SEA SUPPLIER EXCELLENCE ALLIANCE

SUPPLIER IMPROVEMENT CASE STUDY

FILTER SYSTEM DESIGN AND MANUFACTURER

This supplier is a designer and manufacturer of filtration systems to the commercial, transport, helicopter, military, and corporate aviation products for the aerospace and commercial industries. Their expertise extends to virtually any hydraulic, fuel, lubrication, or pneumatic system found on an aircraft, from main hydraulic and flight controls to APUs and main engines. At the time of this case study, the California-based supplier employed approximately 225 employees and occupied a single 127,400 square foot facility, with 88,000 square feet dedicated to manufacturing space.

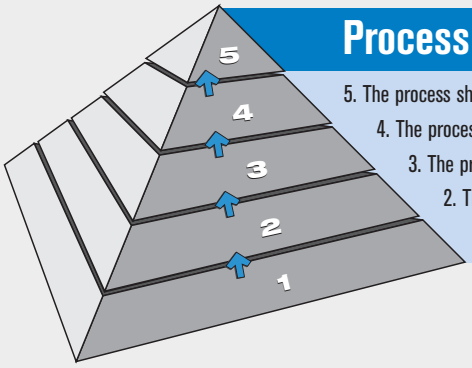
The SEA Lean Enterprise System

The SEA Lean Enterprise System captures the best practices for manufacturing enterprise improvement with a model with three key focus areas: leadership and culture, workforce development and operational excellence. The reason for these three areas is to emphasize the importance of a total organizational approach to managing the transformation. It also acknowledges that long-term sustainability of improvements relies on enterprise-wide solutions and well-managed change. Large-scale changes that do not address all three areas often fail. Implementations of lean that do address all three take less effort and are more often successful. Company President "Everybody is going to take the lean journey. Either you are going to take it now and make a lot of money or you are going to take it later to survive. SEA maps this journey step by step."

The Process Maturity ModelTM is the central element of the SEA Lean Enterprise System.

Process Maturity Model (PMM)

The PMM was developed as an aid for companies who wanted to self-assess and consistently manage their overall process improvement. Because the PMM serves as the backbone for all process improvement efforts whether lean, Six Sigma, or whatever comes next, it provides for long-term integration of all improvement approaches.



Process Maturity Levels

5. The process shows continuous positive trends and benchmarks world class
4. The process is under process control, is analyzed, and improved using data
3. The process has certified trainers and is standardized
2. The process has been documented to the work instruction level
1. The process has been identified, defined, and has an owner

Leadership and Culture

In May 2005 the Strategic Planning Workshop was conducted with the executive and middle management team. This workshop provided the necessary foundation for leadership to effectively implement a lean enterprise culture and, subsequently, the ability to sustain results generated through the workforce development and operational excellence activities. Key outcomes include an updated company mission statement, supporting values and assessment, strategic goals, SWOT analysis, action plans, process owners, balanced scorecard metrics, communication system, and understanding of the process maturity model.

Business processes (40) were identified, PMM baseline levels were established ranging from 0 to 3, and champions and process owners were assigned. Listed below are "Priority A" processes and their initial PMM level:

PROCESS	PMM LEVEL
Continuous Improvement	0
Marketing Intelligence	1
Finance Compliance	2
Training	1
Master Scheduling	1
Shop Floor Control	1
Shipping	1
Assembly Process	2
Mfg. Element Process	2

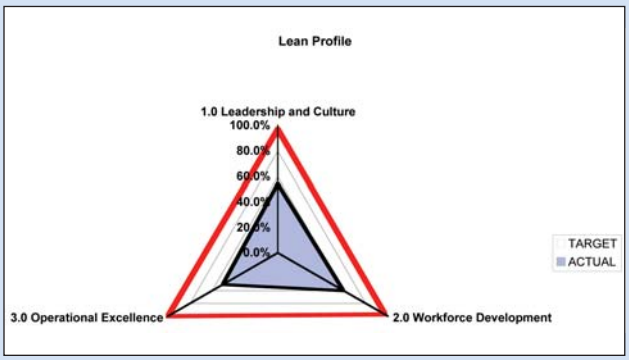
Company president, "By focusing on the 40 key processes identified during the workshops we have experienced decreases in rework, scrap and a marked improvement in overall efficiency...and increased profits."

In June 2005, this supplier launched their lean planning activity by completing the three- day Management Planning Workshop. Key outcomes included adopting the SEA Lean Enterprise System (LES) and the development of a master plan for Phase One implementation. The master plan enables leadership to have ownership and lead the significant changes that will be made. In addition, value stream-maps were created on some key processes and an initial stabilization audit was conducted, which will be a benchmark for subsequent audits assessing progress.

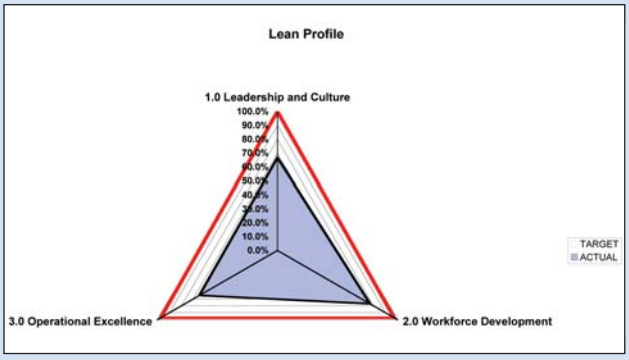
The Kaizen events selected were:

- Coining Operation
- Canister Filter Sub Assembly
- Packaging Cell Design
- Line Balancing, Cell #5
- PMA (Parts Manufacturing Authorization)

Initial Stabilization Audit:



Post Stabilization Audit:



In July, the two-day Managing Process Improvement workshop was conducted with 15 Process Champions and Owners. The purpose of this workshop is to prepare process champions and process owners to fulfill their roles in the company's Lean Enterprise system.