WELCOME!

BART SIMKENS

P5 PRESENTATION

28 – 01 – 2019

STATION LOCATIONS

A holistic assessment of Dutch station locations to identify crucial elements that relate to the enhancement of the traveller experience

WHY? HOW? WHAT? WHO?

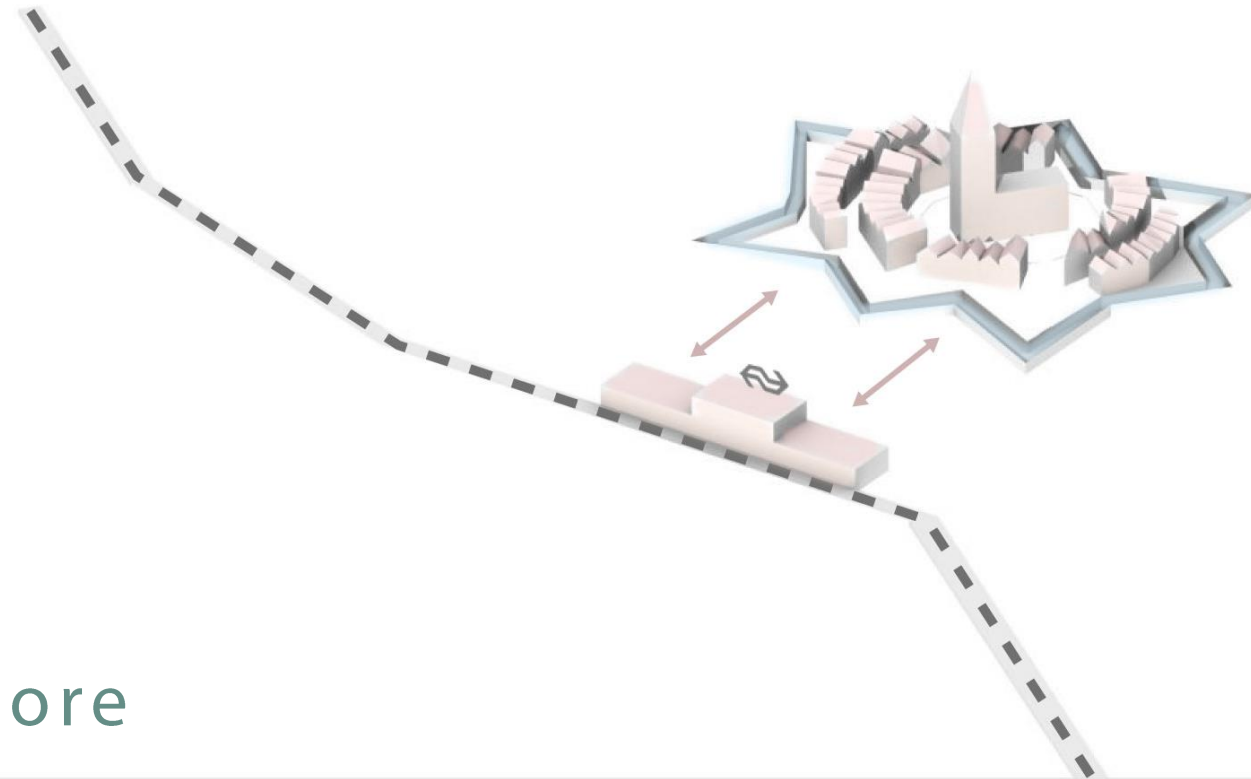| WHY?	HOW?	WHAT?	WHO?
Problem field	Conceptual model	Data collection	Discussion
Research goal	Methodology	Empirical research	Recommendations
Research question	Literature research	Conclusion	
	Operationalisation		

WHY? HOW? WHAT? WHO?

Problem field

Research goal

Research question

outside the city core
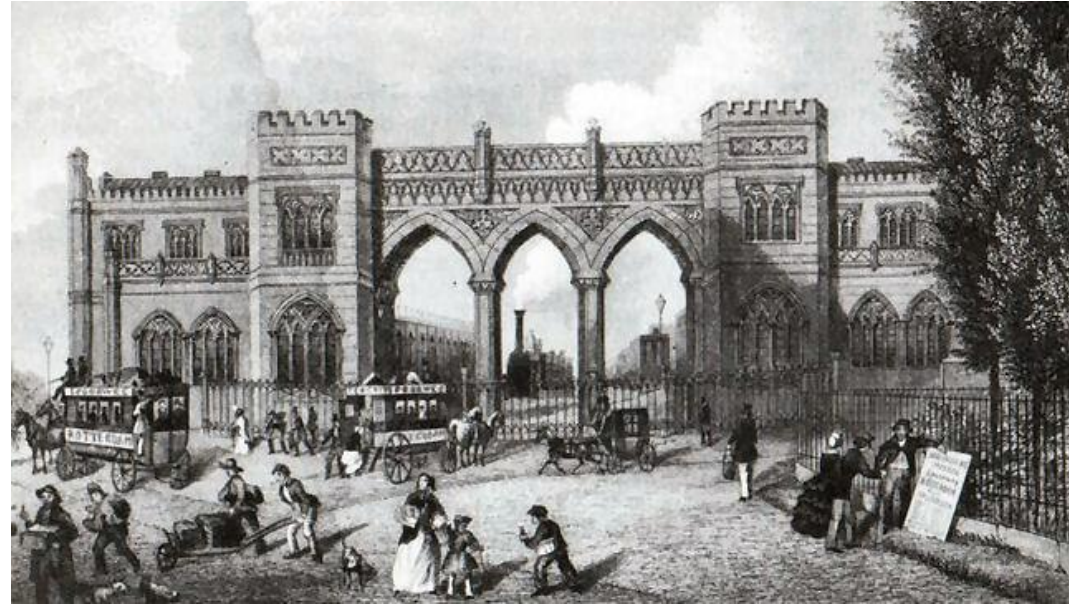
WHY?

Problem field

Research goal

Research question

Rotterdam
Delftsche Poort

1858

Amsterdam
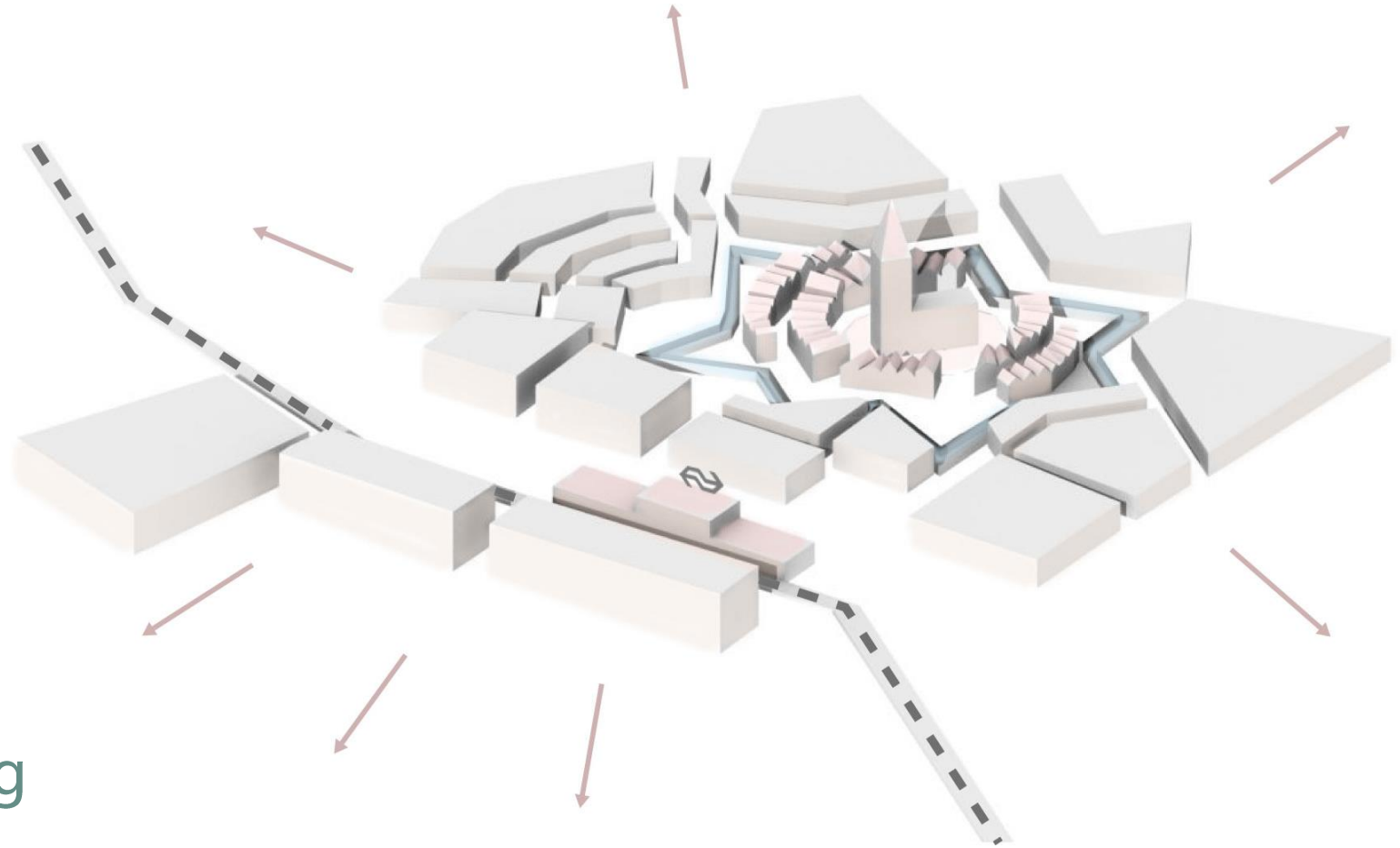Centraal

1888

WHY?

Problem field

Research goal

Research question

cities are growing

railway tracks divide the city

WHY?

Problem field

Research goal
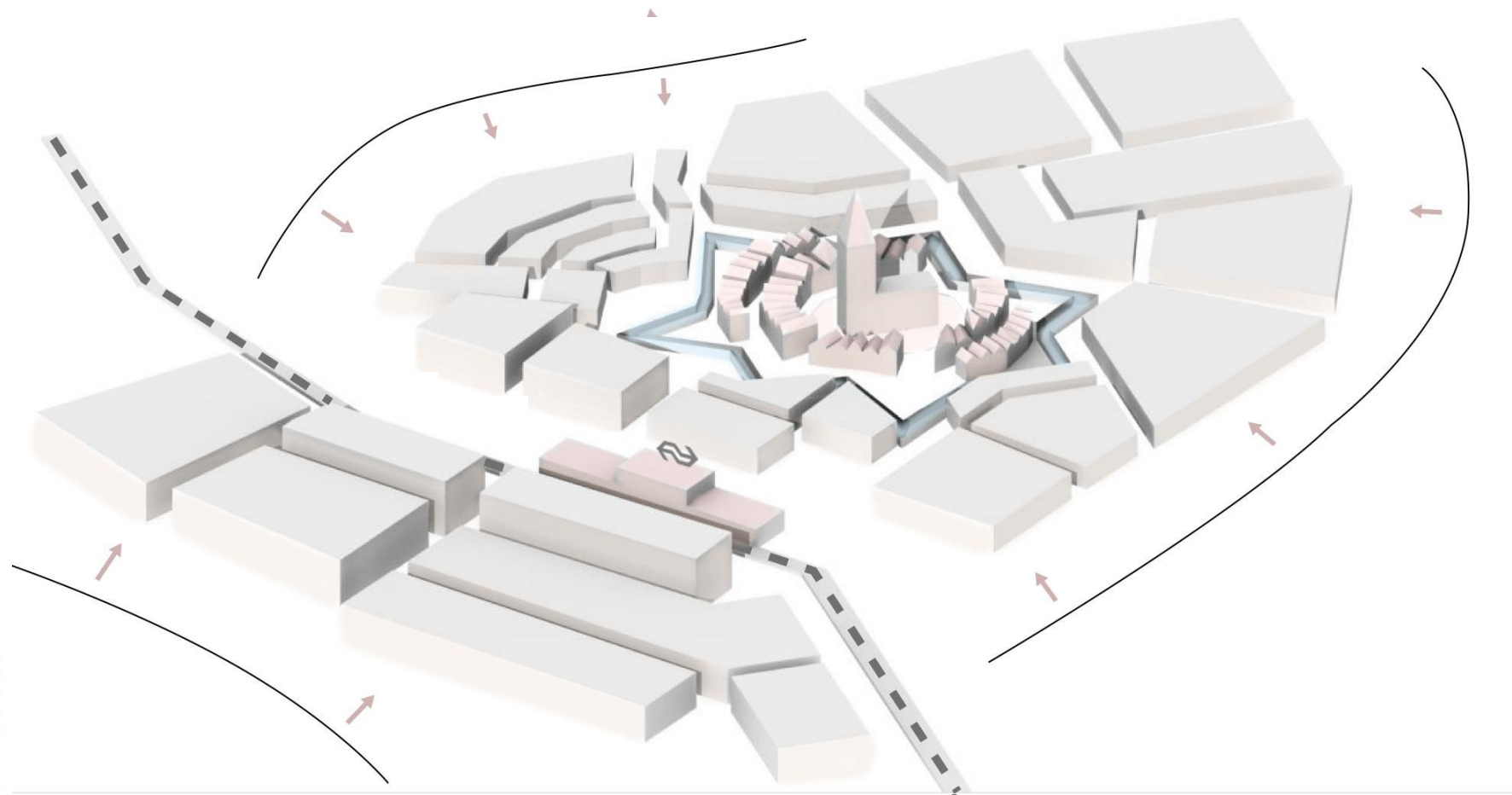
Research question

Spoorviaduct
Delft
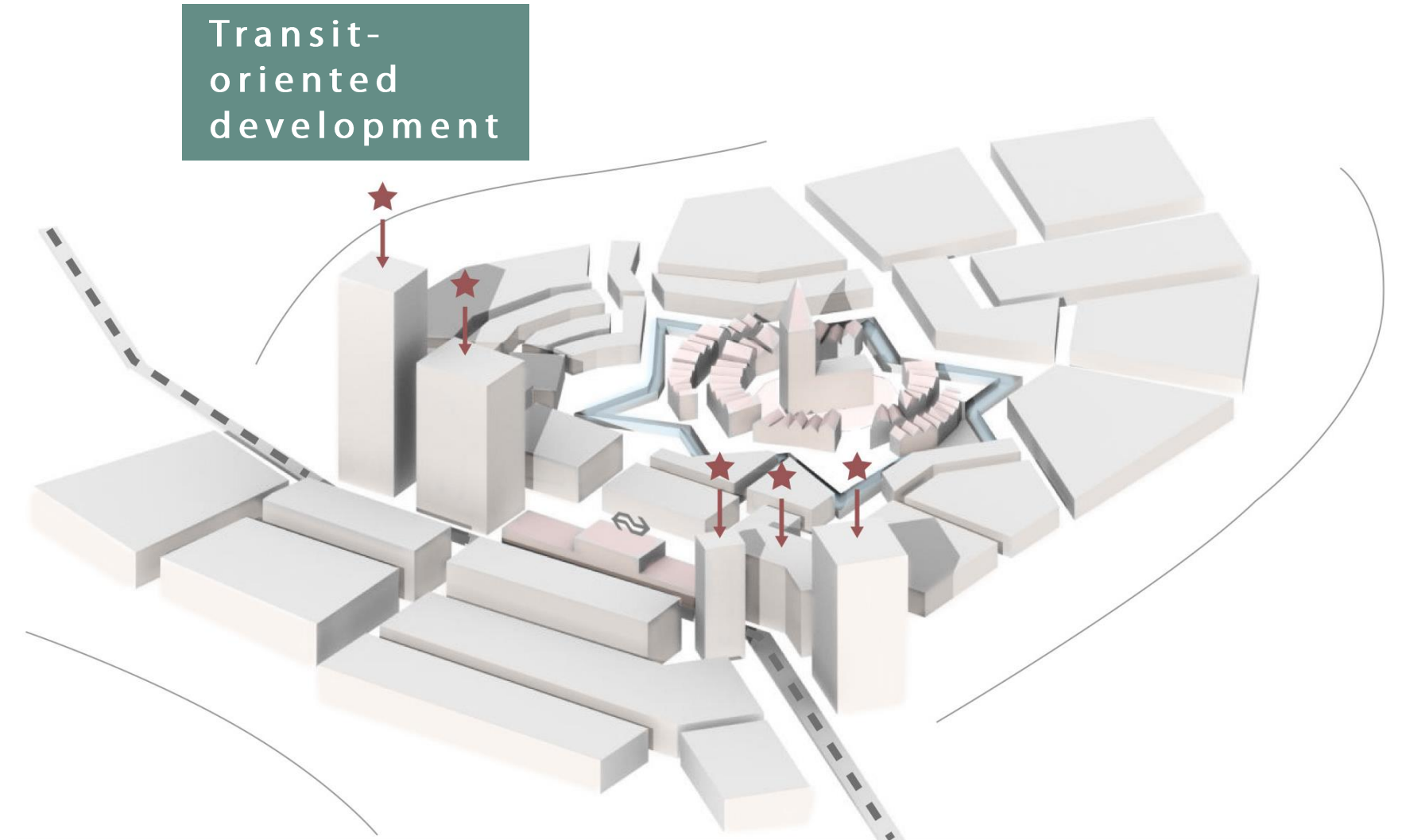
1963

WHY?

Problem field

Research goal

Research question

city reaches borders

WHY?

Problem field

Research goal

Research question

Transit-oriented development

station locations: favourable places

WHY?

Problem field

Research goal

Research question

international connections

Intercity Brussel

ICE Frankfurt

WHY?

Problem field

Research goal

Research question

Rotterdam Centraal

2016

vibrating gateway to the modern city

WHY?

Problem field
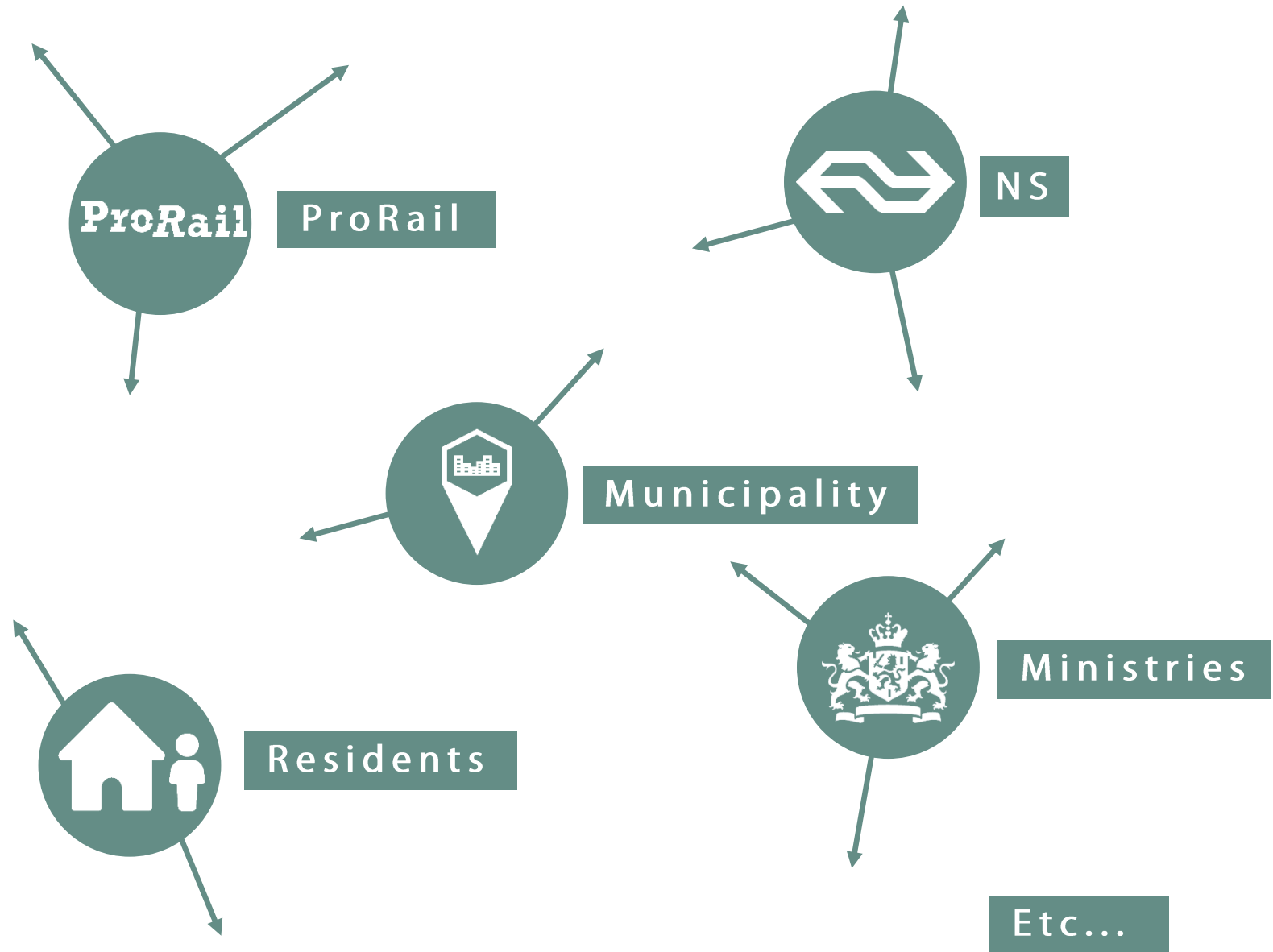
Research goal

Research question

stakeholder
involvement

WHY?

Problem field

Research goal

Research question

uncoordinated
objectives

ProRail

NS

Municipality

Ministries

Residents

Etc...

WHY?

Problem field

Research goal

Research question

CLEAR THE AIR

WHY?

Problem field

Research goal

Research question

FROM WHICH PERSPECTIVE?

WHY?

Problem field

Research goal

Research question

travellers with central
point of attention

WHY?

Research question

Which **elements** at Dutch **station locations** can be identified that **relate to** the enhancement of the **traveller experience?**

WHY? HOW? WHAT? WHO?

Conceptual model

Methodology

Literature research

Operationalisation

HOW?

Conceptual model

Methodology

Literature research

Operationalisation

Station location	→	Traveller experience

HOW?
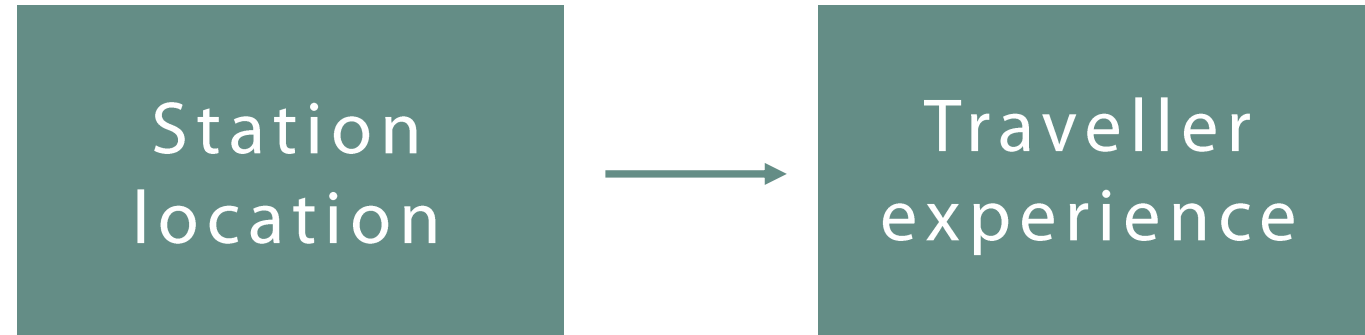
Conceptual model

Methodology

Literature research

Operationalisation

TYPE	DESK RESERACH	EMPIRICAL RESERACH			SYNTHESIS
METHODS	LITERATURE REVIEW	DATA COLLECTION	QUANTITATIVE CORRELATION ANALYSIS	QUALITATIVE DATA REVIEW	KNOWLEDGE IMPLEMENTATION

HOW?

Conceptual model

Methodology

Literature research
   traveller experience
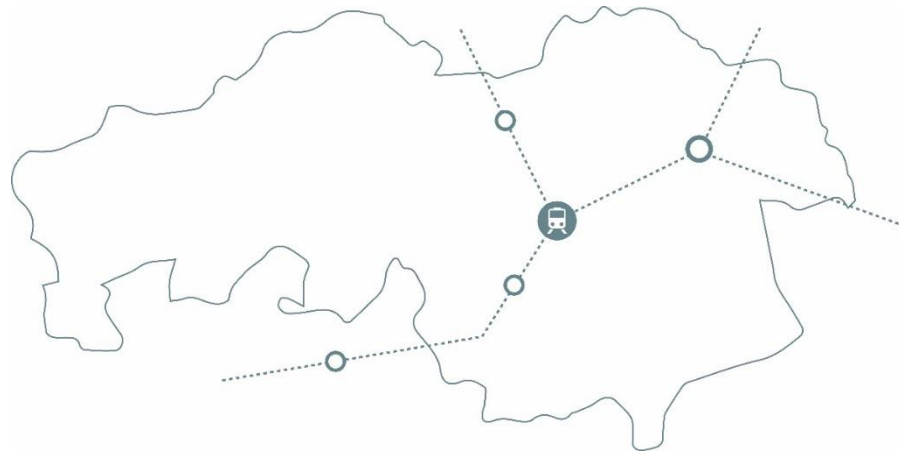   station location

Operationalisation

1) Traveller experience

HOW?

Conceptual model

Methodology

Literature research
  traveller experience
  station location

Operationalisation

1) Traveller experience

HOW?
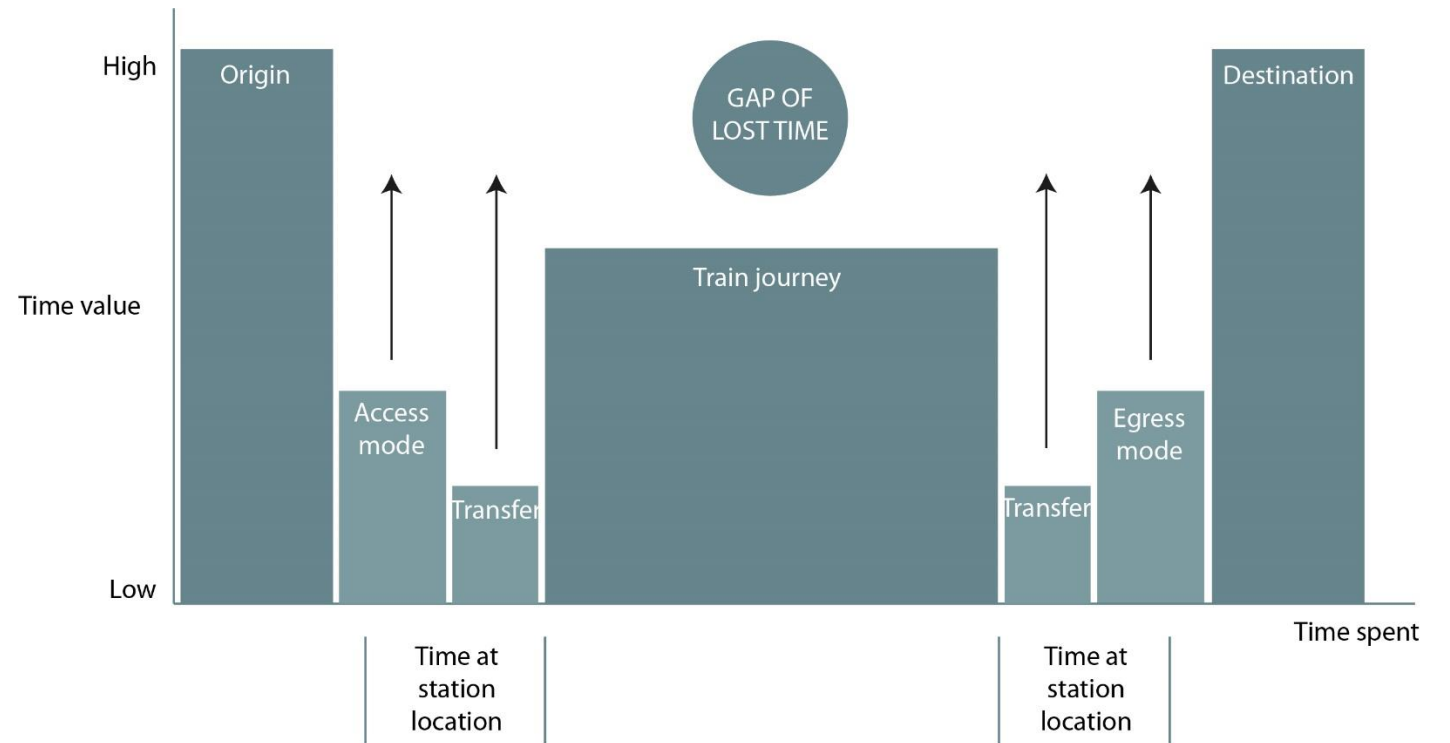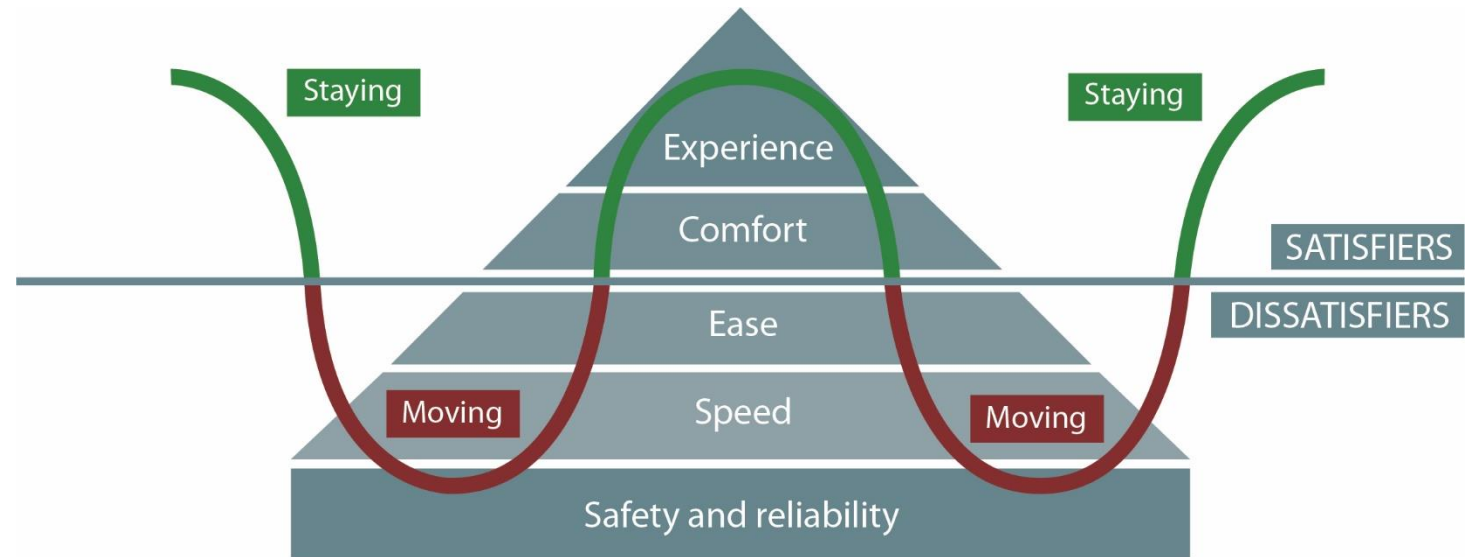
Conceptual model

Methodology

Literature research
traveller experience
station location

Operationalisation

2) Station location

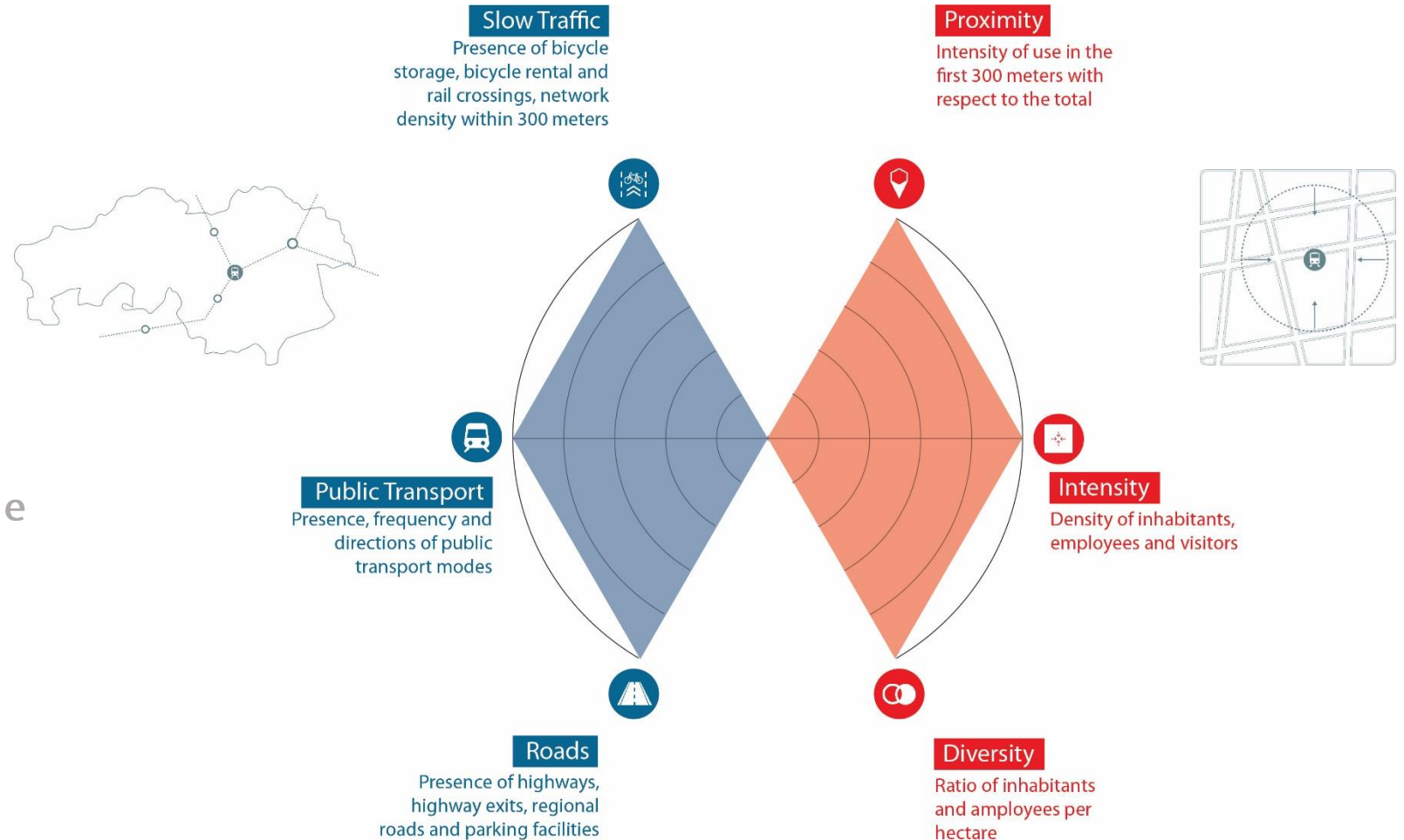**Node**

Place

HOW?

Conceptual model

Methodology

Literature research
    traveller experience
    station location

Operationalisation

2) Station location

Node	Place
transport planning discourse: connection link	urban-economic discourse: urban centre
engineering-technological discourse: transfer machine	cultural-sociological discourse: meeting place

HOW?

Conceptual model

Methodology

Literature research
        traveller experience
        station location

Operationalisation

2) Station location

HOW?

1) Station location

Slow Traffic
Presence of bicycle storage, bicycle rental and rail crossings, network density within 300 meters

Proximity
Intensity of use in the first 300 meters with respect to the total

Public Transport
Presence, frequency and directions of public transport modes

Intensity
Density of inhabitants, employees and visitors

Roads
Presence of highways, highway exits, regional roads and parking facilities

Diversity
Ratio of inhabitants and employees per hectare

HOW?

Conceptual model

Methodology

Literature research

Operationalisation
   station location
   traveller experience

1) Station location

Use node value

Adjust place value

Add contextual value
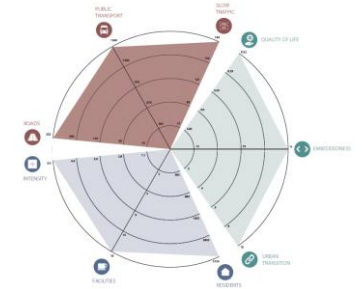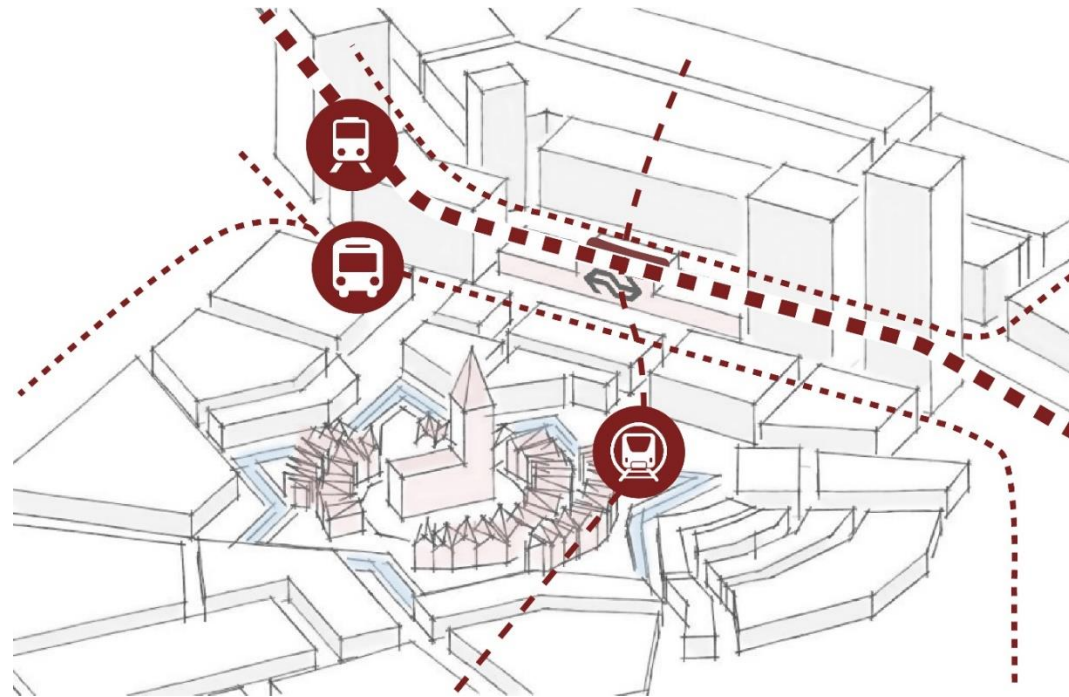
HOW?

Conceptual model

Methodology

Literature research

Operationalisation
    station location
    traveller experience
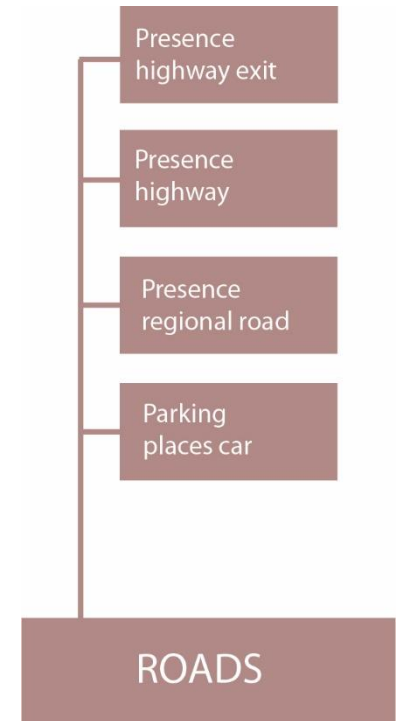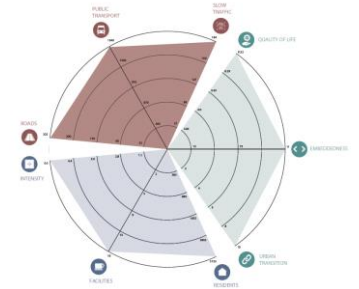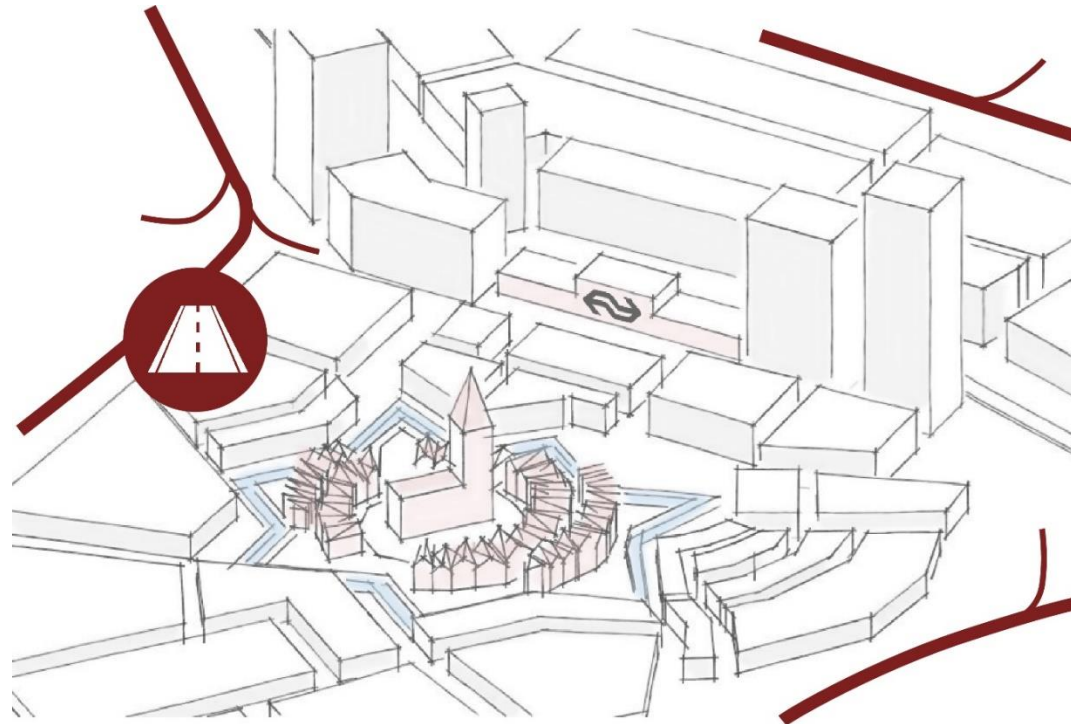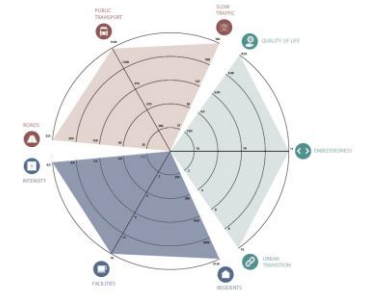
Station Location INDEX
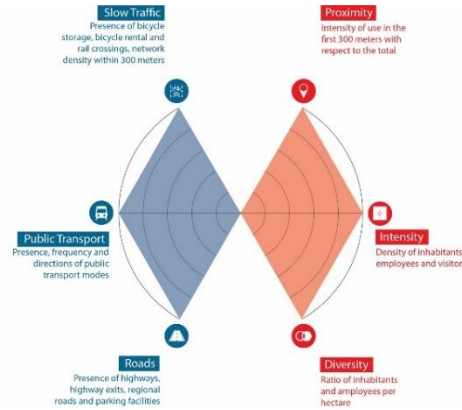
Node value

Contextual value
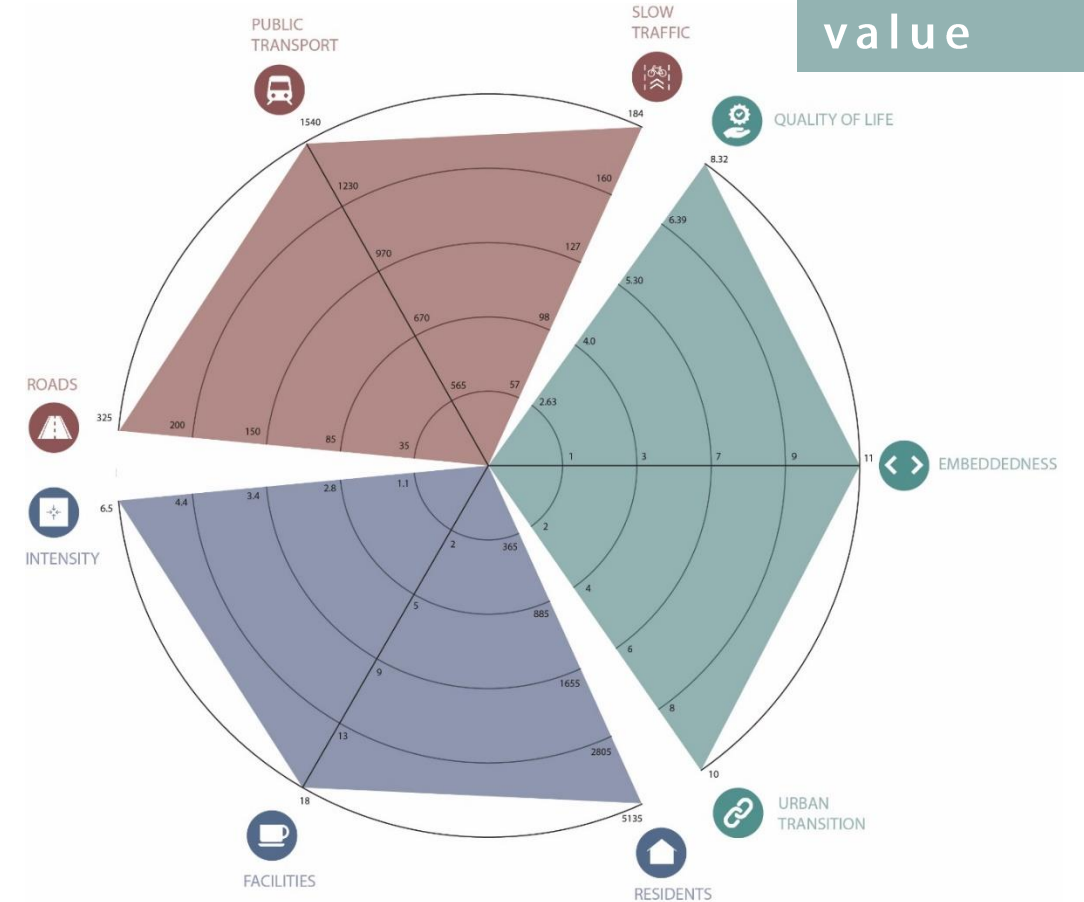
Place value

HOW?

Conceptual model

Methodology

Literature research

**Operationalisation
  station location**
  traveller experience

Station Location INDEX

Node Value

- OV-bike rental
- Railroad crossing
- Unguarded bicycle parkings
- Monitored bicycle parkings
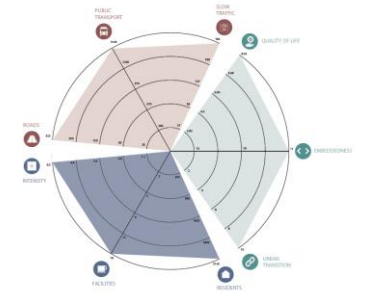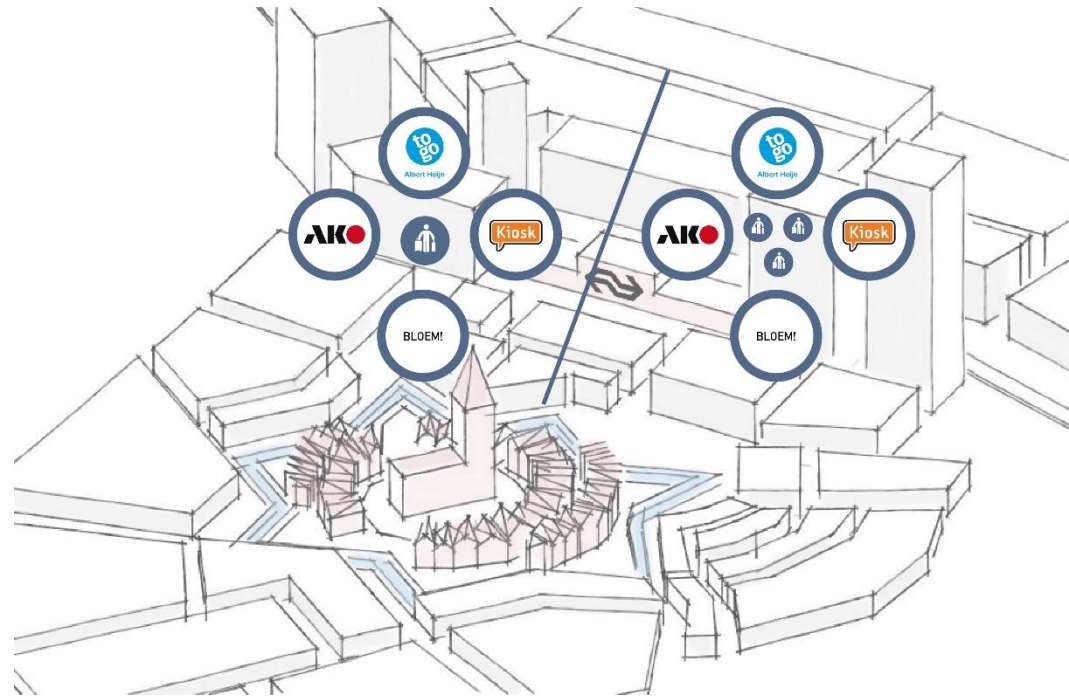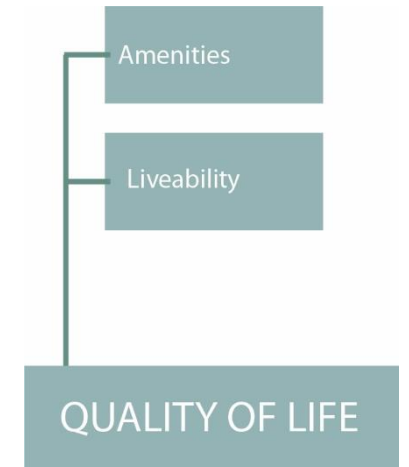- Local roads

SLOW TRAFFIC

HOW?

Conceptual model

Methodology

Literature research

**Operationalisation
station location**
traveller experience

Station Location INDEX

Node Value

Presence HSL, IC, SPR, BTM

Amount of directions

Frequency

PUBLIC TRANSPORT

HOW?

Conceptual model

Methodology

Literature research

Operationalisation
station location
traveller experience

Station Location INDEX

Node Value

Presence highway exit

Presence highway

Presence regional road

Parking places car

ROADS

HOW?
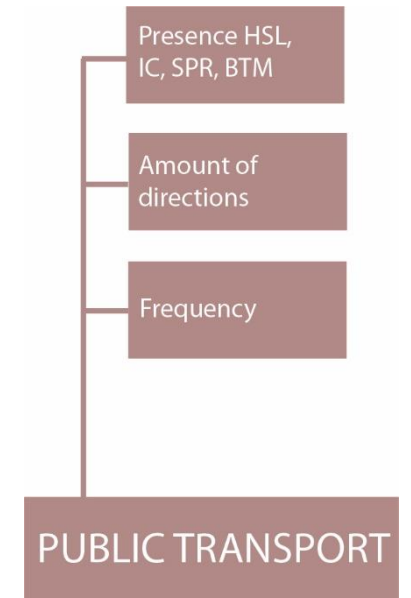
Conceptual model

Methodology

Literature research

Operationalisation
  station location
  traveller experience

Station Location INDEX
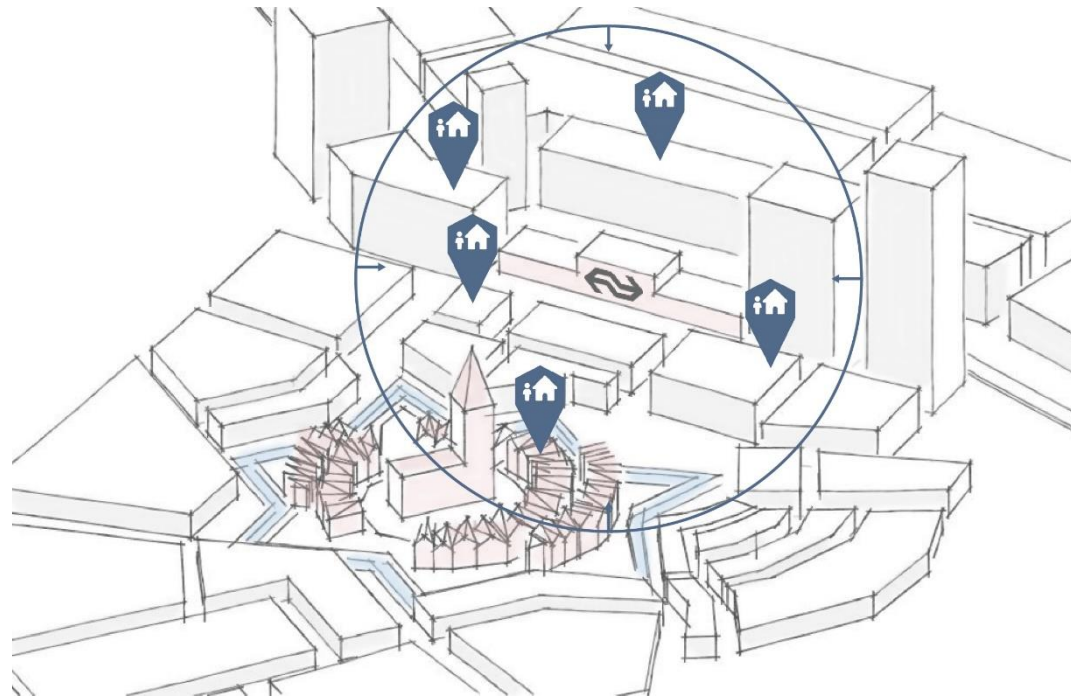
Place Value

Amount of
residents <300 m
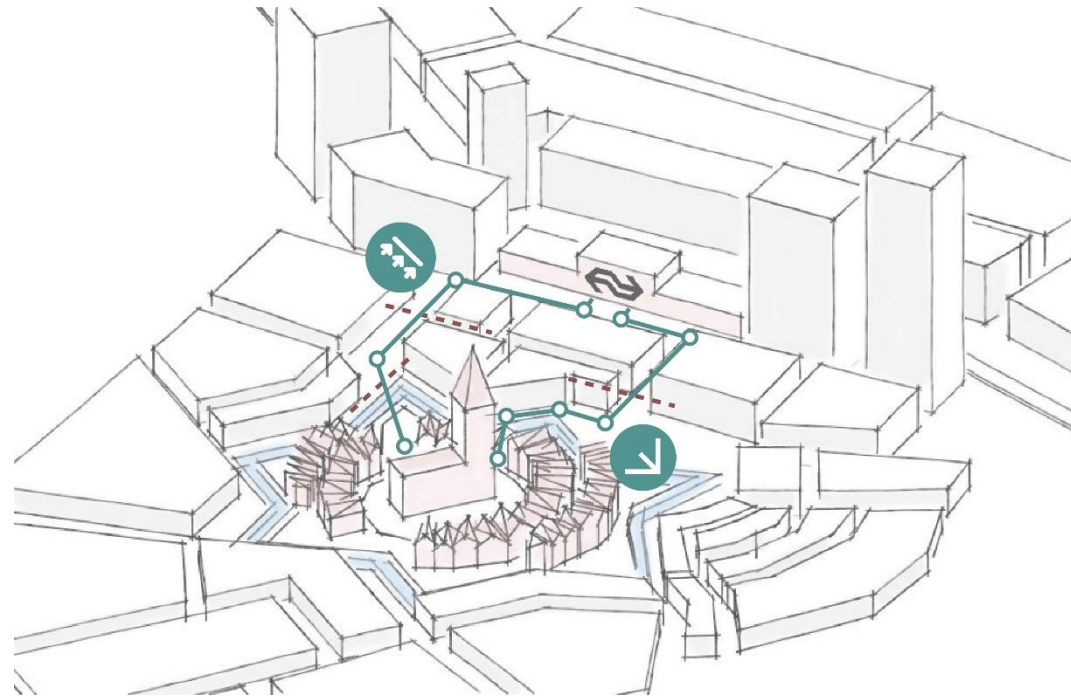
RESIDENTS

HOW?

Conceptual model

Methodology

Literature research

Operationalisation
     station location
     traveller experience

Station Location INDEX
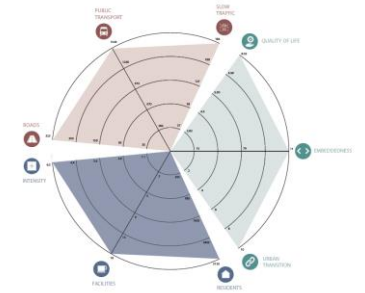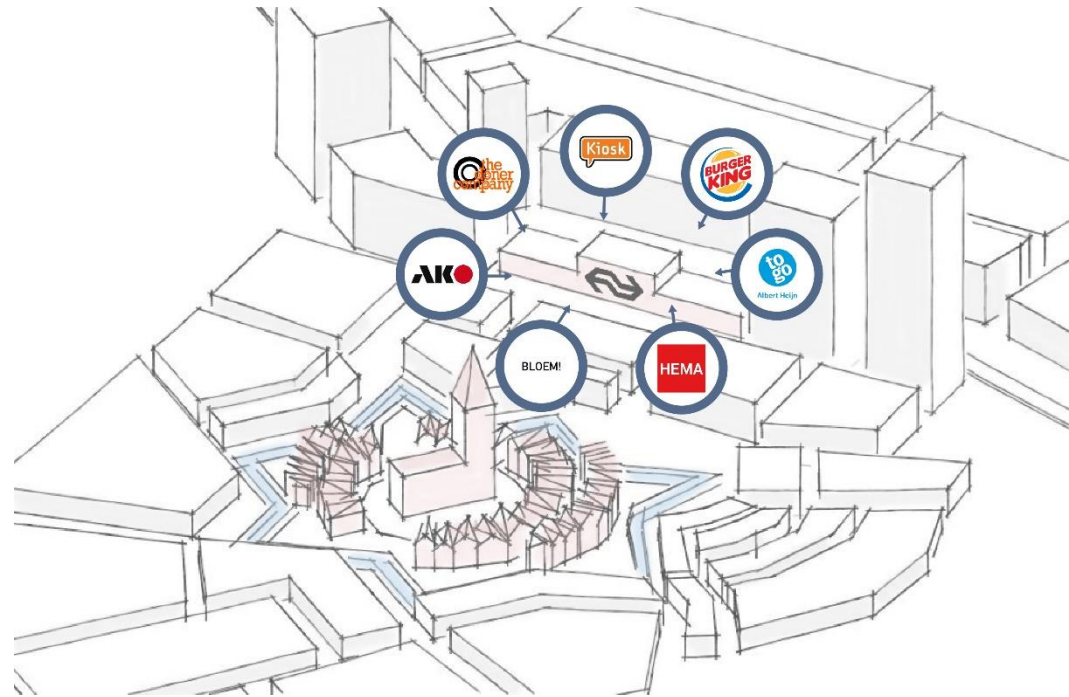
Place Value

Variety of facilities

FACILITIES

HOW?

Conceptual model

Methodology

Literature research

Operationalisation
        station location
        traveller experience

Station Location INDEX

Place Value

Amount of
facilities per
traveller

INTENSITY

HOW?

Conceptual model

Methodology

Literature research

**Operationalisation
station location**
traveller experience

Station Location INDEX
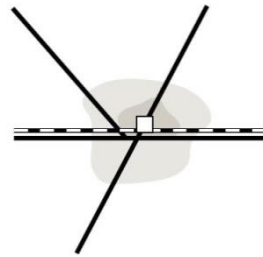
Contextual value

Amenities

Liveability

QUALITY OF LIFE

HOW?

Conceptual model

Methodology

Literature research

Operationalisation
   station location
   traveller experience

Station Location INDEX

Contextual value

Entrance domains

Physical positioning

Square presence

EMBEDDEDNESS

HOW?
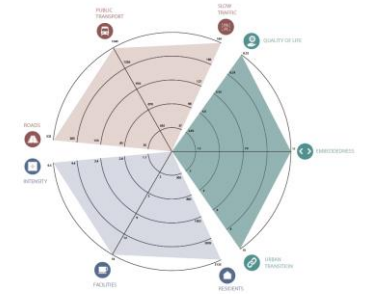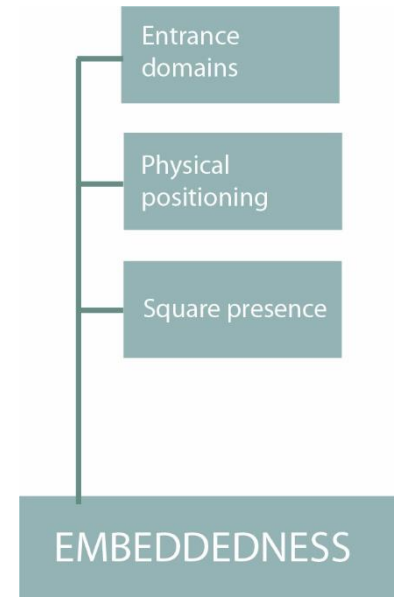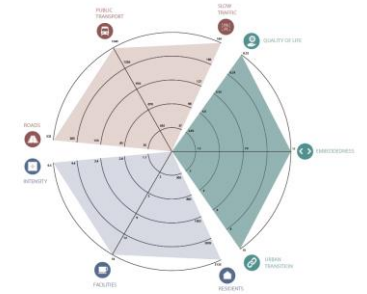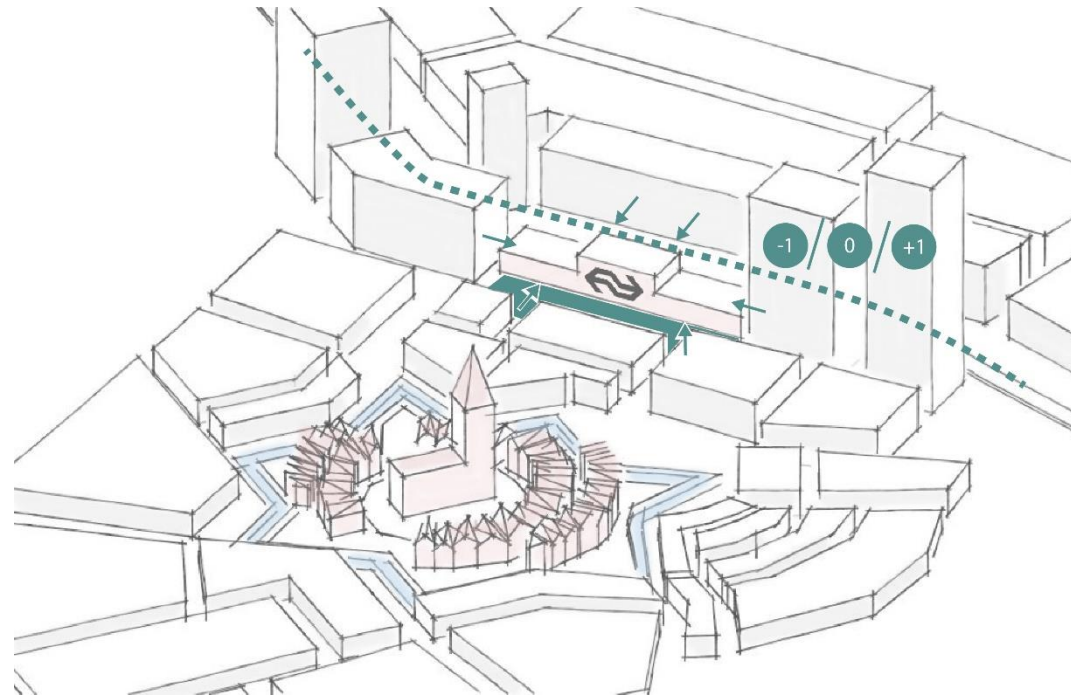
Conceptual model

Methodology

Literature research

Operationalisation
     station location
     traveller experience

Station Location INDEX

Contextual value

Linearity of
the path

Barriers

URBAN
TRANSITION

HOW?

Conceptual model

Methodology

Literature research

Operationalisation
       station location
       traveller experience

Station-experience-monitor

HOW?

Conceptual model

Methodology

Literature research

Operationalisation
      station location
      traveller experience

Station-experience-
monitor

SBM survey statements

Clean
- I experience this station as clean
- I think this station smells fresh

Safe
- I feel safe at this station after 7 p.m.
- I experience the lighting at this station as pleasant

Orientation
- I find this station well-organised
- I find the signage clear at this station
- I find the travel information clear at this station

Flow
- I experience that there is enough space at this platform
- I can reach the train unhindered at this station

Inviting
- I know where i can get information
- I think the staff is customer friendly
- I am satisfied with the retail offer at this station
- I feel invited to buy something at this station

Waiting experience
- I can spend my time at this station pleasantly
- I experience waiting at this station as comfortable
- I experience sufficient protection against wind, rain and cold on the platform,

Attractive
- I experience this station as attractive
- I think this station has a warm appearance
- I think this station looks well taken care of
- I find the station colourful

General
- Your general opinion on this station

Area
- I think the station environment looks well taken care of
- I find the station environment clear
- I experience the station environment as pleasant
- I feel safe in the station area during the day before 7 p.m.
- I feel safe in the station area at night after 7 p.m.

WHAT?

Case selection

2

WHAT?

Data collection

Empirical research

Conclusion

ALKMAAR

Station location

WHAT?

Data collection

Empirical research

Conclusion

Traveller experience

WHAT?

Data collection

Empirical research
    quantitative analysis
    qualitative analysis

Conclusion

Station location
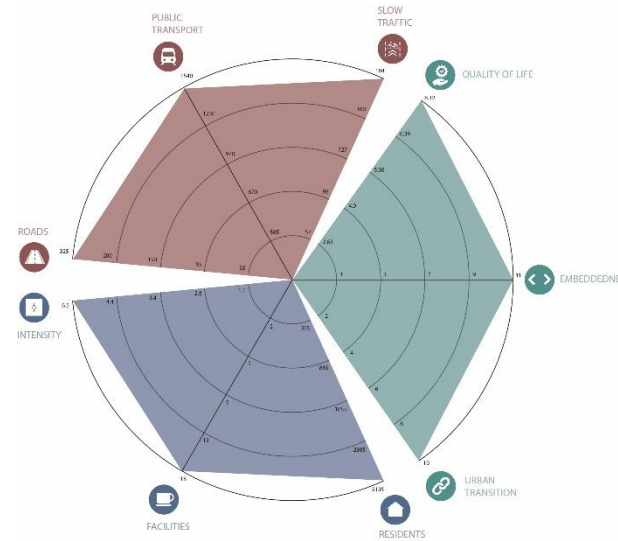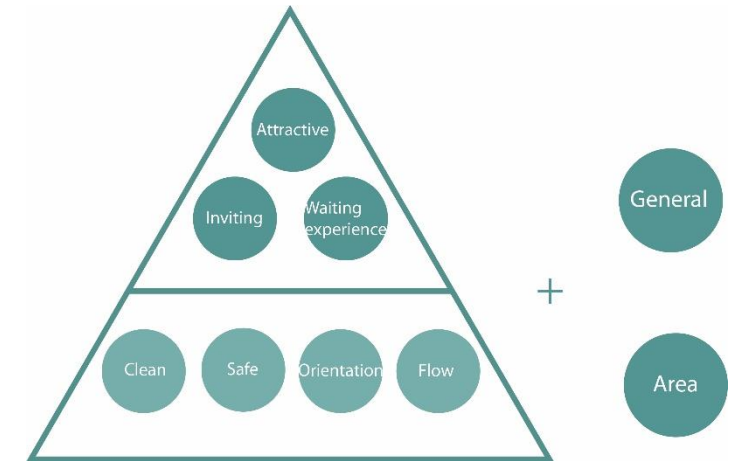
Traveller experience

WHAT?

Data collection

Empirical research
quantitative analysis
qualitative analysis

Conclusion

Monitored bicycle parking
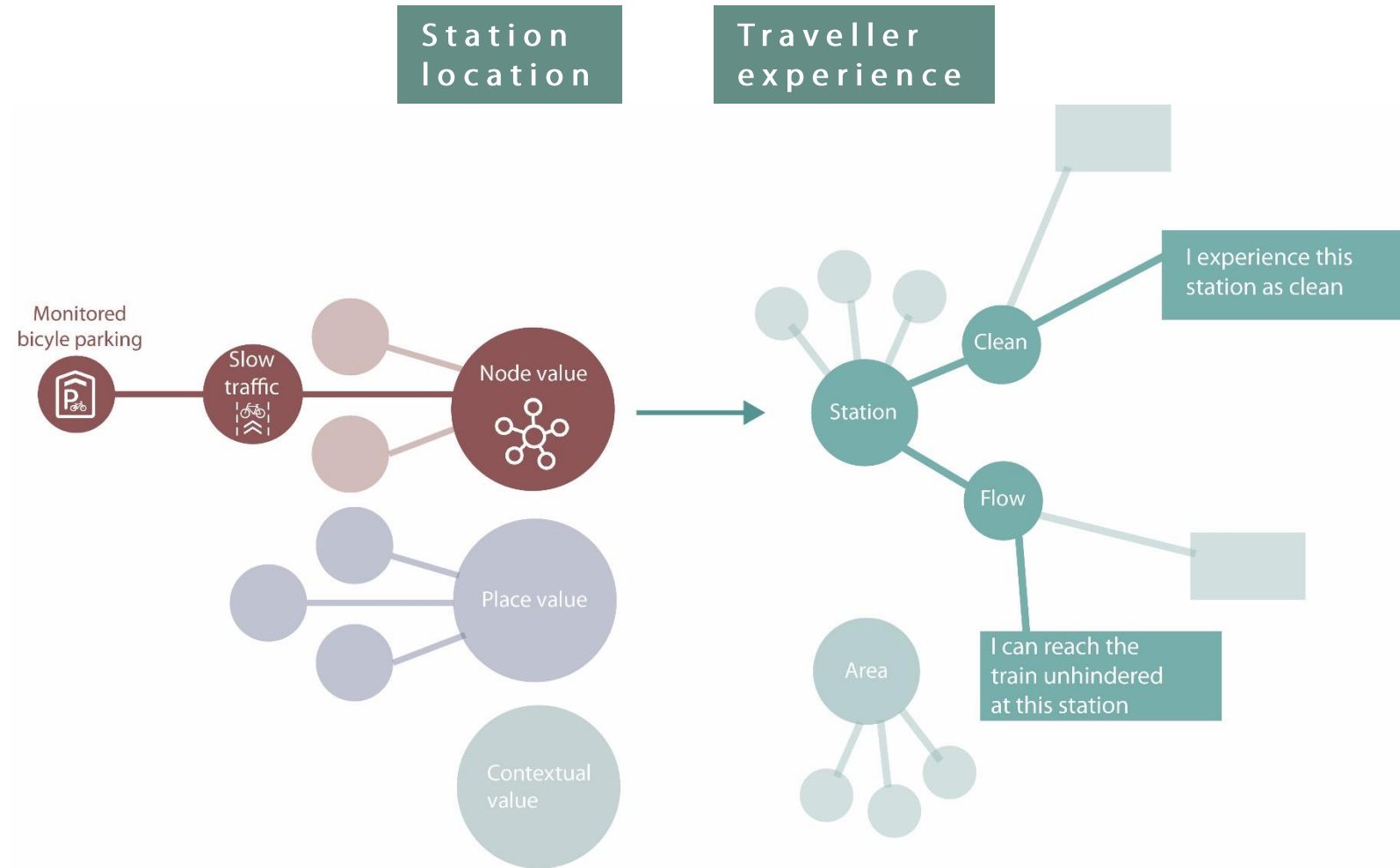
WHAT?

Data collection

Empirical research
quantitative analysis
qualitative analysis

Conclusion

Variety of facilities
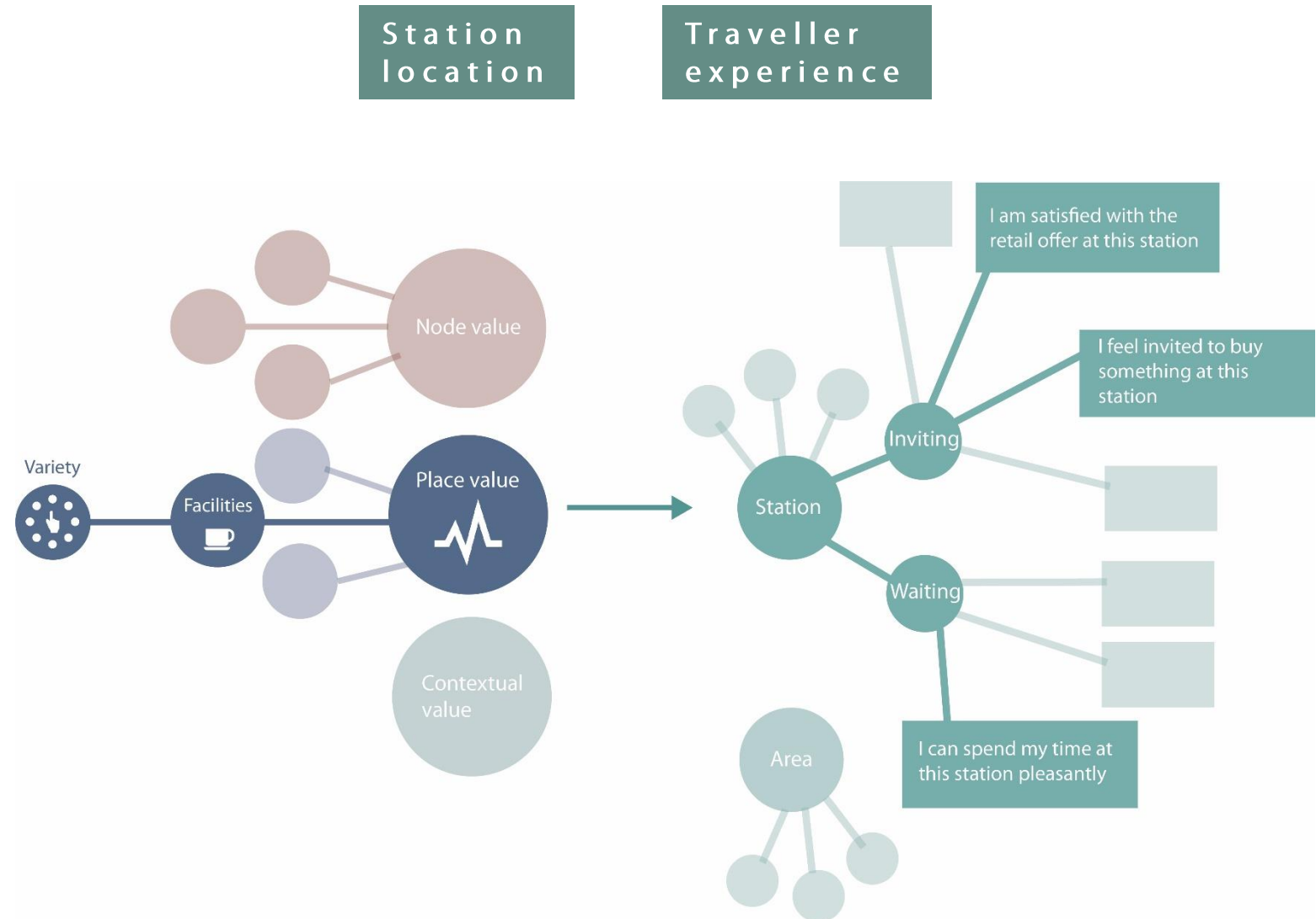
Variety

Facilities

Node value

Place value

Contextual value

Station

Inviting

Waiting

Area

I am satisfied with the retail offer at this station

I feel invited to buy something at this station

I can spend my time at this station pleasantly

45

WHAT?

Data collection

Empirical research
    quantitative analysis
    qualitative analysis

Conclusion

Quality of life
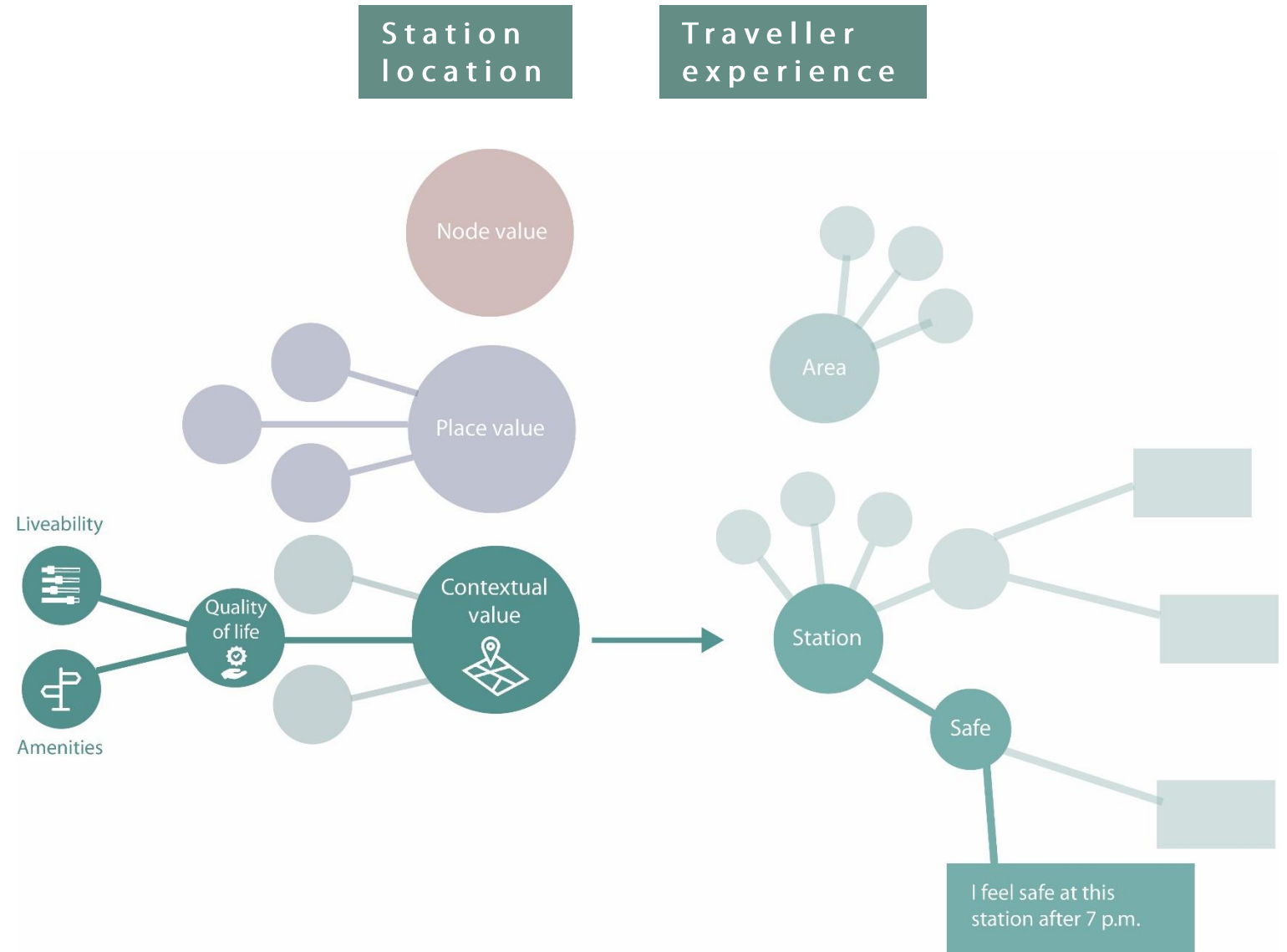
Station location

Traveller experience

Node value

Place value

Liveability

Quality of life

Amenities

Contextual value

Area

Station

Safe

I feel safe at this station after 7 p.m.

WHAT?

"Whenever a correlation is observed, or a correlation coefficient is computed, let it be remembered first, last and all the time, that it measures nothing, except statistical association between variables, no matter how glamorous or seductive the suggestion of a causal relationship may seem." (Pearson, 1857-1936).

WHAT?

Data collection

Empirical research
quantitative analysis
qualitative analysis

Conclusion

Let's place comparable station locations in clusters and see which ones have the highest and the lowest scores … and why!

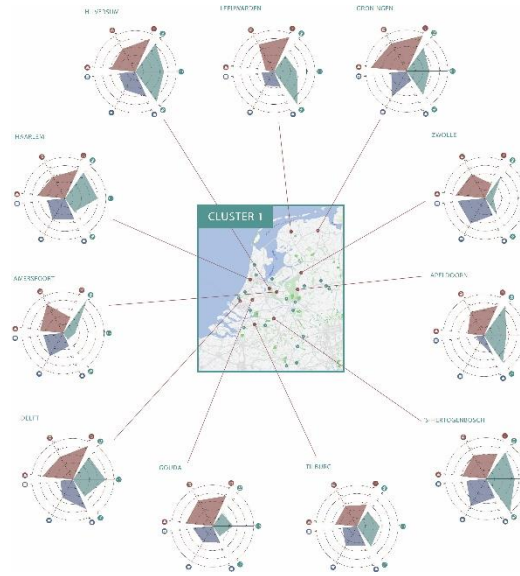# WHAT?

Data collection
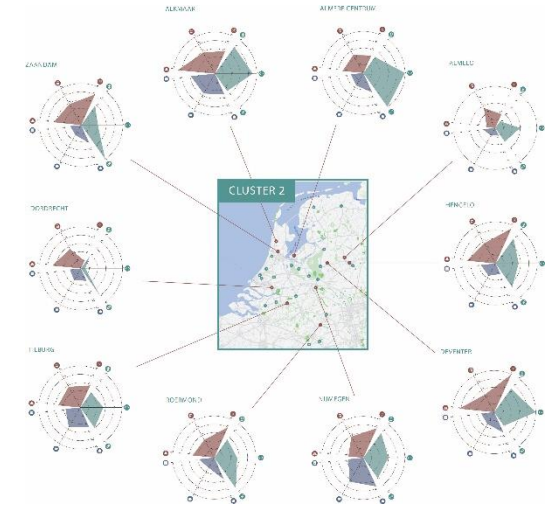
Empirical research
    quantitative analysis
    qualitative analysis

Conclusion

1: Regional city stations
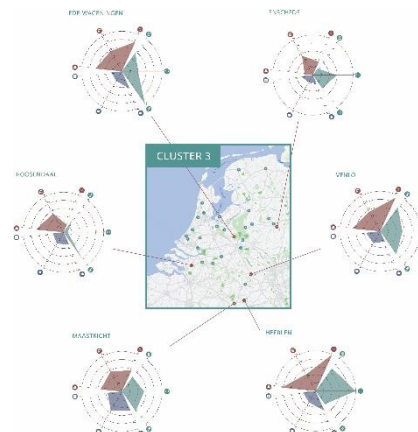

2: Peripheral city stations

3: Border city stations

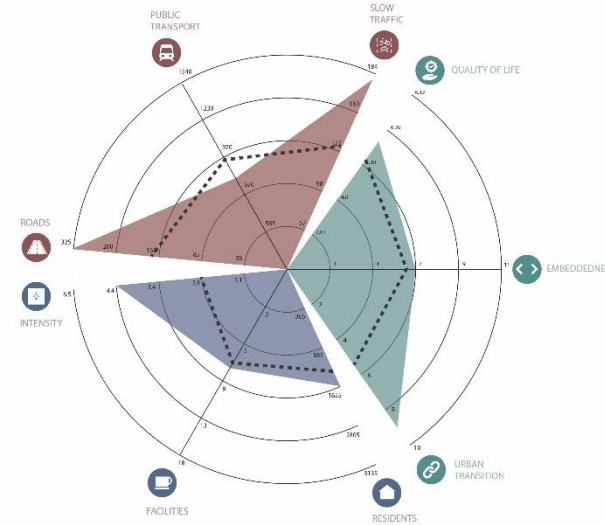**4: Central city stations**

WHAT?

Data collection

Empirical research
        quantitative analysis
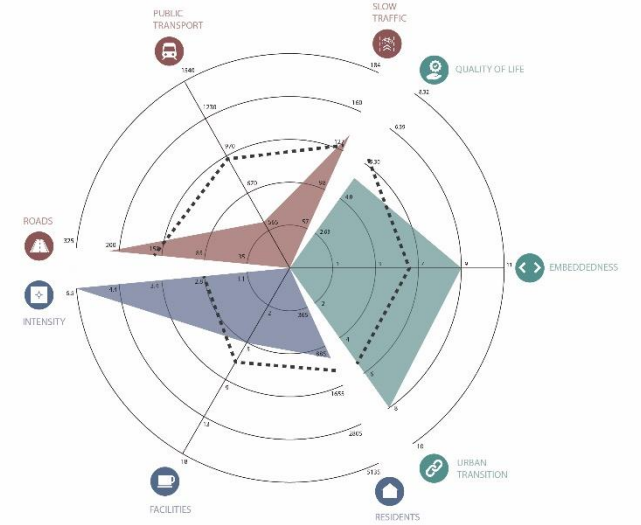   **qualitative analysis**
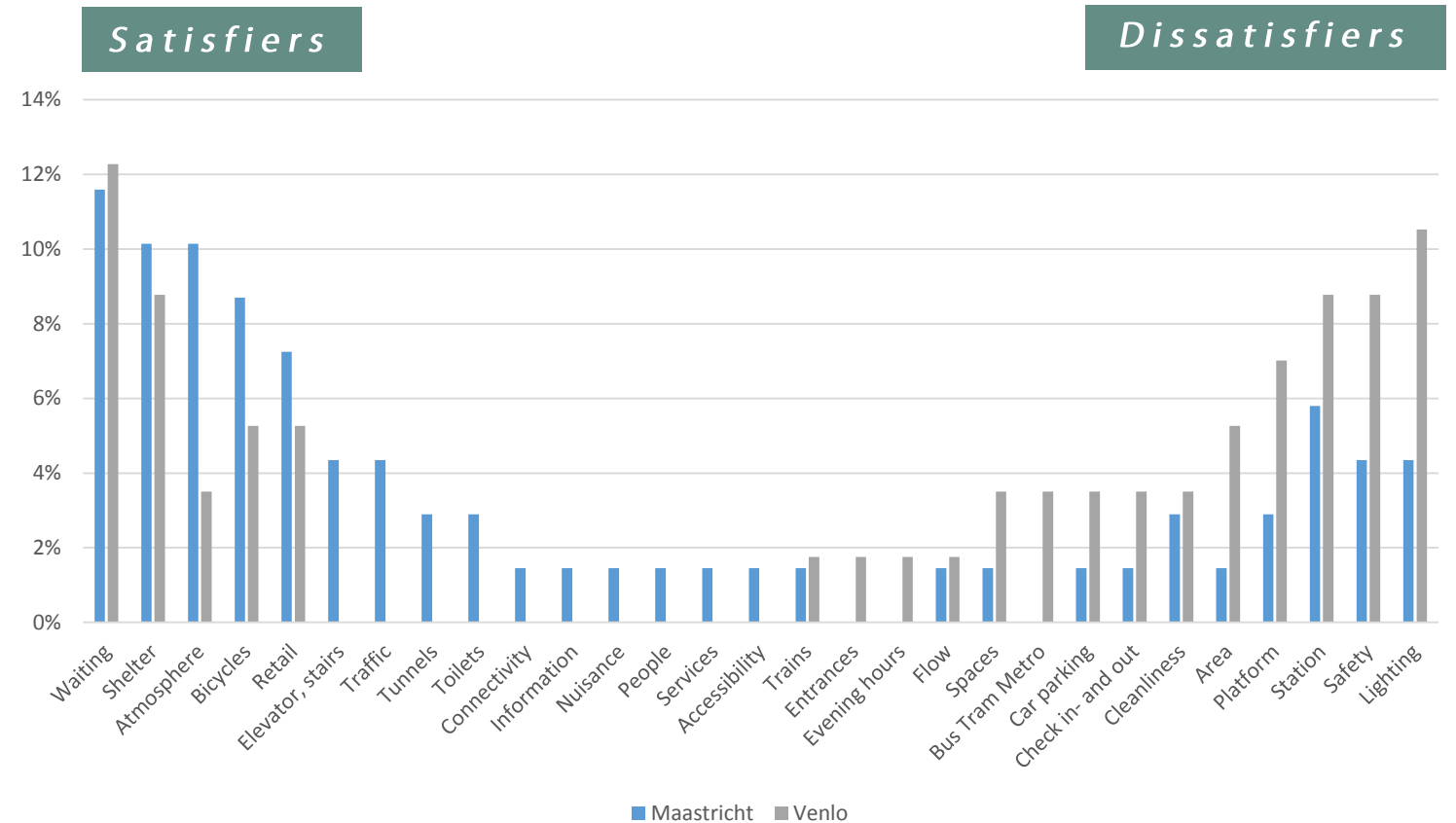
Conclusion

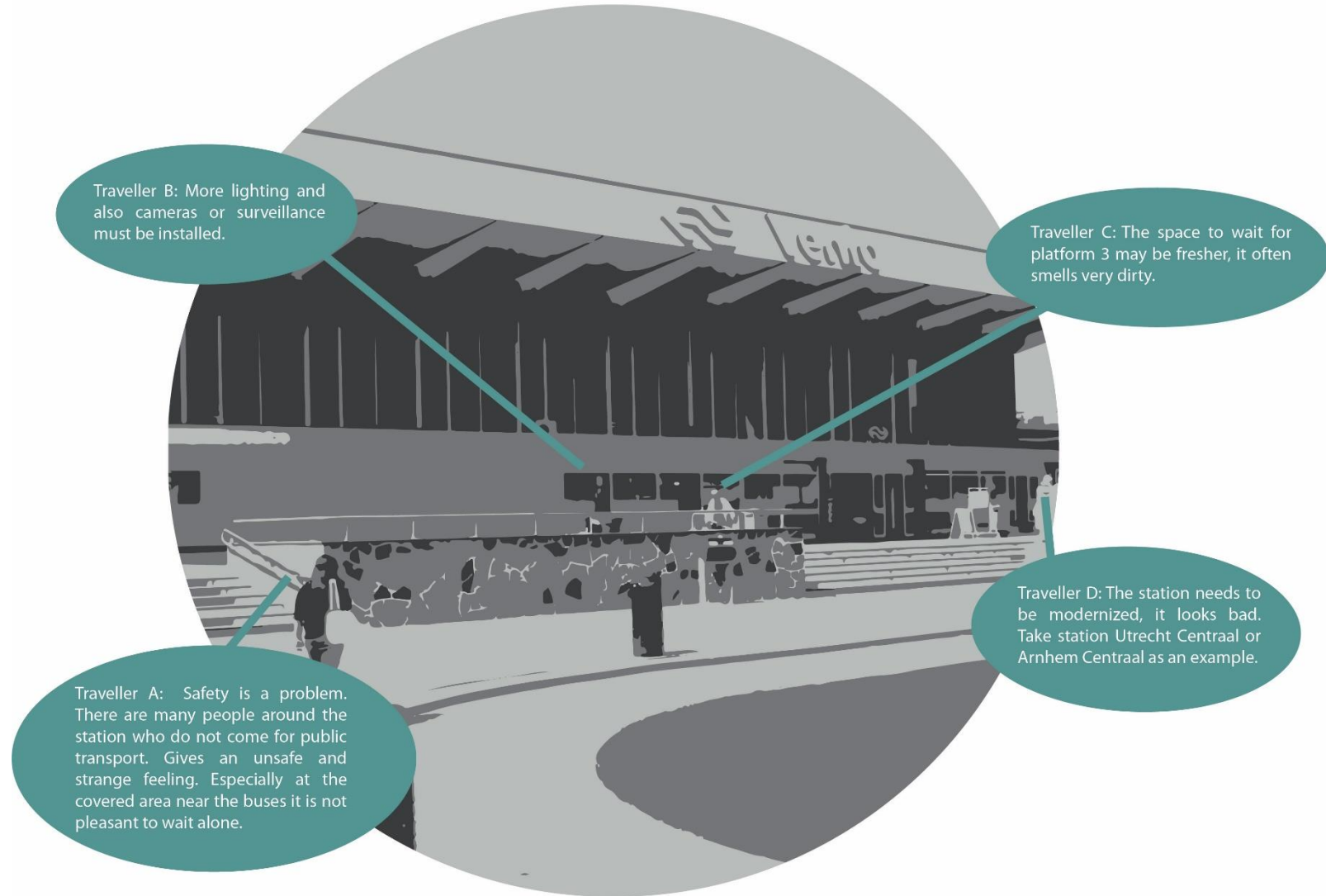CLUSTER 3

MAASTRICHT

VENLO

Best

Worst

WHAT?

Data collection

Empirical research
quantitative analysis
qualitative analysis

Conclusion

51

WHAT?

Data collection

Empirical research
quantitative analysis
qualitative analysis

Conclusion

Traveller B: More lighting and also cameras or surveillance must be installed.

Traveller C: The space to wait for platform 3 may be fresher, it often smells very dirty.

Traveller A: Safety is a problem. There are many people around the station who do not come for public transport. Gives an unsafe and strange feeling. Especially at the covered area near the buses it is not pleasant to wait alone.

Traveller D: The station needs to be modernized, it looks bad. Take station Utrecht Centraal or Arnhem Centraal as an example.

WHAT?

Which **elements** at Dutch **station locations** can be identified that **relate to** the enhancement of the **traveller experience?**

WHAT?

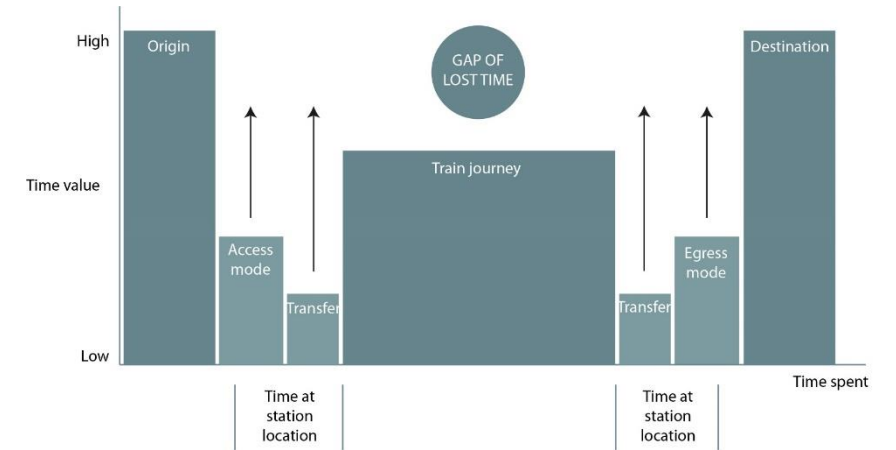Data collection

Empirical research

Conclusion

WHAT?

Data collection
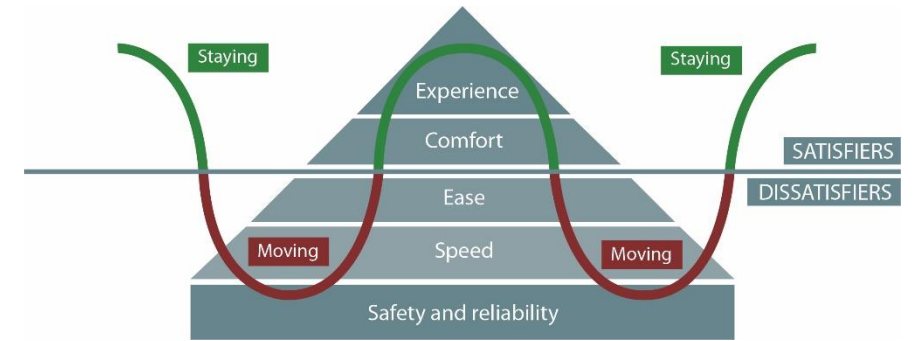
Empirical research

Conclusion

WHAT?

Data collection

Empirical research

Conclusion

WHO?

Discussion
  NS expert panel
  Almere municipality
  Heerlen municipality

Recommendations

WHO?

Discussion
    NS expert panel
        Almere municipality
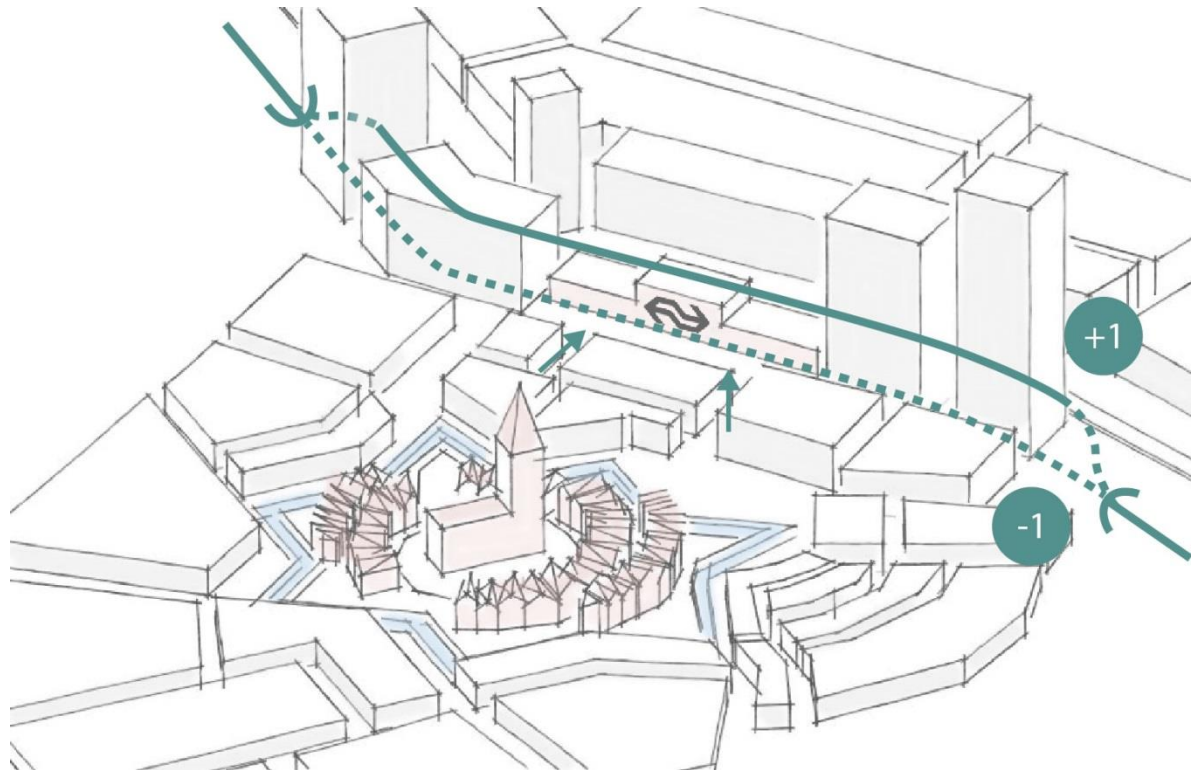   Heerlen municipality

Recommendations

WHO?

Discussion

NS expert panel
Almere municipality
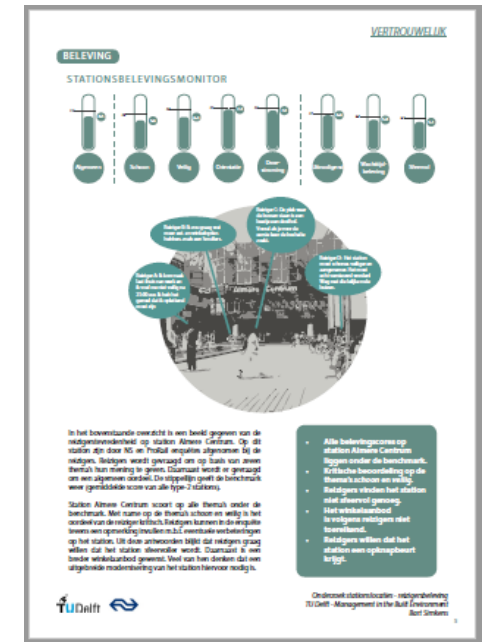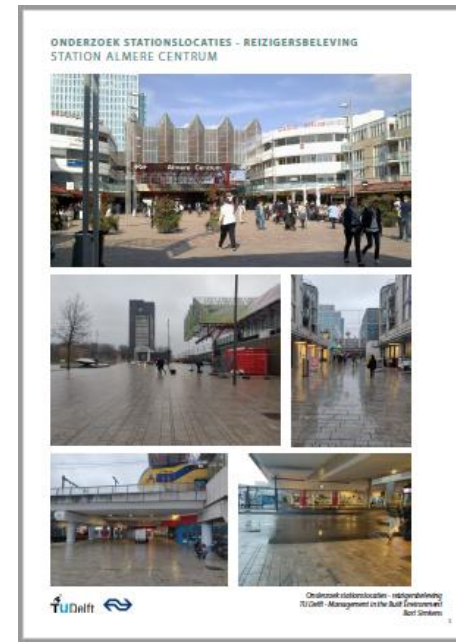Heerlen municipality

Recommendations

+1

-1

WHO?
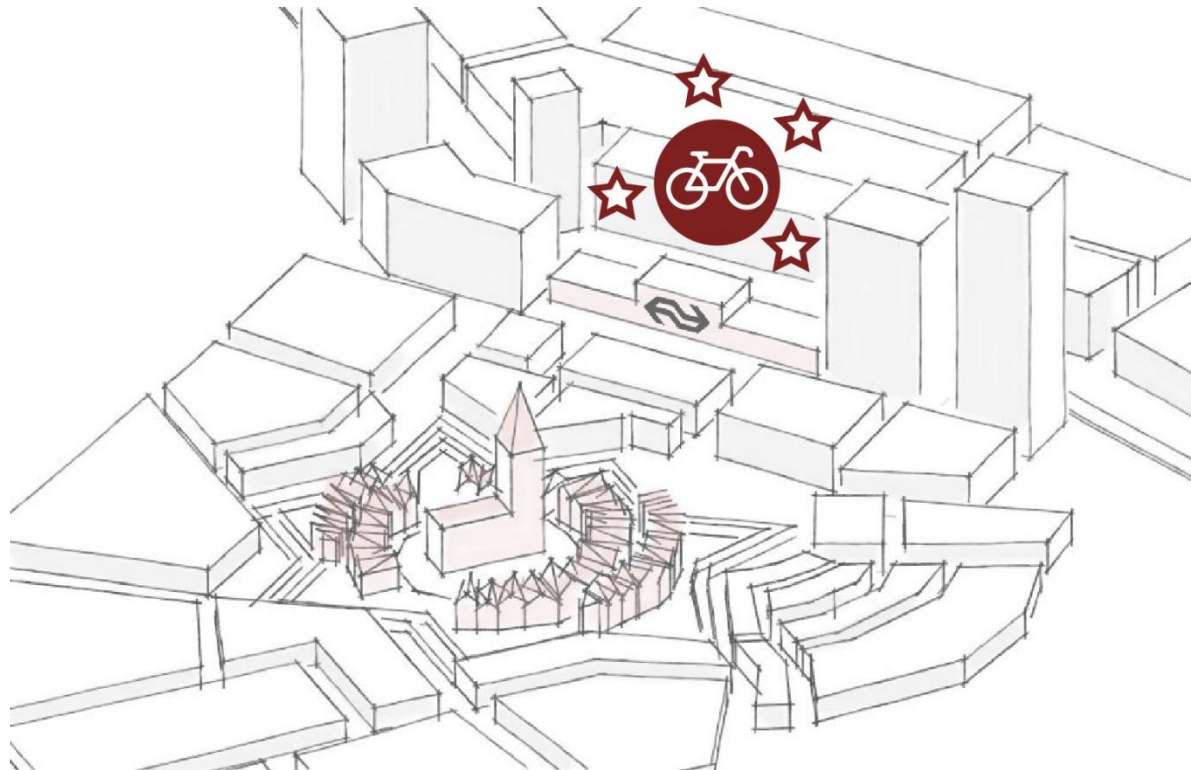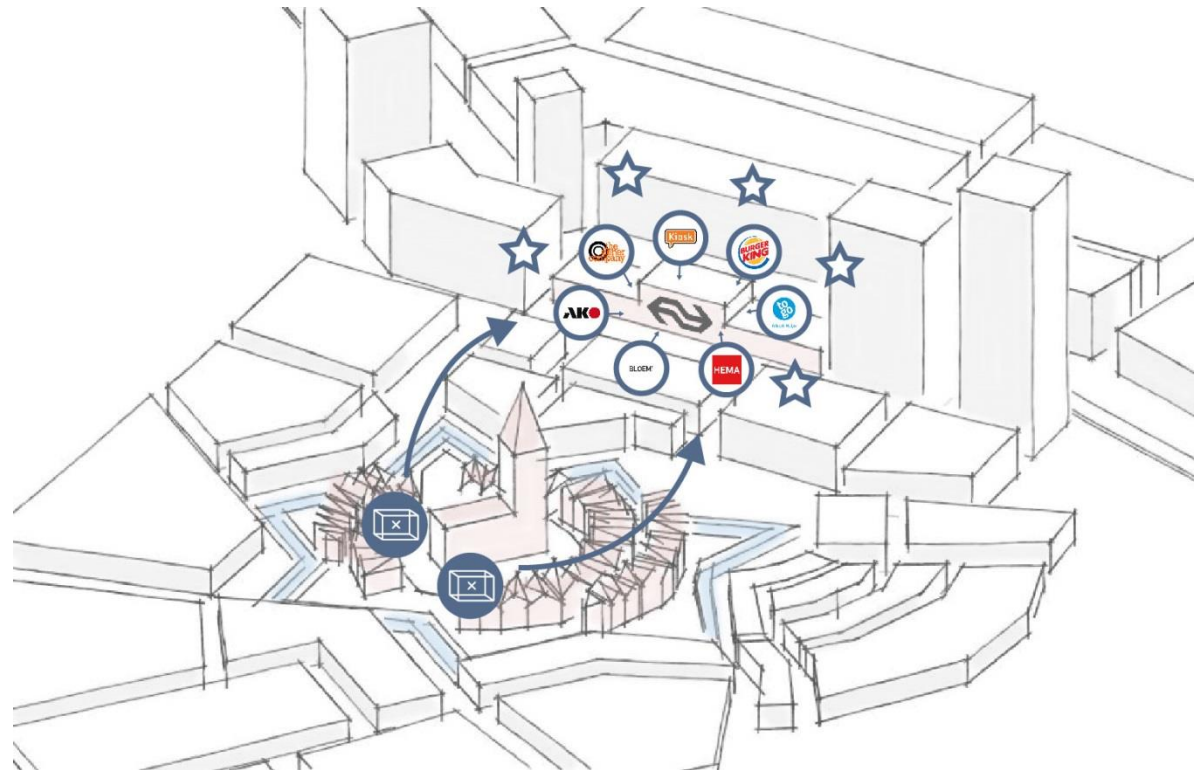
Discussion
> NS expert panel
> **Almere municipality**
> Heerlen municipality

Recommendations

Relevance of the introduced station location INDEX

"If we would have had this reflection at the start of the project, we would have seen what is going on at a glance."

Relevance of the quality of the station area

"We see the renewal of the station area as a complement to the station design. We want to create a liveable and vibrating place."
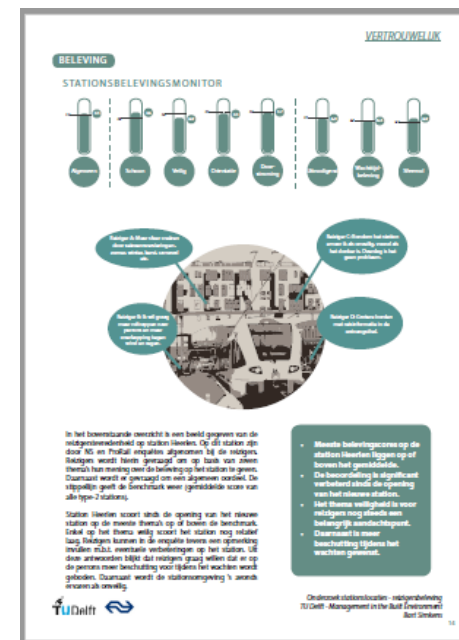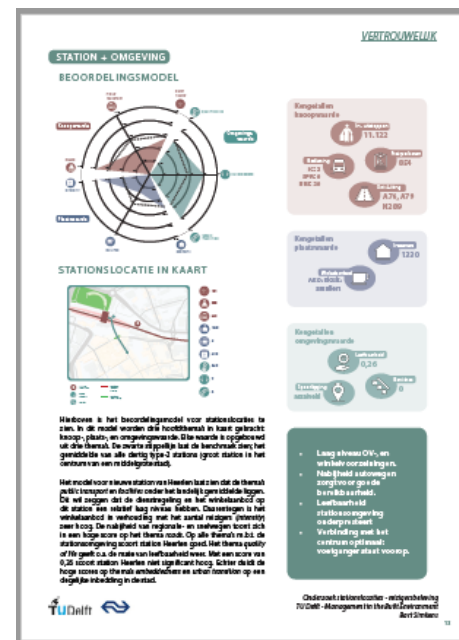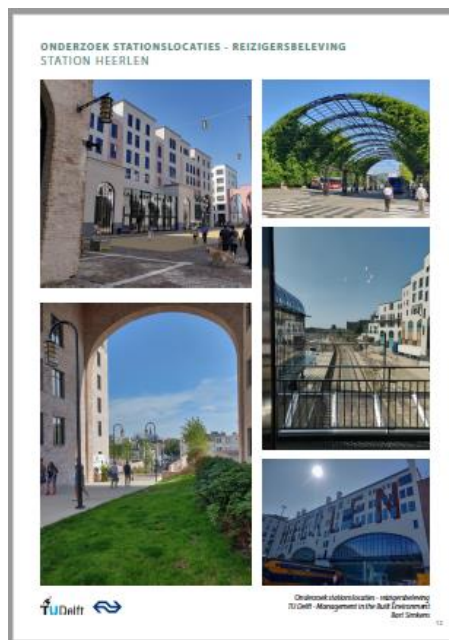
WHO?

Discussion

NS expert panel
Almere municipality
Heerlen municipality

Recommendations

Creating a liveable place
is not as simple as it
sounds...

"The liveliness that we have in mind has not yet been realised. Some measures to achieve this are already being tried out, such as pop-up events. These events show the potential of the area."

WHO?

Discussion

Recommendations