EfficienSea2 Conference: GETTING CONNECTED TO THE FUTURE
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What will connectivity mean for shipping?

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Collaboration is the key to succeed in todays market place - hence our active involvement in the EfficienSea 2 project
Industry Drivers
Maritime Industry demand drivers
Internet of Things

Increased level of automation onboard the vessel with an increasing amount of data to be tracked
Regulation and safety applications (AIS and e-Navigation)
Condition based/performance monitoring (engine, etc.)
Cargo monitoring (containers, etc.)
Requirements for M2M applications onboard vessels

Source: Clarkson Shipping Intelligence, Euroconsult and Cobham SATCOM
The data drive in Shipping - The next big revolution

Developments in Information and Communication Technology (ICT) will according to DNV GL have a:

- Dramatic effect on the shipping industry
- Worldwide high speed satellite communication network
- Real-time condition monitoring
- Internet of all things
- Software solutions to handle “Big Data”
- Faster and more informed decisions

Source: Maersk Group and DNV GL
SATCOM Development
High Throughput Satellites (HTS) provides the link to drive ICT opportunities in shipping

Demand driven by smaller hardware, need for IP data connectivity and standardised solutions

Traditional VSAT
- C- and Ku-band
  - C-band very reliable, weather resistant
  - C-/Ku-band highly configurable, customised
  - Heavy antennas

Growth drivers
- Effective hardware
- Standardised packages

Tomorrow’s VSAT
- Ka-band with L-band
  - Lighter and smaller antennas
  - Standardised solutions
  - Higher throughput

Inmarsat A
Inmarsat B and Fleet
Inmarsat FleetBroadband

Maritime SATCOM is key in the ICT deployment
Developments in Radiocom

Developments in traditional radio communications

Mandatory fit on all +300GT vessels, cruise and passenger vessels to comply with IMO (International Maritime Organization) and SOLAS (Safety of Life At Sea) regulation

- VHF Data Exchange System (VDES) provides a datalink for the future
- Shipboard equipment integration with SATCOM to reduce cost of ownership

Adjacent technologies, product integration and focus on total cost of ownership drives value
Data Disruption in Shipping - Blockchain

When the Marie Schulte called the port of Qingdao this morning, bankers on two continents were watching anxiously.

Focus was on 88 bales of cotton worth approximately $35,000 the container vessel was carrying - not because of the value of the goods, but because of the technology attached to the shipment.

Unloading the goods at the end of their 7,000-mile journey from Houston will mark the final stage of an experiment by Commonwealth Bank of Australia, Wells Fargo & Co. and the trading firm Brighann Cotton to prove for the first time that the combination of much-hyped technologies - blockchain and smart contracts - can deliver real-world benefits.

Source: Bloomberg Technology
Data Disruption in Shipping - Blockchain

The Problem:

The standard method of shipping is made difficult due to the challenges of sharing information between systems, unsynchronized payments and deliveries, and auditing.

The Solution:

By implementing blockchain notarization, shipping partners can increase both the interoperability between all parties as well as the security of the data, leading to reductions in cost and improved traceability and compliance.

Source: Stratumn SAS
Summary

- The advancement in ICT offers real tangible opportunities for the shipping industry and the transformation has only just started
- The drive for data has the potential to change business models and is for sure a catalyst for reducing the underlying cost base
- Shipping should learn from other industries
- The introduction of HTS systems provides a level of connectivity to the vessels that was beyond economic reach just 5 years ago
- The shipping industry is being disrupted - the world around us is going asset lite and scaling up on data - look what airbnb and UBER have done to established industries... Will Amazon take on the maritime shipping industry?

EfficienSea 2 is leading the way in the area of Smart Shipping
Thank you