

# GETTING LEAN WITH GLOVIA CONSULTING

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*Relentless pressure for quality, cost and time-based improvements are leading manufacturers to embrace next generation Lean solutions.*

## **Lean principles make sense to almost everyone:**

- Always Create Value for the Customer
- Religiously Identify and Eliminate Waste
- Continuously Improve Processes

## **The issue is “how?”**

- How exactly will lean initiatives support achievement of company business strategies, goals and objectives?
- What are the primary obstacles that constrain business performance today?
- What are the specific opportunities for substantial performance improvements?

## **Effective improvement strategies and execution are also needed to:**

- Actually realize benefits - reduce costs, compress lead times, and improve responsiveness, quality and consistency
- Sustain process and performance improvements
- Assure that improvements continue

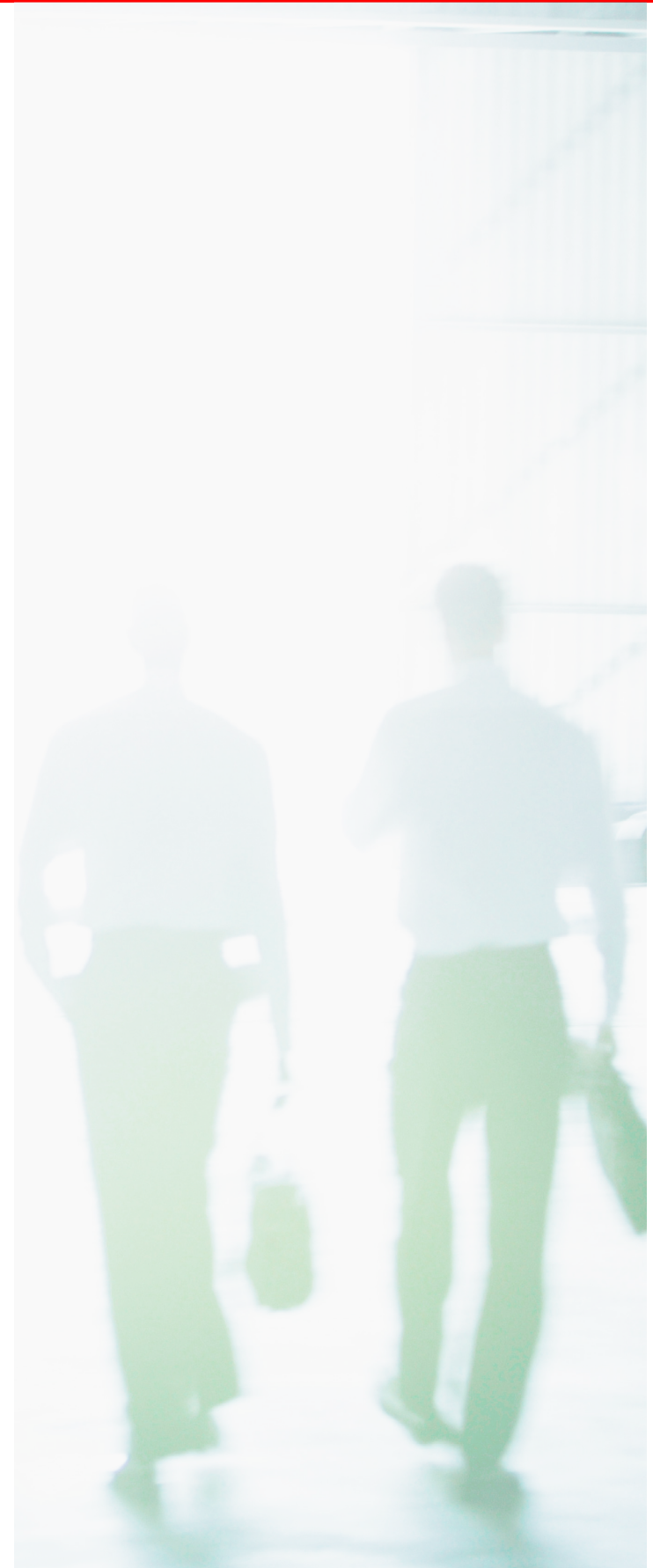
Further adding to the complexity are customer expectations for improvements, demanding timetables, the reality of current processes and the need for effective information support. Companies need more than simple philosophies and techniques to solve today's problems so they are drawing on Glovia's Lean Consulting and System Solutions to help them assess, plan and implement Lean.

Fujitsu, Glovia's parent company, and Honda, both Japanese companies, now make extensive use of Glovia's Lean System tools. Other companies such as Bridgestone Tire Company, Carrier Corporation, Keihin and OPW Fueling Components have put Glovia's Lean solutions to work and are now realizing major performance improvements.

## ***Getting Lean with Glovia***

Since Fujitsu Glovia's extended ERP suite, GLOVIA G2, had its inception as Xerox Chess—a Lean production tool in the 1970s—it has enabled manufacturers to realize the tremendous benefits of Lean. This vast experience working with mid-market manufacturers has enabled countless customers to turn challenges into opportunities. Glovia's unique insight provides strategic actions that manufacturers can adopt to create a competitive advantage.

Glovia Consulting and Systems Solutions have been key enablers of Lean success, providing the means for manufacturers to streamline operations. The solution provides the necessary information to streamline and control processes, coordinate enterprise-wide activities, monitor quality and measure improvements as effectively as possible to enable and complement the key technical elements behind Lean Manufacturing.



The table below lists the technical elements of Lean Manufacturing and illustrates how GLOVIA G2 modules support these elements:

<b>Attribute</b>	<b>Supporting Modules</b>	<b>Functionality</b>
Visual Control	<ul style="list-style-type: none"> <li>GLOVIA G2 Shop Floor Data Collection</li> <li>GLOVIA G2 Factory Planning</li> </ul>	<ul style="list-style-type: none"> <li>Real-time data collection for historical analysis and continuous improvement</li> <li>Displays load graphics and timelines for jobs and provides visibility throughout the factory</li> </ul>
Standardized Work	<ul style="list-style-type: none"> <li>GLOVIA G2 Transform</li> <li>GLOVIA G2 Engineering</li> <li>GLOVIA G2 Costing</li> </ul>	<ul style="list-style-type: none"> <li>Provides access to documentation anytime, anywhere</li> <li>Manages BOMs and Routings</li> <li>Reports actual vs. estimate costs to help develop cost effective work standards</li> </ul>
Set-up Reduction and Total Productive Maintenance (TPM)	<ul style="list-style-type: none"> <li>GLOVIA G2 Engineering</li> <li>GLOVIA G2 Engineering Change</li> <li>GLOVIA G2 Estimating</li> <li>GLOVIA G2 Factory Planning</li> <li>GLOVIA G2 Shop Floor Data Collection</li> </ul>	<ul style="list-style-type: none"> <li>Improves information management for Product BOMs</li> <li>Streamlines Engineering Change Notice (ECN) process and verifies change can be made</li> <li>Enables Progressive Engineering and supports evolving BOM</li> <li>Schedules jobs to minimize set-up times and changeovers</li> <li>Provides real-time monitoring of cells for reporting and visibility</li> </ul>
Cellular Production	<ul style="list-style-type: none"> <li>GLOVIA G2 Engineering</li> <li>GLOVIA G2 Repetitive Manufacturing</li> <li>GLOVIA G2 Shop Floor Data Collection</li> </ul>	<ul style="list-style-type: none"> <li>Flattens BOMs and links components to operations to reduce processing steps and compress cycle time</li> <li>Helps establish and manage production cells; supports backflushing and pull techniques</li> <li>Provides real-time monitoring of cells for reporting and visibility</li> </ul>
Mistake Proofing	<ul style="list-style-type: none"> <li>GLOVIA G2 Transform</li> <li>GLOVIA G2 Repetitive Manufacturing</li> <li>GLOVIA G2 Tool &amp; Gauge</li> <li>GLOVIA G2 Engineering Change</li> <li>GLOVIA G2 Work Orders</li> <li>GLOVIA G2 Shop Floor Data Collection</li> </ul>	<ul style="list-style-type: none"> <li>Makes “best practice” documentation easily available to workers to reduce defects</li> <li>Allows workers to stop manufacturing line to fix a defective process and quickly reschedule</li> <li>Controls and tracks movement of all tools and gauges used in manufacturing</li> <li>Enables company to simulate and analyze effects of proposed product change</li> <li>Backflushes only for affected or selected components</li> <li>Provides real-time reporting of defects for analysis and signals downstream processes about disruptions</li> </ul>
“Takt” Time (cycle time for all manufacturing)	<ul style="list-style-type: none"> <li>GLOVIA G2 Engineering</li> <li>GLOVIA G2 Factory Planning</li> <li>GLOVIA G2 Shop Floor Data Collection</li> </ul>	<ul style="list-style-type: none"> <li>Identifies problems associated with routings</li> <li>Smooths variable demand; allows for assembly and component level analysis to help establish and adjust “Takt” time</li> <li>Provides real-time feedback from factory floor to ensure production can meet demand</li> </ul>
Continuous Flow	<ul style="list-style-type: none"> <li>GLOVIA G2 Repetitive Manufacturing</li> <li>GLOVIA G2 Shop Floor Data Collection</li> </ul>	<ul style="list-style-type: none"> <li>Adjusts repetitive production schedules based on changing demand and flow rates without the need for work orders and paperwork</li> <li>Real-time feedback</li> </ul>
Leveled Production	<ul style="list-style-type: none"> <li>GLOVIA G2 Factory Planning</li> </ul>	<ul style="list-style-type: none"> <li>Sequencing capability schedules blocks of work together</li> </ul>
Pull System	<ul style="list-style-type: none"> <li>GLOVIA G2 Factory Planning</li> <li>GLOVIA G2 Shop Floor Data Collection</li> <li>GLOVIA G2 Kanban</li> <li>GLOVIA G2 Repetitive Manufacturing</li> <li>GLOVIA G2 Inventory</li> </ul>	<ul style="list-style-type: none"> <li>Smooths variable demand; schedules and synchronizes subassembly productions</li> <li>Provides real-time reporting; triggers Electronic Kanban signals and demand-based supplies</li> <li>Automates flow of materials using pull methods</li> <li>Provides backflush capabilities for low-mix, flow-based manufacturing</li> <li>Provides sophisticated Min/Max inventory control for lower-cost components</li> </ul>

## ***Glovia Professional Services Strategy to Support a Lean Enterprise***

Glovia consultants have the skills to assist manufacturers' deployment of GLOVIA G2 to support Lean initiatives, not only in manufacturing, but across your entire enterprise. Glovia's Lean Enterprise offering is typically delivered in five stages.

### ***Stage 1 // Lean Assessment: Identify the Opportunity***

- Glovia works with the customer to understand their business performance requirements, assess the customer's current state, and identify opportunities for performance improvement and Lean System tools to support the improvement process.
- Glovia delivers a report outlining the assessment conducted, findings, recommendations and a proposed course of action.

### ***Stage 2 // Conduct Lean Concepts Workshop***

- Glovia provides the customer a Concepts Workshop to review Lean principles and examine the capabilities and required involvement in implementing GLOVIA G2 Lean Manufacturing modules.
- Glovia creates a document summarizing the results of the workshop as well as a training plan for users.

### ***Stage 3 // Value Stream Mapping: Calibrate and Validate***

- Define the specifics of the customers current "As-Is" value fulfillment process (value stream)
- Identify and quantify specific areas that constrain performance and require improvement
- Define a future "To-Be" state enabled by GLOVIA G2 Lean Manufacturing modules
- Develop a detailed testing and implementation plan for an initial project and subsequent rollout

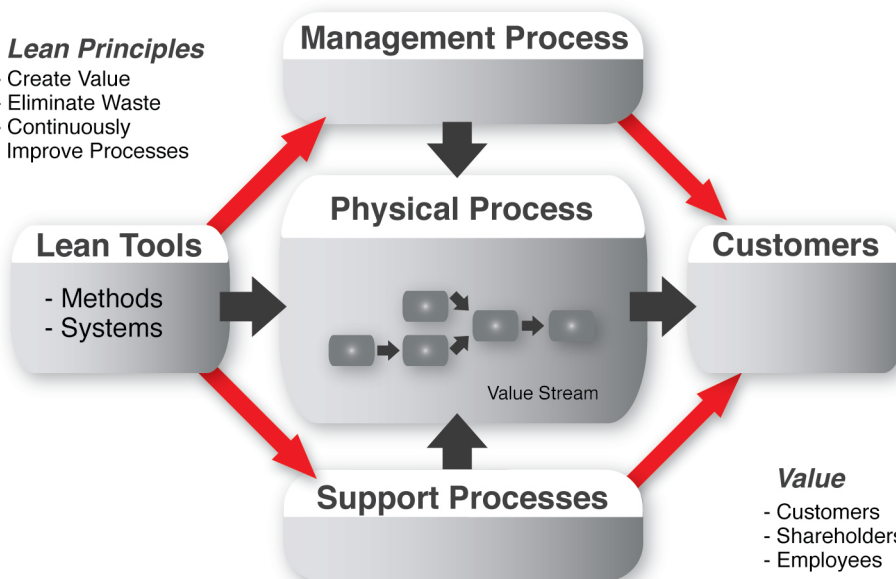
## Stage 4 // Prepare and Conduct Training

- Training will be tailored to specifically support the Lean program
- Users involved in the project will receive training on Lean Manufacturing and related Lean capabilities, including setting-up the training environment and related data using GLOVIA G2 Lean functionality.

Companies of virtually any size pursue Lean Manufacturing strategies to lower costs, increase responsiveness, reduce lead-times, improve customer service levels and increase success in the marketplace. Manufacturers can use Lean capabilities found in GLOVIA G2 to realize the most dramatic success and, ultimately, profit. Many leading manufacturers have turned to Glovia to achieve their Lean Manufacturing goals and with Glovia Consulting and Systems Solutions assistance you can too.

## Stage 5 // Implement, Operate, Measure and Improve

- Test and implement the initial project including installation, setting up and deploying GLOVIA G2 Lean Manufacturing related functionality
- Once test simulations are completed and approved, the physical implementation, testing and approval will take place leading to the overall implementation of GLOVIA G2 Lean capabilities in production.
- Glovia will assist with a plan for ongoing monitoring and measuring, thus ensuring the Lean program objectives are met.



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