PC Company

PC Company (PCC) is a $1 Billion US based company who designs and manufactures two products (MATURE LINE and NEW LINE) for the consumer market. PC Company employs 6000 people.

Internal Profile

Manufacturing

- PCC has one manufacturing facility located in North America where it is capable of making both MATURE and NEW products. The combined demand forecast for MATURE and NEW exceeded the production capacity. To address this capacity constraint, a decision was made to outsource the production of MATURE products while the distribution processes are unchanged.
- All orders which arrive at the facility are replenishment orders originated from the distribution centers. In the event that replenishment orders do NOT add up to the unit forecast, manual orders are created for specific stock numbers and pushed to the appropriated regional warehouse.
- A part of the manufacturing facility is designated as warehouse which holds inventory of both incoming raw materials (or components) and finished goods for shipment to its regional warehouses.
- All purchased finished goods (Mature products now out-sourced) come to the manufacturing facility for quality assurance inspection and are then shipped to the regional warehouses.

Distribution

- PCC owns and operates 4 regional warehouses which stock finished goods; North America, Europe, Australia/New Zealand, and Japan.
- PCC assumes ownership for raw materials and outsourced finished goods at the point in time when they ship from the supplier’s dock.
- All orders which arrive at the regional warehouse are customer orders. In the MATURE LINE, the customers are regional distributors who place orders based on their own stock; the distributor then responds to the demands of the ultimate consumer. There are 6 distributors in North America, 5 in Europe and two in each of the other regions. The expectation is that the products on their order are shipped within 7 days. In the NEW case, the customer is the actual consumer of the product. The consumer’s expectation is that their order will ship within 48 hours.

Sourcing

- The key OEM supplier which provides contract manufacturing of the MATURE Product for PCC is located in Japan.
- The OEM supplier waits for a Purchase Order from PCC before initiating a manufacturing release.
Case Study: PC Company

- The OEM supplier also sells its own products in to the same markets directly to the same distributors as PCC. The OEM delivers from stock to the US distributors network from its LA Warehouse. The OEM uses a pull replenishment process from its warehouse through manufacturing to its key RM Suppliers.
- PCC orders are considered special orders for the OEM because PCC’s Design Specifications call for a custom component not stocked at the OEM supplier. PCC has only one qualified supplier of this custom component (which is used for Mature and New product lines) located in Europe. Europe waits for a Purchase Order from OEM before initiating a manufacturing release. Europe ships directly to Japan.
- PCC has one other US Component supplier (supporting new product lines) located in Latin America. The rest of the Component suppliers (supporting the New lines) are located in various regions of the Pacific Rim. With the exception of the OEM Supplier and custom component supplier in Europe, all other suppliers source, make, and deliver components from stock; standard agreements spell out a 90 day order fulfillment leadtime. PCC assumes ownership upon shipment from the supplier’s dock.

Returns

- PCC has not developed a unique return channel for its finished goods. Finished goods returns are sent from the distributors to the regional warehouses. The warehouses make initial disposition decisions. Returned excess goods is re-stocked. For the Mature product returned defects are assessed and either restocked or sent back to the OEM in Japan.
- PCC has entered into long term agreement with its commodity suppliers and as part of those agreements, it makes no returns of raw materials for any reason. Because of the uniqueness of the European component, defective components are returned to the Supplier for disposition.

External Profile

Market

- PCC has traditionally marketed its MATURE LINE products through distributors. This has allowed PCC to control its sales costs while reaching consumers in all regions.
- Distributors define value both externally and internally. External value is defined by the consumers and includes two factors, product availability and price; product performance is assumed to be comparable among the top 5 suppliers. Internal value is defined by distributor margin and includes three factors, competitive pricing, inventory turns, and low overhead associated with buying a supplier’s product.
- PCC recently introduced its NEW LINE products into the fast growing direct-to-consumer market. It ships to consumers directly from regional warehouses on the basis of purchases orders processed at a centralized order fulfillment center. It was the third of the top five suppliers to enter this market. Early market research indicated that the consumer defined value using two primary factors, product performance and availability; price was a secondary consideration.
• The consumer either buys a NEW or a MATURE Product. (The NEW product is a next generation mature product)

**Strategic Background**

In researching PCC, 4 pieces of information were found to help define the Business Requirements for Supply Chain Improvement:

• Strength Weakness Opportunity Threat (SWOT) Analysis
• Critical Success Factors from the Strategic Plan
• Critical Business Issues from the Strategic Plan
• Value Proposition from the Strategic Plan
• PCC Profit and Loss Statement and Balance Sheet Indices

**SWOT Analysis**

**Strengths**

• The technical performance of both the MATURE and NEW LINES were superior.
• PCC had achieved low cost manufacturer status in the MATURE LINE.

**Weaknesses**

• Delivery performance was inconsistent, especially in the NEW LINE; customer complaints in this market were especially high.
• PCC was developing a reputation in the consumer’s eyes as being “tough to do business with” (Hard to place an order, incomplete and incorrect product shipments, inaccurate pricing, etc).
• It seemed to take months before PC Company could respond to product demand fluctuations.

**Opportunities**

• Leverage product technical performance to gain market share.
• Leverage cost-to-manufacture leadership to increase both revenue and profits.

**Threats**

• Key competitors in NEW LINE set high standard for delivery performance for direct-to-consumer market.
• Price point in MATURE LINE is getting too low to meet profit targets with the current cost structure.

**Critical Success Factors**

• Maintain revenue contribution by increasing share of MATURE Product Line in existing markets (distributor) preserving OI return.
• Drive revenue growth by introducing NEW Product Line in new market (direct to consumer) and capturing targeted share.
• Overall revenue growth for Current Year targeted at 10%.
Case Study: PC Company

- Maintain image as technical leader in NEW and MATURE product lines while minimizing investments in MATURE product line manufacture.
- Add capacity through OEM supplier in MATURE Product Line

Critical Business Issues
- NEW Products introduced to new market (direct to consumer) are selling slower than anticipated while market continues to grow at forecasted rate.
- Not one NEW order has been processed without some customer complaint
- Profits are disappearing from the MATURE Products in spite of achieving unit manufacturing costs targets (unit purchase price from outsource). Sales forecast is on track.

Value Proposition

Grow Profitably as the Preferred Supplier of Customers in our Targeted Markets
- Driven by VALUE defined by customer
- Align processes to deliver this value
- Leverage our strengths to deliver value
PCC Service Performance

Order Profile

- 1000 customer orders placed on the Regional Warehouses per week. Of the 1000 orders:
  - 800 are for MATURE Products
  - 200 are for NEW Products
- 890 orders were delivered by the committed to delivery date
  Of the 890 orders:
  - 100 were delivered as partials, 50 NEW and 50 MATURE
- 790 orders were delivered in full by the committed to delivery date
  Of the 790 orders:
  - 690 are for MATURE
  - 100 are for NEW
- All orders are treated as stock items; items having no stock available are expedited.
  - For items having stock, the line fill rate is 63% NEW and 89% MATURE
- PCC’s Order Fulfillment Leadtime Performance includes
  - Customer authorization to order receipt – 1 day
  - Order receipt to order entry – 1 day
  - Order entry to start build – 1 day
  - Start build to order ready for shipment – 2 days
  - Order ready for shipment to customer receipt – 2 days

- For expedites, add
  - Make Cycle – 30 days
  - Source Cycle OEM – 120 days plus 90 days for Europe totaling 210 days
  - Source Cycle Other – 90 days

- Of the 790 orders delivered on time and in full, 200 orders were either in question for shipping damage, something wrong on the packing slip (price, quantity, and/or product identification), or a mismatch between the invoice and the purchase order.
  Of the 200:
  - 100 were MATURE
  - 100 were NEW
- In takes manufacturing 45 days to increase or decrease production capacity 20% without cost penalty. The OEM supplier follows the leadtime agreed to in the supplier agreement (120 days).