Building blocks of an intelligent platform for advanced manufacturing

**CONTROL TOWER**
Digitally-enabled control tower assists in overall manufacturing network operations management.

**CONNECTED WORKER ENABLEMENT**
Use of digital technologies such as wearable devices, mobile apps, smart procedures, remote assistance and low-cost automation to assist shop floor workers in executing operational activities.

**ENERGY MANAGEMENT**
Energy data analysis across different utilities to identify and prioritize areas for optimization.

**DIGITAL QUALITY**
Utilizing connected systems and AI to identify small changes in quality reducing rework and maximizing First Pass Yield.

**CYBER SECURITY**
Threat prevention techniques and solutions that predict, detect, understand, model, and respond to mitigate operational risks across IT platforms and physical OT assets.

**PREDICTIVE MAINTENANCE**
Asset tracking, IoT sensors, and predictive analytics for maintenance to reduce asset downtime, reduce maintenance spend and increase revenue.

**DIGITAL SAFETY**
Reduces the risk of a safety incident by monitoring an individual’s location, exposure to hazardous conditions, or help workers perform high risk tasks.

**AUTOMATED DECISION MAKING (AI/ML)**
AI/ML learns and proposes actions in the factory by monitoring production volume, utilization, safety, quality, etc. helping identify corrective measures.

**CONNECTED LINES**
Data Aggregation & Visualization
Integrate data from multiple sources and channel to relevant user interfaces.

Remote Visibility
Selective remote views with live performance data and relevant alerts.
INDUSTRY X

Intelligent Operations vision: multiple solutions driven across all available enterprise data to improve outcomes

SUPPLY CHANGES
Material changes from supplier

SUPPLY QUALITY
Supplier Quality Data

CONTROL TOWER
Visibility across operations for monitoring to facilitate real-time decision making

SERVICE/AFTER SALES
Service information and replacement parts, warranty issues

ENGINEERING

ECNs
Engineering changes, New Product Introduction

R&D
Initial test results and risk assessment

SUPPLIER

MANUFACTURING

QUALITY INSPECTION
Quality Inspection/Process Data from Manufacturing

DEALER

DEALER INPUT
Customer requests and concerns around quality

SERVICE

SERVICE/AFTER SALES

CUSTOMER

QUALITY INSPECTION
Quality Inspection/Process Data from Manufacturing

CONSUMER INSIGHTS
Customer driven interactions across channels leveraged and integrated with analytics platforms to create understanding of customer needs, wants, and quality issues

ONE DATA PLATFORM
Uniform application, a “one-stop shop” for operational data

DIGITAL THREAD
Quality data is tied from origin to field
Client example: automotive client challenges

DIGITAL MATURITY

KEY CHALLENGES

- No cohesive Digital strategy (dabbling)
- Haphazard roll out not linked to business value
- Slow speed-to-value at scale
- Lack of modern OT/IT infrastructure
- Many vendors (Who to trust?)
- Industry point solutions (not integrated)
- Hard to get global buy-in across the organization
- Lack new capabilities and workforce talent
- Investment dollars vs. other priorities
- Not convinced of economic value / ROI
Our approach advocates **thinking big...but starting small**

**Think Big**
- Identify target sites for analysis (preferably large mega plants)
- Bring a small team of our Top Strategy and Digital professionals to conduct Operational Technology (OT), IT and Process flow assessments
- Review existing use cases

**Start Small**
- Use the “speed to value” approach to rapidly pilot a combined OT and IT solution based on pre-built use cases
- Quantify value levers – initial areas to pursue are COGS and strategic cost reduction, growth through efficiency gains unlocked by digital transformation

**Scale Smart**
- Prioritize high impact use cases based on pilot results
- Develop industrialization approach for high impact use cases
- Verify proposal amount
Thank You

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