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CASE STUDY

Lean Kaizen Improvements

Shock Tech

PROBLEM / CHALLENGE

A privately owned engineering-manufacturer of specialized systems for the aerospace industry needed to evolve from a small niche business to a growing market leader. The operational processes that worked in the past were inadequate for the future and were constraining growth. Personnel had become accustomed to the old ways of doing business and were resistant to change.

The GM knew the company needed to improve its processes and change its culture to one that embraces change and empowers its people to be involved in overcoming growth obstacles. This required the GM's management team to grow and learn to embrace change.

The GM was seeking a Lean-Kaizen consulting firm to partner with and facilitate the transition to a continuous improvement culture that would take the company into the future.

MANAGEMENT TEAM PLANNING

We started by facilitating the management team through a 2-day working session. The first day was an Assessment, touring the facility and meeting the team one-on-one. The second day the management team met as a group and the GM laid out his vision for the future.

A culture that:

- Embraces change and growth
- Promotes and rewards initiative to make improvements
- Involves the workers who do the work

The rest of the session was spent planning the next steps:

- Management team training on Lean, Kaizen and empowering teams
- Create a plan to conduct 4 Kaizen events, 4-days each, over 12 months, with topics focused on overcoming growth constraints.
- Agreed that all employees would receive 90 minute Lean/Kaizen overview training

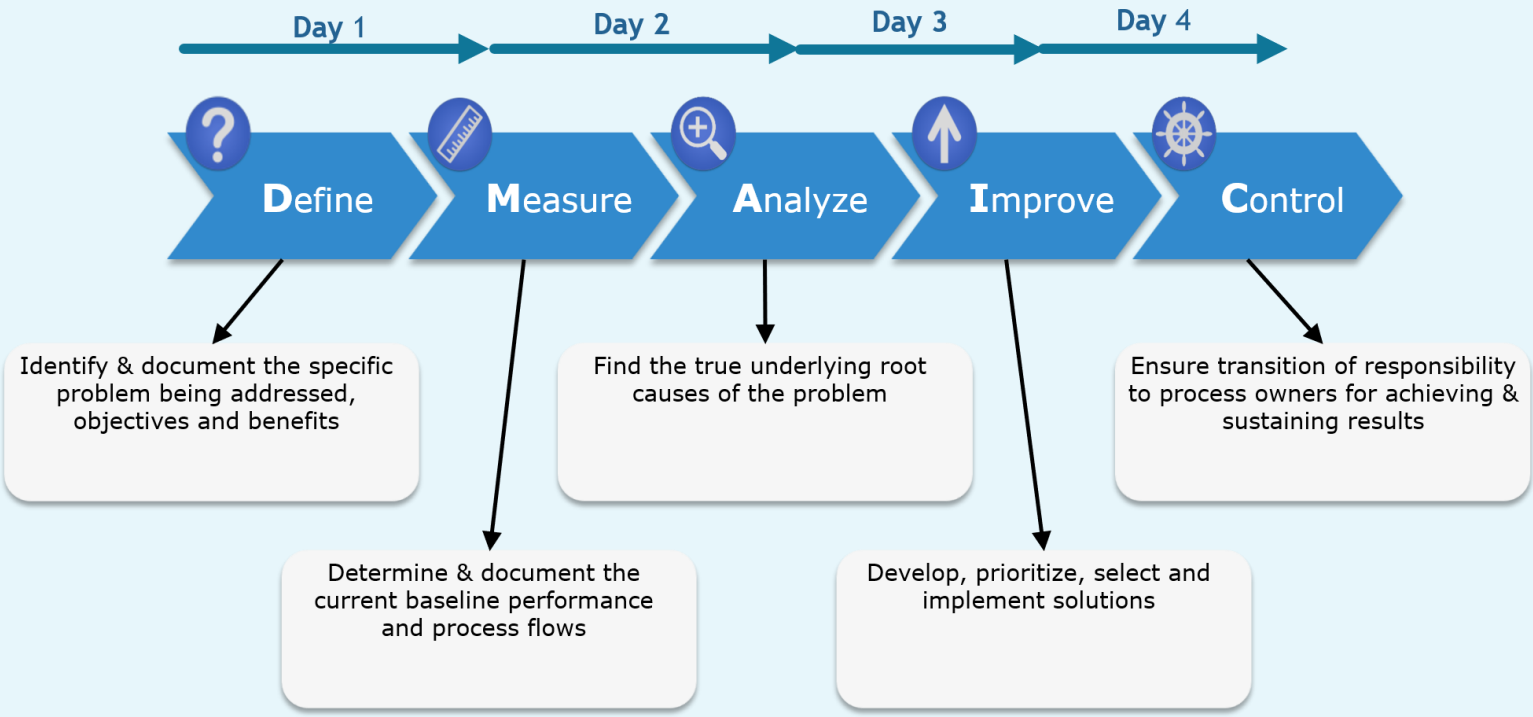
COMPANY-WIDE TRAINING

The training prepared employees for changes and helped make them feel a part of it. Most never worked on a CI project team before, therefore getting them to participate would be challenging. During the training we covered:

- Future state vision for the company
- Brainstormed overcoming growth constraints
- Presented the Kaizen plan for the year

4 Kaizen Topics chosen: (1) quality, (2) process speed, (1) process accuracy

Kaizen DMAIC 4-Day Methodology



Kaizen Agenda & Tools

- Problem Statement
- Key measures or data needed
- High level Value Stream Map to identify growth constraints
- Current state process flow map for core processes
- Analysis, potential recommendations and discussions with subject matter experts
- Develop KPIs for monitoring performance
- Final recommendations and improvement plan including training and standard work
- Action item list with follow up plan

RESULTS

The Kaizen events were successful, but like all real improvement initiatives, they required follow-up and communication. Personnel needed time to adjust their thinking before they fully adopted the new management approach and their empowered role.

The first four Kaizens included a product quality issue, two processing speed (too slow) issues, and a process quality/accuracy issue.

- **Significantly reduced the quality issue by establishing standard work for a key process**
- **Reduced the time required for the quoting process and the prototyping process by 50%**
- **Updated and standardized the purchase order review process to ensure the company met contractual requirements**

We continue to facilitate multiple Kaizens per year, going on our 3rd year.

Reference: Joseph Fuggini, General Manager
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Action Item List

Current State DOTS - Action Item List

	Step	Problem	Recommendation	Category	Action	Owne	Due
1	RFQ received	2 numbers: project# and quote#; with 2 file folders - quotation and project; Also its confusing that both sales and engineering may receive RFQs	Only sales should receive RFQs (this does not prevent engineering from doing advanced work); Also need to consolidate and standardize on file storage	Procedural	1. Future state PFM shows sales received RFQ; 2. Sales will consolidate to a single folder	Angie	4/4/2025
2	Do we have history data?	Can't quote without certain information; should check for worksheet, routing and BOM before anything else; Also need to know if engineering is already working on it or not; Currently we waste time and send too many emails	Check earlier in the process	Procedural	Future state PFM shows check for information at the beginning & we need to incorporate into procedure	Team	Complete
3	No history but catalog needs to	Need to leverage catalog and train personnel to use it and no longer need to contact engineering		Procedural	Future state PFM shows engineering to inform Sales if there is a catalog part that is	Team	Complete
4	Quality clauses?	If quality clauses come in with RFQ, we need to be aware		Procedural	Future state PFM checks for this and sales would inform QC; Incorporate into	Team	Complete
5	Customer	Sales needs to be able to access customer terms		Procedural	Same as above DOT 4	Team	Complete
6	Bottoms Up pricing for	Bottoms up pricing takes time and required input from Operations		Tool/Technique	Future plan is to track labor by job so this can be used for pricing	James	Future
7	Issue quote to customer	Quotes may be sent without a review or 2nd set of eyes; Seen some poor quotes go out		Criteria	Add final review check for specific customers or dollar amount; put criteria in	Angie	4/4/2025
8	RFQ received	RFQs are not formally categorized as needed to simplify process	Establish categories to simplify requirements: - Development/Legacy/Mission Critical/Low Probability	Procedural	Future state PFM has category questions	Team	Complete
	Various	Establish some estimating standards and standard quote wording to reduce time and effort where it isnt	Leadtime ROM - 12 weeks or best effort; Final delivery leadtime after PO; STD price for 1st article.		Need to develop the estimating tools, standards and wording to be used by	Frank &	

Process Flow Map