BEST PRACTICES IN SUPPLY CHAIN MANAGEMENT

Angelo G. Scangas
Quality Support Group, Inc.
Supplier Quality Management

Â One of the leading business practices
Â Significant investments in systems and processes to improve supplier quality
Â Best practices implemented by World-Class manufacturers in supplier quality management
Why is Supplier Quality so critical?
• Outsourcing
• Supply chains have become very long
• Multiple logistics providers via ocean, air and trucks
• Lead time extended imp
• Lean inventory techniques in-place

As a result, any issue in supplier quality can quickly result in stock outs.
• Suppliers need to preserve their preferred supplier status to continue to be considered for future business
• Pressure to ensure that their products continue to meet or exceed acceptable PPM and Corrective Action thresholds set by their customers

Hence managing their own supplier’s quality is very high on the agenda for these companies.
Best Practice #1: Measuring & tracking cost of poor supplier quality
To calculate the actual supplier COPQ:

- Scrap, rework, sorting and processing costs due to poor quality
- MRB inventory and processing costs due to inspection failure
- Shutdown attributed to poor supplier quality
- Using equipment that is capacity constrained for rework due to poor quality, reducing the overall utilization of the production line
- Freight costs due to expedited shipment to customers/downstream plants
- Warranty expenses due to poor quality
- Recall expenses due to poor quality of products shipped to customers
Best Practice #2: Cost recovery
A cost-recovery system, where suppliers are charged back for providing poor quality of components, is an effective way to introduce business discipline and accountability into the supply chain.

*About 65% of the costs attributed to the poor supplier quality are non-material related.*
Figure 1: Causes of non-material related costs due to poor supplier quality

From Supplier manual of a Electronics Manufacturer:
- Operator/Foreman handling
- Eventual disassembly of the part
- Administration to take the part out of stock
- Quality department handling
- Handling by the planner to get a new part
- Transportation back to the receiving area
- Communications with the supplier
- New instructions
- Attention from engineers
- Packing and arranging transport back to supplier
- Invoice Handling

* According to an AMR study, 67% of total cost of poor quality is attributed to non-material costs
Best Practice #3: Supplier Audit

- When will audit happen?
- Which overall processes?
- Lead Auditor
- What resources needed?

- Schedule change
- Scope change
- Progress reporting
- Review non-conformities
- Resolve conflicts

- Objectives?
- Processes & Sub processes
- Detailed schedule
- What requirements audited?

- Written observations
- Non-conformities list

Other Best Practices:
- Clearly defined processes and metrics, so internal audit can discover unambiguous non-conformance
- Audit process must incorporate the results of previous audits to track progress against previous nonconformities
- There is a well defined process for root cause analysis and corrective actions
- Corrective and Preventive Actions are reported formally to all stakeholders

Figure 2: Best practices in supplier audit
Supplier Audits:
• One of the best ways to ensure that supplier is following the processes and procedures that you agreed to during the selection processes
• Identifies non-conformances in manufacturing process, shipment process, engineering change process, invoicing process and quality process
• Supplier and manufacturer jointly identify corrective actions
• Future audit ensures that these corrective actions have been successfully implemented.
Best Practice #4: Supplier Scorecard
Supplier Scorecards:

- Facts to rank the supplier’s relative performance within the supply base
- Track improvement in supplier’s quality over time
- Data point into any future business negotiations

Following are the key operational metrics that leading manufacturers track in their supplier scorecard:

1. PPM of Supplier Components
2. # of Corrective Actions Last Quarter
3. Average Response and Resolution time for Corrective actions
4. # RMAs Processed per month
5. MRB Inventory Levels
6. # of Rework Hours due to Supplier Components
7. % of Actual COPQ Recovered from Suppliers
8. # of Customer Complaints on Product Quality
9. Warranty Reserves
10. Relative ranking of supplier
Best Practice #5: Closed Loop Corrective Action
Systematic reductions in the Cost of Poor quality can be attained by implementing a Quality Management System (QMS) that provides an integrated and closed loop corrective action process.

Information must flow out of the corrective action process with a high degree of accuracy and velocity without falling through the cracks.

Audits become a core driver into the corrective action process and become a key tool for continuous improvement.
Best Practice #6: Engaging Suppliers in quality systems
It is critical for manufacturers to engage suppliers in all aspects of their quality management system, so that the supply-base is fully integrated into the QMS being rolled out.

Key requirements include:
- Supplier should be able to provide quality-related data to the manufacturer from supplier’s quality system into manufacturer’s quality system
- Getting the supplier to use a manufacturer’s web-based quality management system which reduces the cost of ownership for a supplier by providing the right information to a key customer without having to deploy software in-house.
By deploying these best practices, manufacturers can dramatically improve their supplier quality and achieve their own business objectives.
THANK YOU FOR LISTENING!!