



OCEANTRENDS 2018



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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



Cyber Risk Management Strategy



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

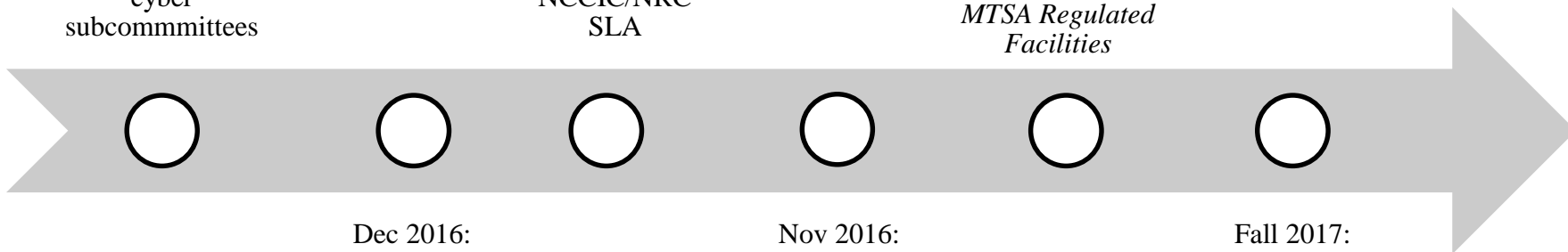
Aug 2016:
NCCIC/NRC
SLA

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

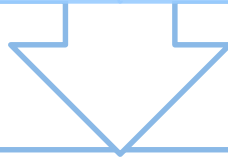


IMO – MSC/FAL Circ. 3 (May 2016)

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

Establishes high-level guidelines for a holistic, risk management approach to cyber

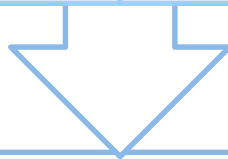
Aligns with NIST Cybersecurity Framework



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



Clear path to compliance:

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

**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



QUESTIONS?

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