Sustainable Mobility

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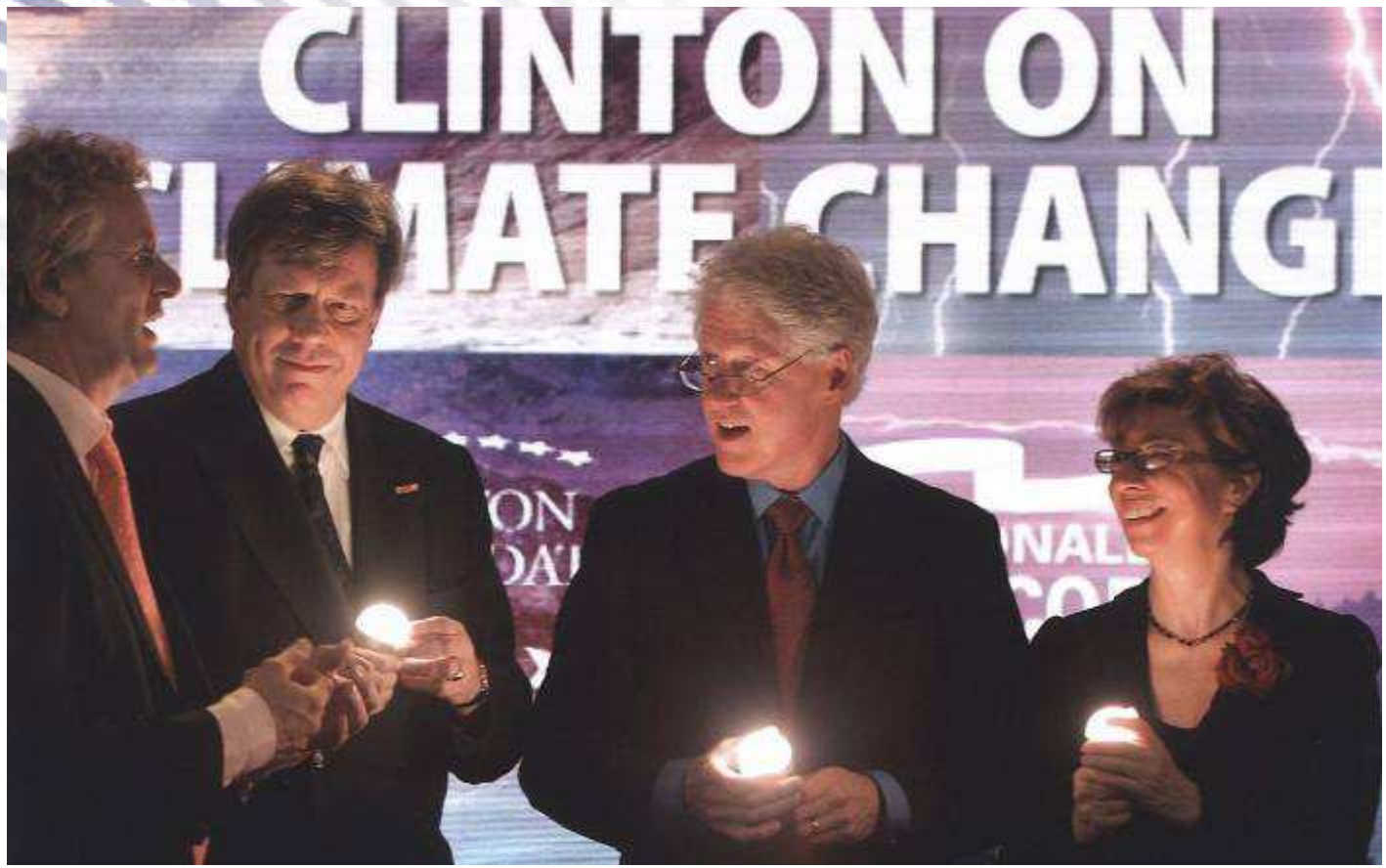
Urban traffic planner

Gemeente Rotterdam

dS+V

Trigger: 50% reductie CO_2 in 2025



Need for action

Independency fossil fuels

Healty environment

Reducing greenhouse gases

Sustainable energy for transport

accessibility

Rotterdam/Netherlands: energy hub for Europe

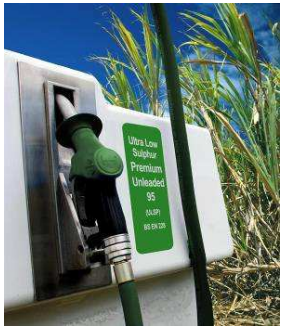
Sustainable mobility Rotterdam

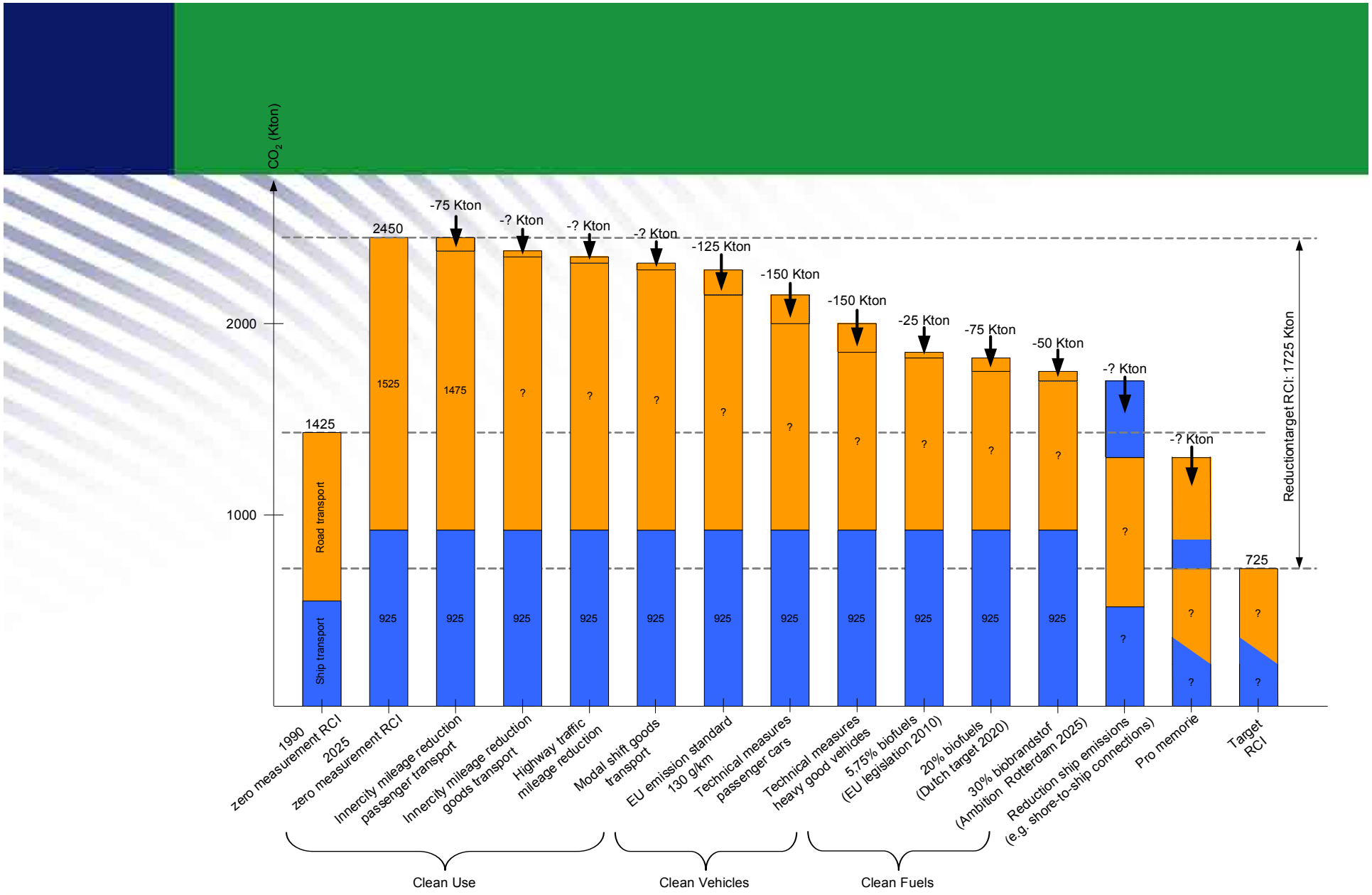
Balance between:

- **Economical development and accessibility of city and harbour**
- **Attractive and healthy city with minimal negative effects of mobility**

Approach

- Clean Use: optimalisation in use of cars
- Clean Vehicles: optimal use fossil fuels, electric, hydrogen
- Clean Fuels: biofuels, CNG, LPG

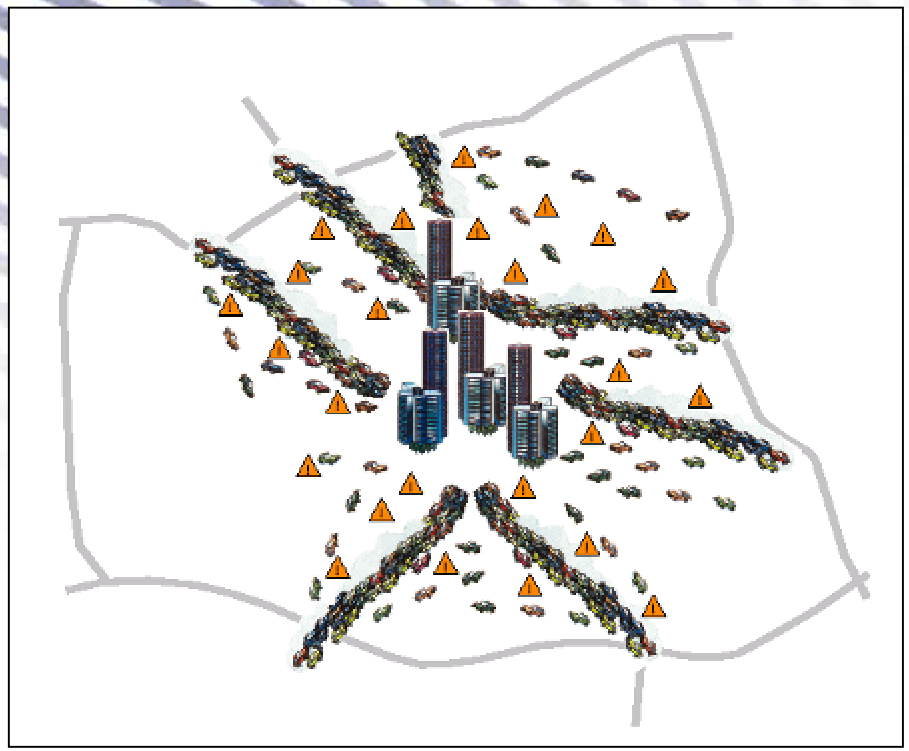


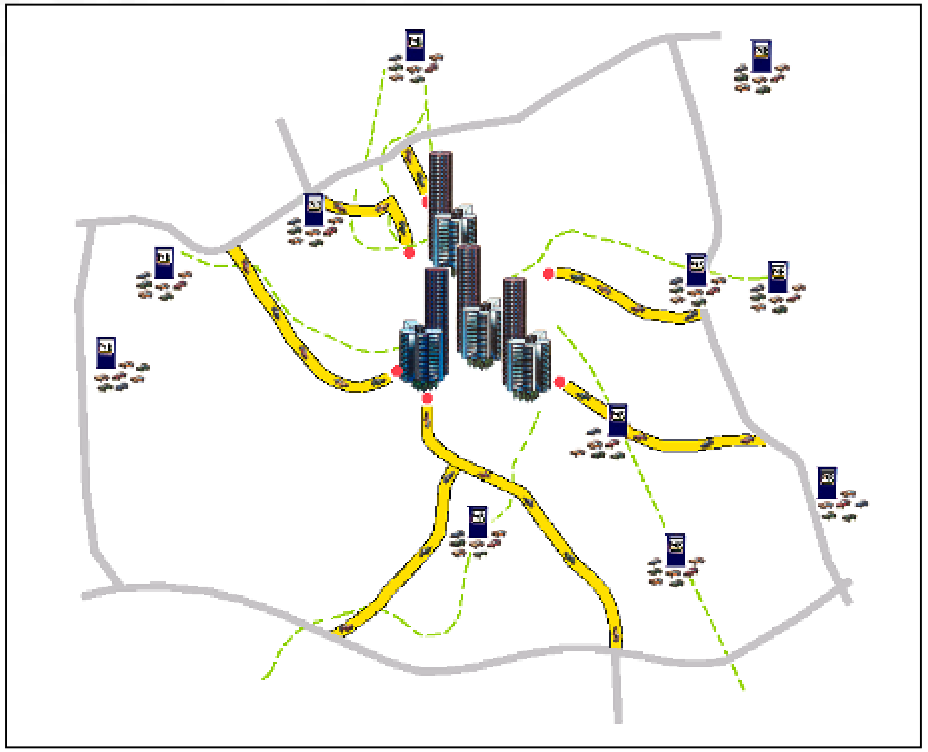

CO2 (Kton)
2000
1000
1425
2450
-75 Kton
-? Kton
-? Kton
-? Kton
-125 Kton
-150 Kton
-150 Kton
-25 Kton
-75 Kton
-50 Kton
-? Kton
-? Kton
725
Reductiontarget RCI: 1725 Kton
Road transport
Ship transport
1525
1475
925
1990 zero measurement RCI
2025 zero measurement RCI
Innercity mileage reduction passenger transport
Innercity mileage reduction goods transport
Highway traffic mileage reduction
Modal shift goods transport
EU emission standard 130 g/km
Technical measures passenger cars
Technical measures heavy good vehicles
5,75% biofuels (EU legislation 2010)
20% biofuels (Dutch target 2020)
30% biobrandstof (Ambition Rotterdam 2025)
Reduction ship emissions (e.g. shore-to-ship connections)
Pro memorie
Target RCI
Clean Use
Clean Vehicles
Clean Fuels

Clean use: general approach

1. Demand – Mobility management
2. Modal-Shift
3. Vehicle
4. (dynamic) traffic management
5. behaviour

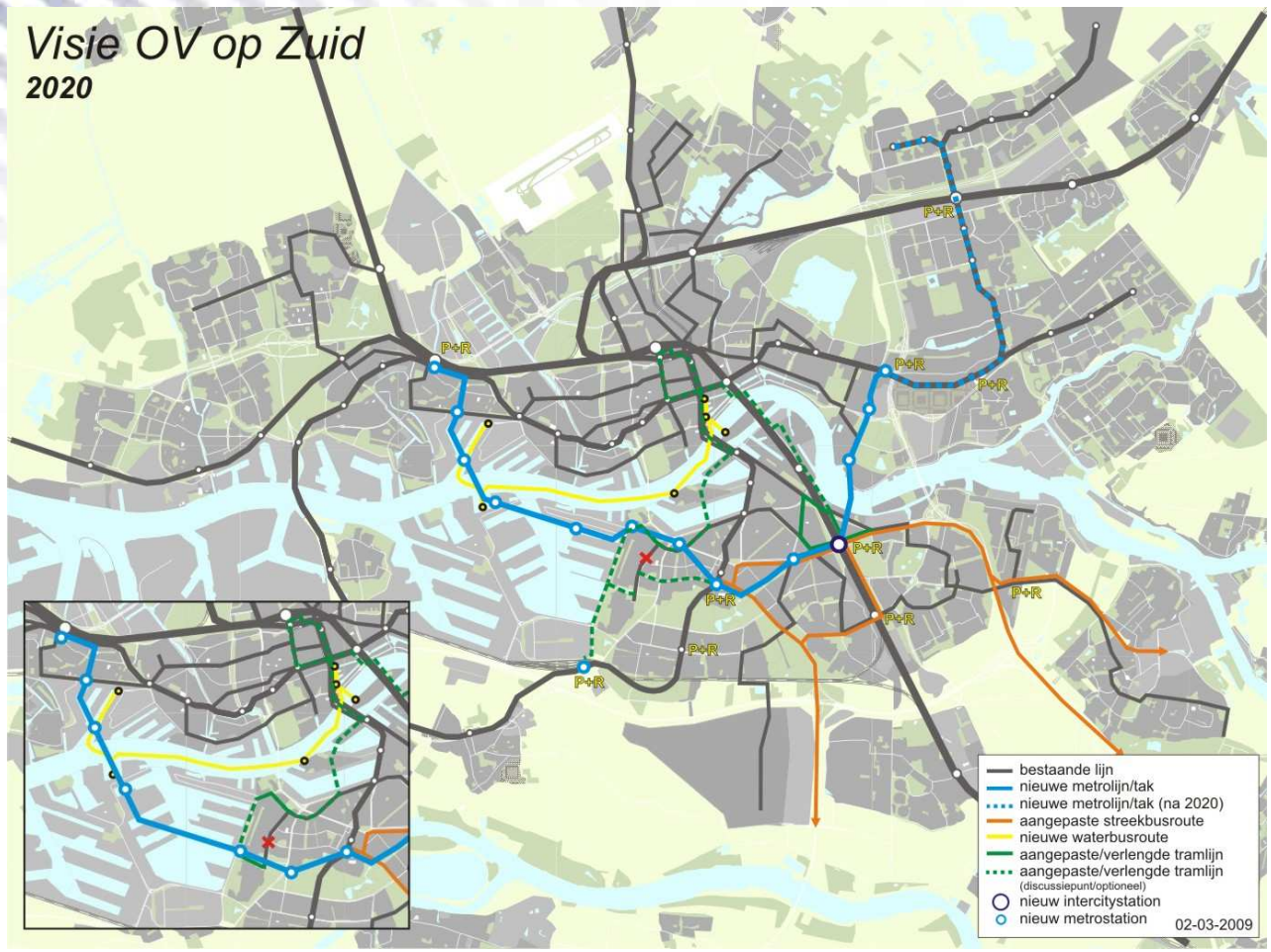
D E S I G N





- 18.000 P+R
- Parking Fees
- concentrating motorized traffic on major roads

Public Transport South Rotterdam



Public Transport: Parkshuttle

- Guided electric driverless vehicle

Public Transport - water

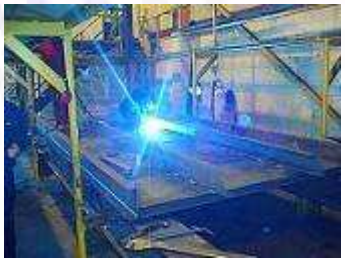
Connecting individual and collective transport

Train & Bike

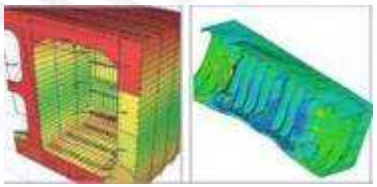
Electric scooter
Hop on hop off system with driver
Small price (€2,50)
From december 2009

Now: LPG Tuk Tuk
October 2009: electric Tuk Tuk

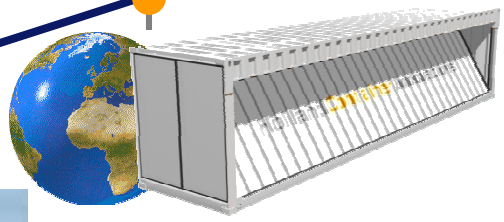
Foldable container



Building pilot fleet
Q4, 2009- Q1, 2010



Design Modification
(2009)



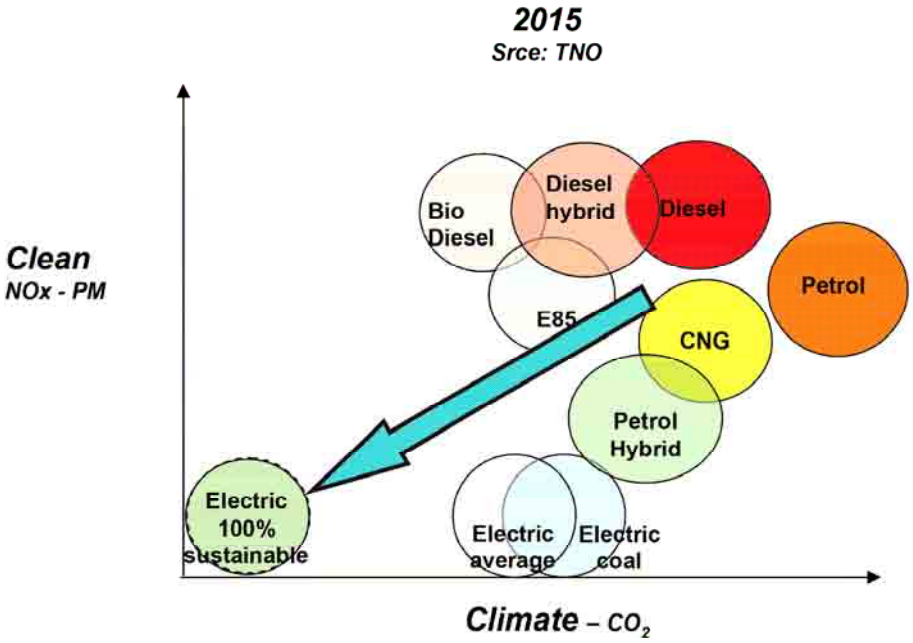
Summer 2010
Global Introduction

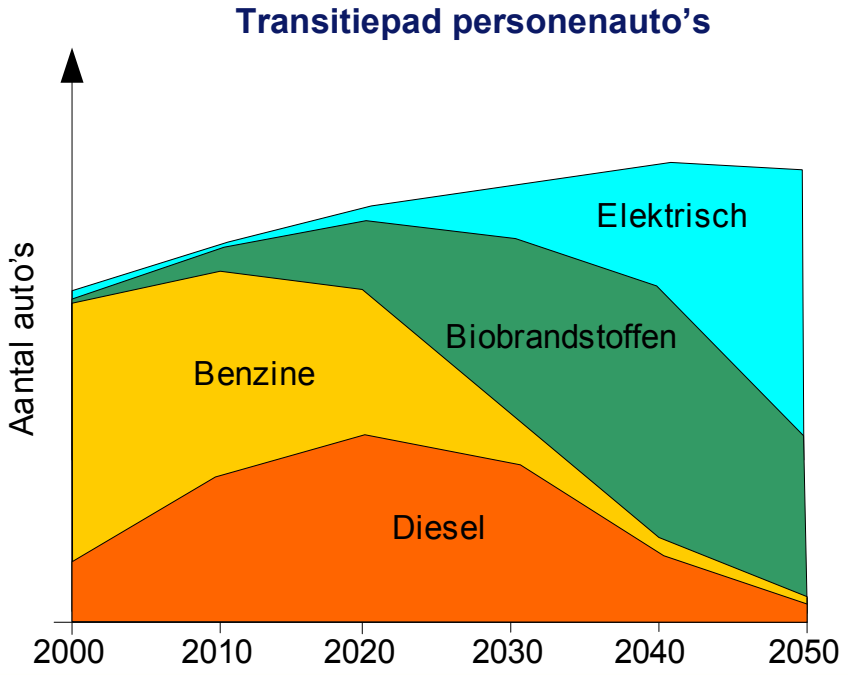
Beginning 2010
tart of Operational Test
20 containers

Certification
(Q4, 2009)

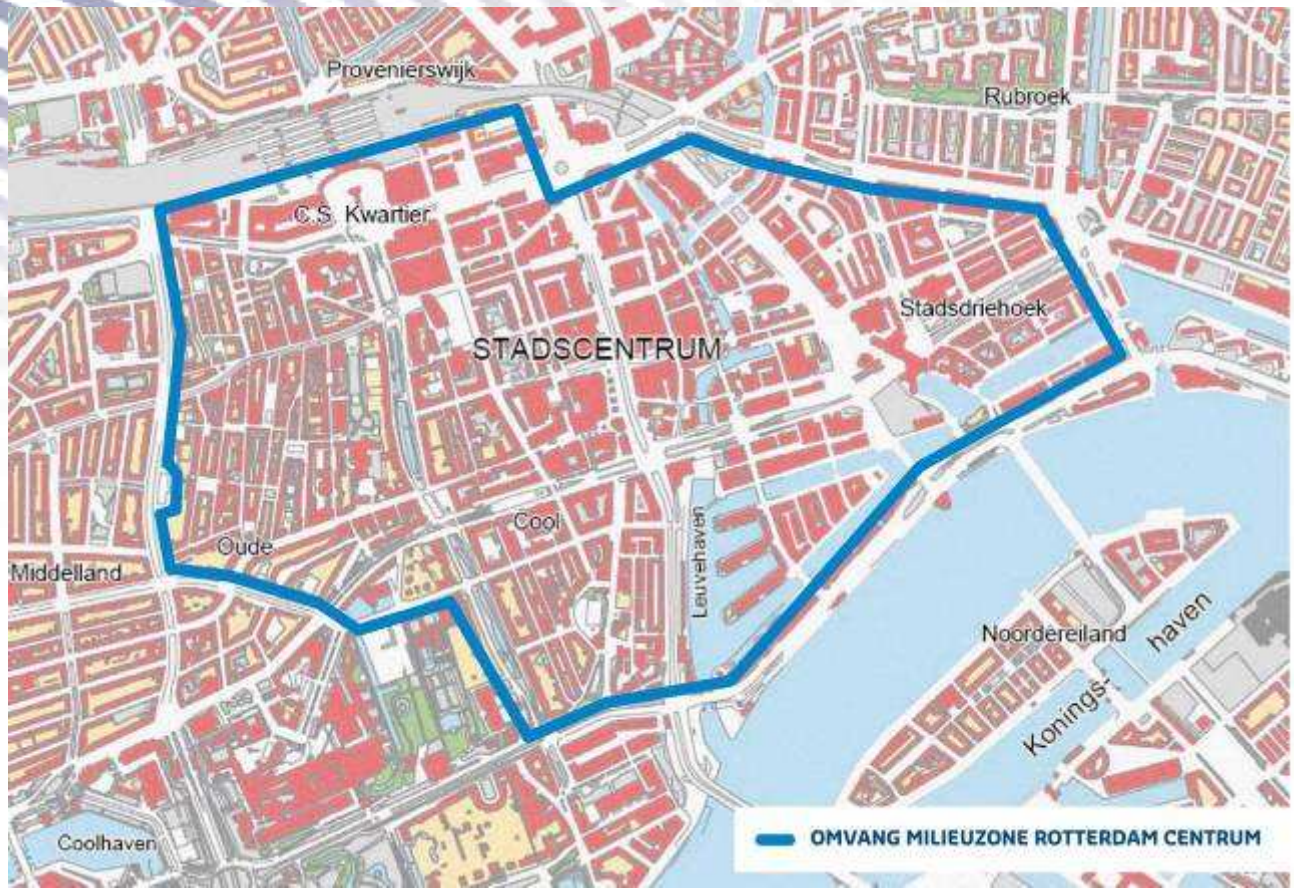
March 2009
1st Full Size Prototype

Clean Vehicles / Fuels





Low Emission Zone



Gemeente Rotterdam
dS+V

Impuls for electric mobility

Ambition

- 1.000 Electric cars in 2014
- 200.000 Electric cars in 2025

Measures - 2014

- 1.000 loading points cars
- 1.000 parking permits
- Loading point in all bike stations
- Loading points in all parking garage
- Stimulating innovation

Impuls for electric mobility

de BEZORGBEER
...daar blijf je voor thuis!

ROTTERDAM

Lancering Elektrische Tuk

Mogelijke vorm oplaadpunten

Gemeente Rotterdam

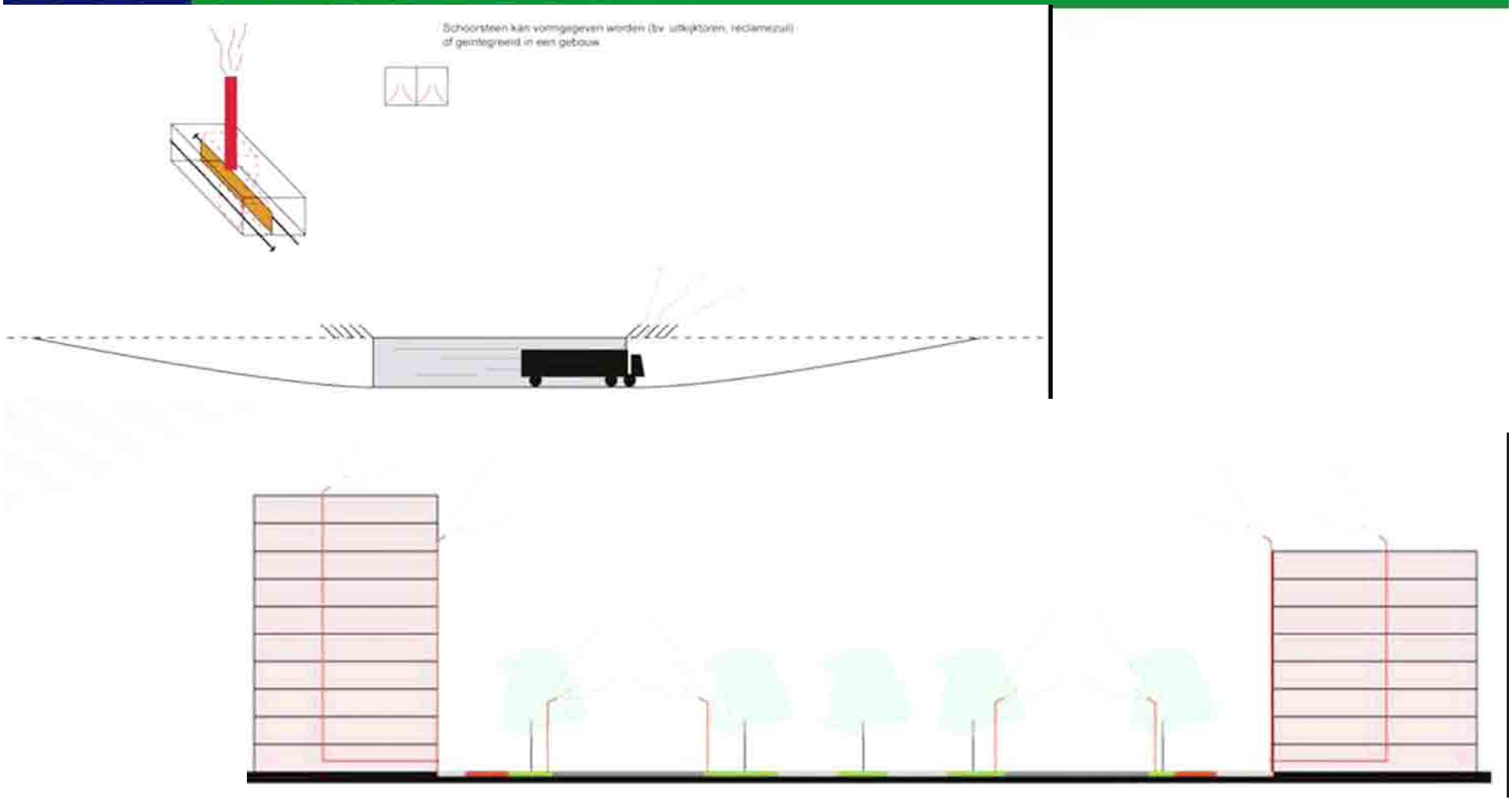
dS+V

Infrastructure

- Local subsidy arrangement bio-fuel pumps (E85/biogas)
- Realising low blend bio-fuel pumps
  - First 5%, later ≥ 10% (depends on EU)
  - B20/30 pilot for (international) trucks
- Realising electric recharging points

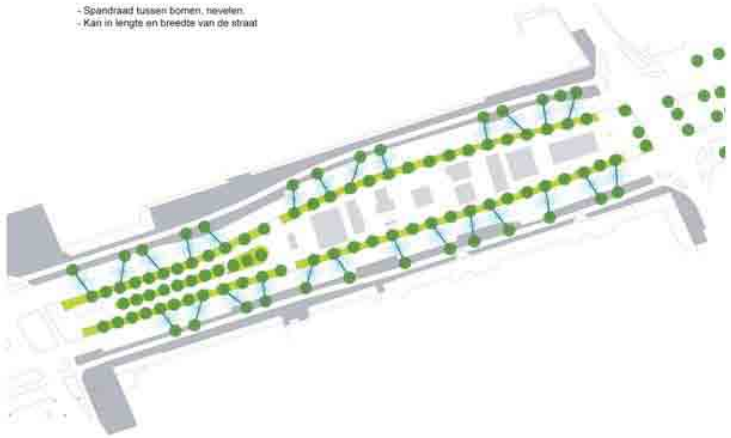
shore-to-ship connections

Design (1)

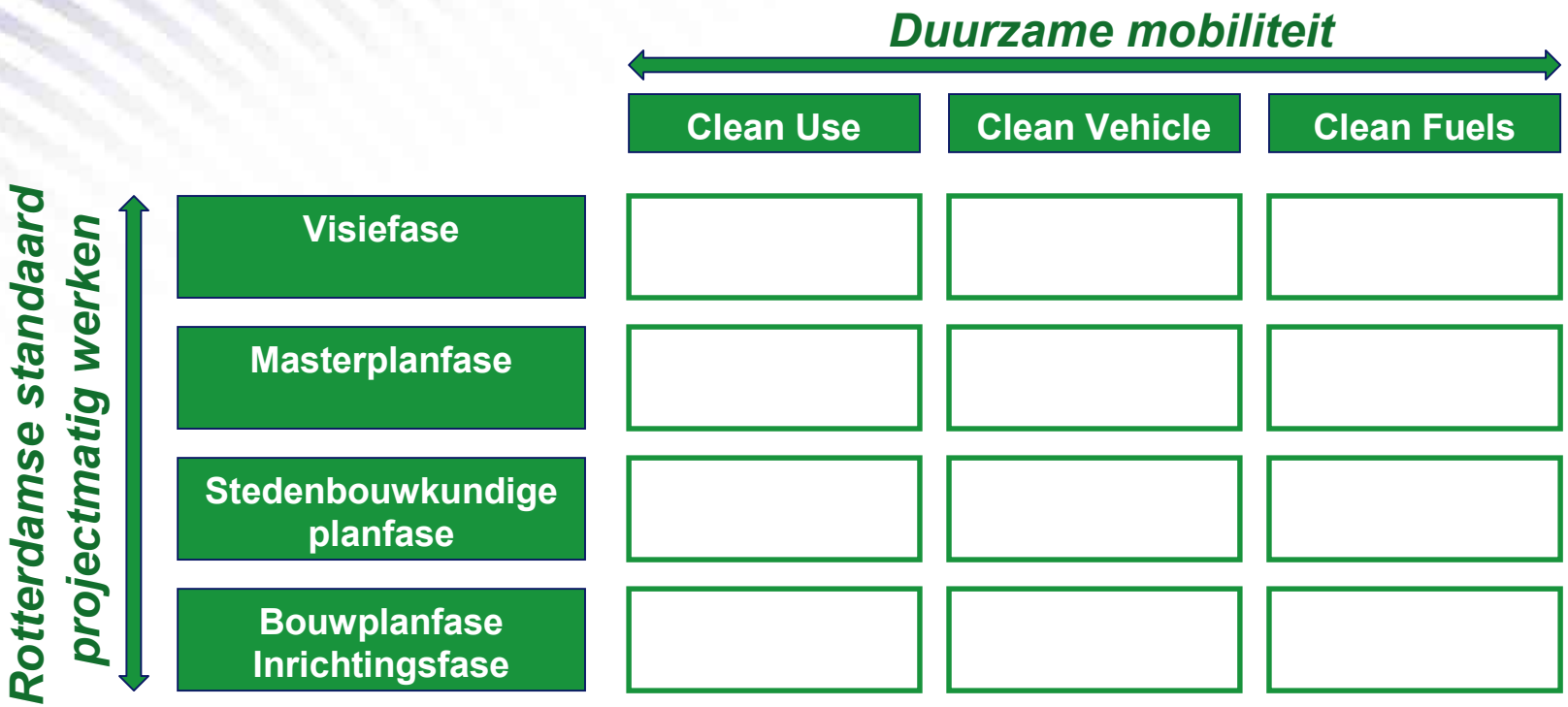

Schoorsteen kan vormgegeven worden (bv. uitkijktoren, reclamezuil)
of geïntegreerd in een gebouw

Design (2)

- Spandraad tussen bomen, nevelen.
- Kan in lengte en breedte van de straat



Next step: implementing sustainable in work process



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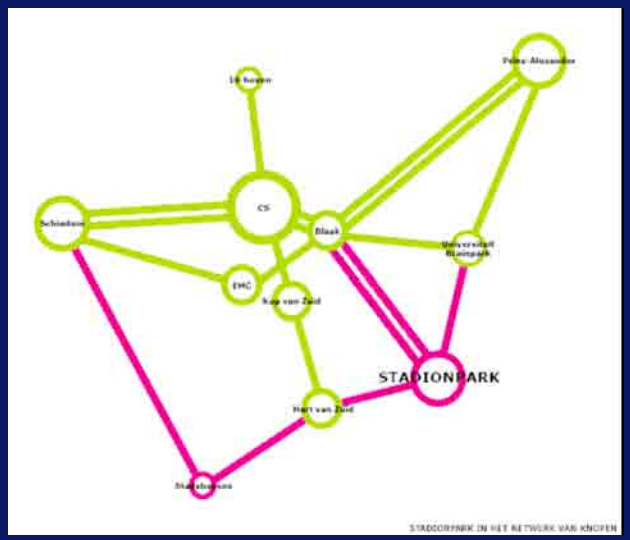

Duurzame mobiliteit

Clean Use	Clean Vehicle	Clean Fuels

Rotterdamse projectmat

Stedenbouwk planfas

Bouwplanf Inrichtingsf

STADS-VISIE ROTTER-DAM

Next step: implementing sustainable in work process

Duurza

Clean Use

Cle

Rotterdamse standaard projectmatig werken

Visiefase

Masterplanfase

Stedenbouw planfa

Bouwpla Inrichting

Remarks

1. Electric vehicles and traffic safety
2. Zero emission vs spatial planning
3. Climate adaptation

Colofon

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