



SICK
Sensor Intelligence.

WEBINAR

Digitalization and Industry 4.0, how to implement it easily

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General note

- › **This webinar is being recorded!**
- › If you want to get the presentations and/or the recording afterwards, we would ask you to agree to the GDPR!



https://s.sick.com/newsletter_registration_at-en

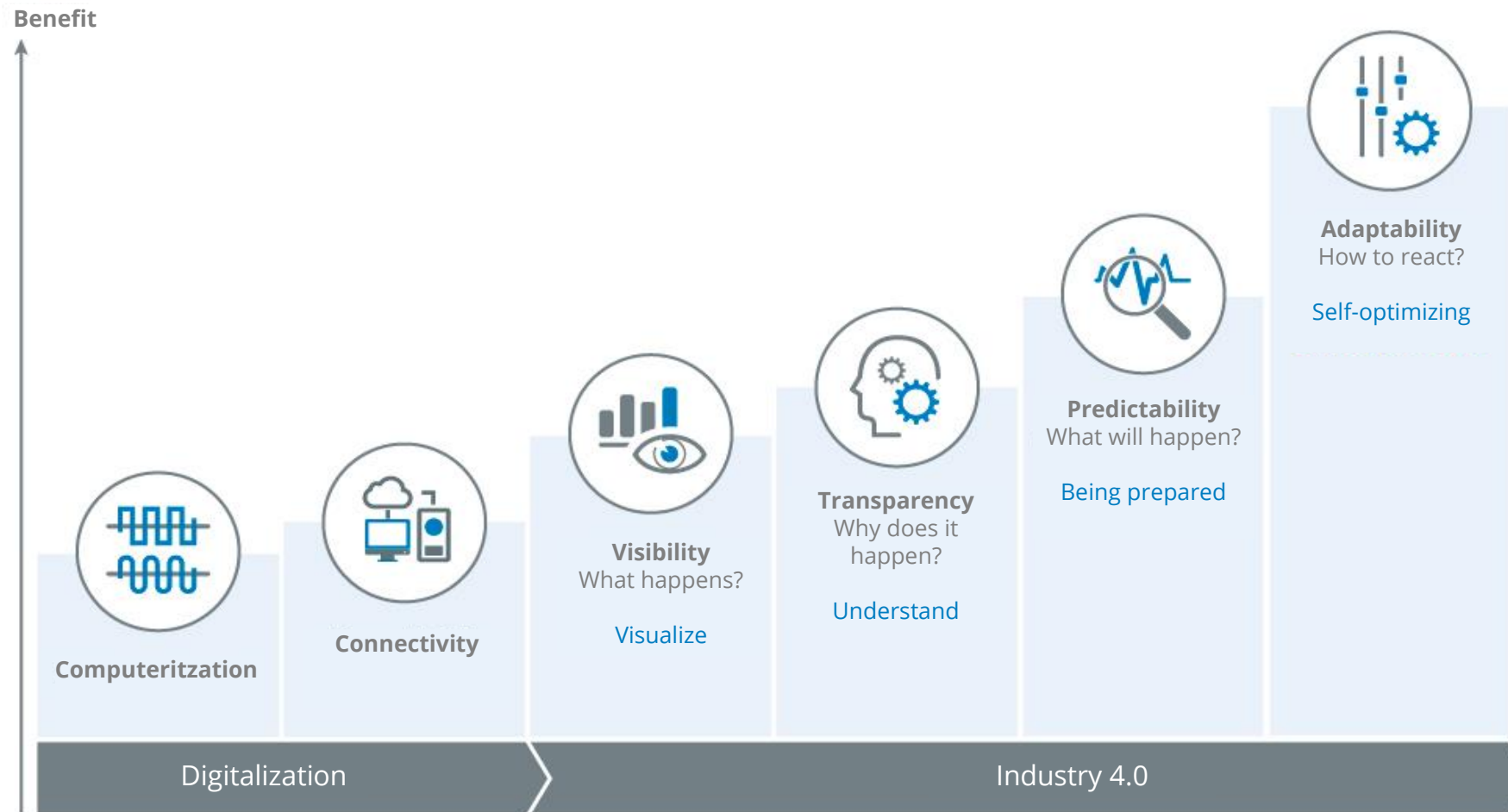


Agenda

1. Digitalization – an overview
2. Active Connectivity – the foundations
3. IO-Link – the tool
4. Integration of IO-Link sensors
5. Configuration of sensors
6. Visualization of sensor data
7. Process- and service data access
8. Outlook – REST API, Cloud Solutions

Digitalization

An overview



On the basis of the acatech Industry 4.0 Maturity Index

Plugged in \neq connected

To properly realize digitalization, it isn't enough anymore to just plug field devices into a controller terminal. Instead they have to be connected, so that a bidirectional communication can happen.

Standard with many larger sensors,
e.g. Laser scanners, Barcode readers, ...

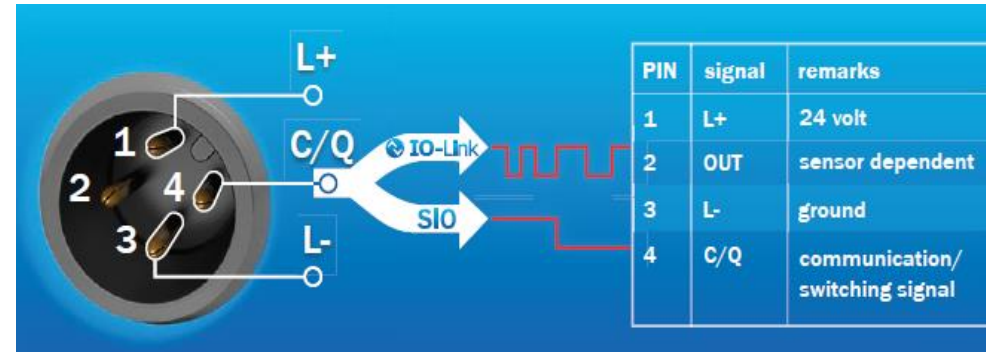
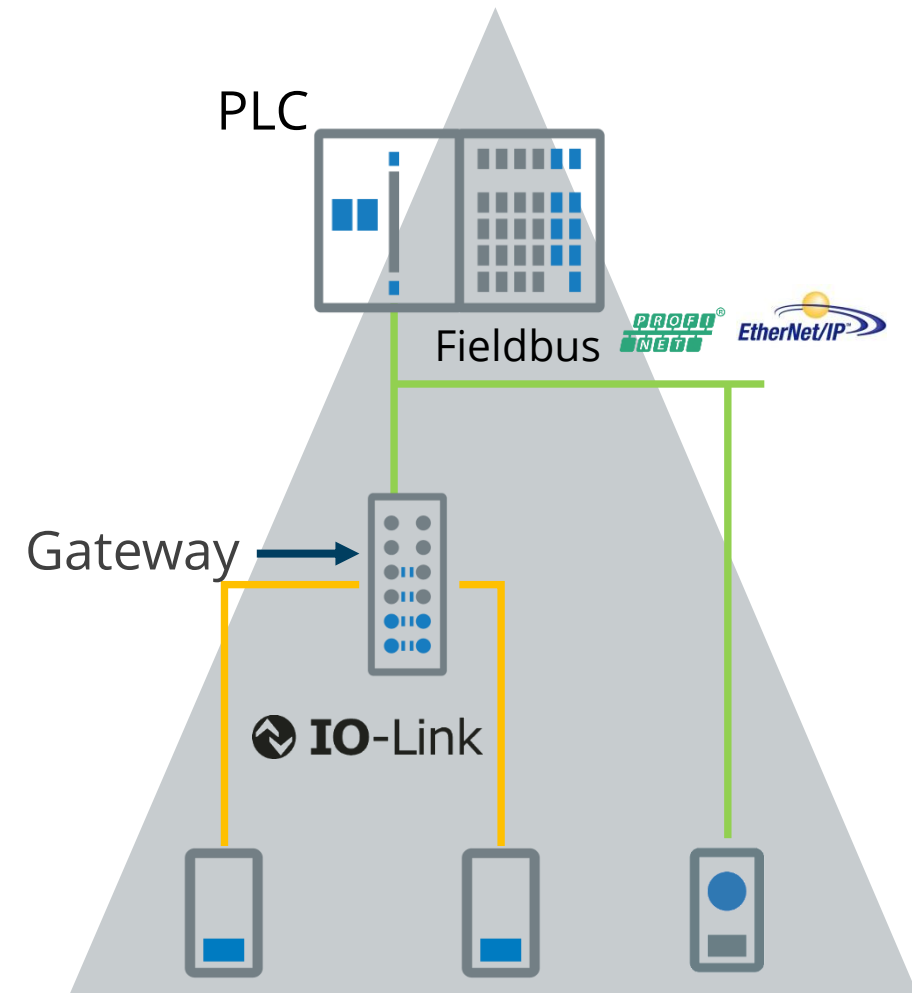


Not really wide-spread with smaller sensors, which often make up the majority in plants. Often there is simply not enough space for fieldbus integration



IO-Link

The perfect tool to achieve that goal



A smooth migration is possible, IO-Link Sensors ...

... can operate in classic "switching IO-mode"

... are not more expensive

... do not mean more integration effort if base-functionality is used

... do need an IO-Link master, but just as a switching sensor needs an IO-module

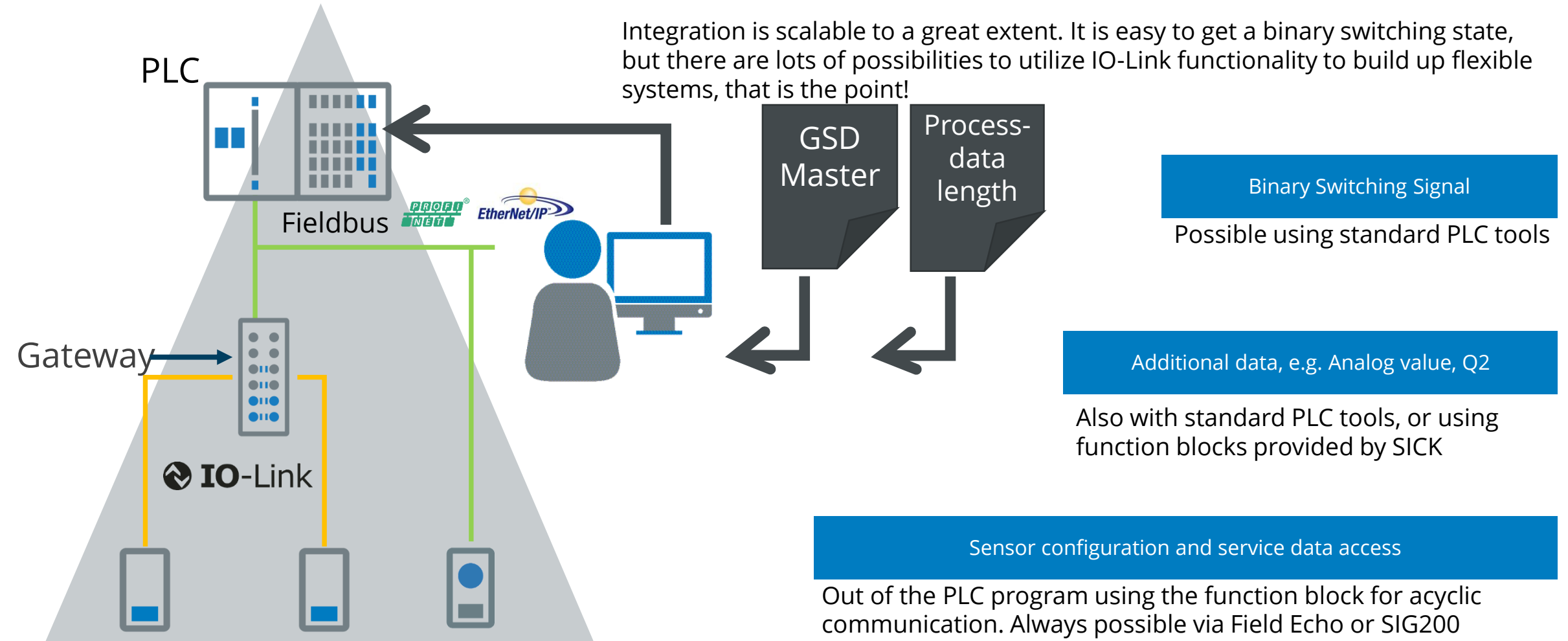
... reduce cabling effort (screening, decentral topology)

... deliver much more information to the controller than a switching sensor could ever do. This together with bidirectional exchange of information is the foundation of digitalization

IO-Link

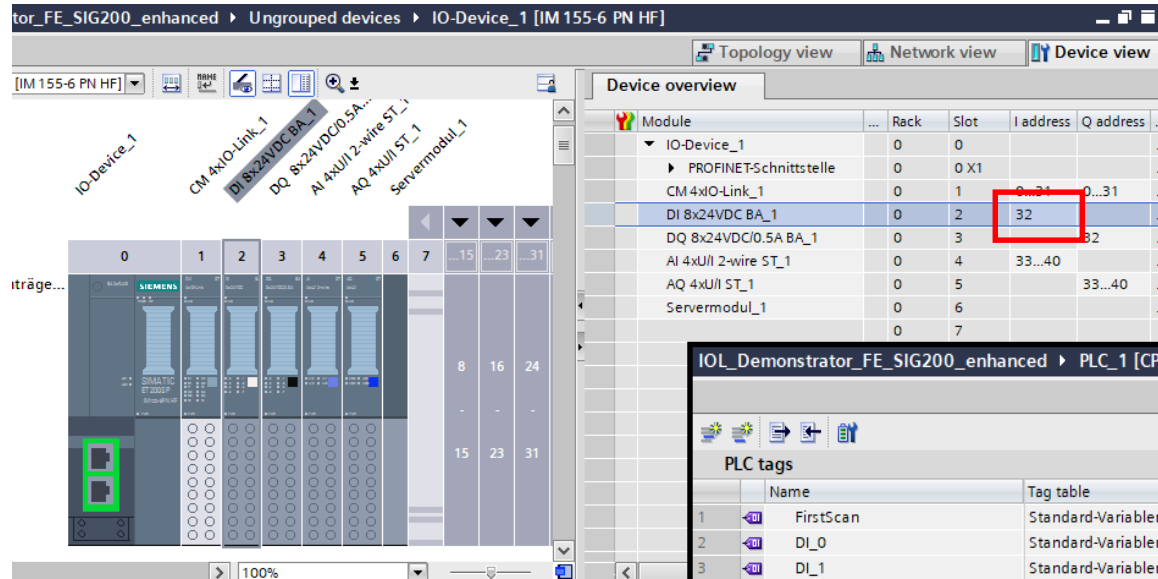
Sensor Integration

Integration is scalable to a great extent. It is easy to get a binary switching state, but there are lots of possibilities to utilize IO-Link functionality to build up flexible systems, that is the point!

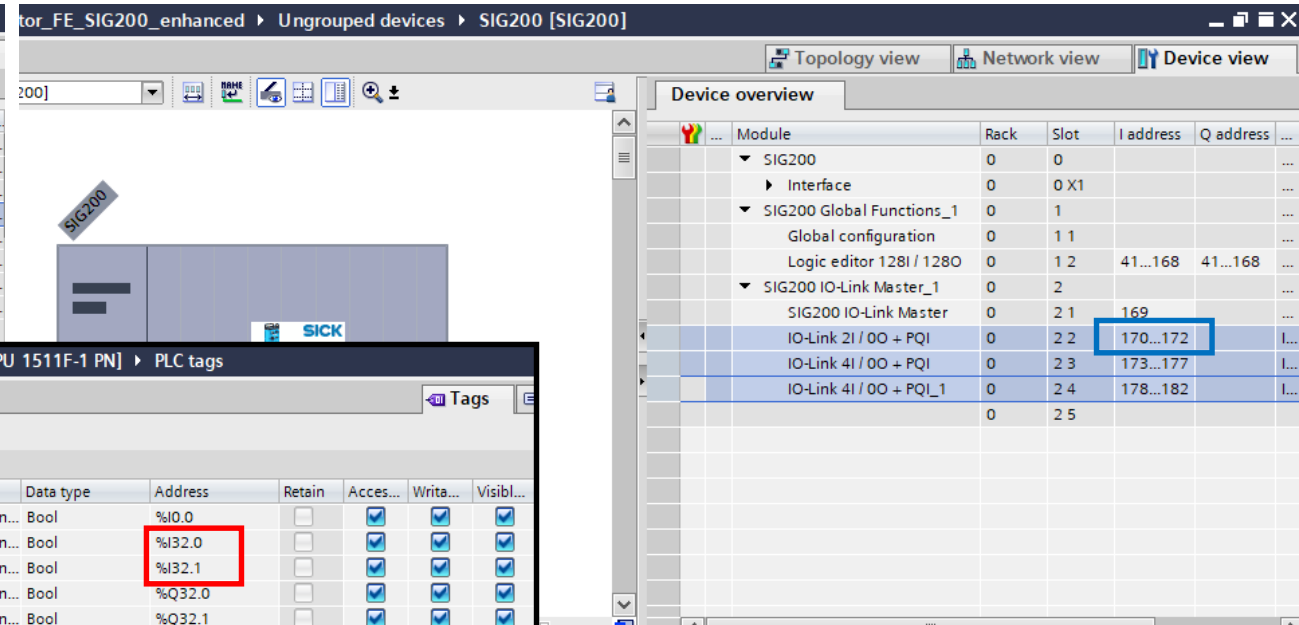


IO-Link

The easy way



Digital input



IO-Link input

tor_FE_SIG200_enhanced > PLC_1 [CPU 1511F-1 PN] > PLC tags

Tags

	Name	Tag table	Data type	Address	Retain	Access...	Writa...	Visibl...
1	FirstScan	Standard-Variablen...	Bool	%I0.0				
2	DI_0	Standard-Variablen...	Bool	%I32.0				
3	DI_1	Standard-Variablen...	Bool	%I32.1				
4	DO_0	Standard-Variablen...	Bool	%Q32.0				
5	DO_1	Standard-Variablen...	Bool	%Q32.1				
6	IOL_MOD_0	Standard-Variablen...	Bool	%I169.0				
7	IOL_MOD_1	Standard-Variablen...	Bool	%I169.1				
8	IOL_MOD_2	Standard-Variablen...	Bool	%I169.2				
9	IOL_MOD_3	Standard-Variablen...	Bool	%I169.3				
10	IOL_DI_0	Standard-Variablen...	Bool	%I171.0				
11	IOL_DI_1	Standard-Variablen...	Bool	%I176.0				
12	IOL_DI_2	Standard-Variablen...	Bool	%I181.0				
13	IOL_AI_2	Standard-Variablen...	UInt	%IW178				
14	IOL_AI_1	Standard-Variablen...	UInt	%IW173				
15	PN_MLG_NBB	Standard-Variablen...	UInt	%IW187				
16	SIG200_LE_IN_1	Standard-Variablen...	UDInt	%ID41				
17	<Add new>							

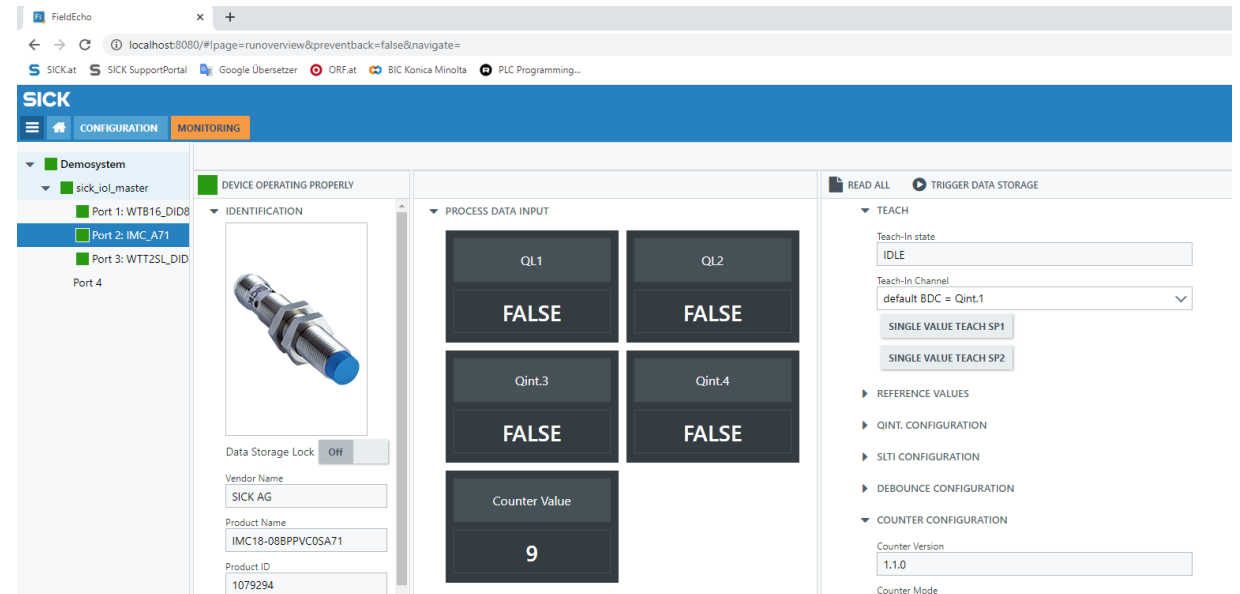
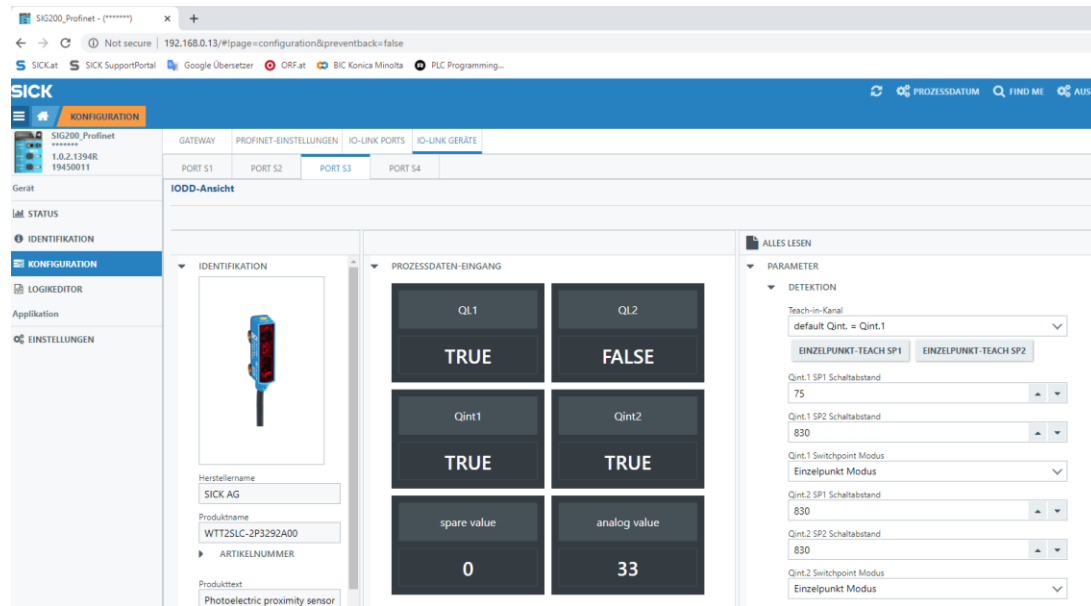
Values equally accessible using variables. Sensor configuration via web-browser (e.g. Sig200)

Easy sensor configuration

Independent of sensor brand

The Sig200 IO-Link gateway provides a browser based interface to access all sensor parameters and options.

Field Echo integration enables you to easily access all IO-Link devices connected to a PLC, also using a browser based user interface.

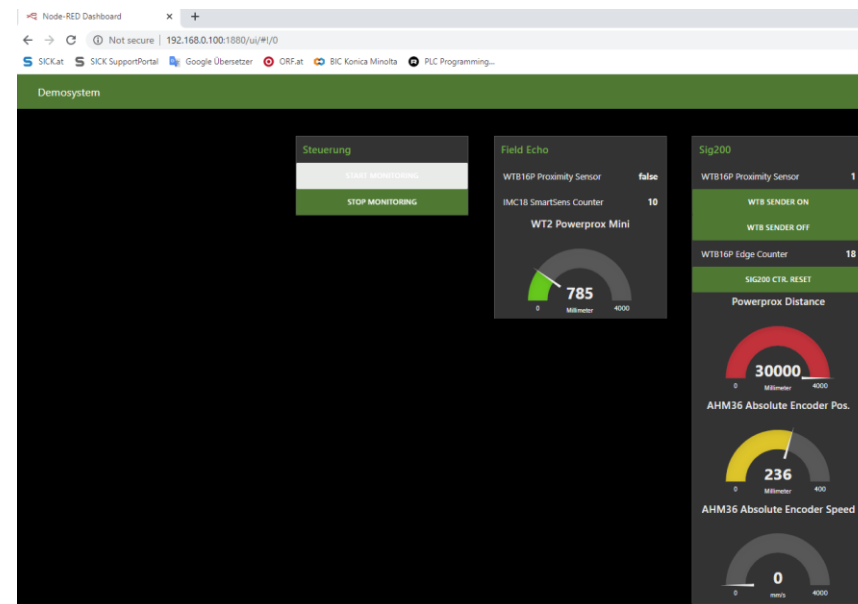
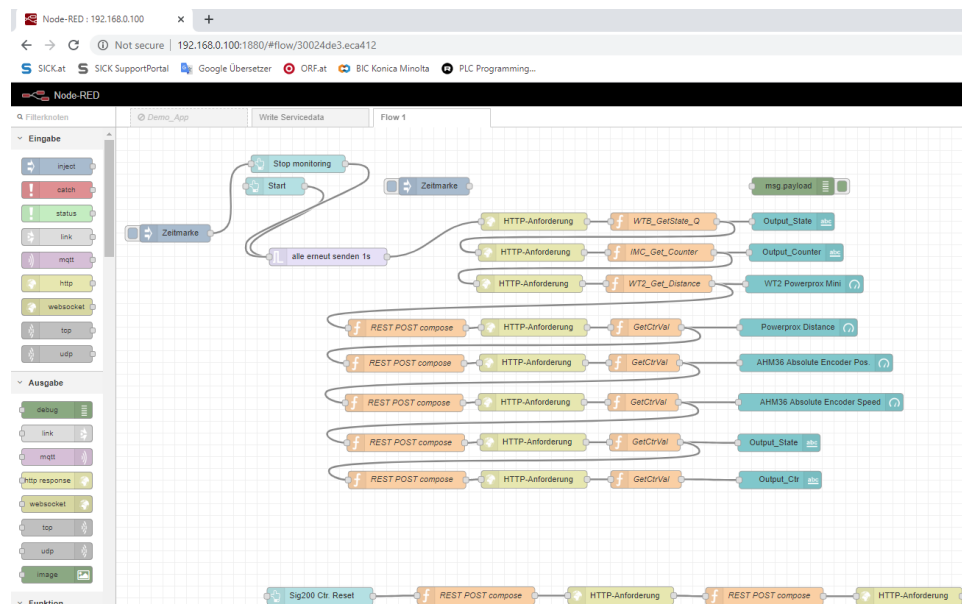


Read and write process- as well as service data

Visualization of sensor data, and configuration of sensor parameters

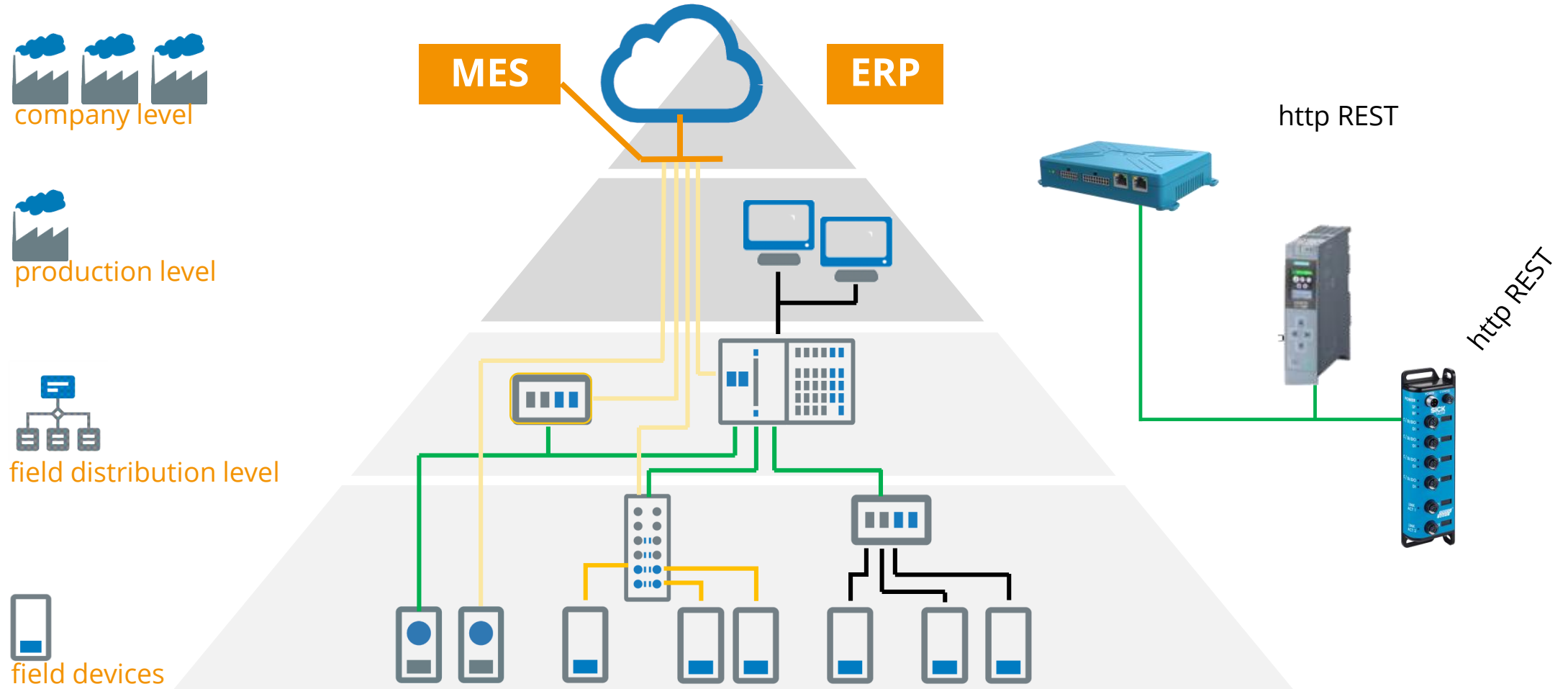
Process data is cyclically transmitted to the IO-Link master and forwarded to the PLC. Service data is transmitted to/from the sensor only upon request and does not interfere with process data. Both can be accessed in multiple ways:

- › In the PLC program, e.g. using function blocks
- › Using the SIG200 or Field Echo via web browser
- › From each device in the same network as the PLC, using REST API
- › Our TDC-E can be used to create simple dashboards using node-red



Outlook

REST API, Cloud solutions



Industry 4.0 Starter Kit

Try it!



Includes the Sig200 Gateway, an inductive and an optic sensor, power supply and cables.
Field Echo can be downloaded free of charge and is - with the free license – fully operational for 4 ports.

Product number: 1100608, Link -> [Click here](#)

Thank you for your attention!

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