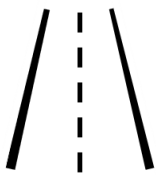




MOVING MOUNTAINS, CONNECTING COMMUNITIES

After the magnitude 7.8 earthquake in November 2016 made sections of SH1 from Blenheim to Christchurch impassable, the NCTIR alliance, made up of four main contractors working in partnership with Waka Kotahi NZTA and KiwiRail, had to work quickly to keep vehicles moving on the South Island. As this section of SH1 is the main route used by freight and ferry traffic to service the rest of the island, and the Main North Railway Line was out of action due to earthquake damage, it was imperative that an alternative route was found so that freight did not grind to a halt. The only feasible route was linking up multiple less travelled inland state highways, a trip of over 400km from Christchurch to Picton via Murchison.

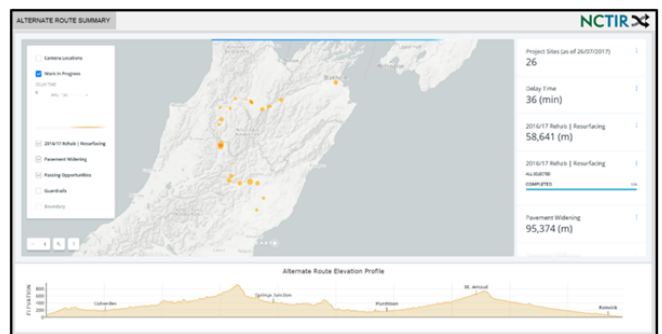
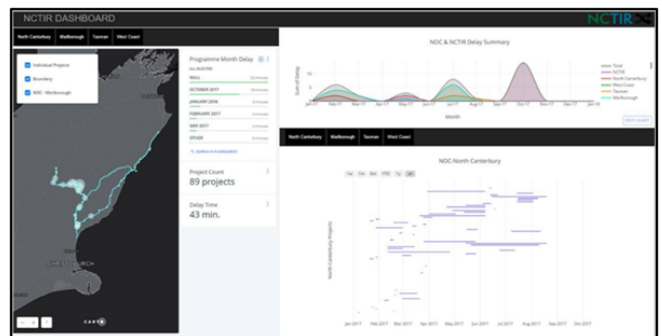


The alternate route required significant upgrades – both to repair earthquake damage, and upgrade route sections to accommodate heavy vehicles and widen the road. The route spanned four different Waka Kotahi NZTA regions and multiple municipal areas, making planning and coordination of this work programme logistically challenging due to the sheer scale and number of parties involved.

The National Forward Works Viewer was implemented to help co-ordinate the \$90 million dollar programme over the course of 18 months. With up to 40 crews working at any one time, and an increase of daily average vehicles from 1,500 to 7,000, it was critical to plan these works in an efficient and effective manner - the risk of economic disruption was just too great not to.

A visual single source of truth to connect everything together

A master programme of works was built across the four regions and published to the National Forward Works Viewer. It gave the NCTIR alliance and Waka Kotahi NZTA a visual single source of truth as to what was happening along the route, and allowed for programme deconfliction when clashes were identified. Another benefit was it allowed Waka Kotahi NZTA to understand likely delays between towns as a result of the work because they could see what was happening between each route segment. Using the data input into the NFWV, a dashboard was built which predicted delay times. This made it a lot easier to communicate likely travel times to the public and manage their expectations.



Without the visibility of the master programme and being able to coordinate the extensive repair programme, it would have resulted in more frequent delays on the alternate route for the 18 months that it was in use whilst SH1 was being repaired - causing unprecedented impact on traffic and freight across New Zealand. Using the National Forward Works Viewer allowed the \$90 million programme to proceed, maintaining the resilience of the alternate route whilst ensuring SH1 could be fixed.