



WHITE PAPER

ESTABLISHING A QUALITY ASSURANCE PRACTICE IN FINANCIAL INSTITUTIONS

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THE PERILS OF IGNORING QUALITY

High-performing financial institutions understand the need for quality within ongoing initiatives that require significant investments in time and resources. The headlines are filled with software development disasters that point back to lack of control over quality, such as:



British Airways was struck by another IT glitch in August 2019 when system failures caused more than 200 flights to be cancelled and others to be delayed.



In mid-January 2016, the Nest “smart” thermostat (owned by Google) was hit with a software glitch which left users, literally, in the cold.



Millions of the bank's customers were unable to access online accounts. Services only returned to normal after a two-day outage.

The following seven pitfalls can be avoided with a proactive approach and ongoing investment in Quality Assurance (QA) practices.

Pitfall 1: Lack of readiness.

This peril assumes organizations can delay adding QA resources and not bringing QA on board early in an initiative. Planning must account for contractual negotiations and the timing to bring third-party vendors on board.

Pitfall 2: Underestimating the effort.

All QA management activities must be accounted for in any significant effort. These include:

- Test planning and approvals
- Test case writing
- Test execution
- Defect remediation

Pitfall 3: Lack of skilled QA resources.

Using business resources who don't know how to test can lead to testing the wrong outcomes in unproductive ways. QA staff should not introduce new testing technology without thoroughly evaluating it and gathering the quality and testing requirements in advance.

Pitfall 4: Over-engineering the effort.

Over-testing can lead to unnecessary testing, creating high costs and consuming time. The important criteria to test becomes the value delivered by the initiative.

Pitfall 5: Over-buying technology.

Small banks have different QA needs vs. large, global institutions. What works for one organization may be too expensive for another's operations. Avoid the thinking that automation can solve all QA challenges.

Pitfall 6: Do-it-yourself syndrome.

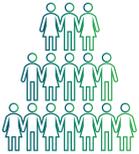
QA teams should not exclude subject matter expertise that lines of business users bring to the table. Nor should QA leaders make decisions on behalf of these users, they must gain their consensus and buy in.

Pitfall 7: Inexperienced leadership.

QA executives need to avoid thinking that all testing resources have the same skill set. Likewise, executives must understand what talents are needed in the frontline QA manager. For example, does the organization need process or testing expertise?

Building a QA practice

Most financial institutions understand the need for a formal QA practice within their organizations. All can relate to the pitfalls of ignoring QA as mentioned previously. How do bank executives begin to establish a QA practice within their institutions? They should follow these guidelines to start the process:



Assemble a trusted team that includes the appropriate resources such as project management, technical lead, business leads, and business analysts. Some of the roles can be fulfilled with existing resources as not all individuals need to be a QA-trained resource, but you should have QA-trained resources in the right roles. Other resources in your bank should help you:

- Consider candidates for the team (new hires, contract, contract-to-hire, or internal)
- Consider how much effort and budget is involved
- Make the best decisions with the most impact

Hire a QA lead or manager either from within or outside the bank, getting the right person for the role.

Consider contract-to-hire as an option and look for QA management experience in both process and testing, as well as banking experience.



Consider the background of the QA team your bank needs in terms of:

- Technology expertise
- Functional experience
- Automation experience
- Performance/system testing familiarity
- Communication capabilities

Consider existing staff (business analysts and technical), but don't rely on them to be QA-trained resources.

The QA mindset requires a different mental approach and skill set than other roles in a financial institution. A solid QA resource who understands the QA process can learn your business. Resources you take on must have a balance between the functional and technical sides of the business, while your existing business analysts must give up some of their current responsibilities and ownership. Have patience, as the new team will need to get up to speed to reach a smooth working cadence.

Scope the size of effort the QA practice will address such as:

- Conversion only
- Conversion and development
- Regular product releases
- Development only
- Integration efforts



Evaluate the tools your QA practice will need:

- Technology required
- Licensing
- Statement(s) of Work
- Data and intentional access to it
- Production data and security
- Ability to refresh data





Consider training needs of the QA practice, which will include:

- QA training
- Process training
- Product training
- Training ownership, who does it and where will the materials come from?



Consider the QA process and methodology needed for your organization's success as you:

- Introduce process gradually and consider the audience
- Overcome resistance with acceptance
- Overcome corporate culture hurdles



Consider the communications needed for your organization as you:

- Obtain buy-in for the QA practice at the executive level
- Communicate from the top down
- Incorporate all QA team members in the communication process

Establish an ongoing QA practice

Merger and acquisition activity

Given the current level of bank merger and acquisition activity, it becomes very likely your financial institution will be an acquirer or a target. In either case, these transformational efforts require an exceptional level of quality and your staff will need to help deliver results.

With organic deposit growth challenges failing to support lending activities, financial institutions must seek ways to expand. Bank mergers for the first quarter of 2019 have grown 21 percent over the same quarter last year, according to a recent [Bloomberg](#) article.

Acquisition execution within a financial institution creates excitement, yet it's also a resource-challenging time. Finding both the technical and quality assurance expertise needed with a tight labor market creates a quandary for the senior management team of the newly combined entities.

Conversion efforts often encompass technology transformations requiring complex solution development and integration. A robust Quality Assurance Practice is a must to drive the intended outcome of the technology conversions as two entities become one institution.

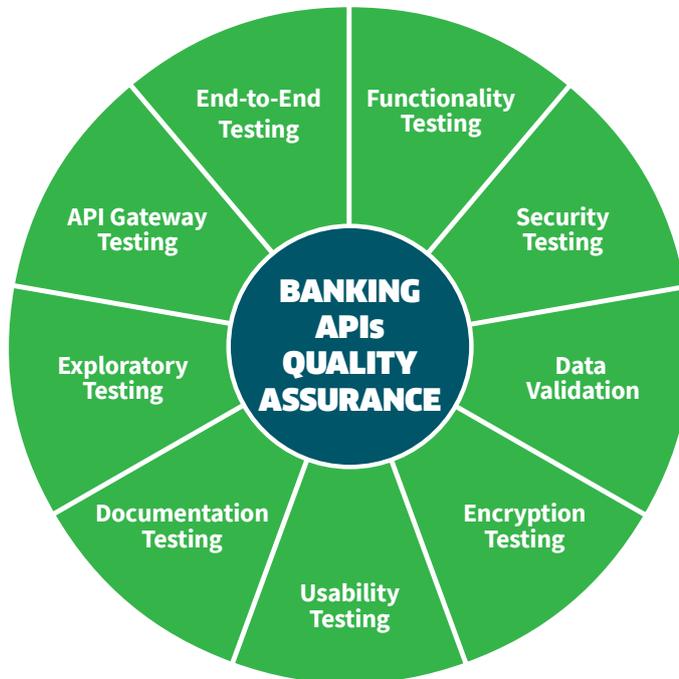
Integration efforts

As application programming interfaces (APIs) and open banking continue to gain traction in financial institutions, best-of-breed solutions proliferate. The need for high-quality projects and development efforts is especially evident in the banking industry today.

The rapid growth of API technology accelerates the need for thoughtful, comprehensive approaches to ensure the strictest quality standards are met. This is especially true in the world of rapid-paced open banking development efforts.

These rapid integrations often involving real-time links need strong QA management to drive end-to-end testing whenever a part of your bank's technology ecosystem changes. A robust QA practice can provide the testing oversight and discipline to ensure newly combines solutions get the attention needed.

The following diagram indicates impacted areas of quality on testing within API integration efforts:



New software releases

Deploying new software and solutions must not become a high-risk endeavor within your financial institution. Customized products and solutions unique to your bank must be tested holistically prior to rolling the change to your production environment. In the case of FIS product releases and their changes, a strong QA practice needs to account for, and test, any third-party solutions integrated with this core solution.

One thing is true of all software releases: they introduce the risk of downtime. In advance of these scheduled events, you and your stakeholders must ask what the impact of a given release is going to be on revenue or production stability and you should have an answer that is informed by real QA data.

Guidelines for creating a sustainable QA practice

“We were going into production and our number one priority was the timeline; we were ill-prepared to support any fall out of any significance.”

Does the preceding quote describe the state of the QA practice at your bank? If that’s the case, established partners can provide QA tools and a methodology that can support sustainable quality initiatives within a financial institution.

A quality methodology should leverage one of the various quality industry standards (such as ISO 9001 – Quality Management System Requirements, or the Software Engineering Institute’s Capability Maturity Model Integration, CMMI). These are excellent ways to establish a best-practice quality management methodology in a bank.

These standards require your institution establish quality controls throughout your business processes. The intent of these quality controls is to ensure your customer requirements are met before your products and services are delivered to the customer. In one proven QA methodology, the quality controls at the management level are commonly grouped into four phases: Plan, Do, Check and Act (PDCA).



Plan:

- The customer's expectations and requirements are determined.
- The processes and quality controls needed for the organization to meet the customer's expectations are identified and documented.



Do:

- The established processes and quality controls are performed – Prevent, Detect and Correct – to ensure the customer's expectations are met:
 - Prevent – The processes and quality controls are implemented to prevent the occurrence of a defect.
 - Detect – The processes and quality controls are implemented to proactively try to identify a defect.
 - Correct – The processes and quality controls are implemented to fix and resolve each identified defect.
- The product or service is delivered to the customer.



Check:

- Feedback from the customer is received.
- The effectiveness of the processes and quality controls are evaluated, answering the question, "Are the customer's expectations being met?"



Act:

- Actions are taken to improve the effectiveness and efficiencies of the documented processes and quality controls to meet the customer's expectations.

Applying these controls can help establish a sound QA practice which creates a foundation for QA success throughout a financial institution.

Summary

A sound QA practice provides the foundation for a high-performing financial institution.

As bankers look to increase merger activity, develop more integrated solutions, and manage more complex software releases, a robust QA practice becomes vital to avoid the severe pitfalls that can occur when quality is not given the important focus it deserves.



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