



Promoting Seaworthy IT



21ο Συνέδριο
infocom | infocom
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infocom
Shipping summit

Our Goals

- ✓ Promote the correct use of I.C.T. in shipping companies
- ✓ Enhance the status of I.C.T. in shipping
- ✓ Forum for exchange of experiences and ideas amongst shipping I.C.T. professionals
- ✓ Participation in shaping of shipping I.C.T. policies and procedures from National and International organizations

About us

- ✓ We are a Non-Profit Professional organization
- ✓ With 2 Membership categories – Full & Associate Members
- ✓ 120 ICT Managers of major shipping companies are Members today
- ✓ Another 200 Associate Members

Activities

- ✓ Our Website is the focal point for virtual meetings & information exchange
- ✓ Educational seminars and promotional events
- ✓ Participation and co-organizing of other events
- ✓ Informal meetings & contacts amongst Members to exchange experiences
- ✓ Permanent and project-based committees and working groups
- ✓ Newsletter

Benefits to Full Members

- ✓ Contact with other colleagues to share experiences and know-how
- ✓ Contact with other colleagues to share experiences and know-how
- ✓ “Industry voice” for the benefit of the individual I.T. Managers, of their employers and of the whole sector
- ✓ Discounts, invitations and special offers from various suppliers

Benefits for Associate Members

- ✓ “Buyers group” who are easier to contact and to assemble for promotional events and for announcements
- ✓ For novel technologies or novel I.T.-related methods AMMITEC will promote adoption.
- ✓ Stay in touch with the “current thinking” and planned activities of AMMITEC members.
- ✓ Some discounts & benefits are available to Associate Members too

www.ammitec.org

Current Issues in Maritime AIS Solutions



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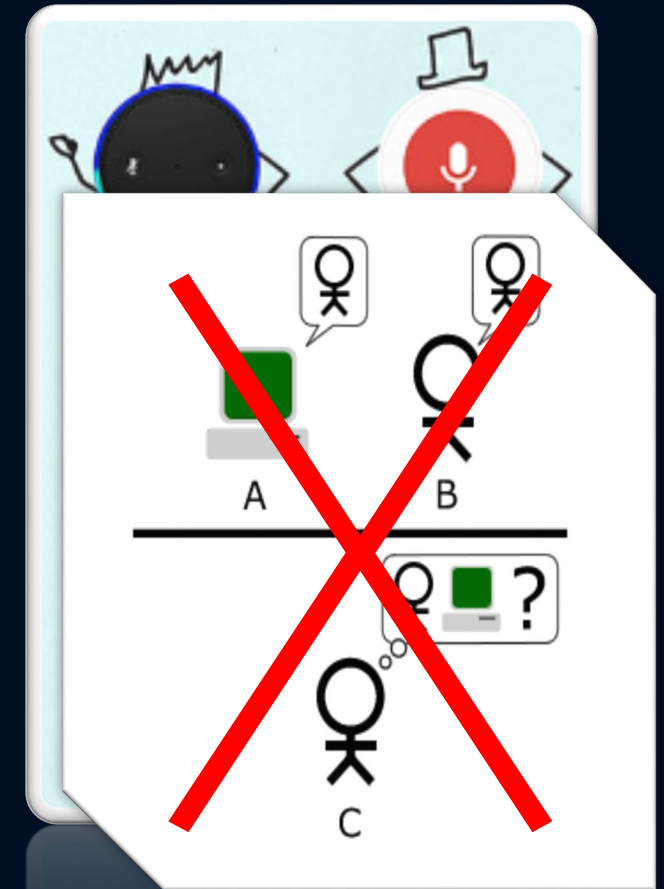


W h a t i s A I?

The term 'AI' refers to a machine's ability to carry out a certain task, and keep improving its performance, **without** being given explicit instructions on how to do it. (Machine Learning – ML)

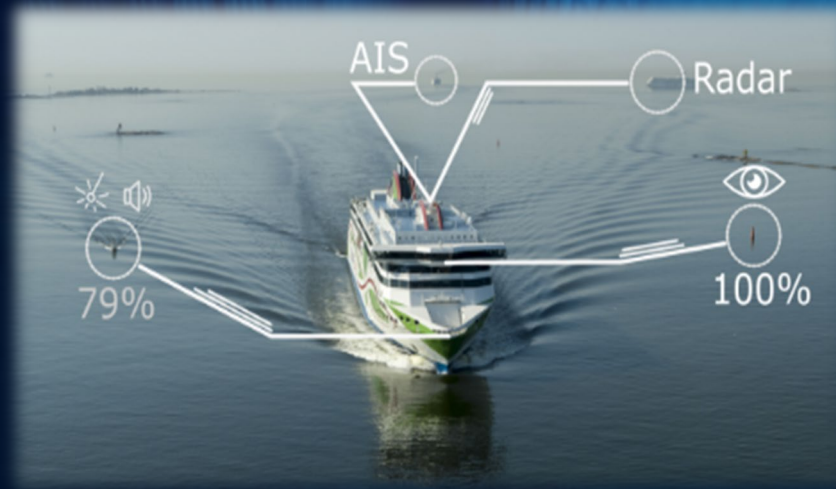
Despite all the hype that comes with the notion of AI, no machine has passed the Turing Test yet.

Computers still can't think.



What is AI good at?

AI's hard currency is **PREDICTION**



AI uses mathematical models that work on information we have - training data - to generate information that we don't have i.e. Prediction.

AI algorithms include classification, decision trees, neural networks, topological data analysis, deep learning, etc.

AI in Maritime

The applications of AI in the maritime sector can be classified in five broad domains:

1. Autonomous vessels and remote command systems
2. Situational awareness and safety
3. Route optimization and fuel efficiency
4. Port operations optimization
5. AI-powered solutions for the Backoffice



Autonomous vessels

In December 2018, **Rolls-Royce with SVAN** pulled off the first public demonstration of an autonomous voyage by a passenger vessel.



Autonomous vessels

In 2020, **Kongsberg** will launch the world's first autonomous electric containership the **YARA Birkeland**.

Autonomous vessels

Kongsberg has recently acquired Rolls-Royce's marine division



KONGSBERG




Kongsberg partnered with **Wilhelmsen** to start a new autonomous shipping venture dubbed **MASsterly**.

ONE SEA

AUTONOMOUS MARITIME ECOSYSTEM

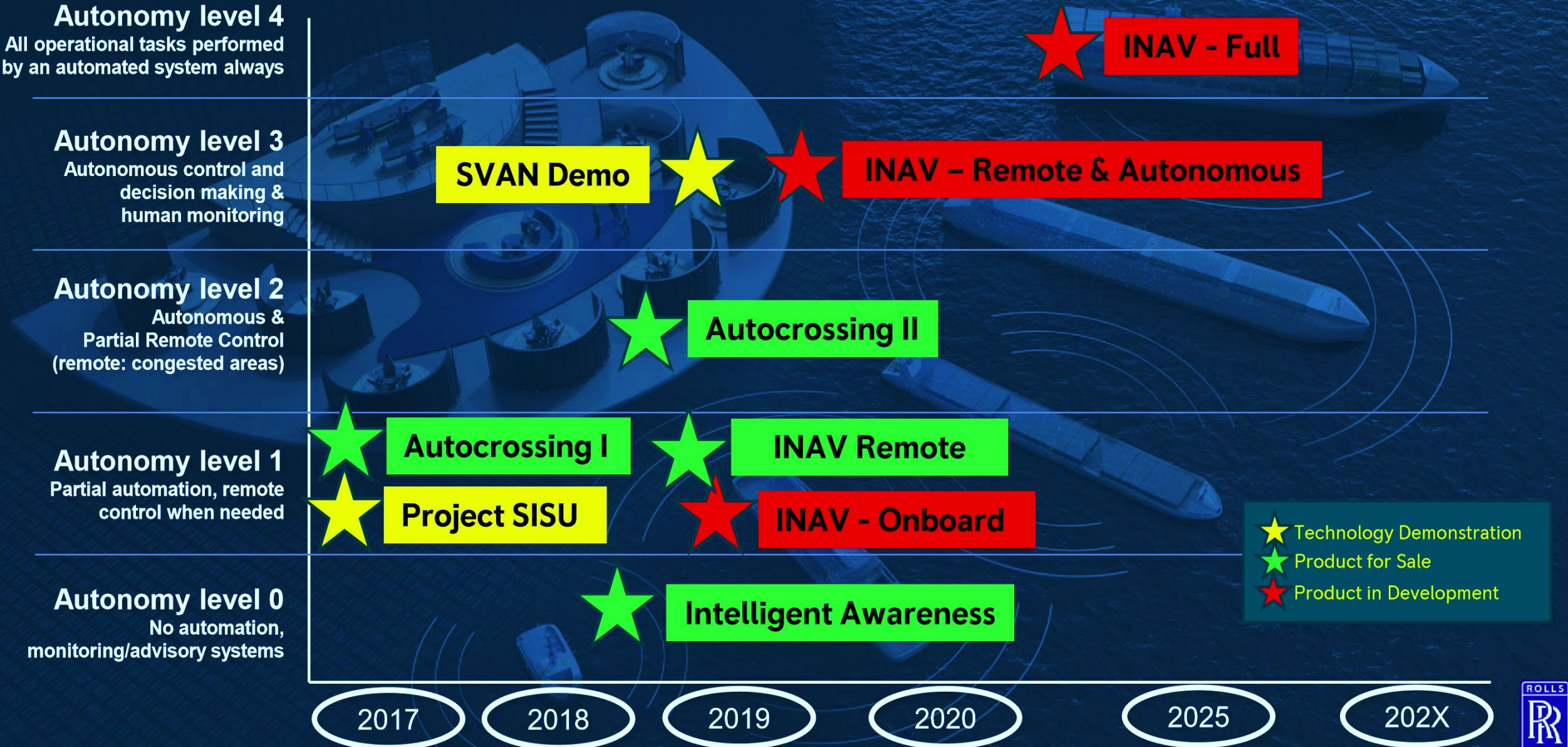
[HOME](#)[ABOUT](#)[ROADMAP](#)[TEST AREA](#)[NEWS](#)[CONTACT](#)

ONE SEA is a high-profile ecosystem with a primary aim to lead the way towards an operating autonomous maritime ecosystem by 2025.

[LEARN MORE](#)

DIMECC

Where are we on the autonomy journey?



Manned Autonomous Vessels

※ 1 MASS: Maritime Autonomous Surface Ship



Manned Autonomous vessels

Strategic alliance: *Samsung & Amazon*



Samsung & AWS: Samsung Heavy Industries announced that it's using Amazon's AWS cloud services to build an Autonomous Shipping Platform. The platform will enable the **self-piloting of container ships and digital replicas ashore.**

Situational awareness & Safety



SEA MACHINES

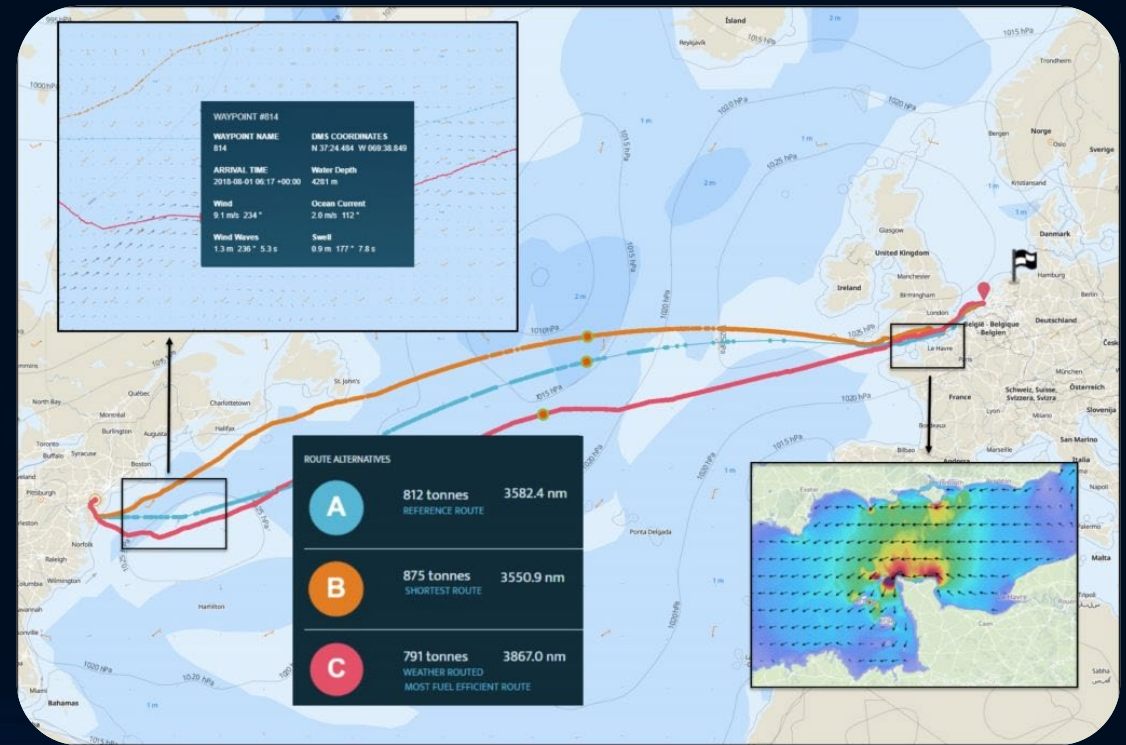


MAERSK

Voyage Optimization

AI assists us in making much more accurate predictions on ETAs for ships as well as spotting trends and risks in shipping lanes and ports, and proposing alternatives.

AI is also capable of analyzing historical shipping data like weather patterns and busy or slow shipping seasons to minimize inefficiencies, errors, and duplications.





Nautilus Labs



CHARTERING

Improve accuracy of vessel descriptions

Maximize ROI for each fixture



OPERATIONS

Optimize voyage profitability

Mitigate claims and penalties



TECHNICAL

Rank and compare vessel performance

Prioritize and assess maintenance events



CREW

Automate data collection

Align with shoreside teams



SIGNAL OCEAN

DATA EXTRACTION AND FUSION

We like to say that the platform 'speaks shipping'. It continuously extracts relevant information from emails and uses fusion algorithms to determine the 'latest and greatest' state of each vessel.

PROFITABILITY ESTIMATIONS

Instantly calculate and compare profitability across all vessels competing for a cargo. Customize calculation assumptions to match your scenarios.



GEOSPATIAL PROCESSING

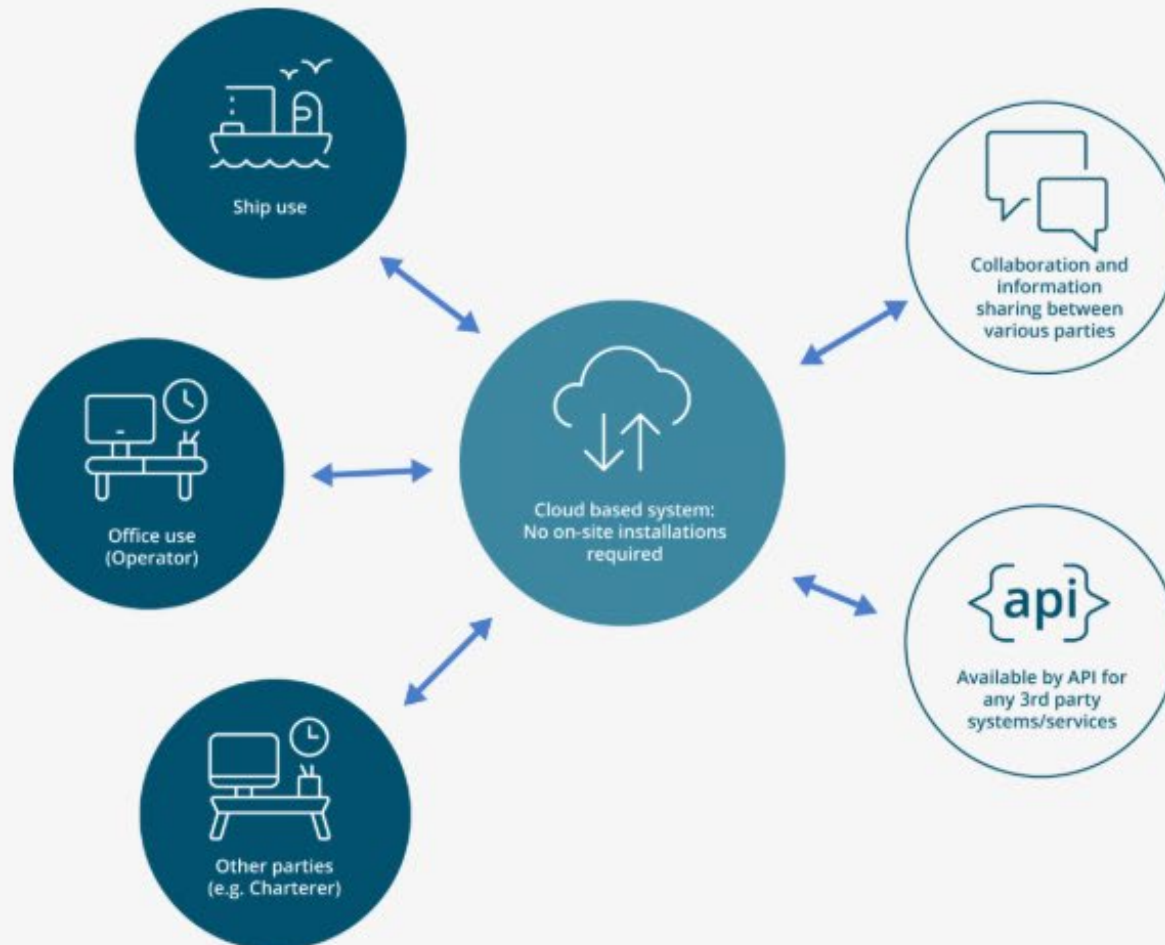
We use state-of-the-art algorithms to turn geospatial data into commercial stories or 'voyages.' Fused commercial data is passed through Planning Algorithms to predict tonnage availability in the near future.

POWERFUL YET SIMPLE INTERACTIONS

We believe in great design. We have developed a user interface and overall experience that is well tried and tested. It is attractive and practical to use.



NAPA Voyage Optimization: How it works



- Browser-based module for **NAPA Fleet Intelligence**
- **Onboard and on-shore** tools, increased **communication** and awareness
- Intuitive and smooth **User Interface**
- Weather routing for multiple **voyage scenarios simulations** and comparisons on **ETA, fuel cost and safety**
- High accuracy **performance model** predictions for **all commercial ships**
- Even higher performance prediction accuracy when using additional data sources (noon reports, automation measurements)
- Available also as an **API for 3rd party integration**

METIS sets Information Intelligence at the disposal of the Global Maritime Industry. METIS has been designed and implemented to address the requirements of Technical & Operations Departments of Maritime Companies. The solution, **powered by Artificial Intelligence** incorporates fully automated, accurate and reliable Data Acquisition combined with the novel idea of virtual cloud-based agents, which analyze operational or engineering processes and provide useful feedback in the form of analysis conclusions and events detection reporting to multiple users.

[Explore](#)


DATA ACQUISITION

METIS fully automated Data Acquisition system gets, fetches, cleans and stores any measurements directly from the onboard equipment and...



CO₂ MONITORING

Recent studies have shown that vessels' energy consumption and CO₂ emissions could be reduced by up to 75% by applying...



FUEL OIL CONSUMPTION

It is crucial for shipping companies to make strategic decision to optimize and reduce their fuel oil consumption (FO) and...



SEEMP

The Ship Energy Efficiency Management Plan, contains energy improvement measures identified by the ship owner, that will be kept...

AI in Port Operations



The first fully autonomous ports have become a reality, but typically are newly built.

In "traditional" ports, digitalization and AI will improve the safety and efficiency of use of the available port infrastructure.



AI in the Backoffice

AI can speed up the core business processes and reduce cost and errors. Most of Knowledge Worker's trivial tasks can be automated. Trivial tasks of accountants, lawyers, HR staff can be executed by AI-powered systems (Cognitive Process Automation).



AI in the Backoffice

Machine Learning Cyber AI
can detect zero-day attacks*
or insider threats, as **anomalies**,
at an early stage and respond to
them autonomously, thus greatly
mitigating cyber risk while not
requiring human intervention.

(*such as Maersk's **NotPetya**)



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