

# Military Vehicle Manufacturer 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 military vehicle manufacturer based in the UK contracted TES to assist with achieving cost reduction improvements in the production of their iconic rough terrain multi-purpose vehicle. This vehicle line traces its roots to the post WW II period and employs many of the same hand-built assembly methods that were in more common practice at the time of its introduction. This company contracted TES to draw upon its extensive automotive production experience and apply it to their multi-purpose vehicle line.

**Project Goal:** Achieve a 10% reduction in labor content with minimal capital investment. TES has the depth of skill sets and experience to expand an organization's ability to change and were contracted to deliver tangible results. TES provided the Industrial Engineering support for a Final Assembly department direct labor decrease of 10%. The opportunities for manpower reduction cost savings had to be engineered and implemented within a period of four months. The opportunities for productivity improvement also had to be implemented with zero impact to Quality or Ergonomics and could not be dependent upon any product design changes. TES provided the plant engineers with the specific skills in waste identification and line balancing analysis necessary to complete this project and the knowledge to carry forward to any future process improvement objectives. The project methodology was as follows:

- Identify constraints and bottleneck areas
- Involve all affected manufacturing personnel
- Waste walk review
- Process Affinity analysis
- Workstation layout review
- Stock presentation review and analysis
- Workstation jig and fixture review and improvement
- Front loading
- Operation and Operator Instruction Sheet Methodization
- Work leveling study and line balance solution
- 5s Improvements

Following the implementation of the project recommendations, TES delivered on its required cost targets and achieved its productivity improvement targets.

## **Benefits of Project:**

- A 10% reduction in direct labor content yielding an annual £1,110,000 cost savings.
- TES also provided the customer's personnel with the skills and experience necessary to conduct future labor reduction and process improvement exercises utilizing internal personnel.



# 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](http://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 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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