

The background of the slide is a collage of images related to shipping. It includes an aerial view of a port at night with numerous colorful shipping containers stacked in rows and several gantry cranes. A large container ship is docked at a pier, with its deck and cargo visible. The overall lighting is dark with highlights from the port's lights, creating a blue and teal color palette.

SMARTSHIP architecture: Beyond DANAOS fleet condition based monitoring solution

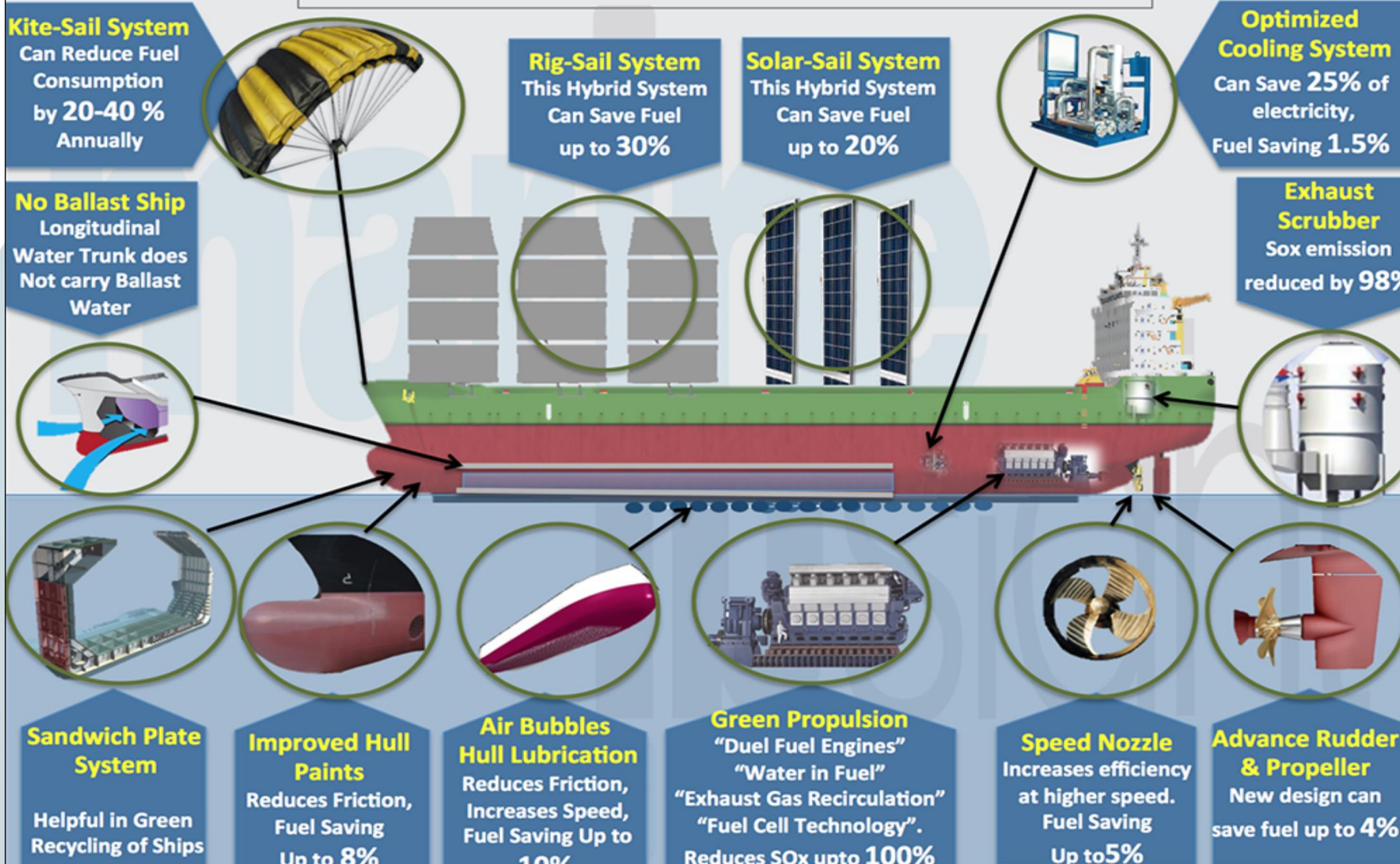
SMARTSHIP 2nd Training session



The SmartShip project has received funding from the European Union's Horizon 2020 research and Innovation programme under the Marie Skłodowska-Curie Grant Agreement No 823916

Towards Green Shipping (Reducing GHG by 50% in 2050)

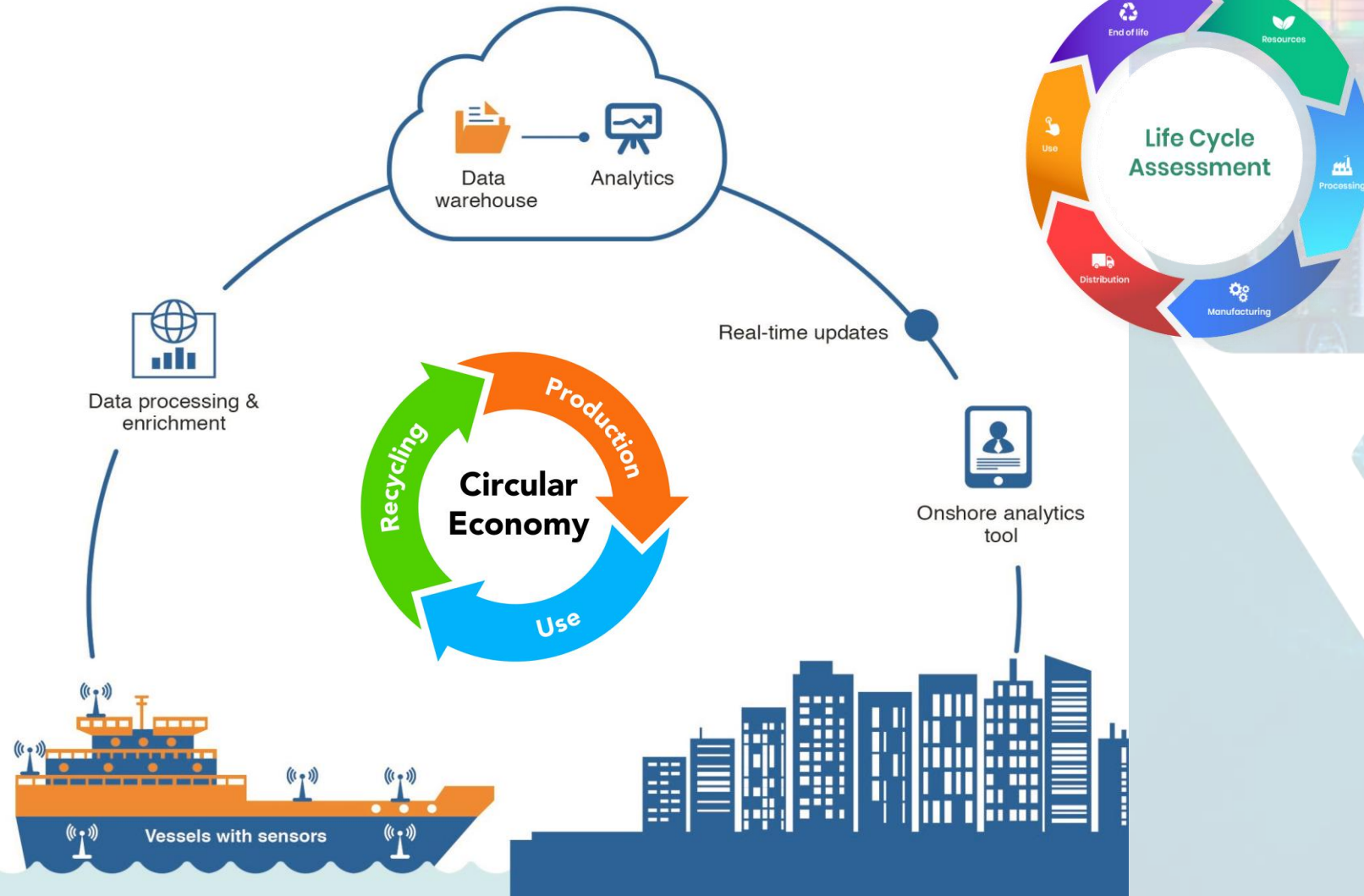
How to Make the Ultimate GREEN SHIP ?



TRADITIONAL APPROACH:
Hardware driven

- *Huge Capital expenditures*
- *Unpredictable Return of Investment*
- *Feasibility of solutions is under investigation*
- *Low Motivation for Investment from the owner*

Towards Green Shipping (Reducing GHG by 50% in 2050)

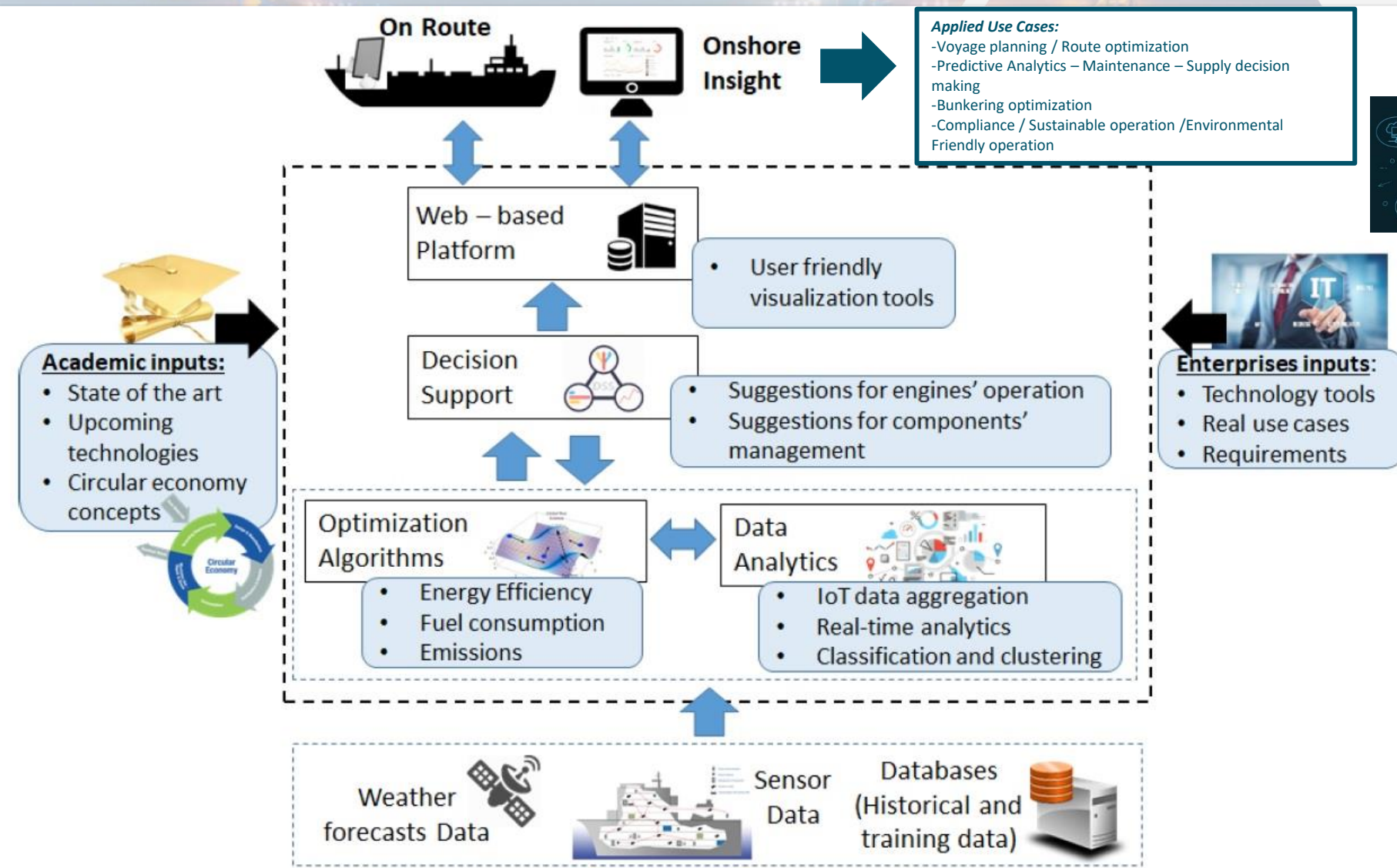


OUR MODERN APPROACH:

Data Driven Model

- *Re-Thinking. Monitor, Analyze, predict and improve operation in a cost effective manner*
- *Life Cycle Multi-parametric Analysis for decision making*
- *Sustainability and Compliance*
- *Circular Economy design*

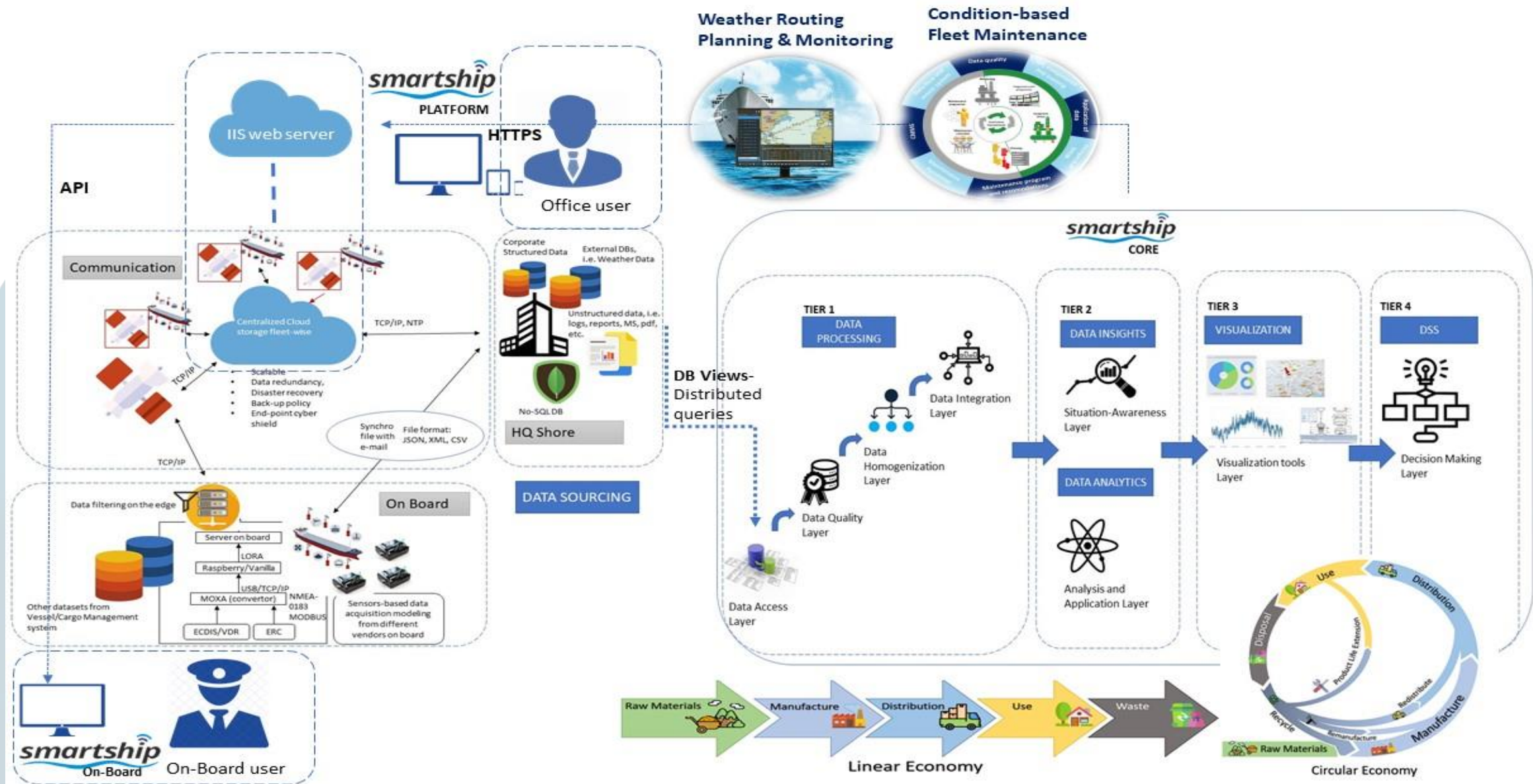
Solution



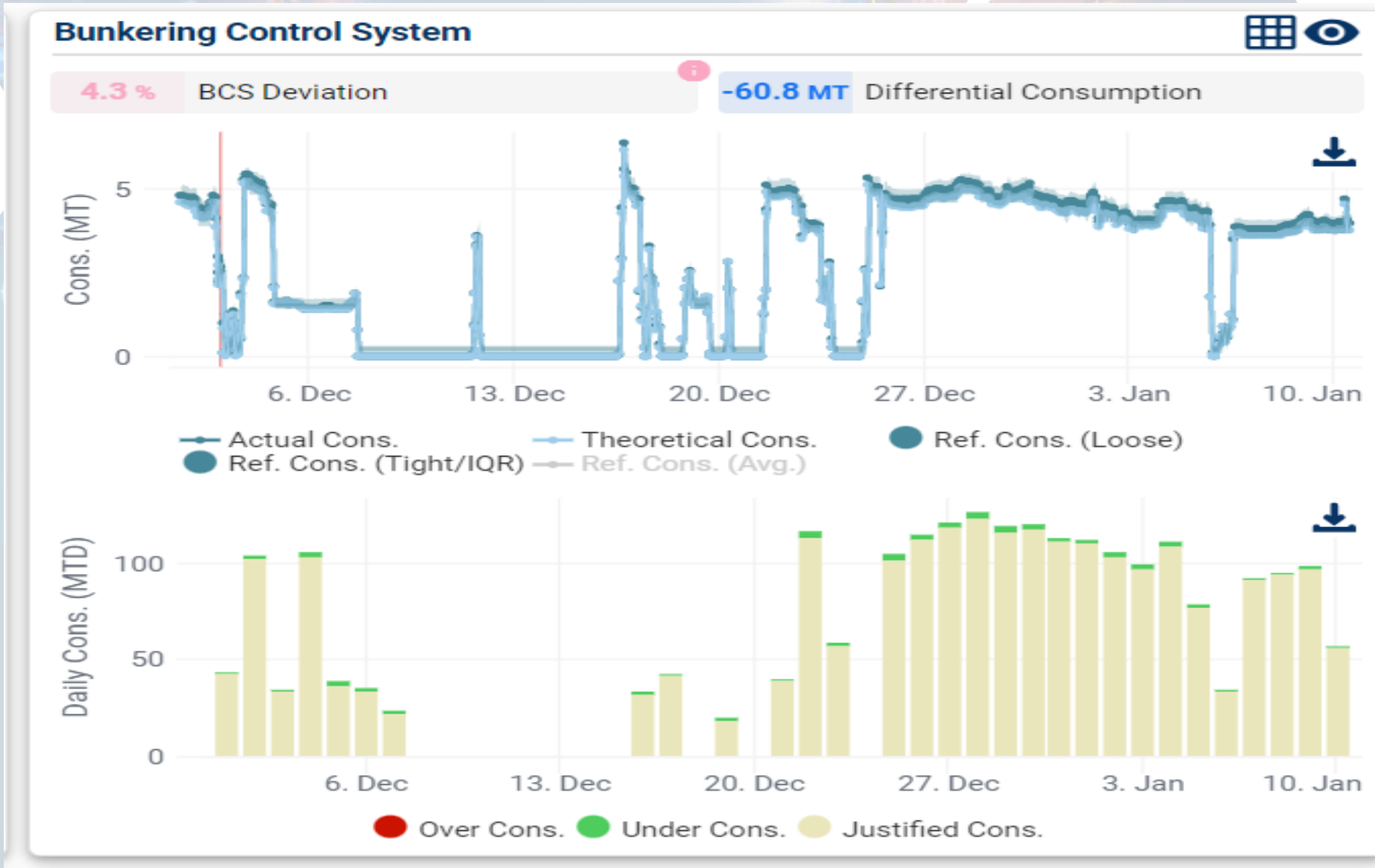
Novelties



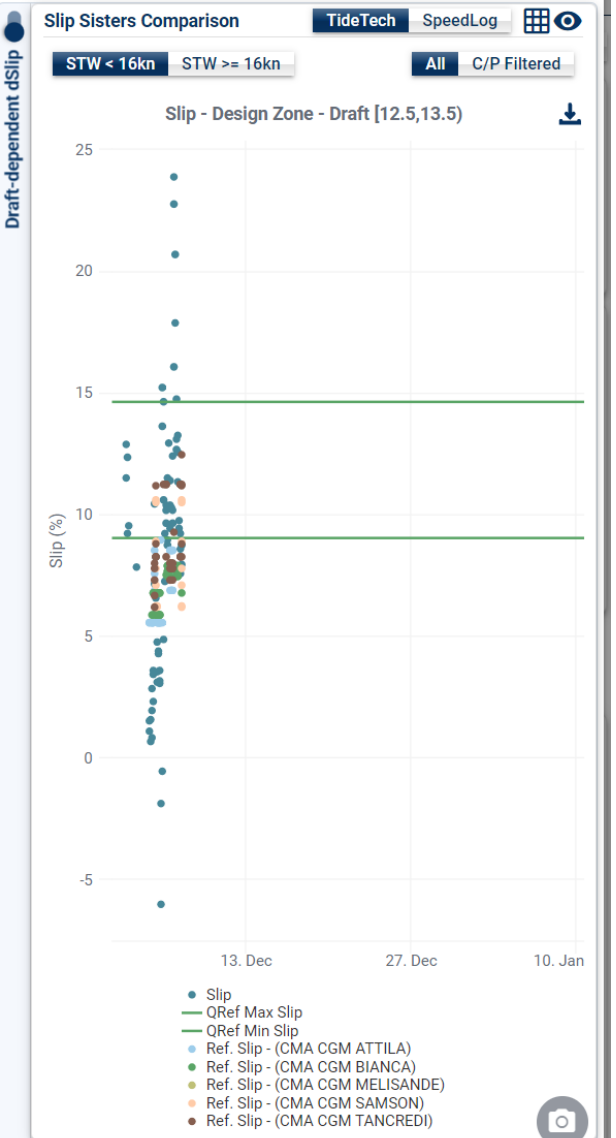
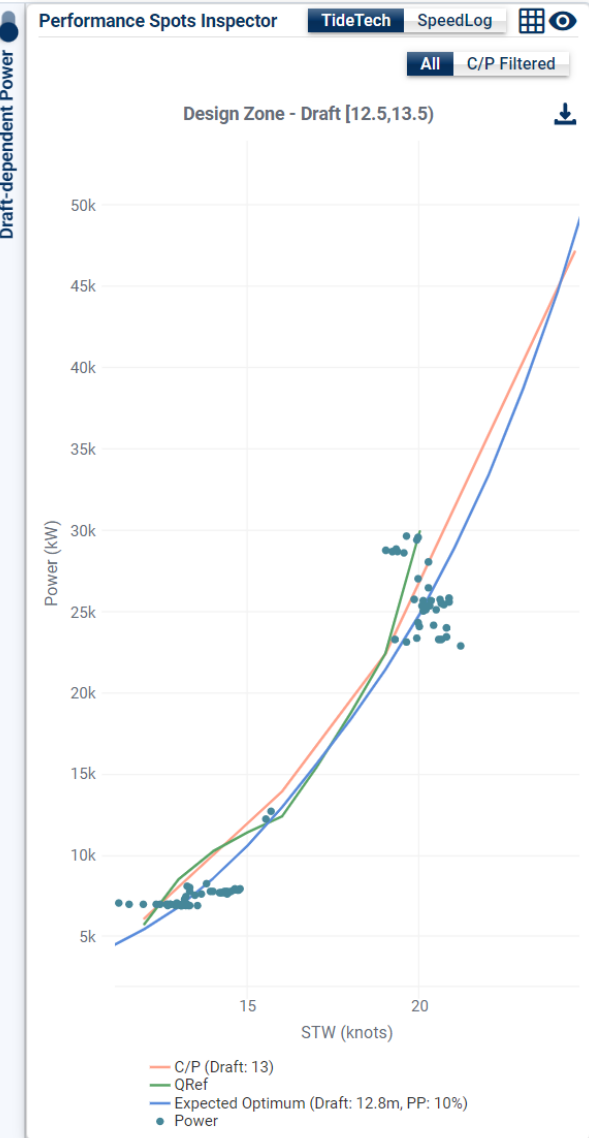
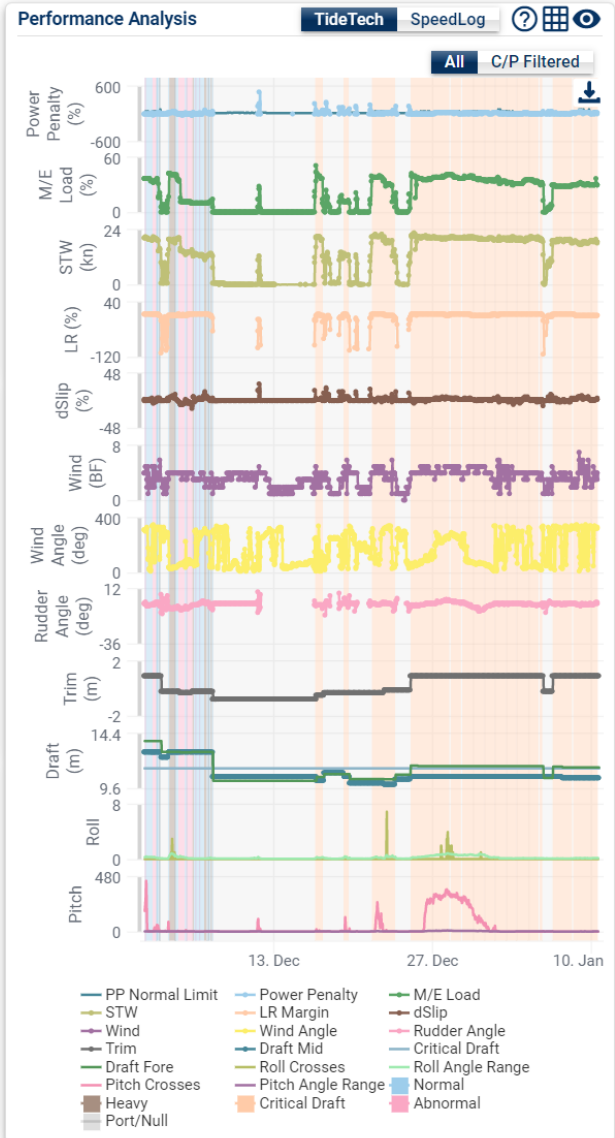
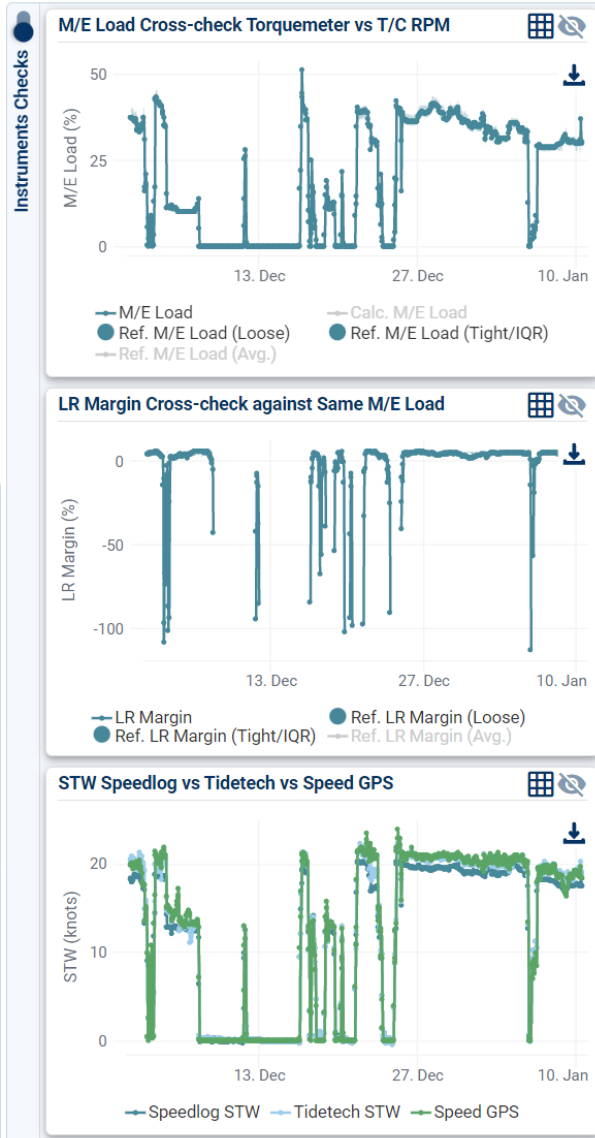
Architecture design and Use Cases



DANAOS WAVES: Reporting Deviation



DANAOS WAVES: Fleet Performance Dashboard



DANAOS WAVES: Compliance Performance Analysis

Performance Analysis

TideTech

SpeedLog

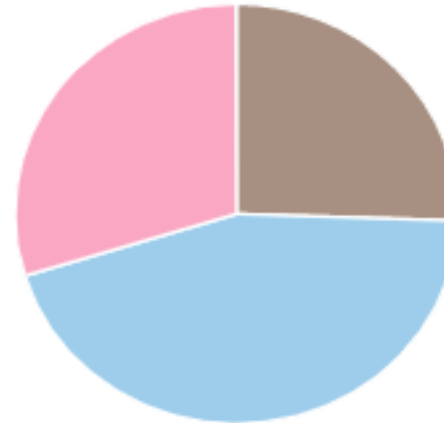
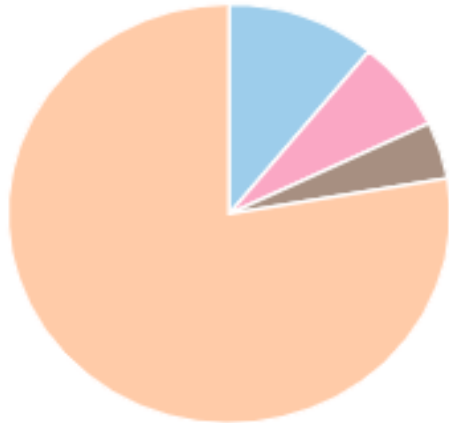


13.2 % Power Penalty

11.7 % Power Penalty (C/P Filtered)

Critical draft

Normal



● Normal ● Abnormal readings ● Heavy ● Critical draft

Circular By Design



Emerging Class of Smart Assets: Maximize sustainable vessel utilization and ensure long-lasting durability of the asset



Value Driven: Extract value from the large amount of data generated by smart maritime assets. Effective flow of Information for natural capital rebuild



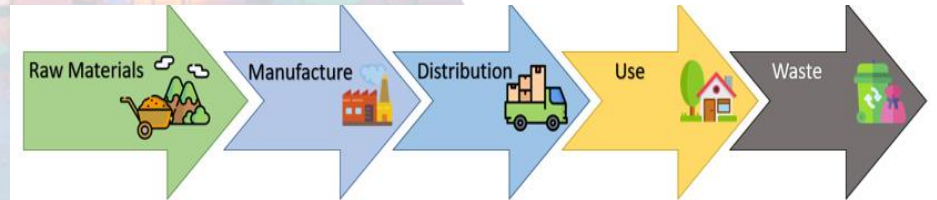
Eliminate Waste: Through Re-Using of data and lean management in decision making for fleet operation and maintenance



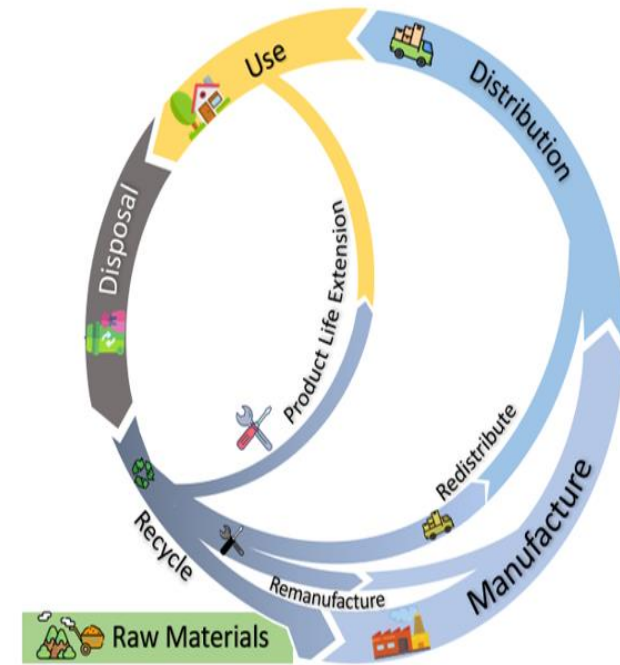
Green Thinking and Sustainability: Minimize energy consumption per unit by combining technologies effectively



Integrated Framework: Extends across the entire fleet and lifetime of the vessel. Values drivers are paired and efficiency is achieved through comparison analysis. Critical mission objectives are met.



Linear Economy



Circular Economy



Thank you!

