Smart Cars, Safer Roads: The Role of AI in Automotive Cybersecurity

Trusted Smart Mobility Since 2016

Cristian Ion
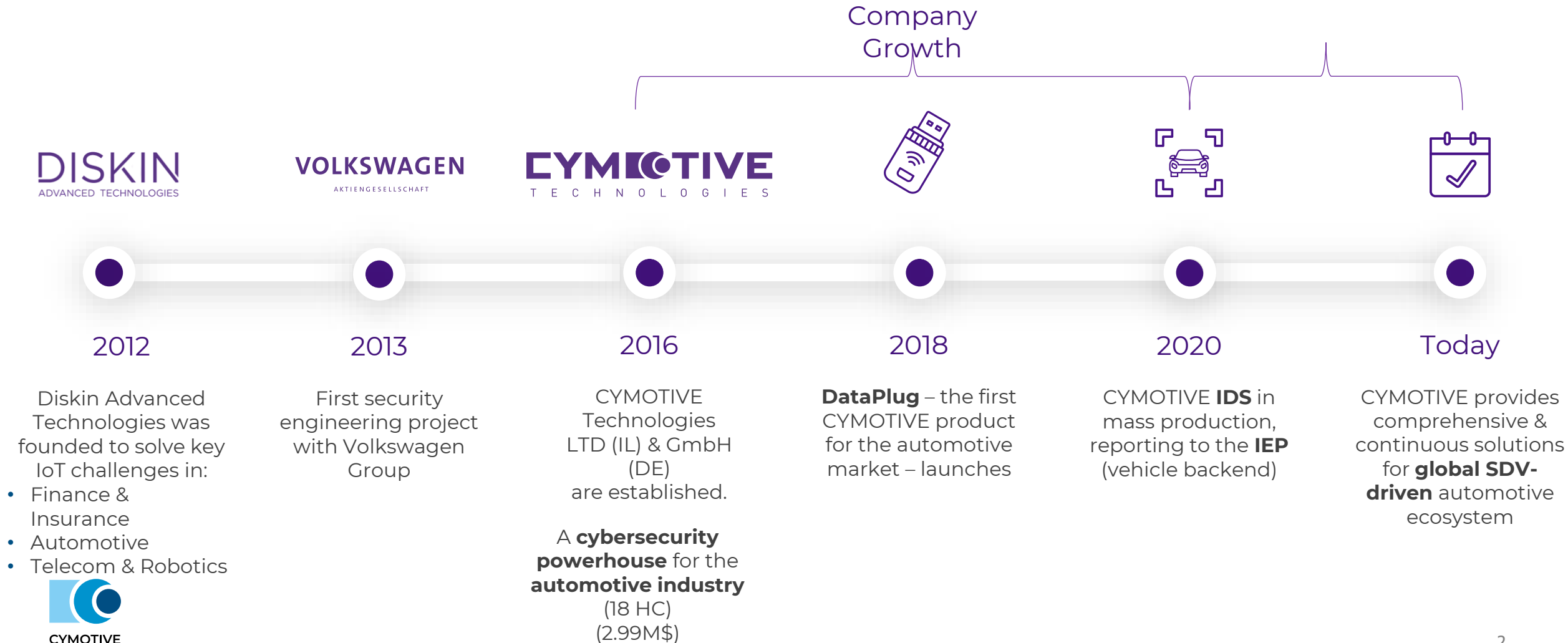
6 August 2025

CYMOTIVE Technologies: From IoT to SDV

Ever-Evolving to Deliver Cybersecurity Solutions for the Global Automotive Ecosystem

Company
Growth

2012

Diskin Advanced Technologies was founded to solve key IoT challenges in:
- Finance & Insurance
- Automotive
- Telecom & Robotics

2013

First security engineering project with Volkswagen Group

2016

CYMOTIVE Technologies LTD (IL) & GmbH (DE) are established.

A **cybersecurity powerhouse** for the **automotive industry** (18 HC) (2.99M$)

2018

DataPlug – the first CYMOTIVE product for the automotive market – launches

2020

CYMOTIVE **IDS** in mass production, reporting to the **IEP** (vehicle backend)

Today

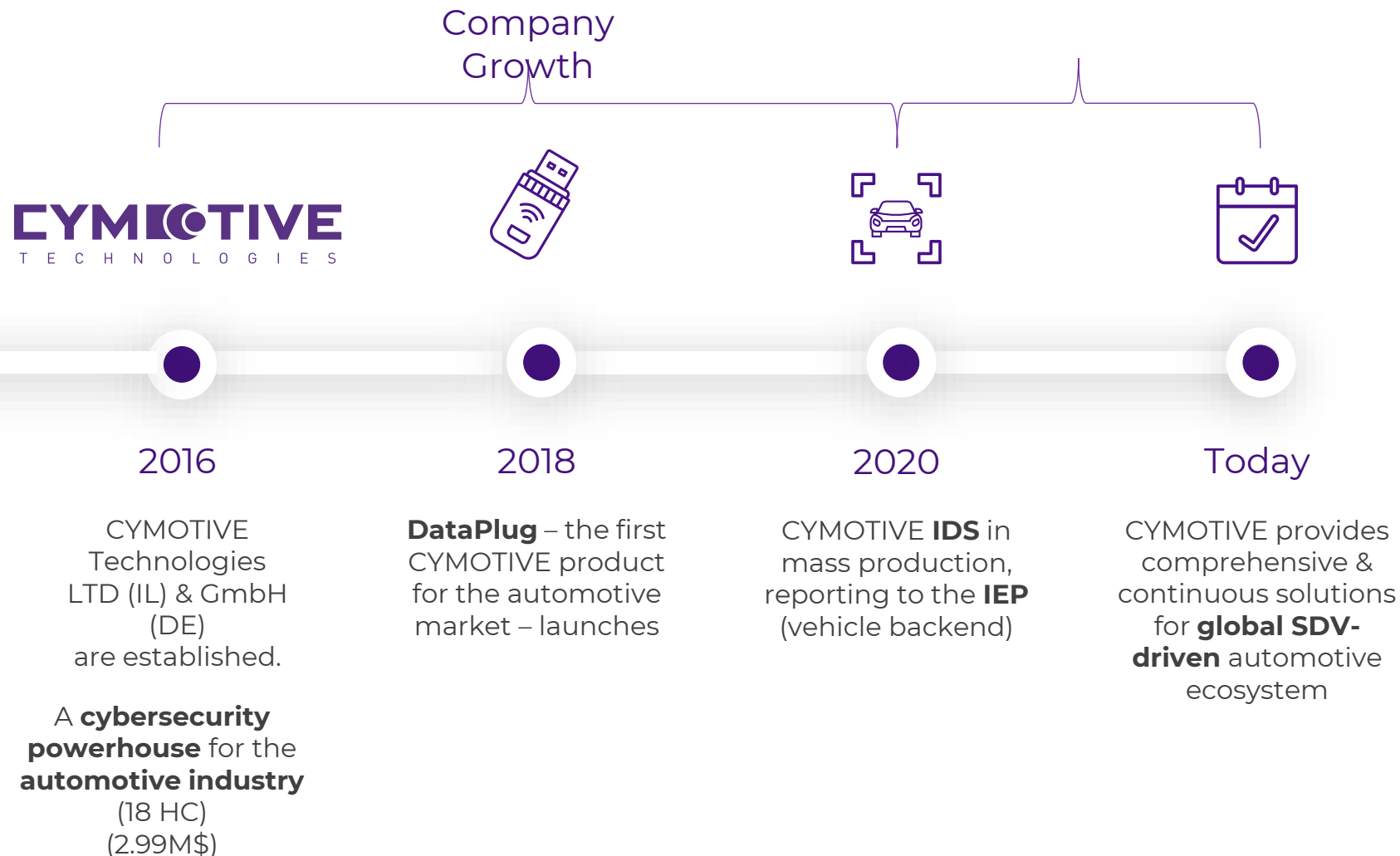CYMOTIVE provides comprehensive & continuous solutions for **global SDV-driven** automotive ecosystem

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Company Growth

Industry Expansion

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CYMOTIVE provides comprehensive & continuous solutions for **global SDV-driven** automotive ecosystem

Since 2023 alone, our cybersecurity solutions for the global automotive ecosystem include:

- **3** electric platforms

- **5** ICE platforms

- **3** L5 autonomous projects

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CYBERSECURITY WORKSHOP

Securing the future of SDV

Agenda

Time	Topic
9:00 - 9:15	FPT Words of Welcome
9:15 - 9:25	**State of the Rapidly Transforming Industry** - increasing regulatory standards & evolving threat landscape
9:25 - 10:30	**Vehicle to Backend Pen Test** End-to-end automotive security posture assessment
10.30 - 10:45	**Intrusion Detection System** embedded in the SDV platform
10:45 - 11:00	**Continuous Vulnerability Management** for vehicle design & operation
11:00 - 11:15	**Threat Intelligence Detection** (web-crawl based) - leveraging OSINT for rapid response in an evolving threat landscape
11:15 – 11:30	**Data Management**, Cybersecurity & Threat Analysis (DTC / vehicle log-based)
11:30 – 12:00	**Q&A** with FPT & CYMOTIVE

NAGOYA JAPAN

The SDV Revolution in Automotive Cybersecurity

- SDV redefines the vehicle-from object to connected mobility

- Open and dynamic connectivity

- With increased connectivity increased attack surface

CYMOTIVE

The SDV Revolution in Automotive Cybersecurity

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+TECH +NEWS +TRANSPORTATION

Hackers caused a massive traffic jam in Moscow using a ride-hailing app / They ordered dozens of taxis to the same location at once

by (+) Emma Roth
Sep 3, 2022, 8:18 PM GMT+2

0   Comments

Hackers sent taxis to the same location at the same time. Photo by KIRILL KUDRYAVTSEV/AFP via Getty Images

The New York Times

Fatal Crash in China Puts Assisted Driving Tech Under Scrutiny

A popular electric vehicle made by the Chinese consumer electronics giant Xiaomi crashed into a concrete guardrail while deploying its autonomous driving feature. Three people died.

Listen to this article · 4:41 min   Learn more

Share full article

Xiaomi's founder and chief executive, Lei Jun, during the launch of a new vehicle model in Beijing last month. Tingshu Wang/Reuters

CYMOTIVE

6

The SDV Revolution in Automotive Cybersecurity

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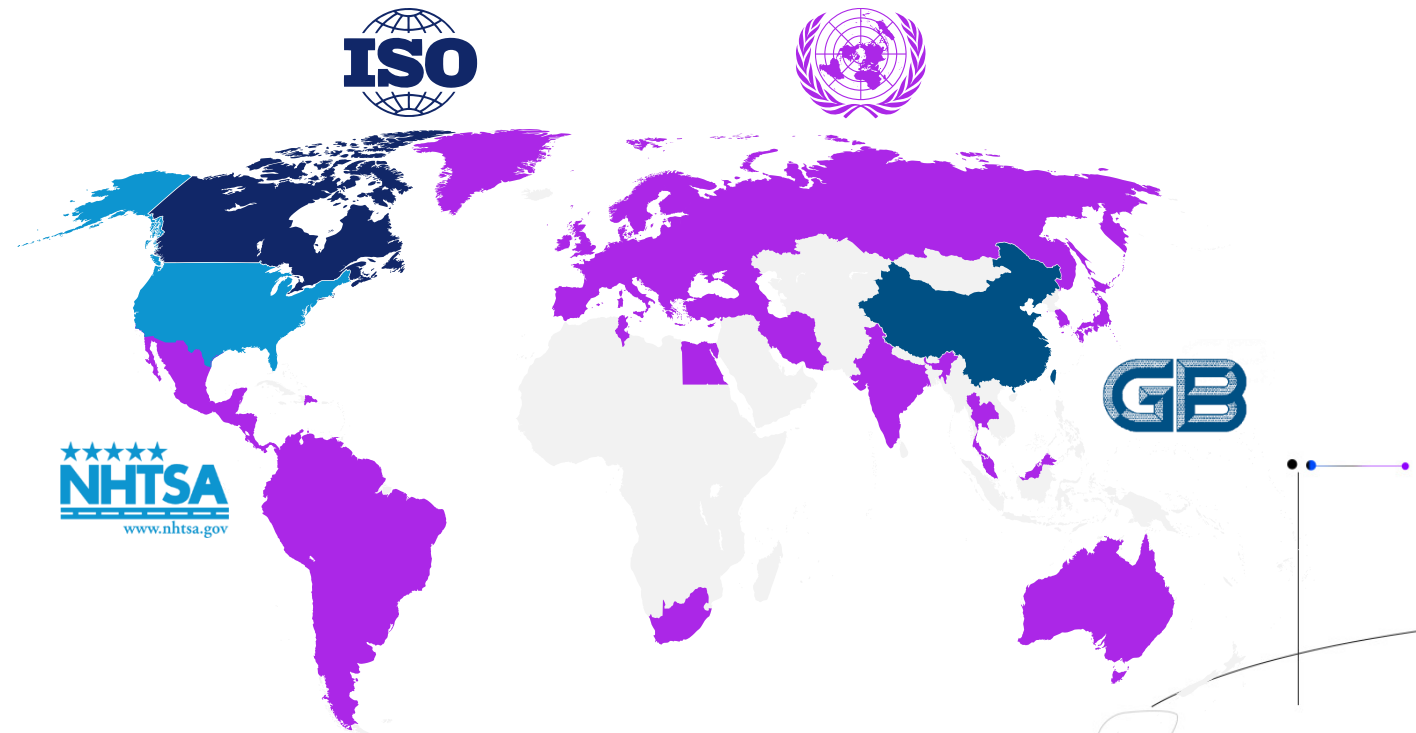*Number of software Vulnerabilities per connected ECU: average of 700, maximum 9000*

Each vehicle on average has around 40 events per year (local and connectivity)

Per year 155mio connectivity events
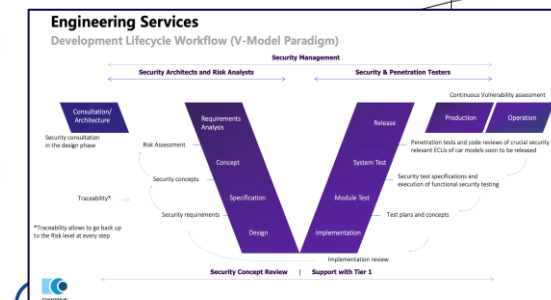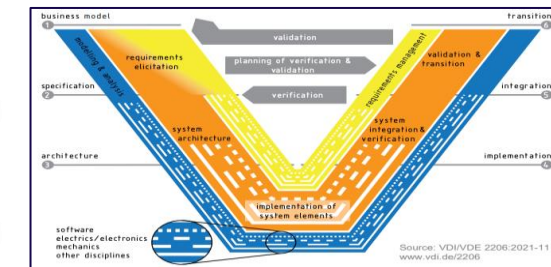
CYMOTIVE
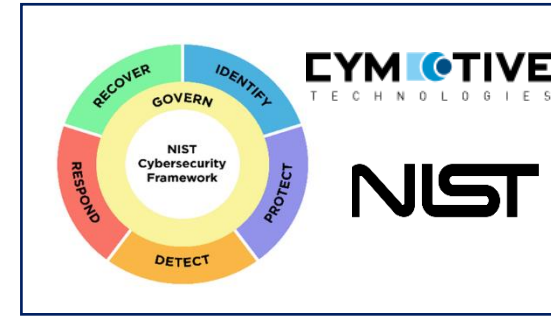
The Automotive Cybersecurity Regulation push

- Supply Chain Regulation domain
  - Rules of origin for Hardware
  - Rules of origin for Software

- Three cybersecurityregulation domains
  - Cybersecurity Management
    - ISO21434/UN.R155/AIS189/GB44495
  - Software Update
    - ISO24089/UN.R156/GB44496
  - ADAS and data retention
    - UN.R.157/GB44497 – regional divergent criteria

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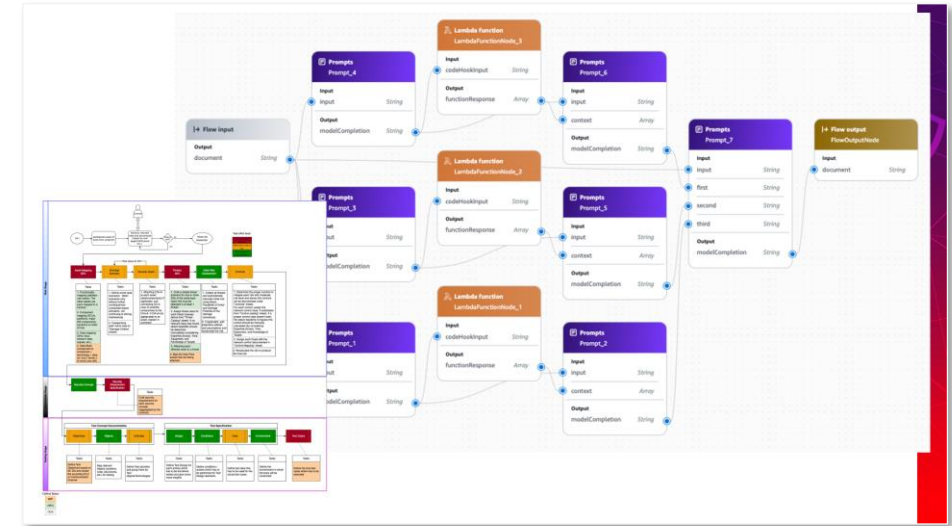# Standardized Security Processes – key to success

- Software – led development focuses on rapid iteration and continuous integration / continuous validation

- Hardware-adjacent development follows more traditional processes

- Effective methods for new developments focus on maturity level and have functional focus (Systems Engineering)

Selecting methods fit to the organization and the existing engineering practice ensure an effective security development process!

AI POWERED Security Engineering – Managing Scale and Complexity

- Per Platform an average 10.000 functions to be assessed

- AI Cortex Features
  - Semantic Search
  - Data Enrichment
  - Classification and Decision Making
  - Automatic Data Structuring

- Delivering Automation, Quality and Consistency
  - Different instances of LLMs, RAGs
  - Agent integration
  - Data separation per project and use case

Embedded AI – Key to scalability

Our products ensure faster delivery, high quality outcome and cost-efficient results

Embedded AI

Automates and optimizes tasks and enhances collaboration, efficiency and data-driven decision-making.

Cybersecurity Management System

Accelerate your governance and compliance using a singular system to plan, manage, automate, monitor and measure your processes, activities and readiness.

Threat Intelligence

Cyber Threat Intelligence platform that collects, analyzes and correlates cyber threats for relevant systems and products

Automated Security Testing

Narrow down attack vectors using comprehensive automated embedded security testing capabilities, tailored specifically for the automotive industry.

Intrusion Detection System

Monitor and detect in-vehicle anomalies based on predefined rules and algorithms.

System Monitoring and Alerting

Map & manage vulnerabilities in your products and systems throughout the SW stack, incl. the entire supplier chain.

CyMind

CySMS

ACTI

Our Products

CyClarity

IDS

CarAlert

CYMOTIVE

Cristian.Ion@cymotive.de

Cảm ơn rất nhiều!

CYMOTIVE

SDV Mobility – covering all aspects of the ecosystem

Cybersecurity coverage from chipset to cloud

Vehicle Platform

Domain-Specific

Connected Mobility

Cloud Platform

Mobility Services Ecosystem

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