CARTRAWLER BOOSTS CONVERSIONS AND ELEVATES CUSTOMER EXPERIENCE WITH SNOWFLAKE DATA PLATFORM

TRAVEL

CarTrawler

COMPANY	CarTrawler
LOCATION	Dublin, Ireland

SNOWFLAKE WORKLOADS USED

COLLABORATION · DATA ENGINEERING · CYBERSECURITY · AI/ML · APPLICATIONS

DATA WAREHOUSE · DATA LAKE · UNISTORE

CarTrawler is the leading B2B provider of technology solutions for the global travel industry. CarTrawler's end-to-end technology platform expands its airline and travel partners' offering to its customers, creating substantial ancillary revenue opportunities. It provides unrivaled breadth and depth of content worldwide, including car rental, private airport transfer, and ride-hailing services to some of the biggest brands in travel including United Airlines, easyJet, Alaska Airlines, Uber, and Hopper. To support a variety of business intelligence (BI) and data science use cases, CarTrawler ingests and analyzes large amounts of transactional data.

STORY HIGHLIGHTS:

Simplify data pipelines
CarTrawler replaced its Spark-based data science environment because Snowflake simplifies CarTrawler's data pipelines.

Recommendation engine fueled by Snowflake
CarTrawler built data science models fueled by Snowflake to predict a shopper's preferences for a suite of products.

Developing closer partner relationships
Self-service reporting via Tableau and Snowflake democratizes data analytics for partners.

CHALLENGE:

Achieving a single source of truth for data analytics and data science
Seeking to keep pace with rising transaction volumes, CarTrawler implemented a cloud data warehouse for data analytics. CarTrawler's growth brought changes in data requirements, which introduced scalability costs that were difficult to solve on a legacy platform. The legacy platform had minimal support for JSON and materialized views, which placed limitations on use cases. Tightly coupled storage and compute inhibited scalability.

Extracting, transforming, and loading data into CarTrawler's data warehouse involved the use of multiple systems, including Databricks. Operational complexity and rising costs introduced barriers to CarTrawler maintaining a 360-degree view of each customer and realizing its data science objectives. "We were collectively trying to figure out how to get all the data in one place and tie it together," CarTrawler's Director of Insights and Data Science, Patrick Callinan, said.

> **We don't need to go down the Spark road anymore because Snowflake is a scalable, reliable, and secure foundation for our advanced business intelligence and data science use cases."**
>
> **—PATRICK CALLINAN,**
> Director of Insights and Data Science, CarTrawler

200+ TB
Total amount of transactional data (40 TB in one large table)

5%
Gain in unit margin of revenue

SOLUTION:

Rearchitecting with Snowflake and Tableau

Realizing the need for a more scalable data environment, CarTrawler turned to Snowflake on AWS. More than 200 CarTrawler team members rely on Tableau dashboards, powered by data in Snowflake, to monitor vehicle bookings, pricing, sales commissions, and geographic trends.

Snowflake's multi-cluster shared data architecture scaled to handle CarTrawler's data, users, and workloads, including one table containing 40 TB of data. Snowflake's near-zero maintenance freed up technical talent to focus on simplifying the data pipeline and building homegrown data applications. Snowflake differentiated itself from its previous Spark-based infrastructure because of its performance without complex manual operations.

Snowflake's native support for semi-structured data aligned with the need to perform Schema-on-Read. Ingesting CRM, customer service, and transactional data into Snowflake provided a single source of truth for powering CarTrawler's BI and data science use cases.

RESULTS:

Higher Conversion Rate with Customer Personalization

CarTrawler's ability to convert a shopper into a customer is crucial to the business's success. Callinan and his team focus on optimizing a shopper's experience by matching them to the best cars that fit their preferences. And with Snowflake as its central data platform, CarTrawler has volumes of historical data for data analysts to surface new insights and data scientists to build innovative models.

According to Callinan, "Building a customer 360 is just the first step. The second is to actually make use of the data layer and insights in a conversion funnel. Stitching together web behavior and transaction data provides something totally new to model against and predict what's going to happen next."

Recommendation engines, powered by CarTrawler's data science models and Snowflake, predict a shopper's preferences and give them what they want by suggesting relevant vehicles, fuel policy, insurance, and more. This has resulted in increased levels of customer satisfaction and healthier margins. "Improving conversion by just a few percentage points is a big deal. We've been able to improve our unit margin by about 5%—that means customers are converting better and getting the cars they want. This requires us to manage and process data at scale. Our Spark architecture wouldn't have worked; it has to be Snowflake," Callinan said.

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Elevating margin potential and reducing risk with data science

Beyond converting more customers from its recommendation engine, CarTrawler now has sophisticated pricing models. Predictive models use large amounts of data from Snowflake to support decisions about CarTrawler's insurance products. According to Callinan, "The more data we have, the better we can predict risk and price our insurance." For example, instead of the rudimentary pricing for its insurance product, predictive models use large amounts of data from Snowflake to support decisions that better predict risk and to accurately reflect the price of insurance offerings.

> ❝ **Snowflake sits at the center of everything we're doing in insights and data science."**
>
> **—PATRICK CALLINAN,**
> Director of Insights and Data Science, CarTrawler

Streamlining reporting

Previously, providing meaningful reports, such as the previous day's car rental booking data, involved manually querying the transactional database and exporting data into spreadsheets.

Self-service reporting via Tableau and Snowflake democratizes data analytics and frees up CarTrawler's account managers to focus on relationship management. "Snowflake allowed us to process at scale. It's taken away a huge amount of manual work and enabled the team to do higher value-added work with partners," Callinan said.

FUTURE:

Increasing customer loyalty and accelerating data sharing

Using Snowflake to increase customer loyalty is a top priority for CarTrawler. Integrating large amounts of historical data will further improve the accuracy of CarTrawler's recommendation engines and lead to an enhanced customer experience.

Snowflake Secure Data Sharing could also be on the roadmap as more of CarTrawler's customers and partners adopt Snowflake. "We love the idea of data sharing and have already proposed it to one partner who is also a Snowflake customer," Callinan said.