

## CASE STUDY

### Fortune 1000 Pharmaceutical Company Online Presentation Builder

#### business situation

A Fortune 1000, Major Pharmaceutical Company (MPC) develops and markets a prominent diabetes drug. To support the promotion of this drug, a Speakers Bureau was created in 1999, in which physicians were recruited to speak about the drug. Since 1999, the Speakers Bureau has grown significantly, consisting of 4776 programs given in 2002 by 1450 physician speakers.

In support of the Speakers Bureau's growth, MPC wanted to redesign its Speakers Bureau's web site. MPC sought to make this new site an easy-to-use tool that would allow their Bureau speakers to 1.) receive news and updates regarding the Speakers Bureau and the diabetes drug product, 2.) acquire predefined PowerPoint slide presentations, and 3.) create and store custom PowerPoint presentations as required by their personal program needs.

#### technical solution overview

The following table highlights the MPC solution components and the technologies that were deployed against each component:

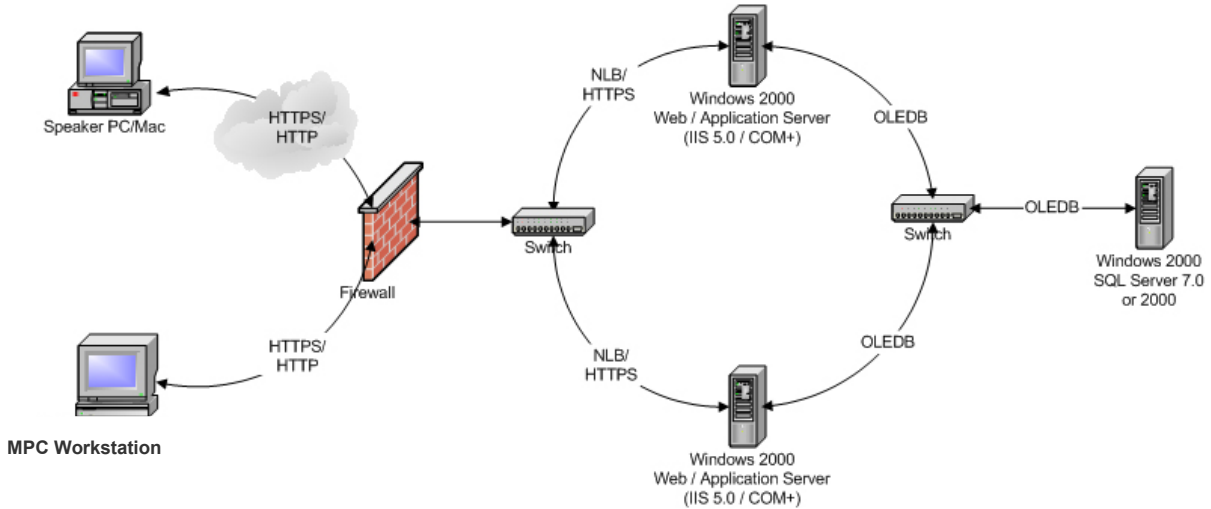
Component/Feature	Implementation/Technology
Clean, easy-to-navigate portal site interface for news and slide acquisition.	<p><b>Client Tier:</b> HTML, DHTML and JavaScript were used to present a clean, intuitive interface compatible with Netscape, Internet Explorer, and AOL 4.0 browsers.</p> <p><b>Server Tiers:</b> VBScript, JavaScript and ASP 3.0 on MS IIS were used for the Interface Tier. The Business Objects Tier was developed in VB – COM+. The Data Tier was hosted on MS SQL Server using Transact SQL. Some commercial COM objects were used such as ZIP and OpenOffice1.1.</p>
<b>Newsletter/ Informational site component:</b> Provides a user interface that presents dynamic content in the form of News, Information, Events, Links, Feedback/Contact, Newest Slides, and Glossary.	
<b>Speaker Presentation Portfolio component:</b> Allows each speaker to log in and manage his personal listing of custom and predefined presentations. This interface allows the speaker to add, remove, edit, and download both custom and predefined presentations.	
<b>Presentation Editor component:</b> Provides a tool that allows speakers to sort and select from all existing slides to create, edit, save, and download custom presentations.	
<b>User Management component:</b> Allows users to maintain their personal information, preferred contact method, etc.	
<b>Administration component:</b> Allows MPC administrative personnel to add, edit, remove and manage users, slides, presentations, news, information, events, and links.	
<b>Data store component:</b> Data schema and procedures required for maintaining the underlying data store needed to drive the Speakers Bureau site.	
Server PowerPoint generation component.	
	COM+ component based on OpenOffice1.1.

#### application architecture

Falkor Group implemented a Microsoft-based solution and architecture for this project. In terms of systems software, the architecture was comprised of the following components:

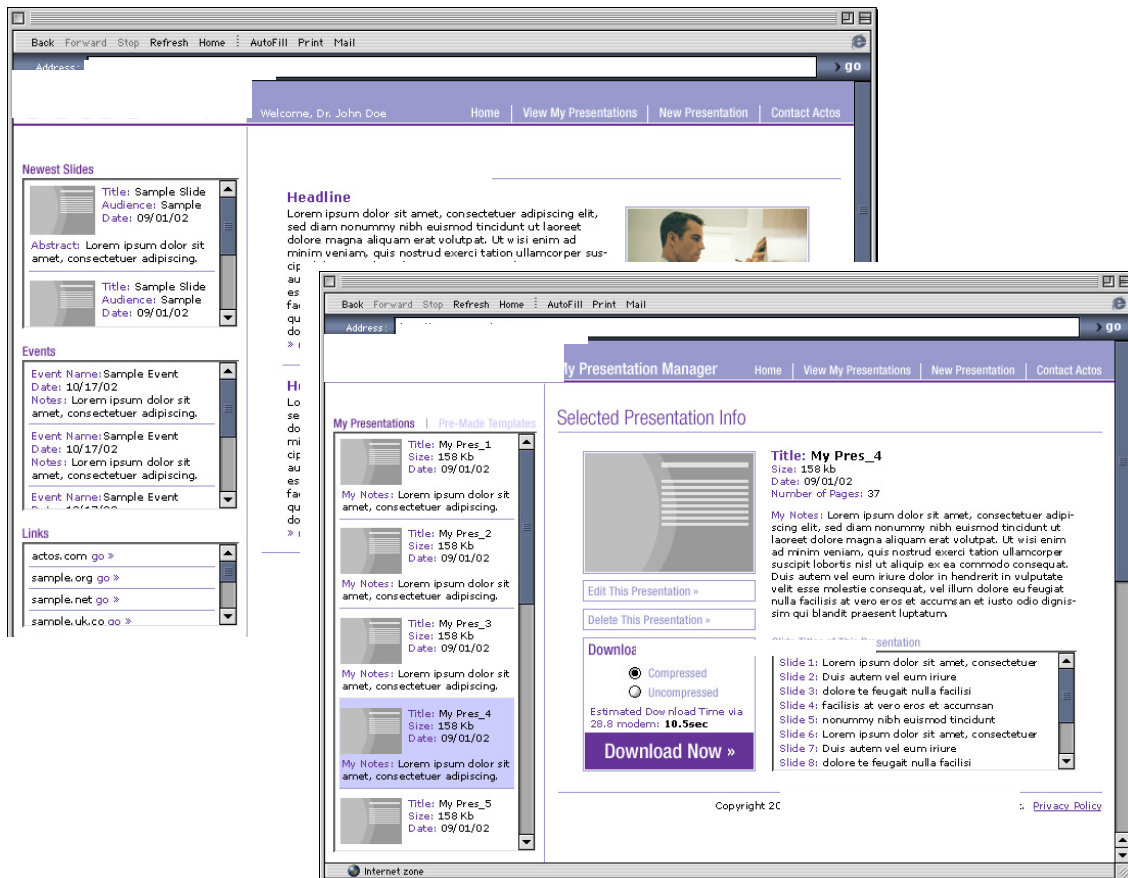
- Microsoft Windows 2000, including IIS and COM+
- Microsoft SQL Server 2000

The core implementation was completed using the Microsoft Windows 2000 platform and other Microsoft server products. The integration of the HTML pages with the middle and back tiers was done using VBScript ASP pages. Custom COM+ components were built using Visual Basic to extend the pre-existing functionality of the Microsoft products and components to meet the needs and requirements for a scalable and extensible architecture. Overall, the Microsoft solution gave MPC a flexible architecture that could be modified in the future using standard tools, such as Visual Basic and Visual InterDev.

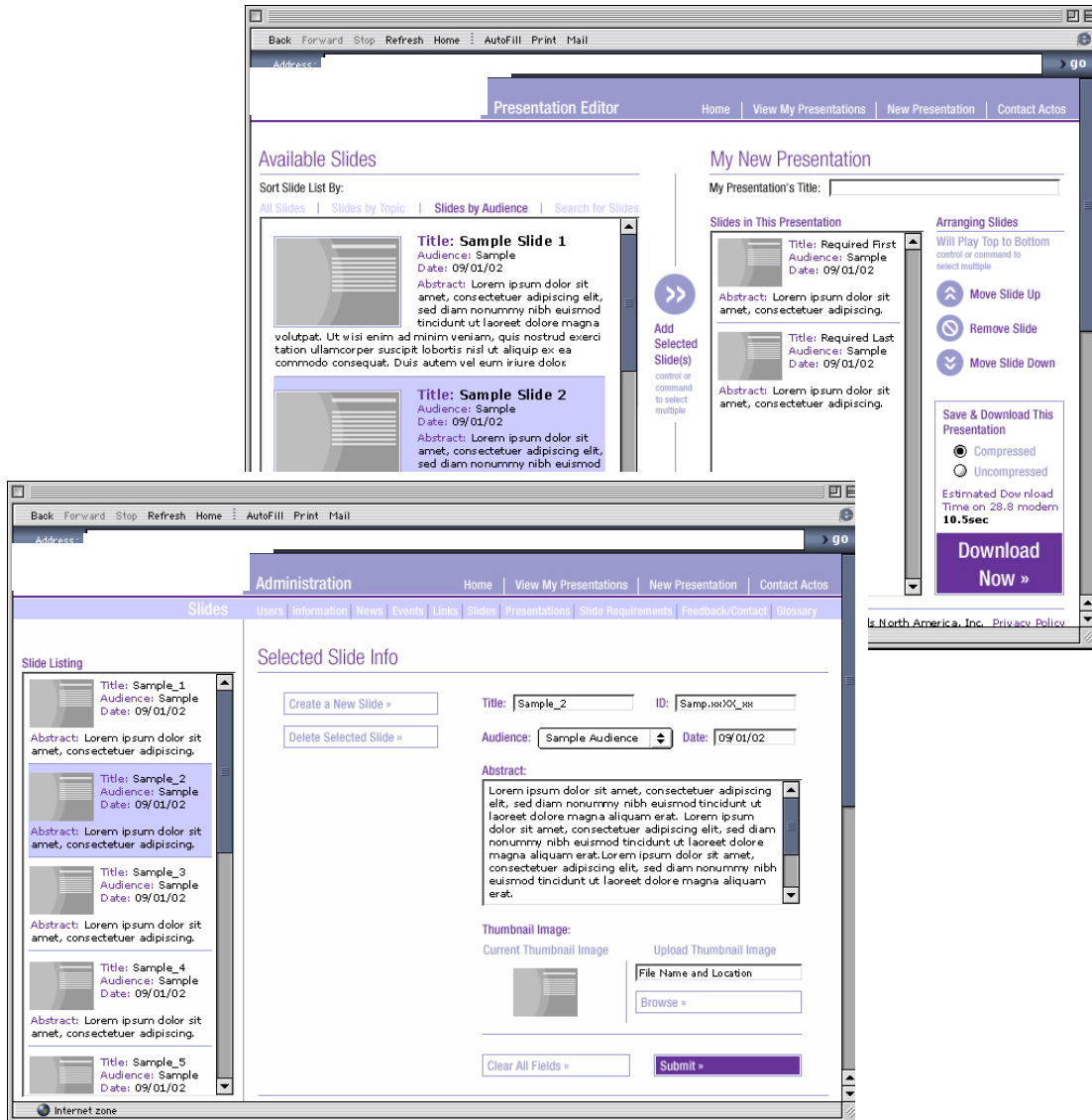


**screen shots** (with MPC identifiers blocked out)

>> Portal Homepage & Personal Presentation Manager:



## >> Personal Presentation Editor & Slide Administrator Interface:



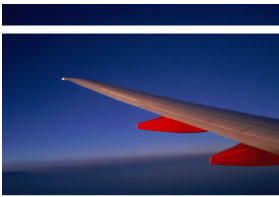
## business outcome

Since deploying the new Speakers Bureau website, MPC's Speakers Bureau members have been using it actively in the field. Per FDA requirements, MPC is now able to assertively control its proprietary drug data and how and when that data is presented to the physician community. Moreover, MPC is able to better control its marketing and brand messages.

Finally, MPC is rolling out a new drug within the year and will be using this application to promote the new drug within the physician community.

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## CASE STUDY

### Fortune 1000 Pharmaceutical Company Redesign – Internal & Extranet Applications

#### business situation

A Fortune 1000, Major Pharmaceutical Company (MPC) develops and markets a prominent diabetes drug. As part of an IT-wide infrastructure upgrade and redesign, MPC Pharmaceuticals North America is redesigning and upgrading all internal and Extranet-based applications. Since many of the internal applications currently running at MPC were designed and implemented by Falkor Group consultants, Falkor Group is again leading the redesign and architecture team for this long-term project.

An essential component of re-architecting MPC's systems is the need to provide seamless integration to new business units in various geographic locales, ranging from multiple US locations, to Europe and Asia. In addition to making MPC's overall application architecture available to these business units, MPC needs to integrate the units' existing legacy systems before they can be phased out.

#### technical solution overview

MPC has retained its Microsoft-based operating system platform infrastructure, but has upgraded its internal servers to Windows 2003 and its Intranet web server to IIS 6.0. The platform infrastructure consists of a load-balanced farm architecture. All redesign and new development is coded against the Microsoft .NET platform version 1.1 with Visual Studio 2003 as the development tool of choice and Source Safe as the code repository. The ability to seamlessly integrate with existing Microsoft products and services, such as SharePoint, Exchange, and Active Directory is one of the key aspects of the re-design.

MPC utilizes the SAP R/3 ERP system for back-office functionality such as Financials and Human Resources. Existing Falkor-developed systems integrate heavily with the SAP system, utilizing classic COM and COM+. The ability to redesign these applications on the .NET platform using the SAP .NET connector affords MPC an upgrade path that ensures no interruption of the applications' performance. Falkor Group's intimate knowledge of these systems and tools provides MPC with the most cost-effective redesign solution.

To facilitate access to information and allow for easier integration with existing MPC systems like SAP and Siebel, MPC is currently testing and evaluating integration tools such as Microsoft BizTalk 2002 and SharePoint Portal.

#### Application Highlight

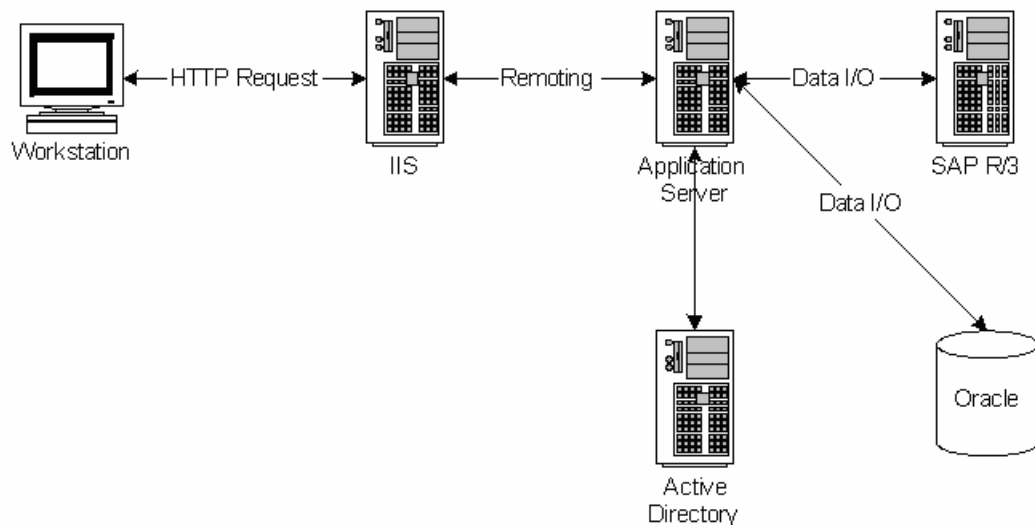
A micro case-study of the overall re-design is the current HR Intranet application by which all MPC employees administer their benefits. Falkor consultants designed and implemented a system utilizing classic COM/COM+, VB, C++ and Oracle to enable all MPC employees to conduct Employee Self Service for all HR-related benefits. This enabled employees to conduct Open Enrollment on-line without the need for form filling or time-intensive communication with the HR department. All benefit elections are made available via an Intranet-based application that utilizes APIs to send and receive information directly to the SAP HR module.

Currently, this application is being re-designed and re-written in .NET. In addition to the functionality provided by the original application, integration with SharePoint is being developed to facilitate document disbursement and workflow messaging.

## application architecture

Current application architecture has followed the n-tier model. Some applications are logically n- or 3-tier, and others are both logically and physically n- or 3-tier. New development and the redesign will ensure that all applications are both logically and physically n-tier. Remoting and Web Services are being utilized, enabling MPC to take advantage of the distributed, .NET platform model. Web Services provide an easy way for customers to retrieve information and even upload documents to the SAP ERP without the need for additional software. Internally, remoting is used to enable employees – no matter their geographic locale – to obtain detailed, ad hoc reports from SAP and Siebel and the SQL server data warehouses. Using IIS 6.0 to act as the host for remote objects allows for seamless security integration with Active Directory for all local- and wide-area network users.

### HR Web Employee Self Service

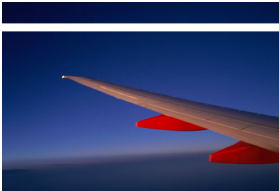


## business outcome

Upon project completion, an integrated and streamlined re-architecture and design will provide an almost immediate return on investment. MPC's aggressive approach to integrate its disparate systems, provide fast access to information and automate business processes will enable MPC to achieve its goal of becoming one of the most innovative and dominant players in the Pharmaceutical Industry.

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## CASE STUDY

### Employee Incentives Company eCommerce Application

#### Phase 1

##### business situation

An Employee Incentives Company (EIC) wanted to create a gift redemption application that utilized e-commerce functionality and created a 'dynamic gift catalog'.

At the time EIC requested this solution, they had a static website that, while functional, required a high level of maintenance and did not leverage the company's existing technology infrastructure. The company therefore requested a web-based solution that utilized their existing investment in IBM's AS400 platform while reducing maintenance costs and improving customer service.

##### technical solution overview

The following table highlights the requested solution components and the benefits of each component:

Component/Feature	Benefit
Network "bridge" linking dynamic web application to access data residing in a DB2 database on an IBM AS400 server.	Leverage existing investment in server hardware and software while consolidating catalog and order data in a single information store.
Dual mode on-line catalog: one mode for browsing and ordering items, the other for browsing catalog items by level and category.	Enable customers to view all available gift items and order from a subset of items through a unified interface.
Secure, password-protected, web-based catalog maintenance enabling the addition, deletion and modification of catalog entries, as well as complete management of item groups with support for multiple administrators.	Reduce costs by enabling secure, online maintenance of dynamic web data. Reduce risk by enabling multiple administrators to maintain catalog application with minimal training.
Enable gift booklet redemption on-line.	Provide value for customers by increasing speed of order processing while reducing administration costs associated with manually entered orders.
Check order status on-line.	Reduce customer support costs by enabling customers to check order status on-line.
Enable on-line administration for distributors.	Improve customer retention and reduce customer support costs by enabling distributors to check gift program status on-line.

##### application architecture

Falkor Group implemented a Microsoft-based solution and architecture for this project.

##### >> Microsoft .Net Web Application Solution Coded in C#

The 'dynamic catalog' web component was based in Microsoft's .Net Framework and built in the C# language. The solution provided dynamic page construction from data contained in three data stores:

- A new Intel-based Microsoft IIS web server located in the client's technology core
- DB2 database located on the client's IBM AS400, which was subsequently located in the client's technology core
- Image data pulled from a server located at the client's current web host

## >> Microsoft HIS-based AS400/DB2 Bridge

The solution included a bridge from an Intel-based Microsoft web server to the client's existing AS400 server to facilitate a data connection to the AS400's DB2 database, where catalog and order data were stored. The bridge was based on Microsoft's HIS (Host Integration Server), which provided three services for accessing AS400 data: network support services, data services (via ODBC drivers and OLEDB objects) and message queuing services.

### Phase 2

#### business situation

Leveraging the 'dynamic catalog' solution Falkor Group implemented in Phase 1, the company wished to enhance their gift redemption web application, which was now being utilized online by EIC customers.

#### technical solution overview

The following table highlights the enhanced functionality the client requested for the site and an explanation of each component implemented:

Component / Functionality	Explanation
Program-Style Management	The appearance of the site (menu-colors, font style, etc.) is editable at the Program level.
Shopping Cart	Added shopping cart functionality to the site that allows: <ul style="list-style-type: none"><li>• The user to select multiple items for redemption.</li><li>• The user to save selected items for a period of time without redemption.</li><li>• The user to save multiple shopping carts.</li><li>• Saved carts to monitor item availability.</li><li>• The user to create a "wishlist" shopping cart.</li><li>• The user to transfer items between "wishlist" and a saved or current shopping cart.</li><li>• The user to redeem carts against available points.</li></ul>
User Management	User identification and tracking was added to: <ul style="list-style-type: none"><li>• Allow users to log in and shop against accrued points.</li><li>• Allow anonymous users to shop and create shopping carts (no wishlist or saved carts are available to anonymous users).</li><li>• Allow a "Demo" user to shop and redeem using "demo starter points" associated with a Program level.</li><li>• Maintain running information as a user navigates the site, and manage points based on items in a current cart/ items redeemed/ and items transferred to a wishlist cart.</li></ul>
Program Management Additions	Each Program has controls (DB tables, logic variables, and interface controls) added to: <ul style="list-style-type: none"><li>• Allow a program to override point values of items in the program's corresponding catalog.</li><li>• Allow a program to filter items from its catalog based on the presence of items in its "program-points" table.</li><li>• Manage Category, Subcategory, Ordinal, and SubOrdinal for items (static table for all catalogs).</li><li>• Manage Category alias (Name and Ordinal of Categories and Subcategories).</li><li>• Manage Program email addresses: a list of e-mail addresses that will receive notification when redemption transaction is completed.</li><li>• Exclude Categories/Subcategories (notes: exclusion of a top level Category excludes all Subcategories from listing).</li><li>• Provide options for viewing catalog items by: Level, Category, Featured Items, Search and Item Number.</li><li>• Choose whether or not to filter items by program-points table.</li></ul>

	<ul style="list-style-type: none"> <li>• Choose to use/not use the new shopping cart functionality.</li> <li>• Require login or not.</li> <li>• Allow for forgot password functionality.</li> <li>• Manage Shopping cart functionality: <ul style="list-style-type: none"> <li>○ Use cart with no login or point limit</li> <li>○ Use AS400 to login users and limit points</li> <li>○ Use external login and points</li> <li>○ Notify external process on redemption</li> <li>○ Limit total item count allowed in each cart</li> </ul> </li> <li>• Choose to submit cart redemptions to program e-mail list.</li> <li>• Choose to send a confirmation e-mail on order submission.</li> <li>• Manage confirmation e-mail contents.</li> <li>• Choose to allow shopping cart “wishlists”.</li> <li>• Choose lifetime for saved shopping carts and wishlists.</li> <li>• Choose to allow custom order fields (up to five) on the shipping information page.</li> <li>• Manage shipping to allow: <ul style="list-style-type: none"> <li>○ US only</li> <li>○ US and Canada</li> <li>○ Worldwide</li> </ul> </li> <li>• Manage a “Ship_Info_Heading” field.</li> <li>• Add the trackable/manageable Program variables.</li> </ul>
BrowseCatalogView Additions	<p>BrowseCatalogView included the following additions/changes:</p> <ul style="list-style-type: none"> <li>• View By Level</li> <li>• View By Category</li> <li>• View By Featured Products</li> <li>• Search</li> <li>• View By entered Catalog ID</li> </ul> <p>Within each view we provided options on how each item is presented:</p> <ul style="list-style-type: none"> <li>• Show points with thumb/detail</li> <li>• Append currency word if show points “on”</li> </ul>
Item Pricing	<p>Functionality was provided to manage how items are priced by either catalog level, or item price depending on program variables.</p>

### application architecture

Falkor Group utilized the application architecture implemented in Phase 1 of the project.

### business outcome

Since adding the online channel to their gift redemption process (in 2003), EIC has moved 40% of their gift redemption traffic from their call center to the online application. This process automation has allowed the client to streamline their call center operations at a huge savings in operating expenses. Furthermore, EIC forecasts that the online channel will make up 60% of their redemption transactions by 2005.

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## CASE STUDY

### Fortune 500 Product Distribution Company eSupply Chain

#### business situation

A Chicago-based, Fortune 500 Product Distributor Company (PDC) works with over 1,200 suppliers worldwide and distributes over 500,000 facility maintenance supplies and 2.5 million repair parts to resellers in North America. The electronic processes PDC used to interface and communicate its suppliers were based in older, inflexible technologies that were difficult and expensive to change.

#### technical solution overview

##### >> eSupply Chain Project

PDC developed a browser-based set of applications utilizing Microsoft.NET technologies as a means to facilitate supplier communication, reporting, and tracking. The applications were developed using .NET Active Server Pages (ASPX), JavaScript, Microsoft C# class libraries and objects, SQL Server stored procedures, and Web Services. The applications were developed using Microsoft SQL Server 2000 for all database related functionality. Falkor Group brought expertise to the client's development team in the following areas:

- Initiated, created, implemented and managed multiple web based application projects used to interact with supplier and carrier based companies that are partnered with the client.
- Designed and developed front-end, middle tier, and back-end software functionality using ASP.NET, C#, SQL Server, and Web Services.
- Designed and developed SQL Server relational databases, stored procedures, views, and triggers for use with back-end functionality.

##### >> BizTalk EDI Validation Project

An offshoot of the eSupply Chain project, PDC wanted to reduce the time and expense involved in the daily correction of EDI transaction errors. Falkor Group used BizTalk was to create a process that provided validation for EDI transactions sent to PDC from their suppliers. This included ASNs and Invoices using the original data sent to the supplier in EDI PO format. Validation logic and data storage was provided using Microsoft SQL Server 2000 databases, stored procedures, and triggers. Web pages and email used in the correction of transactions that failed validation were created using ASP.NET, C#, and stored procedures.

#### business outcome

The eSupply project and offshoot projects, like the EDI Validation project, have become one of the leading cost saving generators for PDC.

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## CASE STUDY

### Korean Technology Company eLearning Website

#### business situation

A Korean application service startup had encountered severe service problems with two vendors while attempting to develop a web application service to teach Korean youth to speak English. Running low on capital and behind schedule, the startup required a new vendor to develop and execute a rapid development plan in order to meet milestones promised to investors and keep the business viable. Through the use of a proven process, Falkor Group was able to accurately define the business objectives, design a solution and deliver the within the required budget and meeting the milestones promised to investors.

#### technical solution overview

Falkor Group designed, developed and deployed a secure, Microsoft ASP.NET web application service that allows Korean academies to enroll students through the web. Falkor Group brought in a graphics design consultant to help design a visually appealing on-line English tutorial course. Falkor Group development consultants then developed a scalable, multi-language solution that streams video, records student audio, and tracks grades. The system is also capable of handing back office functions like billing and tools were constructed to aid in general academy management.

#### business outcome

By applying Falkor's Solution Approach (FSA) and applying the FSA Development Team Model, Falkor Group was able to develop in three months what two previous vendors were unable to develop in six months. This resulted in a substantial monetary savings and stabilized the business from the perspective of its investors. By meeting project milestones and budgets, Falkor Group enabled the client to focus on the successful completion of its business objectives and to maintain there service level commitments to their end customers.

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