



# When 24 Hours is Simply Not Enough

IET used data and design to alleviate a critical constraint in the customer's production process.

## The Customer

A Tier 1 North American manufacturer of molded composite components for the automotive industry.

## The Challenge

Three issues converged to create a perfect storm at one of the customer's plants: (1) surging demand for painted products, (2) paint booth capacity constraints and (3) a complex integrated system of conveyORIZED part handling and automated paint booth equipment. Throughput and labor productivity just had to improve.

## The Solutions

IET recognized the two key improvement areas were paint booth equipment performance and starvation/blocking losses due to the Electric Monorail System's (EMS) interaction with paint and assembly operations. Using direct observation of shop floor operations, IET engineers measured paint booth downtime and repaint losses by product around the clock. Detailed findings were provided to management each day so corrective actions could be targeted and implemented immediately by their own maintenance staff and contractors.

Starvation and blocking losses were a function of product mix, quality rate and the part conveying system. IET also measured actual product flow through the system 24/7 to gain insights to the interaction of key variables. IET developed an animated, discrete event computer simulation of the system and used the real-life data obtained earlier to evaluate alternative scenarios based on paint booth speed, number of EMS carriers, rework rate, control logic and line configuration.

Within one month, specific equipment improvements to the paint system caused uptime to rise from 55% to over 80%. The simulation enabled the team to develop a facility layout and EMS operating plan that supported not only new programs, but dramatically enhanced labor productivity by creating consistent product flow through the system.

**iet**

3539 Glendale Ave. Toledo, OH 43614  
 419.385.1233 800.278.1031  
 www.ieteng.com

How can IET help you?

Any way you need us to.

Productivity

Current production standards

Current production performance

Detailed reasons for variances

Detailed plan for improvement

Goal-setting, accountability

Capacity planning

Key capital resources

Direct and indirect labor

Salaried personnel

Facilities

Support

New manufacturing

Detailed process map

Layout

Facilities

Labor

Support

Indirect labor design

Standards

Material handling

Supervision

Maintenance

Plan for improvement

Total value analysis

Make vs. buy

Site selection

Consolidation

Vertical integration

Horizontal integration