

Driving Business Growth through eBusiness Integration

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Business Challenges

Over 85% of business managers are being held back by their IT systems. That's the startling conclusion of an independent survey that found managers today believe that better integration of management information systems across the enterprise would bring real competitive advantage. Innovative managers have a vision of where they would like their business to be, but their IT systems often struggle to match that vision.

These are just some of the challenges that managers face:

- **Supplying dynamic business needs.** Devolving business decision-making means that business units can stay light on their feet, but it means that the enterprise's information systems have to evolve rapidly to keep up with change.
- **Leveraging the extended enterprise.** Wider choice of suppliers, tighter supply chains and customer access across the Web all mean that lines of communication and the ability to connect become highly significant in a loosely coupled organization
- **Doing more with less,** so that even a larger organization can function as effectively and efficiently as a smaller one, and a small one deliver and guarantee high quality as much as a big one. Managers require a combination of skills and methods that can tax the most advanced enterprise. It's a problem that all businesses face as they grow: coordinating the different units to maintain or increase productivity with fewer resources.

A common thread that runs through all of these challenges is **the making of connections**. Whether it's strengthening existing lines or establishing new ones, the ability to share and exploit information across the enterprise is key to success in business today.

MachroTech's approach to business integration with .NET architecture can provide the qualities that today's computing systems should have, in order to do justice to the creative abilities of business managers. Business integration with Microsoft .NET is introduced as a solution for developing the enterprise and its existing information systems in order to exploit new technologies like the Web. Later sections describe two steps necessary to coordinate information flow around the enterprise, in order to implement business processes.

Integration Benefits:

➤ **Use Information as a differentiator**

While customers may deal with just one part of the business, they perceive the company as a whole. The customer of a manufacturing company may have an inquiry about availability, but may also be interested in prices, alternative parts and delivery dates. While each different part of the organization may be able to answer questions like this efficiently, the customer's immediate problem is to get a part that meets his criteria by the date it's required - can the company at the end of the phone deliver it? The ability to mobilize the separate parts of the enterprise to appear as one is a powerful **differentiator** when it comes to winning a customer's business.

Managers can visualize what's wanted. They hold a mental map of the relationships of the business units, the processes and business rules, and the business events that are driving the enterprise. They understand intuitively how these relationships can be modified to achieve better results. We call this special quality that managers bring to their job enterprise *intelligence*.

It's frustrating, therefore, when the technologies behind enterprise communications (the information systems) struggle to keep up -- though it's not particularly surprising. Most mission-critical applications have been developed and enhanced over many years, and the newer ones may reside only in systems local to one business unit. Until recently, connecting disparate systems like this has been a complex technical task. The result has been a massive mismatch between managers' vision and the ability of information systems to deliver -- an independent survey of the ways that IT departments are responding to business challenges, conducted by Spikes Cavell and Co., shows a staggering 86% of managers believe that better integration of management information systems across the enterprise would bring real competitive advantage.

➤ **Quick to respond to market trends and changes**

Recent developments have increased the urgency for a solution. New ways of doing business -- pioneered by companies like Amazon.com selling books over the Web, Federal Express allowing customers to track their deliveries over the Internet, and Montreal Bank of Canada accepting mortgage applications from Web browsers - have shown that creative use of the Internet and the Web, integrated with existing business processes, can pay huge competitive dividends.

Managers are looking for something that works - and thinks - the way they do: quickly. They think of the company as a whole, not as a set of parts. They operate in terms of real business processes and events, not anonymous bits of data. And they bring a degree of intelligence and discrimination to the job, so that the best of what they do now is kept to complement the best of new ideas. In other words, *they're applying enterprise intelligence*.

Is it unreasonable to expect enterprise intelligence in computer systems? No, it's not. Business integration solutions aim for exactly that -- in supporting intelligent integration of business processes across the whole business, there is also the capability for centralizing knowledge of the rules by which the business is run. Business integration is not an exotic new technology, nor is it some quick-fix nostrum that will be briefly fashionable. It is a way of working within an enterprise and its business processes that will allow it to grow and expand in the only feasible way: by building on its existing applications.

Business Integration is a journey, rather than a destination, and it's a journey that many companies have already embarked on to secure themselves competitive advantage. It doesn't depend on one new product, it simply builds on all the existing applications through an extension to the communications infrastructure called messaging, plus a whole new layer of capability through the addition of a tool kit.

What is .NET?

.NET is software that connects information, people, systems, and devices through the use of XML Web services. From a technology perspective, .NET is an Internet centric architecture and technology offering that defines how different

applications, sources of data, or devices can integrate with and share information with each other. .NET is not a new type of user interface or piece of business application that a user needs to learn or worry about. Even though there are some user interface components to .NET for the most part, .NET is a technology layer that sits "under the hood" of the application and enables it to exchange information with other XML Web Services ready applications over a Web-based communications layer.

.NET includes several software components used to build .NET-connected applications and services. These components include, for example, the developer tools of Visual Studio .NET and the .NET Framework; .NET client software for the Windows XP or Windows CE environments; a set of XML Web services including MapPoint .NET for geographic-based information; and a set of applications and/or services that include .NET-connected products such as Office, MSN, Microsoft Great Plains Business Solutions, and others. Again, the end-user organization does not need to worry about the components of .NET per se; .NET should be thought of as a distributed application that enables XML Web services.

In this Web services environment — which the technologists would define as a rich, loosely coupled model of distributed computing and Web services — information can be made available to any application or device type. These types of application-to-application transactions are called "Web services," meaning that they are conducted over a Web- or Internet-based communication link either within the business or outside of the business with .NET services providers. What is unique about using these services is that .NET-connected applications will automatically find, connect, and collaborate with them, making knowledge workers more productive and informed.

Four Ways .NET Can Improve Your Business:

By using the Internet to enable software applications to more easily work together, MachroTech offers businesses the opportunity to increase operating profits, decrease costs, and connect with customers, partners and employees. Here are four ways .NET can help your business today.

Lower Operating Costs

The ability to connect systems can have a dramatic impact on the bottom line for any business, whether it needs to connect a handful of internal applications or integrate an extensive supply chain. Traditional business integration methods based on Electronic Data Interchange (EDI) often don't work well when dealing with smaller suppliers and partners who frequently use isolated computer systems and communicate via fax, phone, and e-mail. Microsoft .NET-connected software can help bridge the communication gap among smaller partners who never adopted EDI.

.NET-connected software is built on XML Web service standards, which enables both new and existing applications to connect with software and services across platforms, applications, and programming languages. In applications such as Microsoft Excel 2002, .NET-connected software allows analysts to monitor up-to-the-minute production tallies across numerous suppliers, enabling everyone in the supply chain to effectively tailor production to match demand. For example, Newport News Shipbuilding used .NET-connected software to build applications faster, as well as connect with various partners. The company improved its time to market by 19 percent in building and launching its new application.

Drive More Sales

.NET connects sales professionals with the information they need and provides businesses with the opportunity to increase revenue and create new business opportunities.

.NET-connected software provides a sales force with the ability to analyze information that was once isolated in back-end systems through familiar programs such as Microsoft Office XP. This information can be delivered anywhere to a wide range of new smart devices, from smart phones to PCs.

.NET-connected software and services also enable companies to create new business opportunities. By exposing key business processes that were typically locked in internal systems, the enterprise can create a number of new opportunities to make money. For example, Dollar Rent A Car opened its reservation system to partners through XML Web services and drove home a significant amount of new business.

Integrate Better with Customers

Increasing revenue can be a tough challenge for any company. Most businesses derive more revenue by finding more customers, providing better customer service, and selling more to existing customers.

.NET can help companies meet this challenge by enabling them to more easily integrate services and applications. Connected back-end systems provide businesses with the opportunity to combine information and more easily assist customers—whether in a call center setting or in an online Help application. A company can turn quality of service into a competitive advantage.

Businesses such as Trans World Entertainment Corp. use .NET-connected software to provide a better customer experience while improving the bottom line.

Lower IT Costs

Visual Studio® .NET and the .NET Framework empower developers to quickly and easily create cutting-edge XML Web services and applications, building on their existing skill sets. Through support for multiple programming languages, developers are freed to use the programming language of their choice in building XML Web services. Seamless deployment, as well as the ability to use existing XML Web services, presents substantial savings opportunities for the corporate IT department.

In addition to improving developer productivity, Visual Studio .NET helps alleviate one of the greatest scarcities in the world: skilled programmers. Applying rapid application development techniques to Web applications and services increases developer productivity, saving both time and money. Finally, by supporting any programming language, these tools tap the broadest developer talent pool (only about 10 percent of the world's developers know Java), take advantage of existing skills, and let people use the tool most appropriate for a specific task.

How can MachroTech help you move towards .NET Future?

Step 1: FREE CONSULTATION

After we carefully analyze your business processes and needs, we will work with you to create a plan that will put your business at the front of the pack and transform your company into a true enterprise of the 21st century. Whether you are only about to start devising your e-business strategy, or already have an established model, we can help you realize the true potential of your company. With a solid background in both business and technology, our experts are permanently following the market and the latest developments in the e-commerce area. [Contact us](#) for a free consultation, or to simply ask any questions you may have about e-business!

Step 2: DESIGN

MachroTech employs highly skilled, experienced consultants that can help you evaluate the potential of your ideas or strengthen the foothold of your existing business model. Our consultants will work with you to understand your business processes and determine how technology, existing or emerging, might help you better manage the flow of information and maximize returns.

Our past experience includes, but is not limited to:

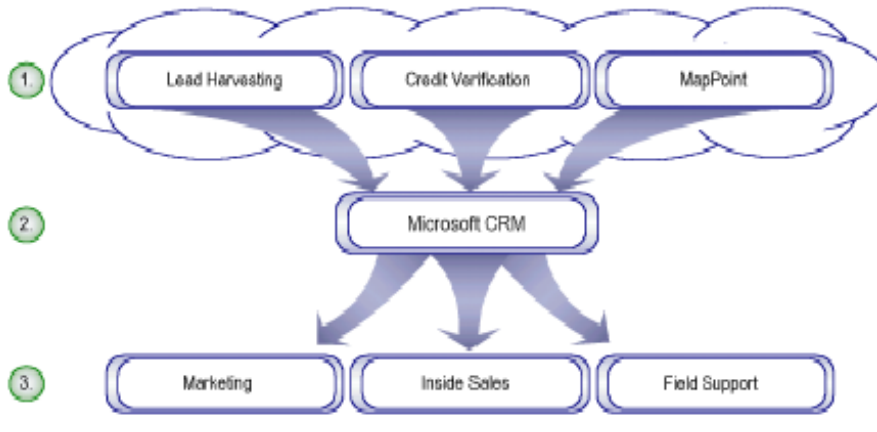
- Custom control development (Mobile Tab control, Mobile tree control as extended control suite of MMIT).
- Design and development of real-world applications for product demonstrations using C#, ASP.NET, ADO.NET, XML Web Services and SQL Server 2000 in Visual Studio.NET environment. For example:
 - Mobile driving direction
 - MachMail, our bulk e-mail management system
 - Investor portfolio management
 - Expense management using mobile devices
 - Mobile pizza ordering.
 - Trading server on mobile (Car trading)
 - Mobile software "bug reporting" system.
 - Etc.
- Design and development of over 350 different code samples for MSDN On-line Help related to mobile device connectivity to a network using the .NET framework and web services.
- Writing code samples for classes, properties and functions for mobile server controls supporting *200 different devices* (Palm, Pocket PC, Blackberry, Mobile Phones, IE, AOL, Netscape, I-Mode, etc.) running on 28 different server controls and 8 different Microsoft Operating Systems.
- Application compatibility on different devices such as MME, UP browsers, I-Mode, Pocket PC, Palm devices, mobile Phones etc.

Step 3: IMPLEMENTATION

With applications on the .NET architecture your business will be able to reduce paperwork, eliminate the need to duplicate information, speed up your operation

processes and thus dramatically increase your efficiency. MacroTech has completed numerous integration projects, such as the impressive [CostumeZone](#) system (see *integration steps below*), and has the expertise to interconnect your various applications in ways you never thought possible:

Figure 1: A .NET-connected application: HVAC, Inc.



HVAC, Inc. uses .NET services to locate, close, and implement a new customer:

1. Lead management service is located through the Web and provides qualified leads to telemarketing via links for pre-qualification.
2. Microsoft CRM passes lead on to inside sales group where the customer is qualified, credit verification is processed in the background, and the order is cleared and entered.
3. Field support organization is notified of a new customer via Microsoft CRM, and uses MapPoint.NET links to the customer record to identify location and plan the best route for several customer implementations.

Source: Aberdeen Group, June 2002

Step 1: Placing an order on your website

- Customer's address and credit card number are matched in real time and a score is assigned to the transaction
- Shipping cost is determined in real time and added to the total of the transaction
- The system automatically places an order with your supplier

Step 2: Placing the order with your supplier

- You confirm the purchase order over the phone's web browser
- Your system directly interacts with the suppliers via XML
- In case, an order can be accepted only by fax, the vendor is automatically sent a fax requesting more stock

Step 3: Shipping the order

- The warehouse closest to the customers receives a notification about the new order
- The tracking number is recorded and printed on the shipping label
- The customer immediately receives an email confirming the shipment with a link that allows him/her to track the package

Step 4: Tracking the package

- The package can be tracked by your software
- The order is automatically marked as complete upon delivery
- Your accounting software receives the transaction details along with the actual shipping cost, and automatically balances the account of the customer

Science fiction? - **No**, Business reality!

Your business can cost-effectively join the global markets by successfully by integrating its various applications and thus cutting cost and time to market.

[Contact us](#) to find out how your business may benefit from having all your systems talk to each other!