

Business Jet OEM Process Planning Case Study

Tactical Engineering Solutions (TES) provides practitioner-based consulting and training services that deliver measurable results for our clients. We work with our clients to understand their objectives, identify solutions that are capable of execution, and develop appropriate plans to achieve, validate, and sustain the intended benefits.

SERVICES:

**Operations
Performance
Lean
Six Sigma
Rapid Improvement
Logistics
Quality Management
Program Management
Change Management
Collaboration and Time
Data Management
Training &
Certification**



Opportunity: A new entry into the business aircraft industry contracted TES to develop their manufacturing process. The focus in this early stage was to provide details filling the gap between the existing design strategy and a viable manufacturing strategy going forward.

Project Goal: The project goal was to develop a world class manufacturing process to be deployed at 5 assembly plants located worldwide. The primary assembly facilities would also have the ability to fully kit the aircraft for final assembly at another location. This will be accomplished utilizing the Complete Knock Down (CKD) and Semi Knock Down (SKD) manufacturing process.

The specific deliverable was to validate and further define the business plan and manufacturing processes to ensure the ability to deliver at the primary facility as well as satellite locations. At this stage TES developed a manufacturing and training solution for each facility. The documentation was also prepared at a level to allow the OEM to discuss manufacturing plans with potential new investors. TES provided the baselines and details for facility layout, Material Movement, Tooling, Schedule development and manpower estimates. TES proposed completion of the manufacturing feasibility assessment as follows:

Preliminary Launch Development

- Preliminary GD&T Dimensional Control Assessment
- Preliminary Tooling Proposal
- Preliminary Kitting, Sub-assembly and Modularity Analysis
- Preliminary Headcount and Budget Proposals
- Preliminary Manufacturing Execution Systems (MES) and Materials Requirements (MRP) Review

TES provided Excel-based software that was used to develop the Work Leveling Charts, and worked with the OEM staff and ERP personnel to integrate the required traceability issues necessary in the aviation industry.

TES provided a robust Manufacturing Review Document and a Production Plan that will deliver the required production numbers stated in the OEM's business plan.

Benefits of Project:

The Manufacturing plan developed by TES provided the OEM with a solution that will bring the aircraft to fruition within the budgetary constraints detailed in the business plan while allowing the OEM to become profitable within the timetable detailed in their financial model.



Tactical Engineering Solutions Overview

SOLUTIONS:

Continuous Monitoring
Process Flow Mapping
Workstation Layout
(5S)
Material Movement
Problem Solving
Workgroup Development
End User Training
Supplier Development
Value Stream Mapping
Standard Work
Workload Optimization
Simulation
Six Sigma
Facility Layout
Visual Factory (Andon)
Pull Systems
Enterprise Performance

For more information on any of our products or services please visit us on the Web at:
www.tacteng.com

TES is a Manufacturing Engineering services firm focused on helping our clients develop **and implement** sustainable operational improvements that deliver measurable results. We work in a collaborative manner with you and your team through the difficulties of the implementation phase and we can ensure that changes deliver and sustain improvements for your customers and staff.

Our transformation work focuses on three elements:

- Developing new operating systems to improve productivity and flow using Lean Six Sigma techniques, with limited capital investments
- Creating the performance management system for leaders to monitor and improve performance
- Building realistic, practical capabilities and confidence that our clients will need to continuously improve

Our specialists in Lean Six Sigma can help clients deliver performance by:

- Developing transformation programs (e.g. labor and manufacturing efficiency improvements, process improvements)
- Supporting existing change initiative
- Conducting performance diagnostics
- On site facilitation for Value Stream Analysis and Kaizen events
- Creating performance management systems (e.g., tracking tools, accountability programs)
- Building organizational capabilities
- Executive leadership and coaching
- Zero cost productivity improvements

We bring best practices from leading manufacturers from around the world and a broad base of industries. We measure our success by the sustainability of our impact and the capability we transfer to clients.

About Us

Tactical Engineering Solutions is a veteran-owned/women owned disadvantaged small business, serving the business needs of both private and public sectors. Headquartered in Michigan, our roots originate in the manufacturing industry and as we have grown, our portfolio of resources continues to expand upon this foundation into other industries, to include Transportation, Electronics, Aviation, Aerospace, Healthcare, Power, Department of Defense, and more.

It is this rich heritage that allows Tactical Engineering Solutions to support our clients with a first-hand understanding of the challenges that businesses face.

Tactical Engineering Solutions is registered with Dunn & Bradstreet and the Federal Government's Central

VISION

TES execute programs that are on-time, on-budget and technically accurate to help our clients reduce overall cost and improve throughput while increasing customer satisfaction.



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