

Lessons learned from one of New Zealand's most challenging civil engineering projects: rebuilding the earthquake damaged pipes, roads, bridges and retaining walls in the city of Christchurch 2011 - 2016.

SCIRT, The Construction Industry Health and Safety Leaders – poster

Story: Health and Safety

Theme: Programme Management

A poster created by University of Canterbury students outlining their findings from examining SCIRT's approach to managing health and safety.

This document has been provided as an example of a tool that might be useful for other organisations undertaking complex disaster recovery or infrastructure rebuild programmes.

For more information about this document, visit www.scirtlearninglegacy.org.nz



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SCIRT, THE CONSTRUCTION INDUSTRY HEALTH AND SAFETY LEADERS?

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SUMMARY

In the last five years the New Zealand construction industry has taken steps to significantly improve health and safety performance in an attempt to meet the standard set by the likes of Australia and the United Kingdom. The Government formed the Business Leaders' Health and Safety Forum to motivate and inspire the business leaders of New Zealand to take ownership of workplace health and safety. The SCIRT alliance's has performed above the benchmark published by the forum.

It was found that an increase in reported near misses decreased the number of incidents. This negative correlation was confirmed by the five principal contractors within the SCIRT alliance. Actively encouraging a proactive workplace health and safety culture in comparison to a reactive environment has been identified as the basis for SCIRT's improved performance. This success has been motivated by the key performance indicators related to workplace health and safety within the alliance.

Given the conclusive findings, investigation into using key performance indicators more frequently in other forms of contracting within the New Zealand construction industry would be beneficial. Investigating this would be the next logical research step.

AIMS AND OBJECTIVES

New Zealand's workplace injury rate is about twice that of Australia and almost six times that of the UK. This has motivated numerous parties to exert considerable effort to improve New Zealand's health and safety performance; ensuring workers go home safely.

The construction industry has directed emphasis towards creating a culture within the industry that expects, understands and actively participates in health and safety.

The research aims to see the positive effects the Stronger Christchurch Infrastructure Rebuild Team (SCIRT) has had on the health and safety performance within New Zealand's construction industry. And how these effects could be replicated in other alliances and projects around the country.

Objectives:

- Demonstrate that SCIRT has, on average, over the duration of the alliance performed better than Zero Harm benchmark produced by the Business Leaders' Health and Safety Forum (a government lead initiative).
- Investigate what SCIRT has done differently to other alliances/projects in New Zealand.
- Identify if other organisations are already replicating SCIRT's Health and Safety initiatives to improve their Health and Safety performance.

METHODOLOGY

- The Zero Harm Benchmark report produced by the Business Leaders' Health and Safety Forum was assumed to represent the New Zealand construction industry's health and safety performance. This was used as the New Zealand benchmark.
- Statistically, compare and contrast the health and safety data obtained from SCIRT and Zero Harm. This will demonstrate that SCIRT's health and safety performance exceeds that of the New Zealand benchmark.
- Survey industry experts' understanding of SCIRT's performance and gauge what their perception of why this improvement has occurred.
- From the quantitative and qualitative data determine what, if any trends become apparent. Ascertain if these trends directly relate to a positive improvement in Health and Safety Performance.

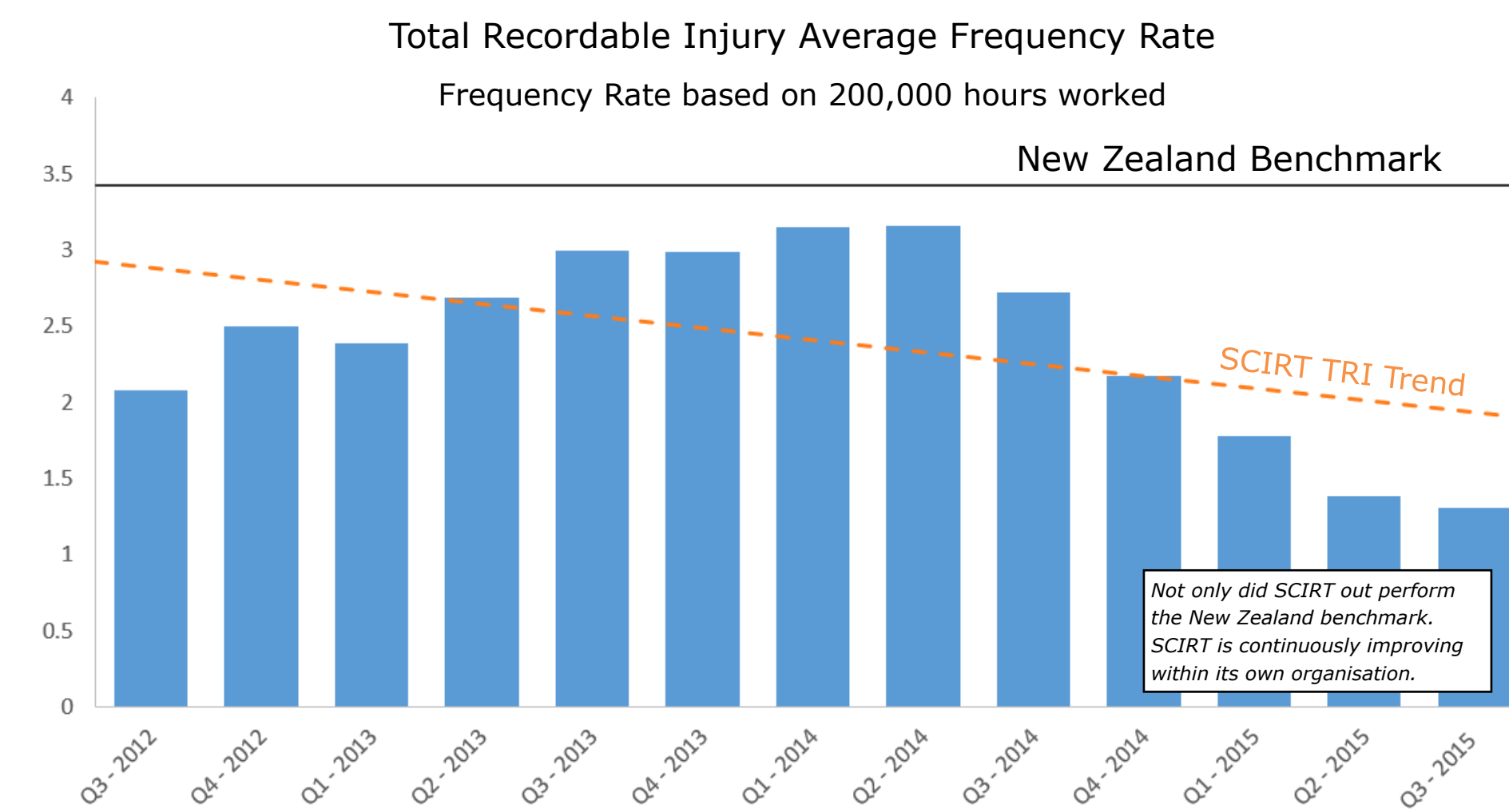
RESULTS

A **Lost Time Injury (LTI)** is a work-related injury, illness or disease that prevents a return to work for one day/shift or more.

A **Medical Treatment Injury (MTI)** is when an employee or contractor receives any medical treatment from a Registered Medical Professional as a result of a work-related injury, illness or disease that is beyond the scope of first aid.

Total Recordable Injuries (TRI) includes medical treatment injuries, return to work injuries, lost time injuries and fatal injuries.

A **Near Miss Event** is a document event where property damage, system failures, environmental conditions, injury or illness could have occurred but did not.



"Internationally it is recognised that we shouldn't measure on the lack of Health and Safety (e.g. LTI, TRI) as this can easily be achieved, by people not reporting. As a Client I look for good lead indicator data and get concerned when we get low levels of reporting...from experience they are the ones to look out for."

- Martin McMullan, Zero Harm Manager, NZTA

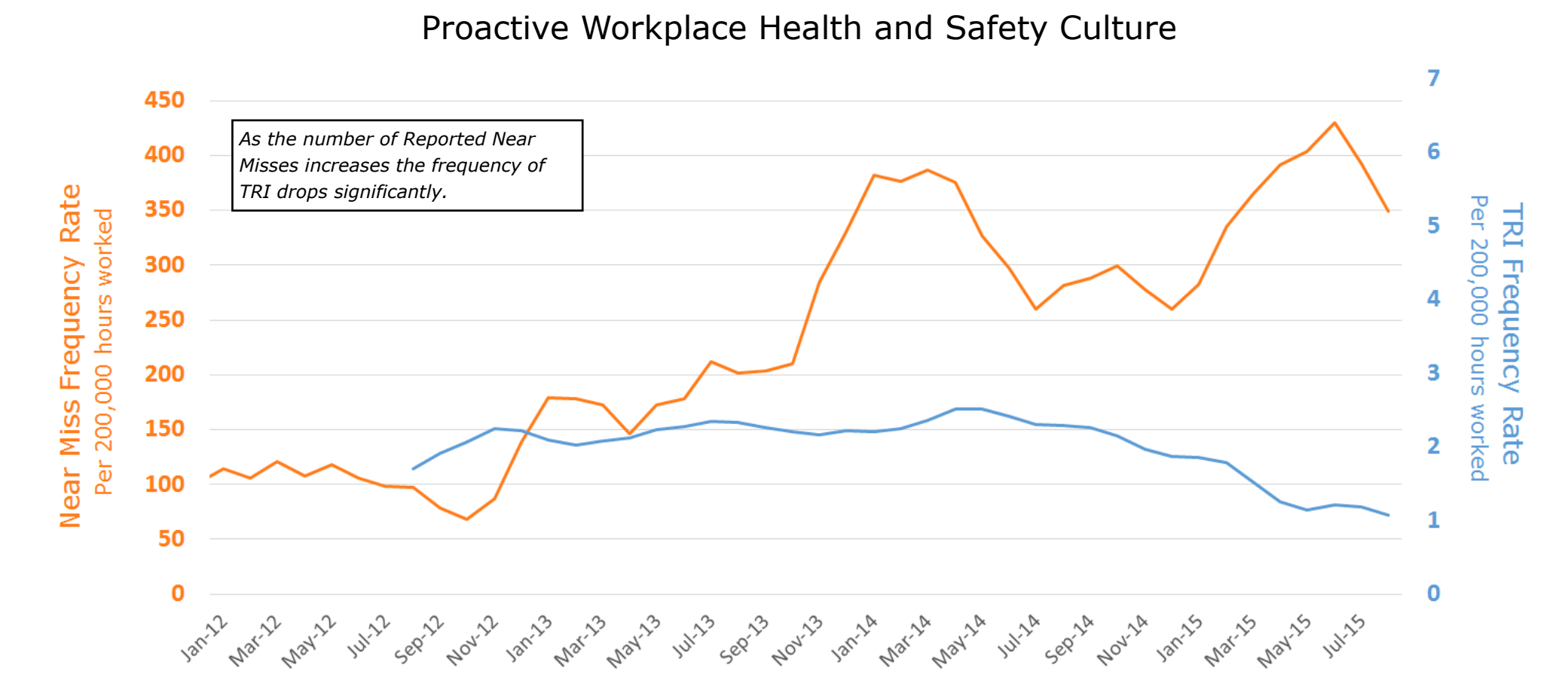
The above figure shows that SCIRT has exceeded the set New Zealand benchmark in regards to the frequency of recordable injuries. The strongest factor leading to this increased number of reported near misses. There is a significant evidence (qualitative and quantitative) to support that as near miss reporting increases the number of incidents decreases.

SCIRT is an unique alliance in that it is a disaster response. They implemented a number of Key Performance Indicators (KPI's), one of which was safety. The idea of the KPI's was to motivate the contractors to create a proactive health and safety culture in which ideas and innovations were shared amongst all parties.

The use of KPI's has put emphasis on improving lead indicators such as near miss reporting compared with lag indicators (incidents that have occurred) creating room for continued improvement. In New Zealand organisations, it is often the safety people who drive near miss reporting, whereas the SCIRT Alliance reinforces the role of front line leaders in encouraging their teams to look for these improvement opportunities.

"KPI's are relatively new (In the last five to ten years) and the use of them in the construction industry is becoming more frequent to a point where they will become used day to day. The Canterbury Earthquakes and SCIRT have definitely accelerated the use of them."

- George Rankin, Lead Health and Safety Advisor, McConnell Dowell



The figure above illustrates the influence that near miss reporting has on the total recorded injuries. It has been internationally recognised that as near miss reporting increases the number of injuries decreases.

"Many organisations see reporting of near miss as evidence of weakness and hence look at it from a negative aspect. In mature safety organisations, near misses are seen as opportunities for improvement."

- Dennis Henry, Executive General Manager, Zero Harm, Downer

RECOMMENDATIONS

SCIRT has exceeded the health and safety performance published by the Business Leaders' Health and Safety Forum that was assumed as the New Zealand benchmark in this analysis. The strongest factor influencing this was the number of reported near misses. Where there has been a focus on near miss reporting, not only a decrease in injuries has been observed but also things like plant damage, environmental incidents and quality improvements (Dennis Henry, Executive General Manager - Zero Harm, Downer).

However, many organisations see reporting of near miss as evidence of weakness, they look at it from a negative aspect. Mature safety organisations like SCIRT, view near misses as opportunities for improvement. This creates a proactive health and safety environment.

SCIRT used KPI's to motivate the contractors to actively participate in safety. The industry experts surveyed agreed that KPI's were a good starting point to initiate the process of health and safety improvement, and that they recognise the positives, rather than focusing on the negatives. However, ideally, reporting near misses and other lead indicators will result in ideas and safer options being implemented because of the benefit to the team in being more safer, more efficient and better for business, rather than because there is opportunity for reward.

Further research into how KPI's could be integrated into other forms of contracting would be valuable to helping the New Zealand Government reach their goal of Zero Harm workplaces.

