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Industry Benchmark

# Redefining Self-Service Success in North America Grocery Retail

Unlocking Efficiency, Enhancing Customer Experience, and  
Navigating Operational Challenges with Data-Driven Insights

# Redefining Self-Service Success in Grocery

The strategic importance of self-service has never been clearer. Labor challenges persist. Customer expectations for speed and convenience continue to rise. The economics of store operations face mounting pressure. Yet discussions of self-service success often remain narrowly focused on metrics like shrink, uptime, or average transaction speed.

**The reality is more complex.** True self-service success means delivering simultaneously on multiple fronts:

- Customer experience that builds loyalty and drives repeat visits
- Labor efficiency that makes economic sense
- Loss prevention that protects margins without creating friction
- Space utilization that maximizes productivity per square foot
- Operational flexibility that supports different customer segments, multiple journey types and fluctuations in traffic

Getting this right matters more than ever. The winners in US grocery will be those who master this complexity – turning self-service from a necessary cost into a genuine competitive advantage.

**Nearly 40%** of grocery store registers in the U.S. are self-checkout terminals.

Capital One



Every second matters in retail. When a banner operates 2,000 stores averaging 800 transactions per day, a 10-second improvement per transaction unlocks 1.6 million hours annually – time that could be given back to customers or reinvested in service.

Self-service success lies in the seamless integration of systems, people, and workflows. Retailers that embrace this holistic approach will not only improve operational efficiency but also enhance customer satisfaction and loyalty. This report distills the findings into five key takeaways, providing a roadmap for strategic improvement.

Diebold Nixdorf and BlueSeed's comprehensive time and motion analysis across US grocery retailers reveals critical insights about where and how these opportunities can be captured.



This report utilizes insights from a **comprehensive time and motion study conducted by BlueSeed**, a leading retail performance improvement firm. The study aimed to benchmark self-service workflows and transaction times across nine grocery retailers in the U.S. and Canada, with additional insights from U.K. grocers available for any relevant comparisons. The methodology involved:

- **Study Scope:** The analysis examined only grocery transactions at self-service stations, excluding clothing, general merchandise, and traditional cashier transactions. This ensured direct comparability across retailers.
- **Observation and Data Collection:** A total of 224 shopping trips were analyzed, covering a diverse range of self-service setups. Transactions were broken down into discrete workflows such as scanning, payment, bagging, and leave times. This granular analysis allowed for detailed benchmarking across retailers.
- **Work Study Principles:** BlueSeed employed rigorous time and motion analysis techniques, rooted in industrial engineering best practices, to measure and compare the efficiency of key workflows.
- **Diverse Retail Contexts:** The study included a mix of retailers with varying self-service formats—from compact express lanes to larger modular setups—capturing the operational nuances and customer behaviors specific to each format.
- **Geographic Insights:** While the study spanned multiple geographies, this report emphasizes findings relevant to U.S. grocery retailers, contextualizing them within the unique operational dynamics of this market.



*"Self-service isn't just a checkout option—it's a strategic lever. Retailers who measure and refine every second of the experience don't just cut costs, they drive loyalty and growth."*

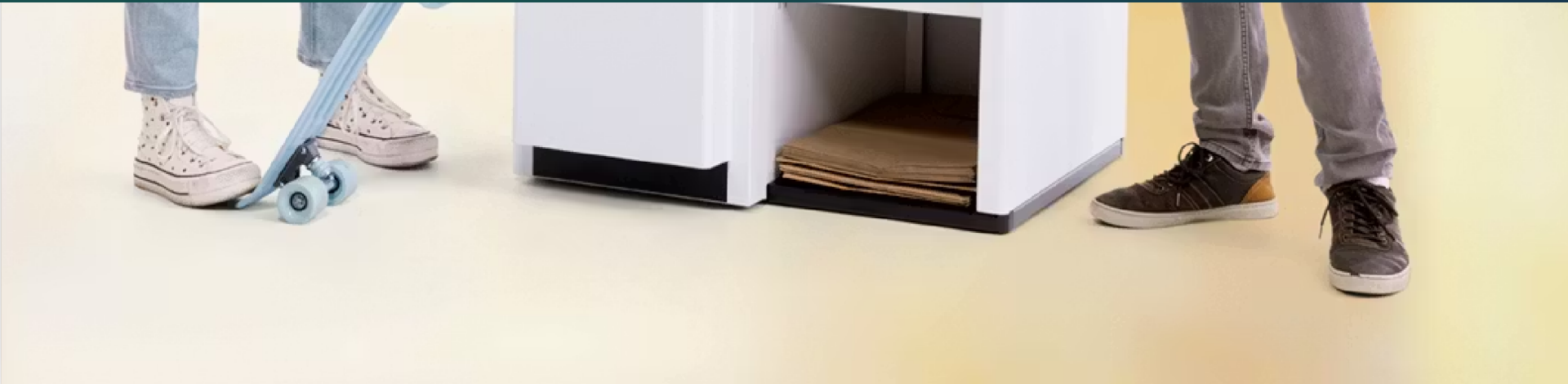
Diebold Nixdorf





"Self-service success isn't won in broad strokes—it's in the fractions of seconds. A delay at any step compounds across thousands of transactions, turning minor inefficiencies into major losses."

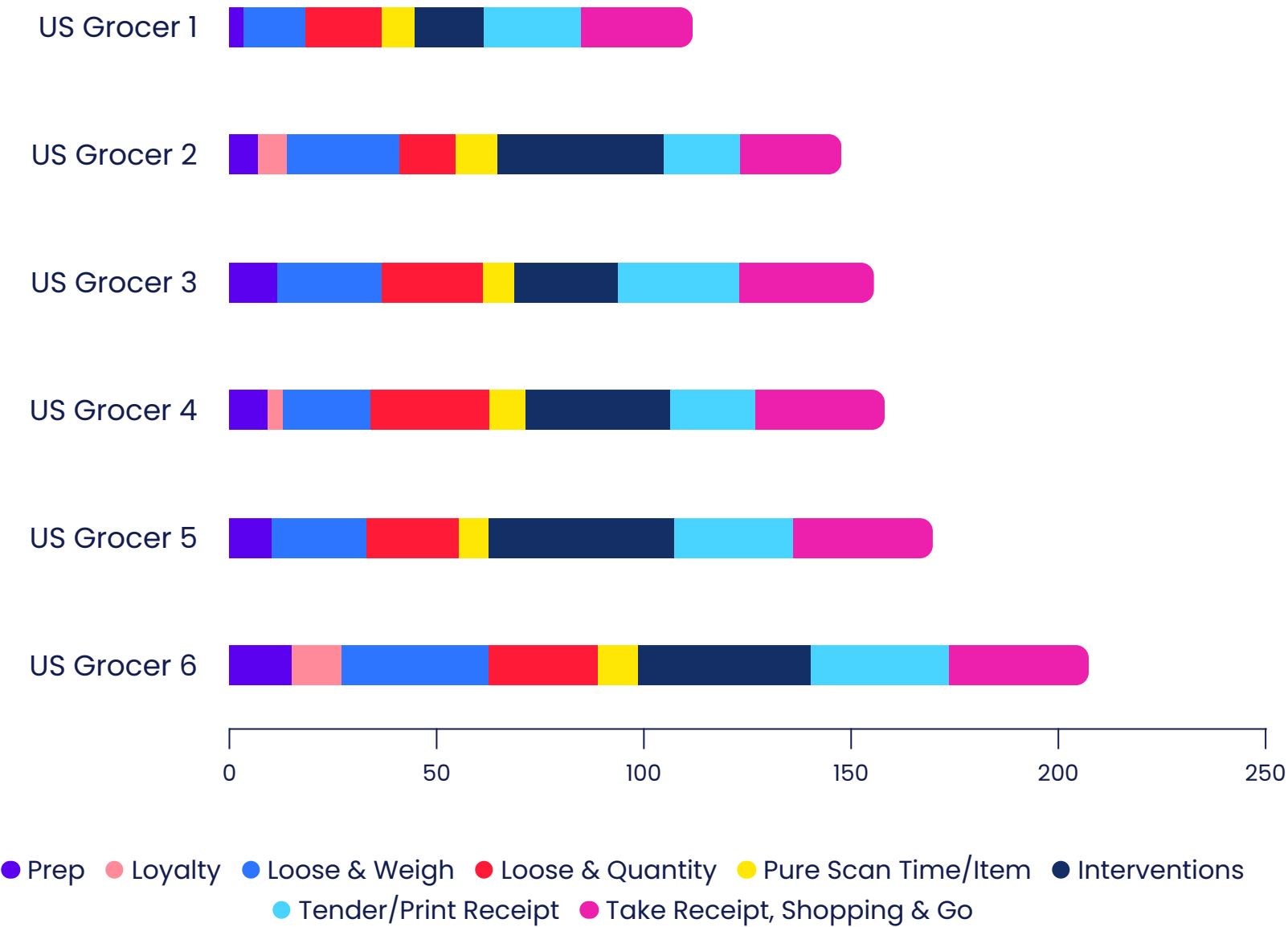
BlueSeed Retail



## Drivers of Self-Service Efficiency: Time Allocation Across Key Self-Service Stages

This chart highlights how time is distributed across critical self-service workflows in U.S. grocery retail, revealing key areas of opportunity for efficiency improvements.

Time (seconds) Per Key Self-Service Workflow Group








# Self-Service Success Depends on Systemic Efficiency, Not Individual Metrics

Self-service performance isn't defined by isolated metrics like scan speed or payment processing time. While a fast scanner may reduce the time required for one part of the transaction, inefficiencies in bagging or transaction interventions can easily offset those gains. The self-service experience is a series of interconnected workflows where even small delays compound into significant friction.

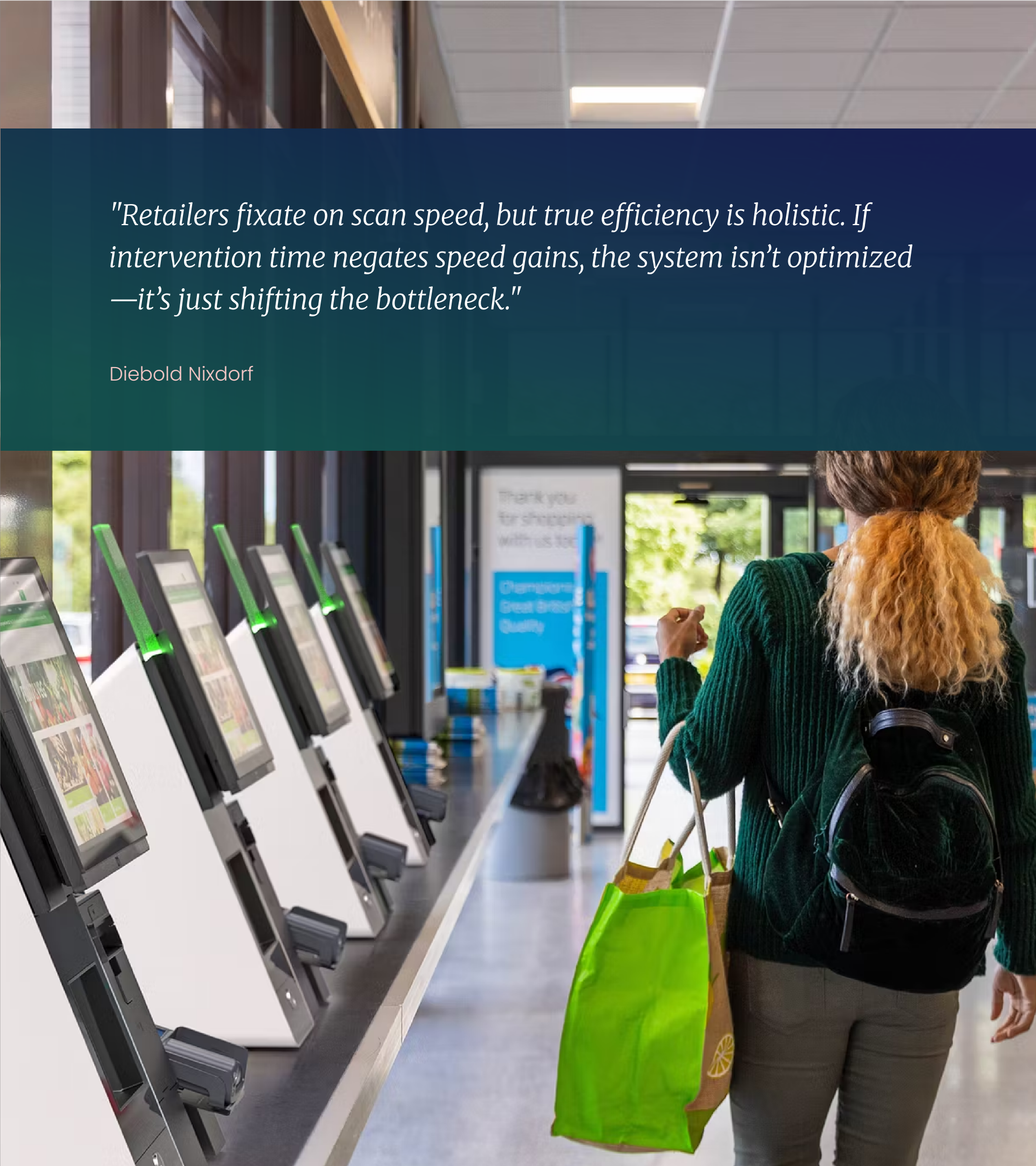
Retailers that optimize the entire process—from item scanning to payment and bagging—achieve smoother transactions and better throughput. Systemic efficiency requires designing workflows that minimize disruptions and ensure seamless transitions between each step.

## Strategic Opportunity:

-  **Streamline End-to-End Workflows:** Optimize each stage of the self-service journey to ensure smooth transitions and eliminate bottlenecks.
-  **Leverage Data for Systemic Integration:** Use operational data to identify and address gaps between scanning, bagging, and payment processes.
-  **Redesign for Cohesion:** Reconfigure layouts and workflows to create a unified experience that reduces friction and enhances flow.

*"Retailers fixate on scan speed, but true efficiency is holistic. If intervention time negates speed gains, the system isn't optimized—it's just shifting the bottleneck."*

Diebold Nixdorf







*"Automation is a force multiplier, not a silver bullet. The best retailers design for the 5% of transactions that require human intervention—because that's where frustration builds or loyalty is won."*

Diebold Nixdorf

## The Balance Between Automation and Human Support is the Key Differentiator

Automation has revolutionized self-service by handling standardized tasks efficiently. However, it often struggles with exceptions like produce look-ups or weight verification. These scenarios frequently require human intervention, and the way retailers approach this will ultimately define the quality of the customer experience. Proactive and well-equipped attendants can turn interventions from a frustration into a seamless part of the process.

To truly differentiate, retailers must blend automation with responsive human support. Systems should handle routine tasks flawlessly, while staff are empowered to resolve exceptions quickly and effectively.

### Strategic Opportunity:



**Equip Staff with Mobile Tools:** Enable attendants to resolve issues in real-time without needing to return to central stations.



**Design for Proactive Interventions:** Position staff to anticipate and address customer needs before delays occur.



**Refine Automation for Exceptions:** Use insights from common intervention scenarios to improve systems and reduce reliance on manual resolution.






# Peak Hour Challenges Require Dynamic, Real-Time Optimization

The pressure of peak shopping hours often exposes weaknesses in self-service workflows. Delays in one part of the process—such as bagging or payment—quickly cascade into longer lines and customer dissatisfaction. Real-time optimization is essential to handle these surges effectively.

Retailers can maintain smooth operations even during peak times by monitoring traffic patterns and dynamically allocating resources. Proactive adjustments, such as segmenting lanes for different basket sizes, can help balance flow and reduce congestion.

## Strategic Opportunity:

-  **Deploy Predictive Analytics:** Monitor real-time data to dynamically allocate resources and prevent bottlenecks during high-traffic periods.
-  **Segment Lanes by Basket Size:** Dedicate lanes for smaller baskets or larger carts to optimize flow and minimize congestion.
-  **Optimize Staff Allocation:** Adjust staffing levels and positions dynamically to meet peak-hour demands.



*"Self-service efficiency isn't just about technology—it's about people. Well-trained and supported associates can develop strong customer service, reduce queues, and actively reduce shrink."*

-  Time and motion analysis revealed that a major European grocery retailer was **losing approximately 2,000 hours per week** to staff clearing interventions at self-service stations. Additionally, interventions were adding 30 seconds to one in five transactions—the highest among peer retailers. By implementing more responsive and available self-service solutions, transaction times were reduced by 7 seconds per customer, and those weekly hours were reinvested into improving the customer experience, resulting in decreased queuing times and **increased self-service capacity by ~15,000 hours weekly**.

BlueSeed Retail



*"Customers don't abandon self-service because of technology—they leave because of uncertainty. The most effective systems reduce hesitation, not just transaction time."*

Diebold Nixdorf



## Customer Familiarity and Workflow Simplicity Drive Satisfaction

Customer hesitation often stems from confusion—whether it's searching for produce codes, navigating payment prompts, or figuring out bagging workflows. The more intuitive the process, the faster and smoother the self-service experience becomes.

Simplifying workflows and providing clear guidance minimizes errors and builds customer confidence. Retailers that invest in user-friendly designs and subtle on-screen assistance see measurable improvements in both satisfaction and throughput.

### Strategic Opportunity:



**Design for Intuitive Simplicity:** Use clear visual prompts and AI-driven tools to make workflows easier to navigate.



**Implement Dynamic Feedback Loops:** Continuously refine workflows based on recurring customer behaviors and pain points.



**Educate Customers:** Provide on-screen guidance and subtle cues to build familiarity and confidence in using self-service systems.



# Self-Service is a Strategic Asset, Not Just a Convenience

What began as a convenience feature has evolved into a strategic touchpoint for customer engagement and operational efficiency. Self-service systems offer retailers a wealth of data and opportunities to enhance loyalty, streamline processes, and innovate the customer journey.

To unlock its full potential, retailers must align self-service with broader unified retail strategies, ensuring seamless integration between in-store and online experiences. When leveraged strategically, self-service can become a competitive advantage that drives both satisfaction and loyalty.

## Strategic Opportunity:



**Integrate Self-Service with Loyalty Programs:** Use data to deliver personalized offers or user experiences, and build deeper customer engagement.



**Align Self-Service with Omnichannel Strategies:** Ensure seamless transitions between online and in-store experiences.



**Leverage Self-Service Data for Insights:** Analyze transaction data to identify customer trends and inform strategic decisions.

# The Path to Self-Service Excellence

Self-service isn't just a process or a type of technology — it's a strategic advantage waiting to be unlocked. The most successful retailers don't just optimize for speed; they build systems that are modular enough to evolve with changing needs, open to seamless integration, consistently available, and innovative in their approach to designing compelling customer interactions.

The difference between self-service as a cost center and self-service as a competitive advantage comes down to execution.

**Your brand's self-service performance isn't theoretical—it's measurable.** See exactly where you stand against industry benchmarks and uncover tailored opportunities to enhance efficiency, reduce friction, and elevate customer experience.



**Let's go beyond insights — let's apply them.**

Unlock self-service excellence with Diebold Nixdorf's Storevolution Advisory Team. Get your personalized checkout results, benchmarked against top retailers, plus clear, actionable steps to boost efficiency and elevate customer experience. [Request your exclusive session today.](#)

