REBUILDING THE BANKING LANDSCAPE
Restoring customer confidence and returning to growth
Introduction
As the banking industry emerges from the fall out of the financial crisis, its sights are firmly set on business growth through innovation in products and services. Achieving this requires a step-change in the way banks meet the challenges of an increasingly mobile and demanding consumer base. With more customers considering exercising their right to move banks due to lower confidence levels and concern that their finances are safe, the pressure is on to attract and retain customers by providing better access to more attractive products and services.

This paper looks at the ways that banks are having to adapt to rise to these challenges, the constraints they face and how innovative changes in IT infrastructure can release time, money and capacity to meet the demands of the new banking landscape.

Key Challenges in Banking Today
Only a matter of 3-4 years ago the prospect of a major financial institution going out business, or even remotely facing that threat, was inconceivable. Today, however, after a number of government bail-outs around the globe and acquisitions, such as Barclays’ purchase of Lehman Brothers, the picture of the financial industry is very different. Financial institutions today face a number of challenges and failure to meet them presents serious risks to even the largest bodies. Activities over the last couple of years have changed banking forever: business-as-usual (at least as it was) does not exist anymore. Change and transformation are the new norm.

Surviving the financial crisis and returning to profitable growth
As the severity of the crisis was revealed, survival became the chief priority for every bank and financial institution. The new financial order makes it imperative for any organization to consider strategies to return to profitable growth in a considered and sustainable way. Critical within this is ensuring that business planning is integrated with IT planning and execution. Banking

relies more heavily on technology than most other industries and any organization failing to make IT planning a fundamental hub of its business planning is highly likely to harm both areas.

Customer focus
Customer loyalty, once almost a given in the banking industry, is now a major challenge for any financial organization. Banks previously wanted to adopt a ‘cradle to grave’ approach with the aim of keeping customers for life. This was not an uncommon occurrence as customers tended to remain loyal to a single bank for their banking life. However, this situation is now under serious threat as consumer confidence was shaken during the financial crisis and customers questioned whether the bank is where they want to keep their finances long-term. For the first time banks face the realization that they will lose custom without a concerted effort to restore customer confidence and improve customer service. Gartner lists attracting and retaining customers as one of the most important challenges for financial institutions, both in the short and longer-term – gaining in importance by 2013 (Figure 1).

There are a number of areas that banks can focus on to address this. Reducing the complexity and time required to open new bank accounts should become a key focus to attract new customers from competitors. Similarly, existing customers demand simplicity when it comes to managing their financial affairs. Improving account maintenance activities, such as creating and amending standing orders, making payments, opening additional accounts and buying insurance helps to retain customers.

Technology has a key part to play here. Addressing customer needs has driven major changes: time pressures make visiting a retail bank unfeasible for many of us. Without online and mobile banking we would be able to undertake fewer transactions. Innovation in technology that enables online and mobile banking, ensuring that simplicity and ease-of-use are at the forefront of the user experience, plays a major role in developing and expanding banking business.

Managing risk and regulatory requirements
There have been substantial changes across the banking industry over the last 2-3 years. Government rescue plans, increased regulatory requirements and mergers and acquisitions have been the norm rather than the exception. All of this has increased both risk and complexity.

Banks are re-examining their core businesses and a fundamental part of this is selecting how and where to use different technology. Continuing market volatility makes it essential to retain a flexible approach to be able to respond quickly to, and to drive new, market demand. This requires flexibility of both the business approach and technology together.
Recent events have erased the certainties of the last decade. Operating models based on leverage and light touch regulation already look outdated. Going forwards, under increased regulatory scrutiny, banks will have to move towards new business and operating models, with reduced risk. 

Ryan Westmacott, Dean Jayson, James Sproule, Accenture (2)

CIO Priorities

As we have already seen, it is vital for business and IT to be aligned to enable banking organizations to meet current and future challenges. It is just as important to understand what CIOs view as their current priorities and establish whether these will enable banks to return to profitable growth, focus on customer service and loyalty and meet new regulatory and business demands with minimum risk.

According to Gartner, CIOs currently focus on delivering projects to enable business growth, reduce the cost of IT and link business and IT strategies and plans. Delivering projects that enable growth rightly remains the top CIO priority looking forward to 2013 (Figure 2). Reducing the cost of IT is understandably a very high current priority in the fall out from the financial crisis but becomes less of a priority in years to come. Obviously the expectation is that reducing costs now can deliver future growth opportunities, making cost reduction less necessary in the future. There is another very important point here: cost reductions made now enable the projects that will deliver growth. It is important to focus on cutting the right costs and achieving that will help banks meet all three of their key challenges: returning to profitable growth, improving customer focus and meeting new demands with minimum risk.

As we’ve discussed, linking business and IT strategies is fundamental to the success of banking institutions in future years. Therefore it is encouraging to see this high on the CIO agenda.
Looking to the future again, expanding the use of information and intelligence becomes the second highest priority for CIOs by 2013. This is a significant step-change as it was traditionally ranked much lower. However there is a growing recognition among banks that better access to, and understanding of, data enables substantial strides towards meeting business objectives. For example, integrating multiple data sources into one central view can enable greater online and mobile access to information and services, improving the customer experience and driving customer attraction and retention.

Another key CIO priority for the future is developing and managing a flexible infrastructure. While this is a broad statement, possibly easier to say than to achieve, it is an important goal for the future. The ability to retain a flexible approach is essential to be able to respond quickly to, and to drive new, market demand. The flexibility of both business and technological infrastructure together is vital.

**Constraints**

It appears as if business and IT goals are largely synchronized as we look forward to the next few years in the banking industry. However, what constraints do banks face in meeting their objectives?

- Core systems that are costly and difficult to maintain
- Aging IT infrastructures that inhibit business agility
- Application infrastructures becoming complex through mergers and acquisitions

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**Strategic Priorities**

<table>
<thead>
<tr>
<th>Strategic Priorities</th>
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<th>2007</th>
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<td>3</td>
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<td>-</td>
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<td>-</td>
<td>-</td>
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<tr>
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<td>-</td>
<td>7</td>
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*Figure 2: Banking CIO Agenda: Getting to Grips With Transformation, Gartner 27 April 2010*
Parts of businesses run in silos resulting in fragmented data.
A focus on the front office rather than back-end systems underpinning the business.

A failure to address these constraints will significantly impair a bank’s ability to meet its objectives and to modernize its business. Application Modernization strategies offer a way for banks to remove all of the above constraints, enabling faster business transformation to help meet key objectives.

**Modernization Strategies and Options**

Enterprise applications are the heartbeat of the banking world. Payment applications, branch systems, ATM systems and ERP systems that help run business day-to-day are all vital to the success of the business. Yet a perception persists that operating and updating them sufficiently quickly to meet the accelerating pace of business change is expensive and difficult. This need not be the case.

Application modernization strategies are proven methods of addressing aging IT infrastructures and costly core systems to achieve the business agility necessary for delivering the type of fundamental change that drives business growth, competitive advantage and new positions of strength. For organizations running business-critical enterprise applications on mainframe environments, there are three key strategies to consider (Figure 3).

In some cases, organizations have opted to replace mission-critical applications with either an off-the-shelf package (often entailing a loss of key business logic and competitive differentiation) or with a project to completely re-write applications from scratch. There are countless examples of such IT projects running massively over-budget, over-time and delivering little or no value.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
<th>Key benefits</th>
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</thead>
<tbody>
<tr>
<td>Migrating or re-hosting apps</td>
<td>Moving one or more applications off the mainframe, with little or no change to underlying code</td>
<td>• Dramatically reduce operating costs&lt;br&gt;• Faster time-to-market&lt;br&gt;• Improve customer satisfaction</td>
</tr>
<tr>
<td>off the mainframe</td>
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<td></td>
</tr>
<tr>
<td>Moving development off the</td>
<td>Enabling the development process to occur on PC environments before the code is moved back to the mainframe production environment</td>
<td>• Reduce costs through improved developer productivity&lt;br&gt;• Increase focus on innovation&lt;br&gt;• Faster time-to-market</td>
</tr>
<tr>
<td>mainframe</td>
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<td></td>
</tr>
<tr>
<td>Moving testing off the</td>
<td>Enabling testing processes to occur on PC environments before the code is moved back to the mainframe production environment</td>
<td>• Reduce costs through greater testing efficiency and lower demand for mainframe resources&lt;br&gt;• Improve product quality&lt;br&gt;• Faster test cycles</td>
</tr>
<tr>
<td>mainframe</td>
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*Figure 3: Application modernization strategies enabling business transformation*
Application modernization strategies provide a low-risk, low-cost alternative that enables business transformation within banks.

Understanding what you have

Prior to the financial crisis, the banking industry had undergone a significant period of consolidation. Mergers and acquisitions generate a multitude of applications within an organization, with a high degree of duplication and redundancy. The first challenge in simplifying the infrastructure lies in understanding what is there in the first place. Inherent complexity and the sheer volumes involved can lead to significant challenges in making the right business and technical decisions.

Application Portfolio Management and Application Analysis tools give banks both the business and technical insight into their application portfolios. This provides vital information to identify redundant or duplicate applications at a business level, which can result in significantly improved productivity and efficiency within development teams. For example, when global bank HSBC recognized that simply maintaining existing applications occupied 90% of its development time, its capacity for product or services innovation was severely compromised. It utilized Application Portfolio Management to address the challenge.

Understanding the full application portfolio allowed HSBC to identify and remove duplicate and redundant applications. The change was dramatic. The bank’s IT function went from simply ‘keeping the lights on’ to focusing 40% of its resources on greater innovation.

Application Portfolio Management provides banks with the information necessary to make informed modernization decisions, providing input into strategic decisions to drive the bank forward and achieve business growth goals.

Migrating applications off the mainframe

Migrating business-critical applications off the mainframe is seen as an extremely effective application modernization strategy. Many organizations have achieved significant benefits that have contributed towards, or even led, business transformation initiatives. Application migration is most appropriate for mission-critical applications or for entire medium- and smaller-sized mainframe environments.

<table>
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<tr>
<th>Approach</th>
<th>Cost</th>
<th>Risk</th>
<th>Time to value</th>
<th>Competitive advantage (0 - 10)</th>
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</thead>
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<td>Modernize existing system</td>
<td>1x</td>
<td>Low</td>
<td>4 Months</td>
<td>10</td>
</tr>
<tr>
<td>Rewrite</td>
<td>4x</td>
<td>High</td>
<td>3-5 years</td>
<td>6</td>
</tr>
<tr>
<td>Package</td>
<td>10x</td>
<td>Medium</td>
<td>2-3 years</td>
<td>0</td>
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</tbody>
</table>

Figure 4: A view of the options considered by the CIO of a FTSE 100 organization
Application migration generates significant cost savings in the first instance and as a result, the ways in which an organization can use this method to transform its business are almost limitless. For example, the savings achieved can be re-invested to focus in areas of greater innovation, such as online or mobile banking. Other examples include releasing millions in operating costs to reinvest in improving the quality of customer service and competitive market position.

Figure 4 was developed by the CIO of a FTSE100 company to compare application modernization versus re-writing the company’s core systems or replacing them with an off-the-shelf package.

Clearly, modernizing the existing system was the lowest cost, lowest risk option, delivering value rapidly while maintaining the significant competitive differentiation that had already been built into the applications.

Whether using cost reduction to enable business growth, improve competitive position, increase customer satisfaction or improve time-to-market, migrating applications from mainframe environments is a proven application modernization strategy to enable bank transformation.

Migrating applications off the mainframe could be regarded as a significant business risk but increasing numbers of financial institutions are driving significant success and innovation through that very approach. A leading UK financial organization, currently in the process of shutting a mainframe environment down, is seeing the project proceed ahead of schedule and returning very positive results.

Moving the development process off the mainframe

As opposed to application migration, where entire applications are permanently moved off mainframe environments, alternative options exist for banks that want to maintain production environments on the mainframe. One option is to move the development of enterprise applications away from the mainframe and onto PC environments. There are typically three main application development and management processes that run on a mainframe environment:

- Development and unit testing
- Pre-production testing
- Production

Of the above, pre-production testing and production typically take up to 90% of mainframe processing power, resulting in development processes taking a prolonged time to complete which in turn leads to inefficient development and slow delivery of new features and updates. A mainframe developer often faces lengthy waits while a program compiles.

It is possible to move the development environment off the mainframe and onto a PC environment, with no requirement for code changes. Much more local processing power can be available to a developer, immediately resulting in improved developer efficiency, faster delivery of functionality updates and increased focus on product innovation.

Consider the case of a UK financial organization facing the following business challenges:

- Slow time-to-market in an increasingly competitive industry
- Increasing cost of developing new features
- Increasing application maintenance costs

Moving development off its mainframe environment saw productivity improvements of 30 days saved per developer per year, a substantial time saving. A 15% improvement in development time not only saved the bank $8 million per year, but enabled increased focus on product innovation as the savings were re-invested back into the business.

Moving the testing process off the mainframe

A high percentage of mainframe processing power, often around 45-50% of MIPS, is typically allocated to the pre-production testing process. Testing is obviously critical to an application’s stability and the amount of testing required can cause a bottleneck in the release lifecycle, lengthening the time-to-market for new products and services. Unfortunately the investment required in mainframe capacity to complete testing phases in optimal timeframes is significant, to the extent that reduced test case execution or extended timeframes are more typically adopted.

By moving testing processes off the mainframe banks can:

- Reduce the costs of key functional testing activities
- Complete testing phases faster, resulting in quicker time-to-market
- Improve quality through more extensive testing completed in a shorter timeframe

The costs saved within the testing process can be re-allocated to other areas of the business, such as increasing focus on customer service or product innovation, while faster time-to-market and improved product quality can improve competitive positioning.
Figure 5 further emphasizes the business impact of moving testing processes off the mainframe. The testing processes carry no risk of affecting production systems and can generate a very positive outcome on product delivery timescales. Additionally, moving integration, QA, system and user acceptance testing off the mainframe can generate significant cost savings. This is often an overlooked area for organizations that are keen to reduce costs and accelerate delivery with the lowest risk approach possible.

A Portuguese financial organization moved pre-production testing and developer tasks from the mainframe onto a PC environment, replicating the production test environment on Windows. The company saved 400 MIPS of processing power that had been allocated to testing, saving $400k per year. In addition, greater performance meant the organization increased the productivity of every QA and test individual returning an additional $800k per year cost saving. ROI was achieved within 10 months.

### Summary

For banks, ‘business as usual’ is dead, if it ever existed. Innovation, transformation and survival are the new watchwords. Banks that are prepared to embark on innovative change projects will benefit from increased market share, better customer retention and profitable business growth. The financial crisis has initiated a step-change in how banks do business and IT is a key enabler of this change.

The range of strategies that banks can adopt are already returning substantial benefits for the leading financial services organizations referenced in this paper. Application modernization is at the forefront of these, releasing valuable mainframe time and power. Planning modernization strategies with Application Portfolio Management can be a vital starting point. Migrating applications, or moving development and testing off the mainframe is

<table>
<thead>
<tr>
<th>Type of z/OS workload</th>
<th>Cost saving potential based on MIPS allocated to type of workload</th>
<th>Risk of negatively impacting production systems on z/OS</th>
<th>Positive impact on delivery timescales</th>
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<td>QA test</td>
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<td>System test</td>
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<td>User acceptance test</td>
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</table>
improving the productivity and effectiveness of these disciplines and releasing cost and development time for further innovation in products and services for business growth.

**Appendix**

**HSBC**

**Business Challenges**

Acquisitions had created a significant application portfolio for HSBC. 90% of its IT resources were dedicated towards simply maintaining and supporting these applications with little resource for innovation. In a competitive industry, demand was growing for new applications and services.

**Solution**

Application Portfolio Management

**Business Benefits**

- Resources focused on innovation up by 400%
- Faster development completion times
- Better team collaboration
- Improved standards and higher quality IT

**UK Financial Provider**

**Business Challenges**

A UK Financial Provider needed to improve the time-to-market of new initiatives significantly, reduce the cost of developing new features and reduce mainframe costs as well as remove bottlenecks in development processes.

**Solution**

Development was moved off the mainframe

**Business Benefits**

- $8m savings per year
- Significant improvement of developer productivity
- Modern development environment improves overall time-to-market

**Portuguese Financial Provider**

**Business Challenges**

A Portuguese Financial Provider needed to reduce the development and testing costs on the mainframe, while at the same time improve performance as well as QA and testing productivity.

**Solution**

Development and testing was moved off the mainframe

**Business Benefits**

- Upwards of $1,2million in yearly cost savings
- ROI in 10 months
- Greater performance and increased QA and testing team productivity

**References**

1. Banking CIO Agenda: Getting to Grips With Transformation, Gartner, 27 April 2010

**About Micro Focus**

Micro Focus, a member of the FTSE 250, provides innovative software that allows companies to dramatically improve the business value of their enterprise applications. Micro Focus Enterprise Application Modernization and Management software enables customers’ business applications to respond rapidly to market changes and embrace modern architectures with reduced cost and risk.