

Factory Automation vs. IT security

BU Automation

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INTERNET
SECURITY
DAYS 2015



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DIEFFENBACHER

DIEFFENBACHER - presses and more

Foundation: 1873
Headquarters: Eppingen, Germany
Shareholders: 100 % family owned
Employees: 1740 employees
Turnover: 469 million Euro
Equity ratio: > 30 %



DIEFFENBACHER - presses and more

Complete production lines
for the wood-based panel
industry



Presses, lines and process technology
for (carbon) fiber-reinforced plastics
components and hybrid components



IT security at industrial factory automation

CONFIDENTIALITY

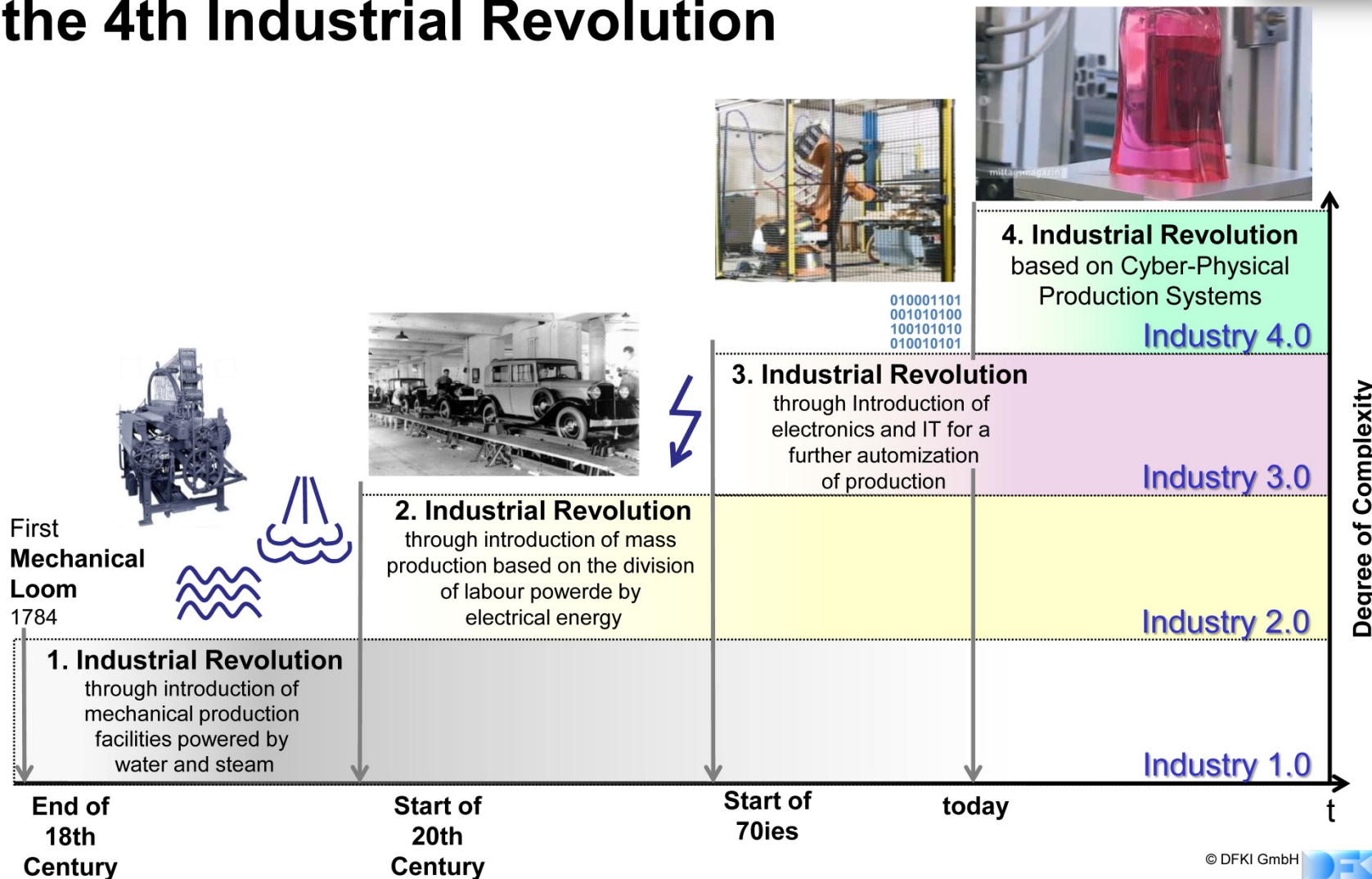
INTEGRITY

AVAILABILITY

Very often the productivity of the production line is the most important aspect

What is Industry 4.0?

From Industry 1.0 to Industry 4.0: Towards the 4th Industrial Revolution



What is Industry 4.0?



What is Industry 4.0 ? – Sample Statements !

The product carries information across the complete supply chain and its lifecycle

The product controls its production by a proactive M2M communication

**SMART
FACTORY**

The product as an agent affects its environment

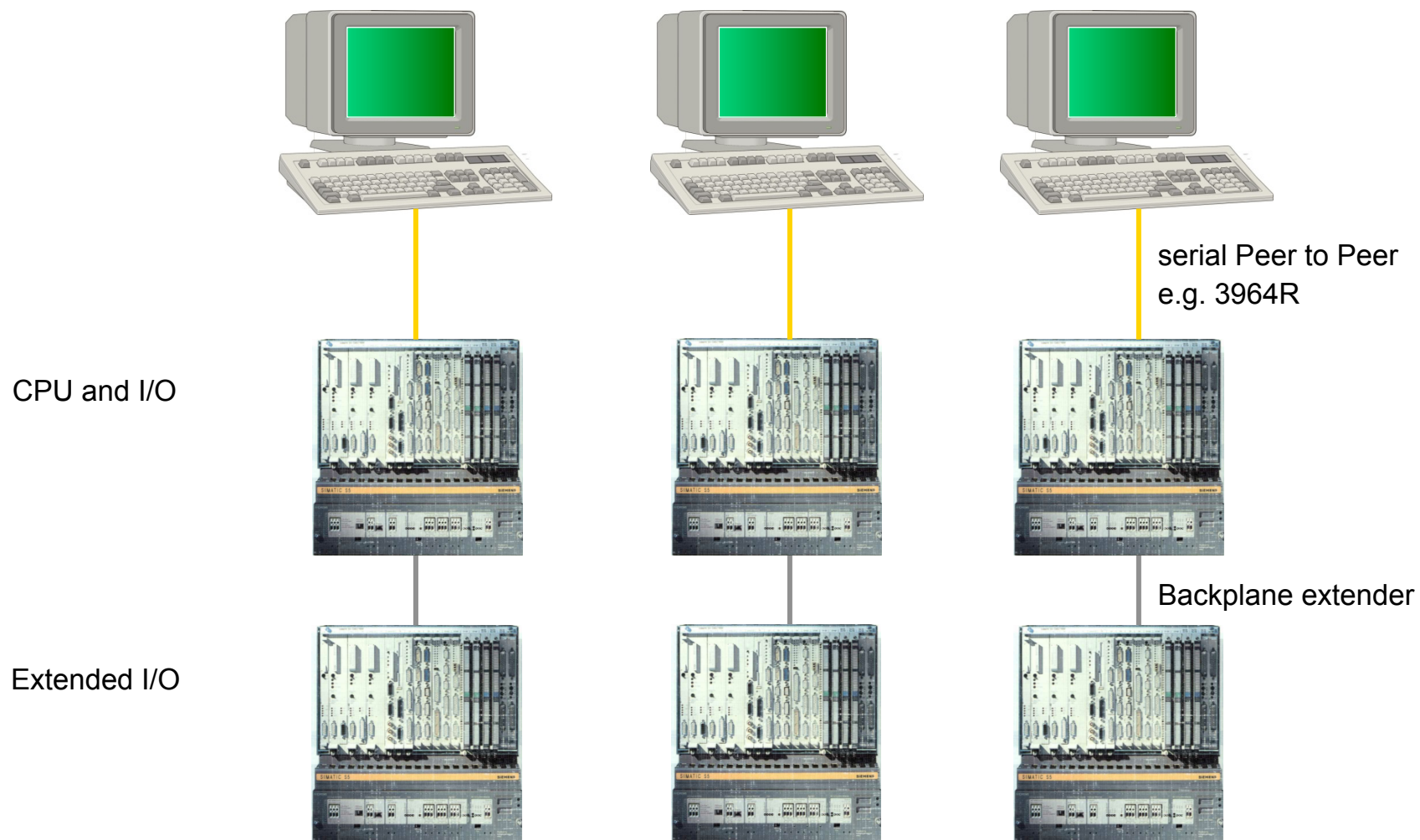
The product as an observer monitors itself and its environment



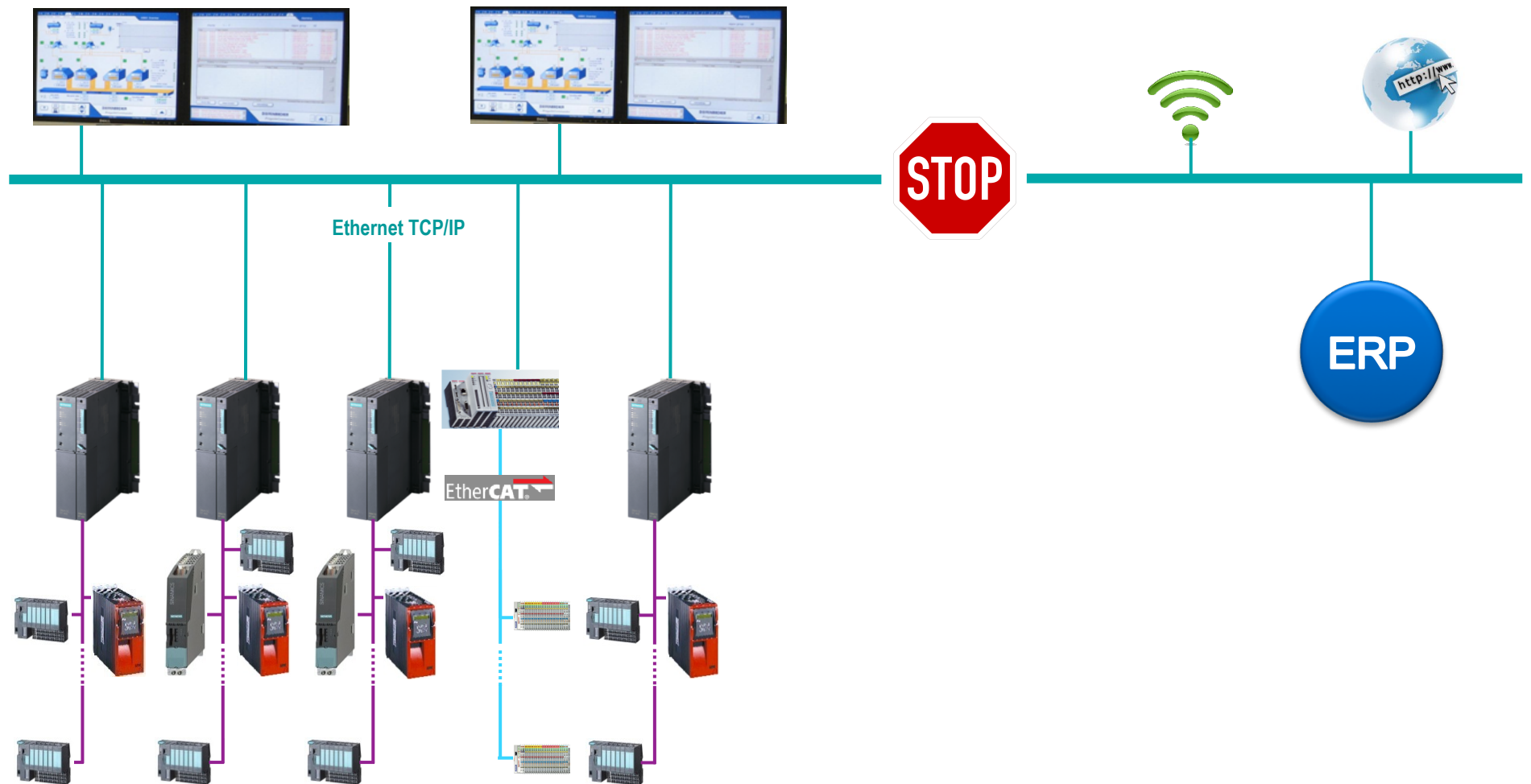
is based on bidirectional

CONNECTIVITY

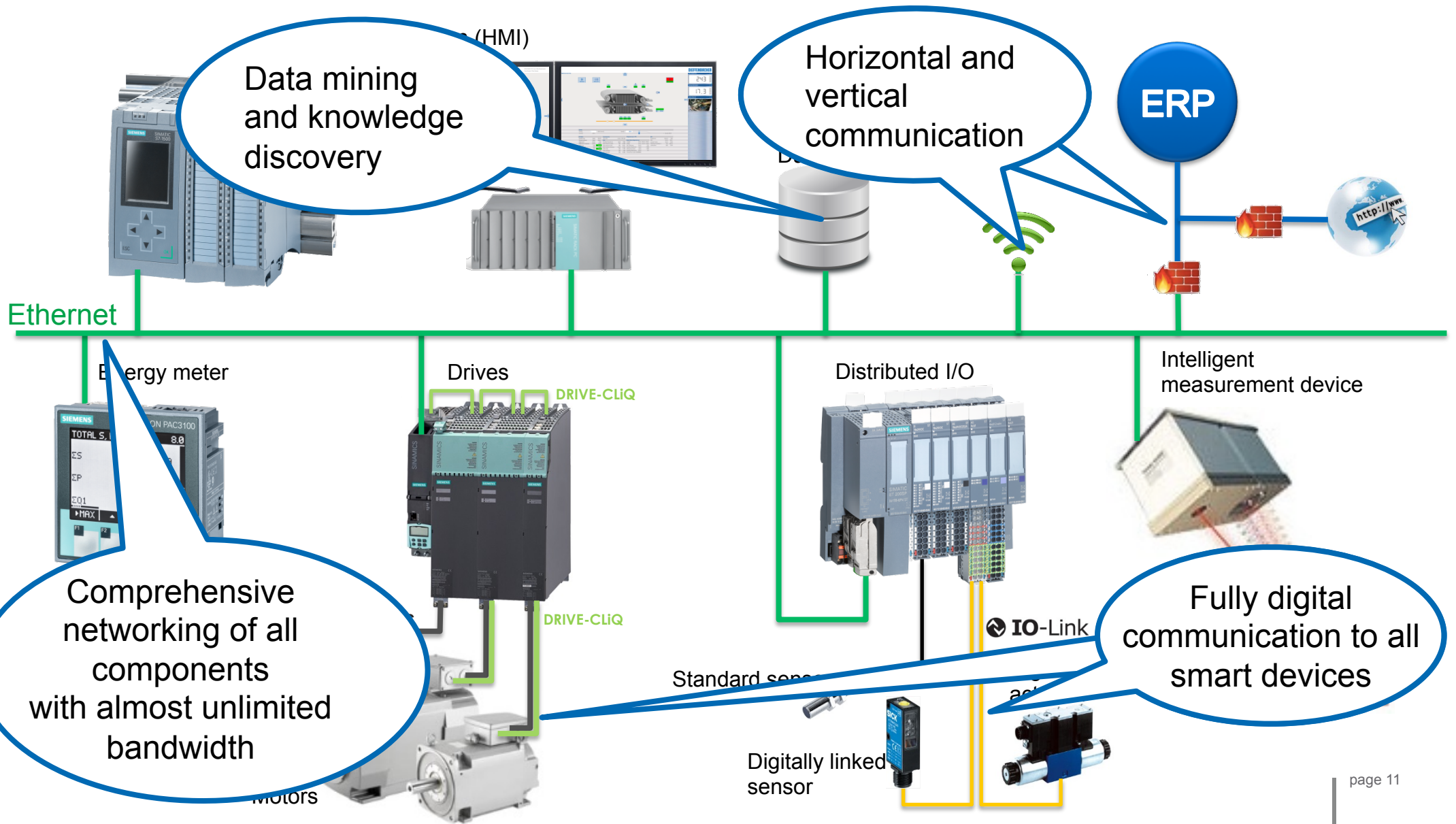
Typical automation system 1990



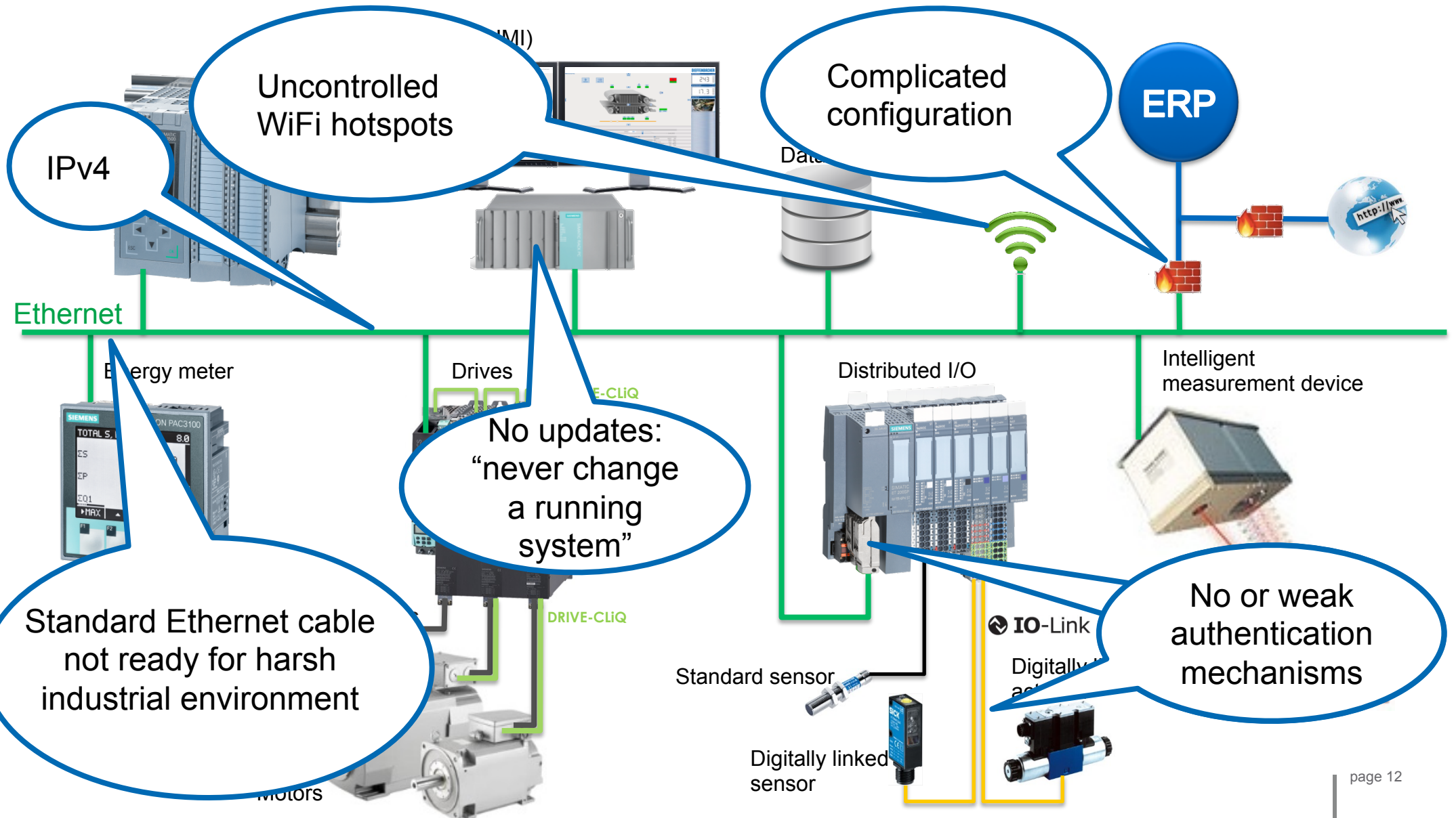
Typical automation system 2010



State-of-the-art automation concept – ready for Industry 4.0



State-of-the-art automation concept – ready for IT security?



IPv4

Uncontrolled WiFi hotspots

Complicated configuration

ERP

Ethernet

Energy meter

Drives

Distributed I/O

Intelligent measurement device

No updates: "never change a running system"

Standard Ethernet cable not ready for harsh industrial environment

No or weak authentication mechanisms

Motors

Standard sensor

Digitally linked sensor

IO-Link

Digitally linked actuator



DIEFFENBACHER

Innovation is in our genes –
since 1873

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