Case Study:
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Boeing Rotorcraft and New Breed Logistics Collaborate on Lean Manufacturing Solution

Inbound logistics process revamped to increase production output and improve factory floor productivity

Situation Boeing's web site describes its lean manufacturing focus as a "grass-roots revolt against waste." Officials at the company's helicopter manufacturing unit, Boeing Rotorcraft, recognized an opportunity to drive efficiencies at its Pennsylvania manufacturing plant and began a revolt of their own.

The plant held numerous storage areas within a seven-building campus. Used to stage supplier materials for shipment to the assembly line, these areas ate up space and impeded the flow of goods and people within the buildings. The prime storage area used an older automated retrieval system that, with no change in strategy, would need to be replaced at significant cost. Leaders within Boeing's materials management group made a decision: focus Boeing Rotorcraft on what it does best (building great helicopters) and outsource logistical support to an expert.

After a competitive bid process, Boeing selected New Breed Logistics to implement its inbound logistics solution. Boeing wanted a provider that would customize its solution for Boeing's needs, not try to force-fit its canned solution on the process. According to Tim Terry, director of materials management at The Boeing Company, working with a mid-sized 3PL like New Breed gives Boeing the flexibility and attention to detail required. "You need a partner that cares about your business so you don't get lost in the soup," he says.

Solution New Breed established a supplier hub near the factory, allowing Boeing to eliminate non-manufacturing-related storage and labor in its plant. The location maintains more than 74,000 SKUs of high-value inventory. New Breed's web-based order management and warehouse management systems are integrated with multiple Boeing systems to manage order processing and provide visibility to inventory and orders. Product is scanned at every move during the process, so visibility is real-time. The solution requires segregation of inventory owned by multiple entities. Parts stored range from tiny consumables to 30-foot-long holding fixtures.

Pre-fabricated kits deliver parts to the line ready to assemble

With an improved storage solution in place, the Boeing-New Breed team set its sites on improving labor productivity. In the prior model, Boeing factory workers

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Boeing is the world's leading aerospace company and the largest manufacturer of commercial jetliners and military aircraft, with revenues exceeding $50 billion.

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Director of Materials Management,
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(continued) spent too much time looking for and unpacking individual parts, then disposing of packaging materials – costly tasks when done by a skilled production worker. Today, these parts are delivered to the line ready for assembly as part of a pre-fabricated and sequenced kit. New Breed engineers designed 4,000 such kits after analyzing which tools and parts were used together during stages of the manufacturing process. All de-trashing and kit assembly now happen more economically at the New Breed warehouse as Boeing Rotorcraft manufacturing workers devote their time to direct assembly.

Each kit is identified by an RFID tag and kits pass through RFID readers before they are shipped from the New Breed-operated supplier hub and again upon receipt at the Boeing plant. These automated checks assure accuracy and further reduce factory labor.

Planning and implementation of this complex kitting solution took time, but Boeing is now seeing the benefits of this customized solution in improved productivity. “The right solution for us had to be customized a little,” says Terry. “The same solution might not work for another unit of Boeing.”

Systems integration and web-enabled processes allow Boeing and New Breed workers to continue using existing systems.

When orders are received, New Breed arranges delivery to a precise location on the line within a designated time-window. Shuttle runs are both scheduled and unscheduled and use vans, flatbeds and tractor-trailers. Orders are executed using New Breed operating systems, providing Boeing staff with real-time visibility to order status as data passes seamlessly between the two companies. Rather than introduce New Breed systems to Boeing workers or vice-versa, New Breed’s IT team created interfaces between the two companies’ operating and planning systems. This allows Boeing to leverage New Breed systems to automate processes while Boeing staff continue to manage inventory and process orders on their own familiar systems.

Results The collaborative solution for inbound logistics has eliminated waste on a number of fronts and enabled Boeing to:

- Reduce manufacturing costs through a streamlined process for feeding component parts to the assembly line
- Increase production by increasing both manufacturing space and the efficiency of manufacturing workers
- Reduce the cycle time for material requests, from order to delivery
- Reduce plant labor formerly used to remove and dispose of packaging materials
- Avoid capital investments for updating warehouse equipment and systems

On logistics outsourcing, Boeing’s advice is not to set performance standards too low. “APICS standards for inventory accuracy are 98% so that’s what we aimed at,” says Boeing’s Terry, “but we’re seeing 99.5% or above from New Breed. And turnaround time is much faster than we anticipated.”

New Breed is a third-party logistics services provider that helps companies gain greater control of complex logistics operations. To learn more about New Breed’s logistics management services visit www.newbreed.com, or contact New Breed at: 866-4-New-Breed (866.463.9273) info@newbreed.com

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New Breed Logistics
4043 Piedmont Parkway, High Point, NC 27265
866-4-New-Breed | info@newbreed.com
www.newbreed.com