

Future Proof Machine Safety

From regulation to practice

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March 2024

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Official announcement – regulation update

29.6.2023

EN

Official Journal of the European Union

L 165/1

I

(Legislative acts)

REGULATIONS

REGULATION (EU) 2023/1230 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

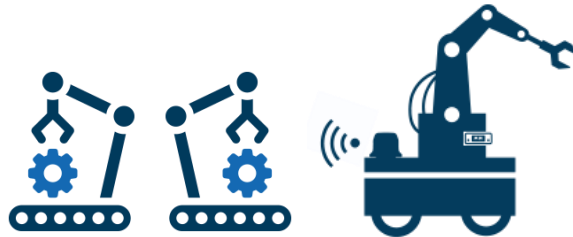
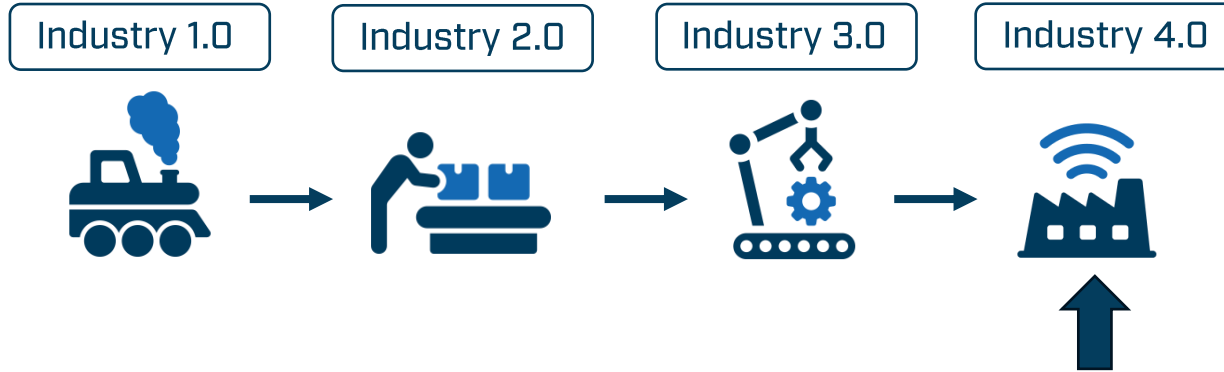
of 14 June 2023

**on machinery and repealing Directive 2006/42/EC of the European Parliament and of the Council
and Council Directive 73/361/EEC**

(Text with EEA relevance)



Industrial Revolutions



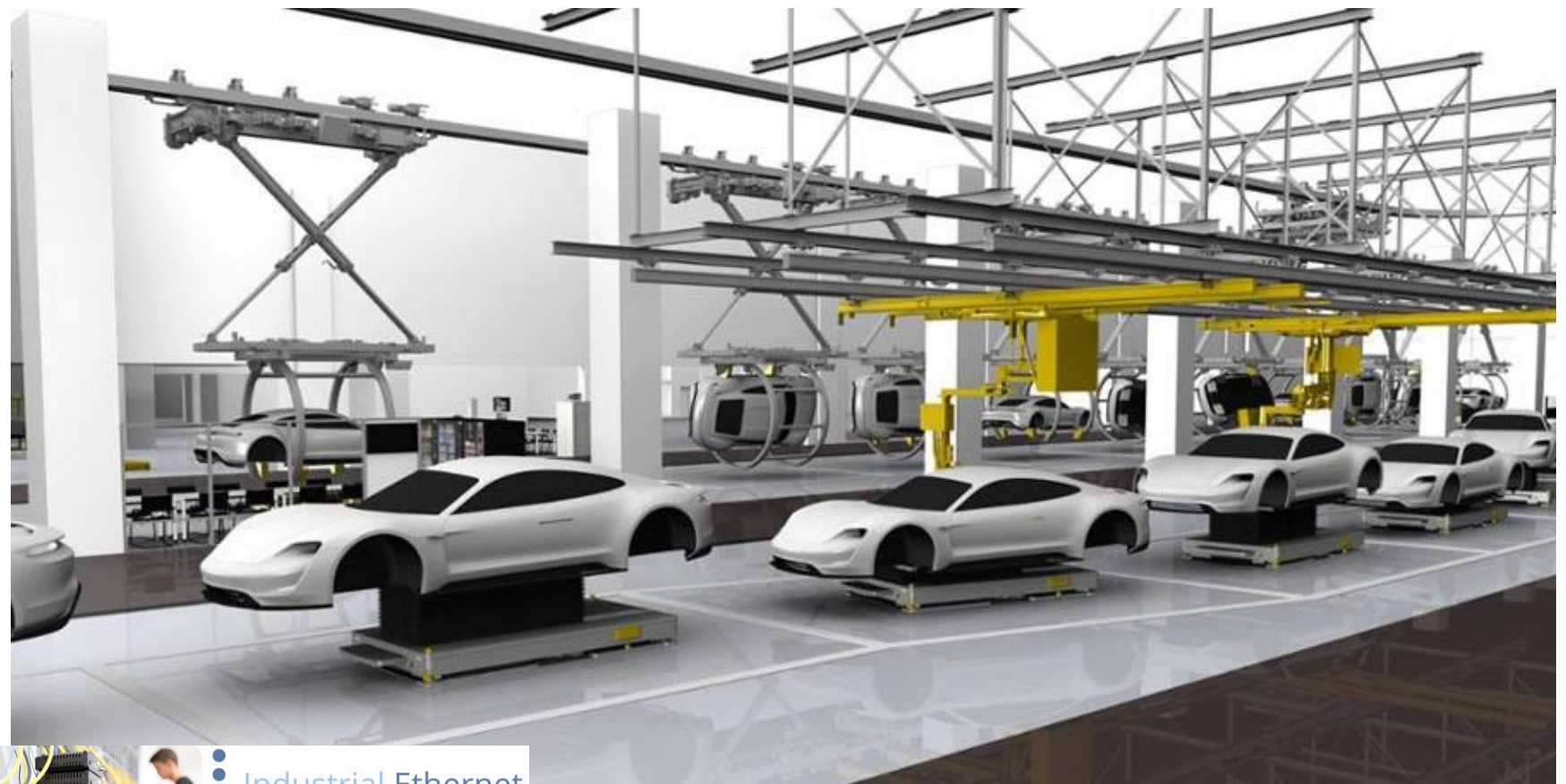
System to system integration

• Industrial Ethernet

26 maart 2024 | De Basiliek, Veenendaal



Increased flexibility, increased wireless controls



Industrial Ethernet

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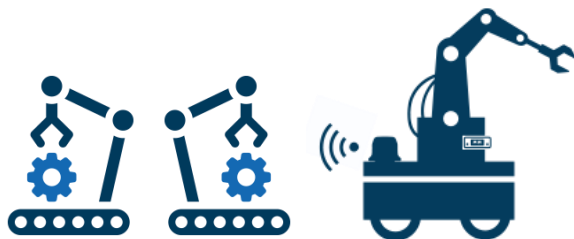
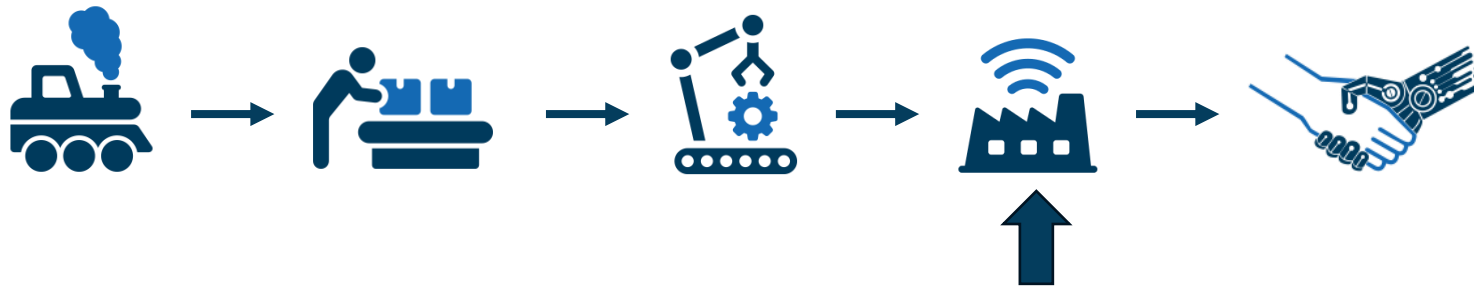
Increased flexibility, increased wireless controls

Didn't we forget something..

.. How to ensure human safety in these increasingly automated and complex environments?



Industrial Revolutions



System to system integration



Human and robot collaboration



New EU Machinery Regulation



Industrial Ethernet

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Practically, how does the machine regulation
impact machine and shopfloor?



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Machine safety today

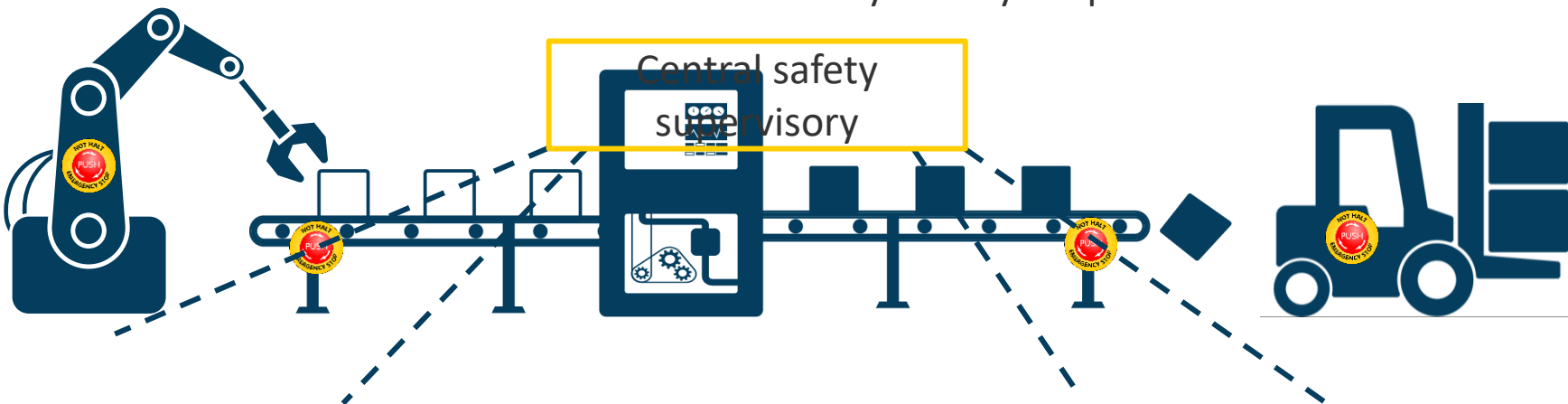
Safety control based on specific machines or part of machines.



Safety according to new machine regulation

Safety control based on *'machinery and related equipment if it's continuous operation may be dangerous'*

One 'Related Machinery' Safety Scope



What to take into consideration for coming regulation?



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Future Proof your Machine Systems

Cost

Engineering effort and resource



Modular design



Time

Time to market



Pre-certified

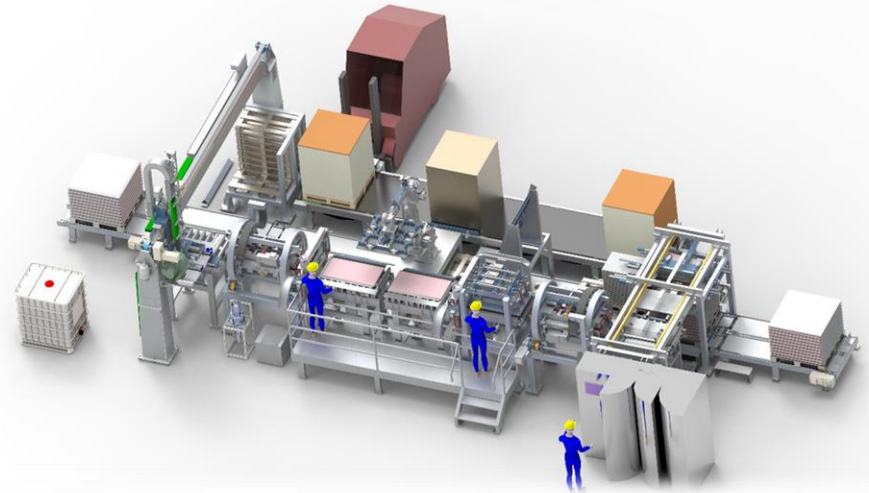


Value

Flexibility and interoperability



Scalable / multi-protocols



Industrial Ethernet

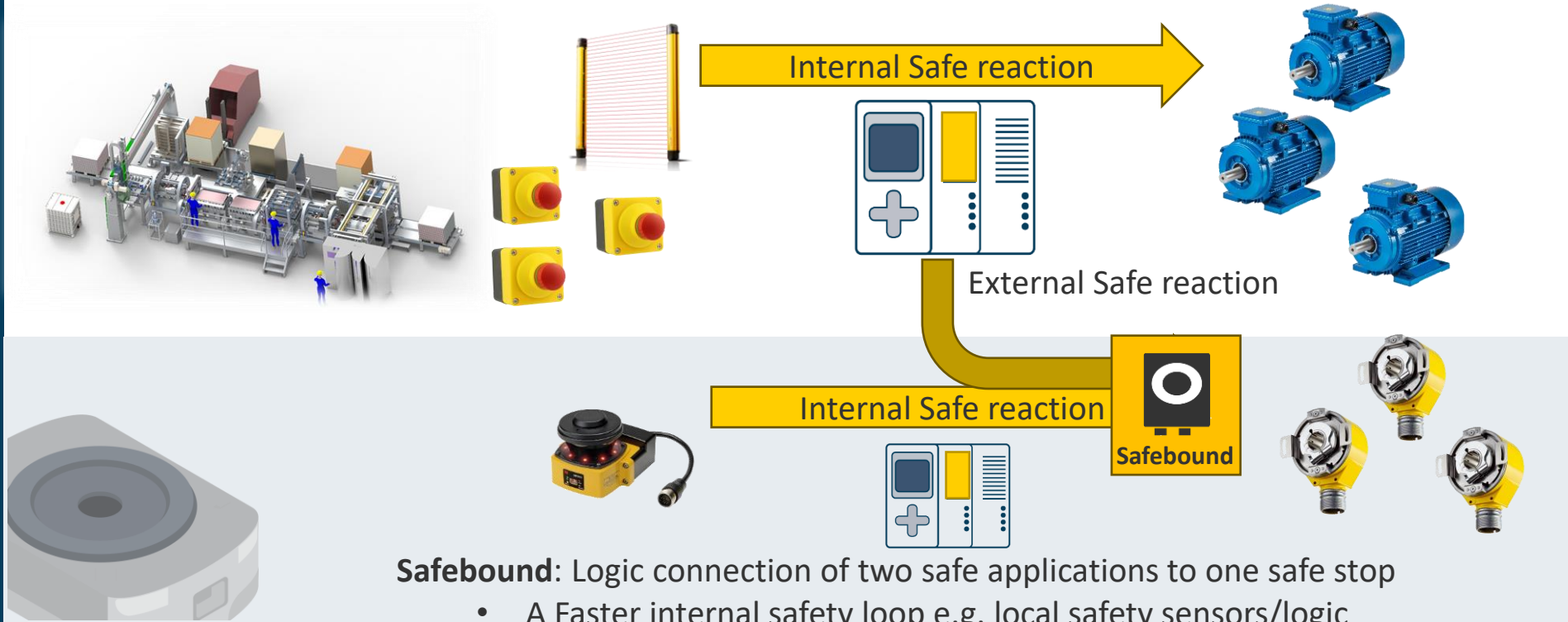
The Safebound



Industrial Ethernet

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Seamless upgrade your safety system



Safebound: Logic connection of two safe applications to one safe stop

- A Faster internal safety loop e.g. local safety sensors/logic
- A Slower external safety loop e.g. wireless emergency remote stop

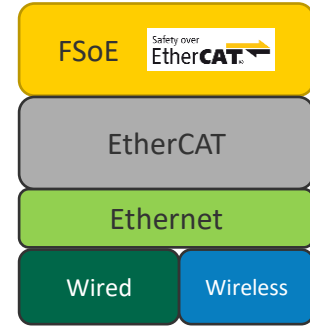
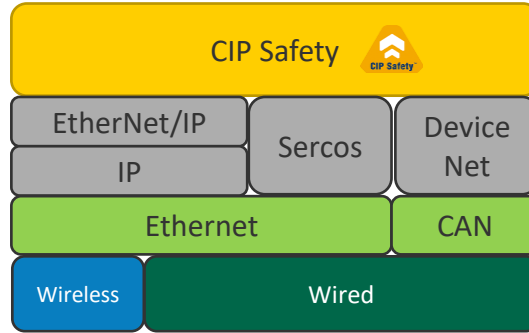
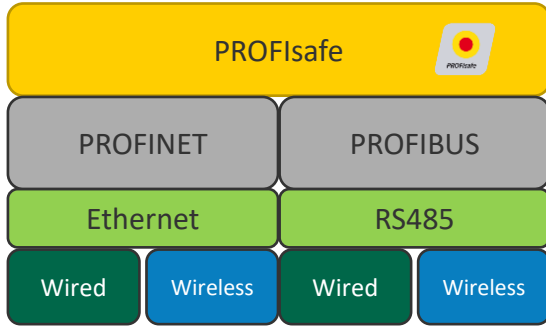
But how can we deal with moving parts
wirelessly?



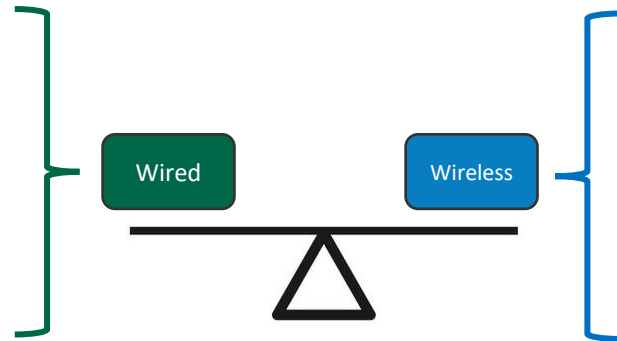
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The underlying layer - Protocols



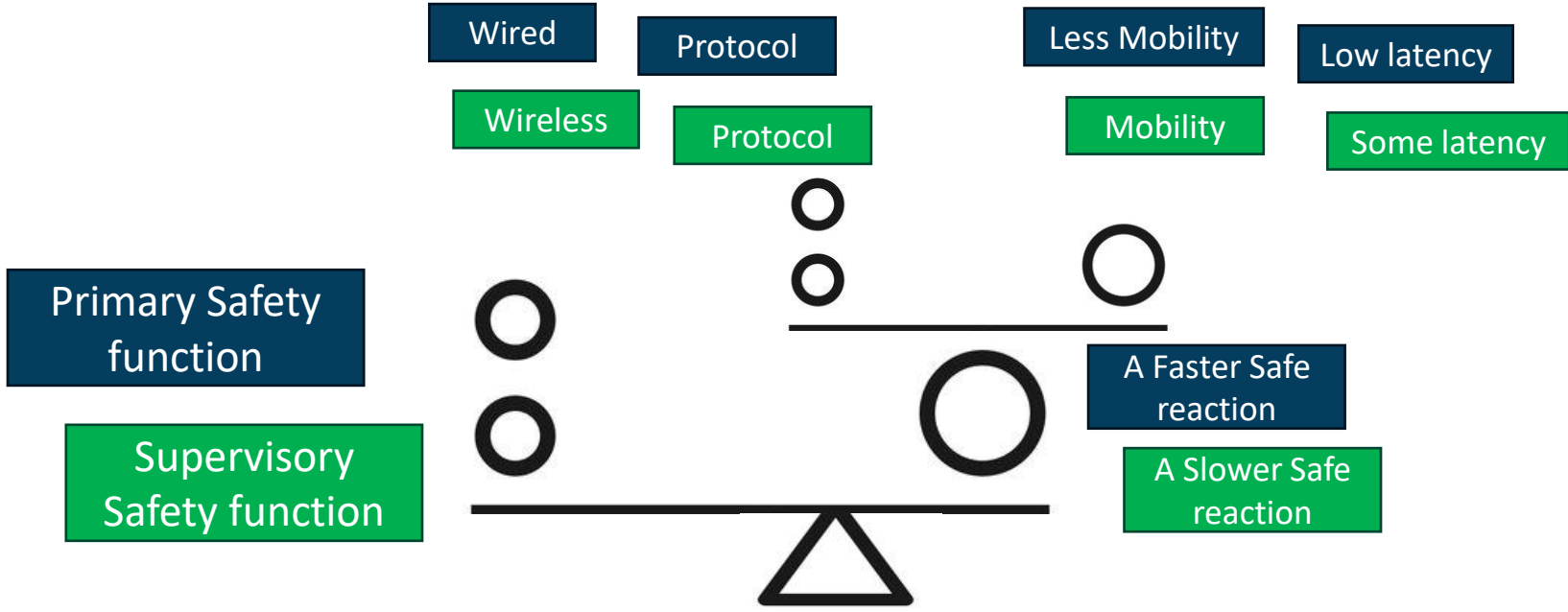
- Full duplex
- Timing / lower jitter
- Less packet loss
- Cost
- Durability



- Half duplex
- Timing / higher jitter
- Higher packet loss
- Cost
- Durability



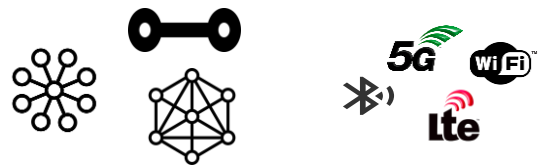
Adapting communication



Industrial Ethernet \times times

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Cycle time



The difference HMS makes



Industrial Ethernet

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Implementation example - machine line

Compliant according to machine regulation update



- Solution requirements:
1. (Wireless) connection
 2. Safety slafe(s)



Case study:



Customer:
AMR Manufacturer



Application:
Using HMS solution for remote e-stop which can be integrated with customers' safety infrastructure



Why HMS?

- Pre-certified solution – fast time-to-market
- Wide range of support across different safety protocols
- Wireless solution for industrial protocols

HMS at a glance

+9,000,000
devices connected

+400,000
machines connected
to cloud systems

Our field:
Industrial ICT

(Information and
Communication
Technology)

5G
Smart Grid
AI IoT
Wireless

At the forefront of
technology

800
employees
worldwide

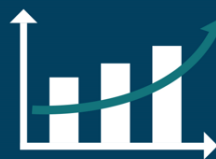


33% in R&D
33% in Sales

Offices in **18**
countries
Partners in **50**



Head office in
Halmstad, Sweden



2022 sales
€225 MLN



CO2 Net
Positive in
2025



Goal:
Annual growth
20%



Key take-aways

1. New EU regulation accepted, valid from 2027, as part of CE certificate
2. Safety supervisory is introduced in the regulation update
3. Safebound is THE solution for direct internal safety loop and delayed (wireless) external safety loop
4. Wired or wireless? → Do your homework 😊
5. Don't re-invent the wheel, dare to ask!



Questions?

Let's contact:

Sep Schraven
Key Account
Manager



Yuan Lee
Business
Dev. Manager





Hms

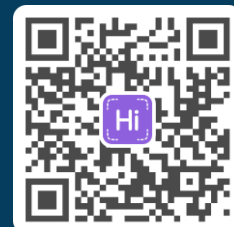
Hardware Meets Software™

Let's contact:

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