Warehouses

“For most businesses, warehouses full of stuff are a kind of security blanket.”

Under extenuating circumstances, stocked warehouses protect businesses from losing sales for

Unforseen Catastrophe

Dell, the world’s largest PC maker, was challenged in 2002 when a 10-day labor lockout idled 10,000 union dockworkers, shutting down ports from LA to Seattle. Dell was unable to receive its raw materials and finished goods.

Dell’s Business Model
At the time, Dell was using a “just-in-time manufacturing model.”
The company was creating their product right before it was shipped to their customer enabling flexibility.

http://www.orangecom.com/ebuy/ebystore/branding/dell.jpg

Dell’s Business Model
• Dell has no warehouses. It carries no more than two hours of inventory in its factories and a maximum of 72 hours across its entire operation.
• Yet, Dell assembles nearly 80,000 computers every 24 hours.


The Threat of No Inventory
• Because Dell has very little inventory to buffer themselves from disasters or failures, the company must meet demand with just the right amount of supply. If something goes wrong, manufacturing operations will collapse within a few hours.


Insider Tip
Dell had been alerted to the possibility of a labor lockout nearly six months before it occurred. Their U.S.-based shipping partners had warned them.

Preparing for Catastrophe

• In preparation, they stayed in constant communication with their parts makers and shipping partners.


Investigation

• Dell also dispatched a “tiger team” to investigate some of the west coast ports that were predicted to partake in the labor lockout.


Definition of “Tiger Team”

• “Tiger team’ is a specialized group tasked with testing the effectiveness of an organization's ability to protect assets by attempting to circumvent, defeat or otherwise thwart that organization's internal and external security.”

http://en.wikipedia.org/wiki/Tiger_team

Confirmation

• Dell’s “tiger team” worked directly with the company’s “carrying and freight-forwarding networks” to develop a contingency plan.

• The specialists confirmed that the labor lockout would occur in the near future.

So what did Dell do?

Chartered Planes
• Dell chartered 18 747s from various carriers to carry parts and products from Asia to the West Coast.
• Each 747 holds the equivalent of 10 tractor-trailers – enough parts to make 10,000 Dell computers.

Avoided High Plane Costs
• Because Dell had prepared for the disaster, they avoided the fierce competition for planes that ensued once the lockout began.
• As a result, they saved nearly half a million dollars on every 747 they had chartered.

Fast Pickup & Delivery
• Dell ensured that the parts were always ready to be shipped out by the time a returning chartered was ready to be reloaded.
• Dell consistently got its planes to the U.S. and back within 33 hours, keeping costs down and the supply chain moving.

Strategic Freight Management
Dell also infiltrated harbors with freight specialists. They made sure that Dell’s parts were the last to be loaded onto each cargo ship so that they would be the first to be unloaded in port.


Aftermath
• Once the ports were reopened, there were thousands of delayed shipments. Companies scrambled to sort out their products.
• Dell already knew exactly where its products were located and when they would be unloaded.


Conclusion of 2002 Lockout
• “In the end, Dell did the impossible: It survived a 10-day supply-chain blackout with roughly 72 hours of inventory, and it never delayed a customer order.”


Comments on Inventory
• Dick Hunter, “[Dell’s] supply-chain czar for the Americas” believes companies keep inventory as protection against poor demand as well as their inability to see into their supply chains.

Comments on Inventory

• “It’s a real misconception that more inventory means less shortages […] If you don’t have solid processes that monitor demand and supply on real-time, continuing basis, then I don’t care how much inventory you’ve got. Invariably you’ll have a lot of the wrong stuff and none of the right stuff.” – Dick Hunter

Old Finance Model

• “On average, computer makers pay their suppliers 30 days before a PC is shipped to market, bought by a costumer and paid for.”
• But Dell is not average…

Dell’s Finance Model

• Dell receives payments immediately and directly from their customers. They get the raw materials straight from suppliers and build and ship the product within four days. Yet Dell doesn’t pay the suppliers until 36 days after it receives payment from the customer.

Capacity Planning

• Assists media production in determining the risks versus profits in order to satisfy demand.

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Scheduling
• Evaluates consumer and market response based on advertising insertions through media vehicles (TV, radio, and magazines) in order to maximize sales.


Priority Assignment
• Incorporated into media production to improve the overall operations by placing them within a most important to least important category in the firm.


Inventory Control
• Maintaining a plan to acquire information regarding an excess or deficit amount of resources readily available.


Cash-Conversion Cycle
• Dell’s cash-conversion cycle is negative 36 days
• Cash-conversion is the time between the outlay payment for parts and the collection of payment for the goods from the

Operations With No Expense

• Negative 36 days means Dell operates with a negative working capital, eliminating the need to finance its operations.

How to Get Rid of Inventory

• Push inventory requirements on to suppliers
  – Suppliers will benefit from good business
  – Suppliers will take the risk of a supply-chain disruption

• Increase factory/worker efficiency
• Increase factory/worker production levels
• Replace inventory with information by making predictions based on purchasing patterns and budget cycles of corporate or repeat individual customers.