Apexon

LEADING GLOBAL BANK ACCELERATES ITS PATH TO DIGITAL BANKING

Apexon speeds time to market
by modernizing software delivery

This top five global bank wanted to extend its industry leadership position by modernizing its software development efforts and accelerating the delivery of new digital services across both its physical and online channels.

The bank provides comprehensive banking and financial services through multiple branches, ATMs, web and mobile channels. As the digital needs and expectations of its business and retail customers continued to evolve. The bank knew it had to deliver more customer-centric digital banking solutions.

As part of this effort, the bank engaged Apexon in 2007 to complement its in-house development efforts with Apexon's expertise in digital technologies and methodologies.

🏛 **LEADING US BANK**

🪙 **$1.9 TRILLION IN ASSETS**

🌐 **8,700 LOCATIONS, 13,000 ATMS**

👥 **265,000 EMPLOYEES ACROSS 36 COUNTRIES**

Apexon joined the effort as the bank was launching new banking, card and investment services on web and mobile devices and has been a key partner in the development and delivery of many new digital services. Since then, Apexon has helped transform the bank's delivery process with DevOps to deliver new digital solutions faster and at a reduced total cost.

This included deploying a Continuous Integration and Deployment strategy, standardizing methodologies and frameworks across the business, leveraging automation wherever possible, and replacing old QA toolsets with new, modern, digital capabilities. Over the course of the relationship, Apexon has also been able to leverage its extensive experience with other leading-edge clients in neobanking, fintech, and ecommerce to keep the bank's digital presence aligned with the latest technologies and best practices.

THE CUSTOMER JOURNEY

2007	2011	2015	2019
• MoInternet Banking functional and nonfunctional QE	• Mobile Banking (Advanced Functionality)	• DevOps - Continuous Integration and Continuous Delivery	• AI-Powered Testing Services
• Quality Assurance Tools & Processes - BPT & QTP	• Mobile Devices functional and nonfunctional QE	• Service Virtualization	• Test Optimization BOT (TOBOT)
• Test Automation Frameworks - Selenium	• Cloud Solution for Automated Testing	• BDD Implementation	• Acceptance BOT
• Automated Regression	• Device Proliferation	• Headless Web Services Testing	• AI/ML - Predictive Analysis
		• Automation for Camera-Based features	• ChatBOT Automation Framework

THE RESULTS

KEY OUTCOMES

FASTER CYCLE TIME

Cut onboarding of new apps from 5 days to under thirty minutes extending leadership in mobile banking services and strengthening competitive advantage

INCREASED CUSTOMER SATISFACTION

To meet and exceed demand for new digital services

GREATER OPERATIONAL EFFICIENCY

Saving $5M in OPEX in just 18 months

THE DIGITAL LIFECYCLE

Apexon works with companies across the digital lifecycle.

GO DIGITAL

LAUNCH & EXPERIMENT

Enable digital adoption in a quick, and agile manner

Apexon worked on solution discovery and definition to launch the bank's internet and mobile banking:

- Understanding expectations of different users and stakeholders
- Defining functionalsolution requirements
- Creating development and release build environments
- Mapping release engineering and CI flow design

BE DIGITAL

AUTOMATE & ACCELERATE

Build digital infrastructure and foundation for enterprises to scale

Apexon helped the bank formalize new delivery processes across the business:

- Eliminated redundant CI, DevOps and testing tools
- Standardized configurations and deployments
- Deployed Continuous Delivery pipeline and standard Agile process
- Service Virtualization - Implementation
- Multi-site development coordination
- Automate software builds and packaging deployment script

EVOLVE DIGITAL

BE INTELLIGENT & AUTONOMOUS

Leverage data engineering to make strategic decisions and get digital right every time

Apexon created a feedback loop to share critical information across the delivery teams and the business:

- A single-pane view of status of QE, PM, CI, DEV and DevOps

TO ROLL OUT NEW WEB AND MOBILE SERVICES QUICKLY

The company had been an early innovator and leader in online and mobile banking, but to protect its #1 ranking, it had to stay ahead of a growing number of competitors. This meant rolling out new web and mobile services more quickly and efficiently.

The bank's end goal was to minimize the risk of delays and rework and gain a higher degree of confidence to ship code more frequently.

But they faced several obstacles including:

Linear and siloed development efforts

Which hampered the build process and created the need for rework in the later stages of development

Highly manual testing processes

Which further slowed cycle times and increased the risk of errors and inconsistent service quality

Disparate tools and methodologies

Used across the organization, creating huge inefficiencies and redundancies

No source code management system

Resulting in multiple code bases, further slowing development and testing

Lack of non-functional testing

Across different stages of the software development lifecycle

DIGITAL ENGINEERING AND DIGITAL QUALITY ASSURANCE

Apexon's engagement was focused on two primary initiatives: digital engineering and digital quality assurance.

The goal was to transform the bank's application delivery processes to address its challenges organization-wide. At the core of the solution was a process-driven approach to DevOps with Continuous Integration which extended across the entire software development lifecycle — from opportunity identification to production release. Apexon was involved with multiple use cases including development of the bank's high-performance consumer web and mobile apps, automated check deposit, and data analytics.

DIGITAL ENGINEERING:

TECHNOLOGY SERVICES

Performance Backend Processing	Cloud Engineering	DevOps Automation	Data-Driven Engineering	Quality Engineering	Enrichment of User Experience & Satisfaction

C-LEVEL DIGITAL TRANSFORMATION INITIATIVES

OPEN BANKING API (Authorization of third parties and payment processing)

CONSUMER FACING .COM & MOBILE APP DEVELOPMENT

COMMERCIAL BANKS MGMT APPS - *Kiosk, Wire Transfer*

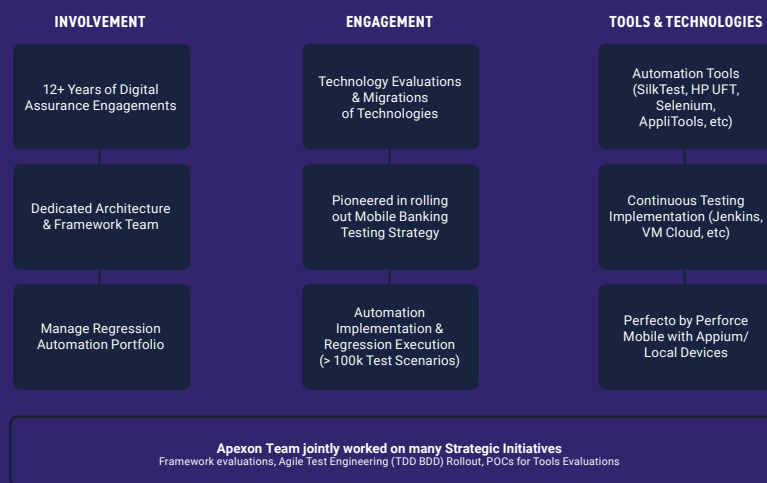**CLOUD STRATEGY & TRANSITION FROM ON-PREMISE TO CLOUD**

USED CASES IMPLEMENTED (PARTIAL LIST)

- Automated Check Deposit
- Re-architecture of Digital Platform
- Mobile Private Cloud for Dev Team Integration
- Device Regression Automation
- Scaled Agile Methodology with short sprints
- Service Virtualization - Design, Development & Rollout across platforms

KEY HIGHLIGHTS:

- 14+ Years of Engagement with Multiple LOBs
- Factory Automation - over quarter million test cases over 30+ LOBs
- Built performant, secure, operationally efficient and cost effective consumer web and mobile app
- Cloud Engineering, Data Analytics, Pipeline-As-A-Code
- Onsite-Offshore Development Centre (ODC) - (USA-India-Pune Ahmedabad), expanded to 400 Seating Capacity in Pune, India
- Cloudbees Jenkins Training Engagement: 120+ Resources Trained

DIGITAL QUALITY ASSURANCE:

INVOLVEMENT	ENGAGEMENT	TOOLS & TECHNOLOGIES
12+ Years of Digital Assurance Engagements	Technology Evaluations & Migrations of Technologies	Automation Tools (SilkTest, HP UFT, Selenium, AppliTools, etc)
Dedicated Architecture & Framework Team	Pioneered in rolling out Mobile Banking Testing Strategy	Continuous Testing Implementation (Jenkins, VM Cloud, etc)
Manage Regression Automation Portfolio	Automation Implementation & Regression Execution (> 100k Test Scenarios)	Perfecto by Perforce Mobile with Appium/ Local Devices

Apexon Team jointly worked on many Strategic Initiatives
Framework evaluations, Agile Test Engineering (TDD BDD) Rollout, POCs for Tools Evaluations

KEY HIGHLIGHTS:

- Involved in Customizing Quality Automation Framework to Requirements
- Involved in Selenium Migration for Silk Test & HP BPT/QTP Scenarios
- Successfully delivered Shirt-Left and STM Initiative to several Projects
- Managed Testing Offering from Apexon Pune ODC
- Services Virtulization - Design, Development & Rollout across the platforms
- Maintain Centralized Documentation Portal

SPECIFIC ASPECTS OF THE ENGAGEMENT INCLUDE:

A COMPLETE RE-ARCHITECTURE OF THE BANK'S DIGITAL PLATFORM, INCLUDING AGILE METHODOLOGY AND A CLOUD ENGINEERING FRAMEWORK FOR DEV TEAM INTEGRATION

- Service virtualization – for design, development and rollout
- Modernization of dev test infrastructure to support the DevOps model
- An outcome-based implementation model based on code delivery, cycle time and operating efficiencies

- Training of hundreds of the bank's engineers on new DevOps tools and processes
- Standardization of test automation processes for 100+ apps across five lines of business using AI tools and predictive analysis

- ChatBOT automation framework
- Automation factory with optimization and componentization – covering over 250,000 tests cases across 30 lines of business

- Continuous-Delivery-as-a-Service (CDaaS) and global support desk with best-of-breed CD tools
- Pipeline analysis/ design architecture
- Support for all customers-Android, iOS, Desktop browser; private/public on premise/cloud infrastructure

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