



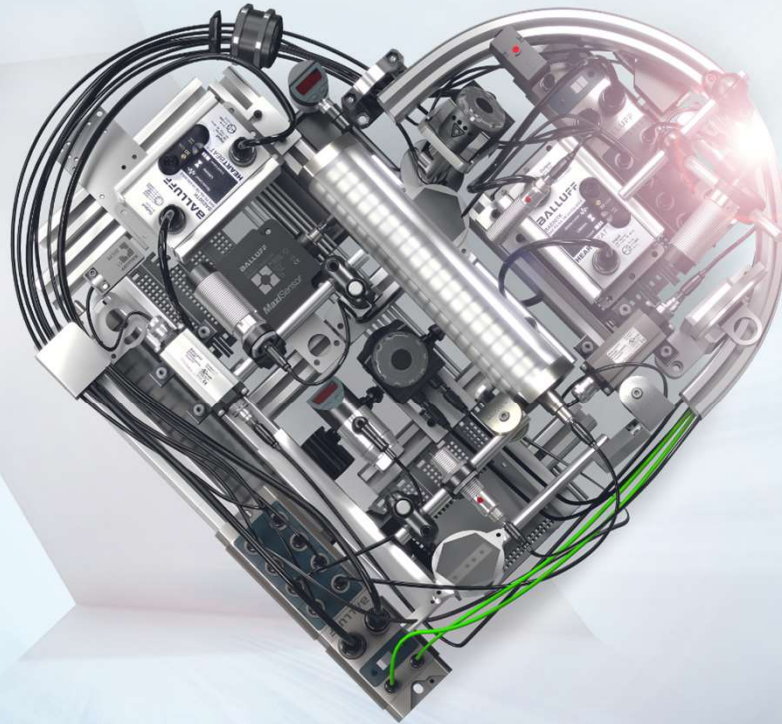
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 *innovating automation*

The Future of IO-Link Intelligent sensors
working in an I4.0 Environment

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OUR HEART
BEATS FOR
INDUSTRY 4.0



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WE PROVIDE AN EXTENSIVE PORTFOLIO FOR
INDUSTRIAL AUTOMATION AND INDUSTRY 4.0



AROUND THE
GLOBE.

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37 SUBSIDIARIES FOR SALES, PRODUCTION, LOGISTICS, AND DEVELOPMENT

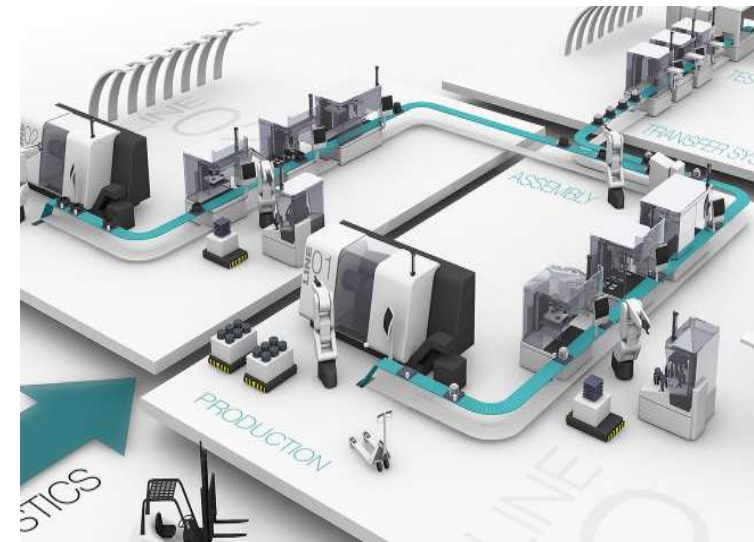
FURTHER REPRESENTATIVES IN 68 COUNTRIES

MORE THAN 3600 EMPLOYEES

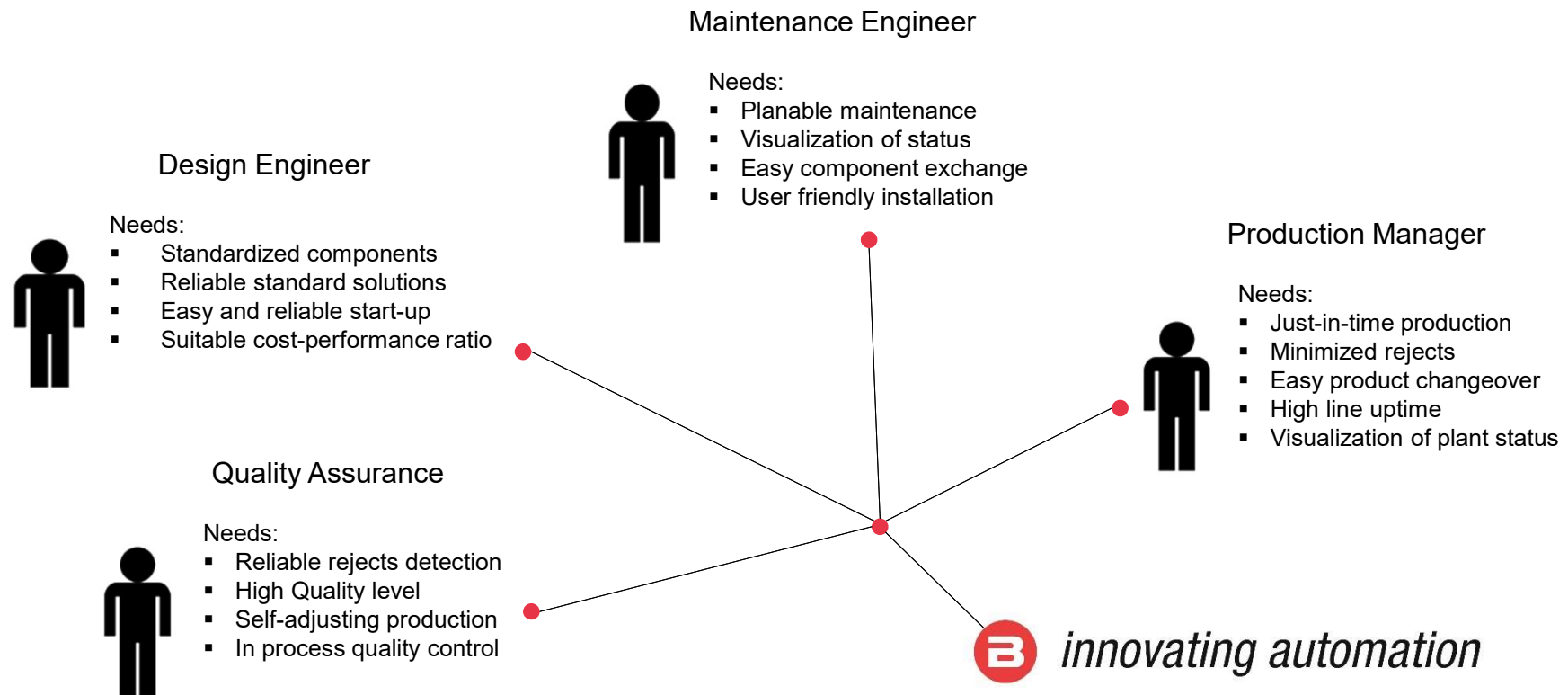
CUSTOMER NEEDS IN MODERN PRODUCTION CONCEPTS

Requirements for tomorrow's efficient production

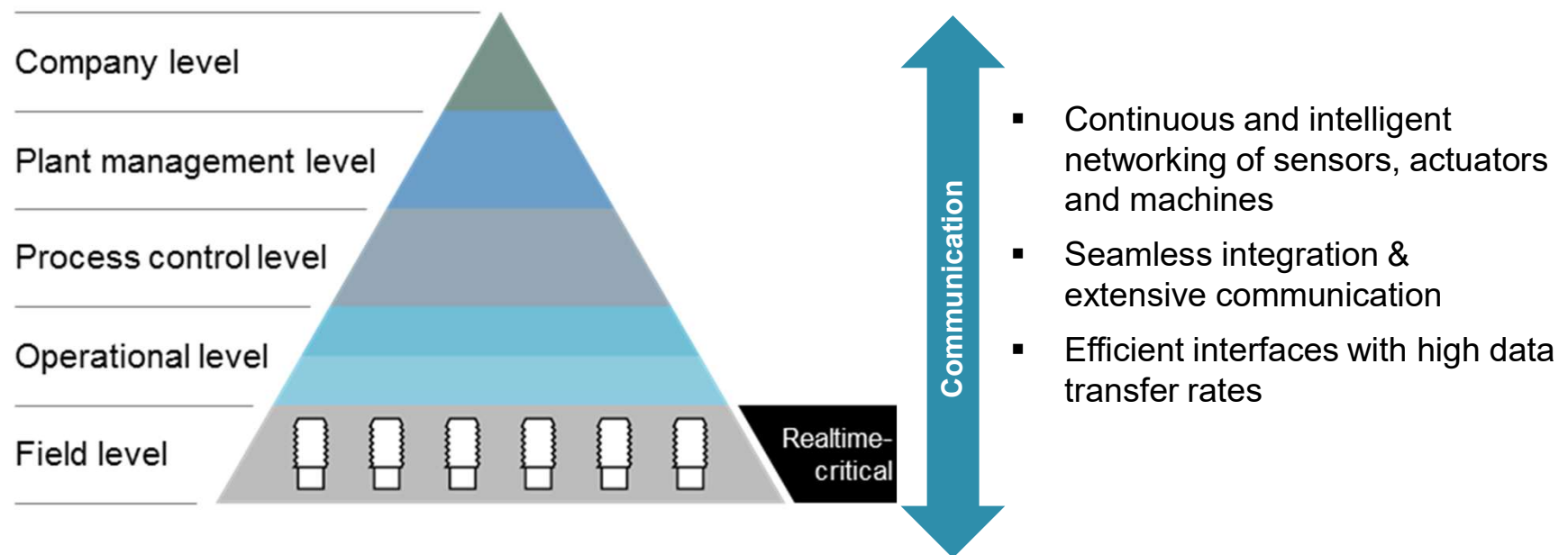
- More and more extremely flexible production lines
- Demand for maximized uptime, minimized downtime
- Real time status information of machines and products
- Smart maintenance and upgrading based on “real” facts
- **Ready for the future:
Self-regulating systems and intelligent control mechanisms – Cyber Physical Systems (CPS)**



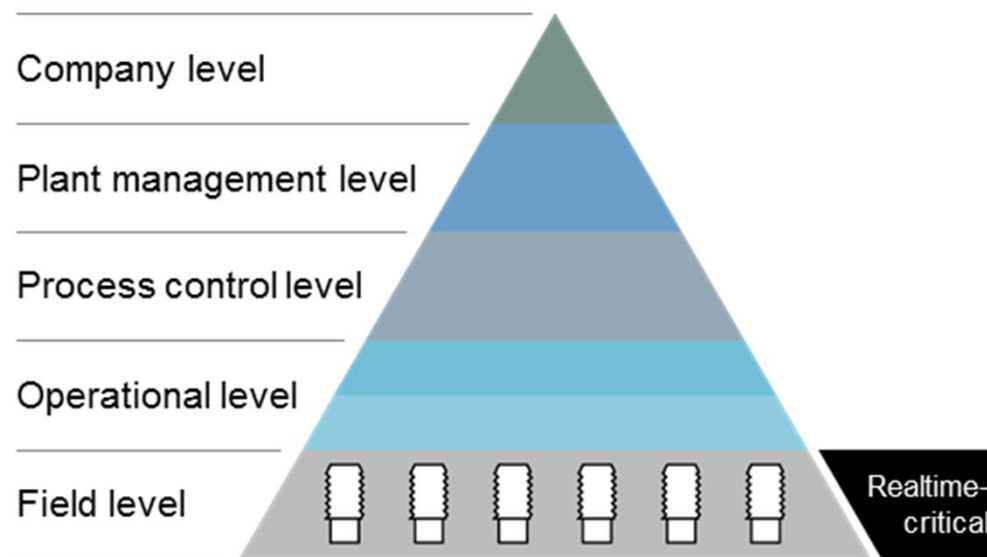
MULTIPLE TARGET PERSONAS WITH DIFFERENT NEEDS



INCREASING NEED FOR INFORMATION BETWEEN LEVELS



ON-SITE INFORMATION IS THE KEY TO EFFICIENCY

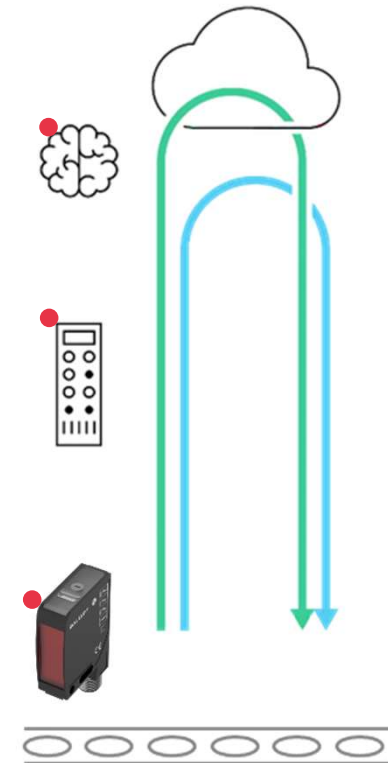


- Sensors are „Eyes and ears“ in the plant and provide valuable data
- Numerous sensors are already in place and are necessary for the control systems
- Without on-site data no reliable information is available
- Primary and secondary data:
 - Object data
 - Identification data
 - Environmental data
 - Diagnostic status
 - Sensor status info
 - Pre-processed data

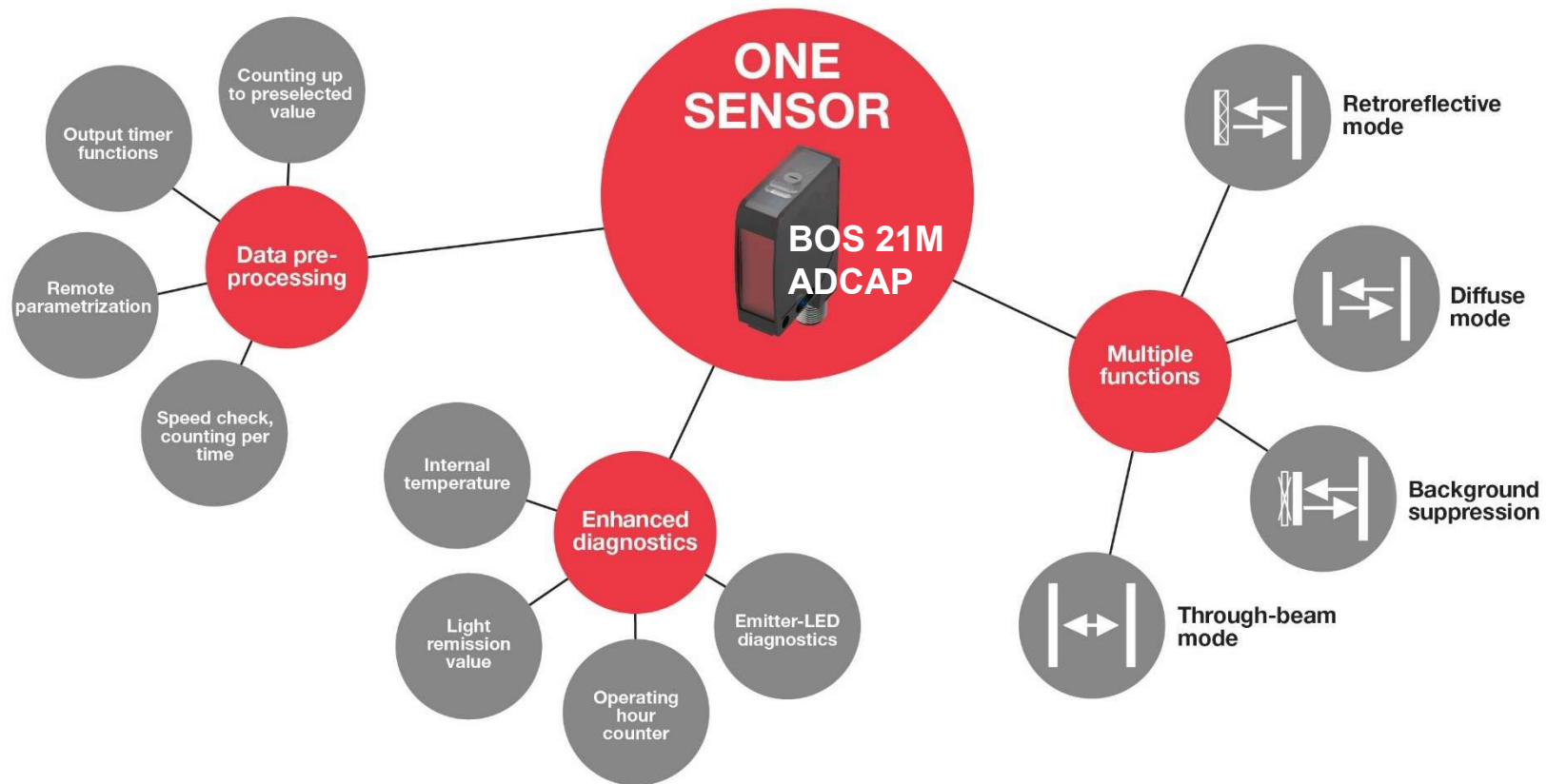


INTELLIGENT SENSORS ARE THE FIRST STEP

- Enriching digital plant models with real life data
- Increasing knowledge of plant status and production
- Providing data beyond the standard sensor function
- Enabling Condition Monitoring and Predictive maintenance with extra data (e.g. lifetime, stresslevel, misalignment)
- Monitoring environmental conditions (e.g. temperature, voltage supply, contamination)
- Remote Parametrization for rapid production changes

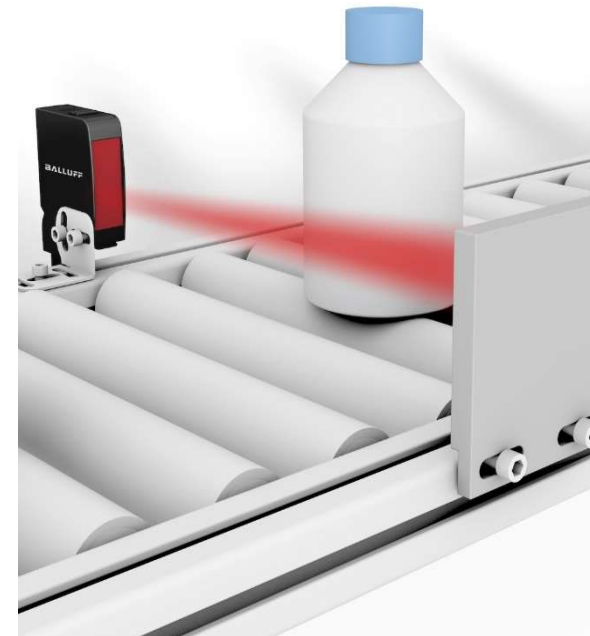


SENSORS ARE ALL-ROUNDERS WITH MULTIPLE FUNCTIONS



INNOVATIVE SENSORS - MORE THAN JUST SIGNALS!

- On the fly changeable sensing modes ensure reliable detection of various objects with best sensing principle
- Decentralized sensor intelligence and data pre-processing enables fast processes independent of IO-Link data speed
- Advanced emitter-LED diagnostics and further diagnostic functions are the base for predictive maintenance based on real-life data.
- Extra condition monitoring functions provide further benefits by increasing knowledge about plant and sensor status

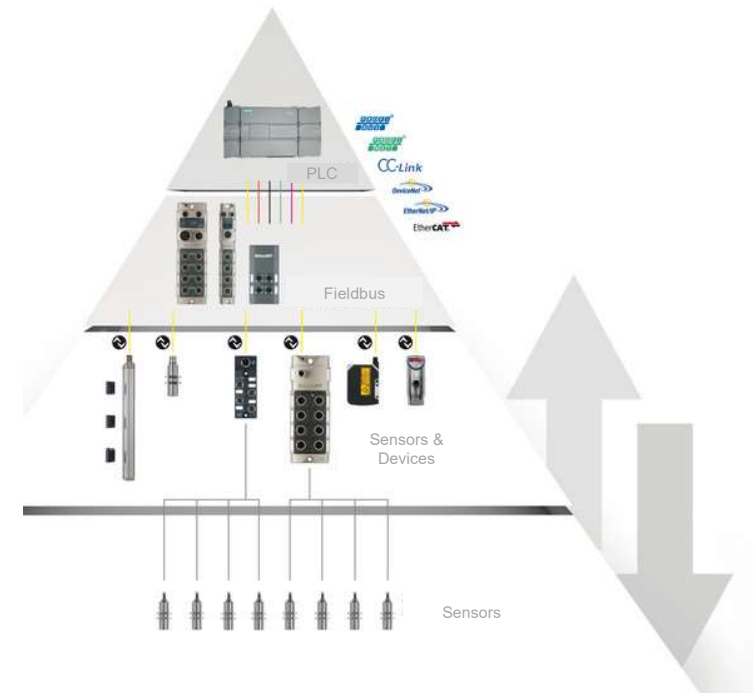


BOS 21M ADCAP – CLEVER AND FLEXIBLE WITH IO-LINK

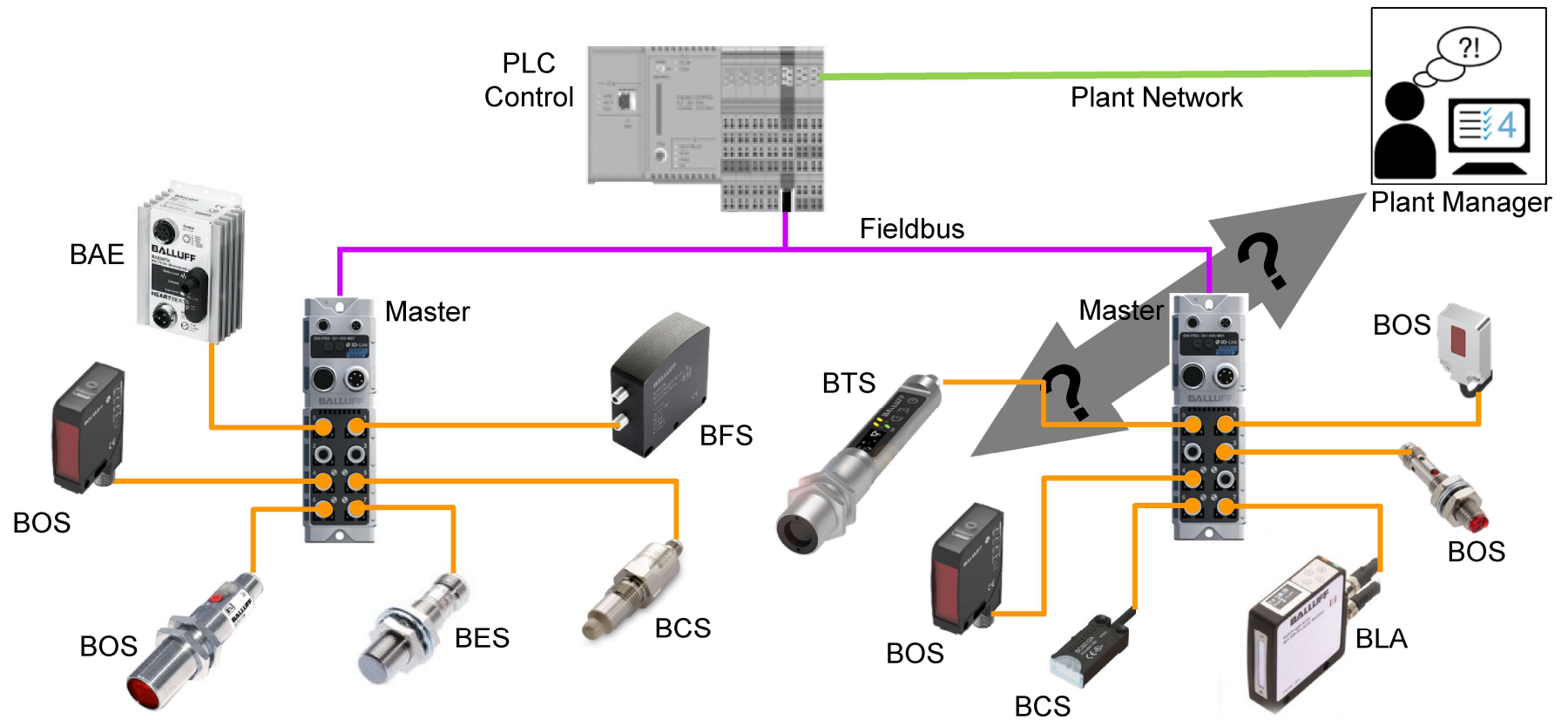


INTELLIGENT SENSORS DO NEED NETWORKS

- Providing bandwidth for transporting data (not signals)
- Connection between sensors and plant management
- Data are collected and transferred simultaneously
- Fast and standardized data exchange
- Data and Information are available to all users
- Reduction of wiring and easy installation

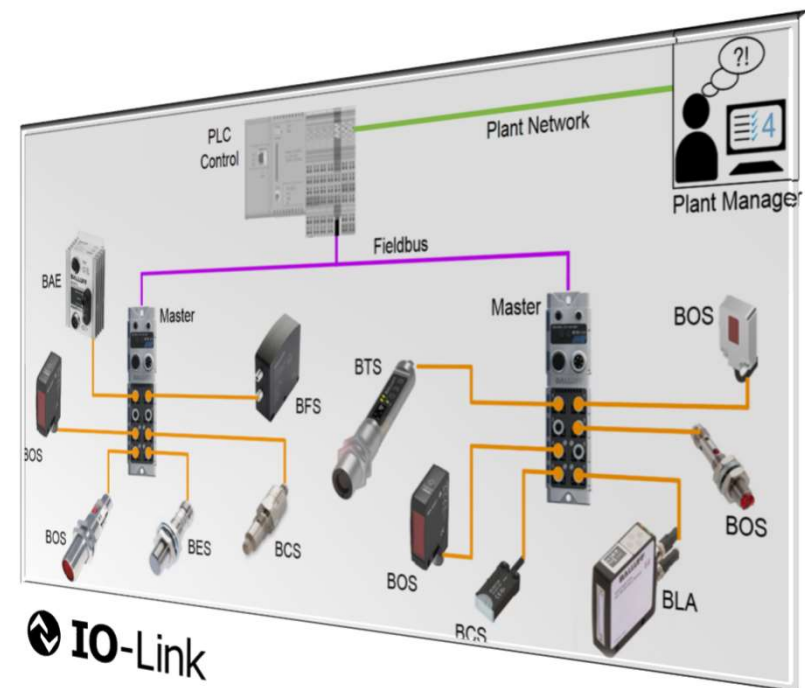


NETWORKS BRIDGE THE INFORMATION GAP



IO-LINK IS THE COMMUNICATION CHANNEL FOR SENSORS

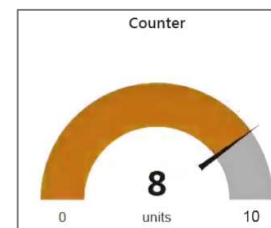
- Standard components with known and reliable technology
- Wide range of sensors, devices and gateways available
- No proprietary system – widely used around the globe
- Standardized protocols and sensor profiles for easy integration and system set-up
- Easy combination with other fieldbus systems (Profibus, Ethernet, CC-Link, etc.)



EASY I4.0 AND IoT WITH IO-LINK



- IO-Link provides a direct connection from the IT systems to the sensors
- IO-Link enables the worldwide access to on-site sensor data
- IO-Link as efficient and powerful interface provides data instead of just a digital signal
- IO-Link is one interface for all signals: direct access to process and service data



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A GLOBAL PROMISE

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