

A GUIDE TO UNDERSTANDING

THE COST OF AN ERROR

How to Optimize Accuracy and Efficiency
Amid Tighter Margins Than Ever

Learn how increasing
order accuracy can
result in **significant**
operational savings >

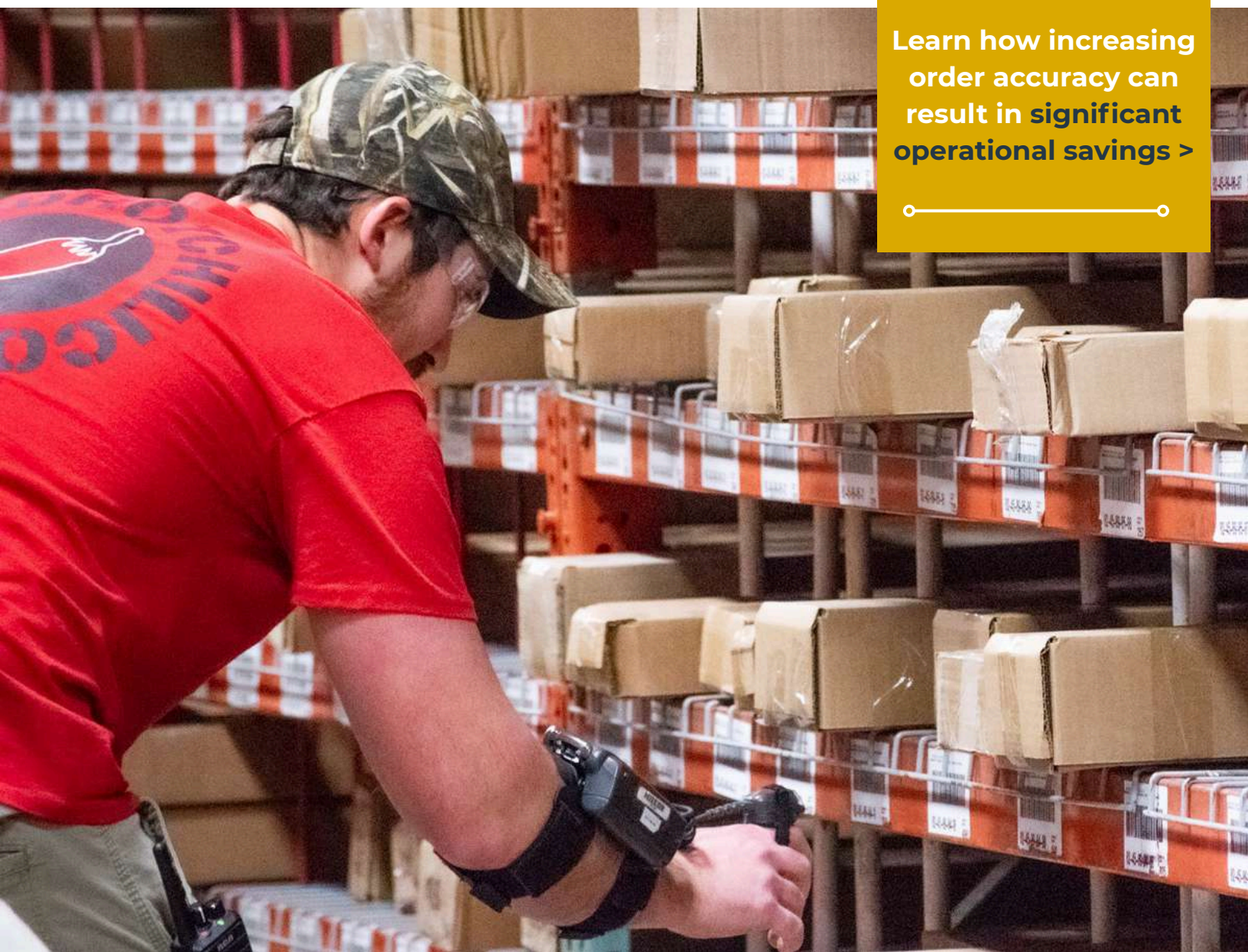


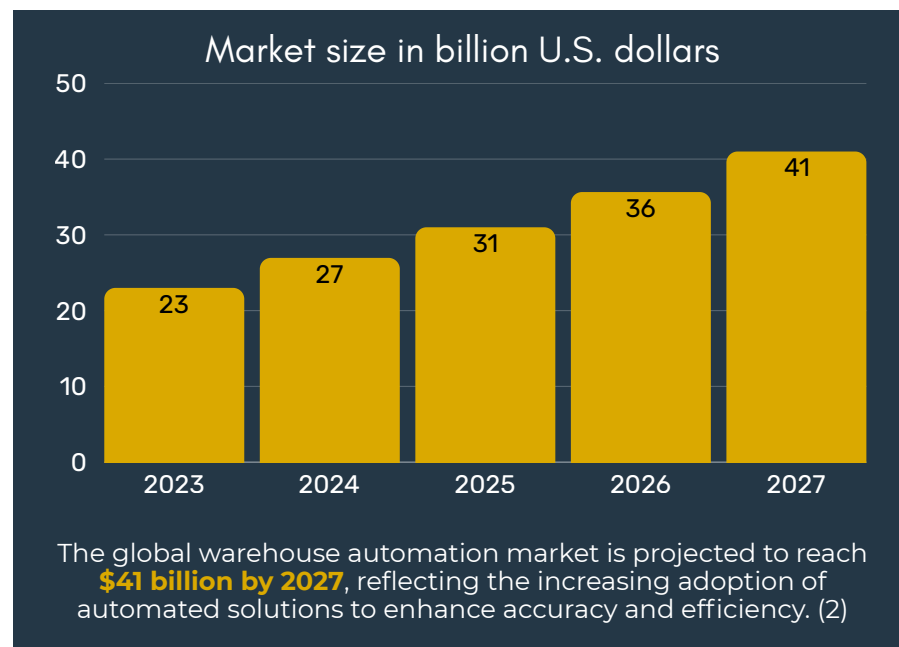
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Overview

The rise of warehouse automation, omnichannel fulfillment, and evolving labor dynamics has reshaped operational efficiency. **As margins grow tighter, accuracy is no longer just an operational goal—it's a competitive necessity.**

According to a McKinsey report, errors in warehouse and fulfillment operations account for billions in lost revenue annually. Whether handling retail, wholesale, 3PL, or manufacturing orders, **every business must focus on reducing costly fulfillment errors to maintain profitability and customer trust.** (1)



This whitepaper explores the financial impact of errors, the latest methodologies for calculating Cost Per Error (CPE), and the proven technologies that are helping companies across industries enhance accuracy and efficiency.

The Direct and Indirect Costs of Errors

Errors in order fulfillment result in direct and indirect costs, including:

- **Operational Costs** – The labor required for order corrections can be substantial, depending on when the error is identified. If an error is caught before shipping, the time spent on correction adds up. If the error is discovered post-shipment, costs escalate significantly due to reverse logistics, additional labor, and potential disruptions in normal workflows. In cases where a "hot shot" correction is required, labor costs surge, along with expedited transportation expenses. For overnight or express freight, these charges can erode profit margins entirely.
- **Customer Retention Risks** – According to ShipScience, 60% of customers are likely to abandon a brand they perceive as unreliable in order fulfillment underscoring the importance of maintaining accuracy to retain customer trust and satisfaction, further highlighting the financial and reputational risks of fulfillment errors. (3)
- **Reverse/Return Logistics Challenges** – Errors in order fulfillment lead to costly reverse logistics operations, including additional labor for processing returns, restocking, and handling customer disputes. These inefficiencies can disrupt warehouse workflows and increase operational expenses.

Understanding and Calculating Your Cost Per Error (CPE)

Defining Cost Per Error (CPE)

CPE represents the total cost incurred due to incorrect order fulfillment, to include:

- **Internal correction costs** – Identifying and fixing errors before shipment.
- **External correction costs** – Returns, replacements, and reshipping due to customer complaints.
- **Lost revenue** – Customers who stop ordering due to repeated errors.
- **Reputation damage** – Negative reviews and operational inefficiencies.

Two Key Types of Errors

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 **recognized at receipt**, usually by the receiving customer.

Each of these errors have **different costs** and **different consequences**.

Pre-Shipment Errors:

Errors detected within the warehouse using automated audits, inline scales, or verification stations.



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

Each of these steps has an associated cost.



Post-Shipment Errors:

Errors identified upon customer receipt, often leading to costly returns, resh Shipments, and damaged brand reputation.



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, color, quantity)
- 2 Customer contacts customer service
- 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 prioritized and interruption to normal order sequencing occurs – plus the original order that was shipped USPS now 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

Errors Add Up with Low Order Accuracy



Cases Picked per Week	100,000
Error Rate	99.8% accuracy (Two per thousand)
Errors Per Year	10,400
Cost per Error	\$25
Total Cost from Errors	\$260,000

Steps to Calculate CPE

1. **Identify Cost Contributors** – Include labor, technology investments, reverse logistics fees, and lost sales potential.
2. **Assess Detection Methods** – Compare costs of prevention (automated solutions) vs. correction (returns and reshipments).
3. **Use Data Analytics** – Leverage AI-driven insights to quantify accuracy trends and financial impact.

Improving accuracy from 99.8% to 99.96% results in over \$200k in operational savings per year.

Over three years, that's nearly \$625K saved!

Improving Accuracy Reduces Total Costs



Cases Picked per Week	100,000
Error Rate	99.96% accuracy (0.4 per thousand)
Errors Per Year	2,080
Cost per Error	\$25
Total Cost from Errors	\$52,000

The Role of Voice Technology in Error Prevention

One of the most effective technologies for reducing CPE is **voice-guided solutions**. Voice technology eliminates distractions and enhances operational efficiency in warehouses, fulfillment centers, and distribution facilities.

How Voice Technology Works

- Employees receive real-time voice prompts through headsets, directing them to pick, pack, or verify items.
- Hands-Free, Eyes-Free™ operation increases efficiency and minimizes distractions.
- Integration with warehouse management systems (WMS) allows for real-time order validation.

Proven Benefits of Voice Technology

- 99.96%+ Accuracy – Companies using voice systems report dramatically reduced picking errors.
- 20%+ Productivity Gains – Hands-free efficiency speeds up order processing.
- Reduced Training Time – Employees adapt quickly to intuitive voice-directed workflows in hours, not weeks.

Industry Applications

Voice technology is widely used across **retail, wholesale, and manufacturing industries**, making it a critical investment for improving order accuracy.



"I was nervous to make the switch from paper to voice. Now that we've made the switch and I see the results, you cannot argue with results. **We have increased our accuracy performance astronomically.** We have gone from 90 days down to 5 days on a training period. We have increased our productivity by 30%. For a picking warehouse, people would be crazy not to take a look at voice."

- President, Regional Cold Storage Food Distributor

Conclusion

Errors are costly, but with modern technology—especially voice-guided solutions—**companies can reduce their error rate, enhance customer satisfaction, and stay competitive** amid growing pressure and budget constraints.

To explore how your company can achieve near-zero error rates and optimize fulfillment processes, [contact us](#) today for a customized strategy session.



Next Steps

✓ See How [Perry's Ice Cream](#) Improved Accuracy, Productivity, and Reduced Turnover with Voice

✓ See Our [Top 10 Reasons Why Voice is Irresistible](#) for Warehouse Automation

Get Connected

Visit www.mountainleverage.com or email info@mountainleverage.com

"Voice technology is not just the smart choice; it's an **irresistible innovation** that's exciting, proven, and continually evolving. It delivers immediate value without the complexities and high costs of other automation solutions."

- Alex Reneman, CEO, Mountain Leverage

Sources:

- (1) <https://www.mckinsey.com/capabilities/operations/our-insights/supply-chain-analytics-harness-uncertainty-with-smarter-bets?>
- (2) Global warehouse automation market size 2023-2027. Published by Martin Placek, Dec 25, 2024.
- (3) Measuring Order Backlogs and Why It Matters for E-Commerce Operations. Anthony Robinson, ShipScience,

