

A photograph of a woman from behind, walking through a clothing store. She has long blonde hair and is wearing a white sleeveless top and blue jeans. She is carrying several colorful shopping bags with geometric patterns over her shoulder. The store has racks of clothes in the background.

# THE ROLE OF AI IN E-COMMERCE: TRENDS, INSIGHTS & IMPACT

QUID

# LET'S TALK AI IN E-COMMERCE

We're excited to launch a report focused entirely on the AI-driven conversations shaping the future of e-commerce.

Using data from Quid, we explored:

- ❖ **The top AI themes in the e-commerce space**
- ❖ **Key sub-trends driving innovation**
- ❖ **When and how these conversations gain momentum**

From product recommendations to virtual try-ons, this report reveals the topics retailers are paying attention to—and why they matter.

This report is your guide to the narratives, innovations, and emerging priorities defining the next era of retail.

Let's see where the conversation is headed and what it means for the future of commerce.



# OBJECTIVE

Artificial Intelligence is reshaping the e-commerce landscape, from how consumers discover products to how retailers manage operations.

This report analyzes a full year of online conversation and market signals to surface the most impactful trends, technologies, and opportunities for digital-first retailers.

The main objectives of this analysis



UNCOVER  
the top AI trends  
shaping  
e-commerce  
today

ANALYZE  
volume,  
sentiment,  
and tech focus  
over time

EXPLORE  
narratives driving  
engagement  
and innovation

OFFER  
insights to inform  
your 2025  
AI strategy

# KEY TAKEAWAYS



## AI integration is widespread across core retail functions

Retailers are implementing AI across the value chain from generative AI in product recommendations (15%) to automation in inventory management (10%) and customer service via AI agents (10%). The focus has shifted from exploration to execution.



## Advancing in parallel, not in isolation

Rather than a single breakout innovation, we observed simultaneous investment in AR/VR-enabled virtual try-on, AI agents, visual search, and cloud computing, indicating a coordinated push toward end-to-end digital transformation.



## Trend activity aligns with retail planning cycles

Conversation volume peaked during strategic retail periods including January (26%), October (22%), and May (22%). This highlights that AI discussions are tied more to planning and execution phases than to reactive trend-hype or standalone product announcements.



## Virtual try-on stands out as an engagement driver

Virtual try-on generated more buzz compared to interactive tools like visual search or cloud features. This indicates rising retailer and consumer interest in interactive, low-friction experiences that help shoppers visualize products and make confident purchase decisions.

# METHODOLOGY

To identify the most relevant trends in AI and e-commerce, we analyzed online conversations and narratives from **May 2024 to May 2025** using Quid's powerful suite of tools. Our analysis covered a broad mix of sources, including news outlets, blogs, forums, social media, and consumer reviews.

We began by identifying the top four trend clusters, then drilled into related sub-clusters, analyzing how volume, timing, and narrative focus evolved over the year.

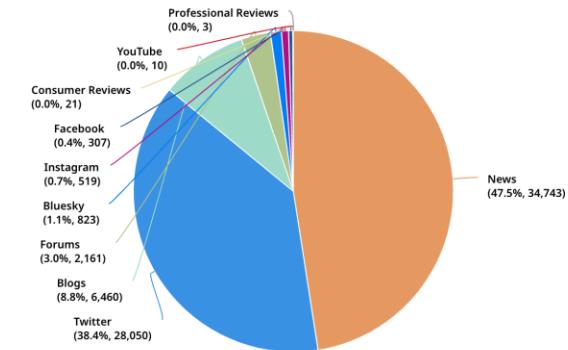
We define a trend as a recurring theme or idea that appears across a wide range of online conversations, supported by clustering and natural language processing.

Each trend is shaped by:

- ❖ High-volume keywords and common phrases
- ❖ Thematic clusters across articles, posts, and public commentary
- ❖ Metadata like sentiment, timing, and co-occurring topics

This approach reveals not just what people are talking about, but when, where, and how those conversations are shifting across the AI and e-commerce landscape.

## SOURCES

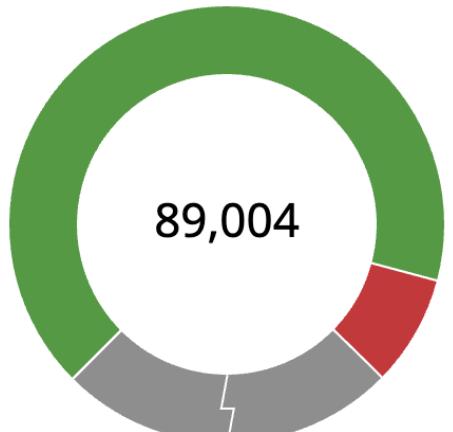


TOP 4 CLUSTERS

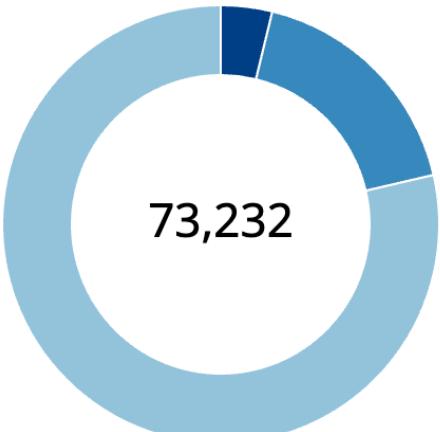
SUB-CLUSTERS

TRENDS

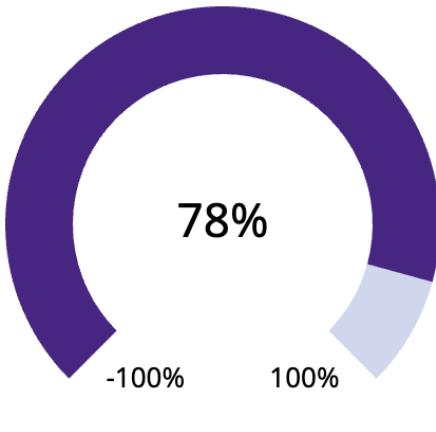
# KEY METRICS



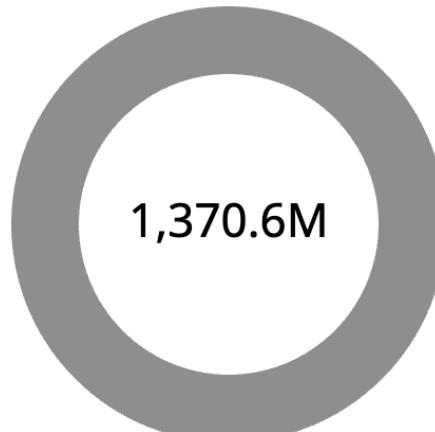
Mentions



Posts



Net Sentiment



Potential Impressions

# SENTIMENT DRIVERS

## ATTRIBUTES



A circular word cloud centered on the word "revolutionize". Other words include "artificial intelligence", "product recommendation", "personalized shopping experience", "e-commerce", "automated technology", "customer service", "enhance", "leader", "innovation", "share", "fail", "problem", "struggle", "enable", "boost", "offer", "revolutionize", "retail", "adoption", "cause", "miss", "lag", "cost", "hinder growth", "application", "hold back many", "diagnose disease", "disrupt industry", "lose money", and "problem". The words are colored in shades of green, red, and blue.

## BRANDS



A circular word cloud centered on the word "Business Wire". Other words include "EZEEBUY Experiences", "Business Wire", "businesswire.com", "Walmart", "#ShopLocal", "Salesforce", "Shopify", "Microsoft", "Apple", "Amazon", "Adobe", "OpenAI", "Google", "Bitcoin", "Fastendr", "Nvidia", "YouTube", "Target", "Alibaba", "LinkedIn", "Facebook", "retail solutions", and "Amazon Web Services". The words are colored in shades of brown, red, orange, and purple.

## THINGS



A circular word cloud centered on the word "AI". Other words include "predictive analytics", "product recommendation", "generative AI", "recommendation", "platform", "retail", "shopping", "insight", "company", "solution", "artificial intelligence", "data", "e-commerce", "business", "tool", "technology", "Amazon", "customer", "machine learning", "eCommerce", and "personalized shopping". The words are colored in shades of blue, purple, and grey.

# TOP AI THEMES IN E-COMMERCE

QUID



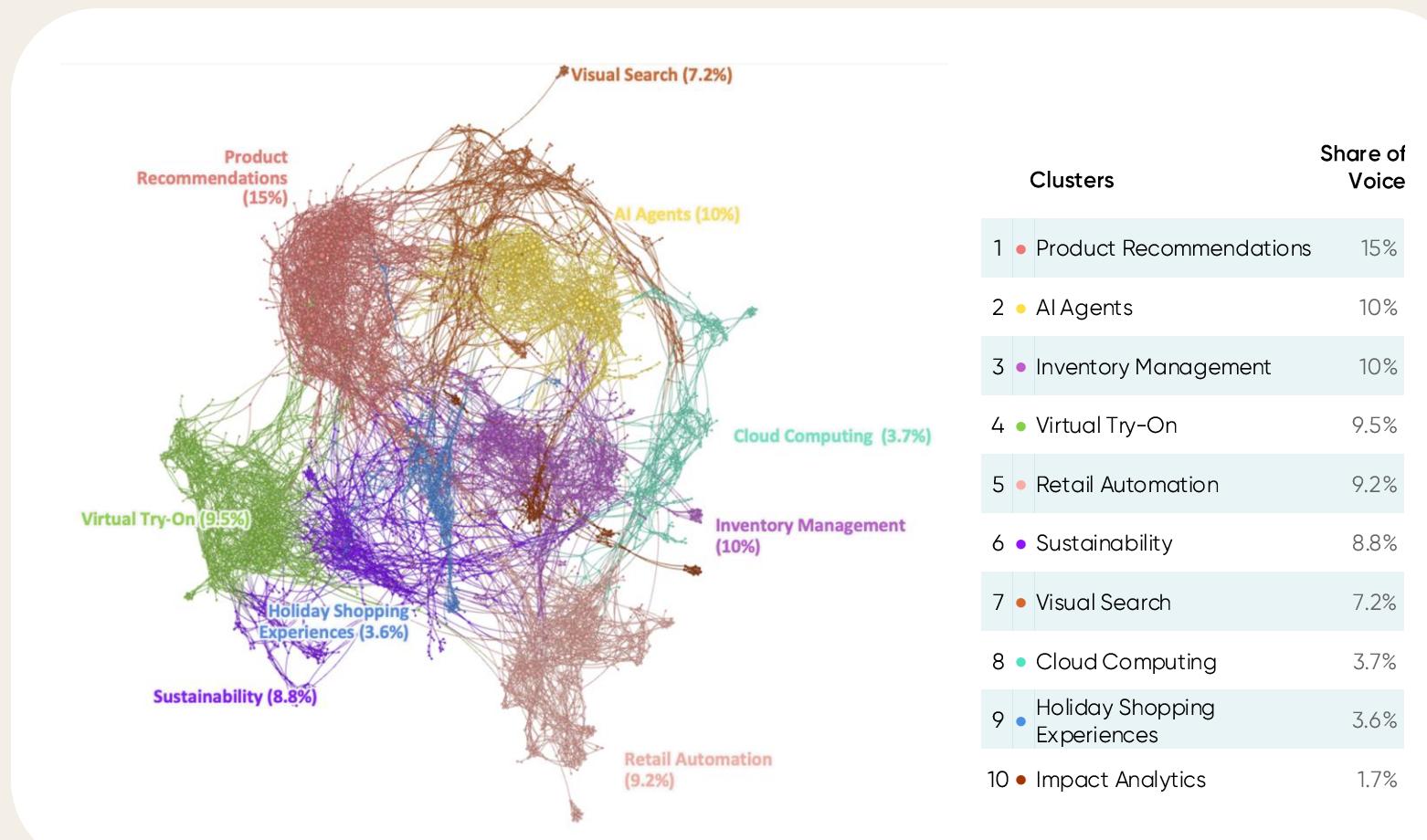
# AI THEMES IN E-COMMERCE

## TOP 10 TRENDS

AI in e-commerce has evolved from hype to everyday utility, with retailers focusing on practical tools like product recommendations, automation, and AI agents.

Rather than chasing a single trend, the industry is steadily adopting AI across the board to improve both customer experience and operational efficiency.

This shift reflects a broader maturity in how retailers approach technology, focusing on integration and building solutions for long-term impact.



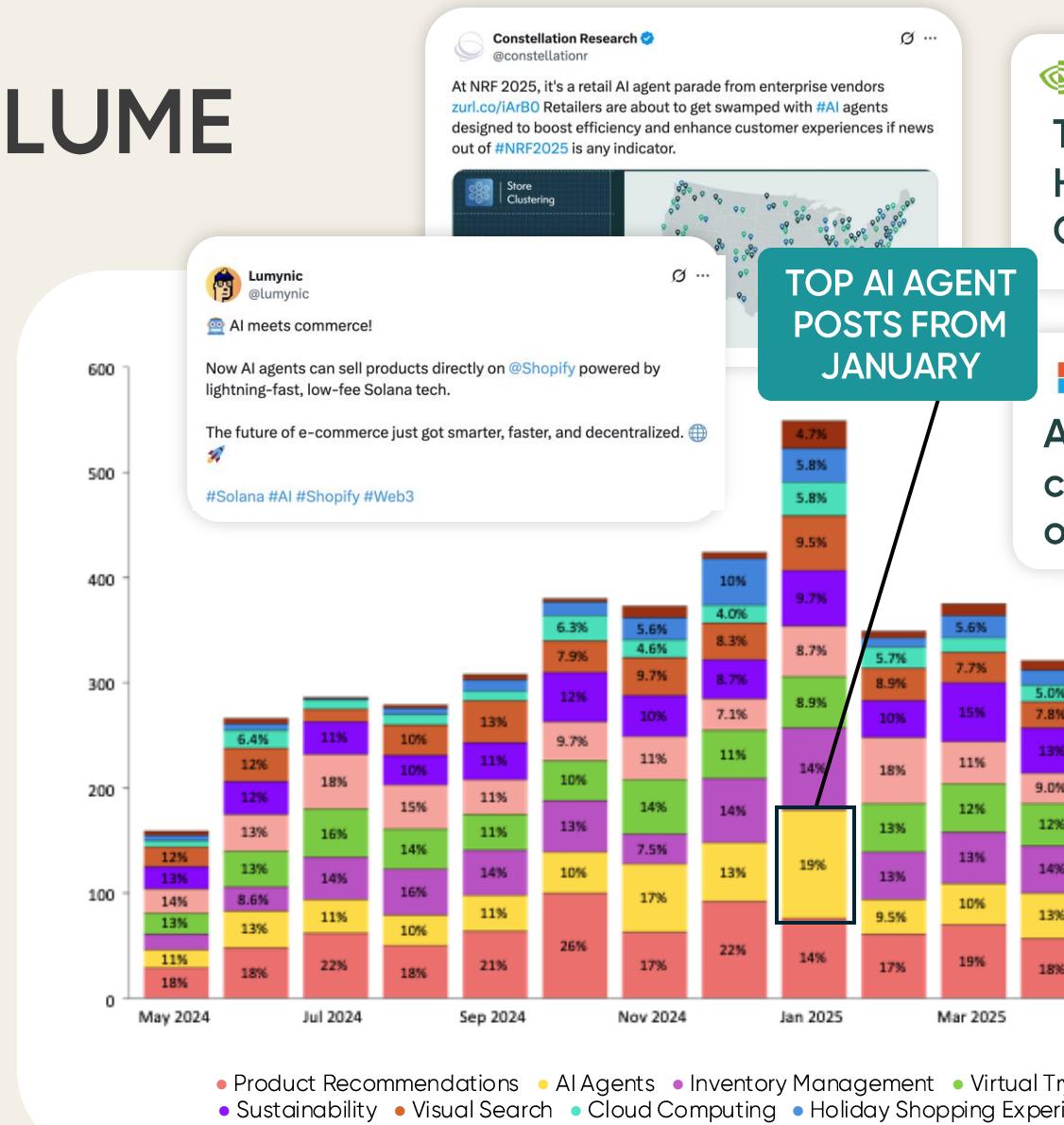
## AI THEMES IN E-COMMERCE

# TIMELINE BY VOLUME

AI conversations stayed active throughout the year, with interest spread across multiple themes.

In **January**, discussions around AI agents spiked, driven by [NRF2025](#) buzz and posts highlighting how agents are reshaping retail workflows and customer experience. Other peaks, like those in October and May, reflected planning cycles more than specific tech launches.

The absence of dramatic spikes doesn't mean AI isn't transformative – it means it's crossing the threshold from emerging trend to essential infrastructure.



**The Future of Marketing:  
How AI Agents Can Enhance  
Customer Journeys in Retail**



**AI-powered retail: Elevating  
customer experience and  
operational efficiency**

**PYMNTS<sup>®</sup>**

**Move Over,  
Chatbots: Agentic AI  
Is Here to Run Retail**

## AI THEMES IN E-COMMERCE

# TOP TREND #1: PRODUCT RECOMMENDATIONS

### Personalization dominates the conversation

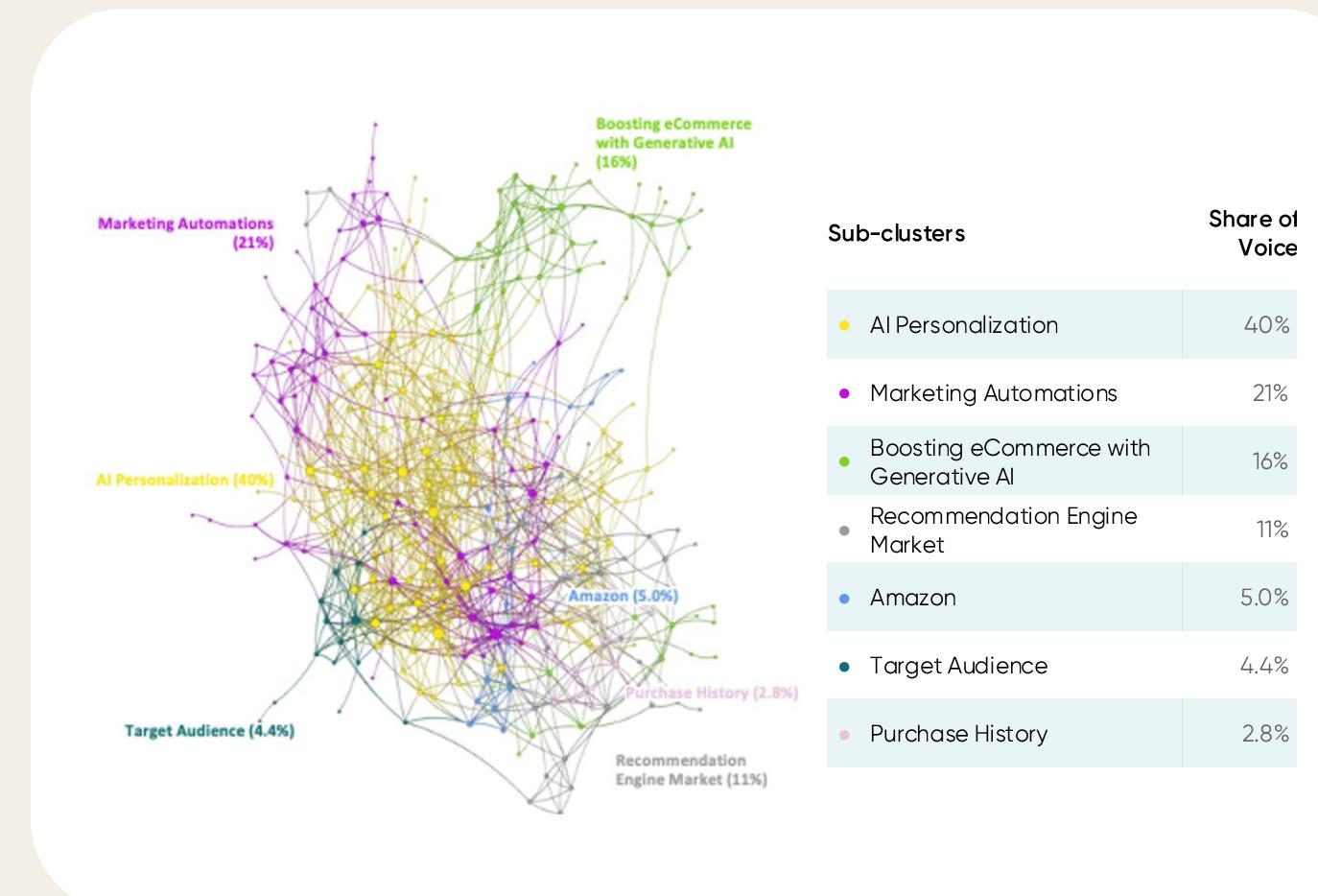
Nearly **40% of discussions** within this trend center on AI-driven personalization, underscoring its role as the most powerful lever for increasing customer engagement and driving sales in e-commerce.

### Generative AI is redefining product discovery

With **16% of mentions**, generative AI is emerging as a game-changer, enabling dynamic, real-time product suggestions that adapt to individual browsing behavior, preferences, and even context.

### Data-backed automation is gaining ground

A combined **32% focus** on marketing automation and recommendation engine infrastructure signals growing interest in tools that turn insights, like purchase history, into smarter, more profitable product discovery.



## AI THEMES IN E-COMMERCE

# TOP TREND #2: AI AGENTS

### AI-powered chatbots lead the conversation

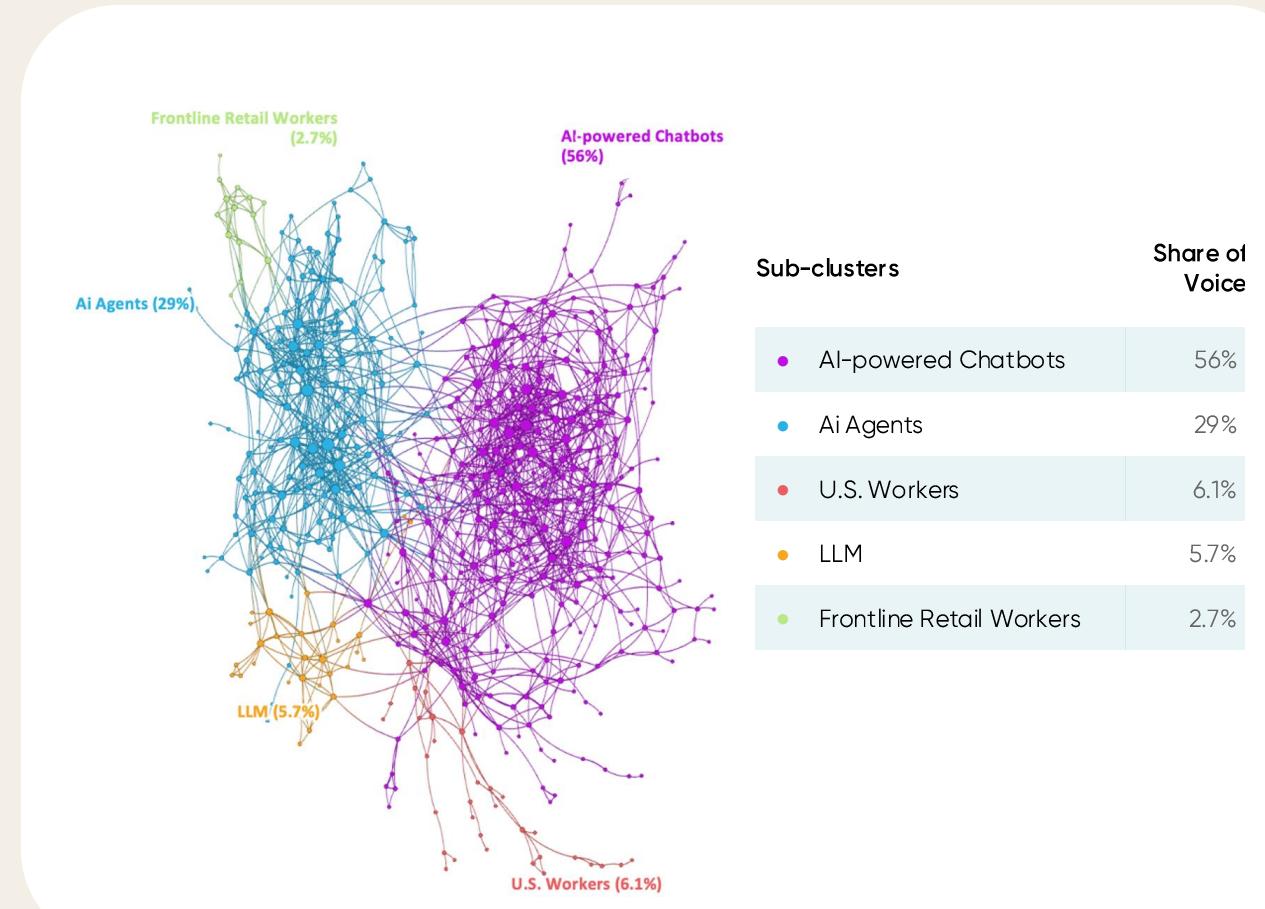
With **56% of mentions**, AI chatbots are the most discussed component of this trend. Their widespread use is transforming customer service by reducing wait times, offering 24/7 support, and scaling personalization.

### Retail is embracing autonomous AI agents beyond chat

Beyond chatbots, **29% of the narrative** focuses on broader AI agents—tools capable of managing everything from product recommendations to dynamic pricing and logistics. AI agents are expanding into pricing, demand forecasting, and decision support, beyond just customer service.

### Employment implications are emerging subthemes

Mentions of **U.S. workforce impact (6.1%)**, **LLMs (5.7%)**, and **frontline workers (2.7%)** suggest a rising awareness of how AI agents affect jobs and responsibilities. These conversations signal a growing concern around ethical AI practices, especially in consumer-facing environments.



## AI THEMES IN E-COMMERCE

# TOP TREND #3: INVENTORY MANAGEMENT

### Smart tech is powering smarter inventory systems

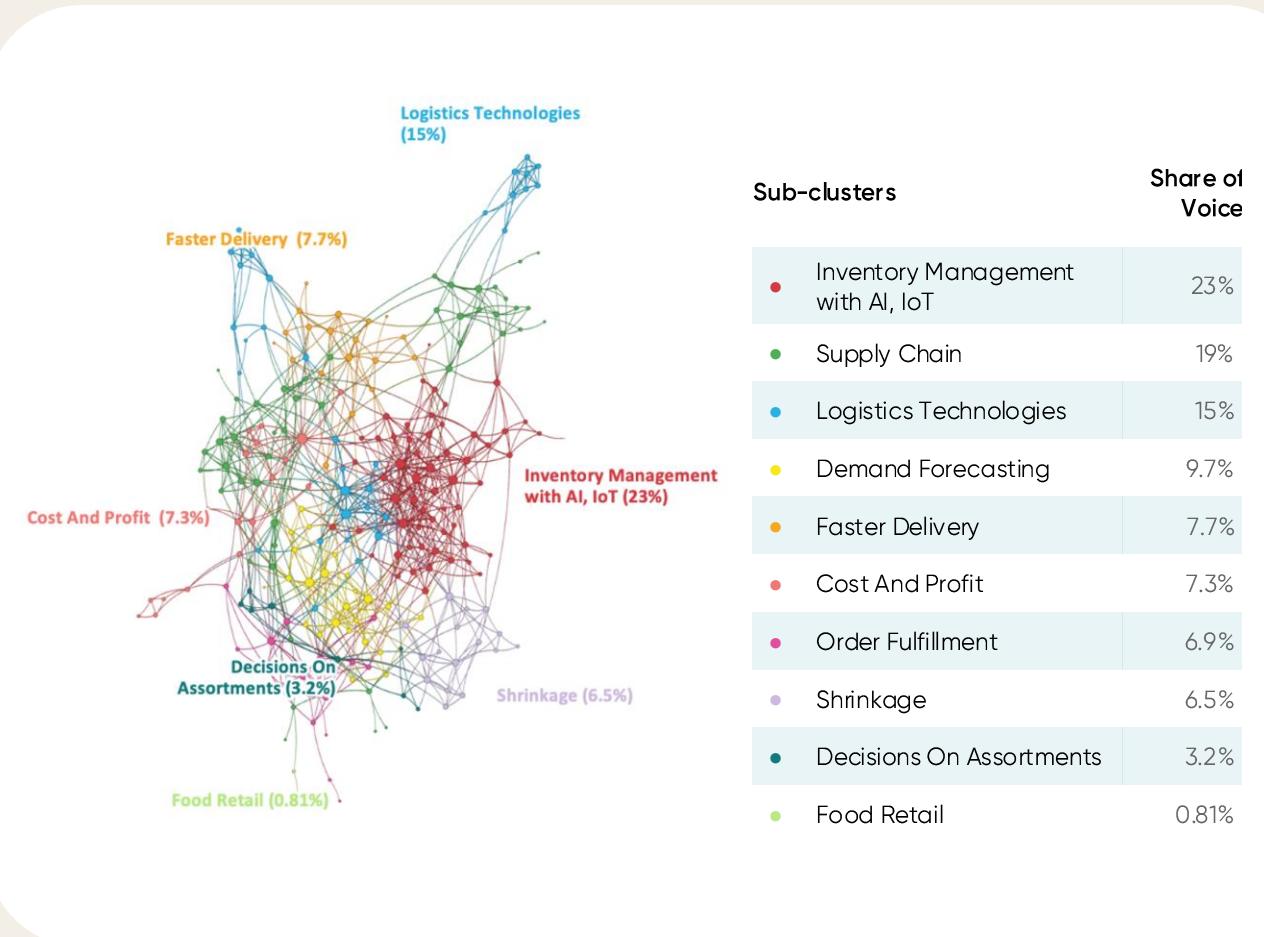
With **23% of conversations** centered on inventory management with AI and IoT (internet of things), retailers are turning to real-time data and automation to minimize stockouts, forecast demand, and streamline operations across warehouses and storefronts.

### Logistics innovation is critical to faster fulfillment

**15% of the discussion** focuses on logistics technologies, highlighting a growing demand for faster delivery and more agile supply chains. Retailers are prioritizing last-mile optimization and fulfillment efficiency to stay competitive.

### Cost control and shrinkage are operational concerns

Mentions of **cost/profit (7.3%)** and **shrinkage (6.5%)** indicate a heightened focus on reducing losses and maximizing margins. AI-powered decision-making tools are helping retailers make smarter assortment choices and reduce waste across the supply chain.



## AI THEMES IN E-COMMERCE

# TOP TREND #4: VIRTUAL TRY-ON

### AR and VR power a more immersive shopping experience

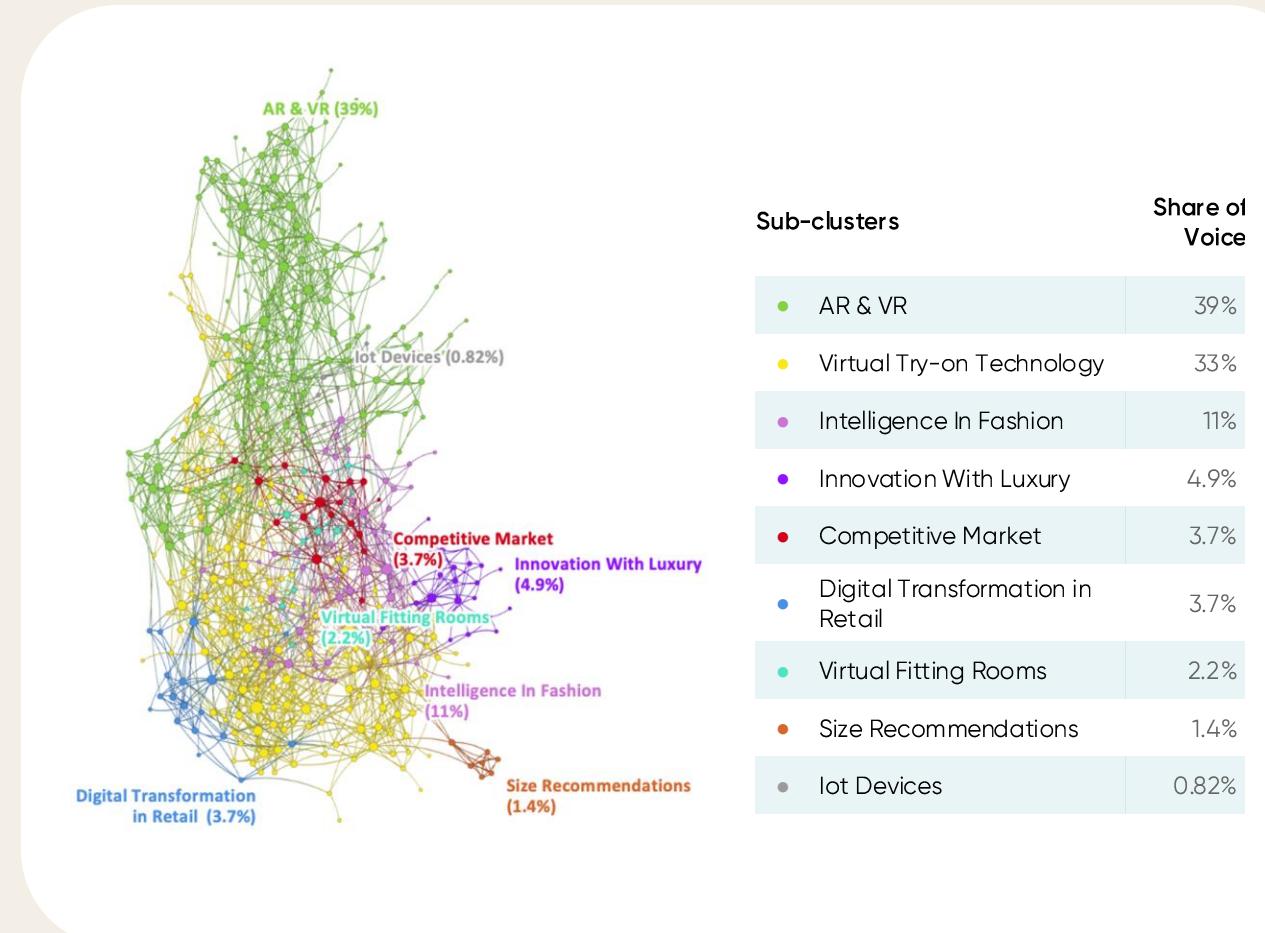
Leading the conversation with **39% share**, augmented and virtual reality technologies are transforming e-commerce by enabling virtual try-ons, helping customers visualize products in real-world settings, and reducing return rates.

### Fashion and luxury brands lead the innovation curve

With themes like "**Intelligence in Fashion**" (11%) and "**Innovation with Luxury**" (4.9%), brands in the apparel and high-end retail space, such as Nike, Zara, and Autometrix are pushing the boundaries of digital engagement and redefining the path to purchase.

### Virtual trial rooms evolve toward greater accuracy

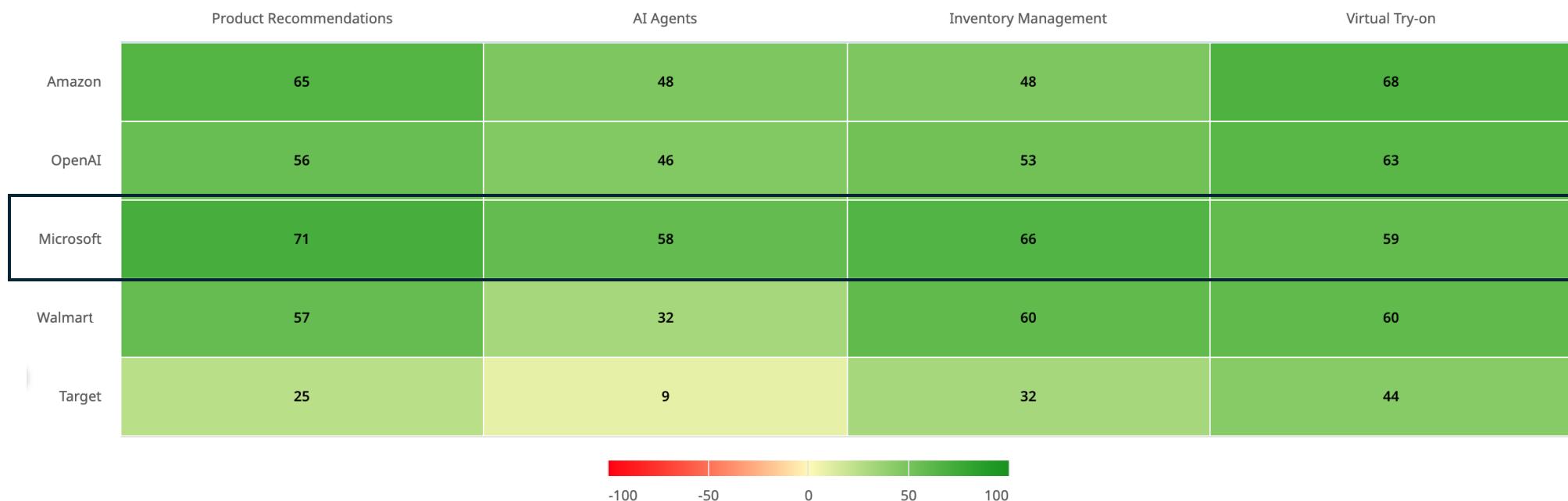
Subtopics like **virtual fitting rooms** (2.2%) and **size recommendations** (1.4%) reflect growing investment in technologies that personalize sizing and styling—addressing one of the most common friction points in online shopping.



## AI THEMES IN E-COMMERCE

# BRAND: NET SENTIMENT

**Microsoft** stands out with the highest sentiment across most AI themes, especially in product recommendations and inventory management, showing strong confidence in its enterprise AI capabilities. **Amazon**, however, leads when it comes to virtual try-on, reflecting more excitement around its immersive shopping experiences. In contrast, while Target currently trails behind with notably lower sentiment, there's room to grow as AI in retail applications continues to evolve.



# RECOMMENDATIONS



### Put customer experience at the center of your AI strategy

Invest in tools with proven ROI, such as AI-powered product recommendations, virtual try-on solutions, and automated size guidance. These technologies improve conversion, reduce returns, and boost shopper satisfaction across categories.



### Connect AI investments across the customer journey

Build a unified ecosystem by linking chatbots, personalization engines, and inventory-aware logistics tools. Retailers that break down data silos see higher impact across marketing, fulfillment, and customer support.



### Test AI rollouts ahead of key retail moments—then scale

Use quieter seasons to pilot and refine AI features, then scale them confidently during high-impact periods like holiday shopping or new-year resets. This ensures your systems are optimized and your teams are prepared before peak demand hits.



### Track consumer sentiment to guide AI priorities & future investments

Monitor emerging topics and the sentiment from online conversations to inform where and how to focus AI investments. Let audience perception shape your roadmap rather than solely relying on internal goals.

# QUID

MODELS. INSIGHTS. OUTCOMES.

## See the full picture

Understand what's being said by your target audience, where it's gaining momentum, and why it matters. We process massive volumes of structured and unstructured data to uncover the signals shaping your category.

## Focus on what's coming next

Act early and with confidence with AI-driven insights that surface emerging themes and shifts in conversation, whether it's a new consumer mission, a breakout product narrative, or a rising brand.

## Turn insight into action

Move from raw data to decisions that are timely, relevant, and measurable. Our outcomes engineers work with you to activate on online signals aligned to your business priorities.

[Let's Work Together](#) ➔