VERSENT

CUSTOMER STORIES
Vix Technology

VIX

VIX'S TICKET TO MACHINE LEARNING & TOTAL DATA TRANSFORMATION

BACKGROUND

Vix Technology has focused on innovative transport ticketing solutions for 30 years. The business operates in more than 200 cities, across 10 countries with a team of 650 people. Customers of Vix include major ticketing operators and systems such as: ORCA in Puget Sound, Washington, USA; Go Pass in Dallas, Texas USA; Ruter AS in Oslo, Norway and TfGM in Greater Manchester in the UK.

From Vix's Engineering R&D hub in Perth, Western Australia, the Vix team was looking for a partner to help take their data capture and analysis to the next level.

THE CHALLENGE

LEGACY DATABASES

Vix was faced with a common problem: monolithic, transactional databases with reports and extracts batched daily for distribution to multiple stakeholders, with no capability to perform in-depth analyses of these. Vix had relied on legacy technologies that produced daily PDF reports and CSV extracts, that made it difficult and time-consuming to perform further analysis to gain valuable insights.

The challenge was to stream this data out from the existing source on a near real-time basis and make it available via newly-adopted visualisation tools that demonstrated capability across several different types of pipeline, including streaming transactional data, application logs and calendar event information.

OTHER CONSIDERATIONS

- **Leveraging serverless technologies to provide scalability and minimise static and operational costs**
- **Catering for a multi-tenant data warehouse model that took into account regional data protection laws such as GDPR (EU) and PIPEDA (Canada)**
- **Enforcing loose coupling between components so that they could be swapped out if the solution needed scaling or extending**
- **Running a blended data project squad so that Vix was building and learning as they developed**

VERSENT

THE SOLUTION

Following an extensive RFP process, Versent was appointed the transformation partner for its novel recommended data architecture pattern. A combination of AWS cloud products, Snowflake and Amazon QuickSight business intelligence would, for the first time, give Vix and their customers the ability to drill down and create a visual representation of their data, using the tools of their choice.

The proposed solution was developed as a reference implementation with a strict deadline of seven weeks, preceded by a two-week planning phase which followed four weeks of Versent's bespoke discovery process – the Yellow Brick Road (or YBR).

The solution was delivered by a 'blended' squad based in three separate geographic locations, with input from Vix customers all over the world. This blended team was crucial to the success of the project, of which Vix were part of from day one. This approach meant that while the project itself took only 13 weeks, Versent was "teaching Vix to fish" during the entire process so that once the Versent team left, the Vix team could continue with their newly-learnt data transformation and visualisation skills without a lengthy handover.

This also enabled the team to deliver an outstanding outcome: a completely usable data solution in less than 13 weeks, on time and under budget.

> *We can now give our customers insights through data visualisations, which we have never been able to offer before. This sets us apart in the market, meaning we can have more insightful conversations with new and existing customers, and really understand their needs and spot opportunities.*
> **Sean Langton, CTO, Vix Technology**

THE RESULTS

The project has been hailed as a huge success by Vix management and executives, who were already demonstrating the solution to potential customers even as the dashboards and visualisations were under construction.

> *The deep analysis transit data this product provides allows our customers to understand what's going on in their operations in real time, and how riders are using the transit network and changing patterns of usage over time. Customers can now make informed decisions on the live, clean data.*
> **Sean Langton, CTO, Vix Technology**

The initial project has now been extended to include a potential Vix customer in Europe, who has twelve years' worth of passenger transit data to be transferred into the new data warehouse for visualising, and a need for this data to comply with GDPR standards.

The solution was also co-presented at the inaugural Snowflake Perth Users Group Holidata event as a showcase implementation, highlighting the strong partnership between the organisations involved to achieve such an outcome.

VERSENT

Versent's proven strategic methodology and delivery approach accelerates business outcomes for our joint customers and aligns perfectly with Snowflake's mission to enable every organisation to be data-driven.
Peter O'Connor, APAC VP, Snowflake

KEY OUTCOMES

Vix customers are now enabled to query near real-time data and identify patterns, trends and anomalies. For example, transport ticketing providers can now look at passenger movement data and overlay information that may impact use, such as major sporting events, weather patterns and public holidays, and make informed decisions around the frequency and timing of transport options. This can translate to a shift in revenue, with the introduction of options such as real-time price changes on bus or train tickets if the service is at capacity or running late.

The shift in the currency of data from static daily data extracts and reports that were limited to transactional data only, to a near real-time data warehouse that integrates transactional data, operational data and third-party data sources is ground-breaking. Providing this as a fully automated service to the customer, while also allowing them to continue to use their existing visualisation and analysis tools, is also a key new feature in Vix's product offering to further differentiate it from other transport ticketing solution vendors.

This has really resonated with our customers, and generated a lot of interest within weeks of launching the new solution. And this is just the beginning – this platform lays the foundations for richer, more powerful, data driven applications, and using Machine Learning to create intelligent systems.
Sean Langton, CTO, Vix Technology

Data is the oil of innovation, and we are now at the precipice of what is possible. We have seen data transform so many customers and give them the power to make better business decisions."
Phil Hampton, Principal Data Engineer, Versent

VERSENT