

# 10SPE Powering Use Cases

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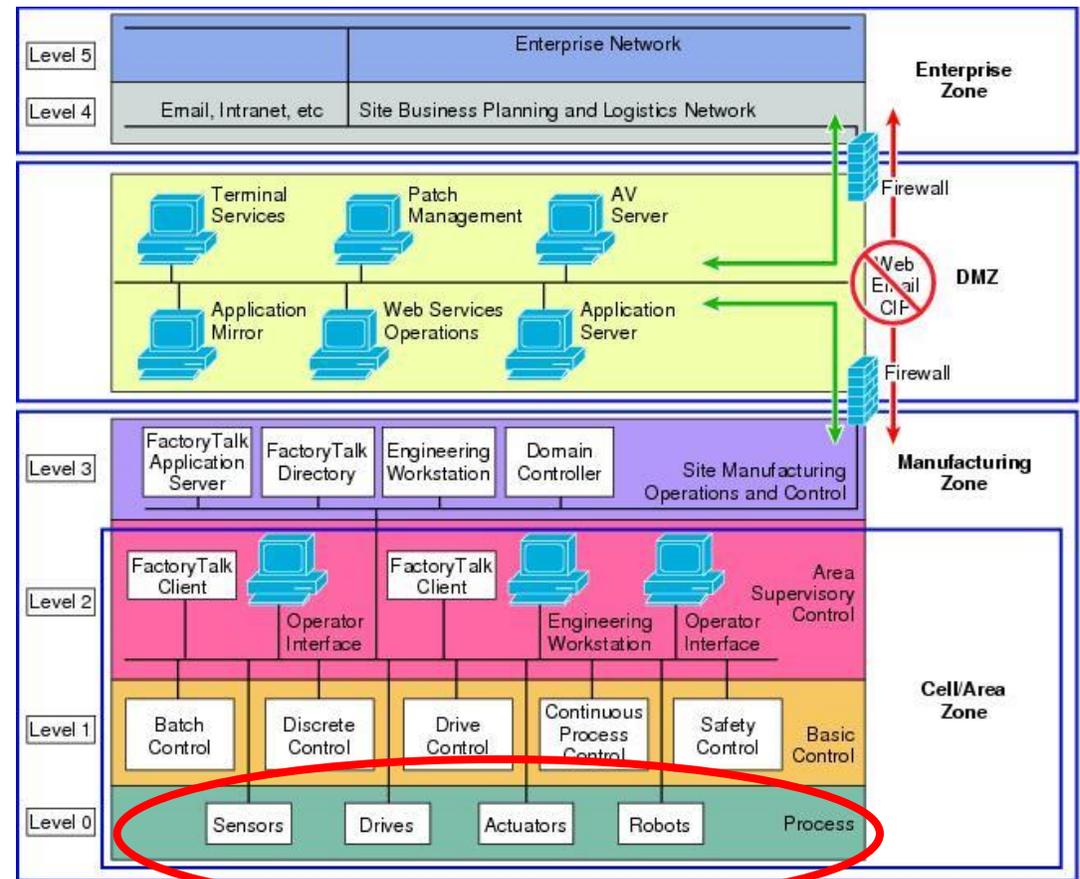
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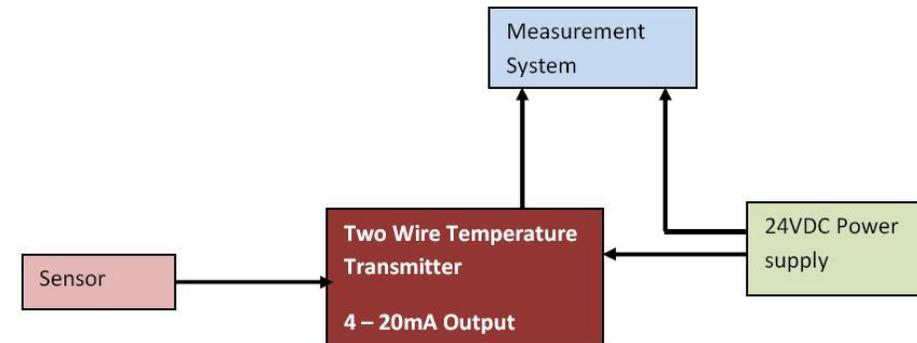
# Industrial Network Power Usage

- Network-supplied power greatly simplifies installations at the edge
  - Achieve a “one wire ideal” where power and control are one connection
- The network edge relies on 24 volt DC power today
  - The nominal 48 VDC of PoE would encounter resistance at the edge
- Some edge devices like actuators require significant power
  - Local source of 24 volt power is still needed



# Long Distance Connections

- Industry Segments:
  - Process, e.g. Oil & Petrochem
  - Large scale discrete manufacturing
- Application
  - Power/communication for sensor or low power actuator
  - Distances up to 1000 meters
  - Low speed communications, less than or equal to 10Mb/s
- Power Needs
  - Power analog/digital conversion, ambient compensation & Ethernet communications

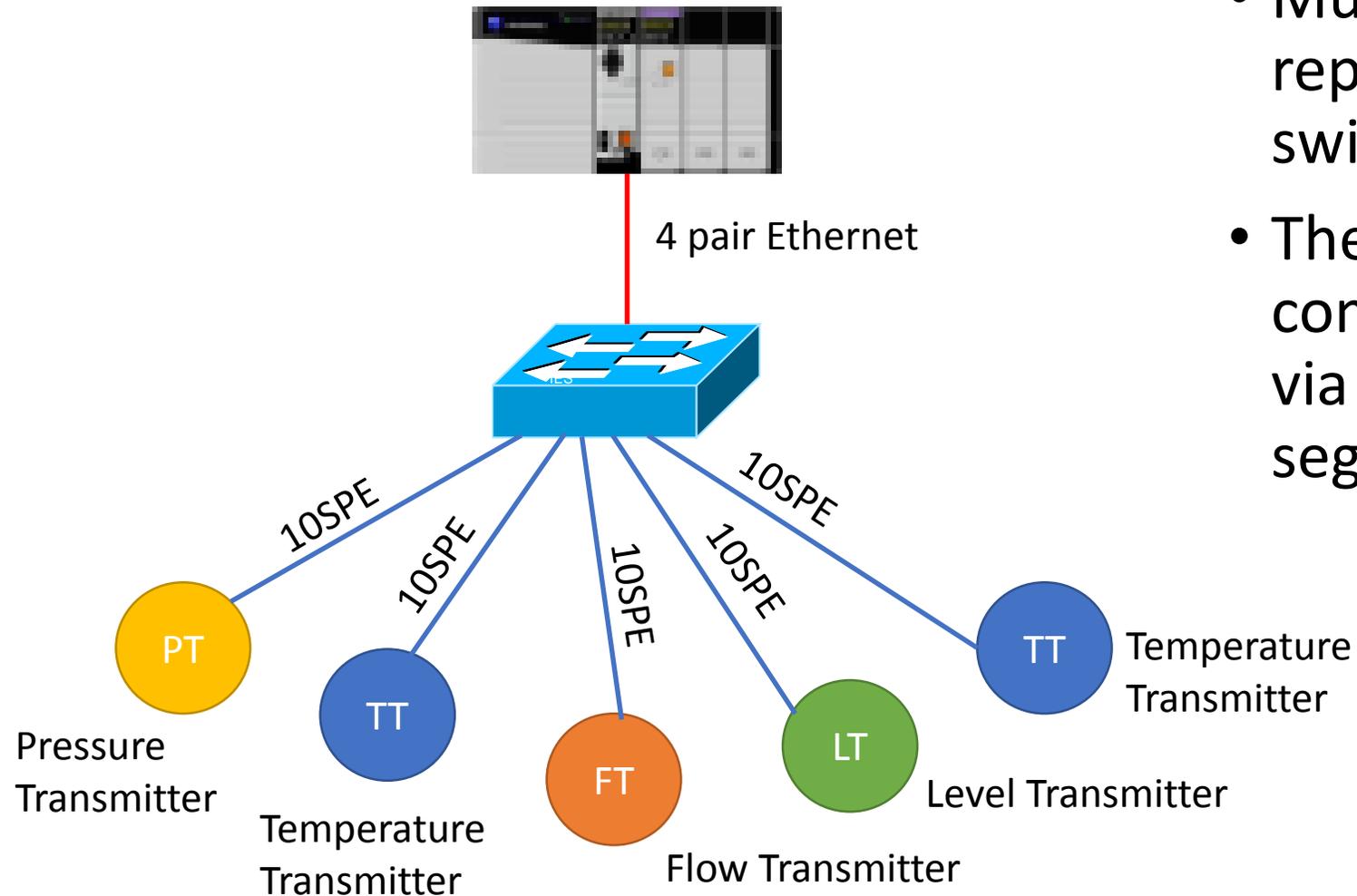


# Machine/Skid Builders

- Industry Segment
  - Discrete Manufacturing (machine)
  - Process Industries (skids)
- Application
  - Power and control edge devices
  - Relatively short distances, < 100m
  - Data rates, 10Mb/s or less
- Power needs
  - Power sensors, actuators, vision systems, etc.



# Multi-Drop?



- Multi-Drop link segments will be replaced by multi-port network switches lower in the network.
- These switches will communicate with end devices via multiple point-to-point link segments

# PoE still has a role in Industrial networks

- PoE powers access points, cameras, etc.
- As these applications are largely satisfied by PoE, they are out of scope of 10SPE
- However, the 10SPE powering environment must work alongside PoE.

