

# Continental Airlines

## Teradata Takes Off at Continental, enabling the #5 U.S. airline to:

- > Track real-time data on 27 million customers dating back four years
- > Use data intelligence to build relationships with their highest-value customers. A targeted CRM program resulted in \$150 million in additional revenues in one year, while the rest of the airline industry declined 5%
- > Integrate all their marketing and operational data in one enterprise data warehouse, saving \$2 million a year in outsourcing data costs alone
- > Adjust flight and overbooking models quickly, solidifying Continental's ranking as the most on-time airline in the industry
- > Empower employees with tools to better serve customers and contribute to Continental's track record as being the most admired U.S. airline for quality and customer service

### The Customer

As the #5 U.S. airline, Houston-based Continental Airlines is not immune to the pressures facing today's airline industry. Sluggish ticket sales from a slowing economy and a less loyal flying public concerned with airline security are just some of the challenges facing the industry.

In spite of these challenges, Continental, known for an open, customer-driven employee culture, has consistently rated tops in U.S. and international surveys for quality, customer and best on-time arrivals. In 2003, the company ranked on the Fortune100 Best Companies to Work For list for the fifth consecutive year – an accomplishment that only about 20 companies have achieved.

### Business Objectives

But, as early as 1998, the airline had separate databases for marketing and operations – all hosted and managed by outside vendors. The ability to run queries or initiate marketing programs to its high-value customers proved time consuming and ineffective.

In 1999, Continental decided to integrate its marketing, IT, revenue and operational data sources into a single enterprise data warehouse. From the beginning, Continental wanted the warehouse to be business driven, not IT driven, recalled Alicia Acebo, director of Data Warehousing at Continental Airlines.

“Our culture is very open. People share information,” says Acebo. “In instances where that isn't the case, it can be a major hurdle to implementing a data warehouse.”

### Teradata Choice

When evaluating the Teradata® platform against competitors, Acebo notes that it was not a matter of how fast the query came back, but the fact that the query “did come back.”

“If you submit one query in each platform the results could be close. But once you go through 20 queries there is no competition to Teradata,” she explains.

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She adds that one of the biggest supporters of the warehouse is Continental's President Larry Kellner.

"He was CFO at the time the warehouse was implemented, and every time he got information that was really significant, he credited it to the data warehouse."

## Business Insights

Today, the Teradata Warehouse allows Continental to track data on 27 million customers dating back four years. The company relies on Teradata as the single source for revenue management, marketing and soon inventory parts management.

Some 80 percent of Continental's corporate information now resides inside the Teradata Warehouse. Continental users enjoy 99.975 percent system availability as a result of Teradata's proactive customer support.

Following 9/11, Continental leveraged the warehouse to help authorities track the movement of the terrorists and their associates leading up to Sept. 11. The resulting intelligence brought security sooner to the traveling public and earned Continental a special award from the FBI.

"Teradata touches every aspect of our business – we couldn't do business without it – from our on-time performance to the way we move customers," says Acebo, noting that there are 1,300 users of the enterprise warehouse and 15 full-time technical staff from her team supporting the warehouse.

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One of the first areas to leverage Teradata for competitive insight was Continental's Customer Relationship Management area.

Moving their marketing data in house to Teradata, Continental has saved \$2 million a year in outsourcing costs. According to Kelly Cook, director of marketing for Customer Relationship Management at Continental, "We have models that tell us our customers' value and their likelihood to defect."

Even better, she has been able to test and tie to revenues the concept that if you build relationships with your customers and treat them well, they will be more loyal. She created three test groups of customers and for eight months one group received a form letter when an event happened, such as a passenger being delayed at the airport. The second group received no letter and the third group received a letter and compensation in the form of a trial membership in Continental's President's Club. When the groups were asked about their experience with Continental, the group that didn't receive anything was still very angry.

"But the other groups' reaction was amazement that a company would have written them unsolicited to say they were sorry," Cook recalls, adding that the customers who received regular written communication spent 8 percent more in 12 months. Out of 4,000 customers, that translated to \$6 million. Since expanding this program to the top 10 percent of Continental's customers, the airline has seen \$150 million in additional revenues in one year (during the same period the airline industry saw declining revenues of 5 percent). An unintended side benefit to the experiment was that 30 percent of the group to receive a trial membership in Continental's President's Club joined.

Cook explains that the ramifications are huge as Continental looks to extend this knowledge to the front lines. "We know that we have the best employees out there so if a form letter is going to create that kind of loyalty what will our employees be able to do?" Already, the airline is finding out – as flight attendants and gate agents act on information they never had before.

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“We built a report for our in-flight crews that says who our high-value customers are and the last service event they had over the past 30 days. Recently, a flight attendant walked up to a customer flying from Dallas and Houston and said, ‘What would you like to drink? And, oh, by the way, I am so sorry we lost your bag yesterday coming from Chicago.’ The customer flipped.”

Such stories are becoming commonplace at Continental, and have received the attention of the Continental’s executive leadership, notes Cook.

Revenue Management is another big winner from Continental’s enterprise warehouse.

“Today, if we have a weather issue, we can look at the revenue of a flight and decide what flight to cancel,” Acebo points out, noting that staff now can adjust flight and overbooking models quickly, solidifying Continental’s ranking as the most on-time airline in the industry.

The next big area of focus will be parts optimization – since Continental carries about \$60 million worth of parts in its

Teradata Warehouse Solution	
> <b>Hardware</b>	12-node system with 3.5 TB of data
> <b>Software</b>	Teradata Database V2 R4.1 Teradata CRM
> <b>Operating System</b>	UNIX MP RAS
> <b>Services</b>	Teradata Professional Services for Installation Data Warehouse Consulting Business Discovery Logical Data Modeling Services

inventory. The airline anticipates that Teradata will help it save as much as 10 percent by optimizing what is held in inventory. Continental also hopes to leverage Teradata to build a profitability model to better understand a customer’s value based on routes traveled and other factors. Finally, Continental will be incorporating web traffic data to better market to its online customers.

In summarizing Teradata’s contribution to Continental’s current and future business, Cook says simply, “I believe 100 percent that Teradata has been integral to our success. From a data integrity, data cleansing and reliability perspective, it has been absolutely outstanding. There is no way we would be where we are today without them.”

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