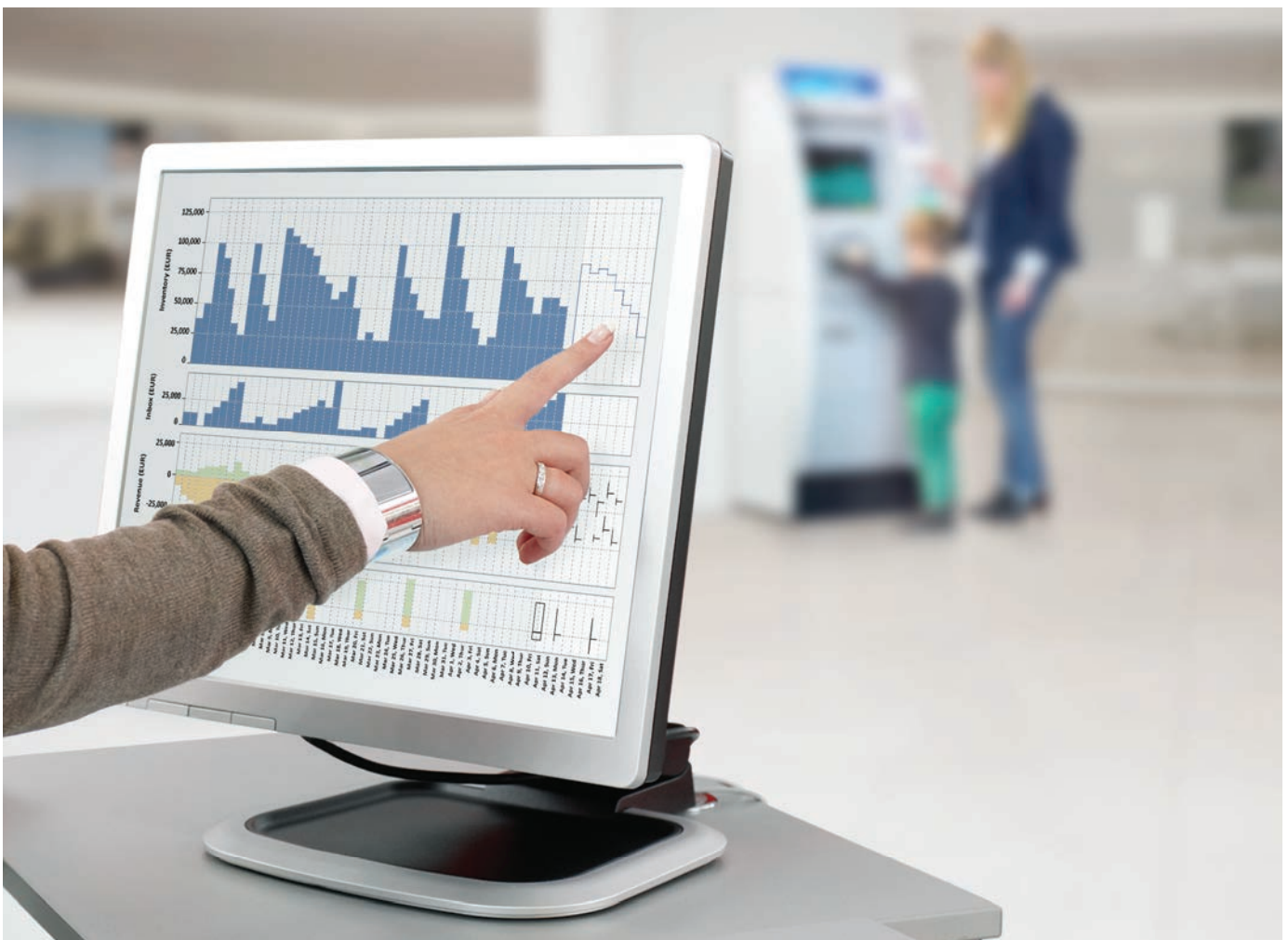# The Ultimate in Cash Cycle Transparency and Optimization

Cash is Still the World's Number One Payment Method.

Customers expect easy access to cash—anywhere, anytime, around the clock and around the world. The worldwide ATM installed base is projected to grow by 27% between 2015 and 2021. So it is hardly surprising that the number of ATMs installed globally is forecasted to grow to over 4 million in this time.[1] And despite the ever-growing number of card-based transactions, the annual volume of ATM cash withdrawals worldwide is forecast to grow by 5% per year on average between 2016 and 2021.[1] Cash must be available so that customers can access it safely and easily whenever they like—at movie theaters, service stations or supermarkets.

With every new self-service system and every new customer service, cash handling is becoming more and more complex. That means enormous additional administrative costs for manual cash replenishment and removal. And the cash holdings in cash points need to be optimized in order to minimize cost of working capital. What's more, manual processes are highly detrimental to the efficiency and transparency of the cash cycle. Relying on the individuals responsible for manual cash handling to possess the relevant know-how has revealed gaps in knowledge, which can pose various risks. This all means that in the highly competitive banking market, achieving flexible, cost-optimal cash handling coupled with high availability is one of the biggest challenges facing retail banks.

1 Source: RBR 2016, Global ATM and Forecasts to 2021

Cash management for non-recycling ATMs accounts for an average of 48% of ATM operating costs worldwide.

Annual ATM Services Expenditures | Datamonitor, 2015

Vynamic™ Cash Management

The Cash Cycle Optimizer (CCO) algorithms have been architected right from the start for complex recycling devices with multiple denominations and are market proven for over a decade, yielding best-of-class results.

END-TO-END CASH MANAGEMENT

CCO controls and optimizes the entire cash cycle, beginning with the automatic calculation of optimal replenishment intervals and volumes on the basis of highly specialized forecasting and planning algorithms. The cross-branch solution also generates the order to the cash center to provide cash and tracks the orders issued to cash-in-transit operators, up to and including transfer of the accounting data to the back office. The software is modular, and strictly aligned with cash management processes. No matter where you keep the cash holdings you want to optimize—cash recycling systems, ATMs, automated teller safes or petty cash—CCO has just the right software module for you.

CCO is a deeply integrated software solution across all functional areas of the cash supply chain, and therefore is able to perform optimization in a truly holistic way, covering ATM denominations, branch synchronization and CIT challenges through a single platform. And it is pushing the envelope even further by integrating delivery processes of foreign currencies, gold, and other valuable items, so branches can finally align deliveries from sourcing, all the way through the delivery process.

FLEXIBLE ANALYSIS OF CASH PROCESSES

Our solution enables you to make targeted reductions in inventory and replenishment costs by automatically adjusting the replenishment amounts and intervals to the requirements of each individual cash point. Beyond the level of the individual device, CCO can optimize cash processes throughout a whole branch or across an entire network of branches, offsite ATMs and cash centers by analyzing the usage data. Software-aided evaluation of historical data allows patterns to be detected even in the slightest fluctuations. And the results of this cash flow analysis can be used to forecast cash requirements, either for entire branches or for individual systems. The cash orders it generates ensure maximum availability of self-service systems. And because our solution helps streamline transport needs, it cuts both costs and your CO_2 emissions, thus helping you make an active contribution to environmental protection.
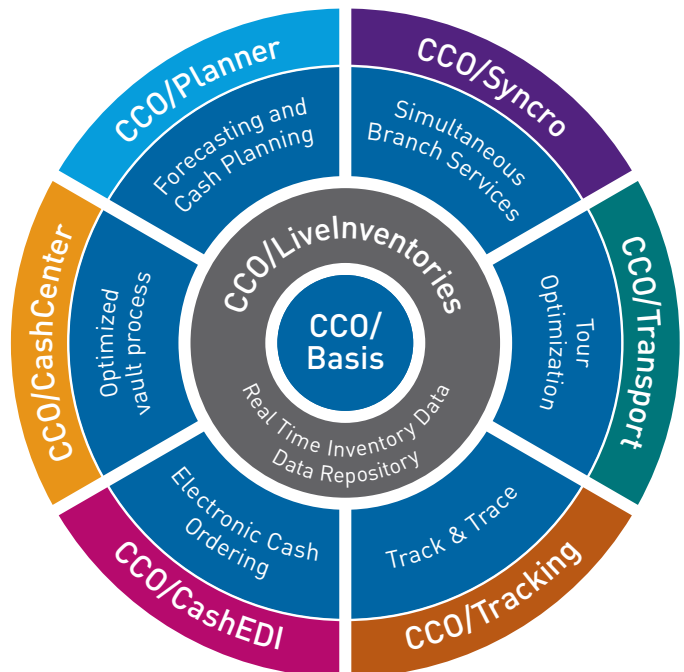
1 Source: RBR 2016, Global ATM and Forecasts to 2021

Cash Cycle Optimizer Suite

CCO automatically generates replenishment and removal orders and passes these on to CIT as scheduled, while the integrated "Track and Trace" function allows package movements to be tracked at any time.

PRECISE REPORTS AND ANALYSIS PROVIDE COMPLETE TRANSPARENCY

The standard reports for key figures include:
- Total inventory and inventory per cassette
- Operating costs broken down by interest costs and service costs
- Turnover per cassette broken down by deposit and withdrawal transactions
- Replenishment history
- Remaining ATM service life cycle
- Quality of optimization

CCO/Basis

The core of cash management is the optimization of cash stocks through fully automated planning of replenishment operations and supply quantities. CCO/Basis achieves optimal coordination of all your cash point service orders—whether they are triggered centrally or decentrally; and executed by external transport companies or by the branches themselves through restocking. CCO/Basis is available for various cash point types: ATMs or cash dispensing machines, cash deposit machines or cash recyclers, branch teller stocks. For operation in multi-client IT service organizations, each client can be configured and managed independently.

CCO/LiveInventories

CCO/LiveInventories provides live-data processing of your ATM devices through intraday turnover profiles and enhanced planning precision. Moreover CCO/ LiveInventories offers numerous certified and reliable data connection procedures.

CCO/Planner

For forecasting and optimally planning of all service call-outs and order quantities in the cash point network fully automatically, CCO/Planner is the perfect module. Based on advanced algorithms it is the foundation for central or decentralized order planning and for the execution of orders by cash-in-transit (CIT) companies or bank branches/retail stores.

CCO/Syncro

Synchronized supply is the most economic method for multiple cash points sites or branches: This means that several cash services are combined on each site—thus further reducing transport costs. Of course, this should not occur at the expense of increased cash backflow. We are using patented optimization technology in order to coordinate site delivery planning many weeks in advance.

CCO/Transport

To optimize costs of cash management from a transportation angle, CCO/Transport supports tour management with the objective of reducing required peak capacities and automating transport documentation. It reduces the fixed costs at the CIT level (labor and vehicles) while simultaneously improving the timeliness of deliveries. Overall, it enables to bring your cash management to unseen levels.

CCO/CashCenter

CashCenter uses dedicated algorithms and workflows to support commissioning and central cash ordering processes at the cash center. It achieves a reduction in cash holdings through forecasting and optimizing ordering/return quantities of central cash vaults and streamlining operations.

CCO/Tracking

Transparent monitoring of all container-specific information and complete tracking along transport routes is ensured by CCO/Tracking. CCO/Tracking works with GS1 standards for the clear identification of shipping units, locations and products and can also be used with customized numbering schemes if conformity with the GS1 standards is not necessary or desired.

CCO/CashEDI

Using CCO, it is possible to electronically exchange data for cash orders and deposit notifications and track the status of all orders as well as the corresponding deliveries with respect to central bank orders at any given time. CashEDI (Cash Electronic Data Interchange) is standard based on the GS1 definitions.

Expanding to Meet the Future

DN Vynamic Software offers growth potential for your entire network.

It's easy to see why CCO has the highest customer retention in the industry. With Cash Cycle Optimizer you can achieve optimal demand-based replenishment intervals and volumes in self-service systems across branch networks. CCO is fully integrated with the DN Vynamic Software portfolio which offers further optimization potential. So you can also use Vynamic Teller to integrate cash holdings into your branch cash cycle from petty cash funds, the main vault and strongbox or automated teller safes. This allows your retail bank to gain an overview of its entire cash flows and to implement optimized cash management in its branches. A combination with Vynamic Operations ensures that the data from cash error and status messages is fed into cash management and can thus serve as a basis for optimizing and forecasting.

WHAT IS DN VYNAMIC?

DN Vynamic is the first end-to-end connected commerce software portfolio in the marketplace. Traversing mobile, ATM, POS, branch, kiosk, and online, DN Vynamic is a system of consumer engagement powered by data and analytics and is cloud/SAAS ready when you are. Built to enable the connectivity businesses of the future require, DN Vynamic extends beyond omnichannel to enable banks and retailers to create seamless, secure, personal connections across the digital and physical channels of today and tomorrow.

Find out how to optimize your cash supply chain management.
Contact your Diebold Nixdorf representative today.

To learn more, **visit DieboldNixdorf.com.**