

Automotive Efficiency Improvement 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 achieving them, 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 major automotive OEM faced a critical task to rapidly reduce manufacturing capacity due to negative economic conditions and gain the resultant efficiencies without impacting the end user experience or final product quality. This task exceeded the capacity of the organization's internal manufacturing engineering staff.

Project Goal: The project goal was to reduce the number of hourly workers by 160 and improve the overall operator utilization as well as first time through quality.

TES has the organizational depth and experience to expand the customer's ability to make and manage change. TES was contracted to provide Industrial Engineering support for a line speed reduction of 25% across two shifts and reduce the plant manpower by 160 hourly workers. The opportunities for manpower reductions had to be engineered and implemented within three months. The opportunities for productivity improvement also had to be implemented with zero impact to quality or ergonomics. Approximately 560 MODAPTS studies were conducted across the entire assembly plant including Final Assembly, Body Shop and Paint Shop. TES provided the OEM engineers with the specific skills in MODAPTS and line balancing analysis needed to complete this project. The project methodology was as follows:

- Conduct time studies for all existing operations using MODAPTS
- Identify value-added and non-value-added elements of work within the Operations
- Methodize the existing operations to optimize part and tool presentation, and update the MODAPTS studies accordingly
- Develop the "To/From" work element move sheets
- Ensure accurate revised Operator Instructions and Material Handling requirements
- Develop an updated work place layout in AutoCAD
- Identify constraints and bottleneck areas
- Provide a work leveling study and line balance solution

TES provided Excel-based software that was used to develop the MODAPTS Studies and Work Leveling Charts.

Following the implementation of the project recommendations, the organization delivered on its required cost targets and surpassed its productivity improvement target.

Benefits of Project:

An improvement in overall operator utilization
An improvement in First Time Through quality
Cost savings in excess of \$12.8 Million Dollars

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 changes both 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 in order 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 executes 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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