EUROPEAN UNION AGENCY
FOR CYBERSECURITY

CYBERSECURITY IN HEALTH:

THREATS, CHALLENGES AND ENISA'S CONTRIBUTION

Maria Papaphilippou
Cybersecurity Officer

EHFCN/AIM joint event

12 | 12 | 2024

AGENDA

1. Cybersecurity threat landscape for the health sector

2. ENISA's contribution in the health sector

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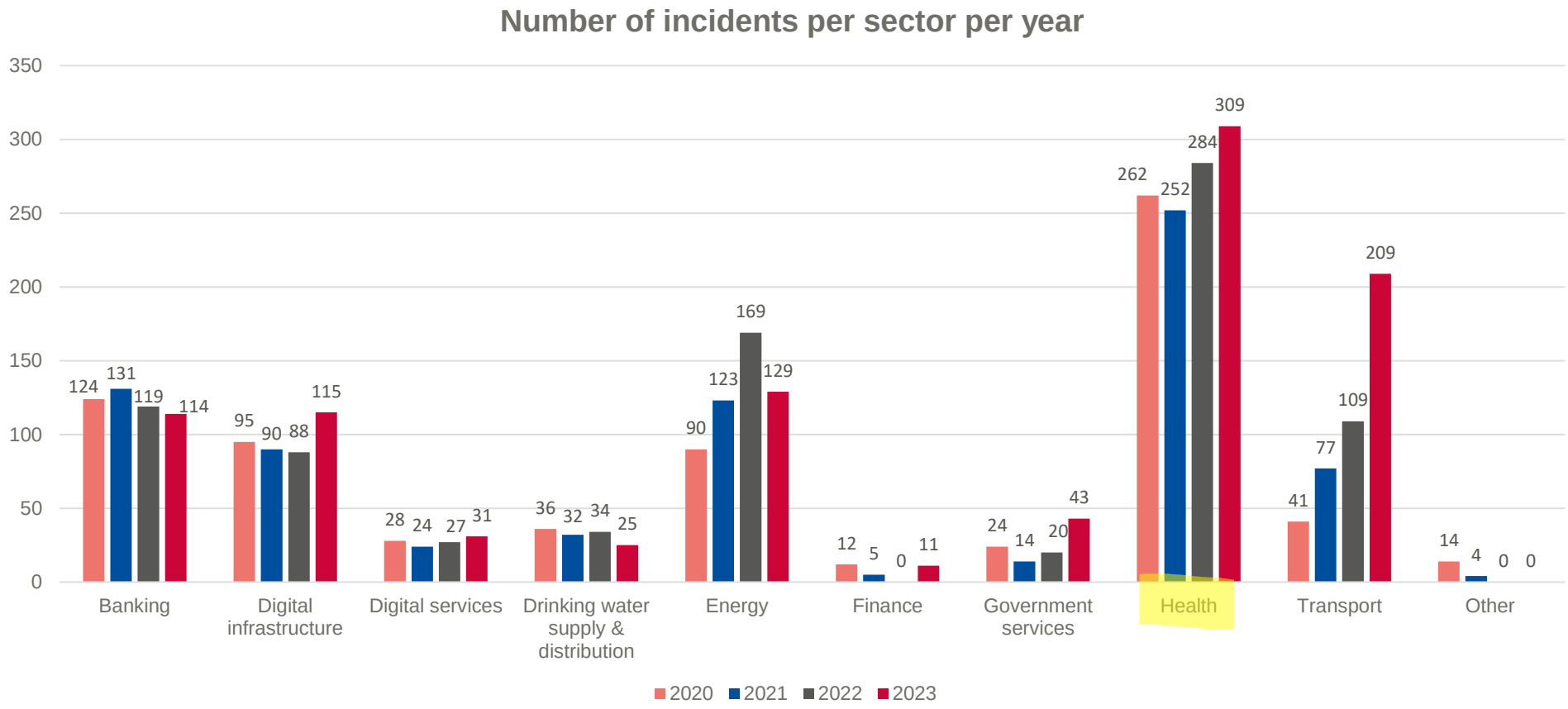
CYBERSECURITY THREAT LANDSCAPE FOR THE HEALTH SECTOR

CYBERESECURITY CHALLENGES IN HEALTH

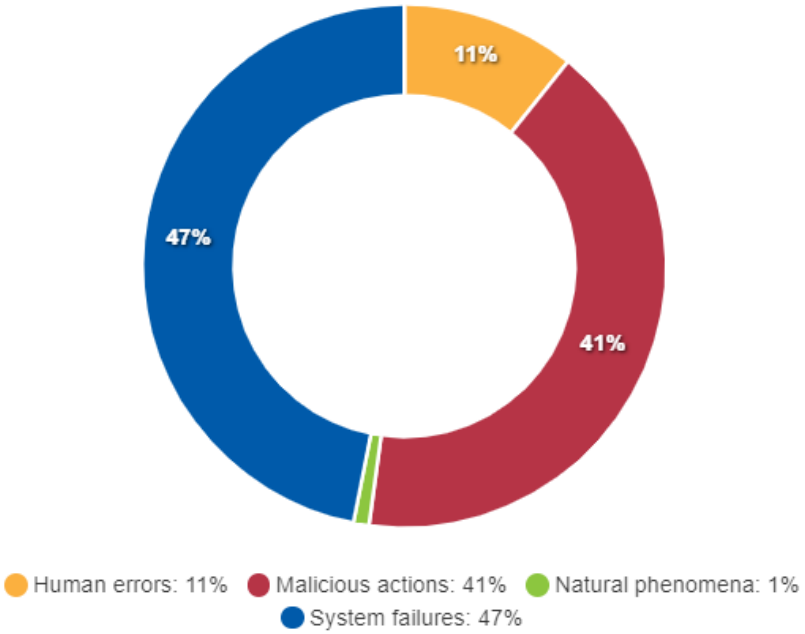
- Ransomware attacks
- Increase in data breaches
- Supply chain attacks
- Low cybersecurity maturity
- Lack of security awareness
- Legacy systems
- Shortage in cybersecurity skills

NIS INCIDENT REPORTING

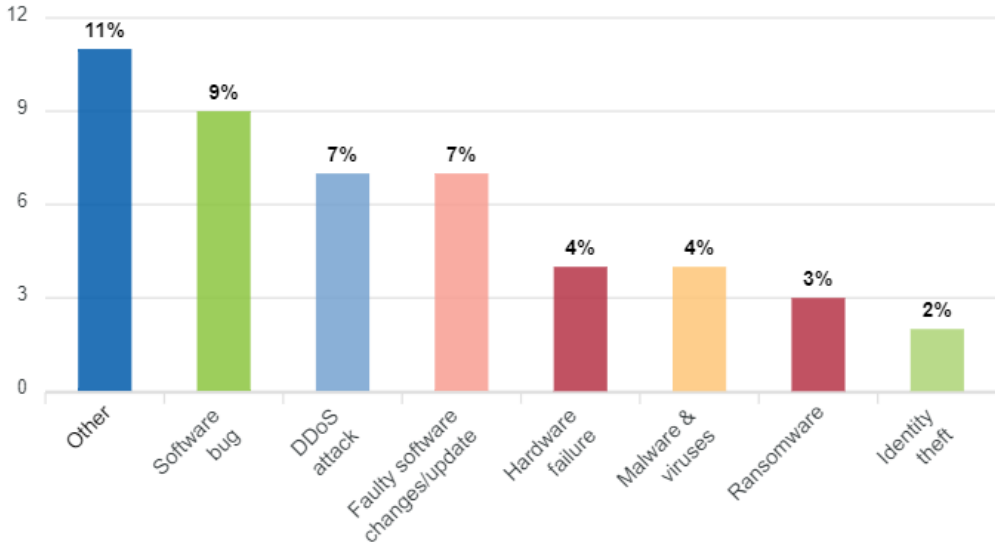


NIS INCIDENT REPORTING (2)

Nature of the incident (%)



Technical causes (%)



ENISA THREAT LANDSCAPE (ETL): HEALTH SECTOR

- **Data:**
- Jan 2021 - Mar 2023
- open source information

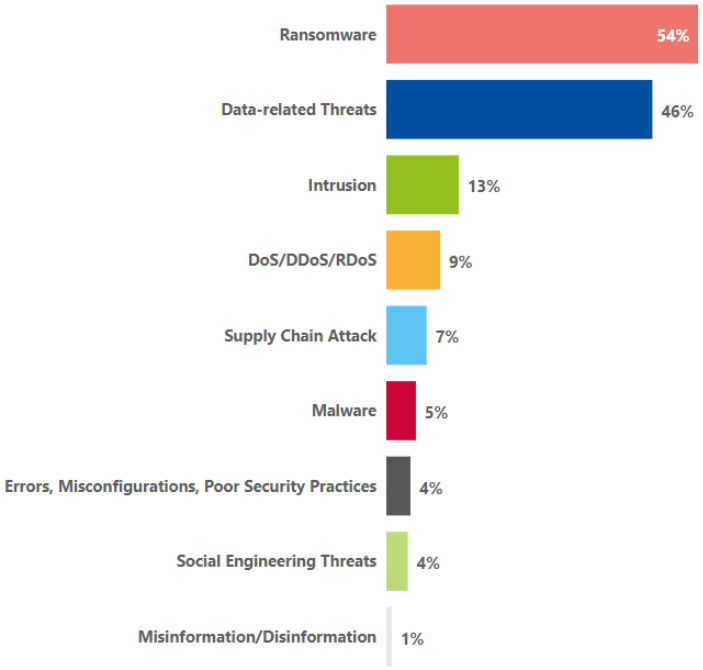
- **Scope:**
- EU
- Entities under NIS

- **Sample:**
- 215 incidents in the EU

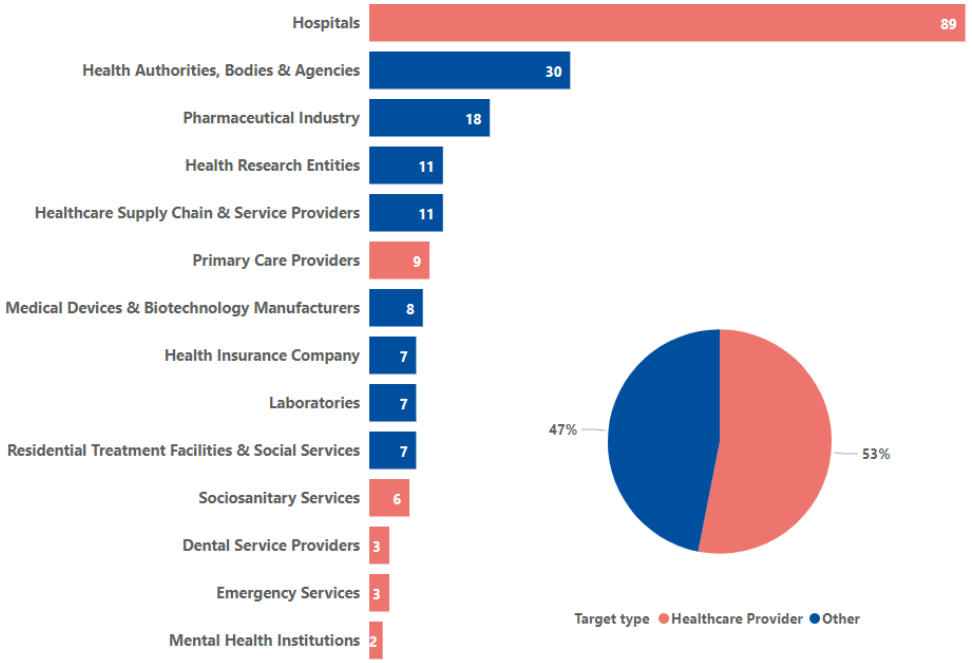
- **Analysis:**
- Observed activity (incidents)
- Prime threats
- Actors and motivation
- Targets
- Impact type
- Affected countries
- Trends

ETL HEALTH SECTOR: THREATS AND ENTITIES AFFECTED

Threats in health sector (Jan 2021 - Mar 2023)

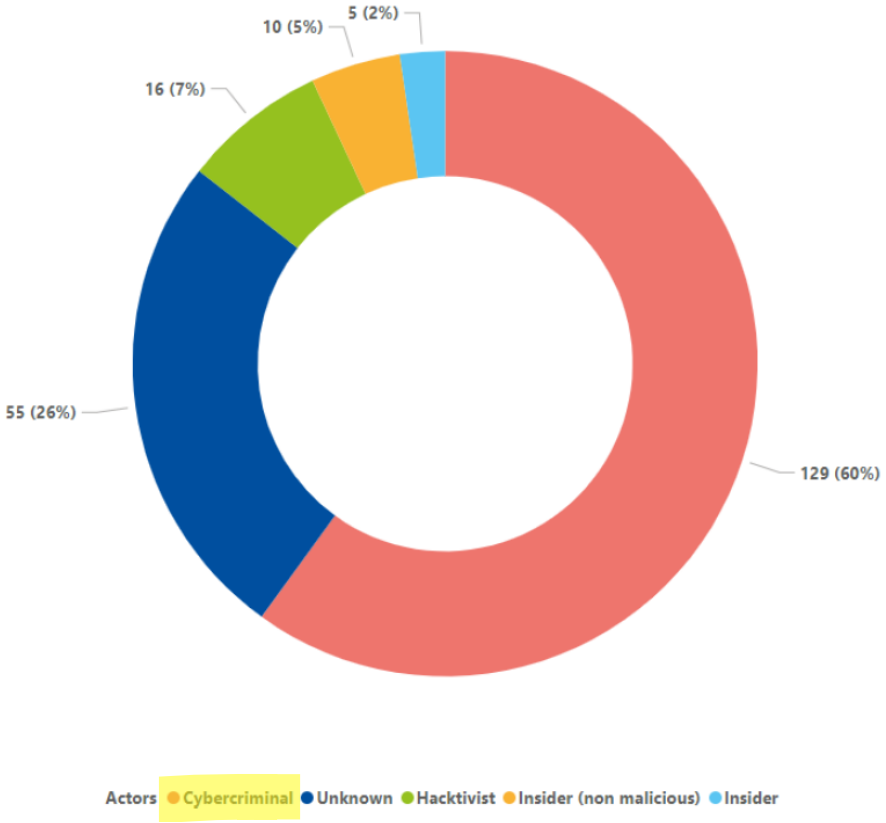


Number of incidents per entity type (targets)

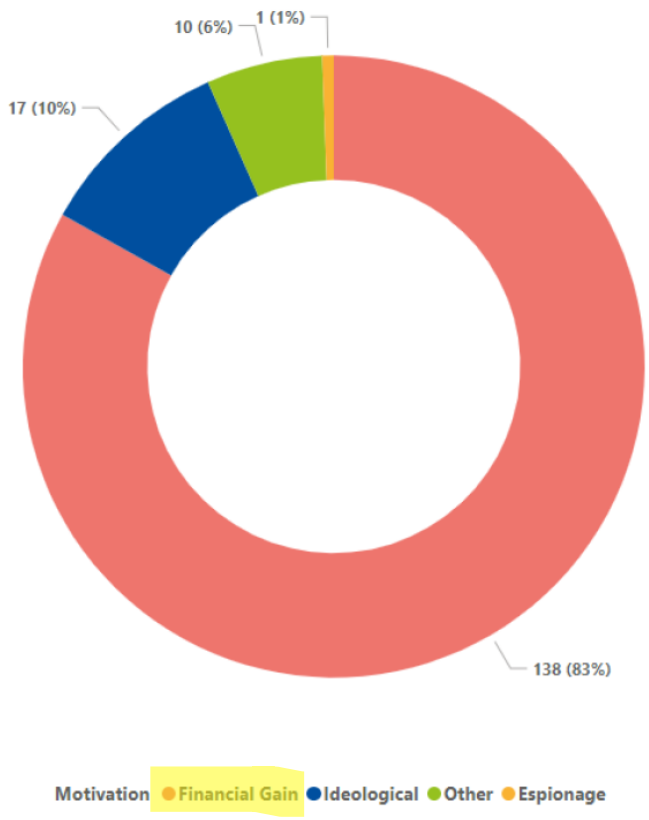


ETL HEALTH SECTOR: THREAT ACTORS

Actor types

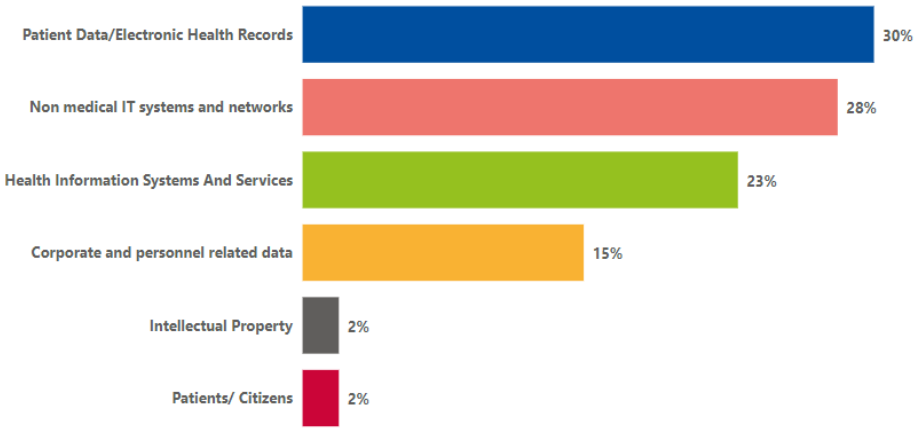


Motivation

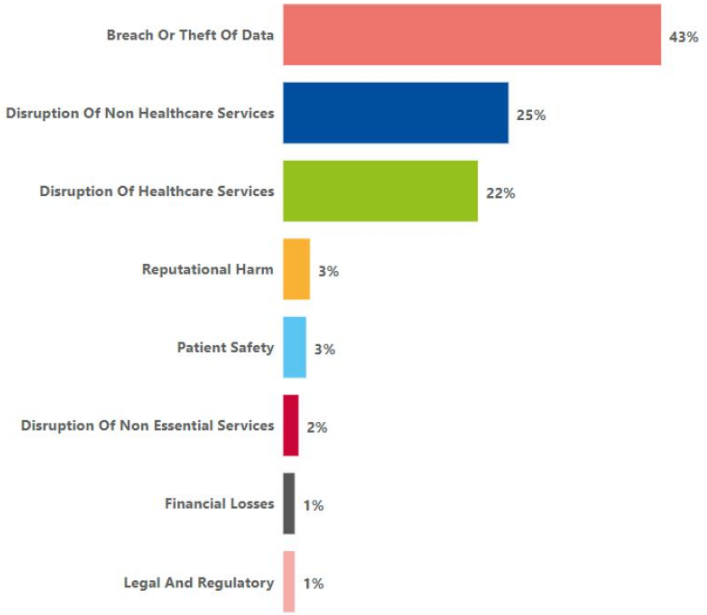


ETL HEALTH SECTOR: IMPACT

Affected assets



Consequences



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ENISA'S CONTRIBUTION IN THE HEALTH SECTOR

2022 NIS INVESTMENTS REPORT

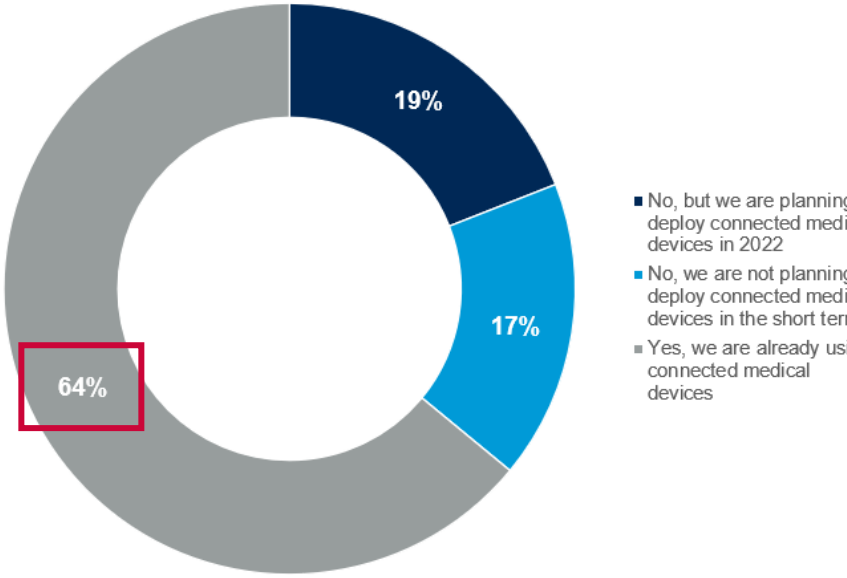
Deep dive in health:

- 1080 OES/DSP
- 189 health OES
- 27 EU MS

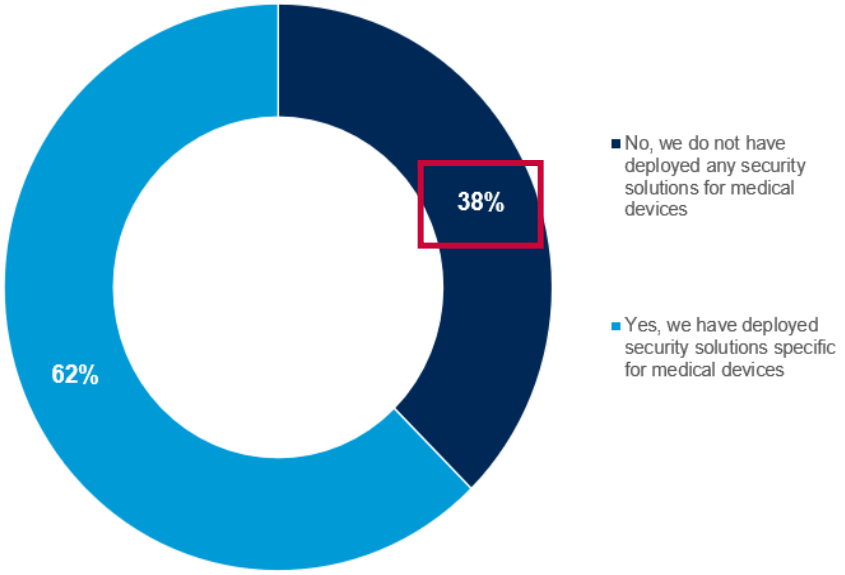
Additional questions on:

- medical devices
- cloud
- awareness

MEDICAL DEVICE SECURITY

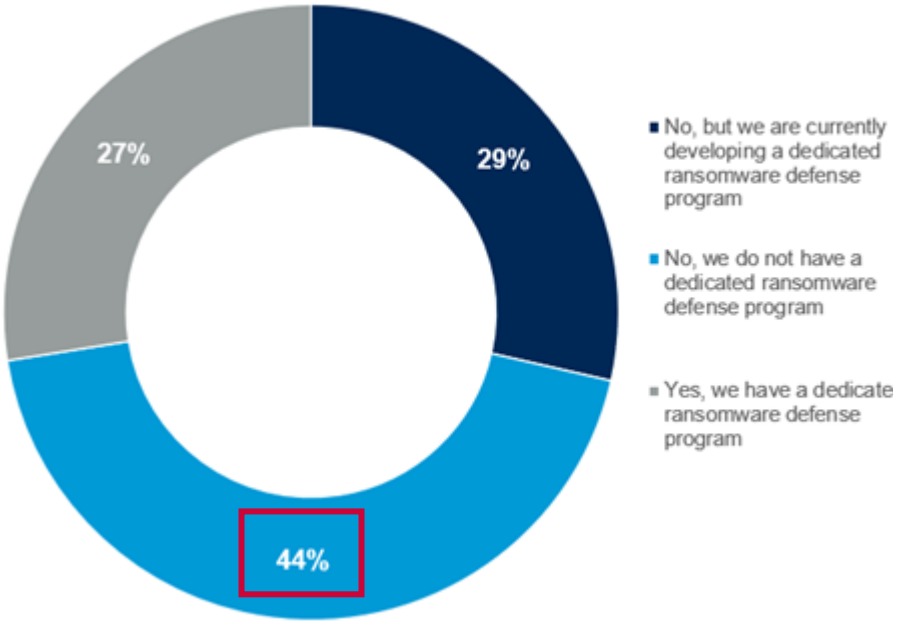


Connected medical devices in health

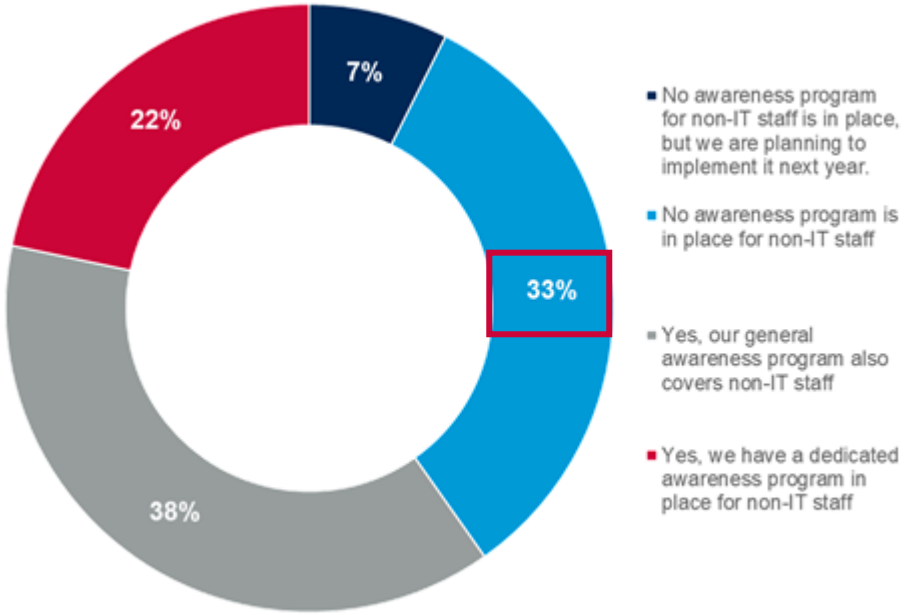


Security solutions for medical devices

PROTECTION AGAINST RANSOMWARE



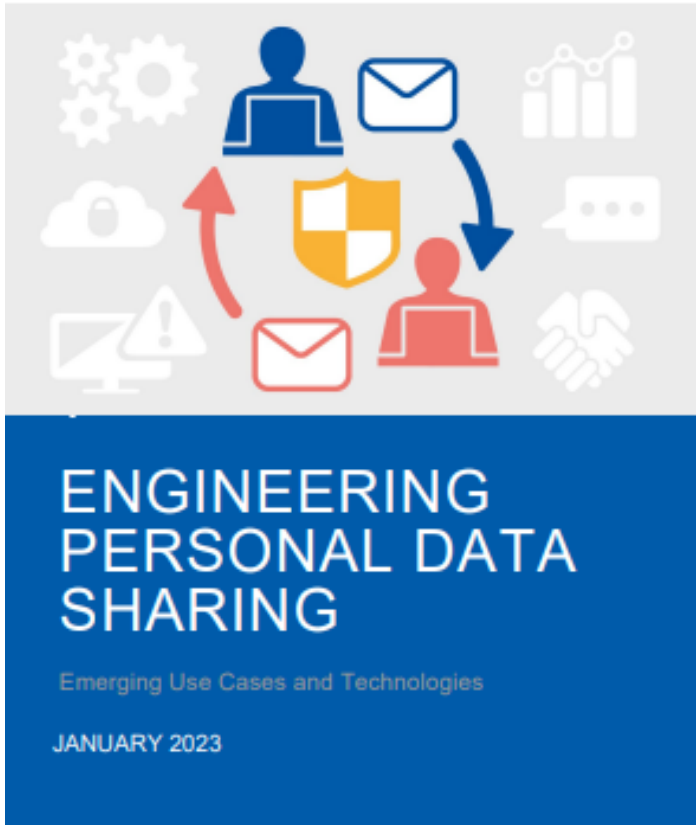
Ransomware defense programs



Awareness raising for non-IT staff

ENGINEERING PERSONAL DATA SHARING

- Engineering for privacy preserving data sharing
- Use cases in health
- Challenges and solutions



https://www.enisa.europa.eu/publications/engineering-personal-data-sharing

OTHER ENISA REPORTS

November 2016

February 2020

January 2021

ANNUAL EHEALTH SECURITY CONFERENCE

https://www.enisa.europa.eu/events/9th-enisa-ehealth-security-conference

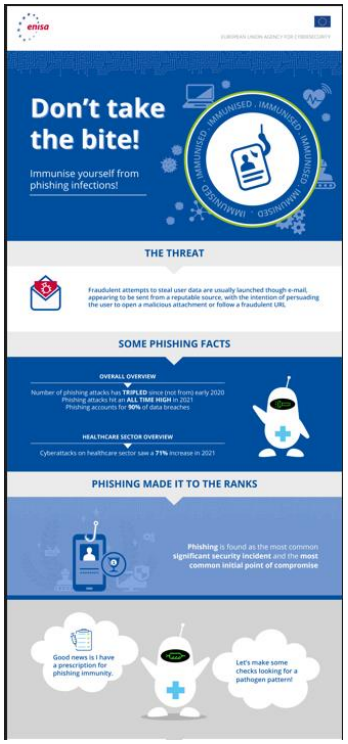
- Chaired by Z-CERT (NL)
- Membership free of charge, travel and accommodation expenses by members
- Targeting healthcare providers and CERTs/CSIRTs
- Secretary: EH-ISAC@Z-CERT.NL

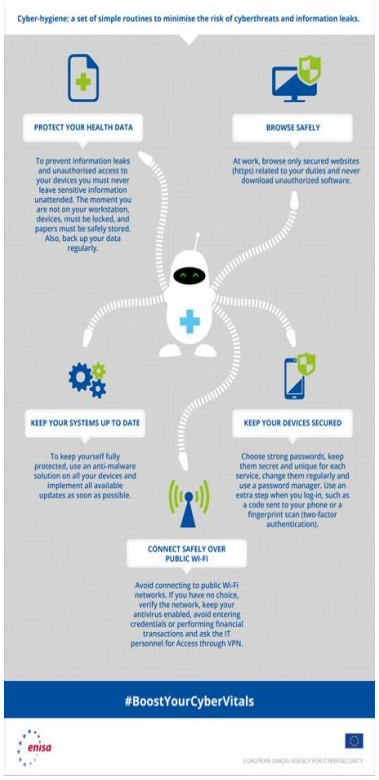
CYBER EUROPE 2022

- Every 2 years
- Focus on one sector
- Series of simulated cybersecurity incidents
- Escalation to an EU level crisis
- Findings in the after action report

https://www.enisa.europa.eu/news/enisa-news/cyber-europe-2022-testing-the-resilience-of-the-european-healthcare-sector
https://www.enisa.europa.eu/publications/cyber-europe-2022-after-action-report

AWARENESS RAISING CAMPAIGN FOR HEALTH





https://www.enisa.europa.eu/topics/cybersecurity-education/awareness-campaigns/boostyourcybervitals

AR-IN-A-BOX

A DIY guide for designing a custom cyber-awareness program

https://www.enisa.europa.eu/topics/cybersecurity-education/awareness-raising-in-a-box

KEY TAKEAWAYS

- Cybersecurity threat landscape influenced by unstable **geopolitics, disinformation and sophistication.**
- The health sector is **critical** and must be protected.
- **Cybersecurity investments** to ensure resilience of critical EU infrastructure.
- **Awareness at board level** will improve maturity and drive cybersecurity investments.
- **Staff awareness/training** is key, especially for medical / clinical staff.
- Several EU regulatory developments requiring **cooperation and support** by Member States and private sector.
- **Information sharing** and increased **cooperation** is crucial.

THANK YOU FOR YOUR ATTENTION

European Union Agency for Cybersecurity
Agamemnonos 14, Chalandri 15231
Attiki, Greece

+30 28 14 40 9711

info@enisa.europa.eu

www.enisa.europa.eu