



Presentation John Cockerill dotOcean

dotOcean Company Profile

- Founded in 2008, based in Bruges, Belgium
 - Complementary team of 14 members and growing
 - International sales network of 15 representatives
- Product lines
 - Autonomous vessel control systems
 - Data fusion products for situational awareness
 - Sediment measurement systems
- Markets
 - Defence
 - Port and waterway authorities
 - Marine contractors
 - Wind Farm owners
- Shareholders
 - 75% founders
 - 25% Artes Group, represented by it's main shareholder Robert Hoornaert in the BoD.

Company introduction

Reference customers



Site Automation Technology

Site Automation- Automation of Operations

Data Lakes

Autonomous Decision Making - Learning Algorithms - Multi Agent Optimisation

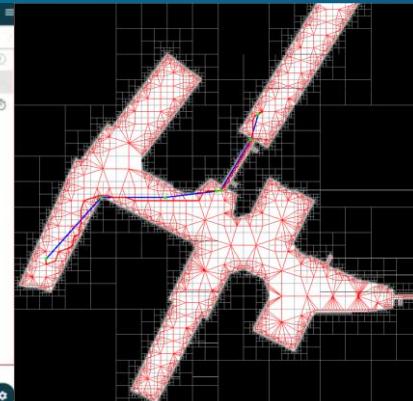
Virtual Worlds - Digital Twins

Cloud Databases

Data Gathering

Site Sensors - Data Mining Databases

Autonomous Systems





Data Gathering

Guarding, Security

Transport & Logistics

Manipulation

Inventory registration,
Environmental and
Asset Monitoring

Border patrol
Port security
Terrain protection

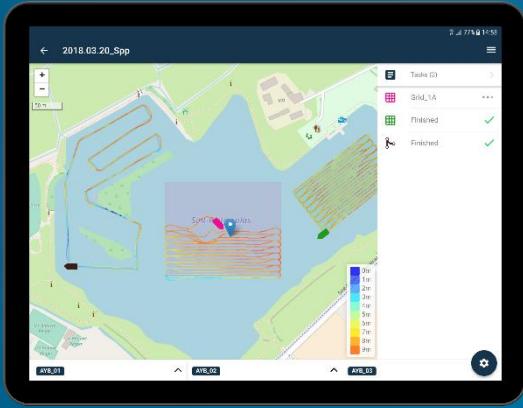
Parcel and
Container transport
Parking
Storing

Fishing
Cleaning
Cutting
Picking

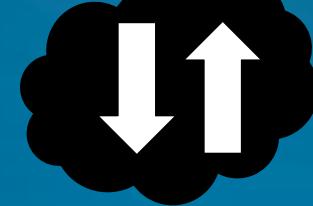
Autonomous Systems: Means to an End



dotOcean Product Lines



1. Autonomous control



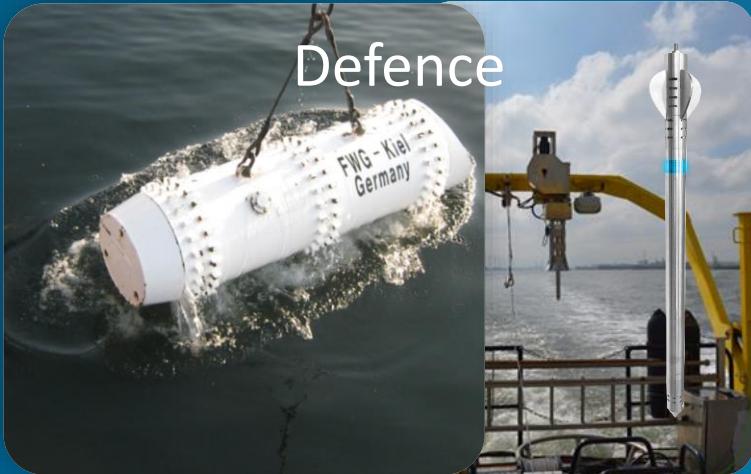
2. Cloud based data fusion
and situational awareness
software for networked robots



3. Sediment profilers



dotOcean Target Markets



Defence



Marine Contractors

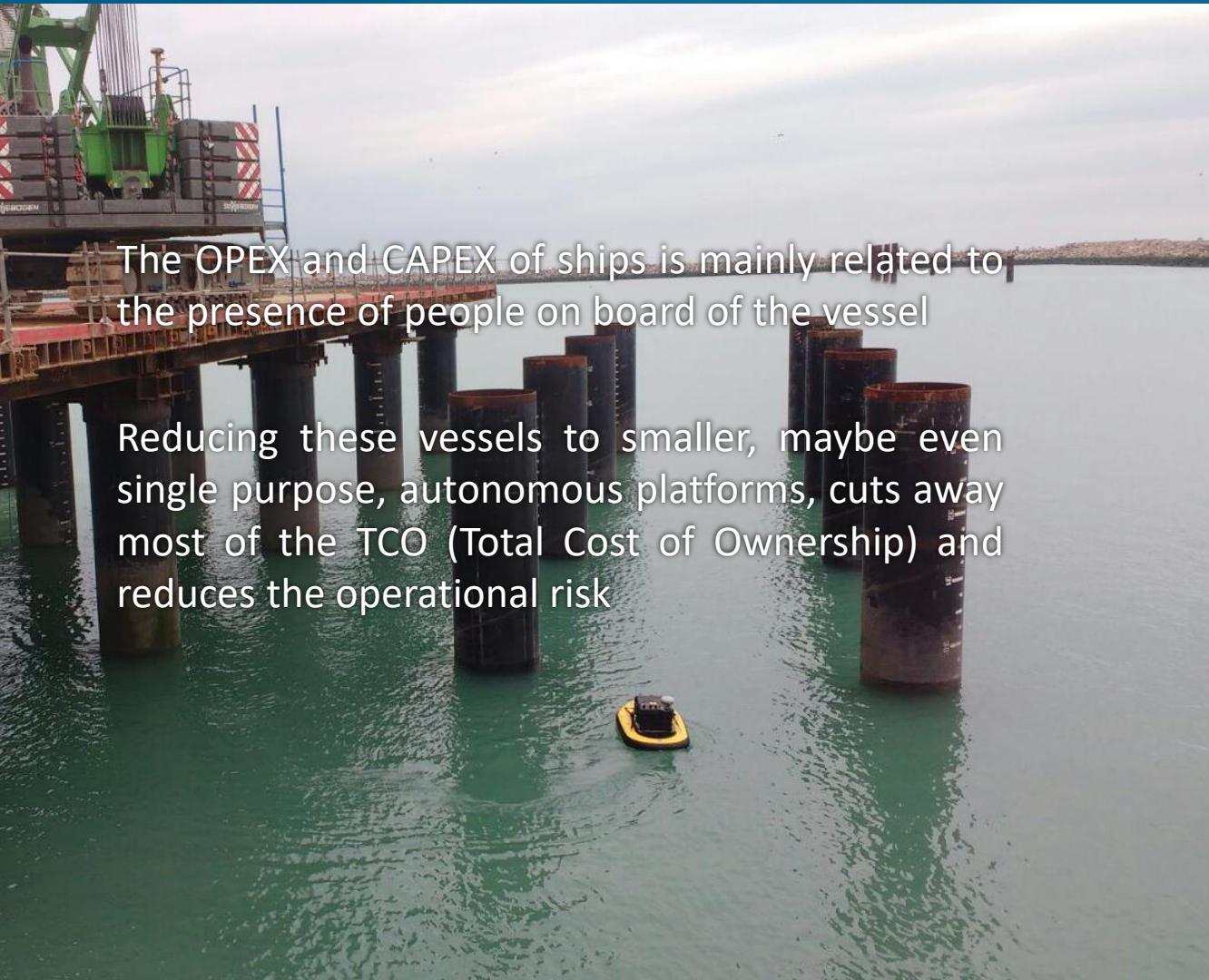


Wind Farms



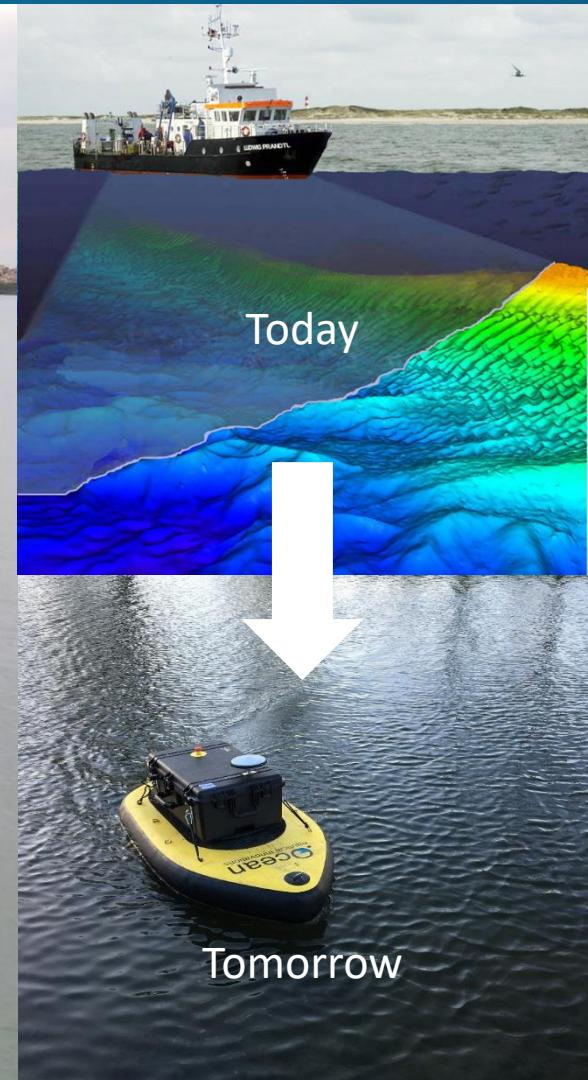
Ports and Waterway Authorities

Marine Process Automation: Market Driver



The OPEX and CAPEX of ships is mainly related to the presence of people on board of the vessel

Reducing these vessels to smaller, maybe even single purpose, autonomous platforms, cuts away most of the TCO (Total Cost of Ownership) and reduces the operational risk



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Defence Market

1. Direct Cooperation Belgian Navy: MarSur, Maritime Surveillance Project

Royal Higher Institute for Defence

with support from dotOcean and the Belgian
Navy

2019 – 2022

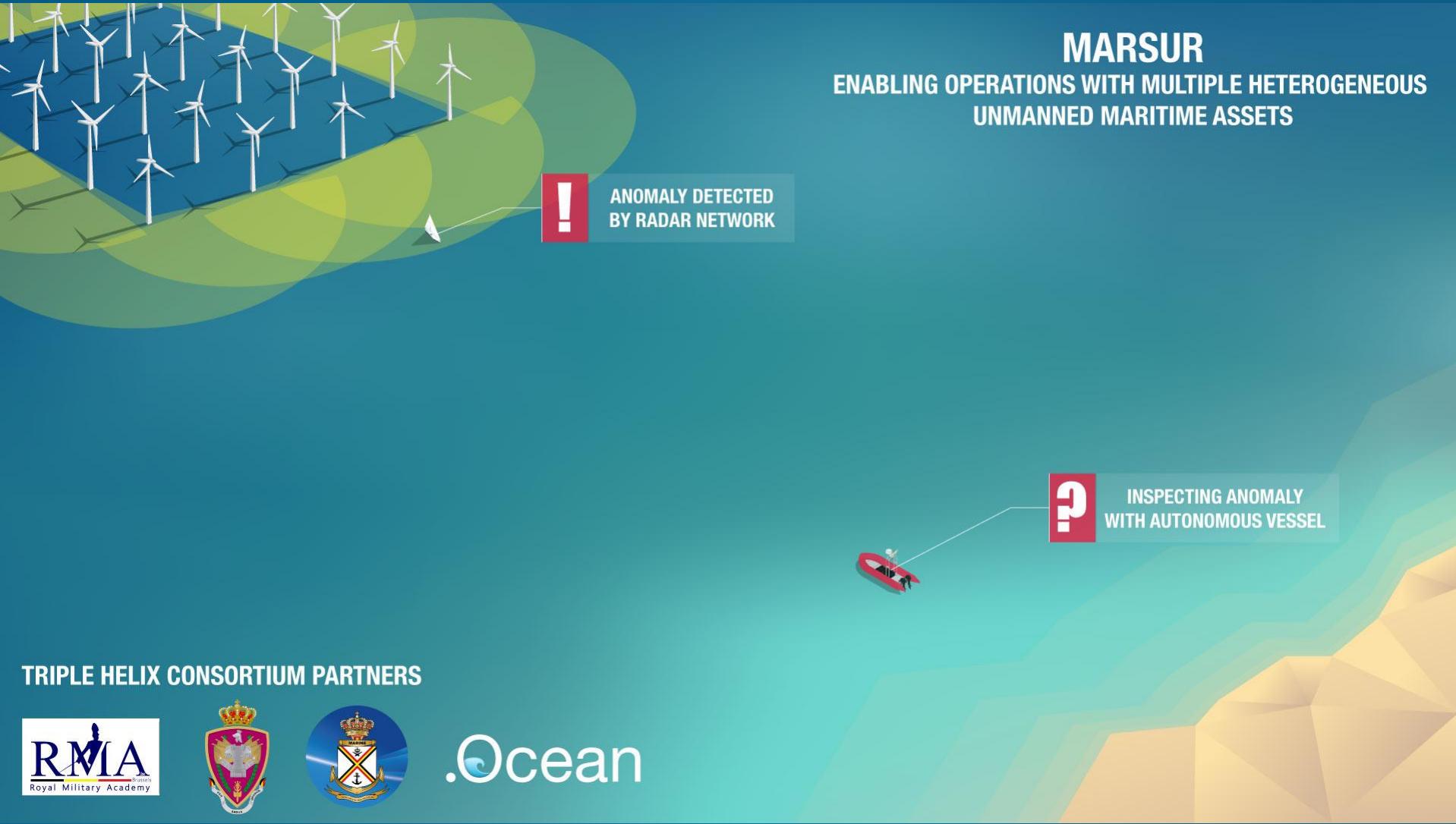
0.4 M€



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1. Direct Cooperation Belgian Navy: MarSur, Maritime Surveillance Project



TRIPLE HELIX CONSORTIUM PARTNERS



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2. MCM ESI program: Mine Counter Measures Vessel Tender



Andere Belgische kmo's die een graantje van het contract meepikken, zijn onder meer DotOcean (nautische informatica), Space Applications, Bats en Akka.

'Mijnenjagers kunnen Vlaamse drone-industrie boost geven'

31 januari 2019 00:00

f in t m



De zes nieuwe mijnenbestrijdende vaartuigen moeten vanaf 2023 onder meer de mijnenjager M923 Narcis vervangen. © photo news

3. EU Defence Projects EDIDP: European Autonomous Ground Robot



EDIDP-MUGS-2019: Multipurpose architecture for unmanned ground systems and solutions for systems integration and manned-unmanned teaming

KMW
A COMPANY OF **KNDS**
New operational scenarios for the use and deployment of autonomous unmanned systems

SAFRAN Sagem **nexTER SYSTEMS** **DIEHL** Defence **MILREM ROBOTICS**

New Artificial Intelligence solutions specific to ground vehicles

Requirements set by 7 EU Member States



guardtime cyber **Rantelion** OUR WAY IS MOBILITY

Novel systematic approach to cyber threat analysis and development of cyber defence system

Imt **Bittium** **DA GROUP**

Integrated communications solution for voice and data, operators and equipment including vehicle to vehicle communications

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INSTA
Advancement of swarming technologies

Manned – Unmanned Teaming & Operational Scenarios
Swarming
Modular Standardized Open Architecture
wide possibilities for payloads and sensors integration

Rapid integration of heterogeneous technologies for multi-mission capable system

iMUGS



gmv (UN)MANNED

Command & Control, Interoperability

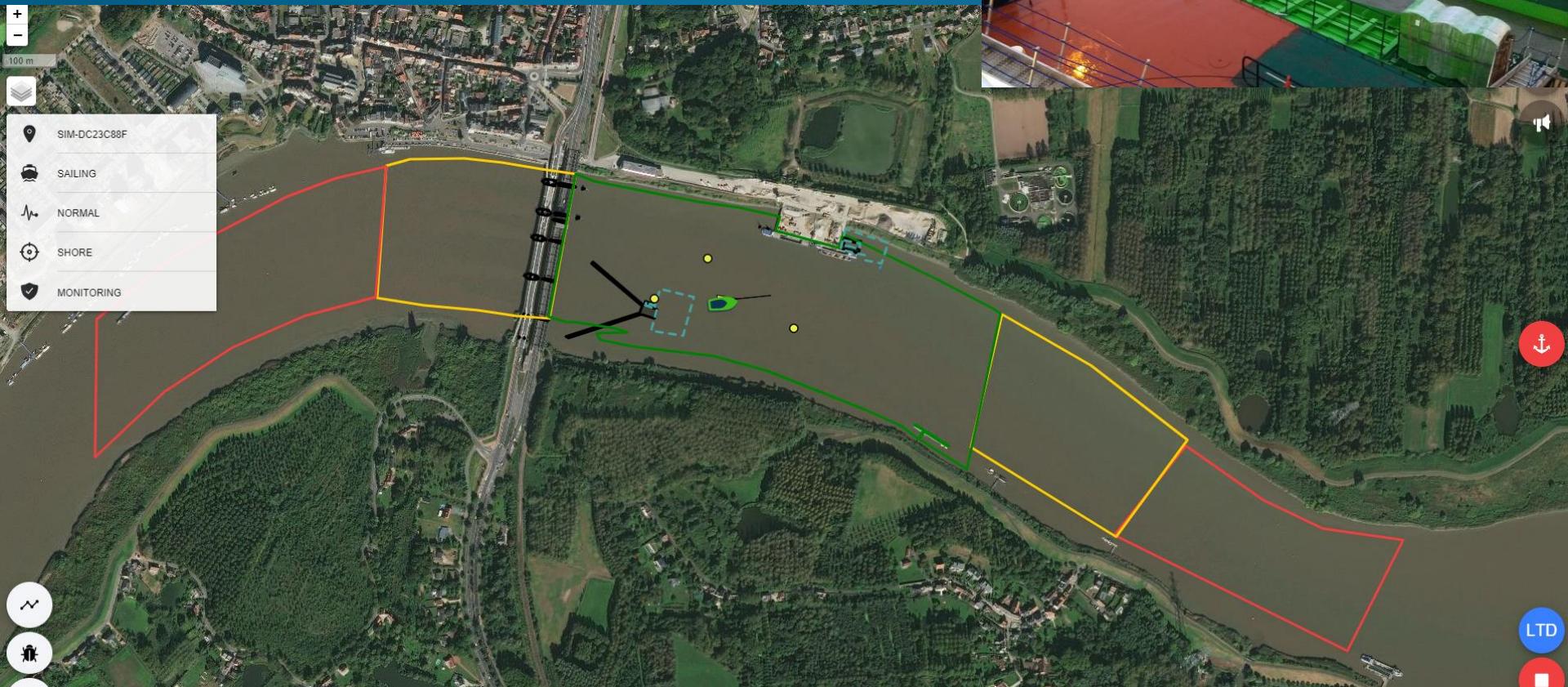
Certifiable mission control station for simultaneous control of multiple UxS systems

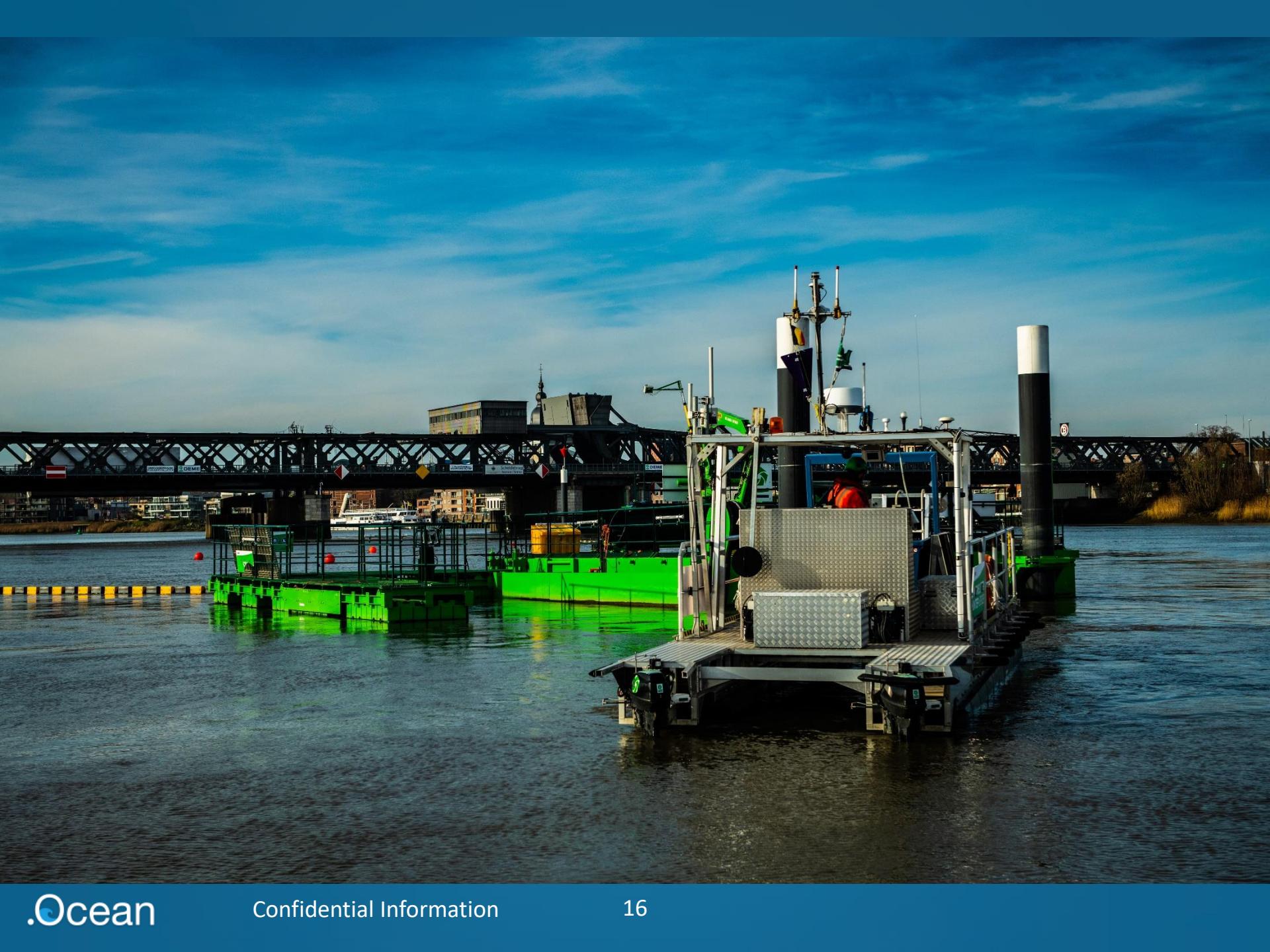
THREOD SYSTEMS

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Marine Contractor Market

Site Automation: River Scheldt Autonomous Vehicle













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Port and Waterway Authorities

2. Site Automation Deurganckdok: Echodrone, Port of Antwerp, Autonomous Monitoring

**Zelfpeilende boot te water
gelaten in Antwerpen**

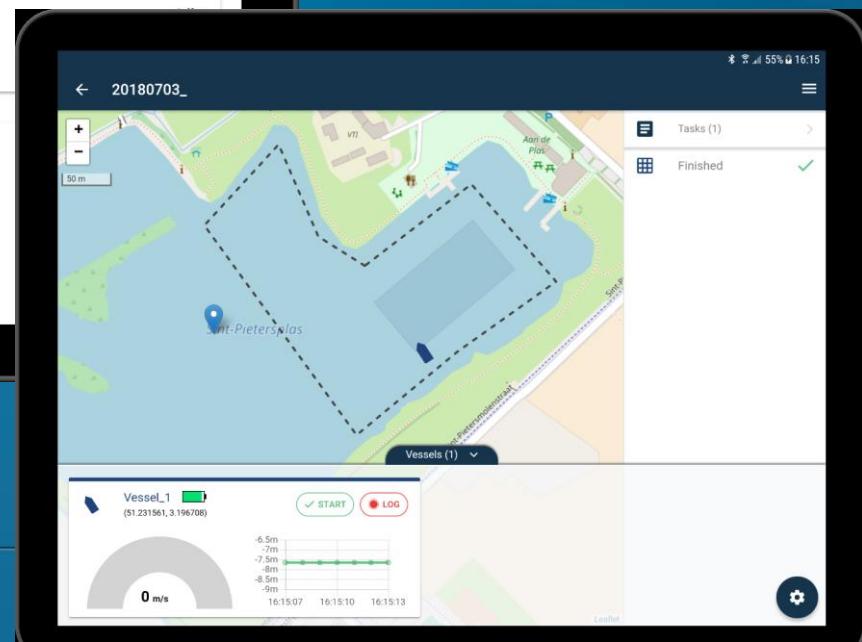
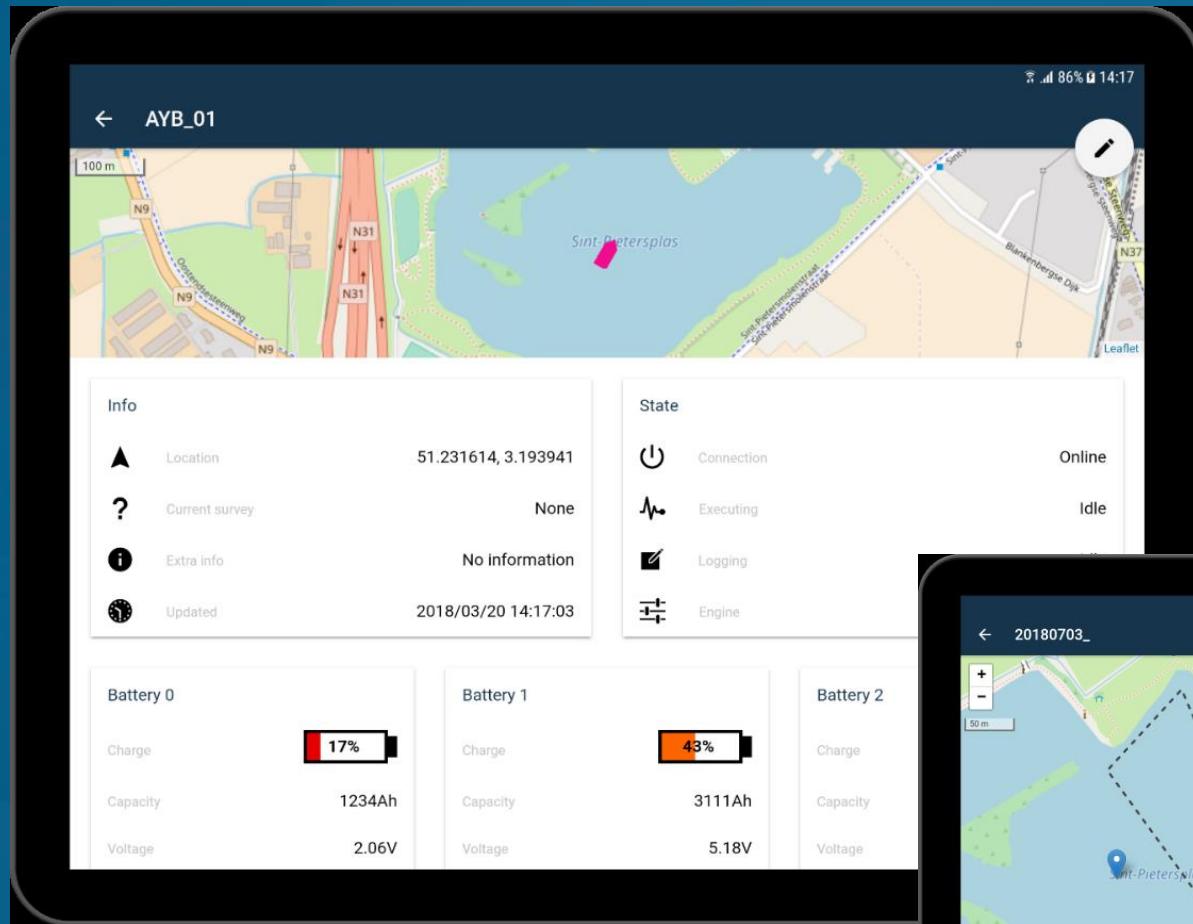
10 augustus 2018 00:00

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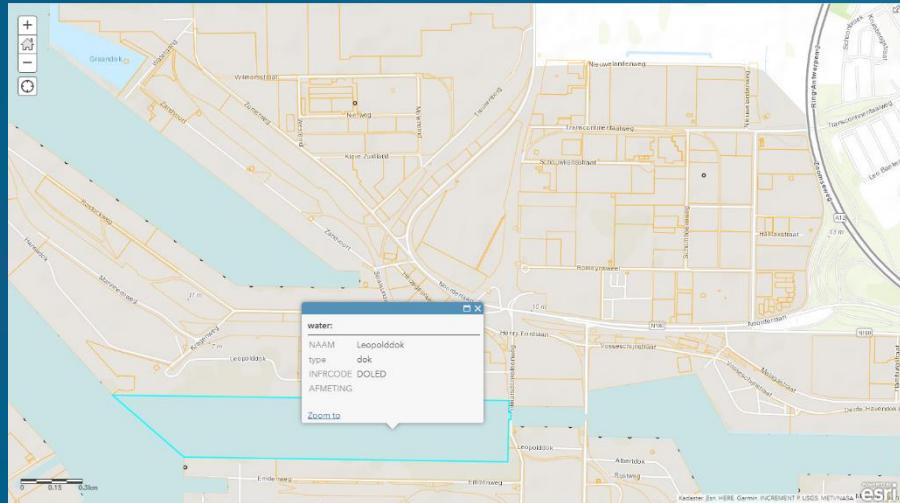


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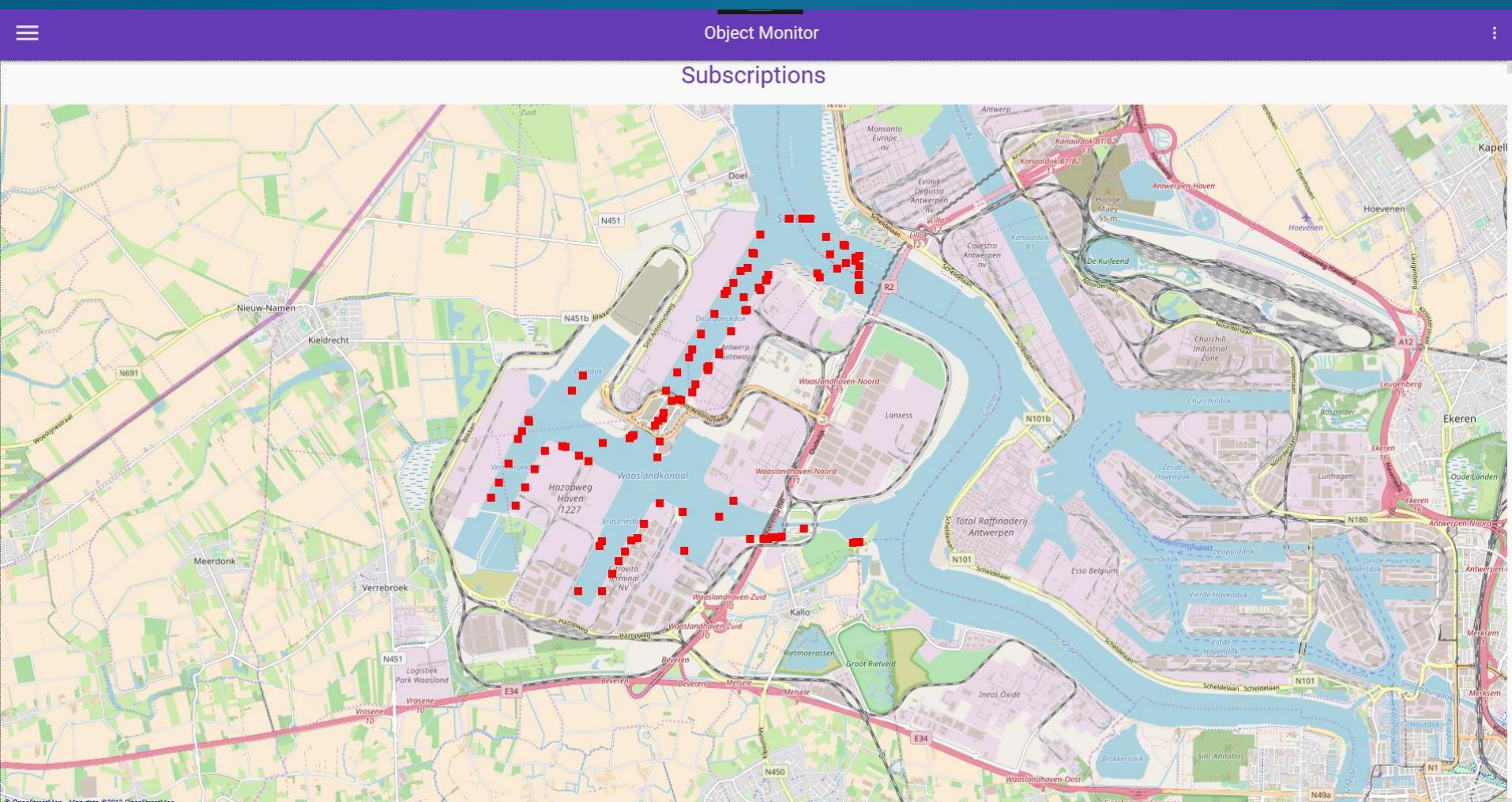
Digital Twin



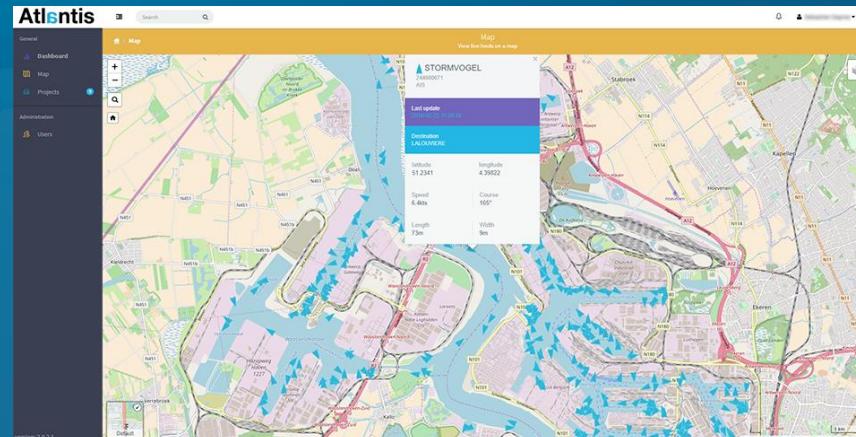
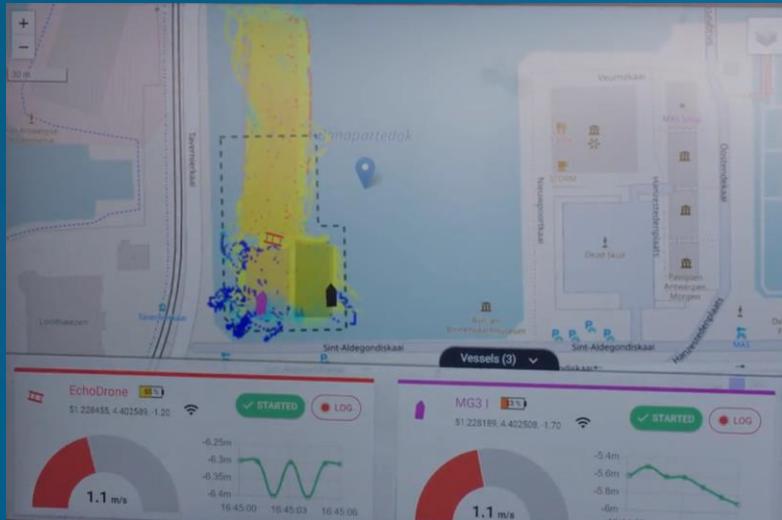
Autonomous Navigation: Port data of Static objects



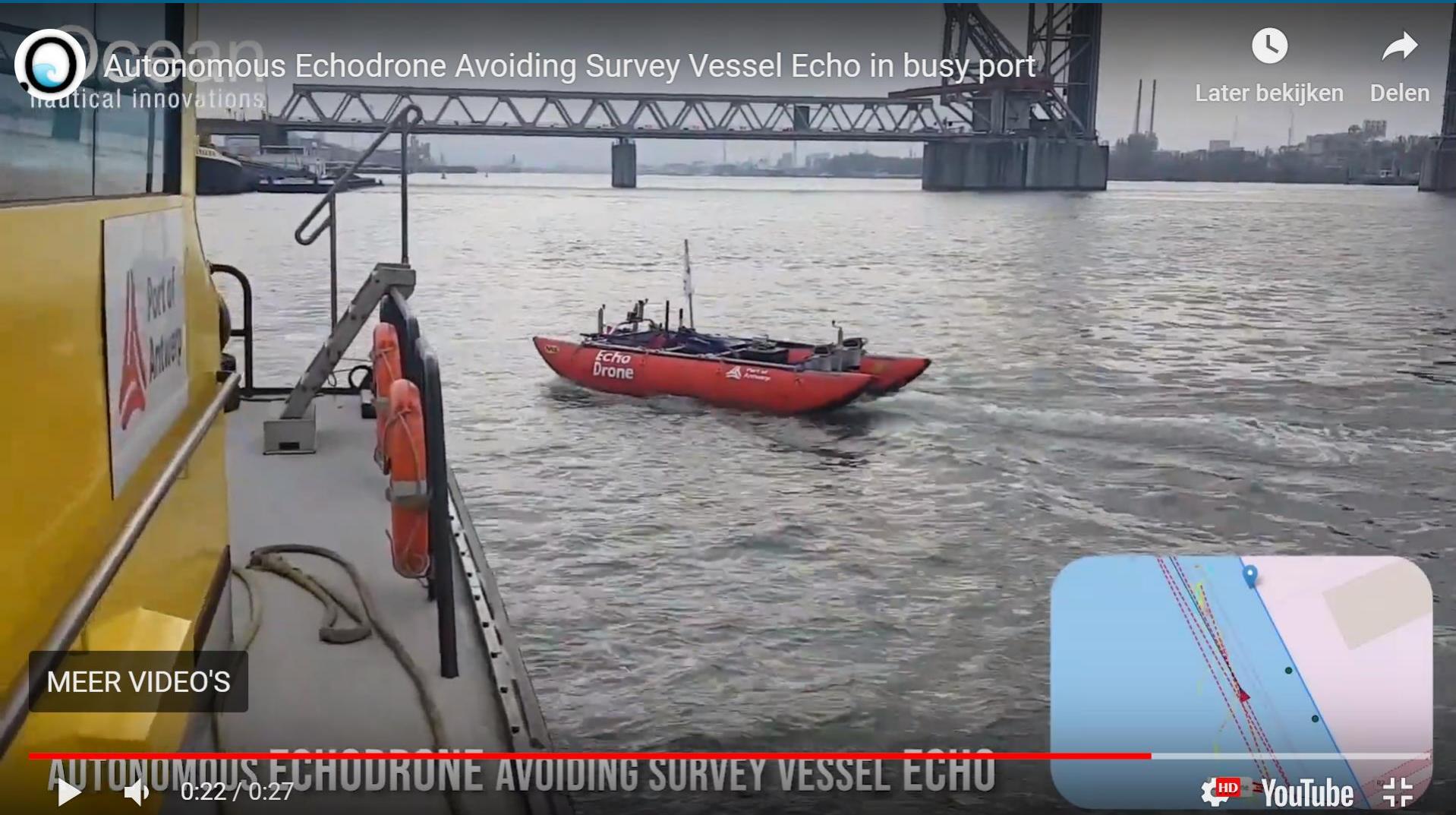
Autonomous Navigation: Port data Dynamic objects: Radar



Situational awareness, data sharing in a virtual world



Ship avoidance tests



Maritime Access project and ESA project

Ports of the Future

Home » Opportunities » Ports of the Future



EMITS REFERENCE	A010229
ACTIVITY	Feasibility Study
OPENING DATE	19 February 2020
CLOSING DATE	31 May 2020

Over PIO Evenementen Aanbod publiek

Home > Projecten > Digital Elevation Models of Coastal Areas (DEMCA)

Digital Elevation Models of Coastal Areas (DEMCA)

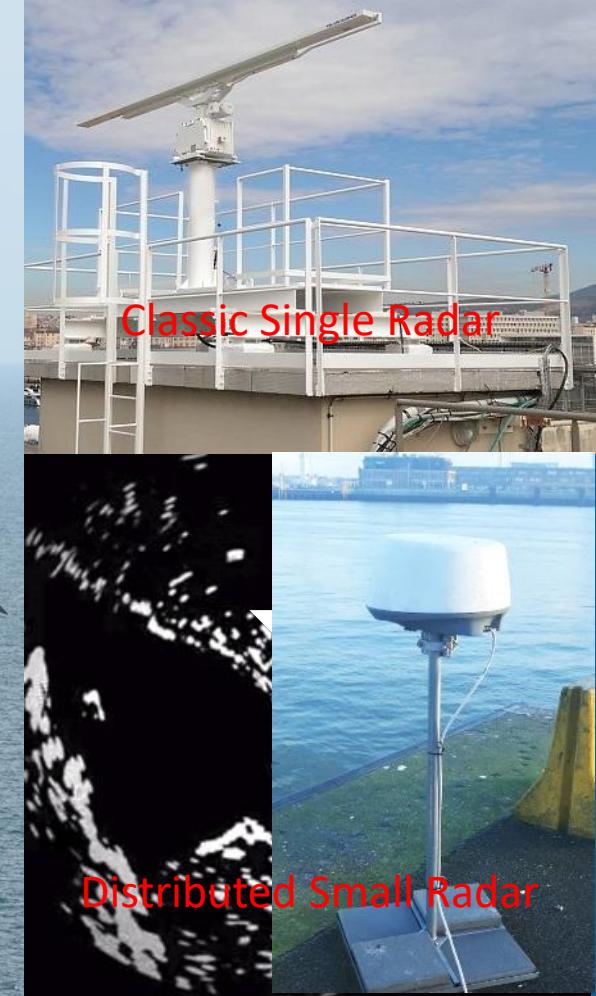


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Offshore Market

Wind Farm Situational Awareness



Radar installation



Radar installation



Radar interface unit, mounted in the tower with magnets



