A Fortune 25 bank experienced costly problems when its legacy check processing software was under high load. The system occasionally failed, bringing check processing to a halt. Yet, the bank was paying more than $10 million a year to license the check processing software and support the necessary infrastructure. CapTech delivered a modern check processing application that efficiently processes checks and can scale rapidly as throughput increases. As the new system is phased in, costs are expected to drop from more than $10 million to approximately $100,000 a year, with infrastructure requirements and licensing costs declining sharply.

**BUSINESS CASE**

A large banking organization regularly processed 8 million checks a day on a legacy check processing system. At peak periods, however, the system was required to process as many as 13 million checks a day. On such occasions, catastrophic failure often occurred, causing check processing to be halted for hours at a time. This led to customer complaints and caused reputational risk.

In addition, the software used for check processing was costly to license. Related infrastructure, including more than 700 servers housed in multiple data centers, was even more expensive. The system used a Windows-based client, which required that an installation be pushed to every machine on which the software was needed. This was costly and time-consuming.

The bank found it increasingly difficult to maintain the system and to add features to it, because many of the underlying technologies were no longer being maintained or updated.

The total cost of the legacy system was estimated at more than $10 million a year.

For business stakeholders, an added headache was that the system provided little transparency into the check processing cycle. If questions arose, business users had to leave it to technical resources to conduct manual evaluations and then provide status reports to the business.

**SOLUTION**

CapTech led the design and development of a modern check processing solution that readily scales to accommodate rising throughput. If volumes threaten to become excessive, users receive timely notification, so that servers can be added. This can be done within minutes.

The solution uses a modern web-based client, removing the need for costly and time-consuming installations on local computers. The system leverages current best practices in usability and availability, providing a variety of keyboard shortcuts for common functions.

The application is designed to offer business stakeholders greater visibility into system performance and throughput. They can view each check’s path through the system, view
an image of the check plus key data for it, and quickly obtain detailed reports. A custom workflow engine displays volumes at every processing checkpoint and enables the bank to pause and resume processing at each checkpoint independently.

The solution includes third-party image recognition software that has greatly improved automated decision-making regarding checks and substantially reduced the need for manual intervention.

**TOOLS & METHODOLOGIES**

- Java
- Agile
- Spring Framework
- Hibernate
- ActiveMQ
- JBoss
- Linux
- Oracle
- Bootstrap
- jQuery
- Subversion
- VersionOne
- Microsoft .NET

**RESULTS**

- The bank now has a modern check processing system built with the latest software frameworks, which greatly ease maintenance and upgrades.
- The new system is expected to cost approximately $100,000 annually, compared with more than $10 million annually for the legacy system. A major part of the savings involves elimination of software-licensing costs; additionally, infrastructure and maintenance costs will decline greatly.
- Business stakeholders now have access to dashboards that allow them to monitor the health of the system at a granular level, without reliance on technical resources. As processing volumes rise, additional machines can be added in minutes.
- The system runs on less than 10% of the infrastructure needed for the legacy system. As the solution is phased in, the number of servers will decline from 700+ to roughly 50 virtualized servers.
- Upgrades and updates to the client are no longer a problem because the new solution is web-based (as opposed to Windows-based with desktop install).