Using Advanced Technology Development Solutions to Improve Financial Services Effectiveness

FINANCIAL INSIGHTS OPINION

The subprime fallout is just one of many worries troubling the banking industry today. As the global credit crisis and the weakening U.S. economy continue to put pressure on earnings, financial services institutions (FSIs) are finding that to remain competitive, they need to keep their focus on long-standing challenges such as compliance, risk management, fraud detection, protecting intellectual capital, updating legacy back-end systems, and gaining a more intimate knowledge of customers.

Compounding the pressure is the fact that all the aforementioned requirements make it imperative for institutions to extract information from multiple and disparate data sources, both inside and outside the institution. The vast majority of institutions still have trouble with this siloed data because applications such as commercial lending and claims management don't have the levels of integration needed to make this objective easy and seamless.

In uncertain economic times and with an emphasis on containing costs while maintaining or increasing competitive position, FSIs must focus on capturing efficiencies by aligning IT with business goals, modernizing systems, and implementing integrated technologies that will allow for increased standardization, reuse, and transparency when it comes to the development and integration of their IT-based business solutions. The choices that FSIs will make in terms of their IT investments will be critical in determining whether they achieve their goals of capitalizing on new markets, effectively managing risk, and gaining a competitive edge. FSIs must implement technologies that:

- Enable the creation of a flexible IT infrastructure that supports goals such as SOA, virtualization, data integration, modularity, and reuse of valuable IT assets

- Provide an integrated development environment that accommodates legacy applications and supports old and new development platforms and programming languages

- Build transparency into systems and processes to better manage enterprise risk and facilitate compliance reporting

- Enable organizations to reach new customers and win customer loyalty via technology innovation and systems that provide a 360-degree view of the customer's relationship with the institution

IN THIS WHITE PAPER

This Financial Insights white paper examines how various advanced development tools and applications can help financial institutions create more flexible IT infrastructures and improve operational effectiveness by aligning IT goals and systems with business strategy and enabling technology resources to be used more effectively.

SITUATION OVERVIEW

Today's turbulent financial environment is putting intense pressure on financial institutions to improve profitability, reduce risk, add new revenue streams, and enhance customer loyalty and at the same time curtail costs. In fact, IDC's recent *Annual Vertical IT Solution Surve*y of end users confirmed that in 2008, the majority of FSIs will face declining or stagnant IT budgets (see Figure 1). Interestingly enough, the same survey also revealed that while budgets are getting tighter, FSIs are allocating significant portions of their budgets to innovative technologies — those that help an organization move beyond keeping the business running as is and help the business to further its strategic goals (see Figure 2).

FIGURE 1

2008 IT Budget Plans for Financial Services Institutions

Q. Will your total IT spending in calendar 2008 increase, decrease, or stay the same as in 2007?
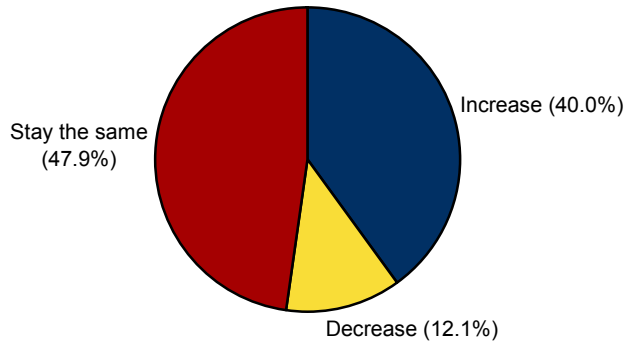
Increase (40.0%)

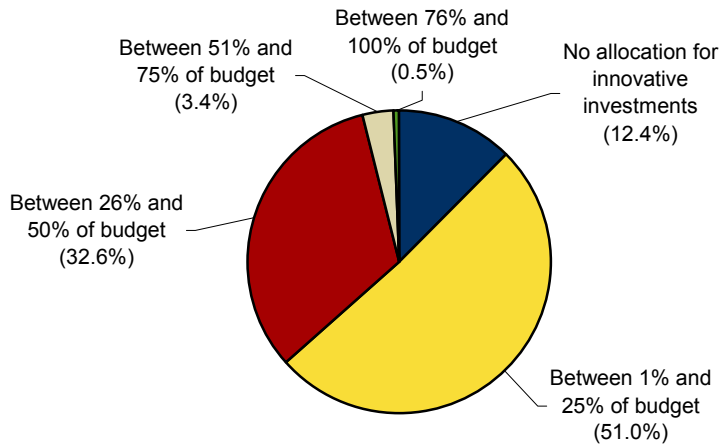Stay the same (47.9%)

Decrease (12.1%)

n = 819

Note: Financial services institutions include banks, insurance firms, and securities and investment firms.

Source: IDC's *Annual Vertical IT Solution Survey*, 2008

FIGURE 2

2008 IT Budget Allocation Toward Technologies That Enable Innovation (Financial Services Institutions)

Q. What percent of your U.S. organization's total 2008 IT spending will be allocated to innovative types of IT investments (e.g., investments that move beyond keeping the business running as is, IT investments that help the business to further its business goals)?

Between 76% and 100% of budget (0.5%)

Between 51% and 75% of budget (3.4%)

No allocation for innovative investments (12.4%)

Between 26% and 50% of budget (32.6%)

Between 1% and 25% of budget (51.0%)

n = 819

Note: Financial services institutions include banks, insurance firms, and securities and investment firms.

Source: IDC's *Annual Vertical IT Solution Survey*, 2008

Given the imperative to find new revenue streams and remain competitive, most FSIs will find it necessary to allocate funds strategically and undertake cost containment initiatives that will improve overall performance, lead to economies of scale in terms of their existing IT investments, and position their organizations for long-term growth.

Table 1 details some of the unique challenges that are facing financial institutions today and that are fueling the push toward further technology simplification and optimization.

TABLE 1

Challenges Facing Financial Institutions

Challenge	Description
Industry economics	The subprime fallout of 2007 continues to put pressure on revenues for many FSIs. Each write-off has a detrimental impact on profits, and FSIs constantly must find new ways to trim costs and increase their competitive position by being the first to offer new products and services to the market.
Global consolidation	Whether through mergers and acquisitions, joint ventures, or organic growth, institutions are finding opportunities to grow quickly by expanding into new and emerging markets. While these strategies often bring about positive results such as revenue growth, they also inevitably introduce redundancy of IT systems to already complex legacy environments. Because redundant systems and business processes radically increase operating costs, FSIs must quickly figure out how to reduce redundancy while keeping their businesses running at a faster pace. Figuring out a solution is paramount, or FSIs risk losing the competitive edge gained through expansion.
Regulatory compliance	The constant growth in regulatory requirements has required FSIs to make enormous IT investments over the years. Despite the already significant investments, overlapping mandates and stricter enforcement have many institutions feeling that they still have only a reactive approach to compliance and that the costs are severely impacting profits. Unfortunately, a true integration of nonautomated tools and processes for compliance processes is something that has eluded many FSIs and has led to many additional manual and often redundant steps to ensure compliance — steps that are very time consuming and costly. To make compliance a bit easier and less cumbersome, FSIs should implement tools that help achieve data transparency and establish processes that are self-governing.
Competition	Demand from sophisticated customers requiring new channels and services that demonstrate the institution's intimate knowledge of customer needs across all product lines necessitates constant product innovation and fuels the intense competition between FSIs to meet elevated performance expectations. For FSIs, technology has become a double-edged sword, enabling customers to more easily sever ties with an institution or enabling an institution to strengthen customer relationships and enhance customer experience. Financial institutions must increasingly look to technology to help them transform into customer-centric organizations. For FSIs, innovation in terms of services and channels is key to winning customer loyalty.
Enterprise risk	An area of constant concern, enterprise risk (comprising operational, compliance, and reputational risks to name a few) is very hard to manage, particularly for organizations without highly integrated systems. The theft of customer financial data, for example, is damaging to the reputation of an institution and can cause irreparable harm to an organization's profits. Failure to properly measure risk not only will turn away customers but also, without a doubt, will bring about even more stringent regulations. FSIs must proactively look for technology solutions that enable them to test for data vulnerability and ensure compliance in processes and enterprise security standards.

Source: Financial Insights, 2008

Addressing any of the challenges mentioned in Table 1 is an extremely difficult task, particularly because most FSIs are still burdened by disparate core systems, legacy applications, rigid IT infrastructures, and ineffective delivery processes, all of which can impede progress and performance. To make progress, FSIs must make strategic investments and address the problems of their IT infrastructures by developing new processes, investing in development tools that enable reusability and modularity, and simplifying back-end systems to minimize both costs and risks.

IT Implications

One path to IT transformation and alignment with business strategy is to plan for IT with the future in mind by working toward creating flexible infrastructures that enable the reuse of technical assets and existing services, simplify integration of mainframe and distributed systems, and ultimately reduce time to market for products and services while reducing the overall costs of IT.

Using automation tools and advanced development solutions is one way that the IT departments of leading FSIs have been able to modernize and transform core systems, move closer to SOA, improve data sharing and information management, leverage business practices across the organization, and reduce operational risk.

Numerous vendor tools can help streamline IT and make the software development process more simplified and painless. Such development tools and solutions enable IT departments to:

- **Understand and document business requirements and goals prior to beginning development.** Successful application deployment can often be linked to proper requirements management. The better organizations manage and communicate project requirements, the more likely they are to deliver solutions that are developed according to exact specifications and delivered on time and on budget. Because most FSIs typically capture business requirements in Word documents, which is not always the easiest format for prioritizing and organizing information, vendor solutions that offer integration with existing word processing programs as well as nonproprietary industry-standard databases can prove to be powerful tools. Integrated requirements management tools can enable FSIs to not only successfully manage business scope but also understand and track changes and report the impact a change has on the scope and timeline of a project, thus providing the visibility and control needed to manage software and systems delivery.

- **Design and model business processes before deploying them.** Business process modeling and analysis of both current and future processes is an essential step toward achieving business goals. Allowing business analysts to visualize, understand, and document current and future processes and link business model elements to business and system requirements can enable FSIs to tightly link processes with corporate objectives and continuously monitor process performance via key performance indicators (KPIs). Tools that enable FSIs to not only document processes but also simulate the impact of new assumptions, decisions, and changes on costs and resources of a project prior to deploying these processes or beginning custom application efforts can be essential in minimizing project costs and enabling reporting for regulatory compliance.

- **Inventory the existing IT environment and gain a deep understanding of the source of application functionality for future development needs.** To minimize IT costs and reduce overall development time, institutions must understand the mainframe and distributed software resources that are available to them within the various enterprise applications. Various tools on the market today can help FSIs accelerate the discovery phase of application development by inspecting mainframe and Web applications and creating a library of application code information in a relational database. IBM's WebSphere Studio Asset Analyzer and Rational Transformation Workbench are some examples of tools that can help organizations gain insights into the dependencies among enterprise applications by making an application's components and dependencies on other assets more transparent to developers. Such tools also come with advanced functionality that enables deep analysis of assets such as the ability to trace the source of application functionality, mine for business rules within applications, identify inconsistencies in rules, and often provide deep application insights that subject matter experts often have but don't always document. By being able to gain a clear view of the organization's resources via an asset repository, IT can significantly reduce the time and costs associated with new application development. Because all developers have an inventory of existing application components prior to beginning development, they are less likely to waste valuable time searching for or developing code that may already exist and are more likely to reuse existing assets.

- **Use a comprehensive software development platform that can support multiple development environments and programming languages.** Perhaps one of the biggest challenges that FSIs face today is the fact that many of their core applications are built on legacy COBOL while many of their new applications are built on .NET or J2EE platforms. Finding technical resources that are able to effortlessly work on multiple platforms and program in a variety of program languages is a monumental challenge. FSIs typically have to reconcile themselves to the pain and added costs of working on development projects with technologies that do not share common platforms, interfaces, or languages. Tools that enable institutions to unify their development teams with development platforms that support various environments, create open platforms for software development, or enable the reuse of mainframe assets in an SOA environment can be key in reducing IT costs, promoting reuse, and delivering projects on time. Such tools can be especially invaluable for FSIs that have experienced mergers and acquisitions and find themselves with disparate software development teams, multiple development platforms, and overlapping or redundant processes.

- **Improve software quality by effectively managing changes to software specs.** Change requests are inevitable even when business processes are well defined and documented prior to beginning actual development. Managing change requests and documenting outcomes become overwhelming tasks when considering the complexity and length of typical software development projects. Tools that enable effective change management and defects tracking, allow for the integration of change management to business requirements and process models, and provide workflow capabilities to ensure audit control and accountability can significantly enhance coordination and improve software quality.

- **Minimize business risk and ensure compliance by testing for application security vulnerabilities.** Because many FSIs today rely on Web-based software to run their business processes and connect to suppliers and customers, having comprehensive security to ensure the safety of sensitive corporate and customer information is paramount. Many vendor tools available today enable FSIs to scan, report, and fix potential vulnerabilities. The better tools are those that enable testing by a variety of users from engineers to business managers, integrate easily with leading QA tools and integrated development environments (IDEs), test against established business rules, have the ability to test thousands of applications concurrently, test for a variety of global compliance issues against established standards, validate code and expose potential code vulnerabilities, offer potential solutions to identified problems, scan business processes such as transaction processing, and make reporting of security issues automatic and uncomplicated.

FUTURE OUTLOOK

Benefits of Using Integrated Technologies

The benefits that FSIs can realize as a result of using integrated software development technologies and structured processes are numerous:

● Reduced IT costs

  ○ Consolidated development environment that facilitates software development on multiple platforms, including legacy COBOL (the backbone of most banks), and supports multiple programming languages

  ○ Integrated back-end systems that help organizations break down data silos and share customer data across the organization (Data and application synchronicity improves data transparency and makes technology nimble and up to date and allows it to process information more quickly. This in turn drives innovation and enables FSIs to offer new and differentiated relationship-based products and services to their customers.)

  ○ Consolidated view of IT assets that are reusable and modular for higher quality and speed of software development

  ○ System modularity (With the use of advanced development tools that enable FSIs to gain an end-to-end view of the enterprise and its core systems and processes, system modularity also becomes a possibility. This ability to replace isolated systems rapidly without disrupting other systems can lead to significant improvements in time to market and significantly decrease service interruptions.)

  ○ Documented processes for future development projects

  ○ More effective change management tracking and version control

  ○ Reduced labor pool (An integrated IT environment eliminates redundancy and duplication. Because the number of platforms and legacy applications is reduced, fewer in-house technical resources are needed.)

  ○ Stronger employee focus and productivity (Because developers, engineers, and system architects have a consolidated view of IT assets and access to modular code, less time is wasted on the software discovery process and more time is spent on more productive development tasks.)

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- Reduced operational costs

  - Implementation of best practices across the organization to ensure proper processes and checks and balances are in place and that the most efficient solution is always considered

  - Reduction of regulatory and operational risks (With more integrated systems that can share data in real time, organizations automatically gain better visibility into processes and operations for easier compliance reporting.)

  - Ability to deliver differentiated services and products faster to support business demands (With integrated systems and a simplified technology architecture, FSIs have the ability to develop new products and services quickly and introduce products and services to the market rapidly — improving their chances of staying ahead of the competition.)

Many leading FSIs have already realized the benefits of using advanced development solutions. For example, one leading provider of specialty insurance products in the United States used IBM's Rational Software Development Platform to standardize the technology environment after a series of acquisitions. In addition, the company wanted to increase the reuse of software assets, improve communication among development teams, and realize strategic objectives.

The solution, which enabled thousands of developers and business analysts to leverage an integrated set of tools for process definition, requirements gathering, development, testing, QA, and training, was also able to support the company's key existing development environments — J2EE, COBOL, and Microsoft .NET. Because the tools streamlined processes and enabled a clear view into technical assets, the company was able to increase its speed of development and asset reuse and realize millions of dollars in cost savings per year.

CONCLUSION

As the pace of business continues to intensify in one of the most competitive industries and the urgency to grow revenue and profits increases, aligning IT with the strategic objectives of organizations will be more important than ever. Yet with the focus on cost containment and the need to urgently streamline resources, companies face the realization that achieving IT transformation takes both time and resources, which they don't always have.

Because IT budgets will be tighter as a result of the current economic environment, strategic technology investments will need to be made — investments that help transform IT into an organization that is nimble, innovative, and responsive to business needs.

FSIs can take several steps to move toward aligning operational processes, business goals, and underlying technologies:

● Keep the big picture and the ultimate organizational goals in mind while taking small and measurable steps toward transformation.

● Identify the processes and technologies that need to be redesigned to improve the way business is conducted. Many transformation initiatives often end up automating old processes without considering whether the processes could have been improved in the first place.

● Inventory the IT environment to determine the technology assets and technical skills that are reusable and available.

● Build systems with transparency in mind to help ease the burdens of compliance.

● Invest in advanced development tools that simplify the transformation process. Although development tools can be a significant investment, they also have the potential to drastically reduce overall IT costs and improve product and service innovation. By supporting multiple development platforms and programming languages and aggregating IT assets, such tools promote reuse and modularity, facilitate compliance reporting, and promote better employee focus and productivity.