Welcome

Agenda

13.00 Introduction to SELECT and recap from workshop #1

Lars Bern, Lindholmen Science Park (SE) &

Piret Liv Stern Dahl, EIT Urban Mobility (DK)

13.30 Regional initiatives

- Heavy Duty Charging in Hamburg – Marvin Coböken, hySolutions (DE)
- Electrification Plan for the City of Gothenburg – Anne Piegsa, Business Region Gothenburg (SE)

14.00 Breakout rooms

14.20 Coffee break

14.30 Regional initiatives

- Heavy Duty Charging in the Netherlands – Tim Frikkee, LOLA (NL)
- Electrification of City Fleet – Veerle De Meyer, City of Mechelen (BE)

15.00 Workshop – group sessions

15.30 Summary and way forward

SELECT

The role of public actors in supporting the electric transition in logistics

Interreg North Sea

Co-funded by the European Union

SELECT

About

Project duration

July 2023 – Jan 2025

Budget

Appr 450 000 euro

Financed by

Interreg North Sea Region

Project coordinator

Lindholmen Science Park/CLOSER

Participating Cities/Regions

City of Mechelen

Region of Noord-Brabant

Capital Region of Copenhagen

Logistik Initiative Hamburg

Communication/Dissemination partner

eit Urban Mobility

Why?

- The electrification of commercial vehicles is perceived as the most important shift in the transport industry for decades, with a huge potential to eliminate greenhouse gas emissions.
  - Large investments are required
  - Electric grid is a potential constraint
  - Public actors want to support the transition
  - The pace of transition varies across the North Sea region

What?

- Examining the operation of logistics stakeholders and their potential needs
- Mapping and analyzing power and energy requirements
- Demand for new services attributed to electrified logistics
- Governance: the role of public actors in supporting the electric transition in logistics
- Communication and dissemination

Short recap from workshop #1
- Demand for new services attributed to electrified logistics

Sharing is caring

- Information
- Risks
- Best practice

Strategy and incentives

- Long term strategic decisions
- Financial incentives to overcome high initial investments

Infrastructure development

- Planning ahead adressing grid capacity and space
- Access, both public and semi-public

Technological integration

- Smart charging solutions
- Digitalization with logistics planning

Legislation and Policy

- Harmonization of transport legislation
- More engagement from public sector

Cross-Border Considerations

- Seamless services
- Pan-European perspective for cross-border transport

Regional initiatives

Marvin Coböken, hySolutions

Heavy Duty Charging in Hamburg

Interreg North Sea

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hy SOLUTIONS
Innovative Antriebe für Hamburg

Hamburg, 17th September 2024

Heavy Duty Charging in Hamburg

SELECT Workshop

CHARGING INTRASTRUCTURE IN THE CITY OF HAMBURG

CONCEPT DEVELOPMENT

hySOLUTIONS
Innovative Antriebe für Hamburg

Municipal charging infrastructure concepts for the following use cases:

Taxi

- 3.000 taxis in Hamburg
- Regulation: From 2025 no new taxis with combustion engines allowed

Transporter

- City logistics shifts towards BEV
- Further sectors follow (such as crafts)
- Public charging infrastructure suitable and needed?

Heavy Duty

- Hamburg as a major logistics hub
- Does the city have an active role in providing charging infrastructure for trucks?
- What measures could be taken?

HEAVY DUTY CHARGING INFRASTRUCTURE

CONCEPT DEVELOPMENT

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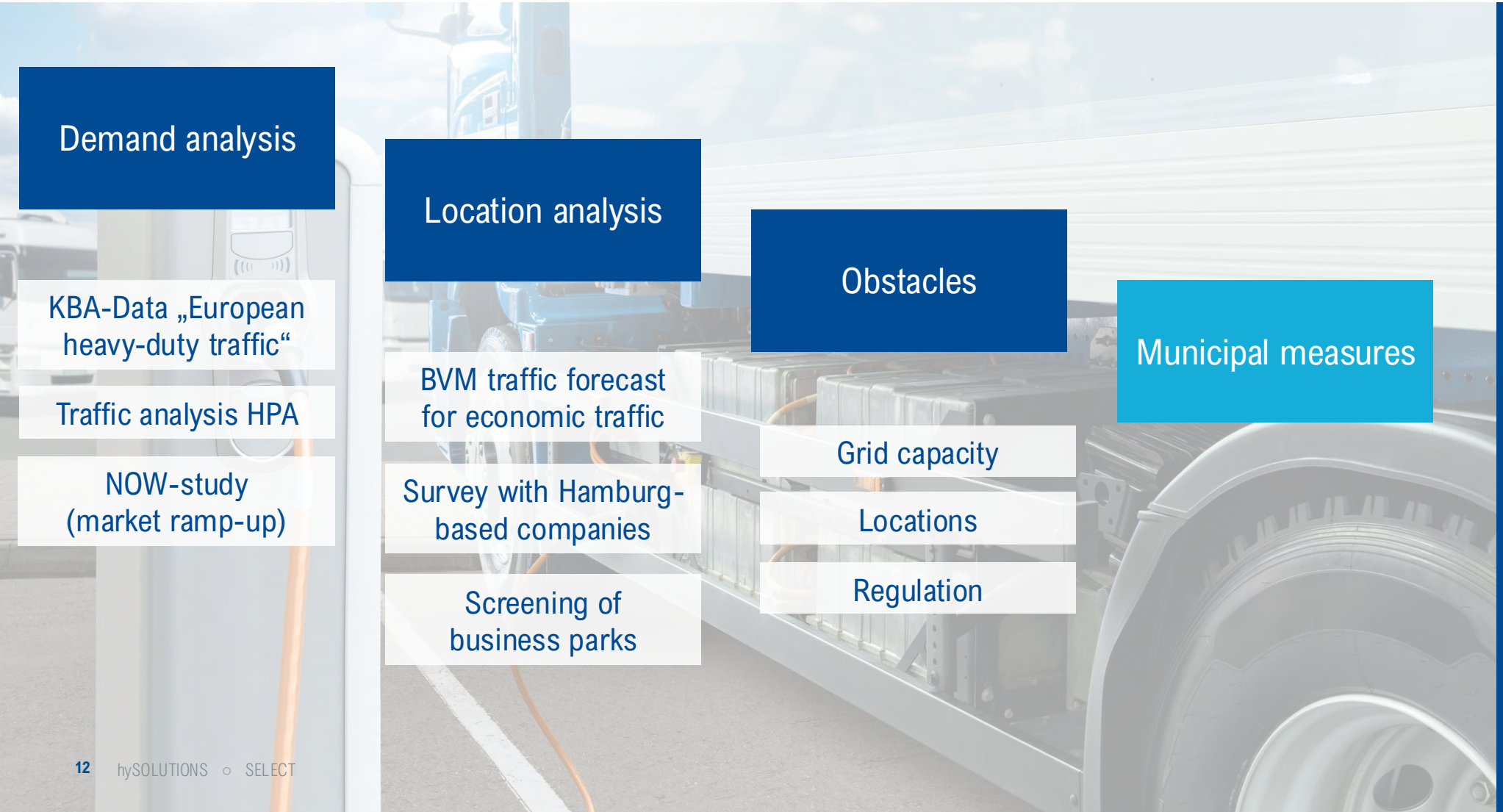
Innovative Antriebe für Hamburg



Demand analysis

- KBA-Data „European heavy-duty traffic“
- Traffic analysis HPA
- NOW-study (market ramp-up)

Location analysis

- BVM traffic forecast for economic traffic
- Survey with Hamburg-based companies
- Screening of business parks

Obstacles

- Grid capacity
- Locations
- Regulation

Municipal measures

Central topics

HEAVY DUTY CHARGING INFRASTRUCTURE

CONCEPT DEVELOPMENT

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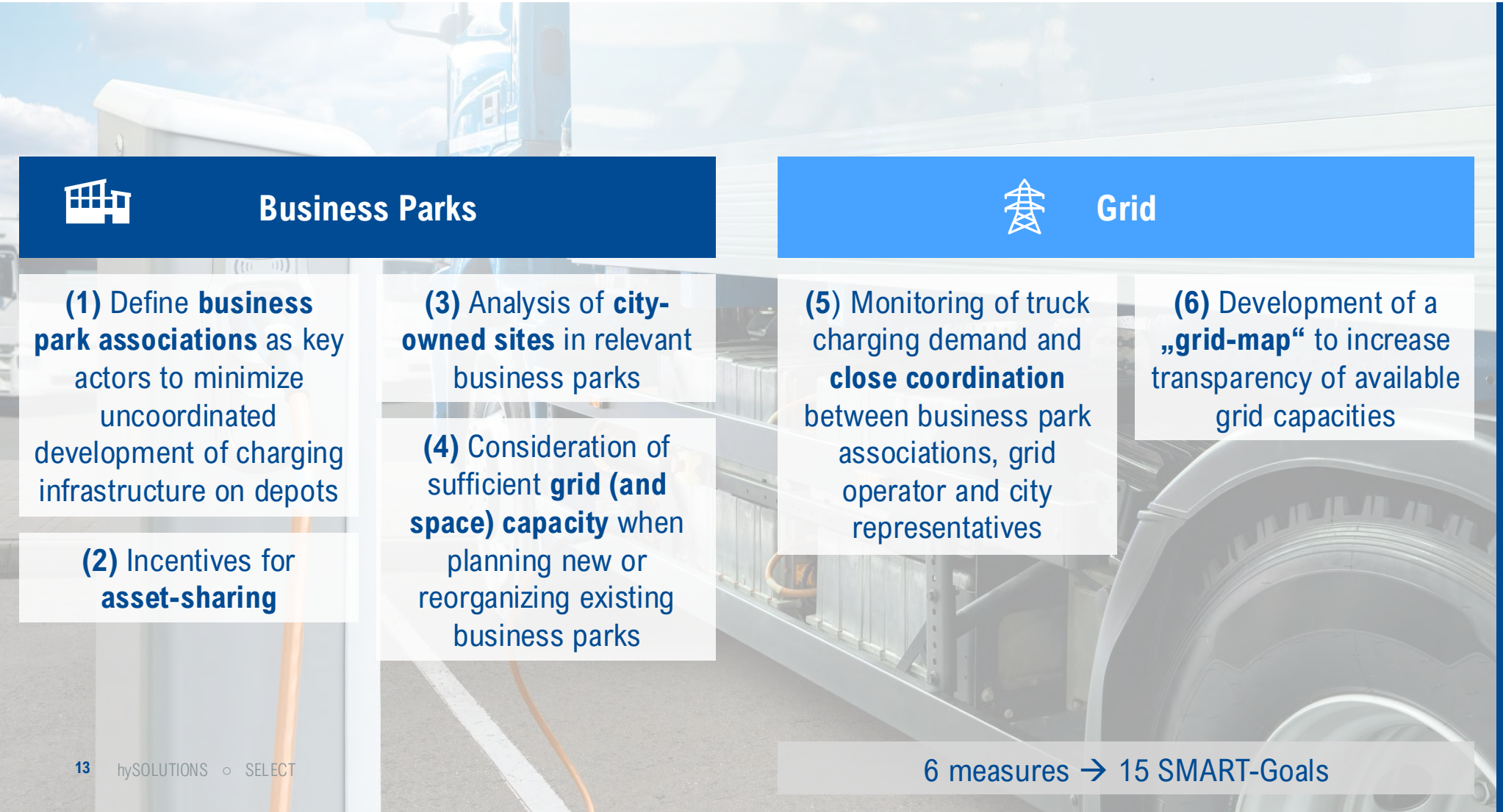
Innovative Antriebe für Hamburg



Business Parks

(1) Define **business park associations** as key actors to minimize uncoordinated development of charging infrastructure on depots

(2) Incentives for **asset-sharing**

(3) Analysis of **city-owned sites** in relevant business parks

(4) Consideration of sufficient **grid (and space) capacity** when planning new or reorganizing existing business parks

Grid

(5) Monitoring of truck charging demand and **close coordination** between business park associations, grid operator and city representatives

(6) Development of a **„grid-map“** to increase transparency of available grid capacities

6 measures → 15 SMART-Goals

Municipal Measures

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www.hysolutions.de

Anne Piegsa, Business Region Gothenburg

Electrification Plan for the City of Gothenburg

Interreg North Sea

Co-funded by the European Union

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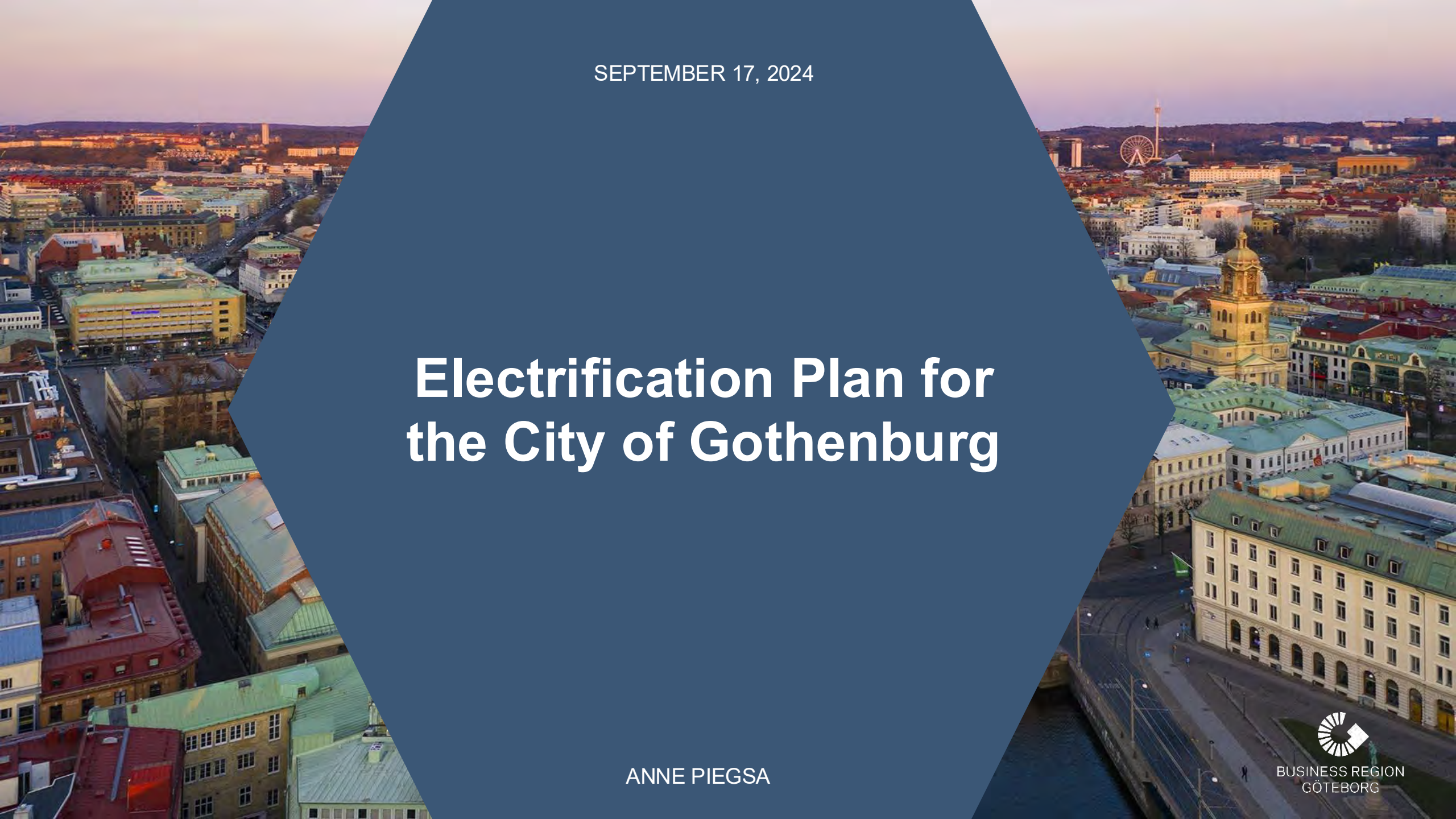


SEPTEMBER 17, 2024

Electrification Plan for the City of Gothenburg

ANNE PIEGSA

BUSINESS REGION GÖTEBORG

Climate targets 2030
City of Gothenburg

CO_2 -90%

Reference year 2010

Traffic -25%

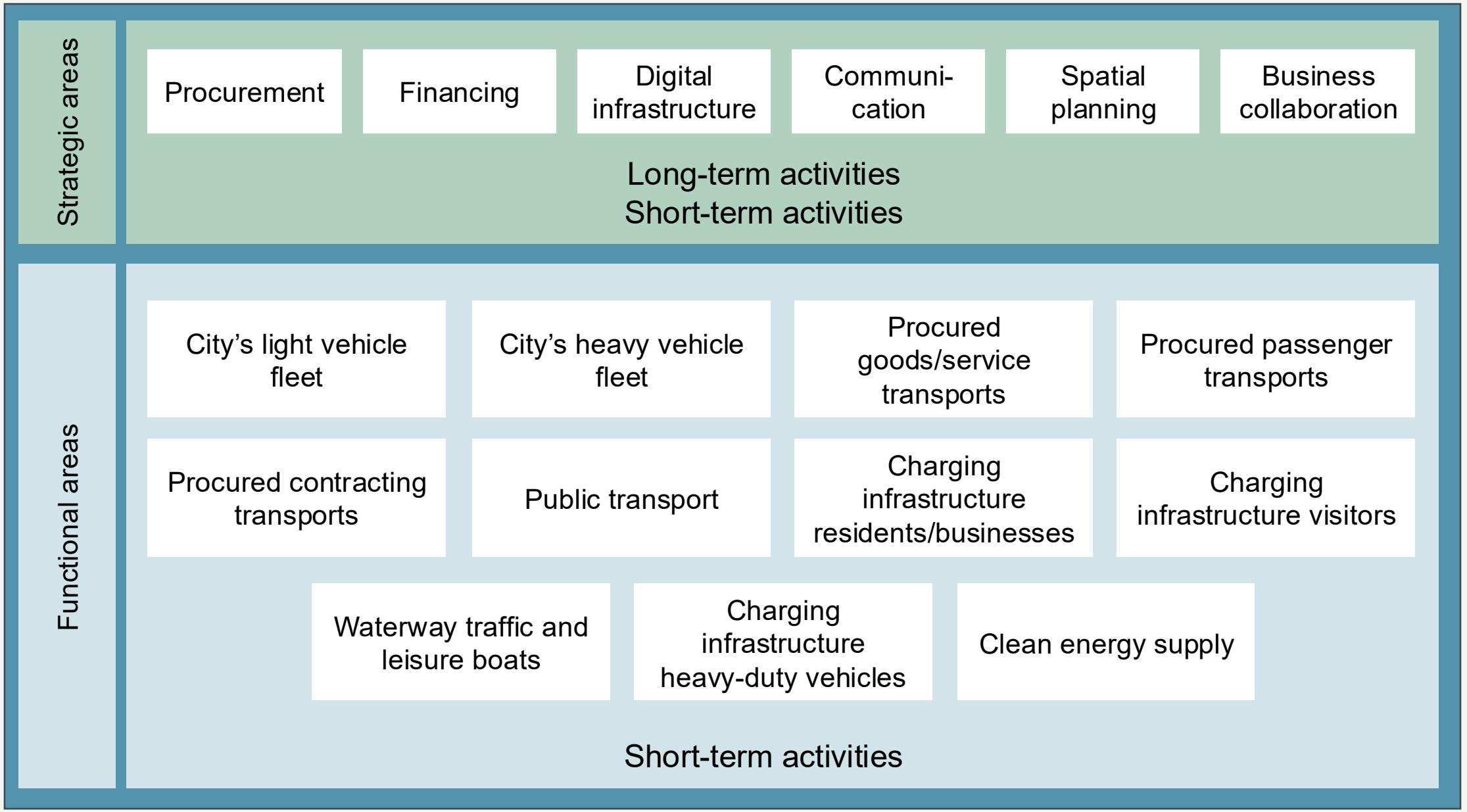
Including growth

Steering documents

BUSINESS REGION GÖTEBORG

Transport needs

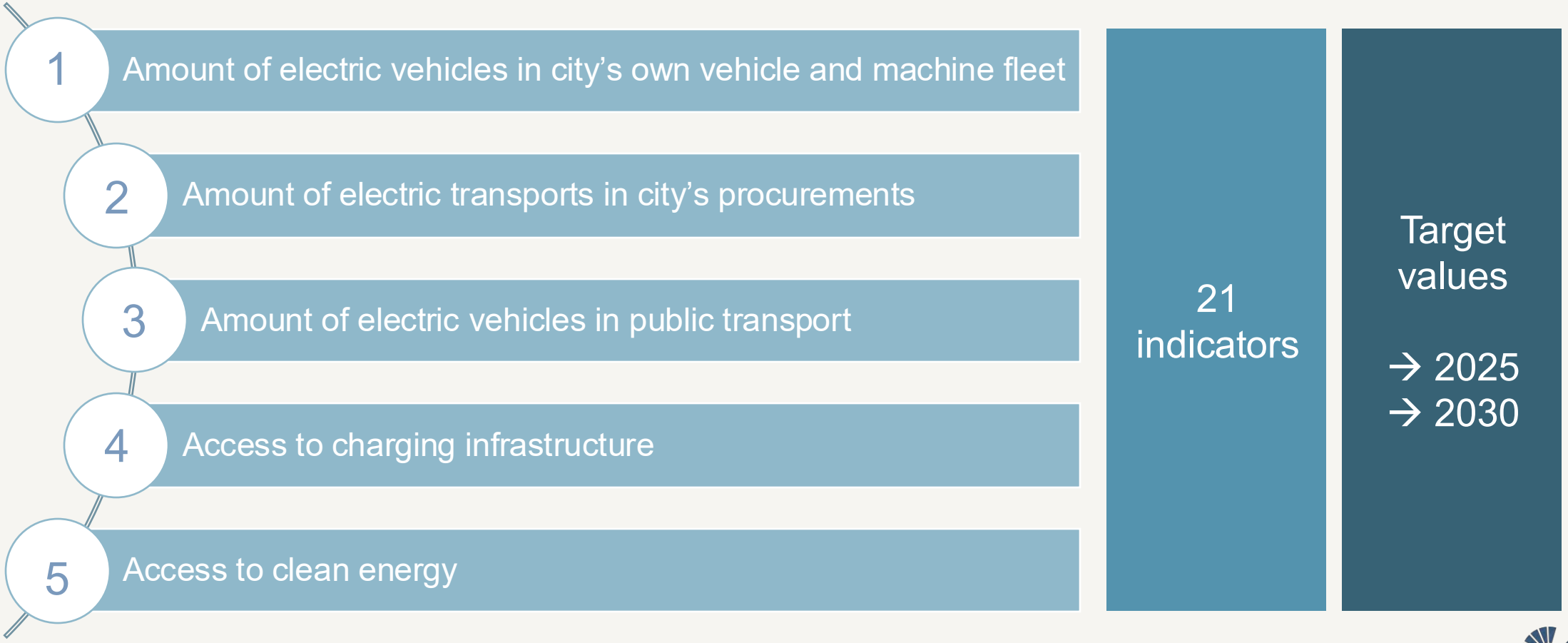
BUSINESS REGION
GÖTEBORG



Environmental and climate plan | Energy plan | Sustainable urban logistic plan | Business strategy program | Traffic strategy plan

BUSINESS REGION GÖTEBORG

Targets and indicators

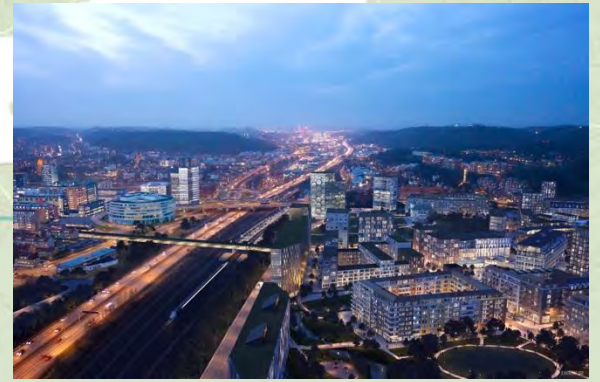


BUSINESS REGION GÖTEBORG

Examples

BUSINESS REGION
GÖTEBORG

Gothenburg Green City Zone



- EU’s 100 Climate neutral Cities
- ElectriCity
- Electrification Mission
- Platform for Sustainable Construction
- Transzero initiative
- Various testbeds

City development project ”Masthuggskajen”

Supply chain:

City of Gothenburg → PEAB → Swerock

- 1 electric truck introduced
- 5-year contract, truck leasing
- Additional arrangement after project start
- 25% increased truck costs
- Additional costs covered by City of Gothenburg
  (peanuts in relation to total project costs…)

BUSINESS REGION GÖTEBORG

Off-peak delivery
School restaurants

- Pilot project in November 2022
- Evening deliveries
- Increase utilization of electric vehicles

- Improved work environment
- Improved school yard safety

- Permanent from January 2023

BUSINESS REGION
GÖTEBORG

Electric Worksite
City of Gothenburg

- Parks, playgrounds, cycle paths, tree planting, …
- Framework agreement electric machines
- Basic requirements electric machines
- Vehicle rental/leasing for own use or in procurements
- Coordination between Stockholm, Malmö, Göteborg

BUSINESS REGION
GÖTEBORG

DREEMER
Shared infrastructure

- Public transport
- Refuse transports
- Heavy-duty goods transports

- Shared charging infrastructure
- Digital system architecture
- Energy and power needs
- Cost and environmental effects
- System demonstrator preparation

BUSINESS REGION
GÖTEBORG

Go:LEIF
Electric leisure boats and charging infrastructure

- Sweden and Norway
- 1 million leisure boats
- March 2023 – March 2025
- Charging infrastructure West Coast: Gothenburg/Sweden to Agder/Norway

- Business models
- Competence development
- Charging map
- Consumer information

BUSINESS REGION GÖTEBORG

Upcoming work

BUSINESS REGION
GÖTEBORG

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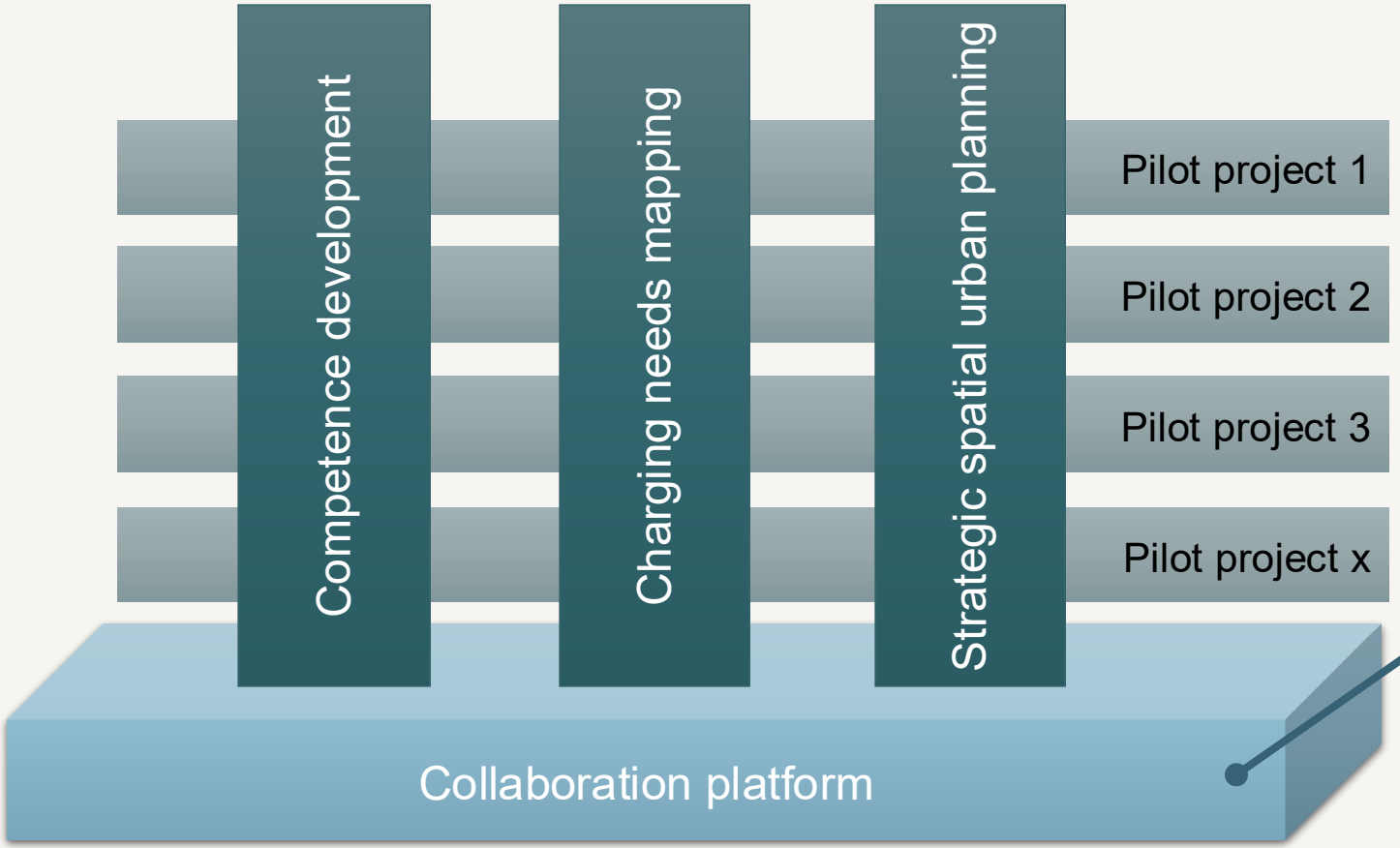
Pre-study: Scaling up electric transports



Perspectives and topics

- Business models
- Policy & Regulation
- Competence & Communication
- Roles & Responsibilities
- Procurement & Requirements
- Power grid & system
- Behavior, Compromises, coordination

”Handshakes”

BUSINESS REGION GÖTEBORG

EVS 38

Gothenburg, Sweden, 2025

THE 38TH INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION

15 - 18 JUNE

BUSINESS REGION GÖTEBORG

Thank you!

ANNE PIEGSA

PROCESS MANAGER

BUSINESS REGION GÖTEBORG

Breakout rooms

Share experiences, insights that were interesting and why?

Coffee break – 10 min

Start again 14.35

Regional initiatives

Tim Frikkee, LOLA

Heavy Duty Charging in the Netherlands

Interreg North Sea

Co-funded by the European Union

SELECT

LOLA

BOOST AND REALIZE A PUBLICLY ACCESSIBLE CHARGING NETWORK FOR logistics IN THE NETHERLANDS

Initiative of

Ministerie van Infrastructuur en Waterstaat

Together with:

ENEXIS NETBEHEER
coteq
STEDIN
RENDO
Elaadnl
Liander
westland infra netbeheer

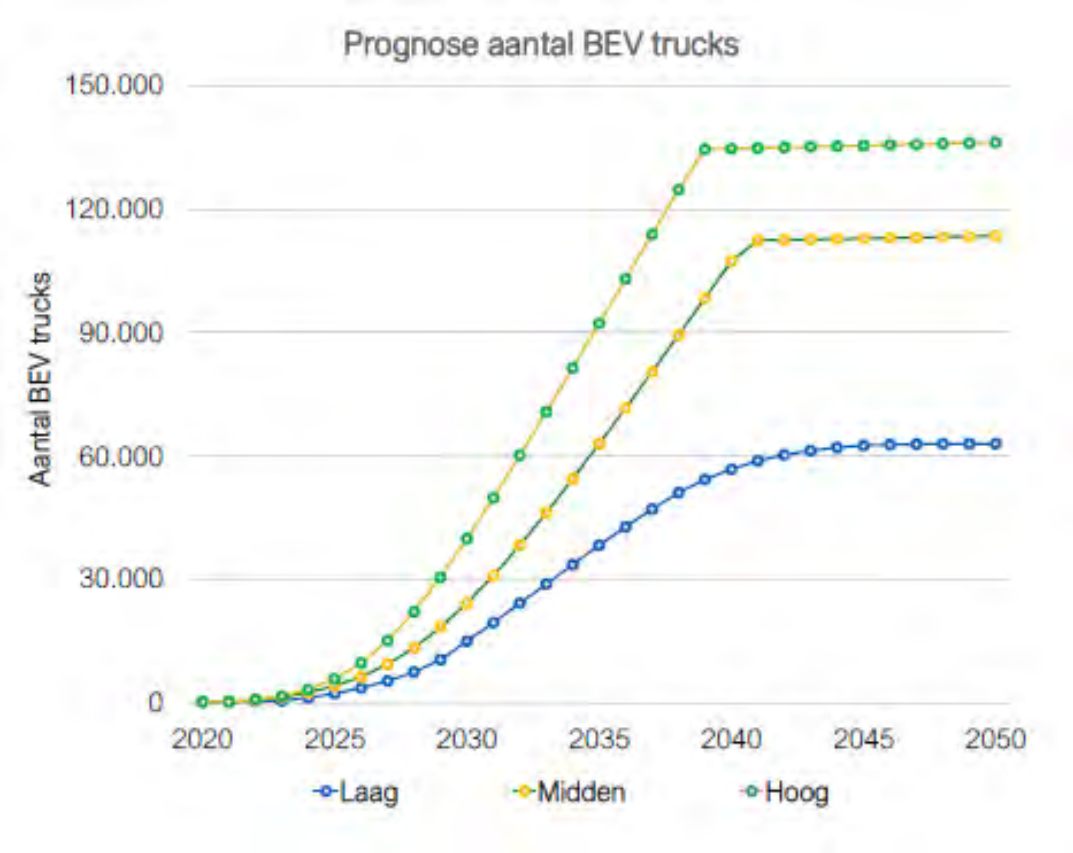
NAL Nationale Agenda Laadinfrastructuur

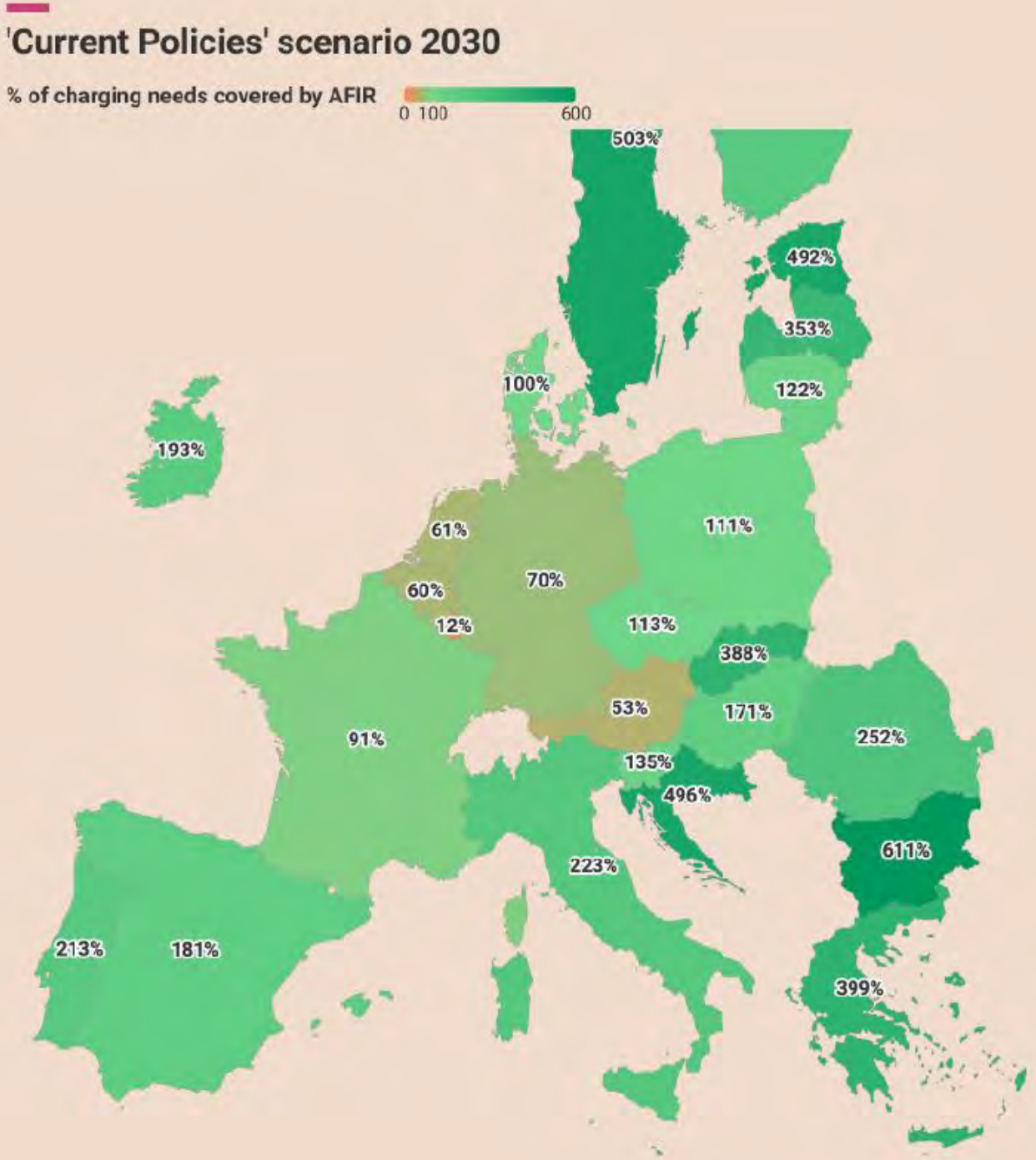
LOLA LOGISTIEK LADEN

1. background

LOLA
LOGISTIEK LADEN

Background


Prognose aantal BEV trucks
Aantal BEV trucks
150.000
120.000
90.000
60.000
30.000
0
2020
2025
2030
2035
2040
2045
2050
Laag
Midden
Hoog


'Current Policies' scenario 2030
% of charging needs covered by AFIR
0 100
600
503%
492%
353%
122%
100%
193%
61%
111%
70%
60%
12%
113%
388%
53%
171%
91%
252%
135%
496%
611%
223%
213%
181%
399%

A PUBLICLY ACCESSIBLE CHARGING NETWORK FOR logistics

AFIR Objectives

The European minimum for a logistic charging network.

Government Target – Definition of a Nationally Comprehensive Network

From AFIR → Expanded basic network → Comprehensive network

Meeting the forecasted public charging demand

Resolving the Chicken-and-Egg dilemma in the market.

Development from the market

Supporting market initiatives where necessary.

LOLA
LOGISTIEK LADEN

National agenda charging infrastructure

- ✓ Started in 2019
- ✓ Focus on a comprehensive charging network for:
  - ❑ Passenger cars
  - ❑ Elektric scooters
  - ❑ Vans
  - ❑ Trucks
  - ❑ Construction vehicles
- ✓ Cooperation between:
  - ❑ Ministry of Infrastructure and Water Management
  - ❑ Cooperation-regions
  - ❑ Netherlands Enterprise Agency (RVO)
  - ❑ Grid-operators
  - ❑ Market parties and lobbyist

NAL Nationale Agenda Laadinfrastructuur

2. Action plan LoLa

Action plan LoLa

LOGISTIEK LADEN

Logistiek Laden
=
Logistic Charging

- LoLa is realizing a **publicly accessible fast-charging** network on which the logistic sector can rely.
- So that this sector never runs out of power.
- Ensuring that a primary network is established. And that regional initiatives **(from governments and market parties)** merge with this national network.

LOGISTIEK LADEN

Action plan LoLa - WHY HOW WHAT

For electric transportation, expectations are high for the logistics sector, governments and the powergrid operators in the near future.

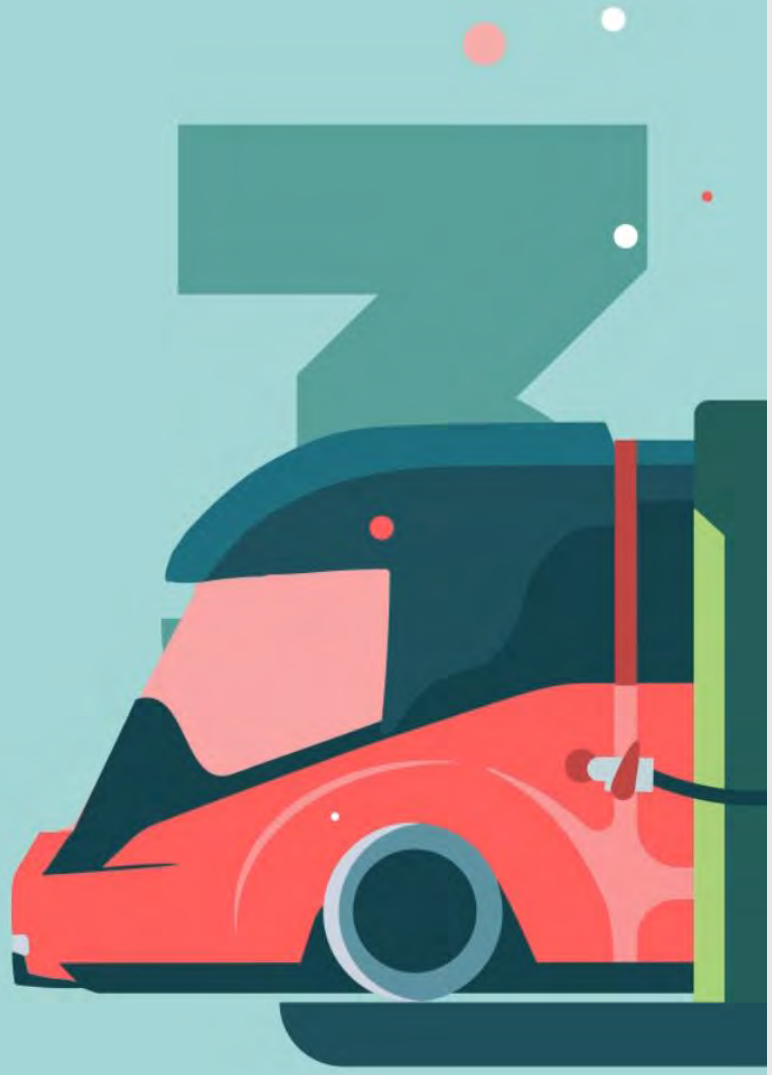
If electric driving becomes cheaper than driving on diesel, things will move quickly.

Early start to remove barriers for electric transport.

(chicken-egg dilemma, location requirements, and powergrid capacity).

We do this by realizing locations and filling in blind spots in collaboration with other initiatives.


Samen
duurzaam!
LAADSTATION ZWAAR
MATERIEEL HORNWEG
Port of Amsterdam
INFRAVERBINDERS
BURO
VISUAL



Lola Approach

- ✓ **Network design** in collaboration with NAL regions, municipalities, and grid operators.
- ✓ Collaborating with market parties to develop **guidelines** for technology and fast-charging locations.
- ✓ Working towards **tenders** for primary charging locations including financial support.
- ✓ Implementation and (integrated) **scaling up**. LoLa is a driving force behind realisation.

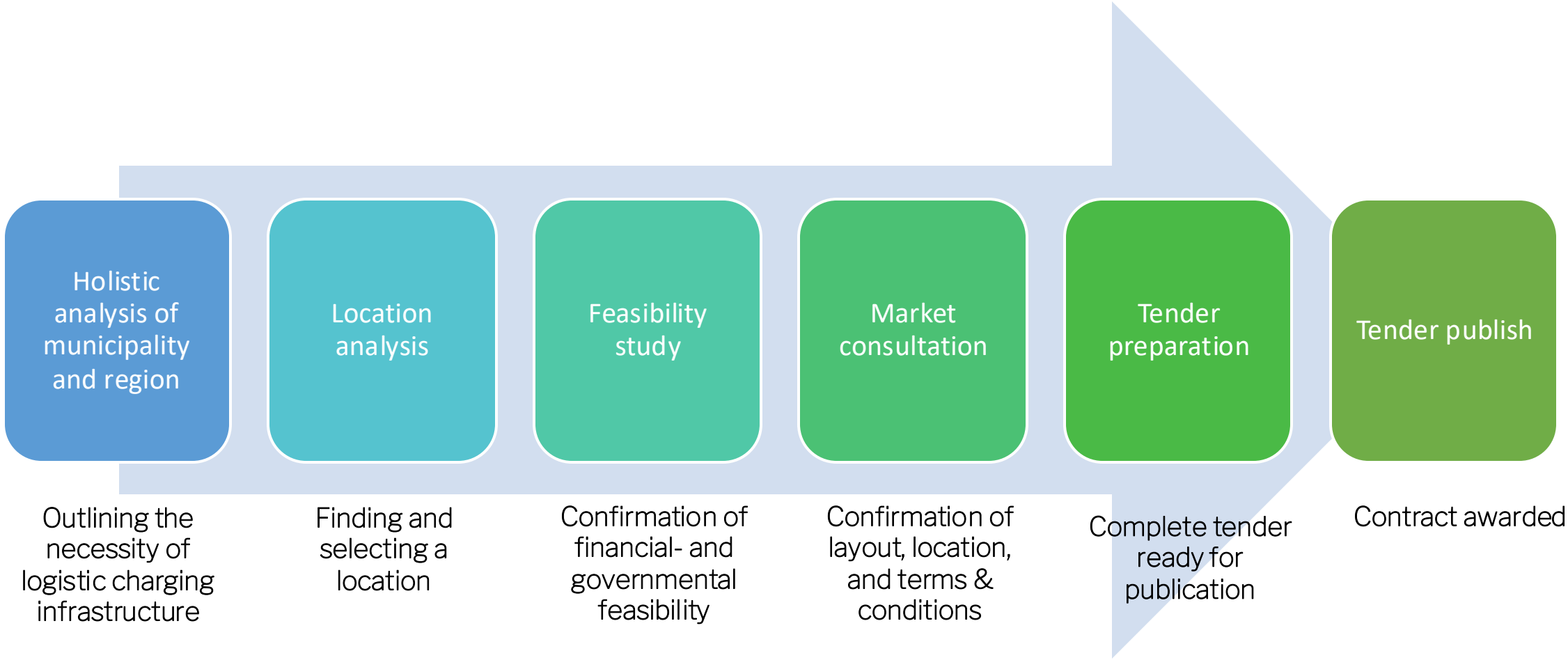
LOLA
LOGISTIEK LADEN

Regional cooperations with LoLa

Actively supporting across all provinces

- 25 municipalities
- 5 reserved locations
- 3 regional market consultations

LoLa proces


Holistic analysis of municipality and region
Location analysis
Feasibility study
Market consultation
Tender preparation
Tender publish
Outlining the necessity of logistic charging infrastructure
Finding and selecting a location
Confirmation of financial- and governmental feasibility
Confirmation of layout, location, and terms & conditions
Complete tender ready for publication
Contract awarded

Veerle De Meyer

City of Mechelen

Electrification of City Fleet

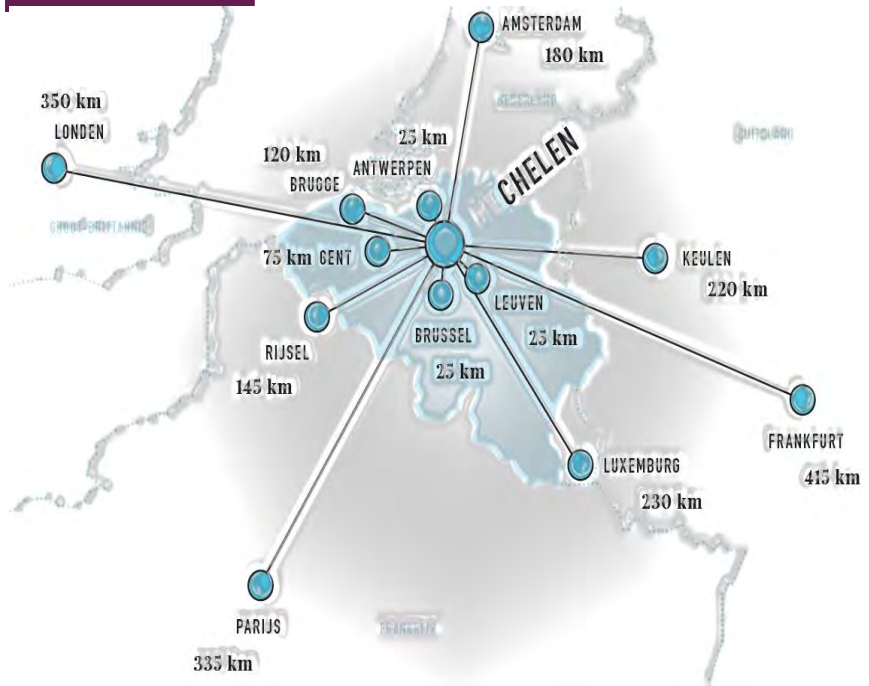
Interreg North Sea

Co-funded by the European Union

SELECT

VEHICLE FLEET MECHELEN

INTRODUCING THE CITY



INTRODUCING… MECHELEN

- Population of 87.000 citizens (5th city in Flanders)
- High climate ambitions: SECAP 'Klimaatactieplan Mechelen'
  - 87 ktCO_2 reduction by 2025
  - -40% CO_2 reduction by 2030
- Covenant of Mayors signatory since 2012
- Green Leaf Award winner 2020
- Member of the Board of Covenant of Mayors in 2021
- Selected for Intelligent Cities Challenge and EU City Facility
- Partner in multiple EU projects on climate mitigation and climate adaptation eg BE REEL!, ACCESS, SHIFFT,…

MAKING THE VEHICLE FLEET SUSTAINABLE: 4 V'S

- VERMIJD = avoid vehicle kilometers by consolidation, local and circular economy
- VERSCHUIF = shift kilometers to more adjusted transportation means, time frames, new distribution systems
- VERSCHOON = change kilometers to zero-emission vehicles
- VERBIND = connect all stakeholders

MAKING THE VEHICLE FLEET SUSTAINABLE

- Multifunctional use
- Shared mobility
- Max. electrification
- Pilot project with C&G
- Alternative transportation vehicles/means
- Charging infrastructure & PV

APPROACH

- Composition of planning with support:
  - Internal analysis
  - External analysis E&Y
  - Analysis by working group of team leaders
  - Validation by team leaders

- Parameters:
  - Vehicles for regular operations → replace one on one
  - Vehicles for team leaders → shared mobility

SHARED MOBILITY

Goals:
Innovate, reduce, make it more sustainable (budget vs quality)

- Use of available material as efficient and optimal as possible with cross-service resources

- Vehicles for specific assignments are appointed per team
  - These vehicles are designed as uniform as possible so that they can be used within shared mobility within one team/service.
  - Are to be shared within one team/service and don't need to be reserved up front.

- Vehicles within shared mobility
  - Vehicles that are being used for specific functions: project leader, foreman, supervisor, …. will be appointed within shared mobility that is cross-service
  - These vehiciles need to be reserved

Reservation system
- A vehicle can only be reserved per day/for one day
- Via a reservation system: https://meldpunt-mechelen.topdesk.net/
  - Reserve within minimal 30 minutes up front
  - Fast interventions can be fixed by telephone

COUPLED PROJECTS

- Charging infra at the site of the execution services
- Update/monitoring of the reservation system
- Stock management → lending service of materials
- Servicedesk → management of the fleet
- Training course

SUSTAINABLE FLEET

Alke weed killer


FULL ELECTRIC DRIVE


alké ELECTRIC VEHICLES
www.alke.com

SOME FIGURES

- Gluttons: from 11 on fuel to 9 electric operational machines
- 4 shared cars:
  - 1 KIA Soul
  - 3 Renault Kangoo
- 11 vans Peugeot E-partners
- 10 ALKE electric small trucks
- 1 ALKE electric weed killer

ALTERNATIVE TRANSPORTATION MEANS

Electric motorcycle

cargobikes

TOTAL

Rijlabels	ASIS
afvalzuiger	12
bakwagen	2
bakwagen (gieten)	1
containerwagen	1
Grote bestelwagen	34
grote bestelwagen met laadklep	1
Kleine bestelwagen	20
Multifunctionele wagen	10
personenwagen	9
veegwagen	1
veegwagen groot 6m³	4
veegwagen klein 2,5m³	8
Vrachtwagen	4
vrachtwagen laadklep	2
vrachtwagen openbak	1
vuilniswagen	4
motor elektrisch	1
Eindtotaal	**115**

Aantal van soort aankopen	TOBE	
Rijlabels	**ja**	**Eindtotaal**
afvalzuiger	9	9
containerwagen	7	7
elektrische wagen (alke)	5	5
grote bestelwagen	28	28
grote bestelwagen laadbak	1	1
grote bestelwagen met laadklep	1	1
kleine bestelwagen 4P	1	1
kleine bestelwagen 2P	17	17
motor elektrisch	1	1
veegmachine groot	1	1
veegwagen groot 6m²	2	2
veegwagen klein 2,5m³	11	11
vrachtwagen laadklep	1	1
vuilniswagen	2	2
Eindtotaal	**87**	**87**

Rijlabels	Overtal
afvalzuiger	3
bakwagen	2
Grote bestelwagen	2
Kleine bestelwagen	9
Multifunctionele wagen	6
personenwagen	6
veegwagen	-1
vuilniswagen	2
Eindtotaal	

-25%

OTHER SUSTAINABLE PURCHASES

- PV
- Elektrical tools
- Alternative fuels

PV TODAY AND POTENTIAL

Solar panels

STAD

Koninklijke Acadamie voor Beeldende Kunsten (ABK)

Begraafplaats Mechelen

Stedelijk Conservatorium Mechelen

Dorpshuis Hombeek

Waterduivel

Zeeridder

Predikherenkerk

Depot Rato

Parking Keerdok

AGB SAM

Gymnopolis

Sporthal De Plaon

Sporthal Den Appelaar

Sporthal De Arena

OCMW

Sociaal Huis

ZORGBEDRIJF

Kinderdagverblijf Dennenstraat

Kinderdagverblijf Klein Begijnhof

Moensstraat 14

Milsenstraat 29

WZC De Lisdodde

Kinderdagverblijf Zwaluwstraat

Huis Offendonk

WZC Bosbeekhof

LDC Den Abeel

WZC Roosendaelveld

Potential

Screening Mechelen/Fluvius → 35 potential roofs

→ green energy production of 1.000.000 kwh/year

+ enlargement current installations

+ churches

ELECTRICAL TOOLS

ALTERNATIVE FUELS: ALKYLAAT

Alkylaatbenzine vs. Normale benzine

	DECOMIX / DECOKRAFT	Gewone benzine/ benzinestation mengsels
Milieugevaar	Niet „milieubelastend" (GHS)	„Gevaarlijk voor het milieu" (GHS)
Bestanddelen	Hogere zuiverheid, o.a. benzeenvrij	Verscheidenheid van giftige stoffen
Uitlaatgassen	Minder vervuilende stoffen	Hoge uitlaat vervuiling
Houdbaarheid	5 jaar*)	Een paar weken

*) Bruikbaar tot 5 jaar na de productiedatum in gesloten originele verpakking en opgeslagen in een droge, donkere en koele berging.

Verhoogt het vermogen van de motor en verlengt de levensduur ervan. Door geoptimaliseerd startgedrag en zuivere verbranding is een uitstekende zuiverheid van de motor gegarandeerd. Bovendien worden de gevaren voor de gezondheid en belastingen voor mens en natuur geminimaliseerd.

CONCLUSION

- Climate goals & necessity to act is evident
- Leading by example
- Gradual investment taking TCO into account
- Follow the 4 V's principle (avoid, shift, change, connect)
- Strategy is more than electric vehicles. It's also charging infra, PV, alternative fuels

Contact

Thanks for your attention !!

Veerle De Meyer

Veerle.demeyer@mechelen.be

Workshop – group sessions

Feedback from groups

Thank You