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## PSC Enterprise Solutions Case Study:

# Easy to Use and Maintain Universal Portal

*SOA design provides for everything including “the kitchen sink.”*

### The Problem...

There are portals and there are portals. Some are only available to internal users, others include B2B functionality for customers and suppliers as well. Some provide customized pages for controlled access to e-mail or sales orders; others limit access to general information such as what is for sale and how much is in stock. Rarely do they provide the same easy access to those who have to maintain site content. In other words, no portal does it all.

Such was the dilemma for one manufacturer that already had a B2B enabled website, but wanted a portal that had everything including “the kitchen sink.” They were continually leveraging the latest in information technology in order to provide the best business processes in their industry, so they were ready for the next step. Their logic was simple -- the easier it was to do business, the more business would come their way. Here is their story about how they not only made business effortless for their customers, but for their employees as well.

### The Situation...

The Client, a specialty manufacturer of industrial products, was ready to take their B2B-enabled website to the next level. In order to keep ahead of the competition, they wanted to provide their customers and employees with a state-of-the-art portal. They were looking for a solution that would enable better lines of communication within and across departments in order to create, develop, and deploy content for the portal. The Client also wanted to provide additional B2B services such as extended ecommerce services, corporate messaging or bulletin board, and ERP data through the corporate portal.

There is more. The Client also wanted to address maintenance issues as well. Because they lacked a consistent content management and delivery model, the

process for creating/delivering content was unmanageable, and unable to scale effectively.

In sum, the Client wanted to provide:

- Personalized interactions with content and data; and provide a single interface to view product offerings, order status, billing information, etc.
- Reduce the “time to web” for content to be made available
- Reduce the time and cost associated with using IT resources to update and create web content
- Provide a single global face to customers and employees

***“The Client got it all...a portal that is user friendly, open to everyone yet with great security, and as easily to maintain as it is to use.”***

### The Solution...

Working with PSC's portal experts, the Client chose a combination of a WebSphere Portal Service Oriented Architecture (SOA) and enTouch.cms, PSC's content management system (CMS). The resulting framework provided for loosely coupled integration, native multi-language support, scalability, dynamic services, and a pervasive presentation layer. The implementation focused on content delivery and back-end data access.

The SOA driven portal included a service bus, or messaging backbone for service-oriented applications and sessions. Each portal portlet application enabled loosely coupled integration “at the glass”, a delivery method that presents aggregated information to the user with minimum back-end integration. Additionally, the portlets themselves were customized to reflect a particular aspect of an application and its functionality, enabling the portal to interact with the application to provide a seamless user experience.

The loosely coupled integration also enabled swift changes to either CMS or the portal systems without influencing the overall system performance.

The new portal now provides a multitude of services for the aggregation of disparate data, and disparate web integrated services into one seamless user experience. Specific portal functionality used in this design pattern includes the following:

**Single Sign-On (SSO).** The portal provides a single point of access for all internal and external users, including those from the existing public website. The service incorporates the directory model used by the local LDAP directory server for portal and CMS authentication. This enables the Client to use existing directory models as a guide to specific portal business roles, security policies, and workflow management.

**ERP integration.** The portal enables authorized users to access, view, and interact with the corporate order tracking and inventory management applications. The order tracking applications search through a database containing approximately 30,000 records located on a System i server. The portal connects to the System i using portlet technology and access data views.

Because ERP is “the core” of the Client's operation, adding external access required an increase in the level of security. This led to the creation of a custom Permissions Management Portlet integrated with the existing data delivered to the portal. After users have logged on and the portal has applied its security, the custom application invokes a custom security model of its own to provide additional security at the account or specific resource within the data view.

**Document Management.** Document integrity and delivery is provided via a single repository for centralized document management. Security is role-based authentication for customer and internal corporate documents stored within the repository. For extra security, the Document Manager also has multiple security layers, enabling security policies to cascade from initial user authentication down to the directory or folder level viewed by the specific user.

**Mail and Calendar.** The separate Community Calendar and standard mail dashboard (mail, personal calendar, to-do's, contacts) are now incorporated into a one-page view, presenting the user with relevant and correlating information. The user has full access to all of their standard Mail Tools and Mail Dashboard with the same familiar experience.

**Latent and disparate Databases.** In the past, disparate databases residing within the network only provided limited access to data, and, therefore, limited corporate value. The portal, via the IBM Notes Server, accesses the local databases for National Accounts and the Corporate Bulletin Board providing users access to account information relevant to existing and new business. The data is configurable for viewing on multiple pages or a single page for users.

**Multiple user/group landing pages.** Typically, in web development, companies create a specific landing page, and attempt to integrate business rules into the specific page for the displaying of data based upon a user's profile. In this solution, the portal enables an administrator to configure either single or multiple pages as the initial landing page for a specific user and/or group. The landing page format is determined by the business rules and security policy. As customers log into the portal, their specific user or group profile will invoke the portal to reconfigure the standard landing page that will change as the actual portal data

elements respond to the proper authentication. Maximizing this ability decreases page navigation complexity, and management.

**Content Management.** Perhaps the most welcomed feature of the project was the extension of the portal technology into the area of content management. Department heads and designated users can now add, delete, update and otherwise manage the content under their area of responsibility. Not only do they have the same easy access as other portal users, but also they can carry out their task without any special technical skills.

**Group Security.** The portal "opened the information door" to a much wider population making security a key issue. PSC's response was a robust security model that enables the use of nesting or "roll-up" groups to maximize the use of security and business role inheritance. The portal enables the Administrator to develop a taxonomy model reflecting the existing directory model for integration into the portal.

Utilizing inheritance, the Portal Administrator empowers groups as specific roles within the organization. This enables the Admin to remove or add a specific user or group. The group will have specific rights to view, edit, and update information. The user will automatically receive the rights of the group in which the user belongs or, if the Administrator so decides, view the data as an individual user as well. This security model demonstrates the level of integration the portal incorporates when using the corporate LDAP directory model.

### The Bottom Line...

The Client got it all... a portal that is user friendly, open to everyone yet with great security, and as easily to maintain as it is to use. From a balanced score card point-of-view, the benefits can be grouped into the following categories.

**Reduced Operational Costs.** The portal successfully integrates existing daily operational applications such as Mail, Inventory/ERP, Corporate Bulletin Board, and Content Management System. The portal also leverages the existing investment made in systems helping the Client to reduce operating costs and increase productivity.

**Customer Perspective.** The Client has shifted its focus from products to customers -- from a non-involvement model to one that builds collaborative relationships. The new portal system enables internal users and customers to view explicit data relating to order and inventory status. Integration of the portal provides a platform for implementing the next generation of value in business relationships called value networks. A value network approach considers relationships as two-way value-creating interactions, which focus on value received as well as value provided.

**Business Process Perspective.** The existing business processes such as public and corporate web content development, web development, corporate document management, product availability, and client deliverable status are now integrated into one main browser. Integration and aggregation of distributed resources has increased employee productivity by removing process delays and bottlenecks.

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