

CASE STUDY

Driving digital transformation

in driver testing services with VTNZ





About the client: VTNZ

Vehicle Testing New Zealand (VTNZ) is New Zealand's largest vehicle inspection organisation. VTNZ is proudly owned by DEKRA, the world leader in safety, and the Motor Trade Association (MTA), the largest automotive industry body in New Zealand.

From New Zealand's largest transport operators to local tradespeople and the public, their nationwide network of expert Automotive Technicians (ATs), Customer Service Representatives (CSRs) and Driver Testing Officers (DTOs) have been helping Kiwis since 1994, and these customers are a driving force in how VTNZ operates.

The problem:

Frequent system outages & delays

DT3 is the application stack used by VTNZ to conduct and administer driver testing applicants' Class 1 (Car) on-road practical tests across New Zealand in partnership with New Zealand Transport Agency Waka Kotahi (NZTA). DT3 consists of three core components:

- **DT App:** The DT tablet app is deployed to VTNZ-managed tablets and is used by on-road Driver Testing Officers (DTOs) to conduct on-road driver testing, replacing the previous paper-based system.
- **DT Admin:** DT Admin is a web-based administration portal used by the CSRs to view DTOs schedules for the day (or future days), as well as the Driver Testing team to administer the DT3 system. This includes the management of testing routes, locations and management of individual customer's tests conducted via the DT tablet app.
- **DT Middleware:** DT Middleware acts as the interconnect between VTNZ and NZTA, allowing the system to retrieve bookings and candidate information for their test, as well as submitting resulted on-road tests to NZTA, and VTNZ are then able to issue a temporary driver's licence to the applicant based on a pass result of the test. It is the primary data store for the entire DT3 solution.

Over the last few years, VTNZ has faced critical challenges with the software that DT3 was built on - WSO2. These challenges included frequent system outages, delays in driving test processing, stuck tests and operational inefficiencies, which negatively impacted customer experience and caused delays.

VTNZ recognised the need to modernise its outdated system to resolve these issues and deliver a better customer experience to driver testing applicants. Collaborating with Seisma, they aimed to address challenges related to the complex legacy system and the transition from Java to Node.js.

Going serverless

The decision to migrate to AWS Lambda and API Gateway was driven by the need to improve the product for VTNZ's customers so there was a system that both DTOs and driver testing customers could rely on.

The VTNZ project team shared,



"When the solution was designed back in 2016-2017, we had flexibility in manoeuvring and developing new features based on customer demand. However, over time, the architecture became more rigid. Seisma's advice was to avoid touching it, given its delicate state. During the selection process for a new system, we prioritised the need for near real-time schedules, scalability for future enhancements, and the ability to decouple processes. This allowed us to ensure independence between platforms, such as driver testing and customer communications at VTNZ."

The platform now allows VTNZ to conduct and process more on-road driving tests per day due to the scalability of the platform when compared to the legacy WS02 platform, which will help reduce the wait times for driver testing customers and allow applicants to get their licence sooner.

Seisma agreed, "Transitioning to a serverless architecture was a pivotal recommendation for VTNZ's platform improvement. Now, with serverless, logging is streamlined, errors are monitored per API, and stability is never compromised, which increase the reliability for VTNZ's driver testing customers."



Challenges faced

The project faced several challenges, primarily due to the complexity and age of the WSO2 platform. The old system was found to be missing some crucial logic, making it difficult for both the Seisma and VTNZ teams to collaborate effectively. Additionally, transitioning from Java to Node.js required more time than expected due to the need to understand and document all functional areas of the code base.

Despite these hurdles, the project ultimately led to a ground-up rebuild of the system, with no original components carried over to the new solution.

Seisma provided more detail regarding the decision to go serverless, "The decision to go serverless was a no-brainer when considering the options for upgrading the platform. While there were three choices on the table, including bug fixes and upgrading the existing system, it was evident that these wouldn't provide the benefits that VTNZ's customers wanted. Not only did serverless offer scalability of driver testing and reliability for candidates with a test, but it also provided a deeper understanding of the application, allowing us to reassess business requirements and ensure alignment with VTNZ's need to find customer-focused solutions."

Future proofing the transformation

The investment in this transformation is expected to yield long-term benefits for driver testing customers at VTNZ. The experience underscores the importance of prioritising long-term sustainability over short-term gains, emphasising the value of forward-thinking approaches for improving customer experience. The project has already successfully realised several desired outcomes and benefits for VTNZ's customers:

- **Improved Stability and Reliability:** The new platform significantly reduced system instability and downtime, ensuring continuous service availability for driver testing customers and a reduction of issues that may occur during an applicant's driving test.
- **Enhanced Scalability:** Serverless architecture enabled effortless scaling of resources based on customer demand, optimising performance during peak times without overprovisioning. This means customers have more of an opportunity to sit their test during high-demand periods.
- **Real-Time Test Processing:** Near real-time test scheduling and processing were achieved, eliminating delays and wait times for customers needing to schedule their test while providing a seamless experience for testing applicants.

Overall, these achievements reflect significant improvements in VTNZ's delivery of the driver testing experience. By embracing AWS serverless architecture, VTNZ successfully modernised its driver testing application, addressing critical challenges and laying the foundation for future growth and innovation for long-term customer satisfaction. The new platform enables VTNZ to deliver a seamless customer experience while also improving operational efficiency.

Key successes included:

- **Platform Uptime:** Achieving 100% uptime since go-live, demonstrating the reliability of the new system.
- **Reduction in Support Time:** Significant reduction in support time spent on triaging and troubleshooting issues, allowing resources to focus more on customers rather than technological operations.
- **Customer Satisfaction:** Positive feedback from customers and staff, indicating improved service delivery and user experience.

The project's success emphasizes the importance of finding a long-term customer solution that is based on collaboration and a commitment to continuous improvement. The collaboration between VTNZ and Seisma's solution showcases the value of leveraging technology to overcome challenges in the delivery of customer service in the driver testing space. By embracing serverless architecture, VTNZ has positioned itself for sustained success in customer service delivery and will help driver testing applicants complete their driver licensing journey.

The VTNZ team would like to say a huge thank you to Seisma for the joint effort in finding and delivering a solution that was needed for them to become more customer focused.



Take the next step

Contact Seisma today to discuss your integration modernisation needs. Our local team of experts will work with you to develop a practical, effective modernisation strategy that delivers real business value.



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