

Transforming Engine MRO:

Harnessing Digital Technology to Overcome Aerospace Industry Challenges

Innovative digital solutions driving
aerospace maintenance transformation



MRO Solution Landscape

Line/ Gateway

Optimized to support distributed team of technicians across numerous locations integrated with flight schedule

Hangar/ Heavy

Designed to support:

- Internal or 3rd party workscope
- Optimized labor and execution
- Generation of compliance documentation

Engine & Complex Component

Configured to support gated process:

- Workscope development
- Teardown
- Clean
- Inspect
- Repair Routing / OSV
- Supply Chain Integration
- Kitting
- Assembly and Test / Acceptance

Component Shop & Backshops

Configured to support:

- High volume component repairs
- Routers
- Special processes
- Inspection
- Acceptance

Agenda Overview

01 Current Challenges in the Engine MRO Sector

02 The Role of Digital Transformation in Engine MRO

03 Implementing Digital Technologies: Strategies and Best Practices

04 Future Trends and the Path Forward

Current Challenges in the Engine MRO Sector



Rising Operational Costs and Economic Pressures

- Increasing **Cost** of Maintenance
- Economic **Fluctuation**
- **Profitability** while prioritizing Safety, Quality, and Compliance



Supply Chain Disruptions and Their Impact

- **Parts Availability Delays**
- **Increased Turn Time**
- **Customer Satisfaction Impact**



Regulatory Compliance and Sustainability Demands

- **Key Compliance and Audit Areas:**
 - Personnel, Manuals, Facilities, Equipment & Tools, Data, Training, Quality Control and SMS
- **Stricter Environmental Regulations**
- **Market Demand for Sustainability**

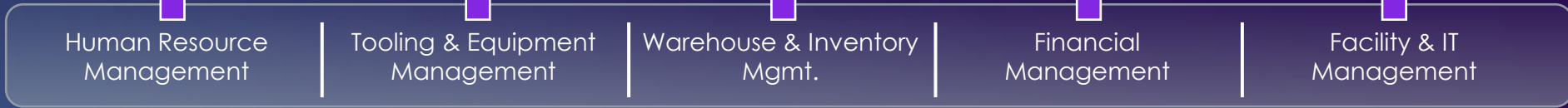
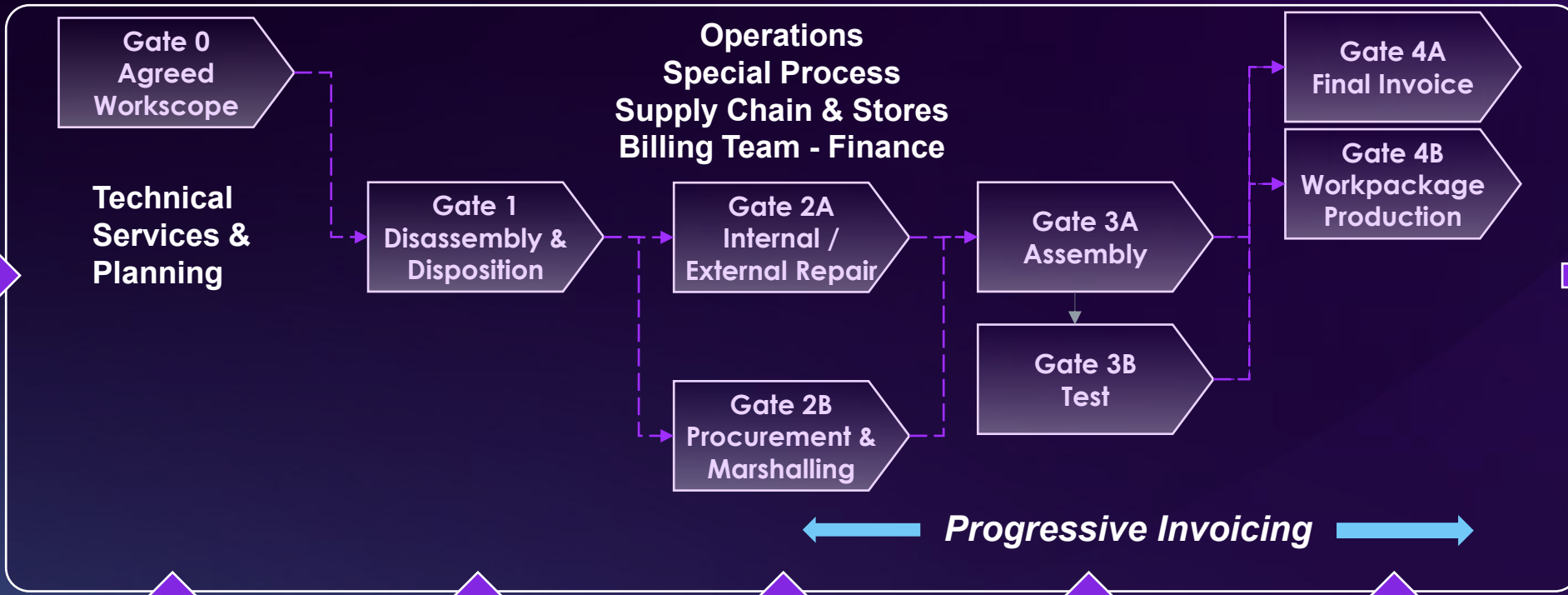


The Role of Digital Transformation in Engine MRO



Engine MRO Solutions : A Digital Backbone for MRO

Engine / Complex Assembly MRO (CAMRO)



Overview of Digital Technologies Shaping MRO

- **Purpose Built Complex MRO Toolsets**
- **Integrated Technical Data Management**
- **Granular Data to Support Planning, Analytics and Forecasting**
- **Artificial Intelligence Enablement**
- **Mobile Devices and Internet of Things (IoT) Integration**



Benefits of Shifting From Reactive to Prioritized Management

- **Effective Sales & Operations Planning**
- **Optimized Resource Allocation**
- **Targeted Operational Excellence**
- **WIP and Finished Goods Inventory Improvement**



Addressing Safety and Compliance Through Digital Enablement

- **Enhanced Tracking and Control through the Digital Tread**
- **Automated Generation of Accurate and Complete Documentation**
- **Reduced Audit Prep for Regulatory Compliance**



Implementing Digital Technologies: Strategies and Best Practices



Overcoming Integration Hurdles with Legacy Platforms

- **Building from Legacy Systems, Paper and Incomplete Data**
- **Integration Planning**
- **Adoption of Standard Processes and Workflows**



Ensuring Cybersecurity, Uptime and Evergreen – Modern Cloud Platforms

- **Protecting Sensitive Data**
- **Maintaining System Security and Access Control**
- **Continuous Monitoring**



Driving Workforce Adoption and Cultural Change

- **Employee Engagement**
- **Training and Development**
- **Culture of Innovation and Adoption**



Future Trends and the Path Forward



Positioning MRO Systems as a Competitive Differentiator

- **Digital Transformation in MRO**
- **Applied, Industrial Grade AI**
- **Agentic support for routine task tracking and monitoring**
- **Reduced time to resolution in dynamic environment**



Enhancing Customer Satisfaction And Business Performance Through Technology

- **Improved Communication**
- **Increased Transparency**
- **Predictability in Maintenance Outcomes**



Proven Use Cases and Measurable Benefits

- **Cost Savings Achieved**
- **Reduced Turnaround Times**
- **Improved Compliance Adherence**



Conclusion & Wrap-up



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Digital Transformation Benefits

Digital transformation enables engine MROs to visualize, define, control and integrate every step of the repair value stream.

Improved Efficiency and Safety

Adopting advanced technologies provides the visibility into emerging constraints, improving efficiency and enhancing safety/compliance.

Meeting Industry Demands

Embracing best practices enables aerospace firms to quickly incorporate advancing technology to remain competitive and meet evolving industry demands.

Questions?





Take Your Maintenance to the Next Level

Thank you!

