Maritime Innovations to Reduce Environmental Impacts

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Maritime Trade: Dramatic Increase

80% goods transported by sea

100,000 transport ships

(6,000 large container)

+35% volume goods carried by ships

+ 300% rise in global ship traffic since 1992

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Environmental Effects of Shipping

Pollution: air, water, noise, and oil

Ships: 18 % of air pollutants.

CO2 emissions: rise up to 250 %

Ships are still the most energy-efficient method, but the sheer size of the maritime industry means that it has a **significant effect on the environment**.

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SRT MARINE SYSTEMS

- ◆ Experts in marine tracking, management & surveillance technologies for 30 years.

- ◆ Pioneered development of **AIS** 30 years ago, now the global standard for maritime tracking

- ◆ Invented world's first digital AtoNs

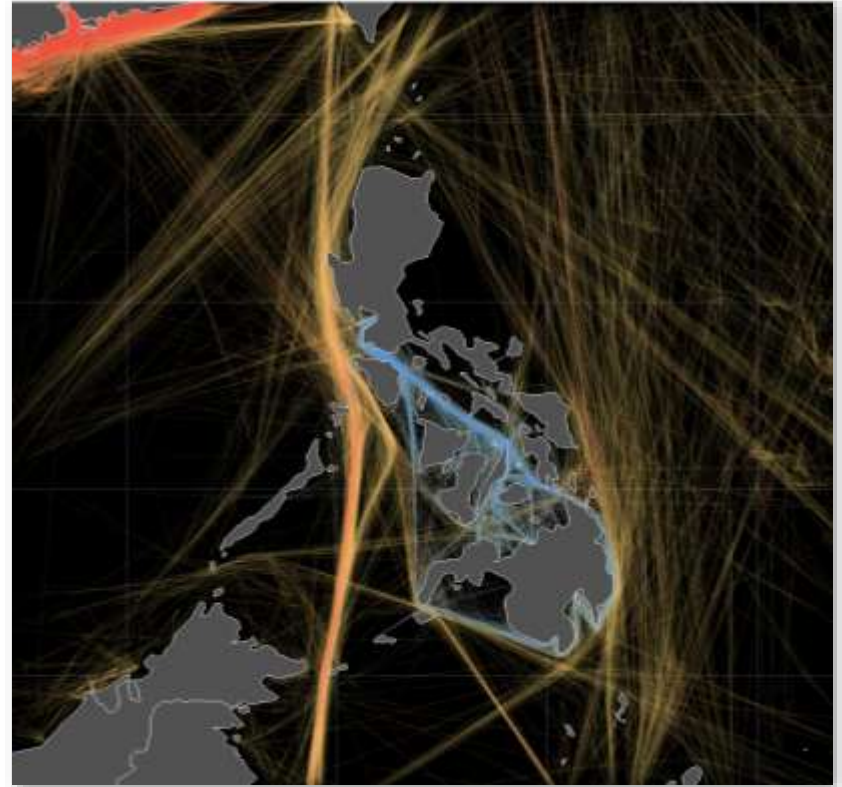- ◆ Proven turn-key systems used by the world's leading national authorities and ports

How can innovation reduce environmental impact?

- ◆ Streamline port operations & reduce wait times = curb fossil fuel use and emissions

- ◆ Avoid accidents and collisions= oil and chemical spills

- ◆ Anticipate infrastructure, traffic

1. Artificial Intelligence & Analytics

◆ Detect all vessels, even dark ones

◆ Anticipate arrival times and tonnage

◆ Manage port traffic so no backlog

◆ Marine analytics lab – develop
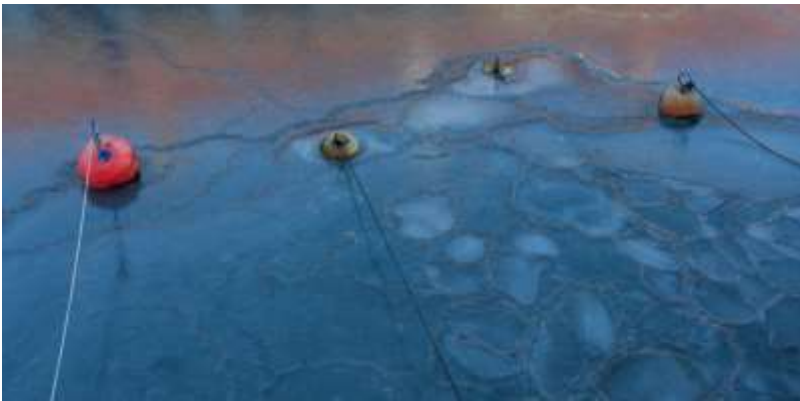 algorithms to detect activities such
  as berthing

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2. 3D Augmented Reality in Real-time

Real time Dynamic-3D enables significantly enhanced VTMS operator situational awareness and understanding of all port traffic movements and events.
Enhanced traffic management, Avoid Collisions and Spills

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3. Digital AtoN & Routing

- ◆ **Digital AtoN with sensors** (Sulfur, water/air quality): Detect Polluting Vessels in real-time to intercept, issues fines, use for proof in court

- ◆ **Predict Oil Drift**: Fuse data with weather and current data, where spill will hit coastline

- ◆ **Digital Routing**: identify routes that save time and fuel

DIGITISING THE MARITIME DOMAIN:
TO PRESERVE AND PROTECT THE ENVIRONMENT

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