

MOTIONWORKS ASSET
AEROSPACE MANUFACTURER CASE STUDY



Zebra MotionWorks™ take productivity to new heights.

Challenge

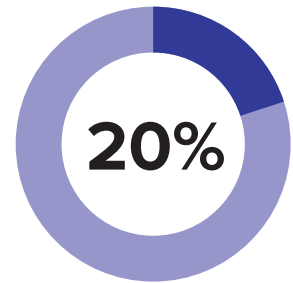
Mechanics for a leading global aerospace manufacturer use costly, specialized tools to complete the thousands of manual processes required to build an aircraft. And to ensure that production schedules are being met, tools must be accounted for—and in optimal working condition—on a need-to-use basis. So when inventory is misplaced, misappropriated, unreturned or compromised, costly delays occur not only along the line but, ultimately, in delivery of the aircraft.

Solution

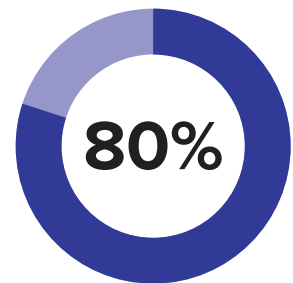
Zebra MotionWorks provided automated real-time asset visibility into the location and condition of every critical tool and piece of equipment. The data led to actionable insights that enabled management to optimize processes based on location, asset use and usage time, and to make better decisions when tools and equipment inventory shortages actually occurred. In addition, staff was able to locate misplaced tools, process more work orders, maintain required tool stocks, and more.

Results

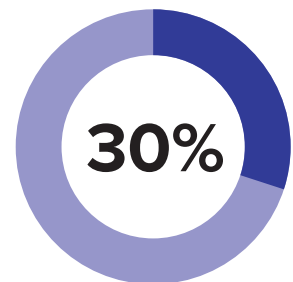
The results from MotionWorks were immediate. With real-time tool and equipment visibility—and the insights this data provided—personnel were able to quickly locate misplaced tools, view the precise location of assets, and accurately and reliably know the location and usage status of tools. They improved equipment utilization by 20 percent, reduced work delays due to missing tools by 80% and reduced out-of-certified tools by 30%. They also reduced capital expenditure to replace “currently not found” items by 50%, and reduced workloads by cutting the search/find time from over eight hours to less than 30 minutes. This reduced capital expenditures and workloads, eliminating manual inventory audits and cycle counts, minimizing downtime and maximizing asset utilization.



**Improvement in
equipment utilization**

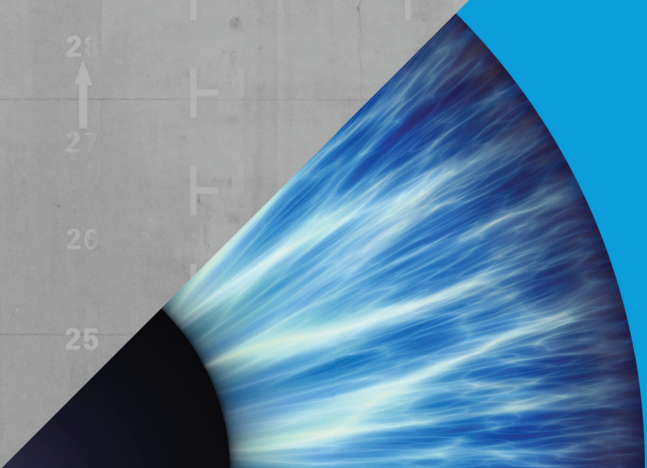


**Reduction in work delays
due to missing tools**



**Reduction in
out-of-certified tools**

MOTIONWORKS MATERIAL
AUTOMOTIVE MANUFACTURER CASE STUDY



Zebra MotionWorks™ accelerates material replenishment.

Challenge

For a leading automotive manufacturer, knowing what inventory you have—and where it is—is critical. Because the inability to locate and manage parts and inventory can slam the brakes on the production process, delay the delivery of products and cost millions. Automating parts replenishment through real-time information and location solutions is essential for keeping the assembly line moving, eliminating lag time and minimizing line-side inventories.

Solution

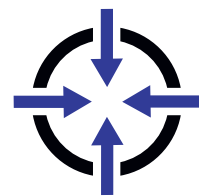
Zebra MotionWorks location solutions armed workers with the ability to replenish parts with the press of a button. Line workers could instantly request a fresh supply of materials via wireless WhereCall technology, and the locating system greatly improved the efficiency of the material replenishment process, optimizing the delivery routes to reduce traffic on the floor. Integration with Automated Storage and Retrieval systems (ASRS) and integration with Warehouse Management Systems ensured monitoring of parts supplies, and signaled when a particular part was due for re-stocking, enabling a line that never runs out of parts.

Results

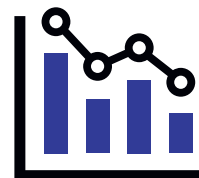
MotionWorks solved this manufacturer's material replenishment challenges by greatly improving flexibility, reliability and capability. With the elimination of manual and paper-based delivery systems, labor was more efficient, the line was reliably stocked with materials as needed and substantial cost savings were realized through productivity improvements and reduction of assembly line downtime due to parts shortages. The capabilities of MotionWorks Material provided incredible real-time visibility to the supply chain that allowed for the use of dynamic inventory storage to save time, money, space and inventory—and ensuring it flowed smoothly and seamlessly.



Increased productivity

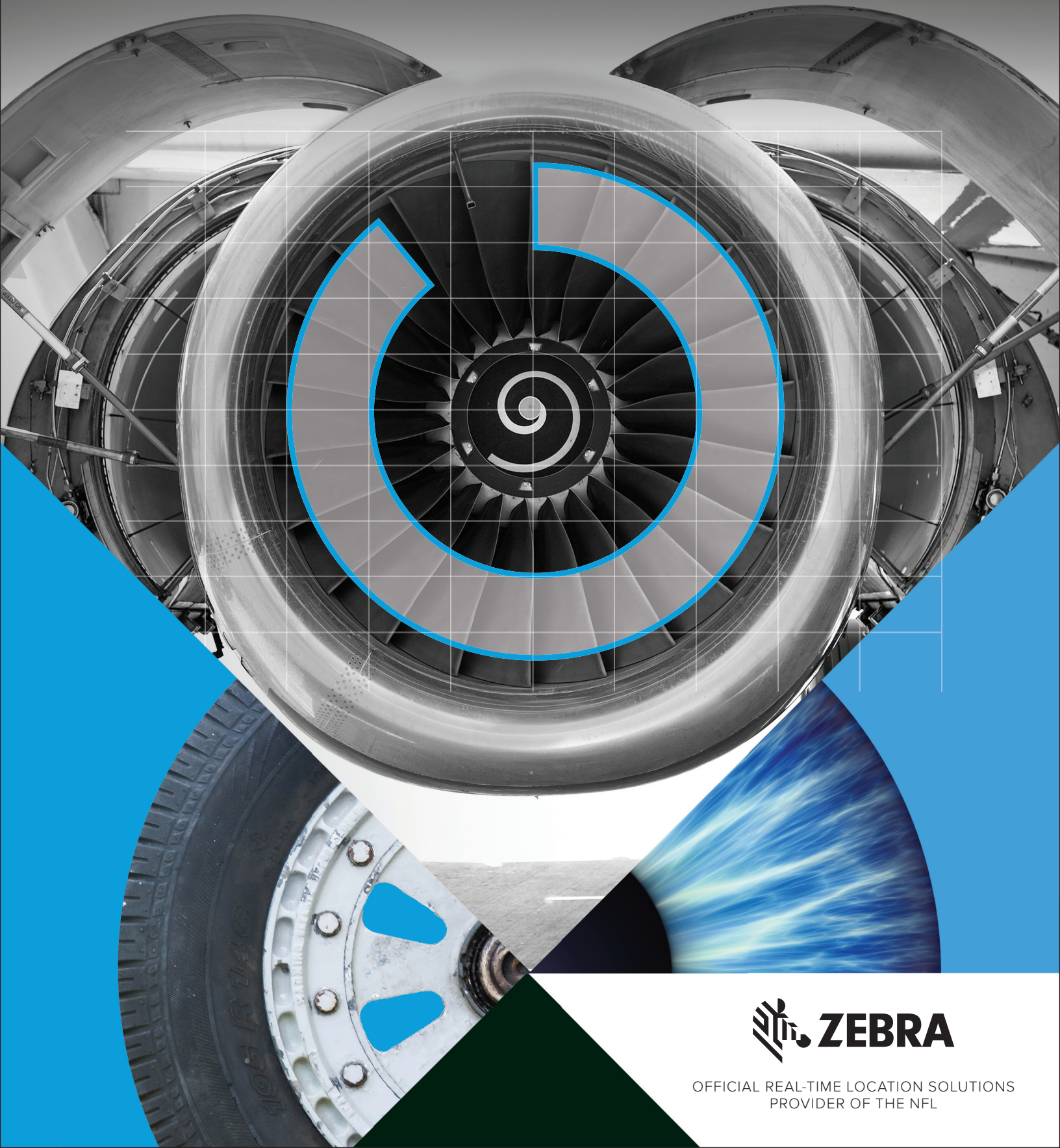


**Optimized delivery routes
and reduced floor traffic**



**Reduced headcount and
assembly line downtime
due to part shortages**

MOTIONWORKS ASSET
AVIATION MANUFACTURER CASE STUDY



Search for aviation assets rescued by Zebra MotionWorks.™

Challenge

A major manufacturer in the aviation industry needed to reduce the amount of time spent searching for critical assets across 20 facilities, because the stoppages and delays were becoming increasingly costly. Delivery misses, audit failures, late testing and more—the consequences of last minute efforts to find the necessary assets and other equipment—resulted in prohibitive replacement costs and physical losses, as well as thousands of lost workforce hours.

Solution

Zebra MotionWorks location solutions provided real-time visibility into thousands of assets across the various facilities. By deploying “smart” portals located at strategic areas, along with the use of Zebra handheld readers for close range asset locating, we created zones that calculated the location of items moving through them—and in addition, automatically updated their status. The ability to track parts across sites and buildings reduced part loss, increased productivity and cut labor and hardware costs.

Results

By reducing the amount of time and money spent searching for and/or replacing assets, Zebra MotionWorks helped productivity take off. With the location of all critical assets on their radar, this aviation manufacturer realized a great reduction in lost inventory of high-value assets, saving an estimated \$1 million a year, gained the ability to track last known location of shipments and assets, and implemented automated validation of shipping and receiving movements within its facilities, reducing labor costs by about \$80K.

\$80K

Reduction in labor costs

\$1 Million

Reduction in lost inventory
of high-value assets in one year



Reduced time spent
searching for missing assets

MOTIONWORKS ASSET
BREWING COMPANY CASE STUDY

PRODUCTIVITY



Zebra MotionWorks™ taps into greater productivity.

Challenge

A global brewing enterprise was faced with a challenge: manual picking in the warehouse was taking too much time and, even more problematically, was prone to error. They needed a faster, more flexible way of counting inventory without tagging everything in the warehouse because—in its current iteration—this required too much time and too much manpower. An automated system for first in, first out inventory (FIFO) was critical to their operations.

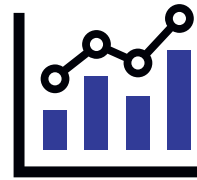
Solution

Zebra MotionWorks location solutions enabled real-time visibility into the entire operation. The solution utilized drones with visualization software guided by Zebra Active RFID to measure actual inventory on hand. Heat maps tracked forklifts and people, to ensure the most efficient pick routing.

Results

With Zebra MotionWorks, this worldwide brewing operation had good reason to raise a glass. With real-time data and the insights gleaned from it, pick and load validation resulted in fewer recalls, inventory was completed in 20 minutes (vs. 3 hours) and the ability to automatically send the right person to the right pick—oldest product first, based on real-time inventory—was realized. In addition, accidents were reduced resulting in greater safety for the employees on the warehouse floors.

9x Faster
Inventory completion

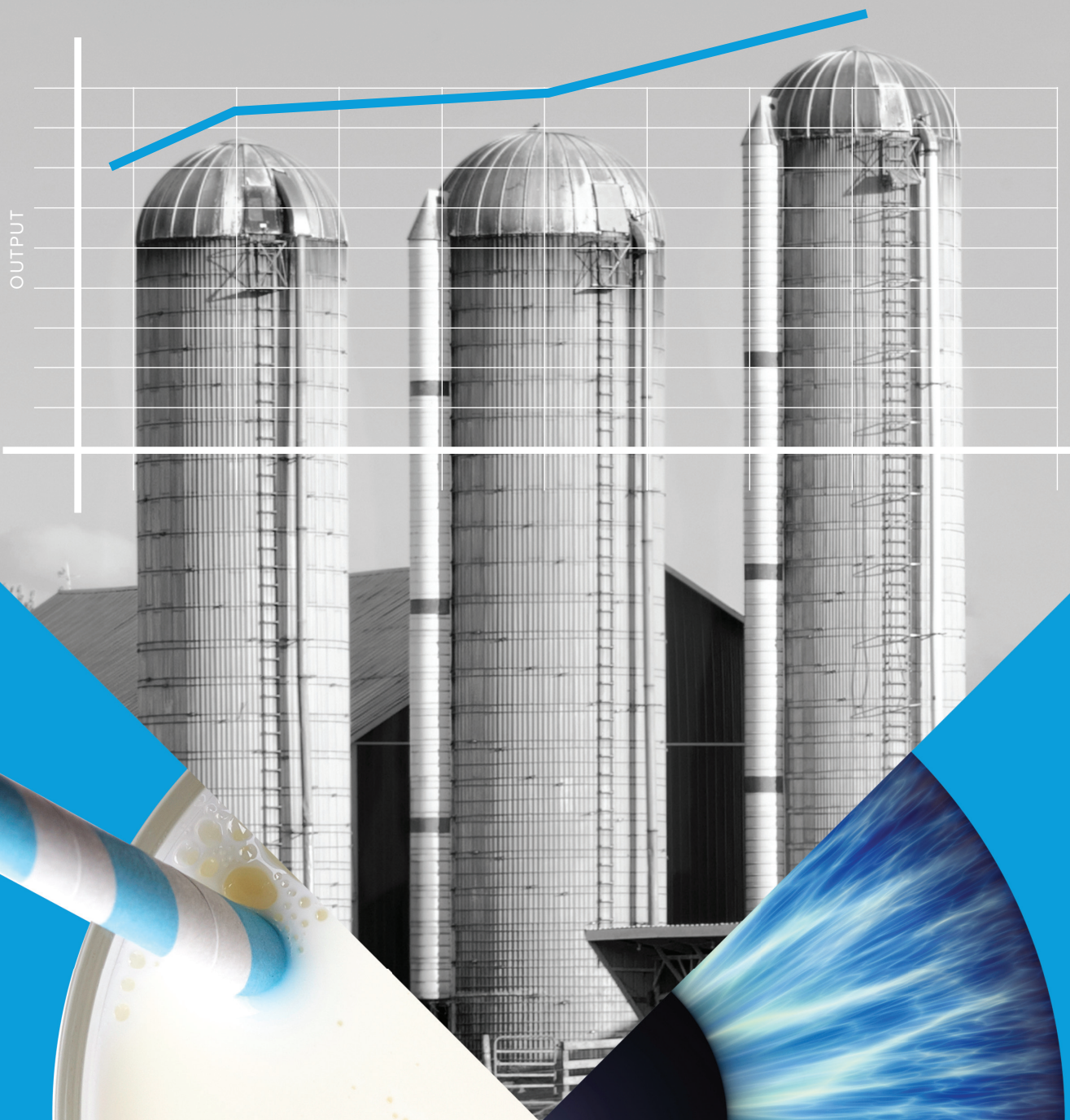


**Increased safety
of employees on the
warehouse floor**



**Pick and load validation
resulted in fewer recalls**

MOTIONWORKS ASSET
FARM EQUIPMENT MANUFACTURER CASE STUDY



Zebra MotionWorks™ helps dairy farm machinery manufacturer and herd management grow their business.

Challenge

One of the world's leading suppliers of process technology—which provides solutions and components for sophisticated production processes in various end-user markets—needed to reduce the time it took to track and manage cows in livestock farming.

Solution

Zebra DART Ultra Wide Band tags were attached to cows registered with sensors located throughout the farms. Zebra MotionWorks location solutions provided real-time tracking of every cow in a herd. This location data was then integrated with their cow tracking application to enable a complete solution.

Results

Zebra MotionWorks allowed this livestock enterprise to herd all their information and glean actionable insights that greatly reduced the manual time it took to find a specific cow. Visibility to how much each cow moves, and how frequently, gives them the ability to draw conclusions based on movement and generate alerts if anything out of the ordinary occurs. This allows their customers to immediately take care of animals requiring special attention, saving time and driving down costs. By implementing this tracking and analytics technology, milk production at one farm increased from 400,000 liters to 500,000 liters.



**Pick and load validation
resulted in fewer recalls**

:30

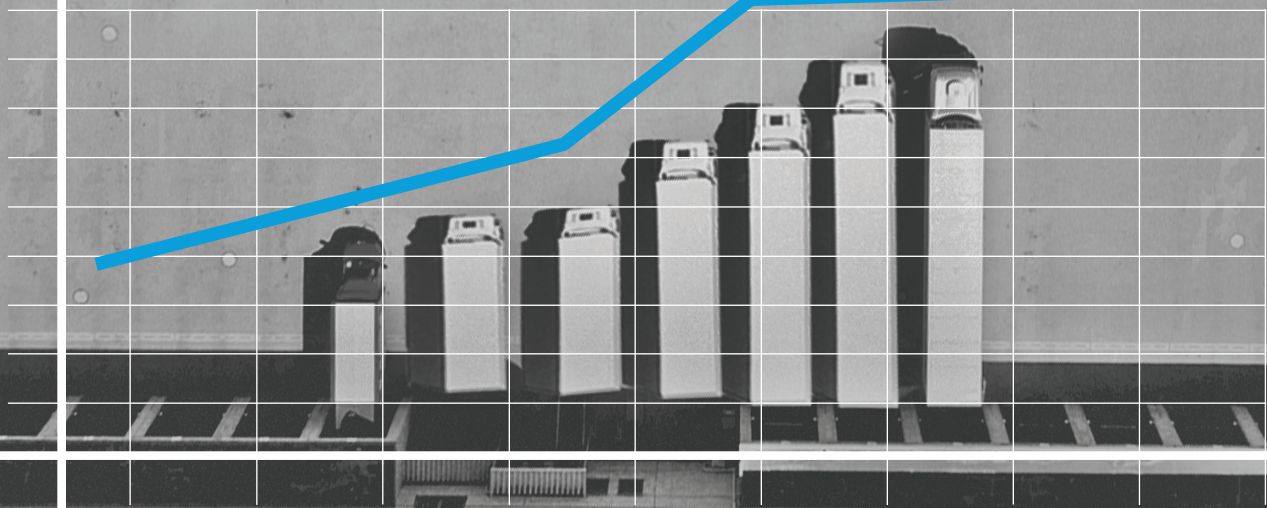
**Seconds to locate
a specific cow**

100,000

**Liter increase in
milk production**

MOTIONWORKS YARD
HOME IMPROVEMENT RETAILER CASE STUDY

PRODUCTIVITY



Zebra MotionWorks™ puts yard management miles ahead.

Challenge

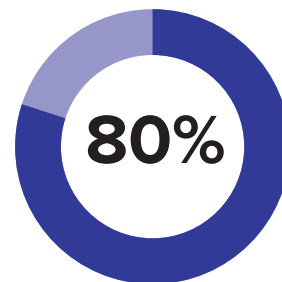
For a major home improvement retailer, increasing switcher efficiency and accuracy was critical to improving yard productivity. In addition, it was imperative to reduce trailer-yard dwell time, integrate up to three disparate logistics environments, eliminate manual intervention and check-in/out processes, and implement a more effective way of matching the demands of the warehouse with yard operations. Accomplishing this would require real-time data reporting and intelligent insights.

Solution

Zebra MotionWorks Yard delivered a systematic approach to yard management that bridged transportation, logistics and distribution operations, and integrated with existing systems, allowing the retailer to increase overall velocity. And the tight orchestration of yard, transportation and warehouse operations enabled a more continuous, fluid flow of inbound and outbound materials and provided alert notifications to yard operators to identify and respond to exceptions, which improved delivery performance, safety and equipment utilization.

Results

Integrating Zebra MotionWorks Yard with their systems across 19 distribution centers enabled them to pull yard operational data and generate reports for each site and region, providing real-time visibility and actionable insights that resulted in much improved yard efficiency and faster supply chain velocity. Average trailer check-in times were reduced by 80%. And consolidating systems led to reduced labor and dwell times, saved fuel costs, expedited the check-out process and minimized the travel time and distance of trailers and switchers. In essence, Motionworks optimized switcher productivity and enabled a more efficient, agile business by making actionable information readily available to decision makers.



Reduction in trailer check-in times



Boosted warehouse productivity



Accelerated inbound & outbound gate operations