



NativeEdge for Retail

Accelerate your
journey to the
**store of
the future**

DELLTechnologies

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State of the retail industry

In the past decade, retailers have come under increasing pressure from ecommerce, a tight labor market, and rising customer expectations. Retail shoppers have become accustomed to large online selections, access to exciting deals and promotions, and a unified shopping experience between online and brick-and-mortar. To meet these expectations and differentiate their brands, retailers are adopting AI and other innovative technologies to improve the retail experience and delight customers.

Adopting these technologies means deploying and managing dozens of use cases in a rapidly evolving retail space, requiring new infrastructure and management capabilities to support the new store strategy. While retailers have been managing distributed applications for years, these solutions are often running on discrete, proprietary hardware that is locked to a specific use-case, such as the Point of Sale and video surveillance systems. Under this paradigm, retailers need to work with managed service provider's to roll trucks for each new application, costing time and money that slows innovation where it matters most.



Losses due to theft,
fraud, or errors in 2022*

15%
increase YoY

[*National Retail Security Survey 2023.](#)

Retail trends

These retail trends highlight the ongoing evolution towards sustainable, dynamic, and customer-centric intelligent retail. By embracing innovations in AI and data management, retailers can confront the challenges faced by evolving customer expectations and increasing margin pressures.

The future of intelligent retail begins with adopting a customer-centric approach that embraces all ways in which they interact with your business, from online to in-store and through third parties. Therefore it is critical that customers have choice and can realize the same selection and experience everywhere. AI plays a large role in this transformation, providing critical functionality and able to act on the valuable data being created in stores, online, and across the business. Enabling this functionality means reconciling the array of technologies deployed in stores today with a new, cloud-native approach. By consolidating brownfield deployments and legacy systems with modern IT infrastructure and management frameworks, IT can provide the agility and scalability to the retail business that enables the intelligent retail future.



Labor

Retailers are facing one of the most difficult labor markets in years, with difficulties in hiring, training, and retaining employees. High turnover rates, rising wages, and creating a positive work environment are critical issues. Technology plays a role in augmenting worker productivity, helping them get trained faster and raising the floor of productivity with software and other digital technologies. Retailers must address these issues to attract and retain talent, ensuring business operations run smoothly and customer expectations are consistently met.



AI integration

Retailers are embracing AI within stores to enhance customer experiences, optimize inventory management, and personalize shopping journeys. AI technologies have the potential to improve operational efficiencies by providing scalable real-time data and insights, enabling retailers to strategically respond to customer behaviors and preferences. The ability to run and manage AI workloads is what will ultimately determine success in the modern retail landscape.



Omnichannel

Omnichannel comes from the need for retailers to integrate online and offline channels. Digitally savvy customers and the rise of e-commerce are pushing retailers to create a seamless shopping experience that bridges online and in-store. Retailers must adapt to these evolving customer expectations with new technological capabilities to stay competitive.



Sustainability

Sustainability has become a major factor in retail, as companies push to reduce their carbon footprint using eco-friendly materials and implementing recycling as well as other circular economy practices. Retailers are meeting these consumer demands by using technology throughout their supply chain to reduce loss and minimize the carbon intensity of their products. These efforts reflect the strategic importance of sustainability in modern retail, ensuring the long-term viability of the business and customer loyalty.



Desired future state

50%

improvement in
assortment
efficiency using AI¹

up to
5%

increase in
sales using
smart signage¹

30%

reduced stocking
costs using
autonomous robots¹

¹McKinsey & Co, Artificial Intelligence: The Next Digital Frontier

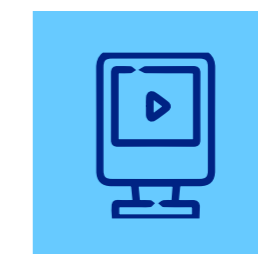
Retailers want to achieve the store-of-the-future, a digitally empowered retail space that delights customers and drives new revenue. This means a distributed compute architecture that is able to support the data and AI needs of each retail location, while providing the flexibility to easily customize each store to meet the needs of that market.

Some of the use cases that will define the store of the future include:



Computer vision driven business insights

The ability to use cameras to map the inside of the retail store, understanding where customers go, what products they interact with, and what they ultimately purchase, will deliver some of the most valuable insights to retailers.



Digital signage

Dynamic signage in public spaces provide more engaging ways to advertise products and provide a new revenue stream for retailers. Both in selling advertising space to products brands, and in increased sales.



License plate detection: drive-thru and curbside pickup

Whether in drive-through lines or curbside pickup to streamline the ordering experience or for security and loss prevention, retailers need the ability to recognize license plates to deliver engaging customer experiences and protect the safety and security of their stores and merchandise.



Robotics and warehouse automation

The cost to pick, pack, and deliver online orders to customers can wipe out profit margins for retailers. Using robotics alongside workers in warehouses and stores can dramatically reduce the cost of fulfilling orders, while improving efficiency, order accuracy, and safety.



Challenges

While the store-of-the-future offers significant promise to retailers in its ability to deliver value, it is not without its share of challenges. Retailers looking to deploy these use cases will have to address:



Increased operational complexity

As retailers deploy more use-cases into stores, they will face significant divergence in hardware and software management with dedicated devices each having their own hardware specifications and differing software management platforms and capabilities. Retailers must find a way to dramatically simplify the deployment, configuration, and management of hardware and software solutions.



Cybersecurity risks

With the adoption of new technology comes the increase in attack surface and cybersecurity risks. Data and compute at the edge requires a new way of thinking of security that is smarter than just traditional firewalls and trusted users.



Speed of deployment and scale

The primary barrier to retailers adopting AI and other edge workloads is speed. Each new use case and deployment requires IT staff in every store. This not only adds significant cost, but also slows innovation and the ability for retailers to adapt to changing market dynamics.

Dell advantage

Innovation at the edge is crucial for unlocking efficiencies, improving decision-making, and enhancing customer experiences. However, retailers struggle to manage the scale of their edge and get value from their data. As the majority of new data is coming from the stores and other edge sites, retailers need to leverage AI inferencing to get value from their data quickly and in context. Additionally, to fully benefit from edge computing, it's essential to address challenges related to speed, scale, and security.

Dell Technologies is in a unique position to adopt a comprehensive two-pronged approach to address these challenges for cities:



Optimize for AI at the edge: Deploy the largest portfolio of flexible compute and storage solutions along with trusted services for retailers.



Accelerate AI innovation at the edge: Provide a platform that can be easily scaled and managed to orchestrate AI applications across all your retail stores using a modern edge platform like Dell NativeEdge.

Dell NativeEdge is an edge operations software platform that streamlines edge management at scale. It is built to simplify the deployment and management of your entire edge infrastructure and applications, no matter how complex. It allows you to:



Securely scale to power any use case with unified and streamlined operations, centralized management, zero-touch onboarding and deployment, and automated operations.



Effortlessly deploy, manage, and scale AI across your edge estate with efficiency, agility, and the flexibility to choose any software application, IoT framework, OT vendor solution, and multicloud orchestration.



Protect your edge with the assurance of a secure supply chain and Zero Trust security framework.

We help make AI simple with the easy-button functionality of Dell NativeEdge, along with the broadest portfolio at the edge that drives innovation across the retail industry.



NativeEdge for retail

The most significant savings can be realized when deploying new hardware to stores with NativeEdge. As the original equipment manufacturer, Dell is able to provide a level of security and convenience to the deployment experience that other vendors cannot provide through zero-touch provisioning.

This means that:



NativeEdge provides the capability to securely deliver new hardware to stores and deploy applications and updates with zero-trust. This minimizes the attack surface by ensuring the hardware and software at your edge is not able to be tampered with or compromised, and it is continuously monitored to ensure your sensitive data is secure.

NativeEdge simplifies edge deployments through workload consolidation. Moving applications from dedicated systems onto NativeEdge, retailers can get better space utilization, improved sustainability and energy footprint, and simplified deployments and management.

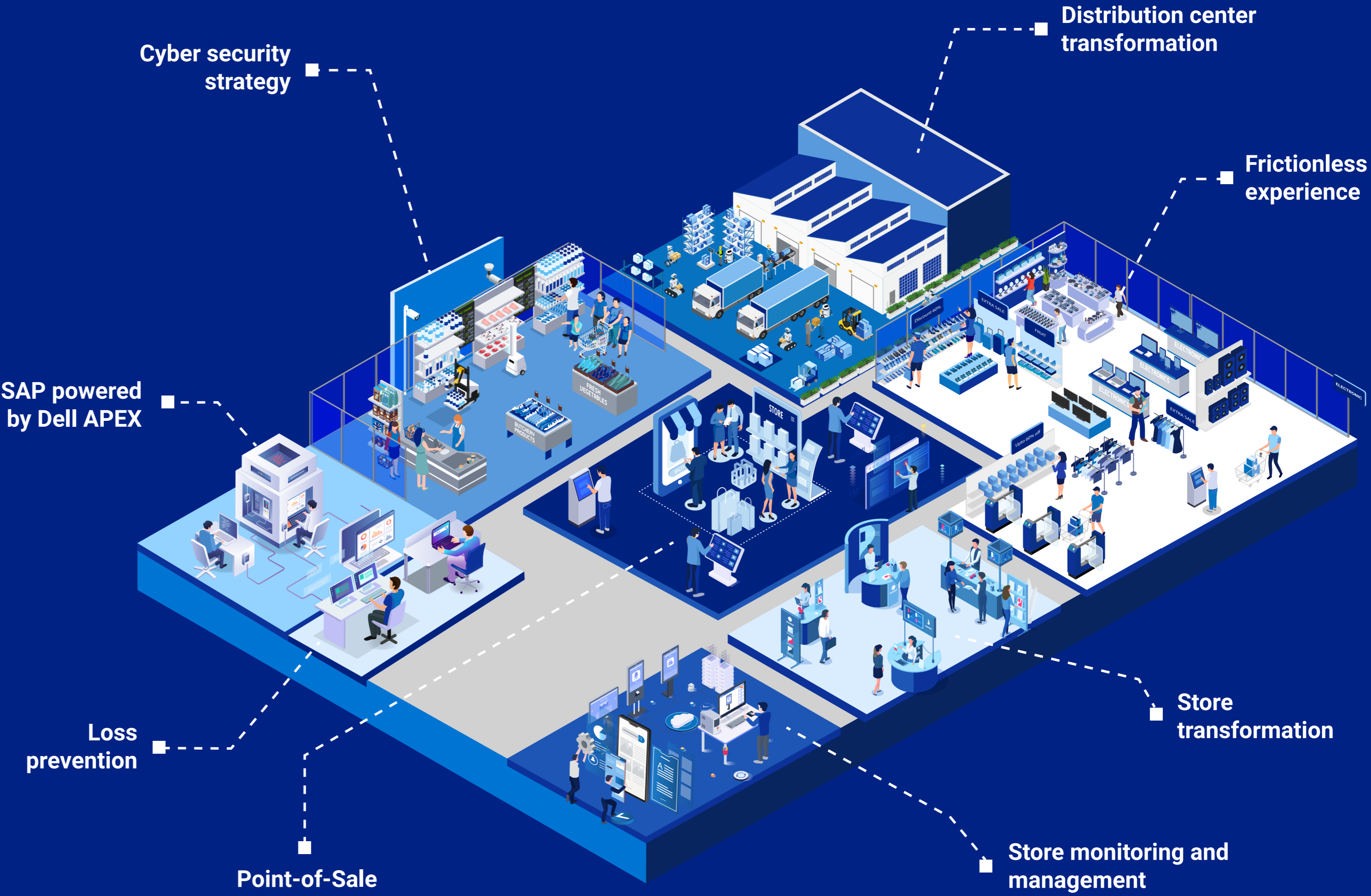


The NativeEdge difference

When it all comes together, NativeEdge has the potential to transform how retailers manage their store IT footprint. Retailers who use NativeEdge will see **faster deployment times** for new hardware, **faster delivery times** of new applications and app updates, and a **lower cost of delivery**.

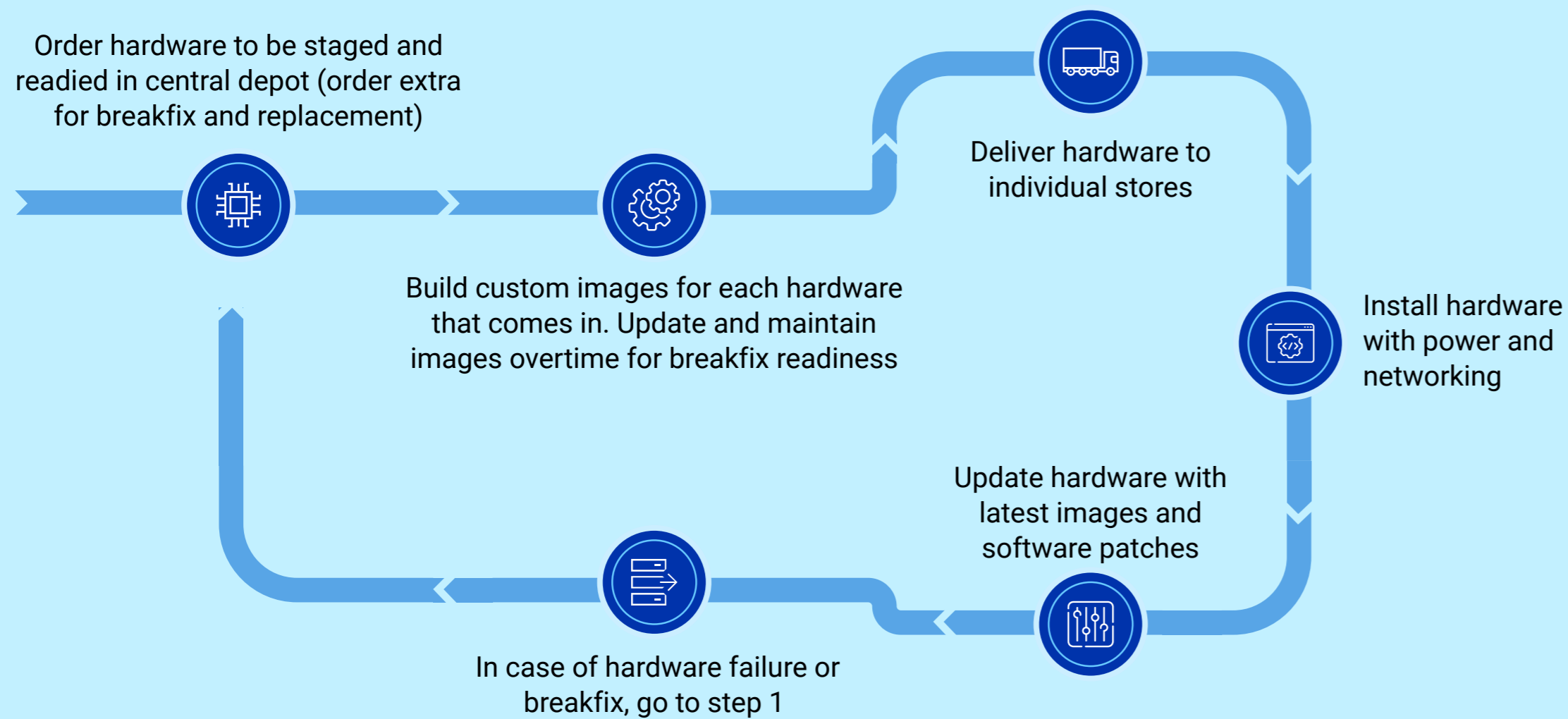
Let's look at an example to illustrate how NativeEdge can deliver so much value for retailers.

One of the most common challenges in store IT is the deployment of new hardware into stores to address a new business use case. For this example, we'll look at a national grocery chain deploying new hardware with GPU's to support license plate recognition cameras for their curbside pickup service.



Without NativeEdge

When deploying new hardware to support a new use-cases, retailers typically need to rely on managed service providers. These MSP's



If there is a hardware failure, the replacement process looks identical, with IT staff being required to reprovision, reconfigure, and reinstall the equipment on-site. This process is repeated for all hundreds or thousands of stores, often rolling out in continuous updates over a multi-year cycle. This means that new apps and hardware can sometimes take years to deploy, resulting in

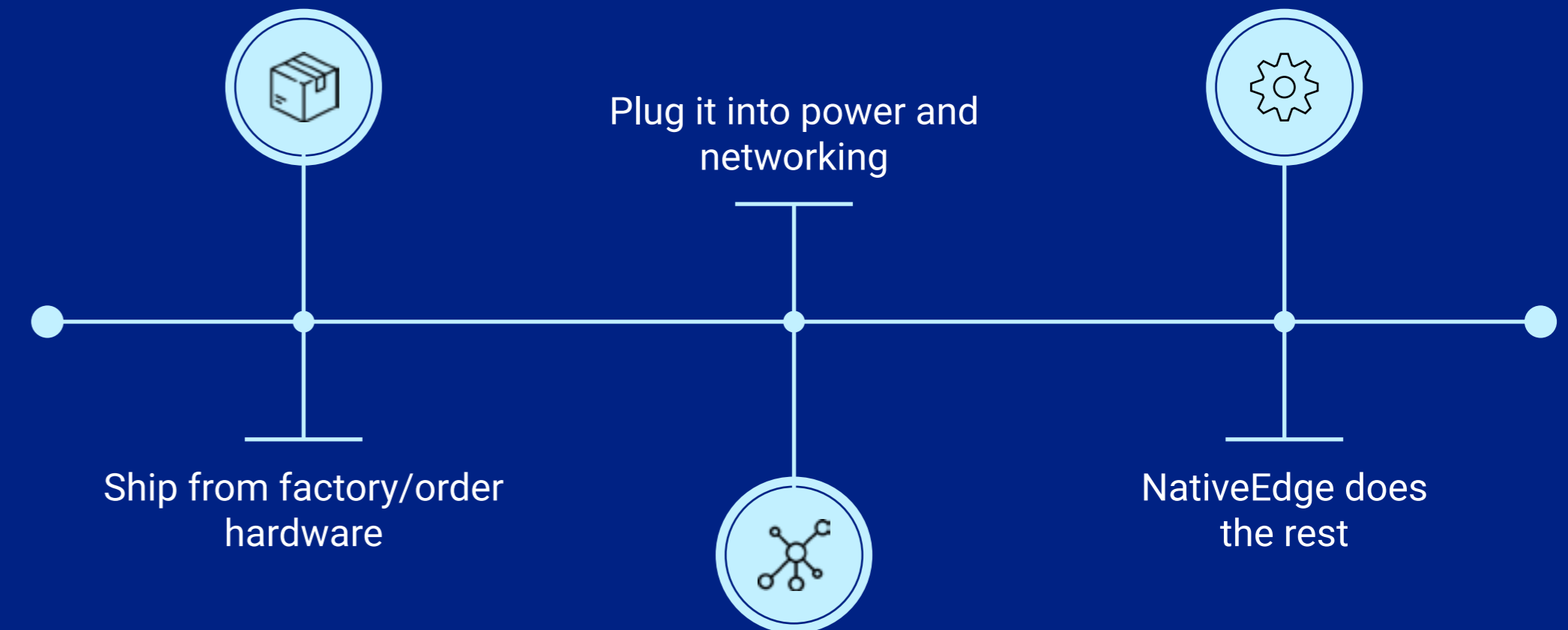
01 | A fragmented IT environment

02 | Inconsistent store experience

03 | Lost revenue in the delays to rolling out store experiences nationwide

With NativeEdge

NativeEdge handles this deployment much differently. Instead of going to a depot to be configured and provisioned, Dell is able to:



NativeEdge uses zero-touch provisioning of hardware and automated application deployment using blueprints to quickly stand up the desired end-to-end edge solution in any store. And, it automatically protects your expanding edge estate using zero-trust security principles. In the event of a hardware failure, new servers can be delivered directly to the store from the factory or from a depot with the exact same seamless experience.

This gives retailers the ability to

Deploy hardware at a much faster pace compared to traditional methods

Push updates to stores instantly instead of relying on a multi-year rolling update cycle

More consistent customer experience

More secure application environment

Less complexity compared to traditional retail IT methods



Conclusion

Dell NativeEdge revolutionizes retail IT operations by simplifying and accelerating hardware and application deployments across stores. Traditional methods rely on managed service providers and lengthy rollout cycles, delaying innovation and creating inconsistencies. NativeEdge eliminates these barriers by enabling direct factory-to-store shipments, automated provisioning, and seamless hardware replacement. Retailers can deploy new hardware and applications faster, reduce costs, and ensure a more consistent and secure in-store experience. NativeEdge for Retail drives significant reductions in deployment time, leading to faster innovation and a unified customer experience across all store locations.



Contact your Connection Account Team for more information.

Business Solutions 1.800.800.0014	Enterprise Solutions 1.800.369.1047	Public Sector Solutions 1.800.800.0019
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www.connection.com/Dell



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