PHYSEC
SECURITY FOR THINGS

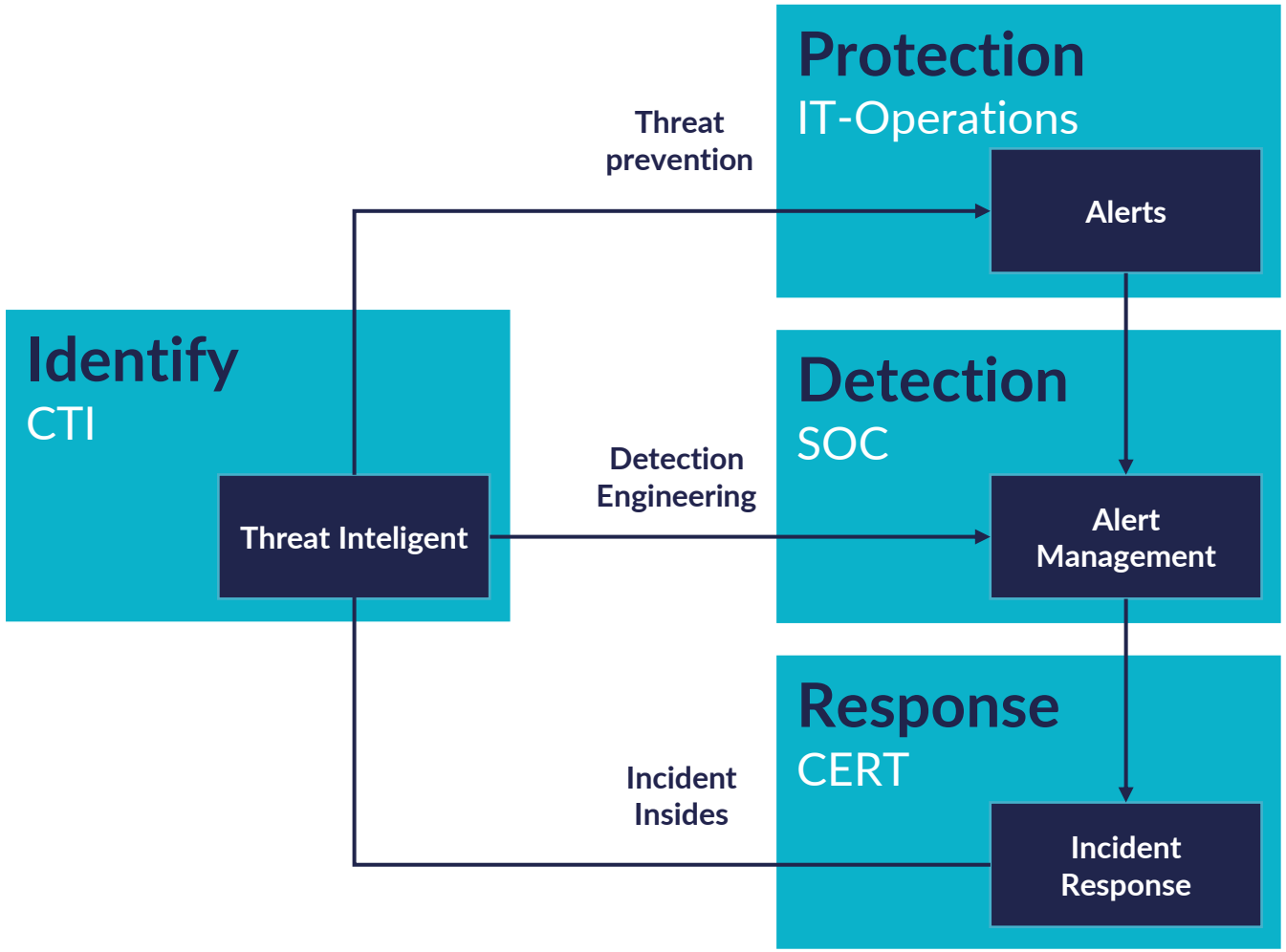
Übergang von der Cyber- zur Cyber-Physischen Sicherheit

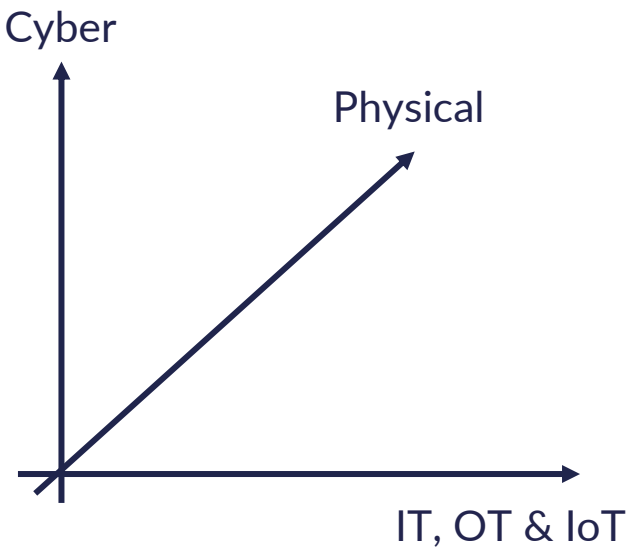
Prof. Dr. Christian Zenger (CEO)

www.physec.de

Information Security Process

Technical approaches to improving security

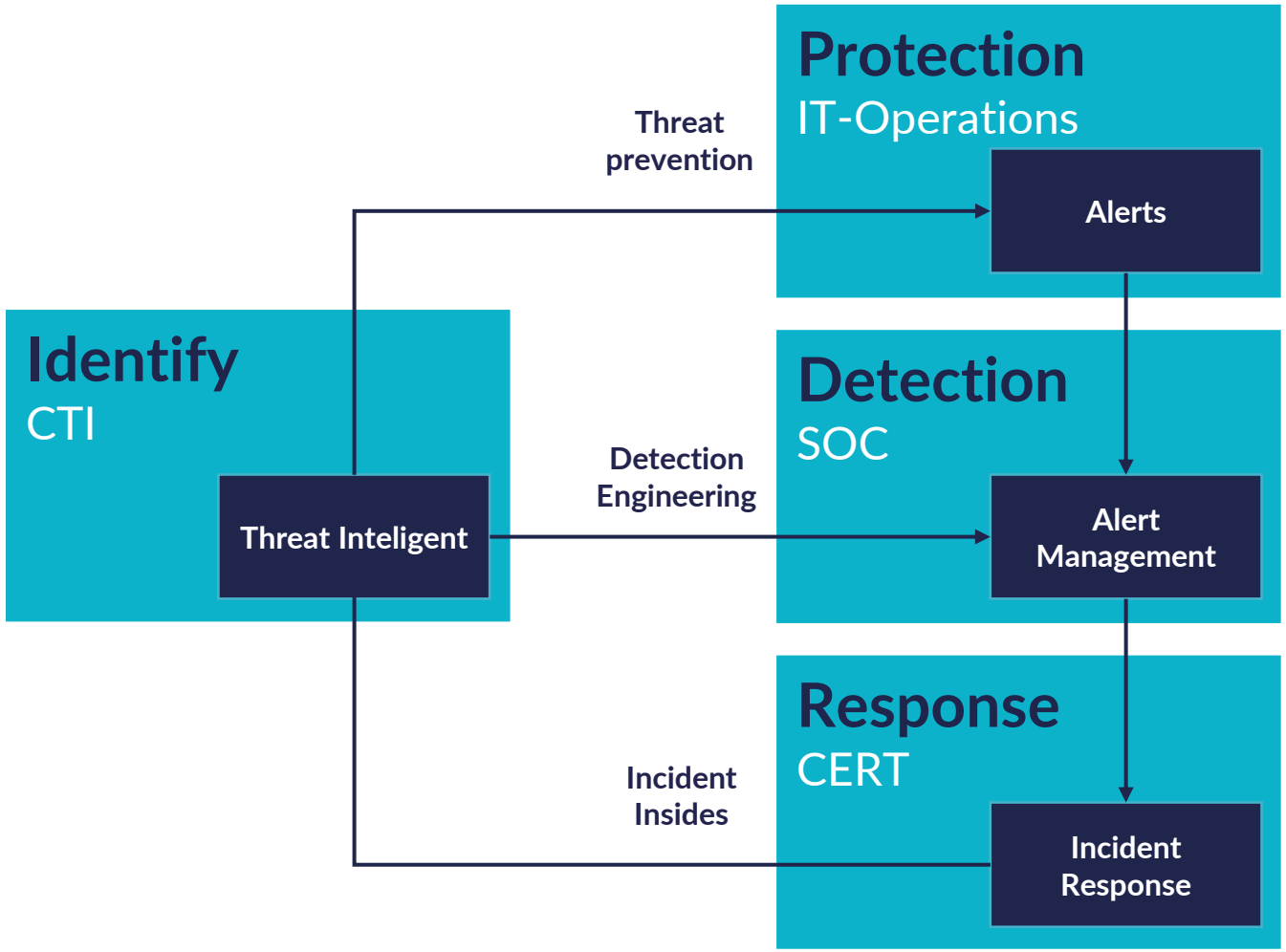


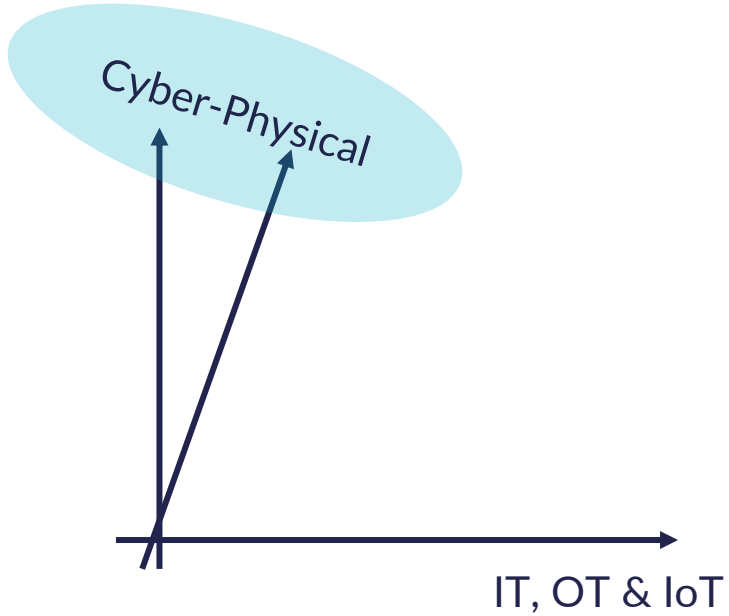


TLP:CLEAR

Information Security Process

Technical approaches to improving security





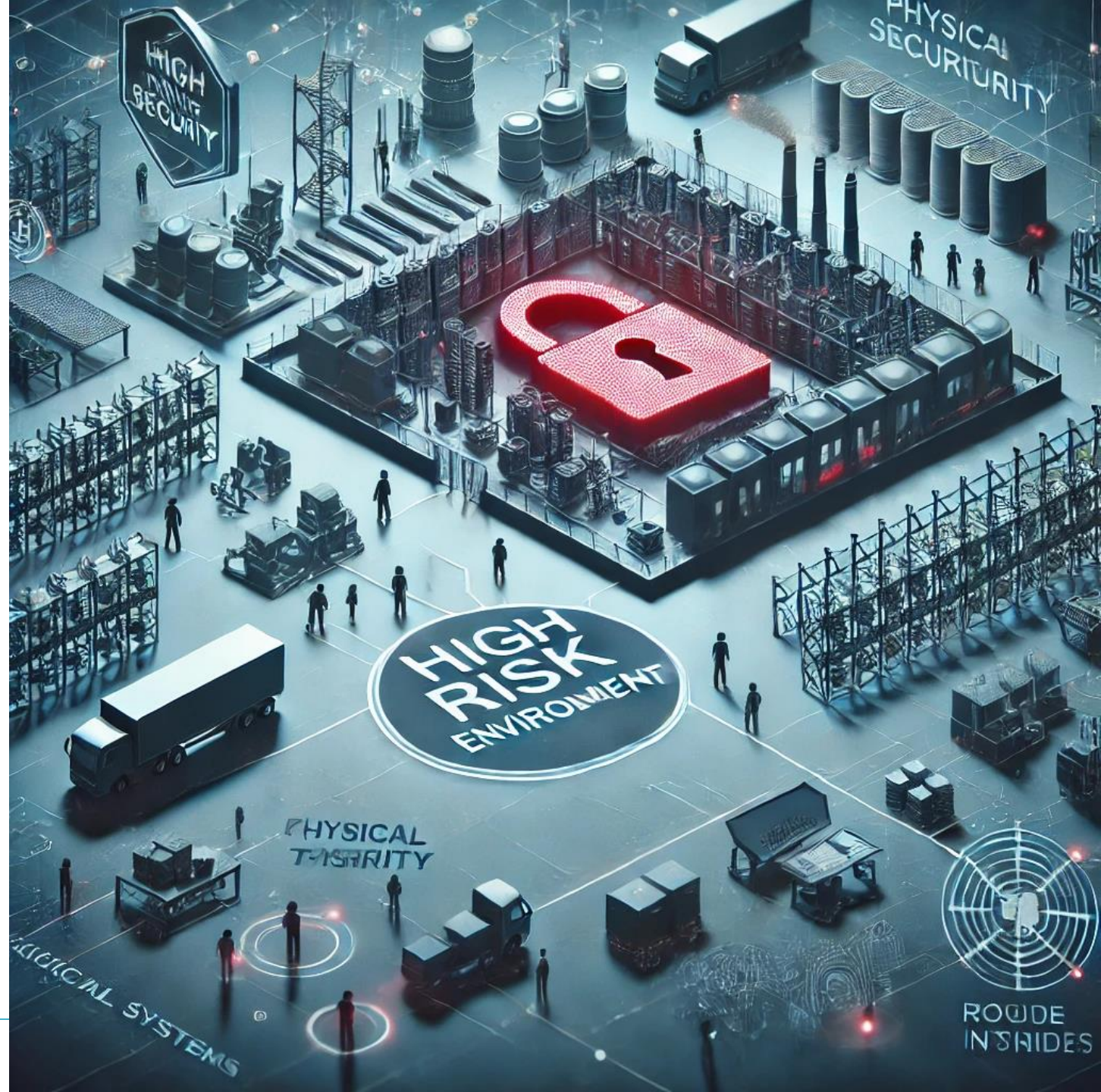
TLP:CLEAR

IoT in Public Zones

- Increasing digitization means increasing the deployment of IoT and OT systems in public zones. This **exposes the attack surface** especially for hardware and cyber-physical attacks.
- Isolated incidents of cyber-physical attacks on critical infrastructures are only the tip of the iceberg.

High Risk Environment

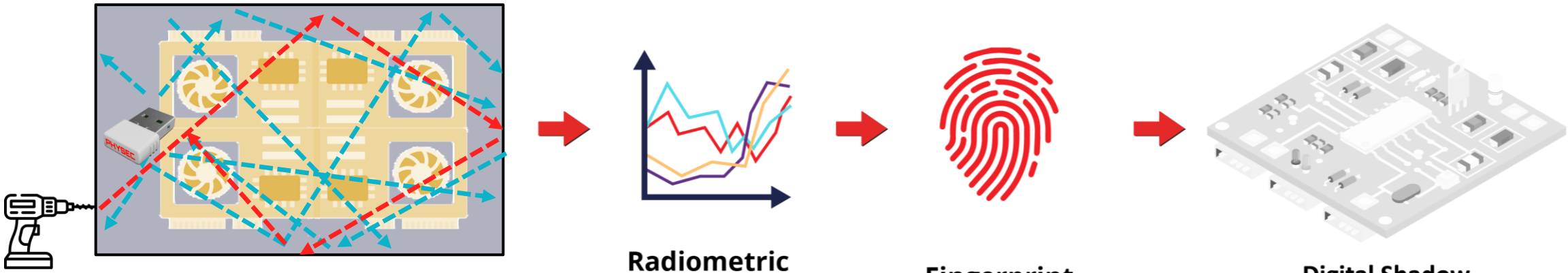
- The physical and digital integrity of critical systems is at a high risk, particularly in the supply chain where **perimeter security and access control measures cannot be reasonably expected**.
- Further, the threat of rogue **insiders** is omnipresent.



Change Detection

- In contrast to **continuous monitoring systems** or **tamper proofs**, our approach provides alerts upon detecting any changes to assets at only 10% the cost of other solutions on the market.

PHYSEC Wirkprinzip



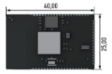
PHYSEC R&D Activities

2013
Research equipment
250.000€

2015
PHYSEC evaluation kit
8.000€

PHYSEC v1: ~1.000€

2019



PHYSEC v2: ~200€

2020

Fully integrated:

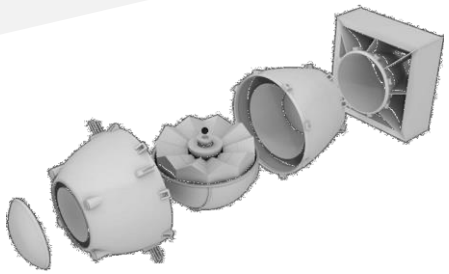
PHYSEC v3: ~5€

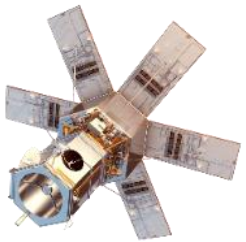
2022

Retrofit:

PHYSEC v3.1: ~50€

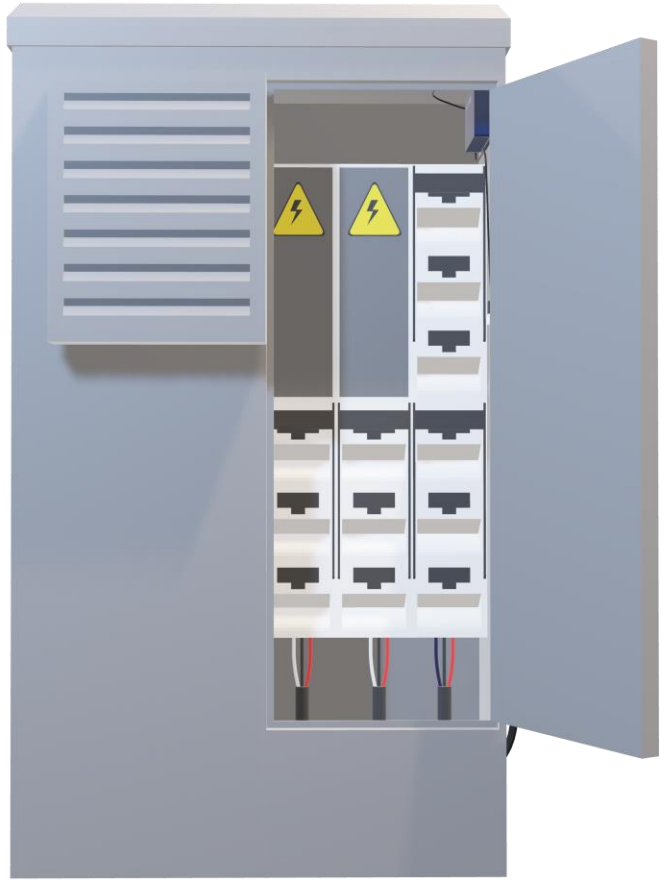
2024





PHYSEC SEAL®

- **Miniatur-RADAR** zur Change Detection
- Bis zu 120 μm^3 Auflösung
- Einfach und überall einsetzbar



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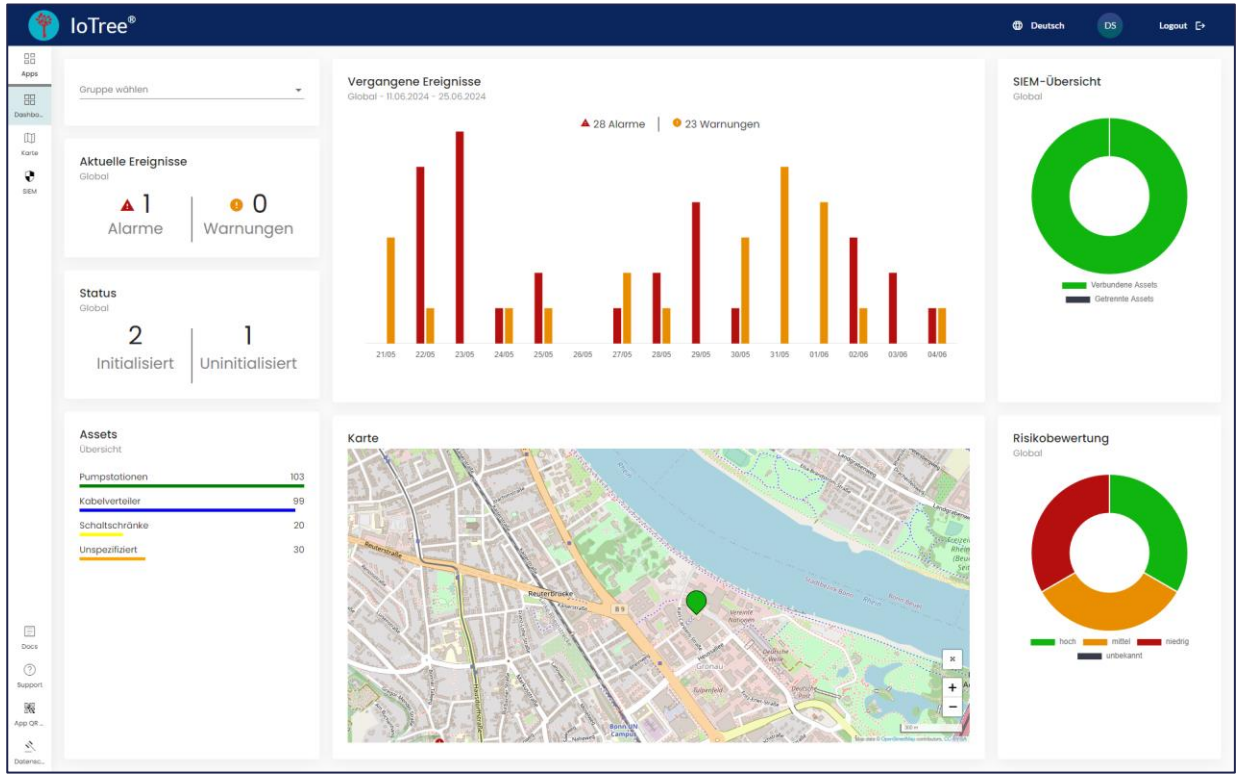

PHYSEC SEAL®

- **Miniatur RADAR** zur Change Detection
- IoT für Hochsicherheitssysteme
- Einfach und überall einsetzbar
- Lösung gegen Insider-Threats

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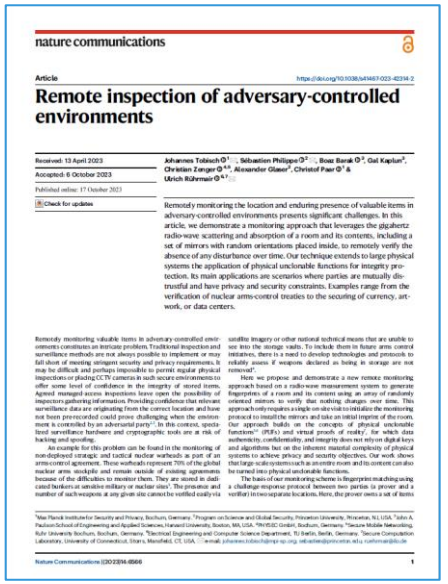
SECURITY FOR THINGS

Entstanden aus

Excellence Cluster CASA

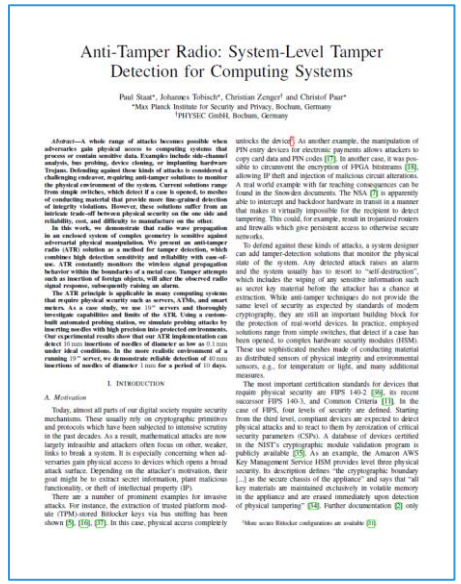
CYBER SECURITY IN THE AGE OF LARGE-SCALE ADVERSARIES



nature communications

Article

Remote inspection of adversary-controlled environments



Anti-Tamper Radio: System-Level Tamper Detection for Computing Systems

60+
Mitarbeiter

8+
Jahre auf dem Markt

60+
Gerätetypen von 30+ Herstellern

50+
IoTree® - Plattformen

130.000+
Connected Devices

50+
Kunden

LinkedIn

PHYSEC GmbH

Prof. Dr. Christian Zenger
Gründer und CEO

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