Waterfront Master Planning

Regeneration, transformation and new destinations
Ports and Waterfront Cities

Waterfronts and ports have a strong historic relation with the city and often even the reason for their existence. They have a huge impact on the physical, economic and social prosperity of the city and its inhabitants. In a waterfront city the dominant and characteristic places are their quays, piers, wharfs, boulevards, seafront promenades, market squares and marinas, because they are the centre of human activity and trade. As such, the places where the city meets the water are the most representative public urban spaces. The strong relation between city and water will continue to exist if the type and scale of water related activities are compatible with the urban surrounding.

The continued expansion and growth of the maritime industry with installations, logistics and activities that are incompatible with a residential environment can cause a separation and a disconnection between Port and City. Waterfront industries and activities often create a huge barrier between the city and the water and these areas can be a hostile environment for the human being.

Many cities around the world are currently addressing this situation with the aim to re-connect the city and the water. Actions are taken to improve or relocate existing port areas and infrastructures to meet contemporary demands for expansion or improved installations and accessibility of the maritime industry. This process has a much broader impact on the city at a metropolitan scale. It affects the urban transport infrastructures, may impact greenfield or agricultural activities, may create an increased housing demand and a growing demand for public services and infrastructures such as electricity and sanitation.

Derelict land of abandoned port and waterfront activities are opportunity areas for urban regeneration and to re-establish the relation between city and waterfront. Waterfront regeneration should aim to enliven the waterfront, be sensitive to the surrounding urban setting and should include a significant portion of new cultural and amenity uses. To regain public accessibility and permeability to the waterfront is paramount.

Strategic planning of port master plans therefore needs to consider a holistic view on the overall zoning conditions and to be embedded in a general strategy for metropolitan growth and regeneration, together with the necessary infrastructure planning. A smart and sustainable city needs to be able to balance the different systems and activities that keep it alive and achieve compatibility between human and industrial activities.
RHDHV proposes to provide Master Planning Design Consulting Services for the project. Services include the conceptual aesthetic character and functional relationships. Our scope shall be limited to spatial configuration, massing, and urban space development.

Any specific engineering design or consultancy services such as traffic, environmental, water and flood risk, geotechnical studies, topographic studies, public services and similar are not included in the current scope of work.

The current scope of work consist of three project stages:
- Stage 1 – Inception and Analysis
- Stage 2 – Concept Masterplan
- Stage 3 – Final Concept Masterplan Report

We will support the development of the project objectives and define the qualitative aspects of the project, comprising both subjective and objective aspects. RHDHV shall be entitled to rely upon all Client-provided information including site plans, surveys, topography, zoning, views, access, existing building drawings/ specifications, geotechnical reports, marketability reports, Client’s Design Standards, Client’s Program, design and construction schedule, construction budget, adjacent sites/ structures and building restrictions.

All reports and presentations will be prepared in English. We may provide a bilingual version of the final report at additional cost.

Our vision on masterplanning

Our principles of sustainable master planning

This chapter elaborates on the most important principles in the way of working of Royal HaskoningDHV on master planning. We, originating from a famous spatial planning tradition, will use our experience with planning systems throughout the world, and will combine this with our local experience and expertise to find the best possible solutions for JKP. We would like to share with you our proven principles for successful and sustainable master
Our vision
Some successful waterfront locations, like Lisbon, were driven by a major event (expo/forum) that focused stakeholder, business and community interest in creating a modern mixed-use district.

Others, particularly in Northern and Central Europe, were driven by the need for infill urban residential neighbourhoods and lately by climate adaptation. And some, like Cape Town, were driven by a need to halt the decline in their employment base by reinventing themselves as tourist destinations to create service sector jobs.

Our Key Strategies
For successful waterfront regeneration
1. Create a destination
   • Create people places
   • Focus on activity and the experience
   • Program events and activities
   • Connect the city side and the water side to attract urban vitality
   • Public accessibility

2. Employ good urban design
   • High quality public realm
   • Calmed traffic and pedestrian friendly environment
   • Allow private use of public realm - awnings, arcades, outdoor café seating, kiosks, etc.
   • Brand the experience - signs, street furniture, environmental graphics and public art
   • Make public access a prerequisite
   • Provide Civic and cultural amenities and attractions

3. Cultural attractions / events
   • Bring tourists and suburbanites back at night and weekend by introducing sports, multi media, cultural and leisure venues
   • Introduce street and water based festivals/fairs – little capital outlay
   • Encourage after-work uses to delay evening traffic impacts
   • Encourage spin-off cultural industries (design, architecture, heritage, and entertainment)

4. Keep it authentic
   • Perceive the waterfront as part of the centre city fabric
   • Build a compelling story from the history
   • Connect to historic and cultural heritage by reusing existing buildings and structures
   • Promote history based tourism
   • Embrace the water
   • Use historic identity to give character

5. Respect retail / experience fun
   • Introduce complementary retail
   • Encourage all day activity
   • Focus the retail energy to maximize impact
   • Match shoppers’ rising expectation and sophistication
Our fields of expertise
Our common way of working in Master planning is based on a balanced and integral approach, combining the full depth and width of the required fields of expertise in one compact and experienced team. For the development of a successful master plan, this integrated approach is crucial: integrated development is typically complex, large scale, requires big investments and need the dedication of a range of different stakeholders. A successful development is characterized by strong socio-economic development; it requires tailored approach and implementation.

Some projects:
- Cape Town Foreshore
- Stellenbosch City Center
- Doha Airport City Masterplan
- Zhengzhou Airport City masterplan
- Master planning framework for MODON, Riyadh, for cities in Sudair, Madinah, Al Kharj, Gurayat, Wa’ad Al Shammal

Doha Airport City Master Plan by RHDHV, Qatar
Regional planning is a relatively new phenomenon in most parts of the world, including the Middle East. As Dutch engineers, we have a legacy of some 200 years of active nationwide and regional planning in our country. This has always been necessary to fight our land off the Sea. The starting point of our regional planning always lies in active stakeholder engagement to create a comprehensive database of hard and soft data, ranging from geography, ecology, climate and sociology to modelling traffic and economic impact of new developments.

While our stakeholder engagement approach is crucial to have all relevant data when it is needed, it is also the baseline for implementing successful plans together with local government, private investors and the local inhabitants. Currently, we are demonstrating this approach with the project office Musandam, Oman: following up on our approved regional plan, we have set up the organization that manages the implementation of the measures in the various fields, from setting up a park management organization for the national park, to facilitating the up-grading of the regional Airport.

Projects:
- Economic and Spatial Master Plan Musandan, Oman
- Sohar Regional Plan and Port Master Plan, Sohar, Oman
- Olympic Games Spatial Framework, Netherlands 2022 games application
- Structural Vision Stadionpark Rotterdam

Economic and Spatial Master Plan Musandan, Oman, by RHDHV
Economic Studies & Development Strategy

Feasible and realistic

Great ambitions are good, but to make ambitions become reality, thorough market analysis and feasibility studies are necessary. What market demand is realistic, what can be expected or created? What developments will be feasible? What phasing is financially possible? After all, a project needs households, entrepreneurs and consumers to fill up the project. Long term developments ask for regular updates to be able to adjust the project to changes in the market.

Today an analysis needs to be up to date to be able to support the entire project and get investors interested. Furthermore creating revenues quickly in order to invest in or finance the next phase is essential. Especially in the financial world we live in today. To go from a master plan to realisation we emphasize the importance of a solid development and management strategy.

The development strategy focusses on how to get things done: how to phase the project in several smaller plans and projects, arrange financing, create Public-Private-Partnerships (PPP) or other legal vehicles and arrange legal matters as zoning plans and permits.

Projects:

- Industrial Port City, Kribi, Cameroon, feasibility and masterplan,
- Market Strategy Sudair city, Riyadh
- Schiphol Airport Corridor spatial vision, Amsterdam

Sudair Industrial City Master Plan, Saudi Arabia, by RHDHV
Urban Renewal & Area Development

A city is continuously in motion; evolving, developing and re-inventing itself. Districts and quarters go through a cycle of rise, boom, degrade, decay, re-investment and re-population and rise again. Next to this ‘breathing’ of the city, the place and function of in the cities’ grid develop. New centers and destinations arise, businesses leave or are established, the city traffic demands may request changes in the infrastructure. Urban renewal enables the city to develop, evolve and grow by focussed interventions in the housing, public and commercial facilities and infrastructure.

Some projects:
• Stellenbosch city center re-development
• Triangle de Gonesse re-development, France
• Markthal Rotterdam, with architect MVRDV
• International Crime Court the Hague, with Architect SHL

Stellenbosch city center re-development, Stellenbosch, South Africa, by RHDRV
Selection of our work
Scheldekwartier Flushing

Awards: European Excellence in Urban Design Award

With the re-location the Royal Schelde shipyard from its inner city location to a new port outside of the city, an urban waterfront area was given back to the city for re-development. Royal HaskoningDHV was the winner of an invited master planning competition and was the lead consultant in the area development during a period of approx. 6 years.

The development was highly challenging in particular due to the presence of asbestos and other polluting substances in the ground, a complex cultural heritage with partly destroyed monumental yards and quays, and a complex traffic circulation due to numerous obstacles.

The plan is based around the monumental shipyards and buildings, a new marina and 1200 new houses in all categories.

Client: Flushing Municipality
Size: Mixed-use waterfront of approx. 160 ha / approx 1,200 houses / 200,000 m² GFA
Scope:
- Spatial Master Planning & Urban Design
- Transport & Infrastructure planning
- Market research
- Engineering
- Culture heritage
Location: Flushing, The Netherlands

Copyright: Karin van Maanen
Al Lith Port City

Master Plan for a new strategic agri-industrial city

The Kingdom of Saudi Arabia (KSA) is in an important geographic position, since it is strategically located in the heart of the Middle East, close to the Suez Canal, with long coastlines along the Red Sea and the Arabian Gulf.

The country has 2 million km² of land, 70% of which is desert, and has very limited water resources. This, coupled with world agricultural production volatility, led to the need for a robust food security program.

Saudi Arabian Government allocated a coastal land area of approximately 90 km², with 11 km coast line, near Al Lith (Makkah Province), south of Jeddah, for construction of a new port. Apart from the port, the allocated land area will include an agri-industrial city, providing state-of-the-art development opportunities for the food industry. As well as handling agricultural and food products, the port will facilitate the import and export of all types of clean cargoes, which will relieve other Red Sea Ports in the Kingdom (especially the Port of Jeddah).

The proposed development will also include food-related research and development facilities, a residential complex and all associated facilities and utilities, required to make this project capable of fulfilling the regional economic and social development objectives.

Client: Midroc Group
Size: 95km²
Scope:
• Spatial Master Planning
• Market Research & Economic Planning
• Urban Design
• Port & Industrial Planning
• Environmental Impact Assessment
• Water management
Location: Saudi Arabia
Cruise terminal Amsterdam

Amsterdam’s Cruise terminal located in the inner city is challenged by rapid increase in traffic and size of ships. Therefore the city decided to relocate the cruise terminal to a better accessible location, where various types of maritime, urban and leisure activities can better be combined. Royal HaskoningDHV won the tender for the integrated feasibility study, analysing and comparing two alternative locations on aspects such as environment, traffic, civil feasibility, cost, urban integration and business model.
Hellevoetsluis Harbour
Re-developing a historic inner city district

In the Veerhaven a new waterfront is created through an innovative combination of living, working and water sports. There are now a number of water sports companies on the spot, but in the years leading up to the real estate crisis, plans were made to buy out the entrepreneurs and turn the site into a residential area. Due to the crisis these plans became unfeasible. In 2010, we were asked to design a “Fallback alternative” where the site would be set up as a business park. Around the Veerhaven, companies are given the opportunity to grow, but the extensions will simultaneously work as a sound wall and will protect the environment. Along the beautiful quayside of the Kanaal through Voorne, attractive new residences with a view of the Fortress and the Haringvliet can be reached. This innovative solution makes it possible to realize a high-quality design for the entire area.

Client: Oud Beijerland Municipality
Size: Mixed-use waterfront of approx. 400 houses
Scope:
• Spatial Master Planning
• Urban Design
• Marina Design
• Stakeholder Engagement
• Culture Heritage
• Supervision
Location: Hellevoetsluis, The Netherlands
Oud-Beijerland Harbour Quarter
Re-developing a historic port

With the relocation of an industrial complex, the river front of the village Oud Beijerland became available for urban renewal. RHDHV’s urban scheme won the design competition in 2002. Thereafter, it was fully developed, realized and sold within a period of only 4 years. Despite this fast development, it blends into the cityscape naturally as if it has always been there, forming a splendid background to the yearly local “Harbour Days” festival.

**Client:** Oud-Beijerland Municipality  
**Size:** Mixed-use waterfront of approx. 200 houses plus retail and restaurants  
**Scope:**  
• Spatial Master Planning  
• Urban Design  
• Culture Heritage  
• Supervision  
**Location:** Oud-Beijerland, The Netherlands
Foreshore Waterfront District
Re-developing the Cape Town Foreshore precinct to an iconic waterfront development

Re-developing the Foreshore Freeway precinct is the key project in the push for Transit Oriented development in one of the major cities of south Africa. Royal HaskoningDHV is the lead consultant and responsible for master planning, traffic and infrastructure engineering in a consortium including Group 5, Mace and other consultants.

The scheme completes the highway viaduct in a slender way on the city side. This frees up the waterside viaduct, which is then transformed into a linear urban park ribbon which connects a new truly metropolitan mixed-use district, district up will be developed into an inclusive waterfront with 4500 houses in all categories and plenty of commercial, retail, leisure healthcare and educational spaces.

Client: Group 5
Size: 2 km highway development & 600,000 m² GFA
Scope:
- Spatial Master Planning
- Urban Design
- Public Space Design
- Landscape Design
- Market research & Economic planning
- Financial feasibility
- Transport & Infrastructure planning
- Environment Impact Assessment
- Technical Engineering
Location: Cape Town, South Africa
The Rotterdam City Council is willing to transform the Stadium Park into the showpiece of ‘Rotterdam City of Sports’. Stadium Park should give Rotterdam status as a real sports city. With Stadium Park Rotterdam will be able to host the World Soccer Games or even become an Olympic site. But Stadium Park also should become the sports area for people from the neighborhoods around the Stadium Park or the inhabitants of Rotterdam. The question for this research is about the integration of the local users, the urban/regional users and the (inter)national visitors:

The mission of Royal HaskoningDHV and our client was to design a sports and leisure programme that ‘breathes’ sports in all of its aspects. Stadium park accommodates School Sports, Club Sports, Neighborhood Sports, and Top Sports.

**Client:** City of Rotterdam  
**Size:** 40 ha  
**Scope:**  
- Spatial Master Planning  
- Market Research & Economic Planning  
- Stakeholder Engagement  
- Environment Impact Assessment  
**Location:** Rotterdam, The Netherlands
Bataviastad

A shopping-leisure concept in the Dutch polder

This charming, reconstructed seventeenth-century village is a shopping Valhalla for fashion lovers. More than 250 international fashion & lifestyle brands like Hugo Boss, Michael Kors and Tommy Hilfiger are waiting to inspire you with the latest trends, must-have items and more. Not only your wardrobe gaps will be filled after a day at Batavia Stad Fashion Outlet; you can also indulge yourself with jewellery, chocolate and even innovative cookware. Tired of shopping? Relax and soak in the cosy ‘Batavia vibe’ at one of the hip cafés or pleasant restaurants. At Batavia Stad Fashion Outlet, 150 stores offer you sophisticated fashion with savings from 30% up to a massive 70%. And with our Special Services like WiFi or Hotel Arrangements, we hope to make your shopping experience even more enjoyable.

Client: Stable International, Forum Invest
Size: 17 ha
Scope:
• Spatial Master Planning
• Urban Design
• Architecture
Location: Lelystad, The Netherlands
Sarah Baie Marina
A new marina for the city center of Dakar

Sarah Baie is a private initiative of Corte Marine SA to develop a new urban area near the centre of Dakar. The protect reclaims land from the sea and creates a barrier in front of the cliffs of Dakar. The cliffs of Dakar are instable, and measures needs to be taken to protect the cliffs from further erosion. Sarah Baie comprises the development of a full service marina, restaurants, shops, hotels, leisure facilities and a residential area with apartments and villas.

The master plan creates an integrated area with a vivid city life. The master plan is composed in such a way that functions interact with each other, and stimulates a mixed-use area where people meet, are seen and want to be seen, and where public space is entertainment in itself.

Client: Confidential
Area: 18 hectares
Program: marina for 90 yachts, 7,500 m² shops and restaurants, a casino and night club, 350 rooms hotel, 85 villas and 200 apartments
Scope:
- Spatial Master Planning
- Financial Feasibility
- Marina Design
- Technical Engineering
Location: Dakar, Senegal
Belgrade Waterfront

*Industrial Brownfield*

Belgrade Waterfront, a first-of-its-kind development for Serbia, will be an extension to the capital, and not an isolated district; a blend of distinct neighbourhood communities, open spaces designed to appeal to pedestrians, riverside walks, tranquil public spaces for residents and visitors, as well as creating new cultural jewels from historic buildings.

Set on the right banks of the Sava River, Belgrade Waterfront will span an area of 1 million square metres, and with a total construction area of 1.8 million sqm. This spectacular new city hub, developed by Eagle Hills, will feature world-class residences, the biggest shopping and lifestyle destination in the Balkans, premium hotels, cultural venues, educational institutions, modern healthcare amenities and a wide range of leisure attractions.

**Client:** Eagle Hills (CRTKL)

**Size:** 100 ha, 2 km waterfront

**Scope:**
- Spatial Master Planning
- Urban Design & Landscape Design
- Technical Engineering

**Location:** Belgrade, Serbia

*Previous work experience Edgar Kiviet for CallisonRTKL*
Port du Futur - Dakar
A new port & re-development of the old port

The national strategic vision set forth in the Emerging Senegal Plan (PSE) identifies the need for change to accelerate the country’s progress toward emerging market status. Relocating the Port, to develop a new and modern port in a green field setting, combined with regeneration of the prime location of the old port, strategically located very close to the city center of Dakar, is believed to boost the economy of Dakar. DP World asked Royal HaskoningDHV to develop the master plan for this development.

Good accessibility and growth space for the new port
The port of Dakar is an important driver of economic growth. It has seen its throughput grow to 13.4 million ton in 2014, coming from 10.3 M tonnes in 2010. The port is expected to grow further in the decade to come, but the existing location cannot provide that space. The new location, at the eastern boundary of Dakar, offers this space, combined with much better accessibility by road and rail, so the port can grow further much faster.

Golden opportunity for Dakar to grow it’s CBD
The city center of Dakar is surrounded by water, limiting the growth of this economic center of West-Africa. Phasing out the port, provides lots of opportunities for Dakar. The Central Business Center can grow, with a vibrant waterfront, public boulevards, attractive marinas etc.

Of course this huge project cannot be realized overnight, and should be phased prudently. Both to enable the port activities to keep going, and to add urban hectare to Dakar at an attractive development pace (keep the m² scarce to a certain degree).

Client: DP World
Size: 400 ha old port + 500 ha new port
Scope:
• Spatial Master Planning
• Urban Design
• Landscape Design
• Port & Industrial Planning
• Marina Design
Location: Dakar - Senegal
V&A Waterfront Vision 2040

Technical review

V&A has been successful in developing the V&A Waterfront development of Cape Town over the last 25 years.

In order to keep up this worldwide position and unique ambiance the V&A has been preparing a long term vision: Vision 2040.

This Vision 2040 has been developed together with KPF Architects. Now it is time to review the masterplan on technical and financial merits. Royal HaskoningDHV has been asked to conduct the technical review, and provide input for the cost aspects of the related infrastructure.

Most important aspects of this review are:
- Coastal protection and land reclamation
- Transport
- Energy
- Water

Client: V&A Waterfront
Size: 150 ha
Scope:
- Technical review Master Plan
- Transport & Infrastructure Planning
- Environment Planning
- Water Management
- Technical Engineering

Location: Cape Town - South Africa
Egbin Tech Park
Prime development area across the Lagos - Lagoon

Development of approximately 800 ha around the largest power plant of Nigeria, located at some 25 km via the Lagos lagoon from the city centre of Lagos, with limited accessibility, located between dense urban area on the north, and the shallow Lagos Lagoon in the south.

By creating 10 km new road in an empty corridor between overhead power lines, and upgrading the water taxi system, the accessibility of the location will be improved. Now the location can be transformed into a Campus area with an educational focus on the technical aspects of the power plant, combined with ICT, high tech businesses, and supported by mixed use areas, marinas and residential areas. In 10 years’ time some 175,000 jobs can be created and 250,000 people will live in a safe, secure and above all inspiring environment, providing Lagos with an unknown development for technical innovation.

Client: Sahara Group
Size: 800 ha
Scope:
- Spatial Master Planning
- Urban Design
- Landscape Design
- Market Research & Economic Planning
- Financial Feasibility
- Marina Design
- Transport & Infrastructure Planning
- Environment Planning
- Water Management
Location: Lagos, Nigeria
The Ministry of Petroleum and Mineral Resources intends to open a new iron ore mine in the remote region of Duba at the northern Red Sea coast. The iron ore pellets will be transported to the coastline for shipping. To leverage economic growth and employment of this region NICDP was asked to assist the Ministry in establishing an industrial cluster at this location. Royal HaskoningDHV was assigned by NICDP to draft a conceptual masterplan and a financial feasibility study for the 3.2 km² estate.

During the project it became clear that the world market prices for iron ore and minerals would not make it likely the new mine would be in operation within the next 15 years. In an effort not to delay the industrial cluster and its desired employment opportunities, Royal HaskoningDHV designed a flexible and phased masterplan. Flexible plot sizes allow various industrial mixes to establish which are based on a third-party market study. A two phase approach reserves space for future minerals related industries if market prices may go up. Environmental zoning is carefully considered.

The industrial mix produced projections of employees and future citizens, which in turn led to the size of a new community. We planned the most desirable areas for living, important to attract the high skilled workforce to the region.

A business case was built including all investments and revenues over time, producing the average cost to create one job. This provides a good base for the investing Ministry.

The approach of Royal HaskoningDHV, combining an economic study and spatial planning with a development strategy and a business case, has provided the client with a solid base for decision making.

**Client:** NWIC  
**Size:** 320 ha  
**Scope:**  
- Spatial Master Planning  
- Market Research & Economic Planning  
- Urban Design & Landscape Design  
- Port & Industrial Planning  
- Transport & Infrastructure Planning  
- Environment Impact Assessment  
**Location:** Duba region, Saudi Arabia
MASTER PLAN
development stage 4

Infrastructure
- Railway
- Station
- Backbone/highway, rail, electricity
- Starter yard
- Main road
- Unpaved road
- Hillside road

Spatial reservation

Industrial zone
- Port Area
- Heavy industry
- Medium industry
- Light industry
- R&D (very low density)
- Industrial claims (2010)

Residential zone
- Density 50-100 d. /ha. (residential + services)
- Density 25-50 d. /ha. (residential + services)
- Density 5-25 d. /ha. (residential)
- Density 1-5 d. /ha. (residential)

Village

Resettlement area boundary 2012

Temporary functions
- (Urban) Agriculture
- Other

Other:
- Planning & construction area railroad
- Natural water buffer
- Beach and sea defence zone
- DPZ area
- Forest
- Natural wetland systems

ROYAL HARBOUR
Enhancing Society
Royal HaskoningDHV was commissioned by the Cameroonian government to create a master plan and development strategy for the project to ensure sustainable spatial, social and economic development. It involves the construction of the Kribi Industrial Port Complex, a 260km² industrial and residential city is underway near Kribi, a coastal town in south western Cameroon. The project provides a deep sea port, a large industrial zone for heavy, medium and light industry and a modern residential city to provide housing for about 300,000 people by 2040. The development starts with the production and export of minerals, energy and petrochemicals. The development of medium and light industry is to bring more jobs and added value.

With several major companies and investors declaring an interest, the project is seen as a key step in creating wealth and sustainability in Cameroon. Regional investment will also be used to develop tourism and preserve marine and terrestrial nature.

Client: VROMI
Size: 260 km² Industrial & Residential development
Scope:
• Spatial Master Planning
• Market Research & Economic Planning
• Regional planning
• Urban Design
• Financial Feasibility
• Transport & Infrastructure Planning
• Environment Planning
• Water Management
• Stakeholder Engagement
• Culture Heritage
• Technical Engineering
Location: Cameroon
Port of Sohar
Master Plan North Batinah Region 2025

Sohar is located 250 km to the north of Muscat, the capital of Oman. Royal HaskoningDHV has drawn up the spatial master plan for the new port of Sohar and surrounding area for an area of approximately 17,000 ha. This master plan provides space for the port area, an industrial area and business parks, new towns, tourism, agriculture, water management, infrastructure and utilities. On the basis of the master plan, H.E. Sultan Qaboos has issued a Royal decree to reserve the project area for the sole developed of these (industrial) purposes, in order to minimize undesirable environmental impacts.

Client: Port of Rotterdam / Port of Sohar
Size: 17,000 ha
Scope:
• Spatial Master Planning
• Regional Planning
• Port & Industrial Planning
• Transport & Infrastructure Planning
• Environmental Impact Assessment
Location: Sohar, Oman
Rotterdam en Duisburg, twee centra in de wereldhandel

(Bron: Duisburger Hafen AG, bewerkt door Royal Haskoning)
Rotterdam - Rhine - Duisburg

Symbiosis between two ports

Working together on Economics and Prosperity
The time seemed ripe to transform the long-established symbiotic relationship between the ports of Rotterdam in the Netherlands and Duisburg in Germany into a formal relationship in which cooperation, joint responsibility and leadership could take shape. This relationship is about optimally stimulating economy and prosperity in Northwest Europe. A strong economy automatically means thriving ports, and vice versa.

Rotterdam – Rhine – Duisburg as a strong two-unit
The ports of Duisburg and Rotterdam are two main players in European logistics, connected by the Rhine, the backbone of the economy of Europe. Provided they operate as a unit, both ports can lead efficiency, innovation and sustainability in goods transport like no other. They can take responsibility, show leadership and also invest in innovation. Acting as a two-unit, they can meet the challenges of the coming decades.

Five challenges where examined by Royal HaskoningDHV:
1. Strong port networks
2. Innovation in transport chains
3. Clean and sustainable ports
4. Strong spatial planning
5. Targeted port organization

Client: Port of Rotterdam
Size: 600 ha
Scope:
- Spatial Master Planning
- Market Research & Economic Planning
Location: Port of Duisburg - Germany
Regeneration Harbour of Satander
Special plan for new waterfront cultural pavillion designed by Renzo Piano

Coastal Resort ‘Marina de Cope’
Masterplan for a 2,000 ha mixed tourism resort with 5 golf courses, 25,000 hotel beds and 10,000 residential unit

* Previous work Edgar Kiviet in Arnaiz & Partners
Rotterdam Merwe Vierhaven
Climate adaption study

* Previous work experience Edgar Kiviet for CallisonRTKL
Feasibility study for integrated water transit hub in the Uskudar district. The ferry terminal at Uskudar has a unique setting and a broad range of transport types with a huge potential for improvement. The primary objective of IBB for the “Uskudar transfer center” is to address and resolve current issues and challenges and to create a new iconic transit hub for the ferry terminal, while improving the passenger experience. A secondary but equally important objective is the need to capitalize on the opportunity to improve the relation between the different transport types and by doing so to convert Uskudar into a modern multi-functional and multimodal transit hub.

Previous work experience Edgar Kiviet for CallisonRTKL
Our core team
Edgar Kiviet  
**Master Planner Waterfronts**

Edgar is specialized in design management of international master planning, city and community strategies, from early concept through delivery. His strength lies in his holistic sustainable vision that drives the best outcomes from complex, multidisciplinary environments and teams. He brings senior experience from a practice with international urban development in the fields of urban regeneration, transit oriented development and sustainability. He is a frequent collaborating professor in Master programs and specialized courses at universities and private institutions.

Mariska Ruiter  
**Master Planner**

Mariska is an Urban Planner for integrated and comprehensive spatial master planning, Transit Oriented Development and Infrastructure planning. Projects carried out included i.e. stakeholder engagement, spatial-economic master planning, E(S)IA’s, management strategy, and tailor made zoning systems.

As lead urban planner she is generally responsible for the client communication, presentation to clients and stakeholders, internal project organization and co-ordination of the different disciplines required, such as urban planning, environment, civil engineering, legal aspects, and traffic and mobility with regard to urban engineering aspects.

Friedemann Römhild  
**Master Planner**

Friedemann is a lead urban planner with an extensive track record in master planning of complex and strategic area developments of all scales. He joined Royal HaskoningDHV in 2009 and has since worked on a series of strategic projects worldwide, including the Kingdom of Saudi Arabia, South Africa, China, Russia, Germany and the Netherlands. He currently holds the position of lead master planner for the framework of Economic City designs for the Saudi government, including the new town of Sudair. Friedemann graduated with distinction at the Technical University of Berlin in 2000. He started his career at the leading architecture and urban design firms of KCAP and Mecanoo, where he was responsible for a series of international design competition wins.

Marcel Wijsman  
**Lead Civil Engineer**

Marcel is Lead Infrastructure Engineer. Specialised in large scale infrastructure planning. During 29 years work experience as a Civil Engineer he has developed extensive multidisciplinary international experience in planning and realization of both large scale and small-scale civil engineering projects. Recently he has been involved in masterplanning and detailed design of large scale industrial and residential developments in the Middle East.

He is acting as team manager, consultant and project manager and has extensive knowledge and experience in a broad range of disciplines. Therefore he is able to oversee and manage multidisciplinary teams in
Wouter Porton  
**Strategic Consultant & Programme Manager**

Experienced project- and programme manager with a highly developed sensibility in relations and stakes. Broad scope in spatial development. Proven leader. Broad experience is gained in managing urban and regional planning, with a focus on strategic planning as well as urban development and organization design. Able to think across fields of expertise, moreover to interconnect them and denote uncommon solutions. Led teams of professionals successfully through complex projects to sustainable developments. Special interest in combining process, content and organizational design. Vast experience in accelerating organizations by intervening, managing, implementing, counseling and on the job coaching. Especially skilled in enhancing tactical operational performance and basic

Urban van Aar  
**Senior Landscape Architect**

Schooled in landscape architecture, Urban works on a wide range of projects, from large scale international master planning and urban design projects, to small scale design and detailed Urban Design and Landscaping projects.

Urban worked for more than 20 years in the ‘Randstad’ (the Dutch delta metropole with more than 6 million inhabitants), for the cities of Amsterdam and The Hague and for his own design company. He made many designs for public space such as urban parks, squares, streets and also master plans and urban designs for new residential areas, city centre projects and business parks. Working for Royal HaskoningDHV he focuses

Johanna Bouma  
**Landscape Architect**

Johanna’s fascination and passion as a landscape architect are inspired by integral design assignments involving various disciplines. Her aim as a designer is to converge technology, process and spatial quality in order to create a design.

Johanna has experience in designing public spaces and landscapes on different scale levels. From detailed design to master planning and spatial planning strategies. In her designs she finds it important that the public space is made for the people who will use it in future; practical, useful and pleasurable place making is her design objective.

Bart Brorens  
**Project manager & senior consultant**

Bart Brorens is an experienced and energetic project manager and senior consultant. He is specialized in creating comprehensive master plans and management strategies for the development of regions, large urban and industrial cities/zones with related infrastructure.

He holds two academic degrees: a master in engineering in the field of land and water management and a master in business administration, in the field of strategy and organization. This broad knowledge helps him in developing integrated solutions by connecting experts and stakeholders in the field of urban planning, economy, environment, technical and legal issues, costs and financing.
Company profile
RHDHV Regional office locations
Royal HaskoningDHV has been connecting people for 135 years. Together, through our expertise and passion, we have helped contribute to a better society and improved people’s lives with work underpinned by our sustainable values and goals.

We are an independent international engineering and project management consultancy leading the way in sustainable development and innovation.

Our 6000 colleagues, working from around 100 permanent offices in more than 30 countries on projects in some 150 countries, are committed to our promise to enhance society together.

Our professionals deliver services in the fields of aviation, buildings, energy, industry, infrastructure, maritime, mining, transport, urban and rural development and water.

We focus on delivering added value for our clients while at the same time addressing the challenges that societies are facing. These include the growing world population and the consequences for towns and cities; the demand for clean drinking water, water security and water safety; pressures on traffic and transport; resource availability and demand for energy and waste issues facing industry.

By showing leadership in sustainable development and innovation, together with our clients, we are working to become part of the solution to a more sustainable society now and into the future.

We are driving positive change through innovation and technology, helping clients use resources more efficiently and creating solutions which connect with people to make their lives easier, happier and safer.

Connecting lives is our history and our future. We are connected through a passion to work on projects that matter and to engineer solutions for our clients that go beyond the original brief. We are connected through work that is enhancing society, contributing to a more sustainable future for our children and our children’s children.

Our head office is in the Netherlands, other principal offices are in the United Kingdom, South Africa and Indonesia. We also have established offices in Thailand, India and the Americas; and we have a long standing presence in Africa and the Middle East.