VOICE BEYOND

a Mountain Leverage Company

A GUIDE TO

Understanding Your Cost Per Error

Table of Contents

Overview

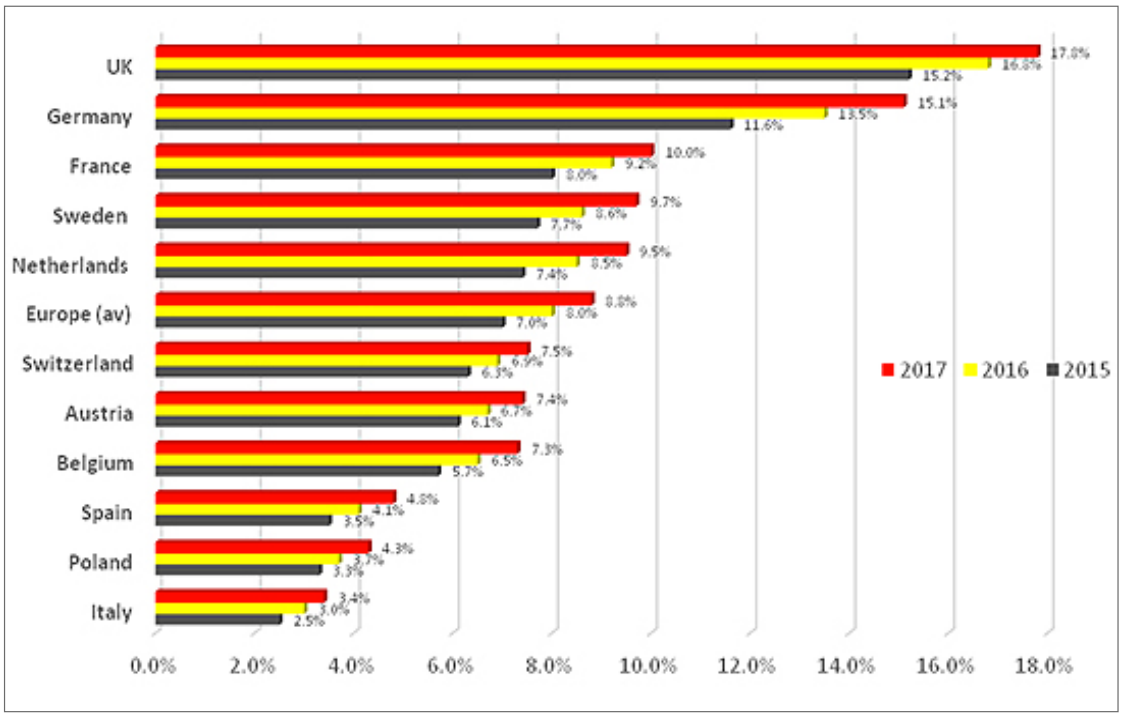
Because of new technology, distribution environments now achieve service levels that were once thought impossible. Advances in products such as warehouse management systems (WMS), labour systems, engineered standards and radio frequency systems have boosted service levels into the upper 90 percent range for most companies. Industry standards are now so high that technology adoption is a necessity for any company that wishes to meet or exceed today's service level expectations.

Even companies that have implemented new technology, introduced new management philosophies, improved workforce training, and fostered a team environment often face three persistent problems — improving accuracy, increasing productivity, and managing a technology-minded workforce.

Market growth is driving rapid technology adoption

The scope of the challenge is increased by the amazing growth in today's e-commerce segment of the retail market.

U.S. online sales[1] in 2015 were £269.46 bn growing by 14.4% to £308.26 bn in 2016 and forecast to be £354.20 bn (+14.9%) in 2017. In Western Europe e-commerce grew from €201.33 bn in 2015 to €232.60 bn in 2016 (+15.6%) and are expected to total €265.68 bn in 2017 a rise of 14.2%.



1. Source: *Centre for Retail Research - 2017 Report on Online retailing: Britain, Europe, US and Canada*

Shoppers who receive an erroneous order, do not return again to that seller's site.

This rapid shift in today's shopping model insists on 100 % accuracy for the online shopper. The days of receiving the wrong item, size, colour or quantity are now inexcusable.

Research statistics show that the online shopper who receives an incorrect order will most likely not return to this provider again.

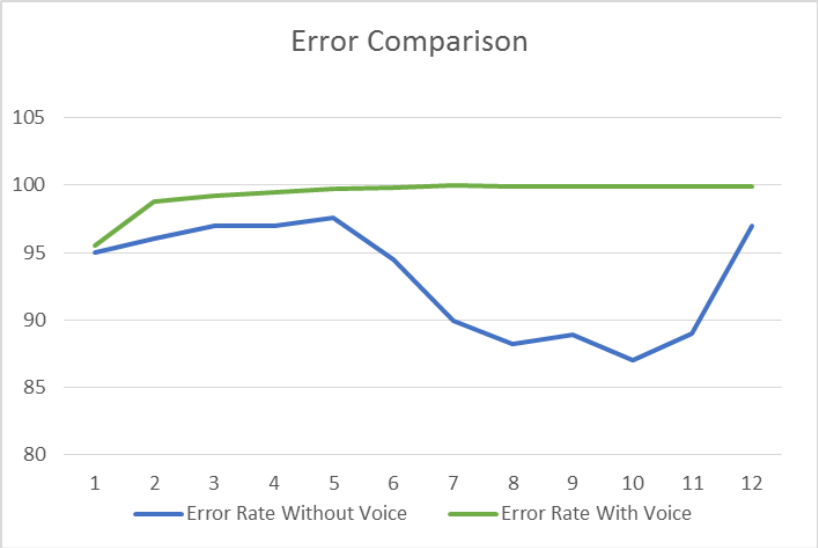
Is it possible to reach 100% accuracy?

Technology has helped industry rapidly improve service levels and consumer demand is forcing companies to achieve and maintain the perfect order. The last few percentage points of improvement gains have proven to be significantly more difficult than earlier double-digit improvements. How can the last obstacles to 100% accuracy be removed?

One solution is voice technology. Voice provides the hands-free, eyes-free environment that lets employees work at a maximum pace and concentrate on necessary tasks instead of the label, pick list or RF device.

The value of voice is proven by the list of companies currently using voice systems. Businesses report that voice has increased accuracy to above the 99.9% level.

Companies that have invested in voice systems view that investment as part of a sound management strategy that puts their operations closer to the 100% accuracy target. By leveraging voice, many have taken error rates down to 0.04% or less. Productivity gains have been strong as well. Although many factors such as previous workforce training, supervisory skill, and employee commitment play a part in improving productivity, statistics show that companies can gain as much as 20% in picks-per-hour productivity within just a few weeks of introducing a voice system.



The key to any workflow improvement program is the same today as it's always been — ROI (Return on Investment) and cost avoidance. The ROI proof point is much more difficult to embrace than in years past as e-commerce and multi-channel distribution is becoming the norm for many companies. Quantifying the cost of a mis-ship was historically a black and white process. Now, having to take into account the loss of a sale and loss of future sales is beginning to show itself as a major component of the accuracy equation.

Expectations

Once a company understands its supply chain needs, it can decide on voice technology by calculating the cost benefit voice can add to its operations. Grocery companies were the first to make the move to voice technology. With low margins and high competition, grocery companies were forced to seek better and more productive ways of doing business. With the evolution of voice technology and the compelling results of voice implementations, we are now seeing delivery of these results in every aspect of retail, wholesale, e-commerce, multi-channel, and 3PL distribution models – as well as increasingly in maintenance, inspection and repair processes.

Every operation is striving for the perfect order shipped in the most productive and cost effective way possible - every time.

The constant evaluation of all aspects of an operation, to ensure this outcome, must include technology advancements as well as the ever-changing work force or labour pool.

Cost Per Error (CPE)

Due to the inaccuracies of picking/selection methods like pick tickets, bar code scanners or label picking, there is a need to identify errors before they leave a warehouse or distribution centre. This demands a means of catching the error prior to shipment utilising order auditors, inline scales to check weight tolerances and/or packing stations to double check orders and potentially repackage or re-box shipments. None of these solutions is foolproof and all add considerable cost to an operation.

Accounting for errors has been anything but consistent. Each business typically has its own method for identifying and calculating both the cost of making errors and the cost of correcting them, no matter what system was used to track the errors. Factors include the burden rate per employee, transportation process and costs, auditing process and costs, and type of company.

Calculating Your CPE

Cost per error can be accurately calculated by reviewing the sequence of events in the distribution process. The list that follows outlines events that may occur within a picking and shipping process. Each event can be matched with an associated burden rate for the employee performing the task, the time it takes to perform each task, and the frequency of each task.

There are two types of errors in the picking process:

1. The picking error that is caught before the order leaves the building.
2. The picking error that is recognised at receipt, usually by the receiving customer or the consumer.

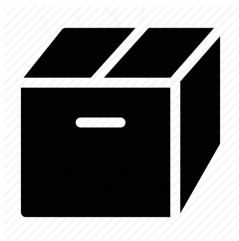
Each of these errors have different costs and different consequences.

ERROR CAUGHT:

If the error is caught by one of several types of auditing methods and has not left the building, the following steps or processes may be taken.

1. Stop the order from being processed
2. Contact the individual responsible for researching the error and correcting (lead supervisor, inventory control)
3. Once research is complete, contact the individual to correct the order (replace wrong item, correct quantity picked, return wrong item to location in warehouse)
4. Repack new or corrected item/quantity
5. Record the error for tracking of individual picker
6. Inventory control to ensure correct inventory levels for items in question
7. Resume order shipping

ERROR SHIPPED:



If the error is *not caught* by the audit method and is reported by the customer, the following steps or processes may be taken.

1. Customer receives the shipment error (wrong item, size, colour, quantity)
2. Customer contacts customer service to report issue
3. Customer service takes information and determines action for customer (return goods via RMA, reship correct item/quantity)
4. Customer service checks inventory levels to ensure correction can be made and shipped
5. Warehouse is made aware of issue and receives a replacement and usually expedites order to fulfill customer needs
6. Once expedited replacement order is received at warehouse, the order is now prioritised and interruption to normal order sequencing occurs – plus the original order that was shipped using standard terms must now be shipped overnight to ease customer concerns
7. Customer service follows up to ensure customer receives correct items and is satisfied
8. Wrong items received back into facility, inspected, returned to stock, customer service notified, and potential credit established

Cost is incurred in each of these error scenarios – to conduct the audits, correct the error, and see that the correct order is shipped to the customer. This in no way determines if future sales are in jeopardy with this customer or the original order is cancelled in its entirety. Therefore, it is difficult to assign a cost to this potential lost sale but remains something that must be considered.

Each of these steps has an associated cost.

To determine the actual cost of an error, each of these steps must have a cost assigned. Each facility will have different costs dependent on the physical size and layout of the facility as well as the steps taken to account for error resolution. Every operations management team uses various methods to reduce errors and has staff and/or hours dedicated to handling the extra steps created when errors are identified. *We have developed a comprehensive spreadsheet that helps companies calculate cost per error and productivity improvements.*

After identifying problems or error-prone processes and the actual cost per error is calculated, a plan can be put together that determines the path to reduction and/or elimination of the problem.

Conclusion

In every case there are two conclusions: 1) errors are costly and, 2) most firms don't take into consideration the full cost of an error when assessing their operations.

If you'd like to talk with a specialist about your operation, you can call us at +44 (0) 208 610 9955, e-mail us at info@voicebeyond.com or visit our website at www.voicebeyond.com (click "Contact Us" and fill out the information request form).

This guide is an adaptation of the white paper Voice Technology: Cost Per Error and Return on Investment by Mike Miller.