



**Modern Cash & ATM
Management to Boost
Access to Cash Services**

Overview

Managing the inflow and outflow of cash to ensure a bank supplies its branches and ATMs with enough, while minimising the cost of its movement are critical to maintaining access to cash.

However, the ways in which cash is managed must evolve significantly in response to changing customer behaviours and business needs, technology, macro-economic trends and political and regulatory pressures relating to access to cash in society.

Further change is forecast for the future as AI and machine learning are likely to become very important in how a bank manages cash; and new operating models are being implemented which promise both operational cost savings and significant service improvements for customers.

In progressing their plans, banks and ATM deployers need an holistic, data-centric approach to streamlining the management of sophisticated ATM networks and to counter the escalating costs associated with cash handling. The merits of such an approach, grounded in continuous data collection and analysis across ATM networks, encompass:

► **Strategic Planning:** Leveraging real-time data to craft bespoke strategies for individual branches or regions, assuring optimal cash flow management and avoiding superfluous cash loading orders.

► **Operational Transparency:** Facilitating stakeholders with instantaneous access to accounting and operational data relating to cash supply chains, thereby enabling timely interventions and adaptations.

► **Enhanced Customer Experience:** Minimising downtime to guarantee uninterrupted cash access to customers at the ATM or in branch, enhancing their banking experience.

This white paper explores how modern cash and ATM management and new models for managing ATMs can enable banks and independent ATM deployers (IAD) to make access to cash more convenient, secure and operationally viable against rising cost and regulatory pressures.

Cost Challenges Aren't Letting Up

Any strategy must take account of how customer demand for access to cash is changing.

On one hand, there is a decline in the reliance of cash for payments. In most societies, there is a shift towards using digital payments, online banking, and contactless cards. Real time payment systems mean instant funds transfers.

Altogether, this would seem to reduce the need for banks to move physical cash between locations including branches and ATMs.

Yet, banks are still required to process and offer access to cash via their branches and ATM networks because cash remains essential to a substantial number of people who still prefer to use it to pay for goods and services. While cash usage is projected to decline by 6% CAGR through to 2026, cash accounted for over \$7.6

trillion in global consumer spending in 2022 (Source: The Global Payments Report, May 2023). The rising cost of living and lack of universal trust in digital payments as well as lapses in the availability of networks and online systems means cash will remain important even in countries where cashless payments are high and rising.

Globally governments are becoming more sensitive to how a substantial proportion of citizens expect to be able to access their cash when, how and where they want.



Countries as diverse as the UK, Ireland, Hungary, and Belgium are progressing plans to ensure widespread access to cash services in urban, small town and rural communities.

For example, Ireland's Department of Finance is developing a National Payment Strategy that includes benchmarks for ATM density and accessibility. The goal is to ensure a minimum number of ATMs per 100,000 people and keep cash services within 10 kilometres of every citizen.

The challenge is that while demand for cash drops and external pressure grows to maintain access to cash services, the cost to manage or improve these services is increasing.

High inflation and interest rates have increased operating costs for managing ATM networks.

The **operational costs of ATMs** are rising because of the need to toughen up ATM security to counter fraud and guarantee the safety of ATM transactions for customers. This

requires an investment in physical security and cybersecurity, plus insurance to prevent or mitigate cyber-attacks and physical fraud.

Regulatory regimes that affect how cash is managed are getting tougher too. Meeting regulatory requirements, such as anti-money laundering (AML), often requires additional processes and reporting, which can increase compliance costs.

Cash-in-Transit (CIT) services are not getting any cheaper either. These services, which include managing reconciliation and scheduling of cash supplies, are not immune to cost increases due to both inflation and security measures that they must absorb or, more likely, pass on to their customers through increased charges.

Navigating the Changes to ATM networks

The implications for cash management costs vary depending on the specific circumstances, locations, and strategies of the organizations involved.

While some might think smaller ATM networks mean lower cash management costs, the opposite is often true. There are downsides and cash management challenges associated with reducing ATM networks, in addition to how loss of self-service banking channels alienates customers.

A smaller network might require a strategic approach to cash management, as the optimization of cash levels becomes increasingly important to avoid cash-out issues and ensure ATM availability. While there might appear to be cost savings from more focused investments in advanced technology and security systems, it may also require higher investments per ATM to maintain modern features and security. Regardless of how there are less ATMs, banks still need to maintain all the infrastructure needed to properly manage them, while delivering an access to cash service that is unsatisfactory for many customers as ATM networks are hacked back.



The impact of reducing ATM networks on cash management costs can be mixed, with potential cost savings in some areas and challenges in others. The decision to reduce ATM networks should be done carefully considering customer needs,

competitive positioning, and the organisation's overall business strategy. Effective cash management practices, including optimisation and forecasting, become even more crucial when managing a smaller ATM network.



How technology can transform cash management today and tomorrow

Cash and ATM management processes have become more automated, reducing the need for manual data entry and reconciliation. [Predictive analytics](#) and machine learning are being used to forecast cash demand at ATMs more accurately, at different locations and [optimise cash supply chain logistics](#). This helps optimise cash replenishment schedules, reducing the risk of cash-outs or excess cash holdings. Cash optimisation software and services are increasingly used to manage ATM cash levels efficiently. These solutions help reduce the amount of idle cash in ATMs while ensuring they remain adequately funded to meet customer demand.

However, as cost pressures rise, there is much more that technology like AI and cybersecurity can do.

AI (Artificial Intelligence) is poised to become increasingly helpful for ATM cash management by enabling even more efficient, accurate and data-driven approaches to managing cash in ATM networks. There is a variety of ways that AI will enhance ATM cash management in the future.

Better forecasting - AI will become increasingly essential to how cash demand is forecasted. Accessing historical transaction data, real-time monitoring, and external factors (e.g., holidays, special events), AI can predict cash demand at specific ATMs. This enables ATM

operators to optimise cash levels and reduce the risk of cash-outs or idle cash.

Cash replenishment transformed - As [AI](#) becomes more powerful, more dynamic cash replenishment scheduling becomes possible. AI can dynamically schedule cash replenishment based on demand forecasts, operational efficiency, and cost considerations. This can lead to more efficient use of resources and reduced operational costs.

More forensic insights on operations - With banks needing to maintain optimal access to cash for customers and improve operational profitability, they can use AI to analyse the overall network of ATMs to determine the ideal locations, services, and cash levels for each ATM, optimising the entire [network's cash management strategy](#).

Unleash adaptive pricing - More operational efficiencies will be possible when AI is harnessed to support adaptive pricing. This determines optimal pricing strategies for ATM services, considering factors like transaction volume, location, and time of day to maximise profitability.

Current and continuing investments in AI, automation, cash forecasting and predictive analytics will help

manage and reduce rising operational costs through for example, less manual processes, mitigating the cost of holding excess cash for liquidity purposes and less idle cash holdings and replenishment operations.

The same technology investments will ensure the customer experience of using self-service channels is always enhanced through ease of access to cash services and at all locations.

Roll out of modern ATMs - New cash recyclable ATMs can combine with CIT optimisation initiatives to reduce costs. They create a closed loop cycle in which bank customer deposits can be used to replenish ATMs. The opportunity of **in-branch recycling** can further **reduce CIT stops** when cassettes are interchanged between systems in one location.

Based on concrete cash flow data of a retail bank, a reduction of 75% in cash replenishments can be realised using cash recycling technology. When ATMs with recycling technology replace standard cash-out ATMs and deposit solutions for cash-in transactions, CIT visits can fall by 156 per year.

Securing Remote Access to Cash Infrastructure - Newer **cybersecurity systems** that are purpose designed for ATMs and ASSTs utilise a zero trust model. This makes suspicious assumptions about the vulnerability of the infrastructure that manages ATM and ASST devices. This way nothing is executed on an ATM or ASST unless it has been previously authorised. Greater security encourages customer trust and aligns with deploying ATMs and ASSTs in more convenient locations for customers.



New operating models to control cash costs

Improving cash management will depend on more than just smarter technology, however.

There are tremendous opportunities to be gained from re-imagining how self-service access to cash channels are organised and managed to be more cost efficient.

How some countries' banks are pooling their ATM networks is another way that cash management costs are being controlled, while enhancing provision of state-of-the-art ATMs and ASSTs.

ATM pooling can leverage advanced cash management to maximise the operational efficiencies and improve customer experience. This is especially true

because in this case there are multiple cash-in-transfer (CIT) operators to coordinate – one moving cash from the central vaults to branches and another loading and unloading ATMs.

By siting ATMs and ASSTs in locations where customer demand will be greatest, such as major transport interchanges or shopping malls, ATM pooling optimises cash management costs. With multiple banks sharing ATMs, CIT and insurance costs are lower, with less ATMs to protect and replenish. This helps put ATM services on track to break even and be profitable especially when these new operating models are combined with that investment in new cash management.

Choosing Auriga as your future cash management solution partner

Auriga's WWS Cash Management solution, which has been operational for Auriga's customers for several years now, is enabling banks and ATM operators to improve customer experience while controlling the costs of access to cash in today's dynamic and challenging markets.

The solution answers current and future challenges on cash management:

► **Predictive Analysis:** By anticipating the cash requirements of different organisational units, Auriga provides counting rooms with accurate demand and cash flow forecasts. Their predictive model accounts for variables such as seasonal peaks, public holidays, and daily usage patterns.

► **Automation & Monitoring:** Many banks still rely on manual processes or basic mathematical functions for cash management. With Auriga's Cash Management software, banks can **automate** these processes; enable real-time monitoring and a more efficient intervention planning. Including reducing waste related to unnecessary order management costs by 25%. This not only reduces errors but also streamlines operations.

► **Optimised Cash Transit Management:** Through predictive analytics, banks can schedule cash resupplies effectively, minimising the chances of ATMs running out of cash and thus enhancing customer experience.

► **Data-Driven Decision Making:** With access to a comprehensive dashboard, banks can generate up-to-date reports and monitor key metrics such as cash availability, number of banknotes withdrawn, and order lifecycle. This rich data source allows for more informed and strategic decision-making. The orders generated by the AI system guarantee a reduction of the remaining cash stock in the cashpoints by 40%.

► **Increased Service level:** the service level guaranteed by a human operator is guaranteed to the same extent by the software, with an increase of about +5%, despite the growing number of managed cash points. In the projects involving Auriga, the increase in managed cashpoints was 300% in 18 months.

For financial institutions looking to optimise cash management, there is significant reassurance that Auriga has a track record of delivering quantifiable benefits from applying its AI-powered data analytics to controlling cash management successfully.

Auriga Lookwise Device Manager (LDM) is the complete ATM security solution to secure access to cash and other self-service bank services. It enforces ATM software security measures through remote monitoring, protecting critical devices with cyber security measures such as whitelisting, applying zero trust model.

Auriga ATM as a Service (ATMaaS) end-to-end managed service makes it easy for banks and IADs to renew their central and local **infrastructure** for access to cash services. They can leverage new technologies and approaches in ATM and branch operations at a reduced cost and within a shorter timeframe.

Auriga ATMaaS is the answer for banks and IADs to respond to the challenge of ensuring access to ATMs while minimising the effort and cost of running them and maintaining a brand presence. The combination of a well-maintained fleet, the ability to launch new innovations and features quickly and securely, alongside the flexibility in meeting consumers at any touchpoint serve to elevate the end-to-end ATM customer experience. Belgium's Batopin ATM pooling initiative utilises the Auriga ATMaaS offering.





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