



**How advances in
retail technology
enable fast and
effective profit
protection**



For today's retailers, safeguarding profits and streamlining operations have become more critical than ever. This whitepaper explores the role that advanced retail technology solutions play in modernizing profit protection strategies.

Discover how forward-thinking retailers are:

- Combating shrinkage with precision and efficiency
- Elevating store performance to new heights
- Enhancing customer experiences through seamless operations
- Slashing response times to potential losses

Read on to find out how your organization can harness the power of advanced technology to gain a crucial competitive advantage.



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The retail industry is facing an unprecedented set of challenges. Escalating retail crime and steeply rising inventory losses present significant risks to staff and the bottom line, while the e-commerce boom and shift to more automation continues to reshape consumer expectations. Finally, the global cost-of-living crisis and staffing shortages make it increasingly difficult for brick-and-mortar stores to reduce the opportunities for in-store theft.

Historically, losses have been an accepted, if not inevitable, part of retail operations, often managed as a planned risk. However, the current surge in losses reveals that traditional solutions and established practices are no longer sufficient—they are selective at best, and ineffective at worst. A truly comprehensive point of sale approach—fixed till, self-checkout, online, BYOD, and customer handheld device—is now essential to proactively and continuously combat the sources of losses more effectively than ever before.

Key aspects of this approach include:

1. Proactively improving in-store process quality.
2. Promptly informing in-store employees when store processes are not being followed.
3. Providing customers with an interactive and secure self-checkout process.

As retailers strive to balance innovation with security, robust, technology-driven solutions that can turn vulnerabilities into opportunities for growth and operational excellence are becoming increasingly urgent.

Shifts in the retail landscape

The retail industry has been impacted by several shifts that have created new challenges for physical stores and contributed to increased retail shrinkage:



Staffing shortages and labor costs

- Job market changes and increased labor costs leading to fewer employees.
- Reduced oversight and increased opportunities for theft.
- Vulnerabilities introduced by reliance on self-checkout systems.



Changes in consumer behavior

- Preference for contactless shopping experiences (e.g., self-checkout, pickup points).
- Increased demand for omnichannel options like buy online, return in store (BORIS), and click and collect.
- Reduced face-to-face interactions with staff, increasing shoplifting risk.
- Increased focus on value and cost-saving, leading some consumers to seek personal benefits through unethical means.



Lingering supply chain issues

- Inventory shortages and increased operational costs.
- Higher value of limited stock, amplifying the impact of shrinkage.
- Necessity for frequent inventory checks and tighter stock control.



Competition with e-commerce giants and third-party marketplaces

- Increased benchmarks for convenience, speed, and availability set by online platforms.
- Need for unique value propositions to enhance in-store experience and compete with online marketplaces like Amazon and eBay.
- Challenges in managing inventory and preventing fraud across multiple sales channels.



Complexities of omnichannel retail

- Challenges in reconciling inventory across online and offline channels.
- Increased risk of fraud and abuse in BORIS and click and collect systems.
- Difficulty in maintaining consistent loss prevention strategies across all retail touchpoints.



Unpacking shrinkage: the economic factors behind a growing issue

The economic landscape has seen significant changes over the past few years, contributing to the rise in retail shrinkage.



Cost of living

Rising expenses in housing, utilities, and food.



Disparity in income

A widening divide between the affluent and those at an economic disadvantage is linked to increased instances of theft in regions with notable differences in income.



Ongoing impacts of economic downturn

With many retail markets entering recession in 2023, stores are still seeing reduced staff levels and less effective loss prevention measures due to cost-cutting.



Why current logic, procedures, solutions, and roles for addressing shrinkage need to be re-evaluated

As retail shrinkage continues to escalate, it has become clear that traditional methods are no longer sufficient.



Inventory losses

Retailers lost a staggering **\$379 billion** to retail theft and organized crime worldwide in 2023.



Internal issues

Employee theft, which accounted for **40% of total shrinkage** in 2023, continues to be a major internal issue, highlighting the need for more robust internal controls and employee engagement strategies.



Petty theft

The noticeable uptick in petty theft, particularly in high-need items like **groceries and household goods** reflects the increasing desperation among consumers due to economic pressures.

Given these difficulties, it's essential for retailers to take the initiative in adopting advanced loss prevention strategies to successfully combat the growing trend of shrinkage.

The many faces of retail loss



The employee side: back-office challenges in monitoring and acting on employee theft

Employee theft poses significant threats to retail operations, often resulting in substantial financial losses. The back-office, which includes the administrative and operational areas of a retail business, plays a critical role in monitoring and addressing issues related to employee theft.

This responsibility is shared across multiple levels of the organization, including store operations management, the audit team, and store managers. Each of these groups contributes their unique perspective and expertise to create a comprehensive approach to loss prevention. However, coordinating efforts across these different groups and ensuring consistent application of policies and procedures presents its own set of challenges.

Variety of fraudulent activities

Employee theft can take many forms, including:

Cash theft

Direct stealing of cash from registers or safes.

Refund and return fraud

Processing false refunds or returns to pocket the cash or keep the merchandise.

Discount promotion abuse

- Illegitimately applying discounts to friends or themselves.
- Misusing promotional offers or coupons.
- Unauthorized early start of promotions to benefit specific customers.

Gift card fraud

Activating customer funds on a different card, handing back the customer a non-activated card.

Bottle returns / deposit fraud

Manually generated transaction.

Inventory theft

Unauthorized removal of products from the store.

Data issues

Teams responsible for tracking inventory data and identifying anomalies often face significant challenges due to various data-related issues. These challenges include:

1. Joining the data dots

Often, information relevant to detecting and investigating fraud is stored in disparate systems, leading to data silos. This fragmentation makes it difficult to get a holistic view of employee activities and identify patterns that indicate fraudulent behavior.

2. Inconsistent data quality

Variations in data accuracy and completeness can lead to unreliable inventory tracking, making it harder to detect discrepancies.

3. Volume of data

Retail operations generate vast amounts of data, from transaction logs to inventory records and surveillance footage. Analyzing this data manually to detect irregularities is time-consuming and prone to errors.

4. Timely monitoring and analysis

Effective loss prevention requires prompt monitoring and analysis to identify and respond to suspicious activities in a timely manner. This can present challenges in terms of the cost and complexity required to maintain the system.





The consumer side: is shoplifting becoming an accepted behavior in retail?

Technological and operational advancements in the retail sector that were designed to enhance efficiency, and the shopping experience might have inadvertently lowered barriers against theft.

A notable shift is the reduced interaction between customers and store staff. This reduction is primarily due to the increased use of self-service technologies, such as self-checkout systems and automated customer service. While these innovations offer convenience to shoppers, they also eliminate the deterrent effect of having staff visibly present and engaging with customers. Without the watchful eye of employees, customers may inadvertently mis-scan and not pay for products and, more importantly, would-be thieves feel less scrutinized and more emboldened to commit theft.

Another emerging trend in customer fraud is a practice known as “nesting.” This involves customers selecting products from shelves, removing them from their packaging in less monitored areas of the store, and then concealing the unpackaged items in their clothing before leaving. This method is particularly effective against traditional security measures, as RFID tags are often attached to the discarded packaging rather than the product itself. The rise of “nesting” highlights how modern store layouts, with their emphasis on creating a more open and less staff-intensive shopping environment, can inadvertently create opportunities for sophisticated theft techniques.

In addition to these changes, certain operational shortcomings may facilitate theft. These shortcomings involve:

- **Inconsistent enforcement of security measures:** Discrepancies in applying anti-theft strategies can pave the way for theft. For instance, inconsistent bag-check policies across different stores could be exploited.
- **Insufficient training in loss prevention:** Employees not fully trained to spot and halt suspicious conduct will likely fall short in preventing theft.

Advancements in technology, while beneficial, come with their own set of security issues, including:

- **Glitches and errors:** Technical issues with self-checkout systems, Electronic Article Surveillance (EAS) tags, and other security measures can be exploited by thieves.
- **Over-reliance on technology:** Retailers that overly rely on technology without adequate human oversight may find that these systems are not foolproof and can be circumvented by determined thieves.

Technological integration challenges

While technology offers numerous benefits for loss prevention, integrating these solutions into existing operations can be challenging:



Compatibility issues

New technologies must be compatible with existing systems to function effectively. Incompatibility can lead to gaps in coverage and monitoring.



Customer experience considerations

While visible security measures, such as guards and surveillance cameras, can deter theft, they can also create a perception of an unwelcoming environment for honest customers.



Customer friction

Excessive security checks and interventions can frustrate customers, leading to negative shopping experiences and potential loss of business.

Self-checkout systems: promise vs. reality

Self-checkout systems were introduced with the promise of reducing labor costs and enhancing customer convenience. However, the reality has been more complex. While these systems have streamlined the checkout process for many customers, they have also created new opportunities for theft. Studies indicate that the introduction of self-checkouts has led to a significant increase in inventory discrepancies, with losses from these systems amounting to **3.5% of sales or more than 16 times more** loss than traditional cashiers.



Challenges and vulnerabilities

- **Minimal supervision:** Self-checkouts often operate with little to no direct supervision, making it easier for customers to exploit the system. Common tactics include not scanning all items, substituting cheaper items for more expensive ones, and manipulating barcodes.
- **Technical exploits:** Glitches and errors in self-checkout systems can be exploited by savvy thieves. For example, intentional mis-scans or system overrides can allow items to be taken without payment.
- **Behavioral issues:** The lack of human interaction at self-checkout areas can reduce the psychological barrier to theft. Customers may feel less guilty about stealing from a machine than from a person.
- **Ineffective control scales:** Control scales, initially implemented as a security measure, have been identified as a source of frequent errors. Many retailers have dismantled them or avoided investing in them altogether due to their unreliability and the frustration they cause to honest customers.

Retailers have also struggled to adapt traditional checkout processes to self-checkouts in a way that maintains security without alienating customers. The initial goal of reducing labor costs by using self-checkouts has often been undermined by the need to employ additional staff or security personnel to monitor these systems. Poorly structured supervision can lead to frustration among customers, negatively impacting their shopping experience.



Improving processes and streamlining workflows

Given the dynamic nature of both back-office and shopfloor operations, the ability to swiftly adapt to emerging challenges and continuously improve in-store processes is essential for minimizing shrinkage and optimizing operations.



By focusing on the following areas, retailers can significantly improve their processes and streamline workflows:

Closed-loop management for continuous improvement

Establishing a closed-loop management system allows retailers to monitor, assess, and refine their processes continually. By analyzing data from monitoring systems, retailers can identify inefficiencies and vulnerabilities in their workflows.

This data-driven approach ensures that process improvements are not only implemented promptly but also tracked and adjusted as needed, creating a cycle of continuous enhancement.

Proactive risk management

Rather than allowing risks to accumulate, which can lead to significant losses, retailers should adopt a proactive approach by issuing prompt warnings as soon as anomalies are detected. This shift from reactive to proactive risk management enables faster intervention, reducing the overall impact of potential threats.

Enhanced employee training and engagement

Improving employee training is another critical component of process optimization. By exposing employees to selected in-store measures and informing them about best practices, retailers can empower their staff to take an active role in loss prevention. Regular updates and training sessions ensure that employees are well-equipped to handle emerging challenges and understand the importance of adhering to established protocols.

Balancing centralized and decentralized activities

Retailers must also strive to find the right balance between centralized and decentralized activities. Centralized management can provide consistency and oversight, while decentralized actions allow for flexibility and responsiveness at the store level. Striking the right balance ensures that both corporate directives and local needs are met, leading to more effective loss prevention strategies.

Real-time visibility for self-checkout

Implementing real-time visibility at self-checkout stations is crucial for immediate loss prevention and customer experience enhancement. This approach allows retailers to detect and address potential issues as they occur. This not only helps prevent losses but also ensures a seamless shopping experience for honest customers.

Management controls for employee-related transactions

Establishing robust management controls provides a systematic approach to monitoring, investigating, and addressing potential issues arising from employee activities. By implementing measures that track and analyze alerted transactions, retailers can ensure thorough investigation of all flagged incidents.



Protecting margins with Fujitsu's solutions

As the retail landscape evolves and challenges such as increased shrinkage and theft become more complex, retailers need advanced solutions that can effectively mitigate these risks while enhancing operational efficiency. Fujitsu's profit protection solutions are designed to address these issues head-on, providing comprehensive tools for monitoring, detecting, and preventing retail shrinkage in both traditional and self-checkout environments.

Fujitsu's profit protection solutions encompass two primary offerings: **profit protection for monitoring** and **profit protection for self-checkout**. These solutions leverage cutting-edge technologies to provide real-time insights, actionable alerts, and comprehensive reports that help retailers protect their margins and improve store operations.

With these advanced solutions, retailers can cut fraud detection time from **over 60 days to as little as 5 days**, reduce the average amount of each fraud case to lessen overall risk accumulation, and achieve a return on investment (ROI) in **four months or less** on average.



Profit protection for monitoring

is a robust solution designed to continuously oversee in-store processes end-to-end, particularly focusing on checkout areas. This solution integrates seamlessly with existing store systems, providing a comprehensive view of store operations and helping retailers quickly identify and address potential issues.



Features

Integrated data and analytics



Comprehensive data integration

Integrate data from multiple sources, providing an end-to-end unified view of transactions and references, inventory movements, and surveillance footage. By combining transaction data with video footage, the solution provides a synchronized view of each transaction, enabling retailers to pinpoint fraudulent activities in only a fraction of the time that would be required without the aid of profit protection.

Monitoring and alerts



Timely alerts

Smart and complex analysis of all referenceable data points, providing a 'cause and effect' evaluation of detected anomalies.



Alerts for critical issues

The system can generate rapid alerts for certain high-priority irregularities, allowing for swift response to potential theft or process errors.



Real-time video retrieval

When an alert is generated, the system provides immediate access to relevant video footage, enabling real-time investigation of the flagged incident.

Dynamic information display and guided evaluation



Actionable intelligence

Instead of static reports, the system provides precise, current information that maximizes the effectiveness of evaluating alerted activities. This dynamic approach ensures that users always have the most up-to-date and relevant data at their fingertips.



Smart prioritization

The information displayed guides users to prioritize investigations intelligently, focusing attention on the most critical or potentially impactful issues first. This helps optimize resource allocation and improves overall efficiency in addressing potential fraud or theft.



Streamlined evaluation process

The system is designed to make the final evaluation of potential fraud just a click away. This streamlined process allows audit teams and loss prevention officers to move quickly from alert to action, reducing response times and improving overall effectiveness.

Configurable controls



Management controls

Configurable management controls ensure that only authorized personnel can access sensitive data, maintaining the integrity and security of the system.

Benefits



Enhanced accuracy

The integration of video and transaction data reduces false positives and ensures that genuine issues are identified accurately.



Improved efficiency

Enable faster evaluation of fraudulent activities via enhanced data displays and transactional checks in near real-time.



Scalability

Designed to scale from medium to large retail businesses, ensuring consistent performance and reliability across all locations.

Profit protection for self-checkout

is an AI-featured solution focused on real-time monitoring of customer scanning behavior at self-checkout stations. This solution aims to reduce theft and errors by providing immediate feedback to customers and store personnel.

Features



Immediate feedback to customers

The system provides real-time prompts and alerts to customers during the self-checkout process, guiding them to correct any scanning mistakes and ensuring that all items are properly scanned.



Data on self-checkout performance

Detailed analytics on self-checkout usage and performance help retailers identify common issues and improve the overall efficiency of self-checkout systems.



Vision AI

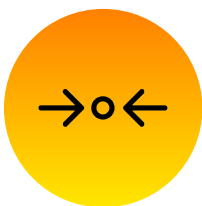
The AI component reads and evaluates customer scanning behavior and quality at the self-checkout device.



Seamless integration with POS systems

The solution is designed to be an add-on for existing POS installations. Merging POS transaction data with AI generated object and scanning behavior video information we can provide an HQ view on potential errors, triggering staff interventions where necessary.

Benefits



Reduced shrinkage

Real-time monitoring and immediate feedback help prevent both accidental and intentional theft, reducing overall shrinkage at self-checkout stations.



Enhanced customer experience

By providing helpful prompts and reducing the need for staff intervention, the system enhances the self-checkout experience for customers.



Operational efficiency

Automating the monitoring process minimizes the need for constant staff supervision, freeing up staff to focus on customer service and other critical tasks.

A leader in retail solutions



Fujitsu is well established as a leader in providing innovative and effective retail solutions. With a track record spanning over two decades, we have consistently demonstrated its ability to adapt to the evolving needs of the retail industry.

Extensive experience

We have over 30 years of experience in optimizing store processes and improving retail operations. This vast experience has enabled us to develop a deep understanding of the unique challenges faced by retailers and to create solutions that address these challenges effectively.

Successful implementations

Our solutions have been successfully implemented across a wide variety of retail environments, from small boutique stores to large international chains. These implementations have consistently delivered measurable results, including significant reductions in shrinkage, enhanced operational efficiency, and improved customer satisfaction.

Integrated security systems

Our integrated security systems combine video surveillance, transaction monitoring, and real-time alerts to provide comprehensive protection against shrinkage and theft. These systems are designed to be both effective and user-friendly, ensuring that retailers can easily implement and maintain them.

Global reach

With operations in over 100 countries, we have a truly global reach. This extensive network allows us to support retail operations of any size and scale, providing tailored solutions that meet the specific needs of each market.

Localized solutions

Our retail experts understand that each market has unique challenges and requirements. As such, we offer localized solutions that are designed to address the specific needs of retailers in different regions. This approach ensures that our solutions are both relevant and effective, regardless of where they are implemented.

Sustainability commitment - building trust through innovation

We are committed to making the world more sustainable by building trust in society through innovation. Our retail solutions are designed with sustainability in mind, ensuring that they not only drive business success but also support broader social and environmental goals.

A comprehensive approach to tackling shrinkage

Shrinkage and theft continue to be significant issues that threaten retailers' profitability and operational efficiency. In this complex landscape, it is crucial for retailers to adopt comprehensive and advanced solutions to protect their margins and ensure the smooth running of their operations.

Fujitsu's profit protection solutions offer a robust response to these challenges. By leveraging cutting-edge technologies, we provide retailers with the tools they need to monitor, detect, and prevent shrinkage effectively. These solutions are designed to address the unique needs of both traditional and self-checkout environments, ensuring comprehensive protection across all store operations.

Get started

For more information on how profit protection can help your retail operations, please reach out to Fujitsu's team of retail experts. Discover how profit protection can safeguard your business against shrinkage and theft, protect your margins, and create a secure, welcoming environment for your customers.

Take the next step with Fujitsu.



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