

# PORT MANAGEMENT PROGRAMS INFORMATION

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## Introduction to Port management partners

### 1.1 BRIEF INTRODUCTION PORT MANAGEMENT PARTNERS

#### STC international

STC International is the leading knowledge institute on human capital development world-wide. Education, training, technical assistance and research are provided to the maritime and transport (related) industries. All programmes are conducted by experts from the industries in combination with high-tech simulation wherever possible. Competency, rules and regulations, efficiency, environment, safety and security are key issues in the services provided. By doing so, people are offered the ability to create a sustainable family income. Organisations can benefit by having a motivated and skilled labour force.

#### STC International provides its services to the clusters:

1. Maritime and Offshore;
2. Port and Terminals;
3. Transport and Logistics;
4. Process Industry and Energy.

The company currently operates centers of excellence in the Netherlands, Colombia, Oman, Vietnam and South Africa. STC International is an experienced partner that provides and migrates prime knowledge for

the national and international transport and maritime cluster in a sustainable and innovative way, in order to bring people, institutions and companies to a higher level of education.

#### Port of Rotterdam Authority

The Port Authority manages, operates and develops the port and industrial area. The objective of the Port of Rotterdam Authority is to enhance the port's competitive position as a logistics hub and world-class industrial complex. Not only in terms of size, but also with regard to quality. Consequently, the Port Authority is a pioneer in the transition to sustainable energy and focuses on digitalisation to make the port and trade flows even more efficient. The two core tasks of the Port Authority are the sustainable development, management and operation of the port and maintaining the smooth and safe handling of shipping.

#### Facts and figures for the Port of Rotterdam Authority and the port of Rotterdam:

- Port of Rotterdam Authority: approximately 1,270 employees, revenue approximately € 750 million.
- Port area: 12,500 hectares (*land & water, including approximately 6,000 hectares of industrial sites*). The port area is more than 40 kilometres long.
- Employment: (direct and indirect) 385,000 jobs in the Netherlands.
- Goods throughput: approximately 440 million tons of goods a year.

- Shipping: approximately 30,000 seagoing vessels and 100,000 inland vessels annually.
- Added value: (direct and indirect) €45.6 billion, 6.2% of Dutch GDP.



Port of Rotterdam Authority



STC International



**LEGENDA**

-  Current joint ventures Port of Rotterdam
-  Port development/ Partnership projects
-  Foreign Offices Port of Rotterdam
-  Rotterdam Representatives Offices
-  Education center (STC)



## Brief introduction the various Port management programs



### 1.3 BRIEF INTRODUCTION PORT MANAGEMENT PROGRAM

Port development and management present major challenges including adjusting ports to rapidly changing market dynamics. Making big long-term infrastructure investment plans in an uncertain and ever changing market climate, adjusting to the technical and operational requirements of bigger vessels and increasing cargo volumes is a challenge to face. Global trends such as energy transition and digitization require innovative solutions to face.

Challenges as how to make future port infrastructure, play a significant role in the course. These are the challenges which governments, port authorities, and port operators increasingly have to contend with. These challenges require staff with a deeper and more nuanced understanding in the complex dynamics of the port industry. The Port Management Program offers candidates the understanding and analytical mind-set needed to confront these challenges.



### 1.4 BRIEF INTRODUCTION PORT MANAGEMENT PROGRAM - DIGITALISATION (ONLINE)

The Port of Rotterdam and STC International developed the Digitalisation spin-off program to promote in-depth insight in this Port Management topic. The COVID-19 crisis has shown to which extent we are dependent on

technology and digital solutions to keep our industries operational. This will undoubtedly give the digital transition new momentum in the years ahead.

The port of the future will be a digital port, where cargo flows are no longer delayed by the inefficient exchange of key data. Digital technologies allow users to share relevant data in real time – and share it with all parties involved in a process that is as safe as it is reliable. This includes partners further along the chain with whom we currently have almost no direct contact. The digital transition will enable us to predict arrival times, reduce the length of port stays and minimize waiting times.

By joining this unique program, participants will have a deep understanding of implementation processes in relation to digitalisation. This understanding will save a lot of time and prevents unnecessary costs as lessons learned are part of this program.



### 1.5 BRIEF INTRODUCTION PORT MANAGEMENT PROGRAM - ENERGY TRANSITION (ONLINE)

The Port of Rotterdam and STC International also developed the Energy transition spin-off program to promote in-depth insight in this Port Management topic. For the port's future to be successful, it is important that port businesses and the shipping industry must be able to develop constantly. At the same time they must do while being mindful of the climate. Among other things, this demands new technologies, new revenue models and new collaborative partnerships.

### Four-pillar approach towards CO<sub>2</sub> neutral

Working with businesses and the government, the Port of Rotterdam Authority has developed a vision and a 4-pillar approach for achieving our goal of a carbon-neutral and circular port. This strategy is the result of years of intensive research.

In this (online) Port Management Program Energy transition we share the most important trends, developments, insights, lessons learned and more. In workshops you will get the unique chance to work with other international professionals on a chosen port of the future, being guided by experts on the field of Energy transition. Tools are provided to take the necessary steps for a sustainable future.

#### Organized by:

Port of Rotterdam Authority & STC International

#### Venue:

On location, Rotterdam or online

#### Lecture topics:

- Port Management & Port Development
- Spinoff programs digitization
- Energy transition (in development)



## Port management program

### 2.1 MODULES

#### Module port basics

During this module we will give answers to questions as: *What is a port?, What does a port do?, How are ports managed? and Where is the port industry headed?* The basics are the foundation to make sure every candidate is on the same level of communication and understanding.

#### Module port business

This module will cover topics such as the role that ports play in global supply chains, the factors that drive the port business, how to attract clients to the port, what criteria do companies use in selecting ports and what role does a port development company (pdc) play in developing a segment.

#### Module port infrastructure and port planning

This module provides insights into the main challenges you can expect in brown/greenfield port developments, the multidisciplinary approach, the need to balance different needs/interests, the different types of contacting (how is this done and what issues to consider) and the benefits of clustering and how this strengthens your port.

#### Module port management

The following topics will be discussed: *How are tasks and responsibilities allocated in a port? What are the different entities and organizations involved in the*

*development of the port? What is the mandate of the port developer? How is management appointed? What are some of the justifications for government involved in port development? What are the interests which a port developer has to balance (stakeholder management)? How do you balance private and public interests in a port? And how do you balance efficiency and compliance with (safety, security, customs) regulations?*

#### Module future of ports

Ever evolving insights on ports and hinterland has it's reflection on the way we work in the future. Paperless offices, autonomous sailing vessels, robotizing, 3D printing and so on will create a new reality. Applicable for the port and it's processes are among others digitization and block chain technology. It requires innovative solutions to face these challenges. Take a step with us into the future of ports and it's industrial cluster!

#### Strategic stakeholder management

The development of the port of Rotterdam from the past to the present created a stronghold where all stakeholders contributed to the growth of the economic region. All parties serving the local industry and the hinterland benefit from collaboration. This ongoing process continues into the future on energy transition, sustainability, digitization and innovation. Sharing best practices from our past help you to avoid loss of time and resources in any local implementation process. From a landlord model perspective this course is an introduction to further specific in deep programs related to your challenges.







## 2.2 PROGRAM CHARACTERISTICS

### Tailored to Client Needs

Together with the Client, a tailor-made PMP (in Rotterdam or on location) is designed that addresses Client specific topic(s). The topics can include long-term vision, spatial planning, sustainability, safety and security, stakeholder management, etc.

### Interactive Lectures

The program consists of interactive lectures delivered by relevant experts of POR and STC-Group professionals. The lectures aim at applying more than 80 years' of combined port development expertise to the local context.

### Case Studies/Management Games

Depending on the objectives and topics, the program can include interactive case studies where participants are asked to apply the concepts they've learned to a local context.

### Port Constructor and Hinterland Game

Management games can be added to the program, if objectives and topics so require. During these games focus is for participants to make judgements, often presented as management dilemmas and tradeoffs.

### Maasvlakte 2, Terminal visits, Customs & Branche organisations

Excursion(s) to the port and/or to port and industrial operations is a crucial element, linking concepts to practice and classroom examples to reality.

### Deliverables

Presentations held during the program, PMP Certificate of Attendance and a short document (presentation or letter) with main insights derived from the program (upon request).

### Participants

A maximum of 20 participants is recommended and at least an intermediate proficiency in the English language is required to successfully participate the PMP.

## 2.3 ENTRY LEVEL

The Port Management Program is a tool developed for capacity building for the following target groups;

### Executives

This program contains Strategic and Board related issues for Board members and senior managers in ports, governments and terminals.

### Project Teams

Teambuilding well suited for newly formed departments or mixed project teams.

### Support functions

In depth programs for port employees in IT, Finance, HR, Communication, Marketing, Procurement, Project Managers and Consultants.

### Students

Program, well suited for students in civil engineering, business administration and social sciences, as well for students who pursue specializations in port and shipping management and maritime economics and logistics.

### Other Programs

Manager Port Operations and Maritime Supply Chain management.

For details we refer to the website [www.stc-international.nl/courses](http://www.stc-international.nl/courses)

**Ruxandra Florescu – Romania/Austria:**  
*“The port management program, offered by the Port of Rotterdam and STC International is essential “food for thought” in a fast paced world where innovative ideas complemented by well-trained professionals bring up the efficiency and productivity we all aspire at.”*



## 2.4 PROGRAM DETAILS

<b>LOCATION</b>	Netherlands, Rotterdam
<b>CONTEXT</b>	The PMP has been specially developed for our existing and potentially new international strategic partners. On request the PMP can be organized on location as well.
<b>MAIN TOPICS</b>	Port Basics Port Business
<b>OBJECTIVE(S)</b>	By participating the PMP candidates get an in-depth, comprehensive overview of POR's 'port eco system', build solid contacts with other professionals from port businesses worldwide and gain knowledge on all relevant port related topics.
<b>NO. OF DAYS</b>	5 days
<b>ENTRY LEVEL</b>	Port professionals, minimal Bachelor's level







## Port management program digitalisation (online)

### 3.1 MODULES

#### Introduction and complexity module (Week 1)

Digitalisation from a historical perspective. In this module, we will answer questions like: *Why digitalisation? How did digitalisation develop over time? What is the current situation? How best to deal with the complex challenges involved?* Answering these basic questions creates a foundation for clear communication and understanding: to ensure candidates are all on the same page during the remainder of the program.

#### Global development on digitalisation (Week 2)

*What are the global developments on digitalization? How to improve port calls by digital exchange?* In addition, this module offers insight into the importance of standardization and the impact of international players like International Maritime Organization. Part of this week is a roundtable conversation on standardization with the various experts in this field.

#### How Port of Rotterdam does it (as organization) analytical (Week 3)

Our 5-step digitalisation model offers guidelines that can be used to detect the maturity within a given port (and its environs). This week also includes a workshop that focuses on the digitalisation maturity level of the participating organizations. The historical development of the port of Rotterdam has created a strong

spirit of partnership and collaboration, within which all stakeholders contribute to the growth of the economic region as a whole. All parties serving local industry and Rotterdam's hinterland actually benefit from this kind of collaboration – be it digital or otherwise. This on-going process will be continued in a variety of fields, including the energy transition, digitalisation and innovation. By sharing best practices developed in Rotterdam, we can help you save time and resources in your local implementation process.

#### How Port of Rotterdam does it (as organization) in practice (Week 4)

- Workshop midterm presentation, Where we want to be
- Implementing Digi
- Digi & Finance

Based on the situation as presented by the participants, we will look into which options there are to implement digitalisation in their organization. We will develop an understanding of on how the digital maturity assessment works and which groundwork is required within the organization. This module provides insight into how to successfully align digital products and create synergy. It also goes into lessons learned during the implementation of digitalisation projects within the Port of Rotterdam Authority and Rotterdam's port and industrial complex.

Key questions: *Which challenges lie ahead in terms of general barriers (legal, cultural, etc.)? How can we improve processes to create digital reliability?*





### How Port of Rotterdam does it (products) (Week 5)

- Digital Twin
- Hamis
- Routescanner

This module highlights which considerations to take in mind before investing in digitalisation or develop a business case for digitalisation. The historical development of the port of Rotterdam has created a strong spirit of partnership, within which all stakeholders contribute to the growth of the economic region as a whole. All parties serving local industry and Rotterdam's hinterland actually benefit from this kind of collaboration – be it digital or otherwise. This on-going process will be continued in a variety of fields, including the energy transition, digitalisation and innovation. By sharing best practices developed in Rotterdam, we can help you save time and resources in your local implementation process. In this week we will also be dealing with the development of a plan of approach for a chosen port project.

### How does the Network does it? (Week 6)

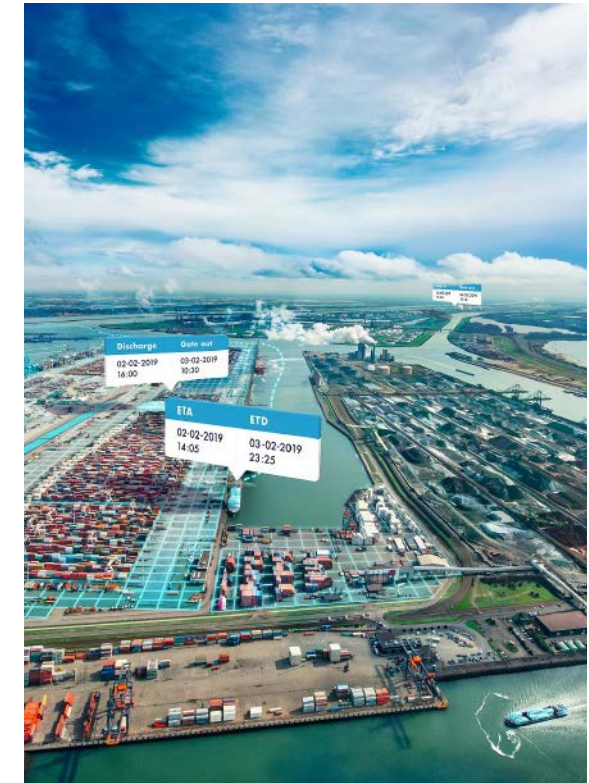
As we can see in daily life, innovation in digital solutions never stops. Although these innovations don't all directly lead to new solutions, they can serve as input for future developments. Investments in start-ups and scale-ups have already gained momentum in digital port products. Awareness and education play a key role in the acceptance of such solutions. This means that an effective plan of approach will always take education and training into consideration. In this module, we will evaluate the plans of approach drawn up by the parti-

cipants and offer feedback and suggestions for their possible improvement. This can help your organization take an important step forward on its route towards digital maturity.

Constantly evolving insights into port and hinterland operations are also reflected in our new approach to work processes. Working in tandem, trends like the paperless office, autonomous shipping, robotization, 3D printing, etc. are effectively creating a new reality. Developments that are particularly relevant to the port and its processes include digitalisation and blockchain technology. Today's challenges call for truly innovative solutions. Join us and step into the future of the port and its industrial cluster!

### How you do it? & Closure (Week 7)

In this week you will provide a presentation of the chosen port and your way ahead towards digitization. course is an introduction to further specific in deep programs related to your challenges. partnerships.



#### Johan Snyman – Australia:

*“I found the course very valuable as part of my professional development to leapfrog existing research on smart port development processes, the Online Port Management Digitalization Program, equipped me with great insight, useful tools, and a wide network of subject matter experts to develop our own digitization strategy.”*



### 3.2 PROGRAM CHARACTERISTICS

#### Tailored to Market needs

We have designed a special PMP digitalisation programme that effectively addresses current market-specific issues. Subjects covered include the latest insights, implementation and impact on the total logistics chain, stakeholder engagement, finance, etc.

#### Interactive lectures

The programme comprises a number of interactive lectures given by digital experts at the Port of Rotterdam Authority and STC-Group. The lectures draw on over 10 years of combined expertise in port digitalisation, applied to both local and international contexts.

#### Case studies

The programme includes interactive case studies, during which participants are invited to apply the insights they have acquired to local contexts. The experts subsequently offer feedback, which is discussed by the group.

#### Deliverables

PDF of the presentations held during the programme and a PMP Certificate of Attendance.

#### Participants

We recommend a maximum of 20 participants per programme. To successfully take part in the PMP, participants' English language proficiency should be at the very least at intermediate level.

### 3.3 ENTRY LEVEL

The Digitalisation PMP is a strategic and tactical implementation tool developed for the following target groups:

#### Senior management

Programmes focusing on Strategic and Board-related digital challenges faced by senior executives working for port authorities, government administrations and terminal operators.

#### Digital Project Teams

Digital programmes that are suited for team-building within newly formed departments and/or mixed project teams working in this field.

#### Support functions

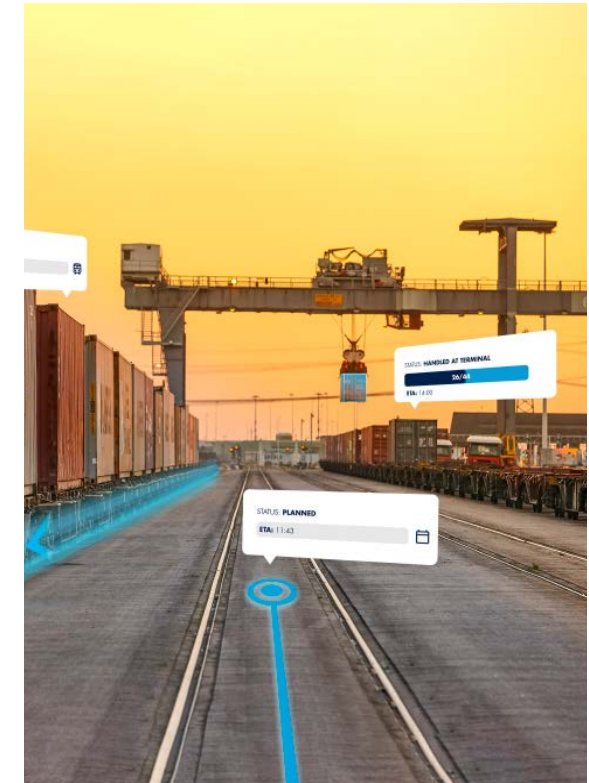
In-depth programmes for port employees in IT, Finance, HR, Communication, Marketing, as well as Project Managers and Consultants who are directly or indirectly involved in digitalisation processes.

#### Students

Programme suited for students of IT and Digitalisation, as well as students with a specialisation in port management or maritime economics and logistics.

#### Other Programmes

Manager Port Operations and Maritime Supply Chain management. For details please refer to <https://www.stc-international.nl/courses/>



#### **Dimitry Rostopshin – Russia:**

*“The Online Port Management Programme Digitalisation, offered by the Port of Rotterdam in cooperation with STC International, is a great way towards understanding how digital ports can contribute into efficiency and sustainability of the whole logistic chain.”*





### 3.4 PROGRAM DETAILS

<b>LOCATION</b>	Online
<b>CONTEXT</b>	The Port Management Programme - Digitalisation has been especially developed for existing and prospective international strategic partners. On request, we can also organise a custom Port Management Programme - Digitalisation that is tailored to your requirements.
<b>MAIN TOPICS</b>	<ul style="list-style-type: none"> <li>• Levels of digitalisation</li> <li>• Digitalisation in practice</li> <li>• Digital maturity</li> <li>• Approach</li> </ul>
<b>OBJECTIVE(S)</b>	Participants in the Digitalisation Spin-off Programme are offered a quick yet comprehensive overview of Rotterdam's digitalisation expertise. In addition, the programme provides an opportunity to build solid new contacts with other professionals from port organisations around the world. The programme provides insight into the most relevant subjects and tools that can be used to take the next step in the implementation of digitalisation in your port and its environs, the Digitalisation Spin-off Programme enables your organisation to take digitalisation to the next level.
<b>DURATION</b>	Seven weeks - 3 hours per week
<b>ENTRY LEVEL</b>	Port professionals at the level of (Senior) management, Digital project teams including related support functions and students.





## Port management program energy transition (online)

### 4.1 MODULES

#### Why energy transition – Introduction (Week 1)

In this module we will discuss the basic concepts of energy and the basic concepts ports for the next steps of the program. You will be further introduced to Energy Transition and the role of ports? This module includes topics as Energy consumption, Climate change, Resource depletion. In this module, we will answer questions like: Why energytransition? How best to deal with the complex challenges involved? Answering these basic questions creates a foundation for clear communication and understanding: to ensure candidates are all on the same page during the remainder of the program.

#### Global developments on energy transition (Week 2)

In this module we will look back to the introduction module and discuss the national and global challenges of the Energy Transition, the impact hereof on the Ports and Port industry and we will make a bridge to cooperation, knowledge and timing in week 4. A guest lecture from another port is part of this module, followed by the weekly workshop for the participants.



#### How Port of Rotterdam does it (as organization) analytical (Week 3)

In this module our experts answer questions like:

*Where to start? And How Port of Rotterdam started.*

*How has PoR brought its knowledge in order?*

We also share the program which we have developed with 4 pillars (knowledge institutes, drawn up strategy, involve stakeholders (cooperation), awareness, consequences for climate change for shipping. The movie “Seablind”, created by PoR will be shared with you! Part of this module is Stakeholder management Energy transition, including the weekly workshop, how to identify stakeholders in the chosen port.

#### How Port of Rotterdam does it (as organization) part 2 (Week 4)

Workshop midterm presentation by the participants and continuing the case & common vision (where we want to be?). We will further discuss the implementing Energy Transition in your port & port organization and share the lessons learned of Port of Rotterdam. As a continuation of week 3 we focus on timing, amongst others “from how to what! Including the lessons learned (Carbon Capture Storages and the story about CO<sub>2</sub> solution in Barendrecht” Before the weekly workshop, our experts will share with you the topic: Energy Transition & Finance.





### How Port of Rotterdam does it (products) (Week 5)

Director Energy Transition will share the story “Who is the Wolf?” with you. During this module projects within the various Pillars will be presented by the experts (CCS/Porthos, Hydrogen, biobased & renewable fuels etc.). The weekly workshop continues with a vision, goals and indicators (where we want to be?)

### How the cluster does it (products & projects) (Week 6)

This module answers questions like: *Who is the cluster? How is this cluster organized? How do they collaborate and what is the effect?* This module contains two guest lectures from companies involved and dealing with (innovations of) the Energy transition. Finally the workshop Solutions in which the question “how do we get there” will be handled and discussed with the participants.

### How do we get there? (Week 7)

In this last week we organize a workshop “*Vision to strategic goals from indicators to solutions*” (evidence based roadmap/how to get there). Finally you will provide a presentation of the chosen port and your way ahead towards the Energy transition. The course is an introduction to further specific depth programs related to your challenges.



Transforming waste into energy

**Sara Al Bahrani – Sultanate of Oman:**  
*“The PMP, offered by the Port of Rotterdam in close cooperation with STC International is a very educative Program that fits perfectly in any employee carrier aim in a way that all topics benefit in a long run.”*



## 4.2 PROGRAM CHARACTERISTICS

### Tailored to Market needs

We have designed a special PMP energy transition program that effectively addresses current market-specific issues. Subjects covered include the latest insights, implementation and impact on the total logistics chain, stakeholder engagement, finance, etc.

### Interactive lectures

The program comprises a number of interactive lectures given by energy transition experts at the Port of Rotterdam Authority and STC-Group. The lectures draw on over 6 years of combined expertise in energy transition challenges in ports and port industry, applied to both local and international contexts.

### Case studies

The program includes interactive case studies, during which participants are invited to apply the insights they have acquired to local contexts. The experts subsequently offer feedback, which is discussed by the group.

### Deliverables

PDF of the presentations held during the program and a PMP Certificate of Attendance.

### Participants

We recommend a maximum of 20 participants per program. To successfully take part in the PMP, participants' English language proficiency should be at the very least at intermediate level.

## 4.3 ENTRY LEVEL

The Energy Transition PMP is a strategic and tactical implementation tool developed for the following target groups:

### Senior management

Programmes focusing on Strategic and Board-related digital challenges faced by senior executives working for port authorities, government administrations and terminal operators.

### Energy Transition Project Teams

The program is focusing on Strategic and Board-related energy transition challenges faced by senior executives working for port authorities, government administrations and terminal operators.

### Support functions

In-depth program for port employees in Energy Transition, Finance, HR, Communication, Marketing, as well as Project Managers and Consultants who are directly or indirectly involved in the Energy Transition.

### Students

Program suited for students who are studying Energy Transition and Sustainable Energy as well for students with a specialization in port management or maritime economics and logistics

### Other Programmes

Manager Port Operations and Maritime Supply Chain management. For details please refer to <https://www.stc-international.nl/courses/>







#### 4.4 PROGRAM DETAILS

<b>LOCATION</b>	Online
<b>CONTEXT</b>	The Port Management Programme – Energy Transition has been especially developed for existing and prospective international strategic partners. On request, we can also organize a custom Port Management Programme – Energy Transition that is tailored to your requirements.
<b>MAIN TOPICS</b>	Global developments on Energy Transition, Energy Transition in practice, Approach, Implementation of Energy Transition (incl. lessons learned), Clusters and Energy Transition
<b>OBJECTIVE(S)</b>	Participants in the Energy Transition Spin-off Programme are offered a quick yet comprehensive overview of Rotterdam's Energy Transition expertise. In addition, the programme provides an opportunity to build solid new contacts with other professionals from port organizations around the world. The programme provides insight into the most relevant subjects and tools that can be used to take the next step in the implementation of energy transition in your port and its environs, the Energy Transition Spin-off Programme enables your organisation to take energy transition to the next level.
<b>DURATION</b>	Seven weeks - 3 hours per week
<b>ENTRY LEVEL</b>	Port professionals at the level of (Senior) management, Digital project teams including related support functions and students who are studying Energy Transition and Sustainable Energy as well for students with a specialization in port management or maritime economics and logistics.







## Management games

### 5.1 SERIOUS GAMING

With serious gaming, a virtual time capsule of development is rolled out for you. Experience by doing, that is the starting point. Participants learn valuable insights in an innovative, creative, safe and interactive way. Serious gaming can also contribute to valuable conversations with relevant stakeholders.

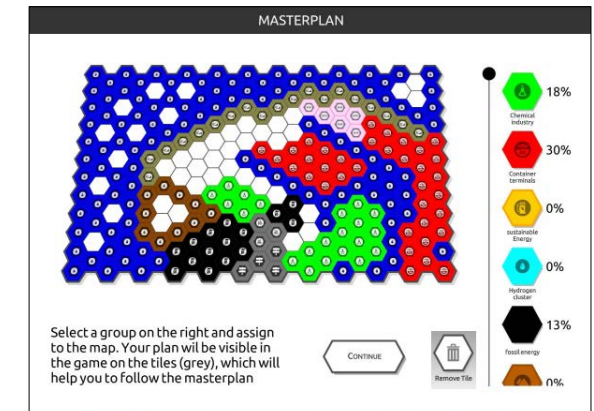


### 5.2 PORT CONSTRUCTOR (SERIOUS MANAGEMENT GAME)

Ports play a pivotal role for fostering trade and development. Ports make cities and industries accessible to international markets and its connectivity determines accessibility and connectivity that reflects transport geography and the global structure of transportation and logistics networks (World bank, 2016).

Port cities have to expand in already densely populated and congested urban and suburban areas, to accommodate bigger ships and handle larger trade volumes (OECD, 2015). Secondly, logistic performance is constrained by human resource development, cumbersome regulations and erratic reforms which limit further efficiencies and innovation. Implementation of relevant measures and policies is complex. Planning and regulations can reduce these effects and contribute to economic, environmental, and social sustainability (World bank, 2016).

In order to bridge these gaps, what is required is a better understanding of the adaptations and interventions that are made when developing ports? Such interventions are most often business case driven, made upon economic drivers, whilst not considering the impact to the full extent on existing functions in the port, the port cluster and port-city area.



*Port Constructor is initiated and created by the STC-Group, Technical University Delft, SmartPort, Erasmus University (UPT), InThere, IHE Delft (edition 1 only) and Port of Rotterdam.*





The biggest challenge of the 21<sup>st</sup> century is the development and implementation of methods that at the same time strengthen the economy and improve the environment, while making optimal use of the available space. In addition sustainability of production and consumption processes should be strived for in coastal zone areas. This is crucial in achieving a minimal global footprint. The environmental footprint can be regarded as a function of population size, lifestyles and technology. In order to grasp such seemingly paradoxical objectives, Port Constructor was developed as a serious management game in order to provide insights in these processes.

### 5.3 PORT DEVELOPMENT AND PORT MANAGEMENT MISSION

In Port Constructor the player develops and manages a port expansion project. The player chooses between a variety of functions. The aim is to optimize the balance between three equally important value drivers: people, planet and profit. On the basis of a baseline strategy, the player needs to consider how neighbouring functions influence each other, positively or negatively. Port Constructor is a microgame, wherein the player engages in missions, each taking 15 to 20 minutes to play. Each mission starts with a short strategy and several action rounds.

Target group for this serious game are students, as well as professionals to gain better understanding how to manage and develop a port.

### 5.4 ENERGY TRANSITION MISSION

A trend that we see in ports all over the world, is the growing importance of becoming more sustainable. To accomplish that, a long-term vision is needed, because becoming sustainable is a long and often complex process.

The Port of Rotterdam has developed a mission that focuses on the energy transition from now until 2050. The goal is to become a sustainable port, while also stay profitable and keep customers satisfied (People Planet Profit). Choices need to be made when it comes to deciding what the energy source of the future will be, with options like hydrogen, solar-power, nuclear power, waste gasification and more.

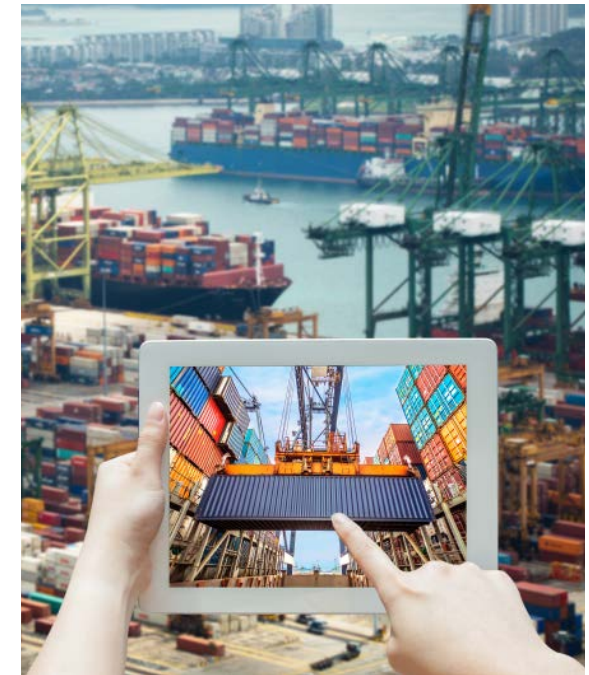
Another dilemma that a lot of ports around the world face is the limited space that is available for new industries. This raises the question if and which current industries may need to be removed to make room for new clients.

All the dilemma's described can be discussed in a safe and even playful way in this mission. Mistakes can be

made, without any real-life consequences, while gaining a lot of knowledge for the real energy transition that needs to take place.

### 5.5 TAILORED MISSION

On request Port Constructor is suitable to build in your own dedicated mission (in your own language) with the challenges and dilemma's in your own port!







*“Rotterdam stands out from other maritime capitals in the way we pool our knowledge and expertise together and develop maritime talent. For international talent who seek to advance their careers, Rotterdam is the place to be”*





## Terms and conditions

The Port Management Programs, the Port Management Games and related services are offered upon request and availability. Please contact us for availability, prices and the applicable Terms & Conditions.

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