Maritime > Digital Ship - Athens

IoT and the State of Connectivity

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Technology explosion
70% of the world's population is connected
70% of all traffic on the internet will be video by 2018
Source: Cisco

Maritime trends

42%

Believe that their organisations would benefit from additional IoT skills

70%

Say cutting insurance premiums is one of the most important adoption drivers

$2.5m

Spend on IoT solutions over the next three years

Source: Industrial IoT: Maritime

Increased digitalisation

About the Research

Part of wider IoT study

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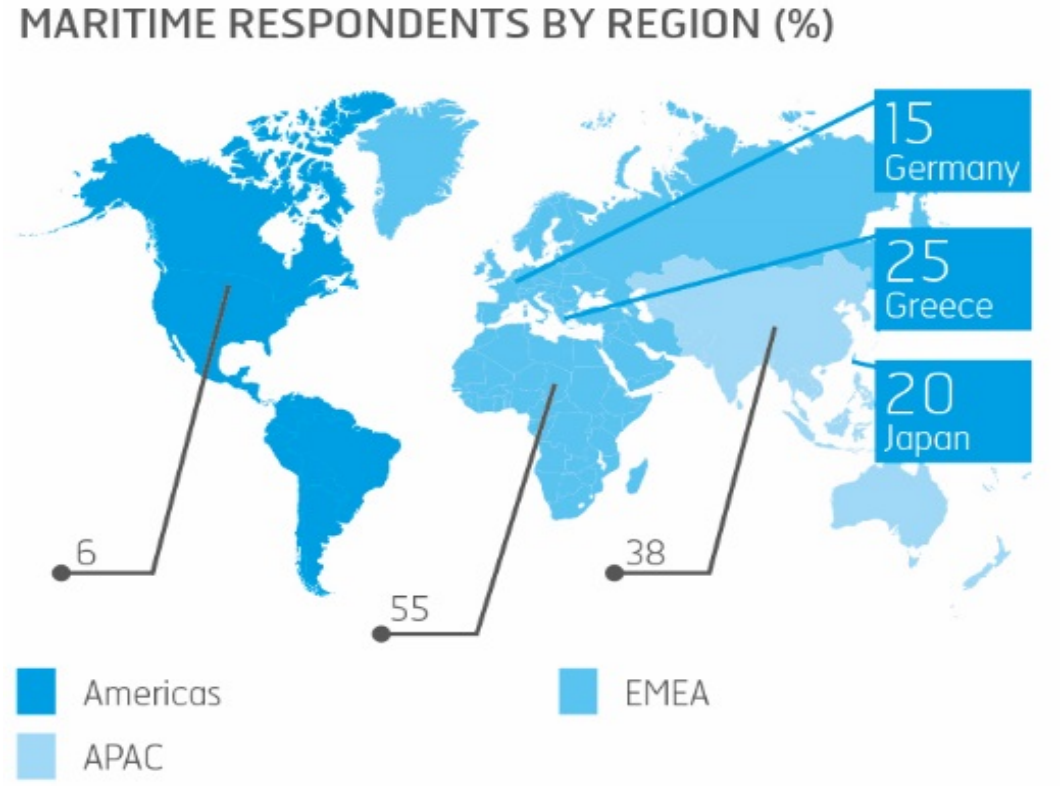
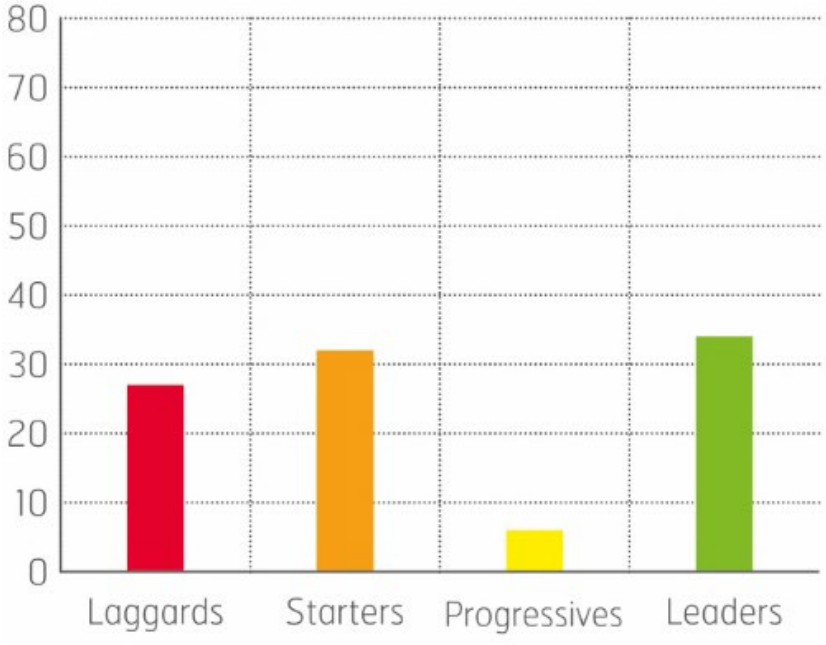
Maritime Demographics of Research

125 ship owner/operating companies across Container, Bulk, Tanker, Gas and Fishing sectors



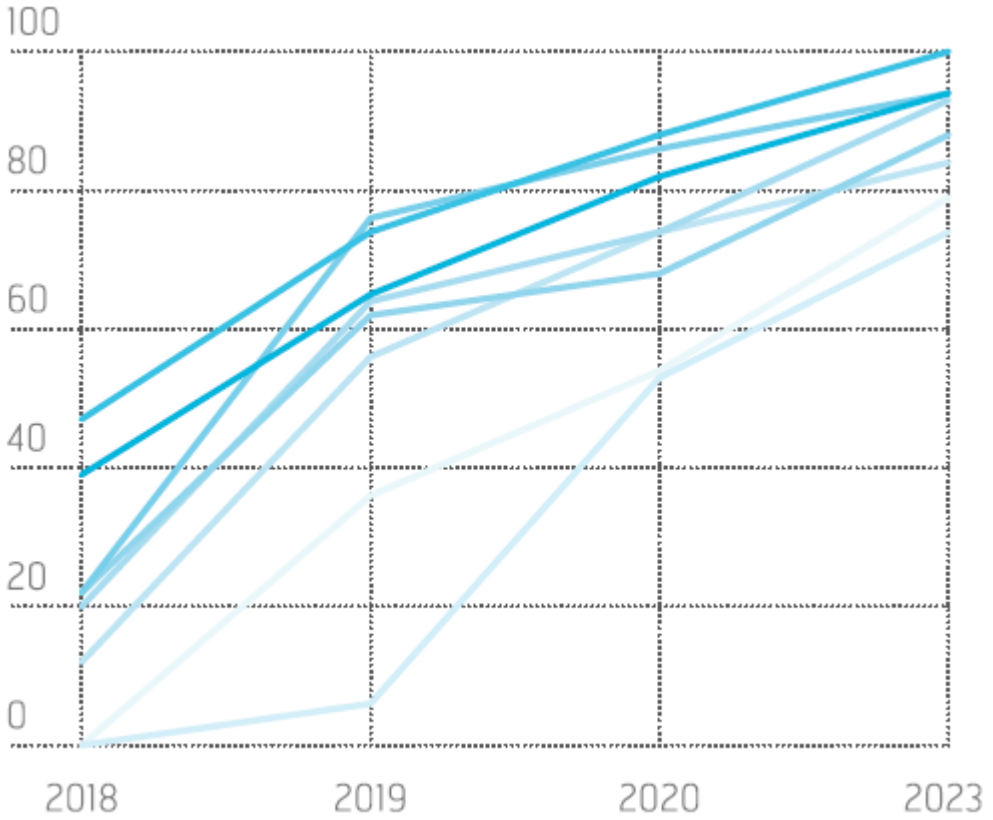
How mature is maritime sector in relation to IoT adoption?



Key Findings:

- Large % of Laggards and Leaders highlights differences between companies investing in technology and those that are investing little and doing minimum to meet regulatory compliance
- 70% will adopt IoT to lower marine insurance premiums

Present and future adoption of applications

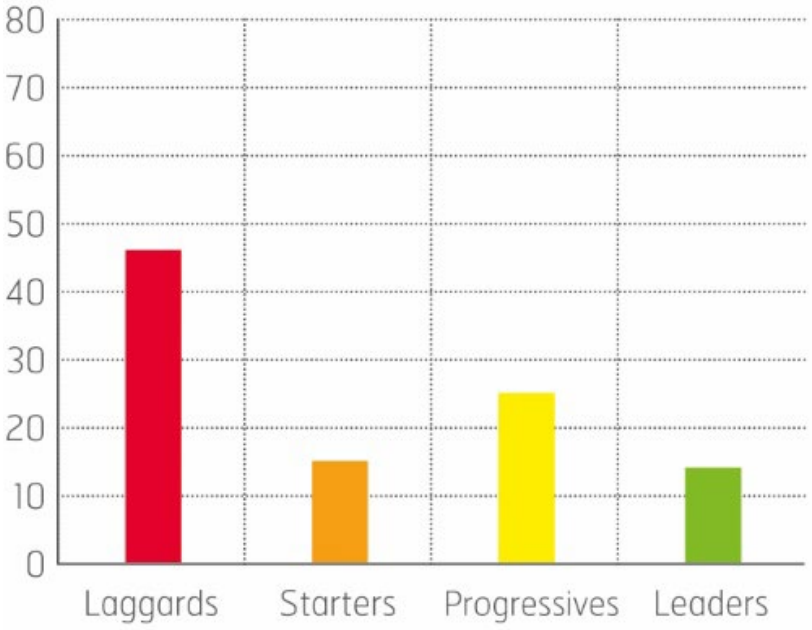


- Employee tracking through wearables
- Energy/fuel consumption monitoring
- Smart monitoring of assets
- Wide area controls such as device management
- Asset tracking and route optimisation
- Monitoring equipment usage
- Business process automation
- Smart security management

Key Findings:

- Environmental compliance will drive IoT adoption with all companies saying will use IoT for fuel consumption monitoring

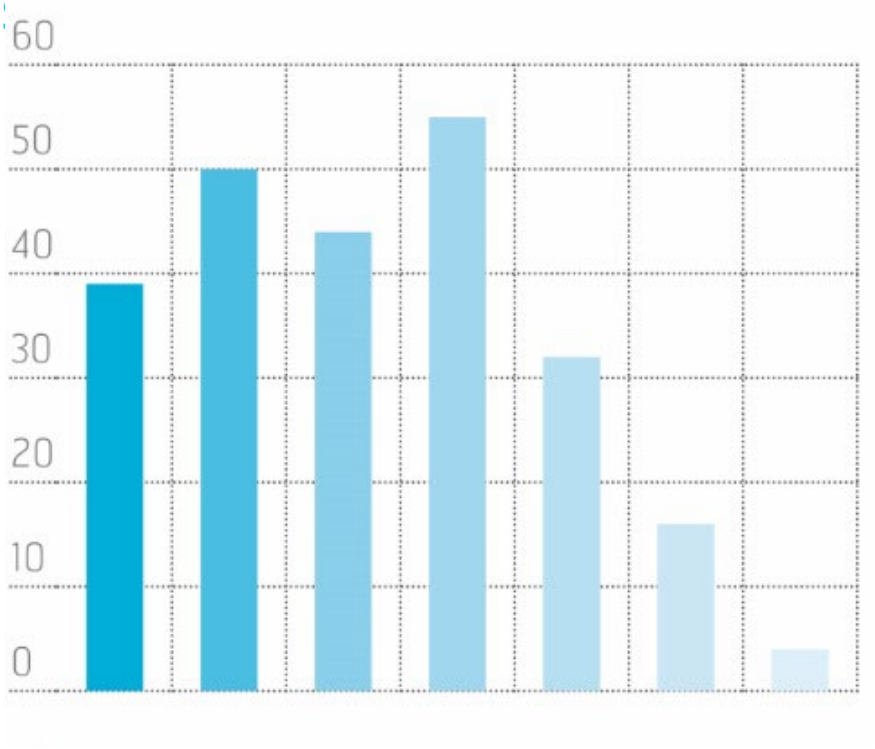
Does the maritime industry have the skills for IoT adoption?



Key Findings:

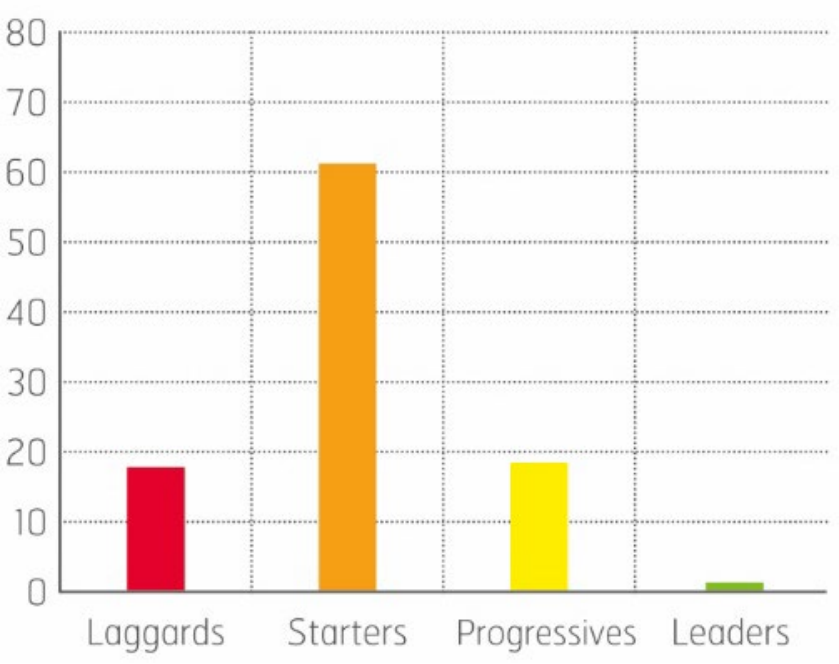
- Reliant on suppliers/consultants to provide expertise with 68% of respondents willing to use external for 'some or all of their efforts'

What are the biggest security challenges associated with IoT solutions within your organisation?



Key Finding:
Data storage and collection is seen as biggest security challenge for IoT solutions

How advanced is the maritime sector's approach to using IoT data?

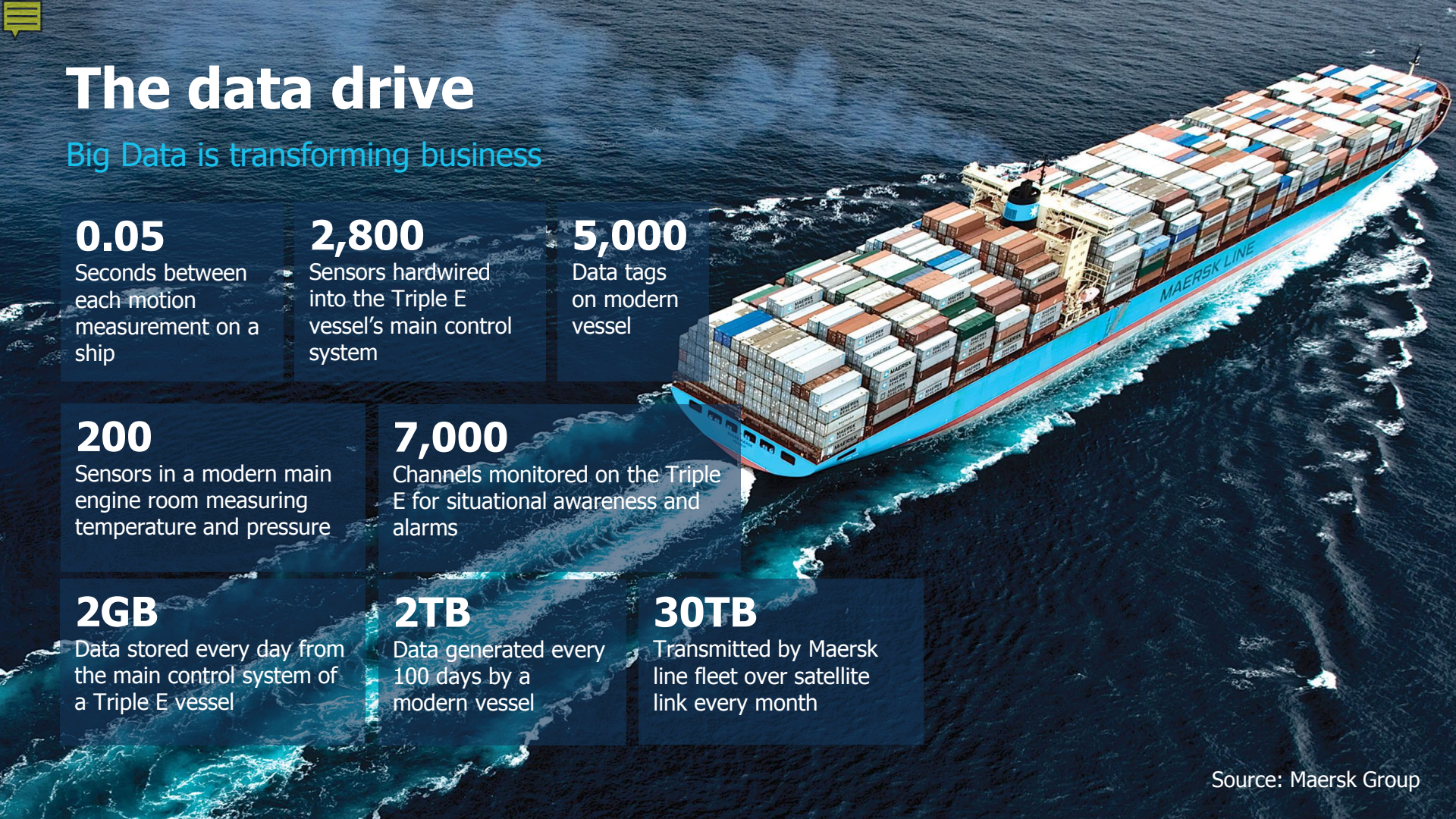


Key Findings:

- Data will be used by 43% of respondents for improving health and safety
- Getting access to real-time data is big obstacle to data usage – still time lag between collection and usage

The data drive

Big Data is transforming business



0.05
Seconds between each motion measurement on a ship

2,800
Sensors hardwired into the Triple E vessel's main control system

5,000
Data tags on modern vessel

200
Sensors in a modern main engine room measuring temperature and pressure

7,000
Channels monitored on the Triple E for situational awareness and alarms

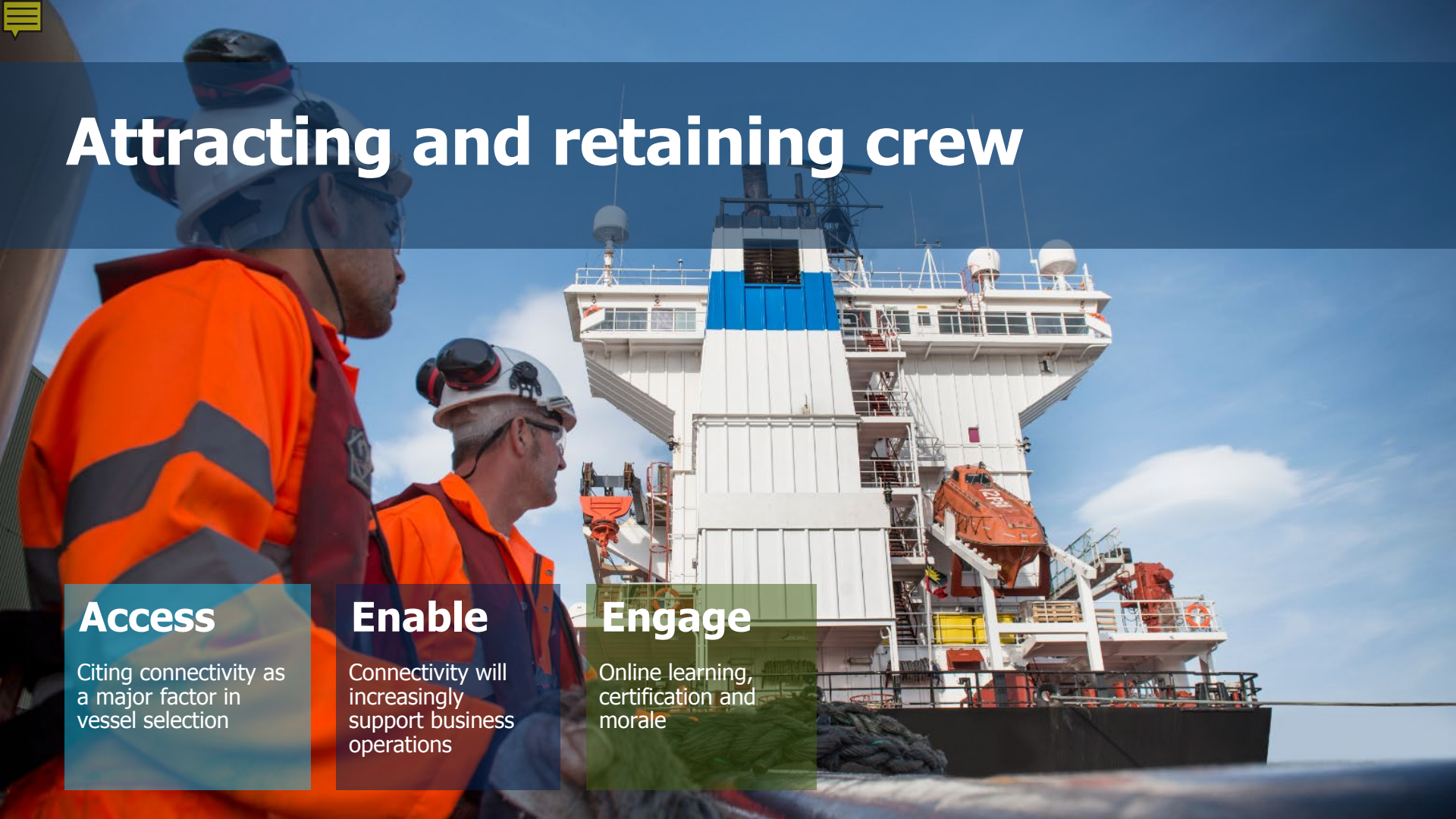
2GB
Data stored every day from the main control system of a Triple E vessel

2TB
Data generated every 100 days by a modern vessel

30TB
Transmitted by Maersk line fleet over satellite link every month

Source: Maersk Group

Attracting and retaining crew



Access

Citing connectivity as a major factor in vessel selection

Enable

Connectivity will increasingly support business operations

Engage

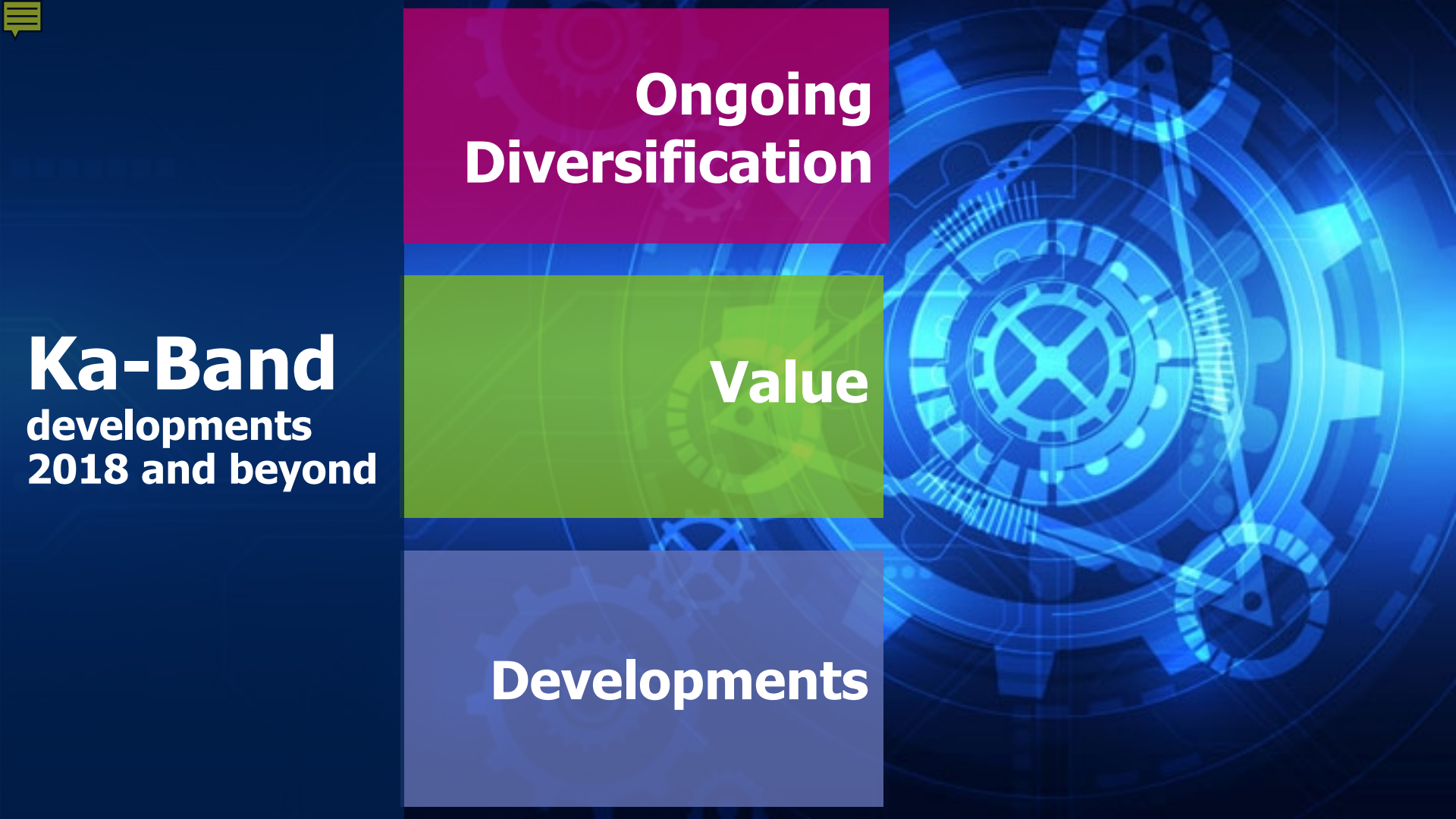
Online learning, certification and morale

Ka-Band
developments
2018 and beyond

Ongoing Diversification

Value

Developments

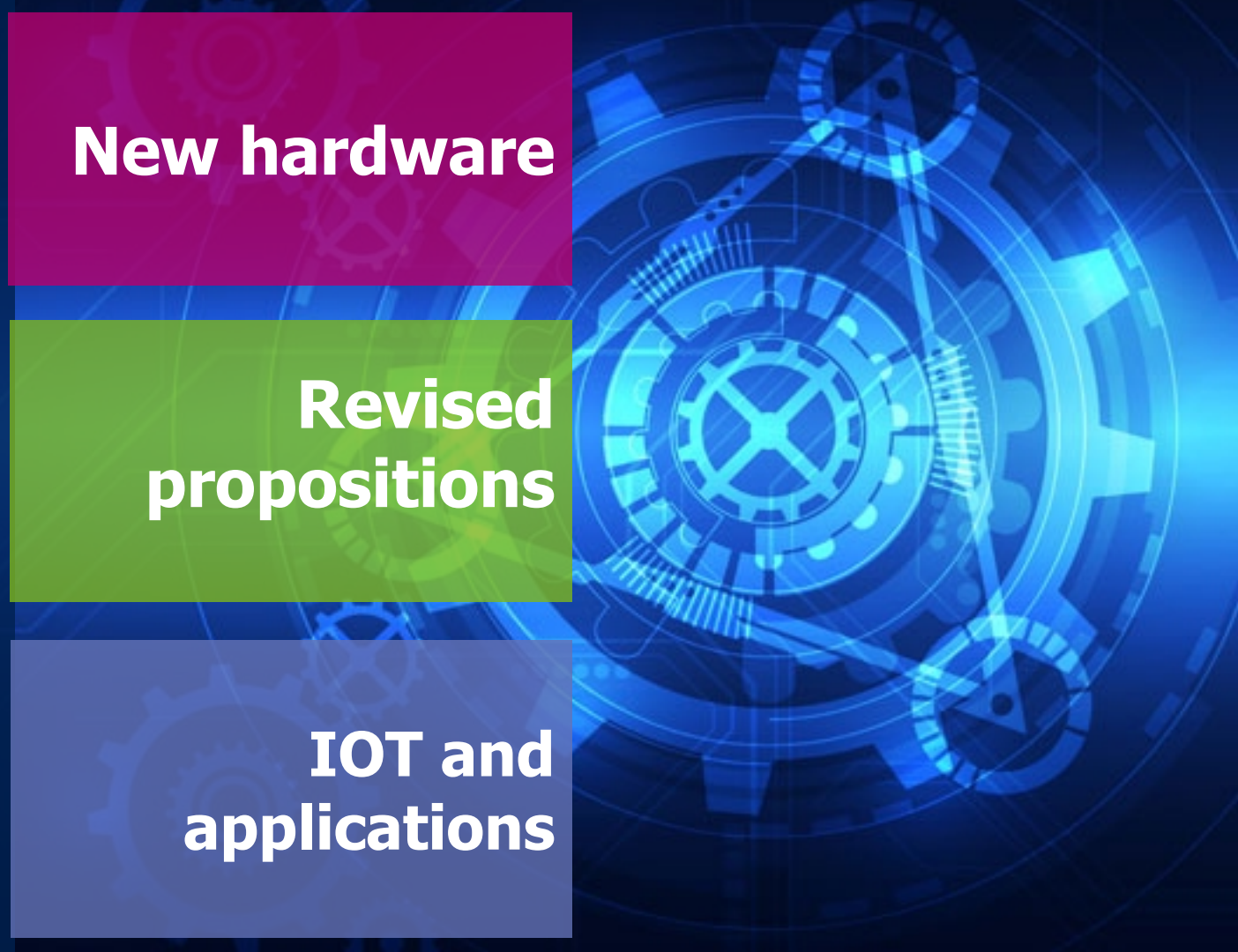


L-Band
developments
2018 and beyond

New hardware

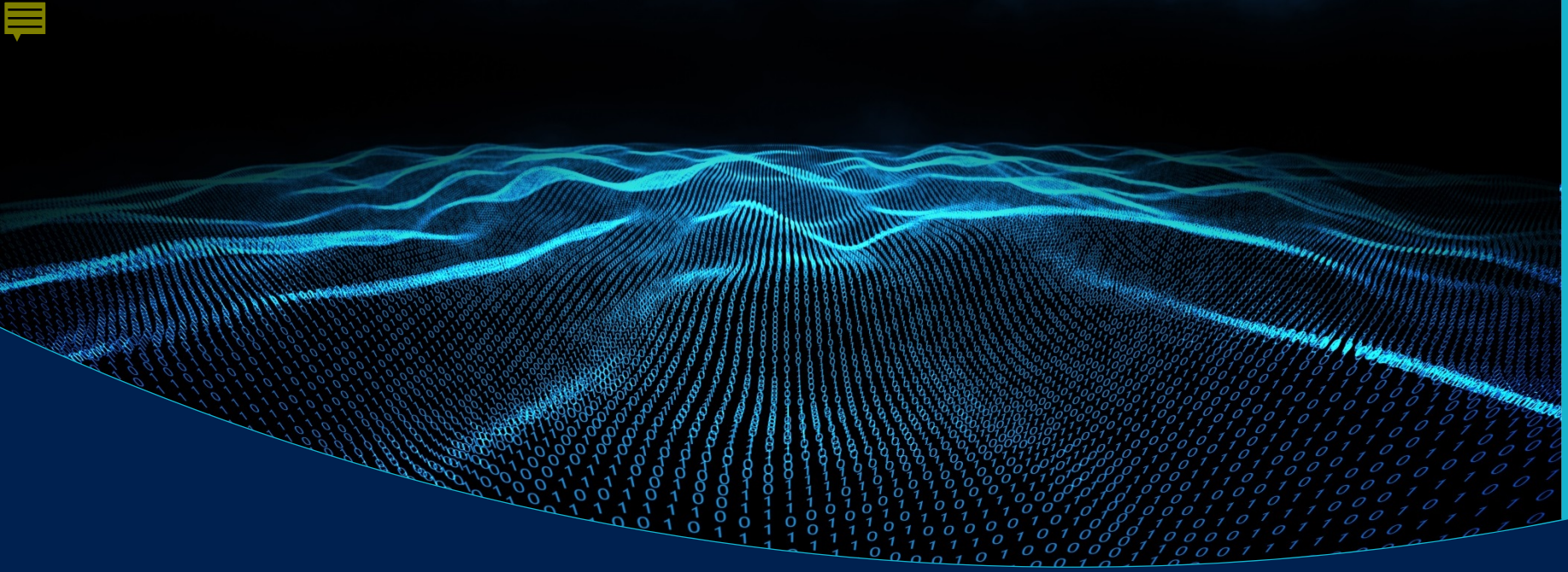
Revised propositions

IOT and applications



What’s on the horizon

Automation, Sea-to-shore based integration and Digitalisation



Thank you

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