



Gemeente Rotterdam

Rotterdam's Fuel Vision

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Starting-point and goal



- The City of Rotterdam aims to be a green, healthy and resilient (future-proof) city. Cleaner fuels are an essential part of this goal.
- The City has expanded on the national Fuel Vision.
- Rotterdam's Fuel Vision is a first step towards a healthy and livable Rotterdam.
- Execution of a practical approach in Rotterdam requires close collaboration with stakeholders.
- This collaboration's first product will be a practical working plan.

Concept approach: context



Rotterdam is a key figure in transportation and fuels

becoming more sustainable:

- Hub multiple means of transportation
- Economy and jobs closely related to (fossil) fuels
- Livability / air quality insufficient at present:
 - Health risks population
 - EU standards

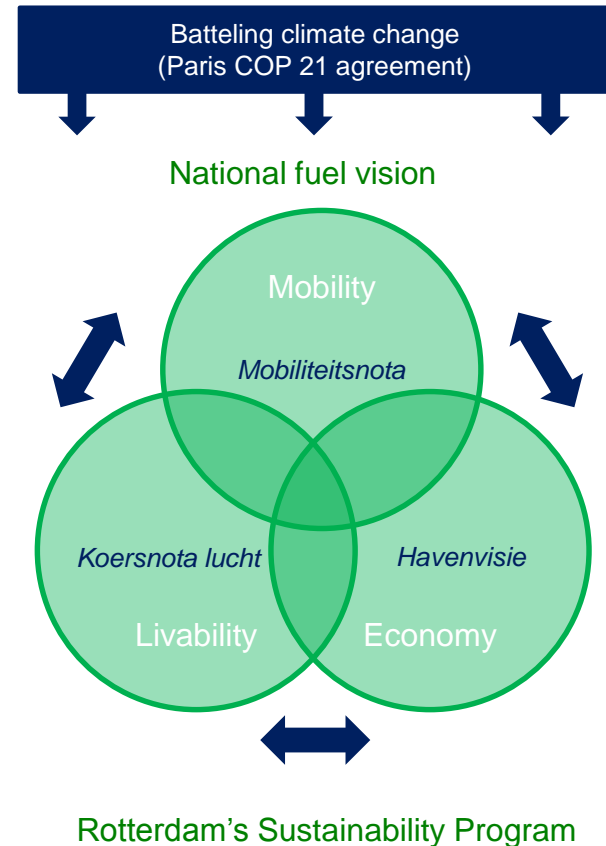


Translation Paris Climate Agreement and national Fuel

Vision in Rotterdam approach, in correlation with local

Sustainability Program

Coherence domains & visions



Concept approach and goals



- Goals air quality: more bicycles, less EC, 25% cleaner car fleet +
- Goals port: global hub fuels and energy, frontrunner sustainability (CO2 per km), max 35% container road transport +
- Goals mobility agenda: bicycle-centered downtown area with little cars, impulse public transportation, better and easier access +
- Translation Paris goals and national fuel vision: zero-emission at higher pace, road vehicles, cargo ships, tankers and fuels at 80%, biokerosene and hydrogen 100%

Programma duurzaam

Ambitie 1:
*Groene, gezonde en
toekomstbestendige stad*

Ambitie 2:
Schonere energie tegen lagere kosten

Ambitie 3:
Sterke en innovatieve economie

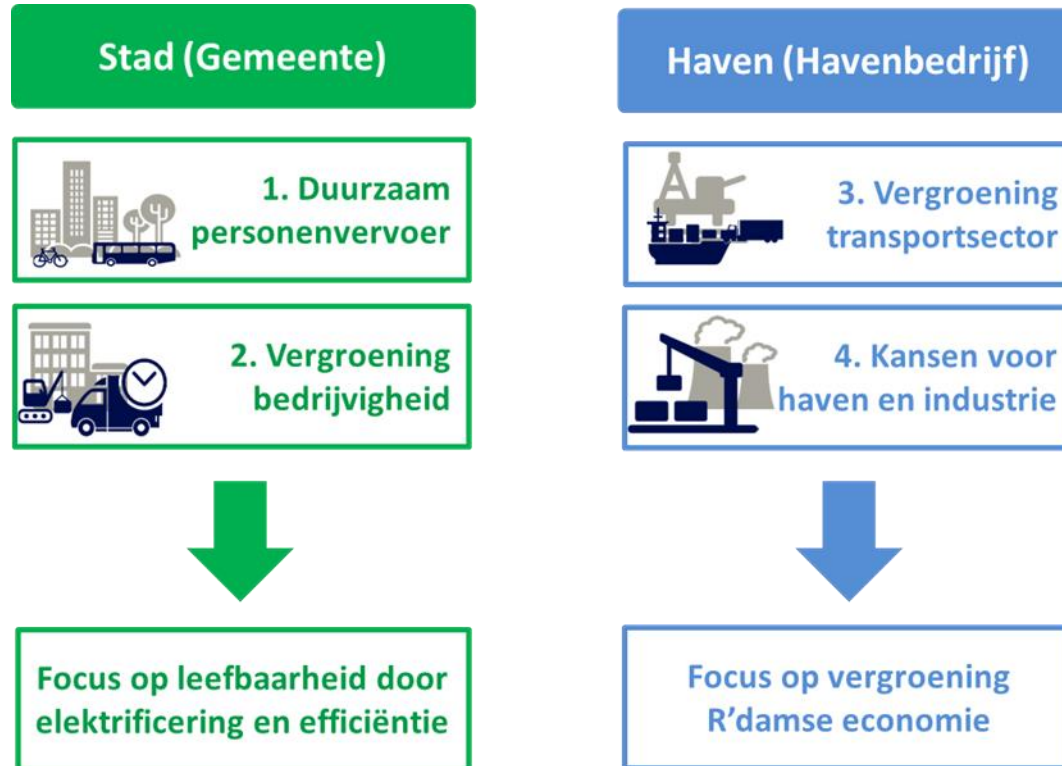
Rotterdamse brandstofvisie

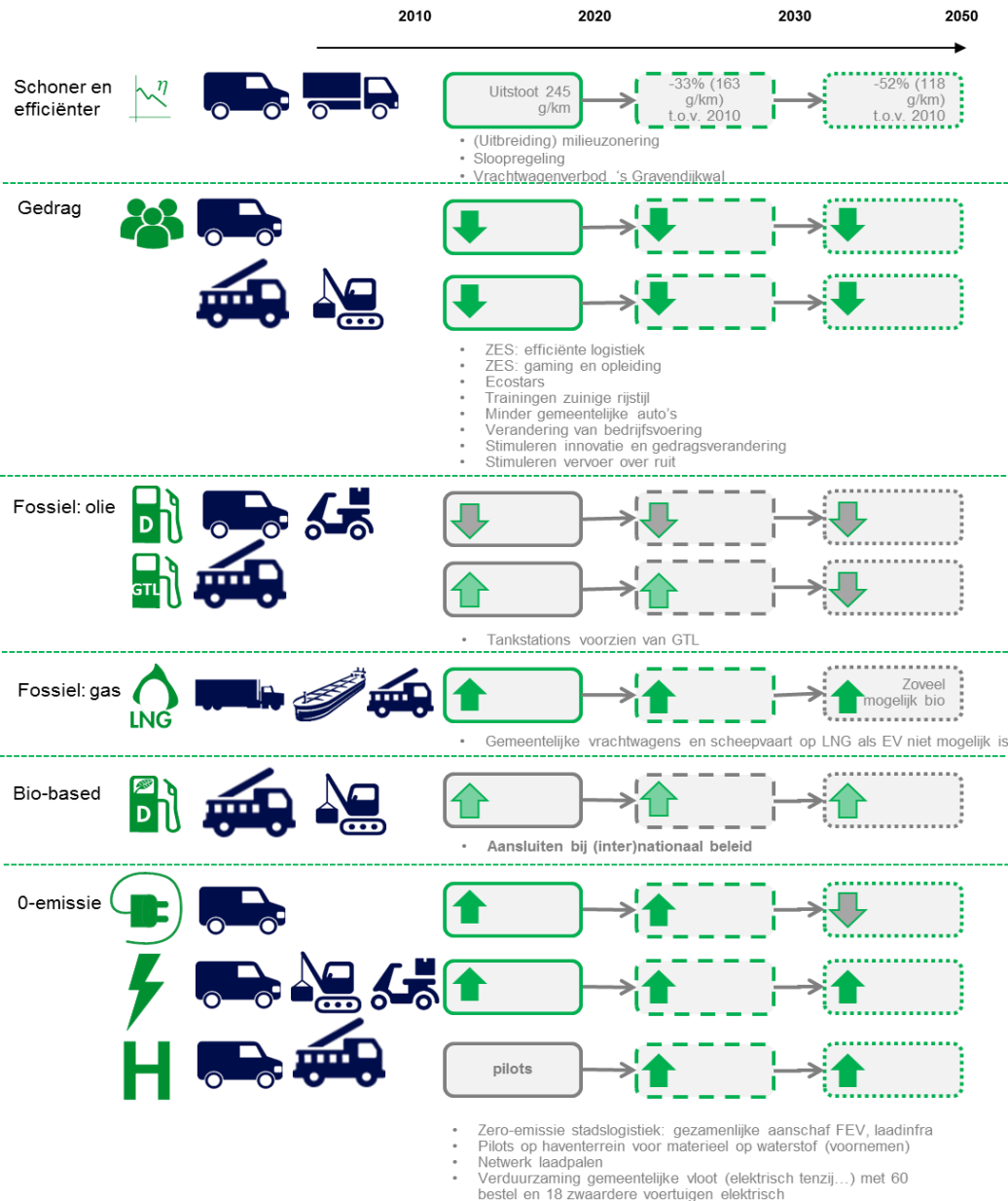
Ambitie 1:
*Gezond leefklimaat en duurzame
mobiliteit*

Ambitie 2:
*Schonere brandstoffen tegen
concurrerende kosten*

Ambitie 3:
*Toekomstbestendige motor van de
economie*

Concept approach: focus areas in strategy





Path 1: Sustainable transportation of persons


- Zero-emission transportation of persons (individual and collective), local push supersedes national
- Improved efficiency
- Shift from individual car use to public transportation and bicycles
- Gas and biofuels in accordance with national and international policies

Path 2: Greener economic activities in Rotterdam

- Zero-emission inner city distribution (supersedes national goals)
- Reduced emissions through behavioral changes and cleaner fleets (incl. working vehicles)
- If and when electrification is impossible, semi-clean solutions (GTL, CNG, LNG)

Short-term actions in Rotterdam




Cleaner and
more efficient

- (Expansion) low emission zone (LEZ)
- Demolition arrangement
- Improved public transportation and connectivity (park & ride)
- Adjustments in circulation (city lounge)
- Improved information (inside and outside city organization)


Behavior

- Economic driving style training
- Fewer municipal vehicles
- Bus hub Maasvlakte port & industrial area
- Stimulating innovation and behavioral change
- Regaining energy from subway braking systems

Biobased

- Joining (inter)national policies

Zero-
emission

- Network of charging points
- More sustainable municipal car fleet (electric unless...)
- Public transportation concessions on zero-emission
- Testing hydrogen buses RET 2016
- Testing hydrogen cars in the city (planned)
- Up to 120 new electric cars purchased by municipality



Additional actions required short term (2017-18)

- Bike policy (mopeds and scooters)
- Stimulating E-bikes as car alternatives
- Contracted transportation (special needs, employees)
- Deals between employers and employees on commuting, attenuating limitations
- Electric small ferries and touristic boats
- Stimulating E-Taxis
- Additional privileges electric transportation/hydrogen, such as using bus and taxi lanes, parking policy


Additional actions required mid long term (2018-2025)



- Realisation basic infrastructure hydrogen fuel stations
- Contracted transportation zero-emission


Short-term actions in Rotterdam



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Cleaner and more efficient

 - (Expansion) low emission zone (LEZ)
 - Demolition arrangement
 - Truck restriction 's Gravendijkwal

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Behavior

 - ZES: efficient logistics
 - ZES: gaming and education
 - Ecostars
 - Train economical driving style
 - Fewer municipal vehicles
 - Shifts in municipal facilities
 - Stimulating innovation and behavioral change
 - Stimulating transportation on Rotterdam city ring roads

- Fossil

 - GTL added to fuel stations

- LNG

 - Municipal trucks and ships on LNG when electric is not an option

- Zero-emission

 - Zero-emission inner city logistics: joint purchase FEV, charging infra
 - Pilots in port for hydrogen-powered vehicles (plans)
 - Network of charging points and quick-charge stations
 - More sustainable municipal car fleet (electric unless...) with 60 light and 18 heavier vehicles electric

Additional actions required short term (2017-18)



- Bike policy (mopeds and scooters)
- Efficiency improvement of fossil fuels by behavioral measures?
- Sustainable logistic vehicles/utility vehicles port and city (garbage trucks, ambulances, fire, cargo handling equipment such as reachstackers on LNG and electric AGV's)
- Sustainable construction vehicles/mobile equipment port and city (excavators, cranes, asphalt pavers)
- Pilotage, patrol boats, service providers (civil engineers, dredging contractors): dredging contractor Boskalis is already testing with B30 biofuel (Goodfuel)
- Benefits EV/hydrogen (shared-use bus lanes, parking permit, loading and unloading)

Additional actions required long term (after 2018)



- Unroll hydrogen fuelling infrastructure
- EMVI for construction projects, sustainable transport and mobile equipment