



Improving Inventory Performance Through the Inventory Quality Ratio Process - IQR

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Gregory Taylor, CPIM

- ▶ I Am A Proud Fellow Huskie!
- ▶ 30 Years Experience in Manufacturing / Operations
- ▶ Retired Materials Manager from Philips Healthcare
 - ▶ Co-Created and Implemented Supplier Management Process
 - ▶ Simplified and Effective Process
 - ▶ Recognized by APICS, Outside Auditors, Employees, and Vendors
 - ▶ Responsible for \$80M Annual Purchasing Budget
 - ▶ Conducted Most Negotiations
 - ▶ Wrote – Negotiations – Prepare To Win – An Analytical Approach
 - ▶ Responsible for Setting and Achieving Inventory Budgets – IQR Major Role
- ▶ Gregory Taylor Consulting – Focus on Negotiation, Supplier Management, and Inventory Management



Survey Questions

- ▶ How Many of You Have Taken A Class on Materials Requirements Planning, MRP or ERP?
 - ▶ Time Phased
 - ▶ Quantity Driven
 - ▶ Scheduling System – Purchased and Make Items
- ▶ How Many of You Understand ABC Parts Classification?
 - ▶ 20% of Items Account for 80% value = A Items
 - ▶ 30% of Items Account for 15% of value = B Items
 - ▶ 50% of Items Account for 50% of value = C Items
- ▶ How Many of You Are Familiar With the Inventory Quality Ratio Already?

How Do You Improve Any Process?

- ▶ Measure the Process
- ▶ Set Goals
 - ▶ Need Balance Between Stretch and Being Realistic
 - ▶ Need Employee Buy In
 - ▶ Team and Individual
- ▶ Provide Proper Tools and Training
- ▶ Make Achievement of Goals Part of Annual Performance Review
- ▶ Frequent Reviews on Progress
- ▶ Recognize and Reward Good Performance
- ▶ Hold Employees Accountable for Poor Performance

How Does IQR Support the Improvement Process?

- ▶ Objective Individual Performance Scores Are Calculated Regularly
- ▶ Aggregated Team Score Is Calculated Regularly
- ▶ Management Dash Board Report Visible To All Team Members
 - ▶ Includes All Individual Scores – Friendly Competition
 - ▶ Includes Team Score – Shared Goal
 - ▶ Includes Dollar Values for Active, Inactive, Slow Moving, and No Moving
- ▶ Clearly Identifies and Prioritizes Actionable Reduction Opportunities
 - ▶ Helps Setting Realistic Goals for Each Employee
 - ▶ Helps With Achievement of the Goals
- ▶ IQR Is A Great Tool – 7 of 10 Best Practices In One Process
- ▶ Progress is Reviewed Regularly – Materials Requirements Planning (MRP) Updates

IQR Includes Seven of Top Ten Best Practices for Inventory Reduction

Top Ten Reduction Practices

- ◆ **Conduct periodic reviews** 65%
- ◆ **Analyze usage and lead times** 50%
- ◆ **Reduce safety stocks** 42%
- ◆ **Use ABC approach (80/20 rule)** 37%
- ◆ **Improve cycle counting** 37%
- ◆ **Shift ownership to suppliers** 34%
- ◆ **Re-determine order quantities** 31%
- ◆ **Improve forecast of A and B items** 23%
- ◆ **Give schedules to suppliers** 22%
- ◆ **Implement new inventory software** 21%

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Who Created the IQR Process?

- ▶ Invented by 35 Materials Managers From Top Organizations
 - ▶ Frustrated With Quality of Materials Requirements Planning (MRP) Action Data
 - ▶ Wanted a Dollar Focus – Not Quantity Focus
 - ▶ Wanted Reduction Opportunities Prioritized
 - ▶ Wanted a Forward Looking Performance Measurement
 - ▶ Measurement is Based on Demand Forecast
 - ▶ Measurement Does Not Use Cost of Goods Sold
- ▶ Same Managers Then Implemented IQR
 - ▶ Achieved on Average a 25% Reduction of Inventory Assets
 - ▶ Improved Customer Service Levels

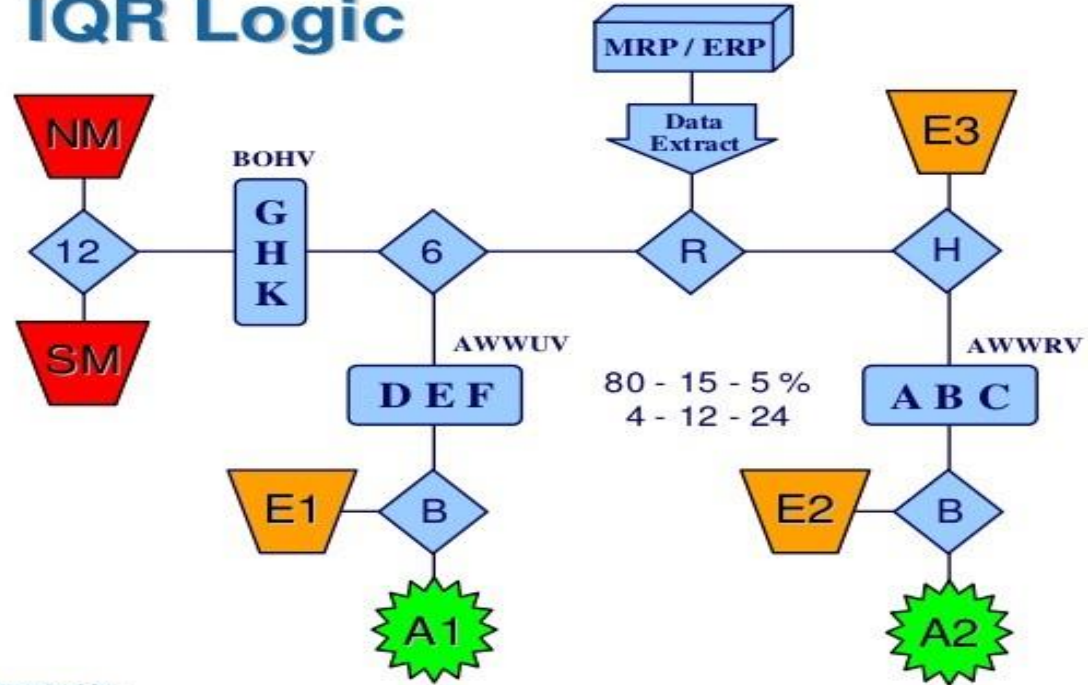
Who Uses the IQR Process?

- ▶ You Would Be In Good Company If You Implement IQR
 - ▶ Goodyear
 - ▶ Cummins
 - ▶ Carrier
 - ▶ Pfizer
 - ▶ Tyco Electronics
 - ▶ Hyundai
 - ▶ Philips
 - ▶ Thousands More

What Data Is Needed for IQR?

- ▶ Uses Data That Already Resides in Your MRP/ERP System
 - ▶ MRP Demand Data
 - ▶ Past Usage Data
 - ▶ ABC Part Classifications / Buyer and Planner Identification Codes
 - ▶ Standard Costs of Components/Parts
 - ▶ Open Purchase Order Records
 - ▶ Inventory Records
- ▶ User Defined Rules – customize the process for your company
 - ▶ Time Period Rules for Slow Moving, No Moving, and Active Inventory
 - ▶ Desired Stock Levels per ABC Part Classification

IQR Logic



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I W SMART MFG

Example of Dashboard Report

- ▶ [Dashboard Example.pdf](#)
 - ▶ Every Team Member Receives This Report With Each MRP Gen
 - ▶ Each Employee Can See How They Are Doing Compared to Fellow Employees and Compared to Their Individual Performance Goal

Examples of E2 and SM Reports - Buyer BB

- ▶ [Example of E2 Report.xlsx](#)
- ▶ [Example of SM Report.xlsx](#)
- ▶ Each Employee Receives Their E1,E2,E3,SM, and NM Reports
- ▶ Manager Receives E1,E2,E3,SM, and NM Reports of All Employees

Summary - Highlights

- ▶ 7 of 10 Best Practices All In One Process
- ▶ Customizable to Your Organization's Philosophy and Goals on Inventory Asset Utilization
- ▶ Uses Your Current ERP Data
- ▶ Dollar Focused / Forward Looking
- ▶ Identifies and Prioritizes Actionable Reduction Opportunities
- ▶ Transparent Process for All Team Members
- ▶ Objective Performance Measurements – Using Demand Plan
- ▶ Great Dashboard and Easy To Use Individual Reports
- ▶ Provides Objective Sarbanes-Oxley Compliant Obsolescence Reserve

Example of E2 Report for Buyer BB

1/23/2017									
Example of E2 Report for Specific Employee (BB)									
Buyer Code	Part Number	Total Dollars In Excess	Excess Quantity	Open Purchase Orders	Qty	Scheduled Date			
BB	1	\$256,000	256	12345	100	2/1/2017			
				12345	100	3/1/2017			
				12345	100	4/1/2017			
				12345	100	5/1/2017			
BB	2	\$225,000	300	13000	200	2/15/2017			
				13999	200	6/15/2017			
				14250	200	10/15/2017			
BB	3	\$176,000	352	13250	300	4/15/2017			
Totals		\$907,000	2,500						

Example of Slow Moving Report Buyer BB

1/23/2017									
Example of SM Report for Specific Employee (BB)									
Buyer Code	Part Number	Total Dollars In SM	SM Quantity	Open Purchase Orders	Qty	Scheduled Date			
BB	1	\$15,234	34						
BB	2	\$7,825	78						
BB	3	\$5,598	974						
BB	4	\$1,000	100						
BB	5	\$354	227	12698	50	6/1/2017			
BB	6	\$100	80						
Totals		\$30,111	1493						

Example of Dashboard Report

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3/23/15
MC5922

INVENTORY QUALITY RATIO REPORT

PAGE 1

      A1$      A2$      E1$      E2$      E3$      CONSS$      SM$      NM$      ACTIVE$      TOTAL$      A2A$      E2A$      ACT RAT      A2A RAT
      72,945      4,      250,085      2,272,15      62,887      2,874,559      236,275      12      4,412,330      7,366,095      6,103      694,673      -.71      -.47
      1,113,200      113,200      170,370      0      0      0      154,000      21      8,438,416      1,012,370      1,853,497      1,000,577      .74      .65
      113,200      113,200      170,370      0      0      0      154,000      21      8,438,416      1,012,370      1,853,497      1,000,577      .74      .65

NOTE: REPORT TOTALS DO NOT INCLUDE 3T/3V
NOTE: REPORT TOTALS DO NOT INCLUDE CONSIGNED INVENTORY, BUT THE IQR RATIO DOES
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Questions



I Would Love To Take a Group Picture!