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MARITIME

SATELLITE TECHNOLOGIES TRIGGER DIGITALIZATION IN SHIPPING

1ST - CYPRUS SHIPPING NEWS ICT CONFERENCE

MARCO CRISTOFORO CAMPOREALE - SEPT 2020

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The gain...

INSIDE SMART SHIPS

Lloyd's List Intelligence

SMART SHIP

VOICE OF SHIP MANAGERS / OWNERS

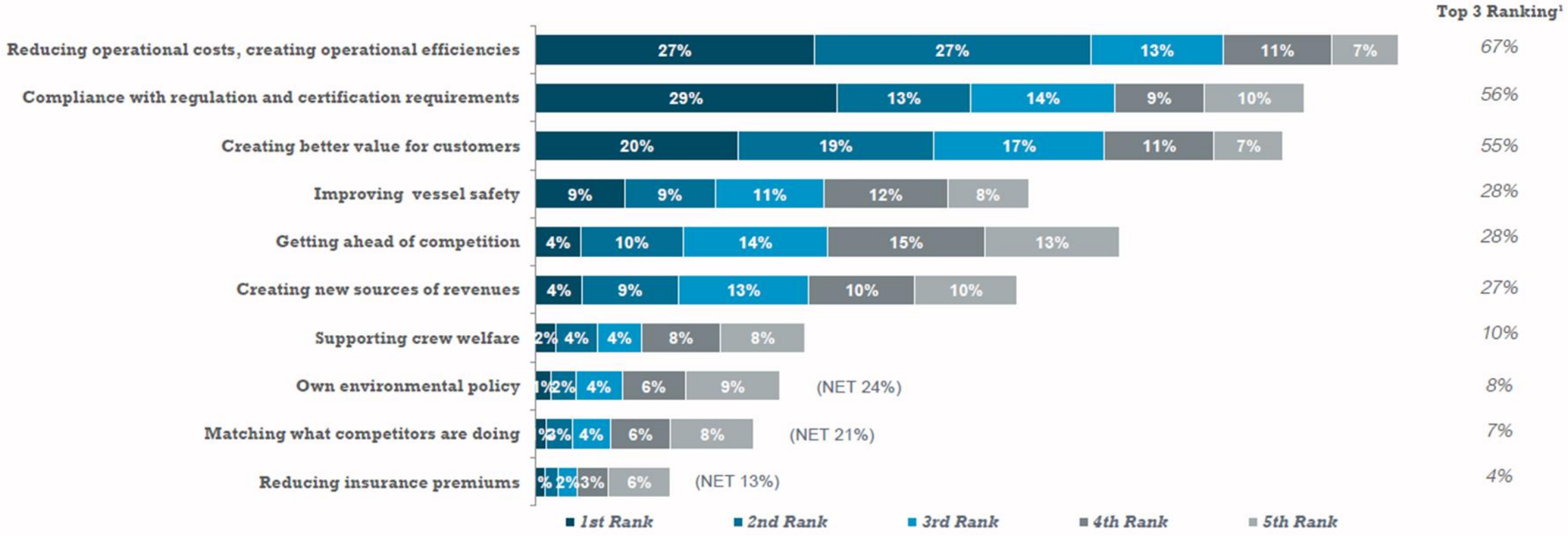
The primary drivers for adopting digital solutions are cost reduction (typically 14%), operational efficiencies and ensuring compliance with regulation and certification requirements.

The present focus for deploying digital applications is on fleet and vessel performance, navigation, and risk and safety management, while future deployment projects increasingly emphasis risk and safety management and crewing/crew welfare.

CUSTOMER DRIVERS

Key Drivers For Adopting Digital Solutions

The primary driver for adopting digital solutions is reducing operational costs, creating operational efficiencies ([1]Top 3 Ranking 67%), followed by compliance with regulation and certification requirements ([1]Top 3 Ranking 56% & highest 1st Rank scores), and creating better value for customers ([1]Top 3 Ranking 39%).

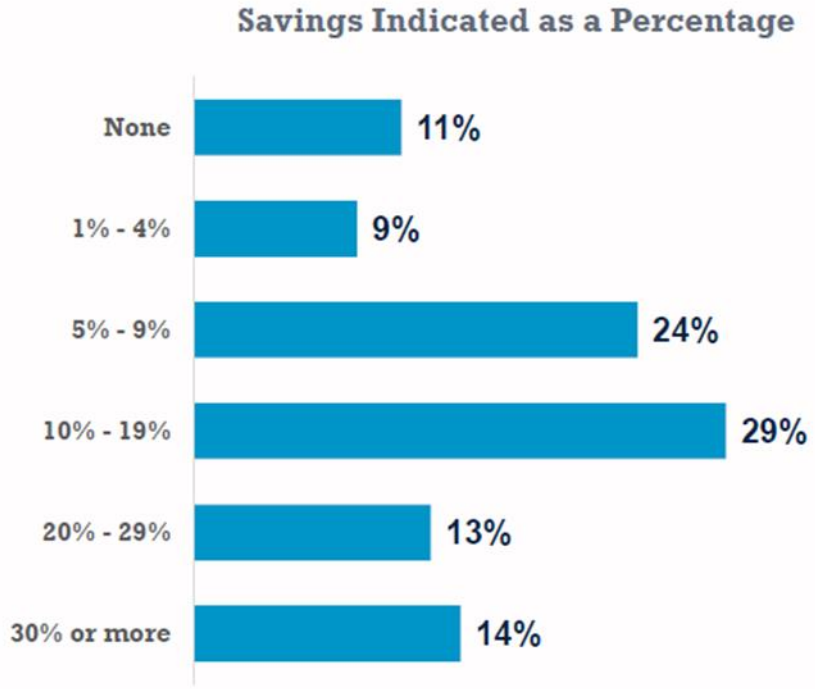


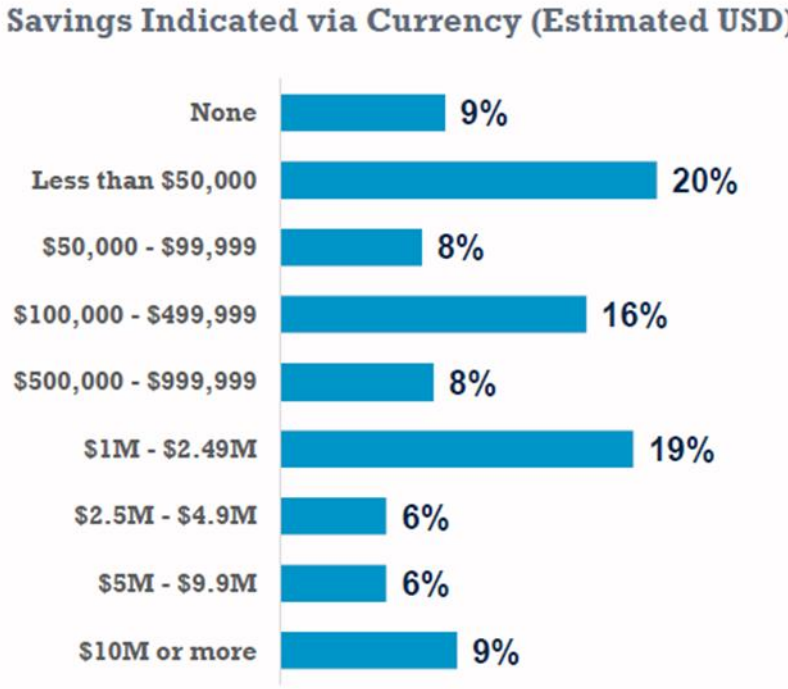
Question: Please select and rank (in order of importance) the key drivers for your organisation in adopt digital solutions? (Please select up to 5 key drivers and assign a value/rank from 1 to 5 for each item, where 1 is the most important and 5 is the least important. Value/ranks may not be repeated)

VALUE FOR CUSTOMERS

Operational Cost Savings from Digital Solutions

Approximately 60% of respondents provided an answer to this question with either a percentage or a currency value; the typical respondent providing a percentage reported an average 14% in cost savings.





Question: How much are you expecting to save in operating costs over the next 12 months from the adoption of digital solutions?

*Base: All respondents (n=411). **N.B.** - Full responses – Please see, 'Verbatims Comments' slides 35. **Analyst note:** Some figures do not specify currency. All numbers are assumed USD for the purpose of this slide.*

THE BENEFITS OF DIGITALIZATION AT SEA

Just tracking can save ~half a day per week of a superintendent @50USD/hr, translates in saving **10k USD / yr / ship**

Failure of mission critical equipment stopping the ship with charter rates of ~30kUSD/day will cost up **100ks USD** per failure

Average fuel consumption of a ~10kTEU container ship is around 250tons per day. @400-450 USD/ton the daily fuel cost is **~100kUSD/day**. Engine tuning, hull resistance reduction, trim optimization, speed advise, weather routing, etc., can save fuel up to ~10% = **10k USD / day**

Late rerouting can cost 10% extra voyage cost. The ability to predict ship and crew health can save late re-routings, avoiding **~100k USD** on an Ocean crossing. Avoidance of an accident will prevent costs of Millions in investigation and legal costs, indemnities etc.

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The pain...

REALITY

PAIN OF DIGITALIZATION

FROM THE APPLICATION PROVIDERS

Connectivity

Need of physical access

Global and disperse market

Complex value chain

Regulations

Finance access

MARITIME IOT TRENDS

$2.5m

Average shipowner investment in IoT solutions over the next three years

100%

Of owners surveyed will be using IoT for fuel consumption monitoring by 2023 to meet emissions regulations

14%

Average cost savings predicted though IoT based solutions use within five years

51%

Say getting data off the ship in real-time is biggest obstacle to IoT adoption

Source: Industrial IoT: Land and Sea

CONNECTIVITY FOR CREW WELFARE

Migrations toward higher data rate communications first for crew welfare and then for operational requirements.

The main reason why shipping companies provide internet to their crew is the welfare. Indeed, given all the safety trainings seafarers must undergo, crew retention is an important aspect for fleet managers.

According to the 2018 Futurenautics survey, 75% of the interviewed seafarers stated that the level of connectivity influenced which ship operator they worked for.

Ensuring usual and systematic updates of large operational software installed on multiple vessels, without compromising onboard connectivity, represents a technological challenge.

Source: Euroconsult and Futurenautics

CYBERSECURITY

+14% CAGR

Forecasted number of distributed denial of service attacks (DDOS)

x8

Growth of internet traffic worldwide and business data breaches

Maersk - 2017 ($300M loss)

Austal - 2019 ($50M loss)

MSC – 2020 (tbc)

Source: Euroconsult

BANDWITH CONSUMPTION

x3

Forecasted growth of average bandwidth consumption

+25% CAGR

Forecasted growth of capacity demand

Capacity risks to remain unmet as in 2020

IP Traffic doubling every year

IP Traffic for Crew taking most of BDW

NB: Accelerated with COVID19 to support crew welfare

The perceived quality of an application is as good as the bandwidth supporting it

Source: Euroconsult & Inmarsat

IMPACT

The perceived quality of an application is as good as the pipeline supporting it!

Cyber security and limits of connectivity at sea

Several connectivity providers with different configurations onboard

Large spectrum of quality (and reliability)

Commercial and Safety Risk

Operations and Asset Mngt

Percevied quality

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The solution...

DIGITAL ECOSYSTEMS

INMARSAT DIGITAL PORTFOLIO

INNOVATION TRANSFORMY THE INDUSTRY

FLEET CONNECT

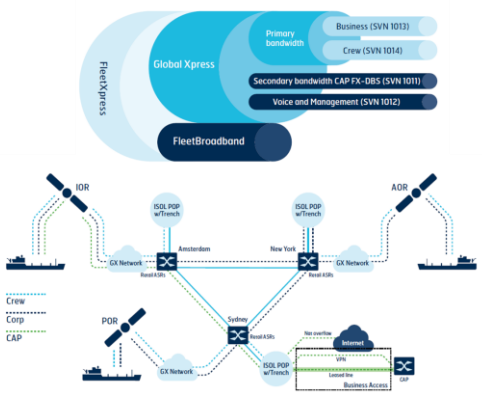
First class CIR-based Dedicated Bandwidth Service for Application Providers

FLEET DATA

The most cost efficient and fleet scalable IoT ship to shore data automation solution

FLEET EDGE

Fleet Edge powered hosting service for Application Providers



INMARSAT CAP ECOSYSTEM

CERTIFIED APPLICATION PROVIDERS – SOLVING PROBLEMS TOGETHER

VIKAND
NAPA
ascenz agile maritime digitalisation
JRC
sirm italia
ib influencing business
IMSA International Maritime Security Associates
HYUNDAI GLOBAL SERVICE
Nautilus Labs
ABB
ankeri
MARORKA
alpha ori
Digital Accelerator
brightree
MOSCORD
frontM
i4sea
PROPULSION DYNAMICS
SRH MARINE SAIT NAVIGATING THE FUTURE
METIS CYBERTECHNOLOGY
YXNEY MARITIME
VesselBot
tapiit
ORCA AI
Port change
TAGVANCE
GREENSTEAM
SPERRE
Ocean manager

HYUNDAI GLOBAL SERVICES

INTEGRATED SMART SHIP

The Integrated Smart Ship (ISS) solution from Hyundai Heavy Industries (HHI) is delivered as a single package with a satellite communications service.

The Integrated Smart Ship and Satellite Communications package is a combination of the ISS – an IoT platform for ships, developed by HHI Group to support vessel operation and device optimization – and Inmarsat's always-on, dedicated bandwidth Fleet Connect service.

The package allows a large volume of measured data to be transmitted between ship and shore quickly and easily, facilitating remote operations and vessel management, monitoring and analysis services, provided via an optimal satellite communication environment with guaranteed global connectivity.

VIKAND

VIKAND HEALTH NET ™

VIKAND HealthNet's Total Healthcare Solution covers all aspects of ongoing healthcare including urgent care, monthly house doctor calls, chronic disease management, crew wellness, medical chest management, medical equipment technical support, a customized mental health programme and a 24/7 medical emergency support hotline.

VIKAND HealthNet™ integrates all aspects of healthcare and medical operations for vessel owners and operators, utilizing the latest satellite communication tools and medical technology, supported by an experienced maritime medical team.

Our shared vision for our partnership is to ensure a healthier environment onboard ships, early intervention when seafarers are not well and a rapid support system in the event of an emergency, utilizing the communication strength of Inmarsat.

SMART SHIP

EXPLOITING DIGITAL ECOSYSTEMS

Ship Owners / Managers cannot solve the challanges of digitalization in isolation.

Ship Owners / Managers need to leverage on the cumulative enabling capabilities of Digital Ecosystems of Application Providers.


THANK YOU