22nd Innovation Forum for Automation

CYBER RESILIENCE IN AUTOMATION:

UPCOMING EU REGULATIONS AND WHAT MANUFACTURERS AND OPERATORS SHOULD DO NOW!

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https://lemontaps.com/tjpdfde9xo/

meyer-matthias

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It is mandatory for companies to protect themselves and their products against cyber attacks

Increasing number of vulnerabilities and attacks

Companies from all domains

Automotive | Health | Finance | Production | ...

Upcoming laws regarding Cyber Resilience

- Network and Information Systems Directive (NIS 2)
- Digital Operational Resilience Act (DORA)
- EU Cyber Resilience Act (CRA)

New stars are born: The EU has issued new regulations!

Cyber Resilience Act (CRA)

Regulation

Security of **„products with digital elements“**

To be fulfilled by September 2026/ December 2027

Network and Information Systems Directive (NIS-2)

IT/OT Security for „KRITIS“, essential, and important entities

To be fulfilled by ~~Oct 18th, 2024~~ Sometime in 2025?

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EU Cyber Resilience Act

Horizontal Cybersecurity Requirements for Products with Digital Elements

Applicable to:

Products (software and/or hardware) that may have a data connection to a device or network and are made available on the European market in the course of a commercial activity

Consequences of non-conformance:

- No CE marking / prohibited to be sold inside EU
- Product warning by federal agency (e.g., BSI, ENISA)
- Penalty payments up to millions of €

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EU Cyber Resilience Act

Who is affected and how?

→ Make products compliant with all CRA requirements
→ Main focus of the regulation

Manufacturers

→ Only compliant products
→ Own name/trademark or substantial modifications
→ partly treated as Manufacturer!

Importers & Distributors

Operators (Users)

→ No obligations

Wait for the NIS-2 part of the presentation! ☺

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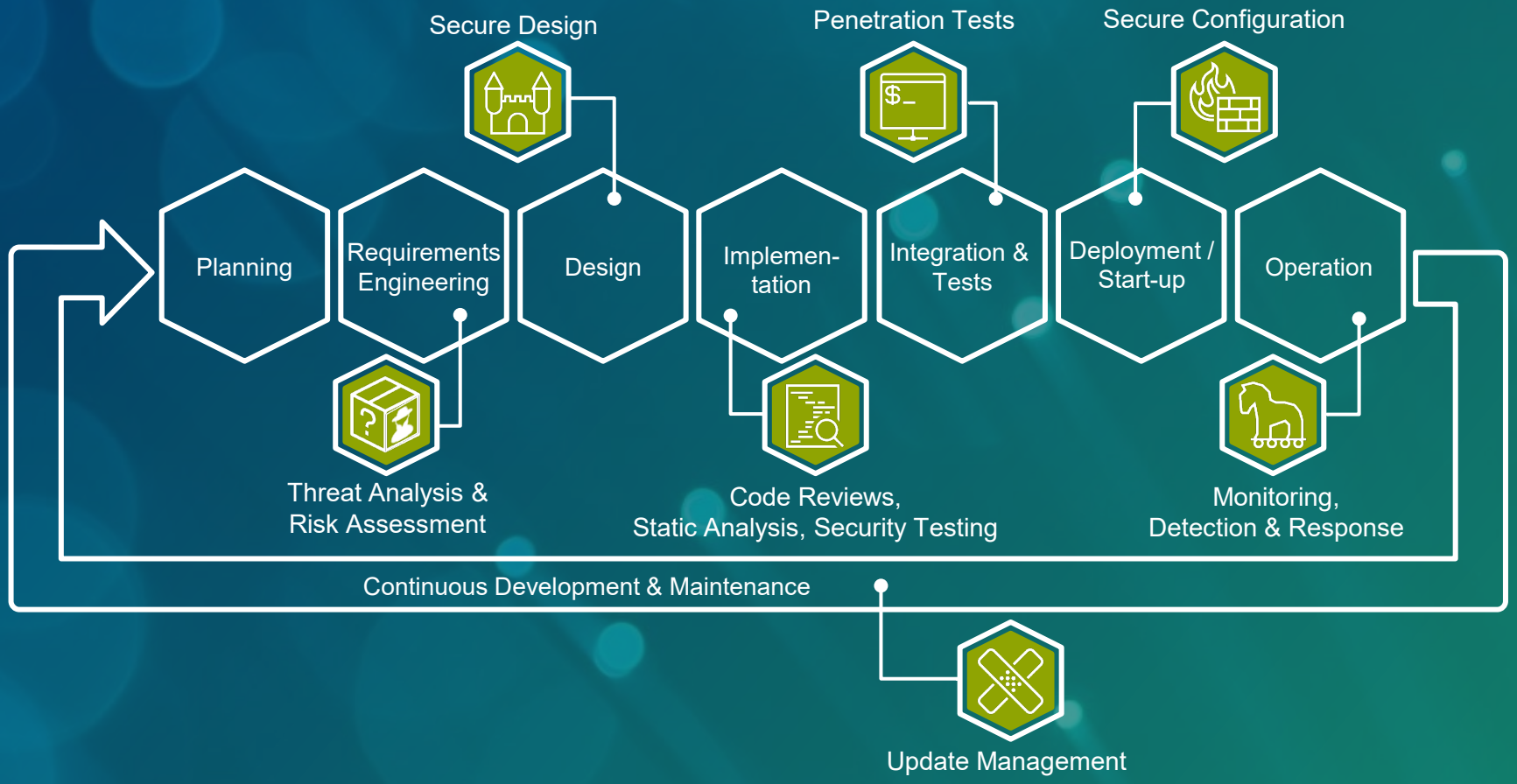
Secure Product Lifecycle (Security by Design)

Requires Security Activities along the entire product life cycle – until end of operation!



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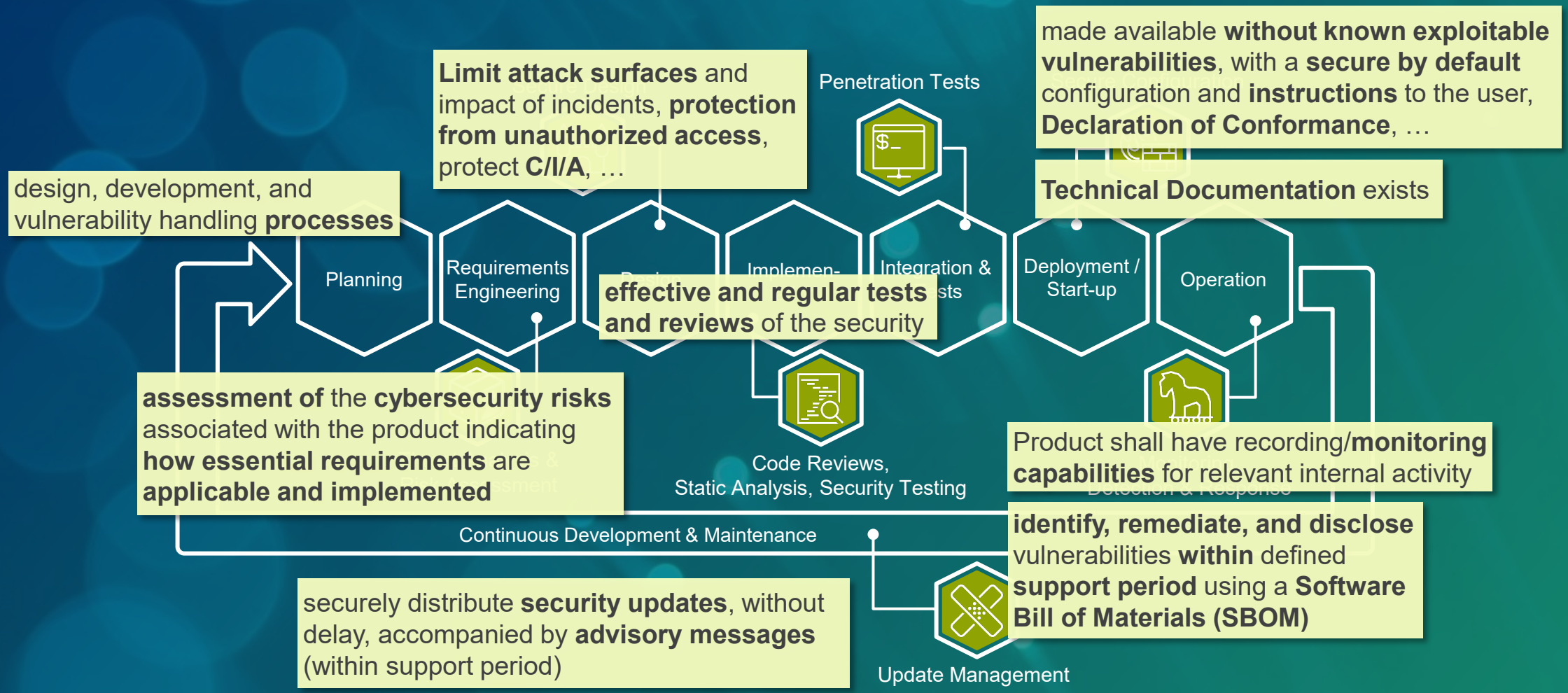
Secure Product Lifecycle (Security by Design)

Mapping with EU Cyber Resilience Act requirements (excerpt)



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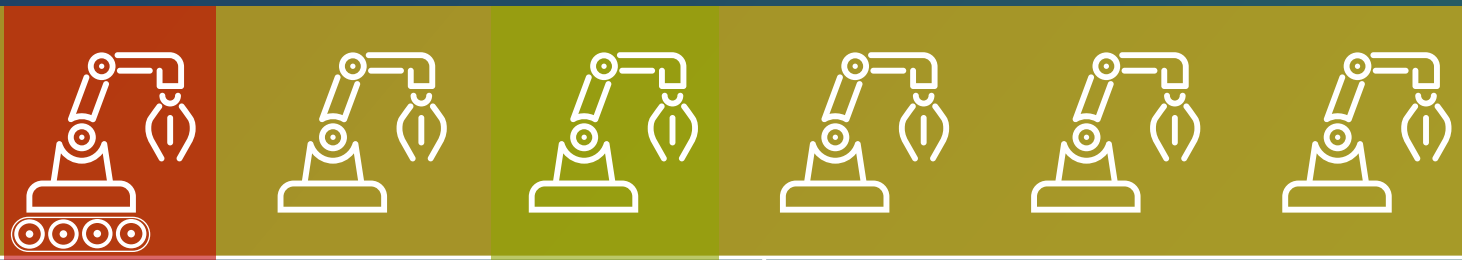
Deadlines & Conditions for compliance

Every single product counts!

Supplier Part

Compatible support period of CRA-compliant supplier parts

Product Type A



Support period
Min. 5 years, BUT corresp. to expected time of use

Substantial modification

Full compliance required!

Spare part

No compl. required

Sept. 11th, 2026

Comply with reporting obligations:
Actively exploited vulnerability → Early warning to ENISA within 24h

For all products on the market!

Dec. 11th, 2027

Full compliance with CRA requirements

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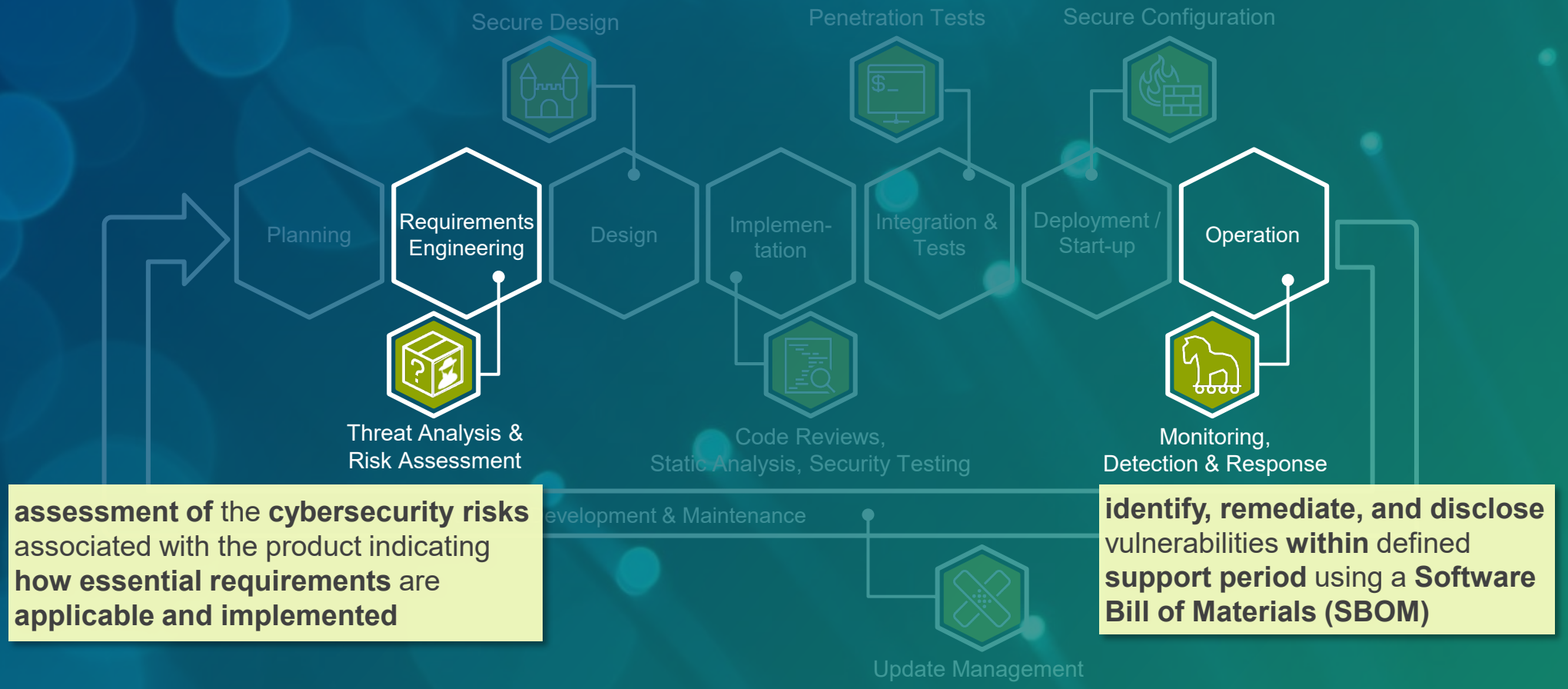
How to Prepare for the Cyber Resilience Act?

Where to start?



assessment of the **cybersecurity risks** associated with the product indicating **how essential requirements** are **applicable and implemented**

identify, remediate, and disclose vulnerabilities **within** defined **support period** using a **Software Bill of Materials (SBOM)**

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How to Prepare for the Cyber Resilience Act?

Where to start:

1. Security is not a one-time thing:
   Establish a **Product Security Incident Response Team (PSIRT)!**
   → **React and report timely.**

2. **Know your risks!**
   Conduct **Threat Analysis & Risk Assessment** for your products!
   → **Make informed decisions & plans.**

3. Conduct **Cyber Resilience Assessments:**
   Identify **status quo &** define **roadmaps** for improving products & engineering processes!
   → **Know what to do when.**

New stars are born: The EU has issued new regulations!

Cyber Resilience Act (CRA)

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Network and Information Systems Directive (NIS-2)

Who is affected?

Essential Entities (examples)

- Digital Infrastructure: DNS providers
- Energy: Electricity Producers
- Banking: Credit institutions
- ICT service management (B2B): Managed service providers

Primarily large organizations

Operators of Critical Infrastructure

Important Entities (examples)

- Postal service providers
- Manufacturing: Manufacture of
  - computer, electronic and optical products
  - machinery and equipment

Medium-sized & large organizations

! Obligation to register:
Check affectedness and register in time!

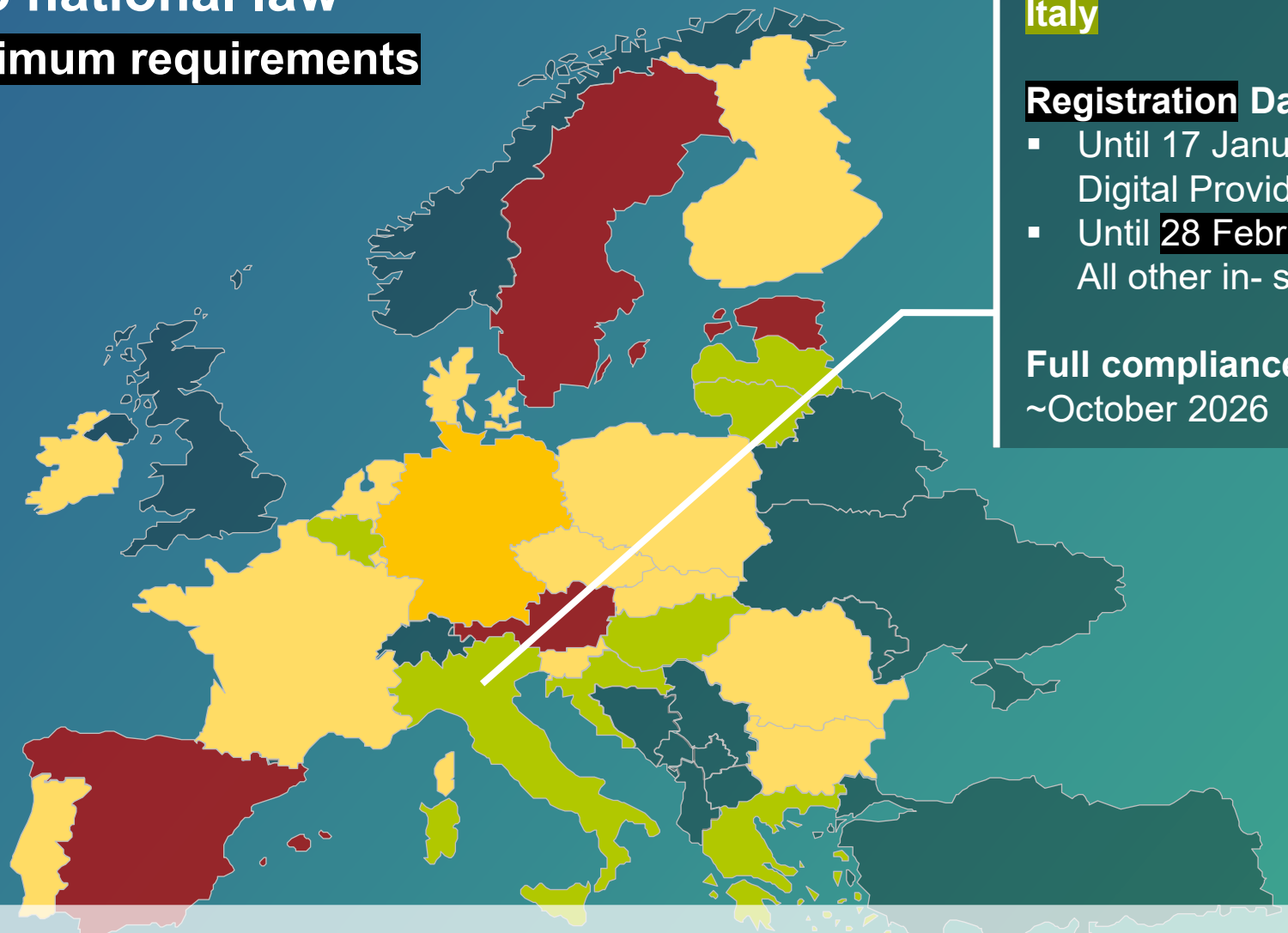
BSI online check: https://betroffenheitspruefung-nis-2.bsi.de/

Transposition into national law

Directive defines minimum requirements

- Unknown
- Draft exists
- Implemented

(As at 18.12.2024)



Italy

Registration Dates:

- Until 17 January 2025: Digital Providers
- Until 28 February 2025: All other in- scope entities

Full compliance due ~October 2026

! Locations in several countries? → The local implementation laws must be taken into account!

Core NIS-2 requirements (Article 21 & 23)

Cybersecurity risk-management measures (Article 21)

- Take technical, operational and organisational measures to manage the security risks of IT used for operations or the provision of services, including at least:
  - policies on risk analysis and information system security (ISMS)
  - incident handling
  - business continuity, such as backup management and disaster recovery, and crisis management;
  - supply chain security
  - […]

Reporting obligations (Article 23)

- Essential and important entities notify, without undue delay, its CSIRT and possibly users of their services of any incident that has a significant impact on the provision of their services
- Significant: (a) capable of causing severe operational disruption or financial loss, (b) capable of causing considerable material or non-material damage
- Within **24 hours**: Early warning
- Within **72 hours**: Initial assessment of severity and impact
- Within **1 month**: Final report

! BSI-Grundschutz, ISO27001, TISAX v6 Lv. 2 provide very good orientation

Duties and liability of the management

Members of the Management bodies of essential and important entities…

… approve the cybersecurity risk-management measures taken to comply with Article 21, oversee its implementation and can be held liable for infringements by the entities of that Article.

… are required to follow training on a regular basis to gain sufficient knowledge and skills to identify risks and assess cybersecurity risk-management practices

… can be temporarily prohibited from exercising managerial functions (at chief executive officer or legal representative level) [applies to essential entities only]

… can be held liable for breach of their duties to ensure compliance with this Directive

How to Prepare for NIS-2?

What to do now:

1

Do you have to comply with NIS-2, and in which countries?

Conduct a legal assessment! If affected, register in time!

Know if & how you are affected.

2

Be prepared for a cyber security incident anyway!

Train managers; do a GAP analysis; Setup an ISMS; setup and practice a business continuity & recovery plan (cf. Article 21)!

Know what to do in an incident & recover fast.

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How to Prepare for CRA & NIS-2?

CRA

Cyber Resilience Act

Security of **„products with digital elements“**

1. **Establish PSIRT**
2. **Threat & Risk Analysis**
3. **Cyber Resilience Assessments**

NIS-2

Network and Information Systems Directive (NIS-2)

IT/OT Security for „KRITIS“, essential, and important entities

1. **Clarify affectedness & register**
2. **Business continuity & recovery plan** (+ other parts of Art. 21)

Contact

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