Introduction: Group Information Security

May 7th 2025 | Mauro Pianezzola - Volkswagen Group Information Security Management

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The following presentations as well as remarks/comments and explanations in this context contain forward-looking statements on the business development of the Volkswagen Group. These statements are based on assumptions relating to the development of the economic, political and legal environment in individual countries, economic regions and markets, and in particular for the automotive industry, which we have made on the basis of the information available to us and which we consider to be realistic at the time of going to press. The estimates given entail a degree of risk, and actual developments may differ from those forecast.

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Any changes in significant parameters relating to our key sales markets, or any significant shifts in exchange rates, energy and other commodities or the supply with parts relevant to the Volkswagen Group will have a corresponding effect on the development of our business. In addition, there may also be departures from our expected business development if the assessments of the factors influencing sustainable value enhancement and of risks and opportunities presented develop in a way other than we are currently expecting, or if additional risks and opportunities or other factors emerge that affect the development of our business.

We do not update forward-looking statements retrospectively. Such statements are valid on the date of publication and can be superseded.

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Agenda: Group Information Security

- 1 Our Challenge
- 2 The Group Information Security
- 3 ISMS / UNECE / CSMS

1. Our Challenge

Constantly new threat situations and increasingly aggressive approaches

APPROXIMATELY
394,000 NEW VARIANTS
OF VIRUSES, TROJANS
AND MALWARE
WORLDWIDE EVERY
DAY

APPROX. 36 BILLION
PHISHING E-MAILS PER
YEAR WORLDWIDE

>100 BILLION EUROS IN DAMAGE P.A. IN GERMANY 86% OF GERMAN COMPANIES ARE VICTIMS OF CYBERCRIME

PASSWORDS CRACKED WITHIN SECONDS

TARGETING DATA OF ALL KINDS: FINANCIAL, EMPLOYEE AND CUSTOMER DATA

THE HUMAN FACTOR IS
A GATEWAY FOR
ATTACKS

RECREATIONAL HACKERS ARE BECOMING WELL-EQUIPPED CYBER GANGS

VOLKSWAGEN GROUP

2. The Group Information Security

Projects & Fields of Action

INDUSTRIAL
CYBER SECURITY (ICS)

SECURITY TOOLS & PROCESSES

CSMS

0

IDENTITY & ACCESS MANAGEMENT

VEHICLE SECURITY
OPERATIONS CENTER
(V-SOC)

INFORMATION
SECURITY SPECIALIST &
EXPERT CONFERENCE
(IS-SEC)

COMPUTER
EMERGENCYRESPONSE
TEAM
(CERT)

INFORMATION SECURITY MANAGEMENT SYSTEM (ISMS)

INFORMATION SECURITY ASSESSMENTS

PKI SERVICES

•••

SICHER IST *BESSER*

(*BETTER SAFE THAN SORRY)

The Group Information Security

Safely into the digital future with us.

EMPLOYEES
FROM 13 NATIONS

+SICHER IST BESSEF

1,200 IS SECURITY REQUESTS P.A.

1.5 MILLION
VOLKSWAGEN PKI
CERTIFICATES

36 IS SECURITY REGULATIONS

1000 IS SECURITY RATINGS P.A.

40 IS SECURITY APPLICATIONS

IT SECURITY MATURITY LEVEL 3.51

50 IS SECURITY ASSESSMENTS P.A.

) ISO 27001, TISAX & CAR2X CERTIFICATE

3 MILLION IDENTITIES

1 IS SECURITY CONFERENCE P.A.

The GISSC

Group Information Security Steering Committee

The highest corporate information security body

- Strategic Committee, implementation via GISP¹⁾
- All brands and regions represented
- Voting rights only if involved
- Six regular meetings per year



Group Information Security Program

The program develops business- and process-driven solutions for new and growing business needs, ensures synergies as well as Group-wide processes and standards to increase the level of security maturity throughout the Group. The design of the program is based on the information security strategy adopted jointly with all brands and regions. GISP is divided into 5 clusters and comprises about 50 projects.



GISSC ALIGNED PROTECTION



AUTHENTHICATION &
SECURITY
SOLUTIONS



GOVERNANCE & COMMUNICATION



IAM SOLUTIONS



CSMS GOV & OPS



3. Information Security Management System (ISMS) within Volkswagen AG Responsibility through "Group Information Security" within Group and organizational policy

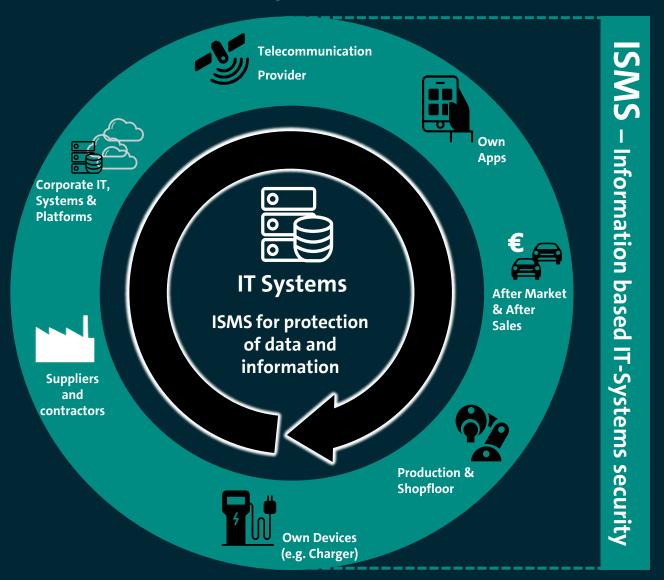
the ISMS has been defined and expanded by the Information Security Group.

Governance processes of the ISMS are ISO 27001 certified

VW IT Services is TISAX certified

TISAX

ENX ASSOCIATION



Interface to UNECE Cyber Security Management System (CSMS) Additional risk-assessment for IT-Systems within "Digital Ecosystem of Vehicle" required

Threat analysis and risk-assessment

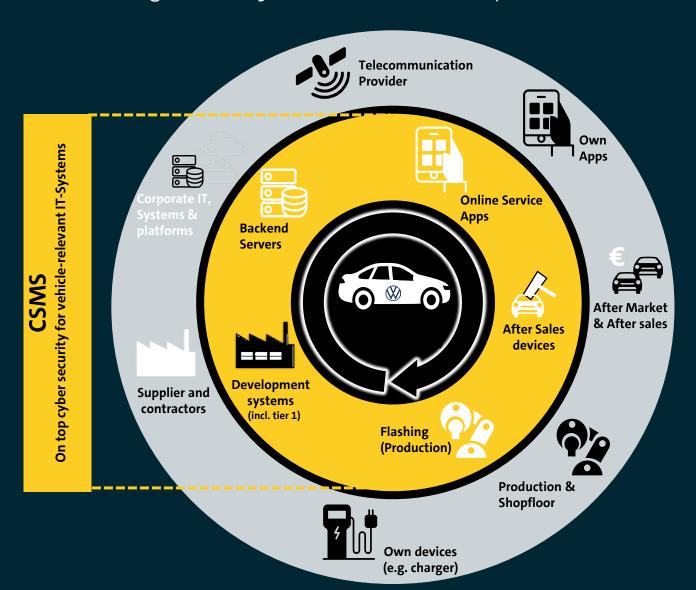
- Which kind of threat is the vehicle facing?
- What is the gross risk of it?

New Damage- and risk-evaluation

- Concerning already existing risks, what is the **net risk**?
- What kind of damage?
- Is it Safety-Relevant?

Mitigation and implementation of issues:

- Which issues mitigate the risk?
- Where to implement them?
- What is the timeline of implementation?
- Are there some risks left?



Security Management System

Cyber

Glossary

CERT Computer Emergency Response Team

CSMS Cyber Security Management System

CSMS Gov & Ops CSMS Governance & Security Operations

GISP Group Information Security Program

GISSC Group Information Security Steering Committee

IAM Identity and Access Management

ICS Industrial Cyber Security

ISMS Information Security Management System

ISO 27000 Information security standard - specifies the requirements for managing and improving ISMS

PKI Public key infrastructure

TISAX Trusted Information Security Assessment Exchange

UNECE United Nations Economic Commission for Europe

SAM South America

NAR North America

APAC / ME Asia and Pacific / Middle East