

From the "brig"* to the autonomous ship

Infocentric Operations of Ships

George Christopoulos

Prisma Electronics

LAROS - Marine Operations



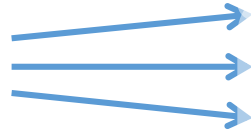
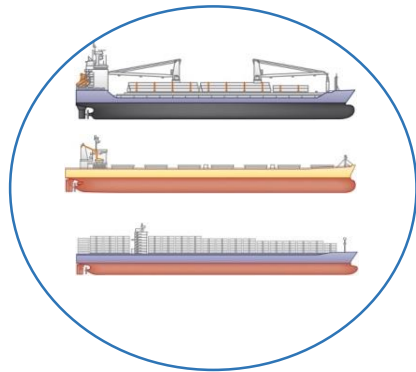
ΑΔΕΛΦΟΤΗΣ ΤΩΝ ΥΠΑΙΩΝ ΑΘΗΝΩΝ
ΕΤΟΣ ΙΔΡΥΣΕΩΣ 1890

Infocentric Operations of Ships with

LAROS

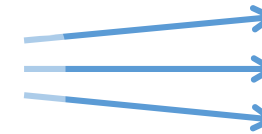
Through Information Intelligence.

Ships at Sea



Unreliable Ship Data

Because of Multiple
System/Sensor Suppliers
 Application Providers
 Solution Integrators

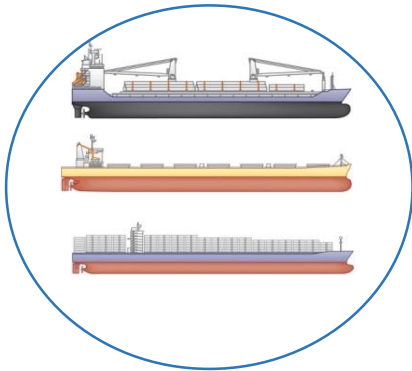


HQ & Ports

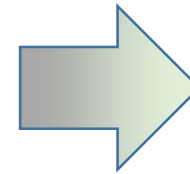


- Many ERP Systems
- Applications' Variety
- Many Data Sources

Ships at Sea

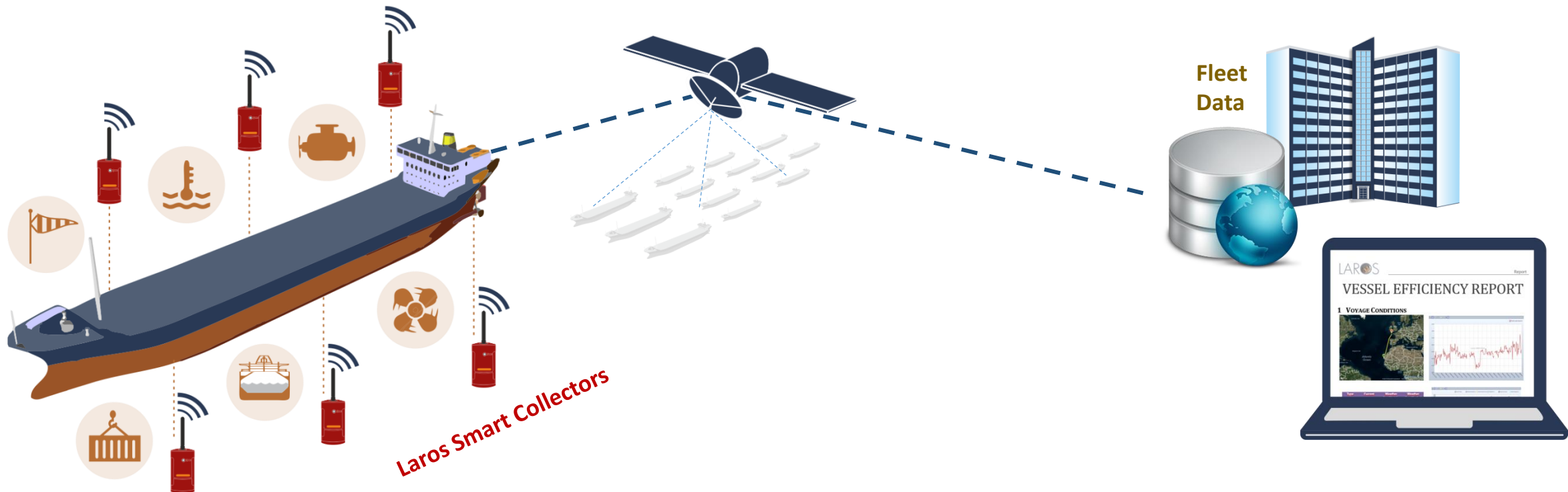


No longer viable to manage ships through disconnected platforms driven by unreliable data from ship legacy systems



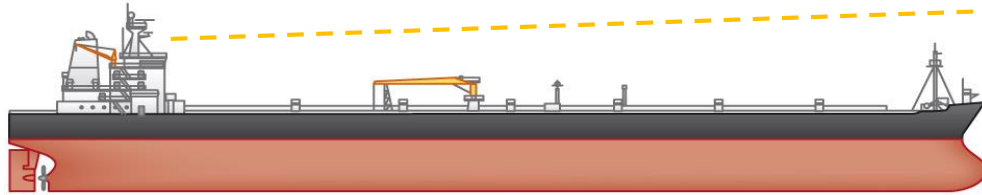
New approach is needed for managing ships and operations based on one interconnected system driven by *reliable data*

LAROS includes all the actions a maritime enterprise should take, to establish an effective information driven decision management model.



- ✓ The ability to utilize data to obtain actionable knowledge, predictions and insights allows for continuous process improvements and optimal performance throughout the lifetime of assets.





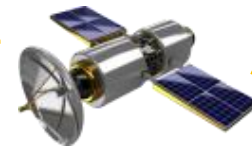
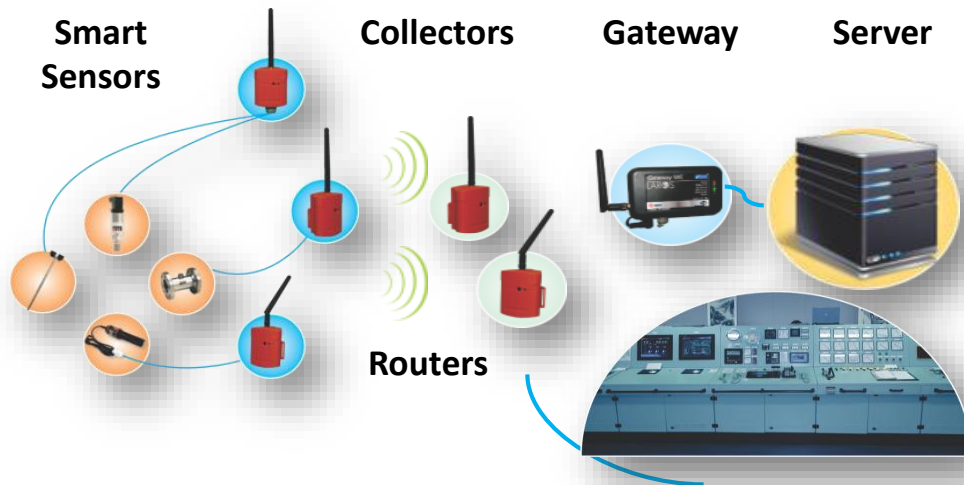
Points of Interest: Engine, Boiler, Pumps, **Voyage**, AMS, Cargo etc.

Vessel POIs*

Wireless LAN

Bridge Control

Reliable Data Acquisition, Filtering and Storing



Satellite Link



Data Center



Headquarters



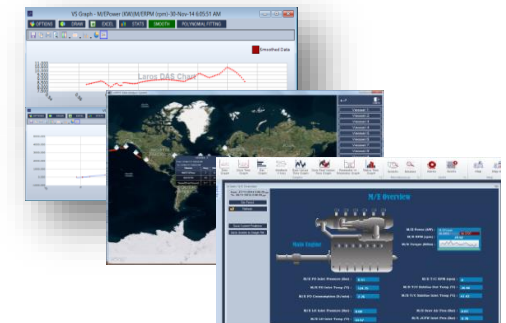
Global Ops

Analytics and APIs to Apps and ERP Systems

Connected Devices

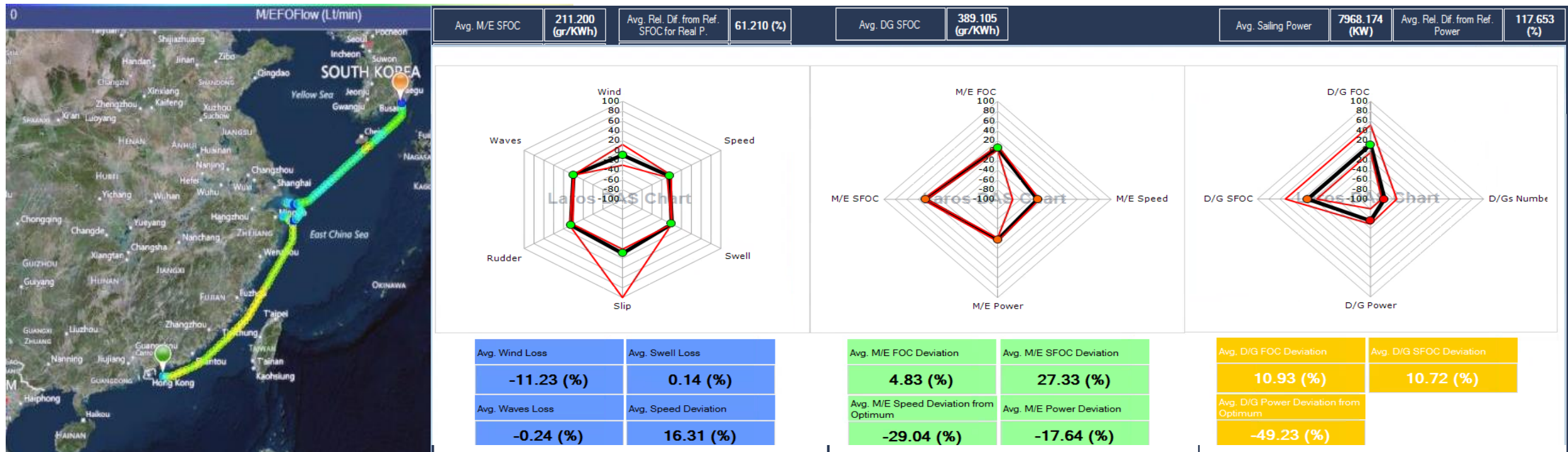


Maritime Applications



✓ *Improving Monitoring – collaboration– Performance - Compliance*

A new level of possibility to analyze and monitor situations, critical operations, adverse conditions and **to increase performance awareness.**



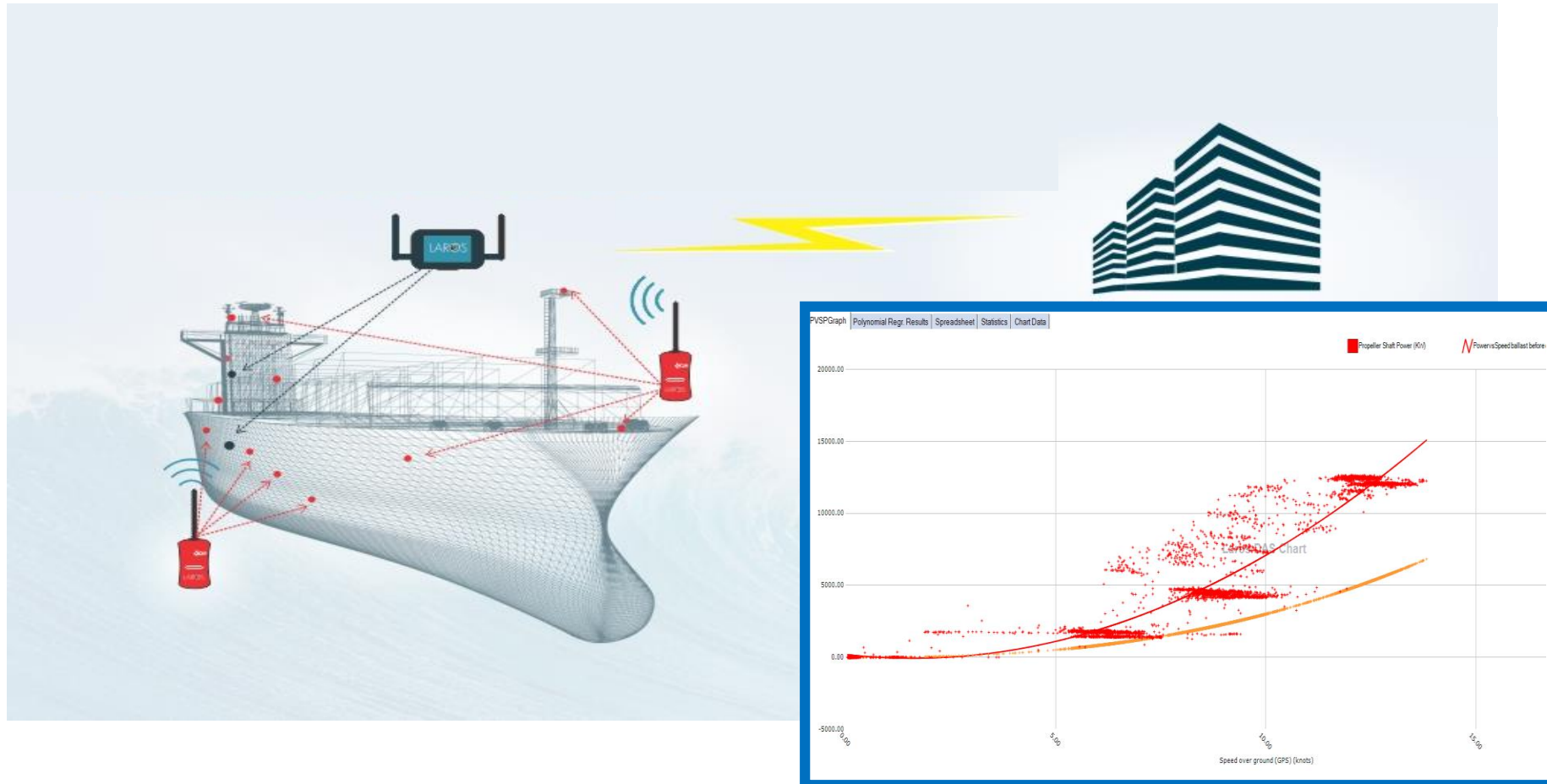
Access Anywhere Anytime



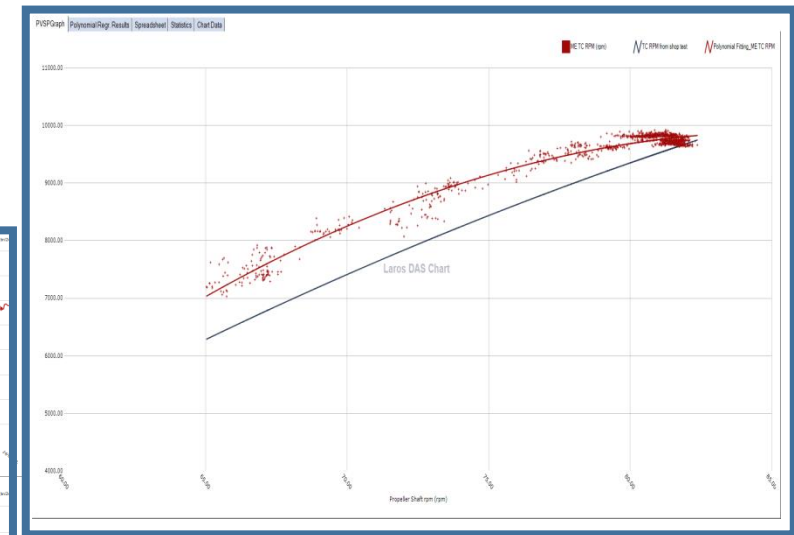
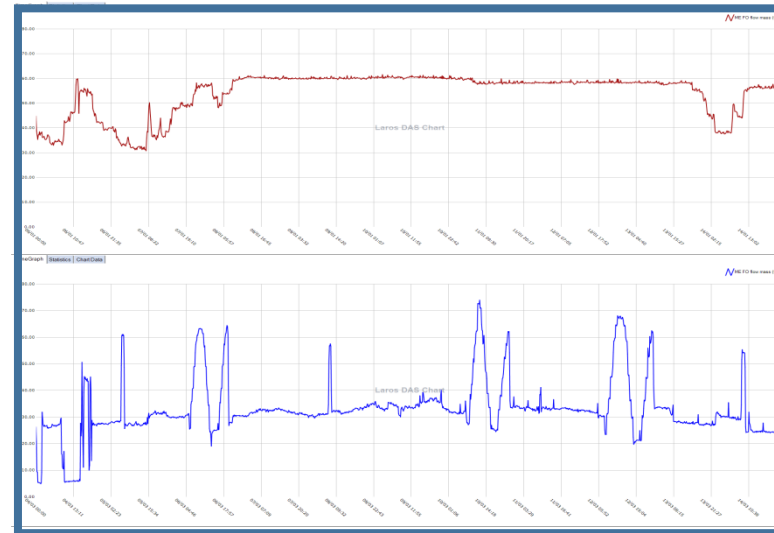
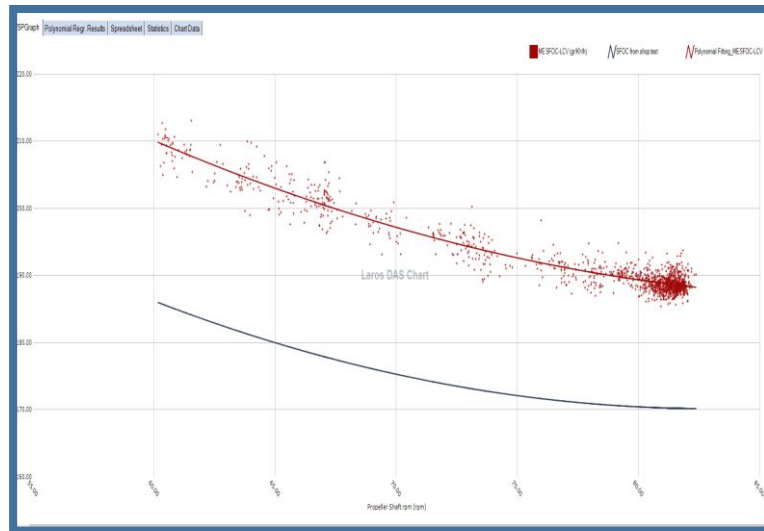
Why is LAROS Innovative

- ✓ The **only platform** in the Industry, based on **wireless network** onboard
- ✓ The **only** one offering **Open Data** directly from the source.
- ✓ The **first end to end** Data Analysis System created to meet specifically the **Industry's needs**
- ✓ The **only platform** that works on **any type of vessel**, new or old
- ✓ Compatibility with **any interface** inside vessels.
- ✓ Easy to **install – configure – expand**.

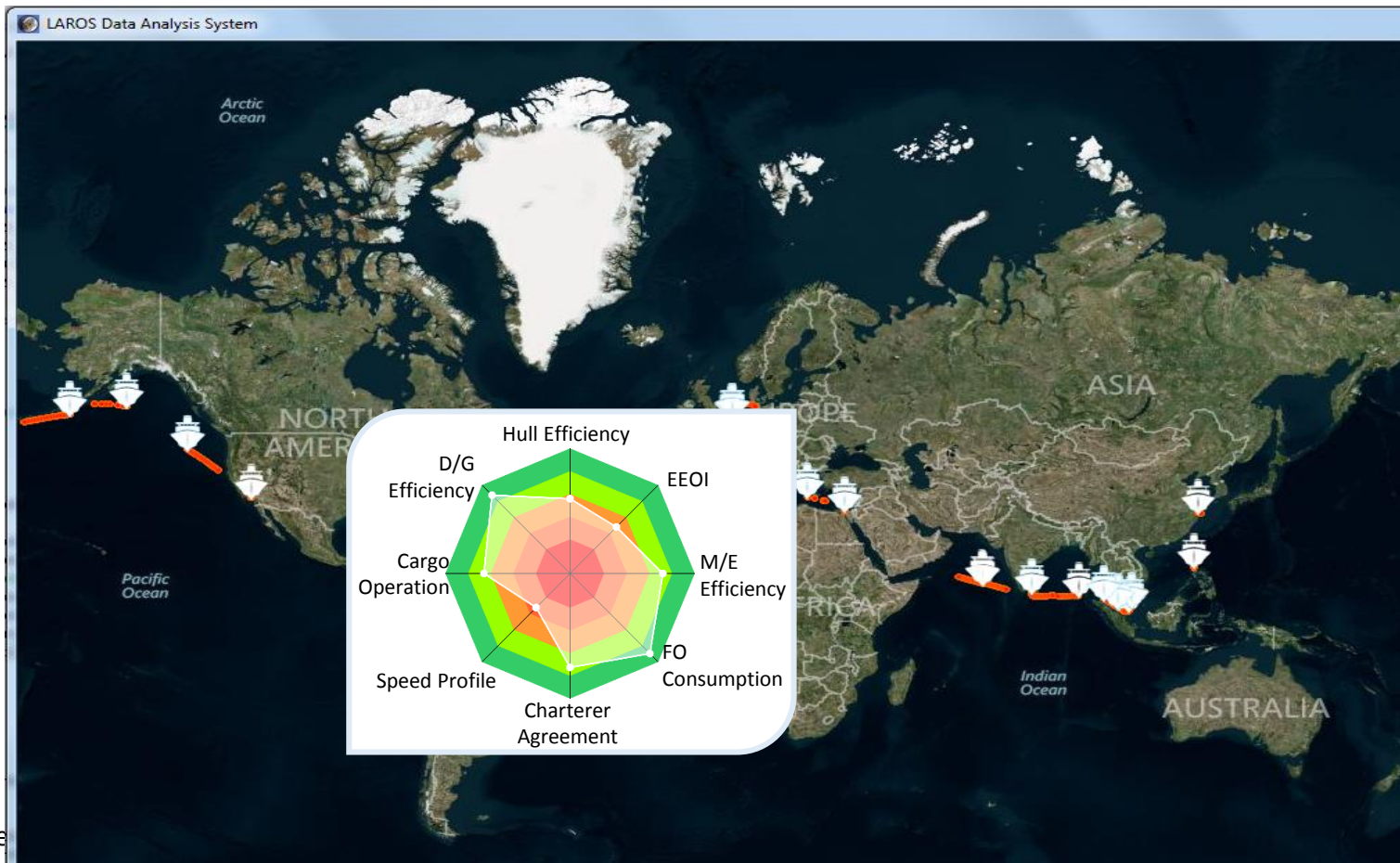
Performance optimization based on measured data.



Real operation is a cornerstone for optimizing the **fuel efficiency** and **technical maintenance** of the vessel and its systems.

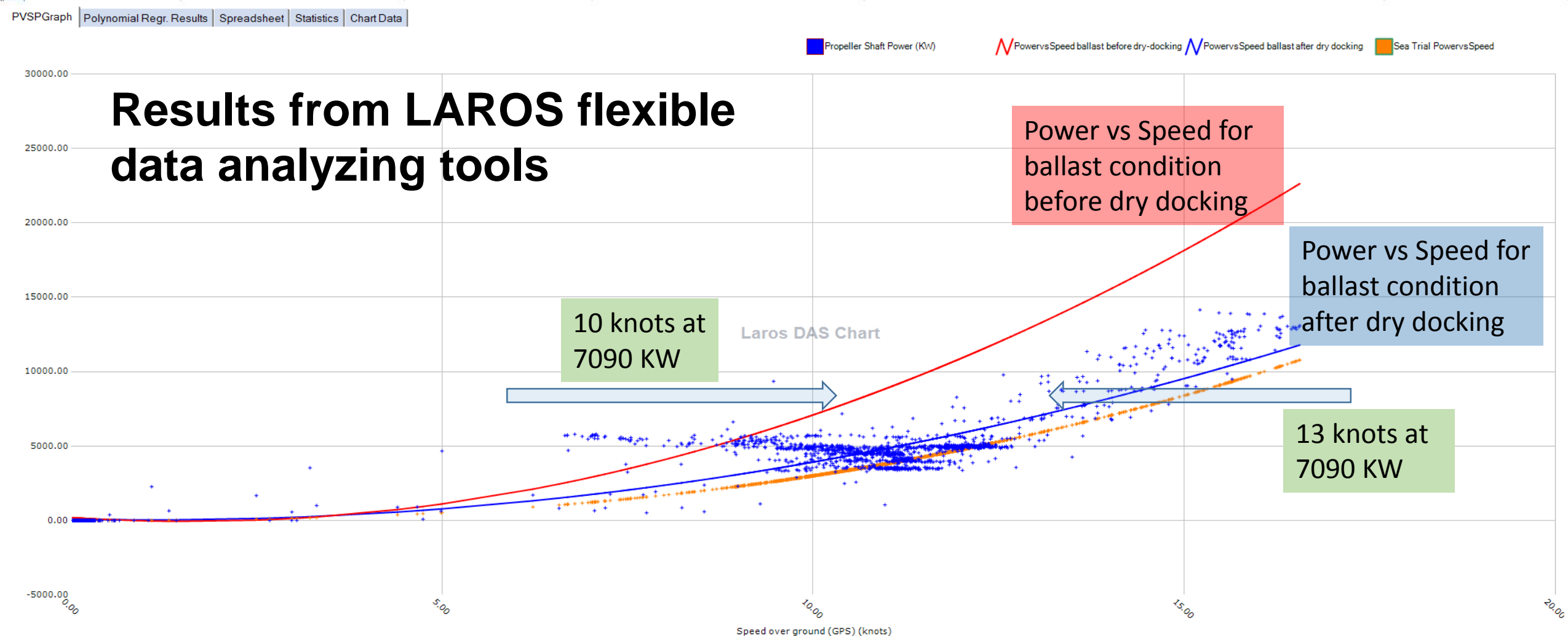


LAROS system provides full knowledge of how the complete fleet, down to vessel, down to system down to single parameter really performs in actual operating conditions.



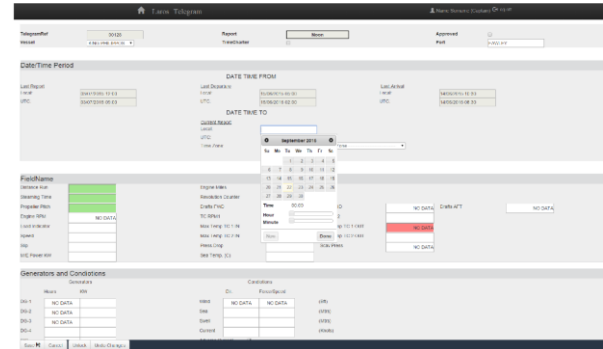
The **simplest** and most **efficient** way to perform your daily control.

Type	Speed over ground (GPS) (knots)	Propeller Shaft Power (KW)	PowervsSpeed ballast before dry-docking	PowervsSpeed ballast after dry docking	Average difference	Model Test PowervsSpeed
Average	7.838	3679.047	6798.863	3678.871	=6798.863-3678.871=3119.992	2956.568



Data Sharing

LAROS enable you define the
 ✓ type and
 ✓ format
 of the collecting and
 sharing information,
 internally and
 externally (charterers,
 authorities, etc.)



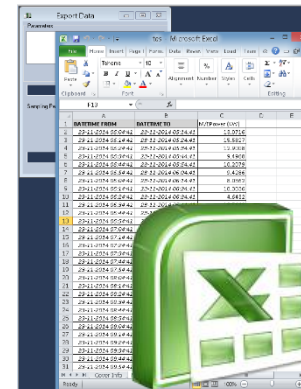
Ship to
On-Shore



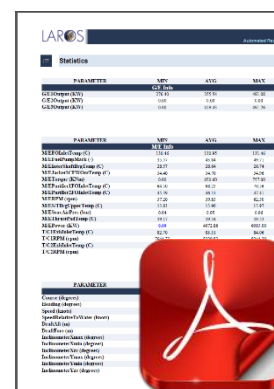
Charterers

LAROS

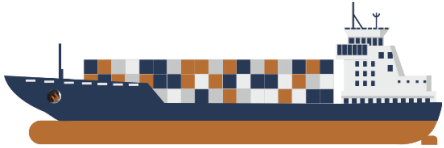
Internal
Reports



Authorities



266.547 TEU Containers



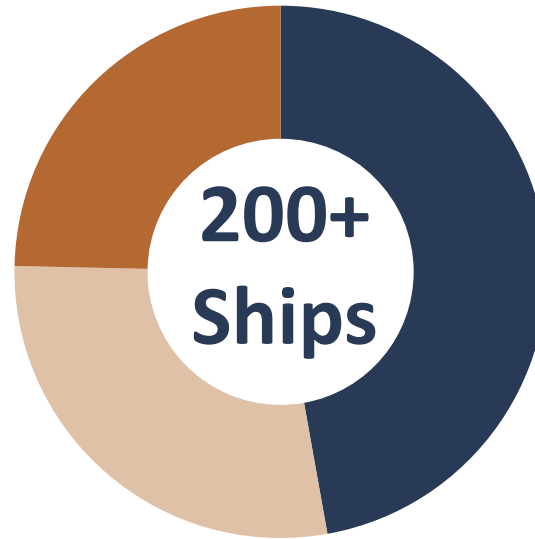
6.239.487 DWT Tankers



3.772.836 DWT Dry Bulk



Proven and
Mature Solution



■ Tankers ■ Bulk Carriers ■ Container Ships



Handling **1.188.000** measurements per hour



Saving **96.360** man-hours annually of data analysis



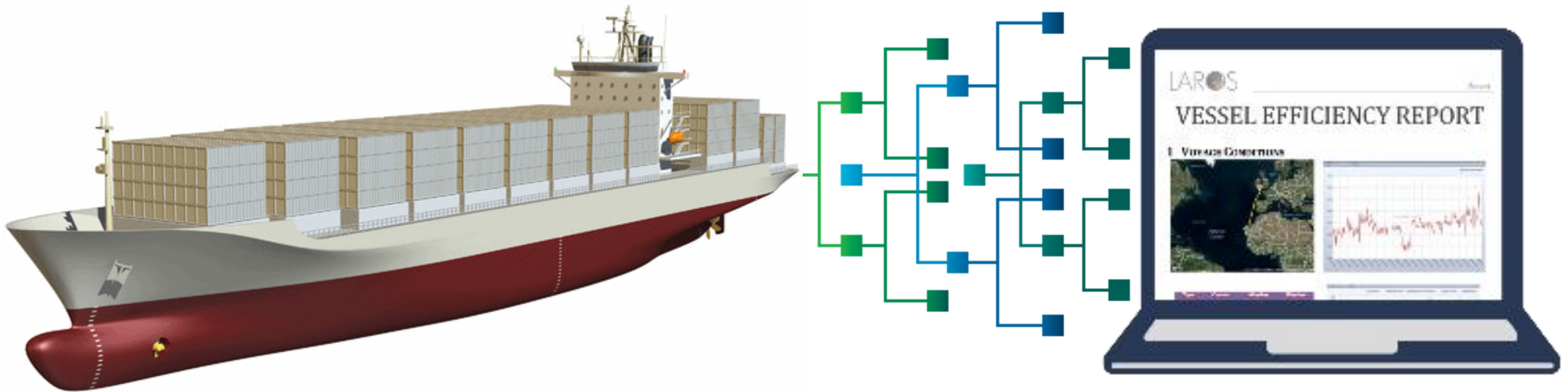
Providing Information **every 1h**, instead of 24h

The System that works Today for Forthcoming Needs

- ⚓ MRV (Monitoring & Reporting)
- ⚓ Environmental Challenges (SEEMP, EEDI, EEOI, CO₂...)
- ⚓ Compliance (IMO, EU, Ports...)
- ⚓ Better Performance
- ⚓ Better Efficiency
- ⚓ Increased Safety
- ⚓ Improved Planning
- ⚓ Building a Unique Fleet Ecosystem

MRV dictates “monitoring plans” to be issued and reported by shipping companies

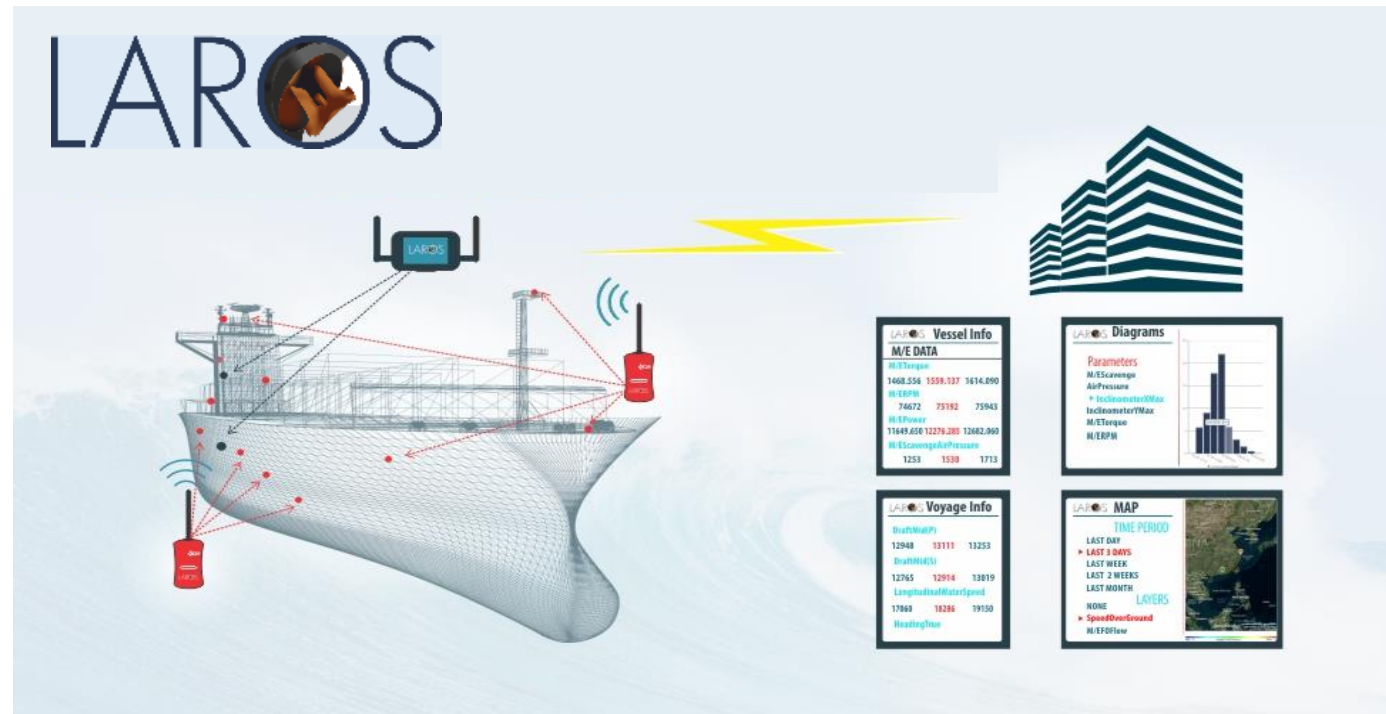
SEEMP will become a demanding document and more accountable on improving vessel performance



LAROS system today answer future demands



LAROS system provides now the future of the
 “Infocentric Operation of Ships”,
 and boosts all other means of fleet management



Prisma Electronics

- 25 years of R&D experience
- Technology-based Corporate Products and Services
- Technical Achievement 2015 Lloyd's List Shipping Awards
- Gold Award from CERN
- Certified by TUV HELLAS with ISO EN 9001:2008
- Certified by Hellenic Ministry of Defence



LLOYDS 2015



**CERN CMS
GOLD AWARD**



Defense Projects



Medical Devices



Scientific Equipment



Space

From the "brig"* to the autonomous ship

Infocentric Ship Operations

Thank You



ΑΔΕΛΦΟΤΗΣ ΤΩΝ ΥΔΡΑΙΩΝ ΑΘΗΝΩΝ
ΕΤΟΣ ΙΔΡΥΣΕΩΣ 1890