

*“You Can Make More Money
Buying Than Selling”*

*Purchasing and
Inventory
Management*



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Distributor Business Issues

Today's distributor needs to take action on business issues centered around purchasing and inventory management

- Reduce inventory investment in the business
- Revise purchasing policies and procedures
- Improve warehouse productivity related to inventory
- Reduce business working capital
- Reduce operations costs.

Our Program Today

Today's presentation will address

- Segmentation and analysis of inventory by SKU
- ABC concept and use
- Evaluation of inventory using ABC
- Managing inventory segments differently
- Evaluation of purchasing policies, procedures, and practices
- Guide to improved purchasing
- Price and volume break analysis
- Establishment of inventory objectives
- Management reports and controls.

The Challenge of Today

The marketplace is changing

Customer service demands are increasing

- More immediate servicing - fulfillment needs
- Shorter servicing time-frames and delivery cycles
- Reduced demand predictability
- Increased demand for information and communications

Consequences include

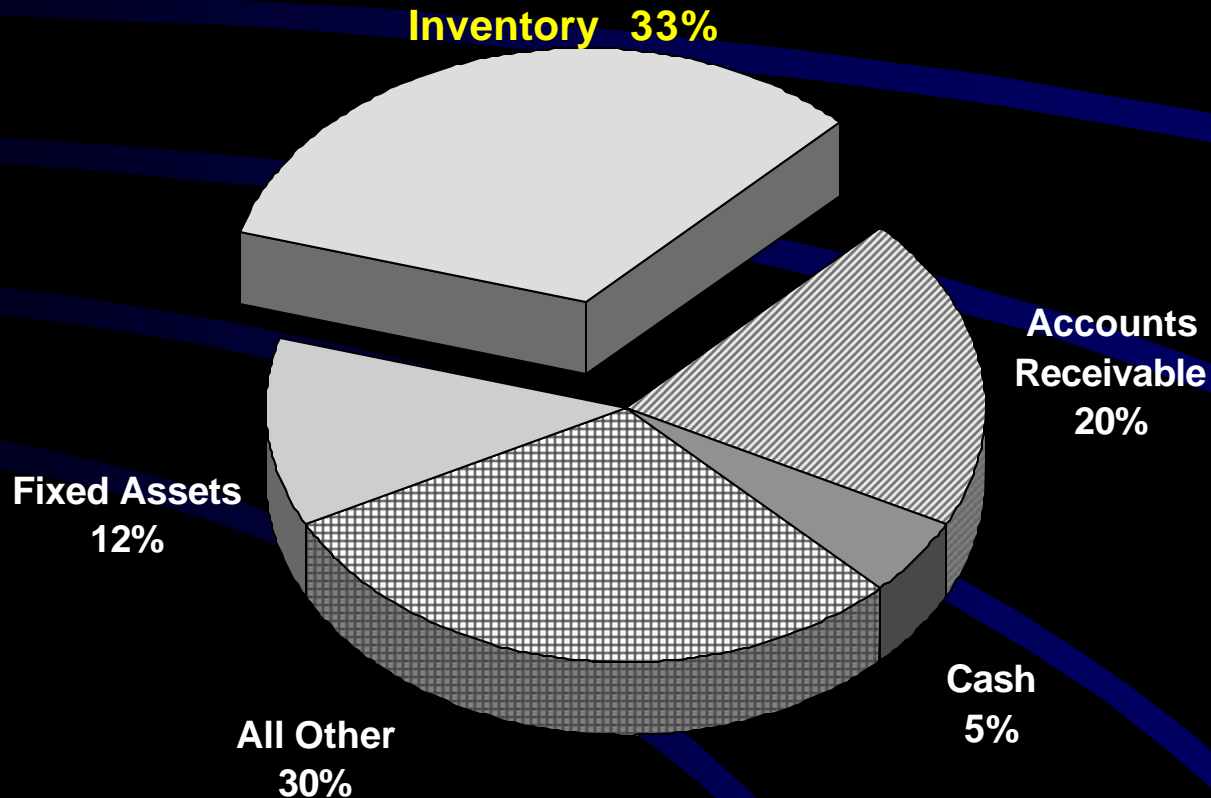
Cost to manage and carry inventory are increasing

- Larger inventories and safety stocks
- Reduced control & efficiency
- Increased damage, loss, & obsolescence
- Increased administrative work
- Reduced cash flow
- Need for increased warehouse space

Profits are being squeezed

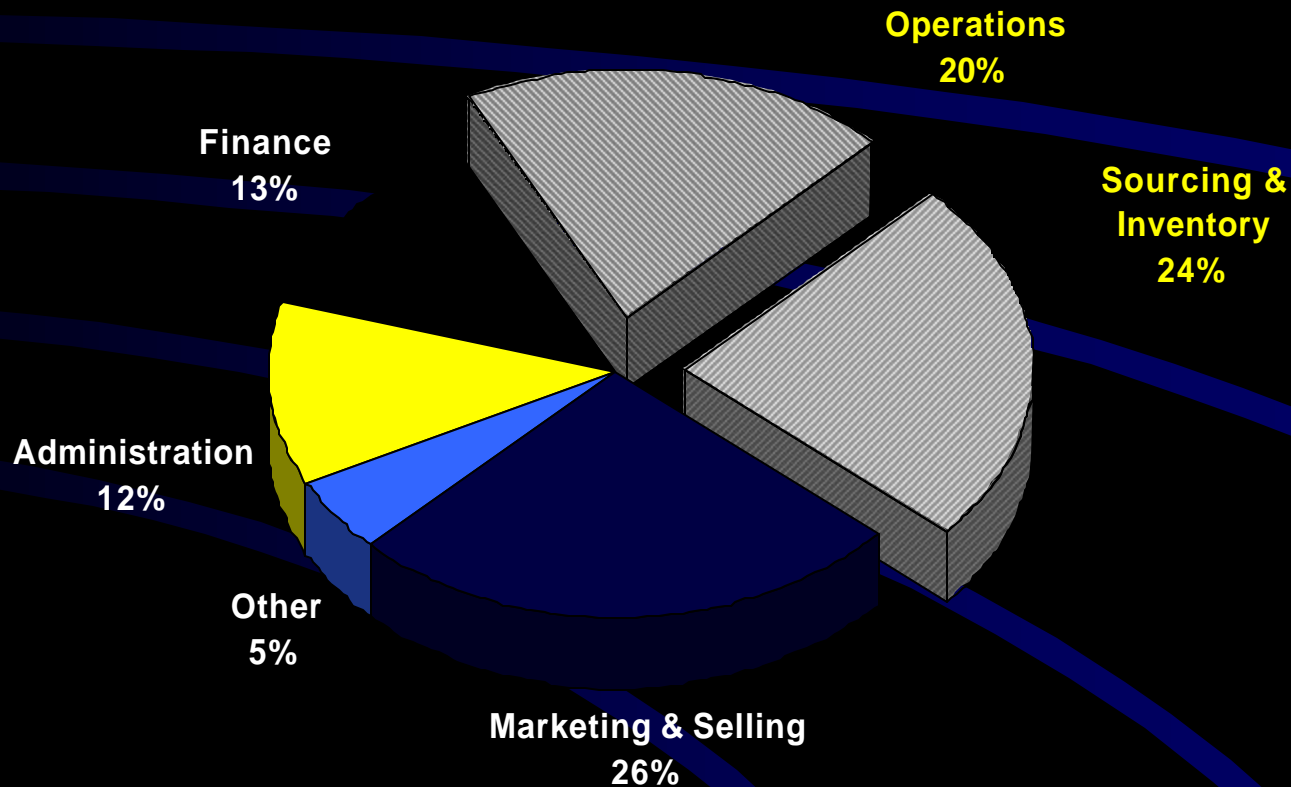
Perspective - Business Capital

Product inventory represents approximately one-third of business capital investment



Perspective - Operating Costs

Business operations, product sourcing, and inventory represent over 40% of annual costs



The Solution

Improve operational effectiveness through

- Reducing the size and cost of inventory
- Reducing delivered product costs
- Increasing operational effectiveness
- Maintaining or increasing service to customers

In short

Improved Supply Chain Management.

Management of Inventory and Purchasing

Effective management of inventory and purchasing focuses on

- Inventory Management
 - Right product, right place, right time
 - What products are needed to support the business
 - How much product is needed to support the business
- Purchasing Management
 - Make the job easier
 - Focus on critical issues
 - Leverage decision making.

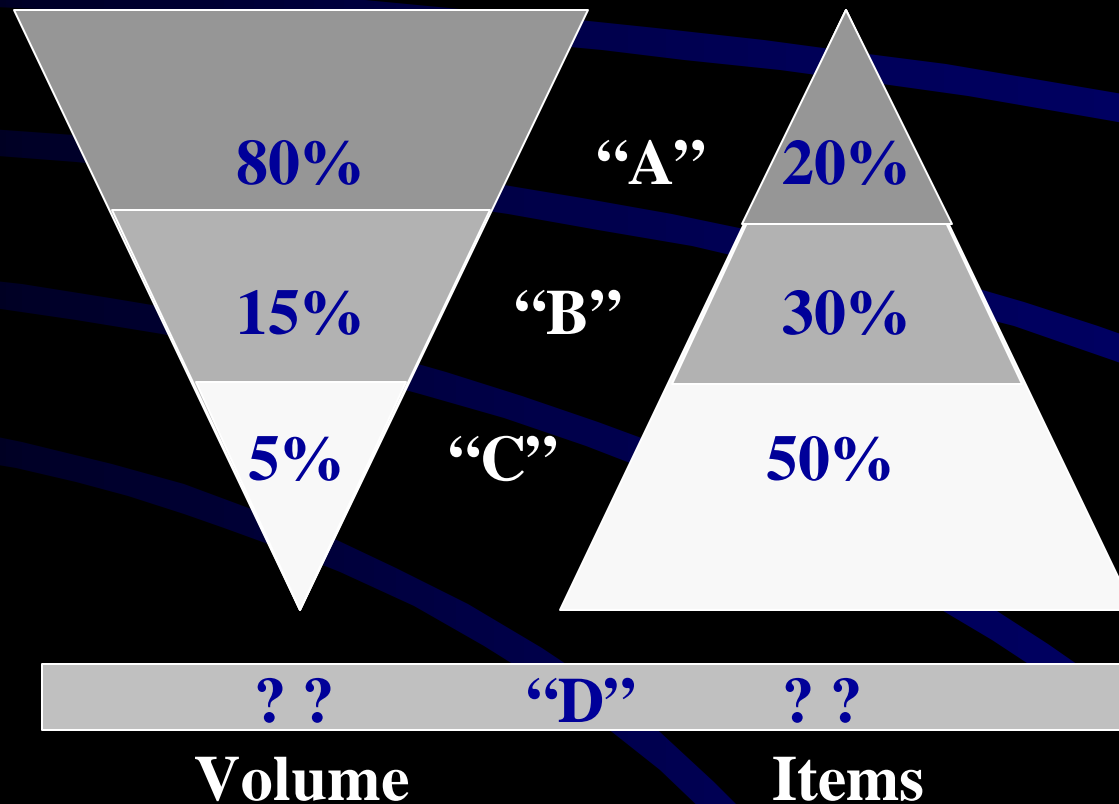
Segment and Analyze Inventory

Inventory needs to be managed according to its basic components . . .

- Product and inventory fall into logical groupings
- Physical characteristics will set storage requirements
- Product value will establish security requirements
- Special items require special management:
 - Forward buys
 - Consignment stock
 - Special customer stocks
- Inventory needs to be segmented by volume movement
 - *Not financial.*

The ABCs of Inventory

The key segmentation of inventory is according to ABC classification based on volume



The ABCs of Inventory - Item vs. Vendor

Item Sales Ranking

- A, B, C Classification - Pareto Analysis
 - A Items - First 80% of Total Sales (*“Super A’s”, 1st 50%*)
 - B Items - 81 to 95% of Total Sales
 - C Items - Last 5% of Total Sales
- Used to classify items for varied inventory management strategies and periodic reorder reviews.

Vendor Sales Ranking

- A, B, C Classification based on total vendor purchases (ranking criteria same as items)
- Used to classify vendors for varied inventory management strategies and periodic reorder reviews.

Managing Inventory Segments Differently

Evaluating inventory according to ABC segmentation provides data for analyzing and effectively managing inventories

- Item and vendor classification
- Segmentation of C items
- Implementation of a periodic review for A & B items
- Identification of cost effective ordering strategy
- Consolidation of product lines and vendors
- Elimination of idle inventory assets
- Establishment of inventory and purchasing objectives

. . . . tailored specifically to your company business.

Segregate C Items

An alternative method for managing C items with minimal effort

- *Identify C Items for all vendors and C vendors*
- *Establish a minimum and maximum stocking level for all C items based on demand - e.g. 2 months minimum and 4 months maximum supply*
- *Use a computer to generate all orders for C items:*
 - *Computer identifies items with below 2 months inventory*
 - *Computer generates orders for up to a maximum of 4 months*
 - *Purchasing reviews orders prior to release to vendors*
- *Combine all C items orders with A & B items for volume vendors*

. . . . to enable inventory management focus on A & B items.

Evaluation of Purchasing

Purchasing policies, procedures, and practices need to be reviewed and evaluated

- *Determine vendor and order review cycle:*
 - Periodic review
 - Volume order point
- *Track vendor lead, cycle, and transit times:*
 - Order placement
 - Order processing and shipment
 - Order delivery
- *Document purchase parameters:*
 - Buying quantities
 - Special terms
 - Etc.

Improving Purchasing

Improvement opportunities can yield significant results in terms of timing, consistency, and cost reduction, leading to more bottom line profit

- *Schedule vendor purchasing and delivery*
- *Segment vendor buying:*
 - “A” vendors weekly or more frequently
 - “B” vendors bi-weekly (50% each week)
 - “C” vendors monthly (25% each week)
- *Periodically review purchasing practices with vendors to:*
 - Improve lead times and inventory turns
 - Improve buying practices
- *Measure, report, and review vendor performance directed at continuous improvement*

. . . . which will have the effect of A & B items flowing like a pipeline.

Use Price and Volume Break Analysis

For A & B vendors who offer volume price breaks

- *Identify the annual purchase cost for each pricing strategy*
- *Calculate the inventory holding cost for each pricing strategy*
- *Determine if the purchase cost reduction associated with the purchase of a higher volume is greater than the additional inventory holding cost*
- *Evaluate the number of months of purchase cost savings that will be required to cover the holding cost for additional (cycle stock) inventory*
- *Consider the practicality of the reorder interval associated with the most cost effective purchase price/quantity strategy*

. . . . select the most cost effective purchase price/quantity strategy with a “reasonable” reorder interval.

Price Break Analysis - Example

A price break analysis can provide the opportunity to structure special buying to meet the needs of the business

Price Break Analysis

Product A

| Sales (\$) | | | | Purchase | \$ / | Purch | \$ / | (a) | (a) | |
|--|-------------|--------------|-----------------|----------------------|--|-----------------|-------------|-----------------|---------------------------|-------------------|
| <u>Day</u> | <u>Week</u> | <u>Month</u> | <u>Year (1)</u> | <u>Strategy(lbs)</u> | <u>Purch</u> | <u>/ Yr (2)</u> | <u>Year</u> | <u>Ann Cost</u> | <u>Cycle</u> | <u>Add'l</u> |
| | | | | | | | | <u>Savings</u> | <u>Stock</u> | <u>Investment</u> |
| 562 | 2,808 | 12,170 | 146,040 | * | 10,000 | 12 | 146,040 | | \$6,085 | |
| | | | | | 20,000 | 6 | 143,119 | \$2,921 | 11,927 | \$5,842 |
| | | | | | 30,000 | 4 | 138,738 | 7,302 | 17,342 | 11,257 |
| | | | | | 40,000 | 3 | 134,357 | 11,683 | 22,393 | 16,308 |
| Volume Discount (per Lbs Purchased) (4) | | | | | | | | | | |
| | <u>Min</u> | <u>Disc</u> | | | | | | | | |
| | 10,000 | 0 | | | | | | | | |
| | 20,000 | 2% | | | | | | | | |
| | 30,000 | 5% | | | | | | | | |
| | 40,000 | 8% | | | | | | | | |
| | | | | * | Current Purchasing Strategy | | | | | |
| | | | | | <u>Net Savings - 40 mlbs vs 10 mlbs (Annualized)</u> | | | | <u>Investment Payback</u> | |
| | | | | | Product Purchase Cost Savings | | | \$11,683 | Add'l Investment | \$16,308 |
| | | | | | Additional Carrying Costs | | | <u>-4,077</u> | Monthly Net Savings | \$634 |
| | | | | | Net Savings | | | \$7,606 | Payback (Months) | 25.7 |

- (1) Annual purchase cost of \$146,040 based on (2) & (3)
- (2) Purchase 10,000lbs per month
- (3) Product value at cost = \$1.217 / lb (based on sample of 3 10mlb purchases)
- (4) Fill in of 1 - 5 mlbs per quarter at last purchase price

RECOMMENDATION *No Change*

- Payback - too long
- Order Interval - too infrequent

Price Break Analysis - Example

A price break analysis can identify when to change purchasing strategy to provide additional savings to the business

| Price Break Analysis | | | | | | | | | | | |
|----------------------|------|---------------------|-----------|--|-------|-------|---------|----------|---------------------|---------------------------|---------|
| Product B | | | | | | | | | | | |
| Sales (Cases) | | | | Purchase | \$/ | Purch | \$/ | (a) | (a) | | |
| Day | Week | Month (1) | Year | Strategy | Purch | /Yr | Year | Ann Cost | Cycle | Add'l | |
| | | | | | | | | Savings | Stock | Investment | |
| 31 | 156 | 675 | 8,100 | * | 240 | 34 | 283,500 | | \$4,200 | | |
| | | | | | 700 | 12 | 251,100 | \$32,400 | 10,850 | \$6,650 | |
| Pricing (per Case) | | | | * Current Purchasing Strategy | | | | | | | |
| | | | Unit | <u>Net Savings - 700 vs 240 cases (Annualized)</u> | | | | | | <u>Investment Payback</u> | |
| | | | Min Price | Product Purchase Cost Savings | | | | \$32,400 | Add'l Investment | | \$6,650 |
| | | | 240 | Additional Carrying Cost (25%) | | | | -1,663 | Monthly Net Savings | | \$2,561 |
| | | | 700 | Net Savings | | | | \$30,738 | Payback (Months) | | 2.6 |
| Fill In | 90 | Price Last Purchase | | | | | | | | | |

(1) 650-700 cases / mth

Price Break Criteria - 240 case minimum, \$35 / case;
 700 case minimum, \$31 / case; 11.5% cost reduction
 Also, there is a 90 case fill-in minimum at the last case purchase price.

RECOMMENDATION *Change to 700 Case Strategy*
 Recurring annual net savings of \$30,738
 Additional investment paid back in < 3 months
 Order interval changes to monthly

Consolidate Product Lines and Vendors

Take an aggressive approach to product line and vendor consolidation

- *Review items beginning at the end of the A, B, C listing and moving towards the beginning*
 - Where possible, substitute the most popular similar item to eliminate a stock keeping unit (SKU)
 - Eliminate C items when the profit contribution associated with the annual sales volume is not worth the effort to carry inventory
 - If a low volume item is critical to support a customer with a substantial sales volume, attempt to negotiate a change to “special order” with the customer agreeing to purchase any required minimum order quantity
- *Review vendors beginning at the end of the A, B, C listing and moving towards the beginning*
 - Attempt to eliminate low volume vendors by purchasing the same or a similar item from higher volume vendors where possible

. . . . to simplify your business processes.

Eliminate Idle Inventory Assets

Implement actions to reduce non-stock inventory

- *Negotiate supplier “buy backs”*
- *Develop special sale promotions*
- *Give non-stock items as a bonus to customer who meet a promotional volume threshold*
- *Evaluate use of inventory liquidators*
- *Donate unsaleable inventory*
- *Scrap all remaining inventory*

. . . . to gain valuable warehouse storage space and eliminate effort to “tend” slow/no moving items.

Implement Inventory Objectives and Measures

Establish purchasing and inventory objectives and measures and monitor results

- *Monitor weekly “purchases at cost” and “sales at cost”*
 - Develop a weekly variance and cumulative to variance to monitor the net affect on inventory over time
 - Graph the cumulative variance as an inventory change trend line and post for on-going management review
- *Monitor monthly inventory change compared to a base point (start date) and inventory objectives by product/vendor group in dollars and turns*
 - Identify variance from base point (\$ & %) as **“Progress Made”**
 - Identify variance from objective (\$ & %) as **“Opportunity Remaining”**

. . . .for effective control of assets and operations.

Reports and Controls - Example

Distributor Inventory Management Program - Example

| Product Group Number | NBR OF VENDORS | NBR OF SKU's | ANNUAL \$ SALES | BEGINNING INVENTORY AS OF 6/01/01 | | CURRENT INVENTORY AS OF 12/31/01 | | INVENTORY OBJECTIVE | | Initial Savings | | Opportunity Remaining | |
|-------------------------|-------------------|-----------------|--------------------|--------------------------------------|------------|-------------------------------------|-------------|-------------------------|-------------|---------------------------------------|--------------|-----------------------------|--------------|
| | | | | ACTUAL INVENTORY \$ | TURNS | ACTUAL INVENTORY \$ | TURNS | AVERAGE INVENTORY \$ | TURNS | (OVER) / UNDER BEGINNING INVENTORY | | OVER / (UNDER) OBJECTIVE | |
| | | | | | | | | | | \$ | % | \$ | % |
| 1 | 21 | 1526 | 6,693,970 | 1,011,560 | 6.6 | 801,675 | 8.3 | 569,710 | 11.7 | 209,885 | 20.7% | 231,965 | 40.7% |
| 2 | 6 | 682 | 22,377,235 | 2,204,720 | 10.1 | 1,180,875 | 18.9 | 1,462,380 | 15.3 | 1,023,845 | 46.4% | -281,505 | -19.2% |
| 3 | 3 | 208 | 1,545,735 | 420,115 | 3.7 | 311,545 | 5.0 | 124,850 | 12.4 | 108,570 | 25.8% | 186,695 | 149.5% |
| 4 | 4 | 416 | 1,588,975 | 608,875 | 2.6 | 566,825 | 2.8 | 128,340 | 12.4 | 42,050 | 6.9% | 438,485 | 341.7% |
| 5 | 2 | 190 | 3,826,385 | 374,480 | 10.2 | 251,340 | 15.2 | 296,295 | 12.9 | 123,140 | 32.9% | -44,955 | -15.2% |
| 6 | 1 | 352 | 994,580 | 163,500 | 6.1 | 137,150 | 7.3 | 80,330 | 12.4 | 26,350 | 16.1% | 56,820 | 70.7% |
| 7 | 1 | 76 | 226,785 | 101,055 | 2.2 | 92,325 | 2.5 | 18,315 | 12.4 | 8,730 | 8.6% | 74,010 | 404.1% |
| 10 | 2 | 102 | 480,730 | 136,890 | 3.5 | 116,470 | 4.1 | 38,830 | 12.4 | 20,420 | 14.9% | 77,640 | 199.9% |
| 11 | 2 | 176 | 713,035 | 94,505 | 7.5 | 79,980 | 8.9 | 57,590 | 12.4 | 14,525 | 15.4% | 22,390 | 38.9% |
| 12 | 3 | 96 | 298,900 | 57,295 | 5.2 | 37,235 | 8.0 | 24,140 | 12.4 | 20,060 | 35.0% | 13,095 | 54.2% |
| 13 | 8 | 784 | 1,862,850 | 139,010 | 13.4 | 139,480 | 13.4 | 141,660 | 13.2 | -470 | -0.3% | -2,180 | -1.5% |
| 21 | 1 | 12 | 43,045 | 16,590 | 2.6 | 14,070 | 3.1 | 3,475 | 12.4 | 2,520 | 15.2% | 10,595 | 304.9% |
| 22 | 3 | 20 | 191,340 | 81,990 | 2.3 | 82,725 | 2.3 | 11,725 | 16.3 | -735 | -0.9% | 71,000 | 605.5% |
| Total | 57 | 4,640 | 40,843,565 | 5,410,585 | 7.5 | 3,811,695 | 10.7 | 2,957,640 | 13.8 | 1,598,890 | 29.6% | 854,055 | 28.9% |
| % Grand Total | 31% | 86% | 94% | 92% | | 86% | | | | Total Progress Made | | 1,598,890 | |
| | | | | | | | | | | Total Opportunity Remaining | | 854,055 | |
| Grand Total | 181 | 5380 | 43,539,550 | 5,913,150 | | 4,414,860 | | | | Total Savings Opportunity | | 2,452,945 | |

Inventory and Purchasing Program Results

Results of a comprehensive Inventory and Purchasing Management Process Review will include

- An improved profile of inventory by volume classification
- Implementation of suggested changes in product sourcing procedures
- A potential business asset reduction in inventory of greater than 25% by:
 - Product classification
 - Purchasing procedures
- An estimated operating costs savings potential of 20% plus - based on:
 - One-time capital costs
 - On-going operational costs
- Additional inventory and cost reductions based on use of price break analyses, item and vendor consolidation, use of objectives and measures, etc.

Inventory and Purchasing Program Results

Specifically, management should look for Inventory and Purchasing Programs Results such as

- A reduction in inventory of “A & B” items
- A reduction or elimination of “C & D” items and inventories
- A reduction in vendor order cycle times
- Potential for inbound product consolidation
- One-time increase in business cash flow (invest in business programs, pay down loans, or take payment discounts)
- Long-term reduction in inventory costs
- Improved in-stock position and customer service.

Summary of Program Results

In summary, program results will include

- *For Inventory and Purchasing Management:*
 - Reduced total inventory investment
 - One-time increase in business cash flow
 - Increased inventory turns
 - Balanced inventory profile - right product, right place
 - Reduced operating costs.
- *For Warehouse and Delivery Operations:*
 - Increased productivity
 - Improvement in resource and space utilization
 - Reduction in operating costs
 - Move effective product flow
 - Improved customer service.

Summary of Program Results

In addition, program results will include

- *For Customer Service:*
 - Improved in-stock position
 - Reduced order cycle time
 - Improved inventory accuracy.

- *For Management and Control:*
 - Improved level of management skills
 - Effective management reports and controls
 - More effective utilization of operations resources
 - More responsive operations support to marketing and business strategy.

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