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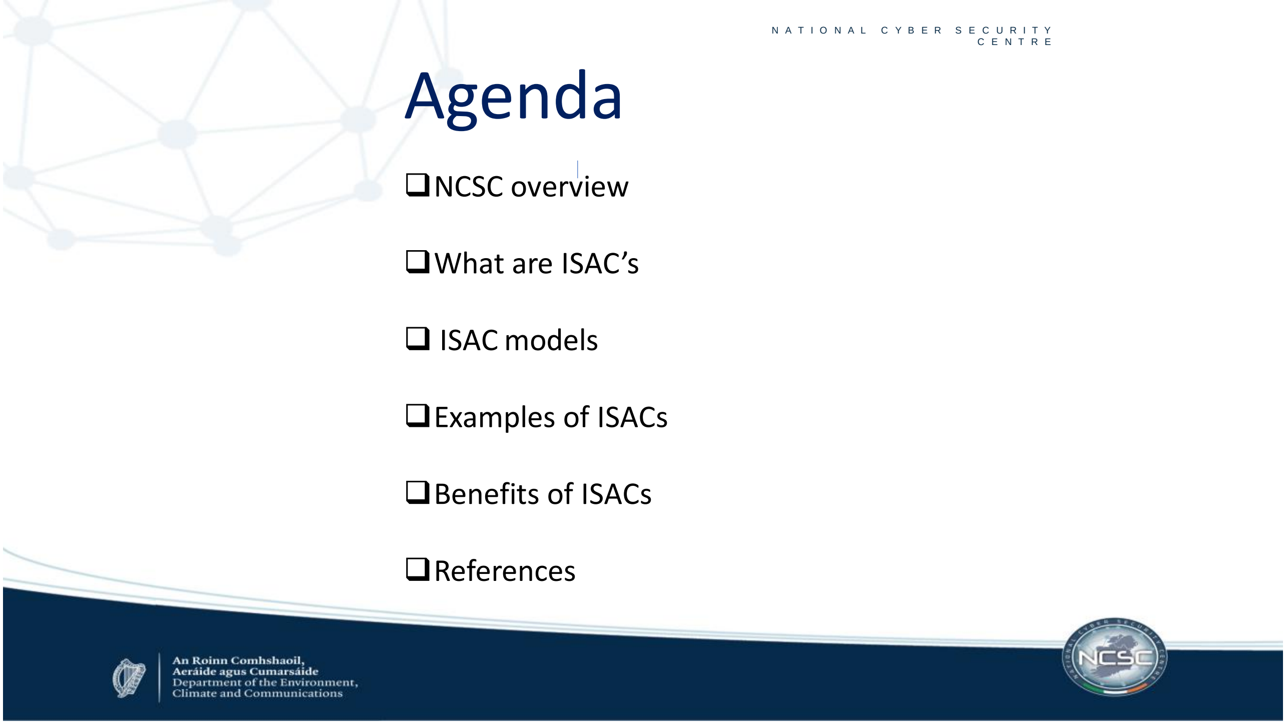
Department of the Environment,
Climate and Communications

HIS Conference
Sligo
Thursday 31st Match 2022



NATIONAL CYBER SECURITY CENTRE

Agenda

□ NCSC overview

□ What are ISAC's

□ ISAC models

□ Examples of ISACs

□ Benefits of ISACs

□ References

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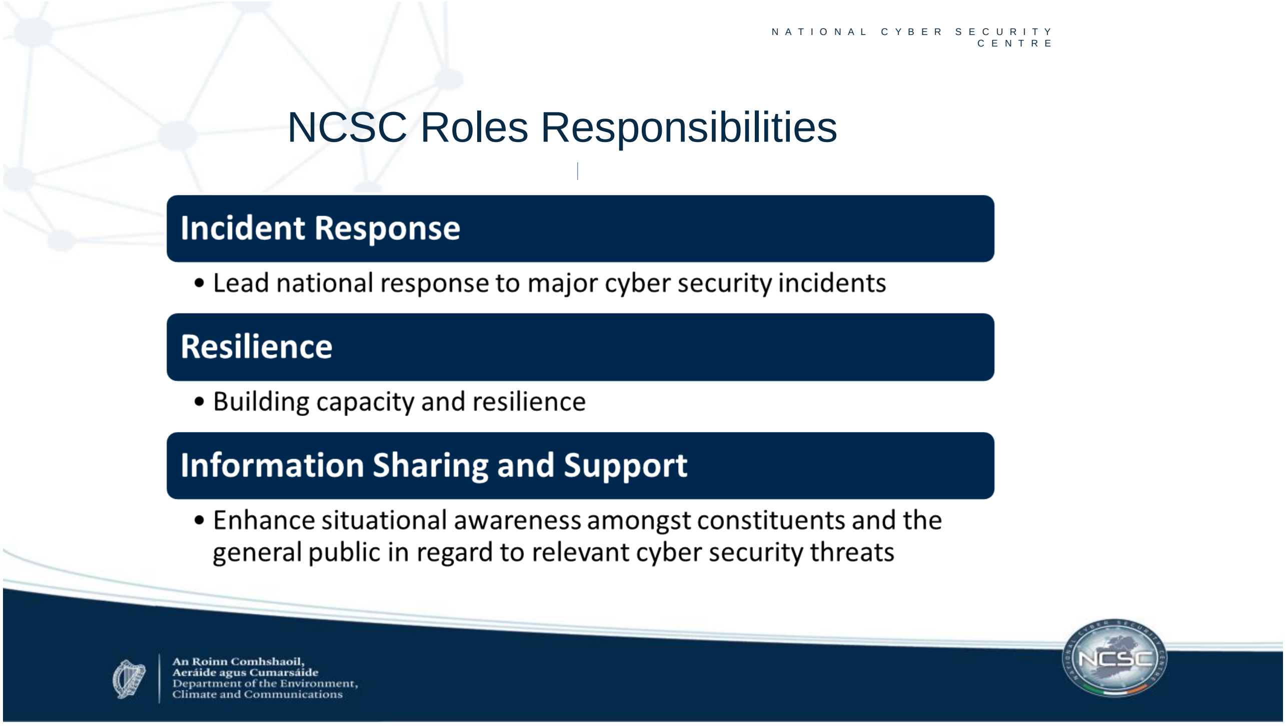

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NCSC Roles Responsibilities

Incident Response

- Lead national response to major cyber security incidents

Resilience

- Building capacity and resilience

Information Sharing and Support

- Enhance situational awareness amongst constituents and the general public in regard to relevant cyber security threats

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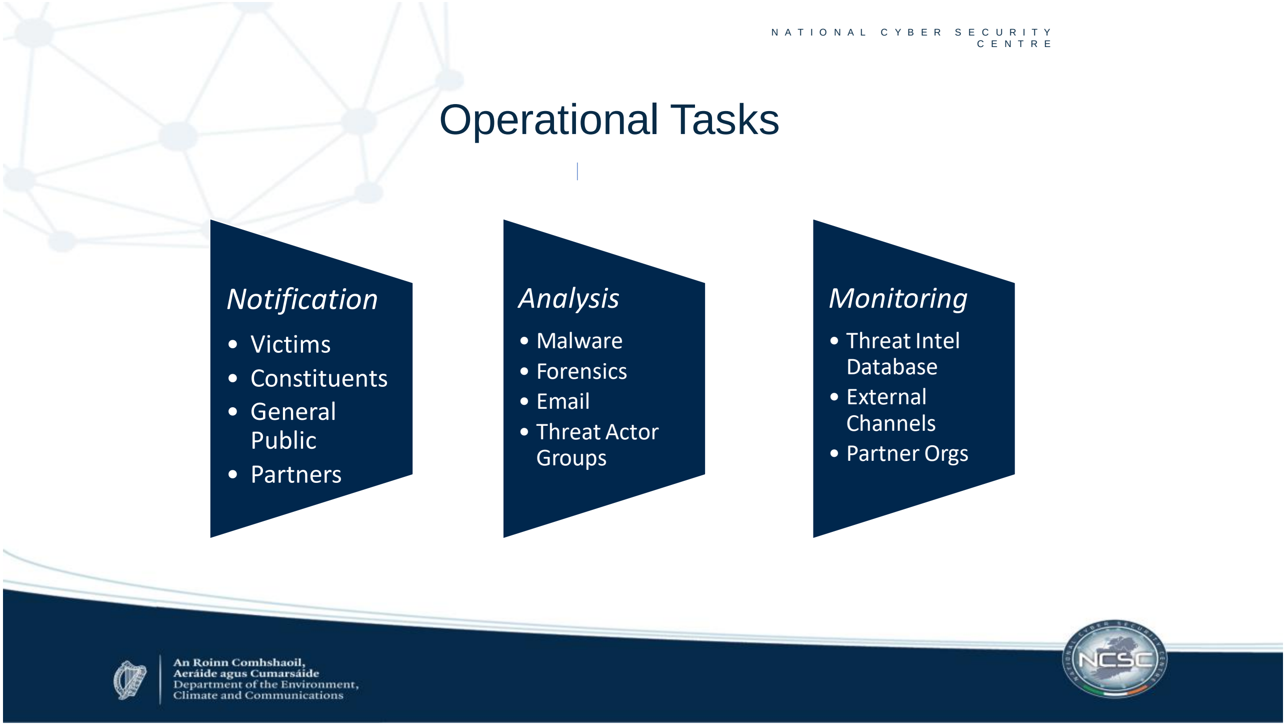

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Operational Tasks

Notification

- Victims
- Constituents
- General Public
- Partners

Analysis

- Malware
- Forensics
- Email
- Threat Actor Groups

Monitoring

- Threat Intel Database
- External Channels
- Partner Orgs

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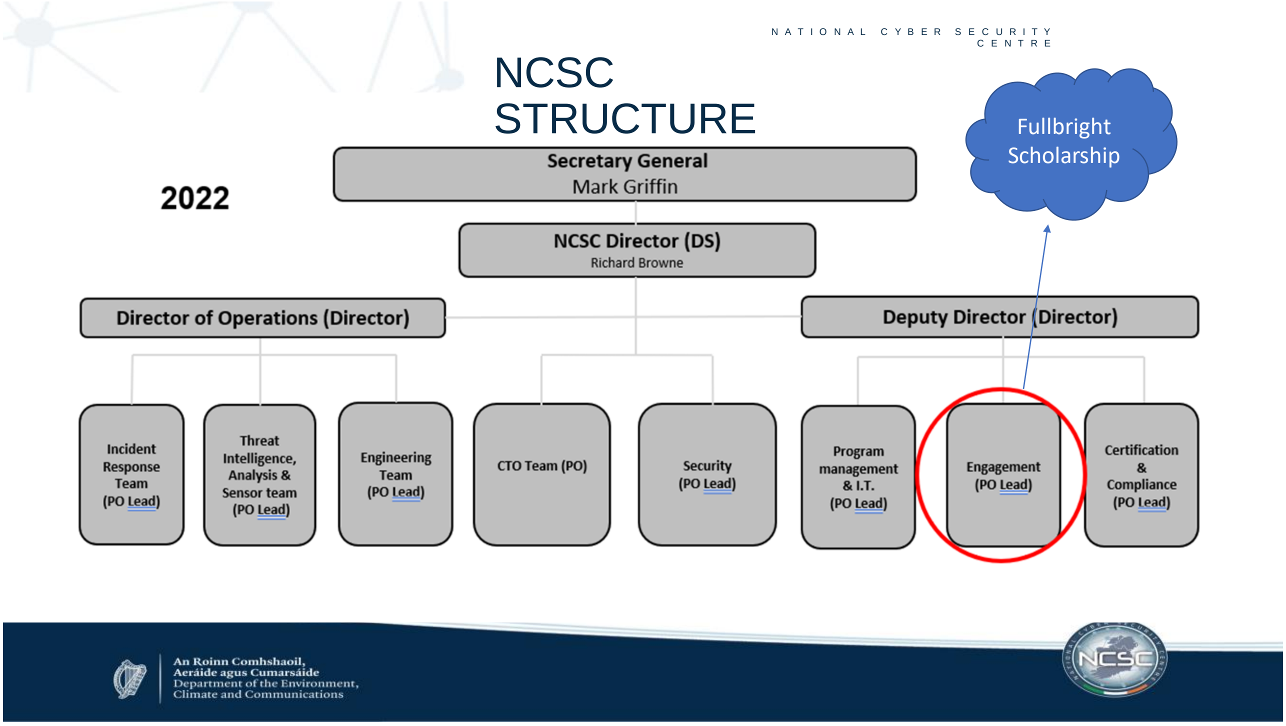

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NCSC STRUCTURE

2022

Fullbright Scholarship
Secretary General
Mark Griffin
NCSC Director (DS)
Richard Browne
Director of Operations (Director)
Deputy Director (Director)
Incident Response Team (PO Lead)
Threat Intelligence, Analysis & Sensor team (PO Lead)
Engineering Team (PO Lead)
CTO Team (PO)
Security (PO Lead)
Program management & I.T. (PO Lead)
Engagement (PO Lead)
Certification & Compliance (PO Lead)

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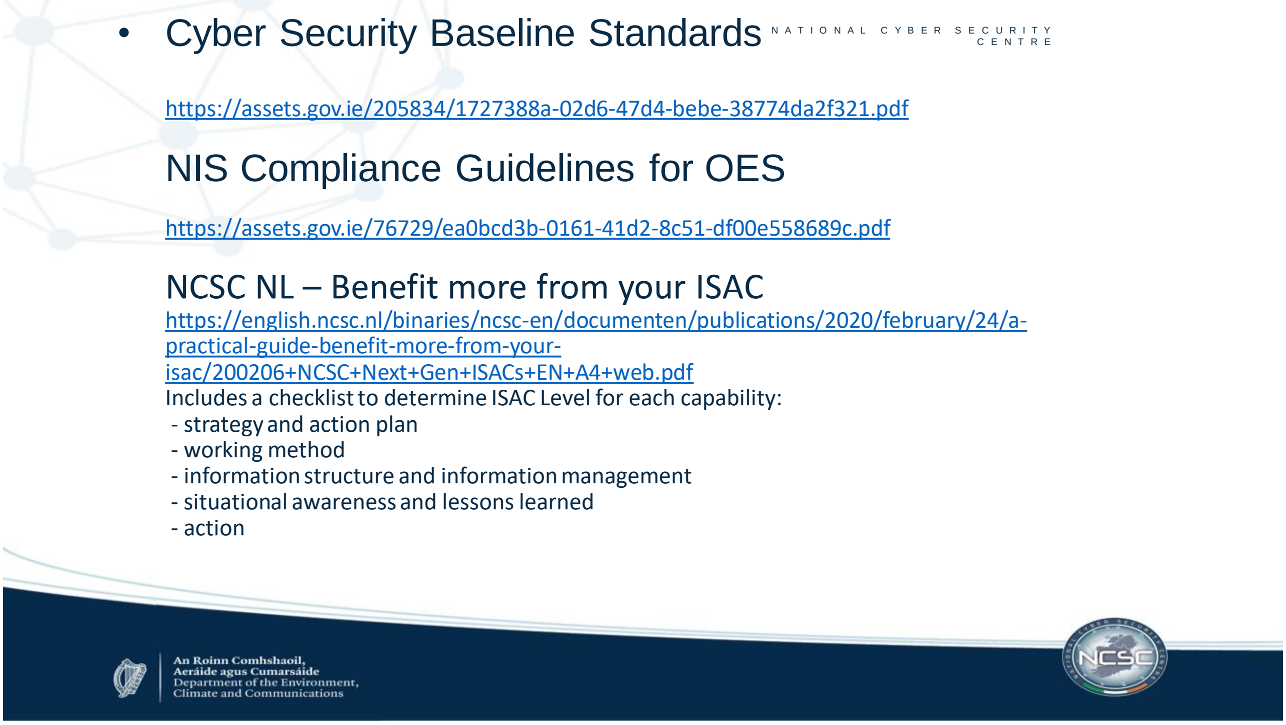

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- Cyber Security Baseline Standards

https://assets.gov.ie/205834/1727388a-02d6-47d4-bebe-38774da2f321.pdf

NIS Compliance Guidelines for OES

https://assets.gov.ie/76729/ea0bcd3b-0161-41d2-8c51-df00e558689c.pdf

NCSC NL – Benefit more from your ISAC

https://english.ncsc.nl/binaries/ncsc-en/documenten/publications/2020/february/24/a-practical-guide-benefit-more-from-your-isac/200206+NCSC+Next+Gen+ISACs+EN+A4+web.pdf

Includes a checklist to determine ISAC Level for each capability:

- strategy and action plan
- working method
- information structure and information management
- situational awareness and lessons learned
- action

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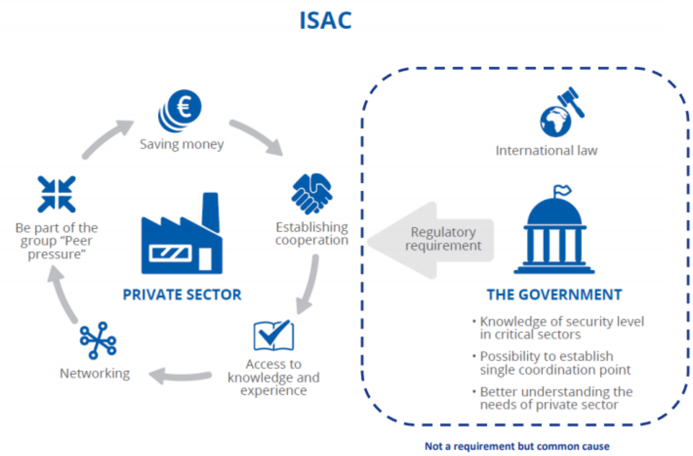
What are ISACs:

Information Sharing and Analysis Centres



ISAC

Saving money

Establishing cooperation

Access to knowledge and experience

Networking

Be part of the group "Peer pressure"

PRIVATE SECTOR

Regulatory requirement

International law

THE GOVERNMENT

- Knowledge of security level in critical sectors
- Possibility to establish single coordination point
- Better understanding the needs of private sector

Not a requirement but common cause

Figure 1: Reasons for the creation of ISACs

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Types of ISACs

ENISA
Information Sharing and Analysis Centres (ISACs) models

❑ Country Focused

❑ Sector Specific

❑ International ISACs

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Examples of sectors that have created ISACs:

- Financial FS-ISAC
- Energy EE-ISAC
- Aviation ECCSA European Centre for Cyber Security in Aviation Supported by EASA

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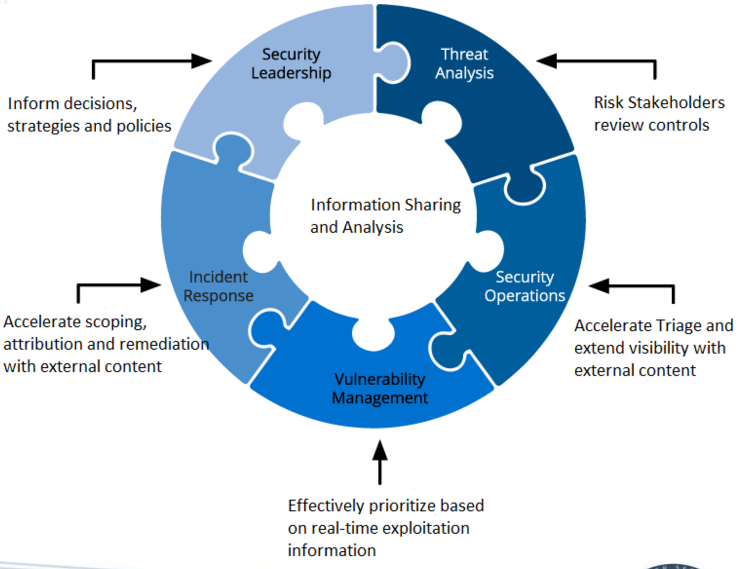
Benefits of ISACs



Security Leadership

Threat Analysis

Information Sharing and Analysis

Incident Response

Security Operations

Vulnerability Management

Inform decisions, strategies and policies

Risk Stakeholders review controls

Accelerate scoping, attribution and remediation with external content

Accelerate Triage and extend visibility with external content

Effectively prioritize based on real-time exploitation information

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Challenges with ISACs

Building trust

Securely share information between organisations with different levels of cybersecurity maturity

Chinese walls

Ensure sharing does not impact compliance or law enforcement

Start slow

Build trust, define ToR, outline roles, responsibilities, information sharing protocols, establish links with other ISACs

Bottom up

Commission advocates a voluntary bottom up approach, rather than through Directives

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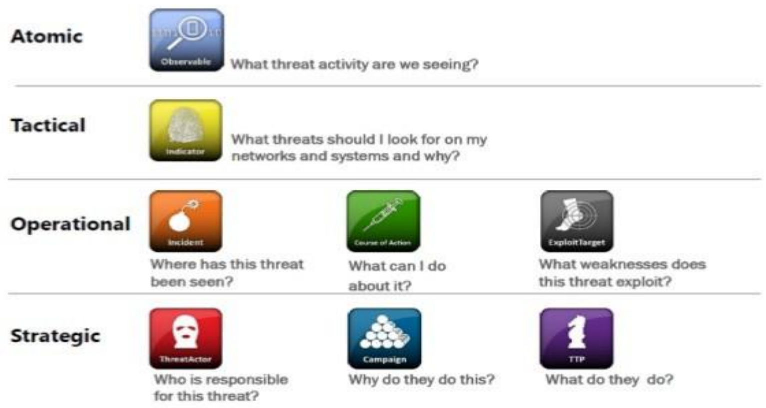
Different perspectives



Atomic — Observable — What threat activity are we seeing?

Tactical — Indicator — What threats should I look for on my networks and systems and why?

Operational — Incident — Where has this threat been seen? — Course of Action — What can I do about it? — Exploit Target — What weaknesses does this threat exploit?

Strategic — ThreatActor — Who is responsible for this threat? — Campaign — Why do they do this? — TTP — What do they do?

Source: https://forums.soltra.com/index.php?/topic/266-soltra-intro-pdf-deck/

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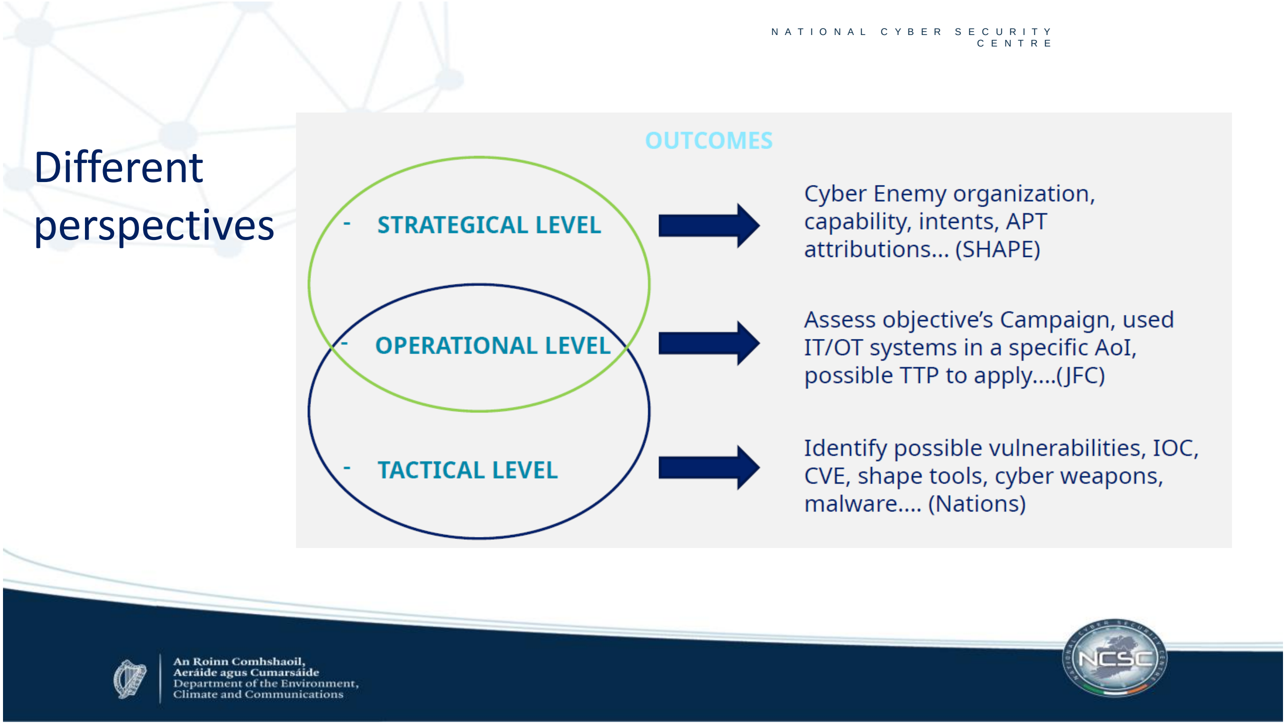

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Different perspectives

Cyber Enemy organization, capability, intents, APT attributions… (SHAPE)

Assess objective's Campaign, used IT/OT systems in a specific AoI, possible TTP to apply….(JFC)

Identify possible vulnerabilities, IOC, CVE, shape tools, cyber weapons, malware…. (Nations)

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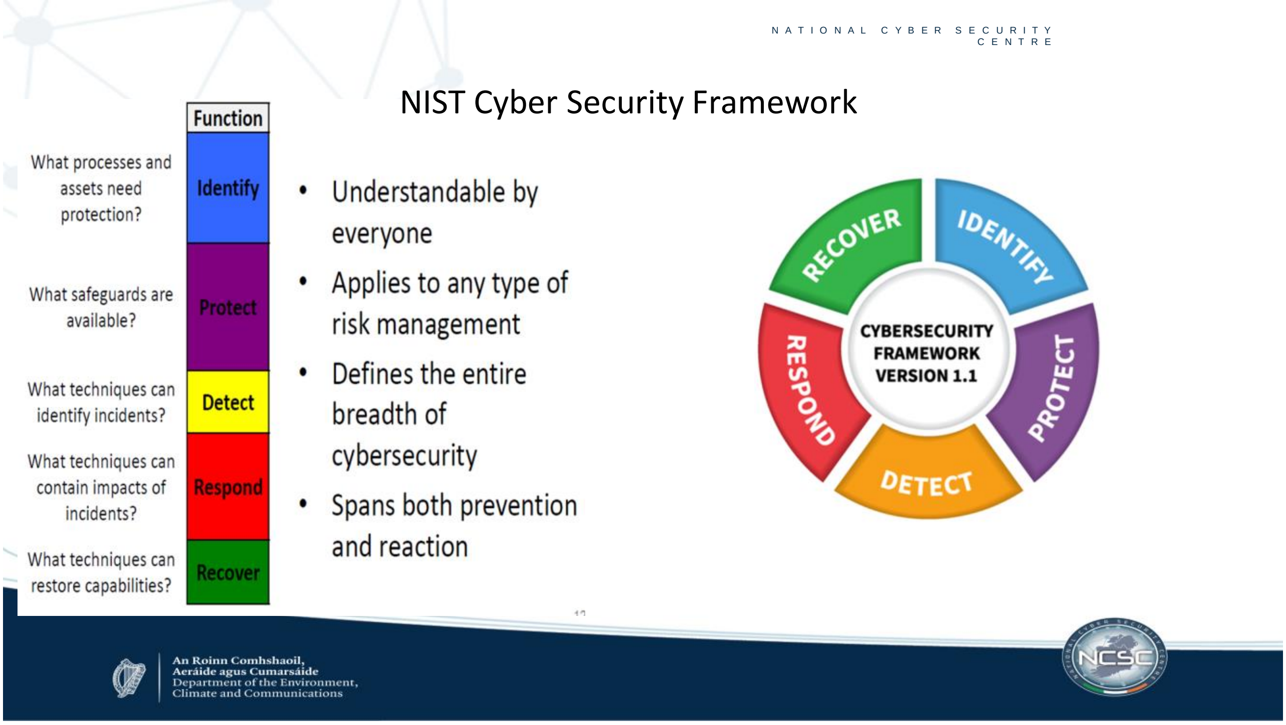

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NIST Cyber Security Framework

	Function
What processes and assets need protection?	Identify
What safeguards are available?	Protect
What techniques can identify incidents?	Detect
What techniques can contain impacts of incidents?	Respond
What techniques can restore capabilities?	Recover

- Understandable by everyone
- Applies to any type of risk management
- Defines the entire breadth of cybersecurity
- Spans both prevention and reaction

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NIST CSF

IDENTIFY

Risk Assessment (ID.RA):
Cybersecurity risk to organisational operations, assets, and individuals are identified and understood.

ID.RA-2:
Cyber threat (strategic, operational and tactical) and vulnerability information is received from information sharing forums and sources.

ID.RA-3:
Threats, both internal and external, are identified and documented.

ID.RA-5:
Threats, vulnerabilities, likelihoods, and impacts are used to determine risk. Risk assessments are dynamic and are updated in light of system or service changes, or changes to the threat environment.

ENISA

ENISA
Information Sharing and Analysis Centres (ISACs) models and good practice

https://www.enisa.europa.eu/topics/national-cyber-security-strategies/information-sharing

NIST
SP 800-150, Guide to Cyber Threat Information Sharing
Guidelines for establishing and participating in cyber threat information sharing relationships

https://csrc.nist.gov/publications/detail/sp/800-150/final

NIST SP 800-53 R4

SI-5 SECURITY ALERTS, ADVISORIES, AND DIRECTIVES
Control: The organization:

- Receives /Disseminates information system security alerts, advisories, and directives to/from [Assignment: organization-defined external organizations] on an ongoing basis

PM-15 CONTACTS WITH SECURITY GROUPS AND ASSOCIATIONS
Control: The organization establishes and institutionalizes contact with selected groups and associations within the security community:

- security education and training
- maintain currency with recommended security practices
- share current security-related information

Q & A