Whole Foods *Secret Weapon*

WHOLE FOODS MARKET ARMED ITSELF WITH NEW **ANALYTICAL CAPABILITIES** BY **MIGRATING** TO THE **CLOUD** AT THE MOST **OPPORTUNE TIME** — FIVE MONTHS PRIOR TO BEING **ACQUIRED** BY **AMAZON**. > By Mike Troy

The price cuts Whole Foods made on key items when it was acquired by Amazon last August and then again at Thanksgiving had the food retailing world buzzing. The high profile moves earned the companies tremendous publicity and prompted speculation about future actions. Meanwhile, less obvious changes had been set in motion long before the Amazon deal that promise to have a bigger impact on Whole Foods in 2018 than any press release about a reduction in organic turkey prices.

In March 2017, Whole Foods completed its migration to Teradata's IntelliCloud, making it one of the first users of the technology firm's newly launched securely managed cloud offering. The process had begun the prior year when Richard Beaver joined Whole Foods in May 2016 as global senior director of enterprise information management with the intent to upgrade an existing data warehouse. However, rather than bolting new capacity onto a 13 year old Teradata system as the company had been doing every few years to stay just ahead of growth, Beaver and others in the technology group grew interested in the cloud. Many of the reasons why were the same as those of other companies, namely faster decision-making, lower cost and scalability — but Whole Foods was also eager to address a major deficiency it had when it came to understand shopper behavior. Business users were clamoring for increased analytics capabilities that Whole Food's on premise system was laboring to provide.

"We were pushing as a company to find new areas of analytics opportunity and one of those areas was around customer marketing. Believe it or not, Whole Foods did not have a CRM program for the first 30 years of its history," Beaver said. "We were just starting to get into that space and we knew that it was going to create a tremendous amount of information and just upgrading the (on premise) system wasn't going to allow us to be successful. We needed to make a step increase in performance and the cloud offers that."

Transitioning to the cloud was an easy choice, but Beaver and his team soon realized the switch entailed many challenges. One of the biggest related to the capabilities of the carrier network over which Whole Foods data would pass. The retailer needed a 1 gigabyte line to connect its Austin, Texas headquarters to the Teradata data warehouse in Las Vegas. Whole Foods and Teradata worked with local and national carriers to get a dedicated line, a five-month process Beaver described as laborious.

◄ Whole Foods is well-equipped to apply analytics to its shopper data and that of Prime member households thanks to a prescient decision that saw the company move to the cloud five months before the Amazon acquisition.

The distance between the business users and the data they would be accessing also created the issue of latency, essentially the time lag that occurs when a user makes a request of the system and data is retrieved. With an on premise system latency is minimal, but Whole Foods data was shuttling back and forth roughly 1,300 miles so Beaver and the team had to change the manner in which information was transmitted by re-architecting systems.

"There are a lot of things you have to think about from a cloud migration perspective," Beaver said.

One of the more straightforward aspects of the entire process involved the actual physical migration of data. In March 2017, Beaver's team, including Ken Casey, senior manager of Whole Foods data warehouse and Caden Schaefer, senior data warehouse architect, began a four-day process to load the retailer's data on a Teradata supplied network-attached storage (NAS) device, essentially a file cabinet size thumb driver. The device was transported to Las Vegas by FedEx where the data was extracted to the Teradata IntelliCloud to be access by the business users back in Austin.

With the hard work, planning and roadmapping leading up to the transition out of the way, Beaver said, "the go live was a snoozefest," and undertaken with minimal fanfare inside the company. Even so, business quickly noticed the speed at which applications ran and query results returned, prompting Beaver to receive several emails asking what he had done.

The cloud migration and the increased abilities Whole Foods now possesses to extract value from its data comes at an opportune time for the company. That's because a key advantage of being part of Amazon relates to finding new ways to serve customers by integrating Whole Foods data with Amazon's behavioral data gleaned from the more than 60 million households estimated to be Prime members.

"We don't quite know what the future holds, but I know it's going to be a lot funner," Beaver said. "Now we can truly innovate on a platform and with a company that has the scale to allow us to do it. All of that is pretty exciting for us." **RL**