EUROPEAN UNION AGENCY
FOR CYBERSECURITY

SAFEGUARDING CYBERSECURITY IN THE EU HEALTH SECTOR

ENISA’S ROLE

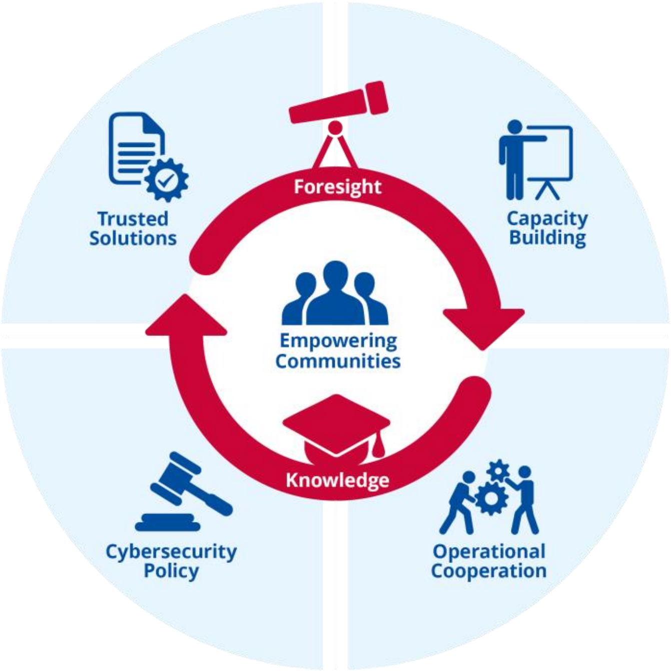
Konstantinos Moulinos, Information Security expert,
Resilience of Critical Sectors (RoCS) Unit, ENISA

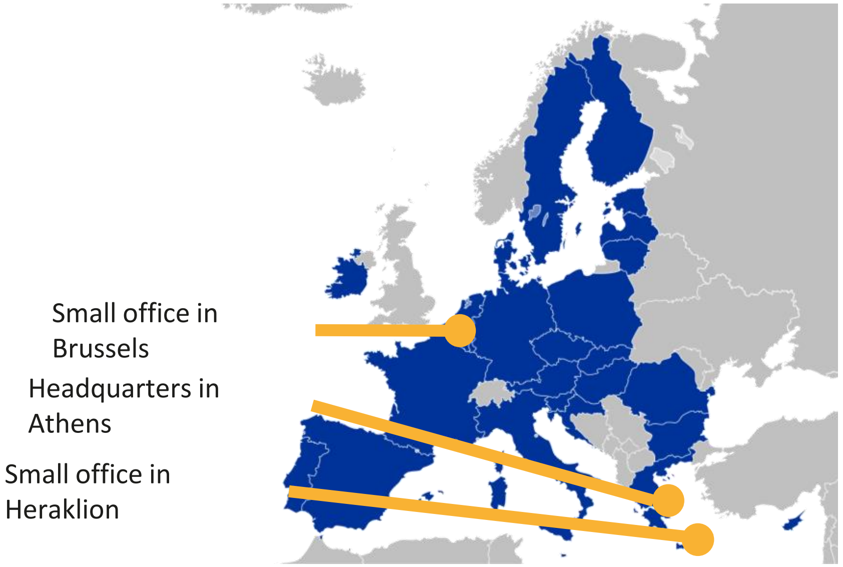
28 | 5 | 2025

AGENDA

1. **Introduction to ENISA**
2. **Why does health sector cybersecurity matter?**
3. **EU Health (cybersecurity) Action Plan (HAP)**
4. **ENISA health sector services**
5. **Latest news on EU HAP**

ABOUT ENISA – THE EU AGENCY FOR CYBERSECURITY





~150 staff in total. Cybersecurity work program done by:

- **Capacity building:** Cyber exercises, challenges, trainings
- **Operational collaboration:** CSIRTs network, Cyclone
- **Policy:** NIS2, 5G, eIDAS, critical sectors.
- **Certification and standardization:** EU certification schemes

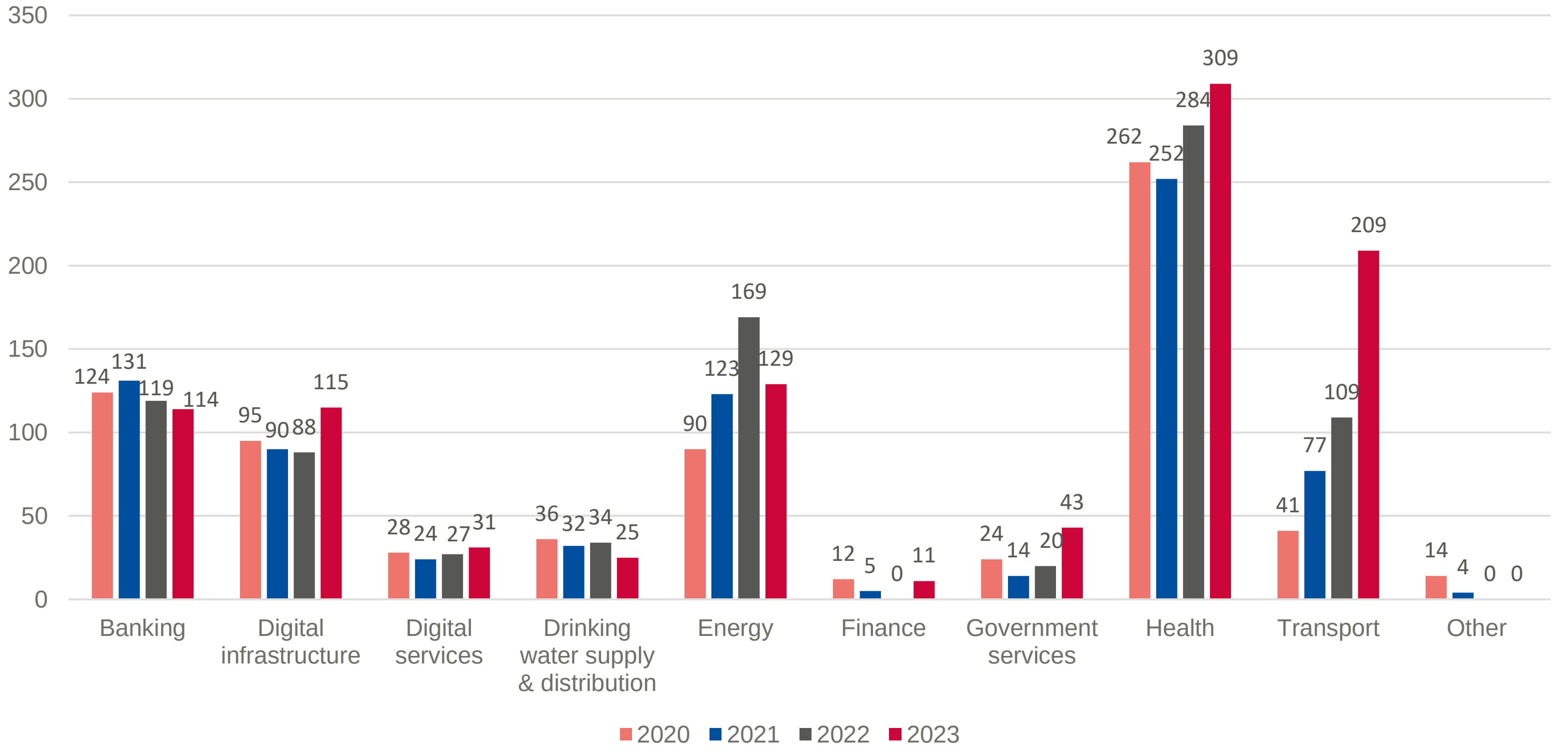
THE NIS2 IN A NUTSHELL

https://videos.enisa.europa.eu/w/sKw5MKgPhACyEVkuAxBiw4

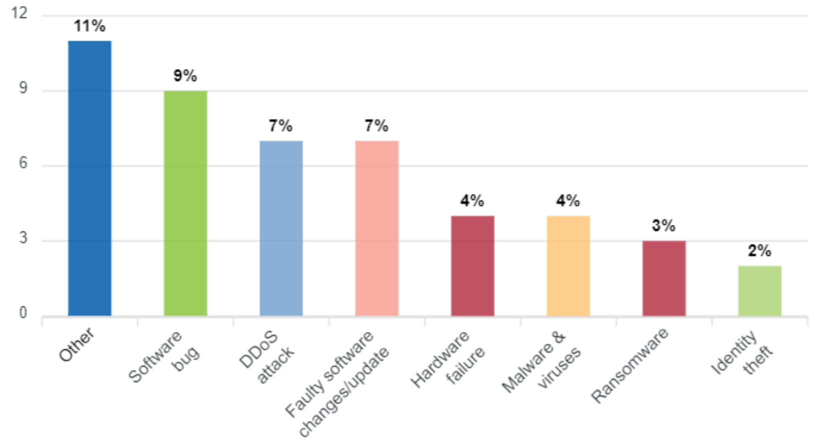
https://www.enisa.europa.eu/topics/awareness-and-cyber-hygiene/raising-awareness-campaigns/network-and-information-systems-directive-2-nis2

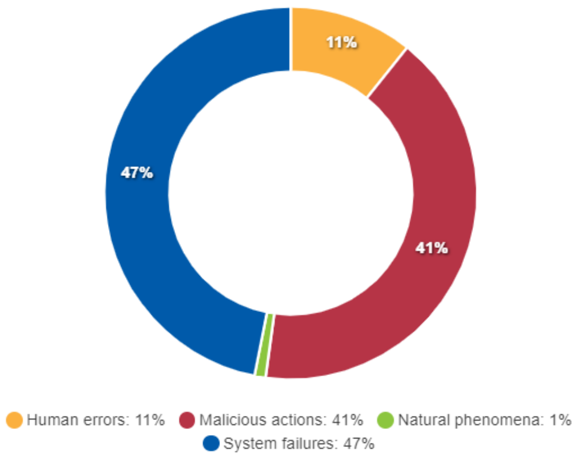
NIS2 REPORTING (DATA 2023)

Number of incidents per sector per year



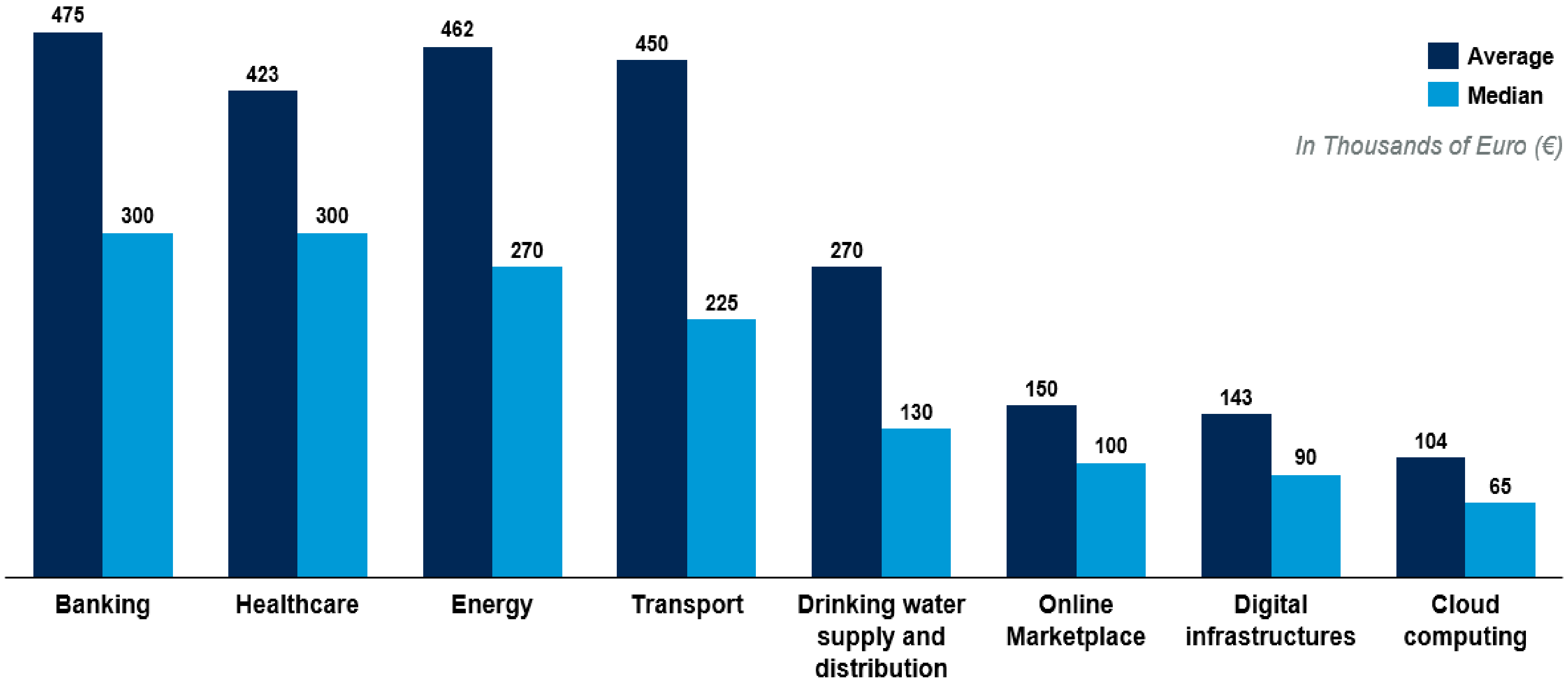
Technical causes (%)





Nature of the incident (%)

ESTIMATED DIRECT COST OF MAJOR SECURITY INCIDENTS PER SECTOR

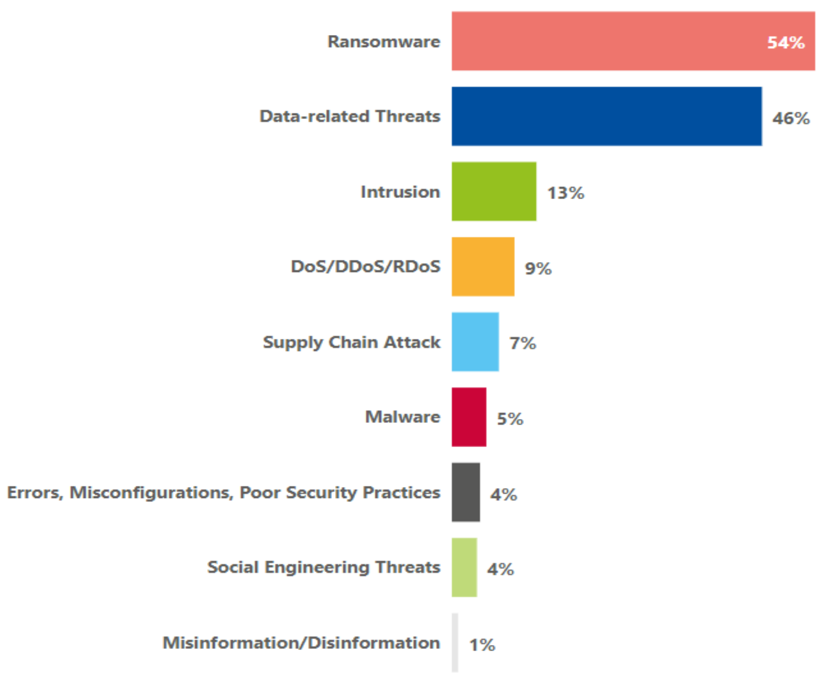


150M

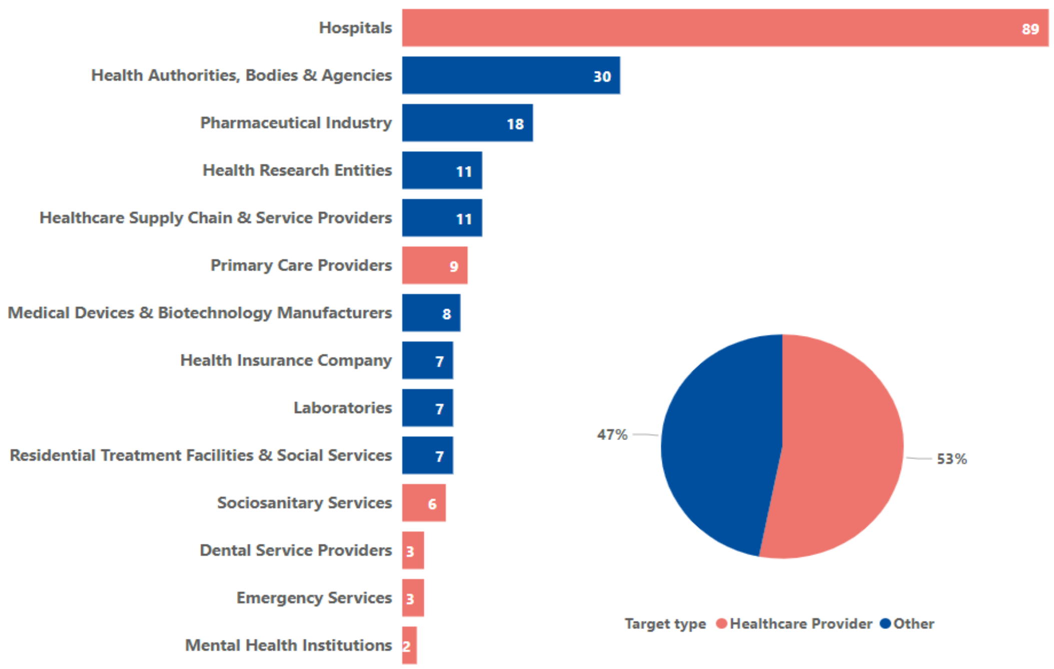
Estimated cost of Incidents in 2023

ENISA HEALTH THREAT LANDSCAPE

Threats in health sector (2023)



Number of incidents per entity type (targets)



CYBERESECURITY CHALLENGES IN HEALTH

- Ransomware attacks
- Increase in data breaches
- Supply chain attacks – complex supply chains
- Poorly cyber-designed medical devices
- Low cybersecurity maturity
- Lack of security awareness
- Legacy systems
- Shortage in cybersecurity skills

2024 ENISA NIS360 IN A NUTSHELL

1st

A new ENISA product to support national authorities tasked with NIS2 implementation

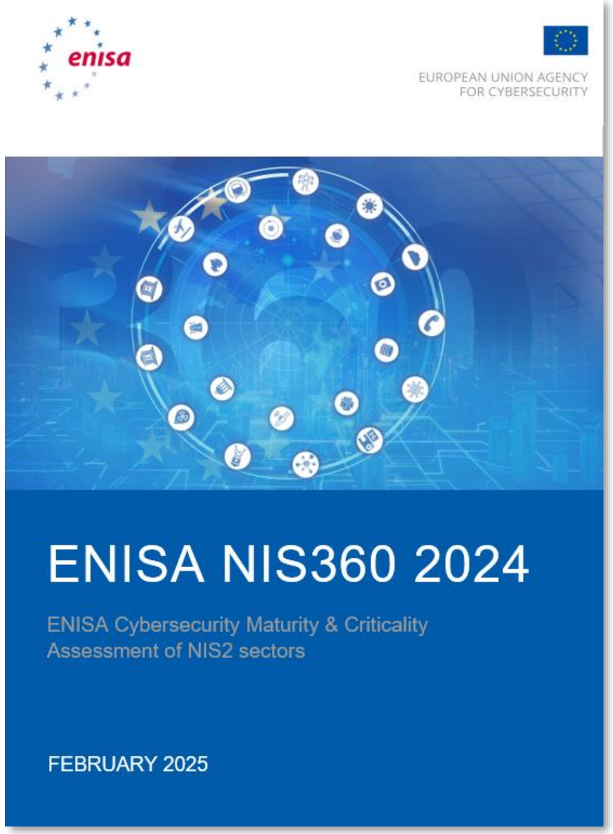
3 viewpoints:
Industry/sector,
national//sectorial authorities
EU level data sources

22

NIS2 sectors covered
(All Annex I sectors of high criticality)

1409

Respondents to ENISA surveys – 59 authorities, 1350 entities.



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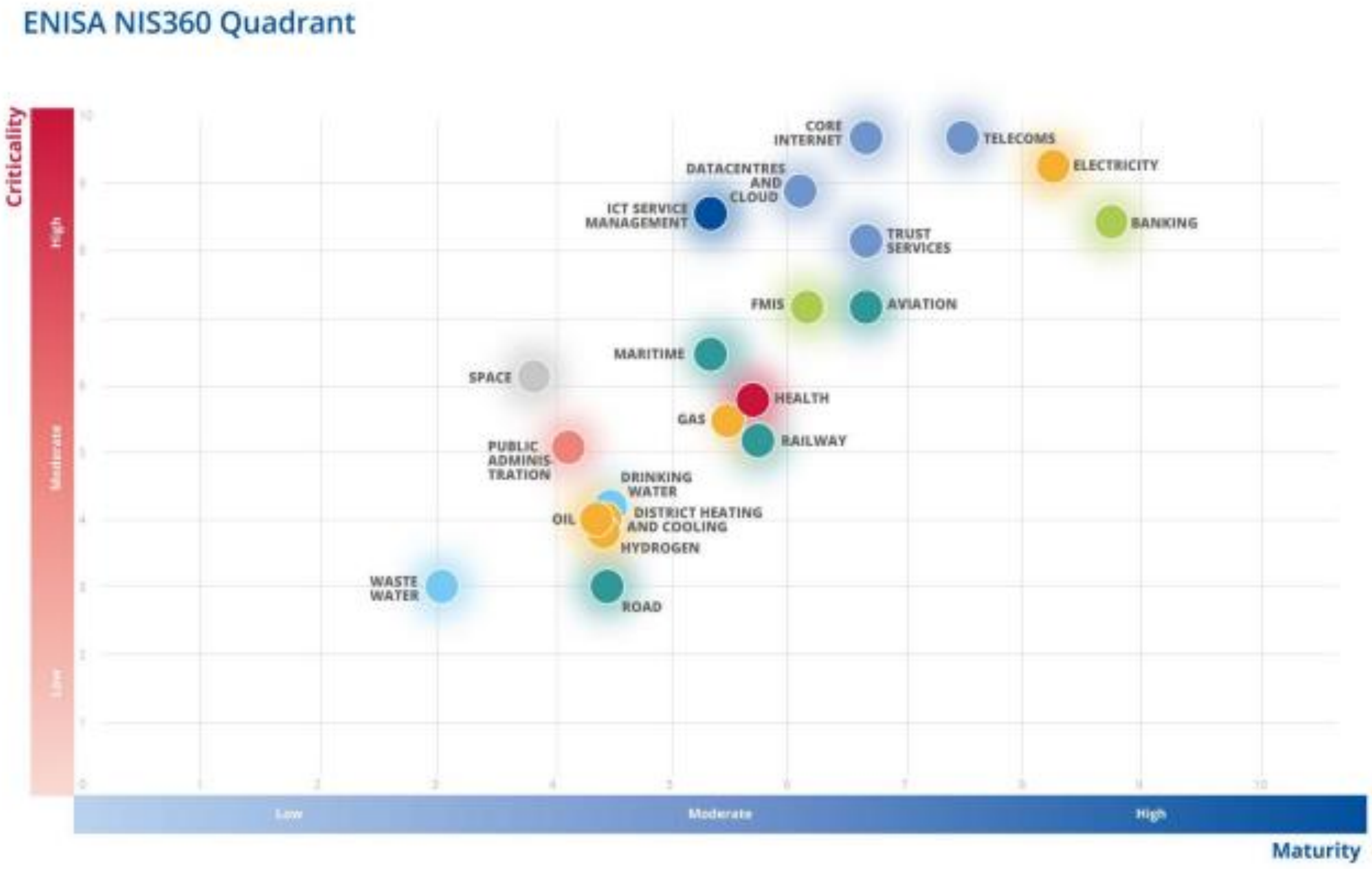
FOR CYBERSECURITY

ENISA NIS360 2024

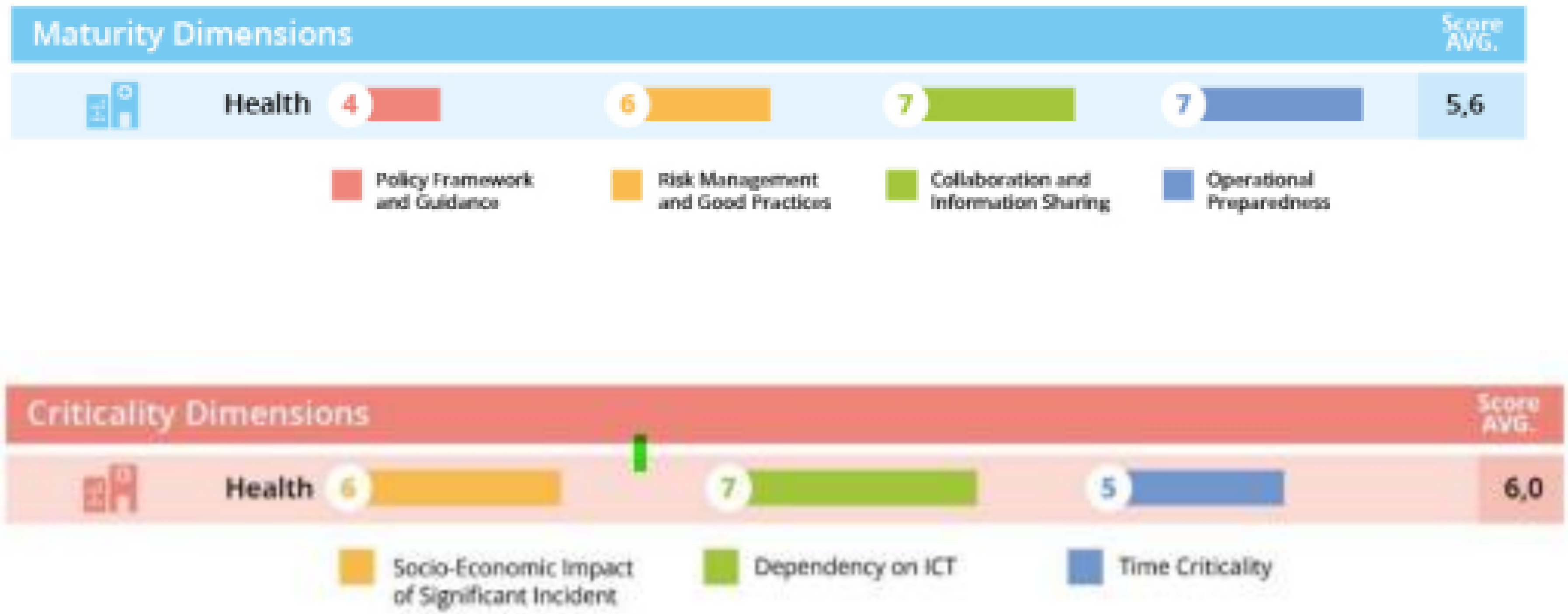
ENISA Cybersecurity Maturity & Criticality
Assessment of NIS2 sectors

FEBRUARY 2025

ENISA 360 SECTOR ASSESSMENT

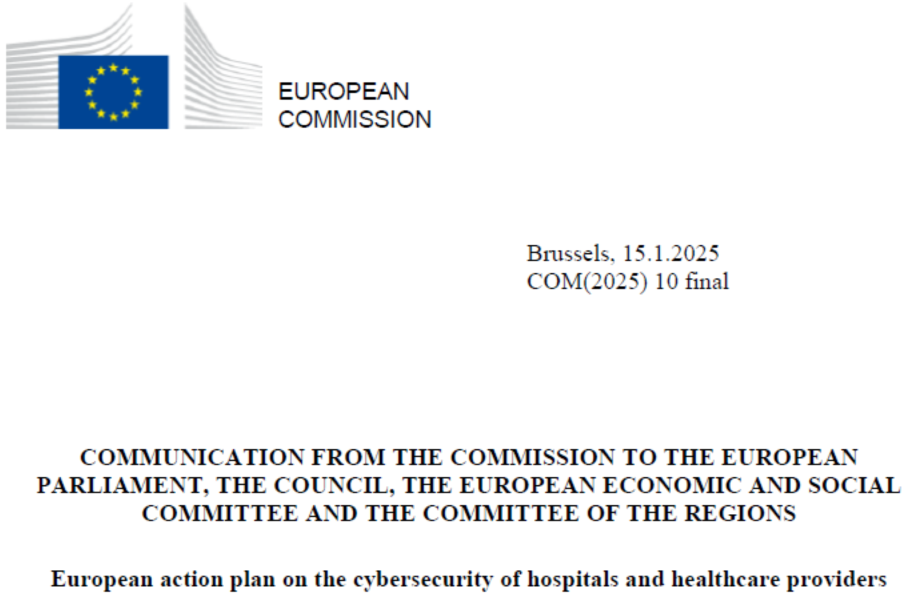


ENISA 360 HEALTH SECTOR ASSESSMENT



EUROPEAN ACTION PLAN ON THE CYBERSECURITY OF HOSPITALS AND HEALTHCARE PROVIDERS

- Published on 15.1.2025
- Objective
- Enhance cybersecurity resilience in hospitals and healthcare providers across the EU
- Strategic Pillars



EUROPEAN COMMISSION

Brussels, 15.1.2025
COM(2025) 10 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

European action plan on the cybersecurity of hospitals and healthcare providers

Prevent	Risk management, training, preparedness
Detect	Early warning system, detection tools
Respond	Incident response teams, EU reserve
Deter	Legal tools & cyber diplomacy

IMPLEMENTATION & SUPPORT FRAMEWORK (2025–2026)

- **European Cybersecurity Support Centre**

- Hosted by ENISA.

- Delivers guidance, tools, and cybersecurity services.

- **Workforce Development**

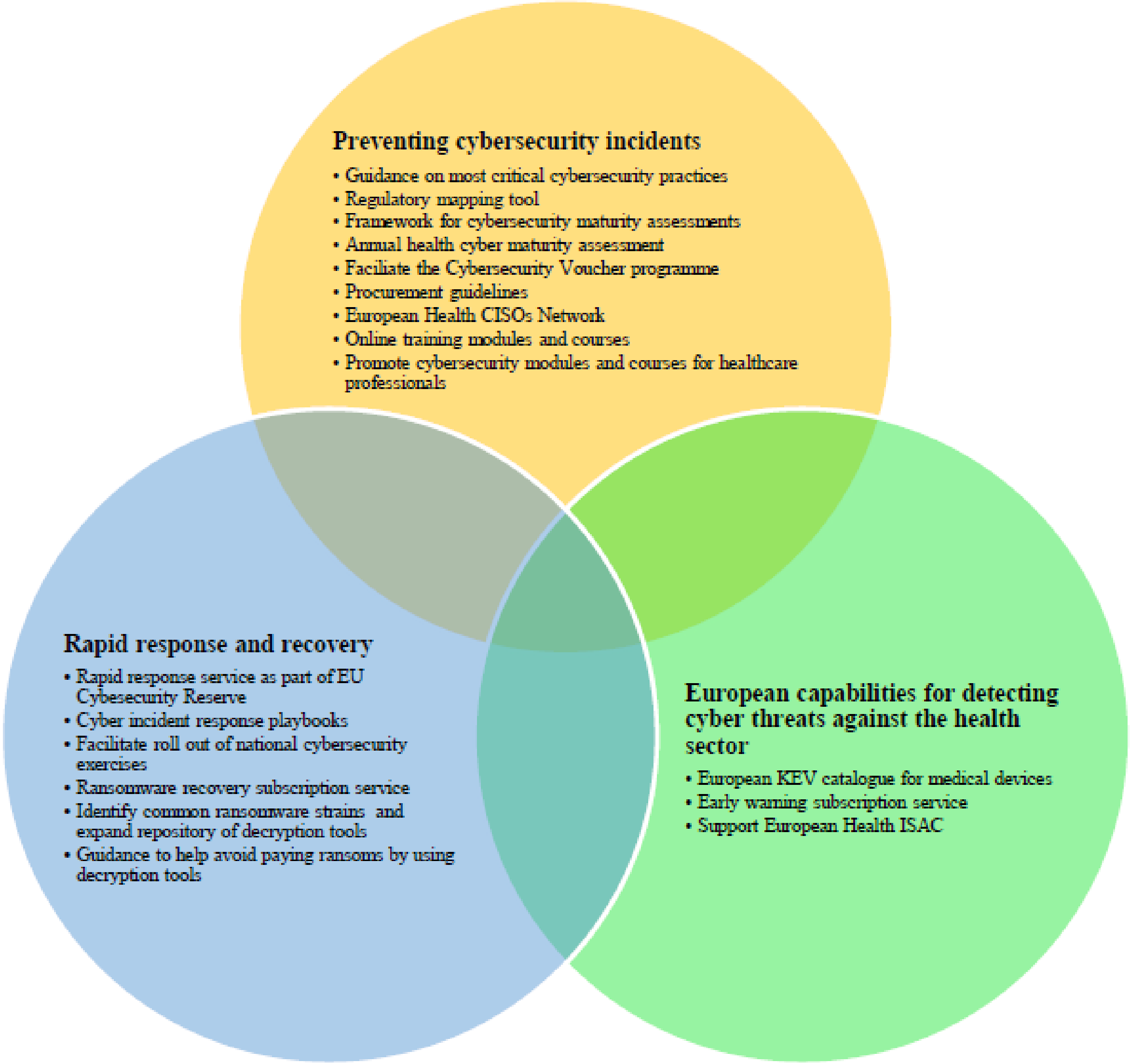
- Promote upskilling through the EU Cyber Skills Academy & Cybersecurity Skills Framework (ECSF).

- Address the shortage of qualified cybersecurity professionals in healthcare.

ENISA AND HEALTH ACTION PLAN

- Repackage and expand current service offer and architecture to strengthen the action and move the needle
- Create and enhance harmonized approaches when possible
- Reusing established methodology, tools and procurement strategy
- Actions done to support and empower Member States and health entities
- Service offer built in consultation with relevant stakeholder

CONCEPTS FOR THE SERVICE CATALOGUE



Preventing cybersecurity incidents

- Guidance on most critical cybersecurity practices
- Regulatory mapping tool
- Framework for cybersecurity maturity assessments
- Annual health cyber maturity assessment
- Faciliate the Cybersecurity Voucher programme
- Procurement guidelines
- European Health CISOs Network
- Online training modules and courses
- Promote cybersecurity modules and courses for healthcare professionals

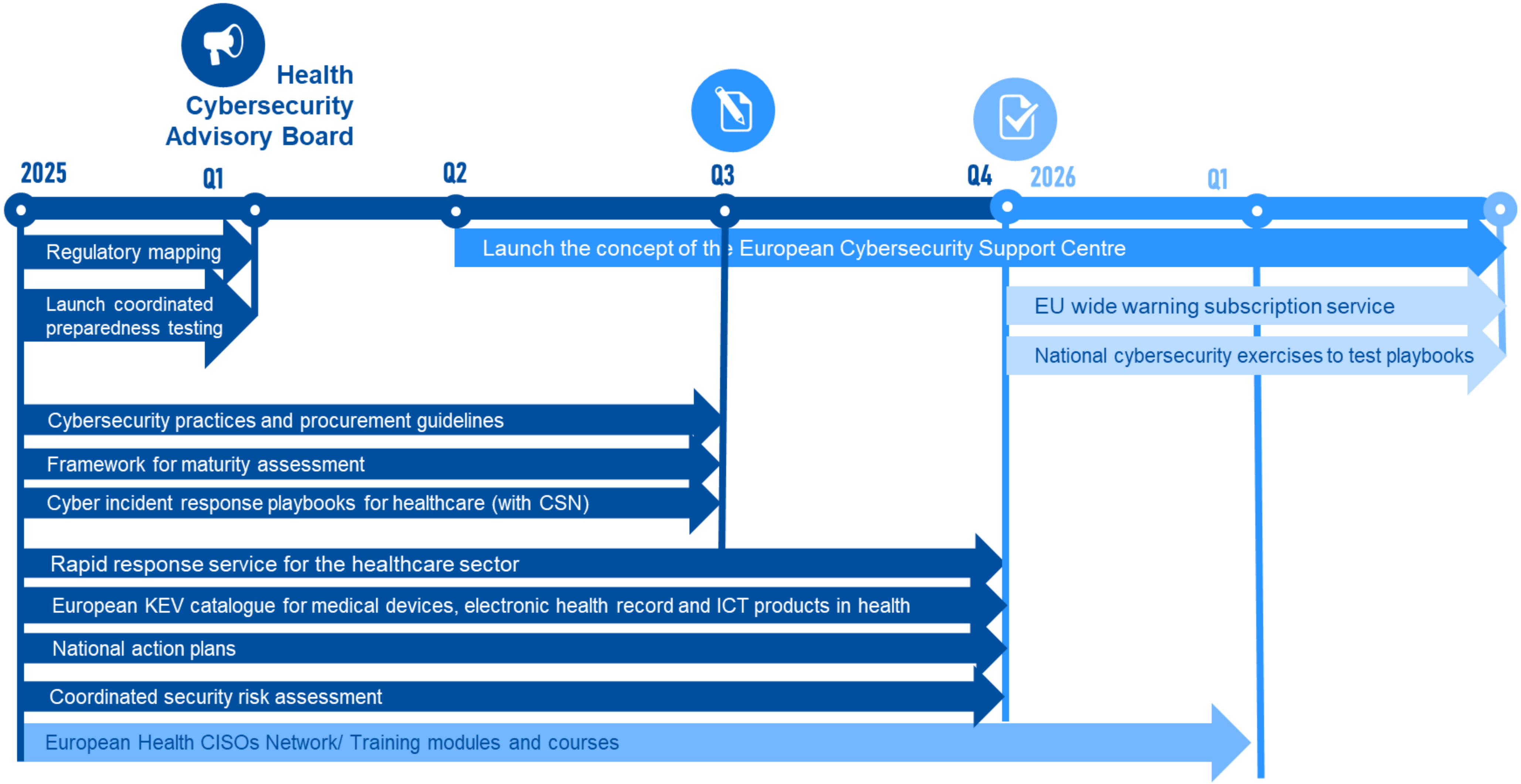
Rapid response and recovery

- Rapid response service as part of EU Cybesecurity Reserve
- Cyber incident response playbooks
- Facilitate roll out of national cybersecurity exercises
- Ransomware recovery subscription service
- Identify common ransomware strains and expand repository of decryption tools
- Guidance to help avoid paying ransoms by using decryption tools

European capabilities for detecting cyber threats against the health sector

- European KEV catalogue for medical devices
- Early warning subscription service
- Support European Health ISAC

HIGH LEVEL TIMELINE



Health Cybersecurity Advisory Board

2025

Q1

Q2

Q3

Q4

2026

Q1

Regulatory mapping

Launch coordinated preparedness testing

Launch the concept of the European Cybersecurity Support Centre

EU wide warning subscription service

National cybersecurity exercises to test playbooks

Cybersecurity practices and procurement guidelines

Framework for maturity assessment

Cyber incident response playbooks for healthcare (with CSN)

Rapid response service for the healthcare sector

European KEV catalogue for medical devices, electronic health record and ICT products in health

National action plans

Coordinated security risk assessment

European Health CISOs Network/ Training modules and courses

ENISA SECTORIAL SERVICES

Policy Implementation Support

- NIS investment study
- NIS360 Assessment
- Sectorial Guidance
- Procurement Guidelines
- Sector maturity assessment framework
- Coordinated risk evaluation
- Regulatory requirements mapping (NIS WS)

Situational Awareness and Incident Response Support

- Incident Reporting and Analysis (via CIRAS)
- Consolidated and bi-monthly threat landscape
- National Sectorial Threat Landscape*
- Attack surface and risk monitoring/assessment*
- Support National Incident Response*

Stakeholder and Community Support

- Support NIS CG WSs
- Secretariat of CNW and CyCLONe
- Support EU ISACs

Capacity Building and Preparedness

- Cyber Europe (focusing in specific sectors)
- Sectorial and National Exercise*
- Tailored Self-Service Training*
- Table Top Exercise*
- Sectorial Cyber Range*

*offered at request under ENISA Cybersecurity Support Action Programme

PAST ACTIVITIES RELATED TO HEALTH

November 2016

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Smart Hospitals

Security and Resilience for Smart Health Service and Infrastructures

NOVEMBER 2016

February 2020

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PROCUREMENT GUIDELINES FOR CYBERSECURITY IN HOSPITALS

Good practices for the security of Healthcare services

FEBRUARY 2020

January 2021

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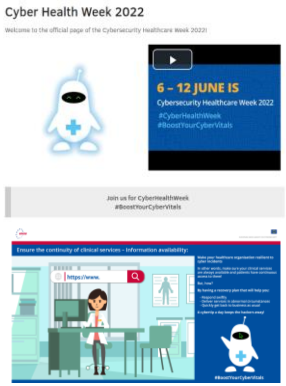
CLOUD SECURITY FOR HEALTHCARE SERVICES

JANUARY 2021

EU HEALTH ISAC


Cyber Health Week 2022

Welcome to the official page of the Cybersecurity Healthcare Week 2022!

6 – 12 JUNE IS

Cybersecurity Healthcare Week 2022

#CyberHealthWeek

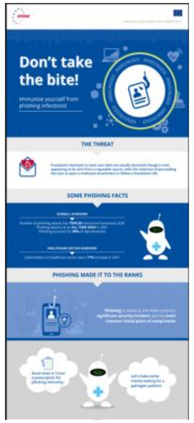
#BoostYourCyberVitals

Join us for CyberHealthWeek

#BoostYourCyberVitals

Ensure the continuity of clinical services – Information availability:

#BoostYourCyberVitals

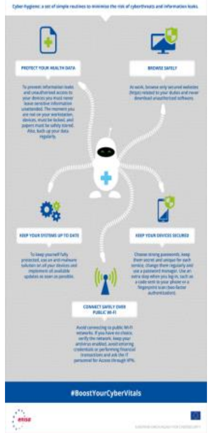

Don't take the bite!

Immunise yourself from phishing infections!

THE THREAT

SOME PHISHING FACTS

PHISHING MADE IT TO THE RANKS


Cyber Hygiene: a set of simple routines to minimise the risk of cyberthreats and information leaks.

PROTECT YOUR HEALTH DATA

BROWSE SAFELY

KEEP YOUR SYSTEMS UP TO DATE

KEEP YOUR DEVICES SECURED

CONNECT SAFELY OVER PUBLIC WI-FI

#BoostYourCyberVitals

9th ENISA eHealth Security Conference

Empowering healthcare through cybersecurity

November 6th 2024 | Budapest

enisa 20 years!

NATIONAL CYBER SECURITY CENTER HUNGARY

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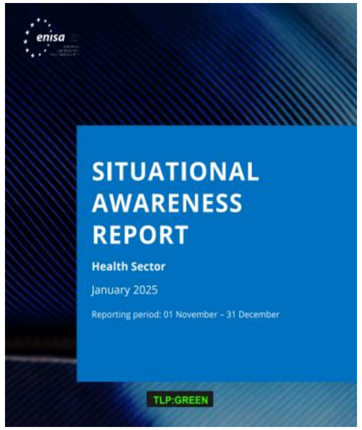
EUROPEAN UNION AGENCY FOR CYBERSECURITY

ENISA THREAT LANDSCAPE: HEALTH SECTOR

(January 2021 to March 2023)

JULY 2023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SITUATIONAL AWARENESS REPORT

Health Sector

January 2025

Reporting period: 01 November – 31 December

TLP:GREEN

CYBER EUROPE enisa 2022

EU HAP - LATEST NEWS

- **Contribution agreement for 6M € for three years to be confirmed**
- **ENISA participates in workshops and series of Horizontal Working Party CI meetings together with the Commission**
- **Discussion on funding in early May**
- **Some tasks already launched**
- **Support Centre’s service catalogue to be discussed with MS**

10TH ENISA eHealth Cyber security Conference

Where	Bucharest
When	16 September 2025
Registrations	[Events | ENISA]

✉ eHealthSecurity@enisa.europa.eu

THANK YOU FOR YOUR ATTENTION

DISCUSSION AND QUESTIONS

📱 Safeguarding cybersecurity in the EU health sector

✉ eHealthSecurity@enisa.europa.eu