

## Case Study: Digital Engineering

# Modernizing Technology to Adhere to Growth and Regulatory Guidelines

Cognizant Digital Engineering upgrades outdated technology for banking and financial services client to redefine current mortgage servicing offering.

Remaining compliant with the ever-evolving banking regulations over the past few years has proven to be quite the challenge for banking and financial institutions that offer mortgage servicing.

To keep up with growing business demand and adhere to the strict compliance regulations, an EMEA-focused banking and financial institution with over 30 million customers in territories throughout UK, Europe, Middle East, Americas and Asia acknowledged the necessity to upgrade its current offset mortgage product technology in an effort to be a completely “connected bank” by 2027. The technology would move from archaic security practices and outdated framework capabilities to a complete user experience overhaul and architectural transformation.

## Solution

The institution engaged with Cognizant to build out a modern solution that would transform the existing mortgage product platform using APIs and cloud, allowing the company to move

## At a glance

- Leading EMEA focused banking and financial institution weighed down by outdated technology and unable to adhere to strict regulations.
- To meet the growing business demand and fulfill compliance obligations, the company needed to modernize its existing technology.
- Cognizant built an entirely new Pivotal Cloud Foundry-based platform that would allow for higher security and a better user experience.
- The customer uses the new platform to offer offset mortgage servicing.

at pace and a lower cost. The solution required three dedicated pods, high-performing cross-functional teams that collaborated with the client's internal team to outline three distinct phases in which the solution would be built.

The first phase was focused on three sprint cycles where architectural runway was defined and agreed upon with the enterprise architect. The Cognizant team worked extensively to understand and identify critical features and dependencies of the existing platform to ensure no impact to the batch schedule currently used. Using Spring/Sprint boot framework for the microservices-based architecture and Pivotal Cloud Foundry for the platform, the solution allows for higher efficiency in speed and security.

The second phase was dedicated to pushing out an MVP, or minimum viable product. In this phase, the Cognizant team worked extensively with front and back end programmers to integrate existing applications with the new microservices-based architecture, but also migrate the existing database to a cloud-based solution, ensuring all data, constraints and indexes were migrated with no loss of integrity. By creating the MVP, the customer user journey was further designed, crafted, and reengineered in cycles based on the outlined architectural runway utilizing technologies such as ReactJS. React SPA allows for complete application state management and single sign-on.

The last phase was dedicated to redefining and delivering epic/stories in every sprint. In this phase, the Cognizant team could identify and fix security vulnerabilities and inefficiencies, while focusing heavily on DevOps tooling, which would prepare Cognizant to deliver a fully automated end-to-end continuous integration (CI) pipeline. Supported by Teamcity for a CI pipeline, the solution now has the capability to support continuous delivery and

refinement. Other technologies used in the solution include:

- Bitbucket for code repository
- Artifactory for build repository
- Oracle 18C for the database

## Cognizant Guilds

We source talent for pods from our Guilds — communities of world-class talent from all over the world with the specific expertise needed to meet each client's business and technology goals.

## Results

The new offset mortgage product significantly improves operational efficiency and productivity through a variety of new features and technology upgrade benefits:

- Data mastery
- Load balancing for SPA
- Application logging, monitoring and alerting
- Target database version analysis
- Data migration
- Common customer, account object definition
- Unit test framework for React
- Cucumber testing framework

Now that the client has the updated technology that addresses the growing demand needs of the market, Cognizant has been engaged to deliver a second engagement that focuses on delivering a strong competitive advantage in the banking and financial markets.

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## About Cognizant

Cognizant (Nasdaq-100: CTSH) 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 194 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](http://www.cognizant.com) or follow us [@Cognizant](https://twitter.com/Cognizant).

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