

# SOPHISTICATED SOLUTIONS FOR PORTS

## AUTONOMOUS VEHICLES FOR CRITICAL USE CASES



it-objects  
<sophisticated solutions />

DEUTSCH-FINNISCHES BUSINESSFORUM 2025

EXPLORING INNOVATIVE  
TRANSPORT SOLUTIONS  
ENHANCING SAFETY AND  
EFFICIENCY





## THE CHALLENGE: GROWING NEEDS IN MODERN PORTS

80–90% of unmanned systems are **remotely** operated.

Operational efficiency gains remain **below 10%**.

More than 90% of Finland's foreign trade moves through ports.

European Commission has **flagged labor and skills shortages** as a priority in its Ports Strategy.

Ports face bottlenecks that **reduce safety and throughput** while **increase emissions and failures**.





Advanced software converts hardware into intelligent, goal-driven systems enabling autonomous control and strategic data processing.

Operational cost reductions **up to 30–60%.**

Human intervention reduced **by 70–90%.**

Automation reduces accident rates **by up to 40%.**

**Enable 24/7** operations, increasing throughput and reliability.

**AI-powered autonomous fleets are not just a technical upgrade;  
it's become a GAME CHANGER.**



## THE OPPORTUNITY: AI & AUTONOMOUS VEHICLES



Mature drone platforms and sensors are available from major and specialized manufacturers.

Proven **supplier base** across EU and US.

Wide range of **sensors** (cameras, LiDARs, etc.).

433K registered commercial drones in the US (July 2025).

42K in Sweden | >15K in Denmark.

Integration shapes the future — software makes it happen.



**THE CURRENT STATE:  
HARDWARE IS READY.**



## THE SOLUTION: CENTRALIZED ORCHESTRATION FOR AUTONOMOUS OPERATIONS

### Mission Planning & Execution

Automate, schedule and enable autonomous vehicle coordination.

### Real-Time Intelligence

Dashboards, operational data logging and AI-driven decision support.

### Adaptive Solution

Fully customizable with company wide integrations.

Launch autonomous port operations through intelligent mission planning, real-time analytics, and adaptive system integration with ITO Control Center.



# USING DRONES FOR REMOTE PILOTAGE IN DENMARK

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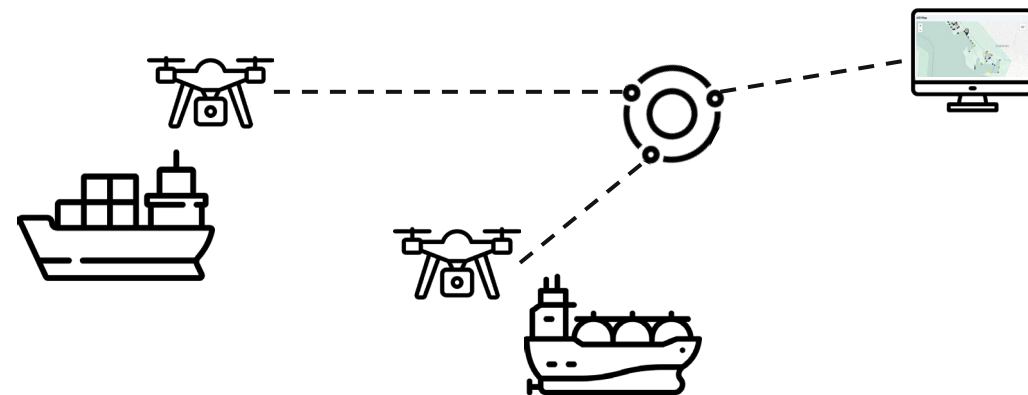
## HOW AUTONOMOUS DRONES TRANSFORM SHIP PILOTING

### The Challenge

Increasing ship traffic and personnel shortages pose organizational and safety challenges for traditional ship piloting.

### The Solution

Drones are deployed as autonomous operated ship pilots to enhance navigation safety and operational efficiency while reducing reliance on human pilots.







**FURTHER USE CASES WE ARE  
WORKING ON RIGHT NOW**

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## OUR AUTONOMOUS VEHICLE JOURNEY STARTED IN 2021

### Security & Defense Operations

Integrated solution for searching and clearing of tank mines.

### Navigation & Safety Systems

AI-based detection of landing sites and execution of landing.

### Logistic Operations

Implementation of logistics processes with multimodal vehicle combinations.

# WE LOVE TO HEAR MORE ABOUT YOUR USE CASES!



Dr. Erik Heimann  
Founder & CEO

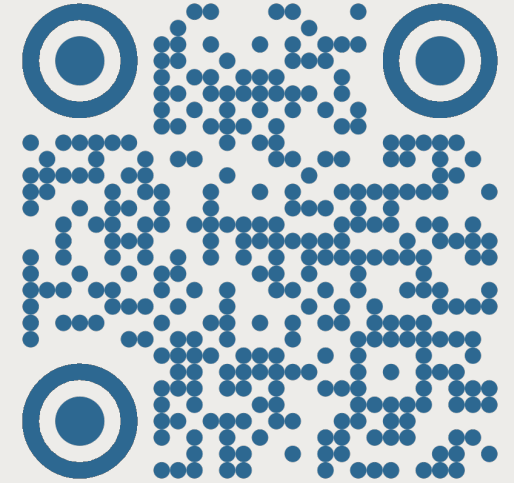


Daniel Meier  
Head of  
Software Development



Tobias Brogt  
Project Lead  
Drones

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SOPHISTICATED SOFTWARE  
SOLUTIONS BY IT-OBJECTS

