Setting the Stage for Smart Factory Transformation
Top US automotive OEM

1 PROBLEM

A leading automotive OEM was being forced to rethink their manufacturing strategy to address the evolving mobility ecosystem.

2 CHALLENGE

For a top American OEM, industry pressures have rarely been greater. Significant competition drives cost pressures while quality and safety concerns remain constant. Customer preferences are evolving as the rapid growth of car-sharing and ride-sharing reshape the purchase decision. In addition to all of this, autonomous vehicles and multiple Industrial IOT solutions are rapidly reaching a commercially viable state.

3 SOLUTION

**Visioning – Collaborative rapid prototyping**
- Established guardrails to foster productive innovative thinking (e.g., target year, vehicle capabilities, no resource restrictions)
- Identified **150+ unique and prioritized Next Gen capabilities**
- Actively engaged cross-organization stakeholder groups and executives
- Created physical, digital, and VR-enabled illustrations to develop and align stakeholders on vision and capabilities

Benchmarking – Competitive analysis and 'Art of the Possible'
- Gathered over **1,200 benchmarking insights** into best-in-class capabilities across automotive and non-auto industries
- Utilised benchmarks to validate capability feasibility and maturity among peer group and broader market

Capability deployment roadmap & deployment
- **Prioritized and sequenced 130 capabilities** based on feasibility and impact
- Identified in-flight initiatives, aligned to future capabilities
- Aligned capabilities to programs for pilots based on gaps, program affinity, and strategic value
- Established business value realization framework in support of capability deployment and roadmap development at plant/product program level
- Defined detailed business process, workforce and technology requirements to implement capabilities
- Developed technology platform to enable rapid deployment of use cases in plants across enterprise
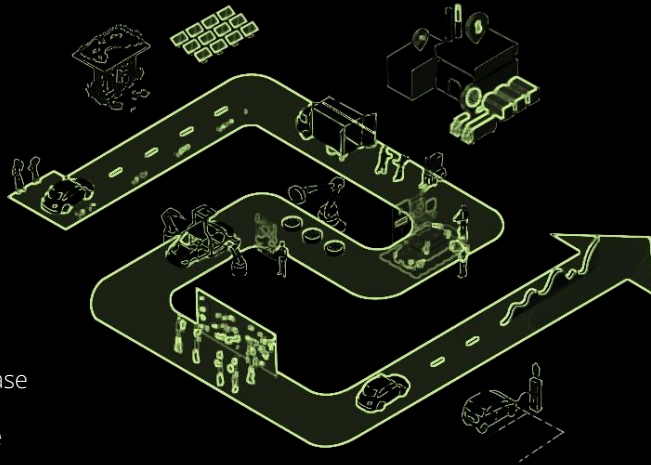
Select High Impact Use Cases
- Digital twin of process (phased digital thread)
- Real-time digital factory performance management
- Condition-based asset monitoring
- Digital operator assignment recommendation
- AI-driven setpoint optimization (yield improvement)
- Digital information boards (shop floor)
- Augmented reality operator training
- Extended reality remote collaboration
- Digital process confirmation
- Work in process inventory visibility
- AI-enabled visual process inspection and monitoring

Value

$1.1B
projected annualised savings across 70+ plants ($15M+/plant)

Impact

- Enterprise-wide shared FoF vision
- Obeya Room to track progress to vision
- Business value realisation framework
- Platform and application development