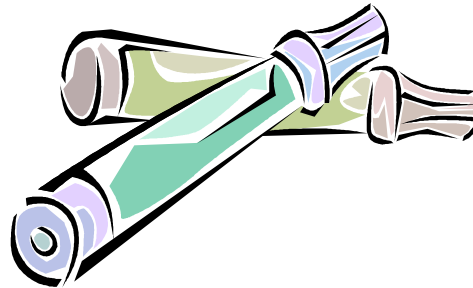


# The Future is Digital

But which bus goes where?



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# Topics

- Instrumentation
  - Reducing Footprint and Wiring Even Further
- Smart Discrete Devices
- Flexibility to Handle Changes
- Reducing Device Count
- Eliminating the Last Proprietary Protocols
- Motor controls
- SIS

# Instrumentation

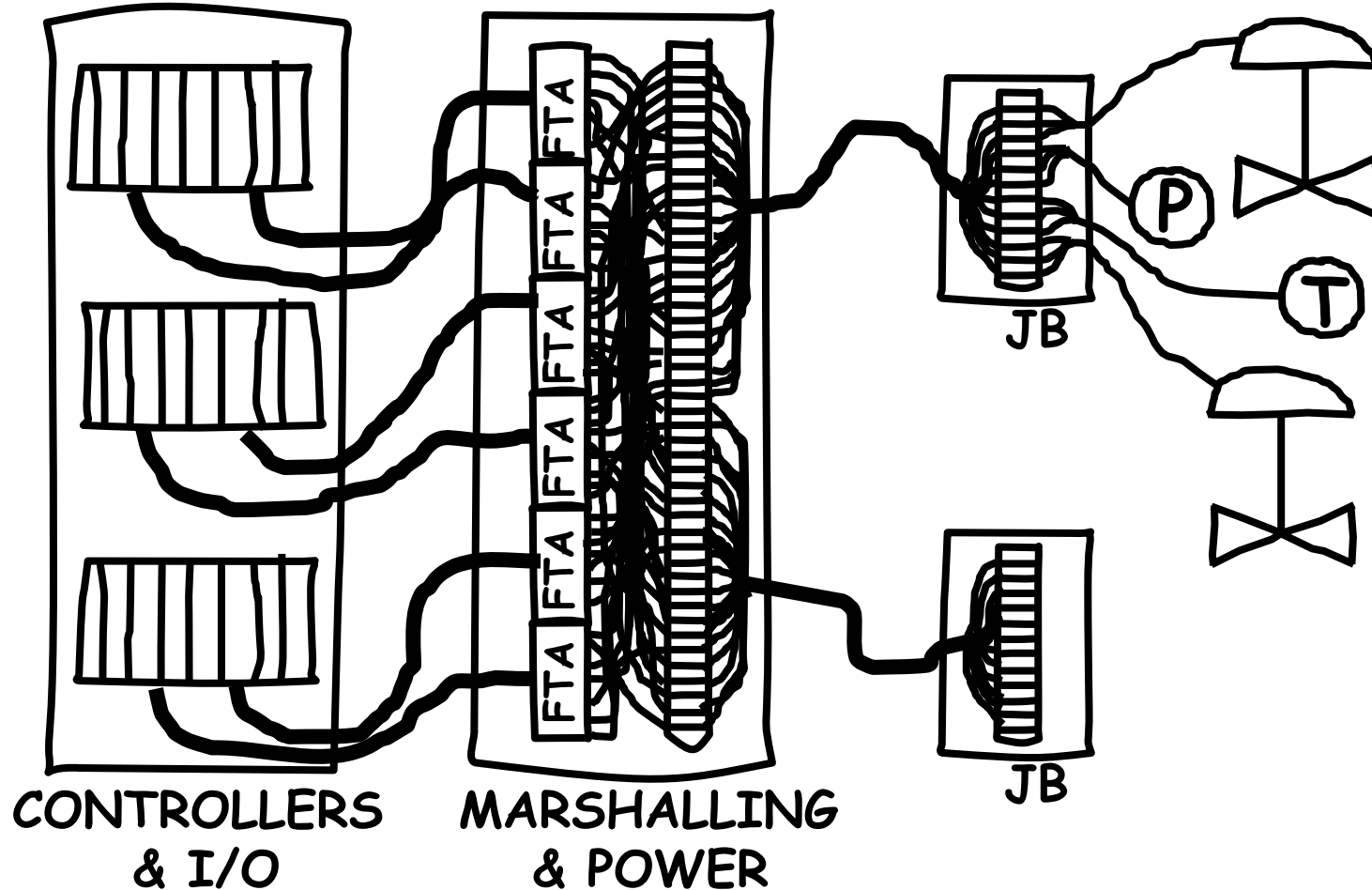
Reducing Footprint and Wiring - Even Further with Integrated Fieldbus Power Supply



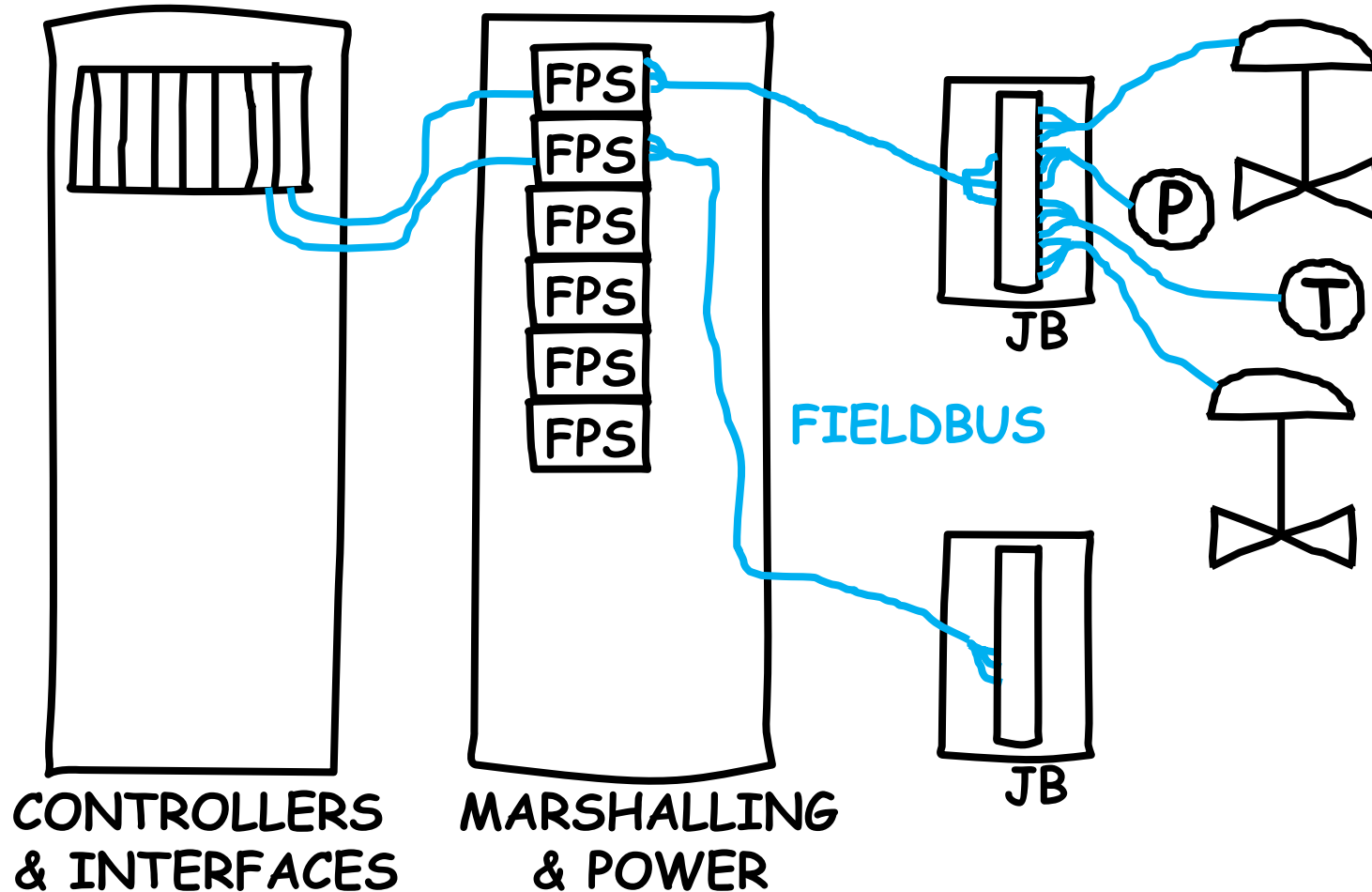
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# Hardwired Marshalling

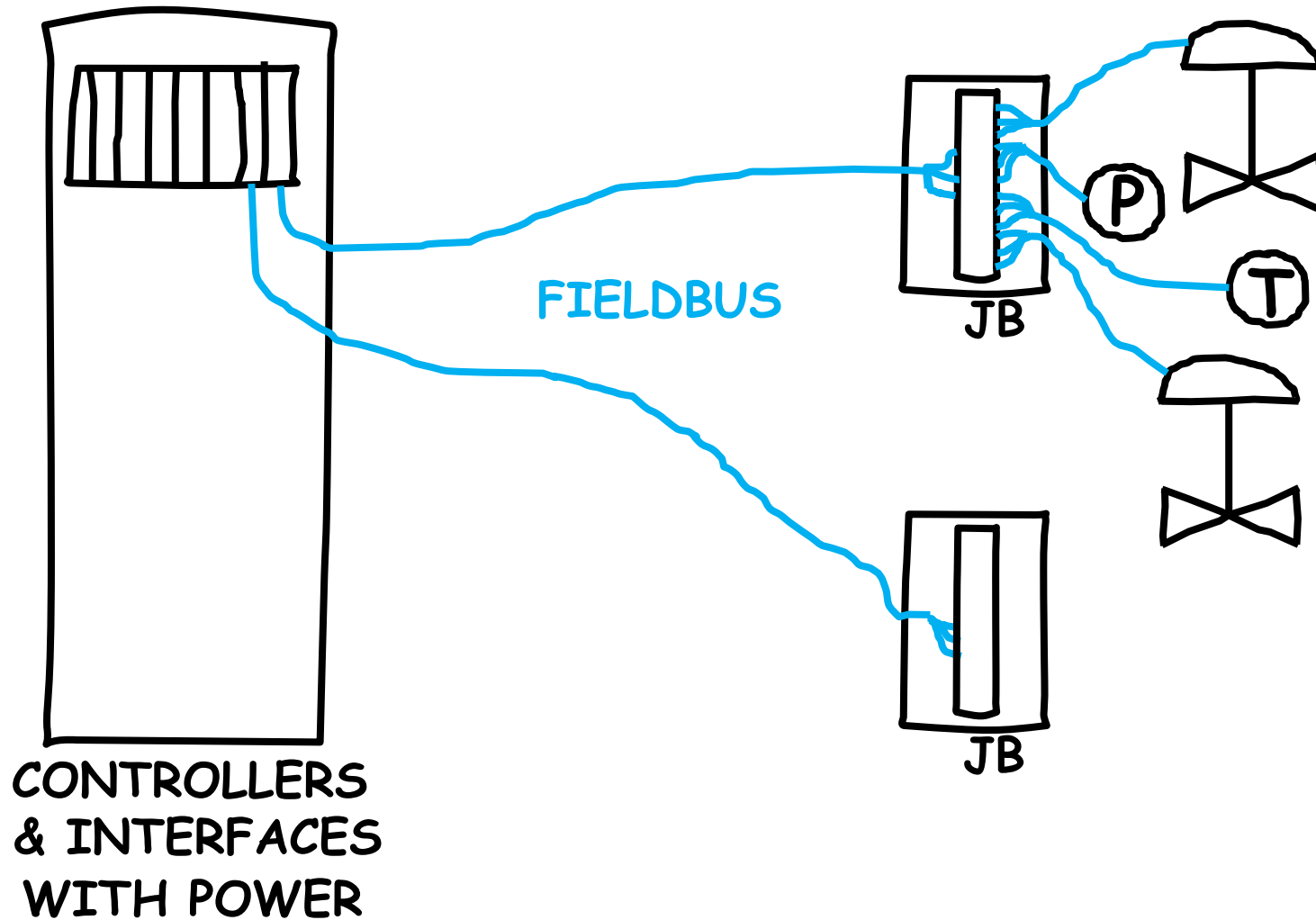
- Well Known, Labor Intensive, Hardware



# Fieldbus with Separate Device Power Supply - Now Almost 'Traditional'



# Fieldbus with Integral Device Power Supply - No Marshalling Cabinet



# Smart Discrete Devices

Intelligence in on/off devices

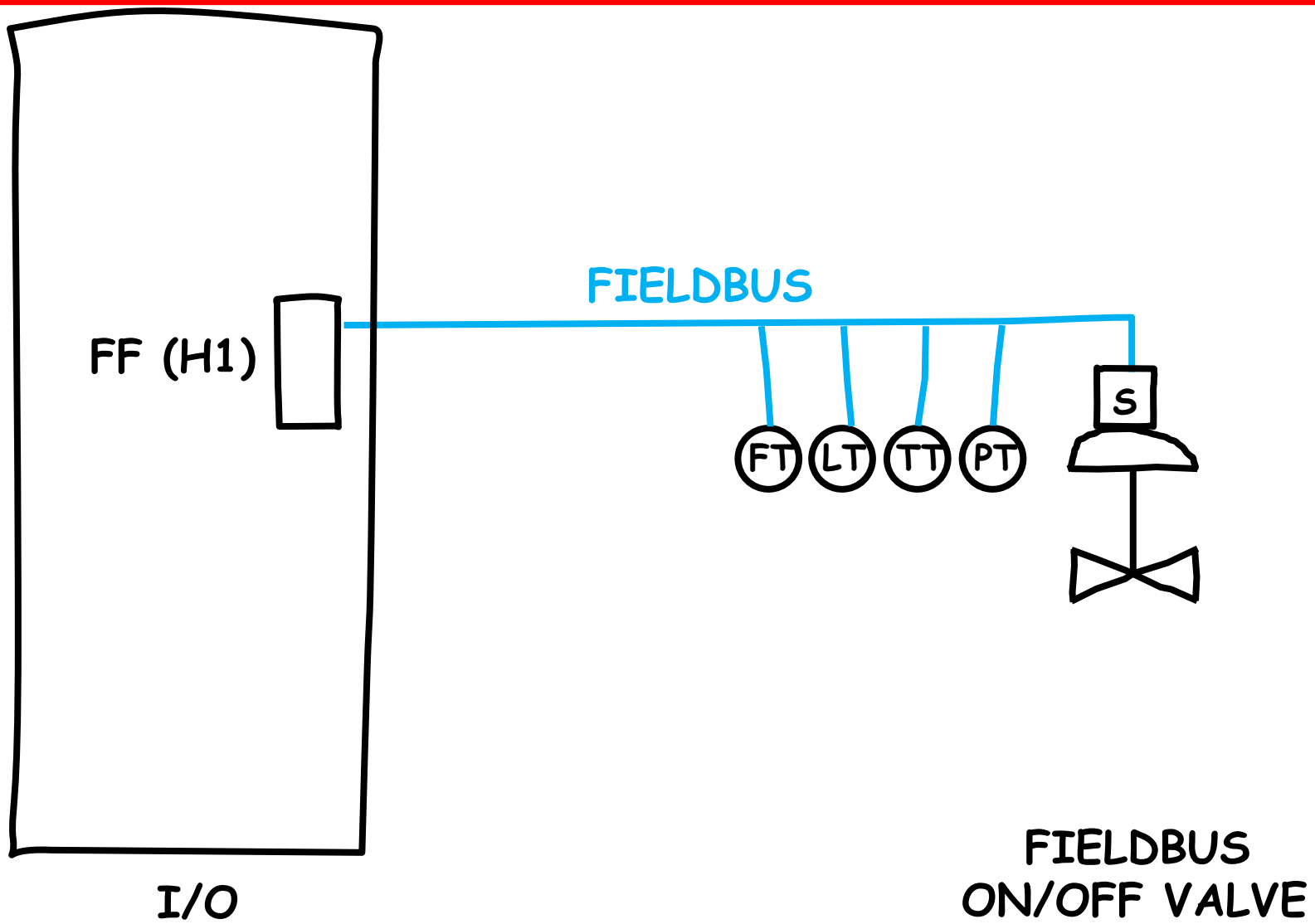


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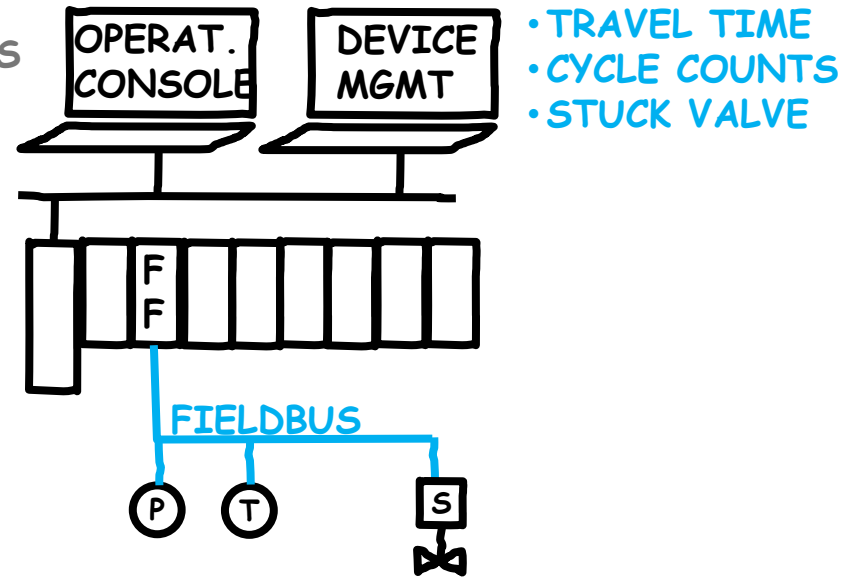
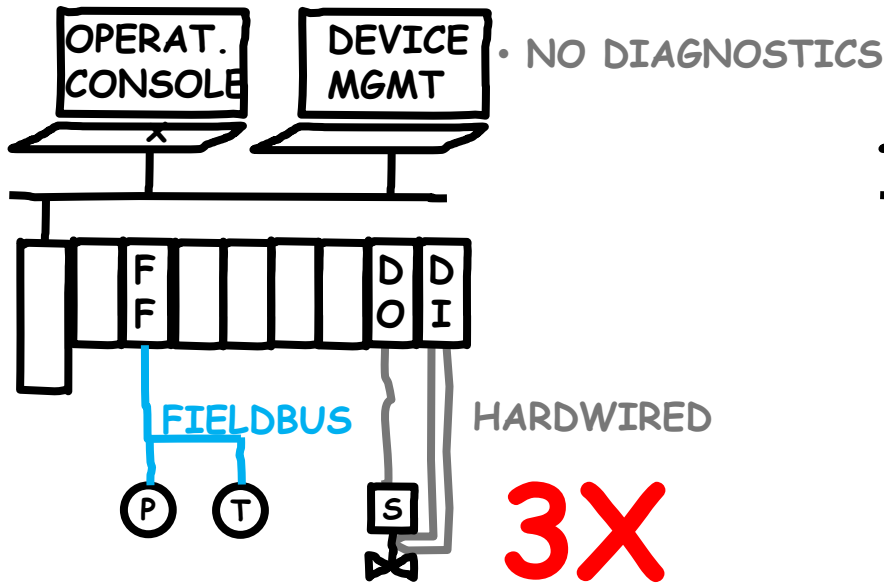




# Intelligent On/Off Valves - Fieldbus



# On/Off Valve Intelligent Device Management: Diagnostics & Setup



# Flexibility to Handle Changes

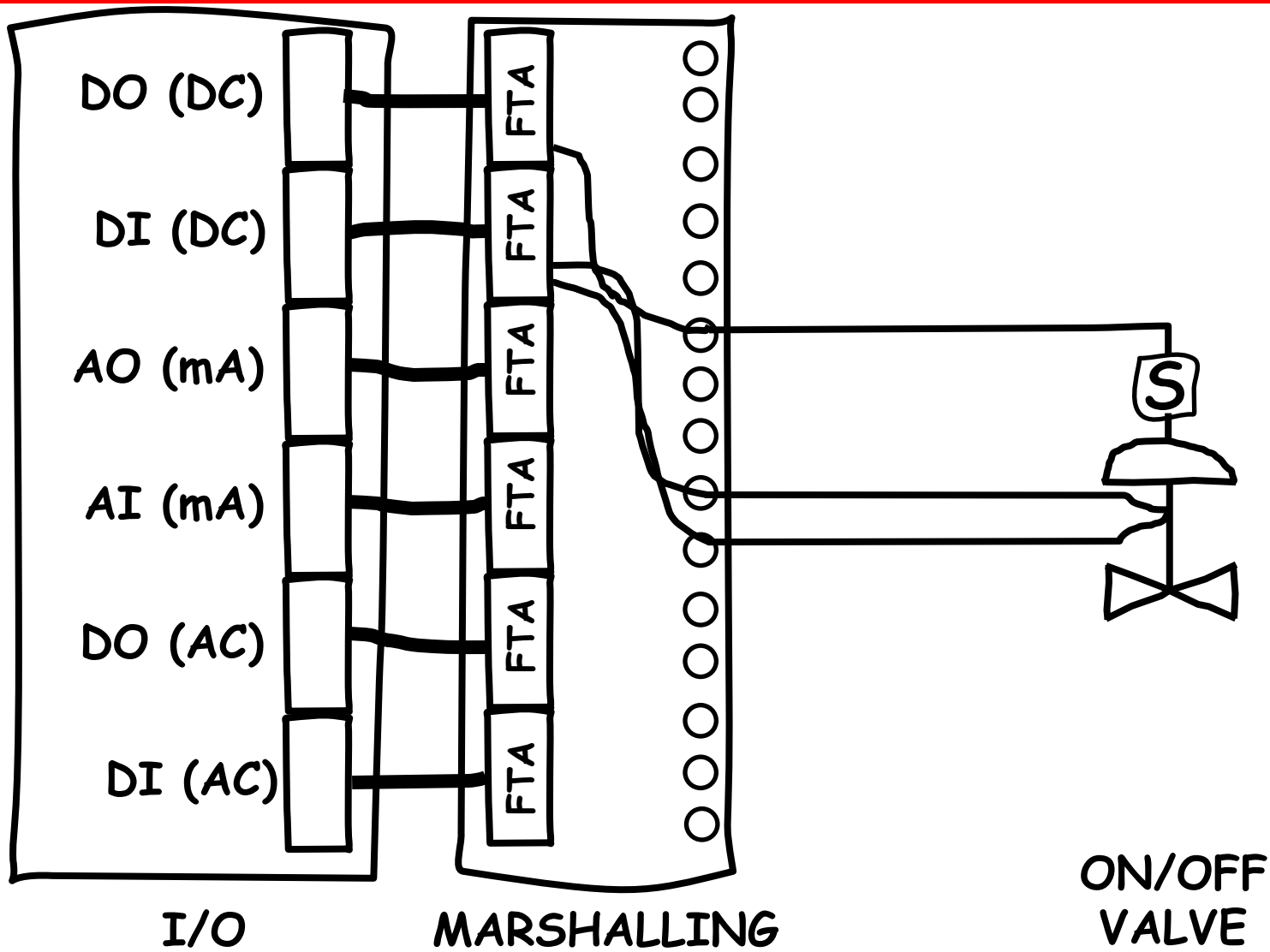
## Virtual Marshalling



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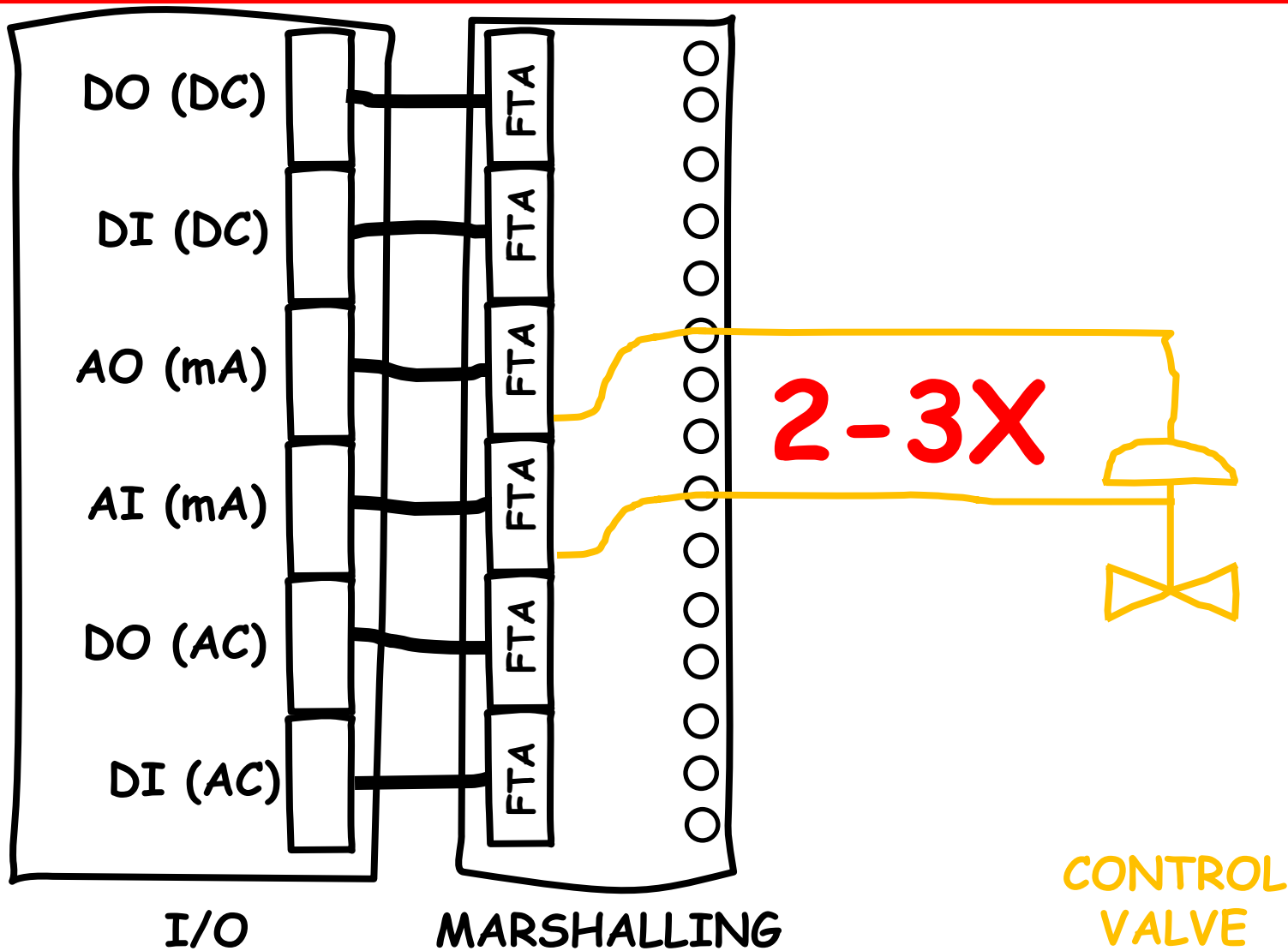
# Hardwired Marshalling

## - On/Off Valve



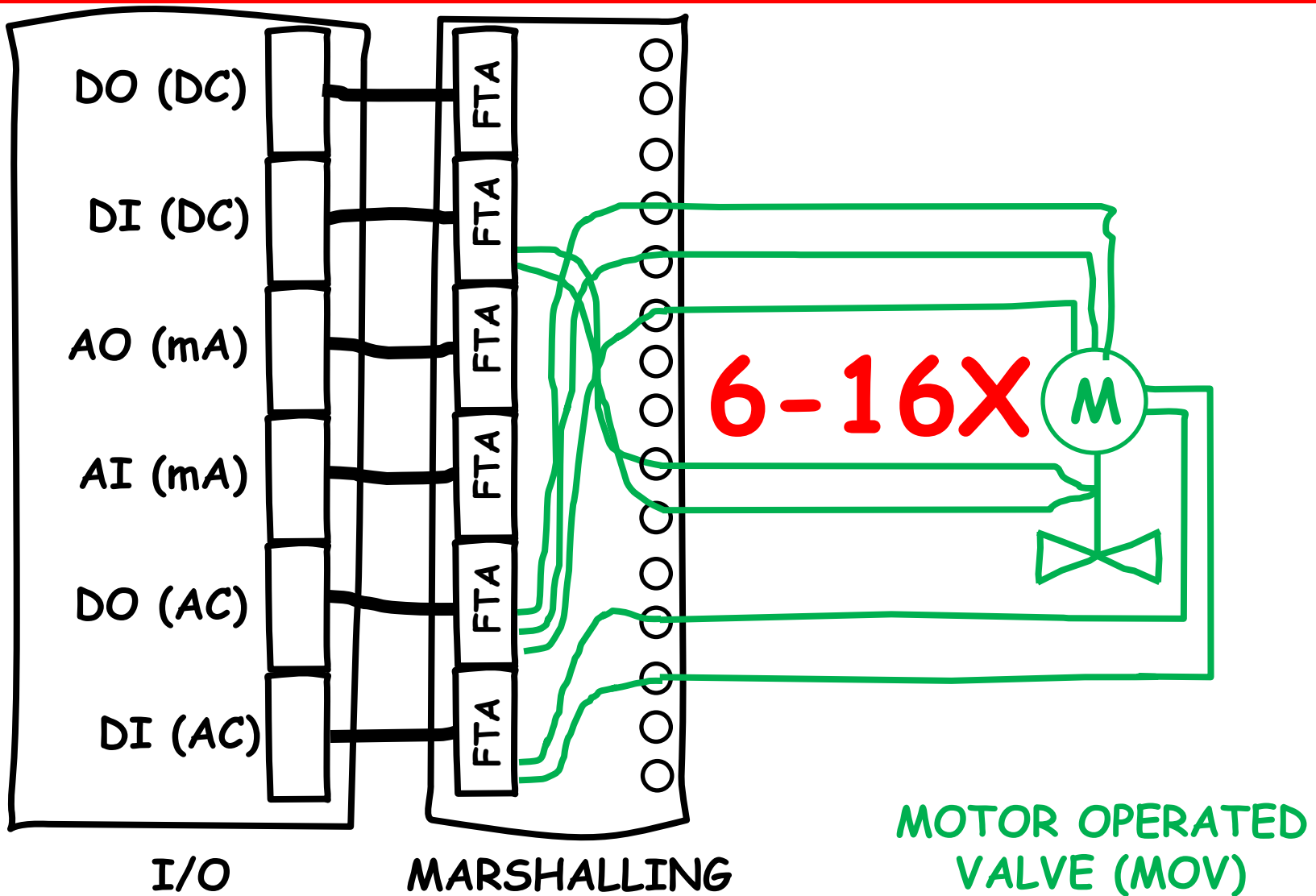
# Hardwired Marshalling

## - Redesign for Control Valve



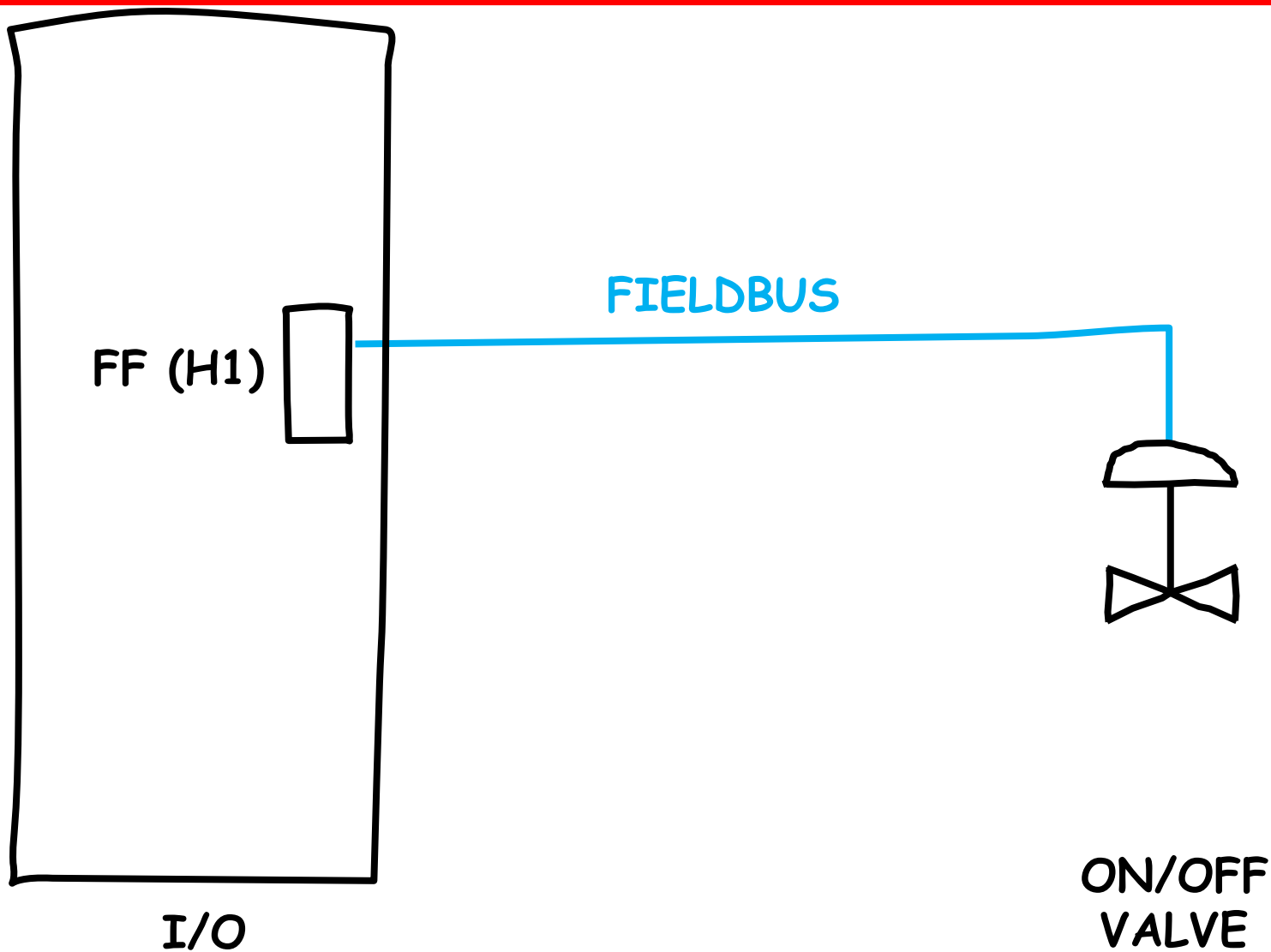
# Hardwired Marshalling

## - Redesign for Electric Actuator (MOV)



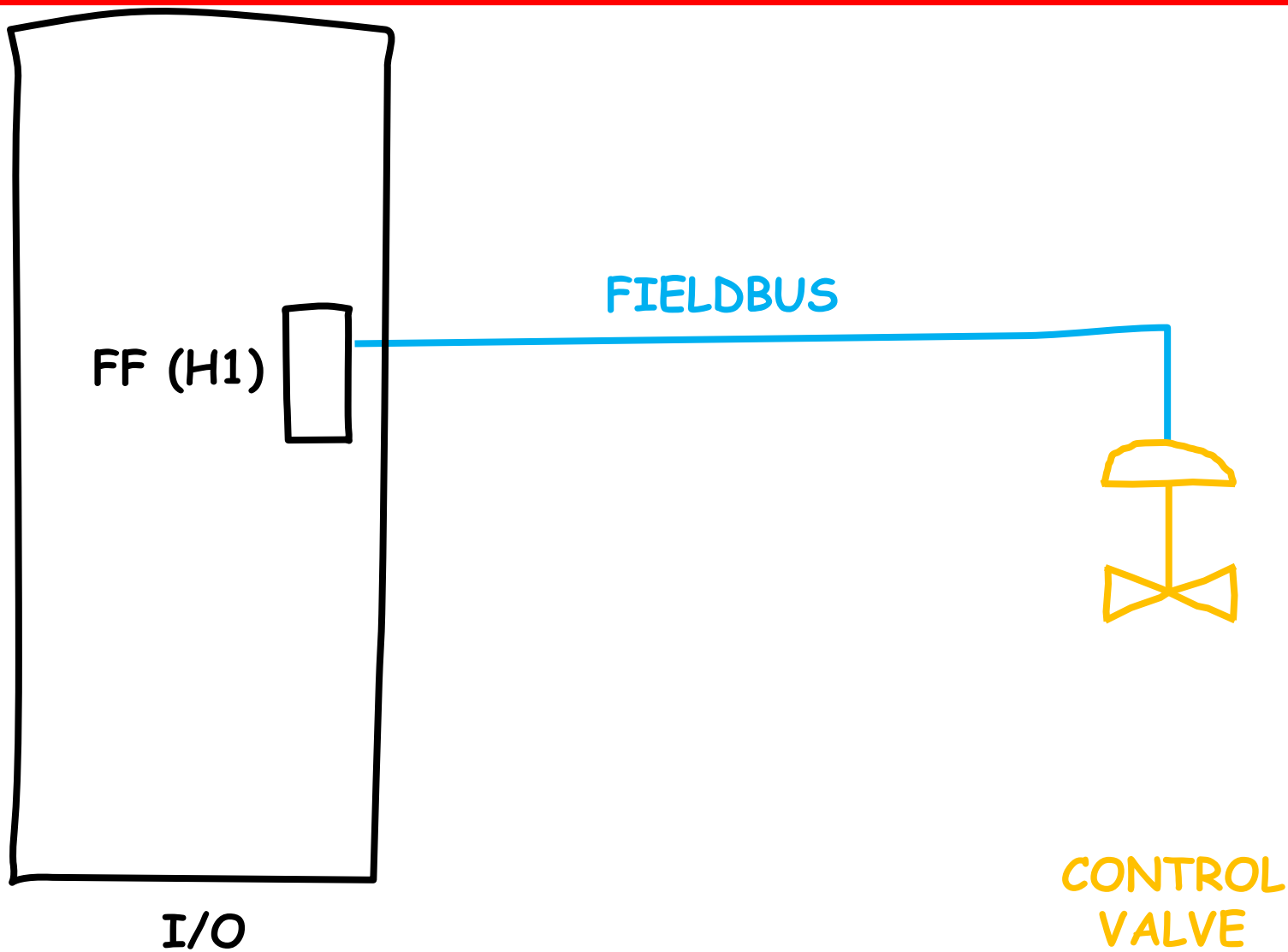
# Virtual Marshalling: Flexibility

- For Fieldbus Device Type Doesn't Matter



# Virtual Marshalling

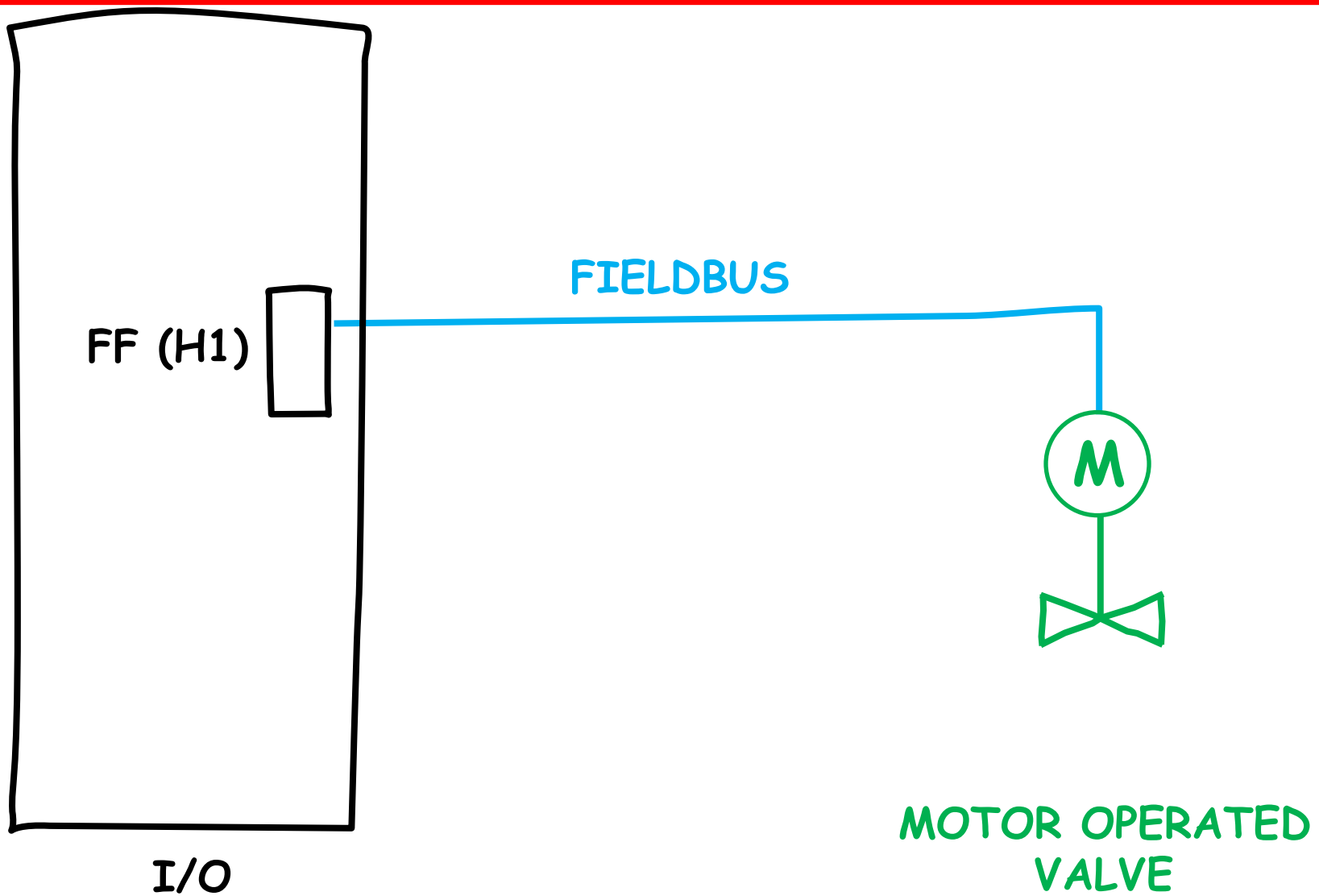
## - No Card or Wire Redesign





# Virtual Marshalling

## - No Card or Wire Redesign



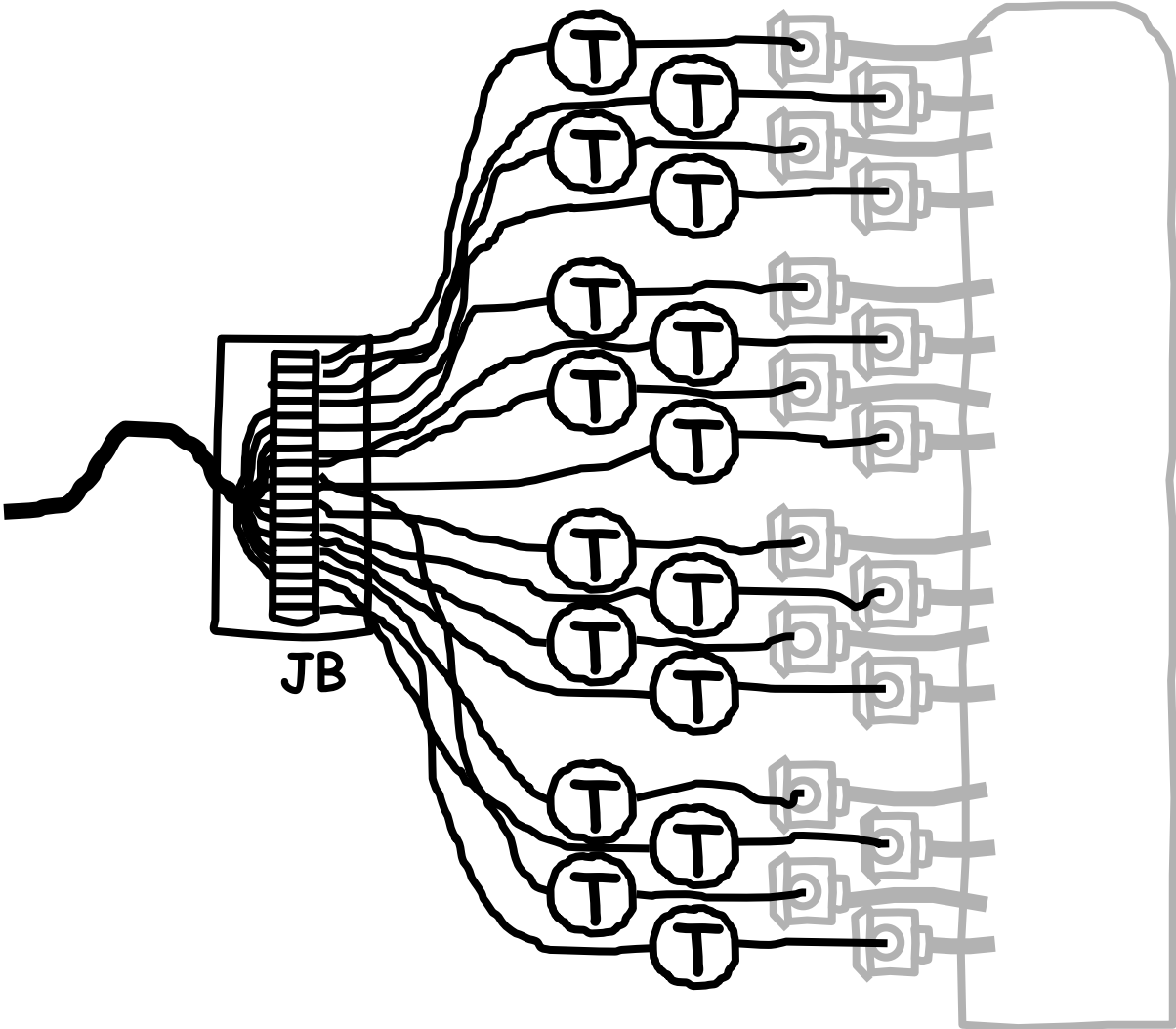
# Reducing Device Count

## Multi-Input Transmitters

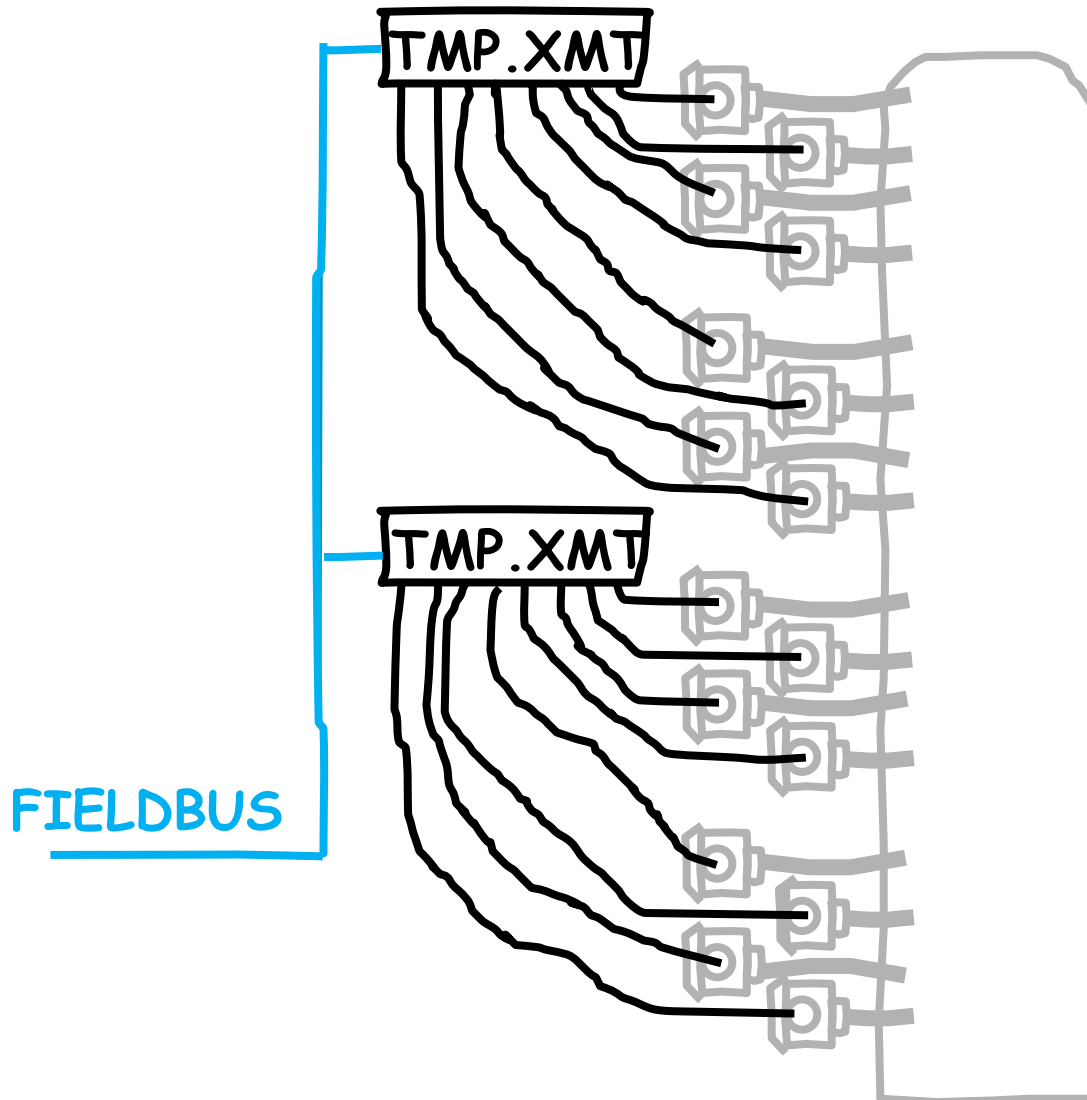


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# Single Point Temperature Transmitters



# Multi-Input Fieldbus Temperature Transmitters



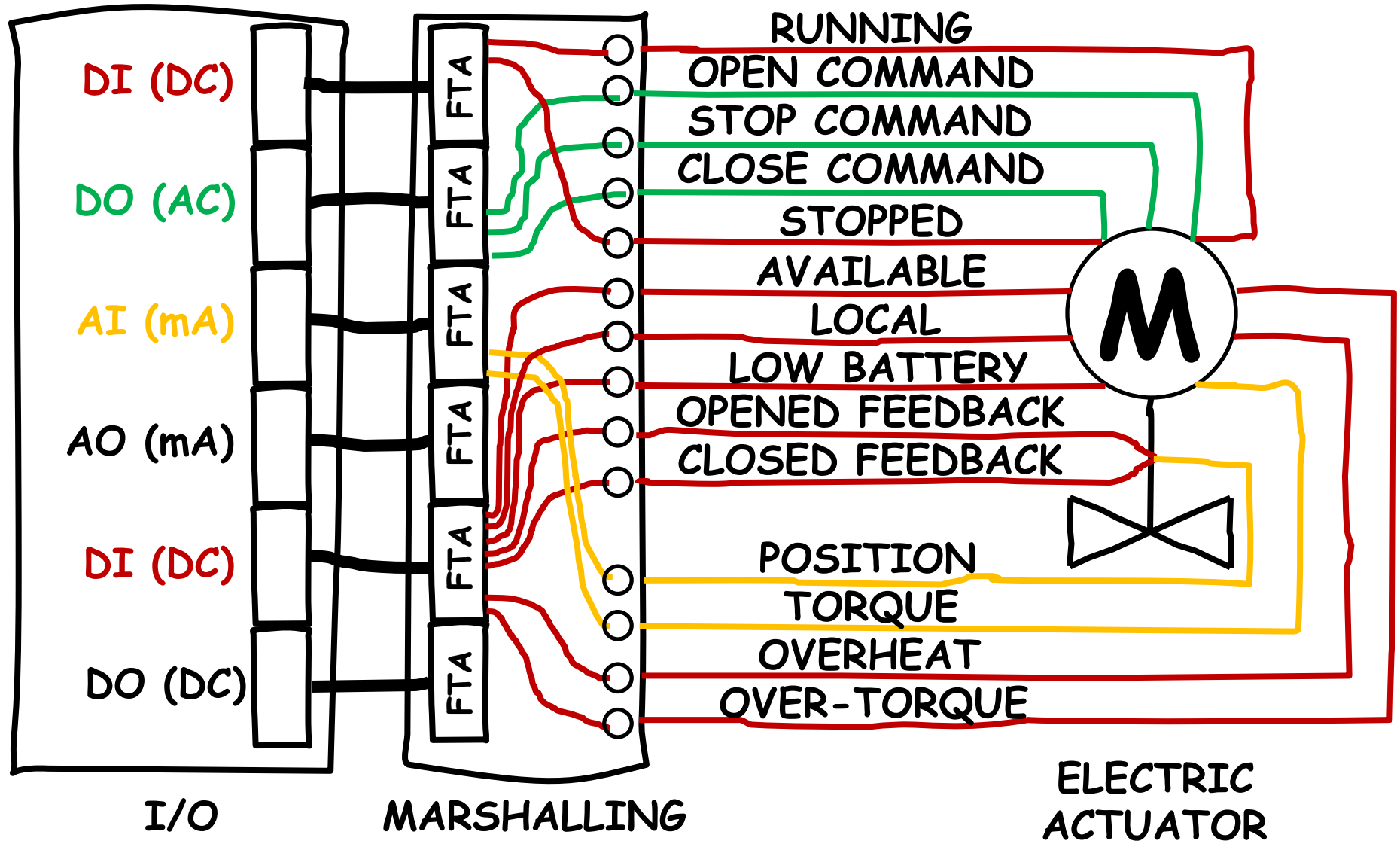
# Eliminating the Last Proprietary Protocols

Fieldbus in complex devices reduce wiring the most

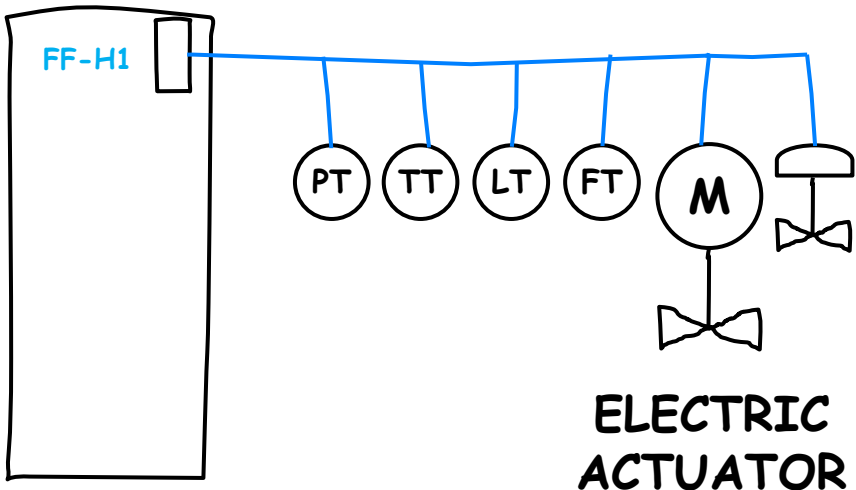
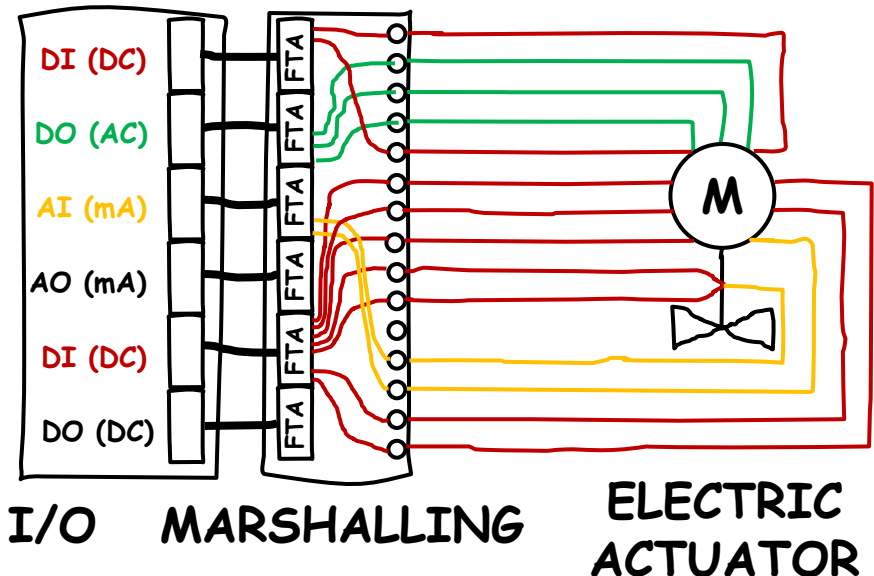


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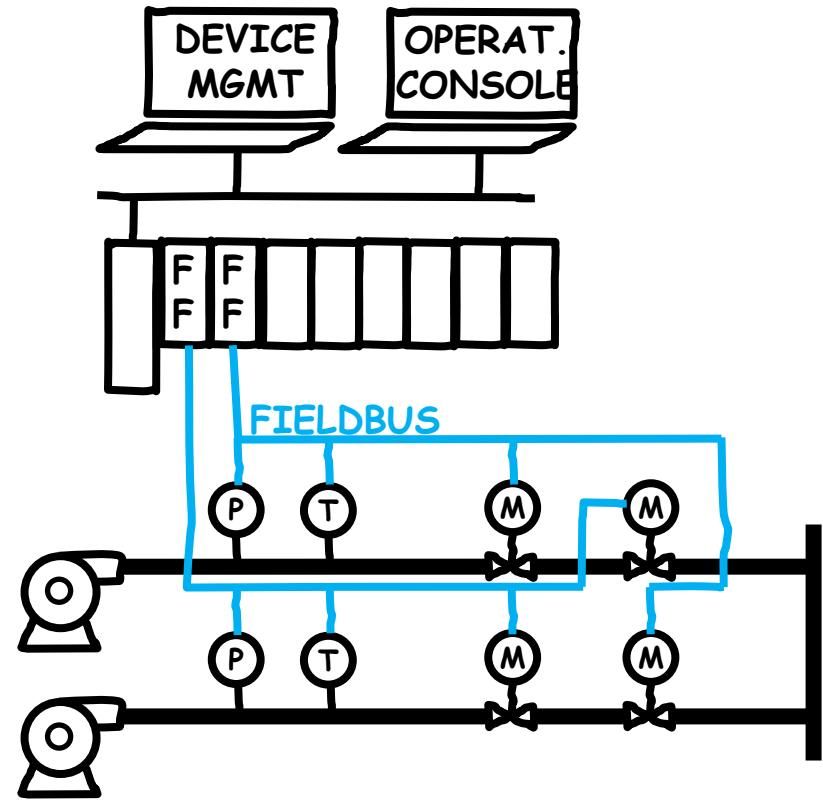
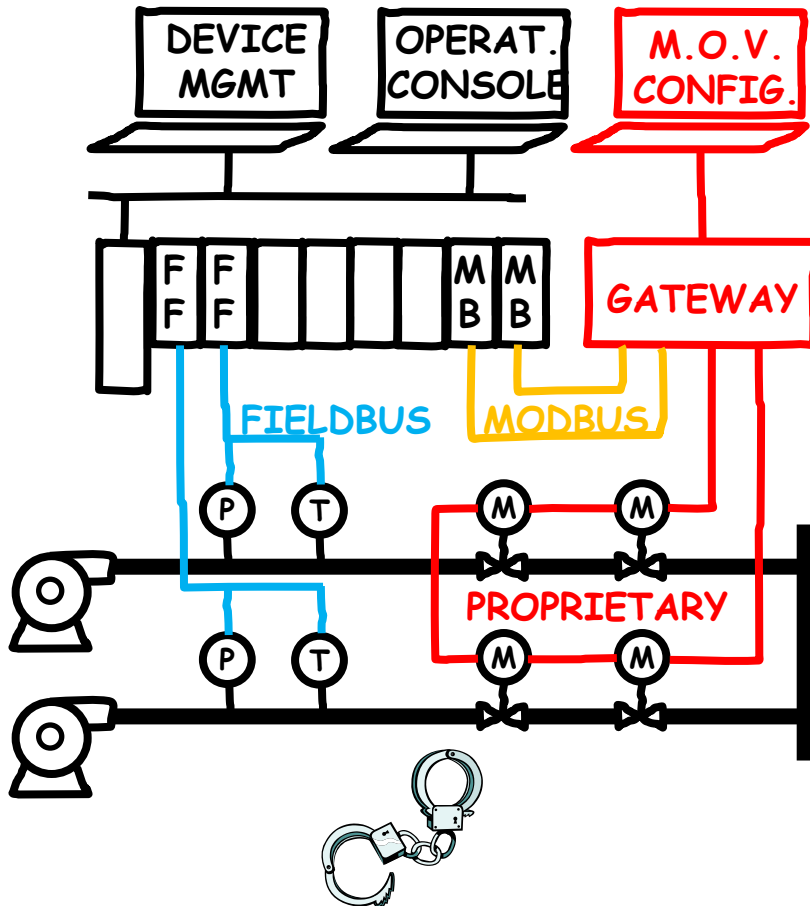
# Complex Devices Have Many Signals



# “Virtual Marshalling” of Intelligent MOV in Software

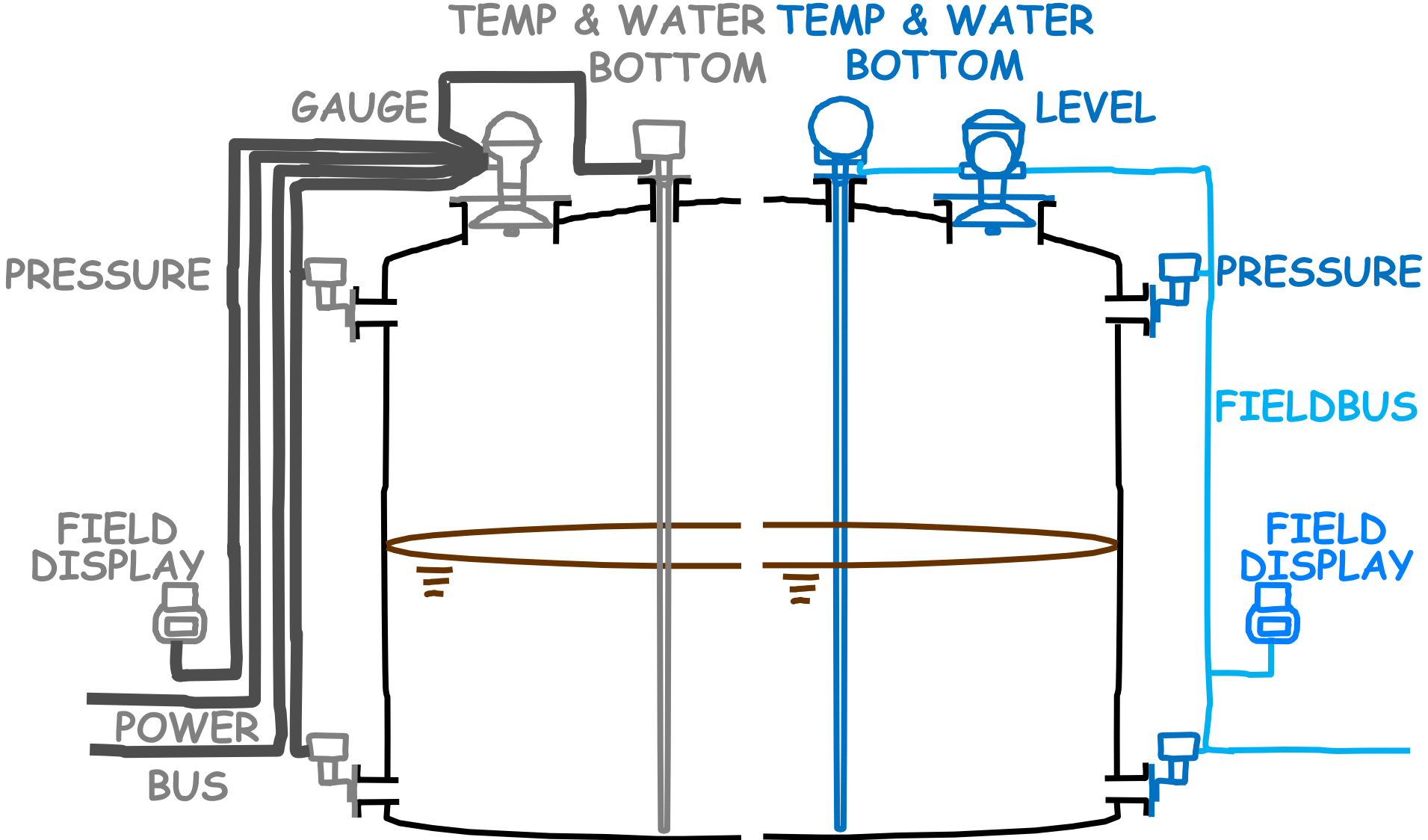


# Eliminate Proprietary Protocols, Gateways, and Proprietary Software

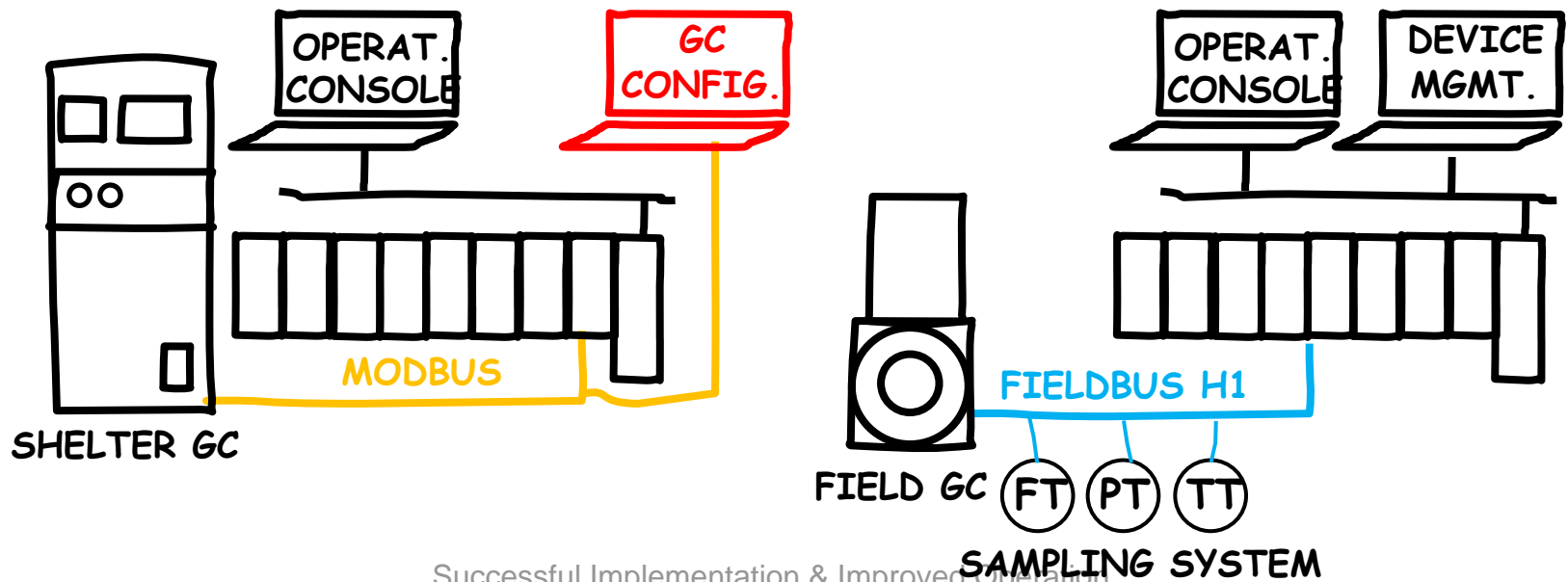




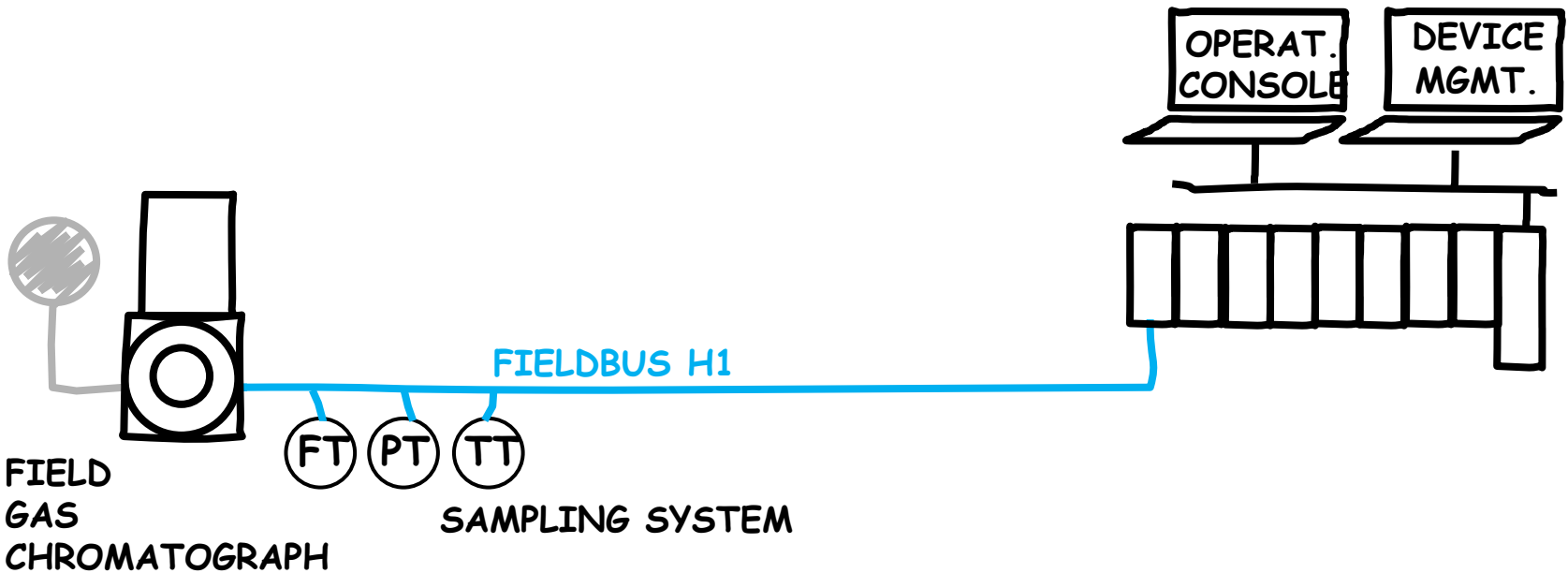
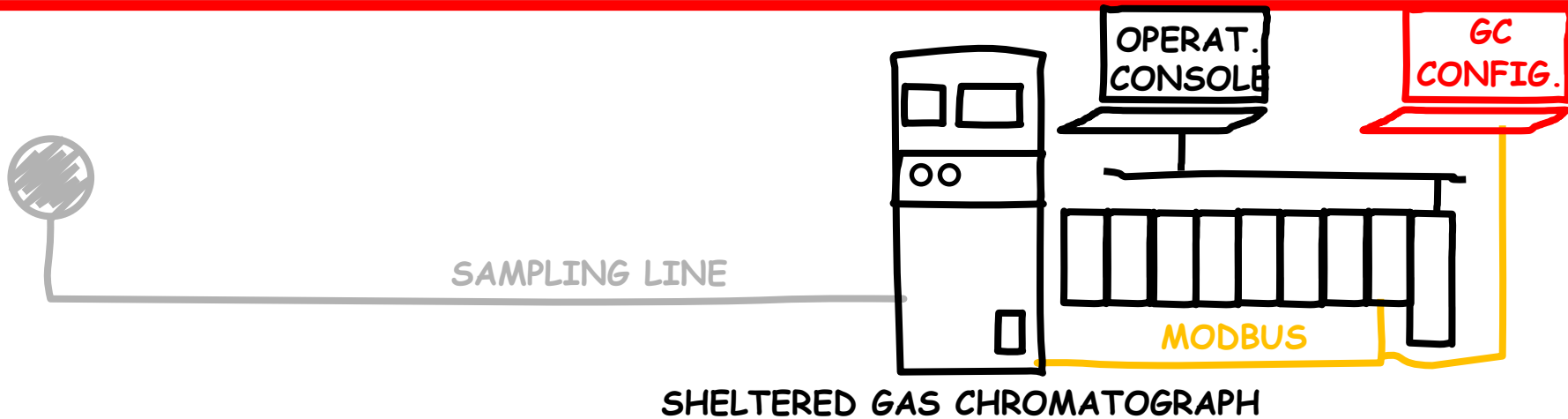
# Intrinsically Safe Two-Wire Intelligent Tank Gauging System



# IPAS: Integrated Process Analyzer System - Shared Infrastructure



# FOUNDATION fieldbus as “Electronic Sampling Line”

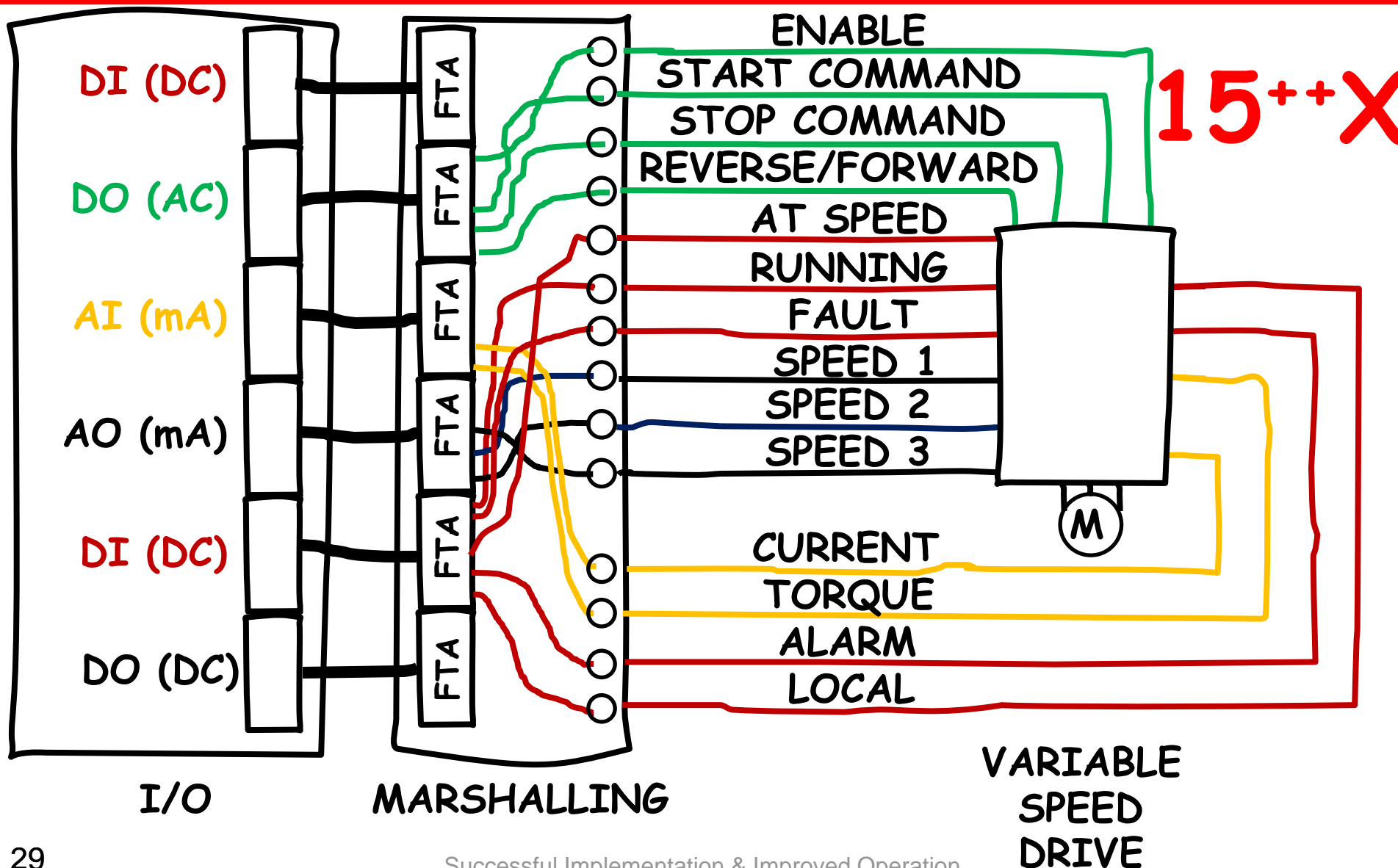


# Motor Controls



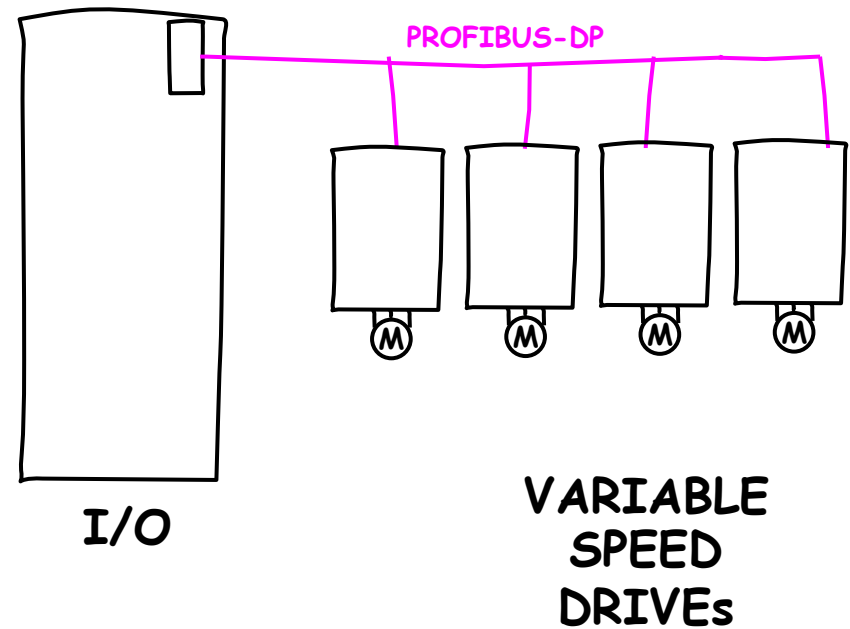
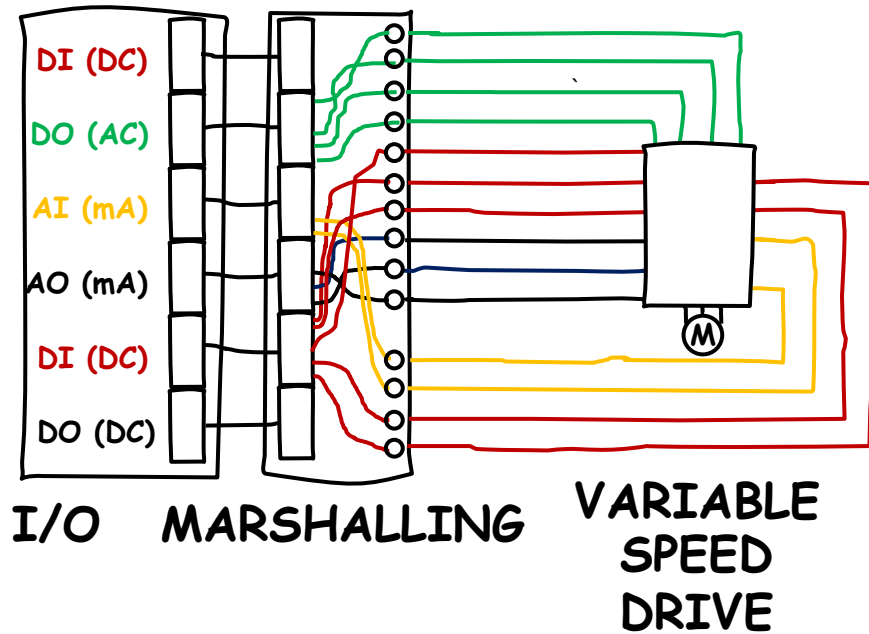
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# Variable/Adjustable Speed/Frequency Drive



15++X

# “Virtual Marshalling” of VSD in Software



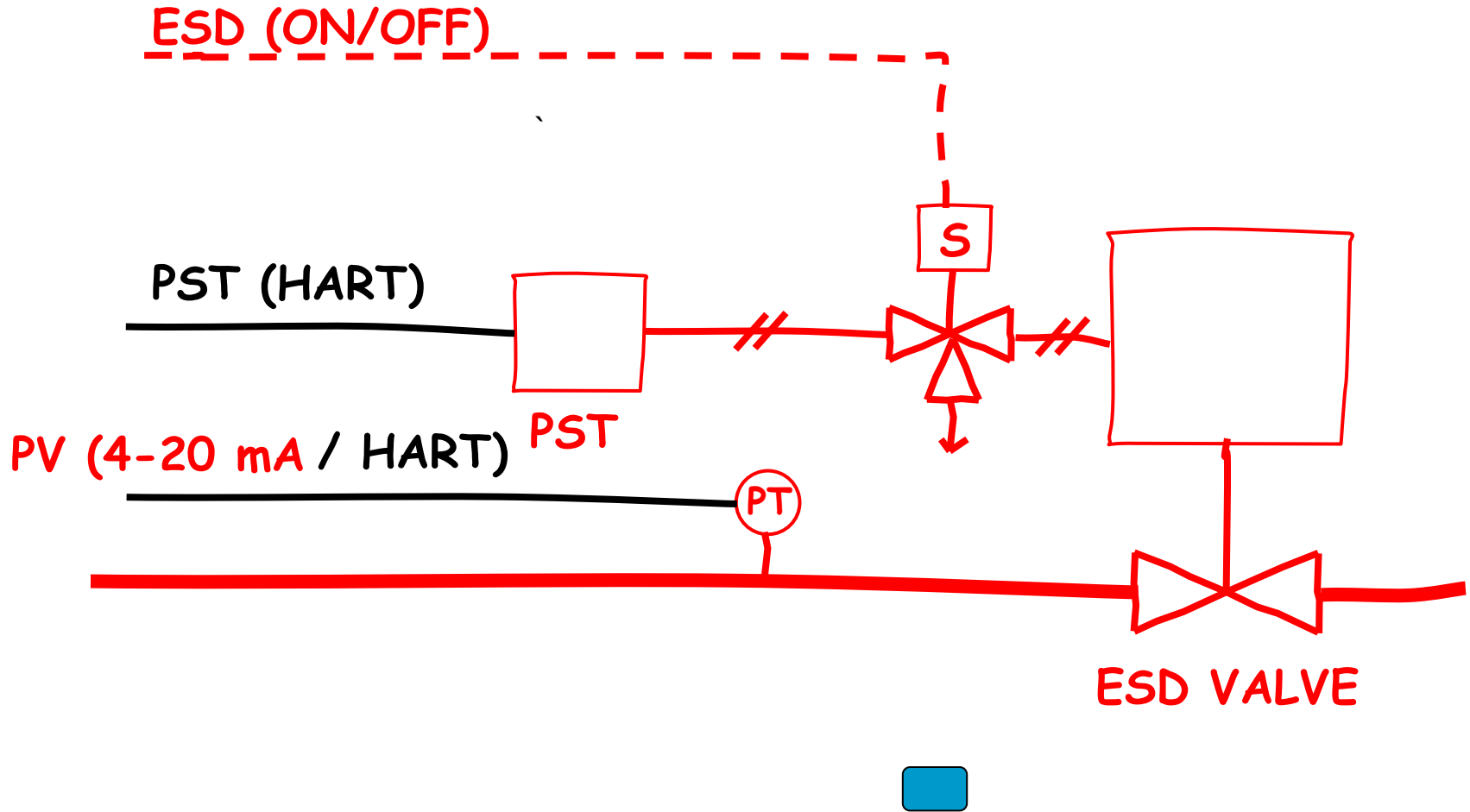
# Safety Instrumented Systems (SIS)

Products are hardwired



Fieldbus  
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# SIS





# Summary

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- Reducing footprint and wiring further than ever
- Smart discrete devices
- Flexibility to handle changes
- Reduce device count
- Eliminating the last proprietary protocols
- Motor controls
- SIS