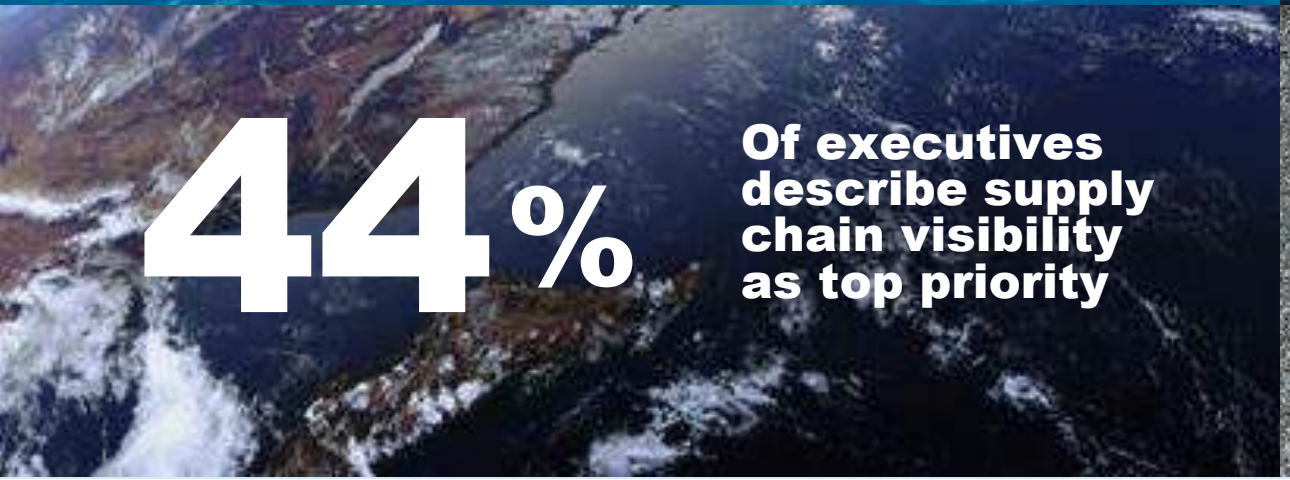
# Move forward:
# Step by step towards a digital port.

**Jan Gardeitchik**
Port of Rotterdam International

PortForward
Digital solutions by Port of Rotterdam

# There is a lot to gain in logistics



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# Next generation port:

Smart and connected

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# Step by step towards a digital port

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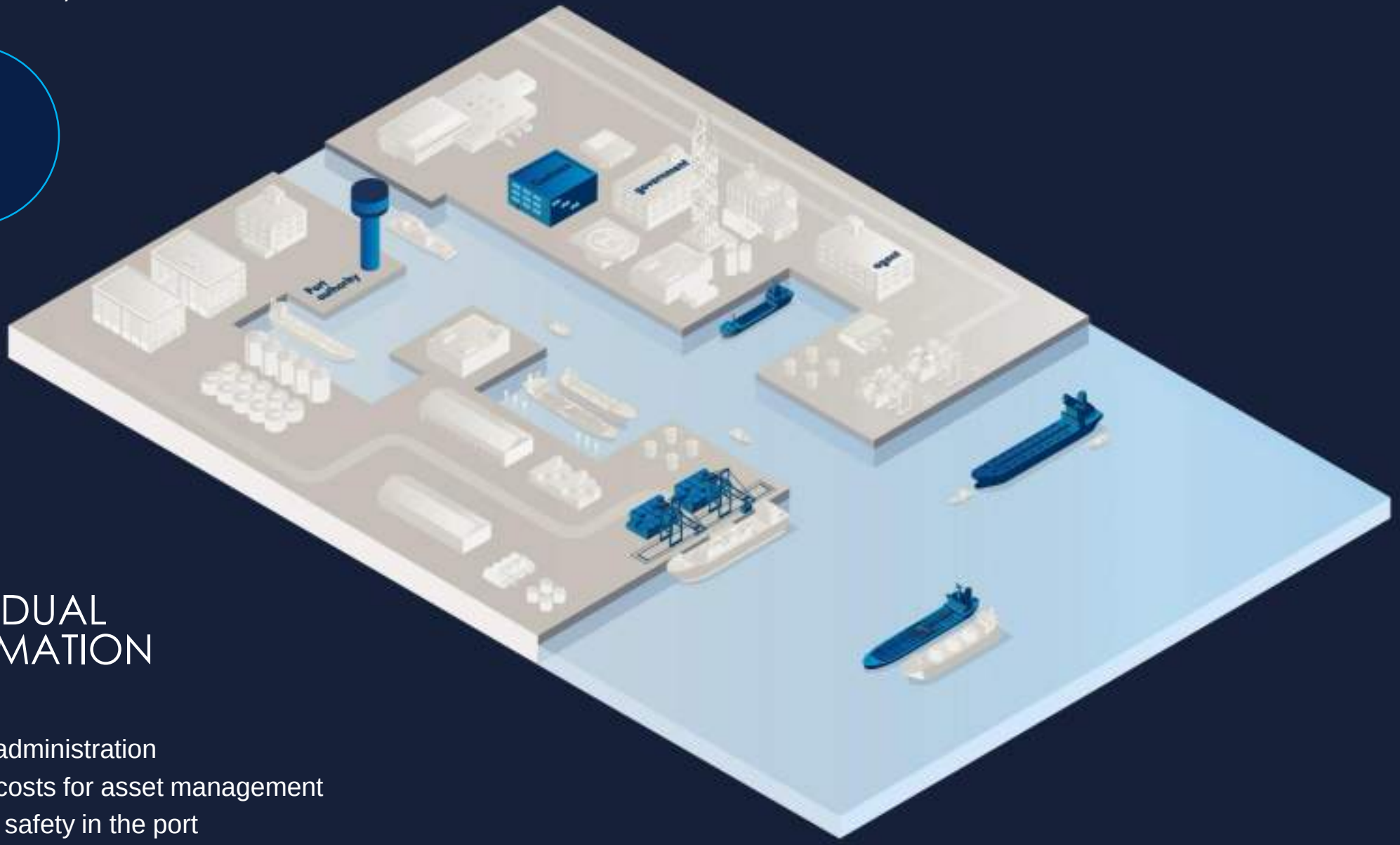
Port Authority

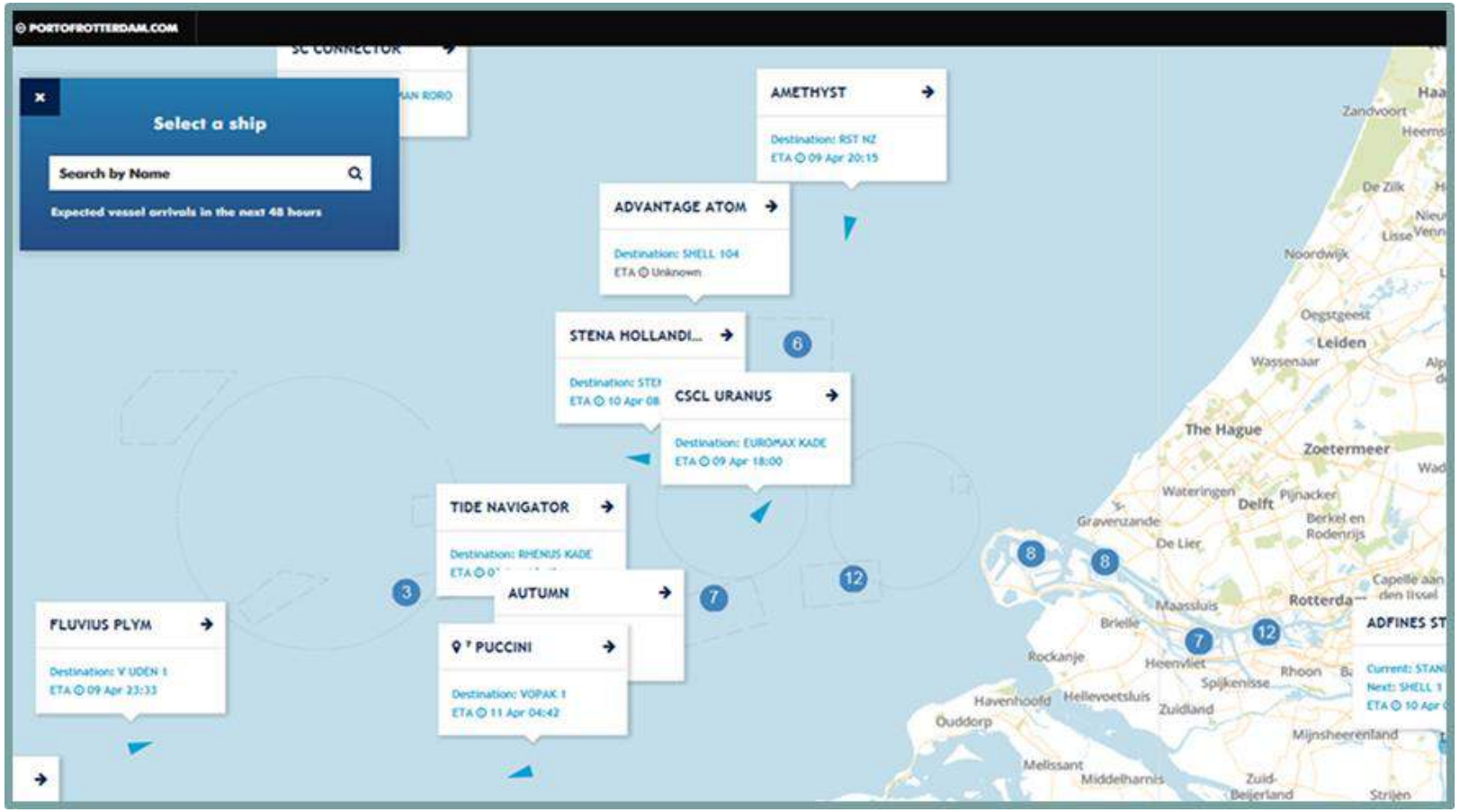
1



# INDIVIDUAL AUTOMATION

- Accurate administration
- Reduced costs for asset management
- Increased safety in the port
- Better services to port users

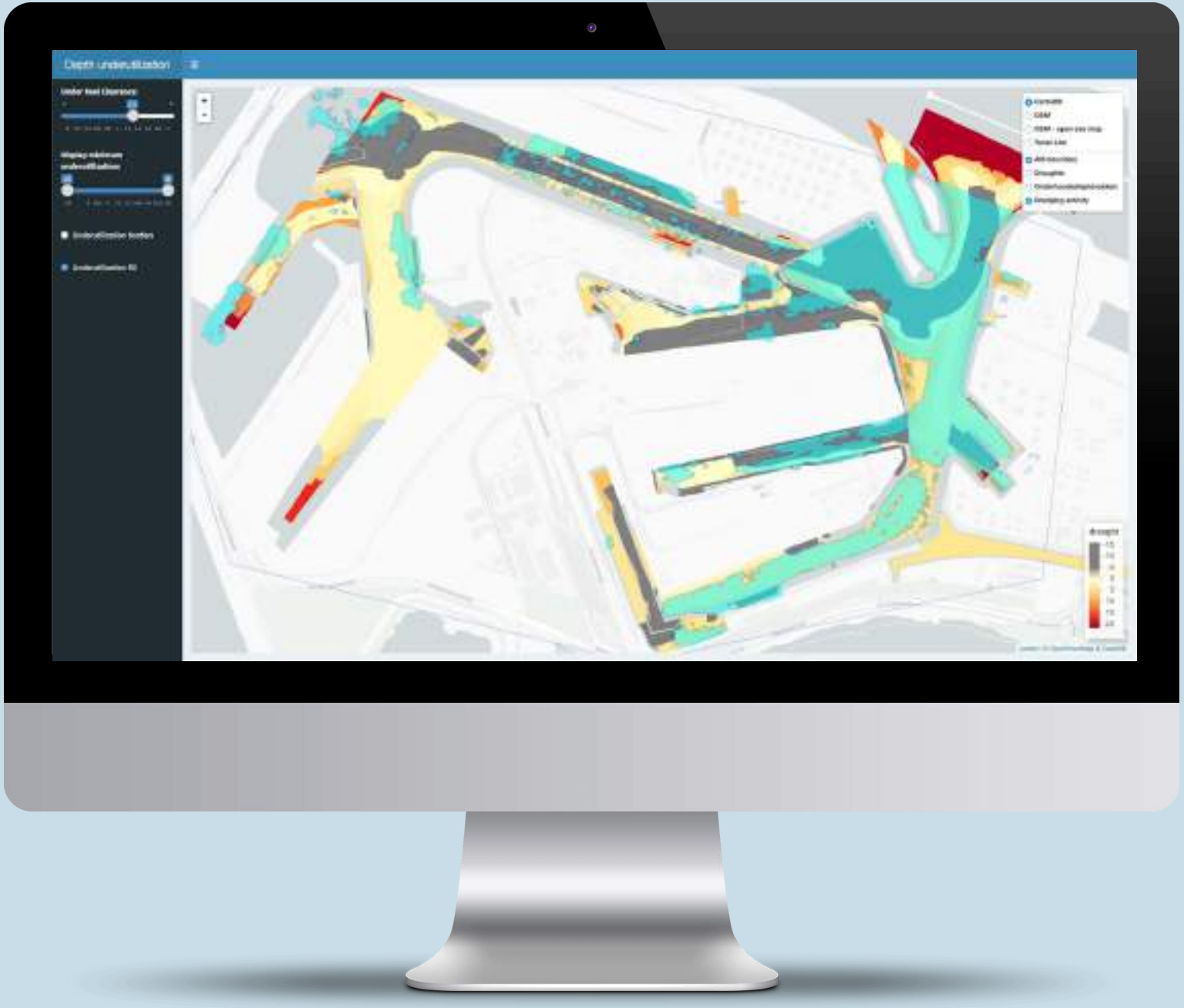
# PORT MANAGEMENT



Port Authority

1

# INDIVIDUAL AUTOMATION

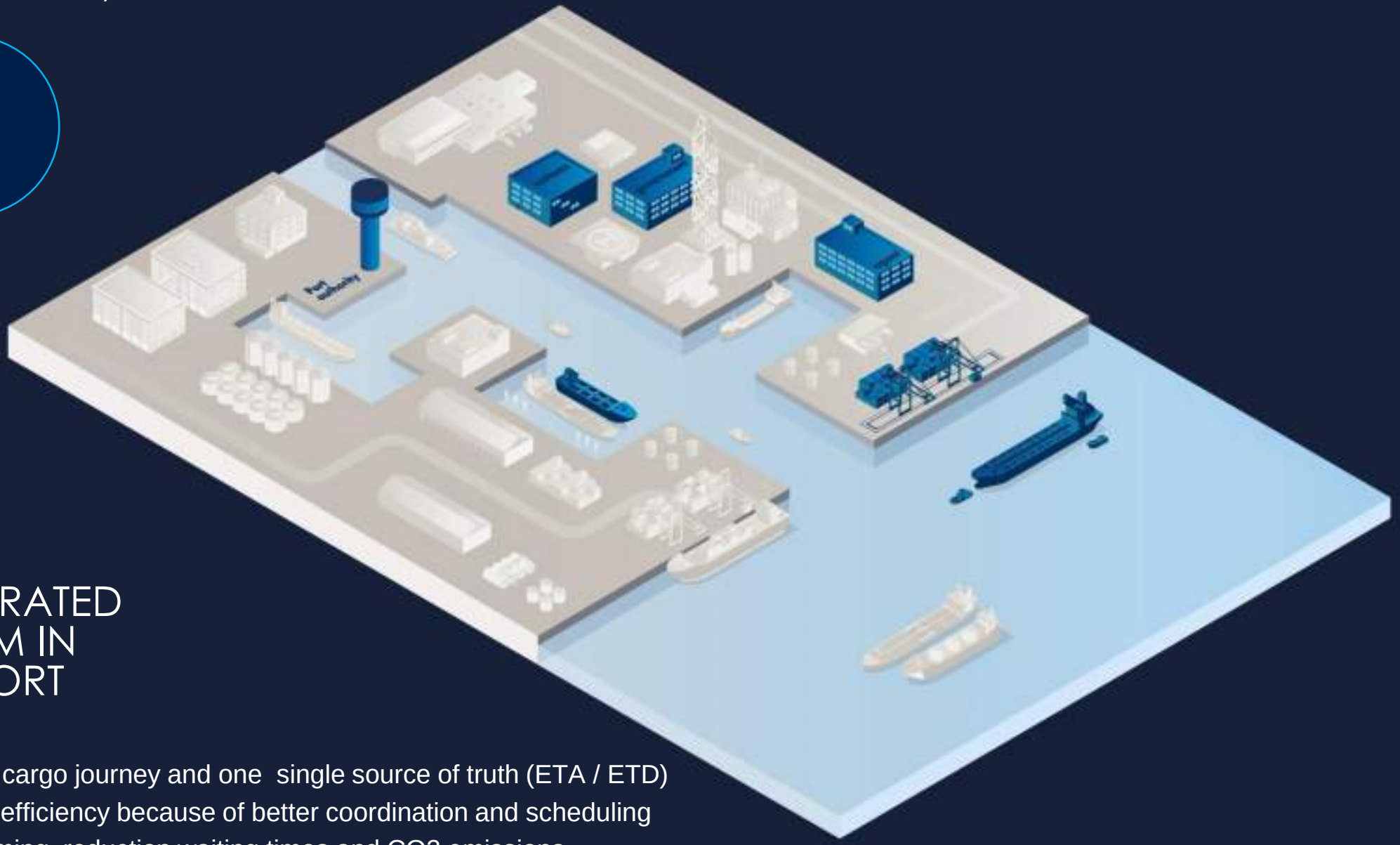


## Goal

Eliminate waste for a single port player

Port Community

2

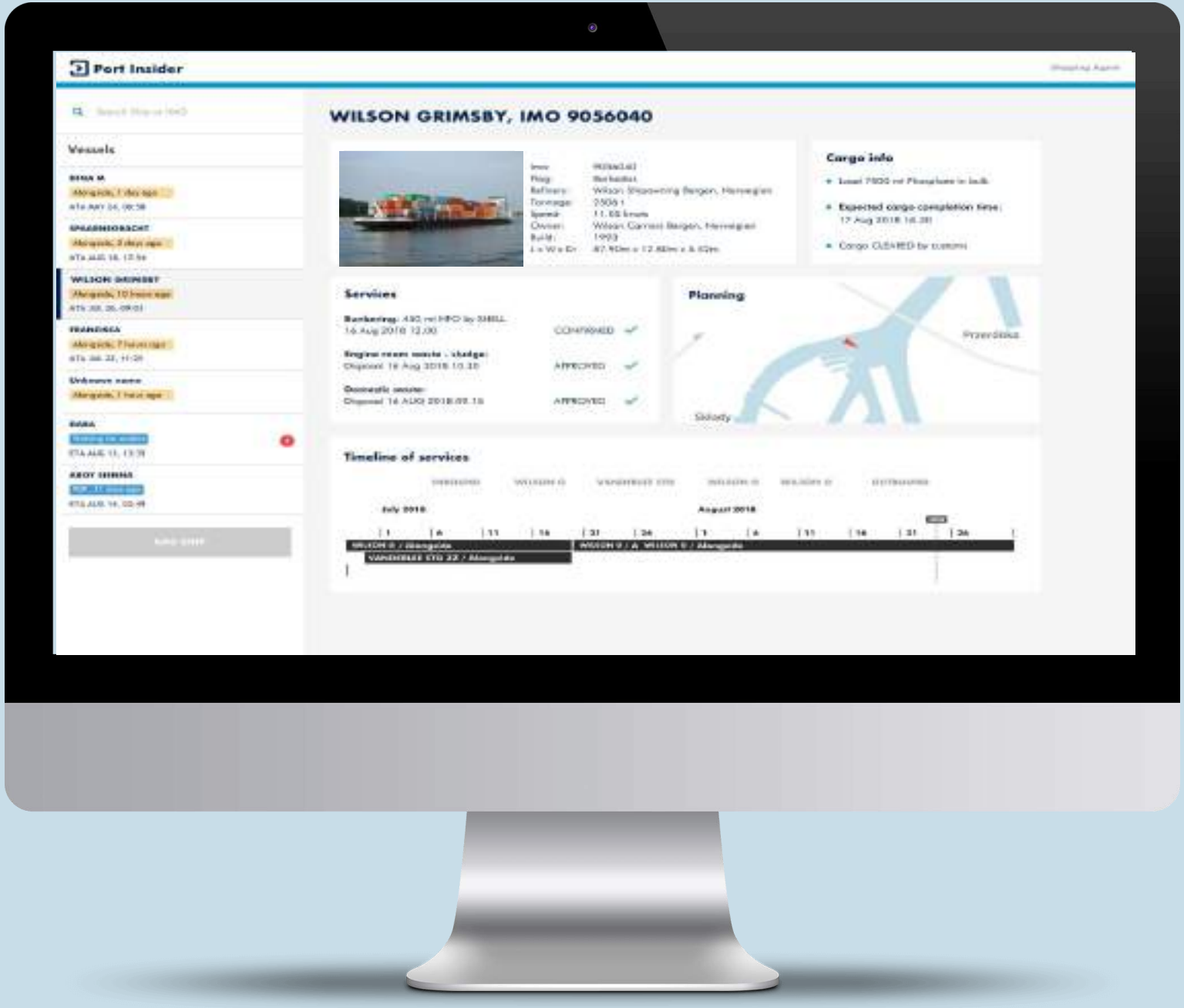


# INTEGRATED SYSTEM IN THE PORT

- Paperless cargo journey and one  single source of truth (ETA / ETD)
- Increased efficiency because of better coordination and scheduling
- Slow steaming, reduction waiting times and CO2 emissions

2

# INTEGRATED SYSTEM IN THE PORT




## Goal

Eliminate waste in the whole Port Community.

# PORT COMMUNITY SYSTEM IN HOLLAND: PORTBASE

**Nationwide available**. Port users: Rotterdam, Amsterdam, Groningen, The Hague/ Scheveningen, Harlingen, Moerdijk

- Largest port community in Europe, wide coverage throughout the chain
- Digital connection and service provider between all parties involved
- Offering a one-stop-shop for logistic information exchange
- Reducing 30 million calls, 100 million e-mails, 10 km stacked paper saved, reducing 10 million unnecessary truck miles and more than 200 million euros of added value to the port community

Examples of parties connected to Portbase:

- Ministries
- Customs
- Ports & Port Authorities
- Terminals
- Shipping lines
- Agents
- Railway operators
- Importers
- Exporters
- Etc..

DIGITAL BUSINESS SOLUTIONS

Accelerated by Port of Rotterdam

# Port Community Experience Rotterdam

**2002**

Start *Port infolink* Rotterdam PCS

Port infolink
Rotterdam Port Information Services

**2009**

Start PORTBASE PCS for Rotterdam and Amsterdam Port

25 services

**2014**

MV2 terminals full electronic (pre) notification

**2016**

Connection Portbase-MSW

**2018**

Portbase Cloud based SaaS on AWS

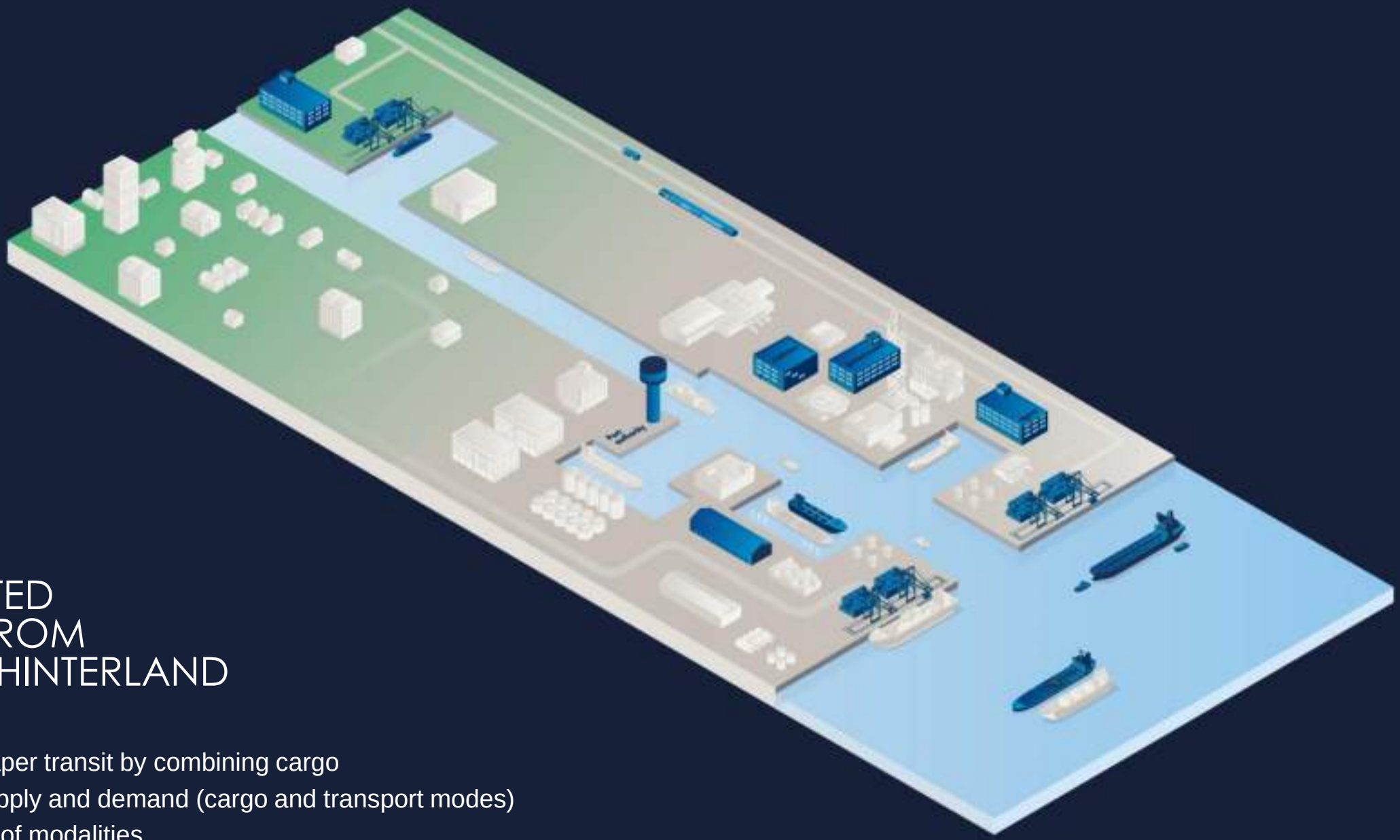
44 services

**2019**

Added brain functions of PCO and track & trace

Hinterland

3

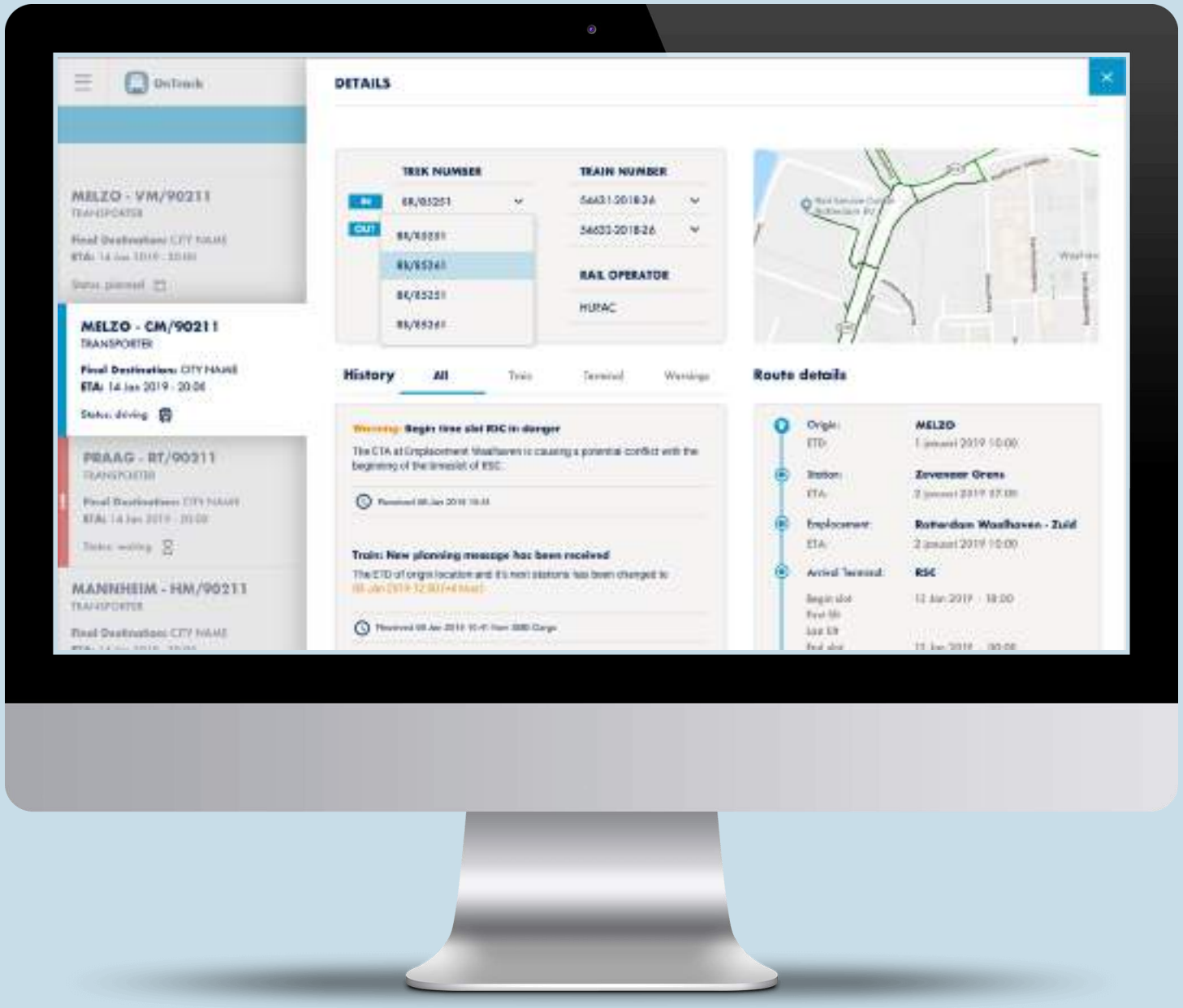


# INTEGRATED SYSTEM FROM PORT TO HINTERLAND

- Faster and cheaper transit by combining cargo
- Better match supply and demand (cargo and transport modes)
- Track and trace of modalities

3

# INTEGRATED SYSTEM FROM PORT TO HINTERLAND




## Goal

Eliminate waste
in the direct chain.

Global

SMART PORT

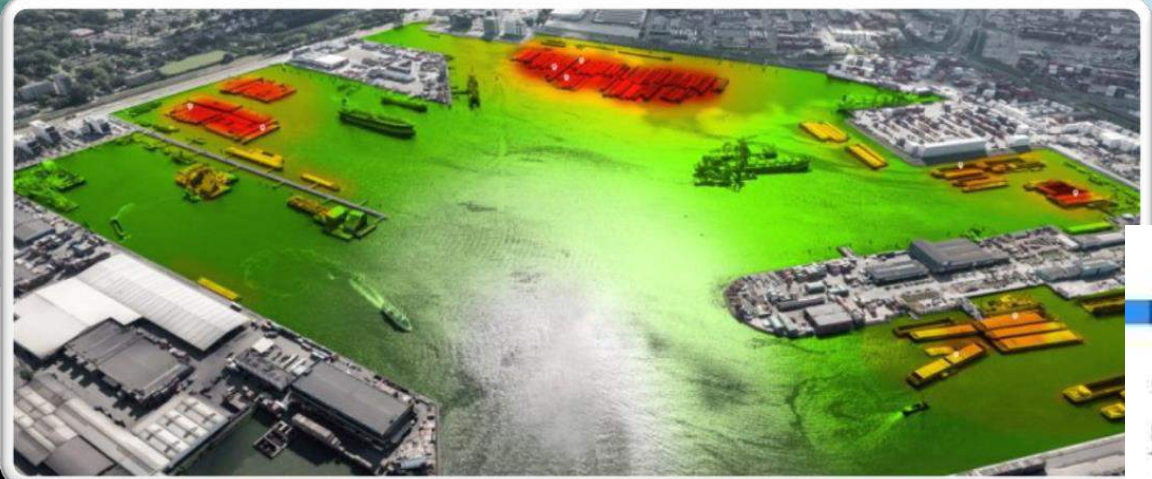
# CONNECTED PORTS AND LOGISTICS CHAINS

- Just in time operations
- Seamless and sustainable cargo journey
- Predictive world: Management by exceptions
- …… Future benefits?

DIGITAL TWIN

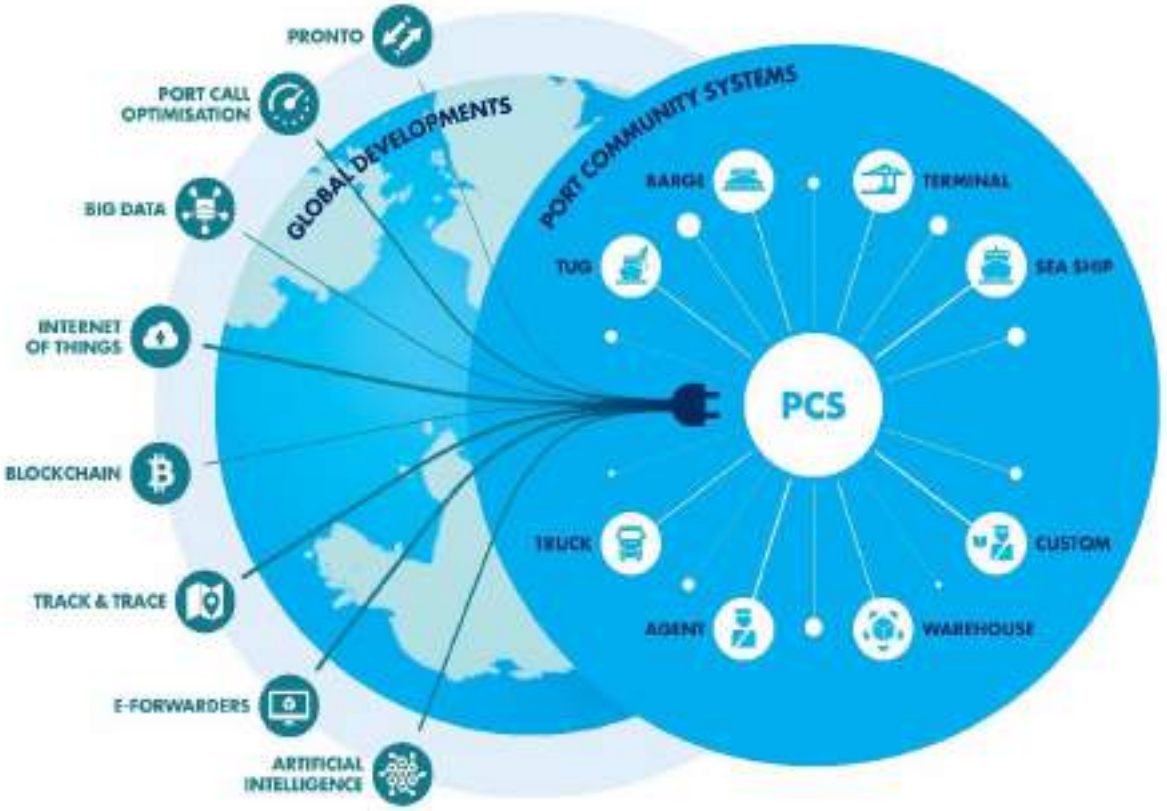
# Rotterdam and IBM prepare for digital ship clearance

The Port of Rotterdam is the largest freight terminal in Europe for commercial shipping. The port is teaming up with IBM to digitalize and automate its logistic operations.



# URGENCY INCREASES TO GET A HUB TO GLOBAL

## NEXT GENERATION PCS

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# HOW CAN YOU DO IT WITHOUT SPENDING MILLIONS OR ENDING UP IN COMPLEX PROJECTS?

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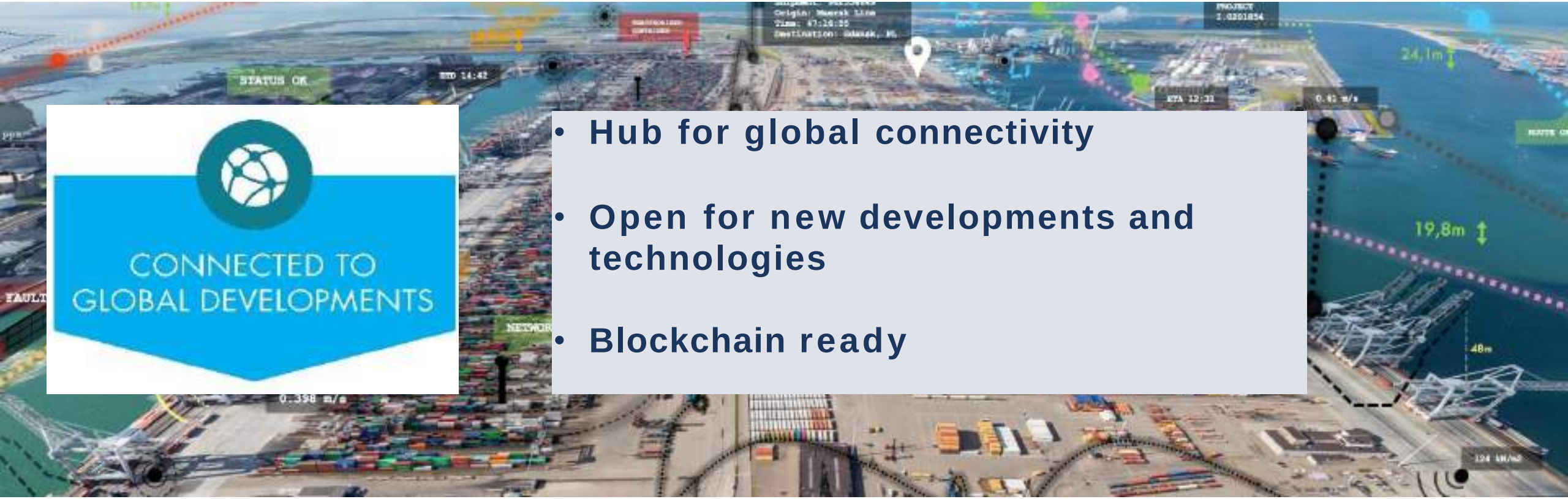
# AN IMPORTANT STEP TOWARDS A FUTURE PROOF PORT




- Hub for global connectivity
- Open for new developments and technologies
- Blockchain ready

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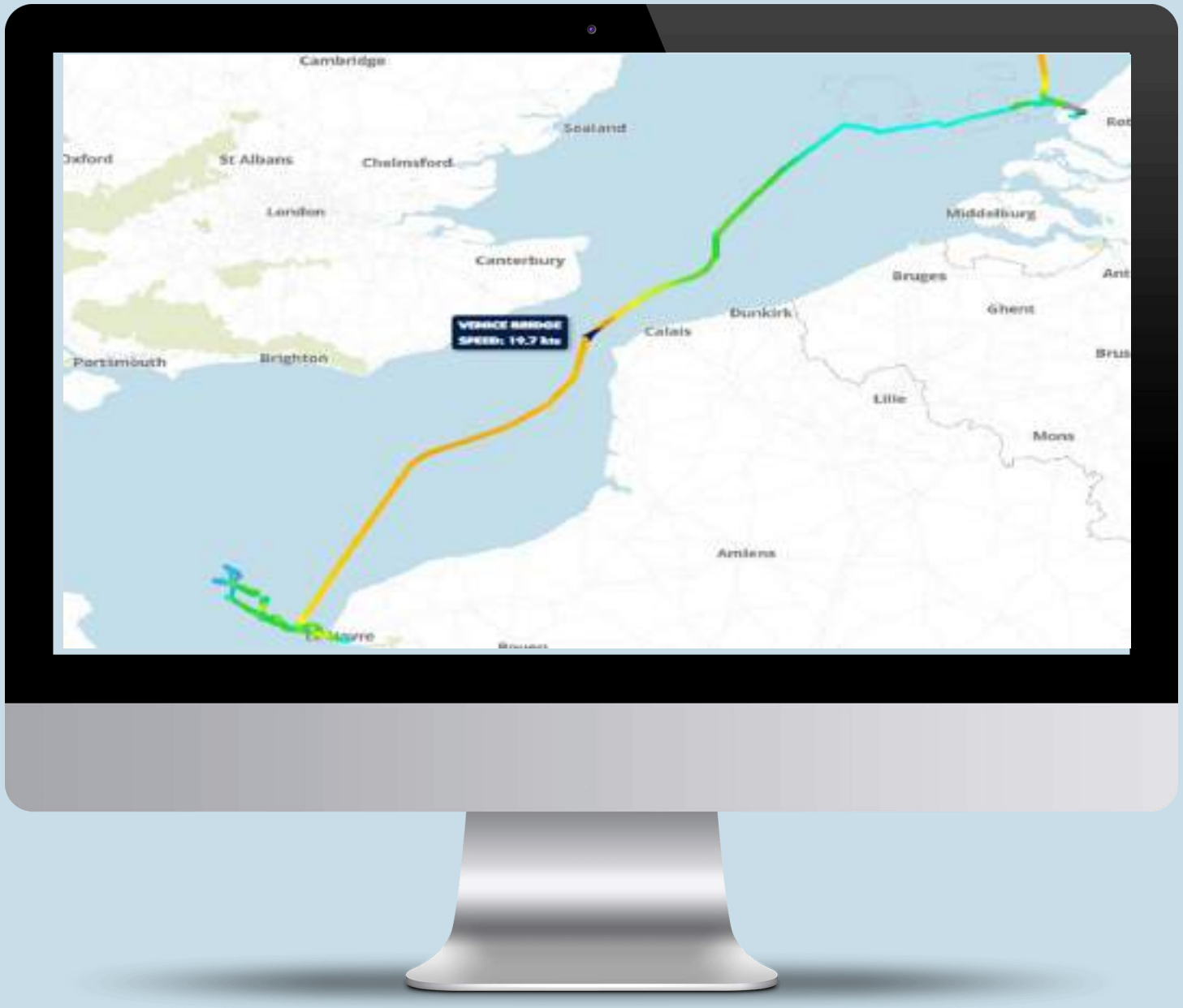
Global

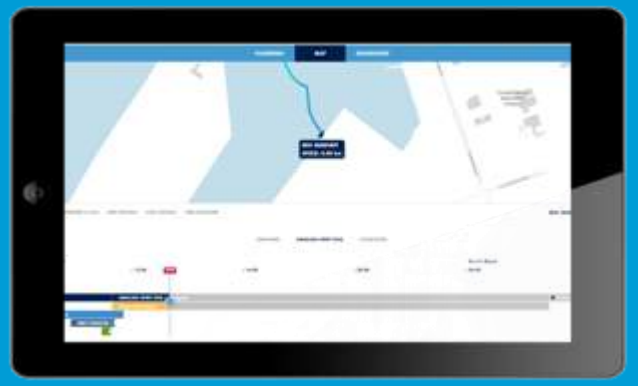
SMART PORT

# CONNECTED PORTS AND LOGISTICS CHAINS




## Goal

Eliminate waste in end to end logistic chain.



One view for all parties involved in a port call

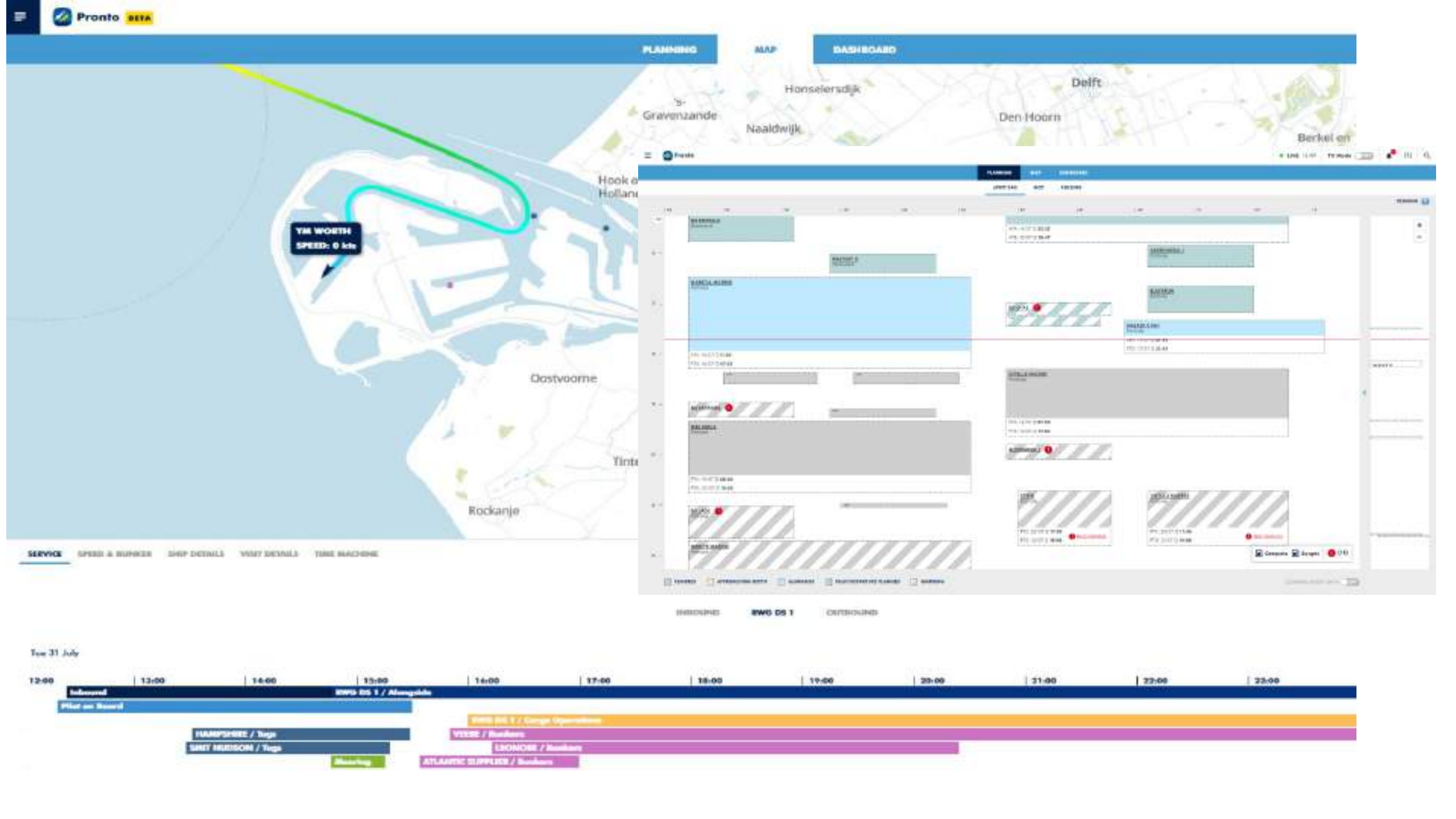
Adapt planning to increase utilization

Service operations can also plan better and work more efficiently

More insights in port calls leads to higher safety level

Reduce port turn around time benefits all parties involved

Optimization within the port and from port to port


Pronto
BETA
PLANNING
MAP
DASHBOARD
Honselersdijk
Delft
's-
Gravenzande
Naaldwijk
Den Hoorn
Berkel en
YM WORTH
SPEED: 0 kts
Oostvoorne
Rockanje
SERVICE
SPEED & BUNKER
SHIP DETAILS
VISIT DETAILS
TIME MACHINE
BWG DS 1
Tue 31 July
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Inbound
BWG DS 1 / Alongside
Pilot on Board
HAMPSHIRE / Tuga
SMIT HUDSON / Tuga
Mooring
VESSE / Bunkers
LEONORE / Bunkers
ATLANTIC SUPPLIER / Bunkers

DIGITAL BUSINESS SOLUTIONS

Accelerated by Port of Rotterdam

# Pronto leads to significantly reduction of bunker consumption, CO2 and nitrous oxide emissions

**Press release October 2018:**

## ‘Just-in-time’ sailing saves hundreds of thousands of tonnes of CO2

Rotterdam, 18 October 2018 – If sea-going vessels were better informed about the availability of berths and adapted their speed accordingly, substantial savings could be made in terms of fuel and CO2 emissions. This conclusion is based on a study that was recently commissioned by the Port of Rotterdam Authority and research institute TNO.

# Our vision on the future of connectivity

**DIGITAL BUSINESS SOLUTIONS**

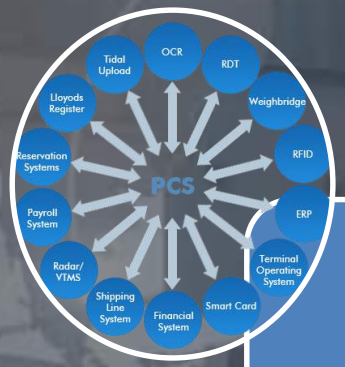
Accelerated by Port of Rotterdam

## Ultimate PCS

Intelligent applications (Brain) with big data and AI

## Next gen. PCS

. ***Fully user oriented***
. User in control of his data
. Real time event tracking
. Generating messages B2B
. SAAS
. Security by design




## Basic PCS

. "standard messages"
. Conversion and reuse (predefined)

# What will be the benefits

- Less CO2 and emissions
- Using the full potential of existing infrastructure
- Optimal transparency
- Just in time operations
- Faster transit times and smoother throughput cargo, paperless
- Increased safety
- financial benefits for the whole logistic chain

# Will you join us and connect?

- Step by step help towards connected ports
- Our Software as a Service (SaaS) concept makes connectivity ***available for all ports*** without huge upfront investments
- **Contact  us to connect with us**
- **Digitalization of ports, a Rotterdam specialty**

CONNECT. OUTSMART. DELIVER.
MAKE IT HAPPEN.

# Join the journey towards world connected ports

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