



## Global Consumer Packaged Goods Company

### ■ Company Overview

The client for this custom development solution is the worldwide internal auditing group for a global consumer packaged goods company based in North America. The company has thousands of facilities worldwide which are in need of a regular audit review to ensure the consistency and quality of the overall manufacturing process and output.

### ■ Business Challenge

The client needed to replace the current audit tracking solution because of severe limitations, including an outdated technical platform, a lack of accessibility to key data and features when working within remote environments throughout the world, and insufficient functionality to perform all necessary tasks and provide the desired data to decision makers. By implementing a well-architected, service-oriented solution, the client could address these limitations as well as provide the members of the auditing team with an efficient and friendly user experience as compared to the tedious, time consuming, and redundant exercise of using the existing tool. The overall vision for the new solution was to enable the auditing group to better serve the client by simplifying and automating the current business process, allowing an area for key stakeholders to access to accurate and vital business information, and enabling a worldwide accessible tool to centralize all group operations.

### ■ Solution Approach

Northridge recommended a solution leveraging Microsoft Windows Communication Foundation (WCF) to build and run the connected systems and meet the client's goals. As a part of this solution, a Windows application and a local data store built on Microsoft SQL Server Express Edition would be installed on each auditor's laptop computer and that local environment would access and communicate data to SQL Server database on a central server through the SQL Web Synchronization Service. In areas where there is no real-time access to the Internet, the local machine would store all user-entered data in the local SQL Express database which would later be synchronized back to the central database as soon as connectivity was re-established. In addition, a website would be developed and deployed in conjunction with the Windows application to allow for secure access to many of the same functions of the Windows application as well as additional reporting capabilities from any location worldwide that has Internet access, even from machines on which the Windows application was not installed. The solution was architected so that both the Windows application and the website utilize a single service layer when communicating with the central database in order to unify the business logic and entities independent of whether it is the Windows or the web client requesting the information.

### ■ Results Delivered

By leveraging Windows Communication Foundation, SQL Server, and Microsoft .NET technologies, Northridge was able to design and implement the desired functionality in a highly-extensible, service oriented architecture (SOA) for the client and do so in an extremely compressed time-frame. The entire first phase of the project, which included the construction of both the Windows and web application user interfaces, the creation and setup of the database, web services, and synchronization components, and the deployment of the entire solution to the final production environment, was completed in less than three months in order to meet a hard deadline constraint by the client.

## Windows Communication Foundation



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