



Case Study: Fox Racing

Extending Voice to Support Operational Excellence with
Real Results for a Growing Business



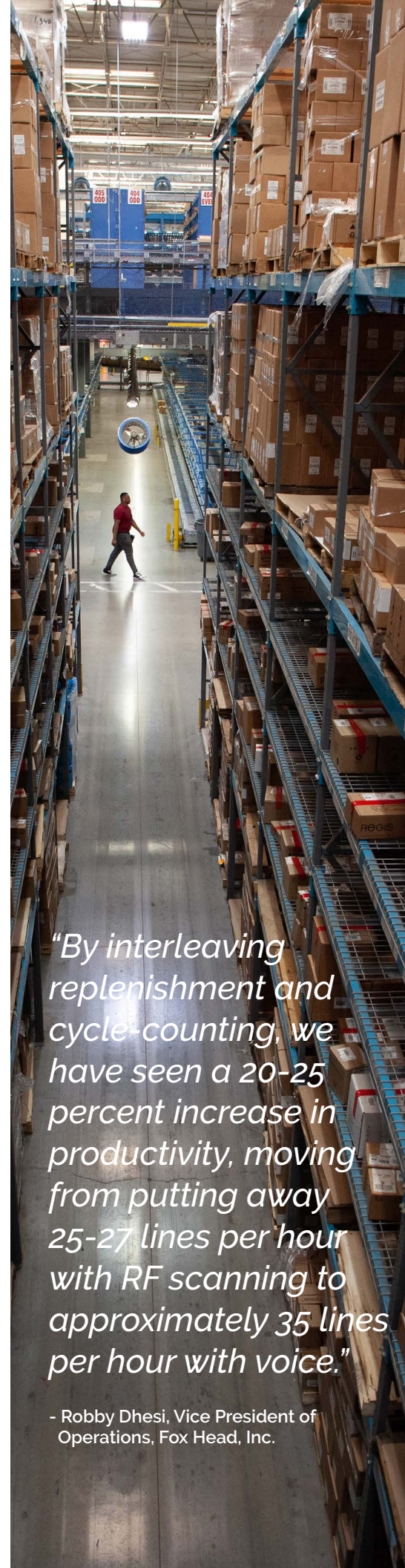
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Founded in 1974, the Fox brand is the most recognized and best-selling brand of motocross apparel in the world today. Headquartered in Morgan Hill, California, with additional offices in Irvine, California, Calgary, Alberta, Canada and Barcelona, Spain, Fox Racing built its business by developing clothing for the high-intensity, physically demanding sport of motocross.

Since its founding three decades ago, Fox Racing has become an international leader in the youth lifestyle clothing market, with its famous Fox Head logo seen worldwide. In recent years, the company has expanded into surfing, wakeboarding and mountain biking apparel, and has grown to support a significant internet business, as well as having a retail presence in major department stores.

To support continued growth, Fox made the decision to implement Vocollect Voice® to help improve its overall quality as a distribution operation, not just to achieve their productivity and quality goals. The results of implementing voice technology across multiple distribution workflows were significant bottom-line and performance improvements. In turn, these business operations improvements resulted in the company being able to support tremendous growth, both internationally and in Fox's burgeoning e-commerce business.

Distribution leaders looking to improve productivity and performance will want to understand the success Fox Racing has had with voice, and companies that are



“By interleaving replenishment and cycle-counting, we have seen a 20-25 percent increase in productivity, moving from putting away 25-27 lines per hour with RF scanning to approximately 35 lines per hour with voice.”

- Robby Dhési, Vice President of Operations, Fox Head, Inc.



already using voice for picking will want to understand Fox's perspective on the value of voice for many other workflows.

Challenge at Fox

With the addition of new product lines and rapid volume growth, Fox's business had reached the point where additional growth could not be supported with its current systems. "We simply did not have the bandwidth to keep pace with the growth or to continue meeting the commitments we had made to our customers. We had been using paper and labels in our picking operation, and RF scanning for putaway and replenishment. We discovered that our paper-based picking system sub-optimized both productivity and accuracy and our RF technology had a number of moving parts that seemed to affect reliability," said Robby Dhesi, Vice President of Operations at Fox.

Working with technology partner HighJump, leadership at Fox identified the following as priority challenges that they wanted to address with voice:

- Keeping pace with a highly fluctuating order volume
- Difficulty in planning distribution staffing because of fluctuating order volumes
- Recurring cost of RF equipment replacements
- Long worker training times and 'pilot error'

The Investigation of Voice

For picking, Fox investigated a variety of technologies. The company found RF scanning that couldn't deliver the desired productivity gains, and pick-to-light couldn't deliver the flexibility or accuracy. For example, picking



Quick Facts



5 DISTRIBUTION CENTERS



MORE THAN 35,000 SKUS



HIGHJUMP™ SOLUTIONS
HighJump Warehouse Advantage
HighJump Voice

"We find voice devices are more stable than RF devices; I don't plan on replacing our Vocollect talkman devices for about five more years."

- Robby Dhesi, Vice President of Operations, Fox Head, Inc.



a size-15 boot with an RF gun was difficult; a hands-free operation was needed to give the worker greater freedom of operation. After deciding on a voice solution, Fox investigated a variety of voice providers, and determined that Vocollect could best deliver the proven business stability and results for the long haul. After setting up a one hour test comparing voice to paper on pick-to-tote and cart-picking, senior management was sold on Vocollect Voice. With the thorough analysis of their options complete, Fox began implementing Vocollect Voice for picking in its Morgan Hill and Gilroy, California distribution centers.

Picking and Beyond

With integration support from HighJump, Fox embarked on a journey toward operational excellence that has become a true distribution success story. With the demands of processing more than 35,000 SKUs across multiple channels of operation, voice has proven a catalyst for company growth, helping Fox to address a wide variety of challenges to the business.

With a tremendous and rapid improvement in productivity and accuracy in picking through voice, Robby Dhesi and his team immediately saw a gold mine – why not further leverage this investment in the voice system and see how it could affect productivity across other workflows such as cycle-counting and replenishment? If they could generate as much as a 15 percent improvement in productivity in additional tasks beyond picking, they could see a clear path to keep expanding their market reach around the world. Further, if they could transition as much as possible from RF scanning to strictly voice, they would likely generate even more benefits and improvements. For example, oftentimes there are benefits to be gained by a boost in worker satisfaction as employees recognize the investment



“The decision to go with Vocollect was solidified when we were able to setup a live demo with our warehouse staff and our SKUs. To see the effect voice could have in our own warehouse was an exciting and eye-opening experience.

- Robby Dhesi, Vice President of Operations, Fox Head, Inc.

the company is making in helping them succeed in meeting productivity and accuracy goals.

Cycle Counting and Replenishment

“No matter how good we got at picking with voice, our pickers were waiting too often for the next order/cart to get to their station. Prior to implementing voice, our cycle-counting was performed as a full-time function using RF scanning every three months, with only 60 percent accuracy. Part of this was because the workers could become fatigued from counting items full-time,” said Dhesi.

With the in-line method, Fox's WMS calculated when to turn cycle-counts on and off, based on order volume. The goal was to eliminate worker idle time. When picking personnel were standing idly by awaiting an order, a mandatory 90-day scheduled cycle-count would then be triggered. The pickers then read the aisle where they were currently standing and they were then directed to cycle-count any location that had not been counted in 90 days. Fox now performs less than 10 percent of scheduled cycle-counts in the normal 90-day cycle, because most locations have already been counted opportunistically.

For replenishment, Fox now has a dynamic slotting function embedded into the voice system. Workers put items

into bins three to four times a day, because while they have 35,000 total SKUs, they only have forward pick faces for 19,000 SKUs. Dynamic slotting allows them to shorten the travel path for picking and replenishment. If a worker goes to pick a bin and it is empty, or he has run out of pick bins within a given class (such as hats), voice directs the worker to a dynamic aisle where he can say where he is, and the WMS will pick a dynamic slot for the product. The user just says, “I am in Alpha One” – there is no need to say the complete location.

Additional Benefits of Voice

With voice, Fox has found it easier to make changes faster than with RF scanning. Processes with up to a certain level of sophistication are easy to test and migrate into production. Training is now conducted within a window of hours or even minutes – including the process changes. Voice has essentially liberated the team from RF scanning in many Fox processes. “Having a computer, a scanner, a monitor... those are all hardware pieces that can fail. No matter what system we had, every three years I was replacing computers at work stations. So the transition to voice was very cost-effective for us on many fronts,” said Dhesi.

In addition, the hands-free/eyes-free functionality of voice fits well with Fox facilities. A worker now opens a case



and drops the contents into the pick bins, so having both hands free saves time and improves safety. With having to pick up an RF scanning gun from the holster, scan the item, put the gun back in the holster, and grab the case – there are countless superfluous touches that the team at Fox can now bypass. Finally, the simple nature of using voice also helps to insulate users from changes to the system.

For example, Fox recently migrated from a homegrown ERP to SAP® and although there were some changes to the High Jump® WMS, the voice users were never affected.

European Operations and Voice

“Using voice for receiving has been a tremendous asset for our European operation, which has a 50,000 square foot distribution center. In North America, customers order the product first and then tell a company whether they want it or not. In Europe, customers commit to items way ahead of production. Fully 90 percent of the volume in Europe is from orders that come in before the purchase order has been placed for the order. Using voice for receiving helps us pre-book multiple orders and schedule the necessary picking and receiving,” said Dhesi. Another benefit of voice that Fox has

experienced has been the significant reduction in new employee training time. Dhesi and his team needed a quality process that would be easy to train and simple to use. With RF, training time was approximately 12 hours. This has been reduced to 1.5 hours with voice.

While the benefits seen at the individual process level have been significant, ultimately Fox instituted voice because of its ability to help them improve their overall quality as a distribution operation, not just to achieve their productivity and quality goals. In an effort to monitor this quality, the Fox voice system also allows managers to turn on logging when there are issues – logging anywhere from eight hours to a week to ensure the issue is fully documented. This allows any issues that arise to be addressed swiftly before they become larger and more complex. For immediate user issues, the Fox voice system allows a supervisor to launch a dialog box of what the user is being prompted to do.

The Future

In the future, Fox is looking to develop a voice solution to guide workers through the packing process. When it comes to the packing workflow, it is true that not one size fits all. In the past, Fox's packing process was simple: Workers picked directly into a carton, the carton traveled to a packing station where its weight

was verified, it received shipping and packing labels, and out the door it went. Today Fox's retailers and direct customers, however, have many more requirements. These days a packing station worker could have to tag, ticket, remove bags, sensor, put on a customer ticket, hang garments, or do a special kind of folding – all information that is displayed on the monitor for the packer.

With the increased demands at the packing station, Dhesi and his team have

estimated that voice for packing will help eliminate as much as 20 percent of unnecessary worker movement, helping them better meet their seasonal order demands with an existing workforce. "Voice enables the highest level of accuracy and detail required for e-commerce, catalog and mail order operations to maintain top-level customer service. The superior accuracy we know we will gain also will reduce the cost of returns," said Dhesi.

Figure 1: Summary of Statistics for Fox Racing

Picking Productivity	50% improvement
Accuracy	82%> 99.9999%
Training Time	One day.....>1.5 hours for full worker productivity by Day 2
Labor	35 selectors before voice> 18 selectors after voice
Dedicated Cycle-Counters	4 before voice> 1 after voice
Putaway	25-27 lines/hour with scanning> 35 lines/hour with voice
Interleaving Picking with Cycle-Counting	35% improvement
Worker Satisfaction	Greatly improved
ROI	6 months (6 less than projected)

Figure 2: Picking Statistics for Fox Racing

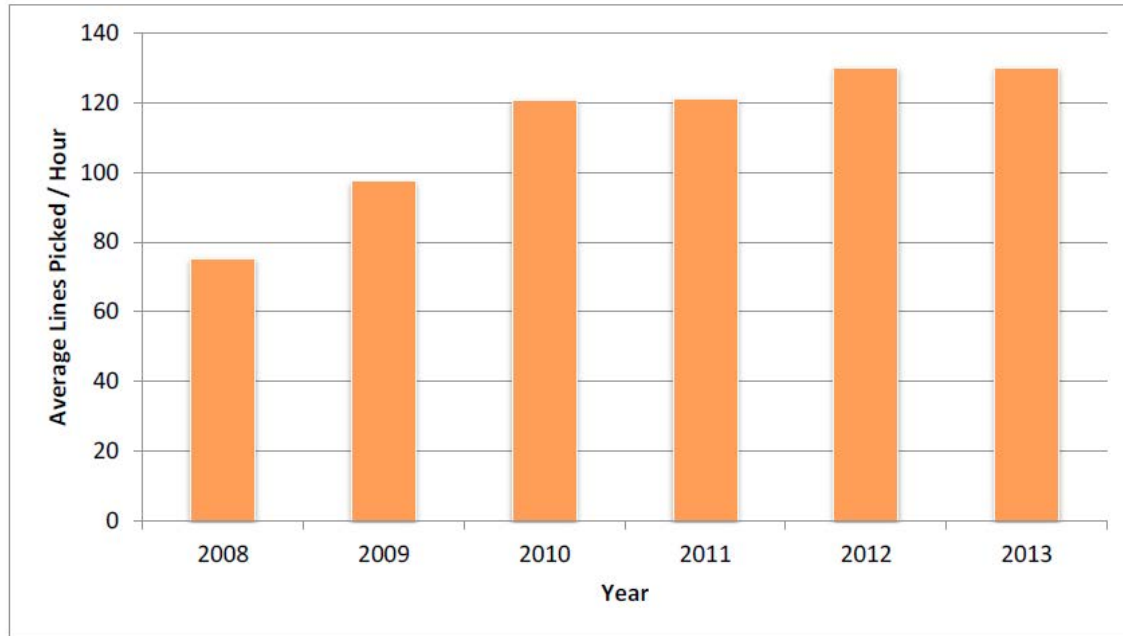


Figure 3: Staffing Statistics for Fox Racing

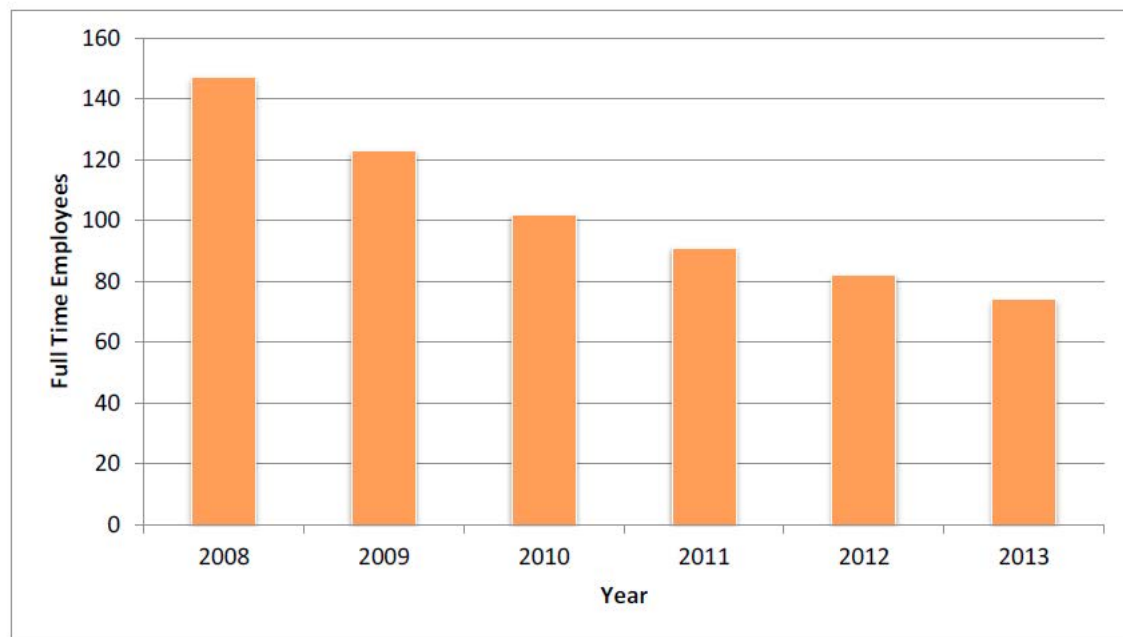
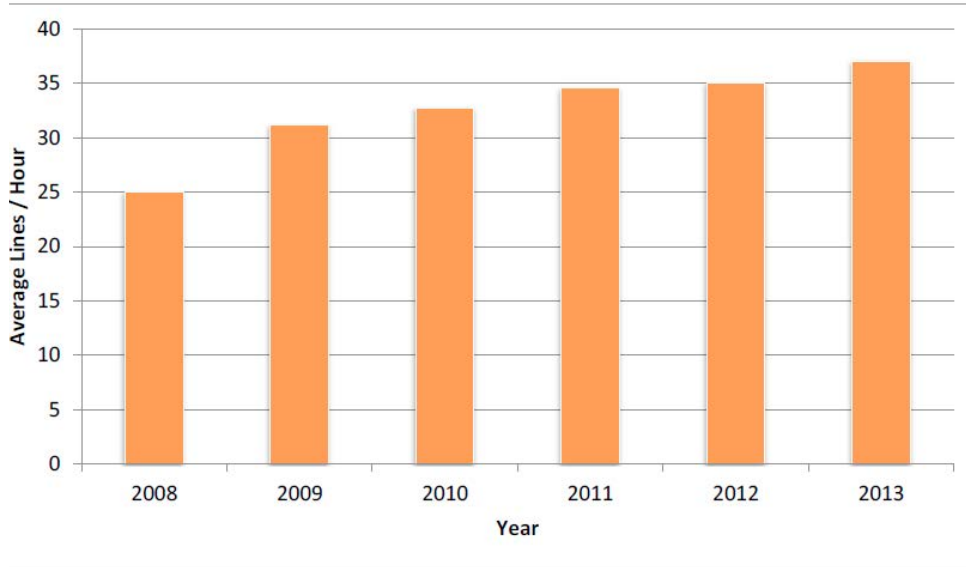


Figure 4: Replenishment Statistics for Fox Racing



"... Fox is quite satisfied with the way we have been able to rapidly identify and integrate new ways of using voice across multiple workflows. We would be happy with the results we have attained just from using voice with picking, but the value-add we have found in applying voice for many other workflows and the ability to interleave tasks has made our overall performance skyrocket and keep pace with the growing demands of a successful business."

- Robby Dhesi, Vice President of Operations, Fox Head, Inc.

Today's consumer has ever-higher expectations for purchasing convenience, delivery speed, choice and adaptability. More options for consumers spell greater complexity for the supply chain. It's no longer enough to fulfill demand – you must anticipate it, predict it and make smarter, faster decisions.

In a high volume, complex logistics environment, the shift to an on-demand model can be challenging – but failing to adapt poses even greater risks. You need a technology partner with a proven track record of delivering efficiency and a lower cost of ownership today, plus the flexibility and innovation to help you realize your strategic roadmap tomorrow and beyond.

At HighJump, we're integrating our proven solutions for the warehouse, transportation and logistics ecosystem with emerging technologies – from around our company and around the world – to build the supply chain of the future. Leveraging advanced cloud technology, we can help you ride the wave of data to achieve greater efficiency, uncover actionable insights, and stay ahead of the curve.