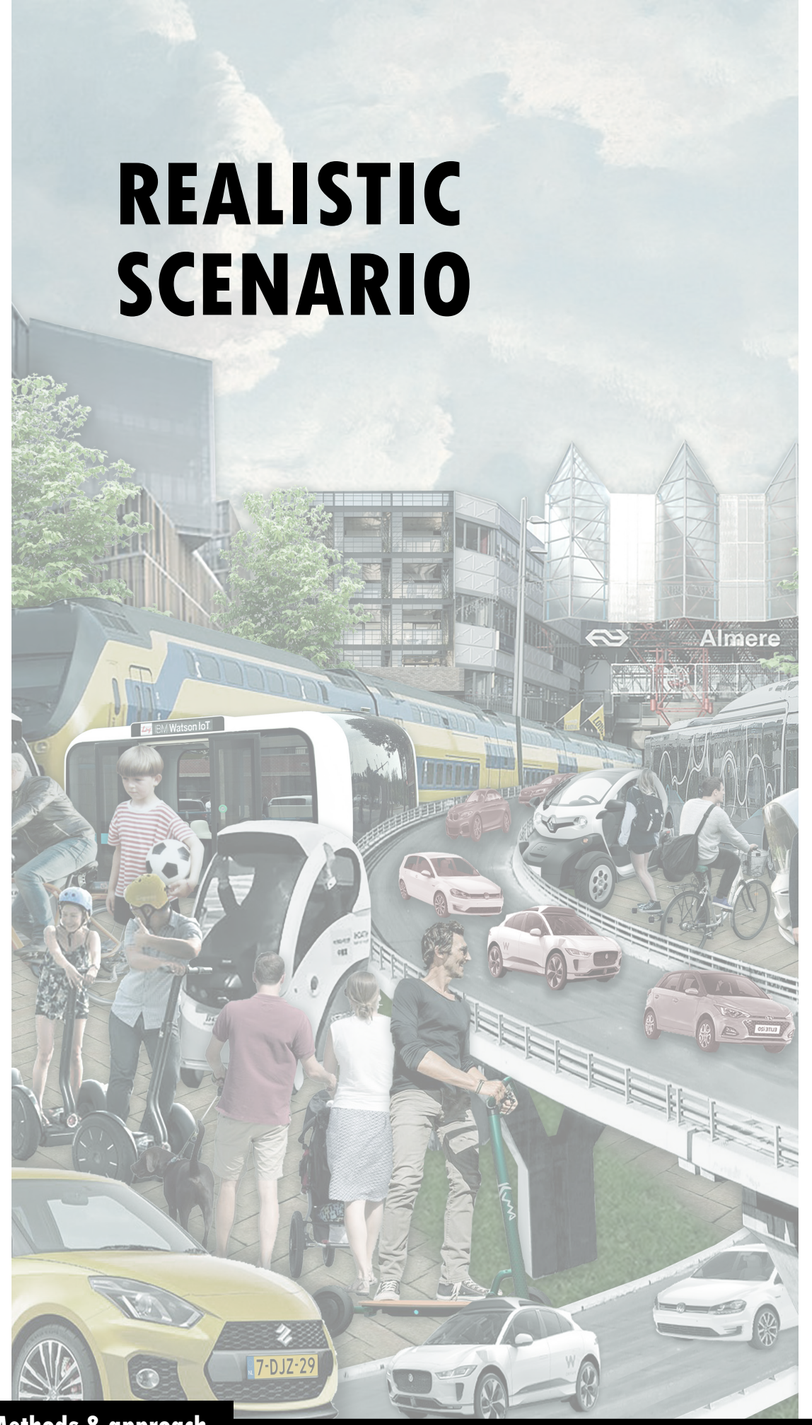
> **Neighbourhood**
Creating areas and routes which are accessible, and stimulate and facilitate activity (physical and social)



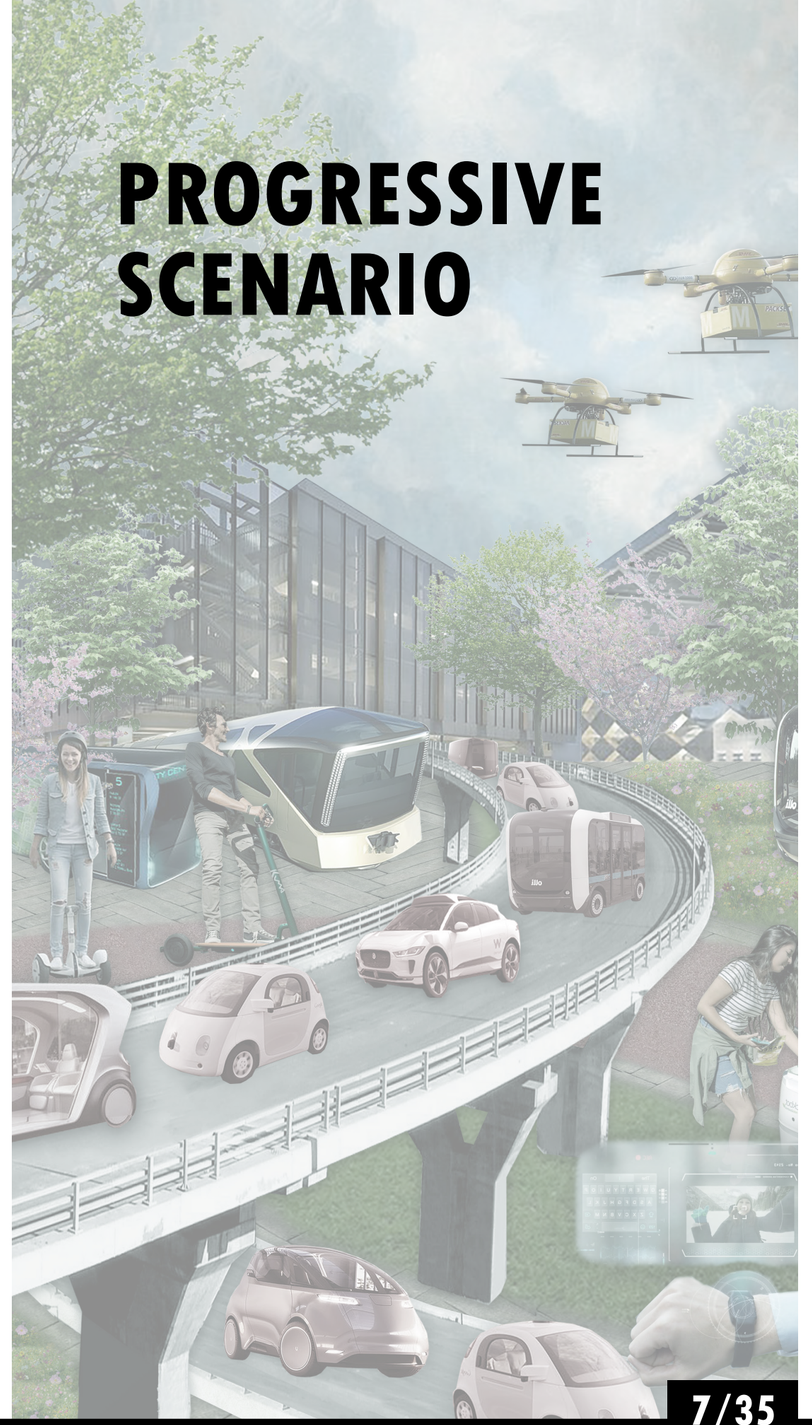
CONSERVATIVE SCENARIO



REALISTIC SCENARIO



PROGRESSIVE SCENARIO



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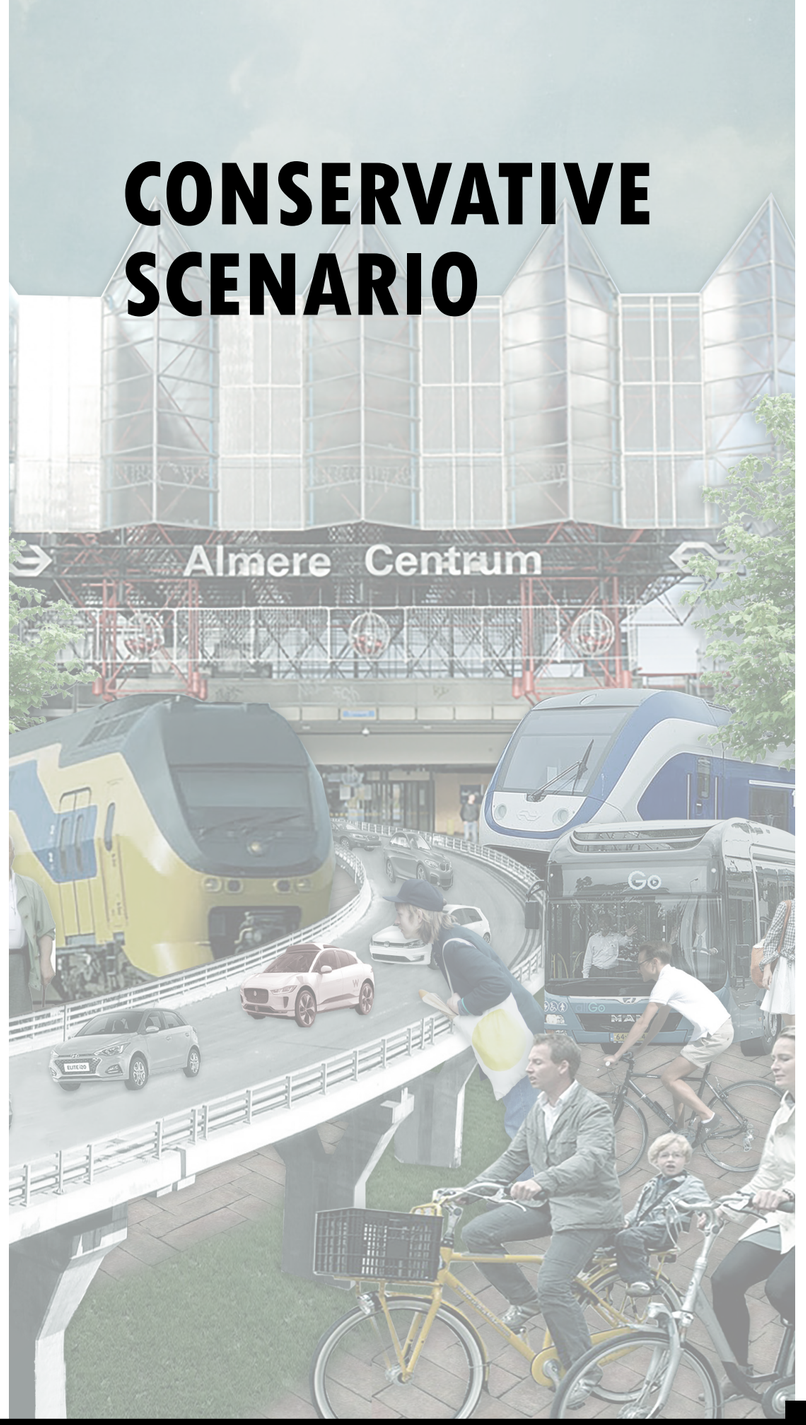

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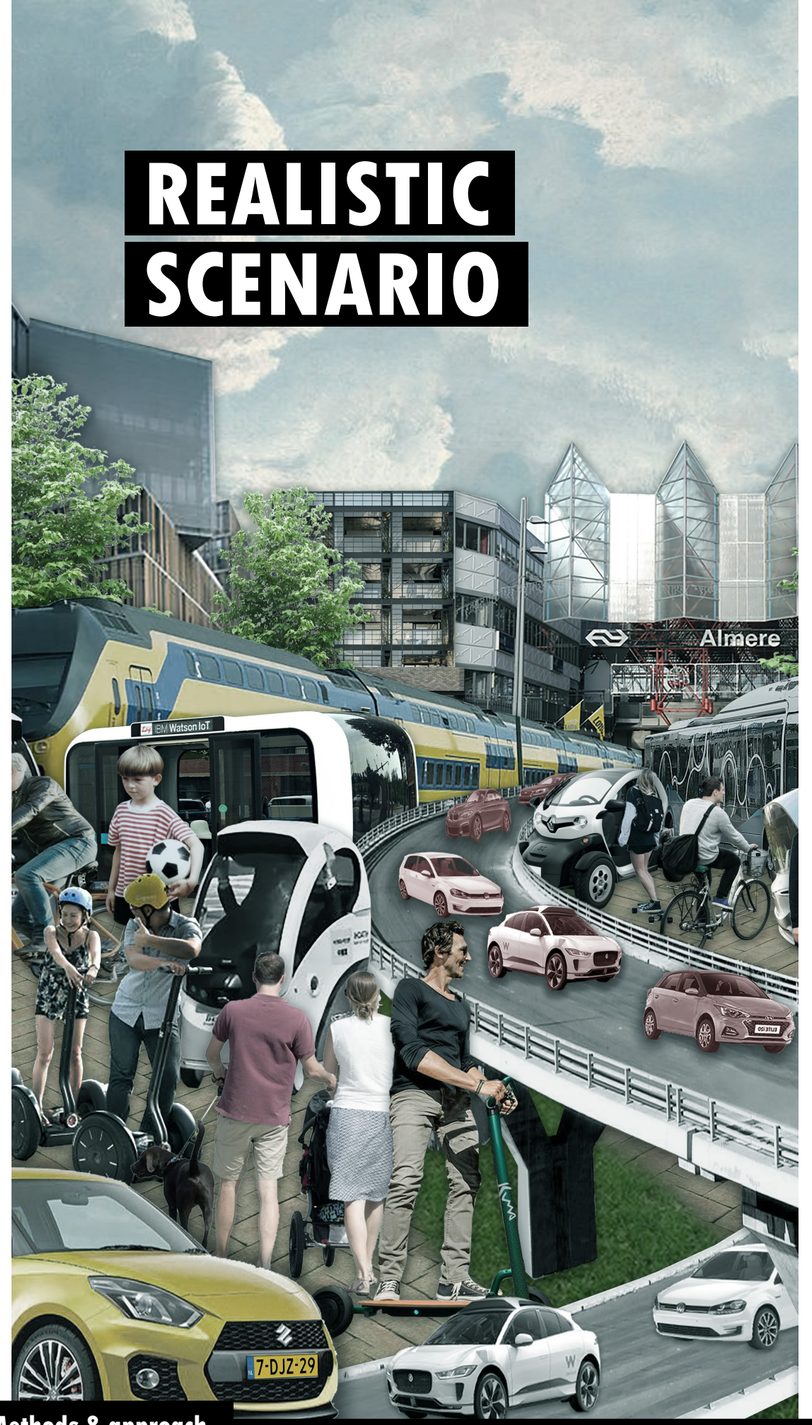

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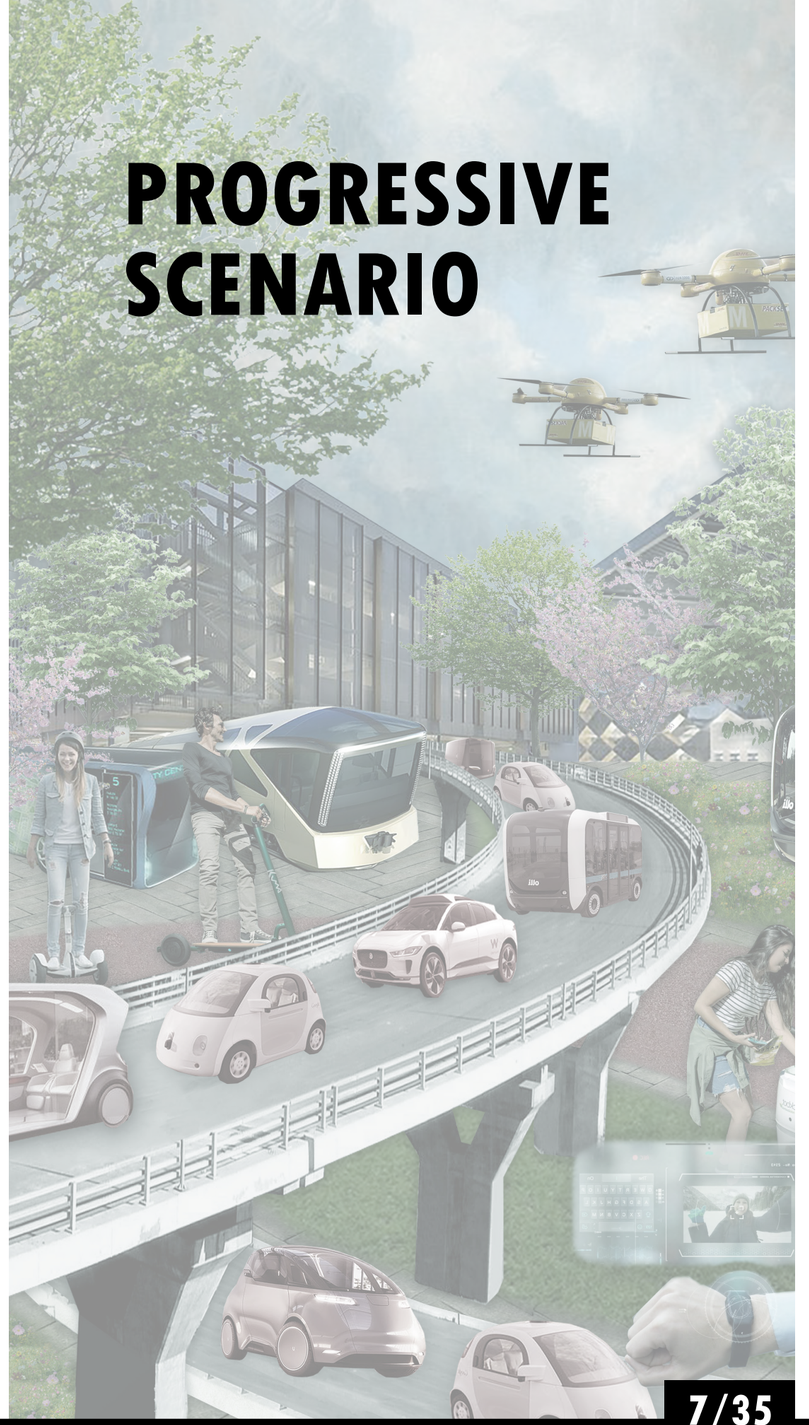

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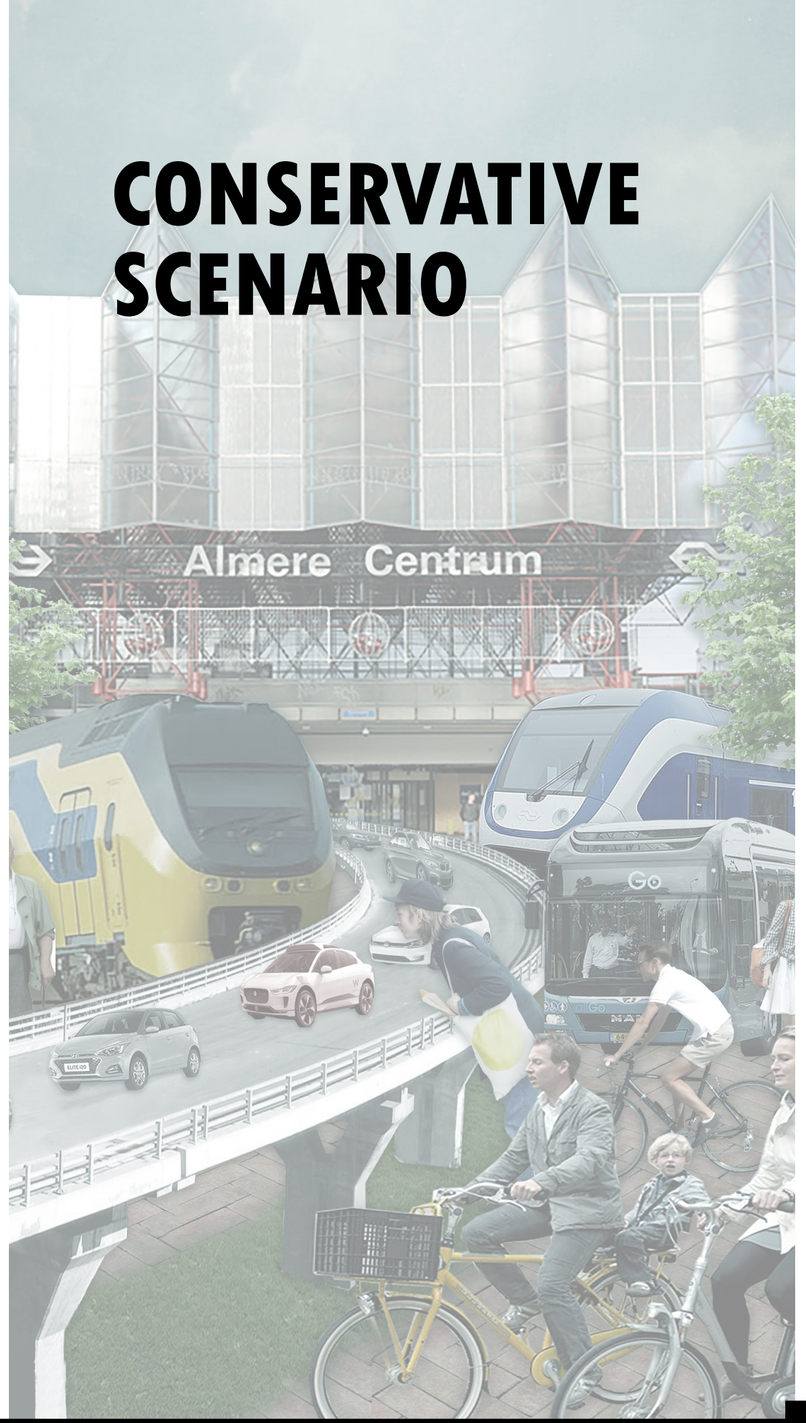

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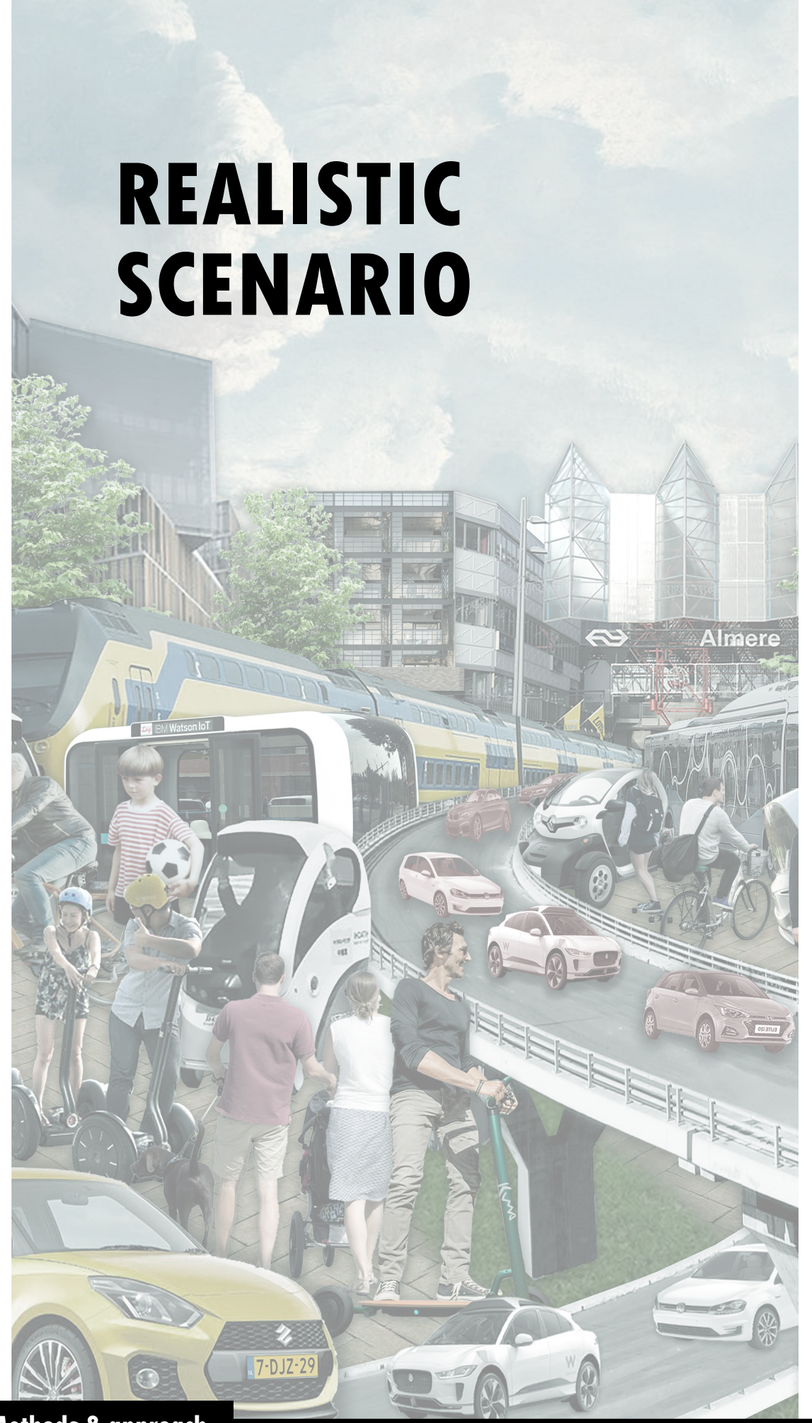

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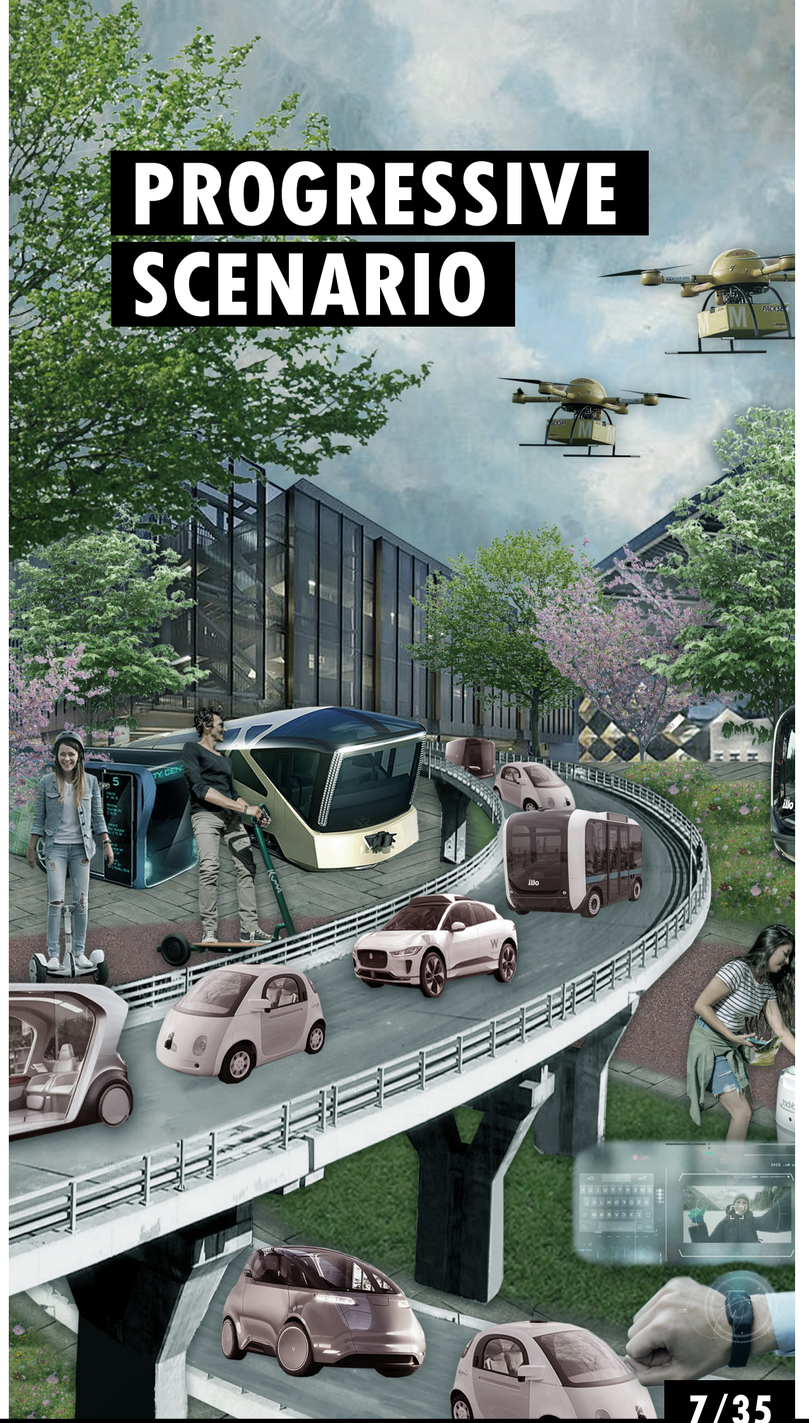


IMPROVING URBAN HEALTH

Analogue interventions
> **design interventions**

Technological interventions
> **scenario determinants**

Symantec Chengdu Campus (Landezine, 2015)

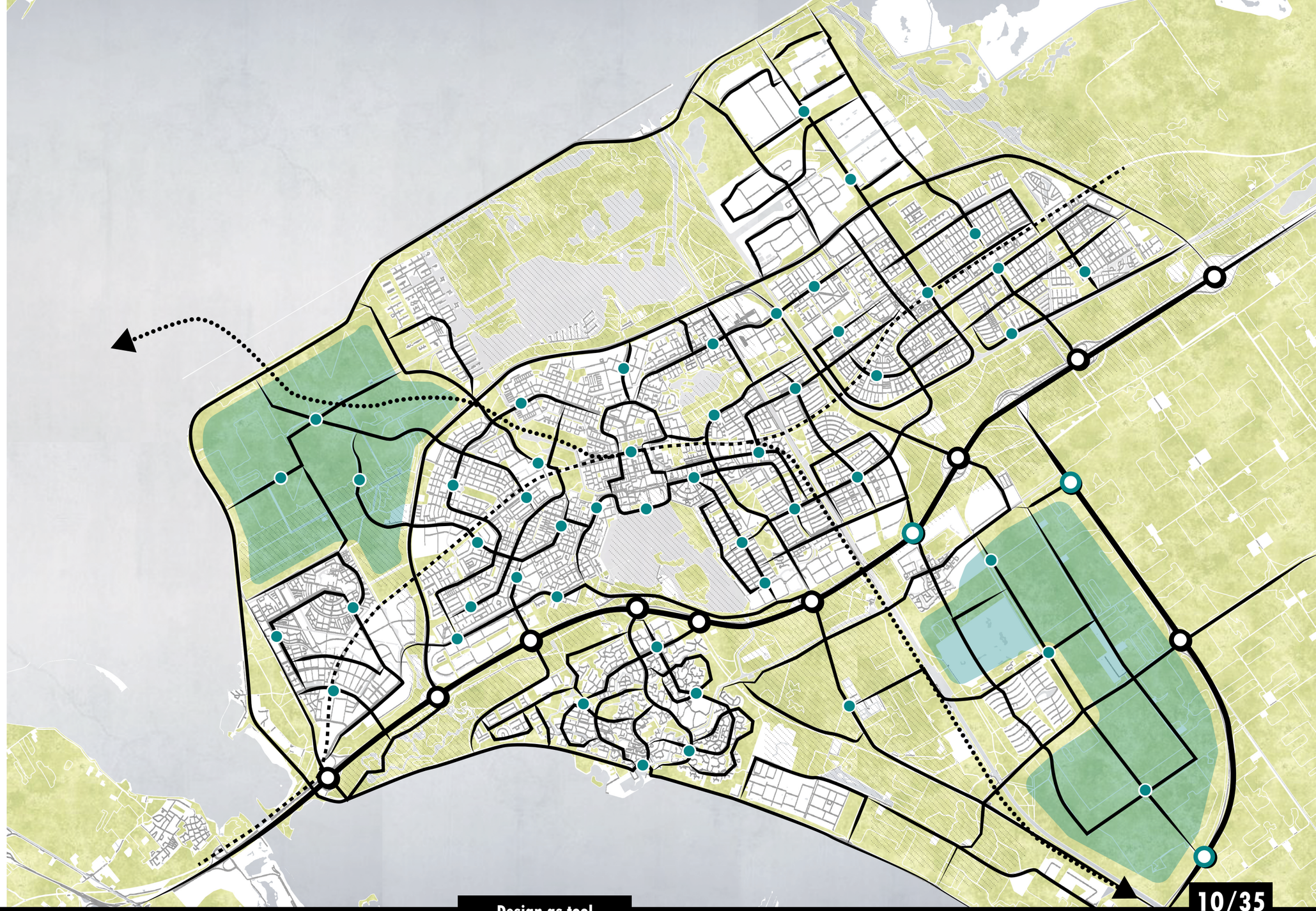
Volvo autonomous car (Volvo, n.d.)

> **Almere Haven - isolated**
  De Wierden
  De Hoven
  De Werven
> **Almere Stad - many cars**
  Filmwijk
  Danswijk

NEIGH-BOURHOODS

DESIGN
CITY SCALE

> Automated mobility network
> Entrances highway
> Parking hubs



DESIGN
CITY SCALE

> Automated mobility network
> Entrances highway
> Parking hubs

RECOMMENDATIONS

Almere Haven

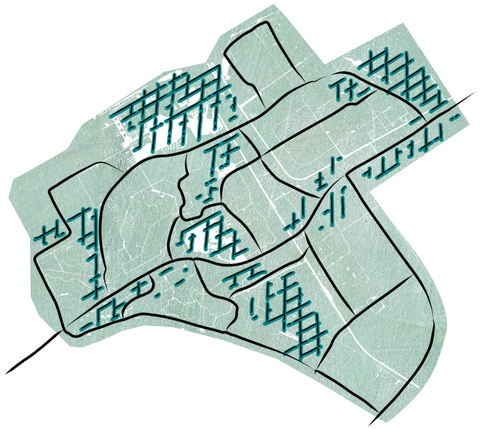
> Automated mobility network
> Separation of flows

RECOMMENDATIONS

Almere Haven

• 1.1 Mobility network

Ambitions
1. Slow traffic priority

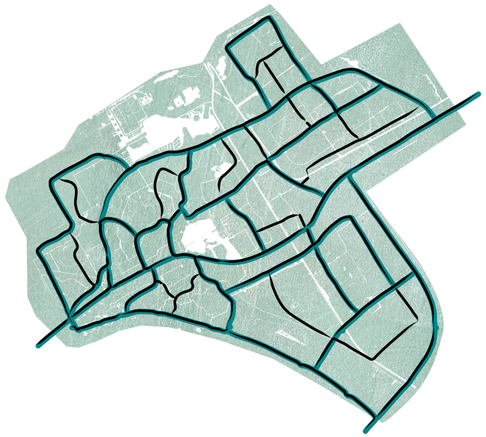


• 1.2 Green/blue infrastructures

Ambitions
4. Healthy & clean environment

+ 1.3 Separation of flows

Ambitions
1. Slow traffic priority

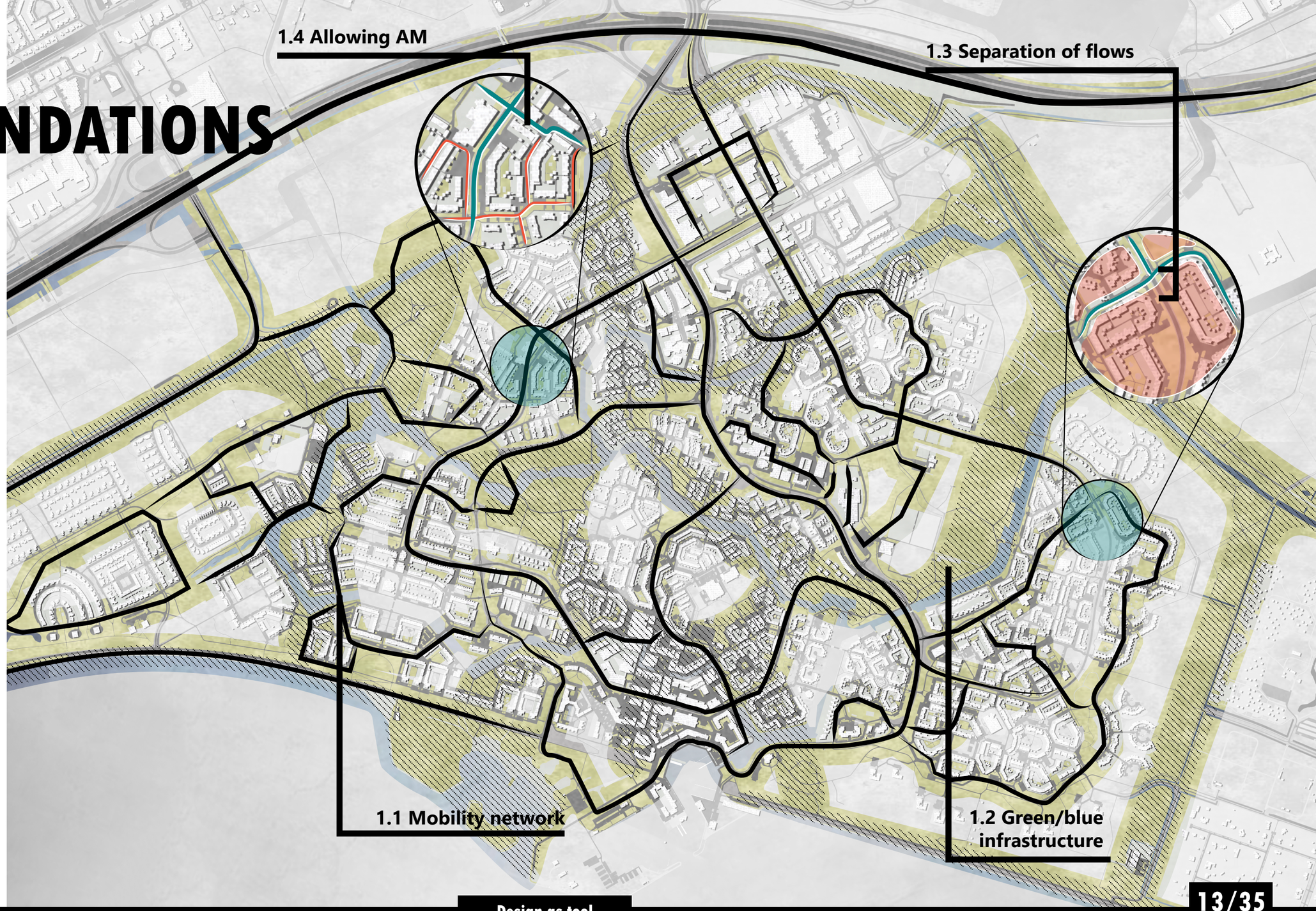


+ 1.4 Allowing automated mobility

Ambitions
1. Slow traffic priority

RECOMMENDATIONS

Almere Haven



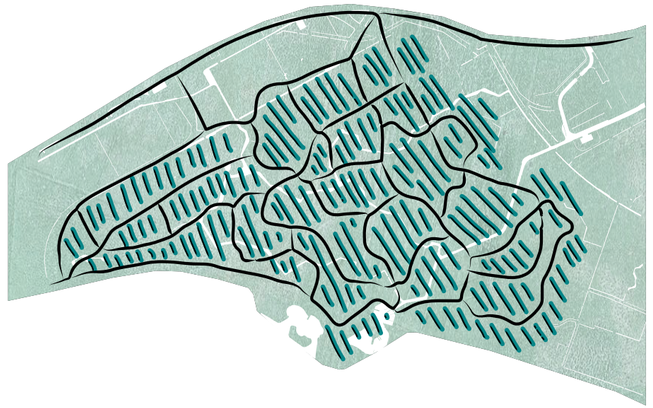
RECOMMENDATIONS

Almere Stad

> Parking hubs
> Driving independent

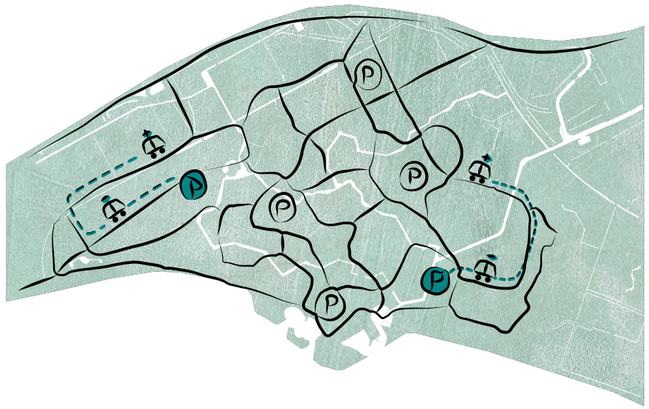
RECOMMENDATIONS

Almere Stad



• 2.1 Fast vehicle free zones

Ambitions
1. Slow traffic priority
2. Invites to move and meet



+ 2.2 Driving independent

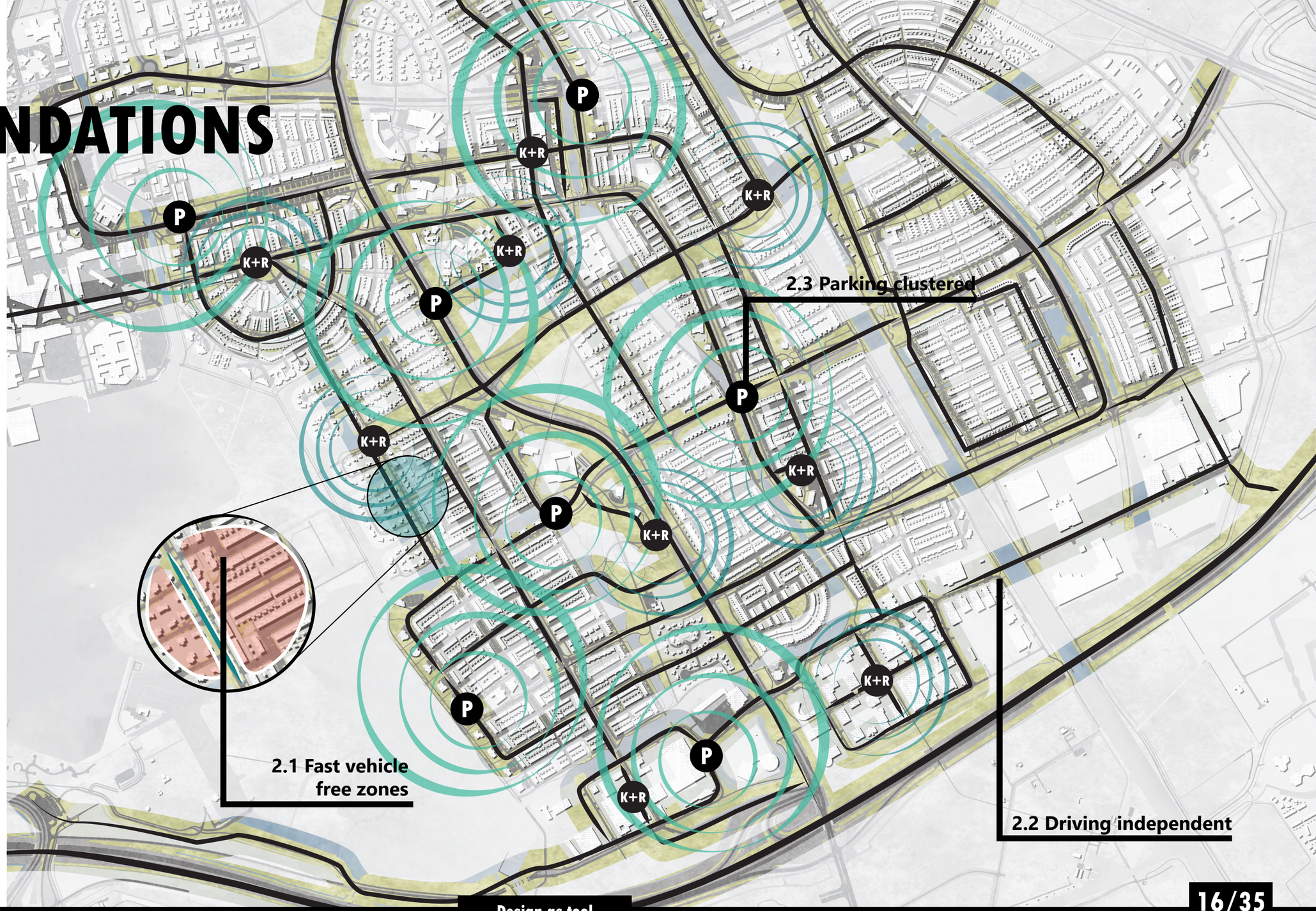
Ambitions
1. Slow traffic priority

•/+ 2.3 Parking clustered

Ambitions
1. Slow traffic priority

RECOMMENDATIONS

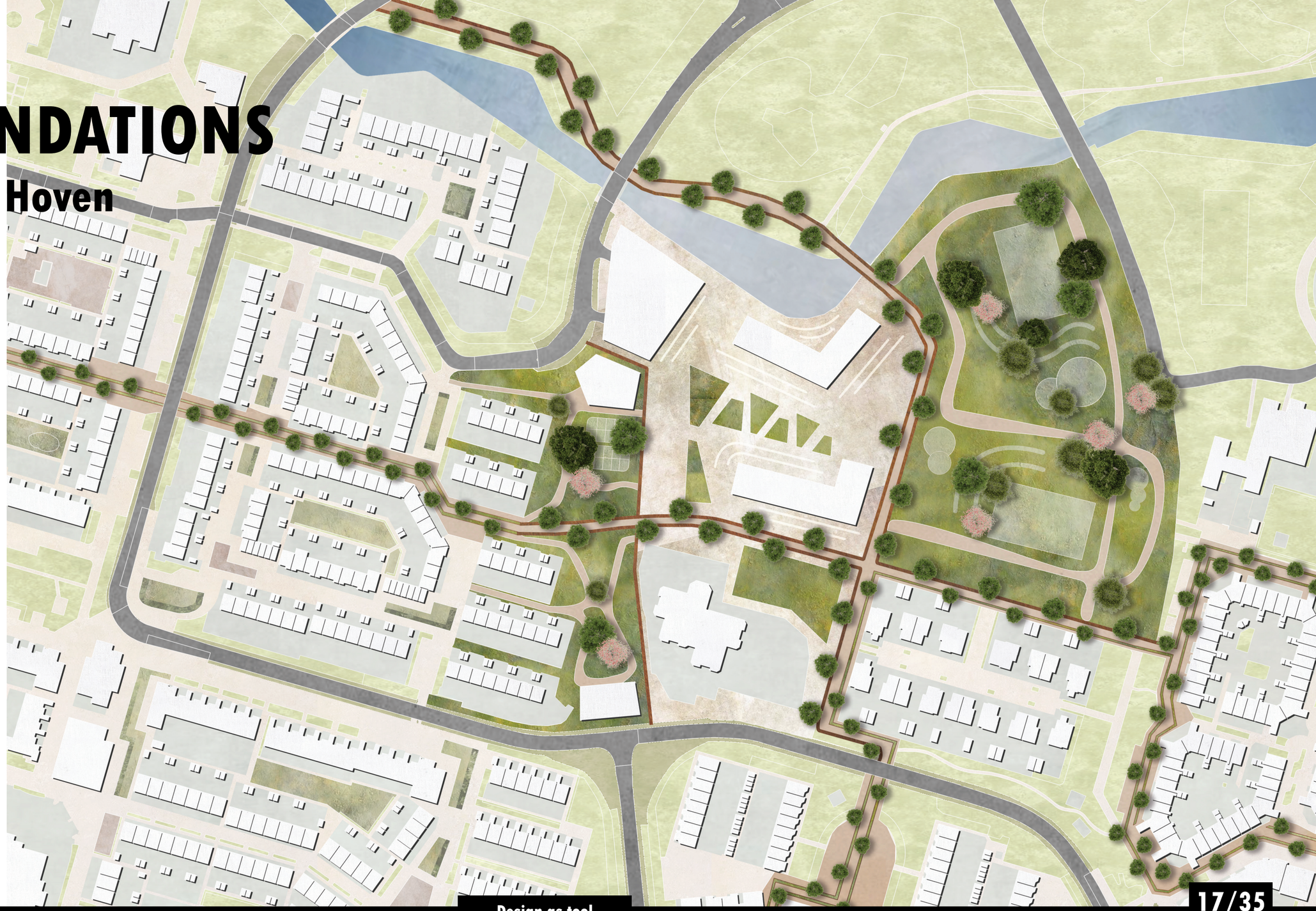
Almere Stad



RECOMMENDATIONS

De Wierden/De Hoven

> Community areas
> Slow traffic routes



RECOMMENDATIONS

De Wierden/De Hoven

• 2.4 Places to meet, play & sport

Ambitions
2. Invites to move and meet
3. Sport- & playground

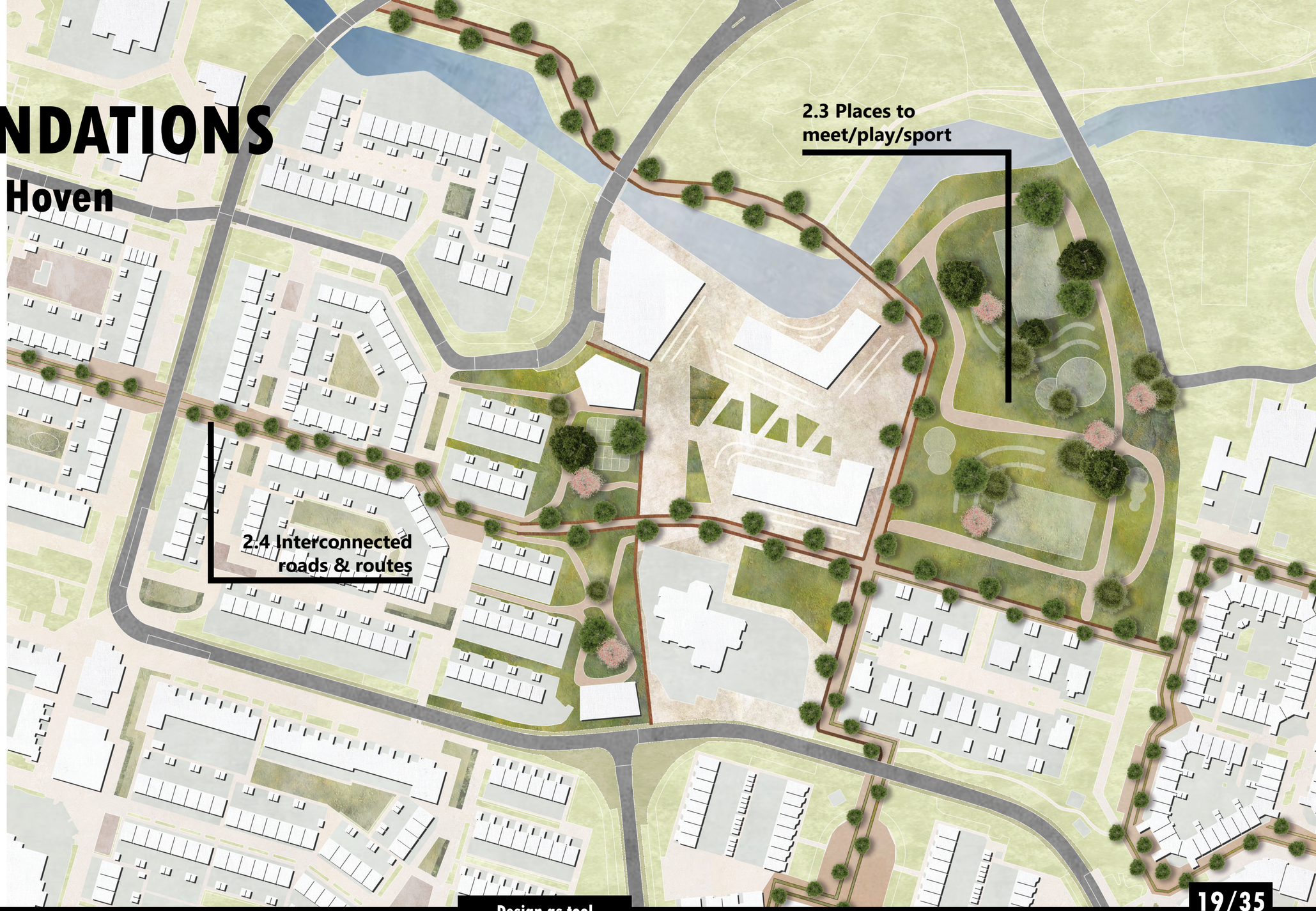
PA

• 2.5 Interconnected roads & routes

Ambitions
1. Slow traffic priority
5. Accessibility

RECOMMENDATIONS

De Wierden/De Hoven



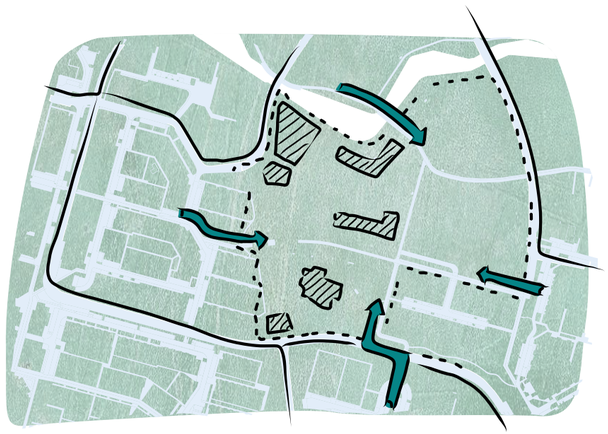
RECOMMENDATIONS

Uithof/Montessoripad

> Community area
> Places to meet, move and play

RECOMMENDATIONS

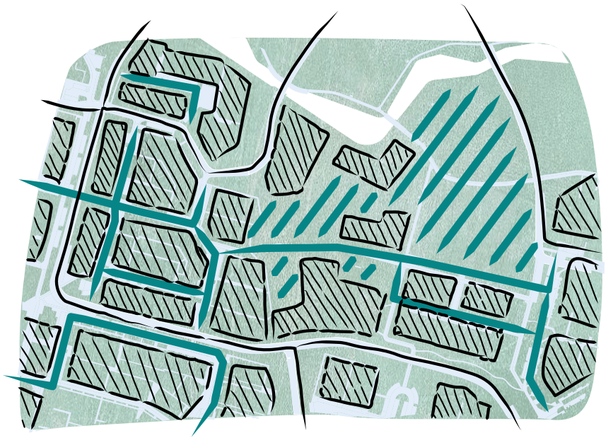
Uithof/Montessoripad



• 3.1 Public areas / buildings accessibility

Ambitions
5. Accessibility

PA



• 3.2 Safety

Ambitions
2. Invites to move and meet

PA

RECOMMENDATIONS

Uithof/Montessoripad

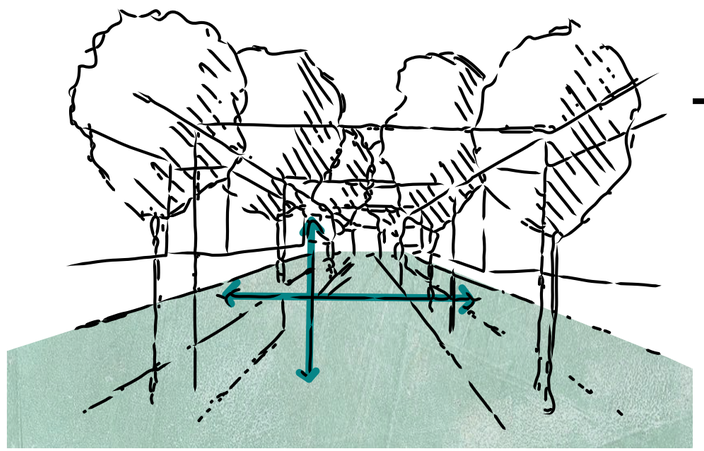
RECOMMENDATIONS

Joris Ivenslaan

> Transport zones > meeting/staying zones

RECOMMENDATIONS

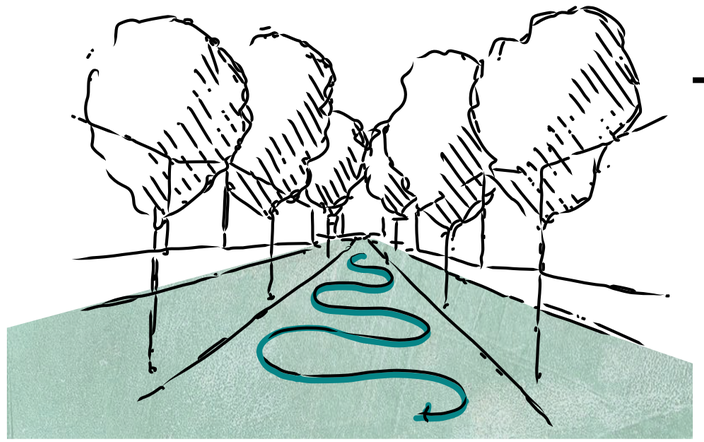
Joris Ivenslaan



• 3.3 Human scale / enclosure

Ambitions
2. Invites to move and meet

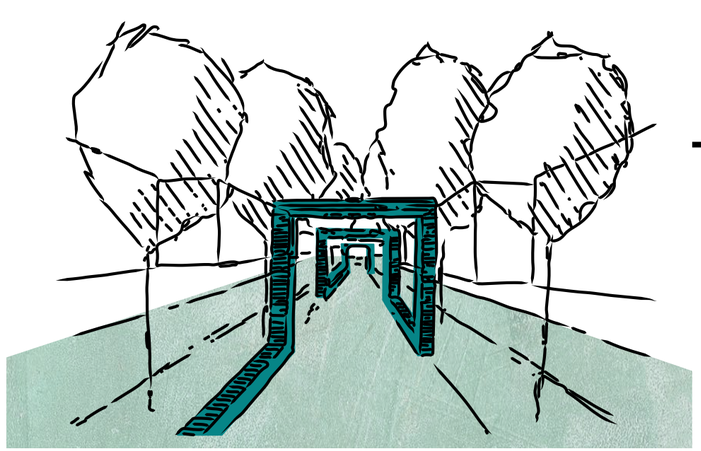
PA



• 3.4 Complexity / transparency

Ambitions
2. Invites to move and meet

PA



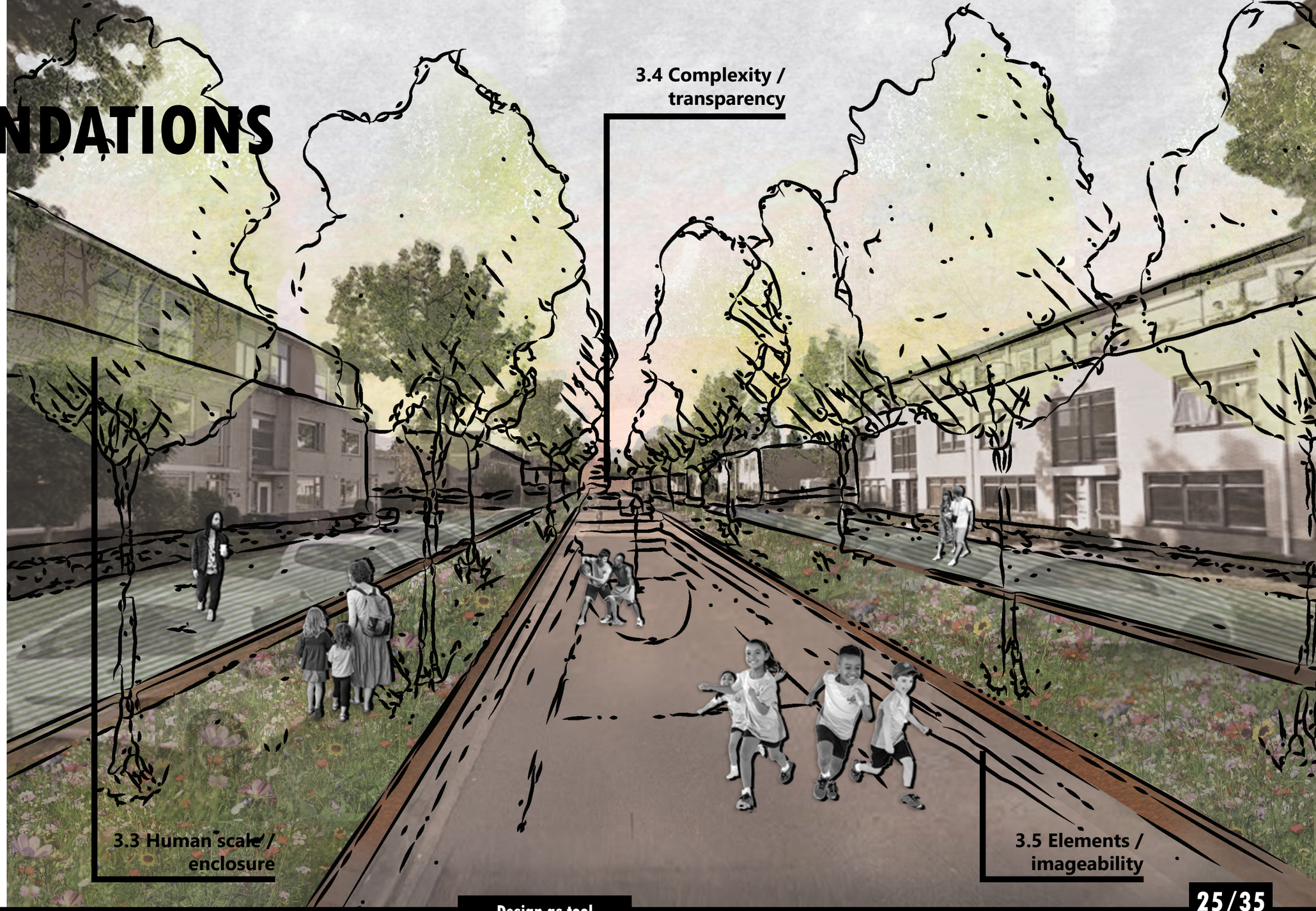
• 3.5 Elements to meet, play & sport / imageability

Ambitions
2. Invites to move and meet
3. Sport- & playground

PA

RECOMMENDATIONS

Joris Ivenslaan



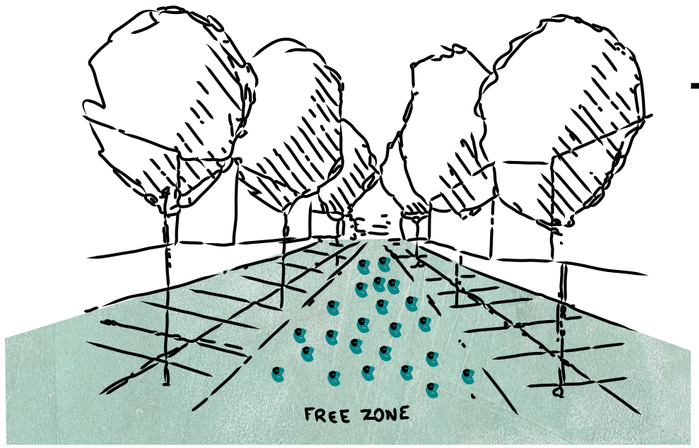
RECOMMENDATIONS

Walt Disneyplantsoen

> Community activities
> Sustainability

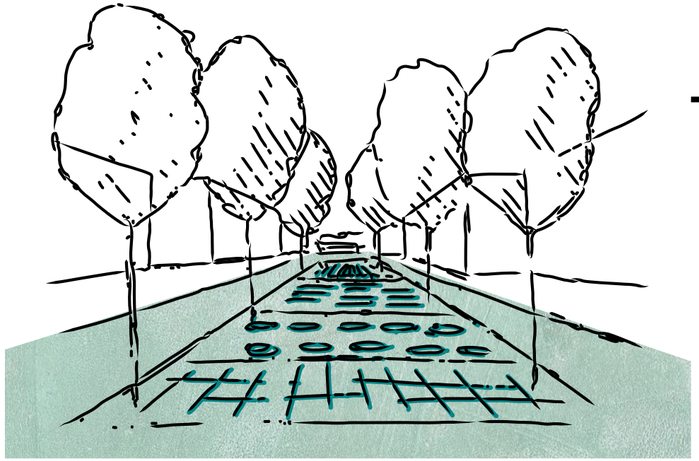
RECOMMENDATIONS

Walt Disneyplantsoen



• 3.6 Include local inhabitants

Ambitions
5. Accessibility



• 3.7 Encourage community activities

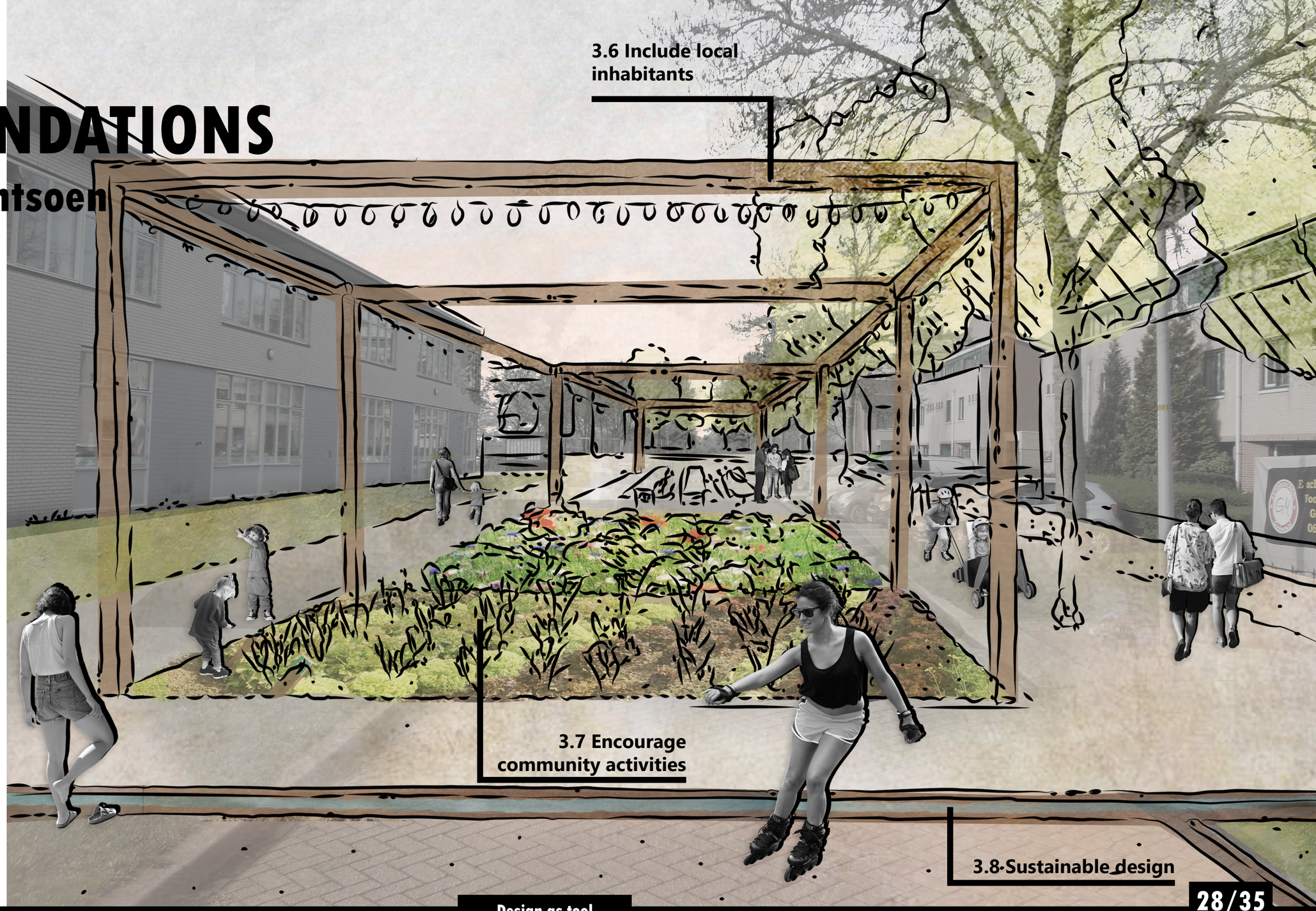
Ambitions
5. Accessibility

• 3.8 Sustainable design

Ambitions
4. Healthy & clean environment

RECOMMENDATIONS

Walt Disneyplantsoen



RECOMMENDATIONS

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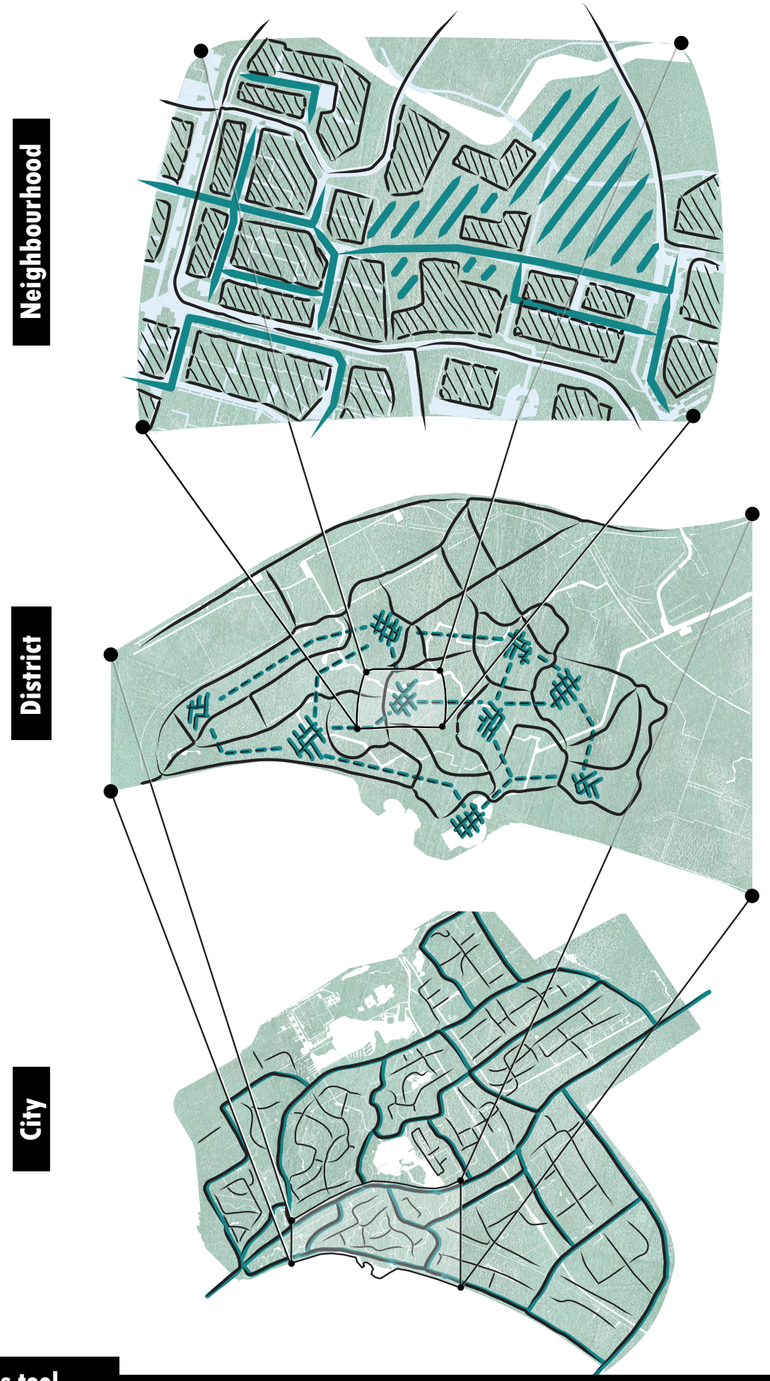

EFFECTS ON URBAN HEALTH

- Personal lifestyles
- Social cohesion
- Housing
- Work
- Accessibility
- Food

- Safety
- Equity
- Air quality
- Water
- Soil
- Global climate

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PRIOR STEPS

> Not all design elements can be implemented yet
> Depending on development technology
> Preparing networks (analogue interventions)

(Johnson, 2017)

REMARKS

- Recommendations based on scenario - predictions and assumptions
- Ambitions based on locations - difference in existing problems/urgencies per location

BIGGER PICTURE

> Opportunity:
new role of the car - management of mobility network

> Threat: people are willing to travel longer - fragmentation sub-urbs

> Task: strengthening local networks - mainly for slow traffic

> Differentiation living environments Almere - living-working balance

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> Differentiation living environments Almere - living-working balance

(Korbelová, 2017)

FUTURE

> Exact development will be unclear
> A careful management of AM is needed to prevent cars from dominating cities (again)
> Recommendations can help to guide urban planners/designers

"How can the implementation of automated mobility contribute in improving urban health, in residential neighbourhoods in the city of Almere?"

RESEARCH QUESTION

HEALTHY NEIGH BOUR HOODS

Evi Goedemans

DESIGN
Almere Stad

DESIGN
Keiwierde

URBAN HEALTH

Determinants of health	Planning policy areas: Building regulations	Housing policy	Economic development	Social services and benefits	Open space	Transport	Energy, water and drainage	Urban form	Urban regeneration
1. Personal lifestyles		*	*	*	**	**		*	*
2. Social cohesion		*	*	*	*	*		**	*
3. Housing	**	**					**	*	*
3. Work	*		**			*		*	*
3. Access		**	*	**	*	**		**	*
3. Food		*			*			*	
3. Safety	*	*				**		*	*
3. Equity	*	**	*	**	*	**	*	**	*
4. Air quality	*	*	**		*	**	*	*	*
4. Water and sanitation	**		*		*		**		
4. Soil and solid waste	*		*		*				**
4. Global climated	**	*	**	*	*	**	**	**	*