



Global Industrial Manufacturer Facility Redesign for Operational Excellence

Challenge

A large industrial manufacturer planned a major expansion to meet increased demand but struggled with outdated facility layouts, siloed operations, and poor visibility across value streams. Without redesigning, the new capacity risked replicating inefficiencies rather than solving them. Leadership engaged Duggan Associates to ensure the facility expansion embedded world-class Operational Excellence principles from day one.

Key Issues:

- Assembly and fabrication areas arranged for convenience, not flow.
- Poor FIFO in material handling and warehousing causes congestion and delays.
- No standard process for facility design decisions increasing execution risk and cost associated with the expansion.
- Workforce untrained in OpEx methods for abnormal flow and corrective action.

What We Did

Duggan Associates conducted a holistic OpEx assessment across the site and designed a future-state facility layout anchored by lean and OpEx principles. The approach combined:



Facility Design: Generating layouts to support end-to-end flow, with material presentation, kitting zones, and line-of-sight between processes.



Value Stream Design: Defining product families, Guaranteed Turnaround Times (GTTs), and visual flow from fabrication to assembly.



Complex Machine Fabrication: Aligning equipment cells with flow logic instead of functional silos.



Large Stationary Assemblies: Mapping assembly bays with takt-based sequencing and space allocation.

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Why it Worked

- **End-to-end view:** Designed the facility as a system, not as separate departments.
- **Flow-first mindset:** Facility layout decisions were driven by value stream requirements, not physical restrictions.
- **Education and ownership:** Teams were trained to see and fix flow problems, ensuring sustainability.
- **Scalable framework:** Early implementation gave leadership a roadmap to expand OpEx across sites.

30% Lead Time upside



5S: Creating structured, organized workspaces with visual standards.



MRO: Applying lean principles to maintenance and repair processes to reduce downtime and increase reliability.



Lean Consulting: Building workforce capability with education sessions, flow disruption walks, and standard work protocols.



Implementation Highlights

- Developed a master facility layout aligning production flow, warehouse operations, and support functions such as Engineering.
- Introduced visual management boards and kitting standards to streamline material delivery.
- Ran design workshops with leadership, engineering, and operators to validate new layouts.
- Created a phased roadmap for implementation, balancing expansion with ongoing production.
- Embedded OpEx principles into the facility design process itself-so future changes could be executed with discipline, not firefighting.

Results (to date)

- Future-state facility design completed, aligning all functions around predictable flow
- Identified opportunities for 20-30% lead time reduction through layout changes, single point scheduling, and improved material handling (projected savings, pending execution).
- Cultural impact: workforce exposed to OpEx thinking, with early adoption of 5S and flow disruption walks.
- Full results were not realized due to incomplete implementation, but the groundwork positioned the client for significant long-term gains.

Contact Us

We believe we must earn our place by accomplishing results. We don't lock you into contracts. If, you don't think we're delivering value, don't keep us as a partner.

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