



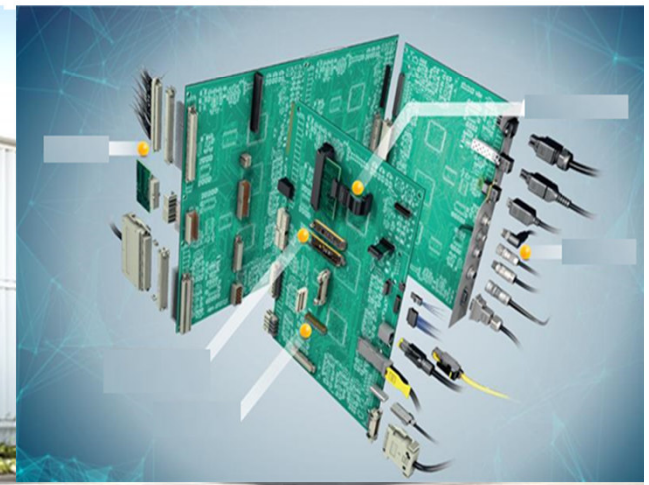
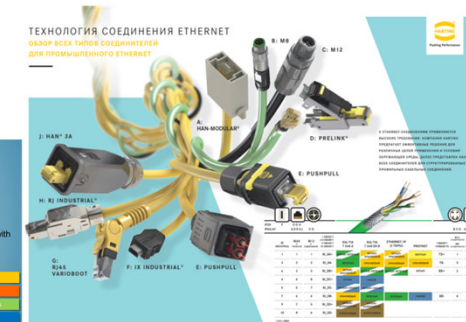
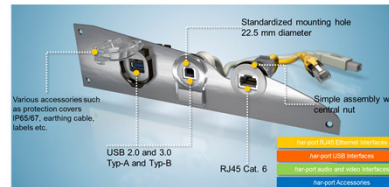
Pushing Performance

ETHERNET CONNECTIVITY SMALLER, FASTER & SMARTER

The presenter



Joachim Finke
Head of Product Management
Network Interface Connectors





The HARTING approach Innovative Connectivity



Machinery Market

Automation devices

IP20 Applications

Inside Cabinet devices



Switches



Converter

HMI's



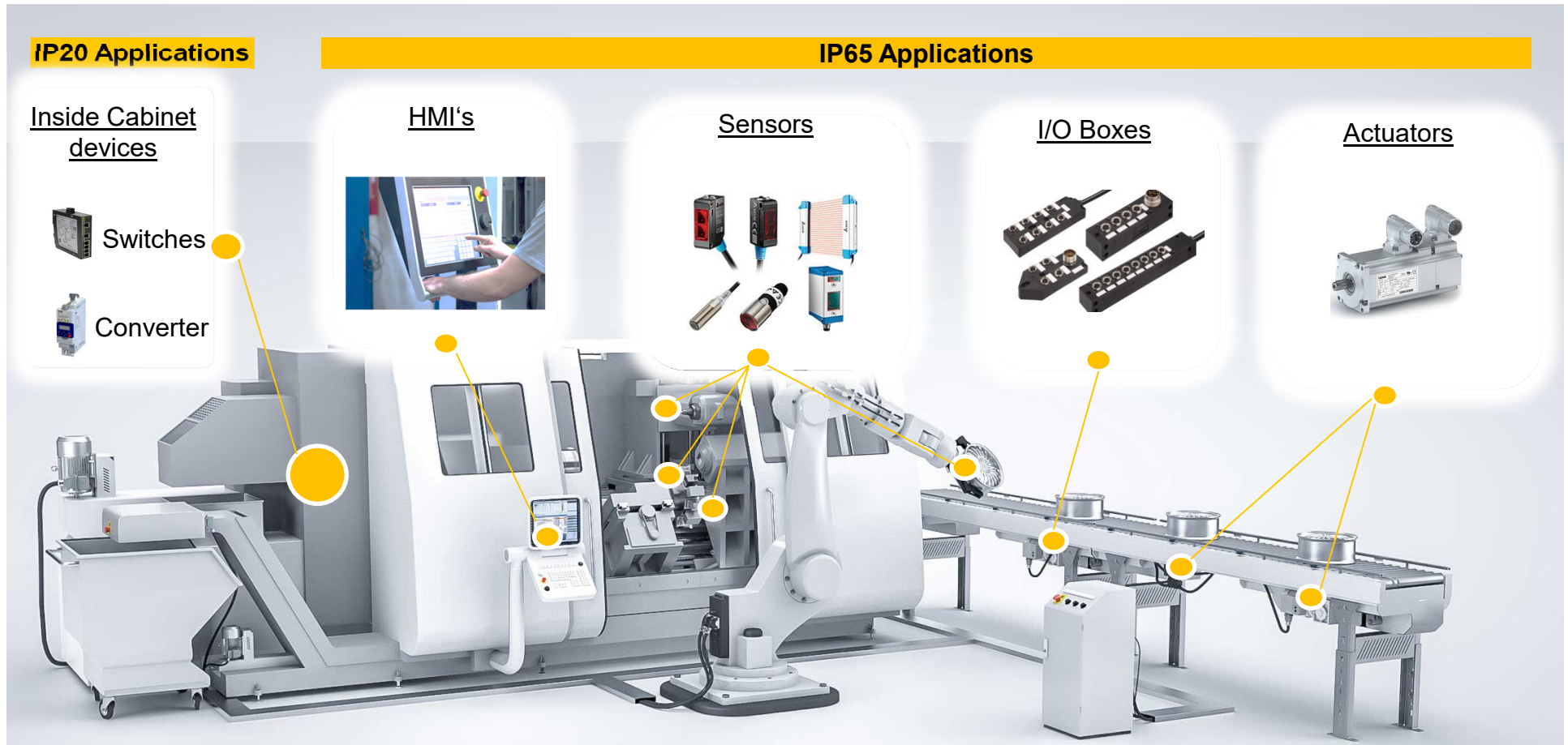
Sensors



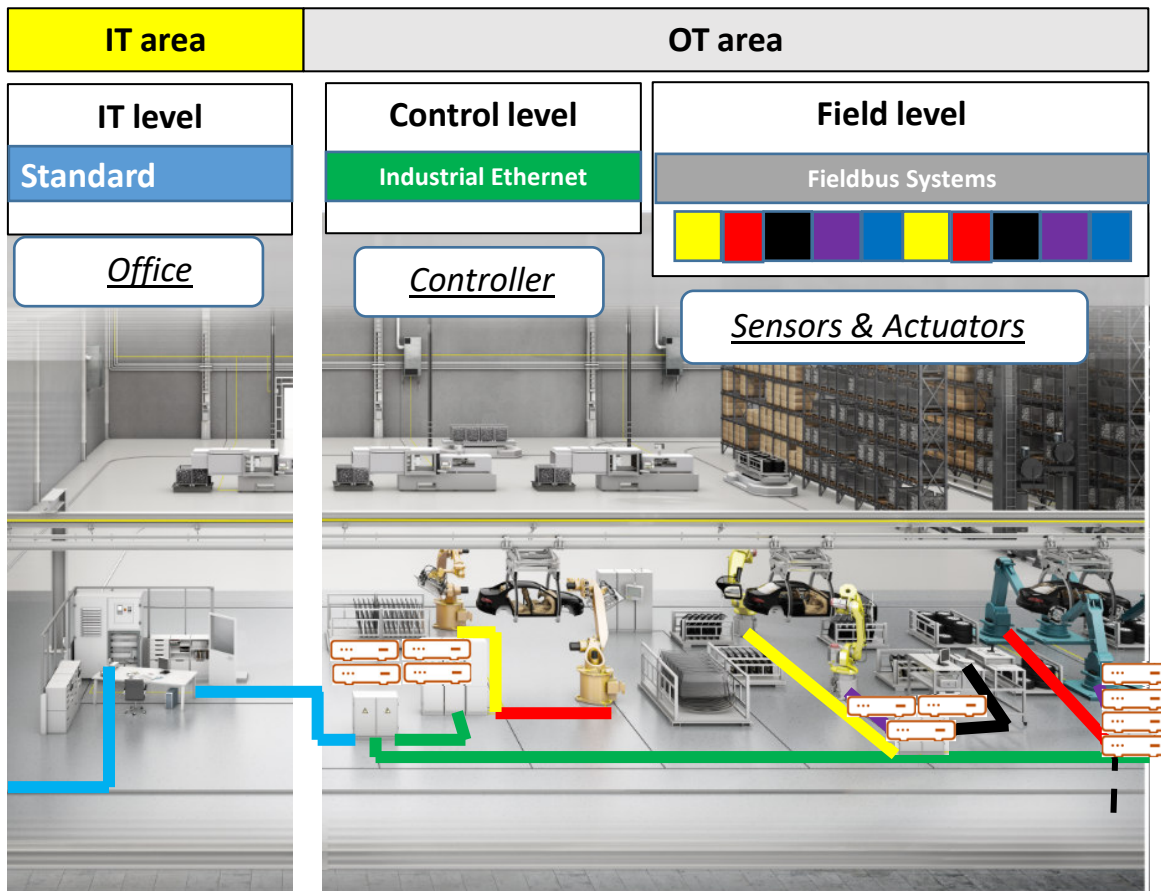
I/O Boxes



Actuators



DIVERSE, LAGACY COMMUNICATION IR



Complex communication
by Gateways

4 New Ethernet related Technologies

Enabler for IIOT

How to physically connect
the huge number of field
devices to the network?



Convergent networks



Real-time-capabilities
for Ethernet

Wireless?



Not suitable for
most applications

Too expensive

Existing
copper cabling?



Fast Ethernet
4 wires

GigaBit Ethernet
8 wires

4 Single Pair Ethernet

The Technology

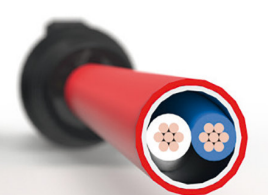
STANDARD

GigaBit Ethernet Cabling
(8 wires)

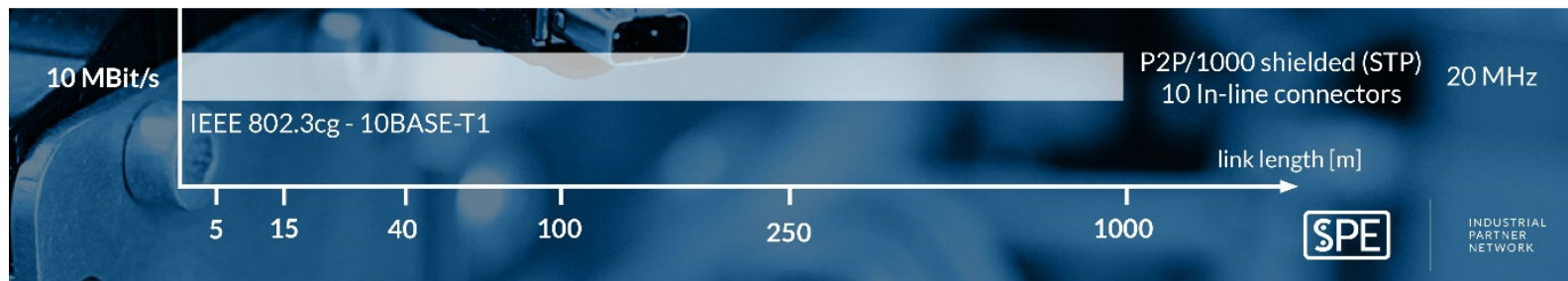


SPE

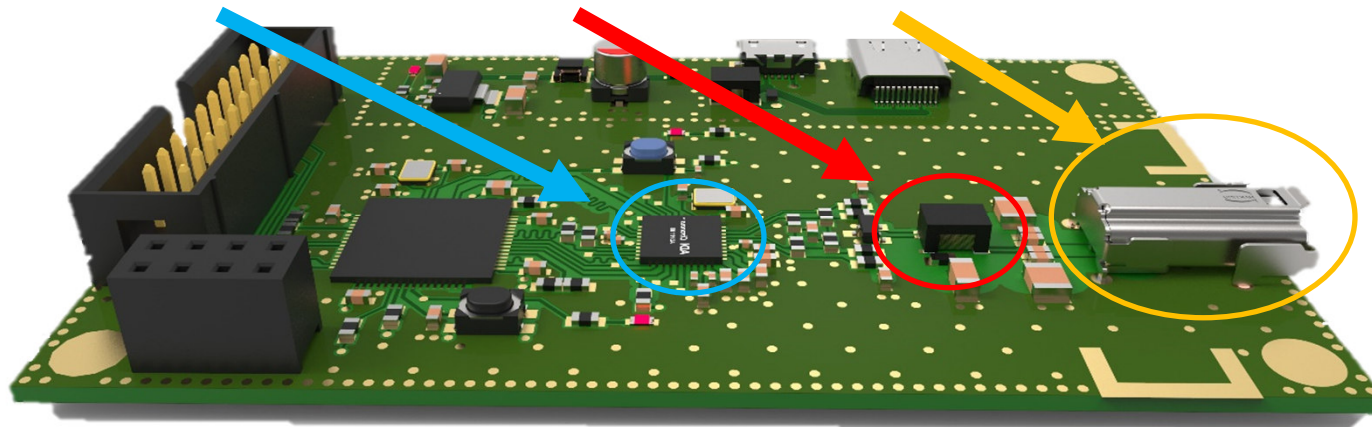
Single Pair Ethernet
(1 twisted pair)



Released IEEE 802.3 standards for SPE

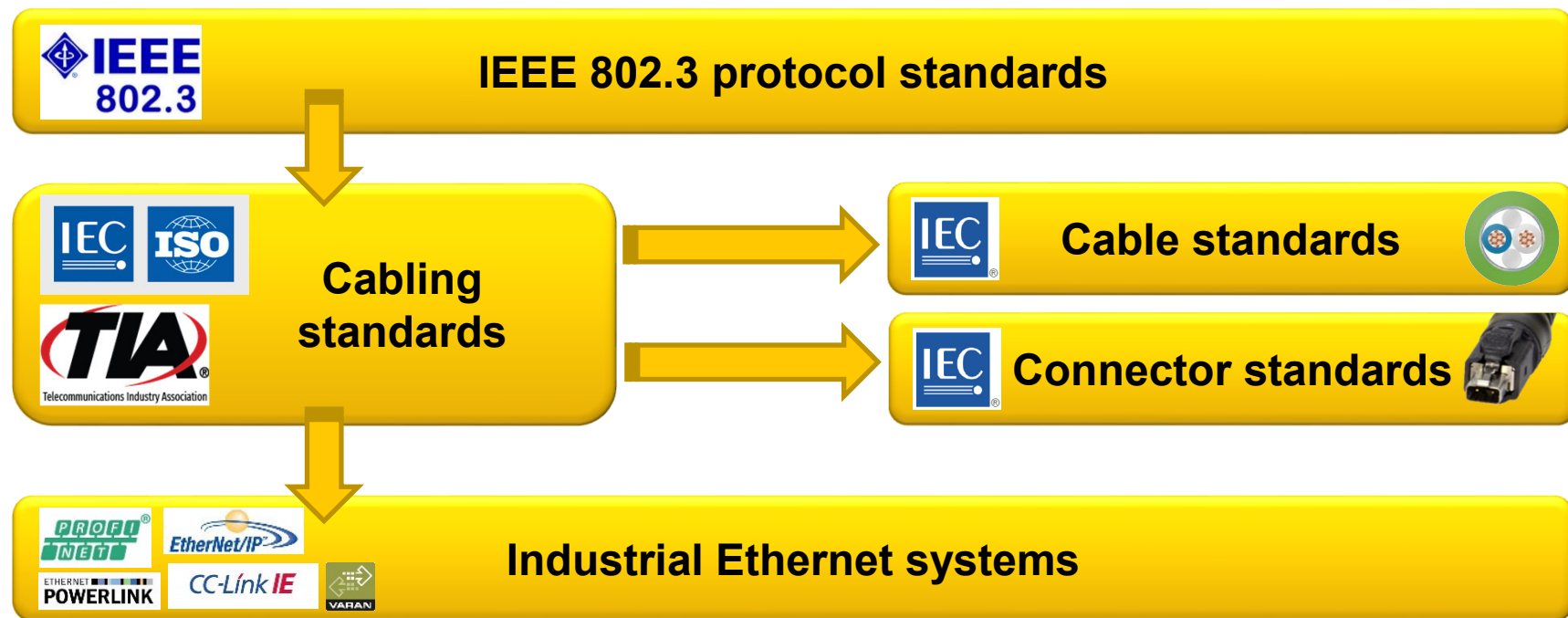


SPE specific components



The international standardization process

SPE standardization landscape and relations between the organizations



Industrial SPE Connectivity

Standardized according to IEC 63171-6



INTERNATIONAL CABLING STANDARDS ISO/IEC AND TIA SPECIFIED FOR INDUSTRIAL SPE APPL.

- Connectivity acc. IEC 63171-6 shall be used

CONNECTOR STYLES FOR EACH SIZE AND APPLICATION

IP20

M8

M8
Hybrid

M12

FUTURE PROVED DESIGN

- supports for data rates from 10MBit to 10GBit

HARTING CONNECTIVITY TAILORED FOR INDUSTRIE REQUIREMENTS


- Robust design
- Shock & Vibration proved acc. to Railway Standards
- Very reliable contact system





INDUSTRIAL
PARTNER
NETWORK

e.v.

A large white industrial robotic arm with a red logo is positioned on a white base in a modern factory. The background shows a complex industrial environment with yellow overhead cranes, metal structures, and various pipes. In the foreground, there is a blue metal frame. The overall scene is brightly lit with industrial lighting.

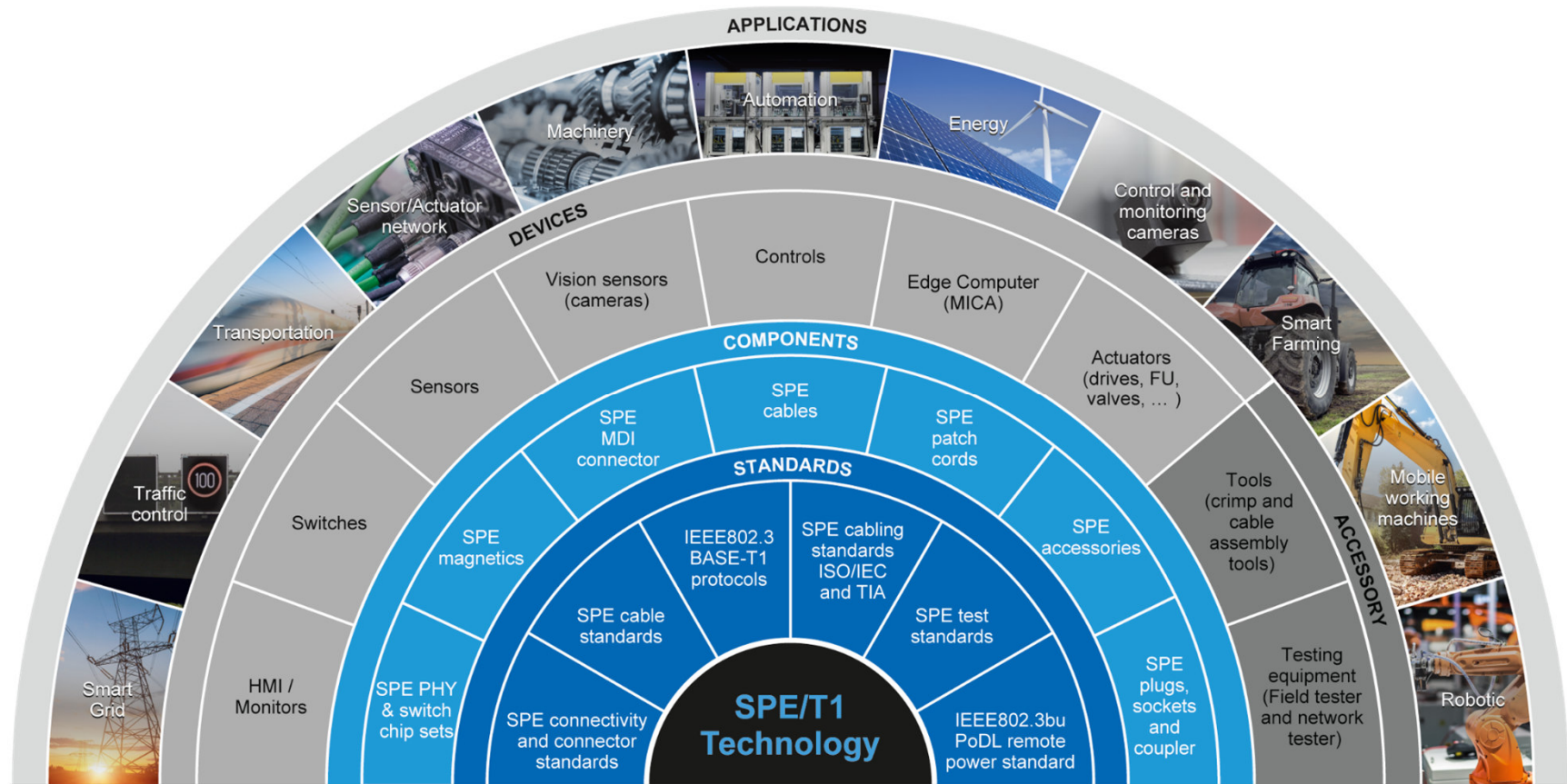
The SPE Industrial Partner Network combines strong brands to communicate and place the Single Pair Ethernet technology on the industrial market.

- Develop the SPE market to create new business opportunities.
- Concretization of IIoT in practice
- Creating clarity through standardization
- Provision of necessary components and equipment
- Transparency to applications

The SPE Eco-System



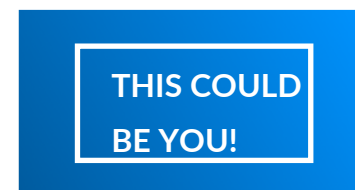
Pushing Performance





SPE Industrial Partner Network

founding members



ADDITIONAL MEMBERS



49!



Pushing Performance

Thank you
for your attention!

HARTING Technology Group (FY 2019/2020)



759 Mio.
Euro Sales

14 Production
plants

Headquarter in
Espelkamp, Germany



44

Sales-
Subsidiaries



> 5.000 Employees

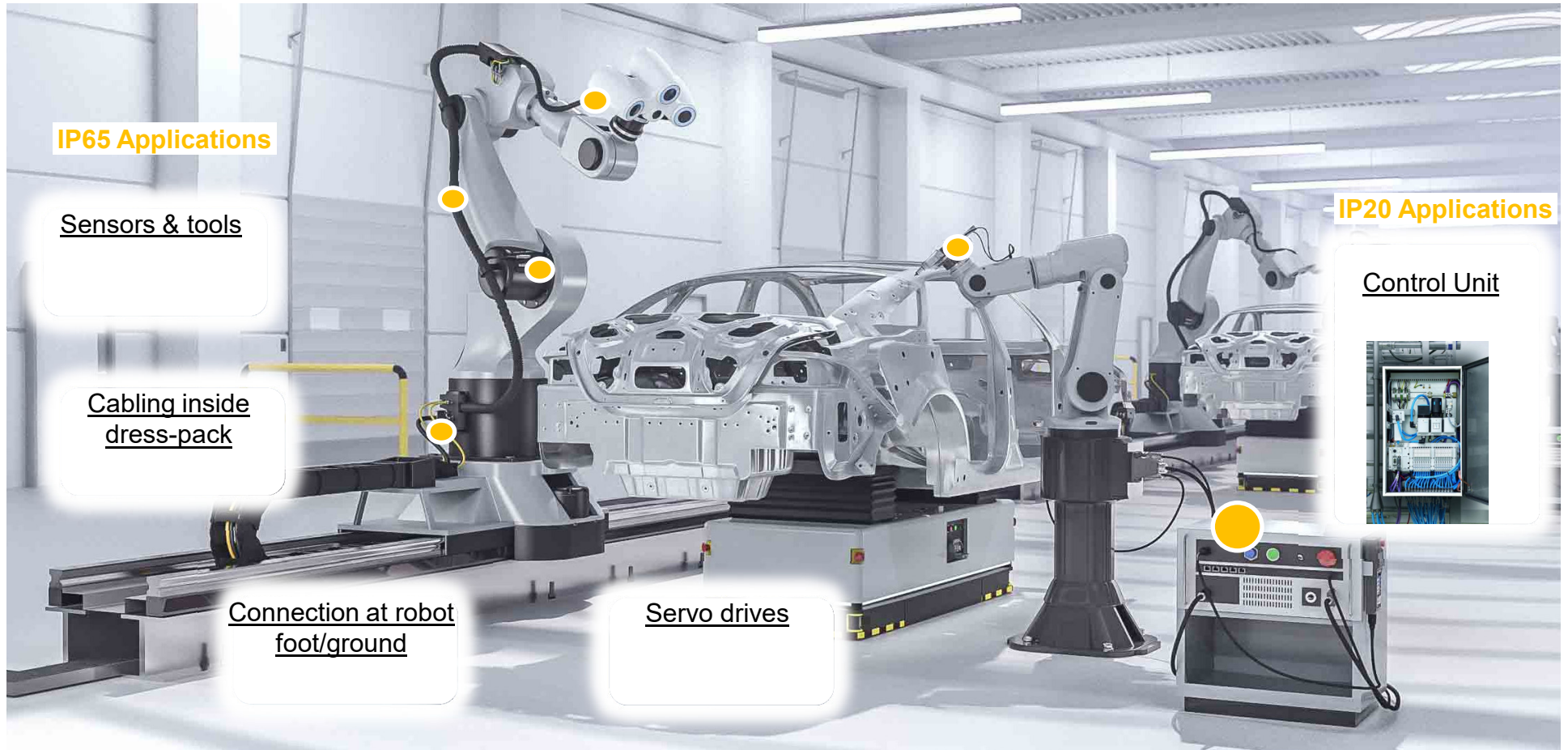
Foundation
1945

100 %
owned by
Family HARTING



Themenübersicht

2 Robotic Market Automation devices



2 The HARTING approach Target Markets

Focus Market TRANSPORTATION

