

PORT OF ROTTERDAM SPATIAL DEVELOPMENT



Jorick van der Heijden
Port Planning | Port Development

CONTENT

- **Introduction Port of Rotterdam Authority;**
- **Spatial development in the Port and Industrial Zone;**
 - Port Development / Port Planning;
- **Future Challenges and Opportunities;**
 - Competition for space → multiple scenarios ask for many different reservations;
 - Environmental management
 - Strategic stakeholder management
- **Questions**

THE PORT OF ROTTERDAM

Throughput volume ceased to be the only consideration at the port of Rotterdam a long time ago. The port is no longer the world's largest, but it does aspire to be the best, the smartest and the most sustainable.

PORT OF ROTTERDAM: ENGINE OF THE ECONOMY

- Port area 12,500 (of which ± 6200ha industrial estate)
- Total employment 565,000 people (direct/indirect*)
- Total added value € 63 billion (8.2% GNP)*
- 3,000 companies
- Largest port in Europe, 11th port worldwide
- Throughput 2022: 467 mln tons; 14.5 million TEU
- Depth up to 75 ft (= 24 m)
- Visits (2022): 30,000 sea-going vessels
100,000 inland navigation

* source: Erasmus University/CBS



MAIN POINTS 2022

- Cargo throughput virtually unchanged in 2022 (-0.3%)
- Large underlying differences: much more LNG, fewer containers
- Sound financial result for Port of Rotterdam Authority
- Major investments in hydrogen and biofuels
- Lack of progress on problems with nitrogen emissions delays energy transition*



Mission:

The Port of Rotterdam Authority creates economic and social value by working together with clients and stakeholders on the realisation of sustainable growth in Rotterdam's world-class port.

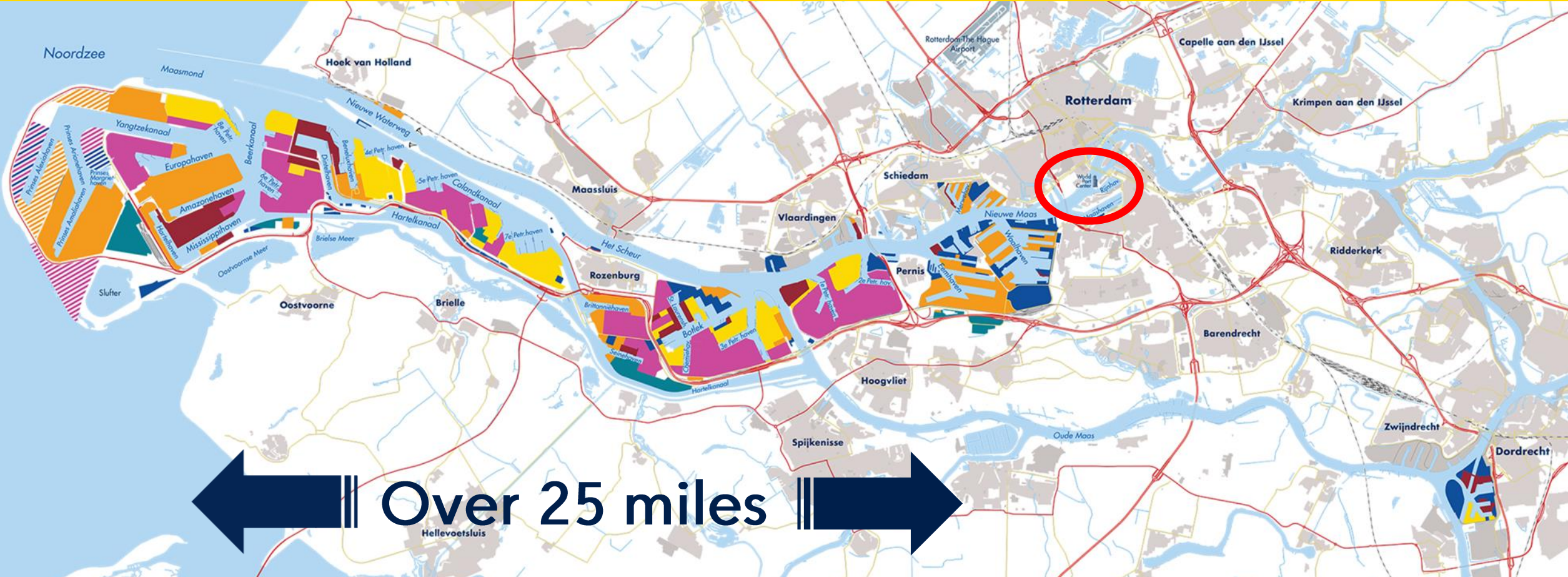


BUSINESS STRATEGY FOR 2020 – 2024

STRONGER IMPACT TOGETHER. MAKE IT HAPPEN.



PORT AND INDUSTRIAL AREA

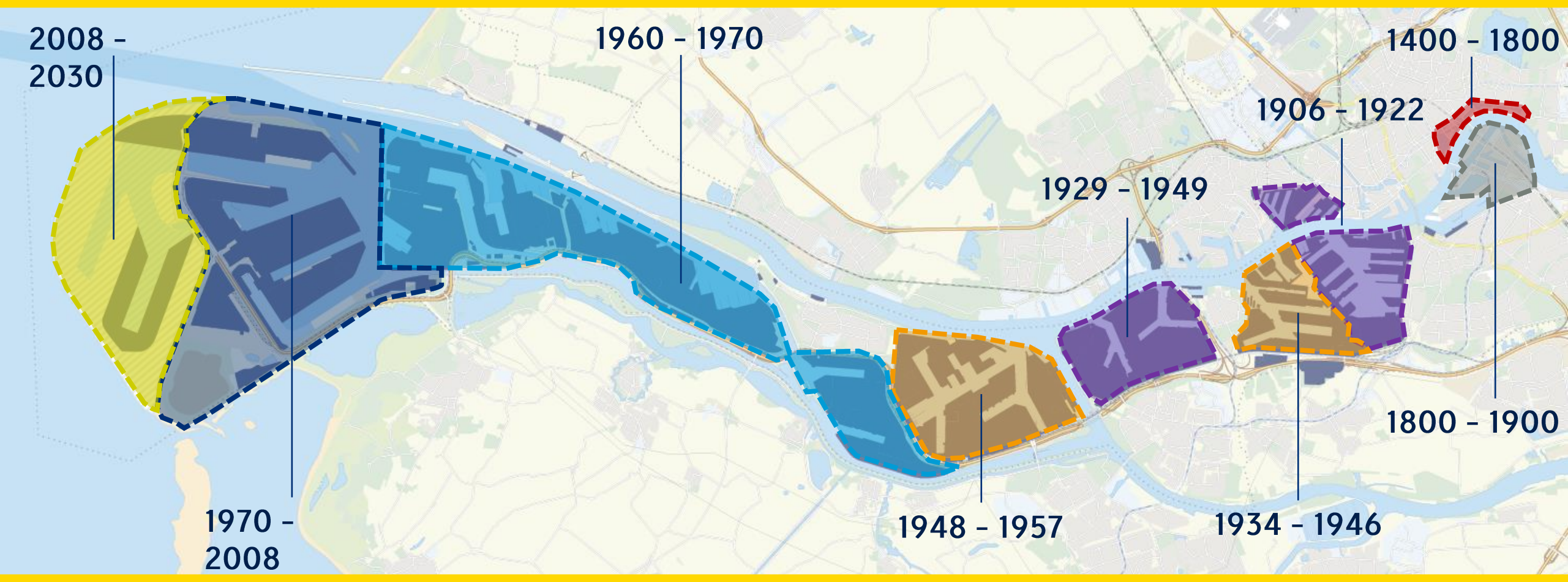


PORT DEVELOPMENT

The main objective of the Port development department is to develop the port and industrial area in the most efficient, safe, flexible and future proof way.

Port Development aims on generating added value combined with financial revenue in the port and industrial area. In line with the PoR commercial ambition and vision.

PORT DEVELOPMENT

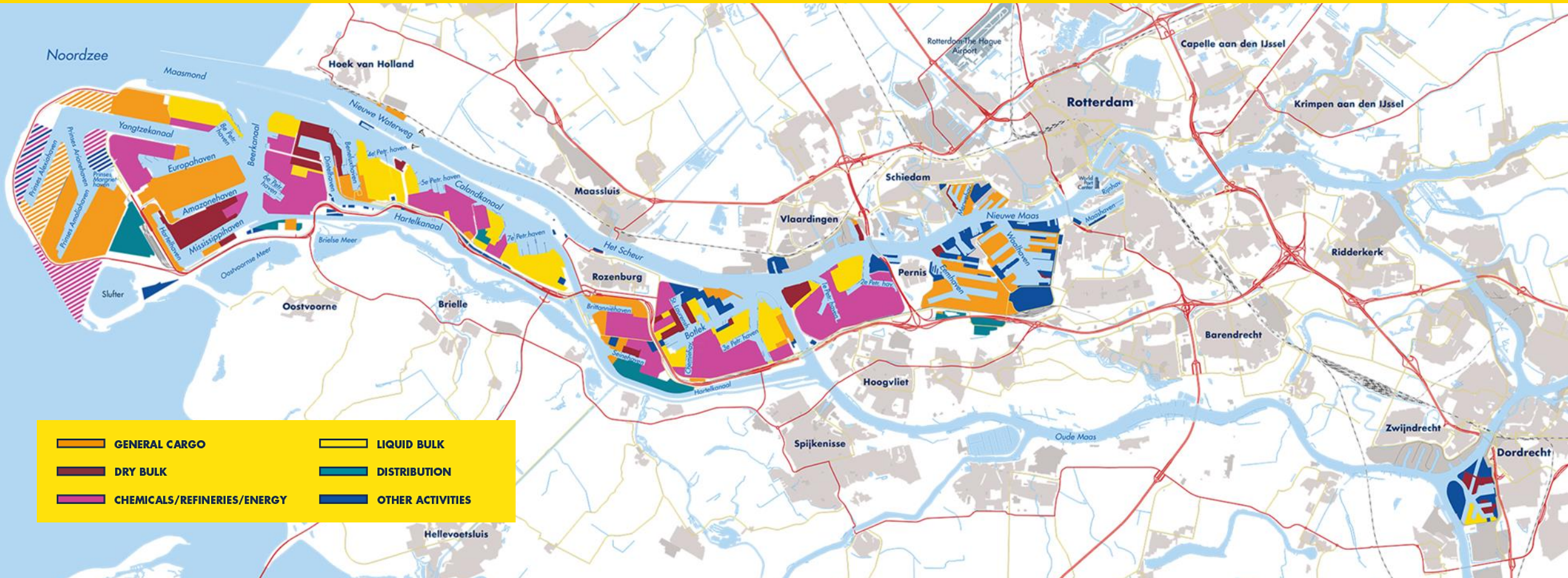


MAASVLAKTE 2

- 2000 ha land reclamation;
- Joint strength of dredging and marine contractors;



MAASVLAKTE 2



PORT PLANNING

An aerial photograph of a port area, likely Rotterdam, showing a large body of water, industrial facilities, and a large number of white storage tanks. The sky is overcast. The text boxes are overlaid on the image.

Spatial implementation of CAPEX and OPEX projects in the port and industrial area.

Coordination of (re)developments in the port and industrial area. Identifying new opportunities and linking them to plots. Looking for synergy with areas outside the port area.

Determining the required space for future developments, inline with stakeholders on multiple levels.

THE COMPETITION FOR SPACE

An aerial photograph of a large industrial port area, likely Rotterdam, showing a complex of buildings, storage tanks, and a large body of water. The sky is overcast. Three blue text boxes are overlaid on the image, and a white banner is at the bottom.

The port and industrial area is a frontrunner in the energy transition.

The transition of existing developments requires additional space.

The more coherent this transition is, the more efficient in the use of space

Scenario mind-set. How can the Port be futureproof, assuring new developments in the future.

(NOT) ENOUGH SPACE?

FUTURE SCENARIOS TOWARDS 2050

Port of Rotterdam has developed possible global scenarios to explore ways forward and prepare for uncertainties ahead in a rapidly changing world.



**ECONOMICS
& GEOPOLITICS**

**ENVIRONMENT
& SOCIETY**

**TECHNOLOGY
& SUPPLY CHAINS**

EXTERNAL DRIVERS (VARIABLE)

Geopolitical stability

Government policy

Consumer behaviour

Global climate change measures

Circular economy

Corporate Social Responsibility

True cost of production

True cost of transport

GLOBAL SCENARIOS 2050



**CONNECTED
DEEP GREEN**



**REGIONAL
WELL-BEING**



**PROTECTIVE
MARKETS**



**WAKE-UP
CALL**

The core narratives of the four global scenarios for the period leading up to 2050 are:

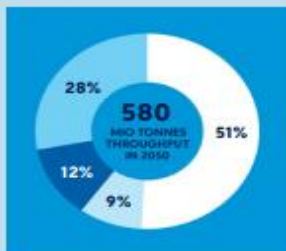


Connected Deep Green:

Effective global cooperation with the acceleration of digital transparency in logistics chains and global commitment to targets for combating climate change, resulting in global carbon neutrality by 2050, broad-based prosperity and high economic growth, and a maximum temperature rise of 1.5 degrees centigrade this century.

Impact on port and industrial complex

Institutional quality and geopolitical stability are high due to global cooperation. Major investments to achieve carbon neutrality by 2050, in combination with high population projections, result in strong GDP. Growth in world trade leads to significantly more container handling. Large amounts of renewable energy, fossil energy falls to zero by 2050.

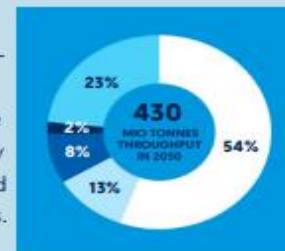


Regional Well-Being:

A switch from a shared commitment to transition in the absence of sufficient global trust towards a regional focus on clean and healthy environments, privacy and well-being emerges in clusters of countries by early 2030. This results in a deteriorating business environment for basic industry in Northwestern Europe and moderate economic growth.

Impact on port and industrial complex

Moderate growth of world economy due to trade barriers and diverse carbon-reduction measures between countries. The business climate for energy-intensive industry in Northwest Europe is affected by a greater focus on the quality of the living environment. Strong decrease in total throughput, especially crude oil, coal and iron ore. More breakbulk due to imports of semi-finished products. Strong intra-regional European market with growth in shortsea volumes.



Protective Markets:

A world with a lack of trust between global powers, global geopolitical tensions and suboptimal integration in logistics chains. There are competing economic interests in a fragmented world with a focus on self-sufficiency, financial prosperity, resilience and defence. No global carbon neutrality before 2100 and low economic growth.

Impact on port and industrial complex

Neglect of climate obligations has a negative effect on investments. Extreme weather conditions and less R&D impair productivity. A declining EU population, low economic growth, significant reduction in throughput volume. Slow transition to renewable energy due to trade barriers. Considerably less refining of crude oil, less general cargo due to re- and nearshoring.



Wake-Up Call:

Increasing concerns about the economic impact of external shocks such as food and energy availability or extreme weather mark a tipping point. There is increasing awareness that strategic cooperation and rigorous measures are needed to reduce carbon emissions. This leads to strategically strong EU policies, moderate economic growth and a late but rapid transition to renewable energy.

Impact on port and industrial complex

Increase in investments and economic growth due to radical acceleration in sustainable energy from 2030 onwards. Slight fall in EU population, shift in consumer behaviour and belief. More imports of biomass as a raw material for energy and chemistry. Late but fast energy transition requires CO₂ storage. Increase in containers due to favourable economic climate. Significantly higher throughput of non-fossil fuels.



CONNECTED DEEP GREEN



PROTECTIVE MARKETS



REGIONAL WELL-BEING

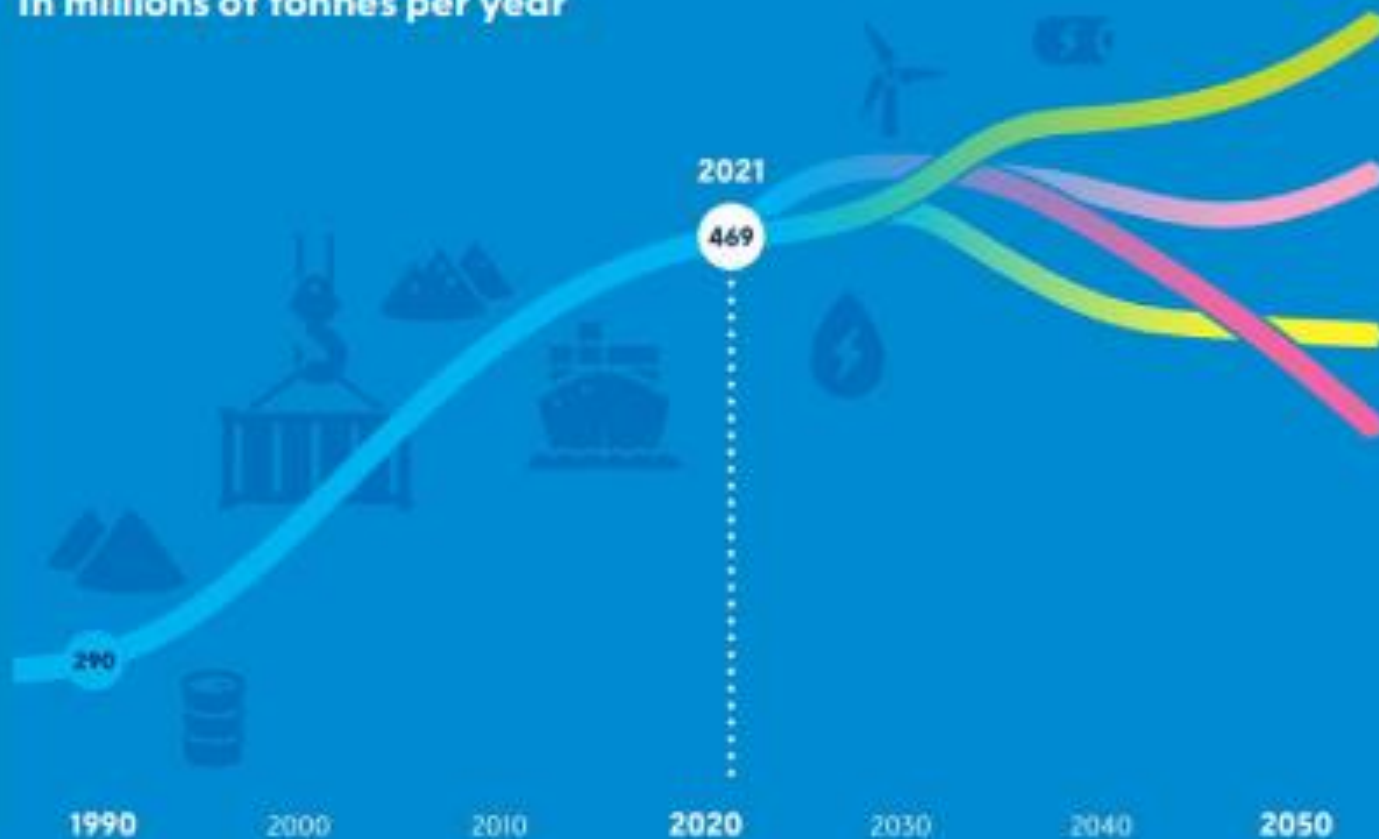


WAKE-UP CALL

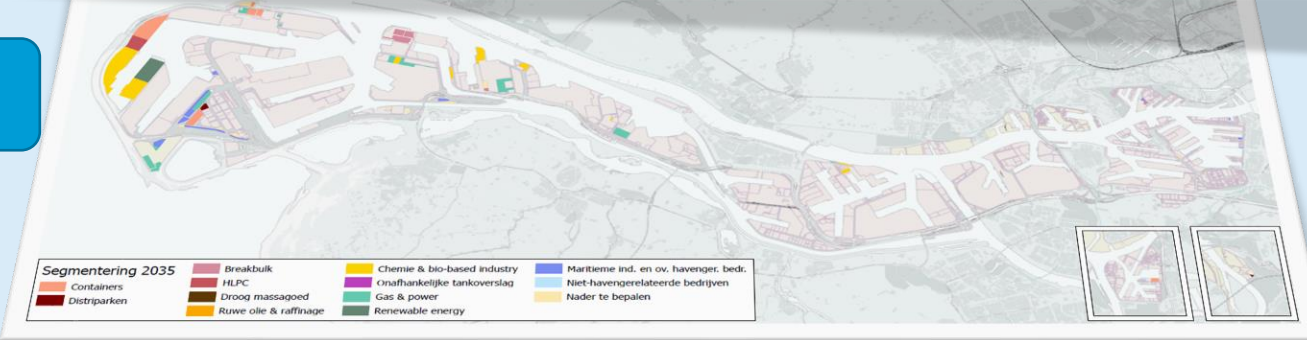
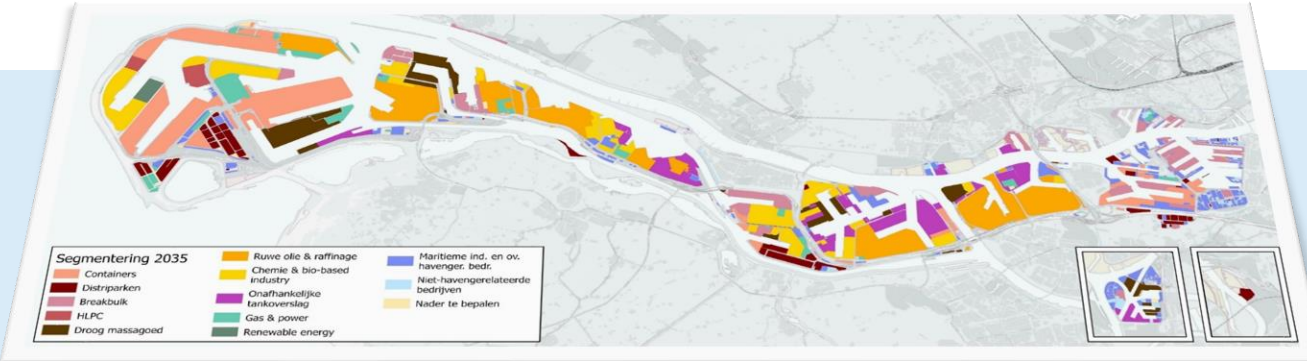
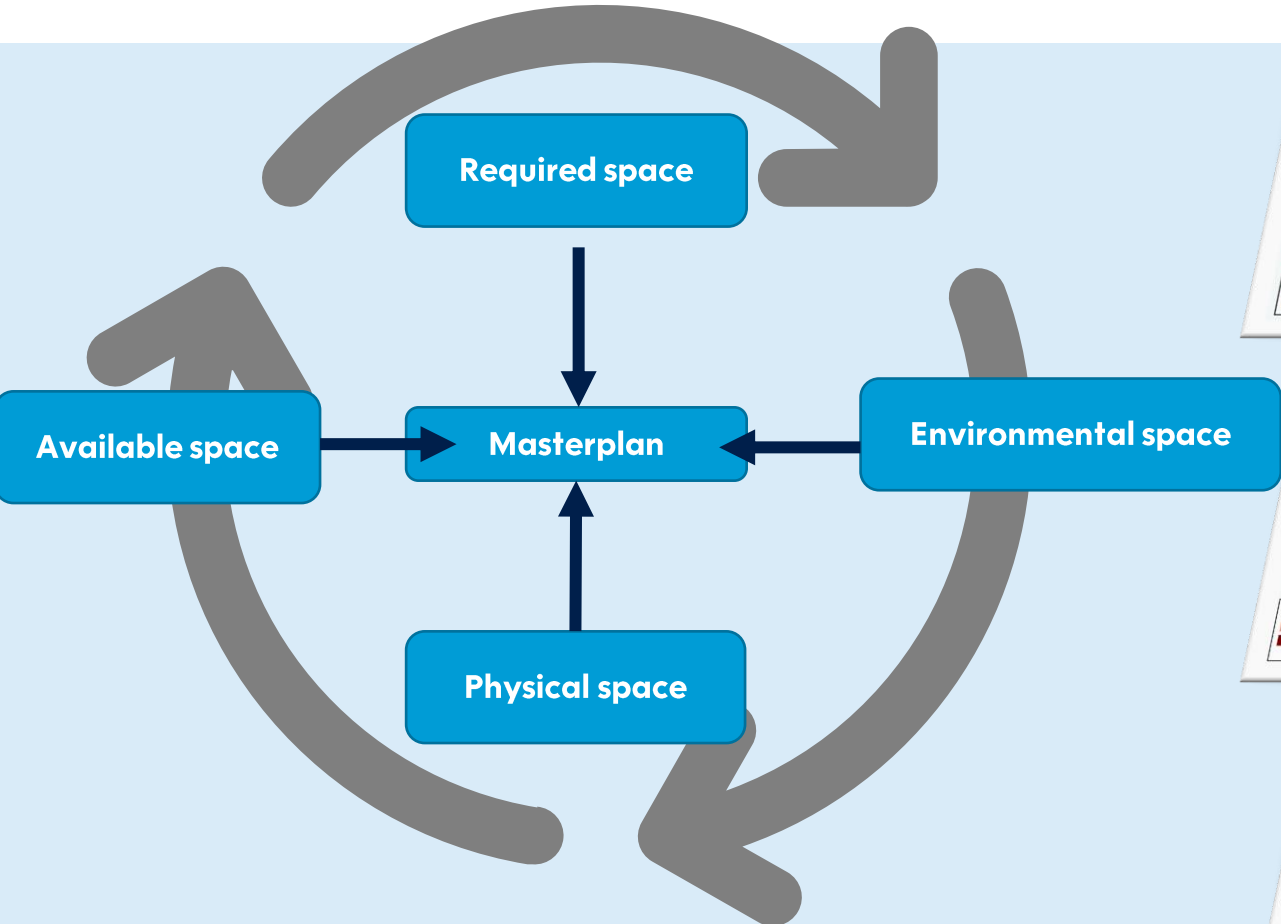


THROUGHPUT PORT OF ROTTERDAM TOWARDS 2050

In millions of tonnes per year



MASTERPLAN PLANNING



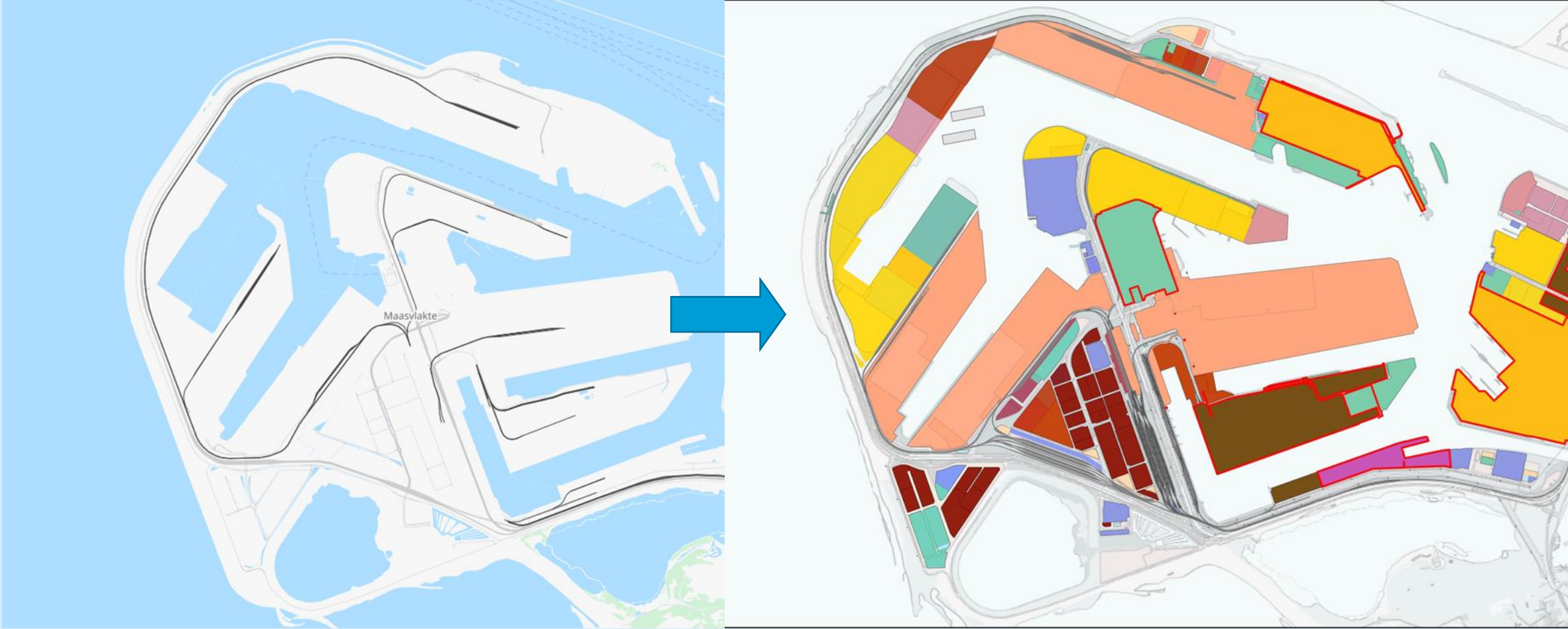
MASTERPLAN: DEVELOPING NEW PLOTS

Develop new plots to accommodate future developments and creating space for new business and growing markets.

Strengthening infrastructure to assure the right capacity for roads, trains and ships



MAASVLAKTE



MASTERPLAN: RE-DEVELOP EXISTING PLOTS / CO-SITING

An aerial photograph of a large industrial port facility. The foreground is dominated by a dense cluster of white cylindrical storage tanks. To the left, there are several large industrial buildings with grey roofs. The middle ground shows a wide waterway with several large cargo ships docked at a pier. In the background, more industrial structures and additional storage tanks are visible along the waterfront. The sky is clear and blue.

Understanding the future shifts/transitions of existing customers. Encourage and challenge redevelopment

Stimulating co-siting and creating new synergies between companies.

ENVIRONMENTAL MANAGEMENT AND STRATEGIC STAKEHOLDER MANAGEMENT

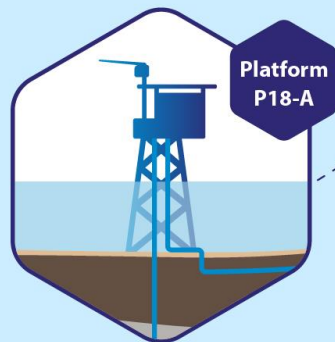
- The Netherlands is small and densely populated;
- The competition for space goes beyond physical space, e.g.:

Sound emissions; Nitrogen emissions, impact on the environment, sustainable development goals and the Paris agreement.

Factors PoR has to take into account when re-developing new and existing plots



CONSTRUCTION PERMIT EXEMPTION FOR PORTHOS?



GASVELD
P18-4

GASVELD
P18-6

GASVELD
P18-2

de Volkskrant

NIEUWS

Wat als de bouwvrijstelling, zoals Remkes vreest, inderdaad sneuvelt?

Het kabinet zal wel boeren móeten onteigenen, betoogde Johan Remkes deze week, want binnenkort gaat de Raad van State Nederland verder 'op slot' gooien. De kiem voor die vrees ligt in de Rotterdamse haven.

Avinash Bhikie 8 oktober 2022, 05:00

Yangtzekanaal

HOEK

MAASVLAKTE

EUROPO

Oostvoornse Meer

OOSTVO



Olof van der Gaag

@olofvdgaag · 8 u

Natuurlijk mag iedereen naar de rechter maar het is wel erg wrang als een milieuorganisatie hiermee de aanpak van klimaatverandering vertraagt en CO2-uitstoot in stand houdt

[N] Nieuwsuur @Nieuwsuur · 19 u

Dezelfde organisatie die het stikstofbeleid van tafel kreeg, gaat nu naar de rechter om een project voor CO2-opslag stop te zetten en zo weer het stikstofbeleid aan te vechten. Dat kan enorme gevolgen hebben. Niet alleen voor de CO2-opslag, maar ook voor de woningbouw. #Nieuwsuur

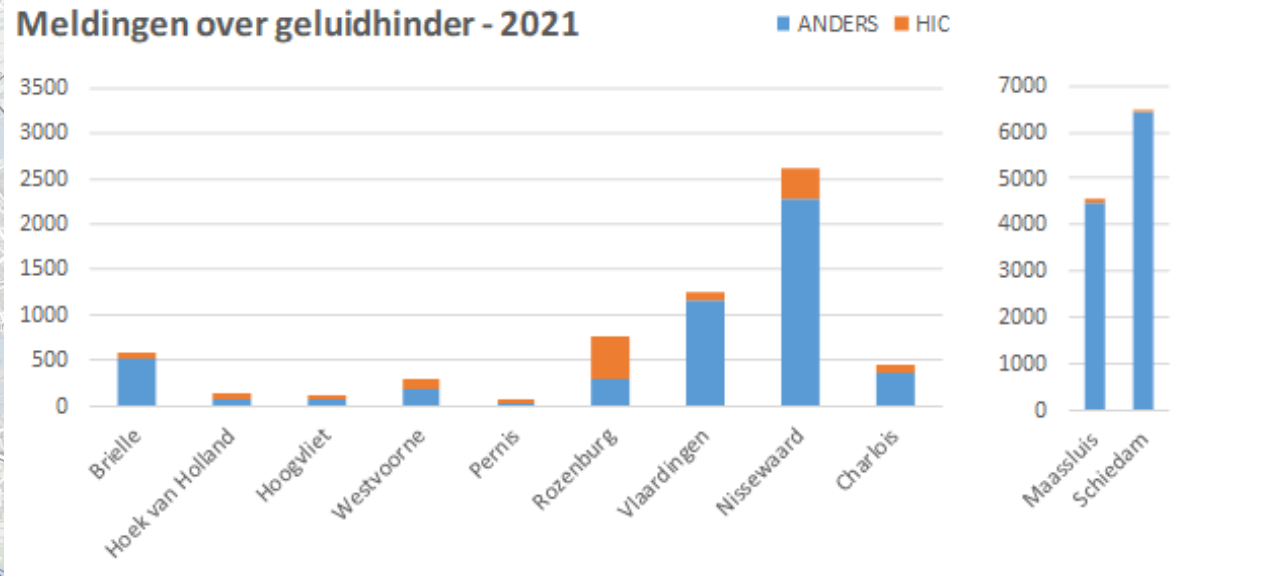
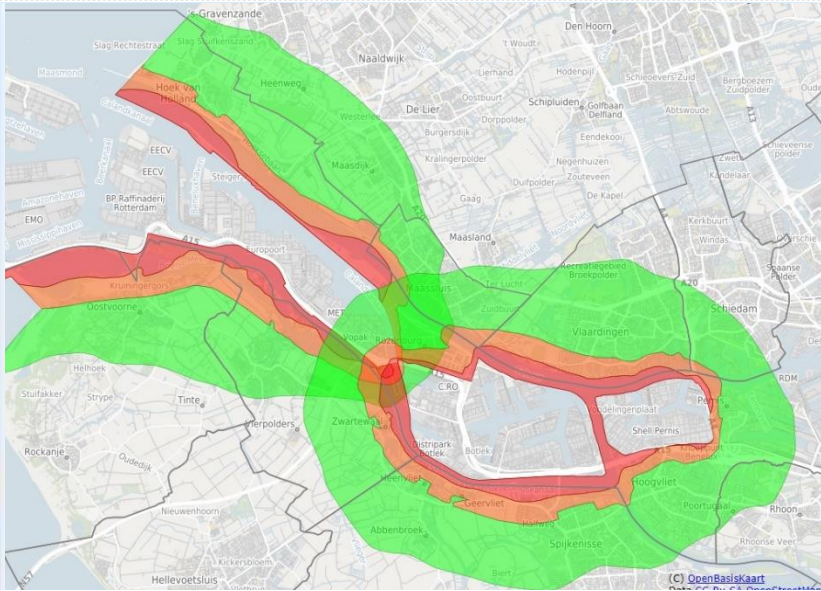


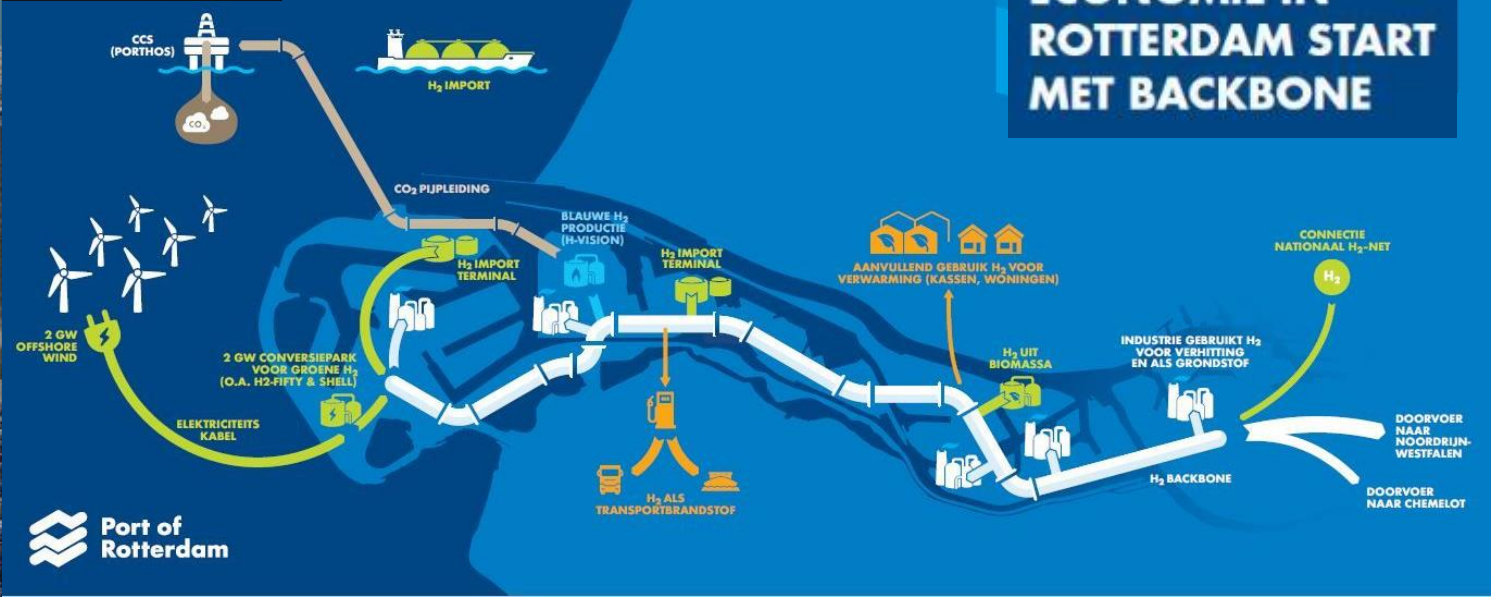
SOUND LEVELS: SEARCH FOR BALANCE BETWEEN PORT - RESIDENTIAL - WORK

Versnelde duurzaamheid in de haven

Op zolder mag je niet slapen, staat in de koopakte - te veel herrie

Woningbouw Gemeenten bouwen duizenden woningen op plekken waar landelijke geluidsnormen worden overschreden. Slecht voor de gezondheid, maar de druk om te bouwen is groot.





PROJECT PORTFOLIO

TITEL

