



**MAKING ROOM
FOR TRANSITION.
MAKE IT HAPPEN.**



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INTRODUCTION



Foreword from the Executive Board

Making room for transition

In addition to our work of keeping the port of Rotterdam operational and maintaining development in a context of digitalisation and the energy transition, 2022 faced us with the far-reaching impact of the war in Ukraine. We saw terrible images. The war had direct consequences for our port. Cargo flows dried up, other cargoes took their place, sanctions forced parties in the logistics chain to pull out all the stops and the war also affected the companies in the port. Difficult circumstances that produced new questions. In close collaboration with our clients and stakeholders, we worked on solutions.

Sustainable Development Goals are at the heart of our activities

Our job is to generate economic and social value. As a business, our aim is to accelerate sustainability in the port and act as a smart partner in logistics chains. We are aware of our responsibility to contribute to the seventeen Sustainable Development Goals (SDGs) of the United Nations. We are satisfied with the impact of our projects on the formulated goals. We are also making steady progress in the area of corporate social responsibility. We are working actively on our diversity and inclusiveness policy. It will ensure we recruit a more diverse workforce and therefore further enhance the quality of the work, the agility of the organisation and our decision-making. At the same time, we are continuing to invest in public support for the port of Rotterdam because this is not something we can take for granted, despite the economic prosperity based on industry and logistics that we bring to Rotterdam and the Netherlands.

Focus on safety and security

We are proud that the port has thrived despite the difficult conditions. Safety and security in all areas are always our highest priority. Unfortunately, in April 2022, there was a very serious accident involving an inland vessel, with one fatal casualty as a result. In July, a water taxi and a tour boat collided. Fortunately, there were no casualties. Another aim is to reduce narcotics-related, subversive crime. We are working with the corporate sector, industry associations, the City of Rotterdam and investigative authorities to counter it. In 2022, for example, the 'Virtual Fence' project was launched, allowing investigative authorities to monitor more stringently.

Results still up to standard

Our clients are at the heart of our work. Safely guiding ships, providing a modern port infrastructure, and developing commercial and sustainable value chains are all part of our day-to-day work. In practice, this can be seen in initiatives such as the construction of the quay walls in the Amaliahaven and in the reclamation of 55 hectares of new land on Maasvlakte 2, making room for companies that are accelerating in the area of sustainability. We ourselves provide the financial room needed to invest. The result after taxation was € 247.2 million (2021: € 247.2 million).

We are investing in the future

Our good financial results in 2022 will allow us to continue playing to the full our special role as an investor in the development of the port. In 2022, we invested € 257.0 million (2021: € 226.3 million). Here, we focus not only on infrastructure, but also on encouraging the use of renewable energy sources such as hydrogen, the reduction of carbon emissions, cleaner air, employment, safety and security, health and welfare. In this way, we directly fulfil our important social role and make room for the transition to a port that is sustainable in every respect.

We want to make the difference

Making room for transition touches on a range of current, pressing issues. We want to make the difference in terms of making the port more sustainable and therefore deliver a major contribution to the national and international climate goals. Important conditions for the sustainable development of the port include room for the use, development, noise and growth of the port. We are seeing pressure increasing on the available physical space and environmental capacity. We therefore seek a sound balance between the two for the development of the port and industrial complex, good accessibility, and room for an attractive and healthy living environment as well as a growing urban area. Our efforts in these areas are reflected in the focal points of our strategy.

Accelerating sustainability in the port

In September 2022, the Science-Based Targets initiative (SBTi) validated our objectives for the reduction of greenhouse gas emissions by 2030. We work with partners on concrete projects that make industry and goods transport more sustainable. The effects of energy transition projects inside the port and industrial complex will contribute to a reduction, in the context of the national climate goals, of nearly 20% by 2030. If we also consider the effects outside the port and industrial complex, this percentage will be even higher. We are achieving this in part through advanced projects such as the capture and storage of CO₂ with Porthos, the import, production and distribution of green hydrogen, and making shipping and inland navigation sustainable. Our initiatives are very much in the spotlight and they are increasingly leading to national and

international alliances that focus on sustainability. The initiatives with the aim of establishing the world's longest green corridor with Singapore is a good example that is globally groundbreaking. We are also encountering obstacles, for example in the area of nitrogen emissions. This issue is affecting the energy transition, even though the projects in question often reduce not only carbon emissions but also emissions of nitrogen and other substances.

Smart partner in logistic chains

We imagine a port where existing and new technologies such as smart sensors, artificial intelligence and blockchain technology generate savings in terms of time, money and emissions. With our partners, we are moving ahead and building on our ambition to make the smartest port in the world a reality. Routescanner, for example, is fast becoming the global, neutral location for the planning of optimal container routes; through Portbase, we are providing our clients with straightforward access to logistical data. In this way, we are further developing areas such as just-in-time sailing. That is important for our clients and good for the environment because it cuts harmful emissions.

Entrepreneurial and effective organisation

In our organisation, we are increasingly working in multidisciplinary teams on adding value to the chains where we work. We are moving faster and having more of an impact for our clients. This gives us the opportunity to generate sustainable economic and social value for the Netherlands. We are grateful to our employees, clients and stakeholders for their joint efforts and the results for the future produced by those efforts.

The Executive Board

Allard Castelein, Vivienne de Leeuw, Boudewijn Siemons

In brief

2022 in numbers

Safety and security

1

major incident (2021: 0)

In 2022, an inland vessel capsized in our port, with a fatal casualty as a result.



Energy transition

23,5 Mtonnes

Carbon emissions (2020: 22,4 mtonnes)

Carbon emissions in the port rose for the first time since 2016, mainly due to the two coal-fired power plants on the Maasvlakte. In 2021, emissions were about 1 Mtonne higher than in 2020, an increase of 4.9% (Source: EU transaction log). Emissions in 2021 were 2.9 Mtonnes higher than in 1990. Figures lag one year behind.



Employment

183,004

jobs (2020: 174,057)

The Rotterdam-Rhine Estuary seaport region employed 183,004 people directly and indirectly in 2021 (the figure lags one year behind) (Source: 2022 Port Monitor).



Added value

2.8%

of gross domestic product (2020: 3.0%)

The added value of the Rotterdam-Rhine Estuary seaport region was € 24.4 billion in 2021 (last known figure) (Source: 2022 Port Monitor).



Goods throughput

467,4

million tonnes (2021: 468.7 tonnes)

Throughput was 0.3% lower in 2022 than in 2021. There were major variations, mainly due to the war in Ukraine, sanctions against Russia and changes in global energy flows.



Revenue

825.7

million euros (2021: 772.7)

Our revenue in 2022 was 6.9% higher than in 2021.



Gross investment

257.0

million euros (2021: 226.3)

The main investments in 2022 were the construction of quay walls in the Amaliahaven (€ 79.3 million) and the land reclamation operation on Maasvlakte 2 (€ 24.8 million).



Entrepreneurial and effective organi

24

employee Net Promotor Score (eNPS)

Since 2022, we have been monitoring the eNPS (how likely is it that you, as an employee, would recommend the Port of Rotterdam Authority as an employer to others?). Our score of 24 is good: the figure nationally is 12. A very large proportion of our employees are proud to work for the Port of Rotterdam Authority



Milestones in 2022



Diversity in Business Charter

On 10 February, our CEO Allard Castelein signed the Diversity in Business Charter. This step was a declaration by the Port of Rotterdam Authority that it considers diversity and inclusion to be important and that it wants to take steps to improve this area at the company. By signing the Charter, we have also become a proud partner of 010 Inclusive.



Shell launches construction of Europe's largest green hydrogen plant

Europe's largest green hydrogen plant, with a capacity of 200 megawatts, will be built on Maasvlakte 2. Shell has made the definitive investment decision. The futuristic plant will be named Holland Hydrogen I and it is expected to be operational in 2025.



Neste invests in biorefinery

Neste has made the definitive investment decision to invest approximately € 1.9 billion in new production capacity for sustainable products in Rotterdam. The company will be building a new biorefinery near its existing plant on the Maasvlakte. This will double the production of biofuels by Neste in Rotterdam.



Shore power increasingly important

April 2022 saw the official signing of the agreement that will make shore power possible for cruise vessels by 2024. This step will be made in collaboration with Cruise Port Rotterdam and the City of Rotterdam. It fits in with our ambition to connect ships to shore power where possible when they call at Rotterdam.



Launching of the world's Longest Green and Digital Corridor

In August, the Maritime and Port Authority of Singapore and the Port of Rotterdam Authority signed a memorandum of understanding for the world's longest Green and Digital Corridor. This was an important milestone for both organisations. The goal is to have the first sustainable shipping on this route by 2027.



Joint development of container terminal

The Mediterranean Shipping Company (MSC) wants its own terminal on the Maasvlakte, ultimately with a capacity of six to seven million TEUs (twenty foot equivalent) per year. MSC's subsidiary, Terminal Investment Limited (TIL), reached an agreement in principle to this effect with Hutchison Ports and the Port of Rotterdam Authority.



Intermediate ruling by Council of State leads to delay for Porthos project

The Council of State's ruling in November led to delays for the Porthos project. Mobilisation for the Environment (MOB) has been given time to respond to the ecological assessment of the Porthos project. Intensive collaboration with shareholders, clients and stakeholders allowed the project to create an opening to order critical items with long delivery times, therefore reducing the probability of further delays.



Wild Port of Europe

The film that premiered on 4 October 2022 shows how animals live and survive in the ports of Rotterdam and Moerdijk. Wild Port of Europe is an ode to the exceptional flora and fauna in ports and industrial sites. The documentary achieved crystal status, with a box office of 10,000.



THE PORT OF ROTTERDAM AUTHORITY

Mission, vision, core tasks and strategy

We embrace all seventeen of the Sustainable Development Goals of the United Nations. However, we make the largest contribution to SDG 3 (good health and well-being), SDG 7 (affordable and sustainable energy), SDG 8 (fair work and economic growth), SDG 9 (industry, innovation and infrastructure) and SDG 13 (climate action). Our goals are a safe port, accelerating sustainability in the port and acting as a smart partner in the logistics chains.



Mission

We create economic and social value by achieving sustainable growth in the world-class port in collaboration with clients and stakeholders.

Vision

We are the developer of a leading, safe, efficient and sustainable port where our clients can achieve business success.

Core activities

The Port of Rotterdam Authority manages, operates and develops the Rotterdam port and industrial area and is responsible for maintaining the safe and smooth handling of shipping. When executing our core tasks, we act as an entrepreneurial developer, matchmaker, facilitator, driver, director, investor and initiator. Successful coordination with third parties requires a clear definition of roles: what do we do and what do we not do? This provides operational focus. The Port of Rotterdam Authority is active in the Netherlands and elsewhere through participating interests and consultancy activities.

Corporate strategy

Our corporate strategy concentrates on three key areas. The central focus is on generating social and economic impact that goes beyond simply increasing volume. Quality and impact also matter. Our activities allow our clients to be successful businesses.

Smart partner in logistics chains

By making information and data available, we are able to organise the handling of cargo in the logistics chain as efficiently and optimally as possible. In this way, we hope to ensure that more 'cargo' opts for Rotterdam.

Accelerating sustainability in the port

As an accelerator of sustainability in the port, our aim is to contribute to the carbon-reduction goal for the Netherlands of 55% relative to 2030 by 1990. With a wide-ranging portfolio of energy transition projects, we are moving towards CO₂ neutrality by 2050, attracting future-resilient cargo flows and operations, and investing in sustainability.

Entrepreneurial and effective organisation

We have strict standards for the effectiveness and client focus of our organisation. Sound internal and external collaboration, and clear responsibilities, help to make that happen. The direct effects include further improvements to the organisation's agility, the control of operating costs and capital expenditure, and the ongoing sharpening of our client focus.

How we create value

We aim to create economic and social value by achieving sustainable growth in the world-class port in collaboration with clients and stakeholders. We do this with our core tasks and our investments in the port, and by innovating in the port. The value creation model below shows how we use our resources to achieve our strategic objectives and therefore to create value.

Value creation model

The sections below describe the impact of our processes in both the short and long term.

Our Assets



OUR PEOPLE



FINANCES



INFRASTRUCTURE



DIALOGUE WITH STAKEHOLDERS

What is our role and what choices do we make?

MISSION



We create economic and social value by achieving sustainable growth in the world-class port in collaboration with clients and stakeholders.

STRATEGY



What are the results?

SAFETY

Major incidents: 1
Nautical safety index: 6.39
No incidents on vital systems: 0
Lost time injury frequency rate (LTIFR): 0.43

EFFICIENT HANDLING OF SHIPPING

Safety & environmental index: 7.33

QUALITY OF PORT INFRASTRUCTURE

Quality of port infrastructure: 8.8

ACCELERATOR OF ENERGY TRANSITION

Carbon emissions in HIC 23.5 Mtonnes (2021)

FUTURE-RESILIENT PORTFOLIO

EBITDA: € 543.5 million
Investments: € 257.0 million

SMART PARTNER IN LOGISTIC CHAINS

Information availability in the logistic chains: 24%

ACCESSIBILITY

Number of destinations where rail services from Rotterdam are available: 63
Difference in travelling time between Rotterdam and Antwerp from and to North Brabant: 11 min 30 sec

What are the effects on society in the long term and to which SDGs do we contribute?

SAFE AND HEALTHY ENVIRONMENT



Zero major incidents in the port

CLIMATE & ENERGY



55% reduction in carbon emissions in HIC by 2030

Increase in logistical efficiency (30% in 2024)

PEOPLE & WORK



Contribution to employment in NL

Development of our people

Added economic value

The value creation model shows how we work on the basis of our mission, strategy and core tasks to create value by deploying four resources. We describe our results and, ultimately, our positive and negative impact on society through our material themes, our CSR themes and the associated Sustainable Development Goals (SDGs).

Our resources

Four capital resources serve as input for our value creation: our employees (human capital), our assets (financial capital), our infrastructure including space (produced capital) and the ongoing dialogue with stakeholders (social and relationships).

Our Portfolio Management supports the achievement of the goals on the basis of our corporate strategy. Are we doing the right things, are we doing enough to achieve our goals and are we doing things the right way? Those three questions are central to our Portfolio Management and they help us to prioritise and introduce focus to the overall investment portfolio of opportunities and projects.

The scarcity of land, nitrogen deposition and size of the labour force means there is a limit to the projects we can execute. The clear and uniform management of our portfolio is therefore required.

Our people

Our employees (1,298), their experience and their competences have a major effect on the quality of the port. In 2022, we hired 150 employees (men: 83, women: 67). We measure employee satisfaction with the employee Net Promoter Score (eNPS). Our score of +24 is high compared to the national average of +12. We are proud of this result. The survey was conducted once in 2022 by an outside firm. Training and development are raising the knowledge standards in our workforce. We spent 1.7 million euros on education and training for our employees in 2022. We attract young talent with our trainee programme and by offering internships. Nine trainees and 86 interns started in 2022. With the results and actions described above, we contribute to a port that is ready for the future.

Finances

Our shareholders' equity (4.5 billion euros) and loan capital (1.6 billion euros) provide a solid foundation for our core tasks and the transition of the port. We see EBITDA, which was 543.5 million euros in 2022, as the engine of the investment machine. We invest a large share of our operating profit in the port and industrial complex. We expect to invest several hundred million euros in the years ahead. By doing this constantly, we ensure that our port continues to be relevant and we strengthen our competitive position.

Infrastructure

With our infrastructure, we safeguard good accessibility so that we can serve our clients as well as possible. In 2022, the port and industrial complex had 6,230 hectares of land at its disposal, with 79 hectares still vacant. The Port of Rotterdam Authority has assets such as quay walls, real estate, jetties, buoys, roads and rail. Maintaining the availability and accessibility of our infrastructure is essential to keep shipping operations safe and efficient.



Kademuur Amaliahaven

Dialogue with stakeholders

Working with our stakeholders and partners, we are building a sustainable and smart port. Engaging in enduring relationships with parties in our environment is widespread practice at the Port of Rotterdam Authority.

To make these focal points a success, sound stakeholder management and portfolio management are indispensable for us. We identify a range of stakeholder groups: clients, strategic stakeholders, employees, local residents, the public and suppliers. We work with, for example, Strategic Environment Management (SOM) to maintain contact with our strategic stakeholders. Given our early focus on stakeholder interests and the search to maximise mutual gains, the SOM is designed to prevent problems and, where necessary, to solve them effectively. We talk to our stakeholders about our long-term strategy, policies, goals and priorities. Our contribution to the Sustainable Development Goals (SDGs) is directly linked to our focal points and material themes.

Engaging in dialogue, with a genuine interest in stakeholder interests and a commitment to achieving a win-win situation, plays a central role here. In the latest stakeholder survey (2021), our stakeholders gave us a rating of 7.2 (out of 10). They appreciate the way we implement our core tasks. By maintaining a dialogue, we know what drives our stakeholders and what we need to do to maintain our 'license to operate'.

What is our role?

Our mission statement says: 'With clients and stakeholders, we want to create economic and social value in order to achieve sustainable growth in our port'. We embrace all seventeen Sustainable Development Goals (SDGs) but we contribute most to SDGs 3, 7, 8, 9 and 13. We are therefore committed to a safe, healthy and attractive port and environment. We want to combat climate change while ensuring that the port area continues to make a major contribution to Dutch prosperity and employment.

In 2022, we worked with our stakeholders on goals linked to the three focal points of our strategy. For example:

Climate and energy

- Energy transition/shore power for international ports: We are one of the initiators of WPCAP (the World Ports Climate Action Program) to work with other port authorities in order to reduce carbon emissions from shipping and port operations, and therefore to improve air quality. In that way, we work actively on the implementation of the Paris Climate Agreement.
- In collaboration with Deltalinqs, we established the Data Safe House. By exchanging data through this platform, companies can share up-to-date and reliable data with grid operators in order to make their operations more sustainable.
- In collaboration with numerous public and private parties under the auspices of the National Hydrogen Programme, the Port of Rotterdam Authority presented the Hydrogen Roadmap ([de Routekaart Waterstof](#)) to Minister Jetten of Climate and Energy. The roadmap details how the Netherlands can make progress on the development of the hydrogen market. It sets goals for renewable hydrogen by 2030 and describes the actions needed to meet those goals.
- The Maritime and Port Authority of Singapore and the Port of Rotterdam Authority signed a memorandum of understanding for the world's longest Green and Digital Corridor in 2022. The goal is to have the first sustainable shipping on this route by 2027. This was a milestone for both organisations. We also signed an agreement with the Gothenburg Port Authority to support sustainable shipping between the two ports.

Safe and healthy environment

- The Port of Rotterdam encourages acoustic monitoring near berthed vessels. Under the name ESI Noise, we will give shipping a financial discount if it is made clear how much noise a vessel produces when it is berthed. In addition to this incentive scheme, we will be collaborating with the City of Rotterdam, the Province of South Holland and the DCMR Environmental Protection Agency to launch a regional monitoring programme for noise from berthed vessels.
- The Port of Rotterdam Authority, the Ministry of Infrastructure and Water Management, Rijkswaterstaat, the Province of South Holland, the Metropolitan Region of Rotterdam The Hague, the City of The Hague, the City of Rotterdam and ProRail are joining forces to work on the accessibility of South Holland in the Zuid-Holland Bereikbaar project.
- The City of Rotterdam and the Port of Rotterdam Authority are developing the Merwe-Vierhavens (M4H) area into an innovative residential and working area. It will be optimally designed for the innovative manufacturing industry and it will include a mix of homes, culture, hospitality, sports and education.
- The Oostvoornse Meer is an appealing area for leisure activities. It opened in 2022. The Oostvoornse Meer Quality Impulse was made possible in part by financial contributions from the Province of South Holland and the Port of Rotterdam Authority. It involves collaboration with a range of parties such as nature and management organisations, business and volunteers.
- The Port Cyber Resilience Program FERM is an independent organisation. Its goal is to encourage cooperation between companies in the port of Rotterdam and raise awareness about cyber risks in order to become the most digitally secure port in the world. The Port of Rotterdam Authority was one of the founders of FERM.
- Subversion is an increasing problem for the port of Rotterdam. We work with authorities to tackle smuggling and the associated threats and logistical disruption. This is our social responsibility and it is in the interests of integrity.

People and work

- As part of the Human Capital Coalition Energy Transition (HCCE), we have been making preparations with a range of partners in the region for the establishment of a labour market with qualified personnel that will be better adapted to cope with the demands of the transitions.
- With more than sixty other parties from business, education and government, the Port of Rotterdam Authority has signed up to the South Holland Human Capital Agreement, which aims to establish a labour market that will make the best use of people's talents. This alliance introduced the Human Capital Agenda 2.0 in 2022.
- Bridge to Possible is an IT skills project in which Randstad, Cisco, the Port of Rotterdam Authority, Deltalinqs, IT Campus and the City of Rotterdam are teaming up to teach employees and employers the right digital skills to keep up with the digital transition.
- With Deltalinqs and the City of Rotterdam, the Port of Rotterdam Authority is committed to helping children aged 8 to 16 in areas with socioeconomic problems to get a good start on the job market.
- Maritime Match Day is a day when third- and fourth-year Maritime Engineering students at Delft University of Technology can speed date with companies in the port of Rotterdam.
- In 2022, we introduced a new plan of action for diversity and inclusiveness in our own organisation. The new Diversity & Inclusion plan focuses on several target groups. The activities target: gender, age, cultural background, people with a distance from the labour market, people with disabilities and people from the LGBT+ community. With the new plan, we want to communicate better what we are doing to improve diversity and inclusiveness in the organisation. One of the activities in 2022 was the celebration of the diversity week during which employees have the opportunity to attend a range of workshops.

Our social impact

Our social impact and social value have been defined in the Corporate Social Responsibility statement. We want to achieve sustainable growth with our clients and stakeholders and, through our work, contribute to the Sustainable Development Goals of the United Nations. By doing so, we strive to deliver sustainable long-term value creation and take into account the effects on climate & energy, a healthy & safe living environment and people & work, as is required of us by the revised Corporate Governance Code. As a logistics hub and industrial cluster, the port of Rotterdam is strategically and economically important for the regional, national and European economy. The CSR statement provides a summary of how we assume responsibility for our social impact, and lists the relevant Sustainable Development Goals. We make the largest contribution to:



Positive impact

Climate and energy

Energy and CO₂ infrastructure is an indispensable tool for the acceleration of the port of Rotterdam's sustainability and to safeguard the future relevance of the port and industrial complex. We are determined to play our part in making the port more sustainable and aim to achieve an emission reduction of at least 55% by 2030 compared to 1990. The Port of Rotterdam Authority acts as the initiator for the development of the expansion of energy infrastructure for hydrogen, heat and CO₂. We establish connections with partners, provide room for business locations and, where necessary, initiate investments. In addition, we are working with partners to expand our position as a production location in the value chain of future-resilient, sustainable activities.

The Port of Rotterdam Authority is committed to reducing carbon emissions in the port and industrial complex. We are accelerating this process by investing in sustainable solutions in the port, such as Porthos and hydrogen projects, and by facilitating dialogue with and between stakeholders. For example, with our partners in South Holland, we developed the regional hydrogen strategy and we are engaged in the stakeholder dialogue with respect to the Energy Strategy Cluster. The people who work for the Port of Rotterdam Authority are committed and driven to make the port sustainable and achieve the energy transition.

In doing so, we contribute to SDG 7: 'Ensure access to affordable, reliable, sustainable and modern energy for all'. At the same time, the theme relates to SDG 9: 'Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation'. We provide room for future-resilient business activity by investing in physical and digital infrastructure.

People and work

A vital port is an inclusive port that provides direct and indirect employment for all levels of society. We therefore contribute to SDG 8 and SDG 9. The economic significance of the Rotterdam port and industrial complex is considerable. The added value of the Rotterdam-Rhine Estuary seaport region, including indirect backward effects, was estimated at € 24.4 billion in 2021. This is 2.8% of the Dutch gross domestic product (GDP) and there were an estimated 183,004 FTE jobs linked to the Rotterdam-Rhine Estuary seaport region (source: 2022 Port Monitor).

The 'Economic significance of the seaport areas' study published in 2022 shows the added value of the ports in the Rhine and Meuse Estuary area (including Moerdijk and the Drecht towns): 63 billion euros and total employment amounting to 563,800 FTEs. According to the same study, the total added value is 8.2% of Dutch GDP.

Safe and healthy environment

There is a close relationship between the economic and social value of the port and the quality of the living environment. That quality depends on factors such as local nature and biodiversity, noise levels, safety and air quality.



Nature in the port fits in well with the port activities. We work with stakeholders who take a critical look at the condition of nature in the port and how we approach it. Generally speaking, stakeholders appreciate our ongoing commitment. We therefore contribute to SDG 3 and SDG 13. For example, many bird species, such as gulls and also many birds of prey, live (and breed) in the port. They make the most of the quiet and the space. The natterjack toad is a protected species that is present in large numbers in the western port area. Air quality has also improved in recent years. In 2021, the annual average for nitrogen dioxide was $23.1 \mu\text{g}/\text{m}^3$. This is almost the same as the 2020 annual average ($22.9 \mu\text{g}/\text{m}^3$), lower than in 2019 ($26.2 \mu\text{g}/\text{m}^3$) and well within the legal standards.

Safety and security in the port and industrial complex are important for the Port of Rotterdam Authority. Our efforts here benefit shipping, but also local residents, employees in the port, companies and users (including leisure users) of the port area. We want to have zero major nautical incidents in our port and industrial complex. That target was not met in 2022. Regrettably, there was one major nautical incident.

Negative impact

Although we try to minimise the negative effects of our activities, the port and industrial complex does have an impact on the local living environment. Safety and security risks also persist. For example, there was an inland shipping accident with a fatal casualty in 2022. And the risk of a cyber attack that could bring the port to a halt also continues to be a genuine threat.

The margins for industrial noise or restricted and careful management are crucial here. We are looking for a balance so that the port, work, leisure and homes can exist alongside each other. In 2022, the DCMR Environmental Protection Agency received 6,417 complaints about noise in Rotterdam.

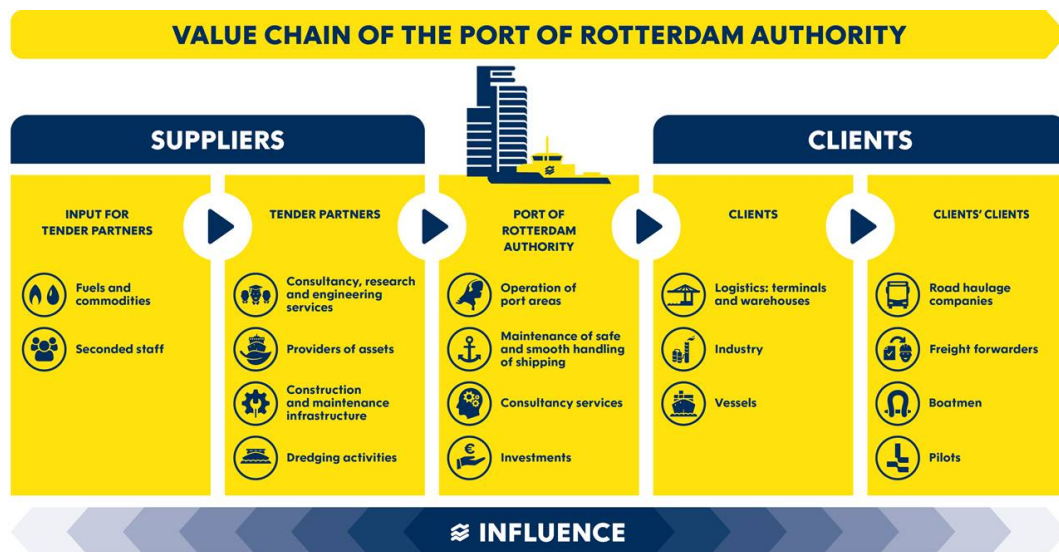
We are working hard to make the port and industrial complex more sustainable. Despite many initiatives, this process is not yet moving as quickly as we would like. Carbon emissions are falling but still not enough. In 2021 (the figure lags one year behind), carbon emissions amounted to 23.5 Mtonnes in the port and industrial complex; the target was 22.8 Mtonnes.

The labour market is tight, making it difficult to fill vacancies. This could lead to delays in the transition to a sustainable port and industrial complex.

Our role in the chain

Our Code of Conduct, in combination with our Corporate Social Responsibility (CSR) statement, guides our actions. That Code describes how we behave with respect to our environment and commits us to the 'Ten Principles' of the United Nations Global Compact (UNGC) relating to human rights and working conditions, environment and anti-corruption. The Code of Conduct applies to everyone who works at the Port of Rotterdam Authority, including, among others, temporary workers and interns. The Code explains in detail how the implementation and monitoring of results is safeguarded and how the Port of Rotterdam Authority approaches stakeholders. That includes the approach to providing information about measures that have been taken and the results. Finally, the Code provides a picture of how the Port of Rotterdam Authority contributes to corrective procedures in the case of malpractice.

Our role means that we have an influence at multiple levels in the chains (including value chains) that are relevant for us. We have an influence in our own organisation, including national and international alliances, as a contract principal and in relation to our clients (primarily in the logistics chain). Most of our own work in the form of investments and investment projects is located in the Netherlands. We also have participating interests and international alliances in, for instance, Brazil and Oman.



In collaboration with contractors and suppliers, the Port of Rotterdam Authority is building up the port and industrial complex into an appealing location for companies and where logistics organisations can transship goods. In turn, these companies and logistics organisations develop the port further. With contractors and suppliers on the one hand, and clients on the other, we are therefore developing a sustainable, modern and smart port.

We have more of an influence on our tender partners (contractors and suppliers) than on direct contacts, and less on their suppliers. Our influence on direct clients is also larger than on our clients' clients.

The Port of Rotterdam is a key hub in global logistics chains. Our clients – established companies and maritime shipping – are part of these logistics chains. As the manager of the port, the Port of Rotterdam Authority has a limited influence on cargo flows. The import and throughput of commodities and their application in production processes take place at the port safely, efficiently and with increasingly clean environmental technologies. In extraction or production areas for commodities elsewhere, or in the transport chains to and from the port, the quality of conditions for people, the environment and nature may not be as high. The Port of Rotterdam Authority is held to account for this to an increasing extent. We look critically at our internal regulations and take practical steps consistent with the ‘Ten Principles’ of the United Nations Global Compact (UNGC).

Human rights and working conditions

We support and respect human rights and we want to ensure that we have no part in violations of those rights. In our Code of Conduct, we subscribe to the ‘International Bill of Human Rights’, (the ‘Universal Declaration of Human Rights’, the ‘International Covenant on Economic, Social and Cultural Rights’ and the ‘International Covenant on Civil and Political Rights’), the ‘ILO Declaration on Fundamental Principles and Rights at Work,’ the ‘OECD Guidelines on Multinational Enterprises’ and the ‘UN Guiding Principles for Business and Human Rights’. We adopted a [human rights policy](#) last year. It sets out our salient human rights issues and describes governance, actions and remedies.

An in-depth study of human rights was conducted for our national and international port operations and our procurement process, taking into account risks of violations in certain geographical areas. This produced a list of risks of human rights issues that are relevant for us. We included the topics on this list in a risk register in which we assess the severity and likelihood of the risks.

The following risks have been prioritised for our procurement activities in the areas of ICT (hardware and software), infrastructure tenders, facility management and consulting services, among others:

- privacy;
- Impact of climate change;
- safe working environment;
- clean living environment;
- fair compensation for work;
- Equality.

The following risks in the area of human rights have been prioritised for our operations in other countries:

- Pecém (Brazil): protection from violence, equality, impact of climate change, safe working environment and forced labour;
- Oman (Sohar): clean living environment, protection from violence, equality, impact of climate change, safe living environment and forced labour;
- Other: equality, impact of climate change and safe living environment

Follow-up actions are in place to reduce risks. Issues that fundamentally affects strategy have priority, as do issues where we have a direct influence. On the basis of the activities in 2022, we have conducted Human Rights Due Diligence (HRDD), and we will conduct an annual reassessment of the severity and likelihood of risks, making adjustments when needed. This is in line with our risk management and control system, which is based on the internationally accepted standards of the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

A range of processes in our organisation safeguard employment rights. In our [Collective Labour Agreement](#) covers matters relating to our employees' rights in the areas of working conditions, fair pay, just living standards, equality, collective bargaining and disability provisions. We also have an [occupational safety policy](#) and [diversity and inclusiveness policy](#). When selecting contractors, we expect the same approach to employment rights and we require a VCA (Safety, Health and Environmental Checklist for Contractors). We reserve the right to monitor our suppliers. This may involve, among other things, safety walks.



Human rights issues may arise in our chains/value chains with respect to matters such as forced labour, child labour and respect for indigenous peoples. We therefore take risk mitigation measures in our departments involved with procurement and international activities, including monitoring and reporting. Starting in 2023, we will determine the responsibilities for policy implementation and embed HRDD processes in the work processes. For example, our departments with international operations will implement a standard human rights roadmap and the Procurement department is working on a code of conduct for suppliers and additional mitigation measures.

If there is a suspicion of malpractice, improper conduct or unethical conduct, employees and third parties can report in various ways. See our [whistleblower protocol](#). In the case of any human rights violations, we take action that is appropriate to the situation and level of involvement. We can take action ourselves to remedy violations, or use our influence to help remedy the situation. In 2022, we received no reports relating to the Port of Rotterdam Authority or our employees.

Environment

A healthy and liveable environment is the basis for the universal rights to life and healthy living conditions. We treat the environment with care, engage in initiatives to raise our level of responsibility and encourage the development and adoption of environmentally-friendly technologies.

By embracing the Green Deal for Sustainable Civil Engineering, we actively look for opportunities in our role as contract principal to improve sustainability in areas including the reduction of carbon emissions, circularity and improvement of air quality during project preparations and operations. These measures will be adopted by contractors in the operational phase. When working with our procurement partners, we ask for the following:

- An Environmental Cost Indicator and the CO₂ value for the project;
- Plan of action for a sustainable construction site;
- ISO 14001 (environmental management).

The carbon emissions from our investment projects in public and client infrastructure have been covered by Scope 3 of the Port of Rotterdam Authority's CO₂ footprint with effect from 2022. Our emission reduction target for fuel consumption is -45% by 2030 (compared to 2019) and -25% for materials.

We exclude parties that do not come up to our expectations. In addition, as a result of changing legislation and regulations, and consumer demand, there may be transition risks for our clients in the port and therefore for the Rotterdam port and industrial complex. The Port of Rotterdam Authority is implementing a range of initiatives to make the port and industrial complex and shipping more sustainable, and therefore to limit these risks:

- We have long-term contracts with our clients. It goes without saying that we respect these contracts. When they are renewed, we have discussions with the client about how sustainability can be included in the agreements.
- We offer discounts on port fees to vessels that score more than a certain number of points on the Environmental Ship Index or to tankers with a Green Award.
- We provide shore-power infrastructure for berthed inland vessels in order to minimise emissions of nitrogen, particulate matter and CO₂, and noise nuisance.
- We encourage the 'Modal Shift': the transfer of container transport from the road to the water and rail.
- We are working with the carbon footprinting expert and platform builder BigMile to develop the Port Emissions Service Platform (HESP). This will put us in a position to help our clients meet the challenge of cutting carbon emissions.
- In 2022, the Maritime and Port Authority of Singapore and the Port of Rotterdam Authority signed a memorandum of understanding for the world's longest Green and Digital Corridor. The goal is to have the first sustainable shipping on this route by 2027.
- The Port of Rotterdam Authority and GoodShipping are jointly campaigning for companies to transport some or all of their sea freight with sustainable fuel.
- Routescanner provides cargo owners with a global, and therefore more complete, picture of door-to-door connections for containers via seaports, inland ports, and rail and road connections. Users can select transportation modes in part on the basis of emissions.

Anti-corruption

We are against all forms of corruption and we expect our employees to prevent fraud and corruption. We have procedures, guidelines for procurement, frameworks and screening procedures for financial control that are designed to prevent and/or detect undesirable conduct. Through a range of training programmes, we create awareness among our employees. We use the European Single Procurement Document for tender procedures.

Our employees may come into contact unintentionally with narcotics-related crime. As part of a package of measures for the management of integrity and security risks designed to protect our employees, we tightened up our screening policy in 2022. In the past, the Port of Rotterdam Authority engaged in 'pre-employment screening' only for new employees; we now reserve the right to conduct 'in-employment screening' for positions with a high risk profile and above. Pre-employment screening is also being extended. This is in line with the GDPR guidelines.

In the area of integrity risks, we have structural measures (regulations, procedures, systems and controls) and cultural measures (awareness, communications and dialogue). All our employees can follow digital integrity and empowerment courses that cover recognition, awareness and the prevention of malpractice. Our employees also attended empowerment courses at the Ethical Port Programme training container.



POLICIES AND RESULTS

Safety and security

Maintaining safety and security in the port and industrial complex is one of our leading priorities. For shipping, but also for local residents, employees in the port, companies and users (including leisure users) of the port area. In addition to nautical safety, this includes safety on projects, ship and environmental safety, flood risk management, subversive crime, safety in the organisation and cyber security. We monitor the 'safety and security landscape' continuously and share our knowledge and expertise about the various subjects.

A major incident may involve considerable environmental damage or a fatal accident. A cyber attack can cause economic damage if terminals, for example, stop working.

Nautical safety

Accidents

We report on the safety of shipping traffic using the Nautical Safety Index (NSI). This is an index which takes the seriousness of incidents into account. In 2022, the NSI was 6.39, which is below the standard of 7.0. In April, the inland shipping vessel *Mar Grethe* capsized on the New Waterway, regrettably with a fatal casualty as a result. Furthermore, a water taxi and a tour boat collided near the Erasmus Bridge on 21 July 2022. In the process, the water taxi was completely submerged. All six people on the water taxi were rescued from the water. The Dutch Safety Board is investigating the accident.

Subversive crime

Subversion and the breakdown of the boundaries between the underworld and legitimate society (often in relation to narcotics) represent an increasing problem for the port of Rotterdam. Tackling subversive crime is a challenge facing society as a whole that, strictly speaking, is not the responsibility of the Port of Rotterdam Authority. However, subversive crime is high on our agenda: we do not want to see it at our port. We are proud of our port's excellent facilities and natural advantages. Unfortunately, criminals also take advantage of them. The port is a logistics hub for drug smuggling in particular. We work with the authorities to tackle smuggling and the associated threats and logistical disruption. This is our social responsibility and it is in the interests of integrity.



We support the business community, industry associations, the City of Rotterdam and investigative authorities such as the police, customs authorities and the Dutch Fiscal Intelligence and Investigation Department (FIOD) in their efforts to combat subversive crime. For example, we assess client designs for business sites that have yet to be established in terms of physical security and we tackle unwanted access with smart technology. By applying an intelligent layer to camera observations, we can identify illegal patterns early and provide optimal support for the dispatcher in the control room. In the 'Know Your Customer' project, we work closely with the Seaport Police and the City of Rotterdam to better assess and/or monitor the integrity of new and/or potential customers.

Occupational Safety

The Port of Rotterdam Authority wants a working environment where everyone is safe and feels safe. We accept only safe and respectful conduct from our employees and everyone who works for us. Open communications with the aim of making improvements are essential here. Our policy is founded on developing and maintaining a proactive safety culture and continuously improving working conditions. The Port of Rotterdam Authority wants to excel here, not only for the sake of our own employees but also in order to set an example for clients, contractors and other stakeholders in the port area.

Going home healthy and safe

The Safety department was established in February 2022. The aim of the department is to transform the ambition of the Port of Rotterdam Authority 'everyone goes home healthy and safe' into concrete safety programmes and a single vision in the field of occupational safety (policy and strategy). The management revised the Health and Safety Policy Statement in 2022. The policy applies to all work and activities that we do ourselves, or that are ordered by or executed on behalf of the Port of Rotterdam Authority.

The safety initiatives in 2022 focused on:

- Designing a central safety management system in which we bring together and anchor instructions and procedures from different departments.

- The development of 'SafetyNow', an incident management tool to ensure that reports and follow-up can consistently contribute to improvement plans. SafetyNow records and analyses reports from employees and tender partners about accidents involving personal injury, near misses, unsafe situations or unsafe conduct, and positive observations.
- The revision of the Risk Inventory and Evaluation (RIE) method for working locations and the introduction of a standard '5xJA' method for 'Last-Minute Risk Analysis'. Roll-out to operational departments will continue in 2023. The method emphasises the policy stating that employees have the right and duty to stop unsafe situations and make changes to the work so that it can continue safely.

Health and welfare

The Port of Rotterdam Authority uses the services of the Arbo Unie in the field of vitality and health. The company doctor plays an important role in sustainable employability and contributes to safe and healthy working conditions. The RIE identifies all health and safety conditions that may affect the physical and mental health of employees and links them to the relevant management measures.

The Human Resources department provides a range of options to motivate employees to work on their own health and vitality. They vary from occupational coaches to company fitness and from mindfulness to sporting events.

If there is a suspicion of malpractice, improper conduct or unethical conduct, employees and third parties can report using the [whistleblower protocol](#).

In 2022, the company doctor diagnosed twelve cases of occupational illness in employees that were covered by the criteria from the Dutch Centre for Occupational Illnesses.

Safe work by our employees on projects

Port of Rotterdam Authority employees are covered by specific safety procedures and instructions. In the case of projects commissioned by the Port of Rotterdam Authority, the legal regulations for the Construction Process in the Dutch Working Conditions Decree apply. As a contract principal, we must be sure that contractors are able to prevent and/or mitigate occupational health and safety risks in the design and operational phases. When adopting preventive measures, we follow an occupational health and safety strategy.

Two aspects of occupational health and safety play a central role in project operations:

- Safety by design;
- Operational safety.

Safety by design focuses on identifying risks in the early stages of a project and eliminating them in the design wherever possible. The resulting architectural, technical and organisational choices are included in the life cycle of the structure in question. All those involved appreciate the active communications between the Port of Rotterdam Authority and its contractors about the residual risks in the switch from design to operations.

Before operations begin, the safety aspects of construction are set out in Health and Safety Plans. The Port of Rotterdam Authority organises safety walks and inspections in order to make systematic checks on safety agreements with the contractor, and a practical and proactive dialogue about safety has been established.

Employee participation

The Works Council of the Port of Rotterdam Authority has a Safety, Health, Welfare and Environment committee with a monitoring and advisory role with respect to the health and safety policy. The committee has quarterly consultations with the Human Resources and Safety departments about the various occupational health and safety issues covered by the responsibility of these two departments.

The 'safety minute' as a regular component of team meetings encourages communications about safety and employees are actively involved in current safety topics or dilemmas.

Safety awareness

We have a culture programme, 'Take Time for Safety' to train our people in safety leadership and what it means to literally take the time to prepare the work properly. All employees receive general safety training when they join the company. Depending on their position, employees receive additional vetting and training.

In 2022, we also developed a number of in-house courses to enhance raise employee safety awareness, including the 5xJA course for risk recognition and a course centring on our 'Life Saving Rules'. These are rules about the work-related hazards that involve the highest risk of serious accidents.

Safety performance

We assess the safety of our employees on the basis of the Lost Time Injury Frequency Rate (LTIFR). We report to the Executive and Supervisory Boards on a quarterly basis about the results. There was one accident with four days of absence in 2022. Our standard for the LTIFR is a maximum of 1. At 0.43, performance once again (2021: 0.42) met that standard.

We also report quarterly about accidents at contractors working on our projects. On one of the projects, we saw a number of near misses with the potential for serious injury. At the management level, agreements were made with the contractor consortium in this case. 'Safety stand-downs' were implemented and safety capacity was added. This led to a number of initiatives on the construction site that made better proactive management possible. The number of accidents fell significantly after that.

Safety on projects

The main focus on the operational side of projects is on getting everybody back home safe and sound at the end of the day. During the course of a project, from the launch of the project to completion, safety is monitored in an integrated way. It is therefore part of our planning, project management methodology and project organisation

Safety by design

We focus on identifying risks in the early stages of a project and eliminating them in the design wherever possible in consultation with a safety expert. During the tender process, preconditions are stated that are crucial in terms of completing the project safely. All those involved appreciate the active communications between the Port of Rotterdam Authority and its contractors about these risks in the switch from design to operations.

Safety on the construction site

The project organisation complies systematically with the site safety agreements, which are part of the management information for the project board. The agreements are stated in safety plans and practices that are anchored in the execution of the projects. The project team and safety experts work closely with the contractors here.

The Port of Rotterdam Authority organises safety walks in order to make systematic checks on safety agreements with the contractor, and a practical and proactive dialogue about safety has been established. Our major concern was the number of near misses that could have resulted in serious injury. By means of active follow-up and a joint approach, the number of actual injuries did not increase significantly.

On the Safety Platform, we consult twice a year with Bouwend Nederland and the Association of Hydraulic Engineers about the practicalities of improving safety on construction sites.



Climate adaptation and flood risk management

The latest studies indicate that global temperatures may rise by more than 2.0°C (since the pre-industrial era) by 2100 if we fail to reduce global greenhouse gas emissions. We already seem to be experiencing the first effects of climate change worldwide. In Rotterdam, we can see this in the summer in the form of low water levels and prolonged drought.

Climate change involves several risks, which can be categorised as physical risks and transition risks. In our role as the port authority and port manager, we consider both types of risk in our operations. The physical risks of climate change affect our port infrastructure and assets, as well as those of our clients. We consider them in our operations to safeguard the quality of port infrastructure and accessibility. Physical risks can also threaten the habitat of the fauna and flora in the port. In addition, they can affect cargo flows and port accessibility.

A multidisciplinary team from the Port of Rotterdam Authority meets annually to assess the potential short-, medium- and long-term consequences of climate change, and to identify and prioritise potential effects. Here, we consider the impact on transport flows and the business climate of the port area, as well as the impact on the performance of our core tasks. We assign the various topics to ‘ambassadors’ and, where relevant, plan follow-up. We communicate about the findings of this group on an annual basis. Where necessary, we keep the Executive Board informed about developments relating to specific climate-related risks.

The prioritisation of these consequences is based on the impact on the port of Rotterdam’s business climate or the activities of the Port of Rotterdam Authority. It depends on the time frame and probability of the consequences occurring. The Port of Rotterdam Authority is prioritising and focusing on the following short-, medium- and long-term climate topics:

- a. Sea level rise: increase of flood risk for businesses and public infrastructure;
- b. Salt intrusion: availability of freshwater supplies for industry;
- c. Extreme rainfall: safe availability of infrastructure;
- d. Low river levels: access to the hinterland for inland shipping;
- e. Extreme wind: safe mooring of ships;
- f. Extreme weather in relation to the ongoing limitation of space in the North Sea.

Flood risk management

The most pressing climate risk for the Port of Rotterdam Authority is sea level rise. The latest climate scenarios (in the ‘KNMI Climate Signal ‘21’) take a sea level rise of 30 to 120 centimetres by 2100 into account. Sea level rise may have an increasing impact on flood risk management in the port in the long term.

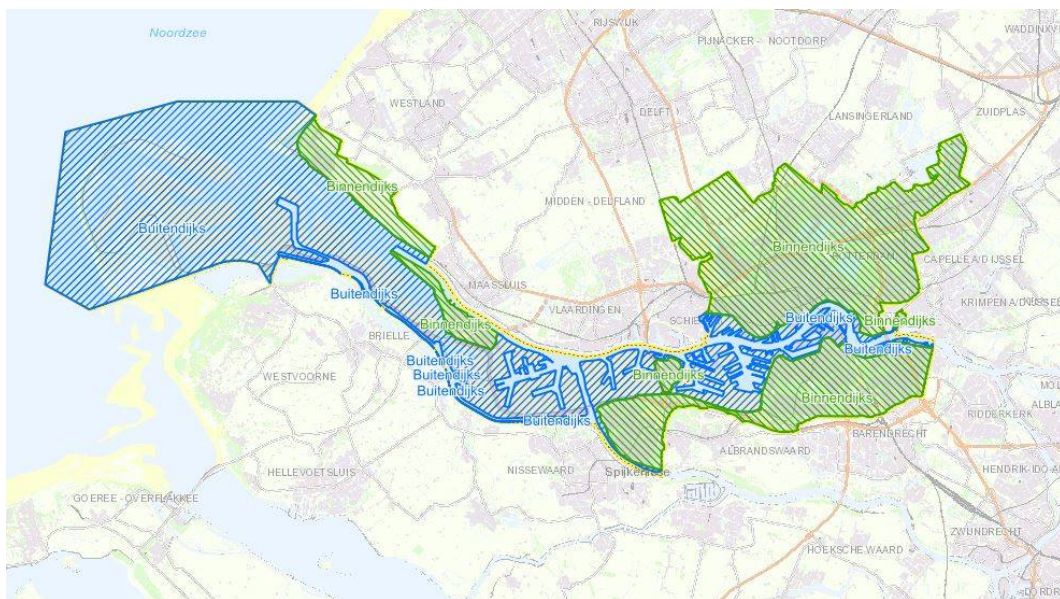
Uniquely, the port of Rotterdam is located outside the dikes and it has multiple open connections to the sea. Port areas such as the Maasvlakte 2 are built relatively high above sea level and are partially protected by storm surge barriers. Businesses will be affected by flooding to some extent only when weather conditions are extreme. Even so, we are working on the prevention of incidents on land and water. On the basis of the ‘Flood Risk Management Programme’, the Port of Rotterdam Authority is directly involved in the ‘Rhine Estuary-Drecht Towns Delta Programme’ and the ‘Sea Level Rise Knowledge Programme’.

The Port of Rotterdam Authority, as the developer and manager of the port, is responsible for adequate flood risk management in public areas and the accessibility of the port when water levels are high. Due to the location of the port of Rotterdam outside the dikes, businesses and asset owners bear the risks of potential water damage themselves. They are also responsible themselves for taking steps to limit that damage. It is therefore important for companies in the port to receive adequate information. In 2022, we took steps to make companies aware of these risks and their own responsibility in this respect and we jointly developed a range of adaptation strategies.

We agreed with the City of Rotterdam to take a range of measures over time to maintain the capacity of the port and port processes to cope with high water. Our projects, asset maintenance and contracts (including renewals) provide the appropriate moments for the assessment of these measures. The ‘Flood Risk Management Core Team’ monitors developments, and formulates and implements policy.

We drew up adaptation strategies for all port areas. It is known when a risk may occur and what the preferred measures are. We transformed these strategies into an implementation programme for our clients and ourselves. The strategies developed are available internally for our staff and they have been presented in our online 'PortMaps' system. This also makes clear the extent to which sea level rise may affect an area, when that impact may occur and which measure is most effective. We developed an [information product](#) for external parties in 2022 and all the adaptation strategies for the specific areas, including flood probabilities, have been posted on the Port of Rotterdam Authority's [website](#). The site also contains an overview of about fifty measures that companies and asset owners can take to improve flood risk management. We have three measures to ensure that we grow in line with climate change: preventive measures, spatial adaptation and crisis management.

We anchor flood risk management in project advice, in project management and in maintenance programmes. We conduct tests in all projects relating to flood risk management. If we find that the project involves aspects relating to flood risk management, the project team looks at the size of the effect, when it may occur and which measures are most effective. Where necessary, the 'Flood Risk Management Advisory Team' provides recommendations about the concrete application of measures on projects. In addition, it also anchors flood risk management in the issuance of new client contracts and in lease contracts for commercial properties.



Areas inside (green) and outside (blue) the dikes in the Rotterdam port and industrial complex. Source: Gisweb gemeente Rotterdam

Other actions relating to physical climate risks

We are engaging in a range of actions for the other prioritised climate risks. Examples include the establishment of programmes on the lines of the 'Flood Risk Management Programme', additional studies or efforts to establish alliances.

We monitor the climate scenarios published by the Royal Netherlands Meteorological Institute (KNMI) that look ahead to 2050 and 2100. The strategies can grow adaptively and flexibly in line with new knowledge about the consequences of climate change such as accelerated sea level rise. When climate scenarios indicate faster flood risks, we take this into account in the measures we implement.

The Port of Rotterdam Authority monitors climate-related risks relating to the quality of the port infrastructure and any increase in the risk of incidents on land or water.

Cyber security in the port and industrial complex

Cyber security is a prerequisite for the proper functioning of the nautical and logistical processes and the further digitalisation of the port. In 2022, the Dutch security services reported that organised cyber crime is continuing to increase. As a part of the country's vital infrastructure, the Port of Rotterdam Authority also takes cyber campaigns into consideration that may result in disturbance and disruption. Developments in the world, such as the war in Ukraine, are generating increasing threats to our port. In response, we have tailored the security of the ICT and OT (Operational Engineering) systems to the current threat level and to the level appropriate for a world port like Rotterdam.

In 2022, with our partners (the police, Deltalinqs, the City of Rotterdam, Rhine Estuary Safety Region, the DCMR Environmental Protection Agency, and the Province of South Holland), we took steps to reach out to more companies in the port and industrial complex and get them to join FERM (the Port Cyber Resilience Programme). This was all done with the aim of enhancing resilience to cyber crime inside and around the port and industrial complex, and reducing the impact in the event of an incident.

Connecting city and port

In close collaboration with stakeholders and clients, the Port of Rotterdam Authority is developing into a leading, sustainable port. During this process we are taking the local environment into account. That means growth, but balanced growth. The Port of Rotterdam Authority is a socially committed organisation that wants to make a contribution across the spectrum to the port and industrial complex, and to the liveable city of Rotterdam and its residents. We commit fully to that role with pride every day. It is important for the port for the standard of living in the region to be high. We want to minimise any negative effects that the port may have on the surrounding area. At the same time, we encourage the positive effects on the economy and employment.

We believe that adaptability, enough space and a clear strategy focused on innovative capacity are important. As are the widening of the portfolio and the strengthening of the business climate. All with the focus on further developing and renewing the Rotterdam port and industrial complex, the city of Rotterdam and the region. The main objectives of the Port Vision are:

- Economic transition: the digital, energy and raw materials transitions, and changing trade flows;
- Social transition: changes in professions and skills;
- Attractive region: compact, competitive, healthy and green.

An optimal business climate with room for transition

We are committed to working with our stakeholders to create an optimal business climate for businesses, employees and local residents. The focus here is on the quality of infrastructure and business parks, and a healthy and attractive living environment. We offer knowledge, provide space for development, safety and accessibility, and help with permit applications.

An optimal business climate cannot be taken for granted. At present, the limitations associated with nitrogen emissions are having an effect. More generally, we note that the available physical and environmental capacity for the port of Rotterdam is a scarce resource. For instance, we need space for sustainable business activity and the development of clean energy technologies. Our activities in the field of hydrogen are a good example of this. Space continues to be needed for optimal accessibility.

Changes in the market, the energy transition that is required, and the housing challenges in the city and region require a healthy dialogue. The adequate availability of well-qualified personnel continues to be an important precondition for new companies to locate in our region. That requires a wide range of training, and particularly vocational training, but also an appealing residential and living environment. Residential areas close to the port area affect the space available for the port to develop, while the port also affects the residential and living environment in those areas. In collaboration with the City of Rotterdam, we are redeveloping the Merwe-Vierhavens (M4H). This is an exceptional city port undergoing the transition to a new maker district where innovative businesses in the circular sector, energy transition and smart mobility contribute to employment and go hand in hand with new housing.

We acquire our 'license to operate' by working intensively with the locality, governments, companies, knowledge institutes and NGOs. In this way, we can contribute to the creation of economic and social value for the city, region, the Netherlands and Northwest Europe.

International port cooperation

The Rotterdam port and industrial complex has a sound national and international reputation. The Port of Rotterdam Authority uses its knowledge and expertise internationally to further strengthen this reputation, to attract companies, to advise strategic parties and to cement our international network through participation.

Sohar Port and Freezone, Oman

Sohar Port and Freezone is a 50-50 joint venture between the Port of Rotterdam Authority and the Omani government. Sohar Port and Freezone develops and manages the port of Sohar. The port throughput rose to a record 77 million tonnes (11.3%) in 2022 compared to 2021. Sohar Port and Freezone expanded in 2022 with 67 hectares of new operations, including the expansion of Steinweg's local terminal (+29 hectares.).

In addition to the expansion of the port complex, energy transition and digitalisation are essential focal points for future development. Sohar Port and Freezone actively contributed to the plan development for the energy transition in Oman, with a national ambition of Net Zero by 2050. Oman's ambitions provide opportunities for Sohar to make its existing industry more sustainable and expand the port with new activities related to the energy transition. A good example is the cooperation with Jindal Shadeed and Hydrogen Rise for the development of Green Steel production in Sohar, as announced in 2022. Sohar is also working on the further digitalisation of port operations and the logistics sector. The Rotterdam digital application Routescanner was therefore implemented in Sohar in 2022. Routescanner provides clients with an overview of the most efficient shipping routes to and from Sohar.



Sohar Port and Freezone

Pecém, Brazilië

Pecém is a 30/70 joint venture between the Port of Rotterdam Authority and the state of Ceará in Brazil. The Rotterdam participation in the port of Pecém offers opportunities for international trade flows and an investment opportunity for clients who are active in the port of Rotterdam and in the energy transition. These objectives are in line with our international policy.

After the record year of 2021 (22.4 million tonnes), throughput fell to 17.1 million tonnes in 2022, mainly because of the large amounts of rain, which meant that Brazil's hydropower plants supplied a lot of electricity to the grid in 2022. This led to a fall in coal imports through Pecém for power generation.

In 2022, the ambition to develop a hydrogen cluster took further shape with contractual commitments from international investors for feasibility studies. The development of wind farms offshore north-east Brazil opens up opportunities for Pecém with the construction of these farms and the logistical services in the subsequent production and maintenance phase.

Contracts were signed in 2022 for the feasibility studies for two tank terminals: fuels and LPG, as well as their bio-counterparts. This marks a further step in the development of Pecém as a potentially renewable energy port.



Port of Pecém

Energy transition offers abundance of opportunities

The energy transition we are driving is leading to the sustainable economic renewal of Rotterdam's port and industrial complex, prosperity for the region and abundant opportunities for existing and new businesses. The rich portfolio contains more and more promising projects, giving us an increasingly prominent role as a pioneer in the energy transition. Developments are moving quickly, particularly in the field of hydrogen. In 2022, numerous projects moved off the drawing board into actual development. Good examples are developments related to Shell's Holland Hydrogen I and preparations for the construction of hydrogen import terminals. The sustainable portfolio is developing rapidly, not least in response to recent geopolitical developments.

Our efforts on the road to a climate-neutral port focus on our own footprint, reducing emissions in the port and industrial complex, cutting carbon emissions from the transport sector, contributing to national reduction targets and our globally leading role as a location for the energy transition.



Our carbon footprint

Our role as a pioneer in the energy transition and accelerator of sustainability in the port means that we ourselves want to be climate-neutral as soon as possible. Accordingly, our activities do not contribute to increases in greenhouse gases in the atmosphere. Our carbon footprint was reduced by 47% between 2019 and 2022. This was achieved mainly by scaling up the use of biofuel in our vessels, incentives for the use of public transport and bicycles for commuting, and a new mobility policy. Our footprint was larger than in 2021. Because of COVID-19, less electricity was used at the Cruise Port Terminal that year and our employees travelled less by air, road and on public transport.

In ktonnes	2022	2021	2020	2019	2018
Scope 1	2.5	2.5	2.9	3.1*	4.5
Scope 2	0.1	0.1	0.1	0.1	0.1
Scope 3	0.6	0.2	1.0	2.9	2.7
Total	3.2	2.8	4.0	6.1	7.3
Emission intensity (tonnes CO ₂ /€ mln in revenue)	3.9	3.6	5.3	8.6	10.3

We manage our footprint in line with the ISO 14064 standard and, in general, we apply the principles from the GHG (Greenhouse Gas) protocol. In 2022, we used the same scope classification as in previous years. The footprint was calculated for the 2022 reporting year for the Port of Rotterdam Authority, including Cruise Port Terminal B.V. (scope 2). To calculate emissions, [publicly available \(Tank To Wheel; TTW\) emission factors](#) are multiplied by consumption for the relevant reporting year.

- Scope 1 includes direct emissions from the consumption of fuels for lease cars, operational vehicles and vessels, and the heating of our own buildings.
 - Emissions excluded from the scope – so-called Well To Tank (WTT) emissions – are emissions released during fuel production. Total WTT Scope 1 emissions amounted to 1.0 ktonnes; of which 0.9 ktonnes came from fuels for vessels. Our vessels run on biofuel (hydrotreated vegetable oil, HVO). TTW emissions for biomass use are very low.
- Scope 2 includes indirect emissions related to the use of energy and district heating. This covers the energy consumption for operations and structures managed by the Port of Rotterdam Authority such as bridges, lighting for buildings and public lighting. Scope 2 also consists of electricity consumption and district heating for leased offices and the Cruise Port Terminal.
- Scope 3 includes the carbon emissions resulting from business travel by air and commuting by employees (by car and public transport). We offset our air travel and emissions from our vessels until we achieve carbon neutrality as soon as the data for emissions are available).

Emissions for scope 1, 2 and 3 are based on CO₂ equivalents. This means that other greenhouse gases, such as methane and sulphur hexafluoride, are included here after conversion into CO₂ equivalents.

The scope 2 emissions presented are calculated using the ‘market-based method’ recommended by the GHG Protocol. The market-based method determines emission factors by type of energy source actually purchased. This provides a clear picture of the purchasing of energy sources with green certificates to which lower emissions are attributed. The categories of energy sources purchased by the Port of Rotterdam Authority are electricity and district heating.

The alternative ‘location-based method’ determines an emission factor on the basis of the region’s energy mix. Under this method, the estimated scope 2 emissions amount to 3.4 ktonnes.

Science-based targeting

To objectively determine the ambition level of our greenhouse gas reduction targets for the years ahead, we use the science-based targeting method, which is the international standard for corporate climate targets. Science-based targets provide a thorough analysis of emissions and reduction plans. The relevant guidelines serve as a basis for the broadening of our carbon footprint for the years ahead. That is because reduction targets have now also been formulated for upstream scope 3 emissions from our civil engineering contracts and for downstream scope 3 emissions from shipping. The new reduction targets have been formulated as follows:

Emission category (GHG protocol)	Description	Reduction % 2019-2030
Scope 1 + 2	Vessels, vehicles, purchased electricity and district heating	-/- 90%
Scope 3	Air travel, commuting	-/- 60%
Scope 3	Contractor assignments (fuels)	-/- 45%
Scope 3	Shipping	-/- 20%

We have selected 2019 as the baseline because emissions for 2020 and 2021 were not representative as a result of COVID-19.

In September 2022, the Science-Based Targets initiative (SBTi) validated our objectives for the reduction of greenhouse gas emissions by 2030 as science-based targets. We are exceptionally proud of that. It has been independently confirmed that our targets are in line with a maximum of 1.5°C warming and that they contribute to international climate goals. You can read on our [website](#) how we plan to achieve the ambitious reduction targets.

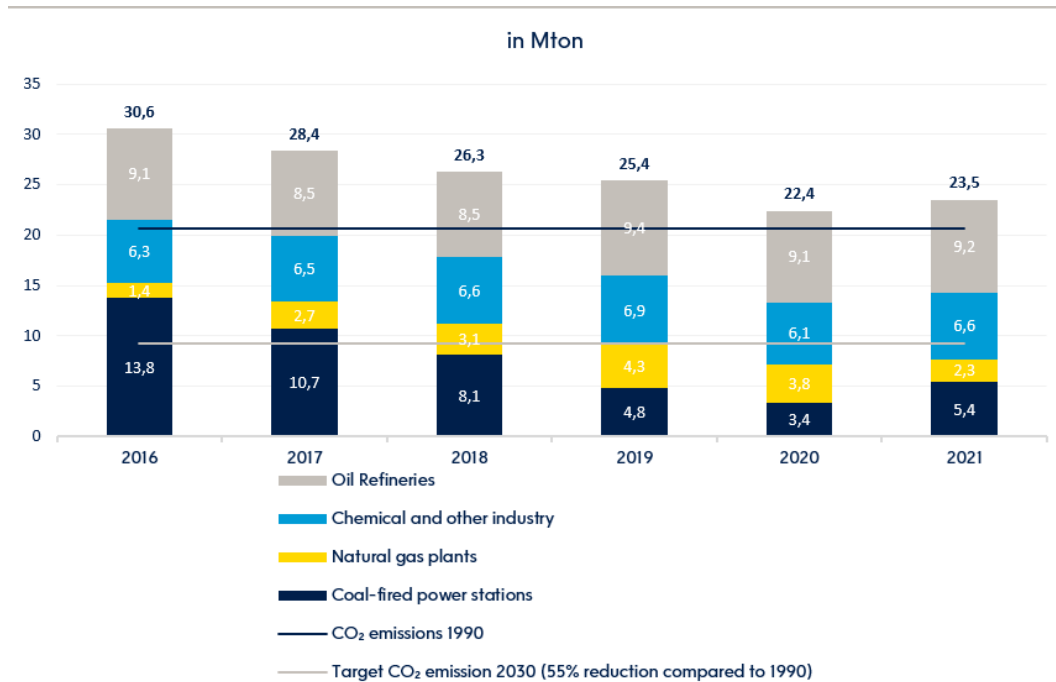
Emission reduction in the port and industrial complex

The European climate legislation package 'Fit for 55' and the coalition agreement of the Rutte IV coalition raised the national and international climate targets. The goal is a reduction in carbon emissions of at least 55% by 2030 (compared to 1990), with the policy targeting 60% reduction. We want to speed up and bring Rotterdam's port and industrial complex in line with these climate goals and climate neutrality by 2050.

As an indicator of sustainable business in the port, we monitor carbon emissions in the port and industrial complex. The port's emissions are the sum of emissions from industry (refineries and chemical plants), power plants (gas and coal plants), terminals, waste incineration, utilities and other industry. We measure annual carbon emissions and compare them with the target for the year in question. Our target for 2030 is a 55% reduction in carbon emissions in the port and industrial complex, the equivalent of a reduction of 11.3 Mtonnes compared to 1990. This target is based on the Dutch climate agreement of a reduction of 55% by 2030.

The reported figure lags a year behind because it takes time to calculate emission figures. In the case of 2022, therefore, we report on the figure for 2021. For 2021, the target for absolute carbon emissions in the port and industrial complex was 22.8 Mtonnes. The actual carbon emissions of the port and industrial complex in 2021 amounted to 23.5 Mtonnes and we therefore did not reach our target for this KPI. Emissions were 2.9 Mtonnes above 1990 levels (20.6 Mtonnes). The increase in carbon emissions was mainly attributable to the two coal-fired power plants on the Maasvlakte, which together emitted 2.4 Mtonnes more (+80%). One of the coal-fired power plants had been taken out of production in 2020 and it was started up again. The other coal-fired plant produced nearly 20% more in 2021 than in the previous year. This was offset by a decrease of 1.5 Mtonnes in emissions from the three gas-fired plants (-40%). The sharp increase in gas prices over the course of 2021 meant that coal-fired generation was cheaper.

We expect the increase in emissions to continue in the years ahead. Geopolitical developments play an important role in this respect. In June 2022, the current Dutch government decided to temporarily suspend the 35% production cap. The coal-fired power plants decided to increase production until 2024 in order to cope with the gas crisis. No fall in carbon emissions is expected until at least 2024. The graph below shows the evolution of carbon emissions in recent years in the port of Rotterdam compared to 1990.



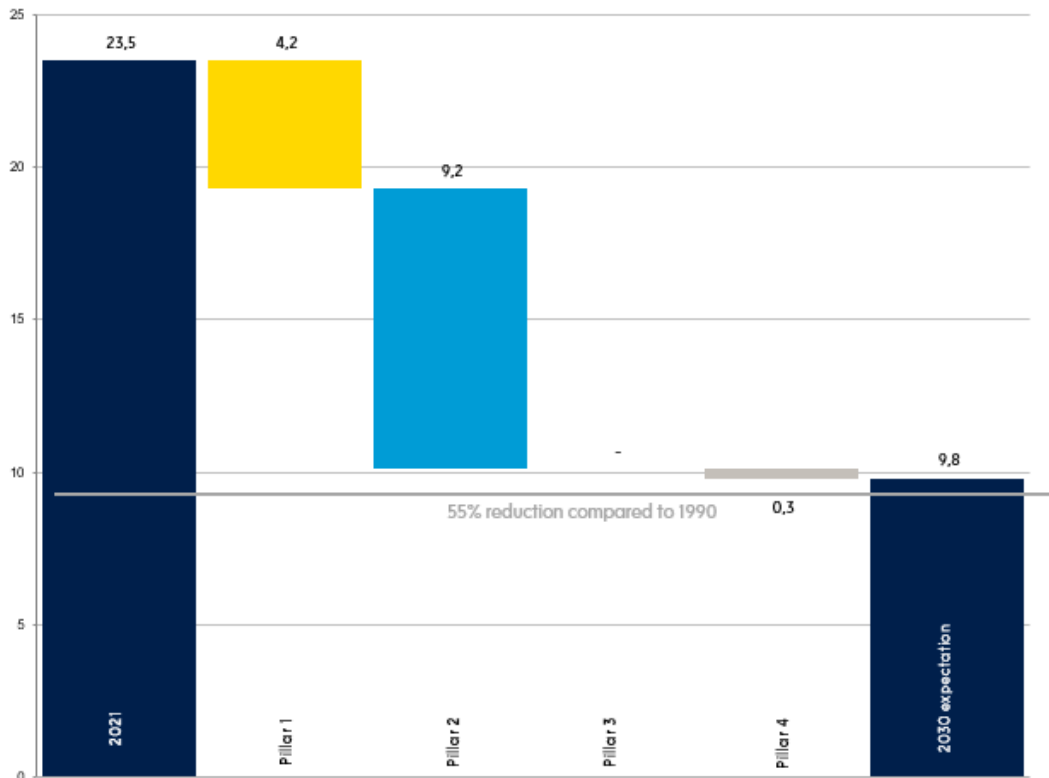
The port of Rotterdam has an ambitious programme for the reduction of carbon emissions. Ongoing projects in areas including CO₂ capture and storage, electrification, hydrogen and the production of clean fuels could together result in a total reduction in carbon emissions of 13.7 Mtonnes in the port. That is almost 20% of the total Dutch target for 2030. If we also consider the effects outside the port and industrial complex, this percentage will be even higher. We are working hard to achieve that goal.

Strategy for a sustainable port based on our four pillars

The Port of Rotterdam Authority is involved in numerous initiatives that are intended to result ultimately in a successful energy transition. We are proud of the progress made on the projects and optimistic about the chance of success. The strategy for a sustainable port is based on four pillars.

The chart below looks ahead from 2021 to 2030 at the expected carbon reductions in our port and industrial complex.

We provide a description below of the projects that are important to achieve those carbon reductions.



Pillar 1 - Efficiency and infrastructure

The first pillar relates to the implementation of efficiency measures and the construction of infrastructure. Residual heat will be used to heat homes, commercial buildings and greenhouses. CO₂ will be captured and stored under the North Sea. These developments will require a lot of additional infrastructure such as pipelines and cables. The Port of Rotterdam Authority develops projects with others.

One example is Porthos:

Energie Beheer Nederland (EBN), Gasunie and the Port of Rotterdam Authority want to establish a basic infrastructure for the collection and transport of CO₂ in the Rotterdam port and industrial complex for storage in depleted gas fields in the North Sea. Porthos – the Port of Rotterdam CO₂ Transport Hub & Offshore Storage – will, over a period of fifteen years, store about 2.5 Mtonnes of CO₂ annually from the Rotterdam companies Air Liquide, Air Products, ExxonMobil and Shell under the North Sea. That is more than 10% of the 2021 emissions from the Rotterdam port and industrial area. Porthos will therefore make a genuine contribution to the climate goals.

In November 2022, the Dutch Council of State made an interim ruling on the use of the legal construction exemption for Porthos. This ruling was that the construction exemption cannot be used, and this has led to a delay in the project. Despite the permit delay, significant progress is also being made. The partners in the Porthos project decided to make preliminary investments in long-lead items in 2022. These are materials that have to be ordered in good time to minimise project delays.

Pillar 2 - A new energy system

This pillar focuses on transforming the energy system. Instead of using oil and gas for heating, industry will switch to electricity and hydrogen, preferably green hydrogen. This will require large amounts of affordable electricity from sources like wind and solar. The Port of Rotterdam Authority is pushing for the change required.

One example is hydrogen:

The Port of Rotterdam Authority's hydrogen vision is based on a series of international studies. The basic assumption is that about 18 million tonnes of hydrogen will be imported by Rotterdam in 2050, with local production accounting for 2 million tonnes. A large proportion of this hydrogen arrives in Rotterdam on ocean-going vessels. Further processing takes place here, and there is throughput to other countries. It is important for Rotterdam to have substantial local production facilities in addition to imports, primarily to establish security of supply. Rotterdam will therefore be an international hub for the production, import, application and throughput of hydrogen to other countries in Northwest Europe. This means that Rotterdam will continue to be an important energy port for Northwest Europe in the future. That is why we are working with a range of partners to develop the hydrogen conversion park on the Maasvlakte for the production of green hydrogen. There is room here for four hydrogen plants with a total of about 1 GW of electrolysis capacity.

In addition, we are creating space for even more hydrogen plants. These conversion facilities are important for the energy transition of the port and a great success for the efforts of many colleagues at the Port of Rotterdam Authority.

Pillar 3 - A new commodity and fuel system

This pillar involves replacing fossil fuels and commodities. That can be achieved by using biomass, recycled materials, green hydrogen and CO₂. The Port of Rotterdam Authority is actively looking for companies that contribute to a circular economy. As Europe's largest port and the commodities cluster of the Netherlands, Rotterdam can make a major contribution to the commodities transition. We are collaborating successfully with many regional and supply chain partners to develop new, circular value chains.

An example is the Neste biorefinery, a new biorefinery on the Maasvlakte near Neste's existing plant. The refinery will primarily produce sustainable aviation fuel for aviation. The current capacity of the plant is 1.4 million tonnes. The investment of about 1.9 billion euros will almost double this amount to 2.7 million tonnes. Half of that is sustainable aviation fuel. This is a development that we are proud to host in our port.

Pillar 4 - Making logistics chains more sustainable

As a major logistics hub in Europe, the Port of Rotterdam Authority, working with parties in the chain, is leading the way in making transport more sustainable on the basis of efficiency, new sustainable fuels and international alliances for carbon-neutral transport.

One example is a green corridor for sustainable and efficient shipping:

The Maritime and Port Authority of Singapore and the Port of Rotterdam Authority signed a memorandum of understanding for the world's longest Green and Digital Corridor in 2022. This was an important step for both parties. The goal is to have the first sustainable shipping on this route by 2027. The two ports have agreed to establish a broad coalition of shippers, fuel suppliers and other companies to collaborate on possible solutions for the use of low- and zero-carbon fuels. We also signed an agreement with the Gothenburg Port Authority to support sustainable shipping between the two ports.

Healthy living environment

The port and industrial complex requires an appealing local area where companies want to invest and where people want to live and enjoy their leisure time. There is therefore a close relationship between the economic and social value of the port and the quality of the living environment. That quality depends on factors such as local nature and biodiversity, noise levels, safety and air quality.

We drafted a [Nature Vision](#) that includes a differentiated approach and measures for projects in order to safeguard the balance between nature and the port area. In the long term, we want to have an appealing location where businesses are eager to locate and where people like to have their homes and leisure activities. We consult with our stakeholders to this end. We are working on an appropriate goal for this theme.

Local air quality

The DCMR Environmental Protection Agency reports annually on air quality. We see the annual average for nitrogen concentration (NO₂) as an indicator that we use to establish a picture of the air quality in the residential area in the immediate vicinity of the port and industrial complex. The report 'Air in figures 2021' (figures lag one year behind) from DCMR shows that this concentration was 23.1 µg/m³ in 2021 (2020: 22.9 µg/m³). The trend was significantly affected by the COVID-19 crisis during the past two years.

Port noise management

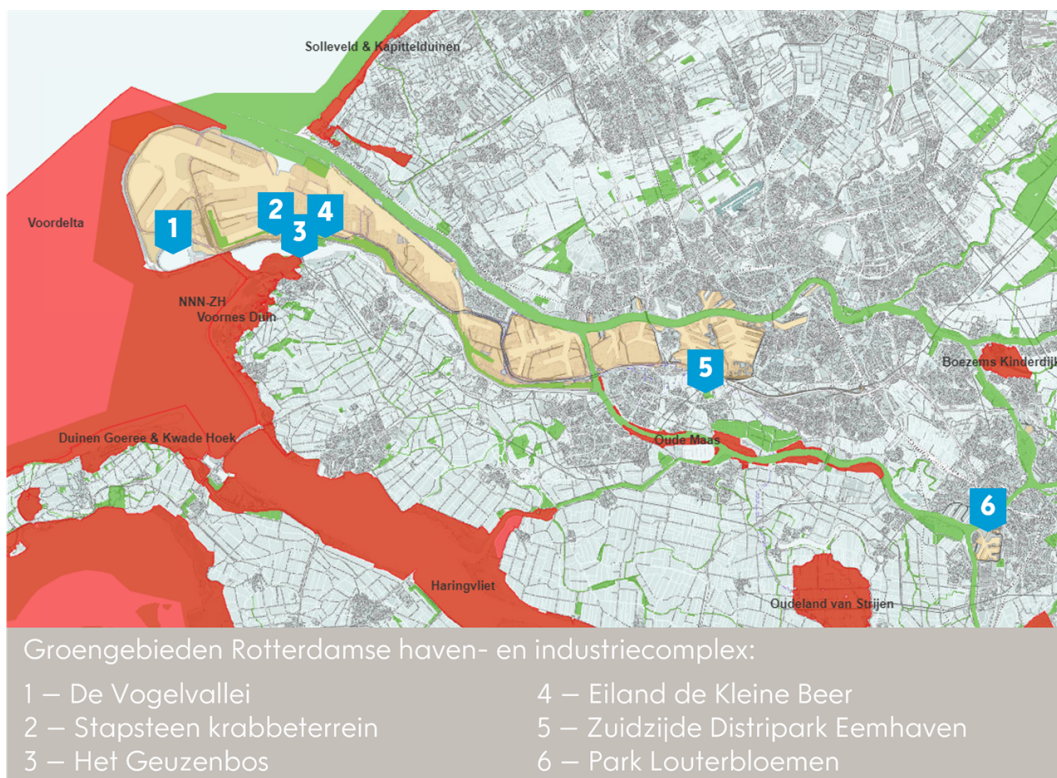
The margins for industrial noise are restricted and careful management is important here. The Port of Rotterdam Authority is responsible for managing the noise budget and assigning it to clients. DCMR sets the noise budget in companies' permits on behalf of the Province of South Holland and the City of Rotterdam. DCMR also checks companies' acoustic surveys and whether a company complies with noise legislation and regulations.

The City of Rotterdam has decided not to proceed with the Facet Zoning Plan for Noise (FBG) project. Noise management and the noise margins for the Rotterdam port and industrial area will be set out in a thematic environmental plan under the Environment Act, which is expected to take effect on 1 January 2024. It has been agreed that this plan will be adopted by the Rotterdam City Council no later than December 2024. In the meantime, in collaboration with the City of Rotterdam and the Province of South Holland, a long-term monitoring programme has been launched to learn more about the noise produced by berthed ships. Under the name ESI Noise, the Port of Rotterdam Authority will give shipping a financial discount if it is made clear how much noise a vessel produces when it is berthed.

Nature in the port

There is a wide range of nature in the port. Some can be seen in the film *Wild Port of Europe*, which has been on show in cinemas since 20 October 2022.

There are more than 6,000 hectares of issuable land for customers in the Rotterdam port and industrial complex. They are used for the production, manufacturing and transshipment of dry and liquid bulk, containers and break bulk. There are several protected areas around these locations: Natura 2000 areas and areas with important natural values in the Netherlands Nature Network (NNN). The figure below shows these protected areas (Natura 2000 and NNN).



Formal nature areas in the Rotterdam port and industrial complex (yellow), and the location of protected natural areas Nature 2000 areas (red) and Netherlands Nature Network (green)

The Port of Rotterdam Authority engages in a range of activities that have the potential to impact nature and biodiversity:

- Issuing land to business: loss of habitat, disturbance as a result of operations;
- Infrastructure construction: loss of habitat, disturbance as a result of operations, limited nitrogen deposition on adjoining nature areas, spread of invasive exotic species;
- Dredging work in the port or outside the port for maintenance (maintaining the depth of port basins and waterways) or the construction of berths and port basins: turbidity and nitrogen deposition on adjoining nature areas.

We make efforts to allow nature in the port to coexist well with port activities. The legal requirement is that activities in and adjacent to Natura 2000 areas must not significantly affect the conservation objectives for these areas. Activities in the NNN are restricted by spatial planning legislation; there are no statutory limitations on activities adjacent to the NNN. Safeguards for protected species are provided through the application of the 'protected species management plan', which makes it possible to manage the populations of protected species at the level of the entire port and serves as the basis for the application of mitigation measures to prevent effects. The activities of the Port of Rotterdam Authority therefore have no irreversible long-term negative impact on species or nature areas.

A number of areas have been established within the confines of the Rotterdam port and industrial complex as nature areas or natural terrain. These areas can be seen in the figure above and they are managed in line with specific ecological targets. The Port of Rotterdam Authority has some areas in leasehold. We arrived at agreements with the parties involved about the responsibility for management and the general approach. With the aim of improving nature, the Port of Rotterdam Authority is a partner in the regional 'River as Tidal Park' programme, which aims to make the tides of the tidal rivers in the Rotterdam-Rhine Estuary region more natural and 'approachable'. The protected and endangered species in the Rotterdam port and industrial complex are monitored annually.

Nature conservation in 2022

We engage in a range of concrete actions to improve nature in the port. For example, we have started setting up sites where gulls can nest in peace and quiet while not being a nuisance for the businesses in the port. We also pay particular attention to biodiversity when building infrastructure in the port. For example, we installed concrete blocks in the Amaliahaven quay wall in two locations that act as artificial vertical reefs and therefore encourage underwater biodiversity.

We also pay attention to the aquatic environment. In 2022, ARK Foundation discovered wild, flat oysters in the port of Rotterdam. This year, the foundation 'caught' some of these oysters before moving them to the North Sea to start a new shellfish reef there.



A target was set in 2022 to increase biodiversity in the port by 5% in five years. Progress will be measured by taking a representative sample that provides a picture of the species composition, and the distribution and development of numbers of butterflies, grasshoppers, bees and plants on grassy vegetation in outdoor areas and on pipeline strips.

Nature compensation in the Voordelta

For the construction of Maasvlakte 2 in the Natura 2000 Voordelta area, it was agreed at the time to achieve a 10% quality improvement in an area ten times larger than the area lost. A bed protection area was therefore established where bottom trawling by vessels with engines larger 260 HP is prohibited. To scientifically determine whether the expected improvement in quality will actually occur, a long-term research programme was initiated even before the construction of Maasvlakte 2. When that monitoring programme came to an end in 2020, it was found that the expected improvement in quality had not been achieved or at least could not be demonstrated.

The obligation to compensate is contained in the nature permit of the Port of Rotterdam Authority but the implementation and monitoring of compensation is the responsibility of the national authorities on the basis of an implementation agreement. A dialogue was initiated at that time with all the relevant stakeholders about an alternative form of compensation. Because the dialogue did not result in a solution that enjoyed the support of the parties, we developed a proposal for an alternative approach to compensation in early 2021 and formally submitted it to the Minister of Agriculture, Nature and Food Quality (LNV) in April 2022. This proposal was shared with the relevant NGOs through, among other channels, the 'Tafel van Borging' and, for us, it continues to be the basis for arriving at a robust elaboration of alternative compensation that will be supported by the parties concerned. However, the national government is the leading partner here since only it has the legal tools to take the necessary measures.

In parallel with these developments, a number of nature and environmental organisations submitted a request for enforcement in 2021 to the Ministry of Agriculture, Nature and Food Quality (LNV) because of the failure to meet the compensation obligations related to the construction of Maasvlakte 2. Because the Ministry rejected this request, the nature and environmental organisations went to court, and the proceedings led to a ruling instructing the Minister to issue a new draft decree. That decree was published in December 2022. The Port of Rotterdam Authority appealed against the decision of the court.

Nitrogen problem

The issue of nitrogen emissions is continuing to generate considerable uncertainty throughout the country, including the port of Rotterdam. Projects that have the potential to contribute to the national climate agenda and energy safety could be delayed. This issue is affecting the energy transition, even though the projects in question often reduce not only carbon emissions but also emissions of nitrogen and other substances.

With the national authorities, the Province of South Holland, the City of Rotterdam and Deltalinqs, we are continuing to actively seek solutions. We also want to develop a new area approach in order to make the desired transition of the Rotterdam port and industrial area possible, while preserving protected nature.

Smart partner for our clients

We are committed to digitalisation with the goal of creating value for the port of Rotterdam. We do this by making things easier, smarter, more economical and more sustainable. This objective is reflected in one of our strategic focal points: 'Smart partner in the logistics chain'.

The aim of digitalisation is to make chains more transparent and exchange data between parties. As a result, the port's performance will improve and we will make it easier for our clients to do business. Our efforts focus on transport, logistics and the work of the Harbour Master's Division, and we are also making infrastructure, port sites and buildings smarter and more sustainable with the Infra Innovation programme. The value we can bring to the port guides our digital ambition.

Digital applications

Digitalisation is not something we do alone. In the logistics chain, we create an open climate in which we cooperate, exchange data and take steps forward. Improvements in information exchanges and analysis allow us to operate more efficiently. Success can only be achieved here through standardisation and by ensuring that systems can communicate with each other. In 2022, we achieved excellent results in the area of digital applications.

Portbase is, for Dutch ports, the Maritime Single Window to which ships report their arrival and departure information. This information is then shared centrally with the competent authorities and stakeholders involved through the Port Community System. Work in Portbase in 2022 included optimising security for the sharing of data by chain partners by introducing two-phase identification.

Routescanner is the routing function for global container transport. It provides cargo owners with a global, and therefore more complete, picture of door-to-door connections for containers via seaports, inland ports, and road and rail links. Users find it increasingly important to be in a position to make transportation choices that are based in part on emissions. As a driver of sustainability, we are happy to help. An important function was therefore added in 2022 which allows the calculation at the container level of carbon emissions for maritime shipping for the various connections and for rail, road and inland navigation.



Digitalisation important at the Harbour Master Division

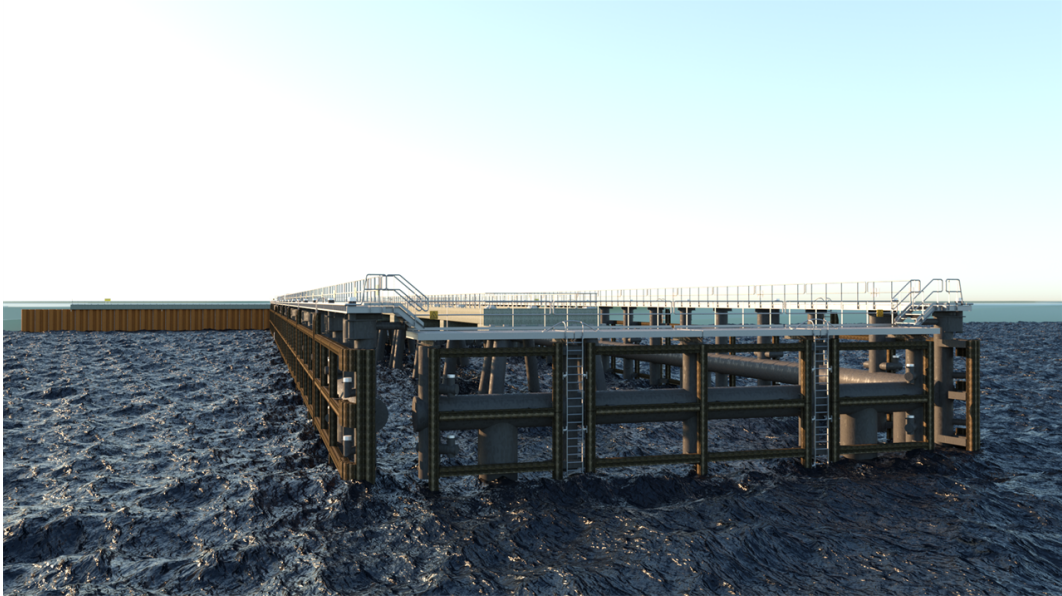
The Harbour Master's Division is responsible for maintaining the safe and smooth handling of shipping. The staff of the Harbour Master's Division assist vessels remotely by monitoring, informing and advising them. In addition, they provide smooth and safe guidance for shipping traffic with multifunctional patrol vessels, and they also monitor that traffic.

Working with colleagues and partners, such as pilots, government authorities and businesses in the port, the Harbour Master considered his own role in the near future and how best to fulfil that role. There is a clear line in terms of widening the concept of safety to include security (and cyber security), sustainability & resilience. The analysis of the future resulted in a new vision and strategy in 2022.

Digitalisation plays an important role in the new strategy. The Harbour Master Next Generation (HMNG) programme allows the Harbour Master's Division to innovate with smart solutions. Planning, traffic, supervision & enforcement and crisis management constitute the heart of the programme. Working with other port operators and standardising data make it possible to exchange data. For example, the Port of Rotterdam Authority and the Port of Amsterdam use a single management system, HaMIS.

Digitalisation of port development and management

We are working on the digitalisation of our assets for the purposes of port development and management. That involves, for example, using sensors that provide us with a picture of construction, use and maintenance. In this way, we contribute to the sustainability of the port and industrial complex. With Infra Innovation, we provide sustainable maintenance and innovation for maritime infrastructure. That results in the more efficient handling of cargo, reduced costs and lower emissions. Our customers reap the benefits. One example is Building Information Management (BIM), which targets digital collaboration in the built environment. We use a 2D/3D model to which we can link data and asset-related documents. In this way, working with our chain partners, we are establishing a central working environment with all the available source data.



Efficient logistics and sustainable accessibility

To strengthen our position as Europe's largest logistics hub, we are constantly working on improvements to the accessibility of the port and industrial complex. During that process, we look for solutions to maximise access to Europe through road, rail, cable and pipeline networks, as well as coastal and inland waterways. Because we are a driver of the energy transition and an accelerator of sustainability in the port of Rotterdam, we invest in initiatives that contribute to these goals. Examples include more sustainable transportation through modal shift, 'Accessible South Holland' and numerous projects that reduce harmful emissions from a range of types of transportation.

We are focusing on using the existing infrastructure better (capacity management) and making joint investments with other parties in new and existing infrastructure. The use of smart information systems and the exchange of data between various parties in the chain will help to improve accessibility and make transport more sustainable via the various modes.

The sharing of data between parties in the logistics chain is crucial. That is why the DIL programme (Digitalisation Infrastructure Logistics) was established in 2022. The DIL approach aims to make logistics chains in the Netherlands transparent, robust and more efficient through a local, publicly available, and secure digital infrastructure. Portbase and the Port of Rotterdam Authority are working with government authorities, industry associations, the Port of Amsterdam Authority and the port business community on this project.

We look to optimise connectivity through all transport modes and to achieve a modal shift by encouraging more transport via inland shipping and railways rather than road haulage. We will describe one important development for each mode.

Water

A port is only ever as good as its connections to the hinterland. Rotterdam is connected to destinations in the Netherlands and surrounding countries by an extensive network of waterways. Inland waterway transport, like other modes, will have to cut its emissions to zero in the future. That will require major investments in both vessels and charging infrastructure on the waterway corridors. The Port of Rotterdam Authority is active here in many ways, including as a co-founder of the company ZES (Zero Emission Services).

In the MIRT Freight Corridor context, we are working on a national strategy for sustainable charging stations for inland navigation. In 2022, the Ministry of Infrastructure and Water Management made 19.25 million euros available for this project.

The Port of Rotterdam Authority is also making efforts to reduce emissions from shipping and industry. These Scope 3 emissions do not come from our own assets and we do not have a direct influence over them. We are aware of the different interests and we are working on making it possible for emitters to reduce emissions.

For shipping in the port management area (which extends to 60 kilometres offshore), the goal is to achieve a reduction in emissions of 20% by 2030.

Road

Digitalisation and innovation are essential to make road traffic more efficient, safe and sustainable. With Transport en Logistiek Nederland (TLN) and Portbase, we are working together under the banner of 'Data Fuel' to implement further efficiency improvements in container logistics step by step. This is happening at several points in the chain. With the City of Rotterdam and a number of companies, we initiated a pilot project in 2022 in which trucks are given priority at smart traffic lights. In addition to reducing emissions and saving fuel, this saves time and makes things more comfortable for the drivers.

As well as encouraging the use of rail and inland navigation, we are also making plans in the port in collaboration with partners for electric charging infrastructure for freight traffic. Preparations are being made for a charging plaza at one of the truck parks in the Waalhaven. Furthermore, in 2022, we teamed up with the City of Rotterdam to launch a tender for charging infrastructure for light traffic. The relevant preparations are in progress.

Following the introduction of HyTrucks in the spring of 2020, more and more parties have expressed a desire to join this initiative and work together on hydrogen-based freight transport. The aim is to have at least 1,000 trucks in the Netherlands, Belgium and Germany running on hydrogen by 2025.



Rail

The Port of Rotterdam Authority wants to see growth in the share of rail in hinterland transport in order to reduce road traffic and make a positive contribution to modal shift and environmental goals. In addition, rail transport opens up new markets for Rotterdam and provides opportunities for our clients to acquire market share.

The Rail Freight Transport Measures Package was introduced with the aim of enabling and facilitating the growth of rail freight transport. In 2022, the Port of Rotterdam Authority, as the leader of the 'Digitalisation' cluster, engaged in the further digitalisation of the rail process, for example by bringing the digital base in the port up to standard.

Cables and pipelines

The port of Rotterdam offers companies the option, and the space, to install new cables and pipelines in the pipeline strips available for this purpose. These corridors are already fully equipped for new construction.

The energy transition will result in the installation of large numbers of cables and pipelines in the coming decades. With our partners, the Port of Rotterdam Authority is developing a new pipeline infrastructure for heat, CO₂ and hydrogen. We are conducting a survey of demand for capacity and the potential capacity.

Future-resilient organisation

We strive for a sociable, healthy and diverse working environment as the basis for responding quickly and in agile ways to current themes and questions from our clients. We invest in employee development with a range of training programmes and in our Port Academy.

We also work on the creation of an environment based on a safe, open culture and efficient processes, and we focus on sustainable employability and diversity & inclusiveness. Finally, we are committed to being socially responsible employers. By doing so, we help our 1,298 employees (as at 31 December 2022) to deliver maximum added value for our clients and stakeholders and the quality of the port of Rotterdam.

More representative workforce

On 10 February, our CEO Allard Castelein signed the Diversity in Business Charter. This step was a declaration by the Port of Rotterdam Authority that it considers diversity and inclusion to be important and that it wants to take steps to improve this area at the company. The Works Council is also striving to make the workforce more representative and to increase diversity in employee representation. A survey was conducted of the target groups in 2022 to determine the willingness of colleagues to stand for election. This resulted in new regulations for employee representation with the aim of making the workforce more representative.

Diversity and inclusiveness

Diversity and inclusiveness are important to ensure that we continue to attract the best people and to contribute to the quality of the workforce, better decision-making, greater agility and more innovation. Success here depends on a safe and open culture in which everyone can voice their opinions and in which everyone has the opportunity to develop their talents.

With the aim of improving diversity and inclusiveness at the Port of Rotterdam Authority, we drafted a new plan of action in 2022.

The new Diversity & Inclusion plan focuses on several target groups: gender, age, cultural background, people with a distance from the labour market, people with disabilities and people from the LGBT+ community. The new plan sets out activities to improve diversity and inclusiveness in the organisation. Those activities focus on recruitment, commitment, empowerment, communications and monitoring. One of the activities in 2022 was the celebration of the diversity week. Employees had the opportunity to learn more about diversity and inclusion, and they engaged in discussions about the topic with one another. In 2022, the Port of Rotterdam Authority also joined the Diversity in Business Charter and 010 Inclusive.

Changes to the recruitment process are key to the improvement of diversity and inclusiveness in the organisation. The guideline for a vacancy is that the new employee will always be 'the best person in the right place' and contribute to the diversity of the organisation. This includes formulating job advertisements differently, inviting a range of target groups to interview, and ensuring that the interviewers are more diverse.

The Diversity & Inclusion (D&I) Task Force organises activities and courses, and promotes communications about D&I. It is the knowledge centre, front desk and advisory body for addressing D&I issues.



Women in management positions

We want 40% of our workforce to be women by 2030. This percentage was 28.5% at the end of 2022. We want more women in management positions. Our goal for the end of 2023 is 25% in the Harbour Master's division, 35% in the office, 50% in the management team, 30% in the Executive Board and 40% in the Supervisory Board. In 2022, the actual percentage of women in management positions was 31.8% (2021: 29.4%).

Providing employment for people with a distance from the labour market

On the basis of corporate social responsibility and being a socially responsible employer, we already have a target for the recruitment of people with a distance to the labour market. We have five jobs available for candidates with a distance to the labour market. One of these jobs was taken up in 2021. This number rose to six in 2022.

Throughput and future-resilient portfolio

The port area

Its geographical location means that the Port of Rotterdam is the gateway to the European hinterland and an important hub in international goods flows. Our port is the largest in Europe. With a maximum water depth of 24 metres, it is accessible for the vessels with the deepest draughts. The port brings together shipping, inland shipping, rail, road and pipelines. In 2022, 29,029 seagoing vessels and 97,459 inland vessels visited the port of Rotterdam.



Total area of the port	12,464 ha	Water depth relative to New Amsterdam Level (max.)	24 m
Land area	7,966 ha	Quay walls	79.5 km
Water area	4,498 ha	Jetties for sea and inland shipping	131
Total length of Rotterdam port area	42 km	Banks (inclines)	176 km

Developments in cargo throughput

The ongoing war in Ukraine, inflation and the challenging economic conditions meant that the macro-economic prospects were not as bright in 2022. Approximately 71 million tonnes of the nearly 470 million tonnes of throughput in the port of Rotterdam in 2021 were linked to Russia. In an earlier analysis, we referred to 62 million tonnes. Large amounts of energy carriers were imported from Russia through the port of Rotterdam. About 33% of crude oil and 30% of coal were linked to Russia, as were 25% of LNG and 21% of oil products. Russia also exported products such as steel, copper, aluminium and nickel through Rotterdam.

The Port of Rotterdam Authority does not have an independent policy in response to Russia's invasion of Ukraine. Nor do we have the authority to, for example, impose restrictions on businesses. We support the policy of the Dutch and European authorities and the implementation of that policy takes place in close consultation with the Ministry of Infrastructure and Water Management.

Throughput in the Port of Rotterdam amounted to 467.4 million tonnes, a slight fall of 0.3% compared to 2021. This is a result of which we are proud given the difficult circumstances. In many goods segments, the war in Ukraine led to significant changes. Imports of both LNG and coal rose very sharply, primarily as an alternative to European imports of Russian gas by pipeline. The throughput of crude oil increased, with oil products falling off. The throughput of iron ore, agricultural bulk and containers was down on 2021. Given the challenging conditions in almost all sectors, this represents good performance by the Rotterdam port business community.

Our market share in the Hamburg-Le Havre range in 2022 (up to and including the third quarter) was 37.3%. That is slightly down on 2021 (37.4% up to and including the third quarter).

(Gross weight x 1,000 metric tonnes)	2022	2021	Difference (number)	Difference (%)
Dry bulk	80,064	78,707	1,357	1.7%
Liquid bulk	212,771	204,589	8,182	4.0%
Total bulk	292,835	283,296	9,539	3.4%
Containers	139,657	154,485	-14,828	-9.6%
Break bulk	34,889	30,928	3,961	12.8%
Total break bulk	174,546	185,413	-10,867	-5.9%
Total throughput	467,381	468,709	-1,328	-0.3%
Total numbers of containers	8,315,417	8,896,425	-581,008	-6.5%
Total TEU	14,456,313	15,299,970	-843,657	-5.5%

Dry bulk

The throughput of dry bulk was 80.1 million tonnes, an increase of 1.7% on 2021. The throughput of agricultural bulk fell by 6.1%. The agriculture bulk processing industry suffered from the high energy prices. German blast furnaces were also struggling with high energy prices, rising inflation and an uncertain investment climate. That led to a decline in demand for steel, and therefore a drop of 15.5% in incoming iron ore. Coal throughput was 17.9% higher than in 2021: because of the shortage of natural gas, the share of coal-fired power plants in power generation increased. Other dry bulk increased by 14.2%. The main reason for this increase was the switch of cargo back from containers to bulk, for example in parcel carriers.

Liquid bulk

In 2022, throughput of liquid bulk rose by 4.0%. Crude oil throughput increased by 5.9%, due in part to the transshipment of (Russian) crude oil until 5 December. The structural decline in the incoming flow and re-export of fuel oil led to a 10.8% decline in the throughput of petroleum products. LNG rose by 63.9%. There is strong demand for LNG in Europe as an alternative to the natural gas entering Europe by pipeline from Russia. The 15.3% increase in other liquid bulk can be explained by, among other things, additional stockpiling due to problems with container logistics.

A number of sectors, particularly the chemicals sector, have been affected this year by the impact of very high gas prices in Europe. The Port of Rotterdam Authority is concerned about the international competitiveness of these sectors and therefore the preservation of these industries and jobs for the port of Rotterdam. With Deltalinqs, we are making a strong call for attention to be paid to this undesirable situation.

Containers

2022 saw a decline in the container segment of 9.6% in weight and 5.5% in TEU containers (TEU: twenty feet equivalent unit) compared to 2021. The difference between tonnes and TEUs is attributable to the fact that a proportionately higher number of empty containers found their way through Rotterdam because of a sharp rise in imports and falling exports to Asia. The flattening economy played an important role in the falling volumes, as did the sanctions against Russia. In 2021, approximately 8% of container volume was related to Russia; these volumes virtually disappeared after March. Container logistics continued to be hampered in 2022 by disruptions caused by ships not arriving on schedule and high terminal occupancy rates. The drop in volume meant that the logistical problems gradually became less acute. Container shipping rates also declined significantly at the end of 2022.

Container market share

With a market share of 31.8% (up to and including the third quarter in TEU), the port of Rotterdam is the market leader in the Hamburg-Le Havre range. Our market share was slightly lower than in 2021 (up to and including the third quarter: 32.0%).

Break bulk

The total throughput of break bulk was 34.9 million tonnes, an increase of 12.8% compared to the previous year. Other break bulk increased because non-ferrous metals were in high demand for stockpiling in view of the falling away of Russian cargo. Roll-on Roll-off throughput rose sharply by 13.5% due to further growth following on from the Brexit effect in 2021.

Financial results

The Port of Rotterdam Authority has had a good year financially. Our revenue rose by 6.9% to € 825.7 million (2021: € 772.7 million). Contract revenues from site rental increased, mainly because of new contracts, the reduction of incremental discounts, price changes and the contractual indexation of rates. Revenue from seaport dues increased, in part due to a changed cargo mix and lower container discounts as a consequence of lower throughput.

Our operating expenses increased by 8.3% (€ 21.7 million) compared to 2021. This was in part attributable to the post-COVID effect, which led to the resumption of activities such as trade fairs, and the transfer of assets in the city port area to the City of Rotterdam. Our result before taxation was € 318.4 million, 16.4% more than in 2021. The result after taxation was € 247.2 million.

In 2022, our total gross investments amounted to € 257.0 million, including capital injections in participating interests (€ 11.8 million). Actual investments exceeded our 2021 investment level (€ 226.3 million). The main investments in 2022 were the construction of quay walls in the Amaliahaven (€ 79.3 million) and the land reclamation operation on Maasvlakte 2 (€ 24.8 million).

All ratios comply with the standard values

The Port of Rotterdam Authority operates on the basis of a robust financial policy, including the maintenance of the current credit rating. In this way, the Port of Rotterdam Authority maintains its capacity to make the investments required to safeguard its competitive position, accelerate the energy transition and to continue its business activities, even in the face of unexpected setbacks. Our financing consists of a mix of loans and capital market products. The most important financial ratios that we follow are: net debt in relation to EBITDA, solvency and the interest coverage ratio. All ratios are well above the standard values stated in the financing contracts.

Ratios	2022	2021
Solvency (in % incl subordinated loans)	73	69
Net debt / EBITDA	1.4	1.8
Interest coverage rate (ICR)	7	6.3

Balance sheet

(before result appropriation amounts x € 1,000)	31 December 2022	31 December 2021
Assets		
Fixed assets		
Intangible fixed assets	79,938	79,269
Tangible fixed assets	3,969,929	3,915,969
Financial fixed assets	1,664,467	1,700,617
	5,714,334	5,695,855
Current assets		
Inventory	907	779
Accounts receivable	208,391	232,822
Cash and cash equivalents	177,819	291,179
	387,117	524,780
Total assets	6,101,451	6,220,635
Liabilities		
Shareholders' equity		
Issued share capital	900,000	900,000
Share premium reserve	391,200	391,200
Legal reserve	123,922	105,006
Other reserves	2,787,963	2,670,445
Result before appropriation	247,243	247,231
	4,450,328	4,313,882
Provisions	46,967	53,181
Long-term debts	1,358,175	1,629,445
Short-term debts	245,981	224,127
Total liabilities	6,101,451	6,220,635

Income statement

(amounts x € 1,000)	2022	2021
Net revenue	782,748	730,038
Other operating income	42,916	42,685
Total operating income	825,664	772,723
Wages, salaries and social security	-123,910	-117,634
Amortisation and impairment losses of tangible fixed assets	-177,725	-189,947
Other operating expenses	-158,301	-142,855
Total operating expenses	-459,936	-450,436
Operating result	365,728	322,287
Financial income and expenditure	-47,359	-48,673
Result from ordinary activities before taxation	318,369	273,614
Taxation	-80,698	-33,131
Income from participating interests	9,572	6,748
Result after taxation	247,243	247,231

Key figures

Key figures				
	Unit	2022	2021	2020
Added value	€ bln	-	24.4	23.8
Employment	Jobs	-	183,004	174,057
Throughput total	Million tonnes	467.4	468.7	436.8
Throughput containers	TEU million	14.5	15.3	14.3
Ship calls (seagoing)	Number	29,029	28,876	28,170
Ship movements	Number	76,769	77,869	75,679
Very serious nautical incidents	Number	1	0	0
Nautical Safety Index	Score	6.39	7.46	7.99
Port reputation among local residents	Score	-	83.2	-
Carbon emissions HIC	Mtonnes	23.5	22.4	25.3
Carbon footprint HIC	Ktonnes	3.2	2.8	4
Proportion of women (total)	%	28.5	27.2	28
Proportion of women (management)	%	31.8	29.4	31.4



CORPORATE GOVERNANCE

Corporate governance

The Port of Rotterdam Authority is an unlisted public company. The Port of Rotterdam Authority's governance is based on a two-tier board structure in which appointments are made by the General Meeting of Shareholders. The Executive Board manages the company; the independent Supervisory Board oversees the Executive Board and the affairs of the company. The shareholders – the City of Rotterdam (70.83%) and the Dutch State (29.17%) – exercise influence over the limited liability company through the General Meeting of Shareholders. The Ministry of Finance acts as the shareholder for the Dutch State. The General Meeting of Shareholders has the competence to, for example, appoint and dismiss the management, and adopt the long-term strategy for the Port of Rotterdam Authority.

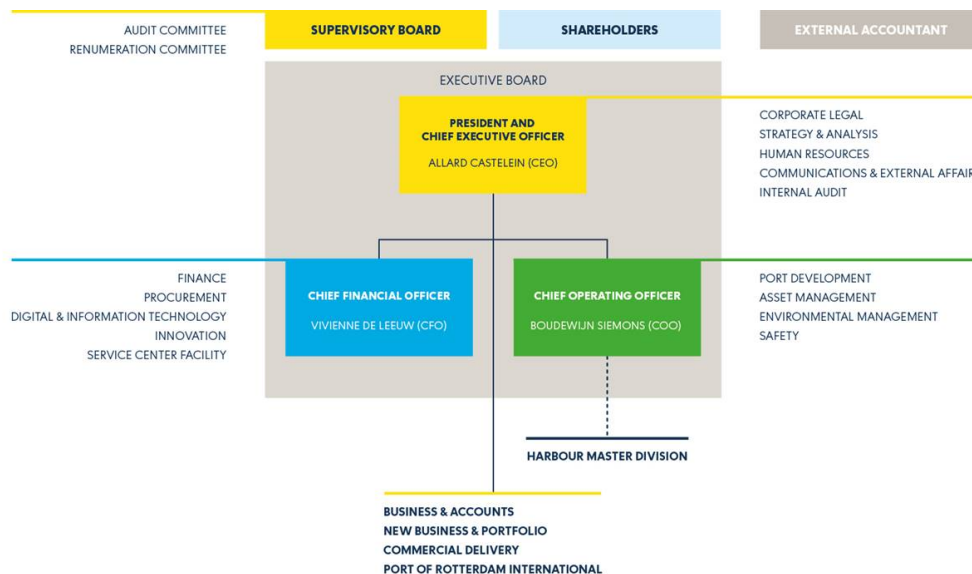
Through their interest in the Port of Rotterdam Authority, the shareholders safeguard the following public interests:

- Nautical safety in the port;
- The continuity and quality of the port of Rotterdam as a vital link in the mainport, efficient market relations and the sustainable use of space;
- The sustainability of the port and industrial complex, and a role as a driver in the energy transition.

The competences of the Supervisory Board and the General Meeting of Shareholders are defined, inter alia, by law and the Articles of Association (see [here](#)). The shareholders have joint control over major decisions. Accordingly, investments exceeding 50 million euros and a change in the company's long-term strategy require the consent of both shareholders.

strategy require the consent of both shareholders. The Port of Rotterdam Authority applies the principles and best practices of the Dutch 2022 Corporate Governance Code. In doing so, we apply the 'comply or explain' principle.

Structure



Executive Board

Tasks and responsibilities

The Executive Board of the Port of Rotterdam Authority consists of three members: a Chief Executive Officer (CEO), a Chief Financial Officer (CFO) and a Chief Operational Officer (COO). The members of the Executive Board are collectively responsible for the management of the company, the general affairs of the company and the affairs of the group companies affiliated with the company. With respect to the fulfilment of its duties, the Executive Board is guided by the interests of the company and the business associated with the company. For that purpose, the Executive Board takes into careful consideration the relevant interests of the stakeholders in the company. According to the regulations (see [here](#)) the duties of the Executive Board include the social aspects of business relevant for the company, the achievement of the company's corporate and public objectives, and the determination of the strategy and policies that will lead to the achievement of those objectives. In addition, the Executive Board is responsible for compliance with all relevant legislation and regulations, the identification and management of risks, and the financing of the company.

The Executive Board is accountable to the Supervisory Board and the General Meeting of Shareholders with respect to the fulfilment of its duties.

Conflict of interest

The rules relating to conflicts of interest have been set out in the regulations for the Executive Board. No conflicts of interest were reported in 2022.

Supervisory Board

Tasks and responsibilities

The Supervisory Board oversees, monitors and advises the Executive Board with respect to a range of issues:

- The achievement of the objectives of the Port of Rotterdam Authority;
- Strategy and risks associated with the business activities;
- The structure and the operation of the internal risk management and control systems;
- Financial reporting process;
- Compliance with legislation and regulations.

In addition, under the Articles of Association, decisions are submitted to the Supervisory Board for the approval of, inter alia, investments in excess of 10 million euros and issuances of land larger than 25 hectares.

Supervisory Board committees

The Supervisory Board consists of at least five members and it has two committees: the audit committee and the remuneration committee. The members of the committees are appointed by the Supervisory Board. The committees advise the Supervisory Board and prepare decisions, and therefore contribute to effective decision-making by the Supervisory Board. The committees report verbally and share minutes or draft minutes at meetings of the Supervisory Board. The Supervisory Board remains collectively responsible for decisions prepared by a committee.

The committees have their own regulations. The regulations describe the rights and duties of the committee and best practices. The regulations of the audit committee and the remuneration committee are included in the Supervisory Board's regulations. The duties of the audit committee include overseeing the operation of the internal risk management and control systems, the company's financial and non-financial disclosures, and compliance with the recommendations and follow-up to comments made by internal and external auditors. The audit committee meets four times a year. The meetings are attended by the external auditor and the head of the Internal Audit Department when the audit committee requests their attendance. The audit committee liaises with the external auditor, in particular with respect to the audit procedures of the external auditor and in cases where the external auditor indicates that there is a suspicion of irregularities with respect to the content of the financial reporting.

The remuneration committee prepares the decisions of the Supervisory Board, including those with respect to selection criteria and the appointment procedures and performance of members of the Executive Board and Supervisory Board. The remuneration committee also prepares the remuneration policy for the Executive Board and the remuneration report.

Appointment and dismissal

The members of the Executive Board and Supervisory Board are appointed by the General Meeting of Shareholders pursuant to nomination by the Supervisory Board. The Supervisory Board prepares a profile and list of candidates for this purpose; they are submitted to the Annual General Meeting of Shareholders for approval. Nominations and appointments take into account the corporate and public objectives of the company, the nature of the business, its activities, the desired expertise and experience, and – in the case of the appointment of a member of the Supervisory Board – the desired independence.

The Port of Rotterdam Authority strives to ensure that the Executive and Supervisory Boards are representative of society at large. The Supervisory Board therefore adopted an updated diversity policy for the membership of the Executive Board and Supervisory Boards in 2022. On the basis of that policy, the aim is to have a male/female ratio of:

- at least 30% women on the Executive Board;
- at least 40% women on the Supervisory Board.

These targets are considered to be appropriate and ambitious given the number of members of the Executive Board (three) and Supervisory Board (desired number of six). The current composition of the Executive Board and Supervisory Boards meets the stated diversity objectives: the Executive Board consists of one woman and two men; the Supervisory Board consists of two women and two men. Appointments to the General Management and Supervisory Boards actively include the diversity objectives in the profile, recruitment and selection of candidates.

The Works Council has the right to advise on the appointment of members of the Executive Board. Furthermore, for the appointment of one-third of the number of members of the Supervisory Board, the Works Council has an enhanced right to advise.

A member of the Executive Board or Supervisory Board is appointed for four years and may be eligible for reappointment. The term of office may never exceed three terms of four years, in other words twelve years.

The General Meeting of Shareholders may suspend or dismiss members of the boards. The Supervisory Board has the competence to suspend a member of the Executive Board. The Supervisory Board periodically evaluates the performance of the Executive Board.

Control

	Supervisory board		Shareholders meeting
Executive bord	Appointments		Appoints
	Suspensions	Independent and immediate suspension	Independent and immediate suspension
	Dismissal		Independent and immediate dismissal
	Remuneration Policy		General Meeting of Shareholders adopts remuneration policy
	Remuneration	Sets remuneration in line with remuneration policy	
Member of Supervisory Board	Appointments	Sends nomination to General Meeting of Shareholders	Appoints and has the right to submit a recommendation to SB for nomination
	Suspensions	Independent and immediate suspension	
	Dismissal of a member of SB	By the Enterprise Chamber at the request of company represented by SB	By the Enterprise Chamber at the request of the company represented by General Meeting of Shareholders
	Dismissal of entire SB		May proceed with dismissal after notifying Works Council
	Remuneration		Sets remuneration

Personal details of the Executive Board

Drs. A.S. (Allard) Castelein (1958) **(Dutch Nationality)**



Current position: Chief Executive Officer (CEO). Allard Castelein is responsible for the commercial departments and a number of staff departments. His term of office ended on 31 December 2021. He was reappointed until 15 July 2023 effective 1 January 2022.

Secondary positions: Member of the Executive Board of VNO-NCW; Member of the Executive Board of the Economic Board of South Holland; Member of the Supervisory Board of Renewi plc.; Member of the Supervisory Board of Heijmans N.V. (effective 12 July 2022); Member of the Supervisory Board of Associated British Ports (effective 23 June 2022); Member of the Supervisory Board of the International Architecture Biennale Rotterdam (IABR); Member of the Supervisory Board of Rotterdam Partners; Chair of the Executive Board of Ronald McDonald House Sophia Rotterdam.

Drs. V.D.I.V. (Vivienne) de Leeuw (1975) **(Dutch Nationality)**



Current position: Chief Financial Officer (CFO). Vivienne de Leeuw is responsible for finances, financing, procurement, facilities, innovation and information services. Her term of office is from 1 July 2019 to 30 June 2023.

Secondary positions: Chair of the PortXL Foundation Board; Chair of the Portbase Supervisory Board; Chair of the Smartport Board; Chair of the Supervisory Board of Rotterdam Festivals (effective 7 July 2022).

Ir. B. (Boudewijn) Siemons (1964) **(Dutch Nationality)**



Current position: Chief Operating Officer (COO). Boudewijn Siemons is responsible for the expansion and maintenance of the port and industrial complex and the Harbour Master's division. His term of office is from 1 October 2020 to 30 June 2024.

Secondary positions: Member of the Board of Next Generation Infrastructures (NGinfra); Member of the Board of Nederland Maritiem Land (NML); Member of the Advisory Board of Deltaport Donatiefonds; Member of the Board of Nederland Distributieland (NDL); Member of the Board of the Logistics Top Sector; Member of the Supervisory Board of Rotterdam Maritime Museum (effective 1 July 2022).

Taskforce on Climate-related Financial Disclosures (TCFD)

The effects of climate change have a major impact on society and the economy, including the Rotterdam port and industrial complex. In this report, we provide transparency for our stakeholders with respect to the steps we take towards a port that is resilient to outside factors. To this end, the Task Force on Climate-related Financial Disclosures (TCFD) has developed a number of recommendations structured on the lines of four themes: governance, strategy, risk management, and indicators and targets. The recommendations are accompanied by references to the relevant passages.

Climate change involves several risks, which can be categorised as physical risks and transition risks. In our role as the port authority and port manager, we consider both types of risk in our operations. The physical risks of climate change affect our port infrastructure and assets, as well as those of our clients. We consider them in our operations to safeguard the quality of port infrastructure and accessibility. Transition risks resulting from the transition to a low-carbon economy can determine the conditions in which the port works (license to operate) and can have an effect on carbon-intensive activities in the port. The more the global temperature rises, the higher the likelihood of physical risks. Measures to combat global temperature rise reduce the probability of physical risks but exacerbate transition risks.

Governance

Describe the organisation's governance with respect to climate-related risks and opportunities.

	Physical risks	Transition risks
State how the Board monitors climate-related risks and opportunities	Climate Adaptation and Flood Risk Management, 4.4 Risk Management	2.4 Trends and future, 4.4 Risk management
Describe the role of the Management in the assessment and management of climate-related risks and opportunities	Climate Adaptation and Flood Risk Management, 4.4 Risk Management	2.4 Trends and future, 4.4 Risk management

Strategy

Describe the impact of climate-related risks and opportunities on the organisation's operations, strategy and finances.

	Physical risks	Transition risks
State the identified climate-related risks and opportunities for the short, medium and long terms	Climate adaptation and flood risk management	2.4 Trends and future
State the impact of the climate-related risks and opportunities on operations, strategy and financial planning	Climate adaptation and flood risk management	2.4 Trends and future
Describe the resilience of the strategy under a range of climate-related scenarios	Climate adaptation and flood risk management	2.4 Trends and future

Risk management

Describe how climate-related risks are identified, assessed and managed.

	Physical risks	Transition risks
Describe the processes for identifying and estimating climate-related risks	Climate adaptation and flood risk management	2.4 Trends and future
Describe the processes for managing climate-related risks	Climate adaptation and flood risk management	2.4 Trends and future
Describe how these processes for identifying, estimating and managing climate-related risks are embedded in the overall Risk Management process	4.4 Risk management	4.4 Risk management

Indicators and targets

State the yardsticks and objectives for estimating and managing climate-related risks and opportunities.

	Physical risks	Transition risks
Describe the yardsticks used for estimating climate-related risks and opportunities in line with the strategy and the Risk Management process.	4.4 Risk management	4.4 Risk management
List Scope 1, Scope 2 and (where appropriate) Scope 3 greenhouse gas emissions and the associated risks	Energy transition offers abundance of sustainable opportunities, 6.4 Key Figures	Energy transition offers abundance of sustainable opportunities, 6.4 Key Figures
Describe the objectives used to manage climate-related risks and opportunities and performance with respect to these objectives	Climate adaptation and flood risk management	2.4 Trends and future



OTHER INFORMATION

Materiality Matrix

Selection of topics

The Port of Rotterdam Authority works with a range of stakeholder groups and is involved in a multitude of public issues. To fulfil the information requirements of our stakeholders as well as possible and to introduce focus to our reporting, we select the most important public issues. We use the materiality analysis, which results in a materiality matrix, for this purpose.

Materiality Matrix

For the materiality analysis, we identified all potential, material public issues relating to the Port of Rotterdam Authority. The assessment of the material themes constitutes the basis for the content of our integrated annual report and takes place in the second quarter of the reporting year.

New themes in 2022

We have added two material themes: subversion and nitrogen emissions. We added subversion because of the large negative impact it has on people and society. In addition, the issue of subversion has a negative impact on public opinion with respect to support for the port's business climate. We added nitrogen emissions because this issue leads to an unfavourable business climate and therefore a negative financial impact. In addition, the emissions have a negative impact on the environment, and therefore a higher impact-lens score. Finally, by naming it separately, we show more clearly that is a very urgent issue for the Port of Rotterdam Authority.

The process

We follow the Global Reporting Initiative (GRI) guidelines for the purposes of the materiality analysis. An update was published in 2021. The updated GRI guidelines focus more on organisations' impact on people, the environment and society. Scale, scope and irreversibility are some of the concepts used to assess different topics:

- Scale refers to the severity of the negative impact;
- Scope refers to the extent, for example the number of people affected;
- Irreversibility refers to the (im)possibility of remedying the situation.

We completed the following steps:

- **Step 1:** The starting point was the list of existing themes, including the 2021 score. This approach was the same as in previous years.
- **Step 2:** We conducted a review to determine the extent to which the themes are relevant on the basis of the strategy and the Port Vision. We also analysed the potential impact for each theme and estimated the possible effects of the impact. Finally, we implemented a review to determine whether the definitions of the themes should be reconsidered. The outcome of this analysis was that all the themes from 2021 are still relevant and that they have a material impact on people, environment and the locality. We added two themes to the list: subversion and nitrogen emissions.

- **Step 3:** For the analysis preceding the establishment of the draft matrix, we used documents such as: management team agendas, the Port Vision, Corporate Strategy 2020-2024, Risk Management Update, staff survey, customer survey 2022, reputation survey 2021, media analysis for the first months of 2022, the waakvlamprogramma and the lobby monitor. We discussed the outcome of the analysis with experts inside the organisation who have daily contacts with stakeholders to determine whether the outcome of the analysis matched the expectations of the stakeholders. The [stakeholder dialogue](#) chapter provides more detail on how the Port of Rotterdam Authority addresses the expectations and interests of external stakeholders.
- **Step 4:** The matrix was presented to, and adopted by, the Management Team. The matrix that results from the validation process describes the issues that are most important for our stakeholders and the assets of the Port of Rotterdam Authority. The members of the Management Team are responsible for the direction and management of all the topics in the matrix. The [Corporate Governance](#) chapter provides more information in this respect.

IMPACT ON STAKEHOLDERS ▲	<ul style="list-style-type: none"> ▶ Appealing and healthy environment (S) ▶ Link to labour market (S) 	<ul style="list-style-type: none"> ▶ Accessibility (G) ▶ Efficient handling of shipping (G) 	<ul style="list-style-type: none"> ▶ Energy transition (E) ▶ Safety and security (S) ▶ Digitalisation (G) ▶ Quality of port infrastructure (G)
	<ul style="list-style-type: none"> ▶ Level playing field (G) ▶ Subversive crime (S) 	<ul style="list-style-type: none"> ▶ Knowledge and innovation (G) ▶ Client appreciation (S) ▶ Strategic collaboration (G) ▶ Nitrogen (E) ▶ Future-resilient organisation (S) ▶ Room for transition (G) 	<ul style="list-style-type: none"> ▶ Future-resilient portfolio (G)
	<ul style="list-style-type: none"> ▶ National and international port cooperation (G) ▶ Connecting city and port (S) 		<ul style="list-style-type: none"> ▶ Financial robustness
	IMPORTANCE FOR VALUE CREATION BY THE PORT OF ROTTERDAM AUTHORITY ▶		

The importance for value creation by the Port of Rotterdam Authority is considered to include the Port of Rotterdam Authority's impact on the economy, environment and society.

Inclusion of matrix in the report

We used the results of the matrix to introduce focus to our report. We chose a matrix in order to safeguard continuity with previous annual reports. We report most extensively on the themes in category 1 (dark blue). With respect to these themes, we report on the management approach and at least one indicator. You can read about how this information has been incorporated in our report in the GRI Content Index. We also report on the themes in categories 2 and 3 (dark grey and light grey), but less extensively. The issues were prioritised on the basis of their impact.

Credits

Publication

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