CASE STUDY

Sheetz Applies Pentaho to Put the Power of Business Analytics to Work

Convenient store giant deploys company-wide data analysis and reporting solution to better serve their customers

About

Established in 1952 in Altoona, Pennsylvania, Sheetz, Inc. is one of America's fastest growing family-owned and operated convenience store chains with more than $4.9 billion in revenue for 2010 and more than 13,500 employees. The company operates 400 convenience store locations throughout Pennsylvania, West Virginia, Maryland, Virginia, Ohio and North Carolina. Sheetz currently ranks 87th on the Forbes list of largest private companies.

Business Challenge

In 2009, Sheetz had numerous datamarts and reporting tools throughout its organization. Different data sources and methods often produced competing results for the same business measures. The company needed a simple, common reporting technology that would provide self-service reporting and analytics to users across all departments. Nanette Pittman, project lead and IT Senior Analyst at Sheetz explains, "Getting the data should not be the challenge, analyzing and reporting the data should be where the users' time is spent. The company needed a simple, common reporting technology that would provide self-service reporting and analytics to users across all departments. Business users needed to bypass the IT roadblock that frequently arose because reports would fall last on the priority list and users often did not have a clear definition of what they needed. The ideal solution would also reduce the use of Access and Excel as reporting tools and minimize strategic reporting against production systems. In an effort to move to an enterprise data and reporting strategy, Sheetz selected both Teradata and Pentaho to provide the infrastructure, tools and support to achieve a common infrastructure.

QUICK FACTS

- Industry: Retail

- Headquarters: Atloona, Pennsylvania

- Website: www.sheetz.com

- Products/Services: Pentaho Business Analytics, Pentaho Consulting

Solutions

- **Pentaho Business Analytics** – Pentaho Business Analytics Enterprise Edition was chosen based on its fit to Sheetz's technical requirements, its low cost of ownership compared to traditional business intelligence and analytics alternatives and its professional support. Sheetz is using the following capabilities of Pentaho Business Analytics:

Analysis (OLAP) is used to slice and dice multi-dimensional sales data. The goal of rolling out Analysis company-wide was to empower business users to do the analysis before creating reports. Pittman explains, "Putting Pentaho Business Analytics in the hands of business users enabled them to build exactly what they want and when they wanted it."

> By putting Pentaho Business Analytics in the hands of business users, we enabled them to build exactly what they want when they want it resulting in eliminating seven hours per week from IT creating reports ability to expose analysis to end users directly stood up against other BI vendors.

– NANETTE PITMAN
Senior IT Analyst, Sheetz

The reporting capability of Pentaho BI is now the reporting tool of record. Pentaho is connected to many Sheetz production systems for reporting and the team set up automatic report distribution methods to minimize the use of email to distribute reports.

- **Data Governance Council** – A Data Governance Council was established to create and enforce data management policies and procedures across the organization. Their role includes improving data quality and sharing data across the organization. Using Pentaho Business Analytics, specifically ROLAP, in order to provide near-time access to data for ad hoc analysis.

- **Data Stewards** – A team of Data Stewards was created to provide input into the use of business intelligence and business models. The team defines the quality expectations and data security policies. The Data Stewards establish business processes around the data and create the policies and guidelines for information use.

- **Pentaho Consulting –** To help ramp up and aid in deployment, Sheetz engaged Pentaho Consulting for a long-term engagement. Throughout the year, a Pentaho Consultant was a dedicated resource to Sheetz and helped several IT developers and Data Stewards become experts with Pentaho tools. As a testament to Pentaho's top-tier consulting services, Rodrigo Haces of Pentaho was named as a Sheetz 2011 IT Vendor of the Year.

- **Technology** – The Pentaho application is running on a VMWare Linux server with the CentOS operating system and the Tomcat application server. Sheetz upgraded their Teradata warehouse to easily manage over two terabytes of data. Due to the increase of users and the now vital and critical Pentaho deployment, Sheetz has two VMWare Servers in different locations, both for production, allowing redundancy and failover tolerance.

Results

- **Quick time to value** – Sheetz deployed the initial project within three months with upgrades each year to enable greater functionality. Pittman explains, "We deployed our first analysis model within a month, and users were very excited at the flexibility and depth of data they could access."

- **Eliminated reliance on IT** – In total, marketing has eliminated approximately seven hours per week that were spent creating reports. IT is no longer a roadblock, however, and can now focus on mentoring on the reporting tool and adding addition data sources to the warehouse.

- **High Scalability** – The Pentaho system has 30 regular users and 80 logins. Sheetz is currently analyzing 2.1 terabytes of data from their Teradata data warehouse. Over one terabyte of this data is five years of sales data. They are confident that Pentaho has the ability to scale with Teradata and are developing data retention policies to be able to easily access and analyze many of their data sets in the future.

- **Confidence in the ability to grow and expand with Pentaho** – Sheetz's original objective was to only deploy a small implementation of ad hoc and canned reports. With rapid success of the project and positive feedback from the business users, the company decided to increase the scope of their project to include the analysis capability of Pentaho Business Analytics and have once again experienced company-wide success. In the near future they plan to deploy other capabilities of Pentaho Business Analytics such as data integration, dashboards and data mining to its customers resulting in additional revenue.

- **Ability to make better decisions faster that increase the company's bottom line** – All business users from the Finance Director to the maintenance department have a consolidated view of data. The Finance Director is a regular consumer of store sales data and is now empowered to accomplish data discovery and exploration without waiting for IT. The maintenance department, which monitors costs such as equipment in stores, gas pumps, and maintenance labor, is able to look at all store maintenance costs together and establish goals and measure progress to reduce these costs..

Summary

As a leading convenience store chain, speed and efficiency of customer service are a priority for Sheetz. It is important for the company to measure and monitor every aspect of their business to optimize operations. Now, using the reporting and analysis capabilities of Pentaho Business Analytics, they can make better decisions on every aspect of their business from monitoring service indicators in their drive-thrus to optimizing the stock and staffing at their 400 stores. Pentaho brings power to the user by enabling Sheetz business users to bypass IT to access almost 2.5 billion rows of data from Teradata to create and analyze their own reports. This has made a major impact on departments like marketing, which has eliminated seven hours per week spent trying to access data for their reports, and maintenance which is now able to access, track, and analyze their spending. The work of Pentaho's Support and Consulting teams earned Pentaho the Sheetz 2011 IT Vendor of the Year distinction for the success of our strategic work together to improve the overall business.

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