

Alpha Company

Alpha Company is a \$1 Billion US based company who designs and manufactures two product lines (EVERGREEN LINE and NEW LINE) for the consumer market. Alpha employs 6000 people.

Internal Profile

Manufacturing

- Alpha has one manufacturing facility located in North America (Los Angeles) where it is capable of making both EVERGREEN and NEW products. The combined demand forecast for EVERGREEN and NEW exceeded the production capacity. To address this capacity constraint, a decision was made to outsource the production of EVERGREEN 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 (EVERGREEN products now out-sourced) come to the manufacturing facility for quality assurance inspection and are then shipped to the regional warehouses.

Distribution

- Alpha owns and operates 4 regional warehouses which stock finished goods; North America (Los Angeles), Europe, Australia/New Zealand, and Japan.
- Transportation providers contract routes at competitive rates.
- Alpha 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 EVERGREEN 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. 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 EVERGREEN Product for Alpha is located in Japan. Alpha assumes ownership for the product at the OEM supplier's shipping dock.
- The OEM supplier waits for a Purchase Order from Alpha before initiating a manufacturing release.
- The OEM supplier also sells its own products in to the US market directly to the same distributors as ALPHA. The OEM delivers from stock to the distributor network from its LA Warehouse. The OEM uses a pull replenishment process from its warehouse through manufacturing to its key RM Suppliers.
- Alpha orders are considered special orders for the OEM because Alpha's Design Specifications call for a custom component not stocked at the OEM supplier. Alpha has only one qualified supplier of this custom component (which is used for EVERGREEN 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.
- Alpha 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. Each supplier is responsible for transporting goods to the Alpha manufacturing facility. To achieve the greatest cost savings for Alpha, orders are aggregated until quantities reach container size before shipping. Alpha assumes ownership upon shipment from the supplier's dock.
- 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. Alpha assumes ownership upon shipment from the supplier's dock.
- All suppliers will ship special orders (rush, partial orders, etc) for a significant price premium.

Returns

- Alpha has not developed a unique return channel for its finished goods. Finished good returns are sent from the distributors to the warehouses. The warehouses made initial disposition decisions. Returned excess is re-stocked. Returned defects are assessed and either restocked or sent back to manufacturing for re-work (with the exception of North and South America – in this case, all returns are sent back directly to the manufacturing site for disposition).
- Alpha has entered into long term agreements 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

- Alpha has traditionally marketed its EVERGREEN LINE products through distributors. This has allowed Alpha 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.
- Alpha recently introduced its NEW LINE products in to 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 EVERGREEN Product. (The NEW product is a next generation EVERGREEN product)

Strategic Background

In researching Alpha, 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
- Alpha Profit and Loss Statement and Balance Sheet Indices

SWOT Analysis

Strengths

- The technical performance of both the EVERGREEN and NEW LINES were superior.
- Alpha had achieved low cost manufacturer status in the EVERGREEN LINE.

Weaknesses

- Delivery performance was inconsistent, especially in the NEW LINE; customer complaints in this market were especially high.
- Alpha 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 Alpha 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 EVERGREEN LINE is getting too low to meet profit targets with the current cost structure.

Critical Success Factors

- Maintain revenue contribution by increasing share of EVERGREEN 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%.
- Maintain image as technical leader in NEW and EVERGREEN product lines while minimizing investments in EVERGREEN product line manufacture.
- Add capacity through OEM supplier in EVERGREEN 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 EVERGREEN 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

Strategic Background

Alpha Financial Performance

P & L Statement - Financial Performance

	Last Year	Current Year Projection
Revenue	\$1,000 MM	\$1,000 MM
COGS	\$ 600 MM	\$ 540 MM
SGA	\$ 170 MM	\$ 289 MM
Order Mgmt	\$ 50 MM	\$ 113 MM
Mat. Acq.	\$ 20 MM	\$ 32 MM
Sales Exp.	\$ 20 MM	\$ 26 MM
Planning	\$ 50 MM	\$ 88 MM
Lab	\$ 30 MM	\$ 30 MM
Net Income (BT)	\$ 230 MM	\$ 171 MM
Net Income	\$ 133 MM	\$ 98 MM
Capital Charge	\$ (19) MM	\$ (40) MM
Economic Profit	\$ 114 MM	\$ 58 MM

Balance Sheet Performance

AP	\$ 22 MM	\$ 22 MM
AR	\$ 146 MM	\$ 292 MM
Inventory	\$ 88 MM	\$ 176 MM

- REVENUE forecast to grow to \$1100M (57,200 orders); actual projection after 6 months is \$1000M (52,000 orders) OR a \$100M (5200 order) shortfall.
- COGS improved 10%, due primarily to the unit prices achieved in the OEM supplier bid.
- SGA (can be considered as TSCMC) went up 70% due primarily to:
 - Order Management: the addition of warehousing resources and an increase in customer service department
 - Material Acquisition: the addition of warehousing space, increases in transportation cost, and increases in the receiving department
 - Planning: increased supply chain related IT and other support (including Finance) costs from \$25M to \$44M. Of the \$44M, IT represents \$30M and other Admin \$14M.
- Capital Charge doubled due primarily to:
 - Increases to Inventory and Accounts Receivable
 - Cost of Capital (Money) is 10%
- Component or Material purchases account for 50% of COGS

Alpha Service Performance

Order Profile

- 1000 customer orders placed on the Regional Warehouses per week.
Of the 1000 orders:
 - 800 are for EVERGREEN 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 EVERGREEN
- 790 orders were delivered in full by the committed to delivery date
Of the 790 orders:
 - 690 are for EVERGREEN
 - 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% EVERGREEN
 - Alpha'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 EVERGREEN
 - 100 were NEW
- It takes manufacturing 30 days to increase NEW Product production capacity 20%. QA tests for the EVERGREEN Product are not constrained by any resource.
- NEW Product production cannot be decreased without incurring labor and facility cost penalties.
- The OEM supplier follows the leadtime agreed to in the supplier agreement (120 days).