OCEANTRENDS 2018

CAPT Ryan D. Manning
U. S. Coast Guard
Office of Port & Facility Compliance
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Cyber Risk Management Is…

- Not unique to the marine industry
- Multi-faceted
- Operational risk management
Cyber is a global issue – not unique to the maritime industry

Self driving cars

Mobile devices

Voting machines

Stock market
End Goal:
Implement a cyber risk management regime based on corporate governance and leveraging existing safety management systems.

Strategy:

Vessels
- IMO/SOLAS instruments and industry initiatives

Facilities
- MTSA authority and industry initiatives
# Phased Approach

## Phase I
**Awareness & Training**
- Awareness in maritime industry
- Awareness in government (CG, DHS, IMO)
- Train CG workforce and maritime industry personnel

## Phase II
**Corporate Governance**
- Industry-led governance regimes to manage cyber risk
- Third-party consensus standards, best-practices, and training

## Phase III
**Standards**
- CG and international standards for CRM
- Minimum design requirements
- Align with industry partners, class societies, and internationally
Cyber Risk Management for Waterfront Facilities

Area Maritime Security Committees / MSC

Cyber-Incident Reporting Protocols (NCCIC)

Interagency & Academic Partnerships

Cyber-Related Exercises

Public Meetings

Mar 2016: AMSC Policy Letter for cyber subcommittees

Aug 2016: NCCIC/NRC SLA

Jul 2017: NVIC 05-17, Guidelines for Addressing Cyber Risks at MTSA Regulated Facilities

Dec 2016: Breach of Security COMDINST

Nov 2016: NIST Profile for Bulk Liquid Terminals

Fall 2017: NIST Profile for Passenger Vessel
IMO Activities

IMO – MSC/FAL Circ. 3 (May 2016)

*Guidelines on Maritime Cyber Risk Management* (previously MSC Circ. 1526)

- Establishes high-level guidelines for a holistic, risk management approach to cyber
- Aligns with NIST Cybersecurity Framework

IMO – Maritime Safety Committee Resolution 428(98) (June 2017)

- Affirms that approved Safety Management Systems should take cyber risk management into account
- Encourages administrations to ensure that cyber risks are appropriately addressed in safety management systems by 1 January 2021

Flag State Implementation (June 2017 – January 2021)

- USCG collaborating with industry to develop a clear path to compliance with MSC Resolution 428(98)
- Development of industry standards, Company implementation, verification, and feedback through the SMS audit process
Standards Development

- Appropriate standards will follow the Guidelines for Cyber Risk Management (MSC/FAL Circ. 3)

Incorporation of CRM into SMS

- Company selects an appropriate standard and incorporates those practices into their SMS

Review of SMS by RO

- Recognized Organization (RO) reviews SMS during annual review

New DOC issued

- New DOC is issued in accordance with MSC Resolution 428(98) prior to 1 January 2021

Evaluation during SMS audits

- SMS audits will provide feedback and verification

Clear path to compliance:

MSC Resolution 428(98)
Maritime Cyber Risk Management in Safety Management Systems
QUESTIONS?

RYAN.D.MANNING@USCG.MIL