Sustainable Manufacturing Growth through Quality Systems

FICCI, Jan 19th 2012- New Delhi
The Agenda

About Frost & Sullivan

Quality systems & Sustainable manufacturing

Case Studies

Summary
The Frost & Sullivan Story

Helping Our Clients Accelerate Growth Through Best Practices in Growth, Innovation and Leadership
The Frost & Sullivan Story

**Emerging Research**  
1961–1990

- **1961**

**Growth Partnership**  
1990–Today

- **1990**

**Visionary Innovation**  
Today–Future

- **Today**

**Pioneered Emerging Market & Technology Research**
- Global Footprint Begins
- Country Economic Research
- Market & Technical Research
- Best Practice Career Training
- MindXChange Events

**Partnership Relationship with Clients**
- Growth Partnership Services
- GIL Global Events
- GIL University
- Growth Team Membership™
- Growth Consulting

**Visionary Innovation**
- Mega Trends Research
- CEO 360 Visionary Perspective
- GIL Think Tanks
- GIL Global Community
- Communities of Practice
Our Global Client Base
40+ Offices Provide Perspective, Coverage & Service

By Region
250,000 SME & Global Companies, 2 million executives

North America, 95,000 Companies
Europe, 80,000 Companies
Asia Pacific, 47,000 Companies
South Asia, 11,000 Companies
Latin America, 9,000 Companies
Africa /Middle East, 8,000 Companies

By Industry
- Consumer: 4%
- Aerospace & Defense: 4%
- Automotive & Transportation: 5%
- BioMed & Financial Services: 15%
- Chemicals, Materials & Food: 8%
- Consumer, 11%
- Public Sector: 5%
- Energy & Power System: 6%
- Environmental & Building Technologies: 3%
- Measurement & Instrumentation: 3%
- Industrial Automation & Process Control
- Information & Communication Technologies: 19%

By Career
- Research & Development: 11%
- Other: 6%
- Investor/Finance: 5%
- Market Research: 9%
- Competitive Intelligence
- Corporate Strategy: 6%
- Corporate Development
- 25% - Sales/Marketing
- 36% - CIO/Leadership
Our Industry Coverage

- Aerospace & Defense
- Measurement & Instrumentation
- Consumer Technologies
- Information & Communication Technologies
- Automotive Transportation & Logistics
- Energy & Power Systems
- Environment & Building Technologies
- Healthcare
- Minerals & Mining
- Chemicals, Materials & Food
- Electronics & Security
- Industrial Automation & Process Control
Our Services

- Growth Partnership Services
- GIL Global Community
- GIL University
- Growth Consulting
- Events
Sustainable Manufacturing Growth through Quality System
Quality systems - Sustainable Manufacturing – Business growth
Understanding the linkage and relationship
Sustainable Manufacturing through Quality Systems

Business Growth – Manufacturing - Quality Systems

Business Performance
- Higher Returns
- Healthy Margins
- YOY Growth

Customers Delight
- Meeting and exceeding Customer expectations
- Achieving Customer Preference
- Gaining Competitive Advantage

Effective Manufacturing
- High Quality
- Optimum Cost
- Reliable Delivery

Robust Quality System
- Capable processes
- Higher Yield
- Quality assured in processes

Quality Systems

Sustainable Manufacturing

Customer Delight

Business Growth
Earning the loyalty of its customers is critical to sustaining Business Growth.

Quality Systems & Manufacturing

Quality systems and its effective implementation enable optimum performance of manufacturing processes.

Effectiveness of manufacturing processes is proved in its ability to meet and satisfy customer requirements.

Earning the loyalty of its customers is critical to sustaining Business Growth.

In a competitive scenario retaining customers and earning their preferred status can also be seen as possessing needed competitive strength.
Hence

Sustainable Manufacturing

*Is the ability of manufacturing processes to consistently perform so as to enhance Customer satisfaction and build competitive strength to Business.*
Sustainable Manufacturing through Quality Systems

Manufacturing processes & Quality Systems

Quality Systems

- Customer processes
- Sourcing
- Producing
- Testing & Quality assurance
- Packing & dispatch
- New product development

Theme:
Effective use of Customer feedback for developing Sustainable Manufacturing Growth.
Role of Quality System in Sustainable Manufacturing
Role of Quality systems to achieve Sustainable Manufacturing

Capture customer expectations, requirements and feedback without ambiguity and on a timely basis.

Link the information back to manufacturing to help it align its processes to meet the stated and unstated needs.

Build a system that is Capable (ensure quality of information) and Reliable (perform consistently) in meeting the above.
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Inputs and Channels of Customer related information

**Requirements**
- Stated needs
- On Product & Service

**Expectations**
- Perception
- Implicit needs

**Feedback**
- Satisfaction surveys
- Complaints

Inputs from these channels define and greatly influence customer satisfaction.

An effective Quality system should be capable to capture the information, consolidate it and link it to manufacturing.
Points on capturing feedback and using for enhancing manufacturing.

Satisfaction surveys are conducted but they lack quality and depth to provide any meaningful feedback.

Outcomes from Satisfaction surveys are not validated.

Complaints are selectively recorded.

Analysis of complaints towards identifying root cause is weak. Solution to resolve are more of Corrective actions in nature.

In many cases manufacturing is isolated and feedbacks do not reach manufacturing.

Perception of customers is not captured.
Case Study -1

*Effective use of customer feedback in improving product.*
Case Study #1: Effective use of Customer feedback for improving product.

A leading manufacturer of Plastic Bins and storage systems wanted to improve its products and product variety.

Being a commodity product it had a variety of applications and a range of customers covering industries to small time vendors selling vegetables.

Approach:

Conduct a survey at actual points / situations where product is used.

Method:
They deployed a team with an agenda to visit the actual place of use, observe, and interact with the users.
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Case Study #1: Effective use of Customer feedback for improving product.

**Observation**: In actual use customers were stuffing the bins with excessive material.

**Current limitation in the product**: Due to warp of the side walls usable volume of bins were getting reduced.

**Feedback to plant**: Eliminate warpage in side walls.

**Action & Outcome**: Side walls were strengthened.

*Usable volume increased by 10%.*
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Case Study #1: Effective use of Customer feedback for improving product.

<table>
<thead>
<tr>
<th>Customer Application</th>
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<tbody>
<tr>
<td>Use</td>
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<td>![Use Image]</td>
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**Observation**: Bins were put to use and abuse.

**Feedback to plant**: Make the product suitable to withstand different usage patterns.

**Action & Outcome**: Thickness at critical areas were focused and was monitored as a CTQ.

**Sturdier bins capable to take loads produced.**
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Case Study #1: Effective use of Customer feedback for improving product.

- **From Customer Need To Customer Application**

- **Insights on Actual customers Usage (Use, Misuse, Abuse) through Survey**

- **Benchmarked our product vis a vis Competitors w.r.t QCD.**

- **SWOT Analysis.**

Observation and interaction on site of use.
Case Study #1 : Effective use of Customer feedback for improving product.

**Overview of gains**

- Improved acceptance of product in the market
- Enhanced brand image
- Increase in sales.

**Learning**

The outcome of the survey revealed a bitter truth

“The product aspects that were considered as Non Value by the organization were actually expected by its customers and they held it important.”

Understanding the product from its actual use and application gives valuable inputs on customer requirements and opportunities for product improvements.
Case Study -2

Deploying Voice of Customer at Manufacturing.
Case Study #2: Deploying Voice of customer in Manufacturing.

The organization is manufacturer and exporter of ready made garments.

It manufactures ready made garments for some of the leading garment brands in the world and is a 100% export oriented unit.

The market and its customers demand a high order on quality of products. Other than the quality of fabric, details such as fit and finish and packing are of critical importance to the product quality.

Garment manufacturing is a mass production and highly labor intensive industry and calls for robust and capable processes, skilled manpower to meet stringent quality requirements of exports.
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Case Study #2: Deploying Voice of customer in Manufacturing.

Need:
Customers are unable to check their products before it leaves the factory.
To put in a process which will achieve the objective in an equivalent manner.

Solution:
To create a replica of customer at the manufacturing site and ensure that products leaving the site are inspected and approved by the end customer.

Approach:
The organization created a position titled “Customer Satisfaction Officer” (CSO).
The CSO, although appointed by the organization, represents for all practical purposes the customer.
The CSO is treated as a representative (agent) of the customer.
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Case Study #2: Deploying Voice of customer in Manufacturing.

**Implementation**: (Highlights of the system)

The CSO is trained by the end Customer on their requirements.

All feedbacks from end Customer is routed to CSO and through it to respective manufacturing process.

The CSO does not report to manufacturing or plant.

Reports to either Customer or to the Merchandising / marketing function who are close to the customer.
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Case Study #2 : Deploying Voice of customer in Manufacturing.

Implementation : (Highlights of the system)

The CSO will inspect products at all stages of garment manufacturing - Incoming, in process and Final.

Ensures conformity of respective customer requirements in all dispatches made.

CSO is authorized to put on Hold / Reject products in case of non conformances.

CSO follows an independent check list and sampling plans for inspection and quality assurance.
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Case Study #2: Deploying Voice of Customer in Manufacturing.

Overview of gains:

- Satisfaction of meeting customer’s quality requirements at plant
- Building reliability in processes and hence enhancing quality in the products produced and dispatched.
- Increase in business tie-ups.
- Reduction in Rejections / Claims from customers.
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Summary points

Sustainable manufacturing growth needs to aid in enhancing customer satisfaction and earning the preferred status.

Developing and implementing an effective quality system to capture feedback and changing expectations of customers is critical to manufacturing growth.

System to route Feedbacks and customer expectations to manufacturing has to be ensured.

A cross functional team approach is necessary to analyse feedbacks and identify improvement actions.

Innovation plays a key role for manufacturing growth and sustenance. Innovation should be directed to improve effectiveness of manufacturing processes to in turn to enhance QCD performance.
Thank You