



## TellerInfinity™ DYNAMIX Software Suite

Combining the power of TellerInfinity  
and your existing Banking IT Systems

# COMBINING THE POWER OF TELLERINFINITY AND YOUR EXISTING BANKING IT SYSTEMS

**TellerInfinity**, Glory's flexible assisted service technology, is a key component in our suite of branch transformation solutions, alongside our industry-leading teller cash recycling solutions and the widest range of middle- and back-office cash counting, sorting, and packaging solutions. TellerInfinity offers the most cost effective, comprehensive customer operated assisted service banking solution available in the marketplace.

TellerInfinity is complemented by Glory's **DYNAMIX** software solution. DYNAMIX gives TellerInfinity the capability to conduct almost any transaction a financial institution can imagine, accessing the necessary banking systems, managing the associated workflows, while maintaining and managing all defined business rules.





# DYNAMIX SOFTWARE IS **DESIGNED WITH A SIMPLE INTENT:**

## **DYNAMIX SOFTWARE HAS A SIMPLE DESIGN INTENT:**

- Provide a highly flexible, institution-unique, easy to navigate user interface
- Power a variety of devices and hardware modules using open standards connectivity
- Connect to a multitude of back-end banking services software applications
- Assemble and allow a wide range of transaction workflows
- Allow banks to automate traditional teller transactions
- Enable banking transformation
- Do all of the above while respecting your investment in legacy banking systems, with minimum implementation, customization, and ongoing support costs



# THE **LIMITATIONS** OF TODAY'S SELF SERVICE APPLICATIONS

Most of today's self-service applications, even those that have been adapted or re-fitted to operate in-lobby self-service kiosks, are designed to connect to only one back-end solution. Traditionally this back-end solution is an Automated Teller Machine (ATM) network. Almost all ATM software systems are designed to meet customer and financial institution needs in a priority order of:

- Maintaining security
- Connecting with minimum bandwidth to reduce networking costs
- Connecting to the fewest possible back-end systems to reduce system management complexity
- Maintaining speed over richness of service

In other words, **self-service applications are designed for efficient, simple transactions** – and the most popular of these systems perform these tasks very well.

Unfortunately, the typical result is a narrow set of transactions that is poorly aligned with the declared purpose of in-branch, flexible assisted service kiosks and the general goals of branch transformation.

**What is required is a solution that can complete a rich set of transactions, replacing both the simple and complex transactions executed at the bank branch's teller line, with minimal intervention by bank staff.**

## **WHY DYNAMIX IS DIFFERENT**

DYNAMIX was designed, from the start, to provide a wide range of transactions, however complex, and regardless of demands for connectivity to back-end systems. It allows customers to identify themselves in a variety of ways, and to leverage all of the systems that human staff members use in their daily activities in support of those customers.

DYNAMIX is not a modified ATM application – it is a ground-up application design for branch transformation.

# IT STARTS WITH KNOWING YOUR CUSTOMER

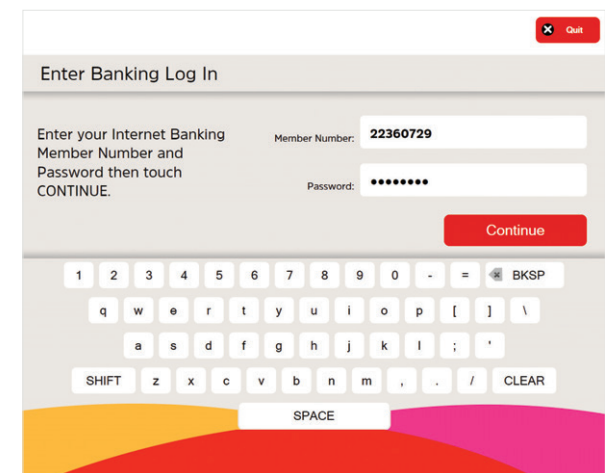
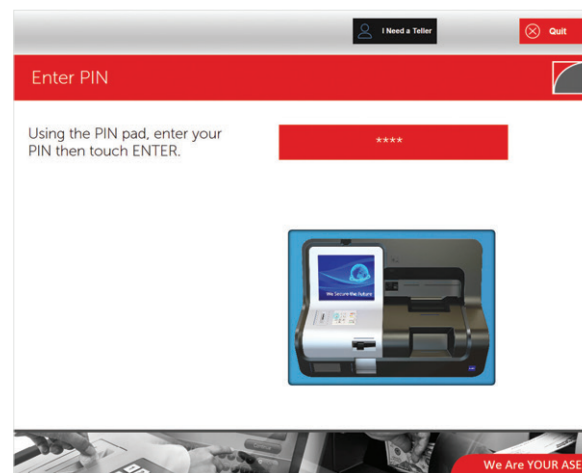
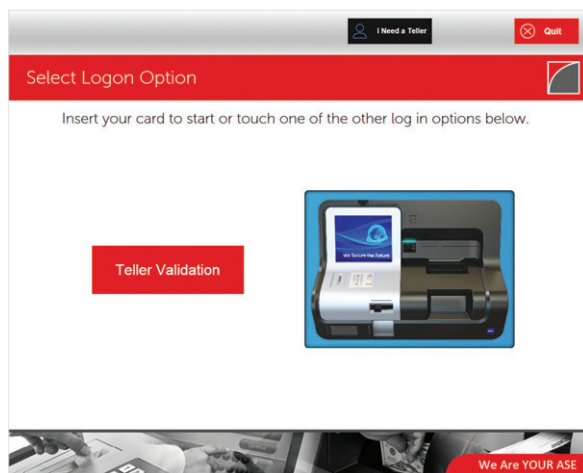
**The DYNAMIX transaction experience begins with flexible identification options for identifying your customer. Glory builds “greeting” processes based on your bank’s own business rules and procedures in-branch. A typical customer can be identified in many ways:**

- Traditional card/PIN entry
- Mobile phone log-in (bar code, NFC, Bluetooth, Geo-fencing)
- On-line banking credentials
- Personal verification through a staff member, or,
- Through self-identification as a “non-customer”

Depending on your rules and processes, DYNAMIX will accept data from scanned identification cards, biometric devices, or can even integrate facial recognition systems, as appropriate.

DYNAMIX can connect to any or all of your credentials-management systems and CRM systems to help your customer prove their identity with the absolute minimum of staff intervention.

Once DYNAMIX has confirmed a system user’s identification, DYNAMIX will provide a **context-based transaction interface** to meet that user’s needs. Depending on the user and the information accessible through bank systems, an appropriate set of transactions will be presented to the user. These transaction sets may vary from a list of minimal transactions for a non-customer to a rich set of favorite transactions for a customer with many different account services.



# MAKING COMPLEX TRANSACTIONS SIMPLE

**At the teller window, teller staff are able to follow documented processes to support a customer through even the most complex transaction. They are able to string these transactions together in a fashion that avoids repeatedly collecting user information, even as they cross-over from one banking system to another.**

## **THE RESULT IS A COMFORTABLE, CUSTOMER FRIENDLY EXPERIENCE**

DYNAMIX applies this same methodology to the assisted service kiosk. A customer chooses from an extended yet simple list of transactions, and our workflow system leads the customer to their desired objective by adding additional requests for decisions based on information retrieved from appropriate banking systems. Only appropriate decisions will be requested. When possible, pre-determined decisions will be honored. All of this will be considered in context of bank rules.



## Example complex transaction: mixed media deposit to multiple accounts

A customer comes to the branch to deposit checks to their primary account, and cash to each of two savings accounts.

CUSTOMER	TellerInfinity/DYNAMIX	Back end systems accessed
Logs-in through on-line credentials	<ul style="list-style-type: none"> <li>Validates customer against on-line banking user database</li> <li>Presents list of allowed transactions, including DEPOSITS</li> </ul>	<ul style="list-style-type: none"> <li>On-line Banking</li> <li>Core Banking</li> <li>CRM</li> </ul>
Customer chooses "Deposit" option	<ul style="list-style-type: none"> <li>Checks with core banking system for available accounts</li> <li>Presents options to deposit checks, banknotes, coins</li> </ul>	<ul style="list-style-type: none"> <li>Core Banking</li> </ul>
Customer deposits media with guided help	<ul style="list-style-type: none"> <li>Presents guided help</li> <li>Confirms check values with check system, presents exceptions to customer for decisions/data entry</li> <li>Obtains authenticated note/coin data from TellerInfinity hardware</li> <li>Presents totals, and all accounts, and the opportunity to split amounts across accounts</li> </ul>	<ul style="list-style-type: none"> <li>Check validation system</li> <li>Banking rules system (to check split deposit rules)</li> </ul>
Customer chooses accounts and amounts to deposit to each account	<ul style="list-style-type: none"> <li>Splits deposit across accounts as requested</li> <li>Verifies transactions received</li> <li>Requests if user wants another transaction</li> </ul>	<ul style="list-style-type: none"> <li>Core Banking</li> </ul>
Customer chooses "yes"	<ul style="list-style-type: none"> <li>Present transaction options screen again, remembering the customer's identification details</li> </ul>	<ul style="list-style-type: none"> <li>Additional systems as appropriate</li> </ul>
Customer completes last transaction	<ul style="list-style-type: none"> <li>Receipt sent to preferred location: printer, text, e-mail, or none</li> </ul>	<ul style="list-style-type: none"> <li>Messaging server</li> <li>E-mail server</li> </ul>

**FOR THIS TRANSACTION, FOUR DIFFERENT BACK END SYSTEMS ARE ACCESSED, TO ACCOMPLISH A TRANSACTION THAT WOULD BE EXTREMELY DIFFICULT TO COMPLETE AT A TRADITIONAL SELF-SERVICE TERMINAL.**



# ALMOST ANY TRANSACTION IS POSSIBLE

Because DYNAMIX accesses different banking systems based on context, and can access an unlimited number of systems an unlimited number of times during a transaction, there are effectively no limits to the transactions that can be created in DYNAMIX.

- All accounts access
- Cash dispense – by value or by exact denominations
- Banknote, coin, check deposit
- Bill and loan payments transaction review
- Statement printing
- Official check printing
- Appointment setting
- Receipt output to email, mobile, or traditional printed receipt

And many more...

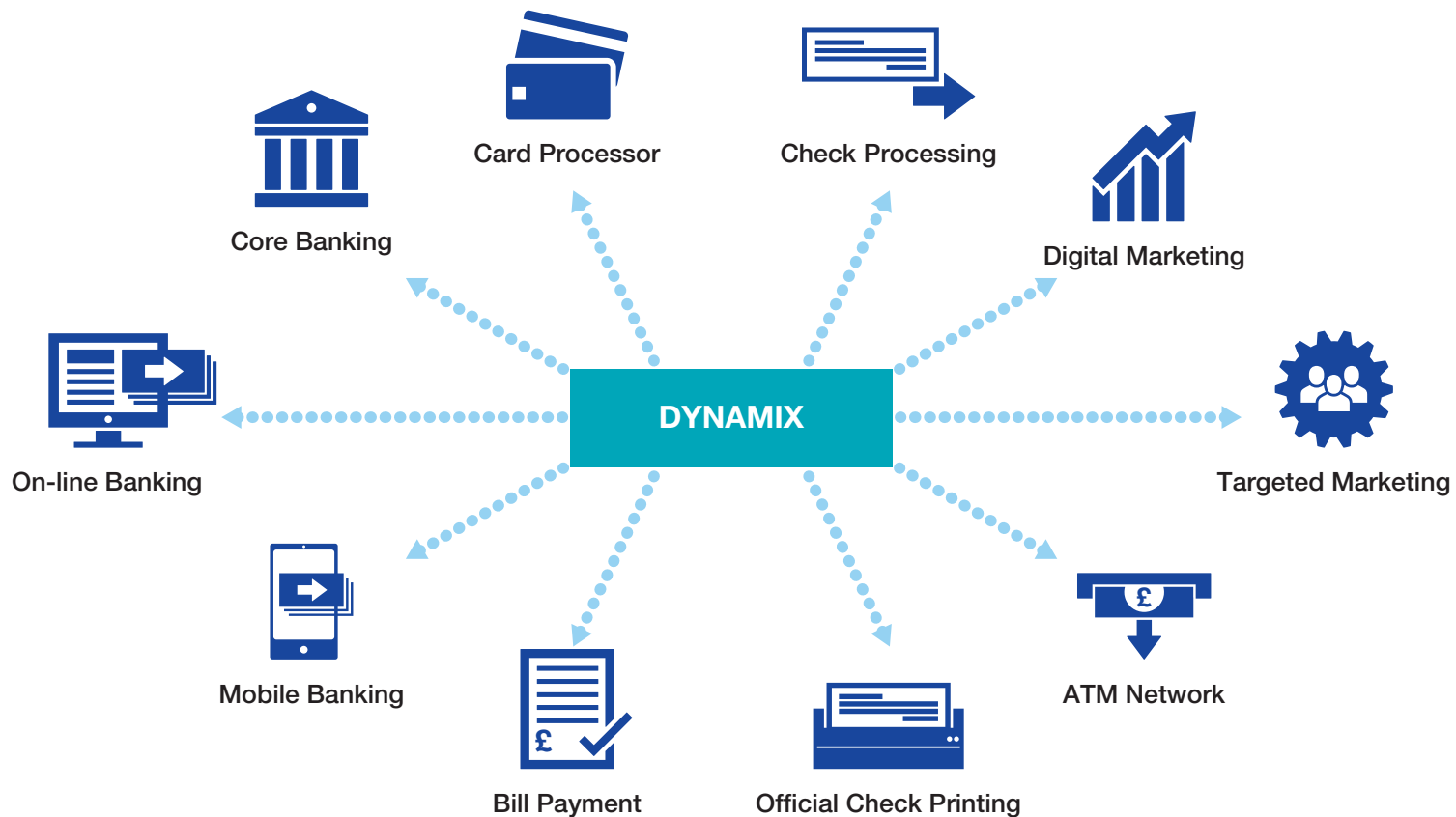




# CONNECTIONS ARE THE KEY

Most modern banking applications will have well-defined interface approaches (API's) for connecting systems. These API's will often use standard connection approaches, such as Web Services. Where these API's exist, DYNAMIX will leverage the API's for simple, reliable connections. Older legacy systems may not have easily accessible API's. Our highly experienced Professional

Services team will work with your Information Technology teams and vendors to build connections to these legacy systems. Below are examples of just a few connections we may develop in the course of applying DYNAMIX to your Branch Transformation project:



# ASSISTANCE ALWAYS CLOSE AT HAND

Successful branch transformation requires changes in:

- Branch design
- Staff behavior
- Customer behavior

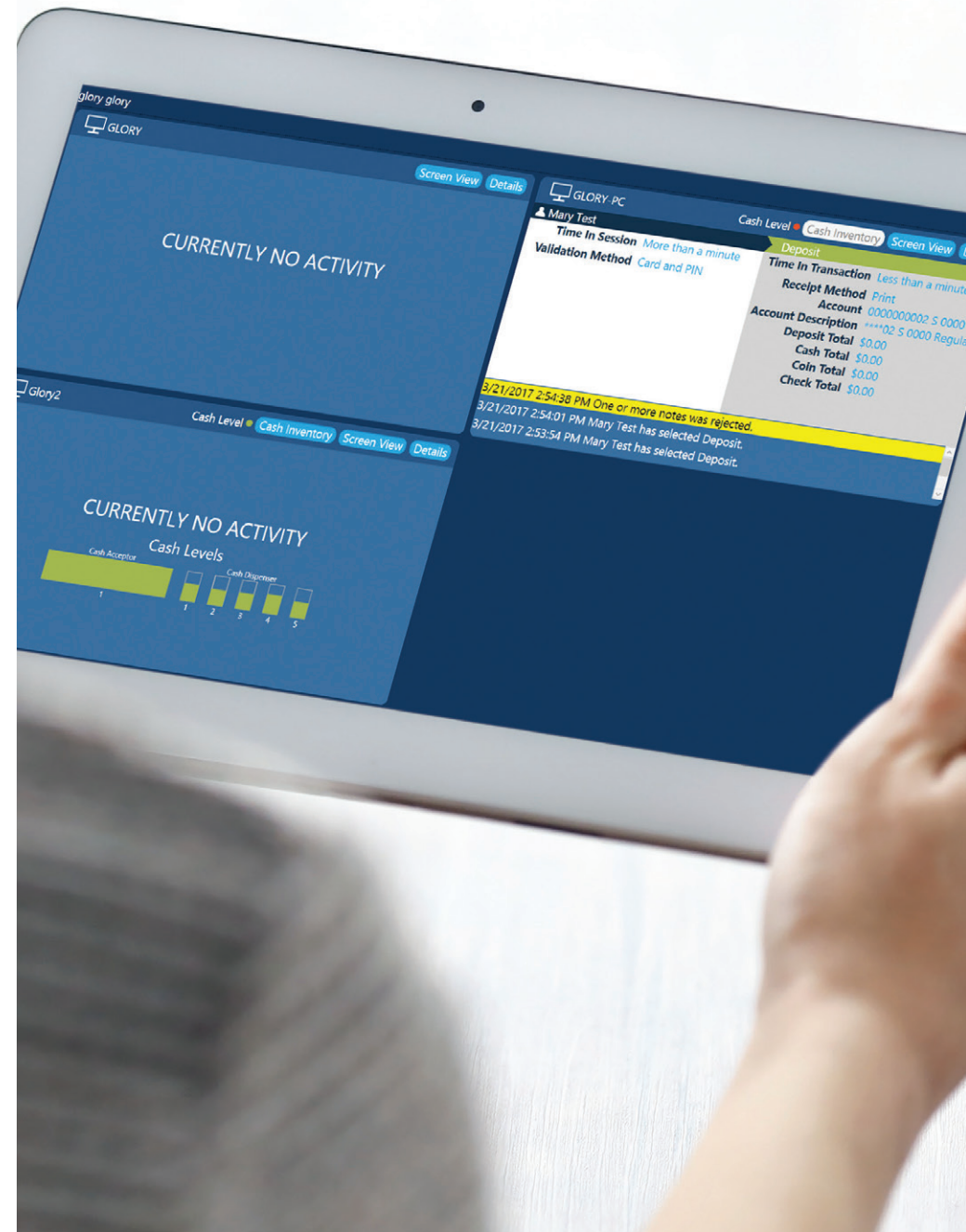
To successfully change behavior, and to ensure satisfaction with the transformation effort, two things are absolutely critical:

- Your new process or solution must be available to your customers
- You must recognize when a customer needs help making the transition to the new service

DYNAMIX delivers these two critical services through the DYNAMIX **Customer Service Now** staff notifications module (**CSN**).

CSN is a server-based, interactive alerts system that signals staff members via connected PC's, tablets, or other devices whenever any TellerInfinity kiosk needs support or whenever a customer at a kiosk needs support.

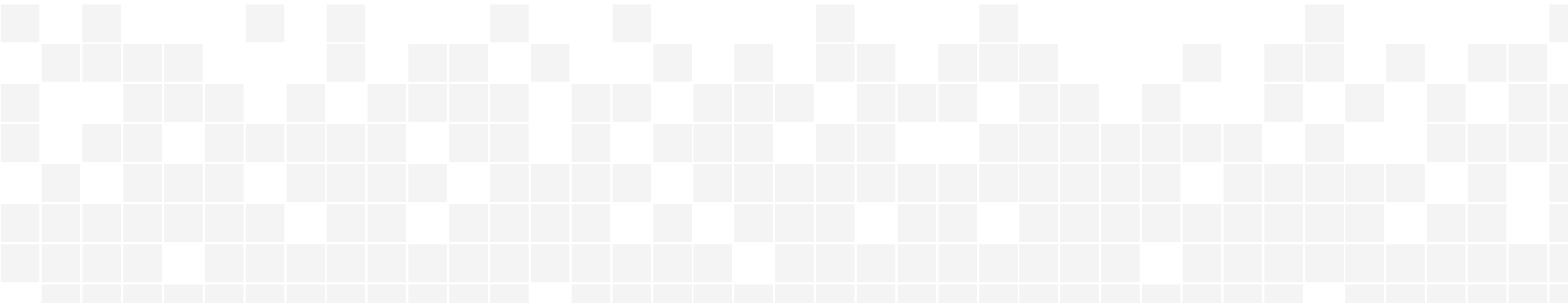
A “many-to-many” relationship exists between on-site kiosks and staff members. When any kiosk forwards an alert to the CSN server, all staff members receive an alert. Any staff member can accept the request for support, which in turn signals all other staff members that the first staff member will help. Requests are queued by priority, where customers needing help are highest priority, followed by machine-generated priorities that have their own hierarchy. Alerts, such as transaction approval requirements, warnings about system interruptions and even regular reminders for standard system inspections, can be managed through CSN.



**EXAMPLE ALERTS, BY PRIORITY:**

HIGH	MEDIUM	LOW
Customer requests support	Cash levels high or low	Paper low
Transaction override required	Paper out	Scheduled cleaning
Customer ID needs confirmation	Check module full	Replace Check Endorser Ink
Machine failed during transaction	Service recommended	Update User Password

**Customer Service Now** ensures system availability when a customer arrives and instant support upon recognition of need or specific customer request. CSN provides this in a fashion that is seamless for the customer and staff member.





# POWERFUL, UNRESTRICTED WORKFLOW DESIGN

The ultimate value of DYNAMIX is delivered through two key modules:

## DYNAMIX CONTENT

A transaction-rich workflow and user interface development environment

## DYNAMIX CONNECT

A multi-method interface toolkit for connecting to banking IS systems

CONTENT and CONNECT interact to connect your customer with different banking back-end systems as required to deliver their desired transactions, however complex, through a seamless user experience.

More importantly, CONTENT and CONNECT combine in a RAPID APPLICATION DEVELOPMENT approach that allows Glory to quickly develop almost any transaction possible with the available connected hardware, regardless of complexity.

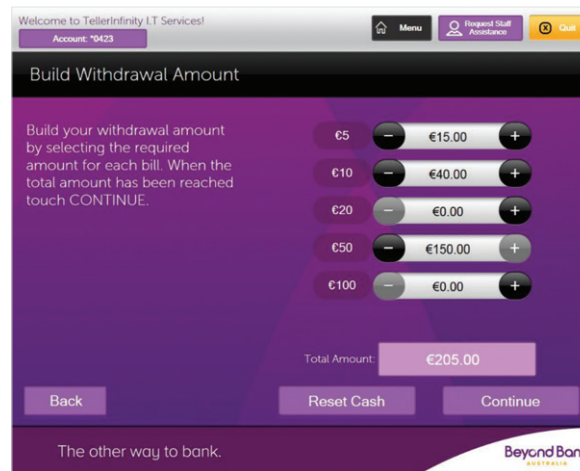
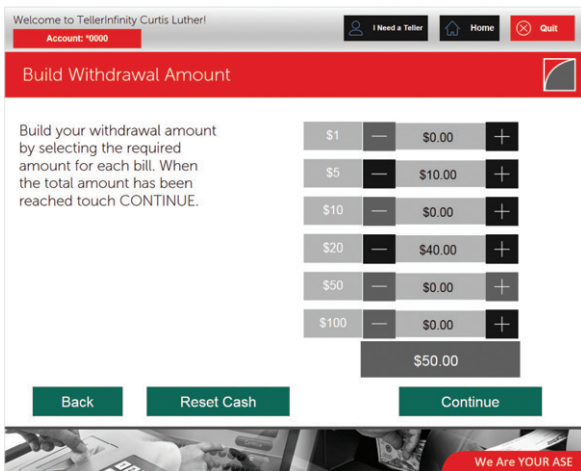
# CONTENT

The baseline DYNAMIX software offers a wide range of support for complex transactions “out of the box”. This core of transactions includes multi-type authentication, all accounts access, cash dispense, banknote, coin, and check deposit, including split deposit; multi-account transfer; bill and loan payments by cash, check, or transfer; transaction review and statement printing; official check printing; appointment setting, and receipt output to email, mobile, or traditional printed receipt.

Data input types include, but are not limited to, traditional self-service input devices like card, PINpad and touch-screen, as well as devices including barcode reader, biometric devices, cameras and scanners, and most any other device that can connect to a PC.

Additional transactions are easily envisioned and commissioned through CONTENT’s workflow editing tool, under the careful guidance of our professional services team, who are experienced in requirements for handling customer information inside a transaction, and who recognize requirements for proper workflow design.

CONTENT “look and feel” is personalized for each customer using modern web design techniques for creating a fresh, innovative touch environment that is readily recognized as each customer’s unique “brand”. Colors, fonts, button shapes, screen arrangement, branding banners, and both in-transaction and idle screen marketing happen within CONTENT for each customer; always guided by our professional design team in close collaboration with each client’s marketing and business teams.



# CONNECT

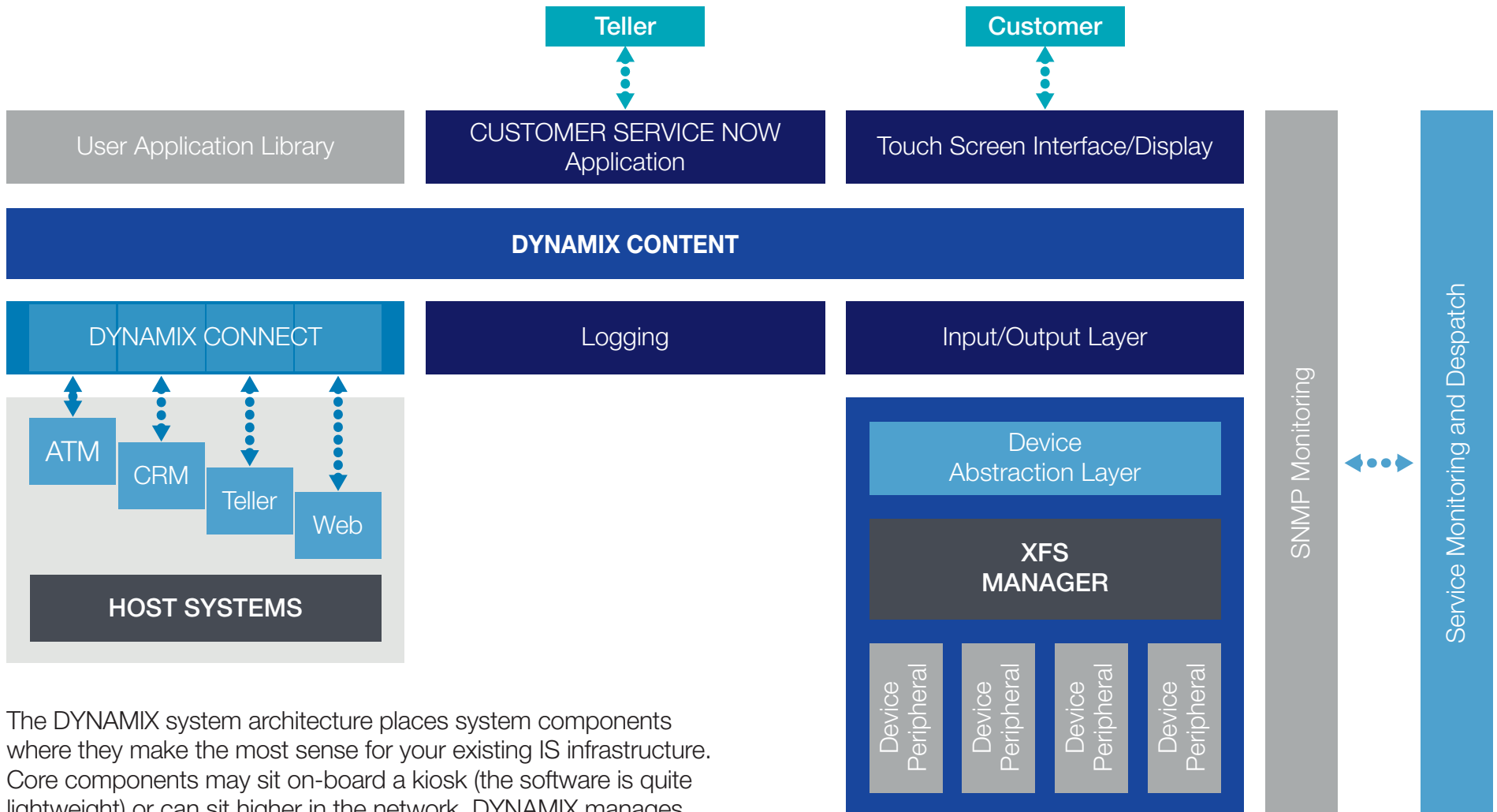
The majority of self-service banking applications access your banking systems via a single point of entry. In too many cases this single point of entry has limited functionality, or must have strict rules in order to manage network security. This limits the ability of these applications to deliver the wide range of transactions required to replace a traditional teller's role, and severely limits in-transaction flexibility.

CONNECT changes the rules, allowing DYNAMIX to access any combination of your banking systems during transactions, in a context-based fashion, as demanded by CONTENT. CONNECT is used to create an information exchange interface to each individual banking system that will be accessed to collect the data or make decisions for each customer transaction. Different systems are updated during each transaction to reflect progress throughout the transaction. The result is a highly traceable workflow that can satisfy a majority of your customer's transaction requests.





# SYSTEM ARCHITECTURE OVERVIEW



The DYNAMIX system architecture places system components where they make the most sense for your existing IS infrastructure. Core components may sit on-board a kiosk (the software is quite lightweight) or can sit higher in the network. DYNAMIX manages the kiosk module-by-module, the touch screen user interface, all workflows, and all connections to back end banking systems. DYNAMIX exposes system performance information to the it's own customer support module (CSN) and general banking help desk/ monitoring systems as appropriate.

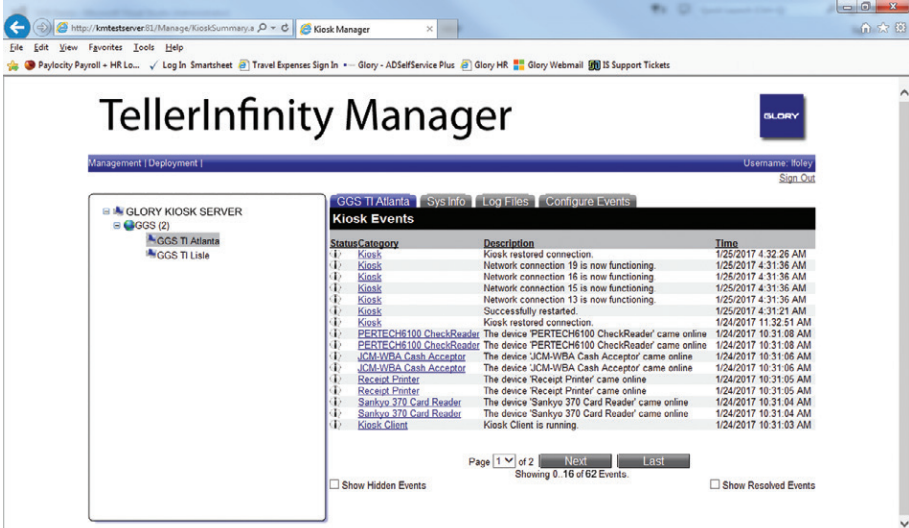
*Not shown here are the DYNAMIX Kiosk Manager module and the various layers of system security built in to the total environment.*

# EASY UPGRADEABILITY, SIMPLE REMOTE MANAGEMENT

DYNAMIX is designed to be constantly improved. CONTENT is always ready to add another transaction; CONNECT is always ready to connect to a new banking system; Customer Service Now (CSN) is always ready to accept new alerts or new customer data. New peripheral devices are readily connected, as well.

System conditions can be monitored through DYNAMIX Kiosk Manager, or by any third party monitoring solution that supports XFS SNMP messaging. In addition, system trouble conditions are also pushed through the CSN alert system to all staff connected to that environment. Regardless of your specific monitoring and management capability, DYNAMIX will get a trouble message to you in a timely fashion.

Content, Marketing, and other updates are easily pushed from your central IS desk to your kiosks through DYNAMIX Kiosk Manager, a central application for managing your DYNAMIX-driven assets.



The screenshot displays the TellerInfinity Manager web interface. The browser address bar shows the URL: <http://kmsserver01/Manage/KioskSummary.aspx>. The page title is "TellerInfinity Manager". The interface includes a navigation menu with options like "Management | Deployment", "Sys Info", "Log Files", and "Configure Events". A sidebar on the left shows a tree view for "GLORY KIOSK SERVER" with sub-items "GGS (2)", "GGS TI Atlanta", and "GGS TI Little". The main content area is titled "Kiosk Events" and contains a table with the following columns: Status, Category, Description, and Time. The table lists various events such as "Kiosk restored connection", "Network connection 19 is now functioning", and "PERTECH6100 CheckReader" events. At the bottom of the table, there is a pagination control showing "Page 1 of 2" and "Showing 0.16 of 62 Events". There are also checkboxes for "Show Hidden Events" and "Show Resolved Events".

Status	Category	Description	Time
↓	Kiosk	Kiosk restored connection.	1/25/2017 4:32:26 AM
↓	Kiosk	Network connection 19 is now functioning.	1/25/2017 4:31:36 AM
↓	Kiosk	Network connection 16 is now functioning.	1/25/2017 4:31:36 AM
↓	Kiosk	Network connection 15 is now functioning.	1/25/2017 4:31:36 AM
↓	Kiosk	Network connection 13 is now functioning.	1/25/2017 4:31:36 AM
↓	Kiosk	Successfully restarted.	1/25/2017 4:31:21 AM
↓	Kiosk	Kiosk restored connection.	1/24/2017 11:32:51 AM
↓	PERTECH6100 CheckReader	The device 'PERTECH6100 CheckReader' came online.	1/24/2017 10:31:08 AM
↓	PERTECH6100 CheckReader	The device 'PERTECH6100 CheckReader' came online.	1/24/2017 10:31:08 AM
↓	UCM-WBA Cash Acceptor	The device 'UCM-WBA Cash Acceptor' came online.	1/24/2017 10:31:06 AM
↓	UCM-WBA Cash Acceptor	The device 'UCM-WBA Cash Acceptor' came online.	1/24/2017 10:31:06 AM
↓	Receipt Printer	The device 'Receipt Printer' came online.	1/24/2017 10:31:05 AM
↓	Receipt Printer	The device 'Receipt Printer' came online.	1/24/2017 10:31:05 AM
↓	Sankyo 370 Card Reader	The device 'Sankyo 370 Card Reader' came online.	1/24/2017 10:31:04 AM
↓	Sankyo 370 Card Reader	The device 'Sankyo 370 Card Reader' came online.	1/24/2017 10:31:04 AM
↓	Kiosk Client	Kiosk Client is running.	1/24/2017 10:31:03 AM

# SECURE BY DESIGN

**DYNAMIX provides a reliably secure environment, when combined with good IS practice and appropriate vigilance by your IS team. The secure environment extends across the logical, physical and customer information realms.**

**Customer Information security** is maintained through a combination of data encryption, finish and forget, and other privacy defense strategies. DYNAMIX achieves EMV L2 standards, is PCI-DSS 3.X certified; in addition to meeting expectations under KYC, AML, and other regulatory standards of operation. No customer-identifiable information is ever maintained in DYNAMIX when a transaction session ends, unless required by authorities.

**Logical security** includes provision to prevent any unauthorized external access to the system, control access by ID and password controlled to all system administration functions, including log-in through Active Directory management, and completely lockdown the user interface. Proprietary secure shell technology is used to prevent access to the underlying operating system. DYNAMIX works cooperatively with anti-virus / anti-malware technology and network security protocols to prevent man-in-the-middle and similar attacks. The solution will work with most enterprise anti-virus / anti-malware strategies or can be configured with a self-contained AV solution.

**Physical security** engagement includes supervision of all physical entry points to the system, integration with card readers and PINpads to identify skimming attacks, integration with on-board camera and alarm systems and electronic control of certain access points to the machine in addition to physical controls. Alerts and alarms can be directed to anywhere in the customer's network, or even to external locations, according to configurations agreed with each client.







# UNIFY THE BRANCH BANKING EXPERIENCE WITH GLORY

Glory is a global leader in cash technology solutions, helping businesses in more than 100 countries optimize the handling, movement and management of cash. Yet despite our broad reach, we're committed to helping you address your unique challenges and goals – enhancing staff efficiency, reducing operating costs and enabling a more rewarding customer experience.

We offer peace of mind. We enable transformation. We generate options. We empower people. We do all this by releasing companies from the burden of cash management, putting cash to work, and helping customers enhance the value that their staff and facilities add to their business.

**We are Glory. We secure the future.**

To learn more, visit [www.glory-global.com](http://www.glory-global.com).





## Related solutions...

### TELLERINFINITY™

An integrated teller-assisted service solution; a device that can perform many transactions that only a teller could deliver in the past.



### PROFESSIONAL SERVICES

Transaction analysis, connectivity, advisory services, user training through to full project management.



### VERTERA™ 6G

Vertera 6G teller cash recyclers deliver a simple, flexible, comprehensive and integrated teller automation solution.



Glory, 3333 Warrenville Road, Suite 310, Lisle, IL 60532 USA

+1 (800) 527-2638 [info@us.glory-global.com](mailto:info@us.glory-global.com) [glory-global.com](http://glory-global.com)

BRO-DYNAMIX-0417\_1.0

Glory Global Solutions is part of GLORY LTD. This document is for general guidance only. As the Company's products and services are continually being developed it is important for customers to check that the information contained herein includes the latest particulars. Although every precaution has been taken in preparation of this document, the Company and the publisher accept no responsibility for errors or omissions. The Company and the publisher accept no liability for loss or damages resulting from the use of the information contained herein. This document is not part of a contract or license save insofar as may be expressly agreed. All capabilities and capacity and throughput figures are subject to note/coin size, note/coin quality and process used. GLORY is a registered trademark of GLORY LTD. in Japan, the United States of America, and EU. All trademarks are owned by the GLORY Limited Group of companies. © Glory Global Solutions (International) Limited 2017.