

Paving the way to \$400M+ value with real-time production visibility and automated OEE tracking for a leading aircraft manufacturer

Cognizant helps a leading global aircraft manufacturer automate OEE tracking, providing real-time production visibility and modeling \$400M+ in potential throughput and cost improvements.



At a glance

Industry
Aerospace & Defense/Manufacturing

Location
Global

Challenge
Manual OEE tracking led to inaccurate efficiency reporting across ~250 machines

Success Highlights

- Over \$400M projected in modeled financial impact
- Over 10% hidden efficiency gap identified

The challenge



Manual tracking masked true performance

A global aerospace manufacturer operated a complex production landscape of ~250 machines across its aircraft and aviation systems facilities. Overall equipment effectiveness (OEE) was manually calculated using operator-entered data, which introduced discrepancies and led to inaccurate performance metrics.

Inaccurate data hindered decision-making

These inaccuracies not only masked inefficiencies but also hindered the client’s ability to accurately measure and improve plant throughput. The organization needed a data-driven, scalable solution to uncover the true baseline of OEE and support strategic decisions around investments, performance improvements and future scalability

Our approach

Cognizant conducted a comprehensive multilayered assessment and developed a solution tailored to the client’s production environment:

- **Site and technical assessments:** We evaluated key production sites, machinery, architecture and data systems to understand the existing OEE calculation mechanisms
- **Data discrepancy analysis:** Our team analyzed the OEE input methods and formulas to identify overreporting issues and root causes
- **Tailored OEE model design:** We developed a custom-fit OEE model aligned to the client’s operational parameters
- **To-be architecture and rollout planning:** Future-state architecture was designed to support full-scale deployment across plants, along with a phased implementation roadmap
- **Business case development:** We quantified the ROI potential by modeling the impact of correcting OEE underreporting, establishing a clear link between data integrity and throughput gains



Business outcomes



Uncovering the true baseline of efficiency

Automating OEE tracking highlighted discrepancies that, if addressed, could lead to over 10% improvement in operational efficiency. The modeled benefits included higher throughput, deferred capital investments and reduced unit costs, representing over \$400M in potential value.

Cognizant’s OEE automation approach provided the client with accurate performance baselines and insights into hidden inefficiencies. Based on these findings, the projected benefits include:

- **\$400M**
projected in annual throughput improvement
- **\$16M**
projected in CapEx avoidance over three years
- **10%+**
hidden efficiency gap identified

These results are modeled projections based on identified OEE gaps and expected operational improvements. Future phases will focus on scaling the solution across all production lines.

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