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## SCS Case Study

### Structured Ad Hoc Reporting Case Study

#### *Solution Snapshot*

**Business Situation:** Lack of user-friendly, universal reporting tool for a large, nationwide franchise chain.

**Multi-Point Solution:** Customized a data visualization solution that would function on any PC, Mac or iPad, required minimal training for franchisees, and offered flexibility to users.

**Technologies Used:** Microsoft SQL Server Database Engine, Microsoft SQL Server Reporting Services, Microsoft SQL Server Analysis Services, Visual Studio, C#, Java, JQuery, Ling, HTML5, CSS3

**Benefits:** User-friendly functionality and access to data; significant time savings for franchisees generating operational data leading to better franchisee relations for the client.

#### *The Client*

The client is a major service industry franchisee that has been operating for more than 30 years. With over 3,500 locations, this company is the largest franchisee in its industry.

#### *The Challenge*

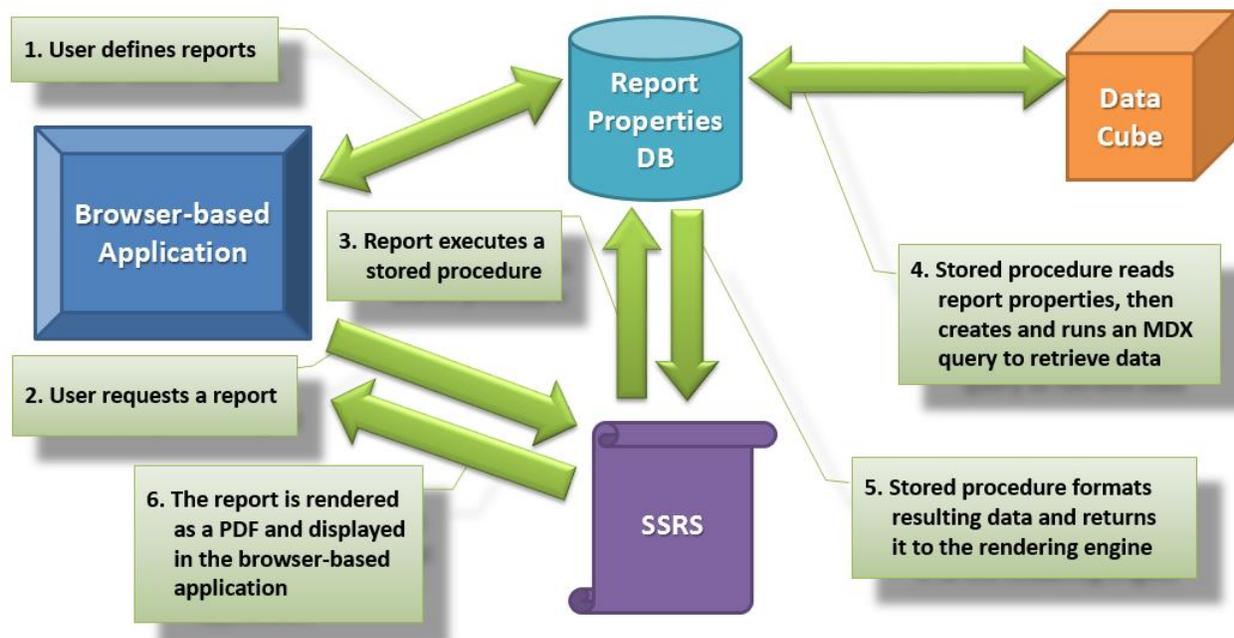
The corporate office was faced with providing franchisees a simple and straightforward tool for reporting on their facilities. Franchisees required the ability to productively use the reporting tool with minimal training, and functionality on any PC browser, Mac and iPad was essential.

The tool also had a range of requirements, including the ability to design a report by selecting facilities they wished to include and the attributes listed for those facilities. The ability to select measures they wished to include and the data range for those measures was also necessary. Finally, users required the ability to dynamically sort data in the report.

Data for all franchise locations is gathered nightly and combined into a Microsoft SQL Server Analysis Services cube. This cube serves as the data source for these reports.

#### *The Solution*

The client required more structure and greater simplicity than what is currently available in data visualization tools, so we set out to create a custom solution. Superior Consulting Services created this custom solution using a browser-based application along with the Microsoft SQL Server database engine, Microsoft SQL Server Analysis Services and Microsoft SQL Server Reporting Services. The solution operates as shown here:



The browser-based application was created with Visual Studio using the C# and Java development languages along with JQuery and LINQ for database interaction. The application leverages Hypertext Markup Language 5 (HTML5) and Cascading Style Sheets Level 3 (CSS3) for the presentation layer. It is designed to work in any browser environment, including the iPad browser. Even though the application was implemented for cross-browser compatibility, it still provides a rich, interactive user experience.

The browser-based application allows users to create reports by simply selecting the measures and facilities to appear on the report. The user can also select from a set of predefined date ranges (last completed week, month, quarter, year) at design time or enter a date range at runtime. To provide a clear, concise mechanism for selecting items, a special checkbox control was created. This control features group headings, group selection using heading checkboxes and list sorting.

**Des Moines**

Des Moines-001

Des Moines-002

**La Crosse**

La Crosse-001

La Crosse-002

La Crosse-003

**Minneapolis**

Minneapolis-001

Minneapolis-002

Minneapolis-003

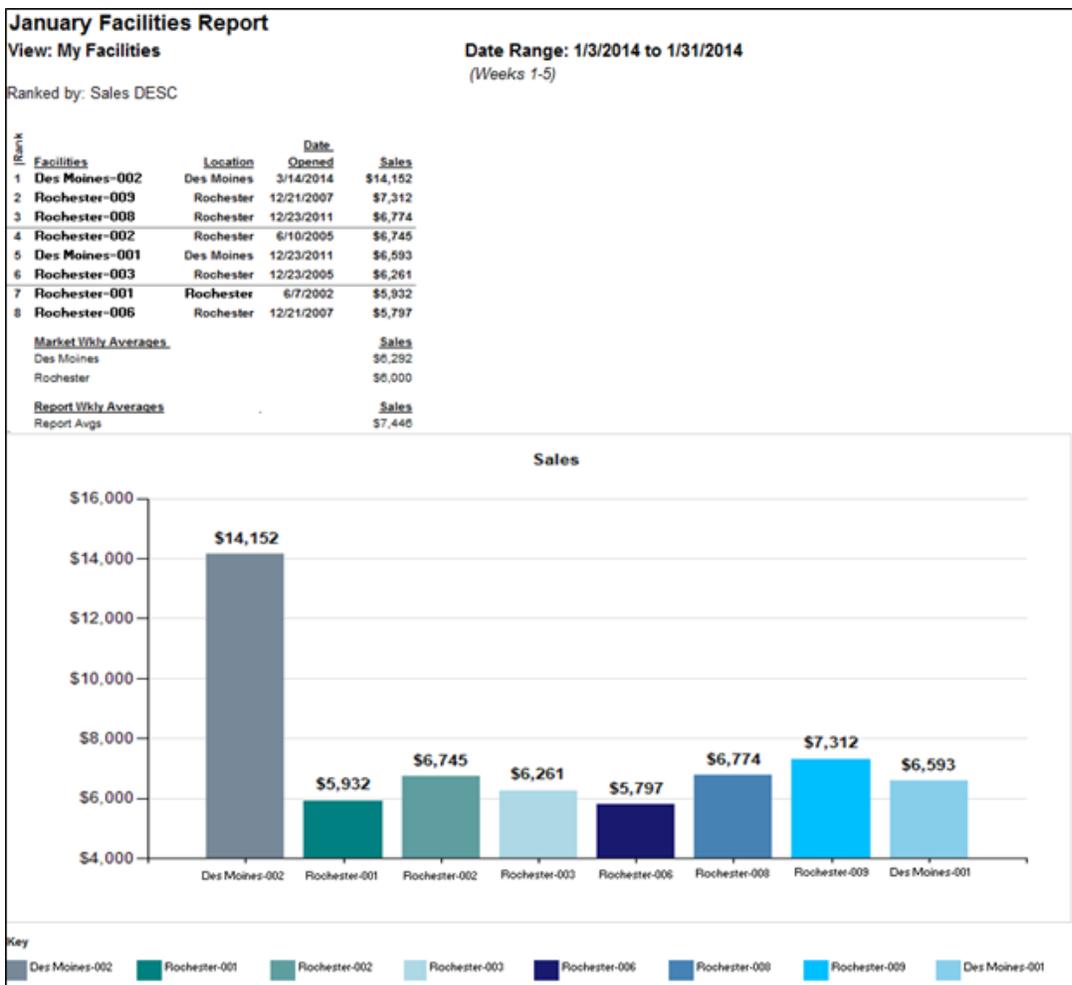
Minneapolis-004

Minneapolis-005

Minneapolis-006

Minneapolis-007

SQL Server Reporting Services is used so the reports can leverage all of the rich formatting and charting features that this tool provides, as shown here:



An innovative stored procedure is utilized when a report is requested. This stored procedure reads the properties of the report definition created by the user and generates an MDX query. This MDX query is then sent to the cube in SQL Server Analysis Services to return necessary data for the report. Even though the data query is built on the fly, reports are very performant.

### ***The Result***

The SCS custom reporting tool has allowed franchisees to save a significant amount of time when generating operational data for their facilities. What previously took franchisees hours of manual spreadsheet manipulation is now completed in minutes. The time savings allows franchisees to spend much less time gathering data and much more time analyzing that data – leading to better strategic decisions. The franchisees see this as a significant value-add that comes with their franchise fee.

Here is some feedback our client has received from the franchisees:

“The tools that you are building will make my organization stronger...This is all revolutionary for this company. It really is.”

“I commend you for the work that you have done for us and for the incredible reporting capabilities that you have made available to us.”

“This advance ROCKS! So intuitive and very helpful.”

“[This reporting tool] has changed my life!”

### ***Contact***

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