



Condition Monitoring of Critical Motors Results in Real Dollar Savings of Over \$100K Per Annum.

In support of its 30-year future-proofed infrastructure plan, A Regional Council in NZ wanted to perform preventative maintenance on its water system. A failure of this system would result in an inability to supply water to customers, thus forcing restrictions on water usage and draining away revenue. Problems with its water supply would impact the City's long term ability to grow its economy by attracting more businesses and families.

machinemonitor® is an independent electrical engineering consultancy that helps companies in the heavy industry sector gain a competitive advantage by increasing the efficiency and lifespan of capital assets. machinemonitor® has 18 years of experience in the asset management of electrical rotating machines and auxiliary equipment, and acts as a strategic partner by delivering design, troubleshooting, specialised field testing, repair management, condition monitoring and unique risk management services.

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A maintenance gap needed closure

The Council was performing preventative maintenance on its water infrastructure, although the maintenance was limited in scope. The City was conducting vibration analysis, which was sensitive to mechanical issues but unable to alert to issues in electrical end process areas. Because the failure of a single critical pump would adversely affect 161,000 customers, the Council needed to close that maintenance gap before a problem damaged its reputation and disrupted its strategic infrastructure plan.

Specialised expertise and equipment were needed

machinemonitor® provided a solution consisting of a single simple on-line test without requiring any shutdown, so no customers were affected. This test exposed mechanical, electrical, and process problems before they could impact customers, and did not require any change to the current plant set-up. machinemonitor® built buy-in from the utility's technical leads by clearly presenting its processes and goals at the outset of the project.

machinemonitor® experts visited the site and collected data, which was then analyzed and a condition report was developed for each unit. With an in-depth and accurate understanding of the condition of their system, an informed decisions was able to be made to harden the reliability of their pumps and motors. Now they can forecast spending and scheduling based on real needs, not theoretical estimates.

The ROI keeps flowing

The Regional City Council began to realise its ROI immediately, reporting that the work conducted by machinemonitor® has resulted in elimination of unnecessary offsite repairs, identification of inefficient pumps and motors, and reduced maintenance and monitoring costs through the consolidation of electrical, mechanical, and process testing.

The 30-year infrastructure plan is bolstered, strengthening the Councils confidence that their equipment is reliable enough to support the region's water needs now and into the future.