

VB 6.x to Native .NET Conversion

A Visionet White Paper

By

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During the recent years, the migration and conversion dilemma has altered from 'whether to migrate or not?' to a simple question 'how best to migrate?' The path to migration is lined with pitfalls and perils which have the potential of derailing the growth strategy of companies.

Most companies need to change their existing systems and processes to meet their ever changing business challenges and requirements. In the 80s, companies moved from Mainframes to client-server architecture. The web-fronting of these client-server systems took place in late 90s and now native web based systems, smart clients and SOA (Service Oriented Architecture) platforms are transforming the business landscape. The current change is happening because it makes the application deployment easier, exchange of information with outside organizations smoother and reengineering of business processes manageable. A significant number of the applications used by the companies around the world have been developed in Microsoft VB 6.0, and these companies have made substantial investment in these legacy Microsoft applications to meet their business requirements. These applications can be enhanced and made web & SOA-enabled with moderate investment instead of being replaced altogether with brand new applications. The SOA based applications are critical for the changing outsourced multi-vendor/partner model favored by most organizations.

Why Now?

According to Microsoft, the support for VB 6.0 is diminishing and is expected to stop in coming years. Mainstream support for VB 6.0 ended in March, 2005. Extended phase support ends in March, 2008. This implies that retaining the existing desktop based applications unchanged becomes more risk-prone. Refer to <http://msdn2.microsoft.com/en-us/vbrun/ms788707.aspx> for more information.

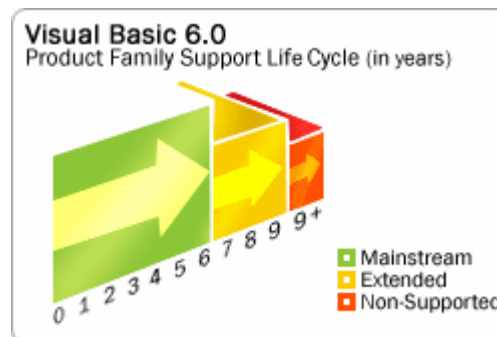


Figure 1 - Visual Basic 6.0 Life cycle

Issues in VB 6.0 client Server applications:

- High Cost of ownership
- Lack of Agility
- Lack of integration and Web capabilities
- Lack of Microsoft support
- Scalability problem

- Difficult to find resources
- Difficult to upgrade the system for new user requirements

Benefits of Visionet's .Net center of excellence

- Delivers cost efficient migration with an offshore model.
- Drives innovation in legacy modernization
- Provides access to large pool of both .NET and trained legacy skills
- QA services with proven methodology for delivering rock solid applications

Visionet Proprietary .NET Conversion Methodology

The Web enabled migration solutions proposed by Visionet lead to opening up the application by exploiting the advantages of object oriented architecture, optimization of entire data access subsystem, increased decoupling of the presentation layer (the GUI code) with the core business logic, thus leading to efficient maintenance and enhanced interoperability.

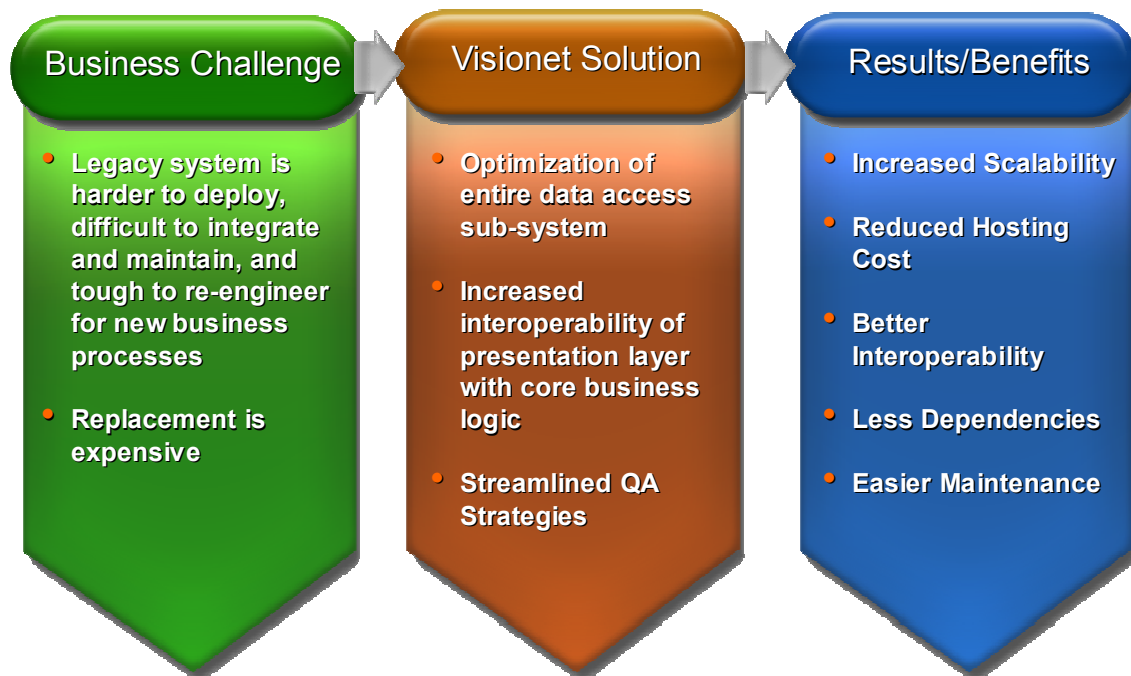


Figure 2 - Conversion Methodology and Results

Migration paths:

- VB 6.0 Desktop to .NET Desktop (no paradigm shift involved)
 - Visionet recommends this path for applications with monolithic design where separation of business logic from the presentation and data access layers is not practically possible.
 - The benefits of this approach include
 - lower cost of migration
 - No impact on existing code logic
 - improved graphical user interface (GUI)
 - less tedious installations
 - improved security

- VB 6.0 Desktop to .NET Web (paradigm shift to N-Tier web based)
 - Leads to drastic enhancement in capability by
 - promoting interoperability with other enterprise systems
 - dynamic user interface generation and the ability to incorporate cutting edge UI features
 - Ability to incorporate state of art workflows functionality feature for aligning application functionality with actual business goals.
 - Extensive use of compiled code, caching and state management and code behind features of .NET web (ASP.NET) for efficient and reliable executing under intensely loaded production environments.
 - Business logic extraction and consolidation from existing code in the form of business objects, hosted on Internet Information Server (IIS)
 - Ability to develop service layer using the business objects, this paving the path towards enterprise level service oriented architecture
 - Option of using smart clients for highly interactive functionalities where end user experience cannot be compromised due to web browser limitation.

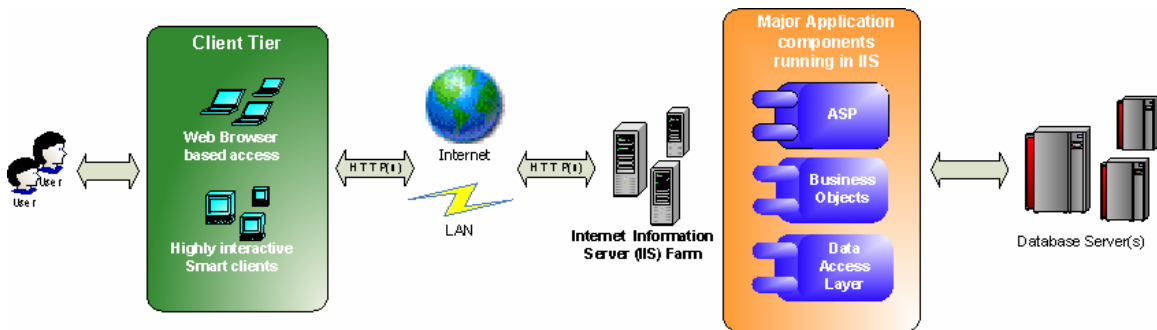


Figure 3 - Resulting Architecture of application upon Web enablement and migration to .NET

The Business Case for .NET Conversion

In order to gain the strategic benefits of Web based applications, customers should consider the option of Web enabling their Enterprise Business Application (EBAs) through Microsoft cutting edge .NET technology platform. Some of the major advantages of Web enabling EBAs to .NET are as follow

- **Increased Scalability:** Web enabling of VB 6.0 is a suitable option for making the legacy system more flexible and easily maintainable.
- **Decreased Installation Costs:** Web-based applications provide benefits like thin-clients, centralized deployment, and everywhere client access resulting in substantial long term operational cost savings.
- **Increased Interoperability:** Current architecture is traditional client server with no room for making it interoperable with the business partners systems. Web based implementation opens up the path to interoperability with other external/internal systems. This makes possible the Web Services on top of Web Enabled legacy components which leads to establishment of the Service Oriented Architecture by leveraging the existing information systems infrastructure.
- **Decreased Hosting Costs:** Web-based solutions reduce and even eliminate the need for expensive third party application hosting servers for accessing the application over the intranet.
- **Ease of Use:** With rich implementation of AJAX and HTML, the web form submission and reloading gets reduced to an extent that the user's experience becomes almost similar to his experience on

desktop system. The additional requirements, not functional in the legacy systems, can be incorporated during migration.

- **Decreased Dependency:** Web-based solutions are less dependent on a particular technology from any particular vendor. One only has to follow the industry standard technologies that support Web development like TCP/IP, HTTP, Web Server, Browser Standards, HTML, XML etc.
- **Reduced Risk:** Future scarcity of resources with specialized skills in development & maintenance of enterprise level application in VB 6.0 should be a key concern of viable long term business entities.
- **Increased ROI:** Migration to .NET effectively capitalizes the long-term investment in IT infrastructure of organizations. Any future development effort expended will have enhanced ROI due to longer life of the converted application.
- **Enhanced performance:** Analysis has revealed that .NET converted applications offer better performance due to better technology and architecture. Adoption of this technology also leads towards improvement in scalability as well as long term maintainability of the application.

Why Visionet?

Visionet is a CMMI Level 3 company (a Level 5 certification review is scheduled in March 2008). It has developed proprietary migration tools and relevant expertise to execute any migration project. The following are some of the reasons which make Visionet a good candidate to carry out a conversion from legacy system to a new system:

1. Visionet has 500 person years of experience in doing such migrations - references can be provided on request.
2. The 'Fixed bid project pricing model' preferred by Visionet minimizes the risk factor.
3. Visionet provides detailed specifications, migration templates and full project delivery lifecycle related artifacts.
4. The streamlined quality assurance strategies used by Visionet ensure that the migrated version of the legacy system fulfill users requirements.

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