



# Hewlett Packard Enterprise



## Objective

Adopt a new data analytics platform to deliver actionable data to all segments of the business for improved operations and business intelligence

## Approach

Implement the HPE Vertica solution integrated with user-friendly mobile applications and data warehouses

## IT matters

- Delivers 60-400 times better querying performance with daily batch loads taking 60-90 minutes versus up to 5 hours
- Enabled the development of a recommendations engine in 3 months
- Accommodates 36 TB of data (compared to 3 TBs before) with cost-effective expansion capabilities
- Simplifies time-consuming ETL work and reduces data transformation time for company developers
- Provides a platform for expanding the company's predictive analytical capabilities to gain higher profitability

## Business matters

- Empowers reports, calculations, and analytics for 80% of the company's workforce worldwide for better business decisions and operational efficiency
- Accelerates application speed-to-market by 30-35%, enabling the rollout of 8 mobile enterprise applications that improve decision-making, efficiency
- Improves merchandise allocation and inventory management across retail locations due to 60-80 times faster performance of complex sales queries
- Affords better sales tracking because essential daily store reports are generated 90-400 times faster than before
- Allows designers, buyers, planners, and merchants to manage their operational areas in near real time

# Outfitting GUESS? with predictive analytics to delight customers

## Fashion retailer seizes insight, efficiency across operations with HPE Vertica solution



Gaining popularity first in the 1980s for its stonewashed signature jeans, GUESS?, Inc. has morphed into a fashion powerhouse with unique, on-trend clothing, shoes, and accessories from season to season. From its first store in Beverly Hills have come 1,638 stores in 92 countries. Consumers can also shop via a mobile app and the online site at [guess.com](http://guess.com).

From GUESS?'s vantage point, data analytics is imperative for continued retail success. However, the Los Angeles, California-based company was hampered by its Oracle enterprise data warehouse (EDW). Daily batch loads took up to five hours, ETL development was time-consuming, and complex queries did not always finish. In addition, database maintenance affected availability, data growth was capped at 3 TBs, and the platform's total cost of ownership (TCO) was excessive. The company coveted an innovative solution built purposely for querying and analytics.

GUESS? replaced the EDW with an on-premise HPE Vertica Analytics solution. The change delivers 60 to 400 times better querying performance with daily batch loads taking 60 to 90 minutes. The platform

“Our HPE Vertica platform is instrumental in many areas of our business—creating predictive algorithms, serving up product recommendations, powering insight to our mobile apps, and generating daily reports and ad hoc queries. It’s crucial for enabling us to be more agile with data.”

– Bruce Yen, Director-Business Intelligence, GUESS?, Inc.

accommodates 36 TB of data, expands cost effectively, reduces TCO, and simplifies time-consuming ETL work for company developers. Eighty percent of the company’s workforce worldwide interacts with or relies on information that the HPE Vertica solution generates daily.

“Vertica helps us empower many calculations and analytics that we couldn’t have done using Oracle,” says Bruce Yen, Director-Business Intelligence (BI) at GUESS?.

Building an EDW on HPE Vertica enables remote, timely data access for better business decisions and operational efficiency. First, the company disseminated information from HPE Vertica to its iPad® application, G-Mobile. This enhancement allows designers, buyers, planners, and allocators to manage the business in near real time. The latest sales, inventory, and logistical information merges with merchandise images.

### **Charming customers with engaging content**

After the success of G-Mobile, the company increased the number of mobile applications to eight, as they afford agility and an easy way for users to interact with data. The Guess Jeans customer-facing app provides personalized

content and product recommendations, which originate from a recommendations engine that the BI team built on HPE Vertica. The recommendations engine allows customers to assemble outfits from various products based on their unique style profiles.

“We want to enhance the customer journey by sharing engaging content and use the data generated across the company to create more captivating offers and more revenue,” Yen notes. “Our mobile app allows us to delight our customers by introducing new products that they may not be familiar with.”

He continues, “We could have bought a tool that did this or worked with a third-party to build a recommendations engine, but we have Vertica and in-house expertise. We were able to set the engine up in three months. That’s one of the benefits of having HPE Vertica. We couldn’t have created the same thing with Oracle and our previous technology stack.”

Speed-to-market is an important capability to have in the competitive landscape of fashion retailing. The company accelerates application deployment, in large part because ETL work and data can be controlled within Vertica.

“We’ve probably saved 30% to 35% of resource time in bringing our mobile apps online,” notes Yen, whose team is responsible for developing

GUESS?'s enterprise and customer mobile apps. "We're also gaining more efficiency by doing a lot of data manipulation quickly within Vertica. The information we use to create predictive algorithms for our customers relies on us aggregating various sources of information. Those algorithms and models become more accurate based on the amount of information and number of attributes."

## Pushing the envelope on analytics

With Vertica, GUESS? conducts affinity and market basket analyses to understand consumer attributes and purchasing behaviors better. Customer experience teams create predictive algorithms to determine a number of buying scenarios, including the likelihood of repeat business from customers and their buying price points. Company analysts can run a model for each customer with the HPE solution. This information is used to develop sales promotions, target the right offers to individual customers, and intensify the Guess List loyalty program.

"We don't have to pay a third party for these customer models," Yen says, "so our investment in HPE Vertica goes a long way. It can do more than analytics and enterprise data warehousing."

Without fear that data size might affect processing and performance, the global retailer leverages its HPE platform to serve crucial information to its stores and personnel globally.

"The amount of data we're able to manage and the amount of insight these apps can bring, plus do it in a quick way, also enable us to grow our app portfolio," Yen acknowledges.

## Faster data, quicker insight

With the previous database, the load process of sales data took too long so that the latest figures were not always available for morning staff meetings on the East Coast. Now store managers have updated information about prior-day sales each morning.

"It only takes one to two minutes to generate reports in HPE Vertica, instead of three hours previously. It's huge to be able to move that time up, to have that information about what happened yesterday and to better track sales," Yen says.

Mobile applications display information within five seconds from source systems and 90% of queries settle in less than 30 seconds. Pertinent business information refreshes on a constant 24-hour basis for management teams, providing substantiation at their fingertips for use in making decisions and seizing opportunities. GUESS? executives obtain hourly feeds of financials from all stores to get a comprehensive view of company operations.



"Our investment in HPE Vertica goes a long way. It can do more than analytics and enterprise data warehousing. Vertica gives us a platform that we can build upon."

– Bruce Yen, Director-Business Intelligence, GUESS?, Inc.

Designers and merchants count on receiving visual images of fabrics, trending styles, and the top 30 most popular pieces in each retail category. The information may prompt a striking new window display, promotion, or merchandising arrangement that captivates shoppers. All of the information consolidates in Vertica.

The platform also powers the company's near real-time product inventory to help personnel replenish items in stores and know how much stock is available at any given time. Retail staffs receive the information easily and visually. A query with details about size-level inventory and all best sellers is now 60 to 80 times faster, requiring only 30 seconds compared to 30 to 40 minutes in the past. The previous system generated merchandise reports in 15 to 20 minutes. Even with remote data access, now merchandise reports complete in five to 20 seconds and can be displayed via the G-Mobile app.

## Customer at a glance

### Software

- HPE Vertica Analytics Platform
- MicroStrategy 10.4
- Red Hat® Enterprise Linux®

“We’re making sure our inventory is being moved from the stock room onto the floor as efficiently as possible. We’re doing that powered by Vertica,” Yen says.

## Gaining key analytic wins

GUESS? staff conducting data science tasks take advantage of the built-in SQL analytical functions and visualizations in HPE Vertica. These sensible functions reduce data transformation time compared to using a programming language.

“We don’t have a dedicated suite of data scientists, but as a company, we can still be agile with data science and accomplish the work because of the Vertica user-defined functions and advanced SQL analytical functions,” Yen notes. “Our developers create more complex queries with less code to investigate and solve problems because of those analytical functions.”

HPE Vertica ties into the company’s manufacturing and retail/customer relationship management (CRM) data warehouses. Data and tables from these transactional systems replicate directly into HPE Vertica every five minutes. Whether analysts want to redefine large data sets, produce reports, investigate issues, or delve into the unknown, they can access the most current, accurate information. And the BI team doesn’t need to spend 70% of its time on time-sapping ETL chores between systems, such as data cleaning and transformation, because information resides in Vertica.

“Vertica has allowed us to offload a lot of querying that occurs on our operational systems,” Yen explains, “so that we’ve improved performance on those systems and the ability to deliver data-driven insight to our employees. We’re changing how quickly our teams can react to a business problem by having all of the data at their fingertips within Vertica.”

While GUESS? has gained several key analytic wins, including trend analysis, inventory management, and personalization and customer engagement, Vertica is the company’s foundation for more enlightenment.

Yen notes, “In just three months, our employees started seeing the value of this platform. That’s a huge win for our BI team, because users don’t want to wait 12 months for a traditional data warehouse project to come online. We’re pleased with our reporting, standard analytical, and enterprise data warehouse capabilities. But we’re hungry to do more predictive analytics. Vertica gives us a platform that we can build upon.”

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