The Cyber Security Policy Framework: NIS Directive and Cyber Security in Maritime

Dr. Athanasios Drougkas | Officer in NIS

Digital Ship Conference| Athens | 8th November

European Union Agency For Network And Information Security

Positioning ENISA activities

CAPACITY

✓ Hands on activities

POLICY

✓ Support MS & COM in Policy implementation

✓ Harmonisation across EU

COMMUNITY

Mobilizing EU communities

EXPERTISE

✓ Recommendations

✓ Independent Advice

The maritime sector is under attack!

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Shipping company Maersk says June cyberattack could cost it up to $300 million

Hackers took 'full control' of container ship's navigation systems for 10 hours – IHS Fairplay

by Editor | Nov 25, 2017 | Blog |

COSCO Shipping Lines Falls Victim to Cyber Attack

COSCO Shipping Lines confirmed that it has been hit by a cyber attack impacting its internet connection within its offices in America.

Shipping firm warns that hackers may leak confidential information

Global shipbroker says it fell victim to a 'cybersecurity incident' and is contacting those who might have had their information stolen by attackers.

| November 29, 2017 -- 16:06 GMT (16:06 GMT) | Topic: Security

Police warning after drug traffickers' cyber-attack

By Tom Bateman
Reporter, Today programme

16 October 2013 Share

The head of Europe's crime fighting agency has warned of the growing risk of organised crime groups using cyber-attacks to allow them to traffic drugs.

The director of Europol, Rob Wainwright, says the internet is being used to facilitate the international drug trafficking business.

His comments follow a cyber-attack on the Belgian port of Antwerp.

Earlier this year drug traffickers hacked into the computer controlling shipping containers at the port of Antwerp

Drug traffickers recruited hackers to breach IT systems that controlled the

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Home > News > Europe > 69% of Danish shipping companies hit by cyber crime in 2017

69% of Danish shipping companies hit by cyber crime in 2017

A survey by Danish Shipping of its ceo panel showed that 69% of companies had been hit by cyber crime last year.

Port of Barcelona Suffers Cyberattack

By Ionut Ilascu September 21, 2018 05:15 PM 0

… and vulnerable

Backdoor Account Found in Popular Ship Satellite Communications System

By Catalin Cimpanu — October 26, 2017 — 08:00 AM — 0

Naval Dome exposes vessel vulnerabilities to cyber attack

More onboard cyber vulnerability has been revealed, with maritime cyber defence firm Naval Dome demonstrating yet more ways hackers can compromise ship safety.

BLOG: MARITIME CYBER SECURITY

Making prawn espressos, or hacking ships by deciphering BAPLIE EDIFACT messaging

Hackers can easily target container ships by hacking load plans due to its vulnerable messaging system

November 28, 2017 By Pierluigi Paganini

Hackers Could Sink a Bulk Carrier Says Pen Test Partners

December 19, 2017

Security

Crappy IoT on the high seas: Holes punched in hull of maritime security

Researchers: We can nudge ships off course

By John Leyden 6 Jun 2018 at 12:18 — 32 — SHARE ▼

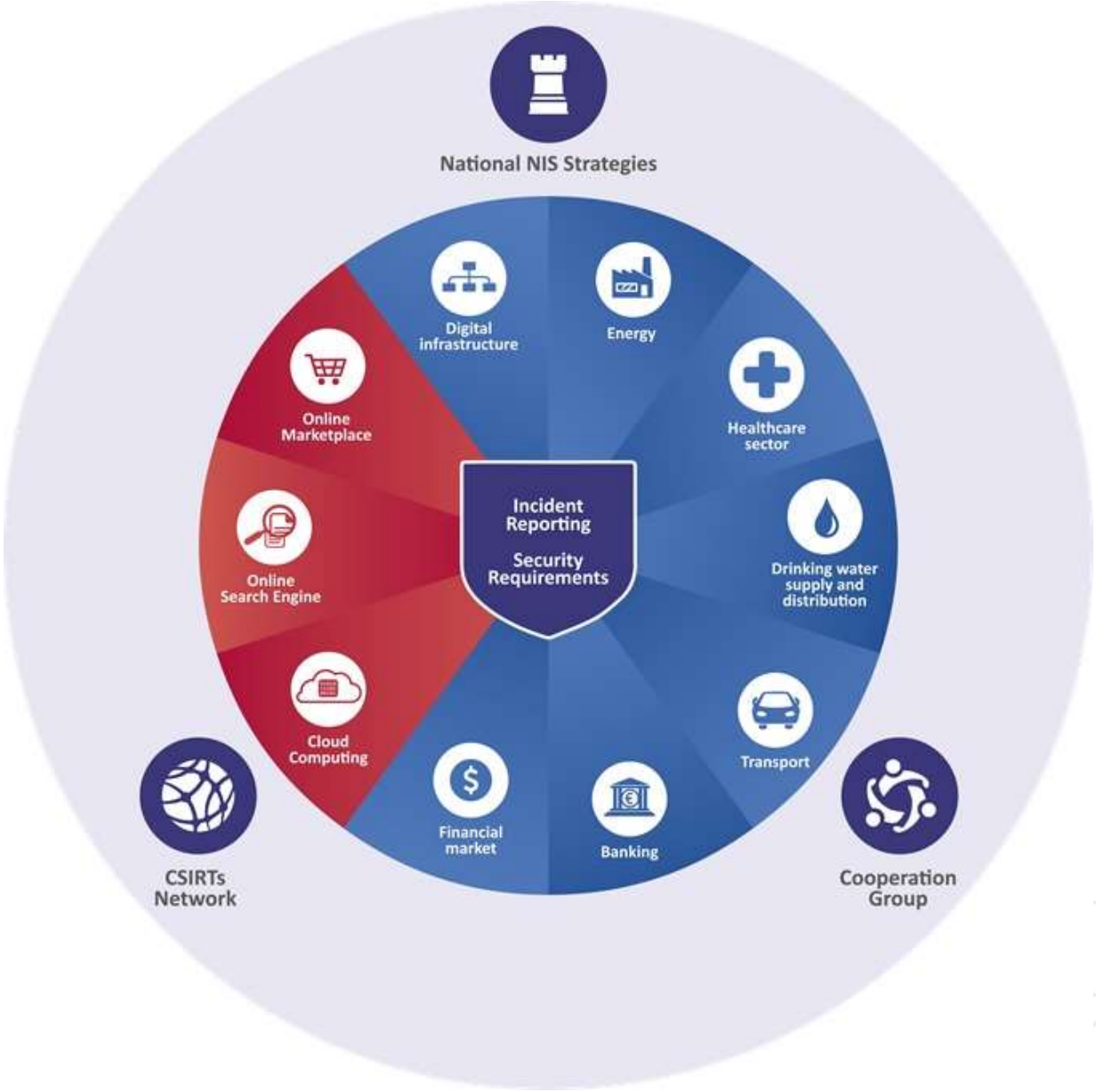
Why 50,000 ships are so vulnerable to cyberattacks

June 13, 2018 2.15pm BST

Cyber security in the maritime sector – Situational Analysis

- Cybersecurity gaining more attention but still relatively **low awareness** and focus on maritime cyber security
- **Emerging standards/guidelines** from IMO, industry etc.
- **Complexity** of the maritime ICT environment including SCADA and emerging IoT usage
- Fragmented maritime **governance context**
- No holistic approach to **maritime cyber risks** and **diversity between different actors** in maritime
- Overall **lack of direct economic incentives** to implement good cyber security in maritime sector

The Network and Information Security Directive



Obligations for MSs on OESs

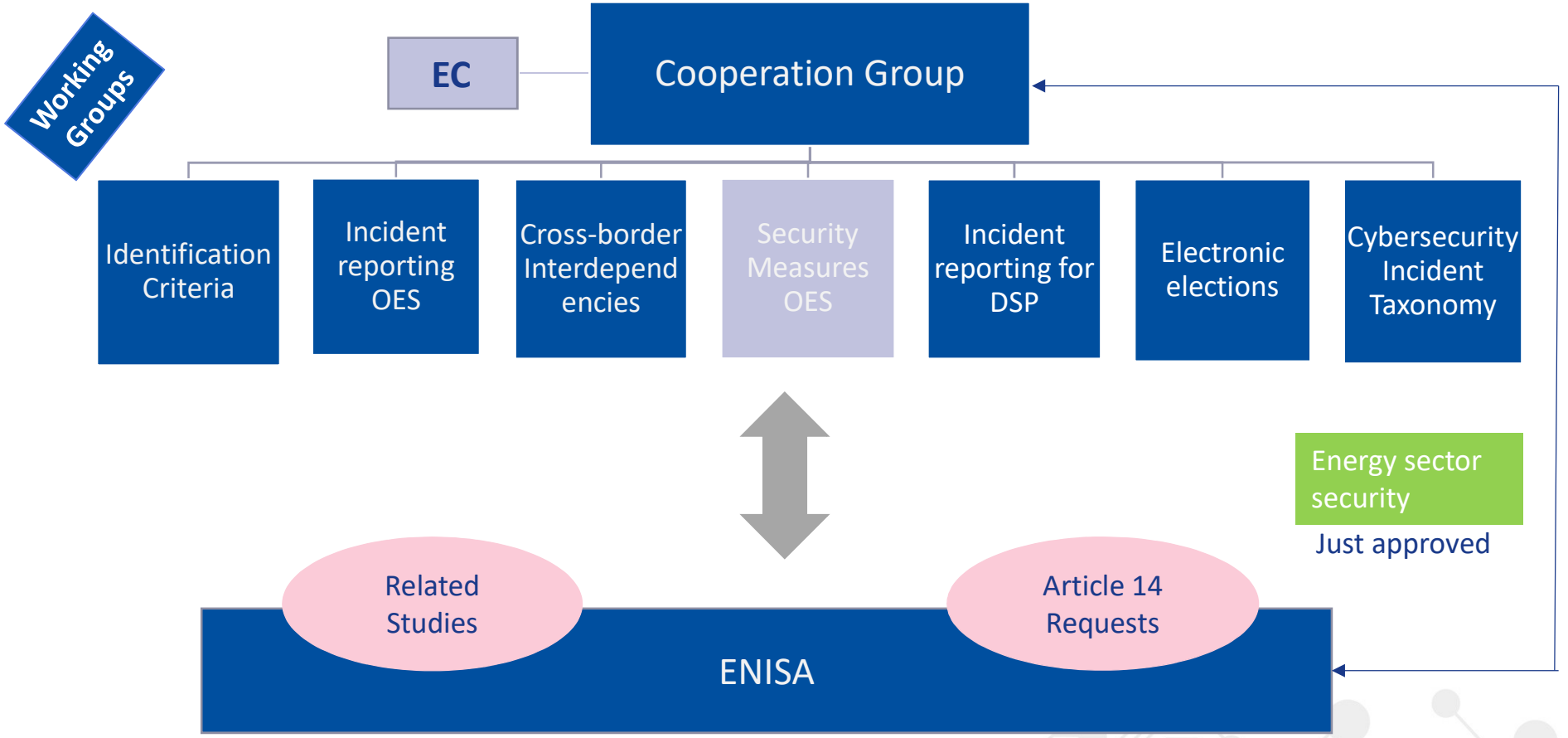
- Identification of operators of essential services
- Minimum security measures to ensure a level of security appropriate to the risks
- Incident notification to prevent and minimize the impact of incidents on the IT systems that provide services
- Make sure authorities have the powers and means to assess security and check evidence of compliance for OES

Identification of OES in the water transport sector

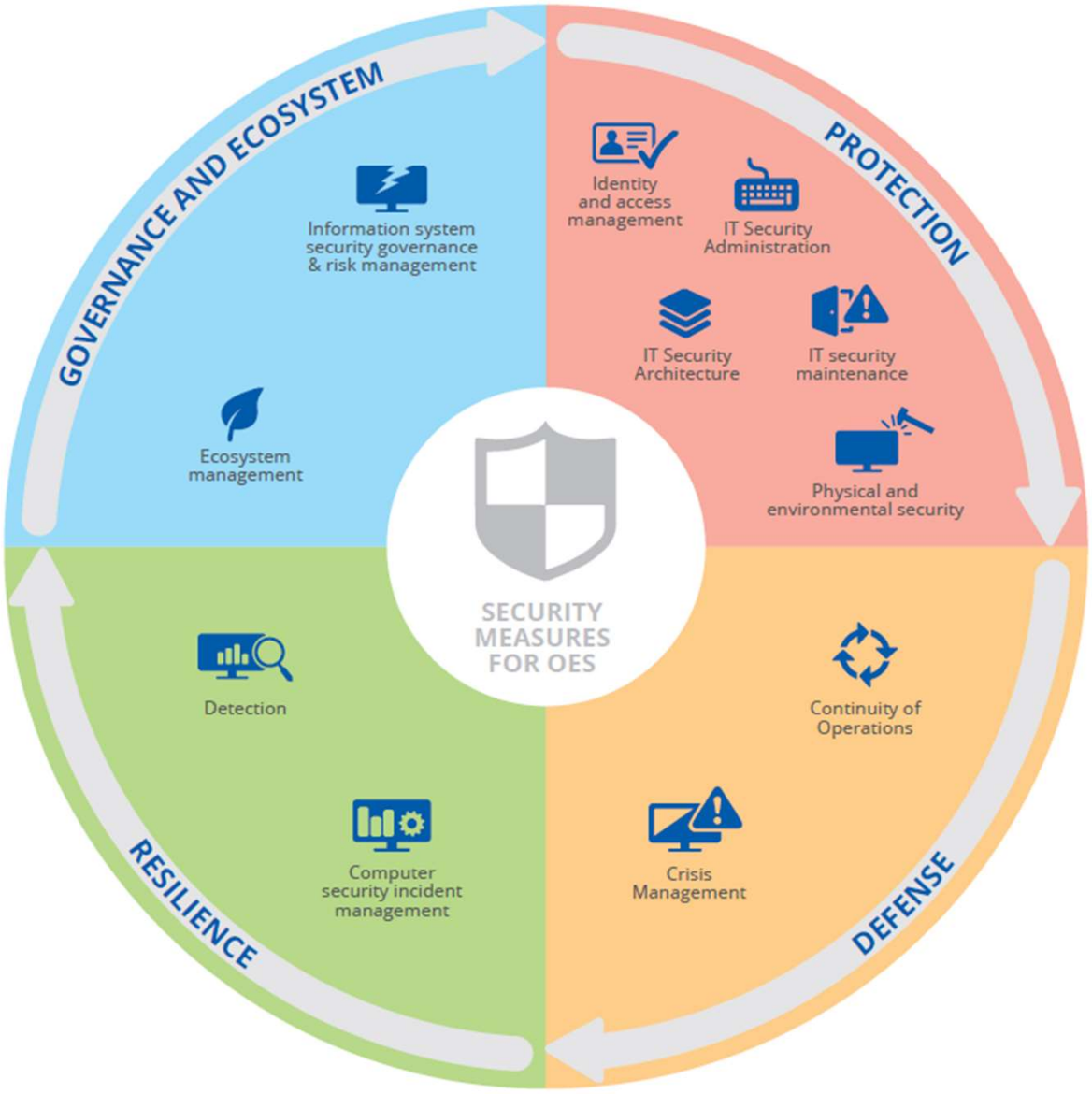
MS shall define the criteria for the identification of operators of essential services and identify the OES among the following:

- Inland, sea and coastal passenger and freight water transport companies (Annex I to Regulation (EC) No 725/2004)
- Managing bodies of ports (point (1) of Article 3 of Directive 2005/65/EC), including their port facilities (point (11) of Article 2 of Regulation (EC) No 725/2004), and entities operating works and equipment contained within ports.
- Operators of vessel traffic services (point (o) of Article 3 of Directive 2002/59/EC)

Working groups under the NISD



Security Measures for OES



NIS directive - TIMELINE

August 2016	-	Entry into force
February 2017	6 months	Cooperation Group starts its tasks
August 2017	12 months	Adoption of implementing on security and notification requirements for DSPs
February 2018	18 months	Cooperation Group establishes work programme
9 May 2018	21 months	Transposition into national law
November 2018	27 months	Member States to identify operators of essential services
May 2019	33 months (i.e. 1 year after transposition)	Commission report - consistency of Member States' identification of OES
May 2021	57 months (i.e. 3 years after transposition)	Commission review

Other maritime regulations, guidelines and standards

- Guidelines on maritime cyber risk management (IMO)
- Maritime cyber risk management in safety management systems (IMO)
- The Tanker Management and Self Assessment - TMSA (OCIMF)
- The Guidelines on Cyber Security Onboard Ships (BIMCO, CLIA, ICS, INTERCARGO, INTERTANKO, OCIMF and IUMI)
- The European Union Maritime Security Strategy (EUMSS)
- Cyber Security Awareness (AMMITEC)
- Recommendations on cyber safety for ships (IACS)

Next Steps for Maritime Security in ENISA

- Implementation of the NIS Directive
- Stakeholder Engagement (MARSEC, SAGMAS, Associations, Industry etc.)
- Collaboration with DG MOVE and EMSA
- Raise awareness via workshops and meetings
- Cybersecurity aspects of maritime
  - Guidelines & Standards (e.g. IMO)
  - Regulatory framework
  - Assets / Threat landscape
  - Good Practices
- **2019 Study on Port Cybersecurity** (TBC)

The ENISA TRANSSEC Group is looking for Experts!

Share your expertise and contribute to promoting cybersecurity in maritime!

Join us:

https://resilience.enisa.europa.eu/transport-security

1st Transport Security Conference

SAVE THE DATE!!

Lisbon 23rd of January 2019

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EASA European Aviation Safety Agency

EMSA

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European Commission MOBILITY AND TRANSPORT

Thank you

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