



CASE STUDY

Lean Supply Chain Crescent Parts

■ PROBLEM / CHALLENGE

Crescent is a distributor of HVAC equipment and parts in the Midwest. Their customers are heating and air conditioning contractors who install and repair residential and commercial units.

Crescent Parts' largest customer represented over 20% of total sales, almost 4 times greater than the next largest customer. As a result, Crescent launched a Lean Process Improvement project, focused on the shared supply chain with their largest customer. The project had three goals: 1) Streamline supply chain processes between the two companies to eliminate overlapping and redundant tasks, 2) Provide value to the customer by helping reduce the cost of doing business with Crescent, and 3) Connect their processes more tightly into their customer's.

■ IMPLEMENTATION DETAILS

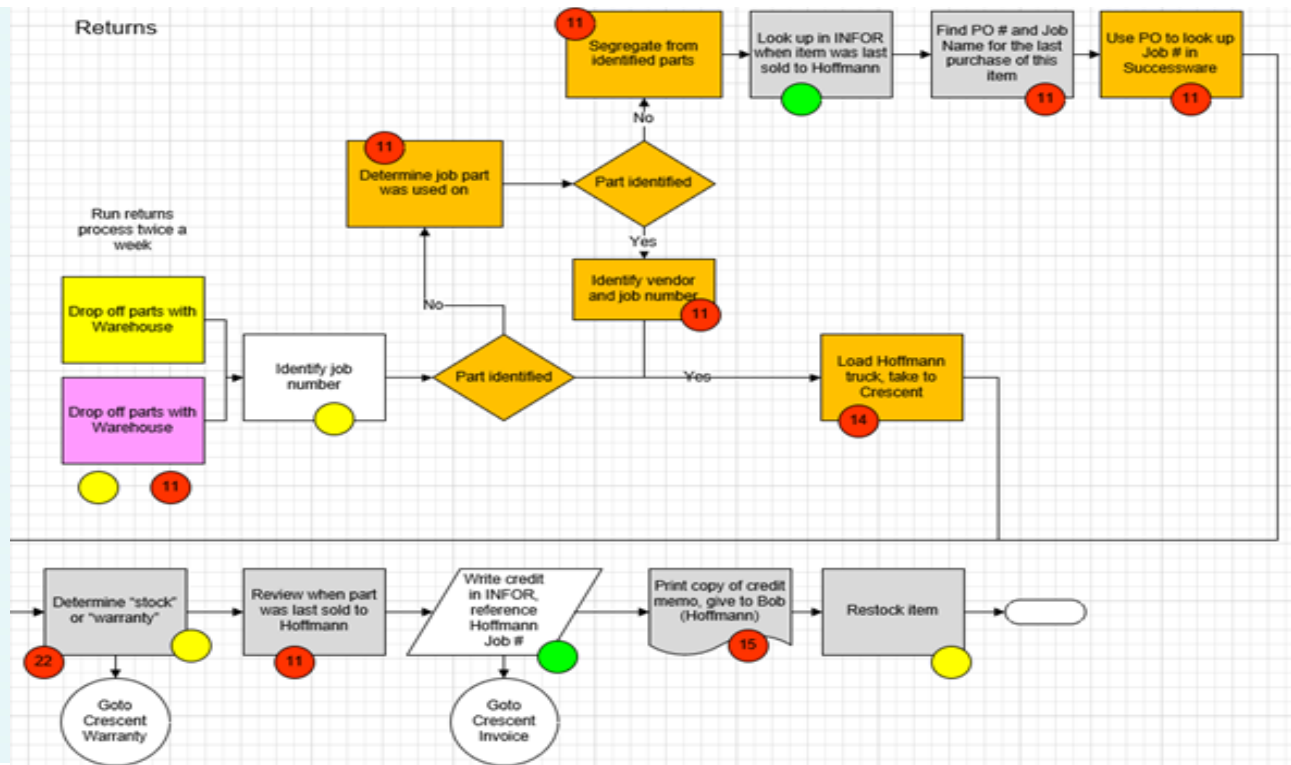
- Formed a cross functional team across the two companies including Executives, Sales Reps, Supply Chain and Operations representatives
- Process Flow Mapped the following aspects of the supply chain:
 - Sales and quoting
 - Repair and installation technicians' parts usage and truck replenishment
 - Ordering parts and equipment
 - Order entry, warehouse tasks, and shipping parts and equipment
 - Receiving parts and equipment
 - Crescent invoicing and their customer's accounts payable process
 - Returns and warranty equipment processing

RESULTS

- Crescent implemented vendor managed inventory (VMI) at the customer, gaining over \$1 million in additional revenue
- Total costs of parts in VMI were reduced, improving the customer's profit margin
- Parts shortages at the customer were reduced by over 90%

RETURNS PORTION OF CURRENT STATE PROCESS FLOW MAP

Red Dots are Improvement Opportunities



IMPLEMENTATION DETAILS:

- Identified 28 improvement opportunities including:
 - Use EDI to eliminate duplication of order entry and payables
 - Set up vendor managed inventory (VMI) with Crescent managing all small parts at the customer's warehouse
 - Reduce inventory levels at the customer's warehouse by considering Crescent's safety stock inventory
 - Crescent staging all equipment and parts needed for each day's installations
 - Make it easier for the customer to access parts and equipment costs for their sales and quoting process
 - By labeling return parts and equipment at the customer, it will reduce significant time at Crescent and ensure the customer is credited the value of the parts faster

DIFFICULTIES ENCOUNTERED

- Needed to overcome normal supplier-buyer trust issues to openly share information and map the "good, bad and ugly" of each company's processes
- Implementing the improvements required significant coordination between the two companies
- Some of the improvements made the customer more committed to a long-term relationship with Crescent, which they initially resisted and felt reduced their leverage
- Reductions in labor and inventory made the change worthwhile
- Software limitations at the customer made it difficult to implement all improvement ideas