Information Security Forum

All at Sea

IoT challenges in the maritime sector

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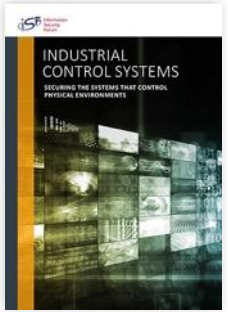
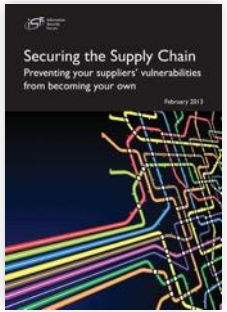
About the Information Security Forum

An international association of over 470 leading global organisations that:

- addresses key issues in information risk management through research and collaboration
- remains a fully independent, not-for-profit organisation driven by its Members
- develops practical tools and guidance
- promotes networking within its Membership.





THE LEADING AUTHORITY ON CYBER SECURITY AND INFORMATION RISK MANAGEMENT

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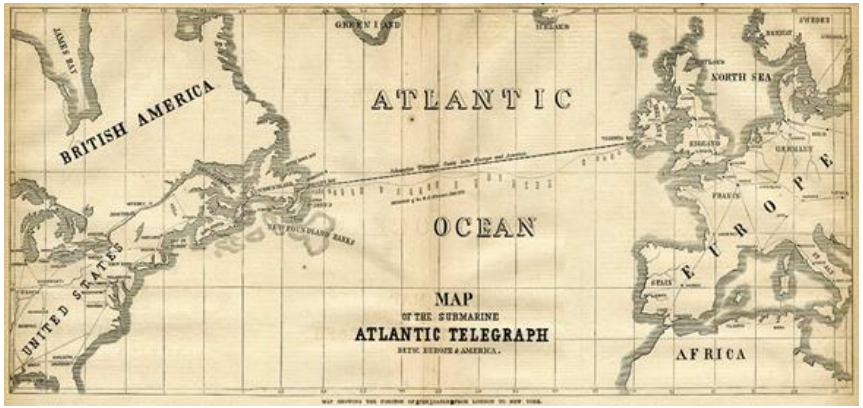
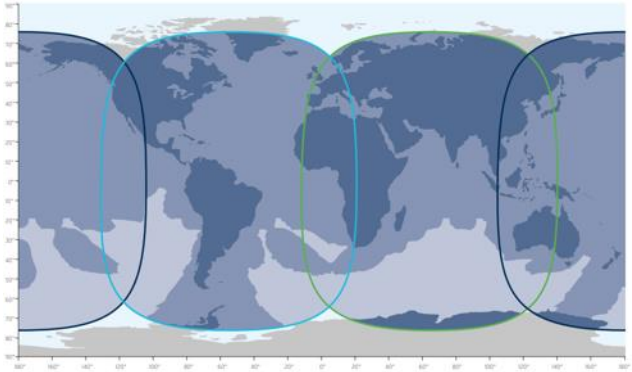
From the high seas…





…to the cyber-seas

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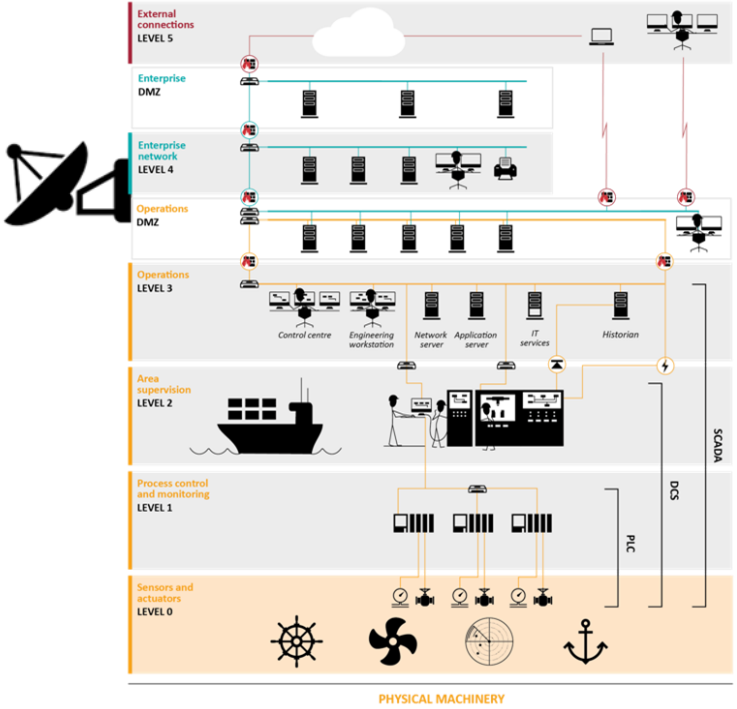
Maritime is on-line



and IoT deployment is accelerated

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The datacentre on water

Rewards

- Customer visibility (cargo)
- Predicative Maintenance
- Navigation improvements
- Bunker efficiencies
- Fleet management
- Autonomous vessels
- Customer engagement (cruise)

Risks

- Cyber piracy
- Hacks
- Extortion
- Malware

Targets

- IoT
- ICS
- GPS
- ECDIS
- AIS
- Satellite
- Third parties
- Pax

Sources: https://www.freightwaves.com/news/shipping-cyber-terrorism-threat-heightened-by-digitalization
https://www.maritime-executive.com/article/tests-show-ease-of-hacking-ecdis-radar-and-machinery
https://www.workboat.com/news/bluewater/most-large-maritime-companies-have-been-cyber-targets/

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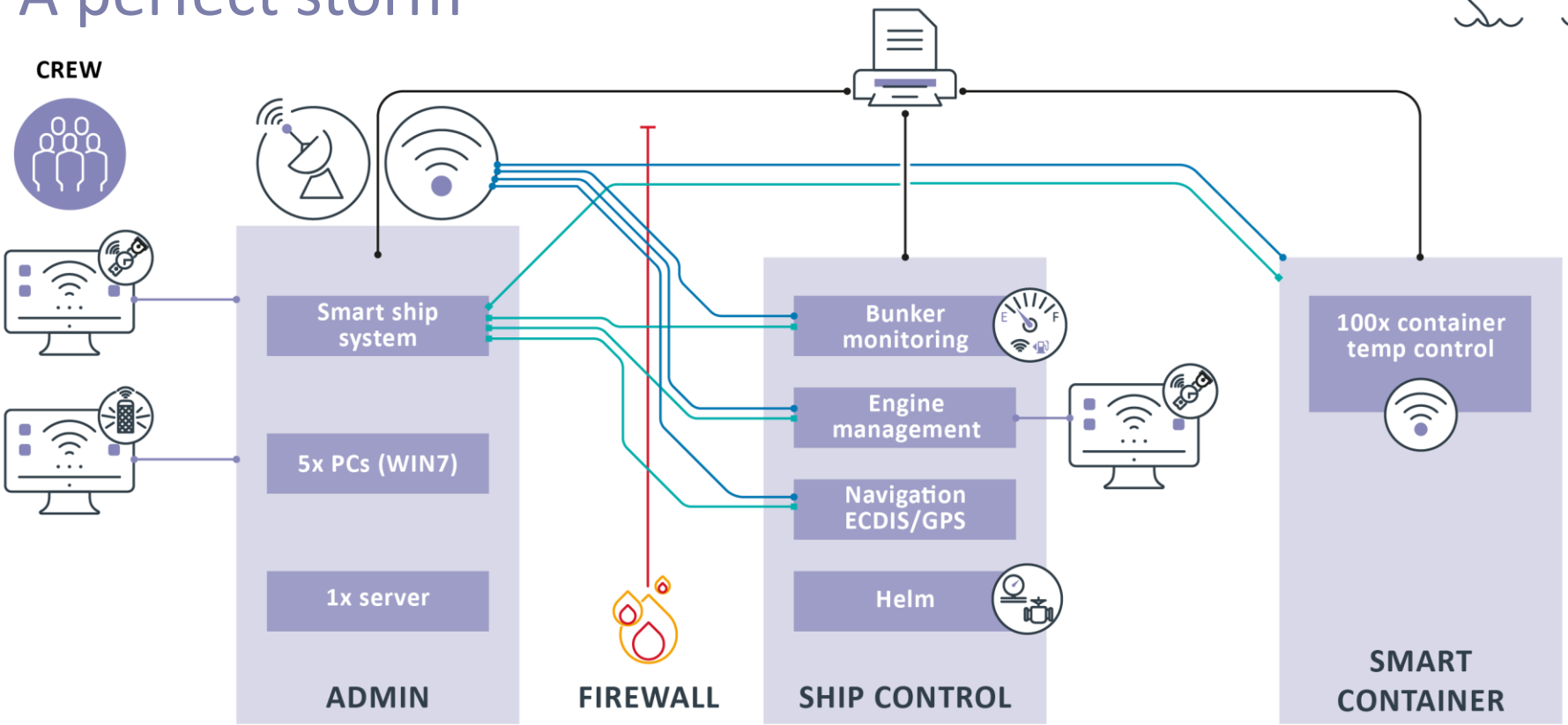
A perfect storm



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Critical infrastructure concerns

90% of manufactured goods travel by ship International Maritime Organisation

Sealift, either through Defence-owned shipping or *hired commercial shipping*, is the most cost-effective means and only real practicable method of deploying at scale to even land locked countries. UK Department of Defence JDP0-10

Shipping is the life blood of the global economy. Without shipping, intercontinental trade, the bulk transport of raw materials, and the import/export of affordable food and manufactured goods would simply not be possible. International Chamber of Shipping

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Industry factors help and hinder

Safety

Regulation

Enforcement

Environment

Legacy

Longevity

Flag states

Builders

Specialist manufacturers

Componentisation

ICS trust model

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The IoT in the maritime environment

Connects a “hostile” ICS environment with associated risks

Shows an accelerating adoption trend

Provokes a regulatory response related to critical infrastructure

Batten down the hatches

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Questions?

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SECURING THE IOT

TAMING THE CONNECTED WORLD

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