HOW ARTIFICIAL INTELLIGENCE IS CHANGING RETAIL FOR GOOD

Leveraging the Cloud for Maximum Benefit

FROST & SULLIVAN VISUAL WHITEPAPER

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The Retail Industry Has Been Reshaped—Forever

The past few years have dramatically reshaped the retail industry, affecting everything from brick-and-mortar stores, consumer behavior, and product demand, to supply chain operations and the employee experience. While this shift has its challenges, it also presents a great opportunity for retailers to embrace digital transformation as they adopt new technologies, including cloud-based artificial intelligence (AI) and data analytics. Doing so will positively impact the shopping experience, empower employees, and redefine the supply chain for real-time operations.

Even before the pandemic, the retail industry had shifted its focus from simply delivering products to achieving high customer satisfaction. But in a world transformed by digital operations, it is now mission-critical for retailers to respond to their customers' needs and demands like never before. Only by focusing on achieving the highest satisfaction rates can retailers continuously cater to changing customer preferences and deliver consistent business growth.

At the same time, retailers must remove inefficiencies from their own operations—both internally and externally, with partners and suppliers.
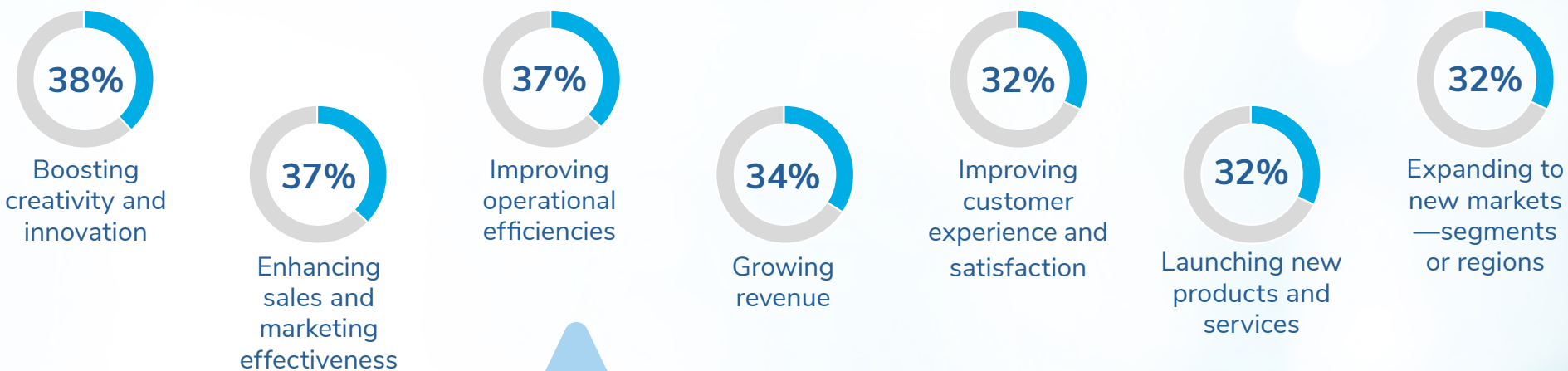
Frost & Sullivan research has surfaced 3 key trends in the retail sector

Growing demand for AI-powered branding and marketing to gain insights from unstructured data.

Increasing focus on online product search and discovery in targeting potential customers.

Improving the customer experience through a blended approach to sales and service.

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Purpose of AI Implementation Amongst Retail Firms

38%
Boosting creativity and innovation

37%
Enhancing sales and marketing effectiveness

37%
Improving operational efficiencies

34%
Growing revenue

32%
Improving customer experience and satisfaction

32%
Launching new products and services

32%
Expanding to new markets —segments or regions

The pandemic forced many retailers to adopt a digital-first strategy.
As a result, many retailers are investing in AI tools that can help them overcome their relative lack of experience in online shopping operations, such as optimizing searches, enhancing sales and marketing, and improving customer satisfaction.

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Retailers Must Maximize the Value of Data

The pandemic impacted brick-and-mortar stores, consumer behavior, product demand, and many other areas of retail operations. But the biggest change comes from the accelerated significance of online shopping channels, as consumers continue to embrace the internet as their primary purchasing platform. This shift has been challenging for many businesses, but it also reveals a great opportunity for retailers to expand and prioritize their digital presence.

As part of this effort, AI can help by enabling new ways of collecting and analyzing data, leading to deeper business insights and better decisions and outcomes. And even though most organizations initially adopt AI for the critical role it plays in data analysis, they quickly realize the other benefits of the technology: boosts in creativity and innovation, enhanced sales and marketing effectiveness, seamless operational efficiencies, and a much better customer experience.

eCommerce Customer Journey and AI Integration at Each Stage

Awareness Stage
- ▶ AI-based chatbot to offer recommendations to customers
- ▶ Using NLP to enhance text search of the product

Consideration Stage
- ▶ Using predictive retail to suggest similar and related products
- ▶ Predicts what customers want even before they make a purchase

Acquisition Stage
- ▶ Voice-activated payment gateway on consumer smartphone for online customers

Service Stage
- ▶ Delivers customer service by autonomously interacting with customers and taking customer feedback via email, chatbot, and SMS

Loyalty Stage
- ▶ Using predictive retail to suggest similar and related products
- ▶ Predicts what customers want even before they make a purchase

AI-driven solutions help retailers gain better business insights while enriching the customer experience.
Over the next 2 to 3 years, the application of machine learning algorithms, natural language processing, computer vision, and emotion and sentiments analytics will increase as retailers try to gain holistic insights from all areas of the business—including inventory, supply chain, production, and in-store operations.

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Retail AI—Key Use Cases by Function

AI tools and technologies optimize operational processes and decision-making activities associated with selling goods and services.

Key Use Cases

Customer Experience
Uses AI to enhance various aspects of the customer experience

- Product search and discovery
- Intelligent signage
- In-store navigation
- Customer service and support
- Virtual fitting rooms
- Smart dressing rooms
- Predictive shipping

Marketing & Branding
Uses AI to create brand awareness and optimize marketing activities

- Reward program
- Personalized recommendations
- Lead generation
- SEO optimization
- Social media analytics

Inventory & Operations
Uses AI to streamline operations, manage inventory, and understand the competition

- Supply chain management
- Storefront layout optimization
- Inventory management
- Merchandise display optimization

Pricing & Payments
Uses AI to reduce friction in the payment process, extend credit, and detect fraud

- Self and cashier-less checkout
- Fraud and error detection
- Dynamic pricing

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Source: Frost & Sullivan

Empower Store Associates

Retailers can jump-start productivity and boost revenues by paying as much attention to the employee experience as they do the customer experience. Employees should have the same access to information as their increasingly knowledgeable customers—and they should be able to make decisions and take action based on that data. By trusting employees to make the best choices for the organization, companies can recognize measurable benefits.

Key Action Items

▶ Prioritize communication: Make it easy for retail associates to reach one another quickly via chat, multimedia, and instant voice communications—whether they're on the floor, in the storeroom, or greeting customers at a kiosk or other remote locale.

▶ Streamline processes: Give employees one-click access to information. Let users customize their feed, segment and tag audiences, receive urgent alerts, and recognize team members all in a single app.

▶ Maintain an engaged, inclusive workplace: Create community while helping workers balance workplace productivity with their own health and wellbeing.

▶ Retail workforce management: Digitize manual tasks like scheduling to drive employee engagement and retention. Look for a tool that lets you:

- Manage shifts with simple and secure mobile staffing
- Connect to your existing workforce management system
- Share information across the organization, from the C-suite to the retail stores

▶ Process automation and career development: Extend automation throughout the organization to:

- Give employees everything they need in one extensible app
- Quickly implement new processes
- Reduce the burden on frontline workers
- Encourage and support career growth and development

Elevate the Shopping Experience

Shoppers are increasingly using mobile apps and devices for product searches, research, and ultimately purchases (including services). Even in-store shoppers routinely use their phones while in physical outlets to conduct online research (comparing product prices, checking reviews, and evaluating product specifications). This shift in behavior has forced retailers to accelerate their digital transformation to cater to these changing needs and expectations.

Consumers find browsing online much easier than visiting a physical store, even if they eventually want to purchase the product in person. The ability to easily search for and gather information and recommendations about a product drives confidence in the buying process, but it also puts retailers at risk—it's that much easier to lose out to a competitor based on perceived quality, not to mention price or availability. Indeed, if not managed well, these online search-and-discover experiences can become a point of a friction between customers and retailers' brick-and-mortar operations.

Digitally savvy millennial shoppers, in particular, are increasingly opting for retailers that offer a seamless online and offline shopping experience. As a result, retailers are adopting solutions that can help them manage the complexity of integrating bricks with clicks to create omnichannel experiences. In the process, they are increasingly integrating AI across functions such as marketing and branding, product search, payment, and inventory management to remain competitive in the marketplace.

Technology Spotlight

Retailers have the opportunity to offer a seamless product discovery and selection process by integrating:

Natural language processing (NLP)
NLP-based search engines can improve the search process by recommending "closest and nearest" products based on customer recommendations.

Visual AI
Customers can search for products via images.

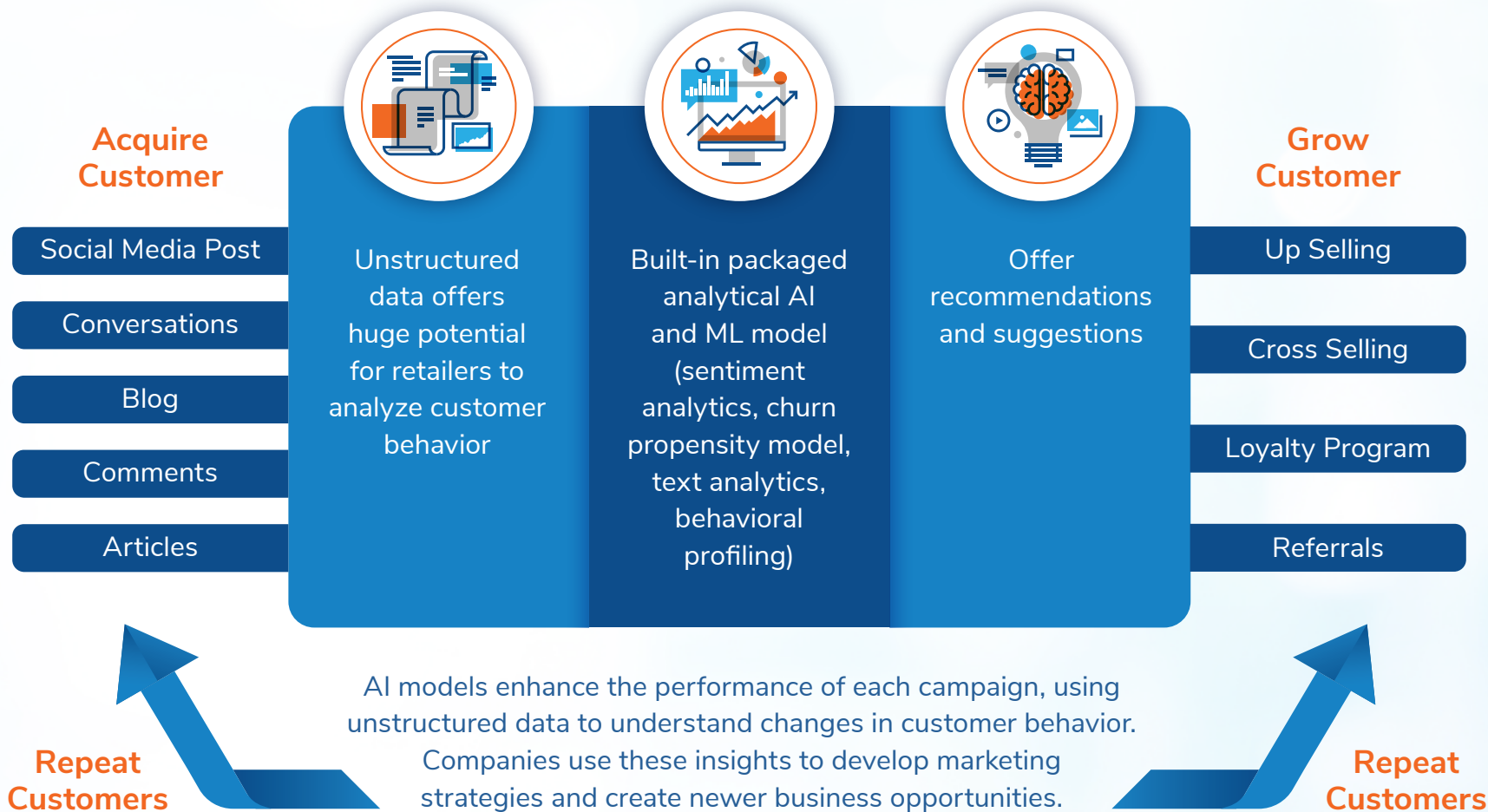**Augmented reality (AR)-based fitting and look tests**
Integrating AR technology within mobile apps can help customers better envision how a product will wear, reducing returns, and exchanges.

Retailers can bundle these features with virtual assistants (aka chatbots) to offer a seamless experience and grab customer attention.

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Increasing Demand for AI-Powered Branding and Marketing Solutions to Gain Insights from Unstructured Data

AI-Based Marketing Solutions

Acquire Customer

- Social Media Post
- Conversations
- Blog
- Comments
- Articles

Unstructured data offers huge potential for retailers to analyze customer behavior

Built-in packaged analytical AI and ML model (sentiment analytics, churn propensity model, text analytics, behavioral profiling)

Offer recommendations and suggestions

Grow Customer

- Up Selling
- Cross Selling
- Loyalty Program
- Referrals

Repeat Customers

Repeat Customers

AI models enhance the performance of each campaign, using unstructured data to understand changes in customer behavior. Companies use these insights to develop marketing strategies and create newer business opportunities.

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Digitize Operations for Real-time Performance

Although still in the early stage of adoption, computer vision and visual AI technologies have the potential to revolutionize the retail industry. Use cases are being developed for improving internal retail operations by eliminating operational inefficiencies and reducing business losses. Computer vision technology solutions optimize internal retail operations and increase labor productivity.

Various Use Cases Include:
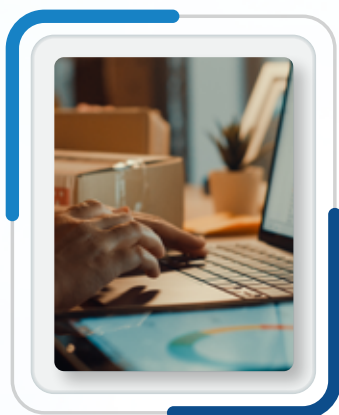
Inventory Management

Ensures efficient tracking of out-of-stock items and repurchased goods
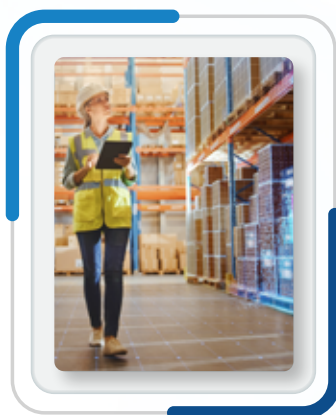
Warehouse Management

Optimizes warehouse space by efficiently suggesting where to store products

Product Design

Insights from images and visual data collected from customers' previous shopping experiences used to design new products

Store Security and Monitoring

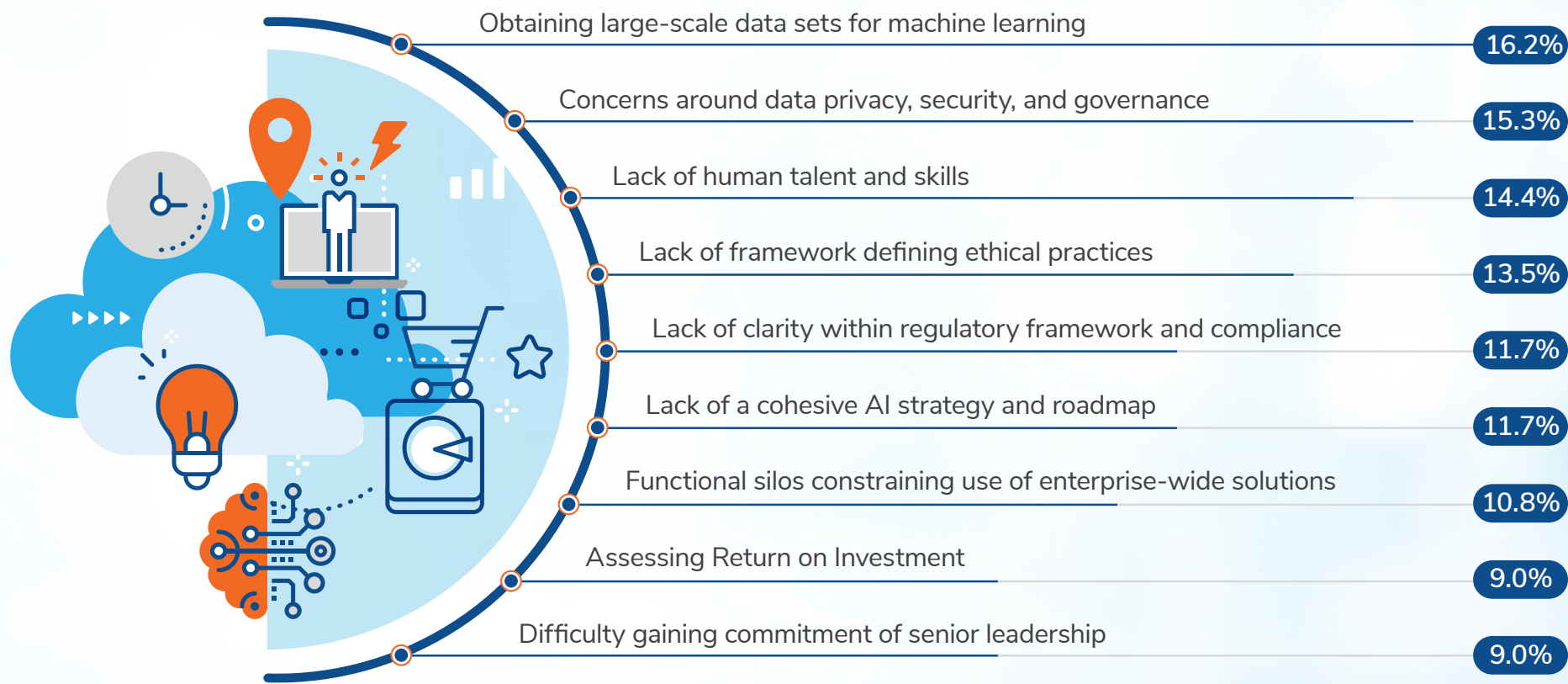Monitors camera footage for suspicious behavior and helps improve in-store security

Payments

Product scanning and automatic payments from customers' digital wallets and/or biometric IDs

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Frost & Sullivan Recommends: The Cloud Can Get You There

Although retailers are deploying AI-based solutions, they will have to overcome certain challenges related to obtaining data sets for machine learning algorithms. The larger the data sets the stronger the output of AI solutions. Additionally, retailers will have be careful while dealing with consumer data and ensure they do not exchange sensitive information. Lastly, retailers will have to invest in developing human talent and skills for analyzing data. Deploying this technology in the cloud can make it much easier for retailers to begin this journey, as it addresses all these concerns.

Challenges Call for the Cloud

Challenge	Percentage
Obtaining large-scale data sets for machine learning	16.2%
Concerns around data privacy, security, and governance	15.3%
Lack of human talent and skills	14.4%
Lack of framework defining ethical practices	13.5%
Lack of clarity within regulatory framework and compliance	11.7%
Lack of a cohesive AI strategy and roadmap	11.7%
Functional silos constraining use of enterprise-wide solutions	10.8%
Assessing Return on Investment	9.0%
Difficulty gaining commitment of senior leadership	9.0%

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Source: Frost & Sullivan

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Microsoft Cloud for Retail | Microsoft Industry >

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