

# CASE

# STUDY:

# GEO

# DEVELOPMENT

We helped New Zealand Transport Agency (NZTA) make its crash data accessible to the road safety community with a modern web application that live streams 1.5 million crash records and informs road improvements that save lives.

NZTA is a New Zealand Crown entity tasked with promoting safe and functional transport by land, including the responsibility for driver and vehicle licensing, and administering the New Zealand state highway network. Road safety is paramount in New Zealand and it is NZTA's aim that road safety improvements reduce accident occurrence.



## 1 - CHALLENGE

NZTA receives crash reports from police and stores them on a database. This crash database contains almost 1.5 million crash records with hundreds of attributes that describe when, where and how a crash occurs. This data is a treasure trove of information for the road safety community, however, it was stored in a dated system that was no longer fit-for-purpose, with a limited number of people able to utilise it. Information that could be used to save lives was instead a source of frustration.



## 3 - RESULTS

CAS has been successfully deployed as a full production system. The road safety community is using it to output complex collision diagrams and reports to help them target and advocate for road safety improvements, as well as store and share queries with other road safety practitioners.



## 2 - SOLUTION

NZTA needed a new, modern, scalable solution that would allow the entire road safety community to quickly visualise, query, analyse and export the data in order to recommend road safety improvements.

Orbica and partner company Catalyst worked closely with NZTA to develop Crash Analysis System (CAS) a user-friendly web application to live stream the database so that transport planners and engineers (with no prerequisite knowledge of SQL) could easily build complex stacked spatial and aspatial queries with drag-and-drop, ease of use and intuitive controls.

The solution was developed using opensource technology with APIs to maximise NZTA's existing software investments.



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