# GIVING CORPORATE BANKING A DIGITAL MAKEOVER

"At the Bank of Canada, we often say we are data dependent. It's not just a nerdy slogan. Good economic data are central to our ability to set the policy interest rate to keep inflation low, stable and predictable." Carolyn A. Wilkins, Senior Deputy Governor of the Bank of Canada, wrote in a recent newspaper article. Wilkins said using big data and exploring the application of technologies like artificial intelligence and text analytics to predict macroeconomic metrics need to be a top priority for banking organizations to adapt to digitization.

Digitization is, without question, changing the face of banking. However, banks have till date largely focused their energies and budgets for digitization towards retail banking, on aspects like digitization of accounts and transaction records and providing personalized services to retail customers across multiple channels seamlessly. Such efforts had largely bypassed corporate banking until recently. Given the nature of B2B environments, corporate banking is still largely about relationship management and mutual trust between companies and banks. But having tasted success in retail banking, banks are now beginning to warm up to the idea of digitizing corporate banking, using data as a core to transform and modernize the services and banking products.

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However, digitizing corporate banking poses challenges which are quite different from the retail side, including the need to manage higher volume, variety, and velocity of data; the ability to analyze this data in real-time; integrate this data in the broader Business Intelligence (BI) strategy; and most importantly, the need to keep up to speed the architectural considerations to ensure data types are supported and regulatory requirements are met. A recent study by Greyhound Research puts expectations from digitization in clear context. According to the study, 50% of large banks currently exploring or implementing technology to digitize corporate banking expect it to help both increase revenue and reduce costs. While 70% of these banks are expecting modest returns on both in the range of 5-15%, the remaining 30% are more bullish and expect returns to the tune of 15-25%.

# A BLUEPRINT OF DIGITIZATION OPPORTUNITIES

Infosys believes that while the benefits and possibilities of using data analytics are endless, key for organizations is to **build capabilities to monetize data** and deliver on the objectives of improved customer insights, enhanced operational efficiency, and new revenue models. We help clients create an **integrated blueprint of opportunities** - unique to their business - for data-led value creation. Thereon we chart the roadmap to incrementally build the capabilities they need to deliver on the blueprint.

A **major banking client** of Infosys wanted to **digitize their trade and cash management services** in order to be more proactive and responsive on providing insights to clients. Their key ask was a platform that would both serve as a **central payment processing hub** for all inward and outward transactions and **provide real-time payment status updates** on transactions to their customers. However, the client did not want to get rid of their legacy data sources and wanted Infosys to deliver a **real-time ingestion and consumption framework** – one which would source data from their existing databases and ingest and process it in real time – and also a **framework for real-time analytics.**

# DEALING WITH COMPLEXITIES

The engagement was particularly complex as the client's existing databases were spread across multiple geographies and had varied designs and schema. In order to be able to ingest the data from these legacy databases, they had to be converted to a single schema and format, which turned out to be the biggest task in the engagement. Another key challenge was the **regulatory complexity** around the trade and cash management business – an area that is far more complex than regular consumer banking – which required us to understand and code in several additional regulatory requirements.

Given the complex nature of the engagement, we used an **elaborate evaluation and assessment process** to select the appropriate tools to build the framework, benchmarking and testing tools. The process lasted over 3 months, and the Infosys team ran 3**0-plus PoCs** (proof of concepts) to arrive at the technology stack that we believed could serve the dynamic nature of the client's requirements. Post the lengthy process, we proposed using a **NoSQL database** (non-relational or distributed database) called **HBase** to store the transaction data and built the consumption framework with **Apache Ignite** -- an in-memory computing layer with faster response. Our approach was to i**ngest data from multiple sources into a persistence layer**, which would host not just current and incoming data, but also historical data of more than 10 years.

In addition, the team also used **reactive programming**, written in Scala (a patterned program that does not require creating every module from scratch like in Java) and **implemented CI/CD DevOps** (Continuous Integration- Continuous Delivery) to ensure the framework was easier to maintain and hence had lower maintenance costs and greater adaptability. Lastly, to save time and effort and also ensure flexibility, the Infosys team deployed niche program delivery aspects to ensure that abstracts from the base platform are used by other programs running on the same cluster.

The new solution not only gave the client a real-time ingestion and consumption framework but also helped them meet regulatory requirements. The client has **deployed the solution in more than 20 regions** across the world, including the US, UK, and South America. The complete lifecycle framework to ingest, process, and provision payments has **reduced the time taken for confirming regular transaction** to one minute, 3-5 minutes for more complex transactions, and 2-3 minutes for a failed transaction. This compares to the client's previous process wherein it would take 3-5 days for customers to get confirmation of a successful transaction, and even longer for failed transactions to be reverted. Our engagement methodology of using a real-time solution is also expected to help **save the client USD 10.5 million annually** in manual customer payment inquiry.

# GIVING CORPORATE BANKING A DIGITAL MAKEOVER: THE FIVE KEY TAKEAWAYS

1 **Strategize** to digitize the core services of your organization to offer modernized services to clients

2 **Account** for the regulatory complexity of the services being digitized and plan for that in the solution framework

3 **List** the data sources being used within the organization and integrate them under one schema for more efficient use

4 **Create** a framework that allows real-time ingestion and analysis of data needed for decision making

5 **Implement** CI/CD DevOps to ensure easier maintenance of systems

# BIG LEARNING:

The trade and cash management business is undergoing significant change as we speak. While at one end complexity in regulations is adding pressure, at the other end shareholders are increasingly demanding more transparency and visibility on how banks are managing this function. This is leading to an increased sense of volatility for most involved in the business and adding to the growing need to invest in new tools, people, and practices. At Infosys we believe that for banks to deliver value to each of their customer segments in trade and cash management, they must put data at the center of their corporate banking digitization journey. This can help banks understand evolving opportunities, hidden threats, changing customer expectations, and the competitive landscape -- all in context and in time to respond meaningfully.

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# WE CAN DO IT FOR YOU.

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