# Retail in 2024:

How Autonomous Store Solutions are Transforming Industries for the Better
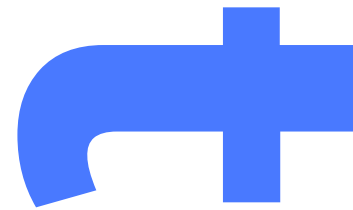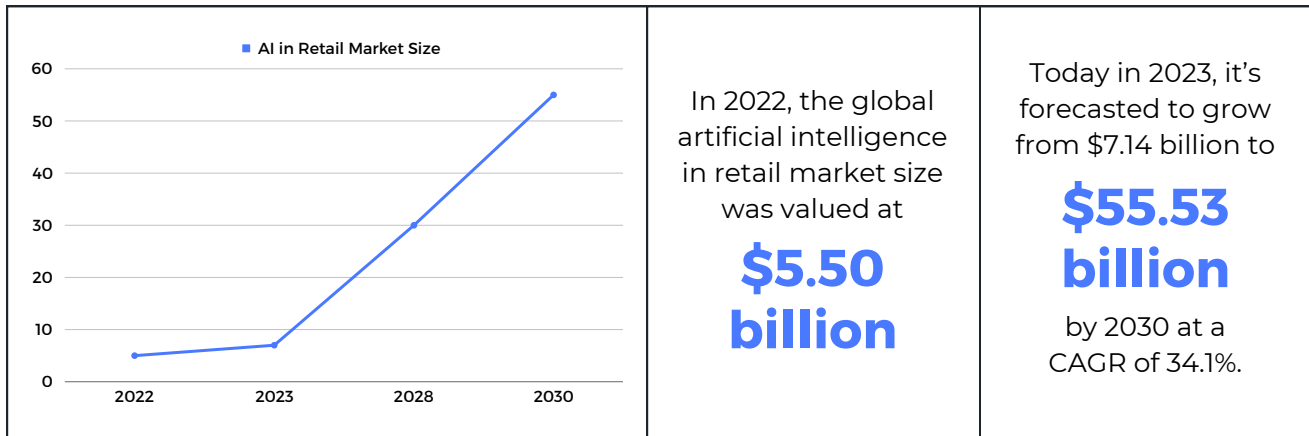
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# Introduction

Artificial intelligence (AI), while still in its infancy, is no longer a novelty. And the retail industry is well on its way to incorporating AI into various aspects of its operations, forever altering the way customers shop, and how businesses optimize labor and enhance overall store efficiency.

| AI in Retail Market Size | In 2022, the global artificial intelligence in retail market size was valued at **$5.50 billion** | Today in 2023, it's forecasted to grow from $7.14 billion to **$55.53 billion** by 2030 at a CAGR of 34.1%. |
| --- | --- | --- |

Source: Fortune Business Insights

As AI technologies continue to mature, the retail sector is becoming increasingly autonomous. Which makes us question:

> What does this suggest about retail in 2024?

> Which industries will be most impacted by AI and autonomous retail solutions?

> How will new technologies and solutions change these industries for the better?

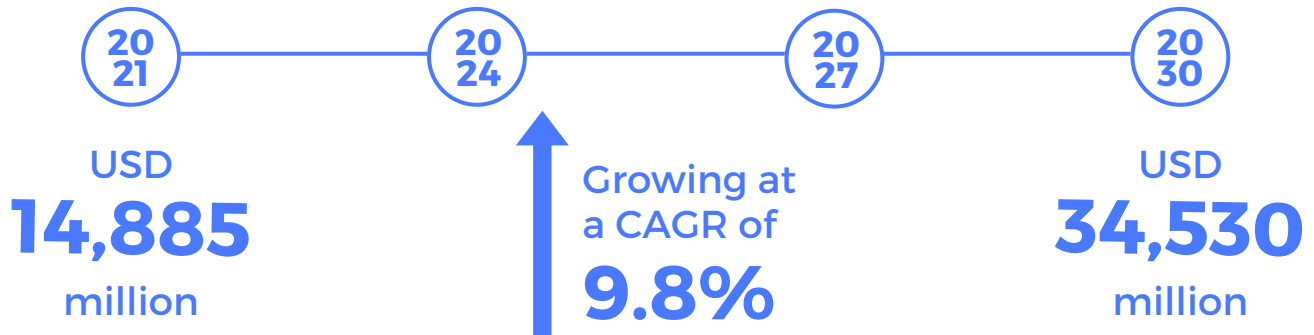We're answering all the above and more in this resource.

# The Rise of the Autonomous Store

**2018**       **2023**       **2024**

**350** autonomous stores     **7,250** autonomous stores     **10,000** autonomous stores

"As of 2018, there were an estimated 350 stores in the world that offered a fully autonomous checkout process. The number of stores offering autonomous checkouts was forecast to grow substantially over the coming years, with 10,000 stores with autonomous checkouts anticipated by 2024."

— Statista

## The Global Retail Automation Market Size

**20 21**      **20 24**      **20 27**      **20 30**

USD **14,885** million     Growing at a CAGR of **9.8%**     USD **34,530** million

"The global retail automation market size was valued at USD 14,885 million in 2021 and is estimated to reach an expected value of USD 34,530 million by 2030, registering a CAGR of 9.8% during the forecast period (2022 - 2030).

— Straits Research

# 7 Industries That Will Benefit from Autonomous Retail Solutions in 2024

Artificial intelligence (AI), while still in its infancy, is no longer a novelty. And the retail industry is well on its way to incorporating AI into various aspects of its operations, forever altering the way customers shop, and how businesses optimize labor and enhance overall store efficiency.

## 1 Stadiums & Arenas: Win for the Home Team

Autonomous stores speed up concessions and enable fans to get the items they need and get back to their seats in record time.
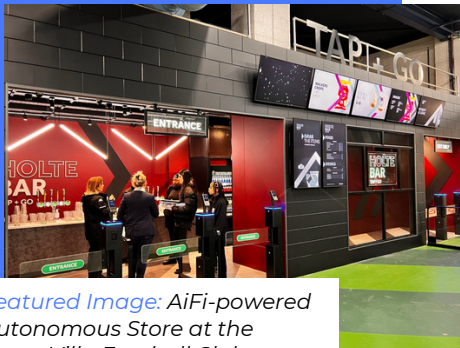


*Featured Image:* AiFi-powered Autonomous Store at the Aston Villa Football Club
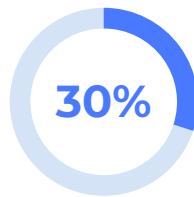
**30%** of global fans believe "being able to stay in their seat is the most important way to improve the food and beverage experience at the stadium, closely followed by faster transaction times."
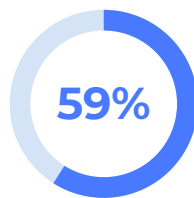
**59%** of fans would spend more on food & beverages if wait times were shorter.

Source: Oracle

## 2 Amusement Parks: Create Magic Through Automation

Waiting on long food and beverage lines is a major inconvenience and hinders the park or event-goer's experience. A quick and seamless checkout process enables event goers to save time, and actually enjoy their time at the festival or amusement park.

**The maximum acceptable waiting time to purchase food and beverages is just 10 minutes.**

Source: Oracle
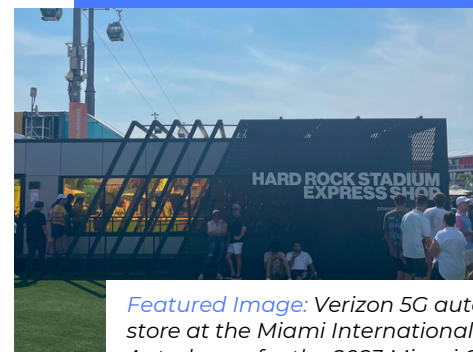


*Featured Image:* Verizon 5G autonomous store at the Miami International Autodrome for the 2023 Miami Grand Prix

*Featured Image: Żabka drive through in Europe*

# 3

## Grab and Go Locations: Establish Convenience & Revenue Quickly

**Autonomous stores have the potential to [nearly double](#) profit margins compared to traditional retail stores.** Plus, with the right technology like computer vision, the worry about [retail shrink](#) is mitigated as the shopper data provides store managers with insights into customer behavior. These insights help to identify high-risk areas, times, or products.
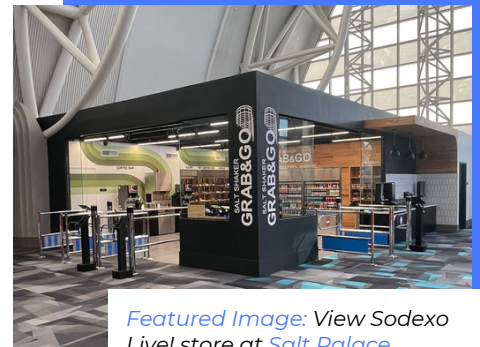
# 4

## Convention Centers: Get Back to Business

Convention centers hosting business networking conferences or cultural events such as Comic-Con can greatly benefit from implementing an autonomous store.

Attendees can quickly grab the food and drink they need for lunch and get back to their business endeavors or favorite exhibition.
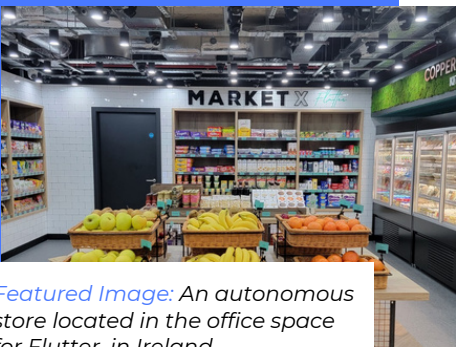

*Featured Image: View Sodexo Live! store at [Salt Palace](#)*


*Featured Image: An autonomous store located in the office space for Flutter, in Ireland*

# 5

## Workplaces: Increase Productivity & Employee Satisfaction

In-office workplaces require quick access to snacks and beverages for a brief break in between meetings or projects. An autonomous store placed within a shared office space, such as a lobby, allows businesses to **cater to busy workers with limited time on their hands while optimizing sales during rush hours.**

# 6

## Travel Locations: Get Going with Snacks & Essentials

Autonomous stores ensure travelers can quickly get the items they need and get back to their travel adventures in minutes—sometimes even seconds.

Plus! Most autonomous stores operate unattended 24/7, catering to shoppers at all hours of the day and ensuring products are always available to them, even in remote locations.



*Featured Image: ServiceStore, in Berlin's Ostbahnhof Deutsche Bahn railway station*

# 7

## Universities: Grab a Quick Bite to Eat Before Class

Autonomous stores on university campuses are effectively addressing the challenge of providing students with access to nutritious food and essential items at any hour of the day. These efficient stores enhance the fast-campus shopping experience by operating with minimal staff and extended hours, resulting in increased sales during less busy periods.
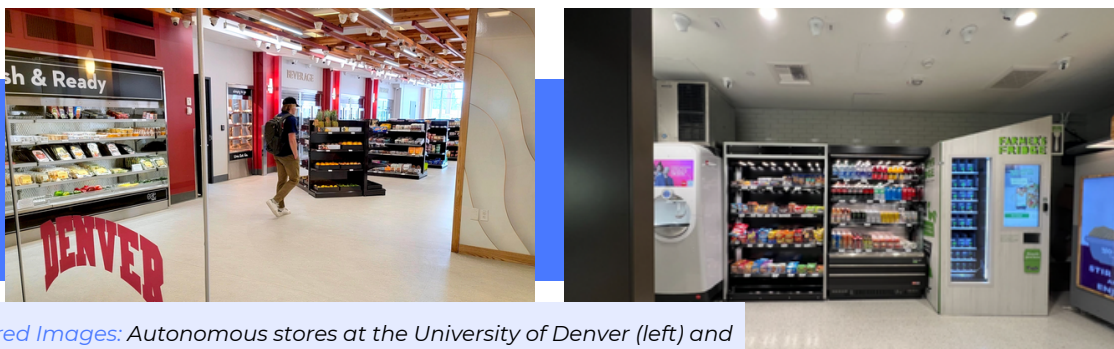


*Featured Images: Autonomous stores at the University of Denver (left) and the University of San Diego (right)*

# Overcoming Challenges: Security, Privacy, and Customer Trust

As with all new technologies, security is a top priority for those implementing the tech and those using it. Autonomous retail store technology is no exception. The most common concerns of building an autonomous store include potential product loss and cyberattacks. Let's take a look at both issues and identify ways to overcome them.

## Product Loss

A [recent global study](#) found that self-checkout systems "accounted for as much as 23% of [a company's] total unknown store losses, with malicious losses representing 48%."
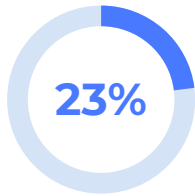
**23%** of [a company's] total unknown store losses were accounted for by self-checkout systems.
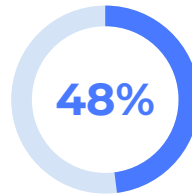
**48%** of those losses were malicious.

Using frictionless checkout systems with camera-only computer vision where shoppers don't need to wait in line or stop to scan and pay is a safer option. All shoppers need to do is walk into the store with their credit card or app, pick up the items they need, and walk out with their receipt sent via email or SMS a few minutes later.

**Camera-only computer vision will accurately identify which items a person walked out of the store with.** This way, the customer is charged fairly and accurately and the store is gaining the proper funds for the items removed.

## Cyberattacks

As the future of retail increasingly relies on technology and artificial intelligence, many retailers are concerned about potential cyber threats that could compromise the security of their autonomous store networks and systems.

That's why it's vital to ensure the software and hardware you use to power your autonomous store has built-in cybersecurity measures to protect your business and your customers. **By investing in secure software and hardware, you can establish a strong defense against cyber threats,** such as:

- **Malware attacks**
- **Phishing attempts**
- **Unauthorized access and account takeover/compromise**

This not only protects your customers' personal information including payment details, but also preserves the trust and confidence they place in your autonomous store. Moreover, it demonstrates your commitment to maintaining a safe and secure shopping environment, helping to **mitigate potential financial losses and reputational damage that can arise from successful cyberattacks.**

# Game-Changing Retail Transformations: Case Studies

## King Power Stadium, Leicester, England
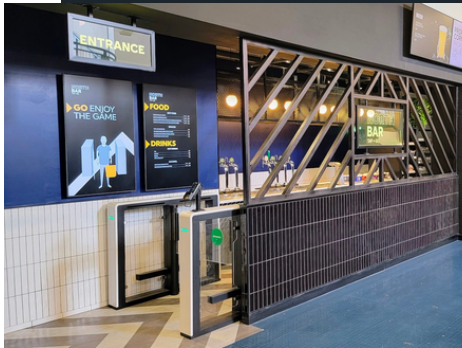
Leicester City Football Club was the first premier league football club to implement an autonomous store serving draft beer for sports fans. Pretty cool, right?

Since launching the cashierless checkout store with AiFi, King Power Stadium has:

**Reduced transaction time from 70 to 18 seconds**

**Increased repeat shoppers by 30-50% during the game**

**Reduced labor by 60%**

## Ford Field, Detroit, Michigan

Stadiums host thousands of fans on game day, and the AiFi-powered cashierless checkout at Ford Field in Detroit has proven to be the fastest way for fans to grab their favorite snacks.

In fact, at Ford Field, AiFi:

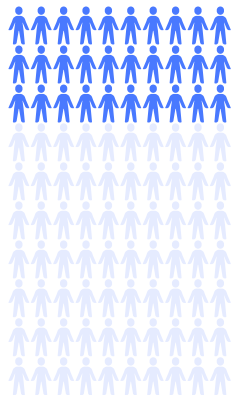**Reduced the average transaction and queuing time by 50%**

**Which lead to an increase in sales by 139%**

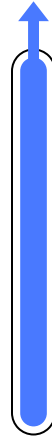# The Future of Autonomous Stores: Key Trends for 2024

## The Demand for Computer Vision Will Increase

Approximately

# 30%

of business leaders reported seeing a **growing demand for computer vision solutions, such as object tracking and identification.**
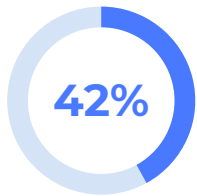
A major stadium in the Southeast U.S. experienced a

# 240%

**increase in revenue** with AiFi's computer vision technology. With this dramatic business win, we expect the use of computer vision to rise in concessions at stadiums and other grab-and-go locations across the retail landscape.

## Gen Z's Shopping Habits Will Require Retailers to Leverage In-Store Digital Tech

**42%**

of Gen Z's spend occurs through physical stores.

**38%**
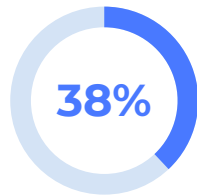
of millennials' spend occurs through physical stores.

Millennials and Gen Z-ers have grown accustomed to personalized and easy shopping experiences. As a result, in-store shopping experiences will need to be altered to accommodate these new buying habits.

As a result, new technologies such as AI will streamline the shopping and checkout experience in brick-and-mortar stores.

Source: Retail Dive

# The Boom in AI Will Enable Personalization in Autonomous Shopping

AI examines consumer buying behaviors, past transactions, preferences, demographic information, and other pertinent data to offer tailored suggestions to individuals. This enhances the probability of them making a purchase and engaging with the brand on a more regular basis.

> "It's like e-commerce shopping, but within brick and mortar—we can collect customer data and track the customer journey at all the stages, which allows us to build advanced analytics, including sales funnel or advanced shopping history based on events. The data, combined with our mobile app, enable us to personalize communication, offer and even discount coupons to the customers."
>
> *— Paweł Grabowski, Head of Unmanned Solutions at Żabka Future*

Source: Sifted

# Final Thoughts

Retail in 2024 and beyond is on an exciting trajectory. With AI technology at its core, autonomous retail is promising a future of more convenient, efficient, and profitable shopping experiences for consumers across a multitude of industries.

AiFi is the leading AI provider, empowering retailers worldwide to scale autonomous shopping solutions with camera-first technology and over 115 active autonomous stores worldwide. If you'd like to learn more about how we can work together to increase your business' revenue, reduce labor costs, and drive increased throughput, let's chat! We'd be happy to discuss the growth possibilities with you.

Get in touch with us to get started.

# About AiFi

AiFi, a globally leading AI provider, empowers retailers worldwide to scale autonomous shopping solutions with 100% computer vision. Powered by the most cost-effective and flexible method of deploying cashier-less technology solutions, AiFi's camera-only platform enables businesses to provide a frictionless checkout experience to their customers. AiFi's technology works through cameras and computer vision to allow quick and efficient shopping for various store formats across multiple global retail segments.

AiFi's solutions adapt to numerous verticals, including convenience stores, sports and entertainment venues, universities, workplaces, and travel retail. AiFi customers include: LA Clippers, Golden State Warriors, NASCAR, Florida Panthers, Aldi, Carrefour, Compass Group, Zabka, and many more. AiFi now has the highest number of store deployments globally, with over 100 active stores. The company has raised a total of $80 million from investors, including Qualcomm Ventures, Verizon, HP, Mithril, Duke Angel Network, Cervin Ventures, TransLink Capital, and Plum Alley.

To learn more about AiFi, please visit aifi.com.