

CASE STUDY

Yellowbrick Helps Top 10 Mobile Operator Speed Time-to-Insight by 20X, Safeguarding Millions in Revenue

One of the largest mobile operators in Latin America, and one of the top 10 operators in the world, was struggling with explosive growth in data volume across its organization. The company depends on insights from the billions of records it collects per day for providing telecommunications and value-added services to millions of mobile users and business customers.

For the past several years, the company had used the IBM Netezza Data Warehouse platform to store and analyze its customer data for use by Finance and other key areas of the business. As business and user demands became more challenging

(including an 800% growth in data volume), the data warehouse struggled to process more than 1 billion records per day, with query latency and system availability becoming highly unreliable.

Time is money for prepaid phone distributors and partners of this mobile operator, so providing exact and timely billing reconciliation is critical. Millions of dollars in revenue were at risk due to the operator's inability to process those reconciliations, significantly affecting its ability to deliver quality customer and partner experiences and to manage costs, expenses, and revenue structures. Clearly, the legacy platform had to be replaced.

CUSTOMER PROFILE

This company is one of the largest mobile operators in Latin America, and one of the top 10 operators in the world.

SITUATION

The company's legacy IBM Netezza platform struggled to process more than 1 billion records per day (reflecting 800% growth), with query latency and system availability becoming highly unreliable. Doing ad-hoc analytics on top of its Hadoop-based data lake was also a significant challenge.

SOLUTION

The company did an extensive evaluation and testing effort of data analytics platforms from established legacy suppliers, and as well as from newer companies. Only the Yellowbrick Data Warehouse met its requirements for performance at scale, compatibility with existing tools, and ease of use.

BENEFITS

- > Improved customer experience and higher customer satisfaction
- > 20x faster query execution, even during ingest
- > 8X more data (billions of rows) ingested daily for queries
- > Millions of dollars/month no longer at risk due to more accurate billing
- > Several million dollars in data center savings per year
- > Data analytics readiness for supporting 5G-ready infrastructure
- > New value-added services opportunities including location-based services and IoT services for business customers

Faster, More Efficient Analytics for Deeper Insights

The company did an extensive evaluation and testing effort of data analytics platforms from established legacy suppliers, and as well as from newer companies. Most showed only modest performance improvements, and some introduced risk with respect to migration, data load, and systems portability.

The Yellowbrick Data Warehouse was the exception: its performance at scale, compatibility with existing tools, and ease of use were superior to the other platforms under evaluation. It was also critical that Yellowbrick's integration partner, Appliance Technologies, could take full responsibility for the end-to-end project, from migration, to implementation, to service and support. In contrast, the other vendors it evaluated required a coalition of system integrators and tools suppliers that would have added increased complexity, time, and costs.

Yellowbrick has given the operator the ability to analyze much more data faster to improve business across the board. Not only is its Finance department able to do billing reconciliation faster and more accurately, but new capabilities and insights that were

previously impossible are now available. For example:

- Marketing can reduce churn by targeting high-value subscribers and upselling customers on new services
- Operations can optimize infrastructure utilization
- Risk Management can analyze more historical data to improve fraud detection

20x Performance Increase on 8X More Data per Day

Enabling ad-hoc analytics on top of its Hadoop-based data lake was also a significant challenge for the operator. Yellowbrick now enables analysts to query a 600TB multi-tenant database 20X faster than the Netezza system and up to 10,000 times per day, with up to 1TB of new data ingested daily in near real-time from the data lake--an 8x improvement. Often, several hundred users might be simultaneously querying the platform at once, and many queries are extremely complex--accessing more than six months of data spread across millions of records, in a multi-billion-row table, with over 1,000 columns.

Thanks to these improvements, analysts can now run reports in

“Game-changing technologies like Yellowbrick do not come around often. Our customer was blown away by the impact that the Yellowbrick solution had on its business.”

Victor Navarro, Managing Director and Founder, Appliance Technologies

real-time instead of batch, and in minutes instead of days. Business groups can also make interactive, ad hoc queries at any time, without affecting other jobs. Currently, approximately 100 business-critical applications are leveraging the Yellowbrick platform.

Millions of Dollars a Month No Longer at Risk

Most of the operator’s customers are pre-paid SIM card users. With the Yellowbrick system, it has safeguarded millions of dollars a month that were at risk with the legacy system due to the inability to quickly validate revenue and reconcile payments to retailers supplying pre-paid SIM cards.

It’s important to identify if a card has been used as the operator pays retailers a commission at card activation. If the operator realizes after paying commission that the card hasn’t been used, a de facto reversal in revenue occurs. The Yellowbrick system now provides the information needed to avoid that scenario in real time, leading to improved revenue optimization.

Millions in Data Center Savings

The operator was also able to replace several racks of Netezza with a Yellowbrick system that takes only 10U of space in a single rack -- a 20-fold reduction in rack space. With this dramatically smaller footprint and reduced power consumption, the operator estimates it will save several million dollars in data center costs per year.

Ease of Use and Seamless integration

Adopting Yellowbrick was very easy for the operator. Because its Postgres-based front end is very familiar to SQL users, analysts became immediately productive while taking advantage of advanced capabilities not available with the legacy warehouse.

The system was also easy to integrate into existing infrastructure, including business intelligence and data movement tools from Tableau, Denodo, MicroStrategy, and others. The operator found the Yellowbrick platform to be the most flexible, reliable, turnkey solution platform it evaluated, and it has experienced virtually no downtime since its deployment over 18 months ago.

New Services and Revenue Opportunities

Now that Yellowbrick is meeting

the existing needs of the operator's user community, the operator is now exploring other ways that Yellowbrick can help monetize data with value-added services--including location-based analytics and IoT services it can provide to banking, government, retail, and other business customers.

Furthermore, with the move to a 5G network—which the operator estimates will lead to a 10-50x increase in data volume (up to several petabytes)--the Yellowbrick platform will enable the company to take full advantage of all that data to provide the best quality and customer experience.

About Yellowbrick Data

Yellowbrick Data provides the world's fastest data warehouse for hybrid and multi-cloud environments. Enterprises rely on Yellowbrick Data Warehouse to power critical business outcomes and get answers to the hardest business questions for improved profitability, better

customer loyalty, and faster innovation in near real time, and at a fraction of the cost of alternatives. Yellowbrick offers superior price/performance for thousands of concurrent users on petabytes of data, along with the unique ability to run analytic workloads on premises, in a private cloud, and/or in any public cloud and manage them in a simple, consistent way—all with predictable pricing via fixed-cost annual subscription.

Learn more at yellowbrick.com.