



Hrdí na naše

Stolz auf unsere  
Innovationen.

## Digitization in production enterprises - opportunities and risks

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ITAPA, 14. November 2017, Bratislava

# Agenda

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Volkswagen Slovakia

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Fields of action for digitization – risks and opportunities

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Risk management – more than ever

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Perspective – Business Process

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Perspective – Employees

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Perspective – IT Infrastructure / Devices

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Practical Example - Wearables

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Summary

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# Volkswagen Slovakia

- Production site
- Vehicles (388.687 / Year)
- Gear Boxes (263.700 / Year)
- Components (33.300.000 / Year)
- 4 Locations
- 12,300 Employees
- 7.6 bln. Turnover



# Overview

## Fields of action for digitization



Customer



Business Modell



Business Process



Employees



Infrastructure / Devices

# Overview

## Fields of action for digitization



Customer



Business Modell



Business Process



Employees



Infrastructure / Devices



# Business Processes

## Opportunities and Risks

### Opportunities

- Increase Efficiency by Automatization
- Data availability
- Improvement of Quality

### Risks

- Increasing demands on IT Security and Data Protection
- High degree of crosslinking
- Risk of fast decisions and misinterpretation



# Employees Opportunities and Risks

## Opportunities

- Ergonomics
- Interesting Topics => high Motivation
- Creativity

## Risks

- Availability of Qualification
- Half-life of Technology
- Work 4.0



# Infrastructure

## IT Infrastructure – heart and nervous system

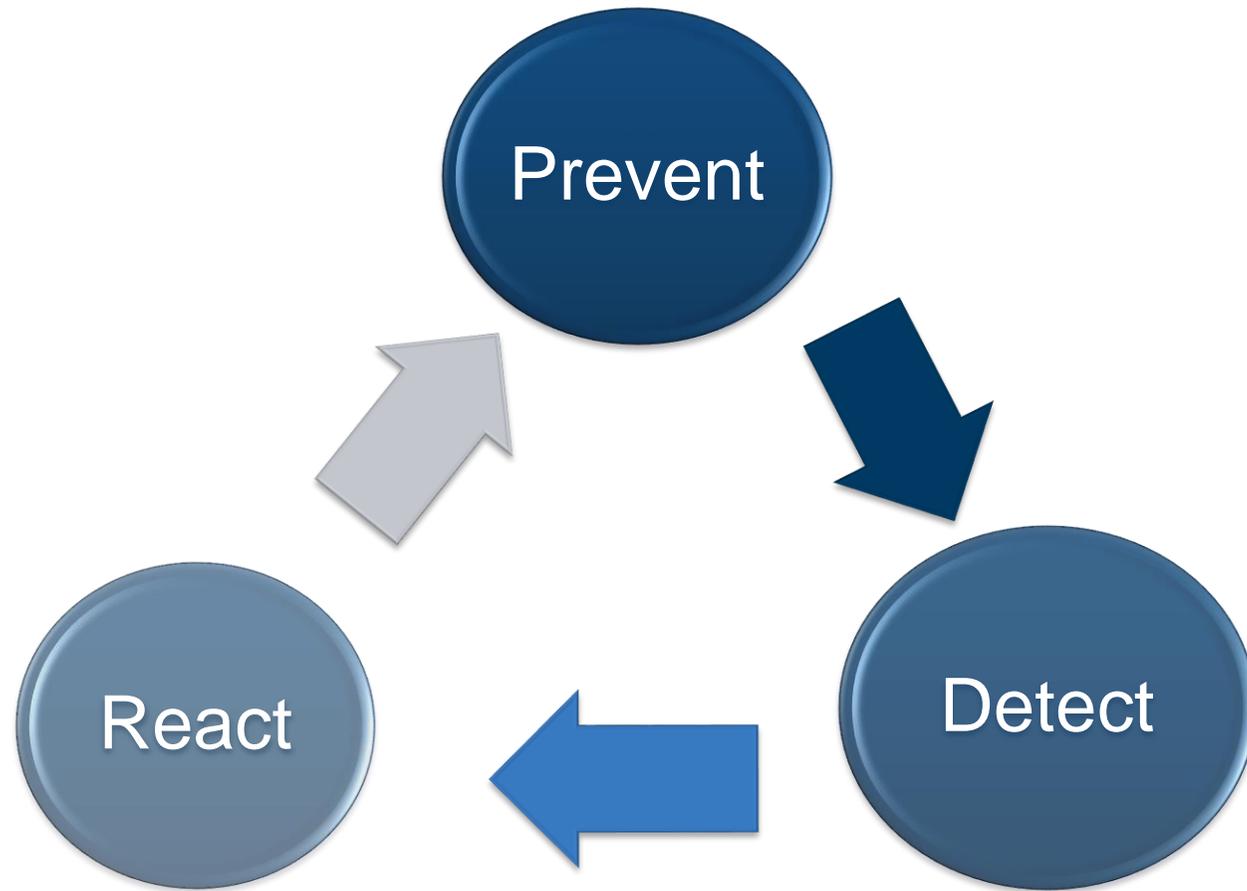
IT Volkswagen Slovakia managed:

- over 10.000 User
- over 35.000 IP-Addresses
- over 300 Applications
- over 500 Server
- over 600 TB Data
- over 4.000 Changes / Year



# IT Infrastructure

## How we protect



# Actual Trends

## Wearables – Promising Future

- Glasses for VR (virtual reality) und AR (augmented reality)
- Smartwatches und Bracelet
- Smart clothing
- ...

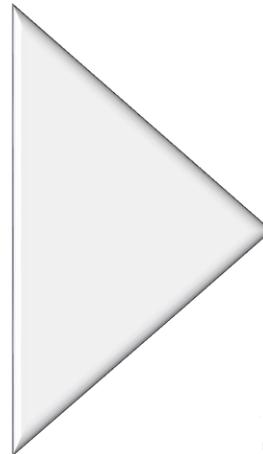


# Actual Trends

## Wearables – VR in the productions process

### Opportunities

- Training for early stages of product development
- Reduced provision of physical learning material
- Risk-free training

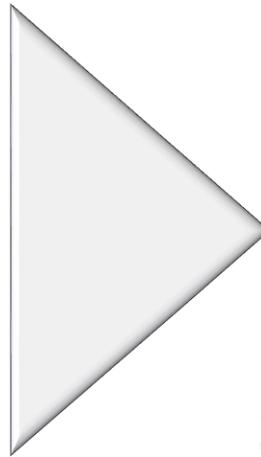
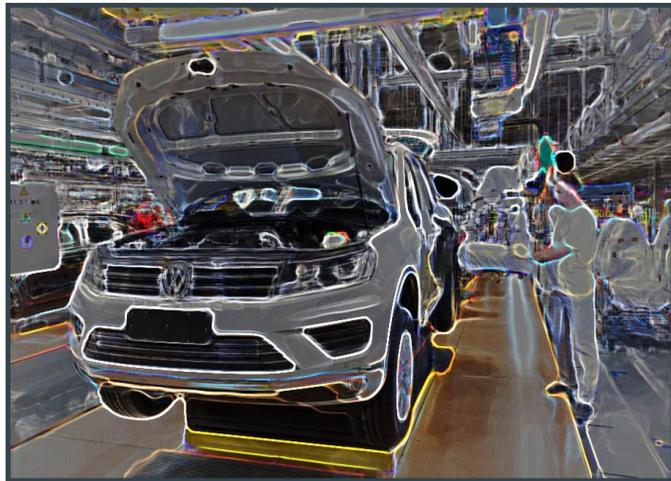


# Actual Trends

## Wearables – VR in the productions process

### Risks

- Symptoms of cyber sickness
- Tensions in the neck and cervical area
- Hygiene aspects
- Rejection by high degree of novelty



# Summary

- Life speeds up
- Cyber-physical systems will evolve and represent the future of everyday life
- The basis for this is a secure connectivity
- Risks and opportunities are close to each other and exist simultaneously
- Risk management is gaining in importance
- Ethical and safety-related discussions must accompany progress



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# Back Up

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# Person

## Heidecke, Hans-Christian

Dipl.-Ing., Dipl.-Wirtsch.-Ing.



### Professional experience:

2014 CIO (Volkswagen Slovakia)

2009 – 2013 Division Manager

2003 – 2009 Subdivision Manager

2000 – 2003 Project Manager

1996 – 2000 Consultant (Fraunhofer Institute, gedas gmbh)

1993 – 1995 Operational Manager (Geco-Prakla, USA)

# Presentation Content

**Titel:** Digitization in production enterprises - opportunities and risks

**Author:** Hans-Christian Heidecke, CIO Volkswagen Slovakia

## **Content:**

The high competitive pressure in the automotive industry causes that the industry is characterized by a large number of product and process innovations. Current technological possibilities lead to a steadily growing and speed-increasing digitization and automation of all processes. The increasing IT penetration rate covers all business areas and connects them in a manner which is not yet known. This leads to many opportunities, which has to be used in the positive sense. However, there are also various risks that must be actively managed. For this, technical and socio-technical considerations are necessary in order to keep a company as a whole on the road to success. Some current and prospective challenges from the perspective of a production company are intended to give.