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Integrating Standards for the Movement of Cash

Barcoding technology stands poised to revolutionize the management of bills, and to bring big benefits to companies that do a lot of business in cash.

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Cash is still king. Even in the digital age, bills and coins remain the most frequently used form of payment in the United States. Thirty-two percent of all transactions—and more than 50 percent of transactions with a value under \$25—are conducted in cash.

Thirty-eight percent of 18- to 24-year-olds, and 48 percent of consumers with household incomes below \$25,000, prefer cash as their primary method of payment. And according to a 2015 survey by the FDIC, roughly 27 percent of all households in the U.S. remain “unbanked” or “underbanked.” This is one driver of the massive number of cash-based transactions that still exist in our economy today.

The volume of cash changing hands is tremendous, and managing its movement is an ongoing challenge for many businesses. For companies in highly regulated industries, in particular, there is a clear value in improving visibility into where the organization’s cash is and has been at any point in time.

Advancements in the processes underlying supply-chain logistics, which are being implemented across a broad range of industries already, offer additional opportunities for improving efficiency and reducing risk for cash in transit. The financial services community is working to standardize the exchange of information in the digital supply chain, which

would modernize the tracking of bills as they move from one institution to another. If implemented, this standard would enable stakeholders to share information electronically, often in real time.

Such integration would substantially improve efficiency in the cash supply chain. And the time to make it happen is now, as leaders in a range of industries are incorporating package-tracking capabilities into their inventory management systems.

How Money Currently Moves

The cycle of companies receiving payment in cash and transferring that cash to their banking partners has historically relied upon paper documentation and verifications. For example, when a courier collects cash from a business, it typically leaves behind a signed paper manifest, and when it delivers that

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cash to the appropriate bank, it leaves the bank with a similar manifest. There are software systems that store cash-in-transit information, but the data is entered and re-entered manually at every step along the way by the merchants, armored carriers, depository



institutions, and finally at the Federal Reserve.

The manual and paper-based processes create inefficiencies and the data entered is always at risk of operator error. These challenges are magnified by the fact that the processes are dissimilar among the different business partners. A lack of unifying standards and common procedures means that each armored car company, bank, and corporate depositor uses its own custody control system. Without interoperability, many large retailers using multiple armored carriers and financial institutions have no single view of their cash movement. They have different customer numbers across their various accounts and different ways of identifying and resolving discrepancies, which complicates the sharing of information.

With so many different strategies for meeting a single business objective, efficiency and accuracy can suffer. Staff spend too much time entering data about incoming and outgoing cash packages, reconciling shipments against

paper manifests and deposit tickets, and searching paper records to resolve errors and find missing items. Manual cash handling drives up costs unnecessarily. Many companies that do a significant amount of business in cash also spend money on storage, for maintaining physical archives of paper records, and on retrieving and destroying old records.

Worse, companies that don't have excellent visibility into their incoming cash shipments may hold excess inventory of bills, in order to reduce the risk that they will run out of certain denominations, or they may have to arrange costly special shipments if they run short of one or more denominations. And if the lack of visibility into the cash-handling cycle leads to inaccuracies in reporting, com-

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panies may also face regulatory reporting risks. There are several requirements by the Financial Crimes Enforcement Network (FinCEN) that compel armored carriers and financial institutions to report certain types of transactions (BSA, SAR, etc.). Better visibility and advance notification of transactions that meet the reporting requirements allow the parties to be more responsive and less likely to miss something that was included in a paper manifest.

Standards-Based Solutions Provide Visibility

Visibility in a business process requires that the item or event be identified, its activity captured, and the information shared in a common way so that everyone who needs the data can understand it. Within the cash-handling supply chain, a complete chain of custody is needed to give all parties reliable information in real time about where cash is currently and where it has been. Achieving visibil-

ity in that chain of custody requires that data be shared and understood across all parties. Thus, it is necessary to have standards agreed to by all stakeholders.

The cash-handling process needs to be modernized to streamline the movement and monitoring of cash, and to provide visibility up and down the chain of custody. In 2016, as a step in this direction, cash-in-transit company **Davis Bancorp**, in cooperation with **GS1 US**—the non-profit standards organization best known for the UPC barcode—incorporated standardized barcodes and Global Location Numbers (GLNs), in order to streamline the processes of transporting and accounting for cash. Data was entered as part of a new standardized process for merchants to notify the armored carrier of what it will be picking up when it arrives.

The solution dramatically improved the cash cycle by enabling participants to access and enter information within a secure global network, allowing an unprecedented level of accountability for tracking and monitoring cash shipments. As a result, **Davis Bancorp** reported a 95 percent reduction in errors, which reduced the need for manual intervention seeking to understand what went wrong. The company also reported an 18 percent increase in route efficiency. Employee overtime dropped by 21 percent, thanks to reductions in vault-loading time (66 percent reduction) and customer service traffic (47 percent reduction). Finally, the company states that its cash management solution simplifies compliance with reporting obligations under the Bank Secrecy Act (BSA) and FinCEN. Based on the success achieved with the pilot, **Davis Bancorp** is implementing this best practice as part of its standard operating procedure with its merchant customers.

Today, GS1 is working with major financial institutions, armored carriers, and the Federal Reserve to develop and implement standards for management and movement of cash. These partnerships, launched in 2015, are designed to

develop a cash visibility infrastructure based on supply-chain visibility programs already in place for other industries that use tools like barcodes and Serial Shipping Container Codes (SSCCs). Software providers have also been part of the standards development and are currently integrating, or planning to integrate, the standards into their solutions.

A Vision for the Future

Our initiative is currently geared toward the development and adoption of data standards and best practices for cash logistics for the most intensive users of cash. The intention is to support a new level of cash visibility that enables:

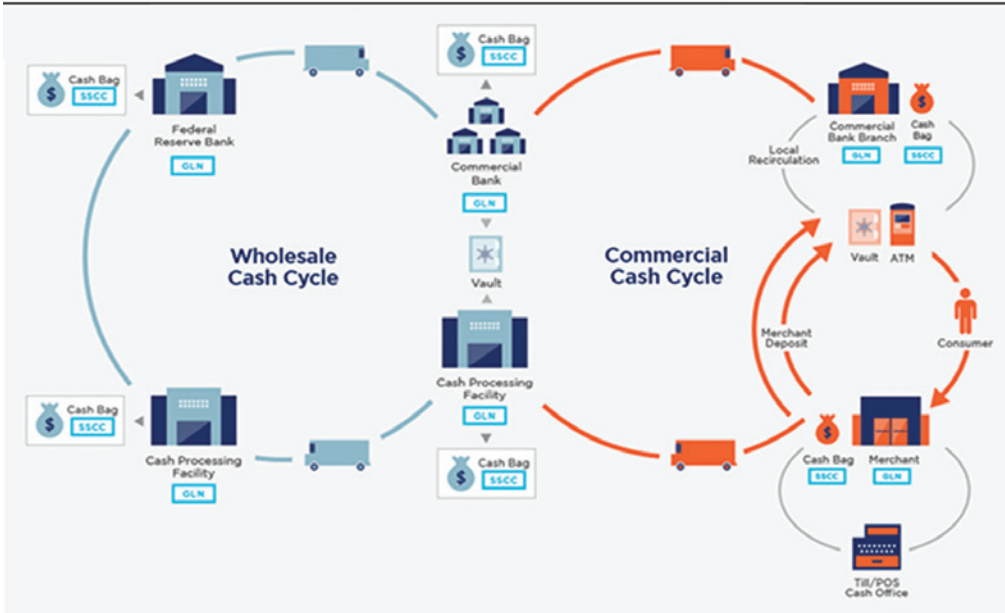
- improved data accuracy with reduced manual data entry,
- faster resolution of discrepancies between origin and destination,
- value-added information on status and value of cash in transit across a merchant's footprint,
- potential real-time access to status of cash-parcel movement, and
- automated vs. manual paper-based custody

Shared cash visibility standards will enable partners to easily communicate about deposits or cash transit status throughout the cycle. Being able to "see it through" allows for better oversight and security, as well as improved financial planning through efficient, reliable control environments at each point of the cash chain of custody. (See Figure 1.)

The initiative is incorporating some of the lessons learned over the past decade from innovations in the retail supply chain. Most retailers are already using advanced, standardized data systems for tracking and tracing product as it moves through the supply chain. Many use SSCCs to uniquely identify logistics units and GLNs to track their location. These unique identifiers are generated and governed by GS1 US.

It stands to reason that a merchant network already using SSCCs and GLNs to track product through the supply

Figure 1:
Introducing Transparency into the Cash Cycle
Barcode-based cash tracking provides visibility into the chain of custody throughout a supply chain.



chain could easily transfer learnings to a similar visibility initiative for cash transactions. The main challenge lies in individual companies' segregated internal systems. Connecting the dots requires good internal communication, resource sharing, and collaborative thinking. Companies' supply-chain departments need to show the treasury function how the GLNs that the company is already using for products could also be used to trace and track cash. When shared with the armored carriers, the GLNs enable a new level of visibility not previously possible for the transfer of cash between point-of-commerce and financial institutions.

Transition to the Future Cash Supply Chain

Modernizing the cash supply chain with standardized processes would bring substantial benefits for all stakeholders, and we believe this is the future of cash handling. However, adoption of standardized SSCCs for cash shipments will take some time. At first, companies may need to use their legacy systems in parallel with the new systems. Cash handlers will be able to scan or hand-key the necessary data, depending on which code is in use.

Merchants will be the main drivers of adoption because they already have these processes and equipment in place. Many of the solution providers working with retailers on logistics are already on board, promoting cash visibility programs using SSCCs and GLNs, and are adding dashboards to facilitate barcode-based processes for tracking cash packages.

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This is great news for depository institutions and armored carriers, for which better verification will eliminate the time currently associated with manual verification and data entry at each transfer point. Dock wait time will also be reduced, promoting more efficient use of staff resources and vehicles. Moreover, the reconciliation process will be enhanced. Searchable databases will allow easier identification of errors, while greater visibility will allow more accurate forecasting and capacity planning. More dynamic and accurate reporting will support

regulatory compliance requirements, and companies whose business is the transport of cash may even be able to increase revenues through innovative products and services that meet merchants' needs.

Meanwhile, merchants stand to benefit from fewer errors and faster resolution of anomalies and discrepancies, value-added information on the status and value of cash in transit, and improved treasury/accounting reconciliation with reduced manual data entry.

Integration of information and processes throughout the cash supply chain offers significant cost savings through improved interoperability, reduced redundancy, elimination of manual processes, and minimization of errors. It allows for improved traceability and accuracy, with fewer discrepancies and more time-efficient investigations, when necessary.

Enhanced visibility and accountability bring reduced risk for stakeholders and enhanced information services. The ability to clearly track and trace the exact location, source, and transactional status of every cash shipment in transit cannot be overestimated—a predominant portion of U.S. commerce depends upon it.



Carrie Wilkie, *vice president of standards management at GS1 US, is responsible for the development of standards on behalf of the GS1 US community and the management of standards expertise in support of core and emerging industry engagement activities, as well as direct customer support. Wilkie drives the development strategy for GS1 US standards programs, policies, and procedures based upon industry requirements.*