



Den Haag

Digital Innovation & Smart City in The Hague

Living Lab Scheveningen



The Hague

Vision on Digitalisation and Public Services 2020-2023



April 2020

Vision on Digitisation and Public service

Ambitions ▼

The Hague goes digital: working together for smart innovation

Public service in The Hague: personal, convenient and reliable

Municipal IT: ready for the future with a reliable foundation

Strategic goals ▼

Digital Innovations
for social challenges

Data-driven working
for a viable city

Listening and improving

Integral public service

Municipal IT ready
for the future

Reliable IT foundation

Tactical goals ▼

Innovation in Scheveningen

Municipal Data Strategy

Accessible and inclusive
public services
(with 'De Stadskamer'
municipal research lab,
customer satisfaction survey
and clear communication)

Online environment as the
foundation (MijnDenHaag,
everything provided there
and a foundation for an
omnichannel with telephone
facilities and helpdesks,
innovation and mobile apps)

Investing in the IT
organisation of tomorrow

Renewing and modernising
IT infrastructure
(IT Master Plan)

Safety & Security
Coalition & Agenda

Urban Data Centre
The Hague

Listening and learning
(encouraging customer-
oriented culture (DNA), active
listening through social
media and complaints
management)

Personal contact for specific
target groups (low-threshold
contact for residents in their
own neighbourhoods, a
central helpdesk for
entrepreneurs and The Hague
International Centre for
international workers)

Enhancing civil servants'
digital skills and innovative
capacity

Reducing the number of
applications and improving
contract and licence
management

Start-up in Residence,
Odyssey and Digital Identity

Digital The Hague in 3D

More efficient and more
effective use of base (data)
registers

Integral approach digital
skills of residents and
entrepreneurs

Implementing frameworks
for information and IT policy



Living Lab Scheveningen

Smart City

What is it?

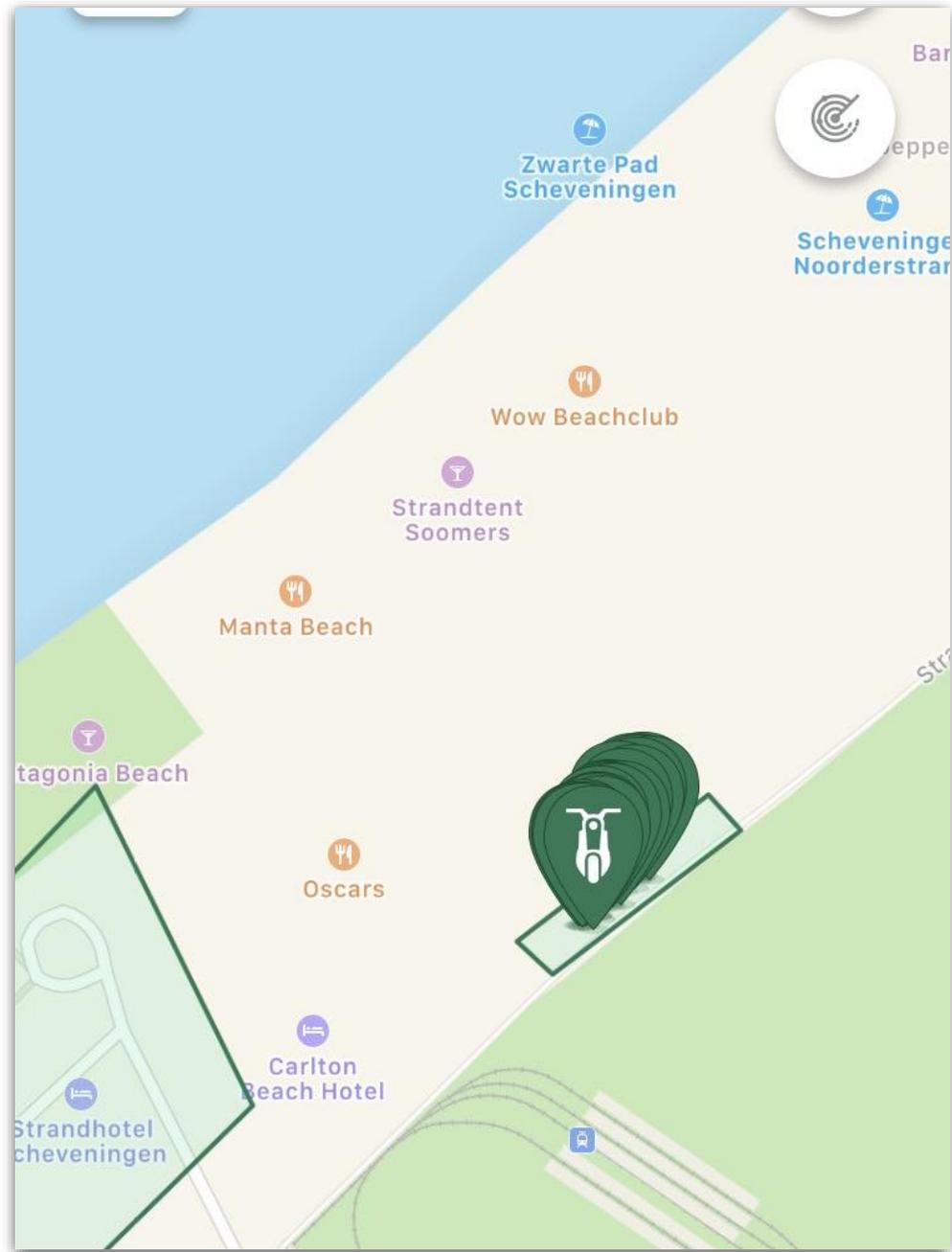
Example 1
ZWARTE PAD
1970











QUESTIONS

What does new technology mean for the **use, design and control** of the public space?

What is the **role of the municipality** in the development of a Smart City?

With whom do we have to **collaborate** in a Smart City?



Living Lab Scheveningen



The City
The Beach
The **Hague.**

MISSION STATEMENT

It is a research project.
We would like to learn.

Smart City
Infrastructure as a
component of the Smart
City System as a whole

We would like to investigate how a Smart City Infrastructure in a
real-life urban area can be made viable to contribute to a
sustainable, safe and pleasant living environment.

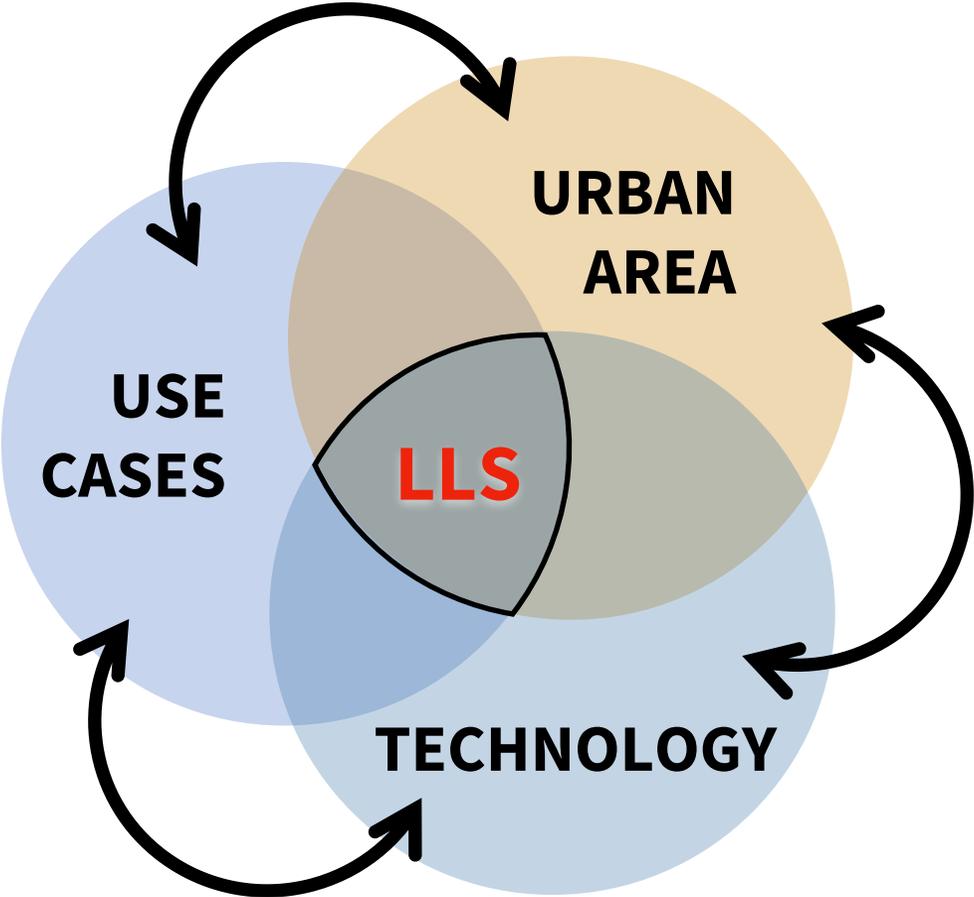
Value creation and consensus
within society and in politics

Scale to the future.
Renewable energy.

Safety in for example
traffic and public space

Connectivity and public services
such as smart parking and
charging. Prevent outdoor
cluttering.

PARALLEL DEVELOPMENT



THE URBAN AREA



- City of Peace & Justice
- Seat of the government
- Legal center
- The Hague Security Delta
- 11 kilometers of coastline

Scheveningen:

- Natura 2000 areas
- Mixed historical neighbourhoods and nightlife areas
- Industrial areas and activity
- Large-scale international events
- Sea harbour and fish market
- Recreational areas & beach
- Approximately 14 million visitors per year (seasonally)

RENVOOI

--- scopegrens zoekgebied LLS (geen harde lijn)

----- zonegrens

□ geen planning bekend / mee met onderhoudsvervangning?

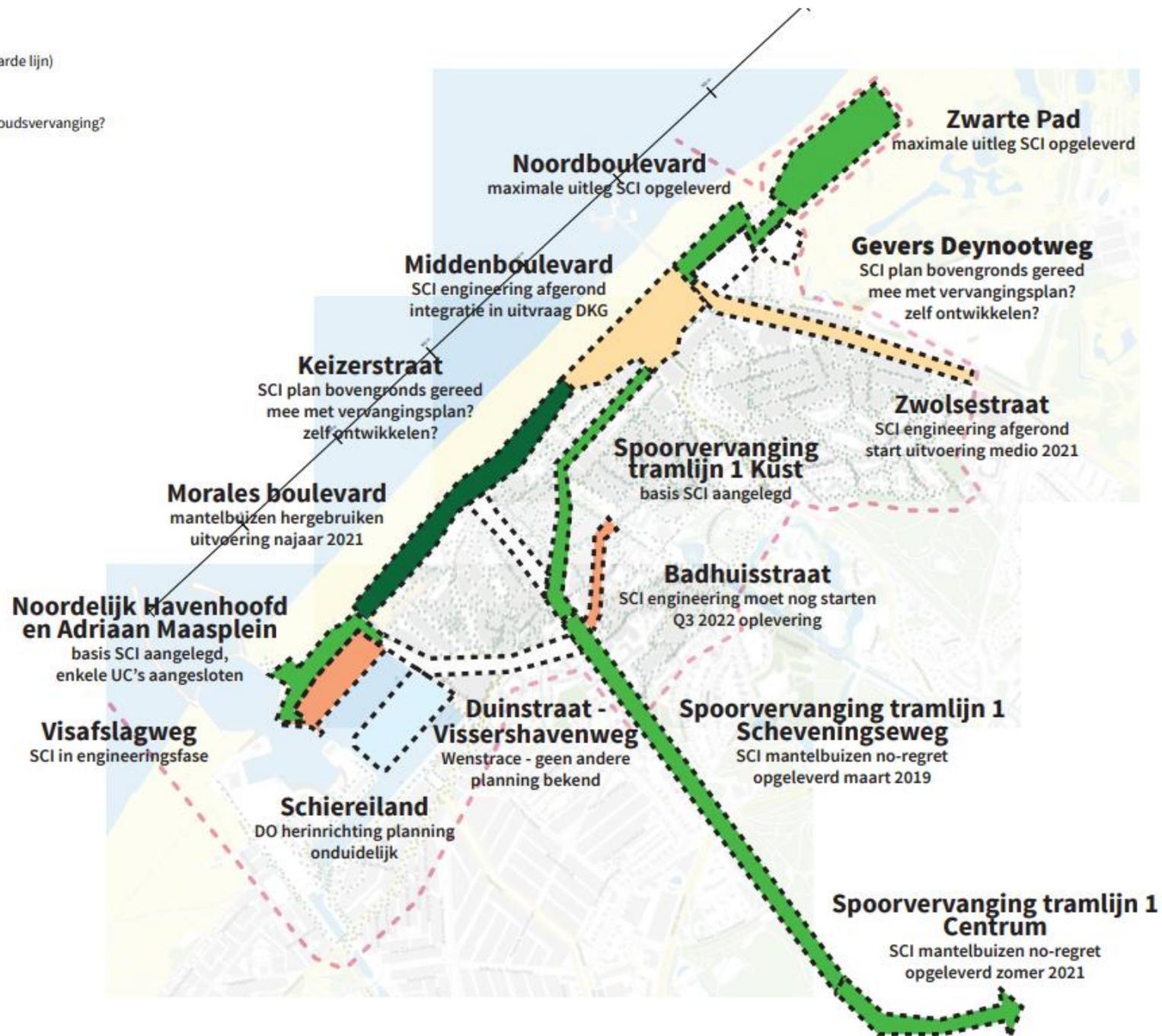
■ gebruik bestaande infra

■ SCI opgeleverd

■ 2022 oplevering

■ 2023 oplevering

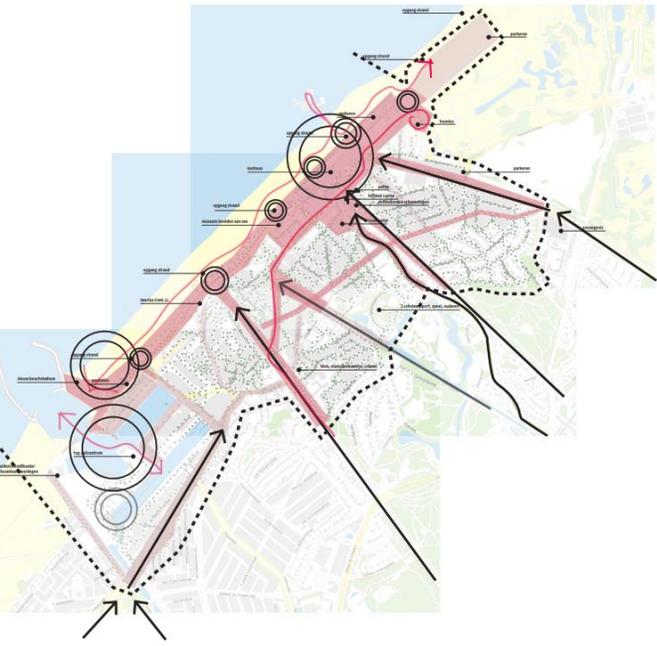
■ onzeker, 2022 en later oplevering

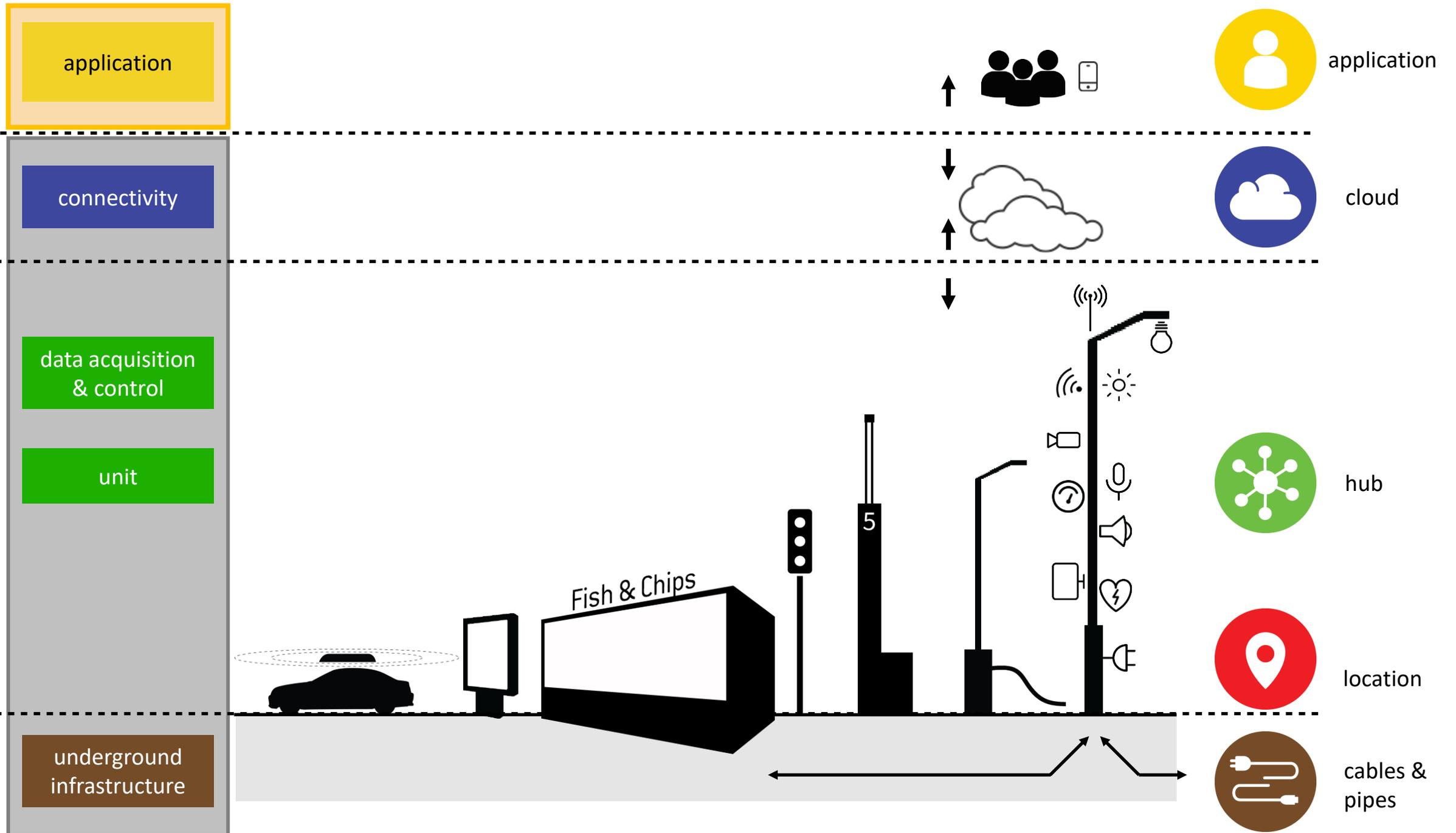


Living Lab Scheveningen
zones in ontwikkeling
stand van zaken
november 2021

Naomi Schiphorst
schaal 1 : 5000, papier A0

THE URBAN AREA - CONSTRUCTION







Noordboulevard

USE CASE CLUSTERS

ENVIRONMENT AND AIR POLLUTION CONTROL

measuring, monitoring, purifying, solar cells

SMART LIGHTING

measuring, switching,
dynamic lighting,
scenarios

CROWD MANAGEMENT

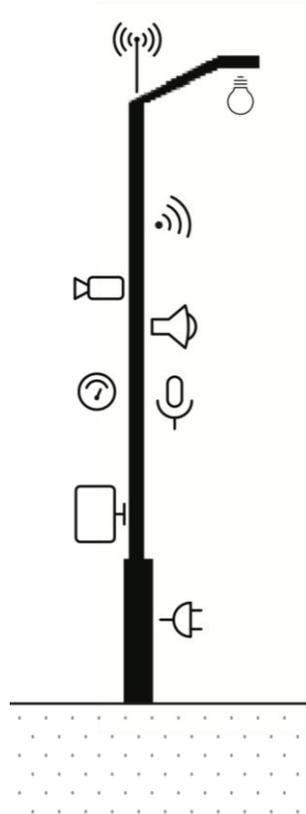
tracing, informing,
guiding crowds, beach portal

PUBLIC COMMUNICATION

dynamic signage,
public announcements,
bill boards, guides

CONTROL & MAINTENANCE

monitoring, KPI's, interruption analysis,
firmware, updates, configuration mgt



CONNECTIVITY

small cells, 4G /5G, fiber

SOCIAL SAFETY & SECURITY

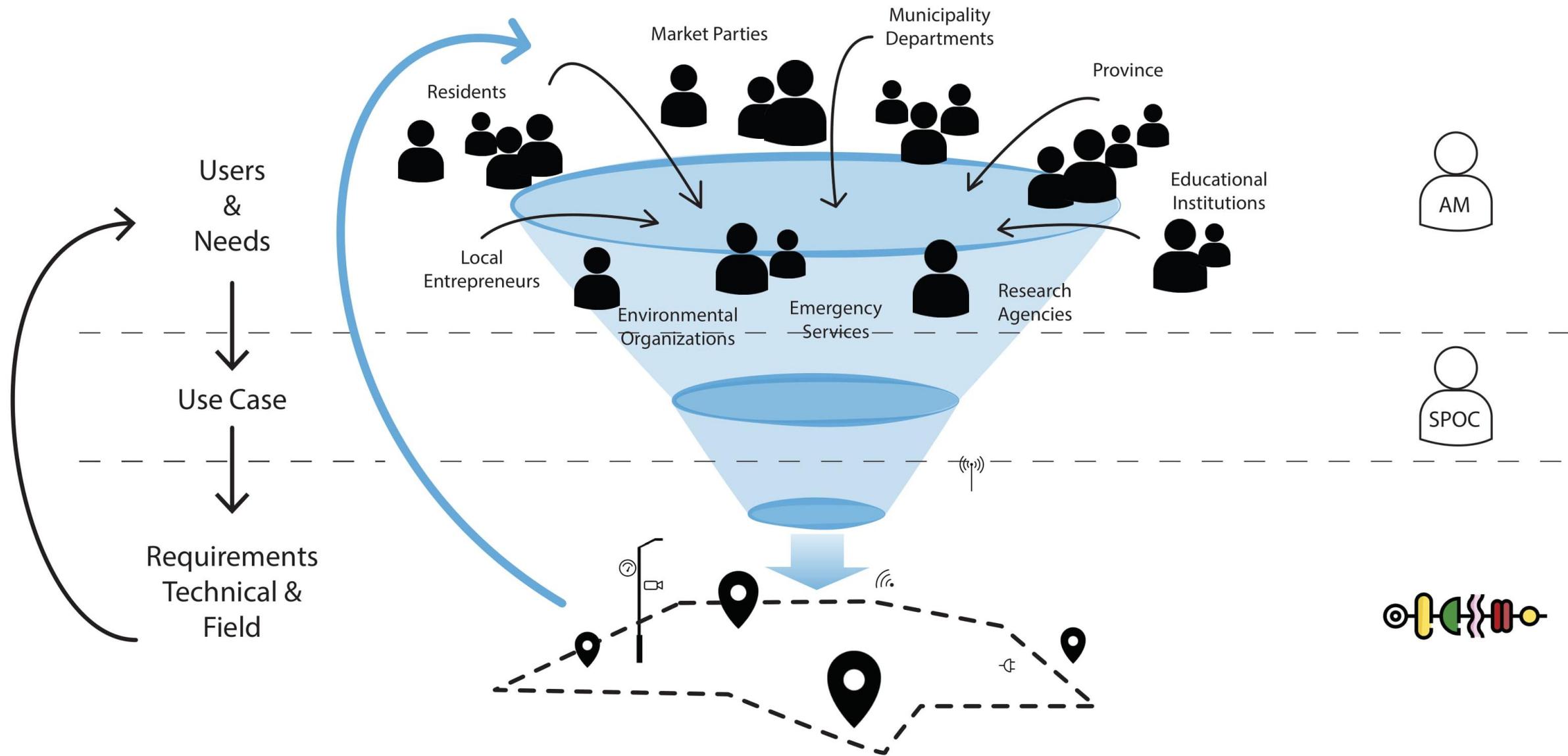
monitoring aggression,
(mobile) camera surveillance,
controlling lights, emergency button

TRAFFIC SAFETY

smart parking, valet parking,
guiding traffic, traffic control system

ENERGY & PUBLIC ACCESS

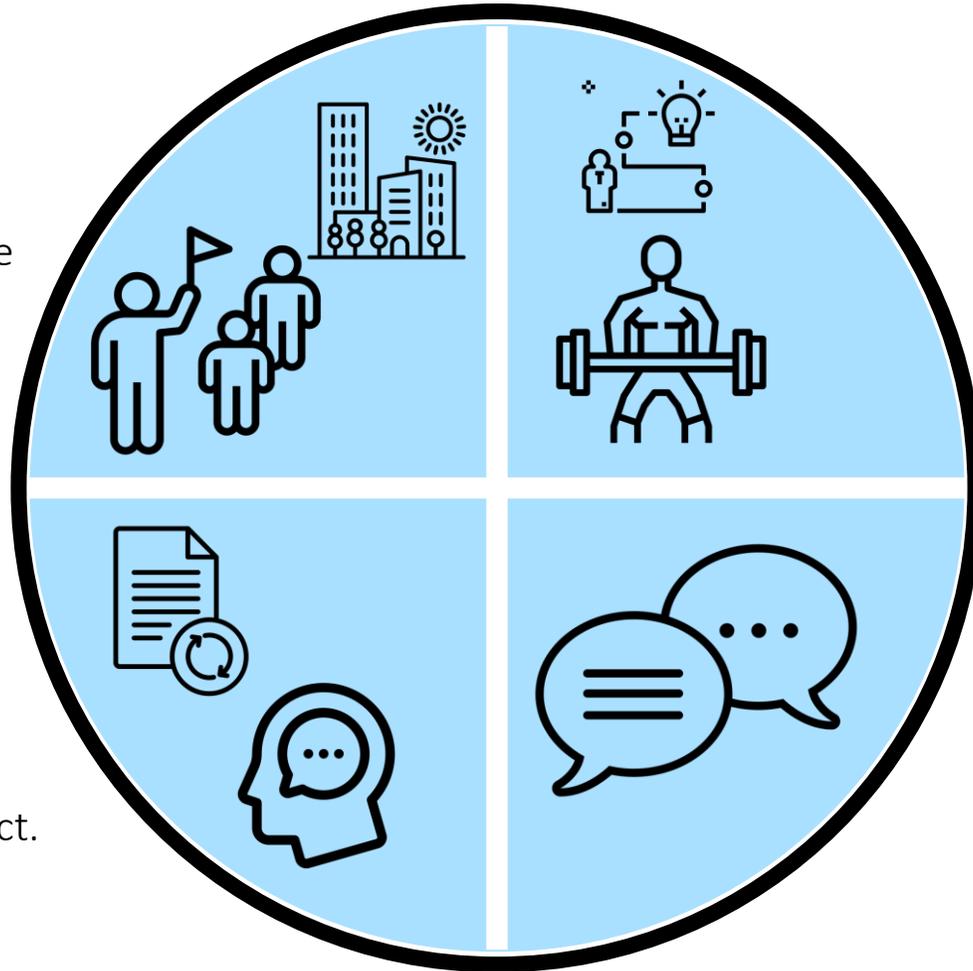
phone, bike, car, scooters,
events, AED



CONTINUOUS LEARNING

Show

We **share** our approach and progress, we tell the why, what and how about a specific topic. All developments are brought to life in the area, for everyone to **see and experience**.



Reflect & document

To make the most out of the learning experience, we **document** our thinking process, to trace our steps and to reflect. This way, we can apply the insights we gain in new contexts.

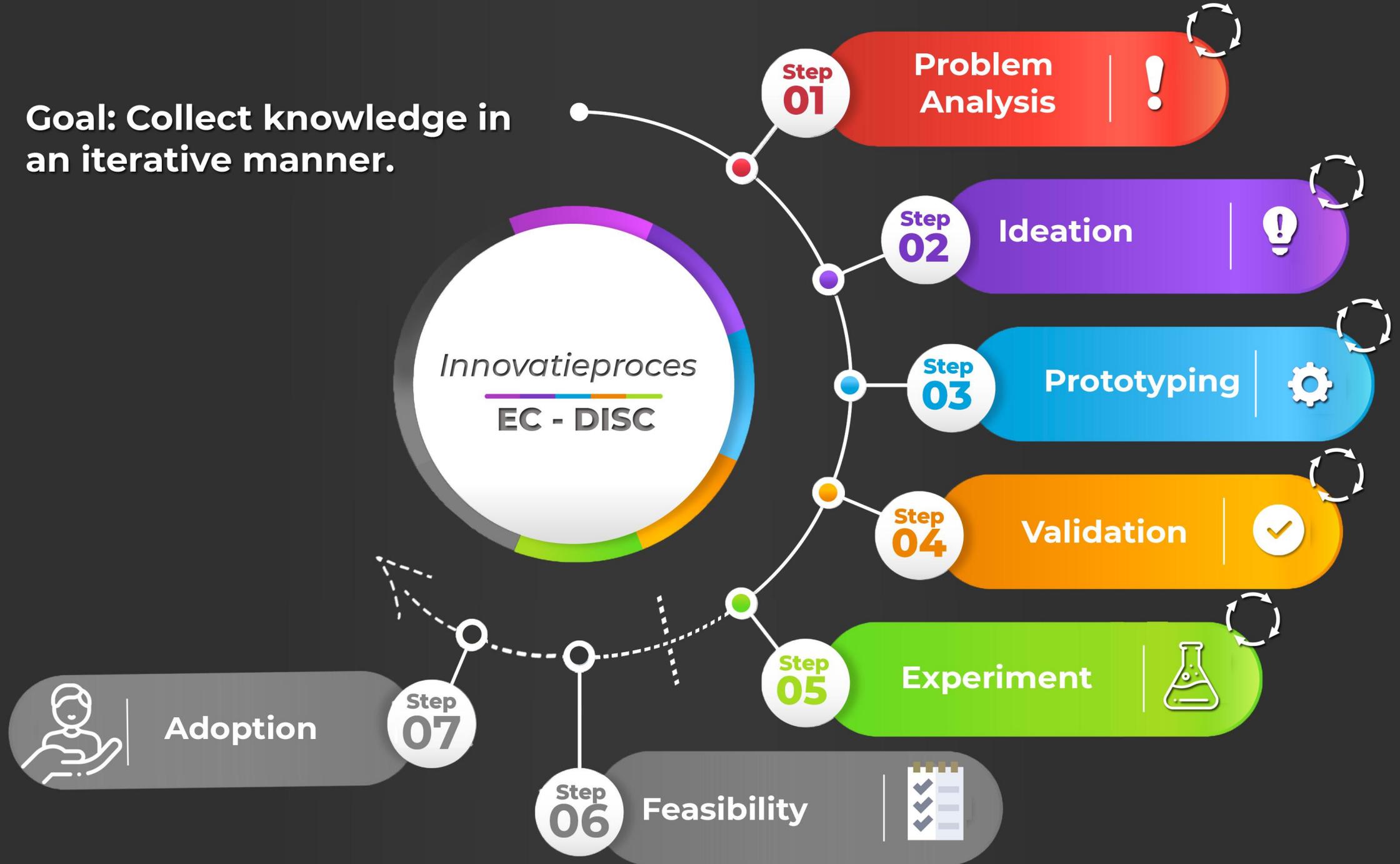
Try & learn

No one grows muscles by looking at other people work out. We **apply theory to practice**, and use **learning-by-doing** methodologies.

Share

Knowledge is created by **interacting with others**. This is at the foundation of our working processes.

Goal: Collect knowledge in an iterative manner.





Safety & Security

Energy & Environment

Mobility

Well-being

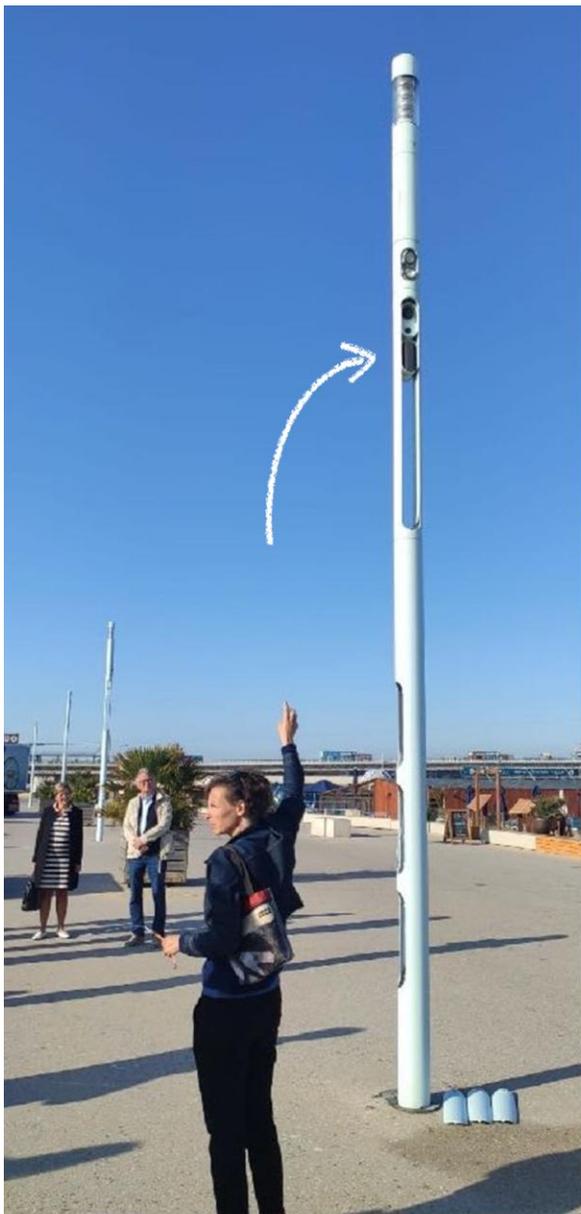
USE CASES



MORE USE CASES



Experiencing noise



Cyrb

DASHBOARD

- ONDERNEMERS
- METINGEN
- REALTIME**
- BEWONERS
- HELP

ACCOUNT

- ACCOUNT
- PRIVACYVERKLARING
- LOG OUT

Realtime

SENSOR

- NB (LM043)
- NB (LM040)
- NB (LM036)
- ZK (LM010)
- ZP (LM006)
- ZP (LM003)
- ZP (LM001)
- Gevel zee
- Gevel stad

WAARDE

- dB(A)
- dB(C)
- dB(Z)

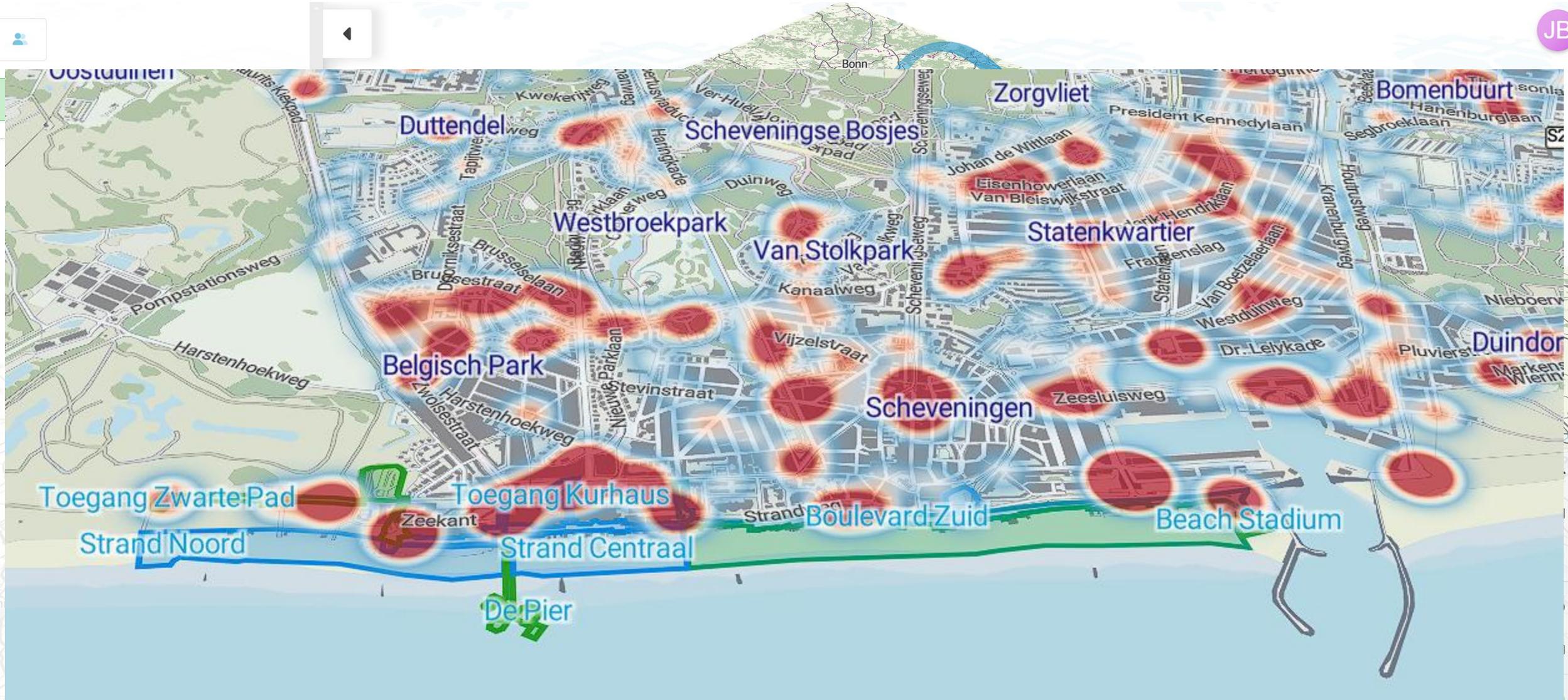
+ WOENSDAG 23 SEPTEMBER
- 21:46

Time	dB(Z)
21:45:00	48
21:45:05	46
21:45:10	47
21:45:15	52
21:45:20	48
21:45:25	47
21:45:30	46
21:45:35	47
21:45:40	48
21:45:45	46
21:45:50	47
21:45:55	48
21:46:00	46
21:46:05	47
21:46:10	48
21:46:15	46
21:46:20	47
21:46:25	48
21:46:30	46
21:46:35	47
21:46:40	48
21:46:45	46
21:46:50	47
21:46:55	48
21:47:00	46
21:47:05	47
21:47:10	48
21:47:15	46
21:47:20	47
21:47:25	48
21:47:30	46
21:47:35	47
21:47:40	48
21:47:45	46
21:47:50	47
21:47:55	48
21:48:00	46

Crowd Safety Manager

The interface is divided into three main sections:

- Left Panel (Control Panel):**
 - Top: User profile icon, three status indicators (9%, 4%, 14°).
 - Mobility: Car icon, dropdown menu.
 - Realtime: Signal strength icon, dropdown menu.
 - Drukte: Crowd density icon, dropdown menu.
 - Hoofdgroep: Scheveningen (selected).
 - Groep: Deelgebieden (selected).
 - Radio buttons: Maximaal, **Normaal** (selected), Vergelijk, Verloop.
 - Info box: "Gebruik CTRL + click (op de kaart) voor toevoegen/verwijderen van gebied aan bestaande selectie."
 - Bottom: Digitwin logo (v4.3.12) and CSM logo.
- Center (Map):**
 - Map of Scheveningen with various districts labeled (e.g., Strand Noord, Strand Centraal, Beach Stadium).
 - Legend: "Legenda" dropdown.
 - Map controls: Zoom (50°), Orientation (224°), Search (13,10), Temperature (14°), Mapbox logo.
- Right Panel (Performance & Settings):**
 - Header: "Drukte" with a crowd density icon.
 - Gebieden: Strand Noord (selected).
 - Datumbereik*: 12-4-2024 - 12-4-2024. Interval*: 15 minuten.
 - Prestatieindicator*: Normaal.
 - Graph: Line chart titled "Normaal" showing performance over time. The y-axis ranges from 0 to 20. The x-axis shows time from 00:00 to 10:00 on 2024 apr 12. Two lines (blue and red) show an increase in performance starting around 07:30.
 - Temperature forecast: 13°, 13.2°, 13°, 13.2°, 13.1°, 13.2°, 12.8°, 13.4°, 15.1°.



9% 4% 15°

Bezoekers

Hoofdgroep
Scheveningen

Groep
Deelgebieden

Aantal

Herkomst & bestemming

Kruisbezoek

Modaliteit

Woonplaats

Gemeente

Wijk

Top aantal

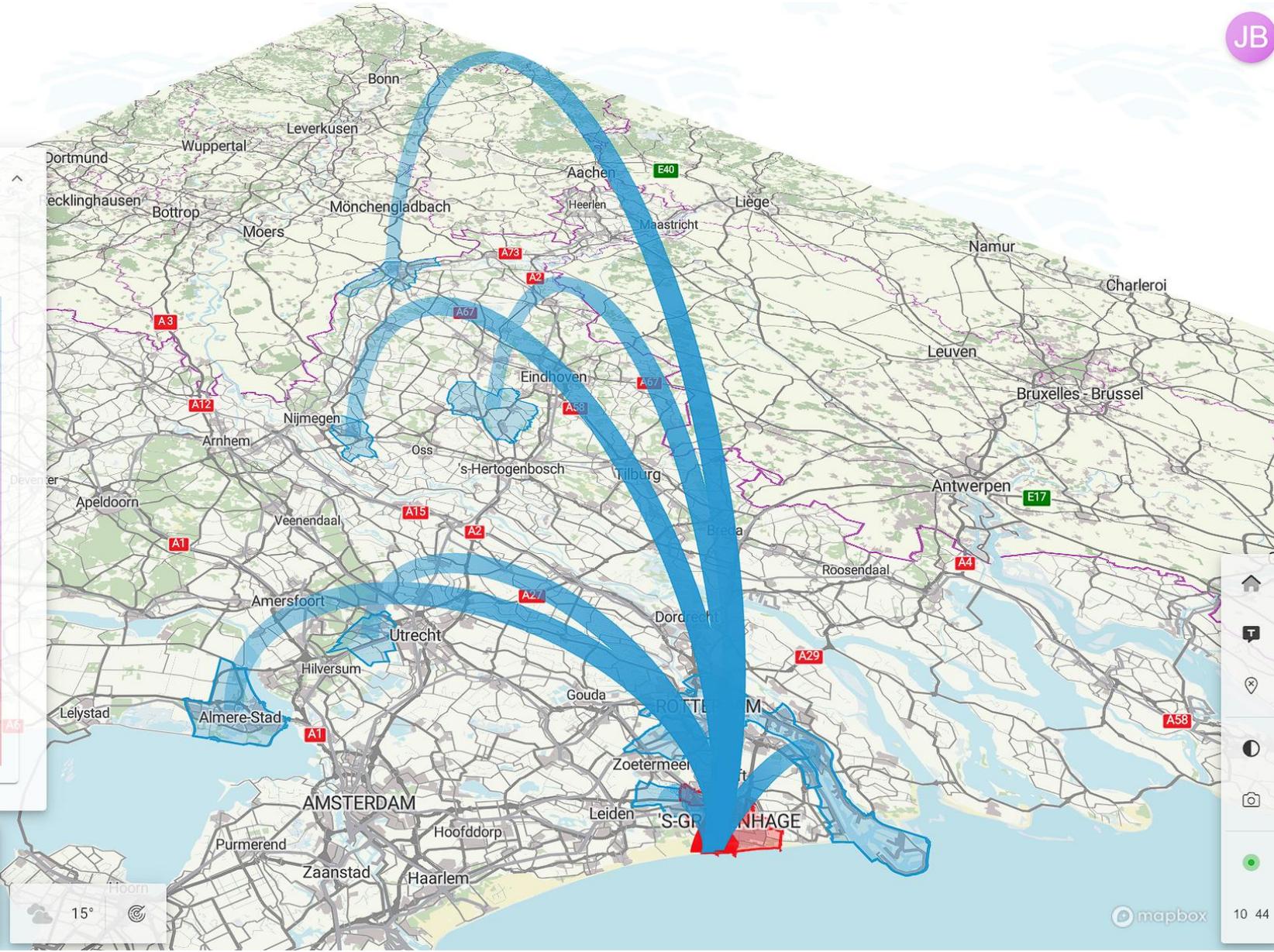
10

Bogen

Legenda

Herkomst
Bezoekers (%)

< 2
< 4
< 6
< 8
< 10
< 12
< 14
< 16
< 18
< 20
≥ 20



Gebruik CTRL + click (op de kaart) voor toevoegen/verwijderen van



Crowdmanagement

EdgeInsights



EN hunink

NoordBoulevard Pier



1
Groups Detected

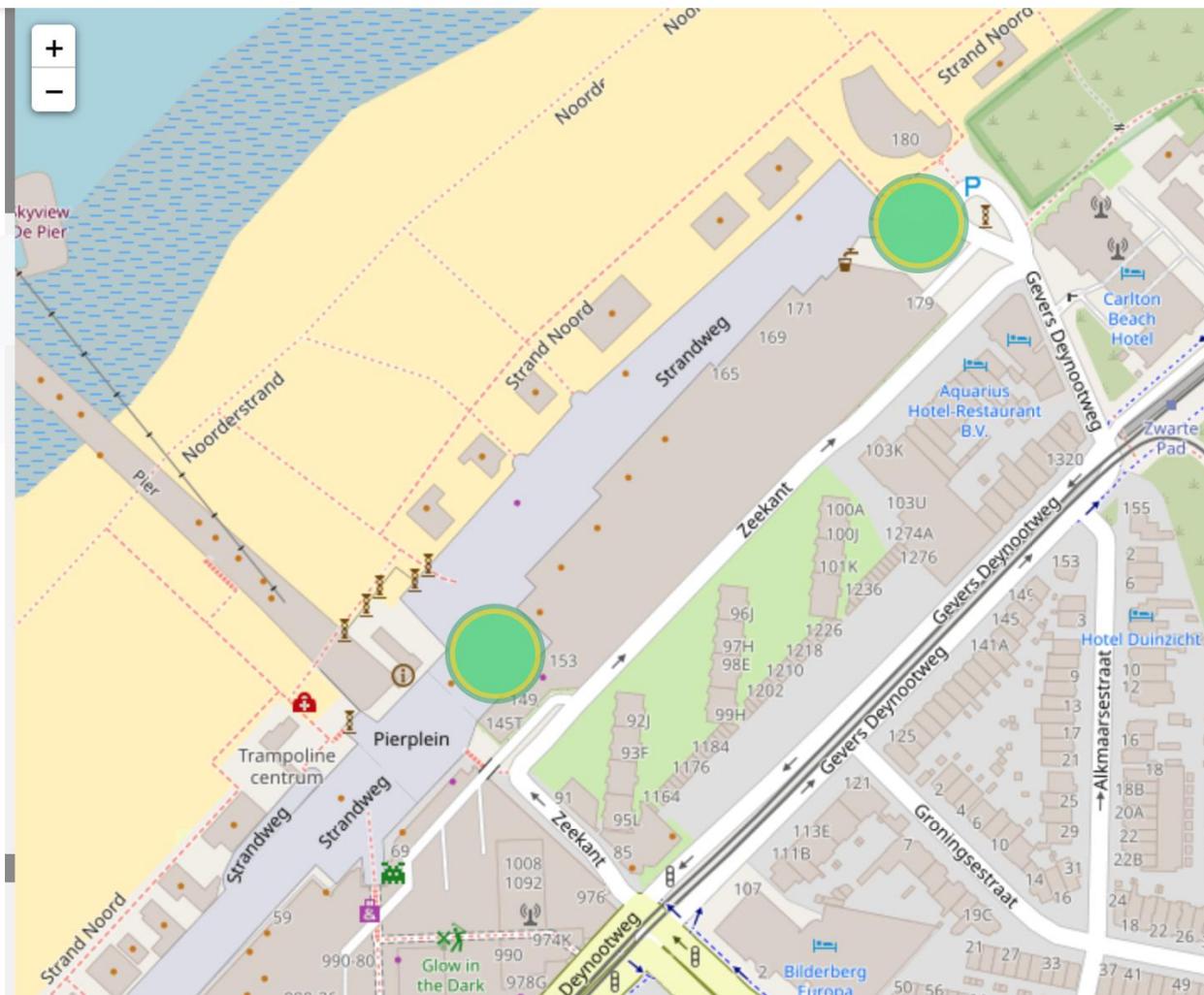
Noordboulevard-Poller



0
Groups Detected

Recent Events

Event Type	Location	Time	
1 Person (People Counting)	NoordBoulevard Pier	08:13 28.10.2021	
0 Person (Crowd Density)	NoordBoulevard Pier	08:12 28.10.2021	
1 Person (People Counting)	NoordBoulevard Pier	08:12 28.10.2021	
1 Person (Crowd Density)	NoordBoulevard Pier	08:11 28.10.2021	
0 Person (Crowd Density)	NoordBoulevard Pier	08:09 28.10.2021	



USE CASE ENERGIE TRANSITIE MICRO-GRID NOORDELIJK HAVENHOOFD





COLLABORATIONS & CITIZEN INVOLVEMENT



[Public Event: Smart@Sea – June 2021](#)
(aftermovie)



[Public Event: Smart@Sea - September 2022](#)
(aftermovie)



Hier zijn sensoren



Wat wordt er opgenomen of gemeten?

 Hoeveelheid mensen	 Drukte	 Veiligheid
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 Beelden poller <small>Verwerkt persoonsgegevens</small>	 Verkeer
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 Gewicht afval	 Openen afvalbak	 Voorzieningen
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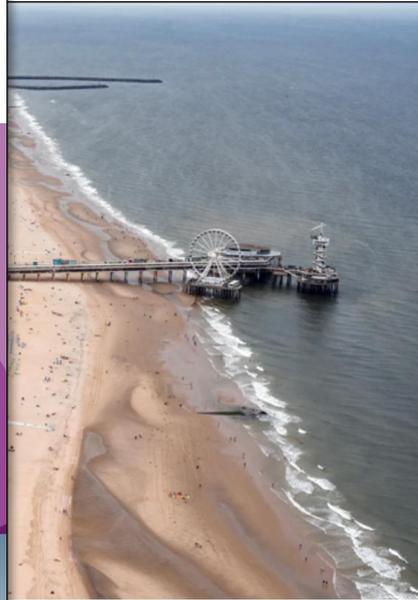
smartcity.denhaag.nl/richtlijn
Telefoon: 14070



Den Haag

Smart technology in public spaces

Lessons and successes from 5 years of Living Lab Scheveningen



Most unique living lab in the world, the Hague has been testing a smart city and how it can contribute to energy transition. It is here that the municipality learns about smart technology in the city. In this whitepaper, we explore the possibilities of building the smart city of the seaside resort,

Smart infrastructure

Along the boulevard in Scheveningen, the municipality has implemented a fiber optic network, running from the Zwaneweg in the north to the Noordelijk Havenhoofd in the south. On the ground, that network connects street furniture such as bus stops, kiosks, charging poles and bus shelters. Above ground, those objects can be equipped with cameras, sensors, antennas and network equipment. In that way, they can support a range of new digital applications. All together, this is the digital infrastructure, also known as Smart City Infrastructure (SCI).

'We knew that technology would become increasingly important to keep public spaces liveable. As a municipality, however, we had yet to learn how to deal with this. By joining the restructuring of Scheveningen's boulevard, we have saved a great deal on costs and created an environment in which we can learn and innovate together with residents and entrepreneurs.'

Marijn Fraanje, former CIO, currently Director of Spatial Planning and Economy.

'As a municipality, you want to make sure that residents' data is handled carefully. That's why we chose to do it in-house at the time.'

Dirk van Brederode, former Project Leader of Smart City at the Municipality of The Hague, currently Manager Digital Society, Association of Netherlands Municipalities (Vereniging van Nederlandse Gemeenten, VNG)



smartcity.denhaag.nl/en/whitepaper



Den Haag

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