



Connecting Commerce

WHITEPAPER

# AI & Automation Revolutionising Retail Industry





The global retail cash management market size valued at \$3.2 billion in 2021 and projected to reach \$12.1 billion by 2031





## Shifting trends

The world of retail has transformed significantly since the passing of the pandemic, from sheer survival to resurgence. In India, the retail industry has played a pivotal role in driving the economy. Indian retail contributes 10 per cent to the country's GDP, generating employment for 8 per cent of the population<sup>[1]</sup>. Interestingly, the digital era has also seen a reversal of sorts, with digitally native companies recognising the importance of physical branches to foster trust and credibility among their customers. Moreover, organised retail chains are making strategic moves to expand their presence in smaller towns and cities, aiming to provide wider access to their services and products, thus contributing to the ongoing transformation of retail landscape.

With the growing expansion in offline stores, retailers will need to focus on improving their capital outcome or their returns on investment through smart allocation and utilisation of resources, irrespective of store format, demographic or location. An efficient capital outcome is made possible by a combination of technologies, that can reduce the risk of loss and also provide valuable data and insights, thus improving overall operational efficiency and profitability.

In a digital-first and connected world, the way of doing business in retail is evolving rapidly, and so is working capital management. With the global cash management market size in retail projected to reach \$12.1 billion by 2031<sup>[2]</sup>, it is time for retailers to focus on cash excellence, enable prudent cash and liquidity management to derive an efficient working capital management practice. As the focus increases on strengthening the cash logistics across the network, change in underlying systems, it will become easier to embed cash efficiency into ongoing operations.

Automated cash management when combined with advanced surveillance technology will help to provide valuable data and insights, enabling retailers to make data-driven decisions for inventory management, staffing, and store layout optimisation beside offering security to store operation.

In this white paper, we'll discuss how retailers can improve working capital and reduce costs using an integrated cash logistics platform, optimise surveillance with AI analytics to detect anomalies in real time, and shift staff focus to value-driven tasks, ensuring a positive customer experience and fostering customer loyalty.

**In a digital-first and connected world, the retail landscape undergoes a significant transformation, emphasising the need for efficient working capital management and advanced surveillance technology for data-driven decisions**

### Reference:

- [1. Future of Retail: Emerging Landscape of Omni-Channel Commerce in India](#)
- [2. Retail Cash Management Market Size, Share & Analysis | 2031](#)



## Challenges of traditional cash logistics

Conventional cash logistics is a manual process. Retailers count, sort, and reconcile cash at the end of the day across their network. The cash remains with the respective store until it is physically deposited at the bank. This process lends itself to multiple risk factors:

- **Working capital is locked due to an inefficient process**
- **Lack of real-time central visibility of cash levels due to manual accounting**
- **Dependency on people for cash reconciliation with reporting delay**
- **High risk of pilferage and shortages**
- **Manual cash handling procedure increases shrinkage risk due to theft/fraud, accounting errors**
- **Increase in working hours of the cashier/supervisor due to cash handover/takeover process**



## An integrated cash management solution helps drive **greater efficiency**

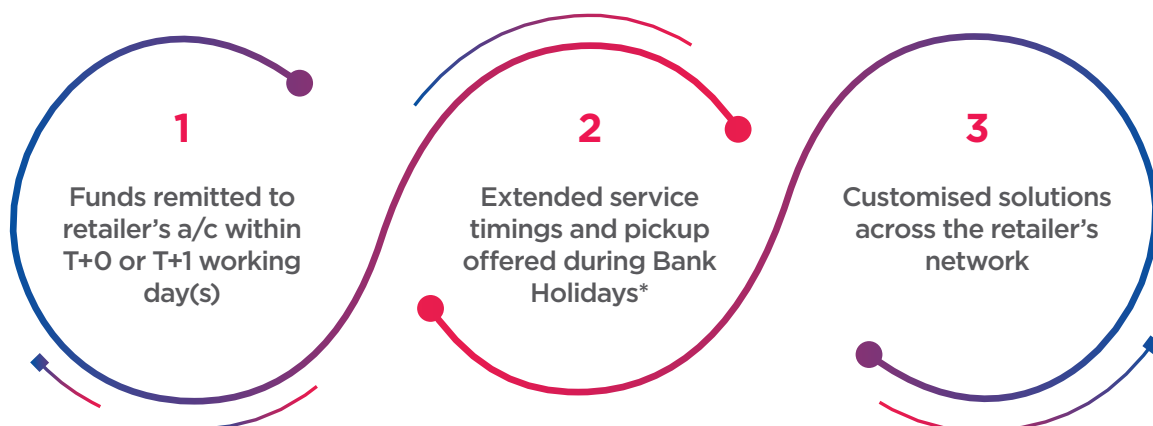
**W**ith an integrated solution, retailers can improve their cash logistics process which is easy to track, manage and implement across the network.

At-premise 24X7 automation such as **Retail Cash Vault (RCV)** is changing the game for retailers by maximising their cash flow, reducing shrinkages and eliminating errors in reconciliation. A cutting-edge vault machine with the latest currency processing technologies such as high-speed sorting & counterfeit detection, a customised front end with API integration and an Escrow feature allowing depositor to cancel a transaction, eliminates manual operations and ensures fully automated cash management from the moment of payment all the way until collection. A range of retailers such as supermarkets, NBFCs, hospitals, airlines, fuel stations and others have successfully deployed Retail Cash Vault and improved operational efficiency.

To drive an efficient working capital management strategy **Cash-X** solution helps retailers with quicker credit through electronic transfer of funds upon collection from any location of the retailer and provides MIS on real-time basis for faster reconciliation. Retailers with pan-India network with footprint in smaller towns often face challenges due to limited banking access and sub-par security for cash movement. Logistics in these locations are countered by high-security transport and access to immediate banking channels for faster credit based on cash deposits/collected across the network. This enables a retailer to get access to their cash deposits within hours instead of days.

**A range of retailers such as supermarkets, NBFCs, hospitals, airlines, fuel stations and others have successfully deployed Retail Cash Vault and improved operational efficiency**

### Advantages of **Cash-X**



*\*At select locations*



## Constraints of current surveillance infrastructure

Surveillance infrastructure has long moved from vanilla eye-ball monitoring to advanced alert-based monitoring. More recently the use of AI in surveillance solutions can impart valuable business insights which can enable an enterprise to make the business model more efficient and customer centric. Traditional solutions had multiple constraints such as, limited coverage, scalability issues, inadequate resolution, storage and retrieval challenges, lack of real-time alerts, compatibility issues and dependence on human monitoring.

Overcoming these constraints often involves transitioning to modern surveillance solutions that leverage advanced technologies like IOT, AI, cloud storage, and high-definition cameras for retailers to enhance coverage, scalability, and real-time analysis and insights of their stores in addition to addressing the basic security and privacy concerns.



## Elevate surveillance with AI analytics

**AI**-driven Remote Monitoring Solution (RMS) is at the forefront of modern security and store efficiency for retailers. By utilising AI-embedded hardware and a seamlessly integrated Video Management Software (VMS) platform, **ALGO AIoT** enables the real-time detection of potentially suspicious anomalies and provides immediate actionable alerts. This advanced remote monitoring solution by CMS not only enhances security and enable the detection of potential threats, but also results in significant cost savings compared to traditional physical guarding methods at the stores. Additionally, the intelligent monitoring system leverages AI capabilities to go beyond security, generating valuable business insights that can drive operational efficiency. The versatile VsaaS (Video Surveillance as a Service) solution obviates the need for fresh capex and utilises the existing CCTV infrastructure to impart AI capabilities, 24x7 monitoring and cloud storage amongst others at a fraction of a cost of conventional system. ALGO AIoT is helping organisations safeguard their assets and gain real-time insights to optimise their operations. For instance, a large retail chain can customise its RMS to alert night-time intrusion detection and help with aisle analytics across its multiple stores. It can also be enabled to detect potential threats on pilferage in real-time thus saving costs for the retailers. Additionally, it can provide intelligent monitoring to generate predictive analytics and critical business insights to drive efficiency at the fraction of the cost of employing a guard.

**An intelligent monitoring system goes beyond security, generating valuable business insights that can drive operational efficiency**

## Advantages of AIoT-enabled surveillance



Effective surveillance at scale



Industry-specific analytical reports



Smart cloud storage



Save on energy & recruitment



AI enhances store surveillance, tracking purchases and footfall, while cash automation enables anytime deposits, rapid reconciliation, and eliminates shift handover risks







# Driving efficiency through AI and automation solutions

INDUSTRY	ARTIFICIAL INTELLIGENCE	AUTOMATION
<p><b>Supermarkets</b></p> <p>Any large format retail store requires an efficient, integrated retail solution that not only safeguards valuable assets but also provides real-time insights to optimise security measures and streamline financial operations.</p>	<ol style="list-style-type: none"> <li>1 Footfall count vis-à-vis hit rate of customer purchases at the store</li> <li>2 Aisle analytics</li> <li>3 Queue analytics</li> <li>4 Store opening closing statistics</li> <li>5 Detect theft and pilferage</li> </ol>	<ol style="list-style-type: none"> <li>1 Easy access to deposit money anytime of the day across wide network</li> <li>2 High speed bulk cash deposition and real-time reconciliation</li> <li>3 Eliminates risk of cash handover take over between the shifts</li> </ol>
<p><b>Airlines</b></p> <p>The airlines industry has come a long way since catering only to the flying needs of the customer. Today, an efficient cash logistics solution, complemented by advanced surveillance, not only ensures the secure handling of financial transactions but also enhances overall operational safety and risk management.</p>	<ol style="list-style-type: none"> <li>1 Queue analytics</li> <li>2 SOP violation</li> <li>3 Anomaly/specific instance detection</li> <li>4 Overcrowding Detection</li> <li>5 Stray package detection</li> </ol>	<ol style="list-style-type: none"> <li>1 Allows cash collected on flights/retail stores on ground to be deposited round the clock at any airport irrespective to base location which leads to early credit</li> <li>2 Centralised monitoring of cash collections</li> <li>3 Identifies soiled and discrepant notes</li> </ol>
<p><b>NBFCs</b></p> <p>As we increasingly strive to reduce the time spent by staff on tedious accounting/EMI collection services, effective cash management solutions can enable NBFCs with secured and efficient cash operations, quicker fund realisation, improved control measures over financial transactions and better financial inclusion through availability of cash in the rural and semi-urban areas.</p>	<ol style="list-style-type: none"> <li>1 Live view of all the geographically dispersed branches</li> <li>2 Footage download on demand with provision for secondary storage on cloud for compliance</li> <li>3 Branch open/close timings statistics</li> <li>4 Monitoring with real-time alerts for SOP violation</li> <li>5 Remote health monitoring of CCTV infrastructure deployed</li> </ol>	<ol style="list-style-type: none"> <li>1 Allows cash collected in branches round the clock which leads to timely credit</li> <li>2 Centralised monitoring of cash collections</li> <li>3 Identifies soiled and discrepant notes</li> </ol>



With an average annual increase of 14.44% in cash collection per retail cash management (RCM) point, Indian consumers have demonstrated that cash continues to be a payment of choice among consumers and retailers

Source: CMS India Cash Vibrancy Report 2023





## Gear up for a smart and secure future

India today has 12 million retail outlets, a million wholesalers and distributors, and a multitiered structure, rendering it one of the most complex retail ecosystem in the world.

According to the CMS India Cash Vibrancy Report, in FY23, organised retail observed an average annual increase of 14.44% in cash collection per retail cash management (RCM) point, Indian consumers have demonstrated that cash continues to be a payment of choice among consumers and retailers thus need to deploy an integrated cash management solution across their network.

Correspondingly, advanced surveillance in retail is of paramount importance to not only deter theft and ensuring the safety of customers & staff but to also provide valuable data and insights for reducing risks, optimising store layouts, inventory management, and enhancing the overall shopping experience for consumers.

With clear resurgence in the retail sector, it is essential for retailers to assess the benefits of a complete and integrated retail solution that not only helps to automate manual cash processes and offer security but to also elevate the business through valuable insights through AIoT led surveillance.

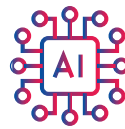
## About Us



Serving  
52,000+  
retail points



Deepest on-ground  
network across  
97% Indian districts



40+ deep  
learning  
AI modules



50,000+  
devices  
connected

Let's start a conversation today. Write to us at [retail@cms.com](mailto:retail@cms.com)



Connecting Commerce

Cash Logistics | Banking Automation | Managed Services | Remote Monitoring Solutions | Technology Solutions

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