



Operations Management Excellence

NPTA Alliance Convention

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Operations Management Excellence

- ***Can and will impact your business bottom line***, in terms of:
 - Costs of operations
 - Levels of service to customers
 - Business working capital.



Today's Business

Management must focus on the entire supply chain, especially the linkages between vendors, internal business operations, and customers - Historically

- Departmental management
- Functional management
 - Operations
 - Cost
- Process management – Internal
- Today - Integrated supply chain management.



Key Performance Indicators

- KPIs focus on three areas:
 - **Service levels to customers**
 - Order fill
 - Delivery timing
 - **Costs of operating the supply chain**
 - Vendor receipt
 - Customer delivery
 - **Inventory levels based on last cost**
 - Total value
 - Inventory turns.

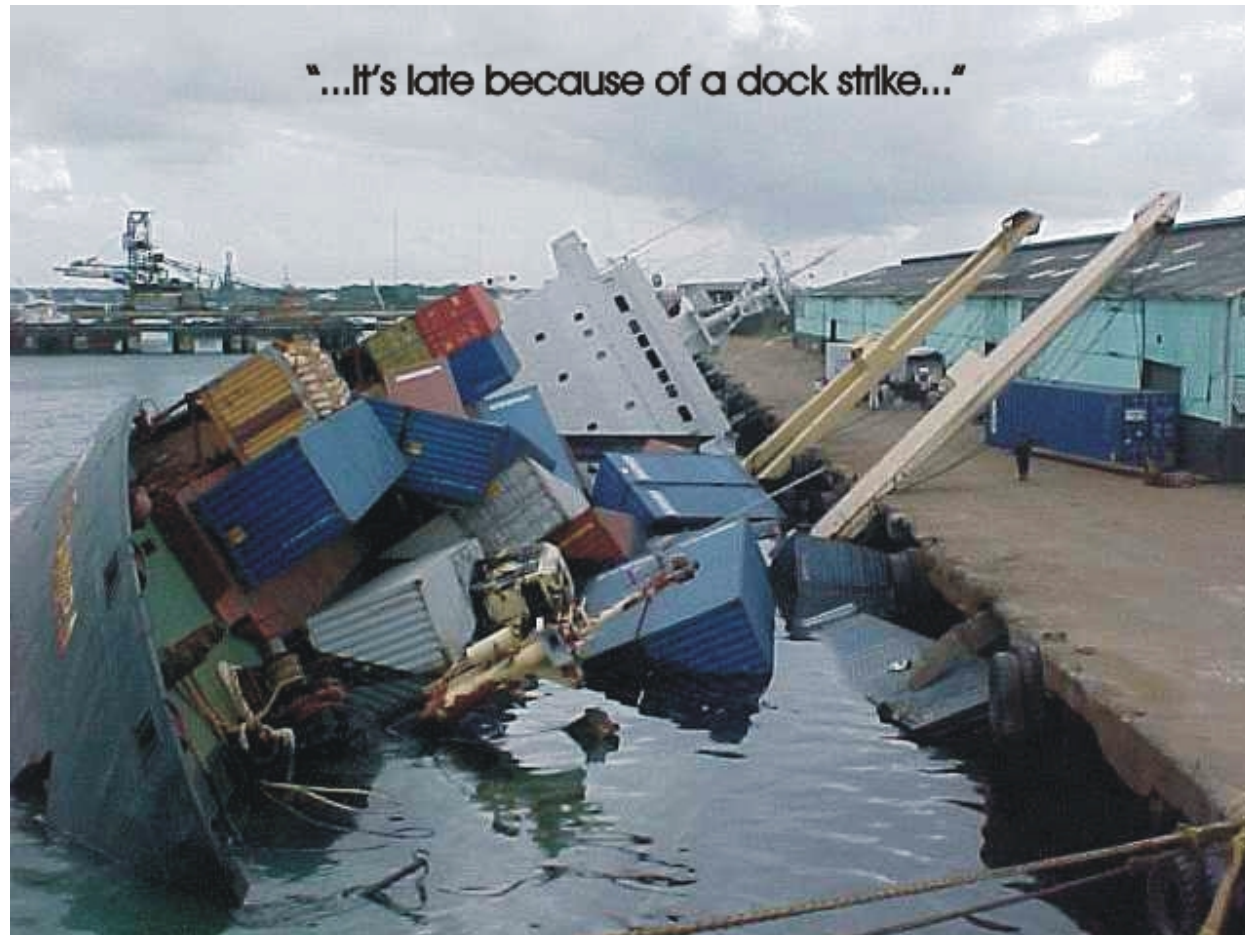


Levels of Service to Customers

- Service levels can vary by:
 - Type of product
 - Type of customer
 - Geography

What do you tell them when there is a problem????

Explaining to Your Customer No 1



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Customer explanation No 2



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Customer explanation No 3



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Customer explanation No 4



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Customer reassurance



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Does your customer require this



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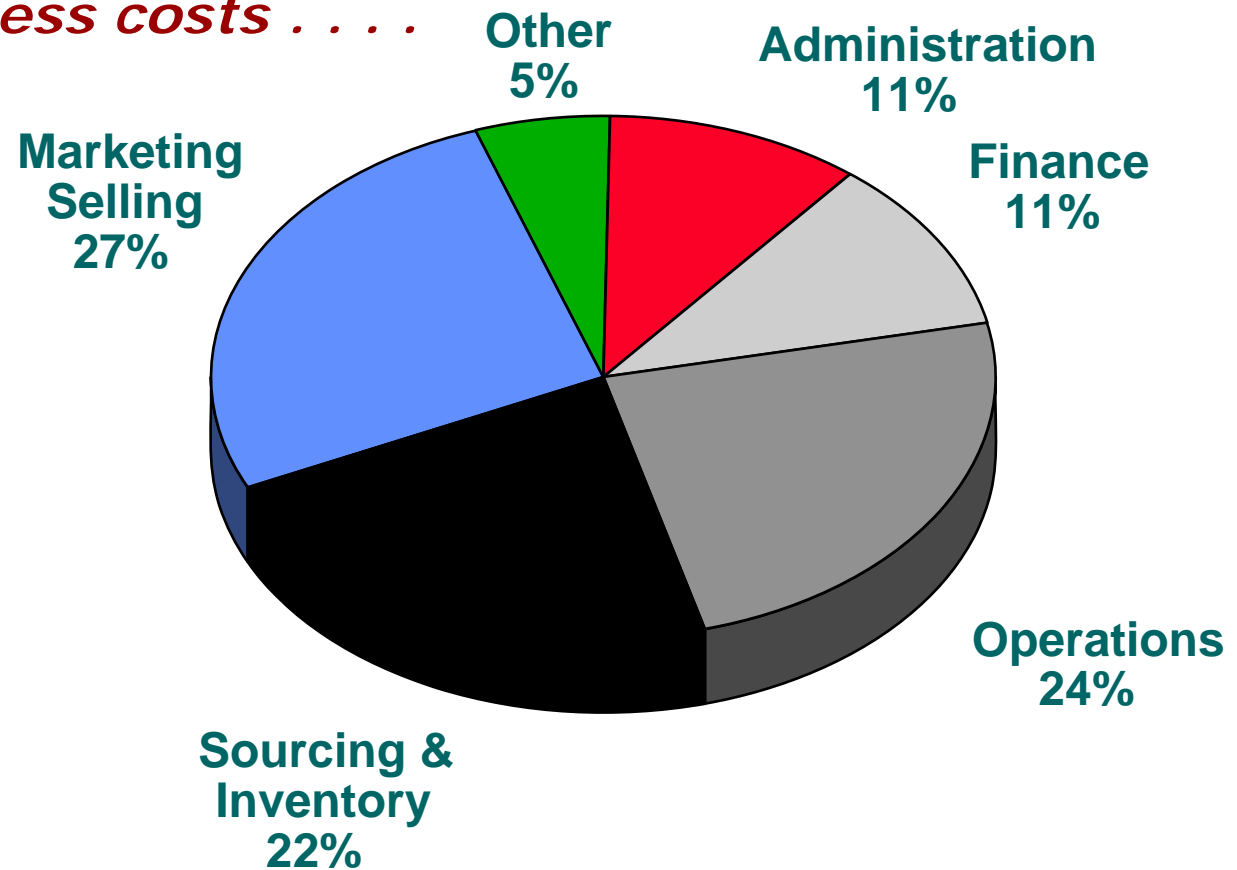


Focus for Today's Discussion

- Cost of operations and the impact on the business
- Business capital deployed to support sales and operations
- Impact on the business *bottom-line*.

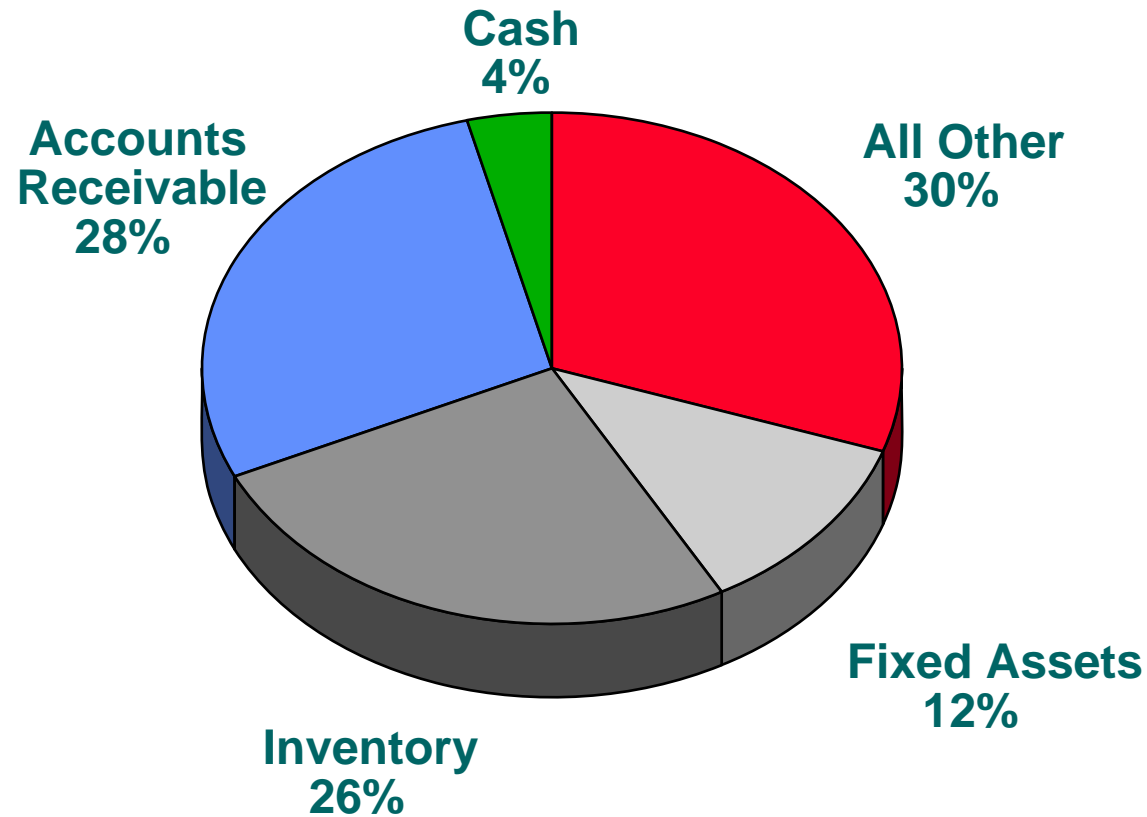
Costs of Business Operations

Operations consume almost one-half of the total business costs



Business Working Capital

Over over-third of the business working capital is tied up in product inventory and support facilities

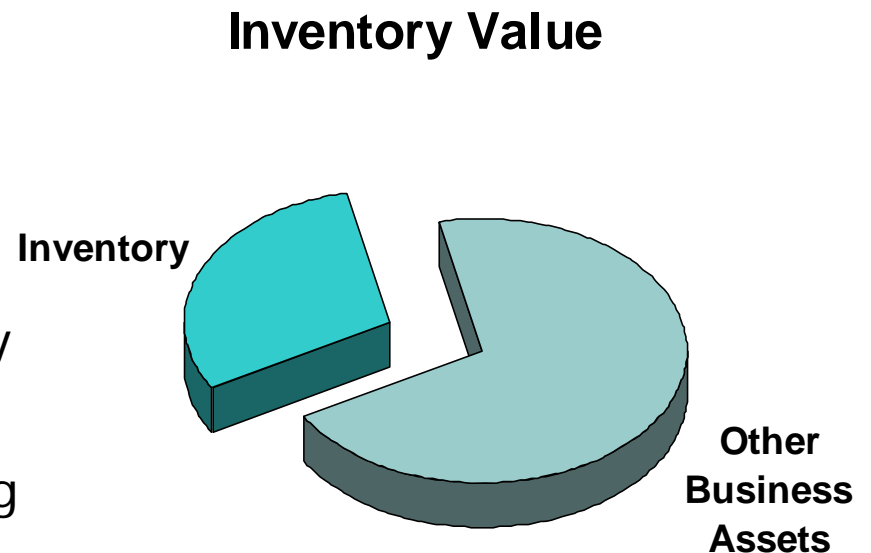


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Inventory Management

Effective inventory management is a critical element of business operations management

- Inventory represents 25-35% of business assets
- Carrying cost of inventory represents 21% of operating costs
- Order costs for processing customer orders range from \$50-\$150 per order
- Stock out costs ????





Sourcing and Inventory

It is said that a distributor business can make more money buying than selling. Therefore a key focus of operations excellence should be

- Sourcing
- Procurement
- Purchasing transactions
- Inventory management.



Sourcing and Inventory

Inventory is one of the keys to effective operations management . . .

- Management of inventories
- Costs of carrying inventory
- How to control inventories
- How much to order from suppliers
- When to order from suppliers
- Measurements of performance.



PAR Report - Benchmarking

The PAR report can provide detailed data and the basis of analysis and operations benchmarking.

PAR Report Measures

Some measures provided by the PAR report include

Description	Dual Firms	Print Firms	Industrial Firms	All Firms
Number of warehouse and delivery employees	73	43	22	43
Number of warehouse employees	44	27	12	26
Number of delivery employees	29	16	10	17
Orders per warehouse employee	15.3	14.8	20.5	17.0
Lines per warehouse employee	36.6	30.9	68.3	43.1
Handling expense per order	\$ 12.30	\$ 13.60	\$ 7.50	\$ 11.10
Orders per delivery employee	23.3	22.5	23.7	23.1
Average order size	\$ 466.00	\$ 574.00	\$ 342.00	\$ 463.00
Delivery expense per order	\$ 13.00	\$ 16.00	\$ 10.00	\$ 13.00
Warehouse and delivery expense as a percent of sales	6.7%	7.0%	7.3%	7.0%
Handling expense as a percent of sales	2.5%	2.5%	2.5%	2.5%
Delivery expense as a percent of sales	2.7%	2.8%	3.2%	2.9%
Warehouse and delivery expense as a percent of gross margin	31.2%	33.4%	30.5%	31.2%
Handling expense as a percent of gross margin	11.4%	12.0%	10.1%	10.3%
Storage expense as a percent of gross margin	7.0%	7.9%	7.1%	7.4%
Delivery expense as a percent of gross margin	12.8%	13.5%	13.3%	13.2%

Note: Par reports can provide additional measures and comparisons in substantially more detail in terms of business size and statistical measures.



PAR Report Analysis

PAR report sales data

- The PAR report examines distributors and segments them according to type of business (Printing, High Profit Printing, Industrial, and High Profit Industrial). Here is a typical NPTA distributor. However, the analysis can be completed for each of the business types.

Gross Sales*	\$21,290,342
Direct Sales*	\$1,405,163
Indirect Sales*	\$19,885,179
Sales At Cost	\$16,095,499
Direct Sales at Cost	\$1,191,067
Indirect Sales at Cost	\$14,904,432

- * Gross sales, as reported, must be broken down into Direct and Indirect elements. A further break down of Sales at Cost into Indirect and Direct elements provides an understanding of Indirect Sales at Cost. This is the portion of data that is needed for examining inventory turns. Indirect Sales at Cost is calculated at \$14.9 million.



PAR Report Analysis

Inventory Analysis

Inventory Turnover*	7.3
Days of Inventory On Hand - 250 days in Year	34
Average Inventory at Cost	\$2,041,703

- * The Inventory turnover ratio reported in PAR is 7.3 for this typical distributor. This equates to 34.2 days of inventory on hand with an average inventory at cost of \$2.0 million.
- Best in class companies that focus on inventory management have been able to make gains in inventory turnover ratios improving them to 12 and even 16 times per year. This would be a 60% + increase in turns for the typical distributor. If we focus on inventory reduction, with maintaining or increasing customer service levels, a 20% reduction in inventory is a reasonable goal for a first year accomplishment.



PAR Report Analysis

Improvements Analysis

One Time Reduction in Inventory - 20% Reduction	\$408,341
On Going Annual Savings - Carrying Costs at 21%	\$85,752
Total Annual Savings - First Year	\$494,092
Improved Inventory Turnover	9.1

- A 20% reduction in inventory through the use of Activity Based Costing, improved vendor management, and improved inventory management would gain the average distributor over \$400,000 in a one-time savings. Carrying costs associated with inventory are derived from capital, service, risk, insurance, and space requirements cost. These costs are estimated at anywhere from 10% to 35% based on the type of product and current financial conditions. At 21% annually, the carrying cost associated with this inventory is over \$85,000. This is an annual savings, not a one-time savings, because the costs associated with the reduced inventory are ongoing. Based on the reduction in inventory investment, the inventory turnover ratio increases to 9.1. This increase represents the amplified velocity that products move through the business.



PAR Report Analysis

Improvements Analysis (continued)

Improved Days of Inventory On Hand - 250 days in a sale Year	7
If Inventory Reduced One Day - One Time Positive Cash Flow Impact	\$59,618
If Inventory Reduced One Day - Annual Positive Cash Flow Impact	\$12,520

- Looking at the changes from a different point of view, days of sales on hand is calculated at 34.2 currently. Each day inventory is held, the dollar amount is equal to \$59,600. If inventory can be reduced by just one day, the initial savings is just under \$60,000 with ongoing carrying costs of \$12,500. Each day removed from inventory increases cash flow by over \$72,000 – the first year.



PAR Report Analysis

Profits Analysis . . .

Operating Profit	\$234,194
New Profit	\$12,520
Total Profit After Improvements	\$246,714
Increased Profit Margin	0.1%
Profit Margin Percentage Increase	5.4%

- The effect on profit margin is also dramatic. Every dollar of carrying cost associated with fewer inventory is a direct bottom line profit dollar. The typical distributor's profit is \$234,000. Focusing on inventory reduction of just 20%, profits increase annually by \$12,500. This is an increase in bottom-line profit of 5.4%.



PAR Report Analysis

Impact on business sales

Sales Needed To Equal Onetime Pre-tax Profit Margin Increase of \$59,618	\$3,800,000
Sales Needed To Equal Annual Pre-tax Profit Margin Increase of \$12,520	\$800,000
Sales Needed To Equal First Year's Increase Pre-tax Profit of \$72,138	\$4,600,000

- These increases assume the constraints of utilizing the same personnel, space, equipment, operating structure, and costs. When this increase is equated with escalated operations necessary to support such a drastic increase in sales revenue, the numbers are even more staggering.



Operations versus Sales

Impact on business sales (continued)

- With the average sales force of a distributor numbering 19
- The sales force would have to increase by 6 the first year
- The sales force would have to increase by 1 thereafter.



Measures and Benchmarks

- The PAR reporting system can provide a base of measures and comparisons
- This information needs to be supplemented by internal measures
- Together they can form the basis for benchmarking present operations against future change.



Bottom Line

- *Operations management excellence can have a significant impact on the business*
- *It can provide achievable near-term results*
- *It requires detailed analysis of functions and costs*
- *It needs to be benchmarked for continuous improvement.*



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