GLORY

TellerConcierge™ DYNAMIX Software Suite

Combining the power of TellerConcierge and your existing Banking IT Systems

COMBINING THE POWER OF TELLERCONCIERGE AND YOUR EXISTING BANKING IT SYSTEMS

TellerConcierge, 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. TellerConcierge offers the most cost effective, comprehensive customer operated assisted service banking solution available in the marketplace.

TellerConcierge is complemented by Glory's DYNAMIX software solution. DYNAMIX gives TellerConcierge 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, customisation, 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 favourite transactions for a customer with many different account services.
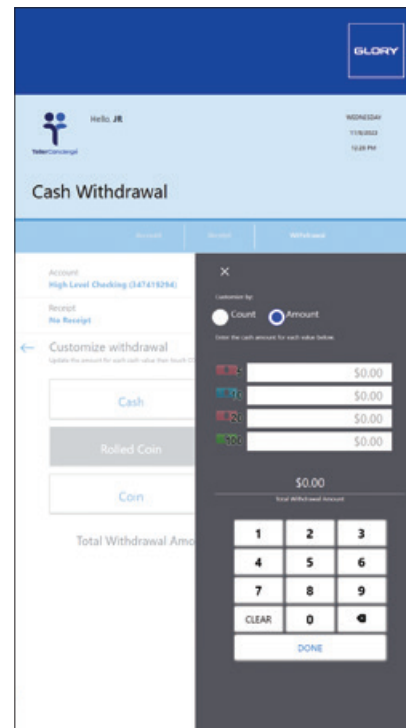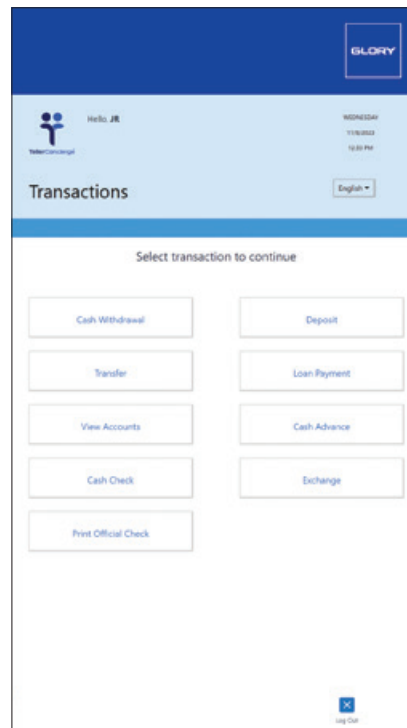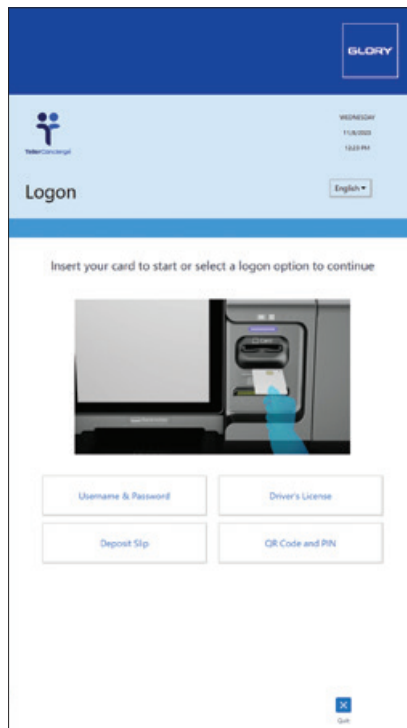
MAKING COMPLEX TRANSACTIONS SIMPLE

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 honoured. 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 cheques to their primary account, and cash to each of two savings accounts.

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

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.
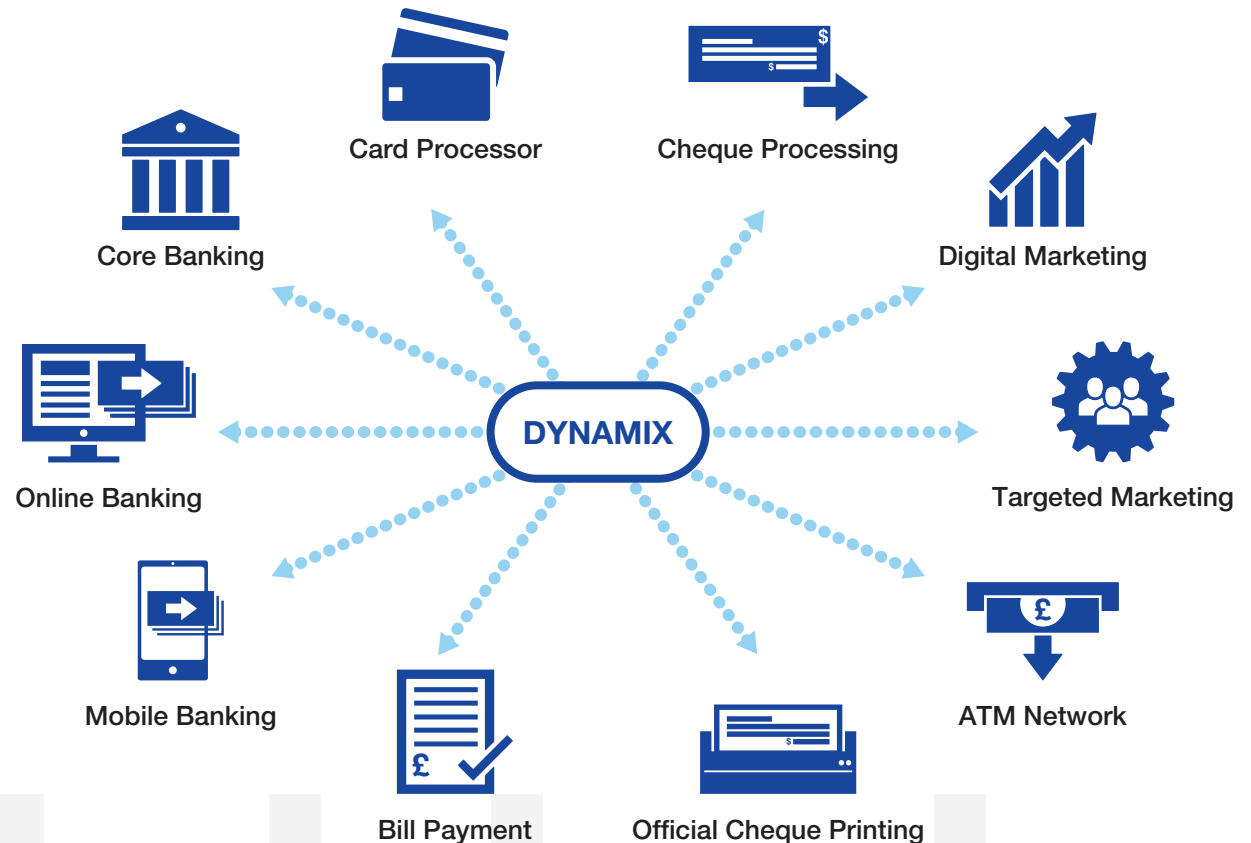
- All accounts access

- Cash dispense – by value or by exact denominations

- Banknote, coin, cheque deposit

- Bill and loan payments transaction review

- Statement printing

- Official cheque 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:

Card Processor

Cheque Processing

Digital Marketing

Core Banking

Online Banking

DYNAMIX

Targeted Marketing

Mobile Banking

Bill Payment

Official Cheque Printing

ATM Network

ASSISTANCE ALWAYS CLOSE AT HAND

Successful branch transformation requires changes in:

• **Branch design**

• **Staff behaviour**

• **Customer behaviour**

To successfully change behaviour, 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 recognise 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.
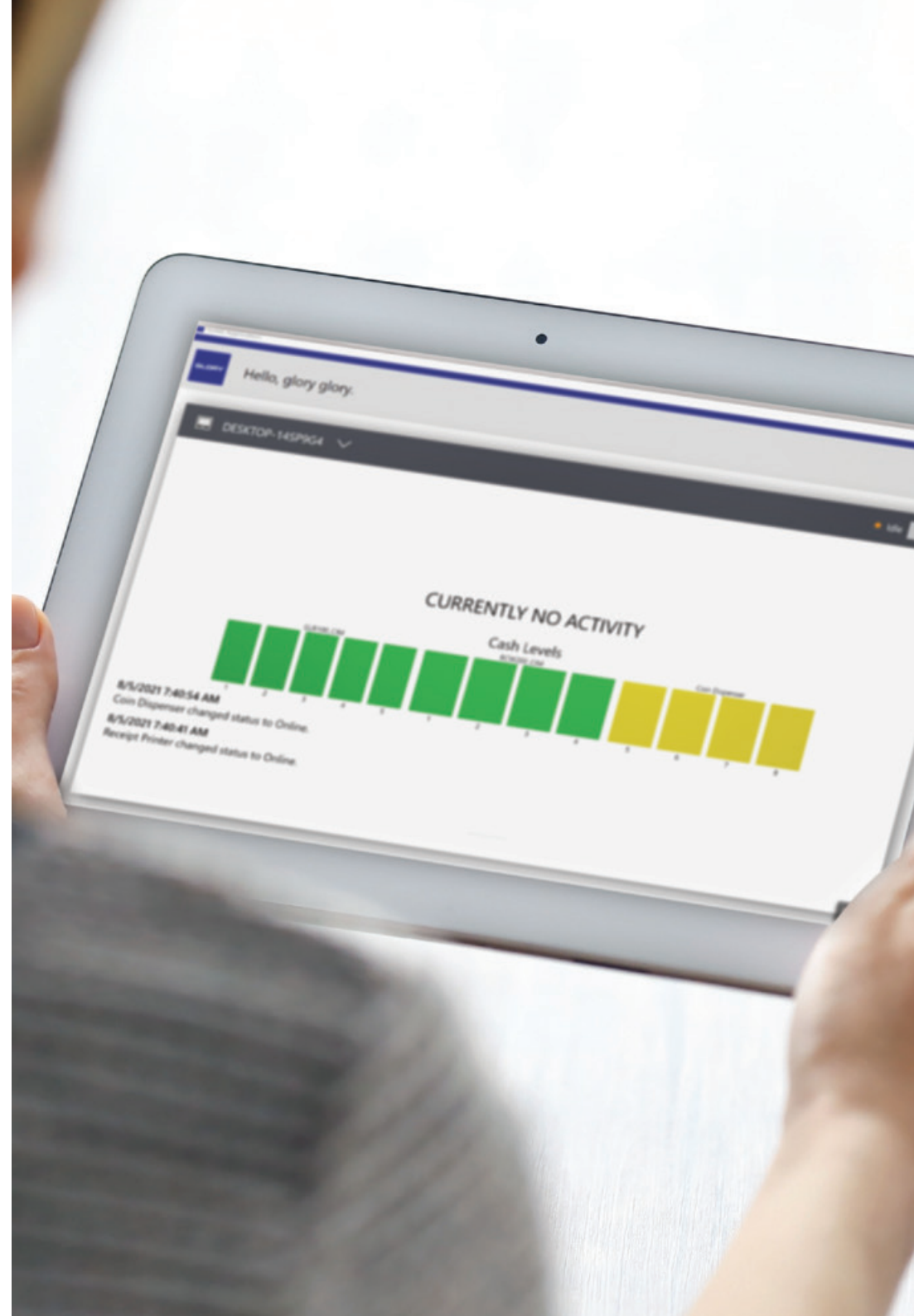
EXAMPLE ALERTS, BY PRIORITY:

HIGH
Customer requests support
Transaction override required
Customer ID needs confirmation
Machine failed during transaction

MEDIUM
Cash levels high or low
Paper out
Cheque module full
Service recommended

LOW
Paper low
Scheduled cleaning
Replace Check Endorser Ink
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.
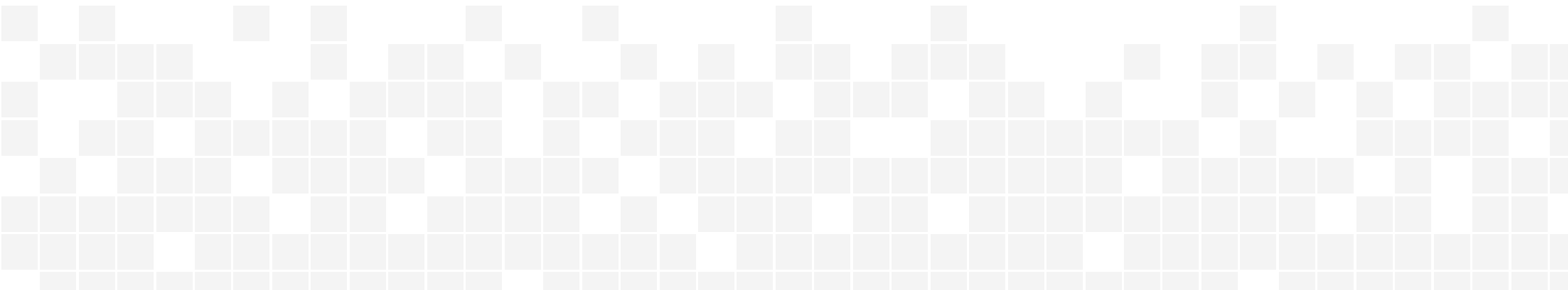
POWERFUL, UNRESTRICTED WORKFLOW DESIGN

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 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 cheque deposit, including split deposit; multi-account transfer; bill and loan payments by cash, cheque, or transfer; transaction review and statement printing; official cheque 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, 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
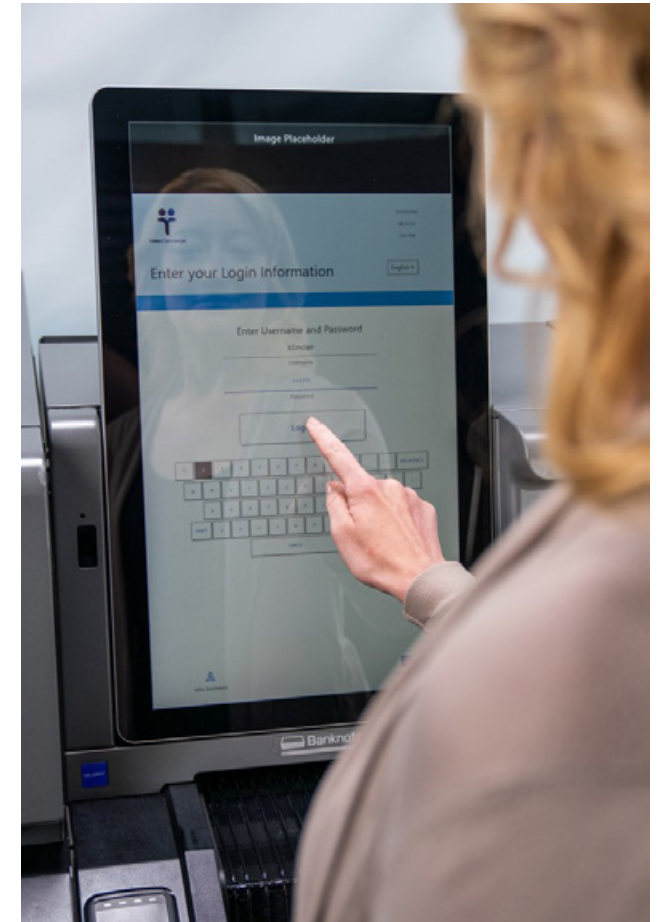
CONTENT "look and feel" is personalised for each customer using modern web design techniques for creating a fresh, innovative touch environment that is readily recognised as each customer's unique "brand". Colours, fonts, button shapes, screen arrangement, branding banners, and both in-transaction and 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.
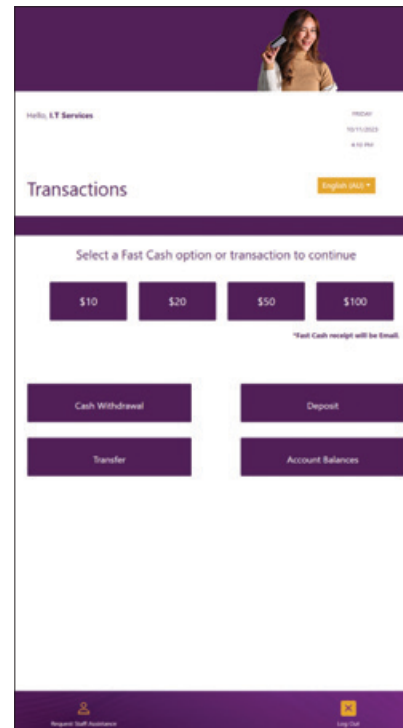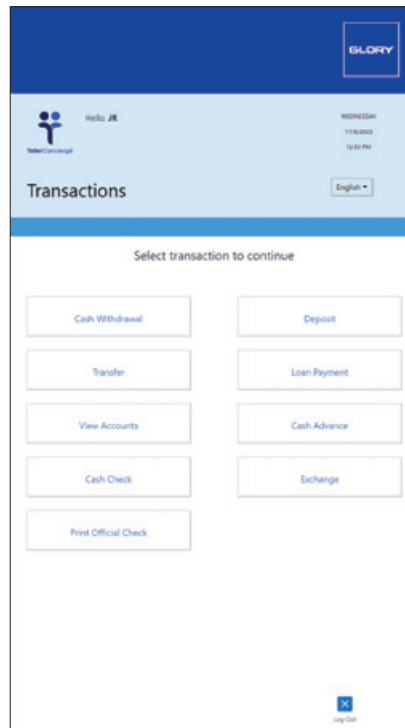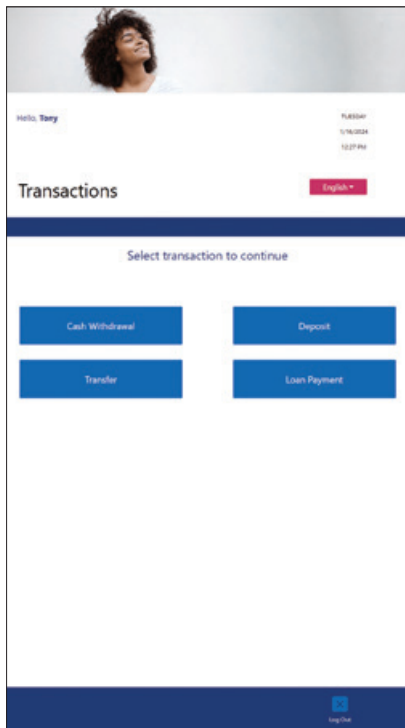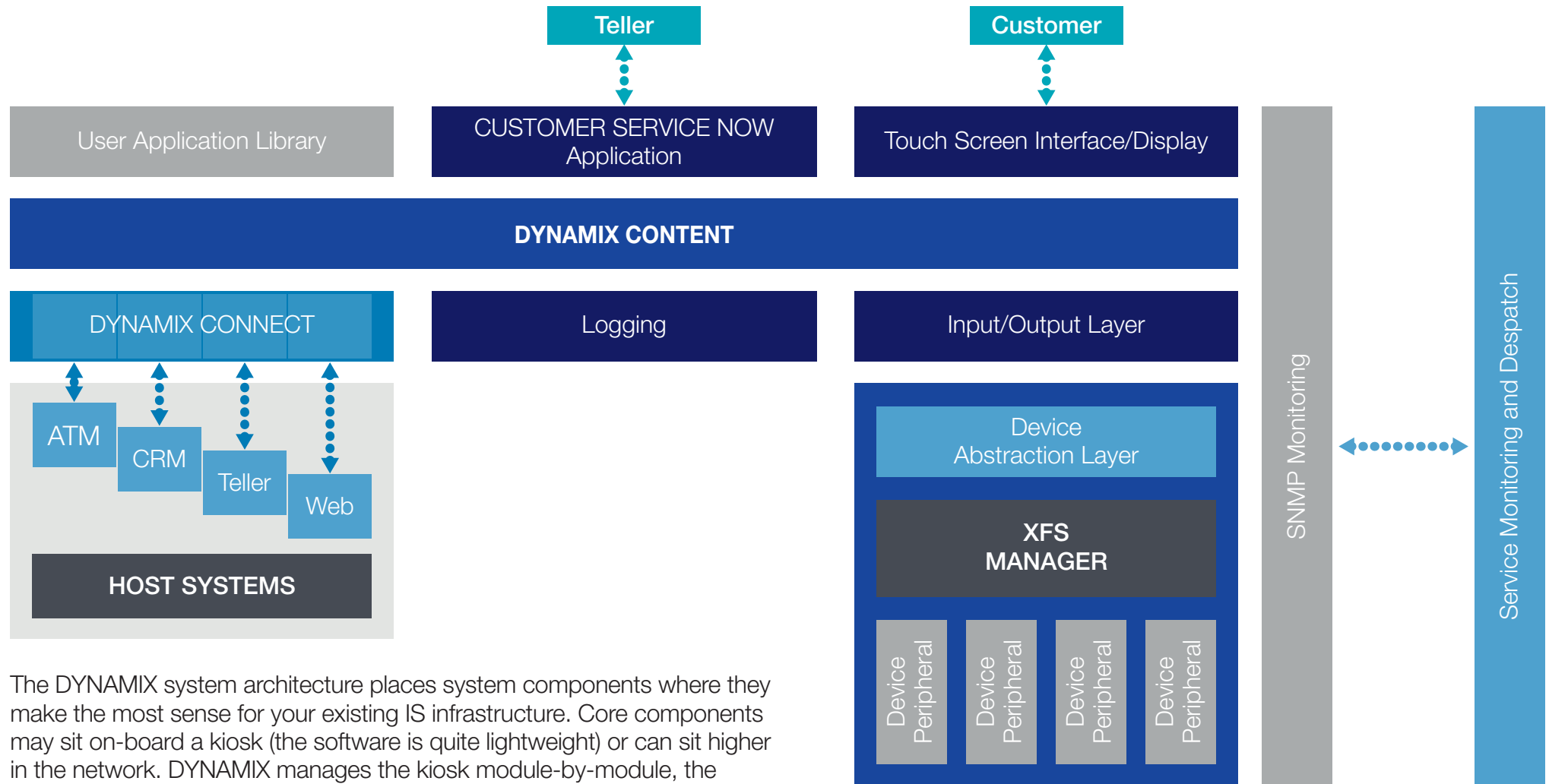
CONNECT

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

Teller

Customer

User Application Library	CUSTOMER SERVICE NOW Application	Touch Screen Interface/Display

DYNAMIX CONTENT

DYNAMIX CONNECT	Logging	Input/Output Layer

ATM

CRM

Teller

Web

HOST SYSTEMS

Device Abstraction Layer

XFS MANAGER

Device Peripheral

Device Peripheral

Device Peripheral

Device Peripheral

SNMP Monitoring

Service Monitoring and Despatch

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.
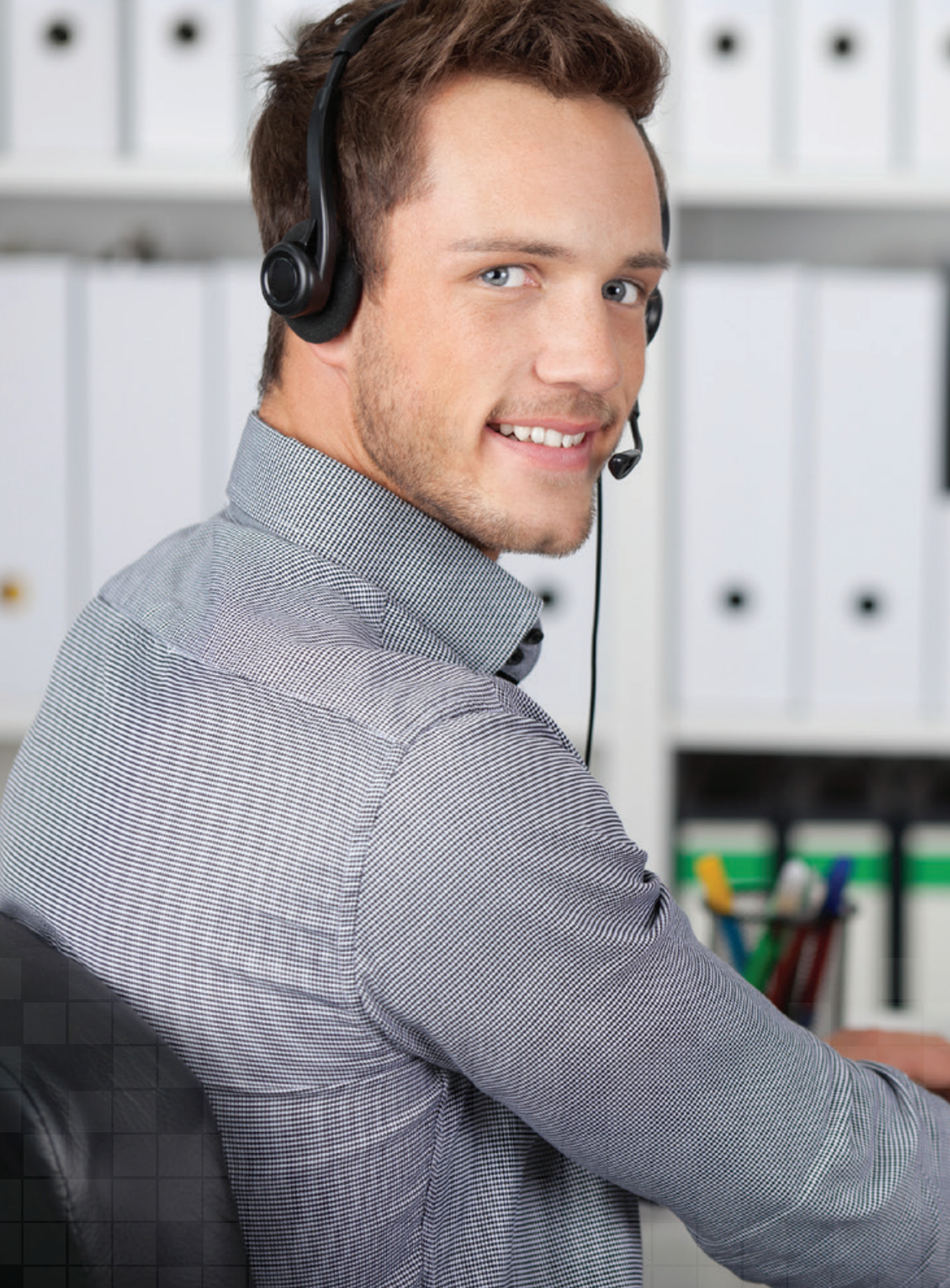
DELIVERING VALUE ACROSS YOUR ENTERPRISE

Glory's UBIQULAR Bridge is a remote monitoring and management solution, designed to provide a simple yet comprehensive way of managing connected and supported Glory devices across your enterprise.

UBIQULAR Bridge offers an immediate view of the operational status of each connected machine and the cash inventory held within the device by value and denomination.

Should a device require technical support, UBIQULAR Bridge provides an alert to Glory's helpdesk, as an issue occurs, meaning no time is lost in communication of the error between staff and the Glory helpdesk; in addition, the help-desk will have access to accurate and detailed information on which to base the resolution of the problem.

- Increasing the availability of the cash automation devices, will improve staff satisfaction and make their role easier.

- Remote monitoring of cash automation devices allows the operator to focus on their customers' needs.

- Remote updates of cash automation devices improves operational efficiency.

- Devices kept in an optimal operational state help to improve customer experience.

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 defence 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 unauthorised 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.

Network Security

Customer Confidentiality

SECURITY

Regulatory Requirements

System Security
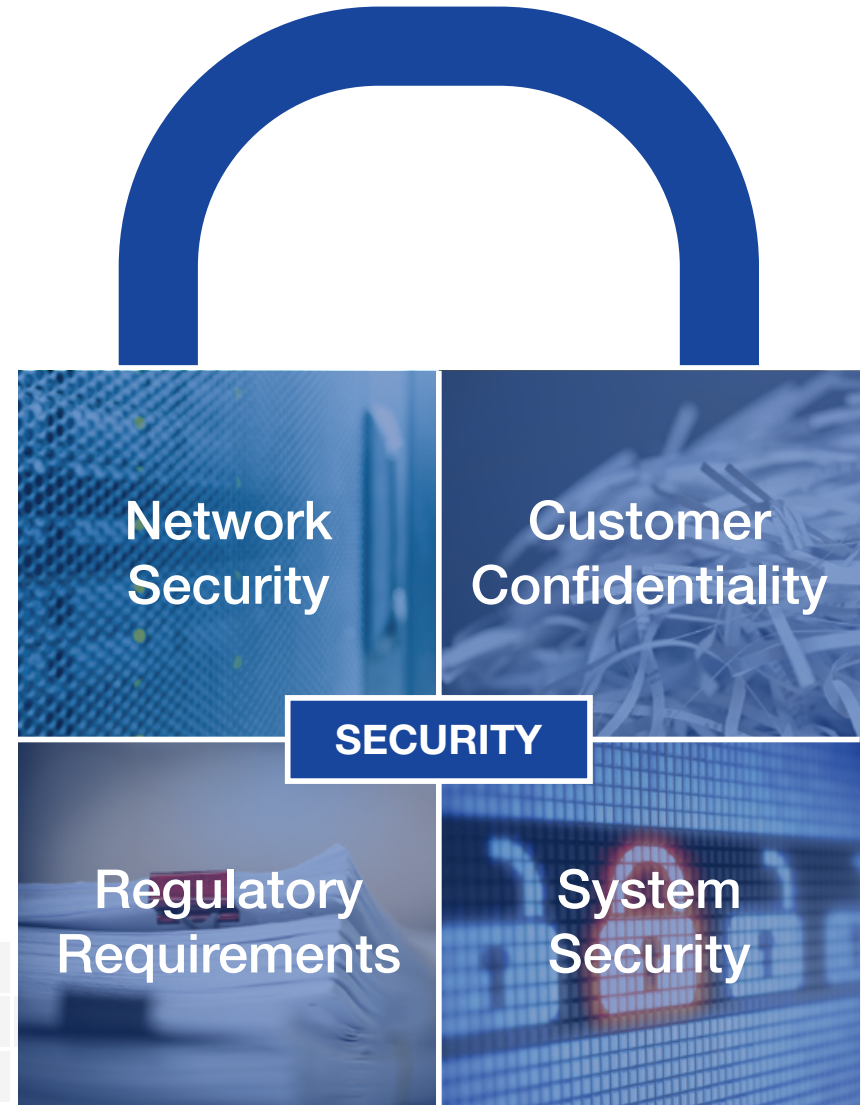
UNIFY THE BRANCH
BANKING EXPERIENCE
WITH GLORY

As a global leader in cash technology solutions, we provide the financial, retail, restaurant, cash centre and gaming industries with confidence that their cash is protected and always working to help build a stronger business.

Our cash automation technologies and process engineering services help businesses in more than 100 countries optimise the handling, movement and management of cash. While we span the globe, we personally engage with each customer to address their unique challenges and goals – enhancing staff efficiency, reducing operating costs and enabling a more rewarding customer experience.

Employing around 11,000 professionals worldwide with dedicated R&D and manufacturing facilities across the world, GLORY is built on a rich customer-focused, technology-driven heritage spanning more than one hundred years.

To learn more, visit www.glory-global.com.

Related solutions...

TellerConceirge™

An assisted-service solution that can be tailored to help you achieve your branch transformation goals.

Professional Services

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

GLR-200

GLR-200 supports customer dispense and deposit transactions of any value or denomination, as well as foreign exchange.