

**City of Nijmegen and
Arnhem-Nijmegen region:
charging ahead with
zero-emission shipping on
the Rhine-Alpine corridor**

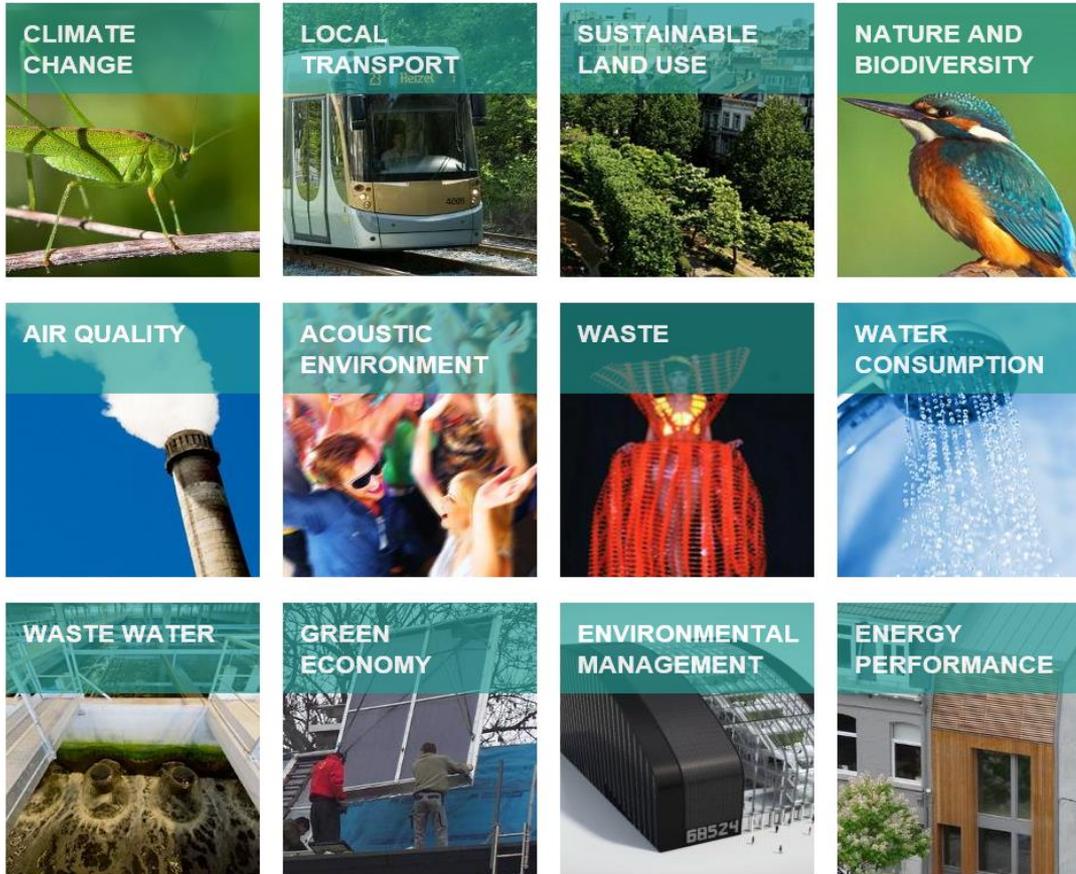
Online Polis conference Parallel session 2A
Geert Ritsema – Arnhem-Nijmegen City Region
Henk Nijhuis – City of Nijmegen
30 November 2020

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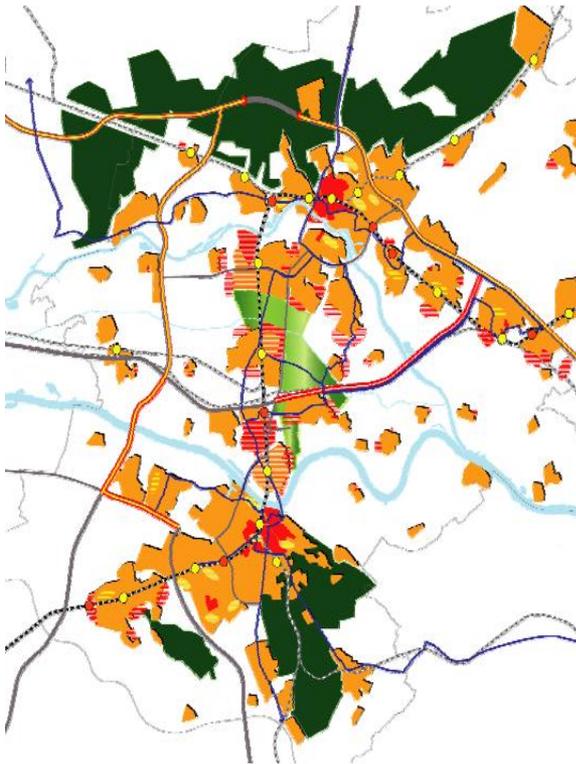


Nijmegen European Green Capital 2018

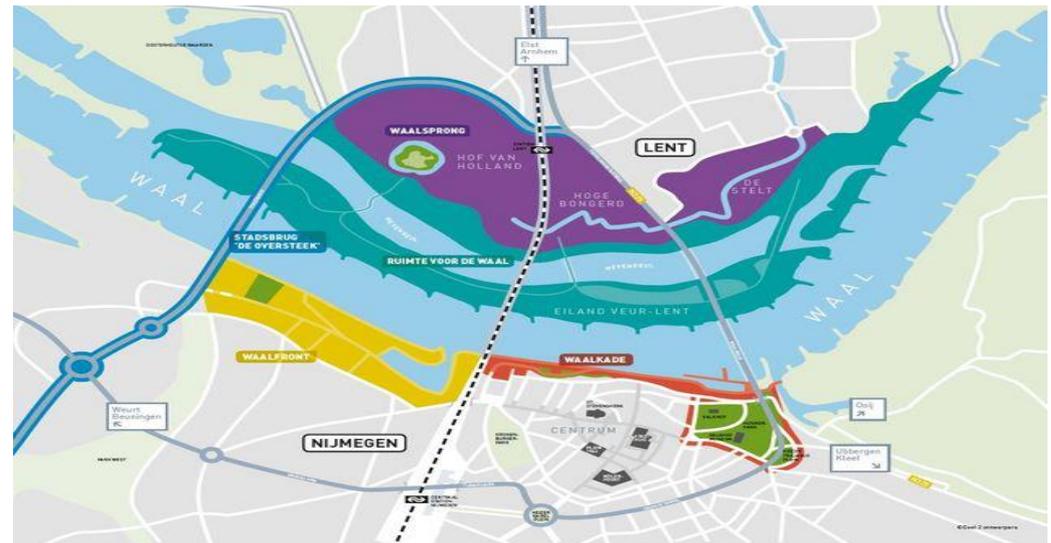


Our challenge: sustainable urbanization

- Growing cities, shrinking villages
- Housing, industry and recreation along the river
- Economic importance but also environmental pressures of inland shipping (and transport in general)
- App 100,000 vessels sail by each year



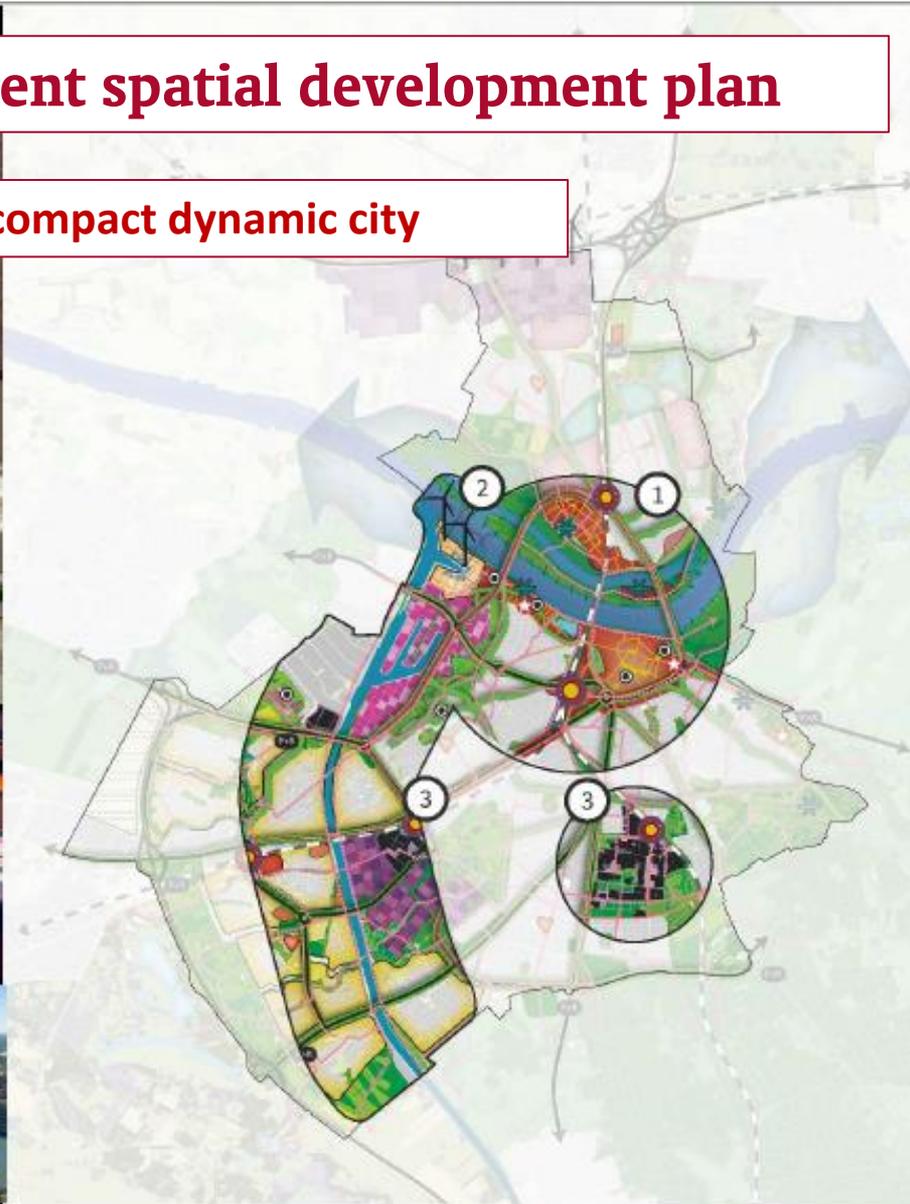
Source: City Region Arnhem Nijmegen



Source: City of Nijmegen

From our recent spatial development plan

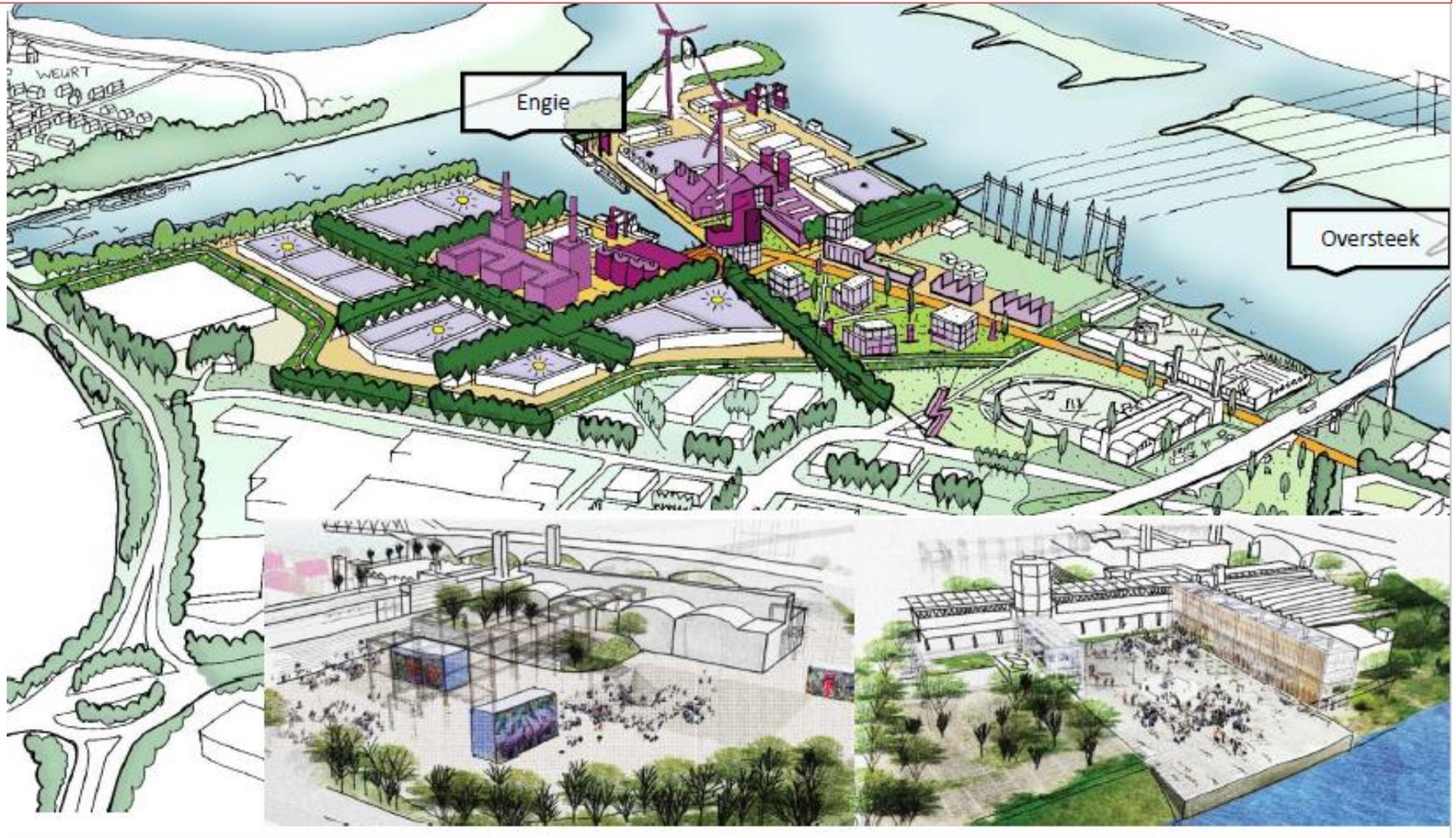
We choose for a compact dynamic city



Preservation of the surrounding landscape

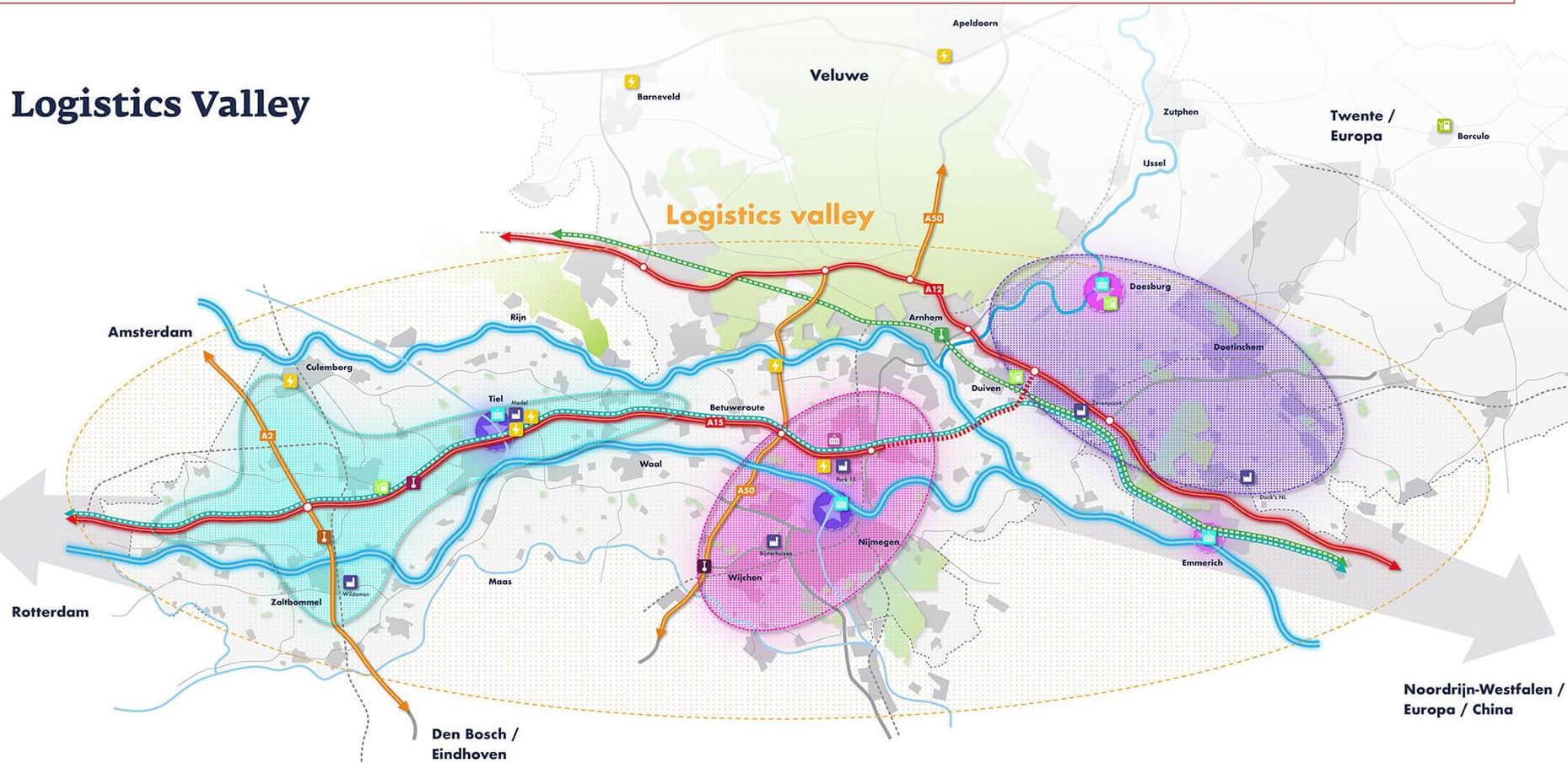
ENGIE site: former coal-fired power station

Energy transition, Smart mobility, Circular economy



European transport corridors attract logistics activities

Logistics Valley



Legenda

Netwerk

- Betuweroute
- ICE verbinding (Amsterdam - Arnhem - Frankfurt)
- A15 / A12 / A2 / A50
- Waal / Rijn
- Bedrijventerreinen
- Containerterminals
- Gerealiseerde LNG vulpunten

Logistieke samenwerkingscentra

- Logistics valley
- Logistiek expertise centrum regio Nijmegen
- Logistieke hotspot Rivierland
- Logistiek innovatiehuis Liemers-Achterhoek
- Logistieke knooppunten
- Knooppunten MIRT-goederencorridor Oost (Nijmegen, Tiel)

Geplande versterking netwerk

- MIRT aanpak knooppunt Bankhoef
- MIRT aanpak verbeteren doorstroming A2
- MIRT aanpak verbeteren doorstroming A15
- Aanpak spoor oostkant Arnhem
- Geplande Railterminal Gelderland
- Geplande clean energy hubs
- Doortrekking A15

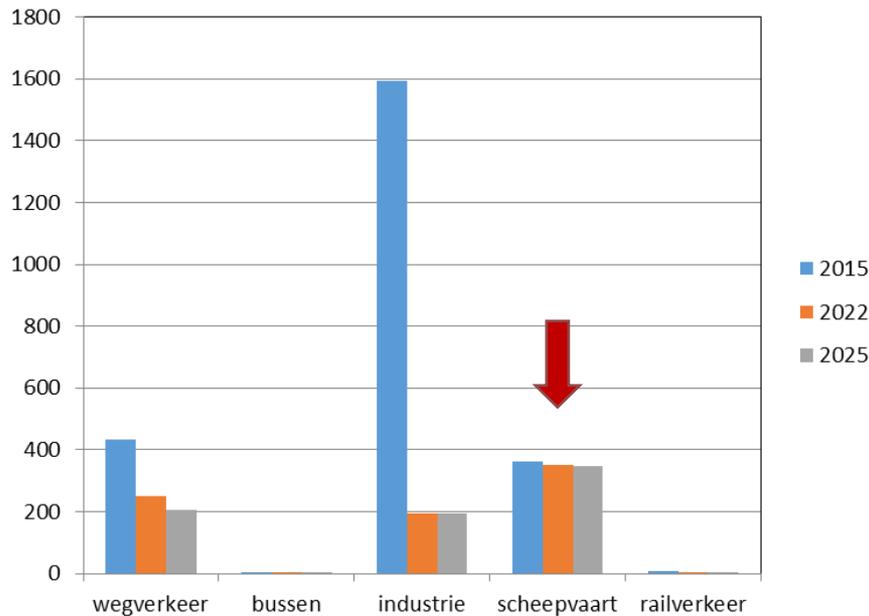
Doelen Gelderse corridor

- Meer betrouwbaar en robuust synchrone netwerk
- Voldoende ruimte voor logistieke bedrijven
- Verminderen ecologische footprint
- Meer personeel voor logistieke bedrijven
- Concurrentiepositie sterker maken door samenwerking
- (Inter-) nationale acquisitie en groei (agro)logistieke bedrijven

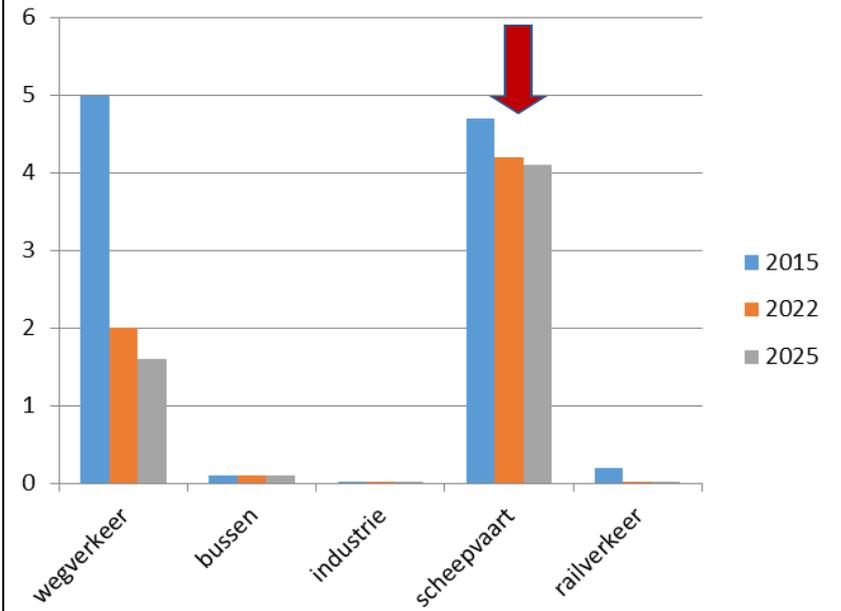
Sources of air pollution in Nijmegen

Inland navigation: app. 100,000 ships pass by every year

Emissies NOx in Nijmegen in ton/jaar



Emissies EC in Nijmegen in ton/jaar



Household woodfiring causes ca. 10% PM10 and soot (EC)

Action programme air quality 2020-2030

Towards healthier air quality

Aim in line with Clean Air Agreement:

- Meet WHO advisory values in 2030
- Achieve 50% health gain in 2030

29 existing and new measures including:

- Zero emission zone for city logistics in 2025
- Subsidies for clean vehicles for SMEs
- Admission to ports restricted for most polluting ships in 2025 (together with other cities incl. Rotterdam)
- Zero emission projects in inland navigation



Local initiatives cleaner inland shipping

Having an impact on international IWT sector is difficult for a municipality. What we do nevertheless:

- Onshore power supply (OPS) for cruise and cargo ships on public quays; ban on generator use where OPS is available
- Environmental differentiation of port dues (based on Green Award)
- Licensed (bio-)LNG bunkering location for ships
- Participation in CLINSH (LIFE+ 2016-2021), Green Deal shipping (NL)
- Host of international conference Ports & the City 2018 during Green Capital year
- Resulting in Declaration of Nijmegen
- Cooperation with local companies for zero emission pilots
- Participation in pilot clean inland shipping (Clean Air Agreement)
- Energy Transshipment Hub Nijmegen



Declaration of Nijmegen (2018) Green Deal shipping and ports

- The Declaration's 19 subscribers (public & private) strive for common development of pilot projects for zero emission inland navigation - battery electric and hydrogen
- Aim and activities integrated in national Green Deal shipping and ports

CONFERENCE PORTS AND THE CITY
smart & healthy
12 | 13 april 2018 Nijmegen | the Netherlands

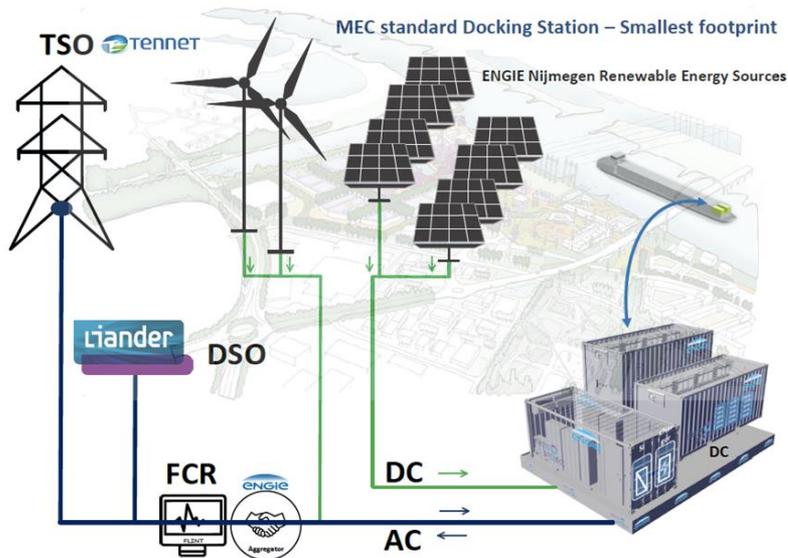
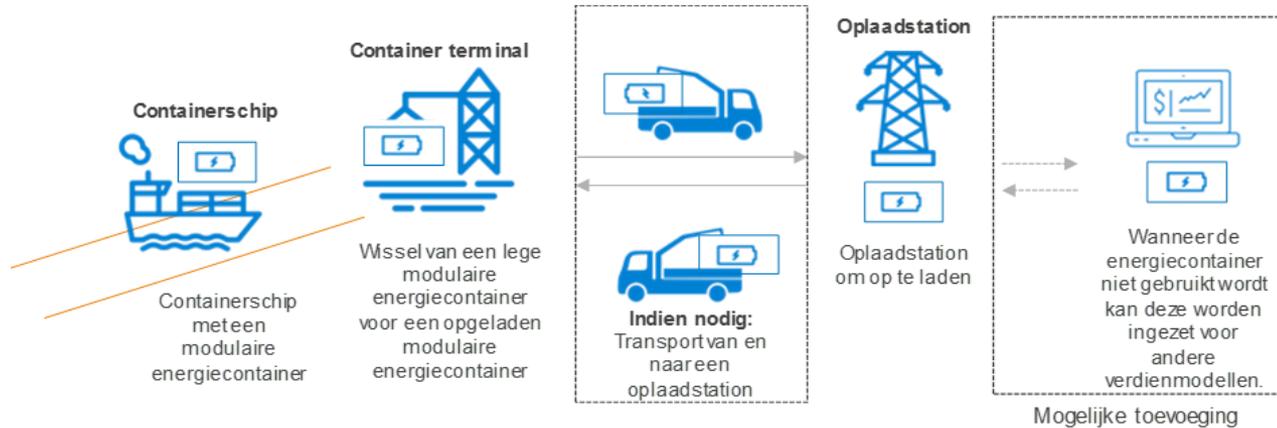
EU Green Capital Declaration

on smart and healthy inland ports and regions and inland shipping sector

BCTN Joop Mijland Directeur Signature:	Danser Group Ben Maelissa Directeur Signature:	EICB Khalid Tachi Directeur Signature:	Gemeente Nijmegen Hubert Bruls Burgemeester Signature:	Gemeente Rotterdam Adriaan Visser Wethouder Signature:	Goodfuels Dirk Kronemeijer CEO Signature:	Nijmegen 12 April 2018
Heineken Harrie Werkman Manager Logistiek Signature:	H2Fuel Jan-Willem Kelder Voorzitter RvA Signature:	Ministerie van Infrastructuur en Waterstaat Cora van Nieuwenhuizen Minister Signature:	MSC Natho Visser Directeur Signature:	MSC Theo van Ravenssteyn Managing Director NL Signature:	Nedcargo Diederik Antvelink Directeur Signature:	
NNB Eric Jansse de Jonge Voorzitter Signature:	North Sea Port John Hollander Havenmeester Signature:	Port-Liner Ton van Maegen Directeur Signature:	Provincie Gelderland Conny Bieze Gedeputeerde Signature:	Provincie Zuid-Holland Rik Janssen Gedeputeerde Signature:	Provincie Utrecht Marlétte Pennartz Gedeputeerde Signature:	Shell Shipping EUAF Region Hanne Henris Manager Maritime Operations Specialists Team Signature:

smart & healthy

ET-Hub project Nijmegen



Partners:

- Engie (energy company)
- BCTN (container terminal operator)
- Tharsis (ship owner)
- eL-Tec (electrotechnical expert)
- City of Nijmegen

Main objective:

- Testing and small-scale demonstration of a model for charging infrastructure and connectors for zero-emission inland navigation using exchangeable battery containers.
- Next phase: also provide hydrogen containers

Hydrogen for Rhine-Alpine corridor (RH2INE)

- Development of zero emission pilots for trucking/shipping along the Rhine-Alpine corridor and directly to UK (sea-river shipping)
- Hydrogen for the Rhine-Alpine corridor is the ambition of RH2INE
 - Rhine Hydrogen Integration Network of Excellence
 - South-Holland, Gelderland, Dept. I&W, German State of NRW and market parties
- 31/01/2020 Lol with the goal to have at least 10 hydrogen fueled ships sailing on the Rhine/Waal in 2024
- City of Nijmegen will join RH2INE to link the Energy Transshipment Hub
- City will also mobilise local skippers, forwarders and carriers to switch to hydrogen vehicles and ships

EU Call Green Ports

- First ideas for extending ET-Hub with H2-containers and H2-production
- Master plan for future green port
 - Integrated plan for the complete port and its activities
- Consortium being forged with 3 other ports and other partners
- Deadline call 26 January 2021