



BUILDING A FUTURE- READY DATA ARCHITECTURE

Accenture helped a leading global collaboration technology company prepare for its IPO by reengineering its data platform and data governance processes with a future-ready architecture that enabled scalable and trusted reporting of business metrics.

OVERVIEW

Approaching its IPO, a leading technology unicorn was challenged with limited trust in data accuracy, eroding the ability of leaders to confidently characterize the performance of the business. As a consequence of rapid growth to global scale, internal data systems grew up in siloes — aligned with the different functional areas of the business — with no centralized data governance process or data architecture. This situation manifested in multiple problematic ways:

- Analysts spend 100s of hours on Management Reporting
- Unpredictable and inefficient query performance
- Interactive/Ad-hoc analytics is slow
- SOX controls & compliance difficult to implement
- Rigid architecture not extensible as Business Evolves

THE STORY

CLIENT PROFILE

This recently IPO'd high growth SaaS client has enjoyed explosive growth over the past decade, and continues to expand and serve consumers and business users around the world.

OPPORTUNITY

Having enjoyed stratospheric growth since its founding a decade ago, a leading technology platform found itself with a data challenge as it prepared for its IPO. Its business had grown so fast, and on such a scale, that its internal data governance and architecture were in need of an upgrade.

With anyone in the business able to redefine key metrics at any time without version control, the company lacked a clear way to track how its performance data had evolved over time. What's more, some of the SQL queries used to create the metrics were becoming convoluted and complex, making them less computationally efficient than they could have been.

Left unchecked, this data model risked the business losing confidence in the metrics being produced – everything from monthly recurring revenue, to the different platforms supported, right up to the total number of registered users. With an upcoming IPO making robust company performance data all the more important, everyone at this leading unicorn knew a rethink of internal data management was called for.

Recognizing the time and effort involved in putting its own team together, the company asked Accenture to help it take data management to the next level. The vision? To build a flexible, fast, future-ready data architecture — and compliment it with a far more mature approach to data governance.

The lack of governance in the company's data model allowed anyone in the business to instantiate or redefine key metrics, but this meant it lacked a clear audit trail to track adherence to standard business definitions, evolution of metrics over time, and computational efficiency and accuracy. They needed to be able to manage and communicate their business performance with clear confidence and limited manual effort — this required data clean-up, metric certification, and the establishment of repeatable processes and scalable architecture.

Accenture initiated an effort, starting with an evaluation of the Top 20 priority metrics, each of which had limited data veracity. Early work included development of data definitions, agreement on key data sources. Alignment across multiple stakeholders was required to consider alternatives (Oracle, Vertica, RedShift, Snowflake), and then socialize the results and achieve sign off. This led to providing assistance with the new data architecture design and implementation.

With Accenture's help, this company has rearchitected its data pipelines using a fully relational, as-a-service Snowflake data warehouse — with a robust data governance organization on top. Snowflake provided the ability to scale up and down, automatically and on the fly, providing the exact performance needed, at the time needed.

This new Data & BI systems enabled by Snowflake & Tableau Dashboards made insights available as close to real time as possible, ensuring business users aren't just more confident in the company's metrics, they also had an easy and intuitive way to drill down into the data and develop new insights at a speeds previously impossible. Together, the two organizations have created a flexible, future-ready data architecture — one fit to support the business as it scales to new heights.

SOLUTION

Accenture got to work straight away, putting a small team of focused experts on the ground with an initial goal of helping the company map the lineage of all its existing data and metrics. By conducting detailed interviews with data owners and gathering intelligence from other stakeholders, the team quickly established the true “as is” state of the company’s data management.

The next step was to evaluate options to improve speed and usability. Reengineering the company’s data lake itself would have been a highly complex and lengthy process, so the team settled on a smarter and more efficient solution. By pulling all the data from the data lake and putting it into a new data store, they realized they’d be able to radically simplify and streamline the reporting and making the ad hoc analysis far faster.

Using Snowflake as the new data store meant the company would benefit from exceptional computational performance delivering close to real-time metrics. The technology’s scalability would also ensure the business could handle not only today’s terabytes of data volumes, but the multiple petabytes of data likely to be required for even a single performance metric in just a few years’ time. Choosing Snowflake meant the company could perform simultaneous data loading and computation — a unique feature not found in any other data warehouse solution and a significant boost for productivity and efficiency.

So, taking each metric in turn, the team optimized ETLs to minimize errors, assisted in development of the data pipeline to pull data into AWS and ingested data loads into Snowflake Data Store using Snowpipes, Snowflake’s continuous data ingestion service after simplifying the underlying queries and push the resulting insights to a new centralized and user-friendly dashboard powered by Tableau.

But creating faster, scalable, more usable metrics solved only part of this company’s data challenge. It also needed better data

management to prevent inefficiencies and establish process evolved from best practices. So the team developed a set of recommendations for a mature data management model, including data hygiene factors and a data governance board.

RESULTS

Within a year, the team had upgraded all the company’s metrics and created a robust data management structure to continually support them. The result was a dramatic boost in the company’s confidence in its own data — especially important as it approached its IPO.

With help from Accenture, the organization now benefits from:

- Sleek and user-friendly data dashboards. No longer required to write SQL queries, extract CSV files, and plot metrics in individual spreadsheets — everyone across the business can now access intuitive and simple-to-use visualizations of key company data — instantly.
- Deeper insights from drill-down capabilities. Business users no longer have to laboriously run separate queries for each variation of a metric — the new solution allows them to immediately slice and dice any combination of top-line figures and compare the results by geography, time period, or other parameters.
- Daily business insights. The speed and simplicity of the solution is saving hundreds of analyst hours every year. And because the dashboards are updated dynamically in close to real time, the company is able to track changes in performance and customer behavior as they happen.
- Ability to scale metrics at the point of need. Snowpipes give business users access to simple “drag and drop” functionality for creating new metrics. Whatever analysis of a business need — the success of the

latest marketing campaign, the results of latest talent acquisition programs or what's popular in the cafeteria — if they have the data, the business can create the metrics at a pace that was previously unthinkable.

- Mature data management. With changes to data and metrics now approved, documented, and tracked by a data governance board, the company can be sure no arbitrary or undocumented modifications are made to complex data queries — building confidence in the data veracity and security.
- Foundation for intelligent operations. With the data warehouse and data pipelines up and running, the business has an industrialized data platform for exploring machine learning and automation, opening up new possibilities for company insights and performance gains.

“It all sounds really simple, but it is not that simple when it comes to us... We basically went and looked at what are the “main” KPIs and how are they calculated? That’s where Accenture was really helpful!”

Lead Data Engineer

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Content current April, 2019

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