GIS @ POR = PORTMAPS

ASSET DATA IS AVAILABLE WITHIN THREE MOUSECLICKS.........
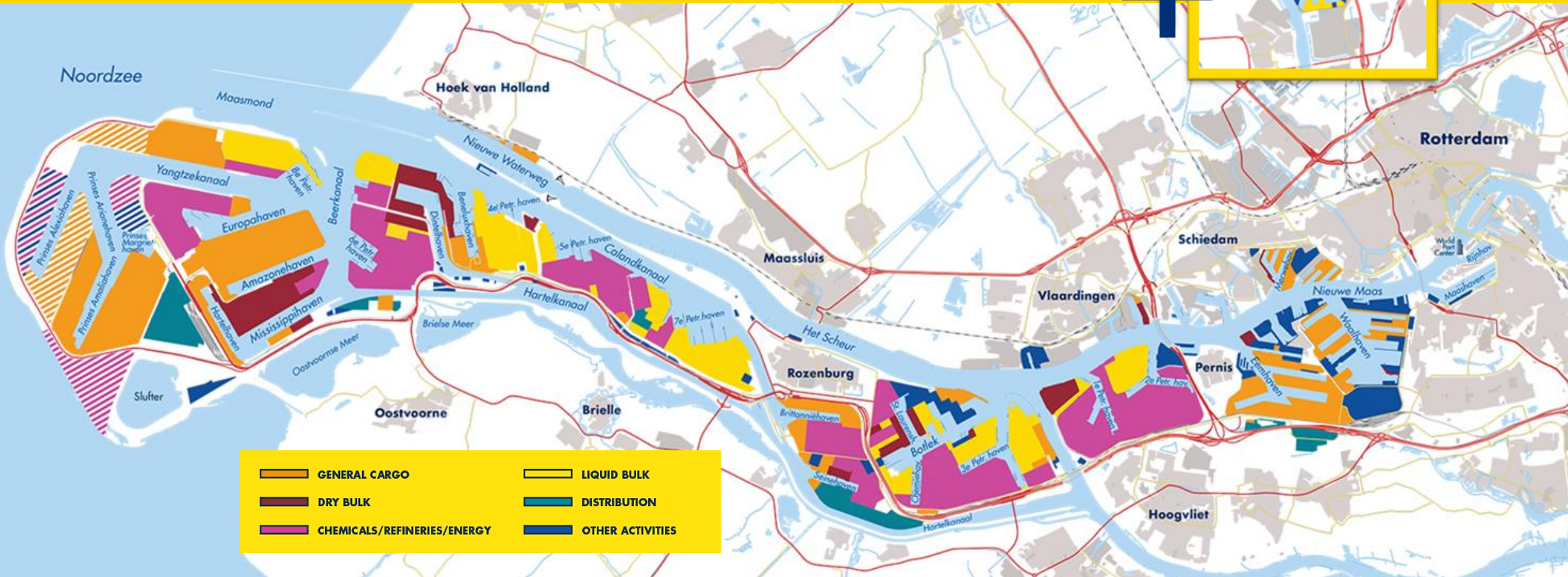
Port in figures

Port of Rotterdam: engine of the Dutch economy

- Total port area 12,500 ha (net 6,000 ha)

- Total employment 180,000 people

- Total added value € 21 billion (3.2% GNP)

- 3,000 companies

- Largest port in Europe, 9th port worldwide

- Throughput 461.2 million tons; 12.4 million TEU (containers)

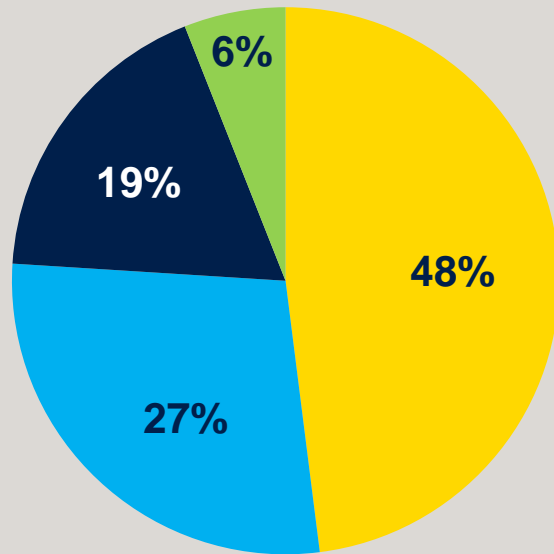- Depth up to 75 ft

Employment

Port of Rotterdam

Port and industrial area

Legend:
- GENERAL CARGO
- DRY BULK
- CHEMICALS/REFINERIES/ENERGY
- LIQUID BULK
- DISTRIBUTION
- OTHER ACTIVITIES

Port of Rotterdam

Port areas

Dordrecht

Pernis

Vierhavens/Merwehaven

Waal-/Eemhaven

Port of Rotterdam

Port areas

Maasvlakte 1

Botlek

Europoort

Maasvlakte 2

Port of Rotterdam

Dominated by fossil fuels and logistics

Cargo ratios in 2016

- Liquid bulk: 48%
- Containers: 27%
- Dry bulk: 19%
- Breakbulk: 6%

Port of Rotterdam

Water depth European ports

APM S-Class & HPL HAX-Class   Malacca-max

Port of Rotterdam

Landlord port model

Port of Rotterdam Authority

PORT OF ROTTERDAM AUTHORITY | PRIVATE BUSINESS | ROAD | RAIL | BARGE | PIPELINE

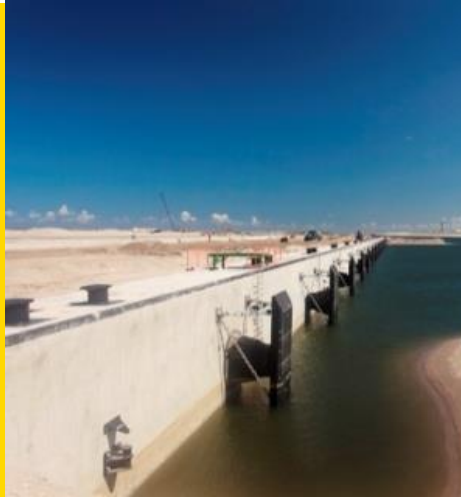Port of Rotterdam
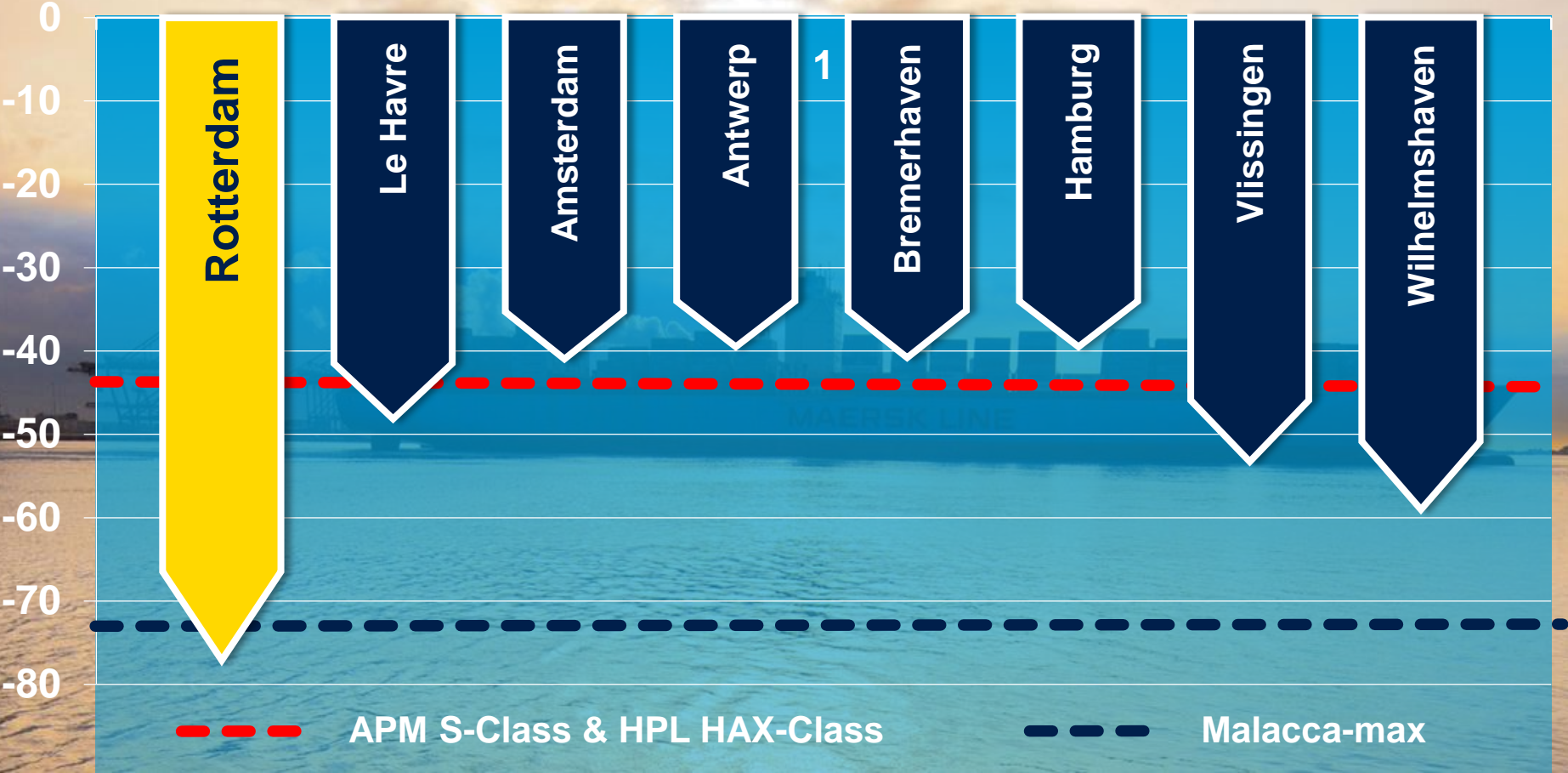
The assets of PoR

Total of 32 asset types

- 70,5 km Quay walls

- 180 km Embankment

- 310 ha Roads

- 3.500 ha Sea bed

- Civil Structures, Buildings, Vessels etc.

Invested Capital € 3,66 Billion

Maintenance budget € 72 Million

Approx. 110 employees in AM

Master Data : Portmaps

One system for all our maps
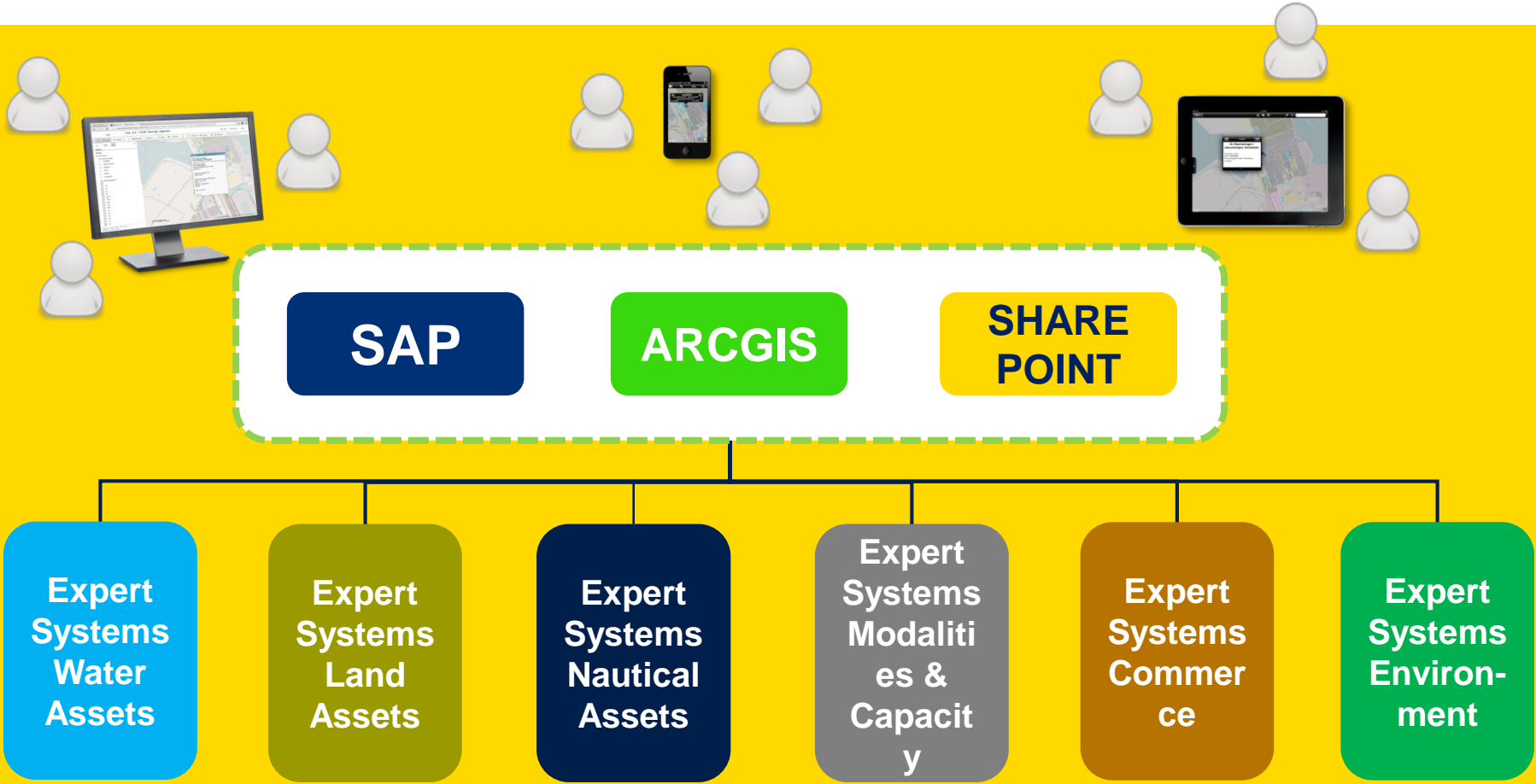
Three clicks to content

Smart object model

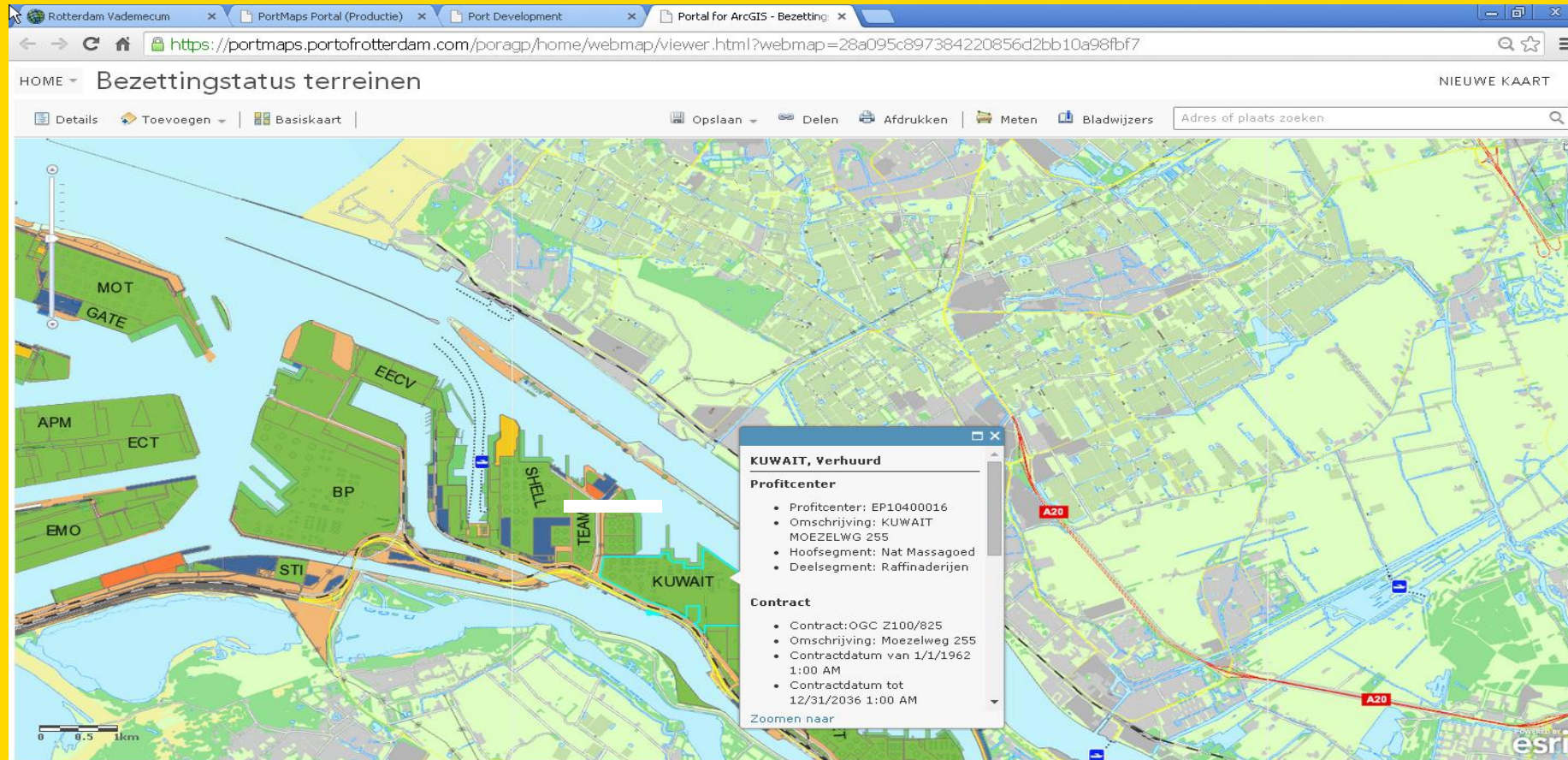Implemented in only 6 months in 2013

Live since 1-1-2014

2,5M+ maps generated since going live

800+ daily users

Port of Rotterdam

Portmaps Architecture

SAP   ARCGIS   SHARE POINT

Expert Systems Water Assets

Expert Systems Land Assets

Expert Systems Nautical Assets

Expert Systems Modalities & Capacity

Expert Systems Commerce

Expert Systems Environment
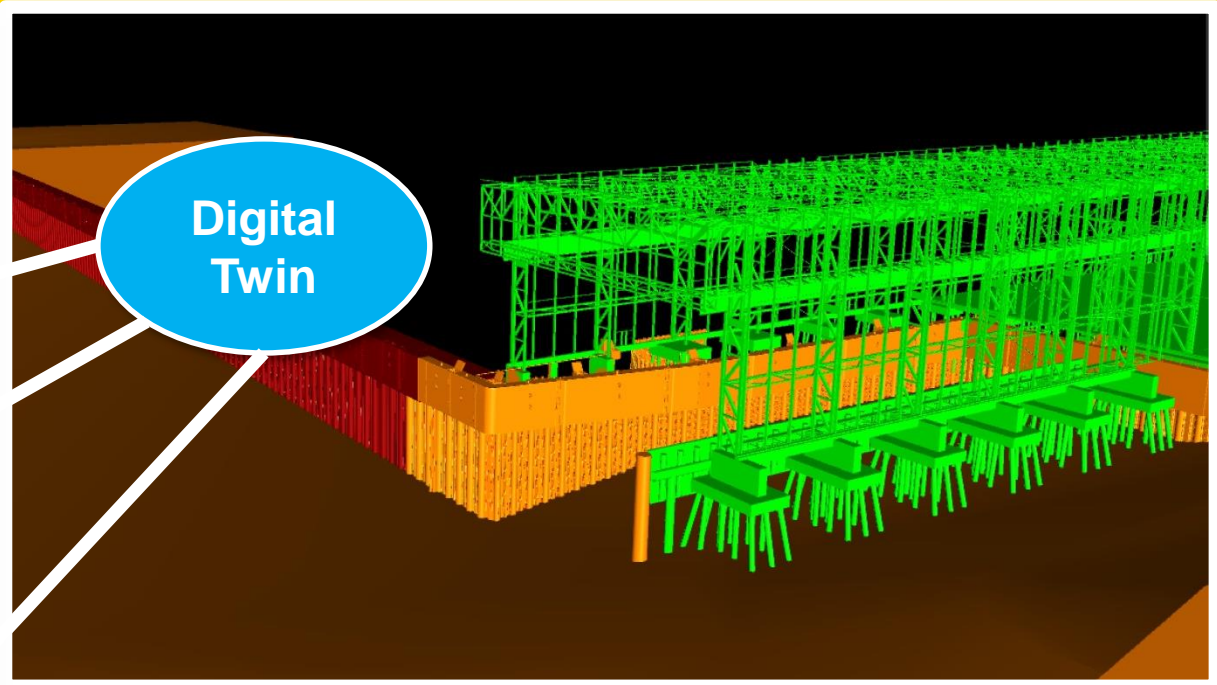
Port of Rotterdam

PortMaps live

Smart Infrastructure : Inspection vs sensoring

- Made possible by Internet of Things (IoT) and increasing availability of high-quality IT connectivity

- By deploying smart - autonomous - devices that generate real-time operational information and share it, we can effectively control and manage the four modalities within the port.

- Examples in Port of Rotterdam:

  - We-Nose network: real time air pollution detection and registration

  - Quay walls: glass fiber sensors for detection of piping effects

  - Real time track & trace of push barges in the port area with help of sensors

THE .SMARTEST PORT. Innovatie

Port of Rotterdam

Finally: the Port and its "Digital Twin"

Digital Twin

Asset

Historical, Real Time & Predictive data

Intelligence

Asset Analytics Lab

IBM Watson

Port of Rotterdam