



Microsoft®

Advance Your Business with IT Solutions

Learn how your company can achieve business goals through IT solutions that connect your people, processes, and information.

Are your **people**  **ready** ?



Introduction

Your line-of-business applications play a critical role in empowering people to make decisions and drive business success. Connecting your people with the processes and information they need to be successful, with software that is flexible, familiar, and easy to use can give your business the edge. Microsoft calls this "software for the People-Ready Business."

What kind of IT infrastructure do you need to support these applications? You need an infrastructure that is connected and adaptable to the evolving needs of your business. One that helps IT become a true partner to the business and drive successful results.

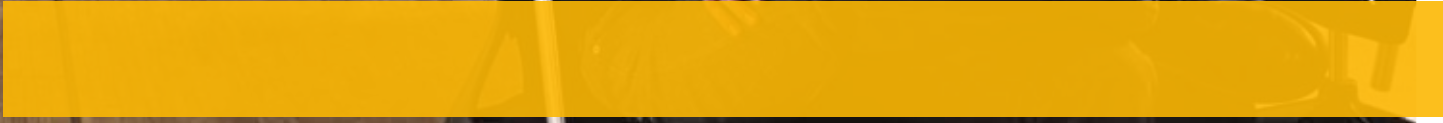


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Today's application environment

Companies today are demanding that IT solutions support real-world business goals. Software has evolved beyond just helping people create documents and read e-mail messages. Software now connects people with the information and business processes needed to make better decisions. From the back-end infrastructure to the end-user tools, software is the key to empowering people to drive business outcomes.

What kind of applications infrastructure do you need to create People-Ready solutions for your business? The infrastructure needs to be flexible, connected, and able to evolve with your business needs. That's easy to say, but harder to achieve. Why? Enterprises deal with a range of IT complexities. Hard-coded business processes are baked into brittle applications. Disconnected silos of information often exist across the organizations. Integrating diverse heterogeneous systems often require inclusion of legacy applications. Development is slowed by complex tools, unpredictable processes and disconnects with the operations department. All of these issues become barriers to a development department looking to create solutions that truly meet the needs of the business.

Delivering the foundation for organizational agility and business success

For many years, business applications were written as rigidly coded units that were self-contained and, in many cases, inflexible and closed. Today, the reality is that most companies utilize a variety of different systems across their business areas. Often hundreds of downstream applications are built on top of these major systems. The key is to connect the applications together in ways that support the required business scenarios—through service orientation and the mapping of core business processes. This will then help that the right information reaches the right people at the right time, through connected systems that are able to span the entire company.

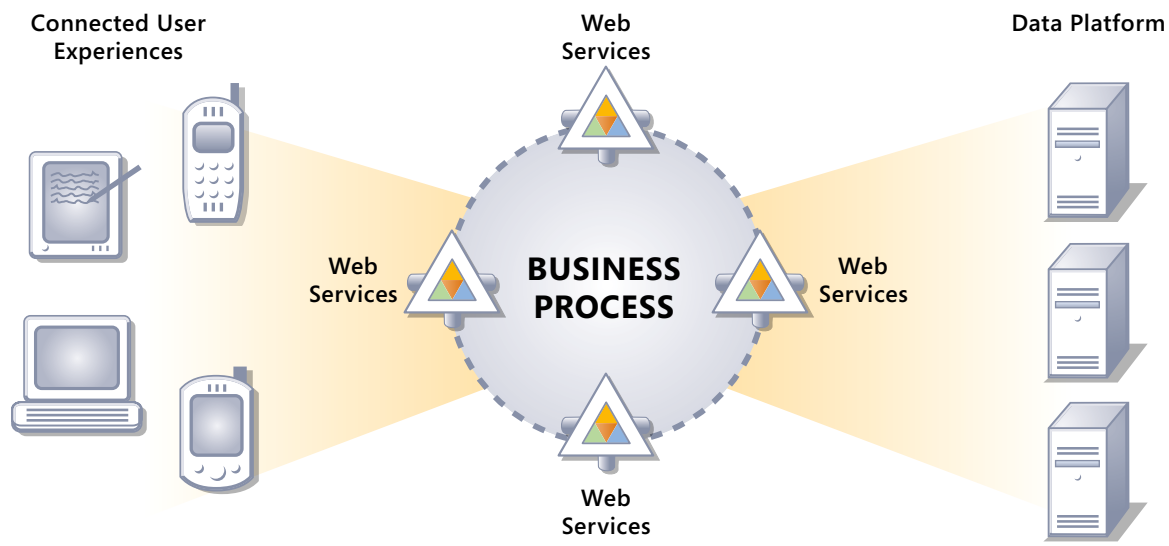


Figure 1. Next generation applications architecture overview.

Next-generation applications architecture

Business applications today are evolving into ones that blend the best of the consumer world—with rich, personalized experiences available across multiple devices and platforms—with the world of more traditional corporate applications, controlled by the IT department and provisioned centrally for business use. This new blended environment puts the user in control of the information they want, and can offer whole new levels of richness and interactivity. Many enterprises are evaluating how they can start to enable these new application types within their own systems for customers and employees to use—and how these applications can pay off for the business.

Several core premises exist behind the architecture required to power these next-generation applications. First, businesses need to harness all the information across their company—within databases as well as applications. Second, this information needs to be connected and loosely coupled through a service orientation and mapped to business processes. Finally, applications within the business need to leverage this exposed information and present it to users in connected and compelling experiences.

Establishing core capabilities across your platform

Specifically, companies need to focus on five core capabilities that form a technology platform approach that can support the development and deployment of LOB applications that can connect your business and drive real outcomes. Microsoft views these five capabilities as core to enabling a dynamic application platform—and they form the basis of this paper.

- 1. Business Process Management:** Meshing your data, applications and processes together through service orientation is core to building connected applications that are adaptable to change.
- 2. Data Management:** Businesses need to be able to harness data across the company and manage it in a centralized way so that the data can flow across the organization and be leveraged by employees to drive the business forward.
- 3. Business Intelligence:** Real-time information needs to be available to all decision makers in the business, and needs to be provided through familiar and easy-to-use tools that help decision makers turn this information into action.
- 4. User Experience:** Connecting the “last mile” of applications to the user is, unfortunately, often an after-thought in the development process. Great user experience and design can improve the effectiveness, comprehension, and satisfaction of end users, whether they’re employees, customers, or suppliers.
- 5. Application Development:** IT and Development teams require tools and processes that allow for efficient and predictable application lifecycle management. Having visibility and control across the design, development, deployment and management phases of the applications are key to enabling agile IT delivery that supports the business.

Service-orienting your systems and mapping them to real-world processes

Today's organizations require pragmatic, real-world solutions to support evolving business processes. Microsoft provides a flexible cross-discipline approach that aligns business processes with IT through services. By allowing people to drive business change by continuously improving and optimizing their processes, Microsoft enables what we call "people-ready processes."

Business processes are defined by operating procedures and policies, institutional working knowledge, business goals, and existing application logic in the organization. In an efficient environment, any of these functional components can be readily adapted and deployed to address dynamic business requirements. This is the concept of business agility—an organization's ability to rapidly reconfigure resources to meet its ever-changing business needs.

This is the underlying premise of the SOA paradigm based on Web services. Elevating the business process from the programming, document, and messaging layers is the key. By separating information from the applications that contain it, and by using self-describing XML metadata to give information structure, the business process logic can then be changed more quickly and easily. This allows the business process to be executed independent of where the underlying data resides, how the application was originally developed, or what platform it runs on. The payoff for businesses that harness service-oriented systems: greater agility, more flexible systems that can be changed efficiently, and ultimately the business applications can truly advance the business—now and in the future.

Early on, Microsoft recognized the enormous possibilities of XML and Web services in creating connected and flexible systems. In 2000, we introduced Microsoft .NET, our branded offering for Web services implementations across Microsoft products and development tools. We believe that delivering near-term business results through incremental steps yields better results than a massive top-down approach. Taking giant steps usually requires major infrastructure investments, which are often misaligned with business goals. Microsoft has developed its "real-world" service-oriented architecture (SOA) approach from the best practices accumulated through more than five years of customer implementations. Our deep experience reinforces the value obtained from a step-by-step approach that starts with a clear focus on the business problem.

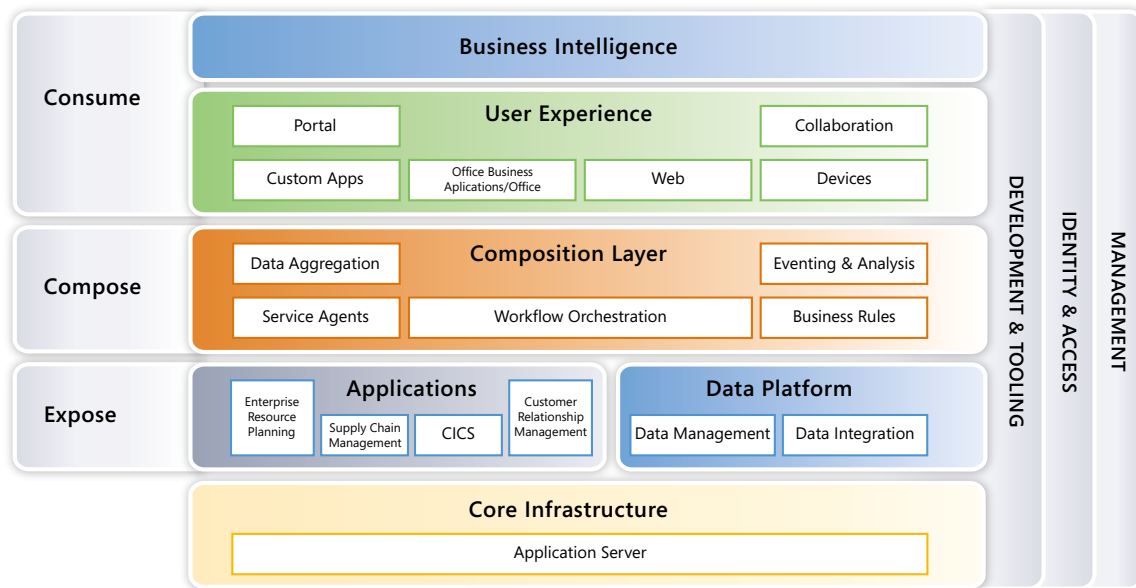


Figure 2. Core components of the service-enabled application architecture.

How can you get “real-world” service orientation benefits with your applications infrastructure? There are four major steps:

1. Define the **business processes** and scenarios to prioritize for the company. Ensure that you understand what is “core” versus “commodity”—customers that focus their IT investment on enhancing core differentiation points to maximize business advantage are often much more successful than those who invest against “commodity” workloads, that in turn do not help differentiate the business in the market.
2. **Expose** information housed within data and application stores through Web services. This enables connectivity across diverse systems internally and externally, and gives IT and development teams much easier access to reusable components when designing composite applications around the desired business scenarios.
3. **Compose** these Web services according to predefined business scenarios. The composition layer in the architecture will allow management of the services, information workflow, policies and security, eventing, and business rules.
4. **Consume** these service enabled components through applications that have been designed around the business and user scenarios. These could include portals, custom (composite) applications, Microsoft Office and collaborative applications, and more.

Real-world service orientation



Global Crossing simplifies order processing and reduces costs

Global Crossing is a leading telecommunications provider of worldwide data and Internet Protocol (IP) networking services. In the past, most of its customers used labor-intensive business processes to manage orders received from customers. Orders were routinely touched by four different Global Crossing employees, who would enter redundant data into multiple internal systems. As order volumes grew, these manual processes became too time-consuming and costly for the company to maintain.

To streamline order entry, Global Crossing implemented Microsoft BizTalk® Server 2006—a business process management server that integrates disparate applications, systems, and technologies. By connecting each application to BizTalk Server through Web services, data from different sources can now be shared in real time. Automating portions of the ordering process with BizTalk Server 2006 reduced or eliminated redundant entry of data, which lowered the cost of operating Global Crossing’s Service Delivery Order Desk by 25 percent and improved customer service. Electronic data transmission and storage requirements have been reduced while data integrity has improved. In addition, the new solution offers Global Crossing the scalability it needs to integrate additional internal systems and processes.

"BizTalk Server 2006 has played an instrumental role in streamlining our operations. The new solution has helped us move from a paper-intensive process to one that is automated, fast, and efficient."

—Kurt Utzman, Director of Service Delivery, Global Crossing, Ltd.

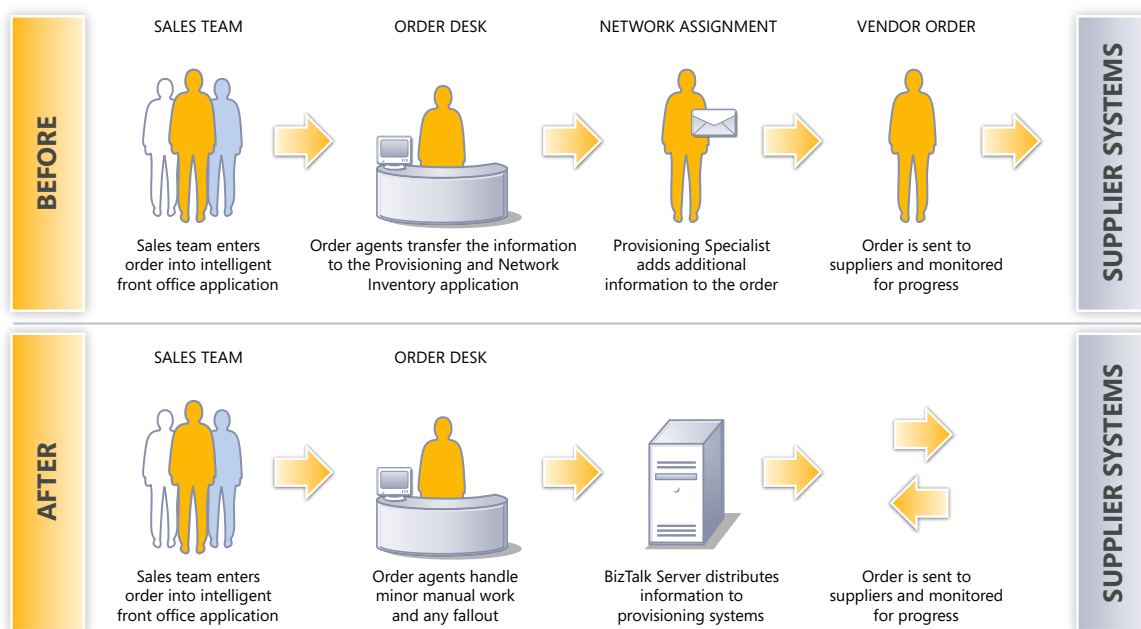


Figure 3. Global Crossing’s internal process before and after the implementation of BizTalk Server 2006.

Managing your information with an enterprise-wide data platform

Information is everywhere across the modern-day enterprise. The ability to access and integrate disparate data sources in a mixed IT environment—across data stores, devices, and applications—is critical. Managing all that information, however, presents multiple challenges for IT departments.

First, the volume of data being generated today in most organizations is doubling every 12 to 18 months. In addition, applications now generate huge amounts of data that business owners want to be able to utilize. Meanwhile, hardware storage costs continue to drop, making it more feasible to store that data. IT departments today also have to be able to manage a multitude of data sources beyond the server. Mobile devices, thumb drives, and personal hard disk drives are widely used for data storage; in fact, much of today's companies' data is stored outside the data center. Increased government regulations requiring companies to retain information have escalated too, creating yet another IT challenge. Multiple forms of data—including voice, instant messages (IM), e-mail messages, electronic and paper-based documents, along with Web-based interactions and LOB transactions—must now be captured, stored, and made available for audit purposes.

Managing information to satisfy all of these functional and governance requirements calls for sophisticated data management capabilities. Not only must the organization somehow manage the proliferation of information, and make it available to all stakeholders who need to access it, the organization must also help keep it secure from unauthorized users.

Furthermore, in today's highly connected business environment, information must be available in the office or on the go. Managing so many stringent requirements can be operationally challenging as well as costly. IT teams need to respond to business changes faster, manage geographically dispersed systems, and ensure that a disaster recovery plan is in place for the infrastructure. The costs of managing explosive information growth are easily overwhelming IT budgets today in many organizations.

Microsoft is committed to making information storage and retrieval manageable and cost effective for the enterprise. With Microsoft® SQL Server™ 2005 as the data tier of the Microsoft application platform, organizations can build, deploy, and manage efficient and cost effective enterprise applications that scale to even the most demanding requirements. SQL Server 2005 provides a host of capabilities to access, integrate, and manage disparate data sources. It allows any sized organization to achieve operational efficiencies through built-in deployment and management tools, while providing a system that is designed for high availability, meaning better support for mission critical business operations—as well as allowing for future scalability to accommodate growth.

Managing data across the enterprise

Weyerhaeuser reduces process time and improves performance



U.S. Department of Commerce reporting mandates require Weyerhaeuser to routinely collect and analyze extremely large and complex datasets under tight deadlines. The existing system had an unpredictable processing time that minimized the amount of data analysis that could be completed prior to submittal. Additionally, the IT staff often spent up to two hours creating reports for individual users.

Weyerhaeuser upgraded to SQL Server 2005, which provides accurate reports on sales data from across the company within tight reporting deadlines. Now business users can quickly and easily create reports to meet the government's detailed requests.

Weyerhaeuser employees are using the freed up time to further refine the accuracy of the data they provide to the government, which has led to a reduction in the number of reports that Weyerhaeuser must submit to the Department of Commerce and has also helped the company avoid providing further verifications of their sales. Weyerhaeuser expects to achieve a 373 percent return on the project with payback in three months.

"Scalability was a huge factor in our decision to move to SQL Server 2005...It's good to know that SQL Server 2005 will be able to support our very real expectation of long-term growth."

—Brad Chapman, Application Team Lead, Weyerhaeuser Company

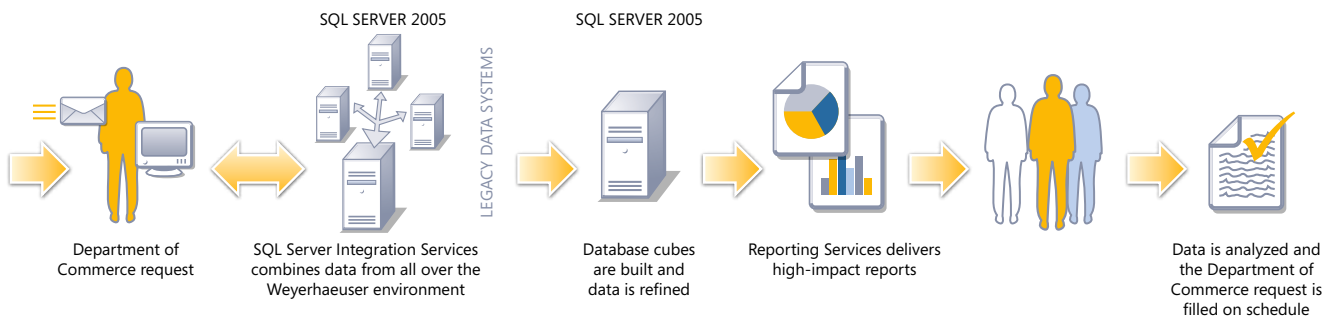


Figure 4. SQL Server 2005 delivers fast access to data at Weyerhaeuser, and is an example of leveraging the Application Platform Optimization model to drive infrastructure enhancements. See page 17 for more details.

Turning your business data into insight and action

As global competition intensifies, companies want a more complete view of their business, customers and markets to inform decision making. However, business intelligence (BI) tools have historically been too costly and complex to distribute amongst managers and workers throughout the entire organization. Consequently, the ability to make such tools widely available has never been an option. Microsoft is changing that. Specifically, Microsoft is focused on helping *all* decision makers in the company get access to the information they need, and turn that information into action using familiar Microsoft Office tools they use every day.

To achieve this, we have developed a complete end-to-end range of products and tools that support all facets of data storage, reporting, collaboration and analysis. SQL Server 2005 delivers a comprehensive BI platform providing integration, analysis, and reporting capabilities; the 2007 Microsoft Office system enables users to easily access, understand, and distribute analysis of information. Now, tighter integration between SQL Server 2005 and the 2007 Microsoft Office system empowers information workers to be more productive. They can answer their own questions in a security-enhanced environment that's familiar and easy to use, freeing IT to focus its resources on higher-value BI projects.

Microsoft Office Excel® 2007 has long been a favorite tool for analyzing multidimensional data and gaining business insight. Office Excel 2007 brings new, more intuitive visualization features and tighter integration with the portal and database; employees can now more securely access, analyze, and share information from data warehouses and enterprise applications. The Business Activity Monitoring (BAM) capabilities within BizTalk® Server 2006 enable real-time events from business processes to be analyzed by business users, who access the process-centric analytics through Microsoft Office SharePoint® Server 2007 and Business Scorecard Manager. Office SharePoint Server 2007 comes with new and advanced collaboration features that make it possible for workers to integrate data and interact with spreadsheets, key performance indicators (KPIs), and scorecards.



Figure 5. A glance at Office Excel 2007 and Business Scorecard Manager.

For IT and development teams, SQL Server 2005 includes: SQL Server Analysis Services for online analytical processing (OLAP), data mining, and data warehousing capabilities; SQL Server Integration Services (SSIS) for data extraction, transformation, and loading (ETL) functions; and SQL Server Reporting Services for easy-to-use, yet sophisticated, reporting capabilities. With this level of integrated functionality, development teams and database administrators can build complex analytical models from any source of business information and generate highly flexible, interactive reports.

Gaining competitive advantage through superior user experiences

Designing rich user experiences for business applications has traditionally been very difficult for development organizations as part of the application development processes. With some exceptions, focusing on the user experience during business application development hasn't been widely practiced. Why? First, designers and developers have traditionally been forced to work in different design environments. Second, mostly due to a lack of awareness, the user experience was largely unrecognized as a top-level requirement during development. As a result, applications were deployed with non-intuitive interfaces and ran differently depending on the platform.

It is clear, however, that with improved user experience and design, applications can deliver significant benefits for your business. Some of these include:

- **Increased revenues:** more users using your product, more often.
- **Greater efficiencies:** internal users are more productive and satisfied.
- **Reduced support costs:** easy to understand, fewer things that need explaining.
- **A better expression of your brand:** positive user experience supports your brand.

Microsoft believes that the user experience is a critical part of the application development process. We are committed to providing innovative tools, development frameworks, and operating platforms—as well as best practice guidance; to enable designers and developers worldwide to build rich, immersive, and compelling user experiences.

Connecting the Design and Development Worlds

In the past, designers would communicate with developers using wireframes, JPEGs, and so on, thus losing design fidelity in the process that compromises the end user experience. Microsoft Expression® is a new tool for professional designers. Using Expression and mark-up/script languages such as XAML, XHTML, CSS, ASP.NET AJAX, etc., designers can collaborate with developers who are using Microsoft Visual Studio® 2008 in the same project file—while still retaining their design fidelity in the process.

Developing applications for Microsoft Windows environments

Windows® Presentation Foundation (WPF) takes full advantage of modern graphics hardware and an extensible set of managed classes that developers can use to create rich, visually stunning applications. WPF also introduces Extensible Application Markup Language (XAML), which enables developers and designers alike to use an XML-based model to specify the desired user interface (UI) behavior. XAML and development tools built on it increase the productivity of developers and designers by facilitating collaboration in the creation of applications that have a user interface component. User interfaces created in WPF can be used either in a Web browser or fully integrated into any desktop application, providing a consistent and optimal customer experience regardless of the overall application architecture.



Figure 6. Rich, compelling applications written for Windows Presentation Foundation.

Using Office as a Development Platform

The Office suite of applications has become the cornerstone of personal productivity for many end users today. Now these familiar applications have evolved to provide another level of value and versatility—as smart clients. By providing a rich object model for Word, Excel, Outlook® and InfoPath®, the Microsoft Office applications are now capable of functioning as smart clients to line of business applications. As fully programmable smart clients, these applications can now access and process information from across the enterprise, allowing users to employ the tools that they are most comfortable with and provide the greatest amount of functional productivity in their every day work lives. For developers we have created the Microsoft Visual Studio Tools for Office that enable developers to take advantage of a “programmable” Microsoft Office interface.

Enhancing the Mobile User Experience

Hand-held integrated communication devices now provide both business and personal users with a variety of useful services when mobile or away from the office. Windows Mobile® 5.0 provides significant new capabilities that enable a rich user experience from mobile devices. In addition to e-mail and web browsing, Windows Mobile 5.0-enabled devices support a mobile version of the Office suite that is optimized for small form-factor communication devices—allowing business people to be productive away from the office. Windows Mobile 5.0 introduces new programming interfaces (APIs) that provide drawing capabilities, easy interaction with device hardware such as cameras, and straightforward integration with Pocket Outlook for customized applications. The Microsoft .NET Compact Framework includes the Mobile Client Software Factory, tools and guidance to help developers create line-of-business Windows Mobile applications that interact with back-end systems over networks such as WiFi and GPRS. In addition, Microsoft SQL Server 2005 Compact Edition extends enterprise data management capabilities to mobile devices.

Managing the application development lifecycle

The development process spans all stages of the application lifecycle—from design, development, deployment, management and retirement. Having an efficient and well-managed software development process means that individuals and teams can be more productive, lower the costs and work-item request backlog, optimize resources and speed time to market for new solutions. Many IT organizations implement tools and processes to support the Application Lifecycle Management (ALM) stages. The Microsoft application platform has tools, technologies and best practices to support the individuals, teams and organizations involved in the development process from end-to-end.

Reducing complexity leads to greater productivity, lower costs, optimized resources, and faster time-to-market, along with applications that give the business a competitive advantage. In an effort to better manage software development, many IT and development organizations turn to implementing tools specifically designed to support the ALM process. However, most past attempts to increase development productivity have either been too burdensome to implement or did not focus on core problems that affect team development. From the CIO's perspective, too much of the IT budget has been allocated to activities that deliver a discouraging return on investment.

The Visual Studio 2008 development system, provides an environment that makes it easier to unleash the power of applications on top of the Microsoft platform. More specifically, the new Visual Studio Team System Suite of products provides the tools needed for teams to manage the entire development lifecycle, including application design, development, and deployment. Streamlining tasks this way enables predictable, repeatable results without trading off productivity and innovation. Now all of Microsoft's applications have a common customization and extension model, giving developers the ability to access these applications' object models using standard APIs based on the .NET Framework and XML.









Teams that build business-critical applications have many participants who are not programmers; for example, business sponsors, project managers, architects, and testers. Moreover, these teams have become more geographically distributed and specialized, so gaps form between role boundaries, creating conditions in which issues can get dropped or plans can diverge unintentionally. For application development teams to be effective, communication must flow readily and must be integrated into daily activities, regardless of a team member's physical location. With Visual Studio Team System, Microsoft has addressed these challenges.

Visual Studio Team System fosters better dialogue by opening new channels of communication between team members and by reducing the overhead of reporting. The team-based approach helps drive business value by aligning the right roles and teams across business and IT. Project managers can translate customer requirements into work items for the development team, and subsequently track the status of the work items to monitor project status. By integrating process into the tools that team members use on a daily basis, Visual Studio Team System products lower the barrier to adopting automated and streamlined cross-functional development processes.

Visual Studio Team System software supports the entire development team, including architects, testers, and database professionals. With the Visual Studio Team System family of products, organizations can reduce the complexity of delivering modern service-oriented solutions that are optimized for their operational environment. The launch of Visual Studio Team System has enabled organizations to bring products to market faster, while lowering the costs of both development and lifecycle management. What is the ultimate benefit? IT departments can gain better ALM through the development process and allocate more resources to focus on business innovation.

Putting it all together: the Microsoft application platform technology stack

The vision for the Microsoft application platform is to make its entire portfolio of products interoperable in an efficient and consistent way. Microsoft's enterprise product stack incorporates this vision, helping organizations achieve a dynamic application platform.

Product	Benefits/Features
 Windows Server 2008	Provides integrated technologies and services such as a built-in, high-performance Web server; transaction management; Web services; a security-enhanced event log; support for message queuing; and an integrated management framework.
 Microsoft SQL Server 2005	Microsoft's data management and analysis solution for the enterprise.
 Microsoft BizTalk Server 2006	Enables broad implementation of business processes that enhance how people interact with each other in real-world situations.
 Microsoft Office SharePoint Server 2007	Allows a new level of collaboration with customers, partners, and employees.
 Microsoft Office	Provides a familiar user interface for customized business process and business intelligence solutions.
 Windows Mobile 5.0	Delivers enterprise-level solutions to workers in the field.
 Microsoft Visual Studio Team System	Provides a consistent development experience; Visual Studio Team System provides the collaborative foundation for architects, developers, and testers to collaborate throughout the development lifecycle.
 Microsoft Expression	Empowers professional designers to deliver superior user experiences.

Planning your journey: Infrastructure Optimization

Microsoft has developed the Infrastructure Optimization Model as a tool that allows us to work with our customers to identify what their infrastructure maturity level is today, and build a comprehensive plan to evolve the infrastructure based on IT or business needs. Some of the core areas of focus for customers when doing this analysis include:

- Reduce infrastructure complexity and costs.
- Improve operational efficiency and business agility.
- Achieve an infrastructure that better serves business goals.
- Select the right technology solutions for an organization's specific size and business need.
- Eliminate over-spending on technology that is not required.

We have created the Application Platform Optimization (APO) model specifically for companies looking to analyze, understand and evolve their application platform capabilities. The APO model was developed using industry best practices and Microsoft's own experiences with its enterprise customers. Microsoft's APO model defines four levels of maturity in the computing platform, each of which has specific and identifiable characteristics.

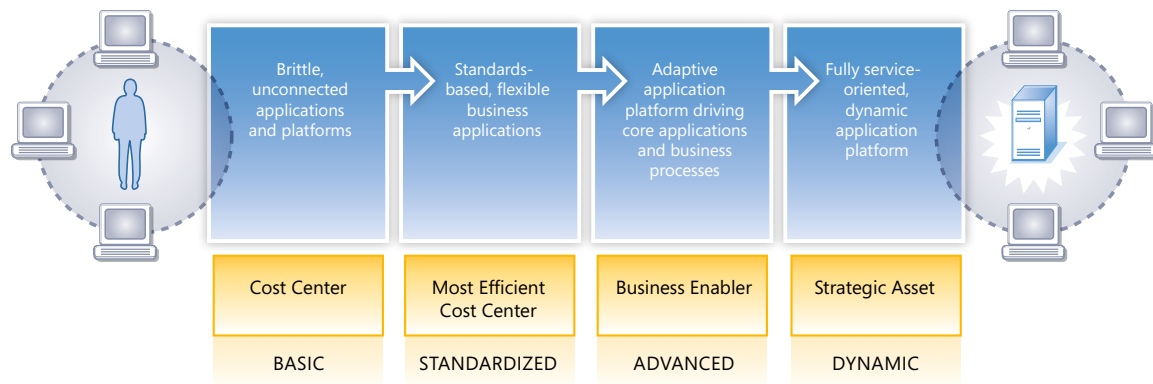


Figure 7. The four levels of IT asset maturity in the APO model.

The first step in using this methodology is to ascertain the baseline maturity level of the IT assets within an organization. Once the baseline level has been established, the next step is to use the model to develop a plan to progress through each level.

Microsoft and its partners can help customers move through the infrastructure optimization journey. By working with Microsoft and using this model as a framework, an organization can quickly understand the business benefits in moving from a "Basic" level (where the IT infrastructure is considered a cost center) to a more "Dynamic" level, where IT is viewed as a strategic business asset.

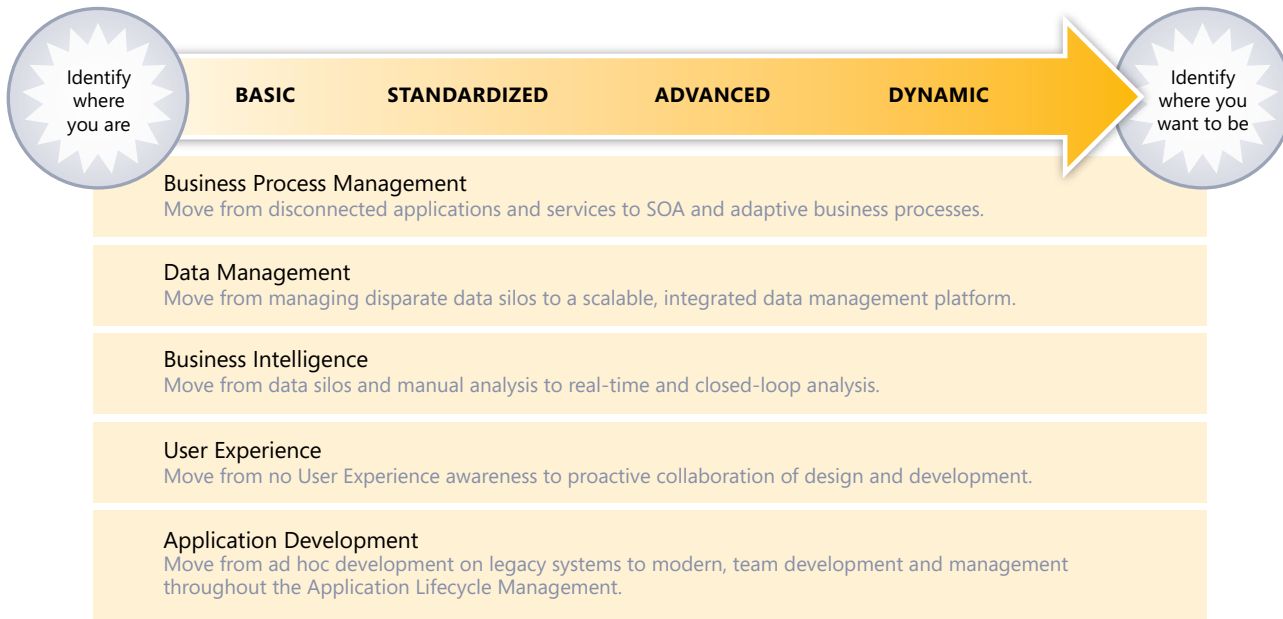


Figure 8. Using the 5 core application platform capabilities to advance through the APO model.

To learn more about APO and to take the assessment, visit www.microsoft.com/applat.

Conclusion

Software and business applications play a critical role in empowering people and driving the business forward. However, legacy issues within the application environment—such as hard-coded business processes, brittle applications, disconnected data sources, and complex development tools—hamper efforts to support business goals. This explains why it has been difficult for IT teams to achieve the level of business agility required to support a people-ready business. And, it highlights the need for a new environment, where applications are designed for change and delivered through a flexible IT infrastructure.

The Microsoft application platform enables such a change. It gives IT and development teams the tools they need to build connected systems that bring together their people, processes, and information. For end users, these agile applications open up new, more efficient ways of accessing the information they need to make better decisions and drive organizational success. These improvements can lead to increased revenues, decreased costs, higher customer retention, and closer partnering with suppliers and vendors. For IT departments, the Microsoft application platform can transform your IT infrastructure from one that is costly and hard to manage, to one that is truly dynamic. This improved infrastructure has given many customers better productivity, dramatic cost savings and better business outcomes as a result.

By focusing on the five core capabilities areas in your application environment—Business Process Management, Data Management, Business Intelligence, User Experience, and Application Development—you too can have a dynamic platform upon which your applications can be designed, developed, deployed, and managed. Ultimately, this dynamic platform will help you achieve the goal of advancing the business through IT solutions, both now and in the future.




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Connectivity and synchronization may require separately purchased equipment and/or wireless products (e.g., WiFi card, network software, server hardware, and/or redirector software). Service plans are required for Internet, WiFi and phone access. Features and performance may vary by service provider and are subject to network limitations. See device manufacturer, service provider and/or corporate IT department for details.

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Are your **people**  **ready ?**