

# Powertrain mix volatility under pressure: Where OEM demand swings break the Tier-n supply flow



As OEMs rebalance EV, EREV, Hybrid, and ICE programs, Tier-1 and Tier-2 suppliers face constant demand swings, spec changes, and delivery pressure. Availability has given way to affordability due to inflation, tariffs, and interest rates—forcing suppliers to flex capacity, labor, and materials while protecting margins and hitting OEM build windows.

## The Problem

Tier-n suppliers lack the visibility, stability, and planning intelligence needed to absorb rapid shifts in OEM powertrain mix—leading to firefighting, rising costs, labor strain, and unreliable delivery performance.

### Unpredictable OEM signals

- × Last-minute order changes driven by powertrain and other variant mix shifts
- × Forecast inaccuracies cause material shortages or excess inventory

### Mix and spec change turbulence

- × Engineering changes arrive mid-cycle with little notice
- × Rework, scrapped parts, and stop-start production disrupt throughput

### Labor and capacity strain

- × Overtime spikes from rush orders and schedule volatility
- × Skilled labor shortages slow response to demand changes

### Premium freight and margin erosion

- × Missed delivery windows trigger expedited shipments
- × Emergency logistics and rework erode already thin margins

## The Solution

Tier-n suppliers need a connected, AI-enabled planning and execution layer that adapts to OEM powertrain mix changes, stabilizes operations, and restores predictable, profitable execution across EV, EREV, Hybrid, and ICE programs.



### Multi-Tier visibility and collaboration

- + Real-time visibility into OEM demand and schedule changes
- + Early warning of upstream material, capacity, or supplier risks



### Supply chain command center

- + Detects shortages, late materials, and bottlenecks early
- + Prioritizes orders and recommends optimized response scenarios



### AI-driven demand and supply planning

- + Anticipates volume variability across powertrains
- + Models scenarios for mix shifts and engineering changes
- + Balances capacity, labor, and material requirements



### Connected execution

- + Transportation Management (TMS): Reduces premium freight by optimizing inbound and outbound flows while meeting OEM delivery windows
- + Warehouse Management (WMS): Improves component accuracy, sequencing, and material availability to prevent stockouts and line stoppages
- + Order Management (OMS): Provides dependable promise dates and automates order orchestration for reliable fulfillment



## Value Benefits

- + Fewer rush orders, premium freight events, and fire drills
- + More predictable labor requirements with reduced overtime strain
- + Lower risk of missing OEM build windows
- + Higher margins from reduced working capital, rework and expediting costs
- + Faster response to EV, EREV, Hybrid, and ICE demand shifts
- + Stronger Tier-1 and Tier-2 collaboration and delivery reliability

See how Blue Yonder's automotive supply chain solutions can work for you.

