

## Microsoft Application Platform: Spotlight on Cost

**Add Value and Save on Costs with the Microsoft Application Platform**

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**Summary:** Many organizations are finding themselves having to deal with difficult challenges in a tough economic climate. A key factor in addressing these challenges is to reduce costs and drive efficiencies, and Information Technology departments are under increasing pressure to maximize the return on IT investment and get the best possible value from new and existing systems. This white paper describes ways in which organizations can use the Microsoft Application Platform to add value and save on costs.

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## Key Issues for Businesses in Today's Economy

Companies are finding that the tough economic climate has brought a number of issues and challenges that they must address in order to remain competitive and survive. Reductions in sales revenue caused by reduced customer spending, and dramatic changes across some industry sectors, in particular financial services and retail, mean that companies face a stark choice between taking action to protect their position or being swept aside. At every turn, business executives need to strive and find the right balance between cutting costs and increasing efficiency and productivity on one hand, and fostering innovation and growth on the other. Key challenges include:

- **Pressure to reduce costs** - One of the key challenges that businesses face today is the increased pressure to drive costs down. Reduced revenues and an increasingly competitive market mean that in many organizations, every penny spent must be scrutinized and justified. Executive boards are seeking ways to avoid new expenditure, and reduce ongoing costs
- **Consolidation through rationalization** - As more companies struggle for survival, an increase in acquisition and mergers has resulted in a large number of corporate takeovers resulting in and new, consolidated companies. This rationalization brings challenges for business managers and IT administrators who need to integrate and optimize disparate systems and operational procedures with minimal disruption to the business.
- **A need for greater productivity** - In many companies staffing coverage has been stretched thin and budgets are tighter than ever. There is a need to maximize return on investment on every project, eliminate the non-essential projects, and make every employee as productive as possible.

This white paper discusses how the current economic climate is affecting businesses and how the Microsoft Application Platform can help companies cut costs, drive more revenue, and maintain agility in a downturn economy.

## Key Issues for Information Technology Executives

The business challenges of the new economy have huge implications for IT executives. The actual proportion of corporate spending on IT varies across industries and specific companies, but in all organizations there is pressure to reduce IT expenditure and ensure that every dollar spent on technology has a positive return on investment for the business as a whole. In many organizations, IT services are perceived to be expensive, and the benefits they bring are often seen as intangible at best. A 2008 survey by Forrester Research<sup>1</sup> found that more than 40 percent of large company IT departments had their budgets cut. IT executives must make strategic decisions to reduce IT spending overall, while making sure that any investment they do make can be demonstrated to be effective in reducing costs elsewhere and adding real business value. Key challenges for IT executives include:

- **Reducing IT costs through standardization and consolidation** - Many IT departments have a history of buying "best of breed" from multiple IT vendors. This means there are many platforms, tools, applications and vendor agreements in place which can create significant long-term maintenance cost overhead. To address this issue, many organizations are moving to a standardized model to cut costs and streamline operations. According to Forrester Consulting, 75% of IT leaders across 412 companies in North America, Europe, Asia-Pacific, and Latin America anticipate a shift toward application platform consolidation, with 41% of respondents saying their application consolidation strategy is currently under way<sup>2</sup>.

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<sup>1</sup> [Forrester Research: The State of IT Services: 2008](#)

<sup>2</sup> [Forrester Consulting - Application Platform Optimization Study 10-2007](#)

- **Accelerating business-driven change** – In volatile market conditions, business need IT systems that are flexible enough to be quickly adapted to new opportunities and processes. To achieve this flexibility, IT executives must make strategic investments in technology platforms that can support the rapid development and deployment of new systems and the integration of applications and data stores when an acquisition or merger results in a need to consolidate systems from different businesses or departments.
- **Enabling employees** - As businesses demand greater productivity from employees, IT must shoulder a share of the burden of empowering those employees to make better business decisions and reducing the amount of time they need to spend performing day-to-day business tasks. IT solutions that can deliver key business insights to employees as they go about their daily jobs can help them make informed decisions quickly, and take action that benefits the business. Application platforms that provide an integrated interface that focus on enabling employees to perform business tasks rather than requiring that employees become familiar with multiple individual systems can make a significant contribution to streamlining business processes.

By investing in the *right* IT technology, businesses can actually both cut costs and deliver more value. A McKinsey Quarterly study found that “Investments in technology-enabled business processes can deliver up to ten times the impact of traditional IT cost reduction efforts”<sup>3</sup>



### Delivering Business Value with the Microsoft Application Platform

The Microsoft Application Platform is an end-to-end software platform that can help you reduce costs, provide a flexible and adaptable IT infrastructure, and empower employees. By making a strategic investment in Microsoft technologies, you can help your business face the challenges of these tough economic times and survive in an increasingly competitive business landscape.

Built on the solid, reliable foundation of Windows Server, the Microsoft Application Platform gives you enterprise-capable database and business intelligence capabilities through Microsoft SQL Server, flexible business process and application integration capabilities through Microsoft BizTalk Server, and the ability to create robust, highly functional business solutions quickly with Microsoft Visual Studio development tools. When combined with Microsoft technologies such as Microsoft Office productivity tools and SharePoint technologies, the Microsoft Application Platform enables you to dramatically reduce operational and application development costs, integrate data and applications across your enterprise, and deliver business insights and productivity enhancing features through flexible and familiar application and tools

<sup>3</sup> [The McKinsey Quarterly: Managing IT in a Downturn: Beyond Cost Cutting - September 2008](#)

## Lowering Costs with the Application Platform

Rationalizing IT systems by standardizing on a limited set of applications and platforms provides better economies of scale in terms of reducing ongoing maintenance, support, licensing and training costs. Standardizing on a common set of technologies enables greater system interconnectivity and reduces the tangle of “spaghetti” connections between different applications representing numerous business processes. A Forrester study found that the large majority of survey respondents are anticipating or have a convergence program underway:

*With about 75% of respondents answering yes to the question, “Do you anticipate a convergence of these application infrastructure capabilities including business intelligence, application servers, development tools, portals, integration, SOA, and BPM to occur within your organization?” the study findings suggest that the trend is toward convergence of application platform software<sup>4</sup>*

When choosing a platform on which to standardize, you need to consider the breadth and depth of capabilities that platform offers while also evaluating the initial cost and the ongoing management and development overheads that investing in that platform will incur. It is important to think holistically about your platform investments and strategy, since performance is optimized by the interaction of all parts, not how they work separately. The Microsoft Application Platform lowers IT costs by providing an affordable integrated and interoperable set of mission-critical infrastructure, applications, servers and development tools

The Microsoft Application platform provides technologies that span the entire infrastructure of your organization, from highly scalable and secure back-end server systems for data warehousing and business intelligence, to information worker applications and mobile device solutions. All of these technologies can be seamlessly woven together into a single business ecosystem through the Microsoft .NET Framework and integration technologies such as the Windows Communication Foundation (WCF) and BizTalk Server. In addition to compelling licensing arrangements that reduce the cost of your initial investment in Microsoft technologies, the comprehensive manageability capabilities that are built into the platform, combined with a massive global community of Microsoft technology professionals and support services helps reduce the TCO of the platform by minimizing the ongoing operational and development costs.

## Reduce IT Operational Costs through Increased Productivity

Your employees are your most important asset, and also your highest cost. Figure 1 shows that more than one-third of IT operating budgets are devoted to full-time staff. As a result, driving productivity enhancements is one of the most impactful things a CIO can do when trying to reduce costs.

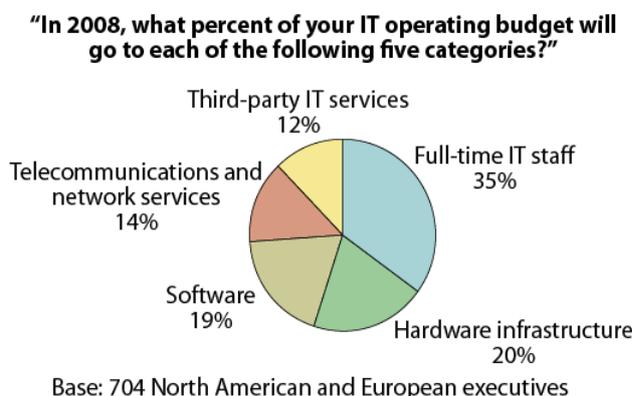


Figure 1: Source: Forrester Research – State of Enterprise IT Budgets: 2008

<sup>4</sup> [Forrester Consulting - Application Platform Optimization Study 10-2007](#)

The Microsoft Application Platform gives IT staff the tools they need to be the most effective. Microsoft has the largest ISV and partner ecosystem and invests billions in readiness, training and community so that your staff can be productive, skilled, and prepared. The Microsoft Application Platform maximizes your employee technology skills, enabling your company to leverage its existing Microsoft IT skills – reducing the need for specialist consultants. Hans Peterson, DIWICON-M Product Manager at CASON Engineering observes:

*“What we’ve learned from experience is that the technology platform from Microsoft is the strongest foundation on which to build our offerings. It’s a homogenous environment and all our developers are trained in the toolsets required. And, best of all, Microsoft keeps improving their product to keep us ahead from a technical standpoint.”<sup>5</sup>*

### Reducing Data Storage Costs with SQL Server

SQL Server provides an enterprise-class database solution with built-in business intelligence capabilities. With SQL Server, you can provide a highly scalable, secure database solution with high-availability and data recoverability while still reducing costs and maximizing the return on your investment. When evaluating the total economic impact of upgrading to SQL Server 2008, Forrester calculated a three-year, risk-adjusted ROI of 162% with a payback period of six months after implementation (of SQL Server 2008)<sup>6</sup>.

#### Database Server Manageability

Data stores are a key part of any IT infrastructure, and the cost of managing those data stores can be significant. With SQL Server 2008, you can improve the productivity of your database administrators (DBAs), enabling a single DBA to manage more database servers through proactive policy-based management, multi-server administration capabilities, and database maintenance task automation.

With SQL Server, database administrators can use a single, comprehensive management interface to manage all aspects of multiple database server instances across the enterprise. They can define centralized management servers, enabling them to run administrative scripts on multiple servers at the same time, and they can use the SQL Server Agent to automate day-to-day database maintenance operations on multiple servers. This centralized management and automation capability significantly reduces the management overhead of your database servers, enabling fewer DBAs to manage more servers.

Additionally, new policy-based management capabilities in SQL Server 2008 enable administrators to define configuration policies and apply them to database servers throughout the data centers in the organization. This proactive approach to server configuration management reduces downtime and administrative overhead due to non-compliance issues, and makes it easy to enforce consistent configuration across servers.

#### Database Server Consolidation

An increasingly common approach to reducing IT costs is to consolidate server applications onto fewer physical servers in order to take advantage of spare server capacity and reduce hardware, power, cooling, and real-estate costs. SQL Server provides a number of options for server consolidation strategies:

- **Consolidate multiple databases in a single instance of SQL Server** – You can host multiple application databases in a single SQL Server instance, significantly reducing administrative overheads and reducing software licensing costs. SQL Server 2008 Enterprise Edition supports server hardware with up to 64 CPUs and the maximum amount of RAM

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<sup>5</sup> [Engineering Firm Builds Mobile Tracking Technology for Romanian Postal Workers](#)

<sup>6</sup> [Forrester Consulting - Total Economic Impact of SQL Server 2008 Upgrade](#)

supported by the operating system, giving you access to the hardware resources needed to support multiple mission-critical databases. Additionally, Resource Governor in SQL Server 2008 Enterprise Edition enables you to control hardware utilization by defining limits for specific workloads. This ability to proactively manage database workload resource usage enables you to provide predictable application performance and prevent runaway queries in one database from affecting performance in another database on the same consolidated server.

- **Consolidate multiple SQL Server instances on a single physical server** – SQL Server supports multiple instances on a single server. You can install up to 16 instances of SQL Server Standard Edition, and up to 50 instances of SQL Server Enterprise Edition on a single computer. This approach maintains isolation between database server instances for security and manageability purposes, while reducing the number of physical servers that need to be provisioned and managed.
- **Consolidate through virtualization** – You can use Microsoft Windows Hyper-V virtualization technology to host multiple virtual database servers on a single physical server. This approach provides complete server isolation while giving you the benefit of application portability, enabling you to move virtual database servers from one physical server to another in order to address changing workload patterns or to perform physical server maintenance. You can also take advantage of special SQL Server Enterprise Edition licensing, which permits you to license the processors in the physical server and install an unlimited number of SQL Server Enterprise instances in virtual machines on that server.

Consolidation can bring significant savings. By consolidating 40 servers to 5, MaximumASP reduced electrical power by 50 amps and licensing costs by \$7,000 annually. With Hyper V they plan to consolidate 200 servers with a hardware savings of up to \$350,000<sup>7</sup>

#### **Reducing the Cost of Physical Storage**

One of the key cost-saving features in SQL Server 2008 is the ability to use data and backup compression to reduce physical storage requirements. Sven Otromke, SAP System Manager at TÜV® NORD Group, one of Germany's largest technical service providers, comments:

*“SAN storage is very expensive compared to other forms of storage. So far, our average compression ratio with SQL Server 2008 has been 63 percent, so we expect that we will be able to reduce the size of our databases by almost two-thirds. This means what normally costs us about \$100,000 per year in storage will cost us only \$35,000. By compressing our databases, we can also reduce I/O, energy costs, and data center space requirements. And we'll be able to realize more efficient backup and disaster recovery strategies.”<sup>8</sup>*

In addition to saving money on disk hardware, data compression delivers improved performance because it uses disks and memory more efficiently. Compressed backups run more quickly because fewer disk writes are needed and because you can use backup compression on data that is already compressed in the database to achieve even greater savings in time, disk capacity, and electrical demand.

#### **Reducing Software Development Costs**

While many business tasks can be addressed with off the shelf software applications, most large businesses rely on developers to create custom line of business applications. The Microsoft Application Platform provides the .NET Framework – a comprehensive library of technologies that form the building blocks of a highly flexible, reliable, and secure application infrastructure. .NET

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<sup>8</sup> [New Data Warehouse Improves Access to Key Business Data, Reduces Costs by 50 Per Cent](#)

technologies such as ASP.NET, ADO.NET, Windows Presentation Foundation (WPF), Windows Communication Foundation (WCF), and rich Web application technologies like Ajax and Silverlight give developers the ability to quickly create highly functional business applications that provide a rich user experience with minimal development costs. Ravi Bagal, Vice President of Retail Markets at Software as a Service (SaaS) provider Edgene, puts it like this:

*“We feel that the Microsoft Application Platform gives us a distinct advantage over our competitors. It allows us to go to market quickly, it allows us to be more efficient and it allows us to get more done for less money.”<sup>9</sup>*

Of course, a great software development platform needs great tools to promote productivity across your development team. The Microsoft Application Platform can make developers more efficient by leveraging team-based tools and servers to ensure all roles work together. You can streamline your development costs by using Visual Studio Team Suite (VSTS) and Team Foundation Server (TFS) in conjunction with productivity tools such as Visual Studio 2008 (VS 2008).

VSTS gives your developers the tools and platform to create any solution rapidly and at lower cost; and provides agile development methodologies that align development efforts closer to business priorities, helping with project management capabilities, automated testing, automated builds, and deployment capabilities. Complexity and risk of custom application development is minimized through an environment that promotes integration between business analysts, architects, developers, testers and system administrators. By using Microsoft Visual Studio Team Foundation Server, Dell was able to consolidate its source code onto fewer servers, redeploy 100 system administrators, and improve the productivity of its developers. They realized an ROI of 225% in 6 months.<sup>10</sup>

## Accelerating Business-Driven Change

In challenging times, businesses need to be able to adapt quickly to changing market conditions and take advantage of new opportunities. Increasingly, businesses need to integrate systems with partners and newly acquired companies, so your IT infrastructure needs to be flexible enough to incorporate a diverse range of data stores, software services, and business processes as and when required.

### Data Integration

SQL Server 2008 Integration Services (SSIS) provides a comprehensive platform for extract, transform, and load (ETL) operations. With SSIS, you can create software packages that connect to diverse data stores such as SQL Server, Oracle, DB2, Teradata, and others to extract data, perform an extensive range of transformations to that data, and load it into a destination data source. This makes it easy to migrate data from one system to another as part of a consolidation or rationalization solution, or to create and populate a centralized data warehouse for reporting and business intelligence applications.

### Service-Oriented Solutions

Service-oriented architecture (SOA) is the term used to describe an increasingly popular way to integrate applications through programmatic service interfaces and communication across networks using well-known protocols and message formats. Microsoft has been at the forefront of the movement towards SOA-based solutions, and has been an active participant in the development of standards for SOA development. WCF-Windows Communication Foundation provides a flexible, .NET-based framework for building service-based solutions, enabling your developers to quickly

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<sup>9</sup> [Software as a Service Provider Lets Shoppers Furnish Homes in an Online 3D World](#)

<sup>10</sup> [ROI Case Study Microsoft Visual Studio Team System Dell](#)

integrate applications and business processes in disparate systems. By using industry-standards to define service interfaces that abstract application logic from the clients that use it, distributed business services can communicate with one another with no knowledge of internal implementation details, making it possible to implement application ecosystems that connect business processes across multiple systems, regardless of the technologies used to develop them. Franc Stratton, IS Consultant and Lead Architect at Tennessee Department of Human Services claims:

*"I estimate that a service-oriented architecture based on the .NET Framework will lead to at least a 25 percent improvement in time-to-market and associated development costs. We're rapidly moving into the orchestration business, where we'll focus on implementing business logic using existing services."<sup>11</sup>*

### **Business Process Automation and Integration**

One of the key issues in many organizations is a proliferation of applications and back-end systems required to perform business processes. Employees often need to use multiple user interfaces to interact with data in multiple applications, reducing productivity and increasing the risk of inconsistency between systems. Process automation is one of the most effective methods for increasing efficiency because it eliminates the need for manual data processing. This not only boosts productivity across the organization, but it also reduces potentially costly errors associated with double entry and process duplication.

Microsoft BizTalk Server provides a way to implement a service-bus that controls business process workflow and integrates the various components and services involved in business operations. By enabling companies to automate business processes that span systems and platforms, BizTalk Server 2006 R2 facilitates improved collaboration throughout the organization and the extended supply chain. For example, with native support for Electronic Data Interchange, BizTalk Server 2006 R2 enables streamlined transaction processing and enhanced communication with suppliers and trading partners, making it possible for companies to achieve true, end-to-end supply-chain integration.

With Microsoft BizTalk Server 2006 R2, companies can quickly create composite applications that link legacy systems with line-of-business applications. These composite applications are an inexpensive alternative to complex integration projects and can yield immediate cost savings in situations where employees spend extra time switching between multiple systems.

After using BizTalk Server to automate business processes and integrate with partner systems, Matt Dewig, Manager of Web Applications at Accuride said:

*"With the solution we have in place now, we'll enjoy great flexibility and agility in making changes or supporting additional transactions, As Microsoft continues to extend the integration capabilities of BizTalk Server to support new standards, we'll be able to easily take advantage of those capabilities without having to learn any new technologies or tools."<sup>12</sup>*

### **Increasing Employee Productivity**

Ultimately, a business's success depends on the ability of its employees to perform their roles efficiently and to maintain a high enough level of productivity to maximize the value they generate for the company. Intuitive, integrated IT systems that deliver the business insights employees need to make the informed decisions quickly, and enable them to perform tasks effectively can be a significant factor in increasing the value added by each employee. Conversely, organizations that rely on

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<sup>11</sup> [State Department Chooses Microsoft Software to Make Better Use of In-House Expertise](#)

<sup>12</sup> [Vehicle Parts Manufacturer Streamlines Production and Delivers New Customer Value](#)

multiple unconnected systems with inconsistent user experiences can be detrimental to employee productivity and reduce their effectiveness.

### Microsoft Business Intelligence

Microsoft Business Intelligence (BI) can help your company see what's driving their business or holding it back, assess and address inefficiencies, and compare the magnitude of problems. A properly integrated business intelligence and performance management solution can have a large, positive impact on operational efficiencies, cost-cutting efforts, and individual employee performance. In fact, these solutions can not only help your company ride out hard economic times, but also put it in a better position when business picks up again. BI can help improve discrete processes resulting in short-term gains and long-term, foundational benefits.

Microsoft BI can help you:

- Find and Target Profitable Customers.
- Pivot on a Dime – Forecast and plan based on modeling various scenarios and business conditions.
- Find Inefficiencies – Understand variances and drill to detail to find trends and make changes.
- Save Money – Know your cost structure and take action to ensure you hit the bottom line.

Microsoft BI allows you to create dynamic reports, perform analysis as well as get better insight into operational data with digital dashboards and scorecards.

Microsoft BI maximizes investments in existing Microsoft tools such as SQL Server and Microsoft Office. Matt Sherriff, Data Warehouse Development and BI Manager, Customer Value Management at Lloyds TSB reports:

*“We are able to provide our business users with much more targeted and focused intelligence, rather than just doing a big data dump that they have to wade through to find what they really need. With Microsoft BI tools, the things managers really need to see are right in front of them ... One of the reasons that Lloyds TSB chose the Microsoft BI stack was because we could give our user community access to all the data and functionality they needed without requiring them to learn any new software, because they were already using Office Excel.”<sup>13</sup>*

### Empowering Employees with an Intuitive User Experience

You can further empower employees by enabling them to use familiar tools such as Microsoft Office applications to interact with business processes, or by using presentation technologies like WPF and Silverlight to provide a rich user experience that promotes productivity.

- Improve productivity with familiar tools
  - Receive an RFP, or support request, being able to manage the full lifecycle of that workstream within Outlook or Office.
- Visualize data from across multiple databases and systems
  - Consolidate data and allow people to model and visualize that data within familiar tools like Excel
- Connect to the business regardless of the device
  - Outlook for example—Rich Client, Phone and Web.
- Connect teams with real-time communications and collaboration
  - Connect with IM, web conferencing and share data using SharePoint
- Enable developers to reuse skills and code
  - Using Visual studio and .NET—write once run anywhere. Mobile, desktop, web, service, portal. Flexible application types and architectures

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<sup>13</sup> [Financial Services Group Puts Powerful, Easy-to-Use BI Tools in the Hands of End Users](#)

## Conclusion

As corporations downsize and streamline costs under difficult economic conditions they can greatly benefit by standardizing on a single Application Platform. By standardizing on the Microsoft Application Platform corporations can benefit from reduced costs, greater flexibility, and increased worker productivity, with secure long-term support from Microsoft. The Microsoft Application Platform brings together the core technologies you need to develop applications that integrate with your existing systems and help you achieve your IT goals.

## Application Platform Agreement for Volume Licensing

The Microsoft Application Platform Agreement for Volume Licensing (APA) provides a simple way to license the Application Platform products for your organization. The APA helps you standardize your application platform at a fixed annual fee for a three-year term.

The Application Platform Agreement provides flexibility, manageability and predictability. You can consolidate the number of vendors and license agreements you have and reduce database total cost of operations with the [Application Platform Agreement](#)

### For more information visit:

Microsoft Application Platform Agreement: <http://www.microsoft.com/licensing/savemoney>

Microsoft Application Platform – [www.microsoft.com/applicationplatform](http://www.microsoft.com/applicationplatform)