Overcoming Software Development & Testing Challenges in Banking & Finance
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Overarching Compliance Challenges

The financial services industry has experienced unprecedented change, with increasing regulations such as Sarbanes-Oxley, Dodd-Frank, and FATCA. Cutting-edge technologies such as high-speed trading, advanced simulations, and blockchain cryptocurrencies are challenging existing business models.

Banking
You need to provide world-class service to your customers, who expect on-demand, real-time banking. While delivering, you are required to maintain compliance with all of the banking regulations, processes, and financial controls.

Insurance
Ongoing changes in technology, demography, and consumer needs are disrupting the insurance industry. Combined with increased regulatory and financial reporting demands, you need to innovate while managing risk.

Finance
The technology landscape for finance firms is changing fast as a consequence of the rise of high-frequency trading, blockchain-based cryptocurrencies, increased privacy oversight, and AI-based forecasting. You need tools that can help you to accelerate innovation.
Tools You Can Trust

Inflectra has the created a single powerful platform to help you develop, test, and manage your software assets, mission-critical applications and core financial systems, while ensuring compliance and minimizing risk.

SpiraPlan is Inflectra's enterprise-level portfolio management solution that manages complex embedded systems that require risk management and reporting, with traceability, baselining and workflows that streamline compliance.
Functionality for Compliance in The Financial Sector

Requirements Verification
Using our SpiraPlan integrated requirements and test management platform lets you manage and test all of your requirements, policies, and regulations.

Risk Management & Mitigation
With SpiraPlan, you have integrated enterprise risk management capabilities that let you manage risks across programs, projects and portfolios.

Security & Privacy
All of our products provide powerful security and privacy tools to ensure your data is secure, whether you choose to deploy on-premise or in our secure cloud.

Traceability & Compliance
Our platform gives you end-to-end traceability from the requirements, to test cases, defects, development work items, source code, and resources.

Audits & Reporting
Our platform automatically maintains a secure audit log of all actions in the system, with powerful reports on all activities for regulators and management.

Automated Testing
Save time testing your systems for compliance. Our platform includes automation tools that generate test scenarios and scripts directly from your running applications.
Overcoming Software Development & Testing Challenges in Banking and Finance

Financial Services systems present unique challenges for software developers and testers. Regulators are very concerned about good provenance over the software being developed. Controls, processes and technologies for managing change to the system must be developed and documented. The system needs to be tested not just against the functional requirements from the customer, but also against the book of mandated policies and regulations.

In addition, financial institutions are not in the business of developing software – and consequently the tools needed to support the software development and testing activities need to be easy to use, provide the needed functionality out of the box, and have a low total cost of ownership (TCO).

Regulatory Compliance

In addition to the usual testing requirements that ensure that a system works in accordance with its requirements (functional testing), handles the prescribed load (performance testing) and is secure (vulnerability testing), financial systems have to meet a whole host of constantly changing regulations from organizations that include the Securities and Exchange Commission (SEC), European Central Bank (ECB), the US Consumer Financial Protection Bureau (CFPB). Since 2001 alone, there have been myriad changes to financial laws: Sarbanes-Oxley (SOX), Basel II, Dodd-Franks, FATCA, to name a few. Each time these changes in the regulatory landscape require changes to test plans, validation procedures and system requirements.

SpiraPlan from Inflectra provides the premier solution for managing all of your requirements, test cases and validation scenarios in a central, easy to manage repository.
Overarching Policies & Requirements

When you have to test and develop against both requirements defined for a specific system as well as an overarching set of mandated policies and regulations, you need to have the ability to define core mandated requirements that are shared between projects as well as project-specific features, use cases, and user stories:

Product Associations  Library Information System (Sample)

The following other products are allowed to access artifacts in this product as part of their own data:

- Sample Barebones Product
  - Program Name: Sample Program One
  - Artifact Types: Requirement, Test Case, Task, Document
  - Operations: Edit

- Sample Empty Product
  - Program Name: Sample Program Two
  - Artifact Types: Requirement, Test Case, Document
  - Operations: Edit

Note: the other products will only have read-only access to the artifacts in this product.

SpiraPlan lets you have projects that share their artifacts with other projects. This powerful feature lets you have projects that reuse components, features and tests from other projects. In addition, you can share requirements between projects so that you can view all of your requirements in a single list; those from the current project and those from any component projects being included:
Traceability

For banks and other finance firms, requirements traceability is not optional, all changes to core systems must be validated and shown to be managed in accordance with the defined processes, procedures, roles and regulations. You need to have an Application Lifecycle Management (ALM) solution that provides you the optimum mapping between requirements, tasks, software controls, test controls, pre-production staging builds, and releases.

Ability to add new books to the system
SpiraPlan provides you with ability to manage the entire end-to-end process of developing and testing software in accordance with your defined processes. It simplifies the reporting, making it easier for you to demonstrate the linkage between your policy attestations and the final code release.

Security & Privacy

When there is a breach in a website or consumer application it is bad enough, but when there is a security breach in a financial service system, the costs and regulatory damage can literally 'break the bank'. When you need tools to help you keep track of your security requirements, testing activities and associated defects, SpiraPlan is your best choice for test management with its built-in version control and audit-log, you can see who made changes to each artifact in the system.

Securing the codebase is another key ingredient to prevent security beaches and vulnerabilities. With SpiraPlan, you can see real-time traceability between each change in the code base and the associated requirement, task or defect that made the change necessary. This real-time traceability lets you find unauthorized code changes and prevent security vulnerabilities before they happen.
In addition, your ALM solution needs to provide sufficient security and privacy controls so that your code data is secure and maintained with integrity. SpiraPlan is available both as an on-premise solution and as a secure cloud service, giving you multiple options that best align with your security policies.

### Transaction Processing

When you are dealing with testing financial transactions containing large volumes of highly precise data, manual testing doesn’t cut it anymore. When you need to automate your system testing, our **Rapise test automation platform** is ready to help. Rapise has been built from the ground-up to support the testing of desktop, web and mobile applications in a single easy to use platform. Now you can use the same tool to test the back-office systems and the mobile applications used by customers in the same set of transactions.

Rapise includes a powerful data-driven, scriptless test design and execution language called Rapise Visual Language (RVL). This simplifies the process of creating large-scale data-driven regression tests that allow you to test large volumes of complex transactional data against your core systems.
Complex Algorithms

With the rise of high-speed trading and automated trading platforms, you need testing solutions that can handle large volumes of real-time data. With our Rapise automated testing platform you have a system that can handle the load.

With its powerful support for data-driven testing, built-in mathematical libraries and easy extensibility, Rapise is your best choice when you need to test and validate complex algorithms.

Speed and Agility

Speed, both in the development process, and in the systems themselves. Financial software needs to be released quickly and need to work speedily because trading in the financial markets is a race among competing firms.

SpiraPlan has been designed for agile processes from day one. The platform makes the requirements management process a fluid and dynamic experience, with real-time dashboards and visual planning boards to enable real-time collaborative planning and prioritization.
Solutions for Banking & Finance

However, although banks and finance firms are heavy users of Agile methodologies and DevOps, due to the need to support regulatory reporting requirements, companies need to adapt agile to include additional steps and artifacts that are not strictly agile. You need tools that are agile in nature, but provide flexibility to include waterfall steps, use cases, item dependencies, and other traditional needs.

SpiraPlan is flexible in its approach, with a methodology-agnostic design that lets you work in a hybrid methodology that is tailored to your business.
Data Interoperability

A key feature of ALM tools that you need to consider is data portability and interoperability. For European companies, the General Data Protection Regulation (GDPR) mandates such functionality. You need to make sure that your ALM platform has a robust set of versioned APIs that are actively maintained and developed. Such APIs will let you integrate the data in your ALM solution with your other systems (billing, document management, etc.).

**Resources**

This table provides a list of all the resources exposed by this REST web service. More detail about each resource is explored after this table:

<table>
<thead>
<tr>
<th>Resource</th>
<th>Methods</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artifact Documents</td>
<td>GET, POST, DELETE</td>
<td>This resource lets you view/add documents associated to an artifact</td>
</tr>
<tr>
<td>Association</td>
<td>POST, PUT, GET</td>
<td>This resource lets you create, view and update artifact associations</td>
</tr>
<tr>
<td>Automated Test Run</td>
<td>POST, GET</td>
<td>This resource allows you to retrieve, create, modify and delete automated test runs in a specific project in the system.</td>
</tr>
<tr>
<td>Automation Engine</td>
<td>GET, POST, PUT</td>
<td>This resource lets you create, and view automation engines in the system</td>
</tr>
<tr>
<td>Automation Host</td>
<td>GET, POST, DELETE</td>
<td>This resource lets you create, view, update and delete automation hosts in the system</td>
</tr>
<tr>
<td>Component</td>
<td>DELETE, POST, GET, PUT</td>
<td>This resource lets you create, edit, delete and view components in a project</td>
</tr>
</tbody>
</table>

SpiraPlan provides a robust set of REST and SOAP APIs that are versioned and maintained, with the ability to run code written over ten years ago against the current version, unchanged.
Domain Expertise

Business knowledge is important for testers in any domain, but particularly in financial services, where the business itself and technology are becoming increasingly intertwined. Our partner network includes industry partners that understand your business and can help many any implementation of tools a success.
The Inflectra Promise

Easy To Migrate
It's super easy to switch to our tools. Migrate your legacy data, documents, spreadsheets, and more. (Don't worry, we also have a ton of ways to export your data.)

Free Trials
No credit cards, no contracts, no hassles. You can trial all of our products in the cloud or on your own servers, and all for a generous thirty days.

Service You'll Love
Best practices baked into every product, dozens of integrations, common sense options, first-class support every time. That's what our customers love about working with us.

Try the Inflectra Platform Now!

Explore the Inflectra Platform

Get a Free Trial