

Finding Solutions for Today's Challenges in the Insurance Industry



A Frost & Sullivan White Paper

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INTRODUCTION

The negative economic news that has battered the global financial sector, in particular, over the last year abated somewhat in late-2009. The credit crunch is still working its way through the system, and consumers are changing their habits after months of news of bailouts, rising unemployment, and the recession.

The struggling economy has affected all businesses, insurance included; net income in the U.S. property/casualty industry fell more than 80 percent in the first three months of 2009 year-over-year. It has affected the different pillars of the insurance industry in different ways, though, and to varying degrees. Life insurance companies, for example, are concerned with investment returns. For other companies, capacity and pricing are significant issues. These are coupled with the other issues that come with a macroeconomic slowdown, such as a surge in claims and an increase in fraud. Some of these issues and risks are unavoidable. However, during this time, insurance companies can evaluate and prepare for the current and future management of pressing issues. Proactive risk management and implementation can position companies to create more sustainable returns – a significant competitive advantage in a time when capital is limited.

Overall, however, the insurance industry has proven to be rather resilient, even in the wake of AIG's downfall, and especially compared to other companies within the financial services sector and other industries. The Dow Jones U.S. Insurance Index has risen about 70 percent since February 2009 after hitting a low that month. It has performed better than the Dow Jones Industrial Average since March 2009.

Insurance companies are still struggling though, preparing to face a new set of regulations, keeping up with customer demand and changing demographics, and upholding corporate social responsibility. The financial services sector, including insurance companies, has cut costs and is looking for efficiencies within its legacy systems. Companies need to continue to turn data into information, add flexibility, and consolidate disparate systems.

Managers and employees alike have been compelled to step back and assess their work environments and efficiency. This creates an opportunity for information technology (IT) managers to proactively contribute to advancing the business by examining their system's infrastructure and supply chain closely. IT must be aligned with business goals, reducing cost and doing more with less is the focus of businesses right now. With all of the changes in the insurance industry, there are undoubtedly areas that are underutilized, overpriced, and excessively complex. These can be addressed with a near-term solution that will not diminish any long-term benefits, like some ad hoc solutions or patches can in tight times. One possible near-term solution can be found with the mainframe. Though it may surprise some, by leveraging this asset, insurers can reduce the number of servers they have and rapidly increase utilization rates. Health insurance is currently a hot topic, but the solutions detailed in this paper span all segments of insurance – property & casualty, life, health, auto, etc.

Over the past several years, the use of distributed servers has grown as companies have expanded. In this new business climate, consolidation, efficiency, and savings are the imperatives. The mainframe is designed for this environment and has proven time and again its numerous capabilities.

Continued innovation is vital to manage and profit from the expected influx of new client expectations, new products, and new technology in the insurance industry. Technology and business integration are differentiators. Technological change can be part of business strategy, not something that simply enables strategy. A robust infrastructure is necessary to provide a unique and better value for customers. Companies must continue to invest in technology to support expanding channels and continue to chase efficiency.

THE INSURANCE INDUSTRY'S BUSINESS CHALLENGES

There are other business challenges, beyond the macroeconomic issues, which are more specific to the insurance industry that must be faced. Growth in this already large industry will be limited in the near term by corporate downsizing. Medical services and health are growth segments for insurance firms, but firms that had expanded into other financial services, such as securities and mutual funds, have been hit hard.

There is a significant need within the insurance sector to modernize systems and the development environment. Companies need a collaboration-based IT environment that is robust, dynamic, and agile. Current legacy systems in many large corporations are not equipped as well as they could be in order to meet current or new business requirements.

With so many applications running simultaneously in large insurance companies, and increasing volume and data loads, companies need to get more from what they have. Companies need to utilize what they have in place as part of a service-oriented architecture (SOA) infrastructure. First, they must assess what they can and can't use – do they have the right resources in place? Should they transform and avoid buying another package? They must think long-term as well; maintenance and enhancement costs of legacy systems can be high compared to what is reaped. Ultimately, they need improved functionality, portability, and scale. Today, many have server, staff, application, and process sprawl. SOA can lead to strong integration – connecting diverse pieces of technology.

Maintaining the right resources

All companies are operating leanly right now. The recession has forced layoffs and hiring freezes. Insurance company IT managers are concerned about maintaining the right resources right now, and in turn, the employees' ability to maintain the systems. Getting and keeping the right developers is crucial. Specific skill sets are needed, and companies may have to look outside if the system needs complex development.

Keeping customers by quickly satisfying demands

Customer demands are changing. Insurance companies are striving to achieve the best mix of communication channels to meet demands – whether it's email, chat, Web, phone, or other correspondence.

Of course, managing customer relationships is part of this. As insurance firms increasingly focus on enhancing their customer relationships, they may integrate call centers more tightly with the Internet, improve various aspects of the call center, and make better use of the Web as a sales and service channel. They may provide more communication choices to customers (particularly wireless), modernize or transform their applications, and attempt to offer the right product at the right price and service to the right customer at the right time. Given all of this, a system that is able to effectively and securely manage and organize customer data is key. A 360-degree view of the customer can unearth opportunities for upsell and cross sell of existing products and services, and introductions to new offerings. It can also identify the most profitable customers and help with retention.

IT spending

IT spending has decreased almost across the board, but certainly in the insurance industry. This is likely to continue in 2010. While this absolute spending is declining, risk and compliance-oriented projects and investments will remain a priority. Additionally, optimizing the customer experience will receive continued funding in order to drive revenue growth.

Compliance and regulatory issues

We are in the middle of vast change in business. The form which it takes and the affects it will have are still to be determined. Regardless, businesses will need to pay attention. While doing business remains the same, exactly how that business gets done may need to change. Of course, IT is integral in businesses, and the regulations to which they must comply can determine the technological solutions used.

Solvency II is the proposed European Union directive for insurance companies regarding capital requirements and related supervision. The legislation is meant to ensure the financial stability of the insurance industry, taking into consideration insurers' assets and liabilities. It also supersedes existing – and primarily country-specific – rules by using a more sophisticated approach to determining the market value of assets required to cover the risks to which they are exposed.

The timeline to achieve full compliance by 2012 remains tight. Companies will need to move forward with initiatives designed to ensure robust plans are in place to meet the deadline, as the new rules bring significant change. A well-planned approach could provide optimal capital and organizational and structural solutions.

In the U.S., there are also changes looming. There is the proposed creation of a new Consumer Financial Protection Agency, which will set standards and aim to protect and educate consumers. The new agency would largely exempt the business of insurance except for credit, mortgage, and title insurance. Principally, the U.S. insurance industry is regulated at the state level. There is some debate within the insurance industry over whether federal regulation is needed, or if stronger regulatory oversight of systemic risk is necessary before overhauling the regulatory structure of the insurance industry and other financial services sectors. Generally, state legislators and officials are becoming more at ease with the idea of modernizing regulation and allowing competition to determine rates. Recently passed laws in Connecticut and Georgia are examples.

These current reformation possibilities are in addition to other existing global insurance industry and business regulations, including Sarbanes-Oxley (SOX); Healthcare Insurance Portability and Accountability Act (HIPAA); CA SB 1386 and other State Privacy Laws; Payment Card Industry Data Security Act; FDA CFR 21 Part 11; FISMA (Federal Info Security Mgmt Act); EU Privacy Directives; UK Companies Act of 2006; and International Accounting Standards.

Mergers & Acquisitions

While the M&A market is currently in a lull, the insurance market is likely to pick up in 2010. As the economy stabilizes over the next year, there will likely be an increase in deals. Many insurance segments have experienced investment write-downs. Additionally, life insurance companies that had guarantees on variable annuities, for example, were hit hard by the market volatility. The losses have increased the importance of raising capital, divesting of non-performing or capital-consuming businesses, or seeking protection from better capitalized firms.

The integration process of a merger or acquisition is increasingly crucial. Uninterrupted service is required, and the focus should continually remain on customers.

IBM SOLUTIONS

Most large insurance companies today find themselves with a disparate mix of distributed servers and mainframes. The key challenge is to find the appropriate mix of these environments in order to address the challenges of the future in a reliable and cost-effective manner. The IBM System z platform can be used to consolidate many of the far flung systems, which will result in more effective and efficient use of all IT assets.

IT environments at insurance agencies are naturally complex. Reducing this complexity is a challenge for managers and has been compounded by other forces in today's business environment. This complexity can be reduced in a cost-effective manner through the proper mix of mainframes and distributed servers.

The proper infrastructure is necessary to support an industry that has information and data at its core. The IBM System z platform has the strength needed in today's new insurance industry. The System z can be used right now for operational efficiency and expense savings. Additionally, insurance companies can use their already-owned legacy application-based mainframes and transform them by taking advantage of their built-in critical functions. Companies are centralizing their back office operations; they realize that the advantages offered by the mainframe in scalability, resilience, recoverability, and security are becoming more critical every day.

IBM insurance solutions are built with a services-oriented, architecture-based insurance framework. The framework provides a robust SOA software platform, insurance process

and data models, best practices, and insurance-specific software extensions to help insurers move to a more strategic and simplified IT infrastructure. Framework-based solutions take advantage of the high performance, scalable computing capabilities provided by the IBM System z platform.

What the Mainframe Can Do for Insurance Companies

There is always pressure from several sides on the IT executive. While they must control costs, there is also pressure to maintain and increase system efficiency. The mainframe can be the platform of choice for insurance companies because of its many advantages. The mainframe can be part of an appropriate mix, providing a more efficient use of a company's IT assets. Server sprawl can be reduced, which in turn improves the distributed environment utilization and increases mainframe utilization. This drives down the cost of each incremental piece of new workload. In addition, the mainframe provides high availability, strong business continuity, deep levels of security, high system utilization rates, and strong and consistent performance.

The IBM mainframe improves data capture, retention, and access. Improved modernization tools make it much easier to publish back office data as Web services. This greatly increases the flexibility of the mainframe technology for employee and customer access to relevant data and, subsequently, increases short- and long-term customer loyalty.

In-house resources can often be leveraged. The Rational z development interface is simple to use. Finding the right resources – the right coder, the right developer – is not a significant problem today, particularly if there is a willingness to train staff. Additionally, Java is portable to all platforms, making transitions smoother.

Companies that oversee and process thousands of transactions a day cannot afford a second of downtime. The mainframe's reliability helps to ensure uninterrupted business. The current situation in the majority of large insurance companies is a distributed environment with several small servers doing duplicate work. This server sprawl leads to staff sprawl – on-going care and management caused spikes in staff numbers until recently. IT departments also end up spending time supervising existing workloads instead of delivering innovative business services. This becomes more difficult after many companies have laid off staff members.

Insurance companies must develop or keep up an environment where applications can be assembled into solutions and managed in a common and consistent way – especially when the solutions consist of mixtures of old, mature, and young software. The server sprawl results in spiraling costs, complexity, and the dilution of service levels. The mainframe on the other hand is a nearly ideal hosting platform for businesses that have and are struggling to integrate multiple, disparate software solutions. The sheer amount of data an insurance company gathers can be searched and used for opportunities – especially if it is consolidated and therefore able to be cross-checked.

To achieve growth, insurance firms will focus on a few key business drivers, including customer relationships, distributor relationships, new products, and mergers/acquisitions. Leveraging existing systems can help companies in two ways: it saves on spending while allowing growth and affording new opportunities. Mining the enormous amount of data that insurance companies have on hand can lead to new relationships and company success. Savings is crucial, but strategies for growth are just as, if not more, important.

Many companies do not utilize virtualization to the extent that they could to reduce capital and operating expenditures. Substantial savings can be realized by consolidating servers with virtualization technologies. The total capital outlay is often less, and extended warranties and maintenance contracts costs are lower since there are fewer machines. Additionally, operating costs are lower because the total power usage is less.

Migration

Linux has the ability to run on System z, and it can be leveraged to consolidate core processors and run several distributed workloads. Migrating workloads among platforms can be a complex undertaking for any business, however. There should be a process established in order to face challenges that may surface during a migration. The size of the project, the timeline, and the associated costs should be considered, in addition to any possible risks. Many customers, particularly those using Unix, typically have a substantial installed base of custom applications and will need to weigh the benefit of a migration. The payback must be justified in an acceptably short period of time.

The first step in a successful migration is an analysis of systems. This step includes an assessment of the current server and application baselines provided. Subsequently, a high-level technical and financial roadmap should be developed, which identifies optimization opportunities within the current environment. This can clarify the next steps for consolidation and virtualization on System z. Approaching the migration in this way eases the transfer of workloads to Linux on System z. Linux is pervasive in business currently; it is a standardization layer that offers both an attraction and a strong value proposition for customers. The recent economic crisis has likely moved adoption of Linux forward given its low-cost nature and the accompanying availability of no-cost Linux solutions.

Overview of System z's Capabilities

Use of a mainframe is a strategy in itself. Its capabilities are considerable, and when paired with Rational for z software, it can be customized to each business to solve specific problems. System z has nonfunctional requirements and technology that exists nowhere else – it is truly unique. This enables the System z machine to outperform others with its large-scale processing ability.

Rational software and System z can help when staff has been reduced. It centralizes vendor contract management, which enables ease-of-use. A 360-degree view of the customer can lead to improved employee responsiveness and, ultimately, more satisfied customers. System z provides an effective information infrastructure that allows different applications,

databases, and devices to access the same information in real time and provide all users with consistent, trusted information. When an employee can access a customer's records and solve their problem quickly, the customer has a better experience.

The System z also provides consistent back up and recovery. This decreases overall audit and security costs. And it can operate uninterrupted and smartly to back up an entire system; it has unparalleled storage and application capacity.

Scalability

An SOA-based core framework can not only protect, but grow new workloads on an IBM System z platform. This scalability can improve a company's ability to manage future growth. It has capabilities to handle up to 9,445 business transactions per second based on more than 380 million accounts with 3 billion transaction histories – a world record. System z also supplies flexibility for SOA. SOA in turn provides the ability for the mainframe to offer new capabilities that solve a new set of business problems, such as the ability to offer older functionality to a more diverse and expanded consumer community.

Systems consolidation and simplification

A centralized data center can decrease risk. The mainframe can be used to decrease reliance on scattered infrastructure. Several virtual servers inside the mainframe have a great deal more power than smaller, stand-alone servers. System z helps enable firms to consolidate and tightly integrate multiple workloads on a single server with centralized systems management, reducing overall infrastructure spend. It is the only platform that can, and regularly does, support hundreds or thousands of servers with low maintenance costs.

Adding capacity also has a low marginal cost. The mainframe employs Extreme Virtualization that has been honed for more than 40 years, and is the result of synergies between hardware and software functions.

Integration can start with building high-value but inexpensive links between multiple silos of information. For example, contract databases, sales and compensation systems, customer relationship management (CRM) data warehouses, and other siloed systems formerly spanned a range of the company's business-focused products. Centralizing this information in one accessible repository is a big step forward. It facilitates analyses that can uncover opportunities for improving revenues. The value comes from integrating information at key points, not from creating new systems.

The mainframe is easily managed with the IBM Tivoli Service Management Center for System z (SMCz). It delivers service management capabilities that allow companies to effectively manage large, complex IT enterprises end-to-end. This includes large-scale and distributed computer systems and complex interconnected networks that support all service and support aspects of their business. It reduces the complexity of IT infrastructures and increases business performance. It is a new approach to business and IT service delivery that integrates and aligns IT and business objectives. SMCz is designed to take advantage of the inherent strengths of both System z hardware and software,

thereby providing unmatched systems availability and reliability for today's business-critical applications.

The new enterprise data center starts with simplification but ultimately deploys virtualization, management, and automation end-to-end across server, storage, and networking infrastructures. The cornerstone for this is the System z mainframe. It provides up to 100 percent more performance, up to 100 percent utilization, and requires 20 percent less energy than competitive IT environments. System z is one of the most powerful tools available to reduce cost, energy, and complexity in today's data centers. The mainframe's unique virtualization environment with dynamic policy-based management and "just-in-time" capacity management provides value-added benefits that allow for extensive end-to-end management of an entire enterprise.

Cost savings and energy efficiency

The System z mainframe can decrease overall floor space used and cooling costs. The energy saved can also be a key part in a company's green initiatives. IBM's System z platform uses advanced virtualization capabilities to consolidate physical servers and boost resource utilization; it can process an incredibly high number of transactions per kilowatt, making it one of the most energy-efficient platforms in the world. IBM System z mainframe servers are the cornerstone of a dynamic infrastructure that helps transform IT to take advantage of our smarter planet, where systems are becoming increasingly interconnected, instrumented, and intelligent.

Security

Security in today's electronic world is difficult to achieve, particularly in a distributed server environment. With its leading-edge security technologies, including high-performance cryptography and supporting middleware, System z enables the efficient processing of insurance policies and claims in a continuously available and resilient environment. It enables high-volume encryption and management of archived data for remote-site archiving. This helps an insurance firm's audit, privacy, and compliance of personally identifiable information. IBM's Geographically Dispersed Parallel Sysplex (GDPS) solution for z/OS mainframes allows for ultra-high-tolerance capability and for near-continuous operations.

Mitigating risk for the enterprise

The security-rich holistic design of the IBM mainframe can mitigate the risk of security breaches and help protect an organization's brand image – and bottom line. Originally designed to be shared by thousands of users, the IBM mainframe has security built into nearly every level of the computer – from the processor level, to the operating system, to the application level. This design helps protect System z from malware, viruses, and threats from insiders.

APICIL, a leading financial services and insurance company in France, was able to extend its customer focus with an IBM CRM solution. APICIL offers personal insurance and corporate and personal pension plans. It covers more than 1 million personal policy holders and more than 50,000 companies. APICIL had been growing rapidly, merging with other groups including IGIREL and UPESE. Faced with disparate IT infrastructure, it needed to

consolidate its systems and improve operational efficiency and customer service across the entire combined organization. A key part of this initiative was to build a unified approach to CRM.

APICIL decided to have its existing IBM eServer zSeries 800 platform support the new CRM solution because it simplified IT administration, while providing outstanding reliability and availability. APICIL also realized that if it had run the application under UNIX, an investment into new servers would have been required. Operating the IBM zSeries allowed for the new application to run alongside the existing z/OS workload, with processing resources dynamically switched between applications to support high utilization.

Additional applications have been migrated to the z800, where their proximity to the CRM application has made queries and reporting even faster than before. A number of Web servers from Microsoft NT systems have been consolidated onto the zSeries, which has further cut administrative workload and reduced licensing fees. Because of the high scalability offered by the z800, it is likely that further systems will be consolidated in the future.

Summary

Insurance Industry Problem

Maintaining the right resources

Keeping customers by quickly satisfying demands

IT spending

Compliance and regulatory issues

Mergers & Acquisitions

IBM System z Solution

Ease-of-use, management, application writing

Security to react to big fluctuations in demand when catastrophes or market changes occur

Scalability provides 24-hour availability as insurers globalize and customer services move to 24/7

Scalability, leveraging existing assets, and fully utilizing capacity

Secure customer data in the current and future regulatory climate

Unrivaled capacity to take on additional work while ensuring business continuity

Case Study: IBM Mainframe Makes it Possible

Nissay IT Technology

Overview

Nissay IT Technology places System z at the hub of Japan's largest life insurance company. The results include more efficient processing, reduced costs, and a platform for future business deployment.

Challenges

Nissay IT Technology is the strategic IT subsidiary of Nippon Life Insurance Company, which is the largest life insurance company in Japan. They design and develop information systems for Nippon Life Insurance and other group companies. They also maximize this know-how to deliver solutions for the insurance and financial industries.

The life insurance market in Japan became drastically competitive in recent years and, even though Nippon Life is the leading company, this competition forces them to constantly change – they cannot afford to sit back and observe.

Nippon Life Insurance's challenges were product development-centric, based on changing customer needs and the diversification of sales channels. To address those issues, Nissay IT had to leverage system capability, while also reducing running costs as much as possible. That is, they were required to overcome contradictory issues.

System z and the infrastructure fabric

Nippon Life Insurance has approximately 2,000 offices in Japan with about 60,000 sales people working out of them. They had a mid-term plan to renew their system using a Web technology-base, because they needed to meet an increasing workload demand. As part of this renewal, they assumed that the per-second transaction volume would increase. So, from a capacity standpoint, they considered deploying on the System z990.

While considering an upgrade to the System z990 and z/OS version 1.4, they found out they could reduce the running costs of the software by utilizing the Workload License Charge. They then included this in their proposal to Nippon Life Insurance, which was accepted.

System z flexibility

They also implemented the Intelligent Resource Director (IRD). By optimizing the allocation of CPU and input/output (I/O) automatically according to the workload, the IRD can change the weight level of the CPU in accordance with the scale of the batch transactions – for instance, large in the daytime and small at night. In other words, they are utilizing the IRD so that it uses few resources to respond to many transactions.

Infrastructure simplification

The existing system at Nippon Life Insurance was operating a Coupling Facility Model (CF) on external hardware. But with the System z990, they deployed an Internal Coupling Facility (ICF), therefore eliminating the need for the external CF, meaning reduced hardware costs.

The ICF duplexing supports higher security, and it contributes to cost reduction because the old hardware was removed.

Application integration

On z/OS Version 1.4 they are running IMS Version 7, DB2 Version 6, and CICS TS 2.2. In particular, the DB2 is useful to them as a main database product, so they plan to utilize it in several different ways.

Future business deployment

When it comes to using the cutting-edge features of the z990, Nippon was the first in Japan to use the Intelligent Resource Director with the Workload Manager in this configuration. It created a cutting-edge system that improved their image and implementation skills.

In the near future, Nippon plans to better utilize System z's hardware and software by taking advantage of its open environment, including Linux®.

CONCLUSION AND NEXT STEPS

Information and well-designed and integrated business processes are crucial to thrive in today's insurance industry. Hardware and an OS must work in conjunction and work smartly, from the bottom up, to back up and protect the core of a business: information. The IBM System z platform keeps information safe, available, and accessible, and maximizes its value. The IBM System z is multifunctional, and most companies can leverage the mainframe system that they are already using to process crucial data. They have capacity that can be useful in storage, applications and other functions, heretofore not necessarily recognized as a mainframe function. With System z architecture, data center complexity can be dramatically reduced, and employees and agents can focus on business and revenue goals. This is critical today, given the economic climate and new state of industry. Maximizing operating budget and increasing revenue are chief objectives for managers in the short-term. Using the System z to streamline operations can restore health quickly and set up an organization for sustainable growth in the long-term.

The insurance sector needs to be prepared for the bounce back. Modernization of systems is a key to being ready. In a recent *Forbes* survey, executives at large companies are anticipating a very robust economic rebound by 2012. These executives have already begun investing in technology, new products and services, and marketing initiatives, in order to maintain their strength.

Outdated systems abound in the insurance industry. Though they can take time and use resources, they ultimately restrain a business' competitive edge. Additionally, companies should be prepared to evaluate financial reporting competencies, information technology controls, risk assessment procedures, and documentation. And finally, they need to anticipate next-generation financial reporting. The U.S. Securities and Exchange Commission has mandated that by 2011 public companies use Extensible Business Reporting Language

(XBRL), an interactive data format, to report their financials. Also, convergence between International Financial Reporting Standards (IFRS) and U.S. Generally Accepted Accounting Principles (GAAP) is on the horizon; firms can be proactive in educating staff and planning for the eventual implementation.

The IBM System z enables mission-critical systems to run faster, more efficiently, and more reliably – and, most importantly, in a way that solves current business problems. The mainframe has been the backbone of the insurance industry for years, and will continue to be the model for business applications and the core system for many of the world's largest companies. For total cost of ownership, the mainframe is the most cost-effective way of processing transactions. Transferring mission-critical applications and data off a mainframe is not a viable option for most business-focused IT leaders. The inherent scalability, reliability, and security of the mainframe continue to be key determinants for the ongoing use of mainframes in large insurance companies worldwide. While there are some who may still consider the IBM mainframe an outmoded type of technology, the System z platform has managed to evolve as an architecture that can withstand the rigors of demanding applications while maintaining system integrity, security, and peak performance.

This paper outlines the benefits possible for insurance companies in using the System z platform and application software. However, learning about the platform and deciding if transforming your systems is necessary is only one step in the process. Assessing, planning, testing, and long-term management are all equally important. The approach is likely to differ slightly across the pillars of the insurance industry and in individual companies. However, all insurance companies are currently focused on similar issues, as discussed in this paper: keeping up with customer demands, finding the right resources, and managing changes in compliance. Additionally, ongoing support and management cannot be overemphasized; a knowledgeable and experienced partner such as IBM is needed for continued success.

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