Optimising the Retail Cash Chain:

From Pocket to Profit

Automate | Authenticate | Secure | Accelerate

THE TRUTH ABOUT CASH

It's not been hard, over the past two decades, to find articles and papers confidently stating that cash is on the way out, and sooner rather than later. This kind of prediction has normally been made by people and companies seeking to promote their own alternatives (often technological) to cash yet, despite their best efforts, cash remains in robust health in almost all of the world's markets.

It's now more than half a century since the first plastic card was introduced and there is more cash in circulation across both developed and emerging economies than at any time in history. Cash remains the single most important means of payment in some very surprising places: Germany being the most cash-intensive economy on earth, and over half of all transactions in Australia, France, Canada and the Netherlands conducted in cash. Even as the "omni-channel revolution" gains pace, it is instructive to note just how many Germans prefer to pay for their purchases on delivery, in cash.

The selection and ordering methods, in other words, seem to be changing faster than the actual payment preferences. Globally, cash payments still account for at least 20% of all retail transactions by value, and that figure is staying surprisingly robust, despite the efforts of digital revolutionaries to reduce it.

Recent examples of economic hardship experienced in countries around the globe have reinforced the fact that many people still have an emotional attachment to cash. It is what you keep "under the bed" when you no longer quite trust the banking system. It is what gives you a sense of security, a form of money you can touch, feel, count and store within easy reach. It still has a different status when compared with any form of electronic payment. That's because cash is a solid, tangible thing, and not just a concept, like digital wallets and plastic cards. In this 21st Century world of apparent technology dominance, that still counts for something.

So cash is still with us and is likely to remain extremely important to consumers and therefore retailers for decades to come. And important it certainly is. For a start, there is a large group of citizens and consumers for whom electronic methods are still not suitable or attractive. Others prefer the simplicity and ease of making purchases with ready money, if only because it is (for them) more secure. You cannot make a cyber-attack on the dollars or euros in your pocket, while the danger from pick-pockets seems modest by comparison with the exploding threats of online identity theft.

And, of course, how many retailers will turn their back on 20% of all potential sales because they find cash handling tedious or difficult? Very few, especially in the current economic climate. The choice retailers have, therefore, is simply this: how can they optimise the way they handle and manage cash to reduce their own costs and risks and increase their own time to profit?

NEW DISCIPLINES IN MANAGING CASH

Cash is a physical item, which means that the way it moves from one place to another has to be managed just as you would manage any other object of value. That means we need to think about managing the movement and use of cash in similar ways to how we manage the movement of retail merchandise. In other words, there is a supply chain for cash, as well: we call it the Retail Cash Chain.

No market sector has greater expertise in supply chain management than retail. Getting a firm grip on the management of supply chains, backed by a relentless drive for continuous improvement, has transformed the way that major retailers operate. This essential discipline has led to:

- Massive reductions in warehousing and inventory, with just in time delivery freeing up expensive space, avoiding excessive capital investments and reducing risk.
- Automated balancing of supply to demand, with real time systems enabling retailers to buy precisely what they need, when they need it, with a minimum of human intervention.
- Outstanding economies of scale, as retailers use their size and buying power to negotiate lower prices, while making sure that slow lines are identified and removed.
- Simplified logistics, using enhanced analytics to ensure that journey numbers are reduced, without compromising availability of products but while driving down costs.
- Improved customer experience, due to more agile response to customer needs as revealed in their buying habits.

In these and other ways retailers have reduced their risks, cut fixed costs and become better able to reflect market needs.
So can we learn from the now mature supply chain industry when considering cash management? The answer is surely yes. In fact, optimisation of the Retail Cash Chain can involve a larger number of techniques that not only reduce the costs of handling and processing but can turn cash into service benefits for customers.

To gain maximum benefit from the use of cash, retailers must be able to move cash from the customer's pocket to their own bank account and therefore to profit as quickly, efficiently and securely as possible. Let's go through the logical steps of a traditional Retail Cash Chain and see how it works:

Step one: the customer tenders cash to the retailer at Point of Sale (PoS) in order to complete a transaction. To do this correctly the cashier must authenticate the cash, secure it in some way and give change. This is not as simple as it sounds. The retailer will need to take anti-counterfeit measures, ensuring that changing designs and security features are correctly identified and being satisfied that the notes and coins offered are legal tender. One other issue of real importance to many retailers (especially those dealing with food) is hygiene. Cash can be dirty, and it is important to safeguard the products sold from any issues arising from this.

Step two: the money needs to be collated and accounted for. That means interrupting the checkout flow in order to lift cash from the PoS terminal to a back office location where initial counting can be done and any discrepancies investigated. Transferring cash takes time and, of course, presents its own security risks. So does everything that takes place in the back office. Typically the cash is securely stored to await collection and/or banking.

NEW DISCIPLINES IN MANAGING CASH [continued]

Step three: periodically the cash is banked, often through pickup by a Cash in Transit (CIT) specialist, normally in the first instance to a central processing centre, where cash will again be counted and verified. Much like management of physical inventory, increasing the number of touchpoints and reconciliation stages also increases handling costs. In the meantime, the retailer will normally have placed an order for change in a variety of denominations, perhaps asking for more than is strictly necessary to ensure that cash registers are never unable to give change when requested.

Step four: once the cash is received at the bank or cash centre and a further round of reconciliation has been carried out, the cash is credited to the retailer's account. At this point, and only at this point, in the traditional Cash Chain, the journey is over and cash has made its way from the customers' pockets to the retailer's account.

This is a very top-level review of what the traditional Retail Cash Chain is like, and there are many cases in which there may be one or two more stages along the way, and others in which there are fewer. Yet, as with any physical object that needs to be moved in order to deliver value, there has to be a supply chain and it is subject to exactly the same rules as any other.

Where there is such a supply chain, optimisation is both necessary and possible. Some optimisation is driven by technology improvements and others by smarter use of time, better training, more rational management of employee time and many other factors, as well. First, however, you need the awareness and understanding that helps you realise that a better way is possible, and the ambition that drives you to identify and implement that better way.

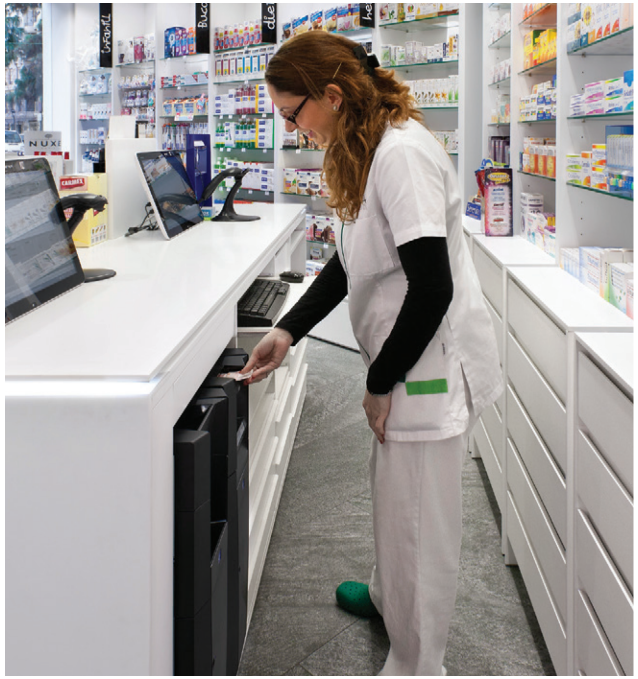
We believe that applying the techniques of "Authenticate", "Secure", "Automate" and "Accelerate" within the Retail Cash Chain will realise significant benefits, ultimately optimising to such levels that the value of cash can move and deliver value beyond its apparent physical limitations. In other words, we can reach a point where Cash becomes the next Electronic Payment. Such a transformation is not unprecedented, it simply reflects the way that cash is evolving in much the same way that Credit and Debit payment transactions moved from use of paper coupons and telephone authorisation, which were normal just twenty years ago, and became "electronic payments".

OPPORTUNITIES FOR OPTIMISATION

In order to start transforming the efficiency and value of the retail cash chain we need to think differently about the potential role of cash within our increasingly technology-enabled economy, and then take practical steps to improve efficiency at every key stage in the chain.

It all begins by accepting that:

Cash can evolve to become an Electronic Payment. A key enabler of Cash as an Electronic Payment is a concept called “Provisional” or “Same Day” credit. This is a growing trend in a growing number of retail banking environments and is already established in many markets including the United States, South Africa, the Netherlands, Russia and others. Technology is used to “Authenticate”, “Secure” and “Automate” cash to the point where there is a high enough level of assurance on the value of the stored cash at any one time such that the retailer’s account can be credited on the same day. Ultimately, this could be when cash is received at the Point of Sale or when it is deposited in the back office.



The basic requirements are:

- A secure cash deposit device within the store that acts as a form of ATM (the kind that permits paying in as well as withdrawals). It either receives cash directly from the customer, or indirectly at the back office through deposits from the Points of Sale; verifies its authenticity, counts it and keeps it safe.
- The basic requirement for Same Day value is the ability to send cash holdings data once daily at a pre-determined time. Most banks will want one daily reconciliation point rather than numerous data checks.
- Based on this data flow, the bank can credit the money received to the retailer's account, pending receipt of the cash, itself, which can take place some time later. The retailer has all the benefits of money in the bank, in the meantime, giving them improved liquidity, access to working capital and, once interest rates return to a more normal level, the ability to profit from simply having money in the bank.
- This opens up the prospect of real competition in the banking space, with CITs competing to own more of the value chain and banks competing to develop new and more efficient services. Cash recycling reduces the need for visits (by CITs to the client location and to the bank branch), which reduces costs and increases operational efficiency. Banks and CITs can and do charge for the "premium service" they deliver and everyone involved gains from faster access to cash and lower fixed costs.

OPTIMISING THE **RETAIL CASH**

Glory's specialist knowledge and expertise ensures any retail orga
cash chain to improve its bottom line – transforming the cas

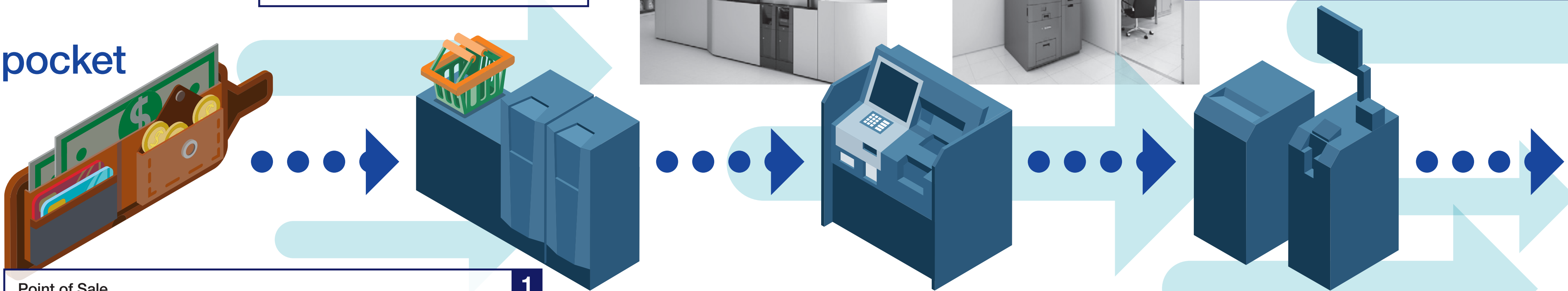
Point of Service 2

Greater confidence in cash handling on the shop floor give rise to further opportunities for the retailer to use cash as a vehicle for enhancing customer service, driving footfall and leading to the store becoming a destination for consumers, or indeed enabling a raft of extended services using cash which otherwise might exclude certain categories of customer. Examples include self-checkout and self-service in grocery and convenience; 'order ahead' configurations in food service to reduce waiting times; integrating cash into extended range ordering to enable omnichannel transactions for cash users; offering cashback, bill payment and advanced banking services to customers at the point of service; and offering cash payment as part of a 'click and collect' in-store.

CASHINFINITY™
GLORY Retail Solution

Cash Office

Cash from the shop floor systems are banked (either mar
back office cash recyclers. Software ensures that the tran
secure, seamless, fast and accurate, essentially allowing
quickly and reliably any time of the day or shift. Counting
automatically and credited to the correct shift/operator/till
maintained; and surplus cash is stored ready for banking.
'cashier's ATM') is also instrumental in replenishing funds
floor, intelligently recommending and dispensing floats an
cash and denomination levels at specific point of sale/ser
trading day, surplus cash is stored and recorded securely
the regular store reconciliation process can be set up to t
Access to the device, and therefore the cash, is controlle



Point of Sale 1

Consumers tender cash as part of the transaction either via the cashier in a traditional checkout model, or directly into the customer facing cash recycler, for example in a self checkout or other unattended environment. The system allows for multiple note and multiple coin tendering – a feature useful for delivering service to customers, but also when manually refilling change into the device. Tendered cash is authenticated by the system, and the software determines what to do with counterfeit or otherwise unknown currency.
A customer friendly set of prompts and indicators guides the transaction ensuring that the customer or operator tenders enough cash. It then issues change based on software-configurable parameters. The speed, convenience and reliability of the system, add to the overall benefits enjoyed by the customer, while self-payment and security elements enable to store staff to focus on customer service and revenue maximisation.

In-Store Security 3

Surplus cash (i.e. beyond that which is needed to dispense change) is typically stored in a secure cassette inside the equally secure 'shop floor' cash devices.
A system of warnings and alerts can be configured to highlight to the store staff that a pickup of cash is required from a specific payment point to the secure cash office.
Depending on the configuration, this secure back room can be managed by the store staff, outsourced cash managers (for example the CIT company) or indeed as a service of the property company, e.g. in a shared mall. Such flexibility is possible due to the cash remaining out of sight and within the secure cassette from the point of pickup at the point of sale/service to the point of delivery to the cash office. Indeed, the system can be configured such that cash is never seen or touched by anyone other than consumers at the point of payment thus eliminating chances of errors or discrepancies.

CHAIN – from pocket to profit

nisation can securely, effectively and efficiently optimise its entire
h journey from the customer's pocket into a healthy profit.

4

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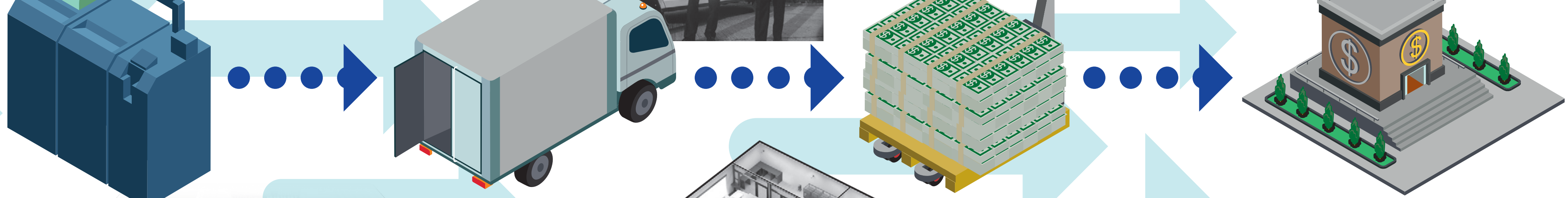
nsactions and transfers are
cash to be deposited and audited
and authentication is carried out
; a change fund for the store is
. This back of store device (or
to the right devices on the shop
d till top-ups based on known
vice terminals. Throughout the
, and software alerts, or indeed
rigger a bank or pickup event.
d and audited at all times.

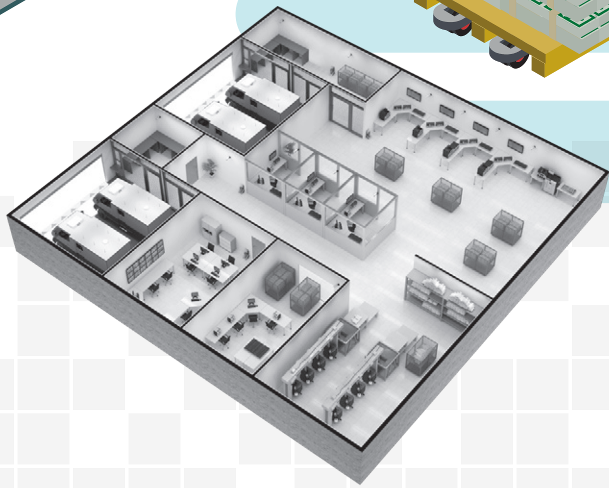
Shared Cash Office **5**

The system is scaleable to allow cash office functions to be consolidated into a larger facility, or indeed a shared cash office environment. Such environments regularly appear in major hospitality locations such as airports and train stations; at entertainment venues such as recreation parks, concert halls and sport stadia; where larger hypermarket stores support nearby smaller satellite stores; and shopping malls where other service providers may provide cash management and handling services to a number of separate retailers or fascia.

Banking **6**

The system so far has validated that the deposited cash is indeed genuine cash. It is stored in a safe, secure environment and technology has ensured we have an accurate view of exactly how much cash is waiting to be sent to the bank or banking agency. At this point, depending on (for example) local regulation regarding cash in circulation and/or the commercial arrangement between retailer and bank or CIT, it may be possible to accelerate 'time to credit' of the known cash into the retailer's bank account. This electronic banking of the cash without the physical transfer of the notes and coins may provide retailers with huge working capital benefits depending on circumstances. Physical banking at a later time can be optimised based on physical capacity and risk, rather than a need to accelerate time-to-credit, thus offering the opportunity to further optimise cash logistics costs. Cash is prepared and presented in such a way to the cash handler as to make subsequent counting and reconciliation at their facilities faster and cheaper, thus leading to further cost reduction and improved profit for the retailer.





Cash Centre **7**

Once safely delivered by the CIT company, the physical cash is logged and processed as deposits by various retailers and merchants. Orders for change are prepared ultimately for ATM's, points of sale and points of service and sent back out to retail stores to complete the **Retail Cash Chain**.

OPPORTUNITIES FOR OPTIMISATION [continued]

Recycle, don't order change. One of the most troublesome aspects of cash management is ordering and handling change. The smallest retailers, of course, do everything they can to avoid making this a special activity, limiting the size of their float and asking customers for exact money, even putting pressure on them not to offer inconveniently large notes when cash in the till is limited.

For large retailers, however, change is a vital requirement that must be handled as a specific Retail Cash Chain item. We therefore often see the very much less than desirable sight of CIT providers arriving at retailers to collect cash paid over by consumers, and then again to deliver cash ordered for use as change. This raises risk, raises costs, increases time used up in counting and distributing, extending logistics-related issues, and of course disrupts the store operation. For retail management this can be an inconvenience, but in some segments of the market it has a very personal impact on often low-paid casual staff.

This is another area where Cash Chain Optimisation can be used to improve performance in some radical ways. Within a physical supply chain, predictive models are used constantly to forecast demand, control inventory and ensure just in time fulfilment: all of these being important contributing factors to improved speed, lower costs and better service to customers. Cash can be treated in the same way, with accurate forecasting enabling retailers to have the right cash, in the right denominations and quantities at the right places for their needs, without wasting time and resources and without putting transactions at risk. This will form an increasingly important part of the Retail Cash Chain Optimisation approach.

Modern PoS terminals, however, have much greater potential for recycling cash to use as change, and so do the corresponding back office solutions. Recycling must be reliably automated so that there is no danger of human accounting errors creeping in. Done correctly, this means that less cash has to be ordered in for use as change, reducing risk, improving service standards and cutting costs.

Stop moving cash in the traditional ways. That little journey from the Point of Sale terminal to the back office can sometimes seem like running the gauntlet. In some countries it is actually a risk to lives. In the world of traditional retailing it is necessary to:

- Remove the money from the terminal with minimal impact to the checkout queue (keeping it safe and not allowing any shrinkage along the way).
- Physically transport it to another part of the store, or in some cases to a central office outside the store (keeping it secure all the time).
- Place it in a secure location within the central office for further processing, again, allowing no shrinkage and preventing any security issues arising.

OPPORTUNITIES FOR OPTIMISATION [continued]

Some retailers have used vacuum tubes to reduce the need for other handling options. Others will move cash in teams (so that the people involved can check on and look out for each other), disrupting both ongoing end-user customer transactions and taking a lot of time over it.

So isn't there a better way? Recycling gives the opportunity to reduce the number of journeys increasing efficiency and safety, but beyond that, other possibilities. These range from providing highly secure cassettes, that can be slotted out of the PoS terminal and slotted into the accounting back office machine, to PoS terminals that work more like ATMs, enabling customers to input money directly, with automated counting in real time, effectively making cash invisible to all store employees.

And there's another point to consider, as well. This is not just about the physical integrity of the system but about who carries what risk. Let's go back to that idea of provisional credit. If we can imagine a world in which the PoS terminal not only communicates with the bank in real time but is actually owned by the bank or CIT then risk is transferred from the retailer, which no longer needs to take accountability for moving the cash at all.

On this last point, we do not have to imagine such a case at all, because something very similar already exists in virtually every major retail outlet: the EFTPOS terminal. As the acronym suggests, this delivers Electronic Funds Transfer at the Point of Sale. They only work because they have been certified by the major banks, which are happy to credit and debit funds at the point of sale without the need for a physical verification (a signature slip or a phone call). The same approach can be applied to cash, as long as the same rules are considered – that the cash is Authenticated and Secured, i.e. guaranteed to be what the transaction declared it to be.

When you separate the physical cash from its value, all kinds of interesting ideas become possible.

Reduce the frequency, predictability and size of cash in transit. As the cash supply chain is progressively optimised we find that money will move around less frequently, reducing the amount of cash in transit. Better recycling options mean that the circular movement of cash (sales revenue one way, change the other way) will be more localised, with change increasingly supplied through recycling in store, as long as local regulations and conditions permit.

Today, PoS terminals already deliver some of the key functions of ATMs, providing cashback and also in some cases offering other basic banking services, such as bank deposit, savings and bill payments. Just a few years ago offering banking at supermarket checkouts would have seemed improbable but experience proves that it works well for consumers, banks and retailers, alike.

Banks are always looking for new ways to transform their own branch networks, so it is extremely likely that they will continue to collaborate with large retailers, providing new services at Point of Sale and exploring options for making use of stores' footfall and role as a consumer destination.

Given the success of cashback and other initiatives, there is no reason to doubt that other banking options can be made to work in the future, just as well. The basic requirement is a closer and more creative working relationship between financial institutions and their retail customers. That requires a clear vision of what might be possible, backed by the ambition to make it happen.

TOWARDS A PERFECT WORLD

Let's go back to that Retail Cash Chain analysis once more and see how much harder and faster cash could be working for retailers and their banks, largely enabled by much improved cash recycling capabilities. In future we can expect to see an integrated system in which:

- Sales personnel never handle cash personally. They focus single-mindedly on delivering quality of service, while their PoS terminal collects, sorts and manages the customers' cash and also validates, authenticates and identifies any problems. This saves sales time, improves the experience, cuts out issues related to hygiene, while sending petty theft and fraud to all-time lows.
- PoS terminals double as customer ATMs and even remote banking transaction terminals and are fully connected into the bank accounting and clearance systems. Money is recycled, reducing the need to move cash within store and between locations. Customers receive a better service and retailers have the benefit of their money instantly – as do banks.
- Cash movements are made more secure and more efficient by the "in store closed loop" system, which makes use of cassettes that are secure and ensure that money inside the cassettes does not require handling. It's just a question of slotting pre-counted funds within cassettes into the main accounting systems in the back office. Again, the level of security is raised, opportunities for theft are eliminated, employee time is saved and speed is increased.
- Accounting in the back office is now generally a very secure and efficient process. Back office cash handling systems account for funds that have already been counted twice, acting as a final stage of validation. Cash accounting machines are more secure than the average safe and, as no cash is handled, it is virtually impossible for any theft to take place, or for accidental loss.

- Cash in Transit becomes fundamentally more secure. CIT visits happen when needed and less often than is the case today. Systems are closed, with counting by the CIT provider only to validate and no opportunity for loss.

The net result is more efficient use of employee time: from now on everyone can focus on customer service, not on low skill, high risk, unproductive tasks, and as wages rise, not just in developed countries but in emerging economies, too, this will become increasingly important. Customer service improves: customers now have the undivided attention of sales personnel, and they are offered additional money-related banking services. Risk is reduced: potentially saving money on insurance fees and on risk capital tied-up as contingency. Above all, we can see here the outline of a different and more productive relationship between retailers and their banks, in which both sides collaborate to target real wins through enhanced service, reduced costs and higher speed.

So much for the vision. Now, here we are in a world where best practice options are emerging but where retailers have many concerns, many priorities and, in technology terms, many calls on budgets that are normally under great downward pressure. We do not expect the perfect Retail Cash Chain to become the norm in the immediate future, though a surprising number of the ideas covered in this paper are already being used by some ambitious retailers in some markets.

We believe in taking things one step at a time and in the concept of investing in success. It is essential to demonstrate value, measurable value from your first investment in order to win the right to propose your next step. The Glory approach is based on objective evaluation of the current realities within a retailer environment, in which key pain points are identified and practical actions recommended to deliver fast benefits.

Very often we find that the logical starting point, the anchor that connects the vision of a technology-enabled cash supply chain to reality, is the back office. Here, it is possible to take hard metrics (number of people employed, time taken, rates of shrinkage, speed of processing, levels of security) and make clear comparisons with the existing reality. This is by no means a universal rule, however, and it is also quite likely that if, for example, security is a point of greater concern, Point of Sale or even a Closed Loop approach connecting Front and Back Office solutions will prove the most logical way to begin optimisation. All retailers are unique in some ways, and it is important to bring an open mind and rigorous analysis to the issues at all times.

TOWARDS A PERFECT WORLD [continued]

So where does this top-level analysis leave us? There are a few very simple conclusions to be made:

- Cash is not going out of fashion and all available evidence underlines the deep connection and trust that still exists between people and cash. Even in the emerging omni-channel, always connected, always on world (which is further away than we might think, if all we read are consultancy papers) cash has a big part to play. Cash is simple, easy to understand, relatively foolproof and, above all, the most convenient way to manage the 81% of all transactions (in Europe at any rate) that are valued at 10 Euros or less. The superiority of cash in this environment, in particular, makes it likely that it will never actually disappear (at least, not for a very long time).
- Yet for retailers cash is a continuing source of cost and risk. Everyone in this market needs to explore all reasonable and viable options for reducing risk and driving down cost.
- By taking a Retail Cash Chain view of the way cash is managed and handled, it is possible to see a number of points at which we can intervene to optimise, sometimes by small, incremental percentages, but in ways that add up to a big difference.
- To do this we have to stop thinking of cash handling systems as pure commodities: "boxes", with greater or fewer features and capabilities. We need to see the chain as a single integrated system and ask how does each component fit in, connect and remain future proofed as this landscape evolves?
- Quick wins are available now, often with the obvious starting point being in the back office. This is where it will be possible to identify, capture and measure benefits.
- These benefits can then be used to fund investments more widely across the cash supply chain, and that is where exponential gains can be made.

One final point to remember: this drive for performance improvement is as much about collaborative relationships as it is about hardware.

For large retailers, it is essential to look at the ways in which IT and procurement set priorities and assess investment options.

We think it will be necessary for senior management to challenge some of the long-held assumptions within those departments in order to make breakthroughs. In optimising the cash supply chain the requirement is to look at total value, not simply upfront capital investment costs. This is a long game and requires strategic thinking and long-term planning.

Equally important is the need to collaborate across the different players in this environment. Retailers, banks and CIT specialists all have common concerns and interests. It is not just about driving a hard bargain with a supplier but about collaboratively seeking ways in which all sides can deliver value benefit.

There is no single "magic bullet" that will transform the way that the Retail Cash Chain is managed overnight. Instead there is a need to look at the entire subject in a broader, more strategic way and develop a long-term vision that will enable positive progress, stage by stage, for all of the partners in the chain. Working together, all of us can make positive gains. The starting point is to see the landscape in a different and more creative way. Once you start to think differently about all the many ways that it is possible to intervene and optimise the Retail Cash Chain, just as other physical supply chains have been transformed, the possibilities become almost endless.

Related solutions...

CI-10

Compact cash recycling solution, enabling automated cash handling at point of sale positions.

CI-100

Fast secure cash processing and storage in the back office.

CI-SERVER

Centralised management of cash throughout a store in the front and back office.

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