Move forward:
Step by step towards a digital port.

Jan Gardeitchik
Port of Rotterdam International
There is a lot to gain in logistics

30% Of shipments is delayed

44% Of executives describe supply chain visibility as top priority

28 Parties involved per transaction

25% Of trucks on the road is empty
Next generation port:
Smart and connected

A new world for Port Authorities

New technologies

Customers ask for predictive logistics
Step by step towards a digital port

1. **Port Authority**
   - **NO AUTOMATION**
   - Eliminate waste for Port Authority

2. **Port Community**
   - **INDIVIDUAL AUTOMATION**
   - Eliminate waste for Port Community

3. **Hinterland**
   - **INTEGRATED SYSTEM IN THE PORT**
   - Eliminate waste for the direct logistic chain

4. **Global**
   - **INTEGRATED SYSTEM FROM PORT TO HINTERLAND**
   - Eliminate waste for the whole logistic chain

- **CONNECTED PORTS AND LOGISTICS CHAINS**

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PortForward
Digital solutions by Port of Rotterdam
• Accurate administration
• Reduced costs for asset management
• Increased safety in the port
• Better services to port users
PORT MANAGEMENT
Goal
Eliminate waste for a single port player
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
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..

> 43 services
3,900 businesses
14,000 users
82,000,000 messages/yr
Port Community Experience Rotterdam

2002
- Start Port infolink Rotterdam PCS

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
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
INTEGRATED SYSTEM FROM PORT TO HINTERLAND

Goal
Eliminate waste in the direct chain.
CONNECTED PORTS AND LOGISTICS CHAINS

• Just in time operations
• Seamless and sustainable cargo journey
• Predictive world: Management by exceptions
• …… Future benefits?
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
HOW CAN YOU DO IT WITHOUT SPENDING MILLIONS OR ENDING UP IN COMPLEX PROJECTS?
AN IMPORTANT STEP TOWARDS A FUTURE PROOF PORT

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

**Basic PCS**
- "standard messages"
- Conversion and reuse (predefined)

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

**Ultimate PCS**
- Intelligent applications (Brain) with big data and AI
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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