

SystemWorld virtual tour

Explore SystemWorld with our virtual tour and discover the future of technology today.



FOUNDATION Fieldbus

Hardware:

- 8 different device vendors
- Classical Trunk & Spur Topology
- Field barriers / Segment Protectors for EX installations
- Two independent segments

Note: FOUNDATION Fieldbus is an established technology but is coming at its end of life within the next years. For new projects we recommend to build on the latest technology developments, based on Industrial Ethernet. If you need any support for migration do not hesitate to contact us.



Emmerson Control System (1/3)

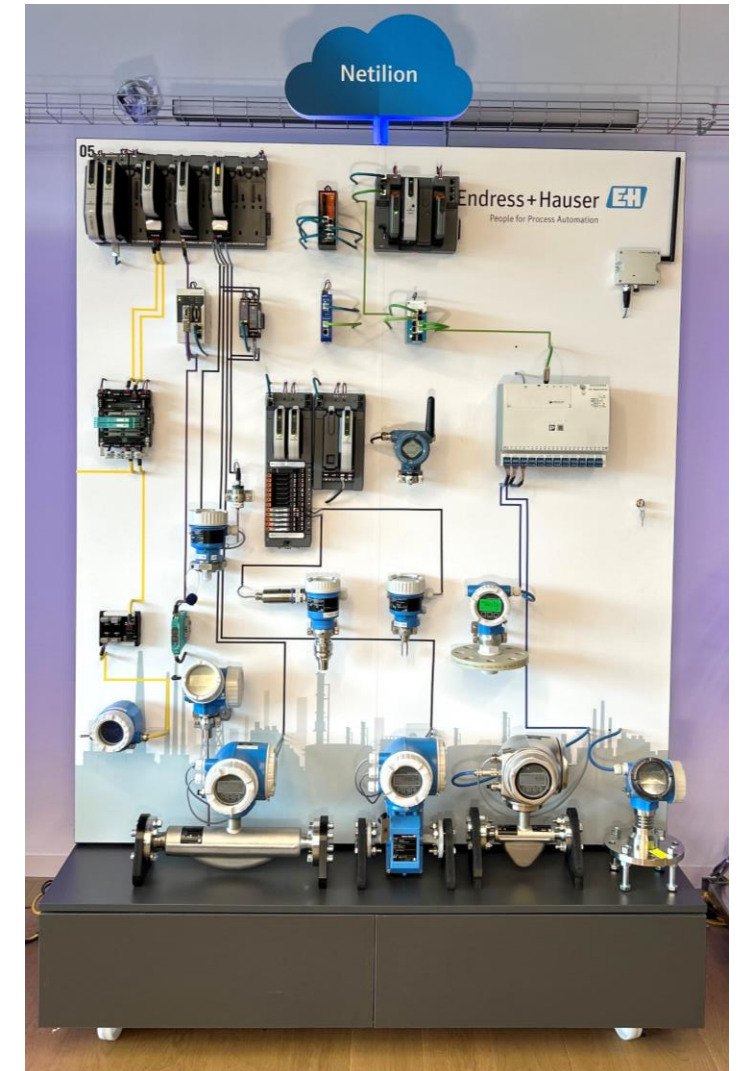
DeltaV Explorer V15 – SQ & PK Controller

Asset management tool: Emerson AMS and FieldCare

Hardware:

FOUNDATION (yellow lines)

- FOUNDATIOEN Fieldbus interface card
- Power conditioner
- Junction box with termination
- FF field device and access to FOUNDATION Fieldbus training rig



Emmerson Control System (2/3)

PROFIBUS (purple line)

- PROFIBUS interface card
- FieldGate SFG500 Intelligent Ethernet/PROFIBUS gateway for FieldCare and Netilion
- Pepperl+Fuchs SK1 and 1 channel segment coupler
- PROFIBUS PA device

HART (black lines)

- 4-20mA HART input interface card
- Emerson WHART Gateway
- SFG 250 HART Multiplexer to get access via FieldCare and Netilion
- Emmerson Charms Remote IO with HART IO modules
- SWA50 Wireless HART adapter



Emmerson Control System (3/3)

PROFINET (green line)

- PK controller with enabled PROFINET Interface
- Softing SmartLink for AMS access to PROFINET

PROFINET APL (blue line)

- PROFINET APL Switch Phoenix Contact
- Flow, Level, Temperature and Pressure field devices

FieldEdge SGC200 (right upper corner)

- Bluetooth Edge Device to connect measuring technology to the Netilion Cloud



SIEMENS PCS7 System (1/3)

PCS 7 V10.0

Redundant S7-410E Controller

Asset Management tool: PDM and FieldCare

Hardware:

PROFIBUS (purple line)

- Redundant PROFIBUS DP interface
- Redundant PROFIBUS DP/PA coupler
- FieldGate SFG500 Intelligent Ethernet/PROFIBUS gateway
- Ring redundancy PROFIBUS PA with SIEMENS Afdis
- Level and Temperature Field devices



SIEMENS PCS7 System (2/3)

PROFINET (green line)

- Redundant PROFINET Interface
- Promass 300 PROFINET IO device
- Scalance Switch
- Service bridge; access for Asset Management
- Compact field unit; PROFINET to PROFIBUS PA with a Pressure field device

PROFINET APL (blue line)

- Stahl PROFINET APL Field switch
- Pressure, Level, Temperature and Flow field devices

HART (black line)

- PROFINET Redundant Remote IO ET200 SP HA with 4-20mA HART interface and a Level and Pressure field device
- PROFIBUS Remote IO ET200M with 4-20mA HART interface and a Level field device



SIEMENS PCS7 System (3/3)

FieldEdge SGC200 (right upper corner)

- Bluetooth Edge Device to connect measuring technology to the Netilion Cloud



Honeywell System (1/3)

EPKS-R520 Server

Asset Management tool: FDM

Hardware:

HART (black line)

- 4-20mA HART interface
- Pressure, Temperature, Flow, Level and Gamma field devices

FOUNDATION (yellow line)

- FOUNDATION Fieldbus interface card
- Turck Power conditioner for 2 segments
- Pressure field device
- Access to FOUNDATION Fieldbus training rig



Honeywell System (2/3)

ABB System V6.1

AC800M Controller

Asset Management tool: FIM and FieldCare

Hardware:

PROFINET (green line)

- PROFINET Interface card
- Weidmueller Switch
- Weidmueller Remote IO

PROFINET APL (blue line)

- Softing PROFINET APL Field switch
- Temperature, Pressure and Level field devices



Honeywell System (3/3)

HART (black line)

- 4-20mA HART interface card
- Temperature, Limit Switch, Pressure and Flow field device



Connectivity to Netilion wall (1/2)

Hardware:

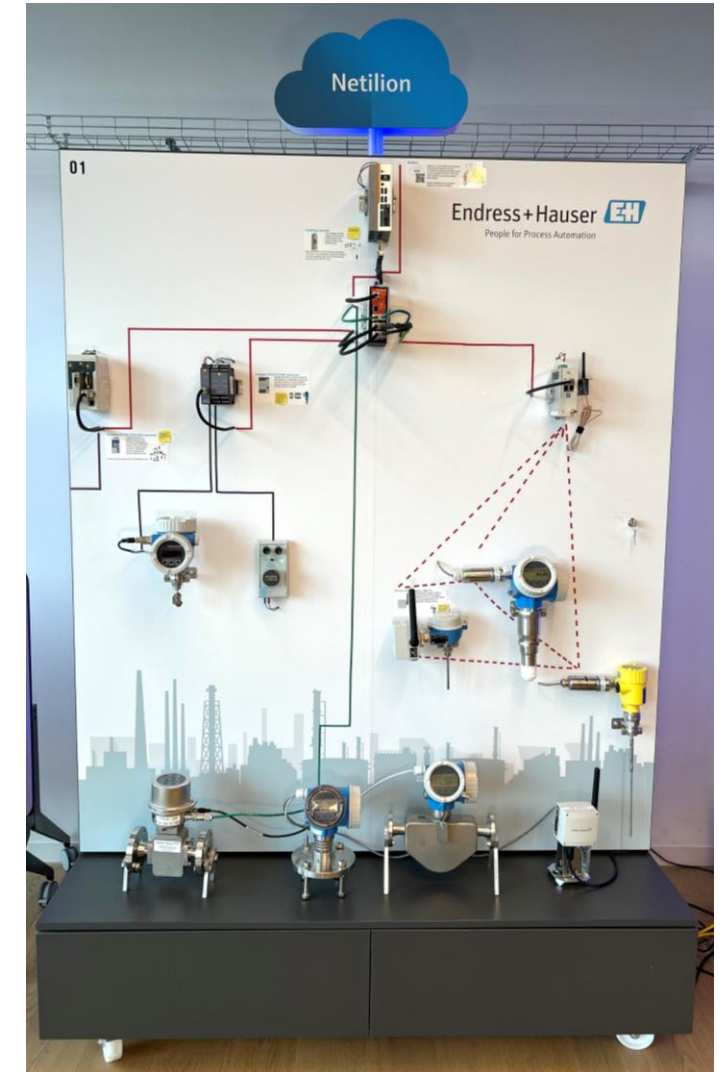
Edge gateway to Netilion, FieldEdge SGC500

WirelessHART (red dotted line)

- WirelessHART adapter SWA70
- FieldPort SWA50
- FieldGate SWG50
- Temperature and Level devices with different Wireless HART Adapters
- Flow and Level device in a HART Multidrop on a Powered Wireless HART Adapter

HART (black line)

- SFG250 HART Multiplexer
- Limit Switch and Temperature field device



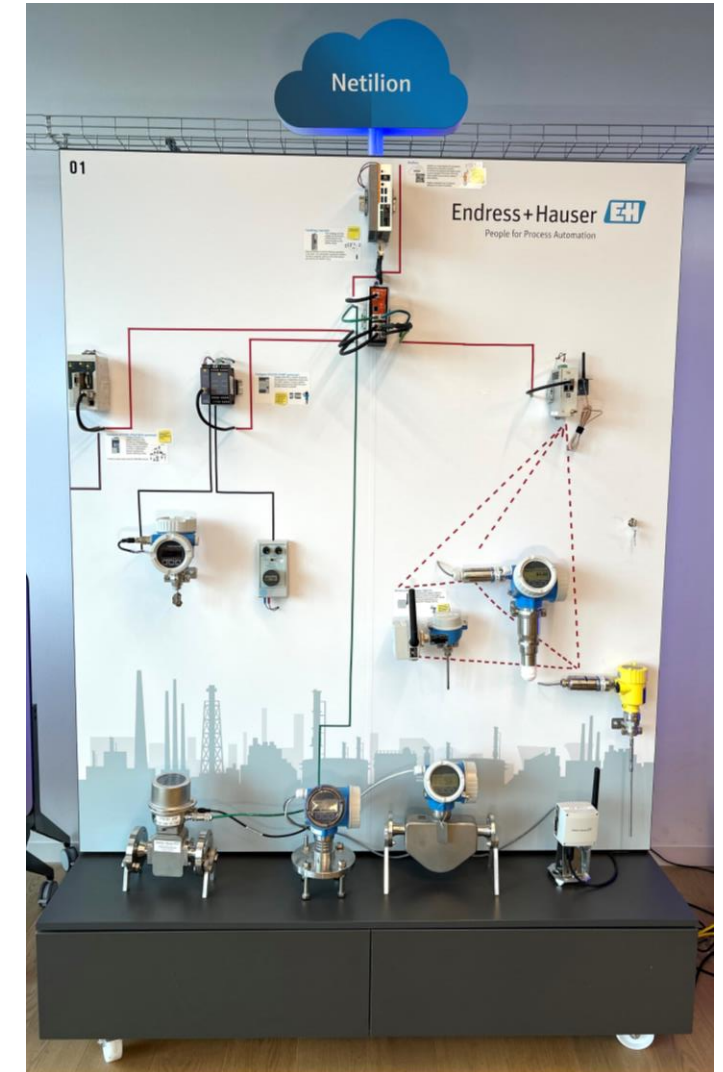
Connectivity to Netilion wall (2/2)

EtherNet/IP (dark green)

- Flow Ethernet/IP device

PROFIBUS (purple line)

- FieldGate SFG500 Intelligent Ethernet/PROFIBUS gateway



Cloud connected devices

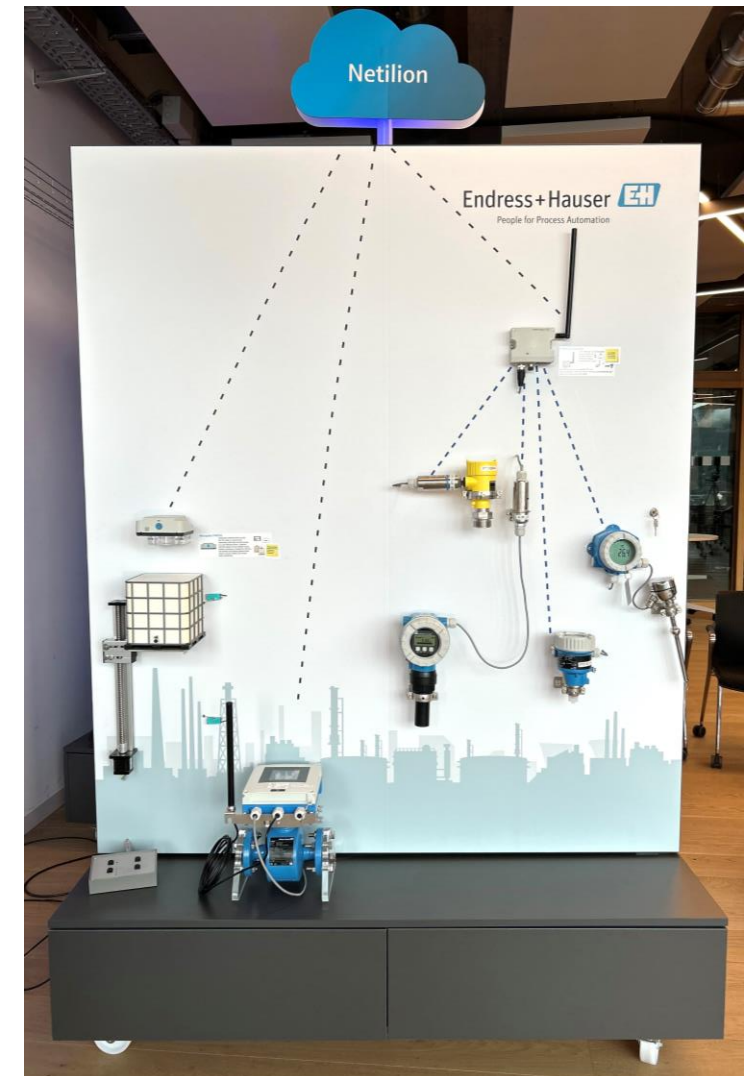
Hardware:

FieldEdge SGC200 Bluetooth Edge Device to connect Bluetooth enabled field devices

- FieldPort SWA50 used as Bluetooth gateway for a Pressure and a Level device without Bluetooth.
- Native Bluetooth devices Pressure and Temperature.

Direct connected field devices

- Promag W800
- Micropilot FWR 30



Control cabinet (1/2)

Rockwell Automation System Studio 5000 V35

Asset management tool: FieldCare

Hardware:

1756-L81EP Control Logix

- Local EtherNet/IP Interface
- Allan Bradley Switch
- Network access to the EtherNet/IP wall
- 4-20mA HART interface card

SIEMENS

Step7 Manager V5.7 and TIA V18

Asset management tool: PDM and FieldCare



Control cabinet (2/2)

Hardware:

Controllers: CPU 315-2PN/DP, CPU 1515F-2 PN

PROFIBUS

- PROCENTEC PROFIBUS repeater
- access to PROFIBUS wall

PROFINET

- iPNMA TAP access Point from Indu-Sol
- Promesh P20 Switch
- Phoenix Contact SPE Switch with a Temperature field device connected
- access to PROFINET wall

IO-Link

- Two Flow IO-Link field devices connected to IO-Link master at the PROFINET wall

Top right: Two Edge devices to connect different networks to Netilion



PROFINET wall (1/2)

Representing field network

Mixture of a Star, Line and MRP Ring network representing a complex field network.

Hardware:

PROFINET fast ethernet (green line)

- Indu-Sol PROFINET inspector
- Indu-Sol PROFINET switches
- Flow, Analytical field devices
- Registration device with 4...20mA HART Inputs and a connected temperature field device
- Actors from Auma, Georg Fischer, Bürkert

HART (black line)

- SIEMENS Remote I/O with IO-Link and 4-20mA HART module



PROFINET wall (2/2)

IO-Link

- IFM, Turck and SIEMENS IO-Link masters
- Pressure, Level and Flow IO Link field devices

PROFIBUS PA (black lines)

- Pepperl+Fuchs SK3 PROFIBUS PA proxy
- Segment Protector with a Level field device
- Pepperl+Fuchs APL Field switch with PROFIBUS PA proxy
- Pressure field device connected to the APL Field switch

PROFINET APL (green line)

- Pepperl+Fuchs PROFINET APL Field switch
- Pressure, Temperature and Level field devices



EtherNet/IP wall (1/2)

Representing field network

Mixture of a Star and Line network, representing a complex field network.

Hardware:

EtherNet/IP fast ethernet (dark green line)

- Indu-Sol EtherNet/IP inspector
- Allan Bradley switches
- Analytical, Registration and Flow field devices

HART (black lines)

- Remote IO, 5094-AENTR with 4-20mA HART module
- Level, Limit Switch, Temperature, Flow and Pressure field devices



EtherNet/IP wall(2/2)

IO Link

- Rockwell IO Link Master 5032-8IOLM12DR
- Temperature IO- Link field device

FOUNDATION Fieldbus (yellow line)

- EIP2FFR gateway incl. power conditioner
- Turck FOUNDATION Fieldbus junction box
- Level FOUNDATION Fieldbus field device



PROFIBUS wall (1/2)

Representing field network

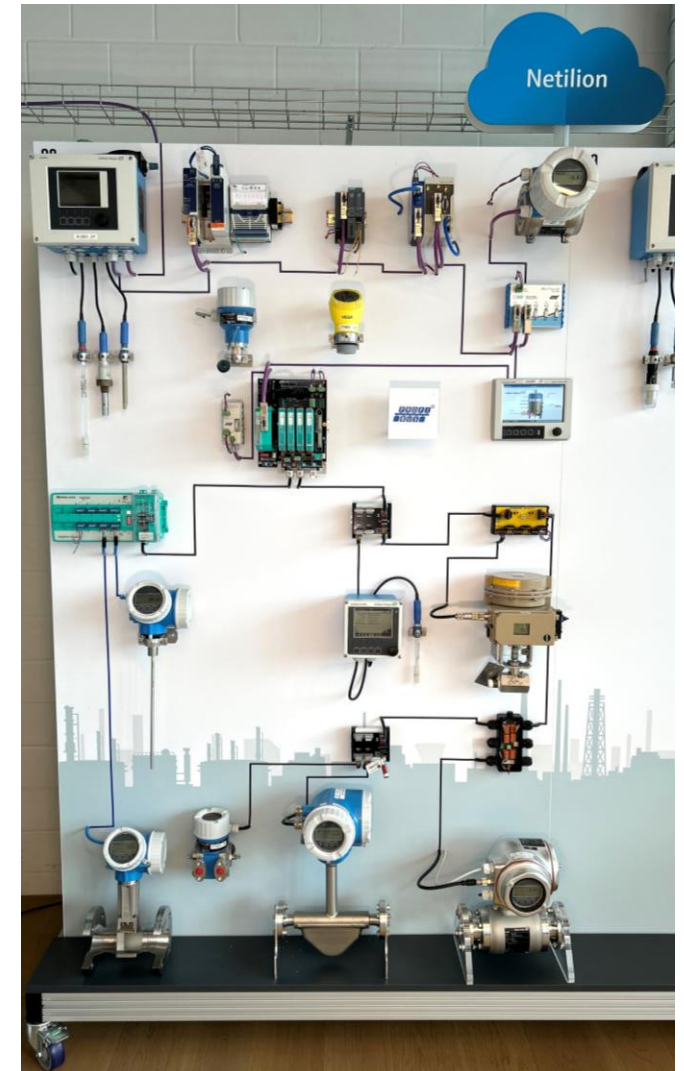
Hardware:

PROFIBUS DP (purple line)

- PROFIBUS DP field devices
- Endress+Hauser FieldGate SFG500 Intelligent
- Ethernet/PROFIBUS gateway for FieldCare and Netilion access
- Softing SmartLink gateway
- Indu-Sol PROFIBUS Repeater

HART

- Stahl IO IS+ with 4-20mA HART module
- SIEMENS IO ET200 SP with 4-20mA HART module

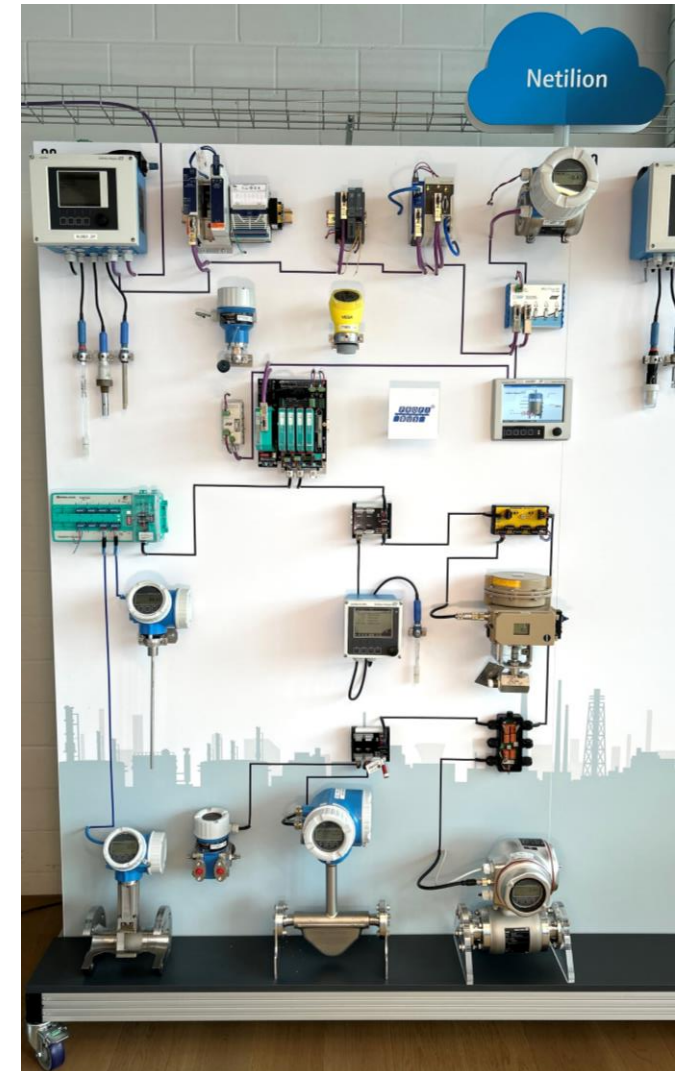


PROFIBUS wall (2/2)

PROFIBUS PA (black, blue line)

- Pepperl+Fuchs segment coupler
- PROFIBUS PA junction boxes
- Pepperl+Fuchs field barrier
- PROFIBUS PA field devices

Note: PROFIBUS DP/PA is an established technology, but it is coming at its end of life within the next years. For new projects we recommend to build on a latest technology based on Industrial Ethernet. If you need any support for migration do not hesitate to contact us.



Modbus wall

Representing field network

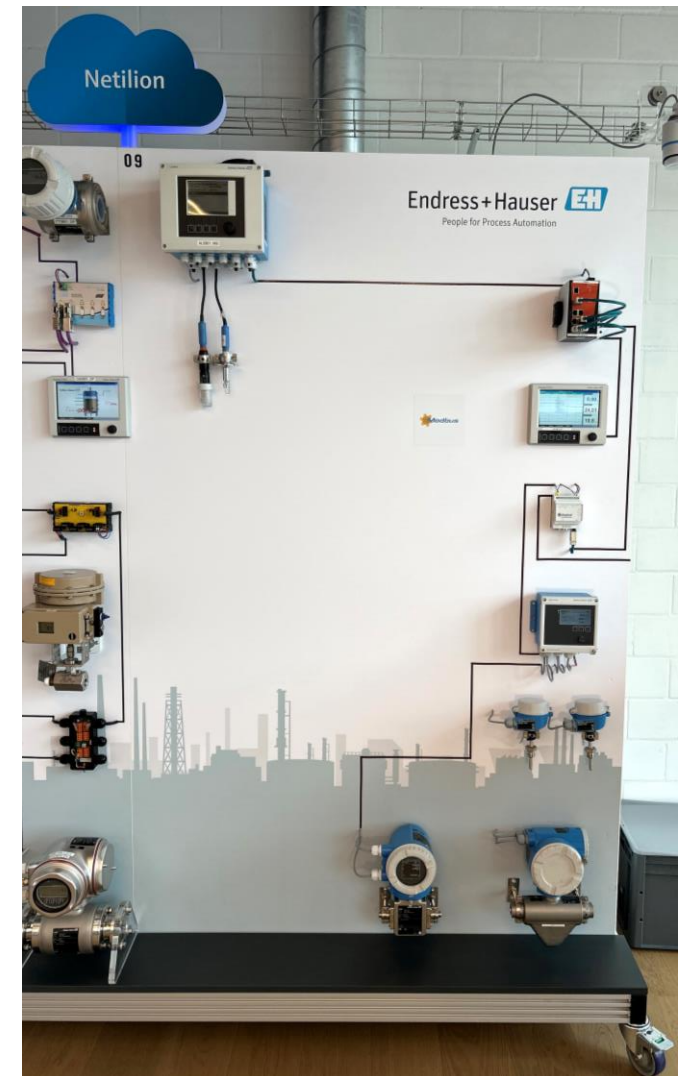
Hardware:

Modbus TCP (dark brown line)

- Registration and Analytical field device
- Ethernet switch
- Any bus gateway Modbus TCP to Modbus RTU

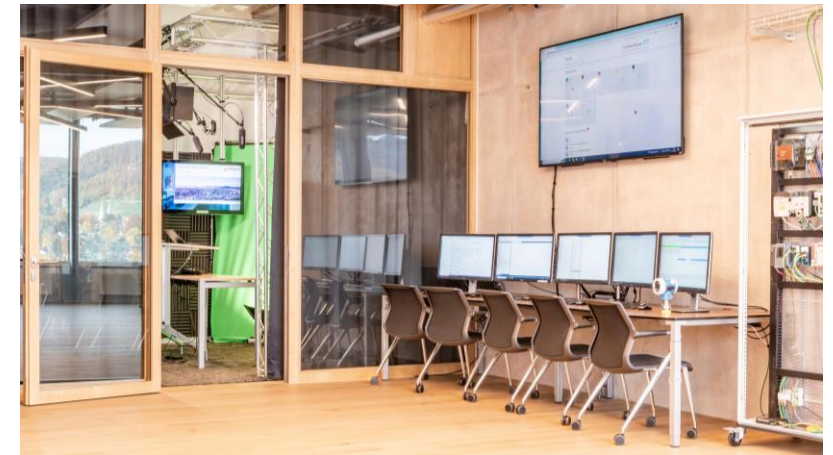
Modbus RTU / RS485 (black line)

- EnergyCal with Temperature and Flow field devices
- Flow field device



Control area

Our control area consists of 5 stations which we use to access 14 different virtual machines. On those we run the Software packages of the different System Vendors to handle the Engineering, SCADA and Asset Management Stations.



Media Room

The Media Room serves as the hub for producing our recordings and delivering our online seminars. From here we host our Tech Boosters and Sales Series as well as our virtual training sessions.

