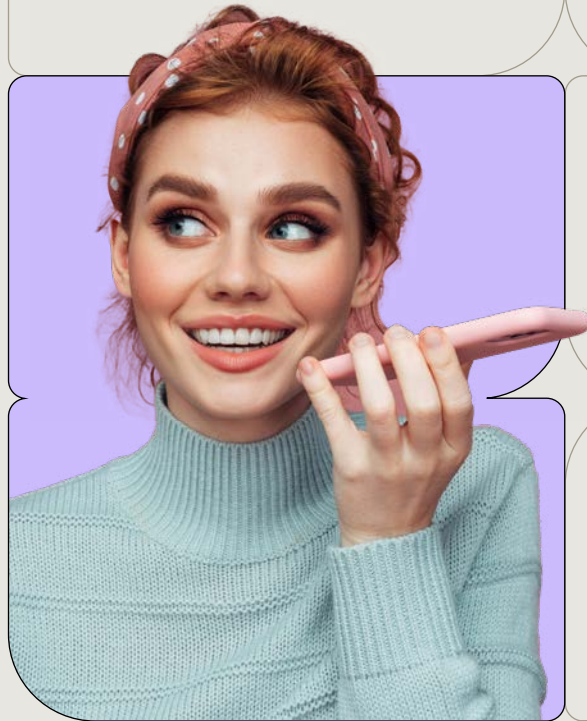# Optimizing Ecommerce Performance with Inventory Management Technology

An Analysis of SMB Shopify Merchants' Challenges, Capabilities, and Plans

Table of Contents

Executive Summary

This report is based on a survey of SMB ecommerce merchants who use Shopify. It reveals critical insights about these merchants, including their current usage of inventory management systems and their key challenges in scaling their operations in the current ecommerce environment.

A critical finding from the report is that **83% of SMB Shopify merchants have difficulties keeping inventory, manufacturing, and accounting data synchronized,** pointing to significant operational challenges.

Furthermore, **60% of SMB Shopify merchants say aligning inventory and production with fluctuating demand is a significant challenge.**

According to the analysis, the adoption of user-friendly inventory management systems and the integration of artificial intelligence (AI) into business operations will be pivotal strategies for ecommerce businesses in 2024. Merchants in this space hope to use these technologies to enhance efficiency, improve customer service, and drive innovation in the coming years.

About the Respondents

The WBR Insights research team surveyed 100 ecommerce leaders from across the U.S. and Canada to generate the results featured in this report. **All the respondents are Shopify sellers and manage their own inventory**—none engage in dropshipping.

What is your seniority?
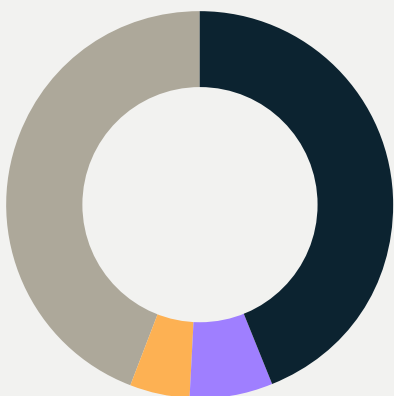
- **44%** C-Suite
- **7%** Vice President
- **5%** Department Head
- **44%** Director

The respondents are C-suite executives (44%), directors (44%), vice presidents (7%), and department heads (5%).

What is your role?
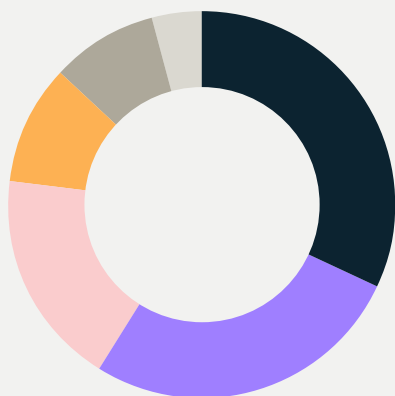
- **32%** Operations
- **27%** Executive
- **18%** Production
- **10%** Inventory Management
- **9%** Owner
- **4%** Procurement

The respondents occupy roles in operations (32%), executive leadership (27%), production (18%), inventory management (10%), and procurement (4%), while 9% of the respondents are business owners.

The respondents are from sellers in various sectors, including health and beauty (19%), apparel (16%), specialty retail (11%), and food and beverage (11%), among others.
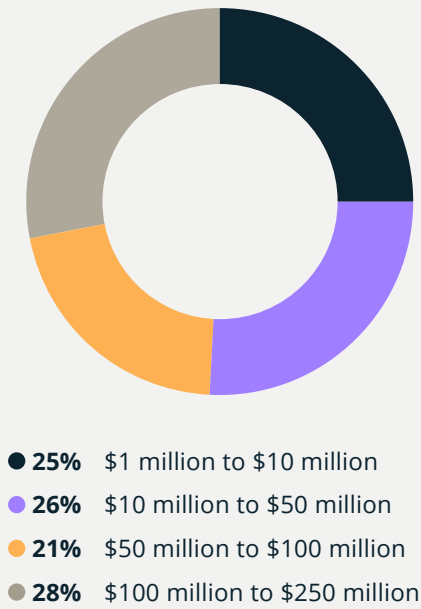
The businesses represented in the report vary in size, as measured by annual revenue. More than one-fourth of the respondents (28%) are from companies that make $100 million to $250 million in annual revenue.

What type of retailer do you represent?

Health & Beauty
19%

Apparel
16%

Specialty Retail
11%

Food & Beverage
11%

Sporting Goods
9%

Entertainment, Food, and Travel
8%

Hardware, Electronics, and Appliances
6%

Home Furnishing
6%

Toys & Hobbies
5%

Pet & Animal
4%

Auto & Transportation
3%

Department Stores
1%

Industrial Equipment & Machinery
1%

What is your annual revenue?

- **25%** $1 million to $10 million
- **26%** $10 million to $50 million
- **21%** $50 million to $100 million
- **28%** $100 million to $250 million

Key Insights

Among the respondents:

63% expect ecommerce to somewhat increase, while **14%** anticipate a significant rise in 2024.

64% view managing outdated business systems and **60%** view aligning inventory with demand as major challenges.

32% each highlight **ecommerce transformation and inventory management** as key areas of focus for 2024.

80% raised prices and **73%** leveraged technology to counter high material costs.

66% currently use an inventory management platform.

Among those using inventory management platforms, **76%** somewhat and **15%** strongly agree that they have comprehensive, real-time inventory control.

Key inventory system features include simple stock management across locations **(62%),** streamlined stock transfers **(58%)**, raw materials tracking **(58%)**, and finished goods inventory management capabilities **(58%)**.

77% are only somewhat confident in their inventory system's scalability.

94% intend to increase their spend on SaaS technology in 2024.

41% find inventory systems and ERPs challenging to use.

66% state that producing and storing inventory is their largest expense.

94% plan to incorporate artificial intelligence into their business operations in 2024.

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Outdated Technologies and Inventory Alignment Are Challenges Amid an Ecommerce Surge

Shopify merchants and other companies engaged in ecommerce sales are operating in a changing landscape filled with ongoing global challenges, including supply chain disruptions, rising prices, and shifting consumer habits. Technology now plays a critical role in how these companies serve customers and manage their inventories, but not every business has tools that are agile enough to scale their operations and allow them to adapt.

Overall, the results of the study reveal an optimistic outlook regarding the future of ecommerce sales, with a notable 63% of the respondents expecting a moderate increase and 14% anticipating a significant rise in their online sales channels by 2024.

This collective optimism underscores the continuing upward trajectory of ecommerce.

The anticipated surge in online transactions will require inventory management systems to become more agile and technologically advanced, ensuring that businesses can meet increasing consumer demand without encountering stockouts or excessive overstock.

How do you foresee sales from your ecommerce channels changing in 2024?

They will increase significantly.
14%

They will increase somewhat.
63%

They will stay about the same.
22%

They will decrease somewhat.
1%

Organizations engaged in ecommerce will also need to overcome substantial operational hurdles.

For example, 64% of the respondents say dealing with outdated or unsupported business systems is a very significant challenge. This suggests there is a widespread struggle to keep technology up-to-date and efficient.
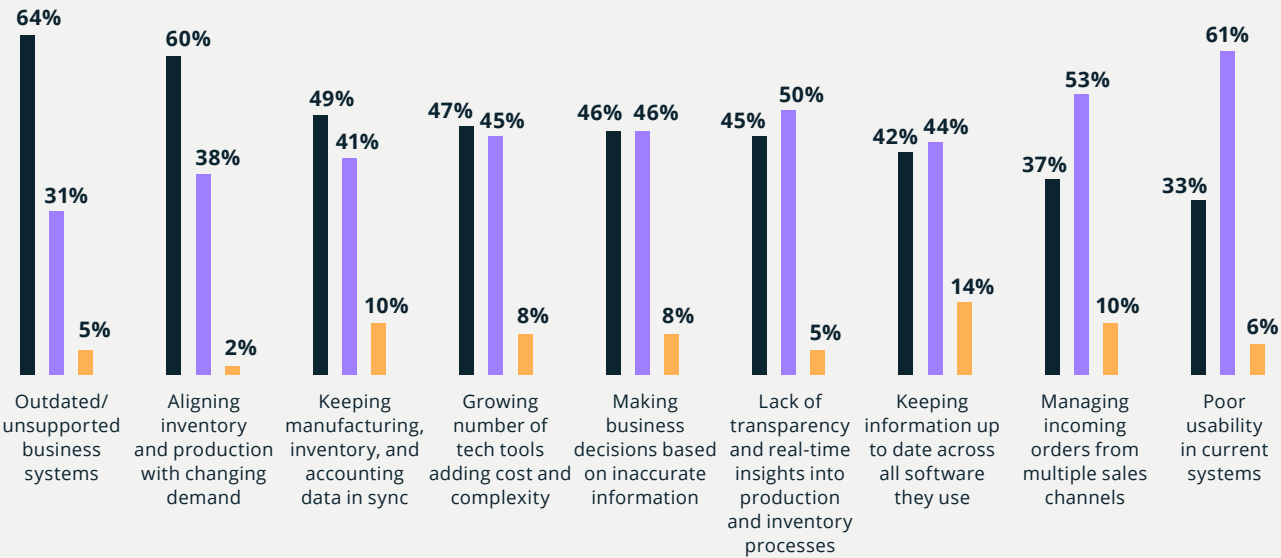
Close behind, 60% of the respondents reported very significant difficulties in aligning inventory and production with changing consumer demand. This reflects the dynamic nature of ecommerce markets and the critical need for adaptable supply chain strategies.

These findings also underscore a broader trend in the industry toward agile inventory management and the need for modern, integrated technological solutions.

Companies grappling with these issues also face the related challenges of synchronizing data across manufacturing, inventory, and accounting (49%) and managing an expanding portfolio of technology tools that add to cost and complexity (47%). This complex web of challenges paints a picture of an industry at a critical juncture, where adopting flexible, tech-driven approaches to inventory management and operational efficiency is no longer optional but essential for survival and growth.

How significant are the following challenges to your ecommerce operation?

● This is a very significant challenge   ● This is a somewhat significant challenge   ● This is not a challenge

Challenge	Very significant	Somewhat significant	Not a challenge
Outdated/unsupported business systems	64%	31%	5%
Aligning inventory and production with changing demand	60%	38%	2%
Keeping manufacturing, inventory, and accounting data in sync	49%	41%	10%
Growing number of tech tools adding cost and complexity	47%	45%	8%
Making business decisions based on inaccurate information	46%	46%	8%
Lack of transparency and real-time insights into production and inventory processes	45%	50%	5%
Keeping information up to date across all software they use	42%	44%	14%
Managing incoming orders from multiple sales channels	37%	53%	10%
Poor usability in current systems	33%	61%	6%

To face these operational challenges, businesses will enhance their presence in the digital marketplace while optimizing their inventory to meet consumer demand effectively.

The study shows businesses making considerable investments in ecommerce transformation and inventory management, with each initiative being prioritized by 32% of respondents. This underscores a strategic shift towards digitizing sales channels as companies strive to align themselves with the evolving shopping behaviors that favor online purchasing.

Concurrently, the emphasis on inventory management reflects an acute awareness of the need to strike a delicate balance—ensuring product availability to meet consumer expectations without the financial burden of overstocking. This dual focus not only mirrors the current trends in consumer behavior but also highlights the complexities businesses face in navigating the digital economy.

Technology will play a key role in these focus areas, as 30% of the respondents say technology adoption will be one of their most important initiatives in 2024. As businesses continue to adapt to the demands of the digital sales landscape, they must invest in technology solutions that enable seamless integration between online sales channels and inventory management systems.

Which of the following initiatives will be your two most significant focus areas in 2024?
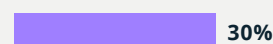
ecommerce transformation: Transitioning more of our business to online sales channels.

32%

Inventory management: finding a balance between having enough inventory and not overstocking.

32%

Technology adoption: Leveraging new automation technologies and artificial intelligence.

30%

Forecasting and planning for demand: implementing tooling and/or processes that enable higher levels of efficiency and accuracy
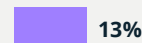
29%

Scaling our operations: Growing our operations effectively while maintaining standards.

29%

Addressing supply chain disruptions: diversifying our supply network to be more adaptable in the face of disruptions.

16%

Multi-channel fulfillment: Selling across multiple channels and consolidating orders from various platforms.

13%

Optimizing shipping costs: Keeping shipping costs down, especially for international shipments.

11%

Order processing efficiency: Automating order processing and reducing manual inputs.

8%

In addition to operational challenges, ecommerce leaders are also contending with rising material costs due to inflation, supply chain disruptions, and other factors.

The data reveals that 80% of businesses have responded to these rising costs by adjusting their pricing strategies upwards. This decision, though crucial for survival, carries the risk of alienating price-sensitive customers in a competitive market.

Meanwhile, 73% of businesses are leveraging technology to mitigate the impact of these financial pressures. This strategic move not only underscores the importance of digital tools in contemporary inventory management but also highlights a growing trend toward innovative, tech-driven solutions to address traditional business challenges.

It also suggests that ecommerce entities have learned that they must become increasingly agile to adapt to changes in the materials marketplace. Moving forward, they will use technology not just for operational efficiency but also as a critical component in their financial strategy to offset external economic pressures.

How have you mitigated the impact of rising material costs due to issues like inflation, supply chain disruptions, and other events?

Increased prices
80%

Technology
73%

Lower cost materials
53%

Layoffs
26%
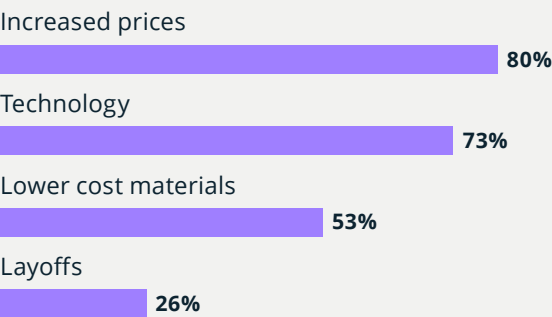
Merchants Lack Confidence in Their Current Inventory Management Systems

For ecommerce merchants, inventory management systems are critical to maintaining cash flow and delivering an optimal customer experience.

With the right system, merchants can track and manage their inventory levels, orders, and shipments efficiently. More importantly, they can align their inventories with customer demands, ensuring they are never overpaying for stock that isn't selling or failing to keep inventories stocked during times of peak demand.

An inventory management platform is a unique type of inventory management system. It is a software platform that helps merchants to automate and streamline their inventory management processes. The most advanced platforms even allow users to engage in data-driven and AI-enabled forecasting, so they can stay proactive when facing shifting customer buying habits.

Roughly two-thirds of respondents (66%) currently use an inventory management platform.

However, among these respondents, only 15% strongly agree that they have complete, real-time inventory management across their multiple warehouses, enabling them to see what's on hand, what's expected to arrive in stock, and when products need to be re-ordered. Most of these respondents (76%) only somewhat agree with this statement, while 9% somewhat disagree.

Do you currently use an inventory management platform?
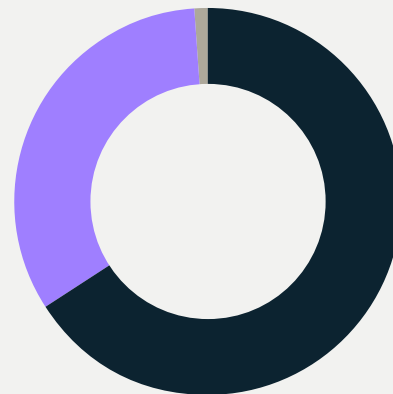
- **66%** Yes
- **33%** No
- **1%** I'm not sure.

Since you said, "Yes," How much do you agree with the following statement:

"We currently have complete, real-time inventory management across our multiple warehouses, enabling us to see what's on hand, what's expected to arrive in stock, and when products need to be re-ordered."

Strongly agree
15%

Somewhat agree
76%

Somewhat disagree
9%
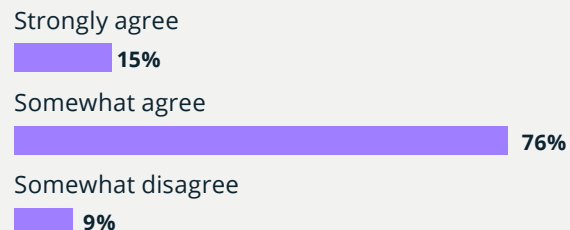
This highlights a critical vulnerability in the operational framework of these companies, potentially impeding their ability to respond swiftly to fluctuating market demands and increasing the risk of either stockouts or surplus inventory. When customer satisfaction hinges on the seamless availability and timely delivery of products, the absence of robust inventory management systems places the business at a competitive disadvantage.
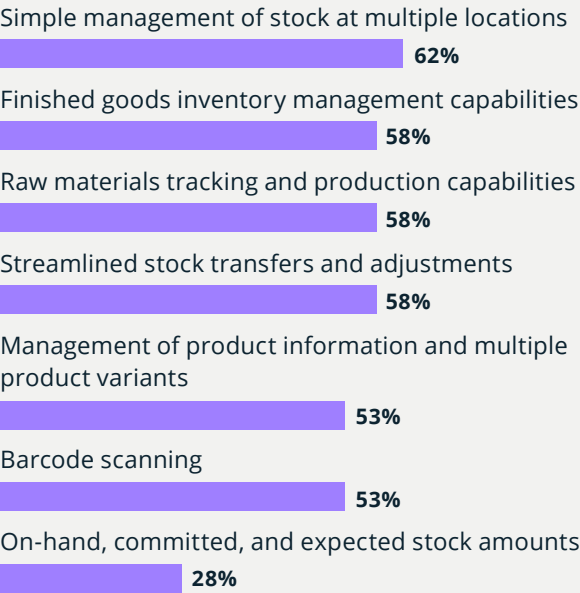
There is a pressing need for ecommerce merchants to adopt more sophisticated, data-driven technologies for inventory management. Such technologies promise to both enhance operational efficiency and ensure the agility required to thrive in today's dynamic digital marketplace.

Most inventory management systems, whether they are a robust platform or not, should be equipped with a comprehensive set of tools and capabilities.

For example, a significant portion of respondents indicate that their systems offer straightforward management for stock across various locations, highlighted by 62% of participants. This feature is crucial for ecommerce merchants with distributed storage or retail facilities, as it ensures a seamless flow of goods across their entire network.

Similarly, more than half of the respondents value streamlined stock transfers and adjustments (58%) alongside capabilities for raw materials tracking and production (58%). These capabilities are imperative for maintaining inventory accuracy and meeting consumer demand.

Which of the following features does your current inventory management system provide you with?

Simple management of stock at multiple locations

62%

Finished goods inventory management capabilities

58%

Raw materials tracking and production capabilities

58%

Streamlined stock transfers and adjustments

58%

Management of product information and multiple product variants

53%

Barcode scanning

53%

On-hand, committed, and expected stock amounts

28%

Furthermore, 58% of those surveyed appreciate the finished goods inventory management capabilities in their systems. Most also benefit from barcode scanning capabilities, which was recognized by 53% of respondents.

These features collectively support the effective tracking and management of items from production through to sale, which is essential for minimizing losses and optimizing sales strategies.

Finally, the management of product information and multiple product variants, as reported by 53%, plays a pivotal role for ecommerce businesses in offering a broad product range and catering to diverse customer preferences.

This data underlines the importance of versatile and feature-rich inventory management systems. These tools can significantly enhance the adaptability and competitiveness of ecommerce merchants in the broader market sector.

Despite these capabilities, the respondents aren't as confident as they should be that their current inventory management systems can successfully scale alongside the business and support growth.

Only 6% are very confident that their systems will support them, while 77% are only somewhat confident. Furthermore, 13% are not very confident and 4% are not confident at all.

Moving forward, ecommerce merchants must prioritize investing in a robust inventory management system that can adapt and grow with their business. This is crucial for sustainable growth and success. Without one, these organizations could struggle with issues like inaccurate inventory tracking and disorganized warehouse management, both of which can considerably hinder growth.

How confident are you that your current inventory management system can successfully scale with your business and support growth?

Very confident
6%

Somewhat confident
77%

Not very confident
13%

Not confident at all
4%
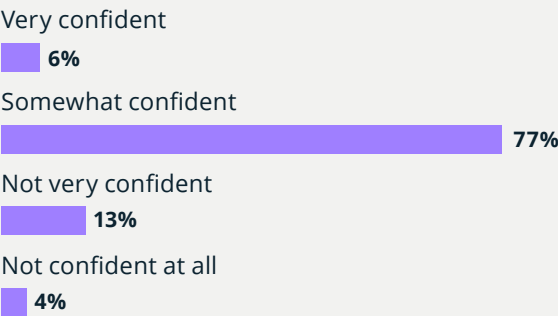
Ecommerce Businesses Will Invest More in Easy-to-Use Inventory Management Solutions

Technology budgets have been steadily increasing in the ecommerce sector as more companies seek new solutions to better manage their businesses and compete on a global scale.

Overwhelmingly, 94% of the respondents say they are planning to increase their Software-as-a-Service (SaaS) and technology spending in 2024.

However, implementing more technologies can significantly increase complexity within the business. This is why ecommerce merchants are drawn toward platforms that are easy to use, even for team members who have no technical experience or coding knowledge.

Are you planning to increase SaaS and technology spend in 2024?
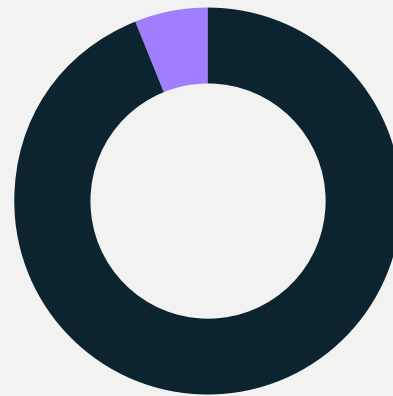
- **94%** Yes
- **6%** No

The results of the study suggest that ecommerce merchants are struggling to use their existing technologies. Specifically, 41% agree that inventory management systems and ERPs are difficult to use.

An easy-to-use inventory management system is characterized by its intuitive interface, simplified processes, and automated features, which collectively reduce the learning curve for users and diminish the chance of errors. Such systems often incorporate drag-and-drop functionalities, clear and concise dashboard overviews of inventory levels, sales, and order statuses, alongside predictive analytics to aid in restocking decisions.

State-of-the-art systems also integrate seamlessly with other business tools, providing a cohesive experience that doesn't require switching between multiple platforms.

The goal of these systems is not only to streamline inventory management but also to empower ecommerce merchants, regardless of their technical background, to make informed decisions based on real-time data. This approach to design and functionality reflects a deep understanding of the challenges non-technical users face and emphasizes the fact that technologies can only lend themselves to business success if they are easy to adopt and leverage.

This ease of use has also become critical amid a landscaped marked by rising materials costs, geographically remote manufacturing and storage operations, and other common challenges associated with producing and storing inventory.

At 66%, about two-thirds of the respondents agree that producing and storing a physical inventory or products is the single biggest expense their businesses have. It is a bigger expense than payroll, technology costs, marketing, and more.

Do you agree with the following statement:

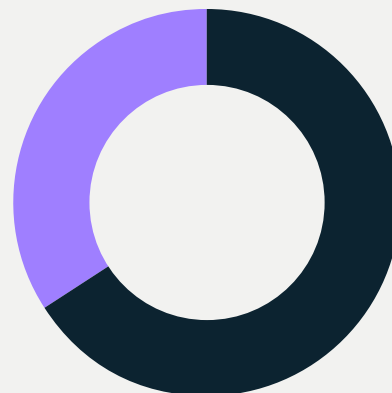"Inventory management systems and ERPs are difficult to use"?
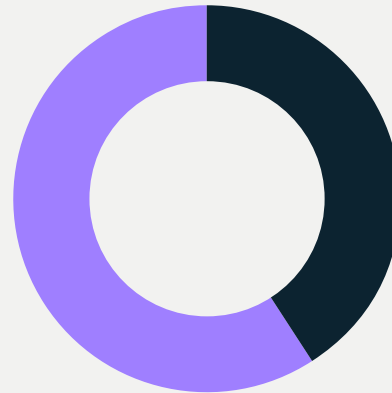
- **41%** Yes
- **59%** No

Do you agree with the following statement:

"Producing and storing physical inventory of products is the single biggest expense my business has"?

- **66%** Yes
- **34%** No

In addition to new technology tools, many ecommerce merchants will be looking to artificial intelligence (AI) to streamline their operations, automate tasks, reduce complexities, and better manage costs. At 97%, almost all the respondents are implementing AI as part of their business operations in 2024.

Researchers asked these respondents to describe how they plan to leverage AI for their business operations. Some of the most common answers are that they will use AI to enhance customer service, manage inventory more effectively, and augment their marketing strategies.

Companies plan to employ AI tools for "tracking productivity of teams and business processes," underscoring a move towards more data-driven decision-making. Additionally, the use of AI for "breaking communication barriers with customers" through generative AI tools indicates a strong focus on improving the immediacy and relevance of customer interactions.

This emphasis on customer-centric approaches and efficiency aligns with the overarching goals of boosting customer acquisition and retention.

Furthermore, ecommerce merchants envision a significant evolution in their operational model by employing AI for internal operations, including procurement, employee lifecycle management, and demand forecasting.

According to one respondent, "We plan to leverage AI to manage the employee lifecycle, automating related functions and workforce planning." This illustrates a commitment to using AI for enhancing human resource processes.

Similarly, AI's application in "optimizing pricing and inventory management aspects of the business" reflects a strategic shift towards more agile and responsive supply chain management.

Fundamentally, ecommerce companies foresee AI as a critical pillar in their strategy to innovate and streamline both front-end and back-end operations, driving more personalized and efficient service delivery that promises to reshape the competitive landscape in 2024 and beyond.

Are you planning to implement artificial intelligence in your business operations in 2024?
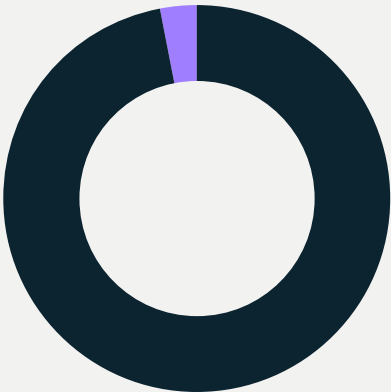
● **97%**   Yes
● **3%**   No

Conclusion: The Most Significant Inventory Management Goals of 2024

Most ecommerce merchants would agree that their approaches to inventory management need to improve, whether it's by implementing new technologies or by augmenting their current strategies with better intelligence. To gain a better understanding of where these merchants plan to start, researchers asked the respondents to identify their most significant goal for inventory management in 2024.

A central theme in the responses is the profound focus on using advanced technologies such as AI and IoT tools to enhance forecasting, reduce stock discrepancies, and streamline procurement processes. Technology stands as the linchpin in their strategy, with plans to "predict product demand accurately" and "minimize inventory overhead costs" identified as pivotal goals.

These endeavors reflect a broader ambition to make inventory management more predictive, efficient, and cost-effective.

In addition to technological advancements, sustainability and cost optimization emerge as critical considerations for ecommerce merchants in the upcoming year. There's also a clear intent to reassess and adjust supply chain practices to meet sustainability standards, as highlighted by the resolve to "change suppliers who've not been adhering to proper sustainability standards."

This demonstrates a conscientious effort to integrate ethical considerations into operational frameworks.

Finally, amidst the backdrop of inflation and economic uncertainties, the aspiration to "reduce carrying costs in 2024" underscores the urgency of implementing cost-cutting measures while maintaining operational efficiency. Together, these strategic initiatives outline a comprehensive approach toward realizing more resilient, sustainable, and technologically advanced inventory management systems in the future.

Key Recommendations

1   **Adopt an easy-to-use inventory management system that includes advanced forecasting features and can scale with your business.**

This will lead to increased efficiency and productivity for non-technical users, ultimately boosting overall business performance and helping you compete.

2   **Introduce predictive analytics and real-time data tracking to optimize restocking decisions.**

This will help you ensure your business has optimal inventory at the most important times.

3   **Integrate your inventory management system with other business tools for seamless management across the enterprise.**

This will reduce the need to switch between multiple platforms and allow for more centralized monitoring of data and processes.

4   **Leverage AI for customer service, inventory management, marketing strategies, and internal operations.**

This will help improve efficiency, enhance customer experiences, and drive innovation in both front-end and back-end operations.

About the Authors

katana

Katana's cloud inventory platform gives ecommerce, retail, and manufacturing businesses the visibility they need to make the right decisions. With Katana as the central source of truth, businesses can build their own tech stack of best-in-breed solutions that make it easy to order, store, and sell physical goods. Founded in 2017, Katana's portfolio of more than 1,500 companies ranges from multi-million-dollar businesses to hobby makers, supporting over $2 billion in combined sales revenue in 2022. To date, Katana's founding team has raised more than $51 million in funding from VC firms and angel investors and scaled its team of six to 150 employees across North America, Europe, Asia, and Oceania.

For more information, please visit **www.katanamrp.com.**

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eTail

We launched eTail in 1999 and have been dedicated to supporting the growth of the retail industry ever since. What started off as 100 people in a room discussing where this sector is headed has led to 2,000 senior-level ecommerce executives being inspired whilst learning and developing their company as well as their careers.

For more information, please visit **www.etailwest.wbresearch.com.**