

Case Study: Banking

Leading bank modernizes 5,000+ branches

A large banking client creates a new centralized core banking platform that lays a digital foundation to deliver seamless teller assistance and rich customer experiences.

The challenge

A multinational financial services company was functioning with a 30-year-old legacy teller platform built using C++ and Exceed X-Windows client technologies, with local servers running at each of its 5,000+ US retail bank branches. The bank had very limited ability to roll out new features due to the monolithic legacy platform, which required substantial effort and time (weeks to months) to manually deploy new features to all of its branches.

The bank also wanted to migrate from its existing in-branch server model to a high-performance, browser-centric application with a centralized infrastructure—hosted at the data center—that would expedite time to market, lower costs and provide a platform for improved customer experiences.

At a glance

A multinational financial services company modernized its legacy C++ teller platform for 5,000+ US retail banking branches with a modularized, cloud-enabled core banking platform that increases business agility, improves reliability of branch operations and optimizes customer experiences.

Immediate benefits include:

- Lowered IT deployment time from six weeks to less than six hours
- Reduced code complexity from 10 million to 1.5 million lines of code
- Increased response times by ~10% and increased performance for teller transactions
- Gained ability to deliver improved customer banking experiences

The approach

The transformation strategy included the design and development of a new digital core banking platform to improve current customer experiences and serve as a foundation for future modernization. The bank's specific objectives aimed to:

- Empower customers to use self-serve capabilities for their banking transactions, like deposits and withdrawals at branches, while allowing them to seamlessly engage tellers for live assistance
- Deploy new features rapidly, in days versus weeks, using the new modularized, decoupled platform that is well organized and offers simplified code
- Integrate seamlessly with peripheral devices such as PIN pads, scanners, high-precision printers, cash counting machines and CCTV
- Set the foundation to further modernize branch operations by using insights and data analytics to provide personalized and improved customer experiences

Cognizant used modular development technologies and an up-to-date digital tech stack to design, develop and help roll out a new high-performing digital branch teller platform with a browser-based common user interface (UI).

Providing end-to-end services

We engaged our global delivery team in a fixed bid contract and delivered the project in record time—18 months.

We provided end-to-end services on this initiative, and assisted our client with the following offerings:

- Business consulting, including reverse-engineering of requirements from the legacy platform
- Architecture and application design
- Development
- Unit test automation
- Support for QA testing
- Performance engineering
- Support for user acceptance testing

- Support for security testing and audits
- Support for deployment to 5,000+ branches and 81,000 workstations

Reverse and future-focused engineering

Our team designed and co-developed the new platform by reverse-engineering more than 50 types of customer transactions and over 2,000 business rules from the legacy C++ system. The knowledge and expertise gained in this effort helped inform the initiative's business requirements, which were verified and approved by our client for use by its staff, Cognizant teams and other collaborating vendors.

The bank then entrusted the Cognizant team with developing complex and critical backbone modules, including deposits, foreign currency and regulatory reporting.

We applied performance engineering principles throughout the project to ensure the new platform performed at the same speed as the legacy C++ platform.

Integration across peripherals

We integrated every transaction from these modules, and modules developed by our client and other vendors, with a wide variety of peripheral devices, including PIN pads, scanners, high-precision printers, cash counting machines and CCTV. And we kept the "middle logic" standardized as we enhanced the user experience of each device, with just minor differences in the user interfaces.

In the process, we also delivered a variety of reusable components, accelerators and innovative solutions such as lazy loading for UI components, a transaction locking mechanism, a custom rules engine for reusable business rules and others.

Business outcomes

Cognizant delivered high quality code for this massive, highly business critical and complex platform, integrated with peripheral devices that supported a seamless rollout and paved the way for a digital transformation.

Benefits include:

- Modernized 5,000+ branches and 81,000 teller workstations
- Delivered a modular, cloud-ready and mobile-ready platform with a common UI for teller, banker, ATM and call center channels
- Lowered deployment time from six weeks to less than six hours
- Reduced code complexity from the legacy platform's 10 million lines of code to just 1.5 million
- Increased response times by ~10% and increased performance for teller transactions

A new way forward

Cognizant helped the bank move forward with an important modernization initiative it was very eager to launch. Because the new platform uses modern engineering principles, the bank anticipates increased business agility and improved reliability of branch operations in addition to the outcomes noted above. The bank also plans to leverage the new platform—and the insights and data analytics it enables—as it works to transform customer experiences and teller interactions, making each of them more personalized and collaborative.

About Cognizant

Cognizant (Nasdaq-100: CTSI) is one of the world's leading professional services companies, transforming clients' business, operating and technology models for the digital era. Our unique industry-based, consultative approach helps clients envision, build and run more innovative and efficient businesses. Headquartered in the U.S., Cognizant is ranked 185 on the Fortune 500 and is consistently listed among the most admired companies in the world. Learn how Cognizant helps clients lead with digital at www.cognizant.com or follow us [@Cognizant](https://twitter.com/Cognizant).

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