

Data Acquisition and Overall Equipment Effectiveness (OEE) analysis

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Agenda:

Introduction to OEE

Data Acquisition

Technology foundation to acquire data

Challenges & Strategy

Benefits

Nestlé Journey with MES & OEE

Q&A

Overall Equipment Efficiency- OEE



$$\text{OEE} = \text{Availability} \times \text{Performance} \times \text{Quality}$$

- Optimization
- Benchmark different equipment or production lines
- Track improvements over time

Data Acquisition



Decentralized data capturing – Limited / Nil Efficiencies

AUTOMATION & DIGITALISATION



Manual data recording & archival impacting productivity- limiting efficiency

MES-MANUFACTURING EXECUTION SYSTEM

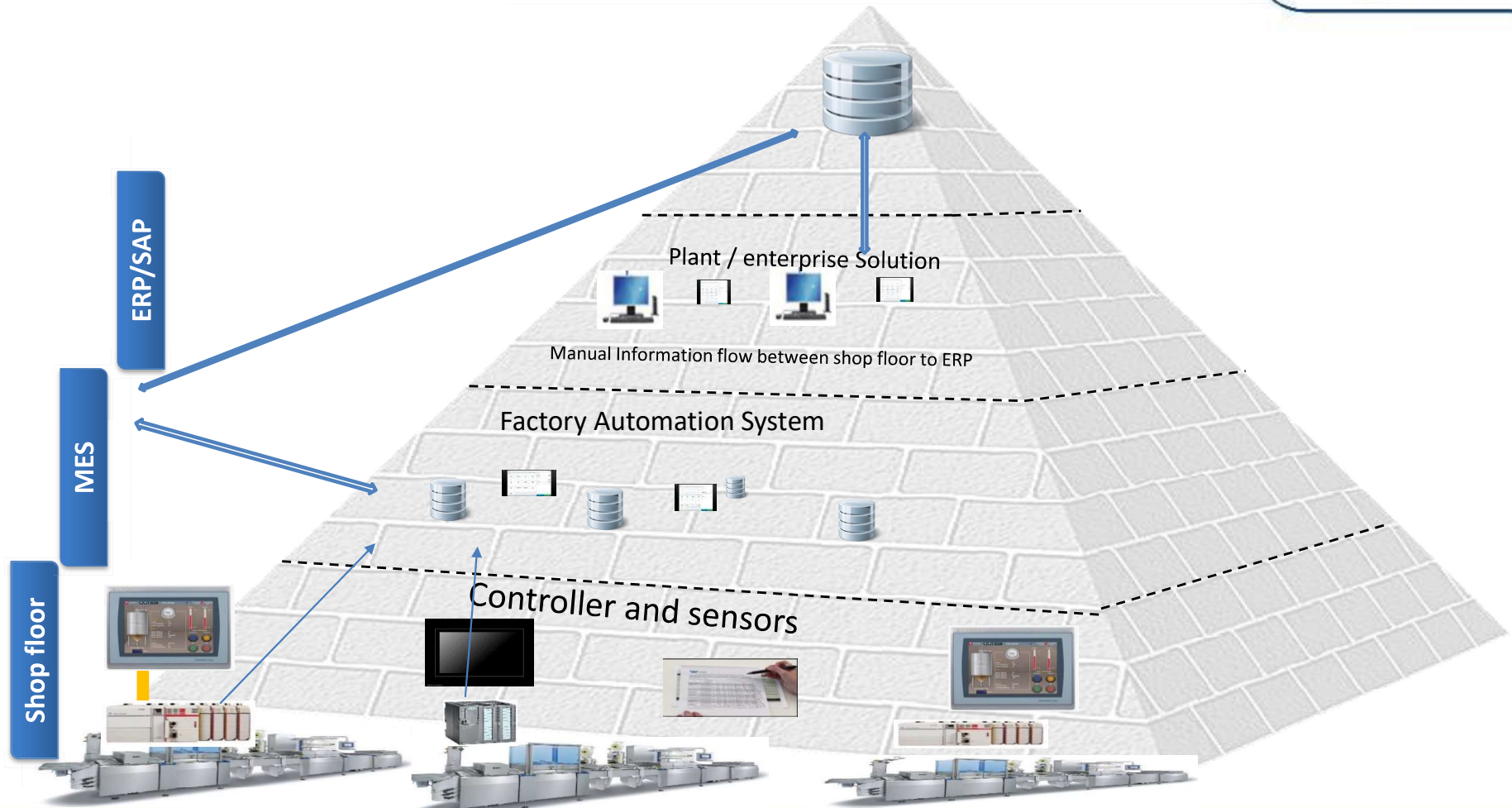


Limited / No Manufacturing Analytics to drive continuous improvement

»» REAL TIME & EFFECTIVE DATA AQUISION

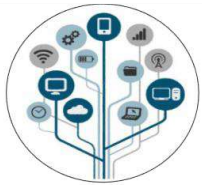
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Technology Foundation



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Technology Foundation:



IT INFRASTRUCTURE

- Network bandwidth,
- Servers,
- Redundant IT structure
- Licenses
- Cyber security



COMMUNICATION PROTOCOL

- Serial communication, Ethernet TCP/IP
- WIFI,
- Gateway,
- OPC UA
- Virtual LANs



CONTROL SYSTEM

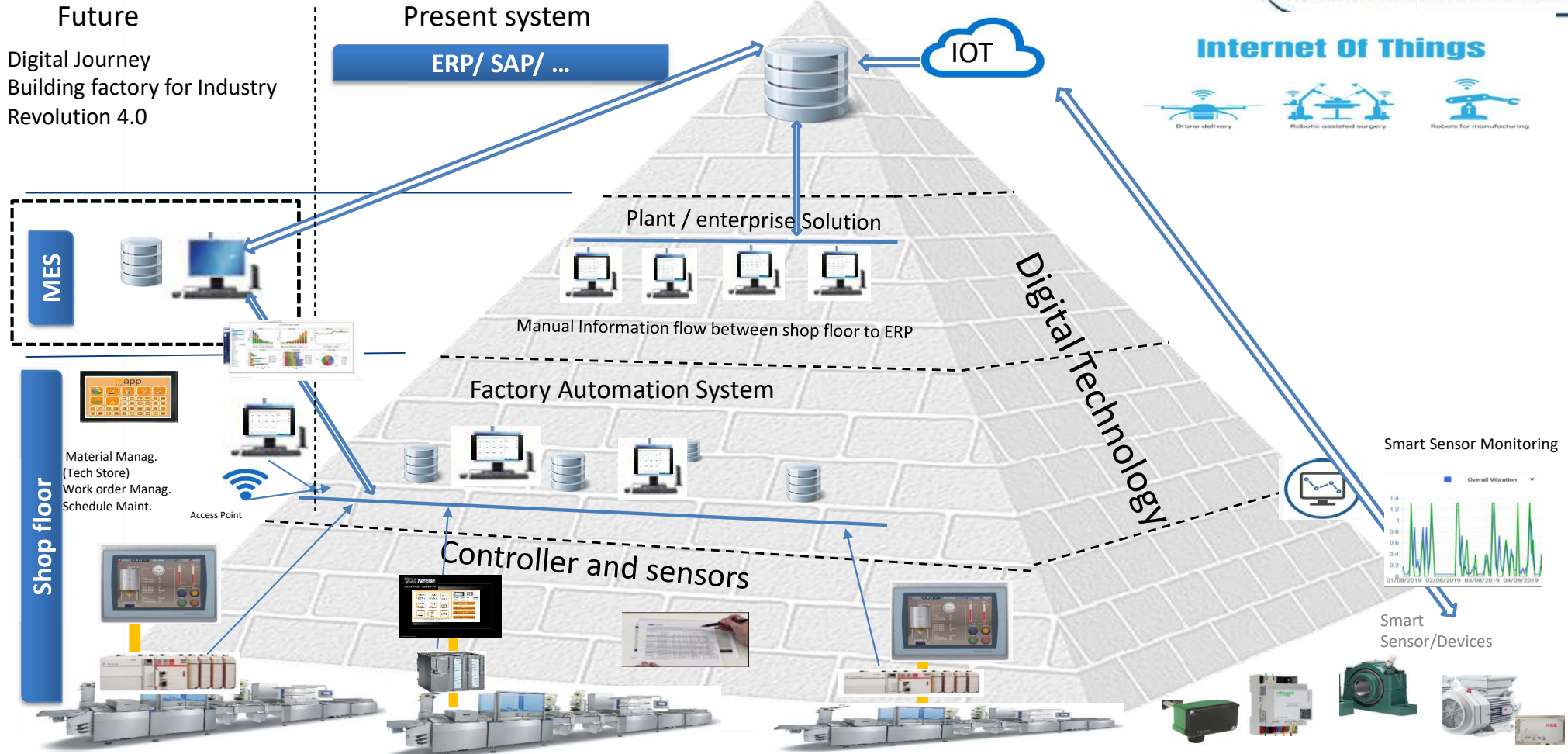
- PLC & SCADAs
- IIOT devices
- Instruments connectivity (sensors, flowmeters, energy meters) and capability with MES system
- Dashboards



QUALITY CONTROL

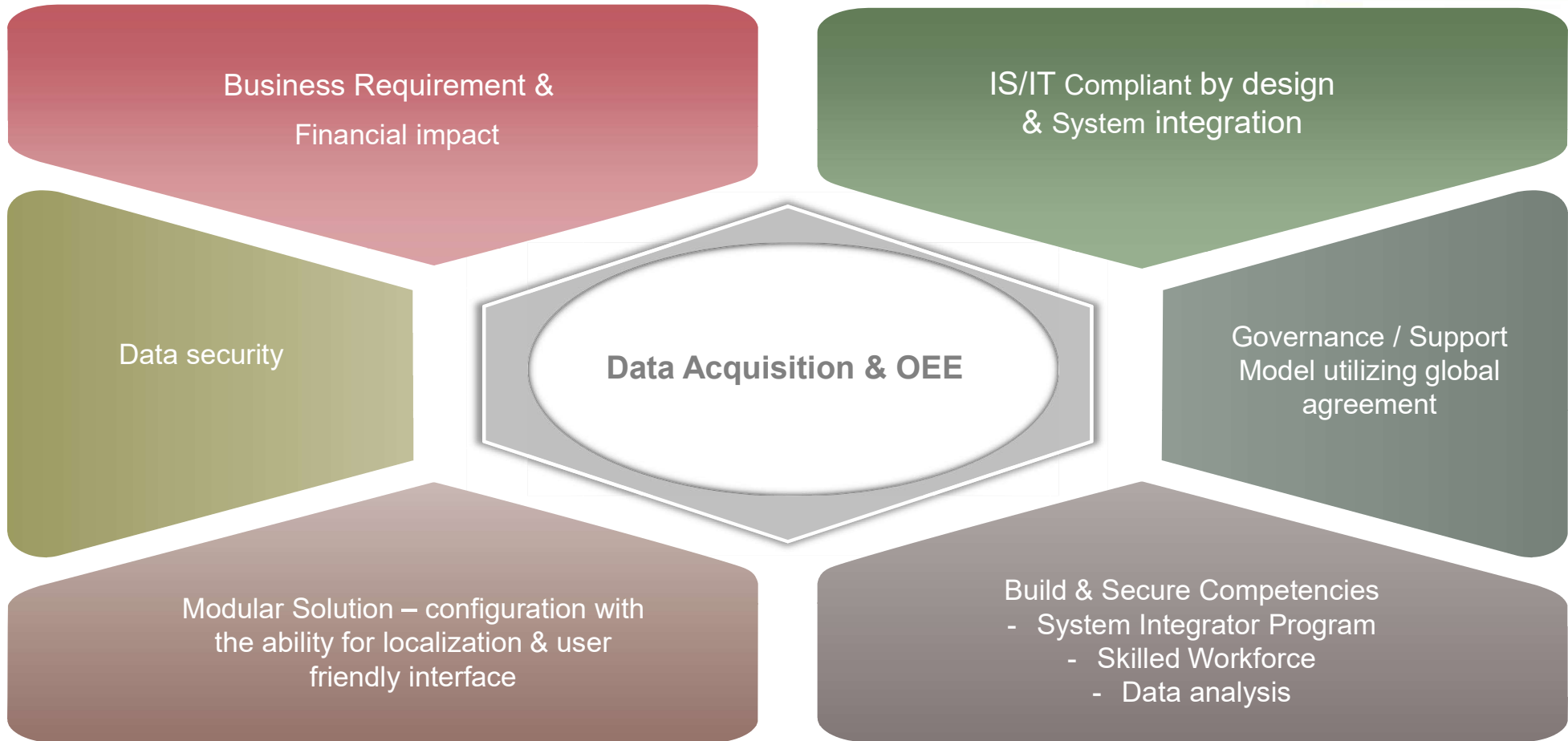
- Scales
- lab instruments
- Real time alerts

Technology Foundation



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Challenges and Strategy



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