Physical Retail's Automation Journey:

HOW RETAILERS CAN LEVERAGE THE POWER OF AI

ECOENERGY INSIGHTS™

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Introduction
Dynamic Retail in a Turbulent World

The physical retail sector has always been a highly competitive and dynamic environment. Successful retailers are constantly evolving to meet the needs of consumers. They are dedicated to developing new products and continuously seek to be one-step-ahead on cost efficiencies through operational and logistical innovation. However, recent years have brought unprecedented adversity to the world and the physical retail industry has been on the frontline.

In early 2020, a once-a-century pandemic triggered a series of extended lockdowns, social distancing measures, occupancy limits, and other policies that specifically targeted indoor commercial spaces. Retail stores, alongside offices and hospitality facilities, around the world were forced to completely shut down operations for months at a time. Physical retail had already been losing ground in a decades-long battle with e-commerce then, suddenly, billions of people around the world had no choice but to shop online.

In the US, e-commerce sales increased by 43% or $244.2 billion in 2020, rising from $571.2 billion in 2019 to $815.4 billion in 2020, according to Census Bureau data. Products typically purchased in-person suffered. The bureau's long-running Annual Retail Trade Survey (ARTS) showed an 18% drop in sales of electronics and appliances between 2019 and 2020, which is the same rate of the decline seen in gas stations. While sales of clothing and accessories slipped a massive 25%, from $269.5 billion in 2019 to $201.4 billion in 2020.

The pandemic didn't just keep customers away from physical stores, it also kept many products away too as supply chain disruptions flared-up, especially from the numerous lockdowns in China. According to an Ernst & Young survey, 57% of supply chain executives reported "serious disruptions" from the pandemic, while 72% in total noting a "negative effect" on supply chains. In 2023, many are still correcting supply chain lags created by the crisis, forcing retailers to innovate to survive.

These initial impacts of the crisis were too much for many in the retail sector, with numerous household brand names lost in the first months of the pandemic. Any retailers struggling before the pandemic would have been facing critical decisions when the crisis hit, as would those that did not have an online presence by 2020. An inevitable period of consolidation has followed in the retail sector, triggering increased competition and a flight-to-quality for physical retail stores as the pandemic sparked a change in mindset across society.

Public health policy and awareness, which spiked in 2020 and 2021, appears to have settled at a visibly higher level than before the pandemic, adding new demands to physical retail spaces. Both customers and employees now expect higher levels of hygiene and air quality, social distancing, and greater flexibility in the way they work and shop. The proliferation of e-commerce and remote work means that both customers and employees will have to be lured back to retail stores with cleanliness, freedom, and in-person experiences.

This global health crisis, while keeping us apart, also brought the world together on key issues. Since the onset of the pandemic, people care more about the environment, the impact of their purchases, and the social values of the brands they align with. Major economies agreed on a "green recovery" to the pandemic, with a push towards clean energy and tighter regulations on building efficiency. To evolve and meet this new mindset, retailers must assess and improve their sustainability before they are ostracized by an increasingly conscious society.

"Change can be good, but constant change can be daunting. Retailers today are feeling the hangover of such volatility occurring in the most condensed time frame of any recent business cycle. Retail executives are preparing for the tides to shift again in 2023 as the reality of economic headwinds, geopolitical strife, a rapidly changing consumer, supply chain disruptions, and lingering labor issues come into play," reads Deloitte's 2023 Retail Industry Outlook.

Despite its undeniable impact, the pandemic did not create these trends, it merely accelerated them to such a degree that the world feels like quite a different place today than it did three or four years ago. Remote work was becoming more common, online shopping was growing, and consumers were increasingly conscious before the pandemic. However, what might have taken another decade took just a couple of years due to COVID-19. These new trends are not just reactions to the pandemic that will revert back to normal, we have been transported forward in time and only progressive retailers will survive in this premature future.

"But the retail outlook is not all gloom and doom; retailers have learned much about resiliency in the past few years. Massive demand fluctuations during the pandemic forced retailers to rethink archaic systems in favor of more pliable operations. Seemingly overnight, retailers rolled out health and safety protocols and established omnichannel capabilities. And they learned that rapidly evolving consumer preferences require more effective analytics and tools to build loyalty," the Deloitte report continued.

To weather the next storm, retailers now know they must evolve again, finding new tools and even more effective analytics to meet the demands of this new landscape. In the next section we outline the key trends impacting retail, before exploring the ideal solutions to help retailers survive and thrive in this new world.

# Key Trends Impacting Physical Retail

The retail industry is facing many new pressures and challenges in this turbulent period of human history. Here we discuss the key trends that are impacting physical retail specifically, through customer demands, in-person opportunities, and the energy dilemma.

Consumer Trends
The New Consumer Landscape

Consumers have also been through a crisis and it has changed their expectations of physical retail. According to a 2022 Salesforce survey, 88% of customers believe trust becomes even more important in times of change. Trust builds loyalty, and loyal customers will spend 67% more in year three of their relationship with a seller, than in year one, according to Invespcro data. To build that trust, retailers must focus on what's important to the modern consumer.
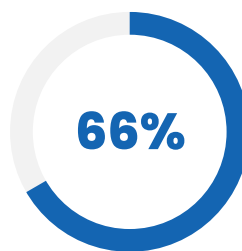
RISE OF THE CONSCIOUS CONSUMER

The global crisis has created a greater sense of togetherness in the world, an understanding that we must all work together to overcome global issues. Consumers are judging brands on their values and impact more than ever before, passing judgment with their purchasing decisions.
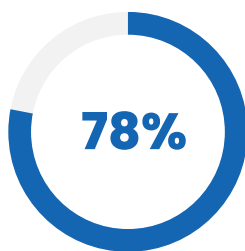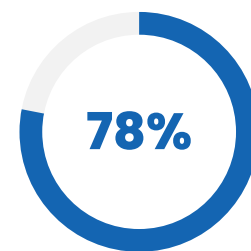
| 78%	66%	78%
of customer purchasing decisions are swayed by environmental practices	of customers ceased buying from brands who don't align with their values	of consumers believe that companies have a larger role to play in society
Saleforce	Saleforce	Capgemini

"In times of change, make customers' needs and expectations your corporate North Star. Keeping customers at the center will inspire loyalty and deepen trust," said Brian Solis, Salesforce's Global Innovation Evangelist. "When it comes to important issues, companies can't stand on the sidelines. Your values are an important part of your brand."

CONSUMER COMFORT AND CONVENIENCE

During lockdowns consumers were forced to shop online, in the comfort of their own home, and now demand greater comfort and convenience from in-person shopping. The physical retail space can be made more attractive to shoppers through temperature, air quality, and lighting, and also made more convenient through omnichannel retail strategies.
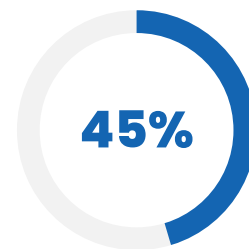
64%
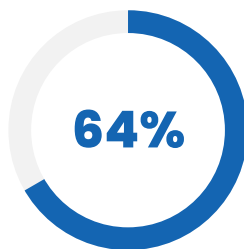
of consumers wish firms would respond faster to their changing needs

Accenture

73%
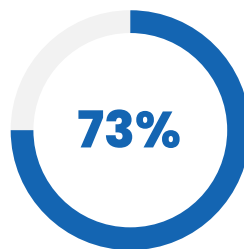
of consumers expect companies to understand their unique needs

Salesforce

45%

of retailers added new channels during COVID, 80% kept them after

Square

"COVID escalated the need for innovation as shopping patterns changed. There will be some return to 'normality' in the way in which customers shop, certainly in-store, but retail has been massively changed in the last 3 years." said Matt Bradbeer, Head of Commerce at Capgemini UK. "The need for high speed to market and proactivity has never been higher. Traditional technology stacks and ways of working or delivering change are no longer fit for purpose."

PHYSICAL CUSTOMER EXPERIENCE

Online shopping will never be able to compete with the in-person experience of the physical store. This has led progressive physical retailers to develop their in-store customer experience (CX), not just for better shopping but to entertain customers and build a modern brand image.

46%
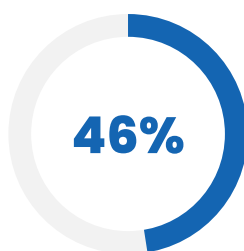
of retail professionals are prioritizing CX over product and pricing

SuperOffice

73%
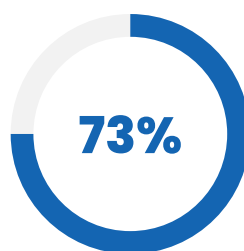
of consumers say CX is most important for purchasing decisions

PWC

60%
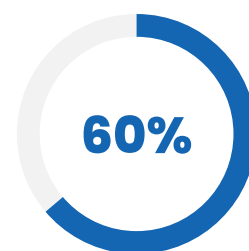
higher profits achieved by CX-focused brands over non CX-focused

CX Index

"While technology is reshaping today's digital-first CX, it's a question of where it can be most impactful, and how business leaders can take advantage of these opportunities," says Andy Thurai, VP at Constellation. "CX needs to be front and center in management decision-making. It takes an enterprise to deliver superior CX, and business leaders need to make this happen and be fully immersed in it as if their business depends on it. Because it does."

Energy Trends
The New Energy Landscape

It has been a turbulent few years for global energy provision. Drastic changes to electricity demand from the pandemic, followed by war between major oil and gas players Russia and Ukraine, and then the Green Recovery driving tighter regulations. Consuming 40% of all the electricity generated, buildings are becoming public enemy number one as society and government increase gr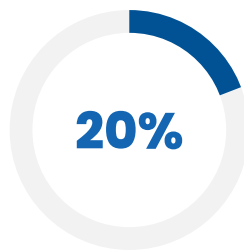een pressures on real estate. As large property owners in the public eye, physical retailers must now go green or face the consequences.

30%
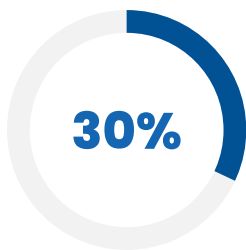
of overhead costs for retailers come from electricity consumption

Realcomm

20%

less energy costs has the same benefit as a 5% increase in retail sales

Carbon Trust

30%
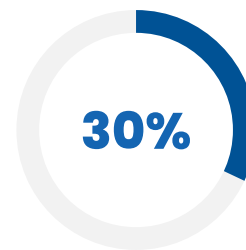
of all energy consumed in buildings is wasted

Environmental Protection Agency

"Retailers know that a responsible purpose-driven approach is essential. Everyone—from consumers to employees, and from investors to governments—expects the retail industry to act on sustainability with greater urgency," reads a 2022 Accenture Report: The Store of Tomorrow. "Sustainability isn't only a part of retail's future. It's an essential component of the here and now and is the very foundation on which successful retail businesses will now be built."
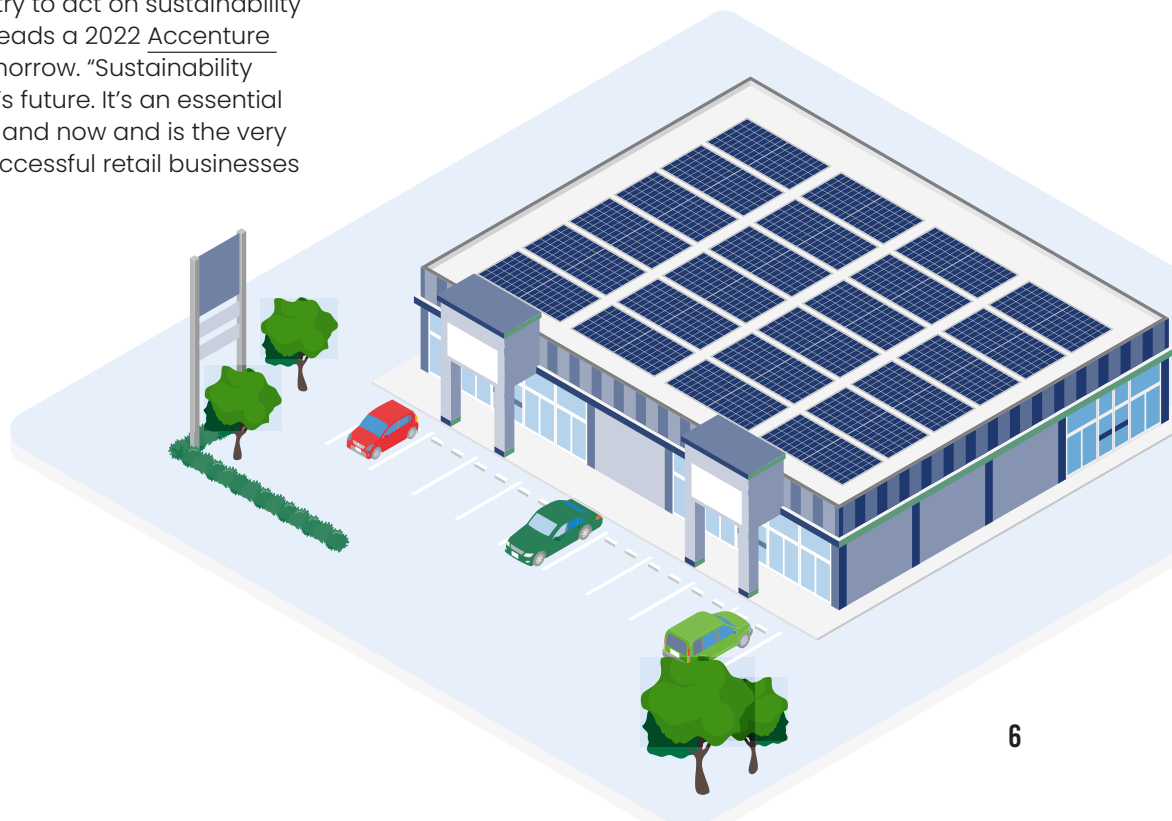
Introducing
Enterprise Automation

For physical retailers to survive and thrive in this new landscape, they will need to start leveraging technology to automate the operation of their stores or risk falling behind on key trends shaping the industry.

At Memoori, we have been tracking the development of building automation and the adoption of smart technologies for well over a decade. Early adopters were typically larger and more complex office or healthcare facilities that could justify the risks to stay ahead of the game.

However, as Memoori's own extensive research study shows, the building technology landscape has matured since then, opening up the benefits of the internet of things (IoT), artificial intelligence (AI), machine learning (ML), and big data processing for buildings of all types and sizes.

For multi-site applications like bank branches, restaurant chains, and retail outlets, the ideal smart building solution is best described as: Enterprise Automation.

WHAT IS ENTERPRISE AUTOMATION?

Enterprise automation is an approach to multi-site management that leverages software to execute tasks and provide actionable intelligence, to simultaneously drive value across multiple functions and key performance indicators.

In a retail context, enterprise automation provides retailers with a centralized view of building system health across their entire portfolio. This allows remote teams to identify and resolve issues with HVAC, lighting, or other systems to drastically improve energy consumption and maintenance costs. While also providing the opportunity to optimize in-store conditions for occupant health and comfort, or prioritize sustainability to meet sustainability goals.

There is no one-size-fits-all approach to enterprise automation, and the best solution providers will be able to adapt to the unique needs of each retailer. Through the sensory capabilities of the IoT, the flexibility of cloud computing, and the power of AI, enterprise automation has emerged as the next step for retailers wanting to get ahead of disruptive trends.

HOW DOES ENTERPRISE AUTOMATION WORK?

System Integration
Most energy consuming equipment contains sensors that feed information to central building automation systems (BMS). Enterprise Automation (EA) platforms can integrate with the BMS to obtain building data from every site, and the top vendors are tech agnostic and can install new sensors when needed.

Data Capture
BMS data from across the retailer's portfolio is continuously fed into the centralized EA cloud platform for a fleet overview with building and system specific data. Company, service management and weather data, are also fed into the platform for a holistic view of operations.

Data Processing & Quality
In the cloud, EA platforms clean, translate, classify, process, contextualize and correlate all the data streams in real-time to ensure centralized dashboards are accurate and up to date. Data organization is an AI game and those EA providers with the best AI provide the best data.

Actionable Intelligence
By creating a single-pane-of-glass that gives retailers visibility across all their sites, EA platforms can generate the actionable intelligence needed for building and portfolio managers to reach energy, sustainability, and customer-focused goals. Supporting executive decision-making.

Proactive & Autonomous Action
The leading AI-enabled EA platforms can also directly complete proactive or autonomous actions, such as the calibration of systems to weather data and demand response management. Some providers even offer advisory services around the clock and optimization recommendations on-demand.

Continuous Transformation
AI-enabled EA platforms continuously learn about their portfolio to provide better insights and optimization strategies over time. Retailers also benefit from the learning history of the platform, meaning those EA providers with the most experience often have the best AI.

WHY RETAILERS ARE CHOOSING ENTERPRISE AUTOMATION?

Improved Energy Efficiency leads to reduced energy consumption, which saves on energy costs and helps companies achieve sustainability, green branding, and ESG reporting goals.

Enhanced Occupant Comfort leads to happier customers more willing to make purchases, and also happier more productive employees that will be more motivated and productive.

Better Equipment Efficiency supports system optimization, cost saving, and extends the lifetime of equipment, thereby reducing the cost and disruption of equipment replacement.

Increased Visibility & Control provides multi-site retailers with a detailed overview of their entire portfolio, allowing them to identify and prioritize operational issues and solutions.

Highly Optimized Operations can be achieved by applying and developing the various features of Enterprise Automation in combination to achieve enterprise goals across a portfolio.

Future-Ready Portfolios are developed through continuous learning of the platform's AI, and by putting in place a flexible and scalable, tech agnostic infrastructure connecting all sites.
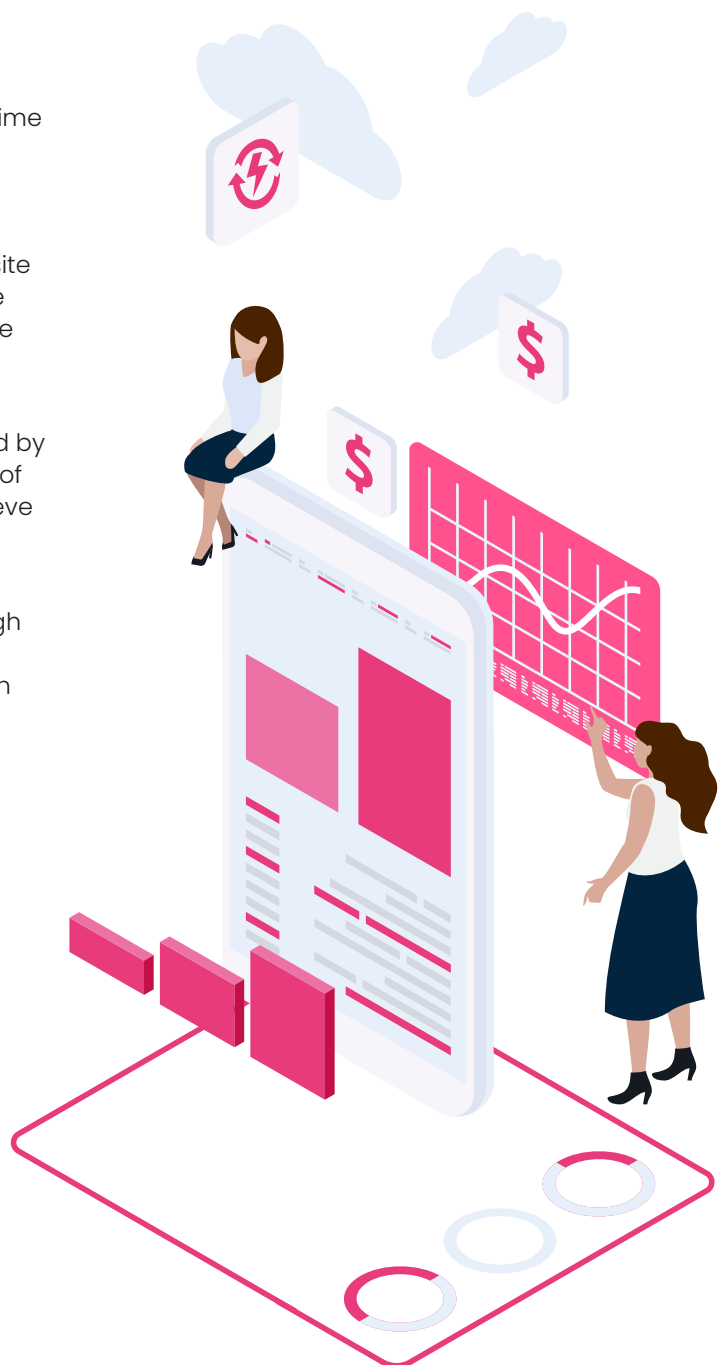
Expert Insight
Real World Enterprise Automation

To better understand enterprise automation from a real-world perspective we connected with EcoEnergy Insights, an industry leader with a reputation for experience and success. We sat down with the firm's managing director, Ravi Meghani , who agreed that the pandemic era has severely impacted retail in many ways but sees this necessary transformation in physical stores as more of an opportunity to evolve, rather than a burden for retailers.

"Air circulation is now necessary for compliance, but also improves customer dwell times, retention rates, and ultimately sales. Energy efficiency not only saves significant costs, but also allows retailers to show their green credentials to customers and staff that increasingly demand it," Ravi Meghani told Memoori. "We could talk about energy prices, remote work, or the rise of online shopping, but it all leads back to the same thing. Physical retailers need to create cleaner, greener, and leaner stores or risk falling behind the competition."

"Another aspect that came into view during the pandemic, was the acute dependency on the field technicians to resolve problems at stores, and the lack of their availability," said Meghani. "By leveraging automation, we helped retailers standardize the way of operating and maintaining store equipment and even tactically manage operations till technicians were available to address issues.

For example, with our platform, if a zone was cooled by 3 Rooftop Units (RTU) and 1 was faulty, we could balance the cooling load between 2 healthy RTUs, while the faulty RTU would be shut off and fixed when a visit was scheduled. This would prevent a disruption to normal store operations. With the depleting number of technicians in the field, thanks to the older generations retiring and less young people entering the trade, this problem is likely to persist in the future. The solution is automation", continued Meghani.

Founded in 2008, EcoEnergy Insights was initially focused on energy management, but quickly gained success from its pioneering context-based approach, innovative solutions, and quality service to optimize building and equipment operations and make them more sustainable. As the start-up grew, it caught the attention of Carrier Global Corporation, and was acquired in 2017, expanding the firm's reach and scale to new levels. Many of the firm's major retail clients were already with them before the pandemic, but EcoEnergy Insights were able to quickly adapt its service to support existing and new clients with these new challenges.
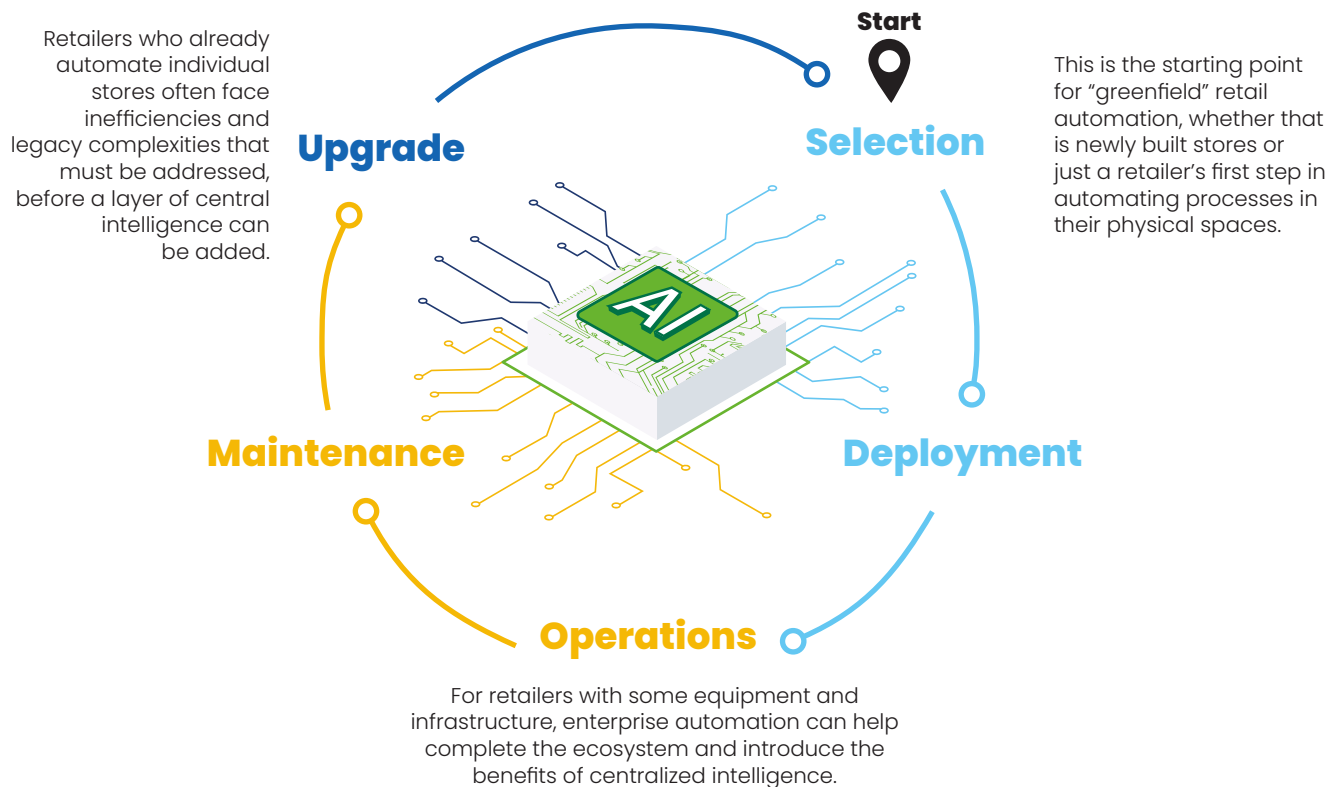
"It can seem like a big challenge but it doesn't have to be," Meghani continued. "The typical ROI for enterprise automation should be just two to three years from energy cost-saving alone. That's before you consider the cost-saving from labor and system optimization. And, while making those cost-savings, retailers are also moving towards compliance, and becoming a more sustainable brand."

Today, EcoEnergy Insights continues to grow and develop its enterprise automation platform, CORTIX™, and client services through its BluEdge™ Command Centers, gaining a strong reputation for multi-site use cases, such as restaurant chains, bank branches, and especially physical retail. EcoEnergy Insights provide these multi-site clients with cutting edge technology, tangible results, and expert support at every step of the journey, championing a virtuous cycle approach for continuous improvement.

EcoEnergy Insights typically serves major retailers across North America, Europe, and Asia, who have approached the firm at various stages in their enterprise automation journey. We spoke with EcoEnergy Insights' North America Business Head and Director of Digital products and Outcome assurance to discuss the different phases retailers typically go through on their enterprise automation journey. They presented three defined stages, each with their challenges and solutions, which together create a virtuous cycle for continuous improvement.

The Virtuous Cycle

A 'virtuous cycle' is "a chain of events in which one desirable occurrence leads to another which further promotes the first occurrence and so on resulting in a continuous process of improvement." For physical retail, that means a step-by-step approach to enterprise automation, which sets up robust systems, generates data, and utilizes the power of AI.

Retailers who already automate individual stores often face inefficiencies and legacy complexities that must be addressed, before a layer of central intelligence can be added.

Start

This is the starting point for "greenfield" retail automation, whether that is newly built stores or just a retailer's first step in automating processes in their physical spaces.

Upgrade

Selection

Maintenance

Deployment

Operations

For retailers with some equipment and infrastructure, enterprise automation can help complete the ecosystem and introduce the benefits of centralized intelligence.

We then selected three recent projects, with the EcoEnergy Insights team, that best represent these three common retail automation scenarios: Selection & Deployment, Operation & Maintenance, and Upgrade. The following case studies highlight the challenges retailers faced and the solutions they implemented to overcome them and thrive in the modern retail landscape.

Case Study 1
Selection & Deployment

One of the largest athletic shoe brands in the USA, and a growing household name around the world was seeking to modernize its stores. Having built its brand on the values of the active trendsetters in society, the firm was focused on sustainability, health, and flexibility of its stores.

The retailer operates over 550 stores in the US alone and set out an aggressive plan to open 40-70 new stores each year for five consecutive years. None of their existing stores had standalone BMS/EMS systems, they didn't have a centralized automation system, and due to their expansion plans they were also cost sensitive. However, they recognized the need to address energy consumption, sustainability, and occupant comfort as they scaled.

"Our first discussions with the client were pre-COVID, so while air quality and comfort were discussed, the main focus was on creating visibility to reduce downtime of HVAC units across all their North American stores," recalls Rajender Beniwal, General Manager for North America at EcoEnergy Insights. "Essentially, they wanted to see what's happening with their HVAC systems, improve uptime, and do it with less than a three-year pay back. After a successful test in 10 stores, we set about rolling out the solution to more than 500 stores over the course of two years and achieved paybacks well within the initial targets."

EcoEnergy Insights provided a robust and low-cost enterprise automation solution using an embedded IoT controller & server, along with BACnet-enabled comfort controllers. To create further cost savings, EcoEnergy Insights utilized wireless and easy-to-install space sensors, which reduced labor demands while driving energy efficiency.

A process supervisor was installed on the firm's own data server to allow the centralized visibility and control of all sites through the CORTIX platform, giving them access to EcoEnergy Insights' advanced AI capabilities. The client has also benefited from access to the BluEdge Command Centers for round the clock support on problem-solving and optimization.

"This client saw significant benefits by approaching us very early in their process and their test phase quickly gave the project's stakeholders confidence to roll out the full solution," explains Subhasis Mandal, Director of Digital products and Outcome assurance for EcoEnergy Insights. "They were especially impressed by the overall cost, quick pay back, and the visibility provided by the CORTIX platform. While the robustness of the hardware stack and reliable support from BluEdge Command Centers have ensured their stores will continuously improve on energy efficiency."

Case Study 2
Operation & Maintenance

A leading department store retailer and household name in the USA, known for its significant savings on brand name fashion and widely celebrated for its in-person shopping experience, had begun its automation journey but encountered operational and maintenance challenges.

The retailer faced issues around the rising demand for occupant comfort while also trying to reduce energy and maintenance costs across their fleet of over 2,000 stores. They wanted to standardize HVAC and lighting configurations and monitor all sites from a central location, to preempt and proactively resolve issues for better equipment performance. However, at an average of 7-8 RTUs per store and numerous equipment brands at play, the complexity of the challenge led them to an experienced partner like EcoEnergy Insights.

"We've engaged with this client since late 2019 and quickly realized that the labor shortages impacting the entire sector were especially acute for them, leading to a range of inefficiencies," explained Rajender Beniwal, General Manager for North America at EcoEnergy Insights. "We were able to reduce the skill level required by technicians, which in turn reduced response time by over 60% in many cases. In a short test phase, they were able to arrest energy leakage and drastically improve equipment uptime, so they quickly made this the primary process in all of their stores."

Through the store automation software package provided by EcoEnergy Insights, the client was able to eliminate a range of manual tasks, significantly reduce the need for unscheduled maintenance, while also becoming more agile to any issues that could arise. By adding the CORTIX platform, introducing a layer of EcoEnergy Insights renowned intelligence on top of existing controllers, they were able to optimize and automate a wide variety of actions that support energy efficiency and store comfort.

"The client was delighted with the centralized single-pane-of-glass solution offered by the CORTIX platform, giving them the ultimate visibility across their portfolio and the support of our BluEdge Command Centers," recalls Subhasis Mandal, Director of Digital products and Outcome assurance for EcoEnergy Insights. "Together, we were able to significantly reduce energy leakages, notably improve occupancy comfort, almost eliminate the need for manual checks and corrective actions, while also identifying weaknesses, such as bad sensors, to raise the quality of operations of the entire portfolio."

Case Study 3
Upgrade and Improve

The biggest retailer in the USA for fabrics and craft supplies has over 850 physical retail stores that have become community hubs that inspire customers to find and develop their skills and passions. Founded in the 1940s, many of the firm's building systems were showing their age and they contacted EcoEnergy Insights to discuss upgrades.

The client's established fleet of stores faced a range of issues relating to legacy equipment, including inefficient energy use and significant unscheduled downtime. The portfolio included over 800 legacy BMS controllers of multiple brands and technologies, in addition to numerous controllers that were non-responsive or, in some cases, beyond repair.

"The client had an established but inconsistent infrastructure of building systems across its broad portfolio of US stores, and they wanted an upgrade that allowed them to utilize that infrastructure where possible, "explained Rajender Beniwal, General Manager for North America at EcoEnergy Insights. "We were able to integrate a layer of intelligence on top of their existing technology, only making hardware upgrades where absolutely necessary while ensuring they had complete visibility and control."

EcoEnergy Insights' solution began by upgrading the old systems with a brand new embedded IoT controller & server system, alongside a new on-site data center. Using EcoEnergy Insights, the client could then implement their store automation software package, which enables automatic actions, such as sensor calibration or schedule and setpoints changes, which drive various energy saving measures.

EcoEnergy Insights also onboarded all of the client's upgraded stores onto the their store automation software package, platform providing the customer with a complete view of system health across all stores, something that just wasn't possible before the upgrade. They also enjoyed the support offered by EcoEnergy Insights' BluEdge Command Centers, which led directly to energy saving, better equipment uptime, and improved policy compliance.

"Repair costs of some older controllers were actually higher than the installation cost of the newer versions, meaning the customer spent less on a system upgrade than they would have on repairs," said Subhasis Mandal, Director of Digital products and Outcome assurance for EcoEnergy Insights. "We also upgraded the software on the remaining controllers, and as these final legacy controllers gradually develop issues, the retailer is steadily letting us replace them to complete the full portfolio upgrade."

The result of the upgrade was a huge leap in visibility across their 850+ store portfolio through the integration of the CORTIX platform, which also provided the client with a centralized single-pane-of-glass view and access to remote services. They were delighted with the significant reduction in issues and downtime that occurred under the aging previous system, and with the new system installed they can easily upgrade and integrate equipment whenever needed.

Conclusion
A Turning Point for Retail

Our discussions with EcoEnergy Insights and others in the retail sector have revealed an industry transforming to meet the evolving demands of business, government, and society. Like other industry verticals we cover at Memoori, retail is beginning to find a deeper understanding of the power of the physical building in meeting the demands of our modern world, and enterprise automation stands out as a solution that fits the growing needs of retailers.

Energy efficiency in physical retail stores directly links the growing trend in sustainability with the in-person customer experience. Also, creating overtly healthy and comfortable stores may be the best way to lure shoppers back to physical retail and show the caring side required of all modern brands. While the quick ROI and continuous cost savings are a no brainer for an industry still reeling from the pandemic as economic clouds loom.

Today, "the green store" is a powerful weapon for physical retailers looking to attract more customers and thrive in an increasingly competitive and consolidated market. Tomorrow, the green store will be a necessity to comply with regulation and avoid being ostracized as climate change escalates and increasingly conscious generations of consumers begin to dominate the economy. Enterprise automation is about getting ahead of the curve, but also about survival in the modern retail landscape.

"While new trends and technologies are useful tools for improving customer experience and profit margins, 2023 will be the year where brands and retailers fully understand how critical it is to address their outdated tech stacks and core business models to survive the next decade," states retail strategy & CX expert, DeeAnn Cambell, writing for ReThink Retail. "The ability to flex fast and integrate will be the most essential skills for the retail industry."

The trends are undeniable, the challenges are clear, and the solutions are available, there is now no excuse for retailers that do not seize the opportunity. After one of the most turbulent moments in history physical retail is at a turning point, those who evolve to meet these trends will have the chance to thrive in a new retail landscape, those who don't will be left behind.
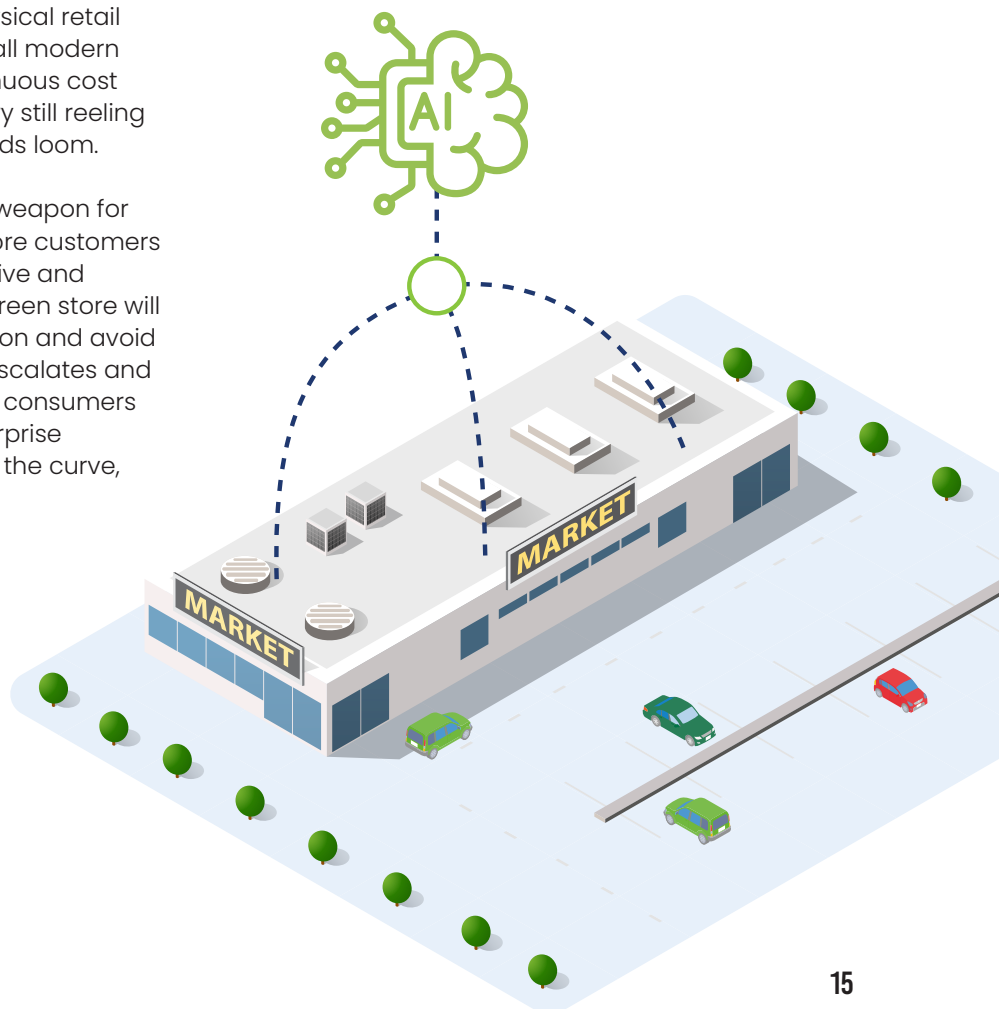
About EcoEnergy Insights

EcoEnergy Insights is a leading provider of AI and IoT-enabled solutions to digitally transform building and equipment operations.

Their CORTIX platform collects data from multiple sources, analyzes it, acts on defined deviations autonomously and offers predictive actionable insights. The platform, combined with expert human analytics, has been delivering award-winning outcomes in comfort, maintenance and energy efficiency across multiple industries such as retail, hospitality and banking. EcoEnergy Insights is a part of Carrier Global Corporation, global leader in intelligent climate and energy solutions that matter for people and our planet for generations to come.

Discover more about enterprise automation or the future of retail and commercial real estate:

For more information on EcoEnergy Insights and the CORTIX platform, visit **www.ecoenergyinsights.com** and **cortix.ai.**

Or write to them at **info.ecoenergy@carrier.com**, if you're ready to explore the potential of AI and automation across your store operations.

About Memoori

Memoori is a truly independent analyst company focused entirely on the smart building industry, delivering unrivalled research with deep domain knowledge. Memoori uses its decades of experience from across the real estate and technology sectors to provide in-depth analysis into the key trends impacting the evolution of commercial buildings. From comprehensive market reports to whitepapers, case studies, company investigations, interviews, webinars, and more, Memoori offers the market intelligence needed to survive and thrive in the rapidly developing proptech space. Explore our new report and subscription packages to stay ahead of the curve on commercial real estate and smart building developments.

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