



Delivering Mobile Banking Excellence:

A Complete Blueprint for Success

How Leading Financial Firms
Provide The Highest-Quality
Mobile Banking Experience



It's no longer a question of whether banks should have an app.

The real question: Is the app now the bank?

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Senior Engineering Manager

LEADING BANK

It's no longer a question of whether banks should have an app. The real question: Is the app now the bank? For many people, their mobile phone is where they check their balances, manage investments, apply for loans, and get financial advice. In a world where 78% of people prefer to manage their finances through a mobile app, the app experience is the bank branch, brand, and customer experience all rolled into one.

That means the app isn't just a product. It's a builder of trust. And that trust is fragile.

When a banking app malfunctions, it doesn't just trigger user frustration. It triggers panic. A bad balance display, a failed payment, or a delay in funds can send a ripple effect through a customer's day, or if a critical transaction fails, their life. In banking, bugs don't just cost money. They cost confidence.

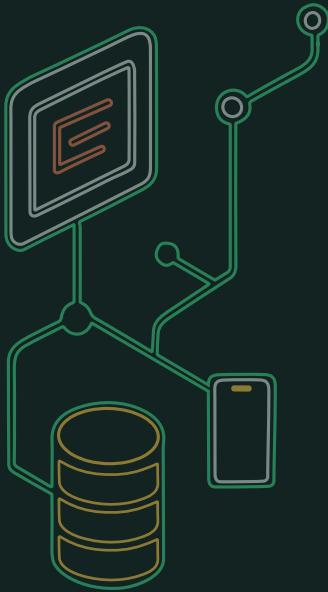
However, banking apps are wildly complex under the hood. What looks to customers like a single, polished mobile interface is often a tightly orchestrated system of hundreds of microservices. These services must communicate seamlessly to power account views, mobile payments, credit card recommendations, fraud alerts, and more. Every one of them represents a potential failure point.

**"We're not just releasing updates.
We're conducting a symphony of risk,"**

said Marcus Merrell, Principal Technical Advisor at Sauce Labs.

When it comes to mobile banking apps, quality is essential to ensuring strong customer relationships, revenue, and competitiveness. In this guide, we spoke with banking app quality experts to share their lessons learned on how modern financial institutions can raise the bar on quality so that you can turn your app into a competitive advantage.

Balancing Speed and Quality in Mobile Banking App Development



Just like any other app user, mobile banking app users expect regular feature updates, reliable access, and seamless performance.

As a result, banking app developers are expected to release new code at the same velocity as any other software. But for engineering teams behind the scenes, those expectations come with enormous risk. The process of updating an app takes time, and when a bug hits, minutes can feel like days.

"With mobile, it's not like the web,"

said a Senior Engineering Manager at a leading bank.

"You can't just fix a bug and push it live. You have to go through the app stores, and that takes time."

Every new feature, improvement, or optimization must be shipped carefully. That's why high-performing engineering teams treat quality as a continuous process, not a last-minute to-do item.

"From a strategic perspective, I'm always pushing for fast feedback loops at all points of the software development lifecycle. Developers should get instant feedback while making changes, and continuous integration testing should catch issues before they're merged," the engineering manager said.

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At the leading bank, the engineering team has built a system that allows for high velocity and high confidence. Their approach includes:

Rapid feedback loops:

Developers get instant feedback about their code quality as they write it, enabling them to fix issues sooner.

CI/CD pipelines:

Automated pipelines verify each change against a battery of functional tests so bugs don't escape into the wild.

Phased rollouts:

New updates are gradually released to small user cohorts, allowing developers to monitor for issues before going wide while minimizing the impact of any unexpected behavior.

Remote feature flagging:

If something goes wrong in production, developers can deactivate the faulty feature remotely in real time instead of waiting for an app store's approval cycle.

When it comes to mobile banking app development, speed and quality aren't mutually exclusive. In fact, they reinforce each other. The more teams leverage technology to ensure quality, the faster a team can detect problems, and the more confidence they have to ship. That confidence fuels innovation.

But tools and technology alone aren't enough. One of the biggest risks in mobile banking isn't code, but coordination. While the mobile app is a single, monolithic executable, it depends on hundreds of microservices managed by different teams. If one service fails, it shouldn't bring down mission-critical features like account history or payment transfers.

"The biggest risk is when teams only check their own areas and no one tests the integration between them," said the engineering manager. "We rely on tooling that helps assess coverage and risk so we can catch integration issues automatically."

Who Owns Quality in a Shift-Left World?

The short answer: **everyone.**

As more organizations shift testing left, the days of siloed QA and adversarial relationships between QA and developers are over.

“Developers will embrace quality if we make it easy for them. The key is removing friction. Instead of forcing developers to learn unfamiliar tools, we should provide testing frameworks that integrate naturally into their workflow. For example, JavaScript developers should be using JavaScript-based testing tools, not switching to Java just for test automation,” Merrell said.

Many financial institutions now rely on a Center of Excellence model that empowers a small team to curate the toolchain, define test strategy, and provide advisory support instead of conducting all the testing themselves. That way, testing can be distributed across the SDLC without sacrificing quality standards.

“Ultimately, quality is more of a mindset than a process. There’s no reason why everybody shouldn’t be responsible for quality, but someone still has to be accountable.”

Senior Engineering Manager
LEADING BANK

Measuring Testing Impact to Gain Leadership Support

Creating high-quality mobile banking apps requires executives to first create a culture of quality.

Executive leaders need to understand how testing connects to risk, the customer experience, and revenue, especially as they push teams to release more code faster.

This means speaking the language of leadership by measuring and communicating quality's impact on the user experience, achieving compliance, and accelerating innovation.

Ways to demonstrate the value of testing include:

Defect escape rate:

By reducing the percentage of bugs that make it past testing and into production, you can lower the chances that a customer will encounter an issue. You can calculate this rate by dividing the number of defects found in production by the total number of defects found across both production and test environments. "Ideally, we want to catch 90% of bugs before customers ever see them," the engineering manager said. "Even 70% is a solid starting point if you're still scaling automation."

Test execution speed:

Speedy test execution shortens feedback loops, reduces idle time, and increases iteration velocity, all while ensuring quality. In high-performing teams, test speed is a leading indicator of engineering efficiency. "The faster your tests are, the faster the team can release," the engineering manager said.

Bugs caught by automation:

Tracking the number of bugs caught by automated tests demonstrates the ROI of your testing strategy in terms of preventing production issues and saving engineering time. Teams can tag bugs found by automation in tools like JIRA to track trends over time and build a year-end impact report. "You've got to celebrate those moments when your tests catch something critical," the engineering manager said.

Contract testing coverage:

Contract tests help ensure that services communicate as expected, which is essential in a microservice-heavy environment where integration points can silently fail. "I implement what I would call a heartbeat contract test on every microservice that I care about so we'll know as soon as something starts to fall apart," Merrell said.

"The more I go in my career, the more I think the buck stops with leadership. Engineers care about quality because they take pride in their work, but executives need to make sure that it is a core value on the team."

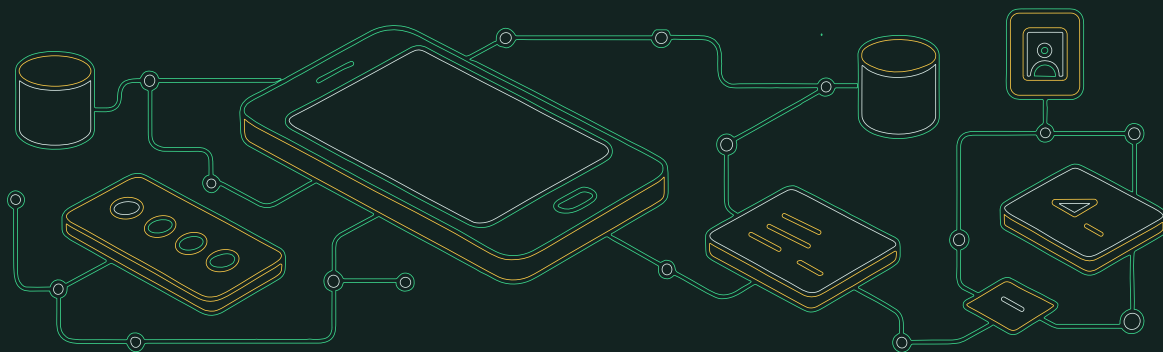
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Incorporating Security, Compliance, and Accessibility

While app quality is essential, developers must also ensure that their testing infrastructure meets cybersecurity expectations, helps achieve regulatory compliance, and can help ensure their apps are accessible to all users.

The right mobile banking app testing strategy will account for more than just quality to help protect your financial institution against breaches, audits, and lawsuits.



Incorporating Security, Compliance, and Accessibility

Incorporating cybersecurity into testing

While other teams might ultimately be responsible for penetration testing and vulnerability assessments, developers still play a critical role by ensuring security is considered at every stage of the SDLCs. Building secure applications starts with designing secure test processes from the first line of code through release.

"I've experienced projects where security is an internal team and also where security is an external third party doing penetration testing later," the engineering manager said. "It is a lot better when security is part of your delivery team and can be thought of much earlier in the development cycle."

Remember that your test environment is often an overlooked aspect of security. Testing on public cloud devices or improperly secured environments can expose sensitive data, violate internal controls, or break compliance with regulations like SOC 2, PCI DSS, and GDPR. Instead, financial institutions should use secure proxy tunnels for secure internal access during CI/CD and private real devices instead of shared infrastructure for critical tests.

Meeting expectations for accessible experiences

Just as you wouldn't design a bank branch with stairs but no wheelchair ramp, your mobile banking app should be equally accessible to all your customers, regardless of their ability.

While app accessibility is both the right thing to do and a way of driving revenue by serving more customers, it is also quickly becoming a legal requirement: the European Accessibility Act (EAA) requires most digital products that serve European consumers be accessible to people with disabilities—including banking apps.

Accessibility testing ensures your digital experiences are usable for all users—including those with visual, motor, cognitive, or auditory disabilities. It's not just ethical or required by law (like the EAA); it's essential to inclusive design and long-term brand trust.

This kind of testing helps you discover and remove barriers that may prevent users from fully interacting with your website or app, making it a critical component of your overall usability testing process.

Ensuring compliance with audit support

It's not enough to test every feature. You have to prove you did it—especially when the person asking is an auditor or regulator.

"An auditor can easily come along and want to check everything you delivered a year ago," the engineering manager said. "You really need a paper trail on every change that was delivered and every check that was done to ensure it went to production safely."

In highly regulated industries like financial services, automated test traceability can help prove:

- What was tested
- What testing types were performed
- The outcome of the test
- Who performed the test
- What changes were made
- Who reviewed and approved the changes

Trust isn't earned. It's coded.

In a world where the app is the bank, every tap is a test of trust.

Customers don't care about your test strategy—just whether their data feels secure, their money is accessible when they need it, and your app is meeting their needs. But your test strategy is what delivers these outcomes and more, making testing the foundation of your relationship with every customer you serve.

Building that trust doesn't happen at the end of the release cycle. It happens at the earliest stages of the SDLC as part of a comprehensive team approach. By shifting from reactive fixes to a proactive approach to quality, you can ensure trust with every commit, test, and release.

**Ready to build the mobile banking experience
your customers deserve?**

Learn more about Sauce Labs for financial institutions.

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