

# Health and Safety:

## Indicators and Measures Knowledge Bank

2019

## Government Health & Safety Lead

### ACKNOWLEDGEMENTS

The following organisations provided advice in the preparation of this guide.

- > WorkSafe New Zealand
- > CosmanParkes
- > Impac
- > Civil Aviation Authority of New Zealand

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Published 2018



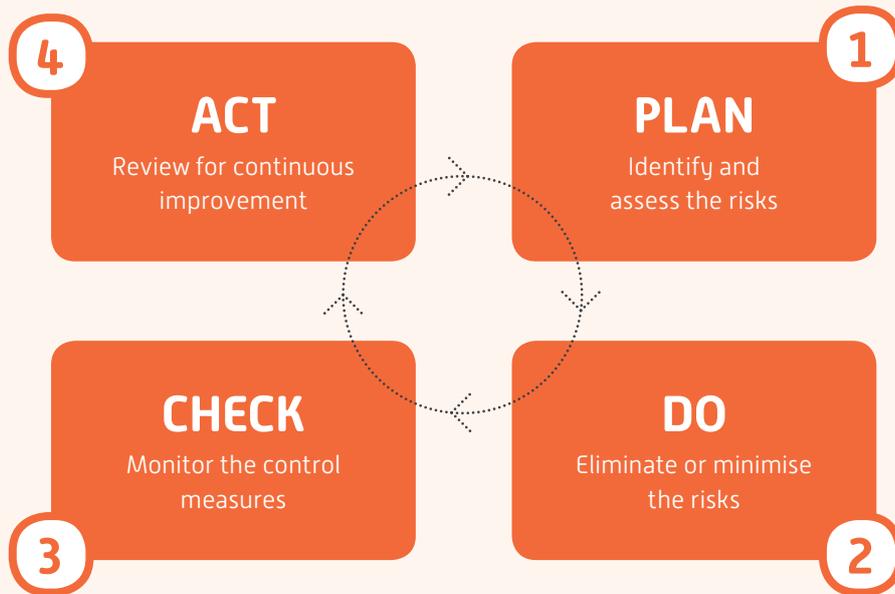
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The purpose of this document is to present a range of indicators and measures that can be used to assess the H&S performance of an organisation. It aims to assist Public Sector agencies with the 'check' component of the below risk management framework.



How to manage work risk<sup>1</sup>

1 Taken from WorkSafe New Zealand



## INTRODUCTION

**Managing health and safety (H&S) can be a challenge for any organisation. To be successful, organisations need to measure performance as an indicator of how well they are keeping their workers safe.**

No single indicator is perfect, and taking one measure, such as injury rates, and focusing all efforts on enhancing performance of that single indicator can have unintended consequences and provide an inadequate picture. Rather, a range of indicators and measures which include a mix of data, descriptive information and analysis is required.

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**In order to manage something effectively, it needs to be measured and monitored.**

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This resource is intended for H&S professionals who are responsible for reporting to senior management and officers<sup>2</sup>. It includes a list of potential indicators and measures for inclusion into an organisation's H&S monitoring activities. This list has been compiled from sources which include: a range of New Zealand (NZ) public sector H&S management reports, annual reports from private sector organisations in the NZX50 index, as well as other resources such as Monitoring What Matters (NZ resource), Measuring and Reporting on Work Health and Safety (Australian resource), Health and Safety Guide: Good Governance for Directors (NZ Resource) Lead Indicators (New Zealand Resource) and A Guide to Measuring Health and Safety Performance (UK resource).

For guidance on how to identify critical H&S indicators for your organisation see 'Monitoring What Matters' by the Business Leaders' Health and Safety Forum<sup>3</sup>.

The following list of indicators and measures have been aligned under the three monitoring categories used in Monitoring What Matters. These include:

- > Risks
- > Relationships
- > Resources

One additional section of monitoring has been included in this resource for indicators specific to officers. Officers have clear duties under section 44 of the *Health and Safety at Work Act 2015* (HSWA). A significant component of this section details the due diligence required by officers. Without appropriate monitoring, officers are unlikely to be meeting all requirements under HSWA.

The full list of H&S indicators and measures in the knowledge bank can be found in **appendix one** on page 12.

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<sup>2</sup> Officers are defined as being directors, and other types of specified governance roles and **any other person occupying a position in relation to the business or undertaking that allows the person to exercise significant influence over the management of the business or undertaking** (s 18, HSWA).  
<sup>3</sup> [www.zeroharm.org.nz/assets/docs/our-work/monitoring/Monitoring-what-matters.pdf](http://www.zeroharm.org.nz/assets/docs/our-work/monitoring/Monitoring-what-matters.pdf)

## HOW TO USE THIS DOCUMENT

**Measuring something is no guarantee that performance will improve. Before deciding on the indicators that are best suited to an organisation, it is first important to consider what will make the most impact on H&S outcomes.**

Research<sup>4</sup> indicates that focusing on risks, relationships and resources is generally the best approach. These focal points should form the basis for deciding what indicators best reflect the H&S performance of an organisation.

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**To reliably improve performance the right things need to be measured and monitored.**

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The following questions should be considered when selecting H&S measures and indicators<sup>5</sup>.

- > **Purpose:** is the reason for monitoring at a high level to:
  - » monitor the level of safety in a system? i.e. are controls effective at reducing both the likelihood of harm (typically lead indicators<sup>6</sup>) and consequence (typically lag indicators<sup>7</sup>)?
  - » decide where and how to take action?
  - » motivate those in a position of power to take action?
- > **Validity:** do they measure what you want it to measure? Is correlation enough, or do you need the link to be causal? What will good or bad results look like? This includes using rates which take account of exposure when counting things such as accidents.
- > **Reliability:** do they give the same measurement when used by different people in the same situation, or on different occasions by one person in the same situation? Can this data be manipulated?
- > **Unintended consequences:** will the measure really drive the performance and behaviour that you seek or could it drive unintended behaviour? e.g. avoidance of necessary activities for fear that they will affect results.
- > **Sensitivity:** do they respond to changes in a sufficiently tangible way to become statistically significant over a reasonably short time?
- > **Representative:** do these cover all of the aspects which are relevant?
- > **Openness to bias:** can they be manipulated to show a better score, or create unnecessary administrative burden without changing the underlying results?
- > **Cost-effectiveness:** does it cost more to collect the data than would be lost without the indicator to assist decisions?
- > **Focused attention:** do they drill down to the things that will prevent death, serious injury and serious illness? Alternatively, do they focus attention on things that will continue to encourage good safety practice (using the Safety 2 approach)?
- > **Diversity:** do they include a mix of data, descriptive information and analysis?
- > **Individuals:** who will be presenting the data and how often?
- > **Multi-purpose:** can this data provide multiple insights? E.g. mental health indicators may be useful for monitoring mental health risks as well as capability [resources].

When considering the above, one may find that tailored indicators meet an agency's need for performance measuring, in addition to example indicators in the appendix. The indicators listed are examples to inspire ideas, and should not be taken for a checklist of measures government agencies should adopt.

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<sup>4</sup> Research undertaken by the Business Leaders' Health and Safety Forum

<sup>5</sup> Considerations adapted from Hale, A. (2009). Why safety performance indicators? *Safety Science*, 47(4), 479-480.

<sup>6</sup> Lead indicators are those that typically give an indication of safety performance **before** a H&S event occurs typically

<sup>7</sup> Lag indicators are those that typically give an indication of safety performance **after** a H&S event occurs



## WHAT ARE KEY MEASURES

In the New Zealand Public Sector, the following key measures should be considered for reporting.

- > SafePlus assessment highlights
- > Critical health and safety risks (including how these risks are managed and what progress has been made in the reporting year)
- > How workers have been engaged in health and safety

- > Health and safety governance arrangements, including how officers have met their duties.

To assist with elements of benchmarking, below are two graphs showing the incident rates for work-related claims and entitlement payments in **New Zealand vs the Public Sector from 2007-2017**.

Graph 1 – Incidence rates for all work-related claims in New Zealand from 2007-2017



Source: ACC, Stats NZ, SSC

Graph 2 – Incidence rates for work-related claims involving entitlement payments in New Zealand from 2007-2017



Source: ACC, Stats NZ, SSC

## MONITORING OF RISKS

### WHY IS IT IMPORTANT TO MONITOR RISKS?

Every New Zealand Public Sector organisation has H&S risks and therefore has a responsibility to protect its workers from harm. In order to manage the harm created by exposure to these risks, risks and their controls need to be measured or monitored.

Additionally, the HSWA explicitly requires organisations to monitor the health of their workers and conditions of the workplace for the purpose of preventing injury or illness under their primary duty of care.

### HOW DO RISK INDICATORS ASSIST PERFORMANCE IMPROVEMENT?

Monitoring (and managing) risk provides assurance that an organisation's controls are sufficient and operating effectively to a level considered tolerable. With this assurance in place, opportunities can be pursued where risks may be present. If risks are being identified as ineffectively managed, this monitoring can be used to make the most appropriate changes.

### WHAT AREAS COULD BE CONSIDERED AS PART OF RISK MONITORING?

The following areas have been identified as areas where risk monitoring could be focused, depending on the nature of an organisation. Indicators and measures under these areas are detailed in **appendix one** on page 13.

#### Common Public Sector risks:

- > Vehicle operation
- > Aviation
- > Bullying & harassment
- > Mental health
- > Violence, aggression & assault
- > Hazardous substances
- > Stress
- > Fatigue
- > Remote working

#### Generic risk-based measures and indicators:

- > Occupational healthy
- > Injury rate
- > Event type
- > Controls monitoring
- > Investigations and corrective actions
- > Procurement
- > Strategy implementation

Below are the common risks that affect New Zealand Public Sector organisations.<sup>8</sup>

#### Most prevalent critical risks/factors facing public serice workers

Self-assessed and FTE-weighted data\*



\*Results derived from agency responses to the Government H&S Lead survey



**HELICOPTER INCIDENTS ARE THE LEADING CAUSE OF WORK-RELATED FATALITIES IN THE PUBLIC SECTOR\***

\*Does not include health-related workplace fatalities

8 July 2018 data collated by the Government Health and Safety Lead



## MONITORING OF RELATIONSHIPS

### WHY IS IT IMPORTANT TO MONITOR RELATIONSHIPS?

Monitoring systems are not just restricted to injury surveillance data, but include other essential ingredients, such as effective communication and engagement, clear roles, responsibilities and systems to manage complex working arrangements. A central part of monitoring health and safety outcomes is the relationships between various parties, which under the HSWA, starts with the person conducting a business or undertaking (PCBU's).

A PCBU's primary duty is to ensure, so far as reasonably practicable, the health and safety of their staff while they are at work. This includes monitoring the interconnected relationships, such as contract management relationships, health and safety representatives, etc.

### HOW DO RELATIONSHIP INDICATORS ASSIST PERFORMANCE IMPROVEMENT?

At times, relationship management can be a 'tick box'. With appropriate monitoring of relationships, organisations can gain a true insight as to how well they are engaging with workers and key stakeholders. For example, seeing indicators around the ratio of managers to workers who attend H&S committee meetings can generally provide insight to how impactful the committee is at driving sustainable change.

### WHAT AREAS COULD BE CONSIDERED AS PART OF RELATIONSHIP MONITORING?

The following areas have been identified where relationship monitoring could be considered, depending on the nature of the organisation. Indicators and measures under these areas are detailed further in **appendix one** on page 21.

- > Worker participation & representation
- > Staff engagement & perception of H&S in the workplace
- > Leadership engagement
- > Contractor management relationships
- > Joint agency relationships
- > Key stakeholder relationships
- > Other stakeholder relationships
- > Incident engagement
- > Promotion of good H&S practices

## MONITORING OF RESOURCES

### WHY IS IT IMPORTANT TO MONITOR RESOURCES?

A critical component to ensuring H&S is successfully managed is ensuring that H&S is appropriately resourced. This extends well beyond how many H&S FTEs are employed, or how many dollars have been allocated to H&S. While funding may be a challenging area for organisations, it is by no means the only mechanism for resourcing H&S.

The HSWA specifically requires officers of a PCBU to ensure that resourcing of H&S is sufficient to minimise risks. Information supporting this duty is unlikely to be accurate without appropriate monitoring. Put simply, effective management of H&S is unlikely to occur without appropriate resourcing of H&S.

### HOW DO RESOURCE INDICATORS ASSIST PERFORMANCE IMPROVEMENT?

Understanding how the organisation is holistically positioned to undertake H&S effectively enables better precision in setting and achieving realistic goals. Identifying deficiencies in resourcing in an area of the organisation through monitoring can enable organisations to take a tailored and impactful approach, enhancing H&S, as well as making H&S performance sustainable. For example, monitoring the current workload of the workforce against their capability and capacity in high risk roles, can indicate where 'short-cutting' may be an organisational force, and where incidents are more likely to occur.

### WHAT AREAS COULD BE CONSIDERED AS PART OF RESOURCE MONITORING?

The following areas have been identified where resource monitoring could be focused depending on the nature of the organisation. Indicators and measures under these areas are detailed further in **appendix one** on page 24.

- > People (physical and psychological capacity)
- > Processes
- > Equipment and assets
- > Financial resources
- > Organisational capability



## FURTHER RESOURCES

To view other resources which give insights to monitoring H&S, see the following.

**Monitoring What Matters by the Business Leaders' Health and Safety Forum:**

[www.zeroharm.org.nz/assets/docs/our-work/monitoring/Monitoring-what-matters.pdf](http://www.zeroharm.org.nz/assets/docs/our-work/monitoring/Monitoring-what-matters.pdf)

**Measuring and Reporting on Work Health and Safety by Safe Work Australia:**

[www.safeworkaustralia.gov.au/system/files/documents/1802/measuring-and-reporting-on-work-health-and-safety.pdf](http://www.safeworkaustralia.gov.au/system/files/documents/1802/measuring-and-reporting-on-work-health-and-safety.pdf)

**Lead Indicators by SafePlus:**

[www.worksafe.govt.nz/about-us/who-we-are/our-priorities/safeplus/resources-guidance/](http://www.worksafe.govt.nz/about-us/who-we-are/our-priorities/safeplus/resources-guidance/)

**Health and Safety Guide: Good Governance for Directors by the Institute of Directors:**

[www.iod.org.nz/Portals/0/Governance%20resources/Health%20and%20Safety%20Guide\\_Good%20Governance%20for%20Directors.pdf](http://www.iod.org.nz/Portals/0/Governance%20resources/Health%20and%20Safety%20Guide_Good%20Governance%20for%20Directors.pdf)

**A Guide to Measuring Health and Safety Performance by the Health & Safety Executive:**

[www.hse.gov.uk/opsunit/perfmeas.pdf](http://www.hse.gov.uk/opsunit/perfmeas.pdf)

## APPENDIX ONE: INDICATORS AND MEASURES

The lists of indicators and measures within this documents do not represent an exhaustive list of health and safety indicators and measures, nor does this form a checklist of areas that should be monitored. Agencies should make a selection of lead and lag indicators that are appropriate for their context (see page 6).

If you have H&S indicators or measures that would be valuable in this list, please forward your suggestions to: [govthealthandsafety@corrections.govt.nz](mailto:govthealthandsafety@corrections.govt.nz)

This appendix will be updated annually and hosted at [www.healthandsafety.govt.nz](http://www.healthandsafety.govt.nz)

### COMMONLY USED INDICATORS AND MEASURES

Below is a short list of indicators and measures that are most commonly used. A long-list of possible indicators and measures can be found from the section following. Each agency will need to determine their own measures based on their risks and reporting capabilities.

<b>Risks</b>	<ul style="list-style-type: none"> <li>&gt; LTIFR<sup>9</sup> (Lost time injury frequency rate)</li> <li>&gt; Physical safety (threats/assaults)</li> <li>&gt; Number of high consequence events</li> <li>&gt; Number of near miss events</li> <li>&gt; Number of first aid injuries</li> <li>&gt; Number of injuries resulting in disability</li> <li>&gt; Number of occupational health/illness events</li> <li>&gt; Fatalities</li> <li>&gt; Percentage of critical risks that have effective controls</li> <li>&gt; Number of abusive behaviours/phone calls</li> <li>&gt; Early reports of discomfort pain or injury (DPI) rate</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>&gt; EAP usage statistics</li> <li>&gt; External audit results (e.g. SafePlus)</li> <li>&gt; Internal audit results</li> </ul>
<b>Relationships</b>	<ul style="list-style-type: none"> <li>&gt; % Workers that feel they are, or can be, involved in decisions relating to safety</li> </ul>

<sup>9</sup>  $LTIFR = \frac{\text{Number of lost time injuries in accounting period}}{\text{Total hours worked in accounting period}} \times 200,000$



## RISK-BASED MEASURES AND INDICATORS

### Risk-based indicators for common New Zealand Public Sector risks/risk factors:

#### Sub-topics:

- > Vehicle operation
- > Aviation
- > Bullying & harassment
- > Mental health
- > Violence, aggression & assault
- > Hazardous substances
- > Stress
- > Fatigue
- > Remote working

#### Vehicle operation<sup>10</sup>

**Purpose:** to understand the extent to which operating vehicles presents H&S risks to workers. In particular, these indicators aim to provide confidence that relevant workers are adequately skilled, fit and prepared to operate a vehicle that is fit for purpose.

This was the most prevalent FTE-weighted critical risk identified by Public Sector organisations in 2018.

Percentage of relevant drivers and others on work trips who stayed overnight this month to manage the length and fatigue of a trip
Percentage of relevant managers who encouraged drivers to stay overnight to manage driver fatigue
Percentage of relevant vehicle operators who have completed a daily vehicle safety check sheet in the last month
Percentage of relevant drivers that logged and planned their routes in the last month
Were drivers involved in the selection and comfort fit checks for prospective new fleet vehicles prior to purchase or lease?
Percentage of relevant drivers reporting their driver hours to managers

Percentage of fleet vehicles with GPS tracking installed to identify worker positions and protect remote workers
Percentage of relevant vehicles with emergency equipment such as fire extinguishers, accident warning signs, day/night high visibility clothing, and a first aid kit installed
Percentage of vehicles with secure storage areas for luggage and equipment
Percentage of relevant vehicles with additional communication equipment installed to account for areas with poor or no cell phone coverage (such as CB radio, satellite phone, cell phone mobile repeaters etc)
Percentage of relevant vehicles with equipment for poor weather as standard (for example, wet weather gear, chains, or winter tyres)
Percentage of drivers who changed a planned route because of weather or other concerns in the last month
Percentage of vehicles used for work greater than 10 years old
Number of traffic infringements in company vehicles
Number of motor vehicle incidents and insurance claims
ANCAP Rating – average rating score of fleet
Percentage of relevant staff who have completed driver training and refresher training for specialist vehicles

<sup>10</sup> Examples of these indicators derived from Lead Indicators by SafePlus

## Aviation

**Purpose:** to understand the status of safety for staff, contractors and members of the public when aircraft, particularly helicopters, are used to support the organisation.

Helicopter incidents account for the greatest number of work-related fatalities in the public sector.\*

Percentage of helicopter or fixed wing aircraft service suppliers that have been independently audited to a recognised standard in the last three years
Dates of the last three Civil Aviation Authority audits or investigations
Date of last Review of Airworthiness for each aircraft operated
Percentage of operators utilising task specific safety equipment (e.g. floats, crash resistant fuel tanks, wire cutters, traffic collision avoidance systems, terrain awareness warning systems, weather radar, autopilot, night vision systems (if appropriate))
Percentage of operators using cockpit data recorders to enhance safety (e.g. cockpit video recorders)
Percentage of aircraft operated without dynamic seats and crash resistant fuel tanks
Number of suppliers yet to obtain approval of their safety management system (SMS) from CAA
Number of risk assessments performed and percentage of risks reviewed on time by operators
Percentage of flights undertaken in close proximity to other aircraft, such that either risk of collision or rotor downwash are safety factors
Percentage of relevant workers who have been trained in safe procedures in, around and interacting with helicopters or fixed wing aircraft
Percentage of pilots, relevant ground staff and relevant management who have received training in dynamic risk management
Percentage of operators with a formalised drug and alcohol testing policy and programme
Number of safety-related occurrences (including near miss events and nearby drones spotted)

\*Numbers do not include fatalities resulting from health-related harm.

Date that operating pilots last undertook flight training for the relevant aircraft type
Date of the last flight crew competency check for each pilot in the aircraft being flown
Number of operational helicopter pilots with less than the below experience (hours): > 2500 total > 1500 as a helicopter pilot in command > 100 operating the type of aircraft being flown
Percentage of operators who have undertaken operation specific scenario based and/or simulator training
Longest shifts worked for aircraft pilots and other workers in aviation safety critical roles (e.g. essential ground crew)
Percentage of flights where the pilot undertook a documented pre-flight risk assessment where the following elements of pilot fitness were covered: fatigue, illness, stress, medication and nourishment
Percentage of flights which include flight between evening civil twilight and morning civil twilight
Percentage of operators with documented PPE requirements for flight crew and passengers

## Bullying & harassment

**Purpose:** to understand the extent to which bullying and harassment may be present in the workplace, the H&S risks they create to workers through outcome indicators, as well as training offered to workers and managers.

Number of personal grievances
Number of bullying or harassment cases reported
Percentage of workers who have received training or support on bullying and harassment
Percentage of managers who have received training or support on bullying and harassment
Engagement survey feedback on workplace culture with regard to bullying and harassment
EAP usage stats

See 'human resourcing' page 24. of this knowledge bank for other relevant indicators.



## Mental health

**Purpose:** to understand the extent to which working may impact worker mental health (positively as well as negatively) through mental health outcomes, initiatives and the capability of the workplace to effectively manage this risk.

This was the second-most prevalent FTE-weighted critical risk identified by Public Sector organisations in 2018.

Timeliness of safe return to work/uptake of professional psychological support
EAP usage stats
Percentage of worker in staff surveys (or other measures) that can cope with everyday stressors
Number of high exposure processes or roles reviewed for suitability
Number of staff social events (organised or unofficial) each quarter
Initiatives undertaken to assist managers in recognising signs of mental health harm and how to support workers
Initiatives undertaken to assist workers in mental health resilience
Initiatives undertaken to pre-screen workers for high exposure roles
Information and training on safety, health, wellbeing and resilience to all recruits and new personnel
Corrective actions undertaken, following information derived from EAP/absence/illness
Hits on intranet resources for staff and managers
Percentage of managers trained in mental health basics

## Violence, aggression & assault

**Purpose:** to understand the extent to which violent and aggressive interactions present H&S risks to workers. This section has been highlighted as a key H&S risk to Public Sector employees, particularly those with public-facing offices, following the 2014 Work and Income Shooting.

This was the third-most prevalent FTE-weighted critical risk identified by Public Sector organisations in 2018.

Number of physical safety assaults
Number of organisational threats
Number of incidents relating to organisational threats
Number of personal threats (verbal, post, social media)
Percentage of relevant frontline staff who wear allocated PPE (e.g. on-body cameras)
Percentage of relevant frontline staff who have undertaken de-escalation training
Percentage of clients with a high-risk profile (e.g. criminal history, mental illness)
Length of time since high risk policies and processes (e.g. claim rejection criteria) have been reviewed
Number of abusive behaviours/phone calls
Number of dog bites
Percentage of public-facing offices with restrictive access
Percentage of public-facing offices with duress alarms
Compliance with security standards (e.g. attendance of security guards at specified times)
Number of security breaches (intentional and accidental)
Percentage of staff that feel safe from violence, aggression and assault at work
Security trends
Number of reactive repairs to broken security features (e.g. broken locks)

## Hazardous substances

**Purpose:** to understand the extent to which risks created by hazardous substances are being managed at work. In particular, understanding the organisation's capability to appropriately handle and store hazardous substance and minimise exposure.

Percentage of sites that store or use hazardous substances
Number of relevant sites without approved handlers
Percentage of workers trained to handle their respective hazardous substances
Percentage of hazardous substances found with missing or inappropriate labelling during the last audit
Number of hazardous substance storage areas without spill kits or signage
Number of health monitoring tests undertaken to identify hazardous substance exposure in workers
Number of hazardous substance work areas with exposure limit alarms
Number of tolerable exposure limits (TEL) exceeded in the last three months
Number of injuries relating to hazardous substances
Number of compliance certificates out of date (e.g. handler, filler, location and container)
Number of worksites with asbestos accessible to workers

## Stress<sup>11</sup>

**Purpose:** to understand the extent to which stress-related risks are being controlled and outcomes being are being managed at work. This is particularly important in tasks and roles where H&S is reliant on human accuracy.

Percentage of workers (including managers) who have received resilience training in the last year
Has the organisation's stress policy been reviewed within the last two years?
How have findings from worker surveys been included in the risk control processes for stress?
Number of stress and pressure self-reports received in the last month
Percentage of workers that have participated in health surveillance for cardiac, digestive, and cancer risks in the last year
Percentage of staff participating in wellness campaigns this quarter
Results from annual employee engagement surveys
Percentage of employees participating in annual employee engagement surveys
Percentage of employees participating in annual employee engagement surveys
Percentage of managers that have been trained to recognise signs of stress and fatigue in their staff in the last year
Percentage of high-stress job descriptions and job activities that have had a risk assessment completed in the last year
Are questions about worker stress and demands included in performance and exit interviews?
How many surveys seeking information about stress and work demands have been carried out in the last year?
Percentage of staff who used EAP or other external agencies in the last month
Percentage of major events that EAP or other external agency staff have attended
Number of stress claims

11 Examples of these indicators derived from Lead Indicators by SafePlus



## Fatigue<sup>12</sup>

**Purpose:** to understand the extent to which fatigue-related risks are being controlled and outcomes are being managed at work. This is particularly important for tasks that require concentration to keep people safe such as driving, use of plant and other equipment.

Percentage of relevant toolbox talks or staff briefings that include discussion of the management of fatigue in the last month
Percentage of night-shift workers that have been assisted with personal measures to have a more restful sleep between shifts
Were staff involved in the design of the shift pattern?
Has consultation on the effectiveness of the shift pattern occurred in the last six months?
Percentage of staff who attended optional fatigue management training this year
Percentage of staff who participated in wellness campaigns this quarter
Percentage of lighting in the workplace that emits longer-wavelength light (rather than red/short wavelength) light, to suppress melatonin/sleepiness for workers
Does the shift pattern allow for two consecutive nights off following night shifts?
Are consecutive night shifts restricted to no more than four in a row?
Do day shifts start after 7am?
Are day shifts that start before 7am shorter than 7am-start shifts, to allow for staff to recover?
Is overtime forbidden for staff that work 12 hour shifts?
Is there a minimum of 12 hours between shifts?
Is the shift rotation pattern quick (every 2-3 days)?
Does the shift rotation pattern move forward (morning-afternoon-night)?
Percentage of the workforce that has to travel more than 45 minutes to work

Average time between shifts that staff are sleeping
Percentage of staff working shifts who have another job
Percentage of staff that work shifts or long hours (including management) and have their health monitored for cancer, cardiac and digestive health

## Remote working

**Purpose:** to understand the extent to which remote workers are being exposed to risk and whether the controls are appropriately effective.

Percentage of workers who undertake remote working around material risks
Percentage of workers who undertake remote working and carry a device capable of reliable communication at all times
Percentage of workers who undertake remote working and carry a device capable of reliable location tracking
Percentage of workers who undertake outdoor remote work and carry sufficient clothing to survive a night of poor conditions outdoors
Percentage of remote workers exposed to material risks who have had their work practices reviewed in the last 12 months

12 Examples of these indicators derived from Lead Indicators by SafePlus

## GENERIC RISK-BASED INDICATORS

### Sub-topics:

- > Occupational health
- > Injury rates
- > Event type
- > Controls monitoring
- > Investigations and corrective actions
- > Strategy implementation

### Occupational health

**Purpose:** to understand the extent to which occupational health risks are being controlled and outcomes are being managed at work. This particularly applies to hazardous substances, dusts, noise, musculoskeletal stress and the below areas:

#### Health-related safety risks\* ('effects of health-on-work')

##### Impairments Risks

- > Fatigue
- > Stress or mental distraction
- > Drugs/alcohol consumption

##### Incapacity Risks

- > Poorly controlled diabetes
- > Poorly controlled heart disease
- > Poorly controlled high blood pressure

##### Mobility Risks

- > Physical frailty
- > Bone and/or joint conditions
- > Severe obesity

##### Sensory Risks

- > Colour vision deficiency
- > Reduced visual acuity
- > Reduced hearing capability

\*Health-related safety risks are specific to the tasks, situation and work environment that they exist within and are not a risk in all circumstances.<sup>13,14</sup>

<sup>13</sup> Taken from WorkSafe New Zealand

<sup>14</sup> See fatigue, stress and mental health indicators in the prior pages

#### Health-related risk trends

Number of health exposures that have exceeded accepted levels

Number of health monitoring tests that are positive for exposure

Results of exposure or environmental monitoring, and actions taken

Percentage Health exposure tests with results over regulatory thresholds

Number of health monitoring tests done versus number of workers exposed to a health risk

### Injury rates

**Purpose:** to understand how often workers are hurt and the severity.

TRIFR (Total recordable injury frequency rate)

MTIR (Medical treatment injury rate)

LTIFR (Lost time injury frequency rate)

LTISR (Lost time injury severity rate)

WAFWR (Annual rate per 1,000 workers for injuries resulting in a Week or more Away From Work)

Year on year comparison of injury severity (e.g. discomfort vs illness vs hospital vs first aid vs near miss)

Number of days lost

Incidence rate for work-related claims per 1,000 full-time equivalent employees



## Event type

**Purpose:** to understand where poor H&S outcomes are occurring to enable focus on the areas with the greatest impact.

Breakdown of events that occurred based on event type
Breakdown of mechanism of injury (e.g. hit by object, cut, muscular stress)
Events per department/1,000 staff
Number of unsafe acts
Number of workplace accidents (generic)
Early reports of discomfort pain or injury rate
Number of first aid injuries
Number of LTIs (Lost Time Injuries)
Number of LTIs resulting in a week or more away from work
Number of MTIs (Medical Treatment Injuries)
Number of injuries resulting in disability
Number of serious injuries
Number of close calls/near miss events
Number of unexpected loss of control events
Number of notifiable events
Number of all injuries
Number of muscular stresses reported
Number of ACC claims
Number of workers performing light duties while recovering from an injury
Number of non-work related injuries
Number of occupational health/illness cases
Number of fatalities
Breakdown of Actual Incident Severity
Breakdown of Potential Incident Severity

Breakdown of the events that occur based on event severity
Breakdown of the events that occur based on injury severity
Number of high consequence events
High potential incident (near miss) frequency rate
Status of organisational risks associated with high risk events
Cause of injuries year on year (e.g. animal, burn, cut, equipment, ergonomics etc)
Breakdown of agency causing the incident (e.g. buildings/structures, weather, chemicals)
Number of Asset Damage Events
Work related injury claim cost by category of rehabilitation
Breakdown of injury claims year on year (registered, declined, accepted etc) (injury management data)
Number of incidents relating to strategic risks

## Controls monitoring

**Purpose:** to understand how the high-level effectiveness of critical controls keep people safe

Number of critical risk presentations by risk owners of each critical risk covering where the risk occurs, who is impacted, the control measures, any gaps in the controls, and monitoring practices to ensure controls are effective and implemented

Percentage of critical risks that have effective controls

Status of critical risks

Status of critical controls

Status of implementation of any identified critical controls

Number of critical control reviews undertaken

Number of alarms activated

Percentage of workers that report risk controls to be understood and implemented throughout the organisation

## Strategy implementation

**Purpose:** to understand the organisation's progress and position with regard to H&S goals.

Status against H&S targets

Anticipated new risks and controls

Any new significant risks

Summary of emerging issues and trends

Progress against the health and safety plan of the business [SafePlus fits here if the agency has included this in their H&S plan]

## Investigations and corrective actions

**Purpose:** to understand if investigations are happening, happening on time and if appropriate corrective actions are taking place.

Number of critical risk presentations by risk owners of each critical risk covering where the risk occurs, who is impacted, the control measures, any gaps in the controls, and monitoring practices to ensure controls are effective and implemented

Percentage of critical risks that have effective controls

Status of critical risks

Status of critical controls

Status of implementation of any identified critical controls

Number of critical control reviews undertaken

Number of alarms activated

Percentage of workers that report risk controls to be understood and implemented throughout the organisation



## RELATIONSHIP-BASED MEASURES AND INDICATORS

### Sub-topics:

- > Worker participation & representation
- > Staff engagement & perception of H&S in the workplace
- > Leadership engagement
- > Contractor management relationships
- > Joint agency relationships
- > Key stakeholder relationships
- > Other stakeholder relationships
- > Incident engagement
- > Promotion of good H&S practices

### Worker participation & representation

**Purpose:** to understand the extent to which workers, particularly those exposed to risks, are actively participating in making H&S more effective and how this is being actioned by the organisation.

Ratio of H&S reps to staff
Ratio of management to worker attendees at H&S committees
Number of complaints
Percentage of relevant staff consulted on H&S matters
Number of staff suggestions adopted
Number of key actions from engagement forums completed or outstanding
Status of feedback from management to workers/committees
Complaints/issues/incidents/ideas from those who work with us (including contractors)
Number of team health, safety and wellbeing toolbox meetings held
Number of travel briefings undertaken
Percentage of corrective actions and investigation findings communicated through the business

## Staff engagement & perception of H&S in the workplace

**Purpose:** to understand the extent to which workers are satisfied and engaged in their jobs, as well as the honest views of H&S from those at the front line.

Percentage of staff who take advantage of staff benefits (e.g. gym, medical subsidy, eye exams)
Engagement survey index
Number of consultative committees
Number of relevant operational staff involved in decision making at each level of the organisation
Work-related stress rate
Scores from engagement or culture surveys, and actions taken as a result
Employee turnover
Percentage of workers that report the organisation is doing more for safety than it was a year ago
Percentage of workers that report leadership is driving the organisation to become a safety-centred organisation
Percentage of workers that report leaders in their area listen to their safety concerns
Percentage of workers that feel they are, or can be, involved in decisions relating to safety
Percentage of workers that believe most adverse events occur as a result of system failure and not attributed to one individual

### Leadership engagement

**Purpose:** to understand how leaders are being active in promoting H&S as well as enhancing their H&S capabilities.

Number of H&S activities undertaken by leadership (e.g. safety talks, site engagement)

Number of sector-wide health and safety forums attended by senior leaders in the last 12 months

Percentage of people leaders who have attended HSW leadership training in the last 12 months

### Contractor management relationships

**Purpose:** to understand the functionality and nature of work being delivered by contractors.

Number and type of contracts that have successful health and safety outcomes and practices

Percentage of tender or pre-qualifications that are rejected or issued improvement requirements based on H&S performance or capability

Number of contractors with current verified health and safety capability versus number unverified

Number of inspections of contracted work conducted and a summary of the findings

Number and type of deficiencies identified during monitoring of contracted work

External site audits

H&S performance and actions of contractors

Status of risks and controls that contractors own

Number of procured activities currently active

Number and nature of projects where health and safety has been built in during the design phase – prior to procurement or start-up

Percentage of contracts or product procurements that meet the required health and/or safety weighting of the business at first attempt

### Joint agency relationships

**Purpose:** to understand the functionality and nature of work being delivered in a joint effort with other government agencies.

Number of other agencies engaged in shared medium-high risk work

Percentage of other agencies who have been consulted with over shared work

Number of joint agency consultation groups undertaken

### Key stakeholder relationships

**Purpose:** to understand the state of relationships with key stakeholders such as iwi and unions with regard to H&S matters.

Engagement and consultation activities undertaken with relevant iwi

Complaints/issues/incidents/ideas from relevant iwi

Engagement and consultation activities undertaken with relevant unions

Complaints/issues/incidents/ideas from relevant unions

### Other stakeholder relationships

**Purpose:** to understand the state of relationships with other relevant stakeholders such as volunteer groups, protestor groups and funding relationships.

Engagement and consultation activities undertaken with relevant volunteer groups

Complaints/issues/incidents/ideas from relevant volunteer groups

Number of protestor or activist groups campaigning against the organisation

Percentage of protesting or activist groups that have been consulted with

Frequency of consultation undertaken with sources of funding to ensure H&S value is adequately recognised

Frequency of outcome reporting to sources of funding



### Incident engagement

**Purpose:** to understand how quickly and effectively the organisation is responding to H&S incidents.

Incident reporting rate
Ratio of near miss events to accidents resulting in harm
Timeliness of incident reporting
Third Party Incident reporting
Timeliness of incidents investigated

### Promotion of good H&S practices

**Purpose:** to understand activity behind the praise of good H&S practice in the organisation.

Learnings and circulations of lessons from good incident outcomes and investigations
Stories of success
Number and nature of people celebrated for their actions
Case studies developed
Number of 'push-backs' – when someone said no to a task or asked that work cease – and the actions taken as a result

## RESOURCE-BASED MEASURES AND INDICATORS

### Sub-topics:

- > People
  - » Employee data
  - » Training & capability
  - » Human resourcing
- > Processes
  - » Audits, assessments & review
  - » H&S management system
  - » Work programme
- > Equipment & assets
- > Financial resourcing
- > Organisational capability

### People

**Purpose:** to understand worker psychological, physical and technical capacity to work safely.

<b>Employee data</b>	<ul style="list-style-type: none"> <li>&gt; Turnover and information from exit interview</li> <li>&gt; Unplanned absence days per FTE</li> <li>&gt; Percentage of staff with an annual leave balance greater than 27 days</li> <li>&gt; Percentage of staff with time off in lieu greater than 5 days</li> <li>&gt; Sick leave taken per FTE</li> </ul>
<b>Training &amp; capability</b>	<ul style="list-style-type: none"> <li>&gt; Number of H&amp;S reps that have been trained vs number of staff</li> <li>&gt; Level of training delivered to H&amp;S reps</li> <li>&gt; Number of H&amp;S training programmes completed by management</li> <li>&gt; Number of H&amp;S training programmes completed by staff</li> <li>&gt; Number of H&amp;S training programmes completed in line with key risks (e.g. driving, remote working, mental health and physical security)</li> <li>&gt; Percentage of workers with physical capabilities assessed in relation to job requirements</li> <li>&gt; Percentage of worker with psychological capabilities assessed in relation to job requirements</li> <li>&gt; Percentage of workforce training that is up to date/completed</li> <li>&gt; Number of supervised assessments of worker capability</li> <li>&gt; Percentage of workers in safety-critical roles assessed for their physical fitness to work</li> <li>&gt; Levels of competency achieved by workers</li> <li>&gt; Percentage of workers that have the capability to do their job safely</li> </ul>
<b>Human resourcing</b>	<ul style="list-style-type: none"> <li>&gt; Number of fire wardens and first aiders per area</li> <li>&gt; Ratio of permanent staff to casual/contracted staff</li> <li>&gt; Number of vacancies per division of the organisation</li> <li>&gt; Summaries of workload levels for high-risk teams</li> <li>&gt; Summary of forecasted workload levels vs capacity of the workforce</li> <li>&gt; Summary of current workload levels vs capacity of the workforce</li> </ul>



## Processes

**Purpose:** to understand the appropriateness of processes within the organisation with regard to current risks, the work and the worker.

<b>Audits, assessments &amp; review</b>	<ul style="list-style-type: none"> <li>&gt; Number of Internal Site Audits completed</li> <li>&gt; Outcomes of Internal Site Audits completed</li> <li>&gt; Number of External Site Audits completed</li> <li>&gt; Outcomes of External Site Audits completed</li> <li>&gt; Summary of outcomes of health and safety audits, and other relevant operational audits</li> <li>&gt; Number of compliance audits that are up to date</li> <li>&gt; Number of audits (generic)</li> <li>&gt; Number of inspections</li> <li>&gt; Audit readiness, anytime, across all sites</li> <li>&gt; Number of inspections completed on time</li> <li>&gt; Percentage of opportunities for improvement (to areas of strength in the audit reports)</li> <li>&gt; Audit results on percentage of health and safety data stored in appropriate software, log books or spreadsheets versus what is not recorded</li> <li>&gt; Summaries of project debriefs</li> <li>&gt; Number of substandard conditions or practices</li> <li>&gt; Safety observations</li> <li>&gt; Benchmarking of performance against other organisations or similar profile</li> <li>&gt; Audit results of appropriateness of processes aligned to critical risks</li> <li>&gt; Audit results for accessibility of processes to the nature of work and the worker</li> <li>&gt; Number of learning review recommendations at a critical/high level</li> <li>&gt; Percentage of learning review recommendations completed on time</li> <li>&gt; Number of risk assessments completed for activities/locations/items of equipment versus total number identified as required</li> <li>&gt; Risk ratings of identified hazard</li> <li>&gt; Percentage of risk register items reviewed to schedule</li> <li>&gt; Instruments operating outside safe limits</li> <li>&gt; Hazard review actions closed off on time</li> <li>&gt; Hazard review actions closed off late/still open/overdue</li> <li>&gt; Number of health impact assessments completed prior to projects or processes commencing, or new equipment introduced</li> <li>&gt; Percentage sites and contractors with completed critical risk assessments</li> </ul>
<b>H&amp;S management system</b>	<ul style="list-style-type: none"> <li>&gt; Number of standard operating procedures, policies and procedures that have been updated vs the number that need reviewing</li> <li>&gt; Number of work permits signed out incorrectly</li> <li>&gt; Summary of how health and safety is being built into the design of the work</li> <li>&gt; Percentage of business-as-usual processes that have health and safety integrated into them</li> </ul>
<b>Work programme</b>	<ul style="list-style-type: none"> <li>&gt; Update on the current work programme</li> <li>&gt; Other H&amp;S initiatives that are taking place in the agency (e.g. development of new policies, new HSMS software, flu vaccinations)</li> </ul>

## Equipment & assets

**Purpose:** to understand the suitability, sufficiency and fitness of equipment and assets that enable workers to work safely.

Percentage workers that report they have the equipment to do their job safely

Number of incidents or near-miss events where plant/equipment design is a contributory cause in the last three months

Percentage of moving machines guarded

Number of machine-body incidents

Number of items of equipment/plant removed, decommissioned or replaced for deficiencies or maintenance defects

Number of incidents or near-miss events where plant/equipment design is a contributory cause

Surveys of assets for asbestos and summary management plans

Compliance in the correct use of PPE

Percentage of machinery and equipment that is certified as safe (Tested and tagged)

## Financial resourcing

**Purpose:** to understand the impact of financial resourcing on H&S outcomes.

Number of H&S business cases declined in the past 12 months

Proportion of overall operational and capital expenditure that is focused specifically on management of H&S risks

## Organisational capability

**Purpose:** to understand the capability of the organisation to develop greater H&S outcomes.

Frequency of automated notifications and reporting delivered to key individuals (capability of IT resources)

Ratio of dedicated H&S FTEs to total workforce FTEs

## OFFICER-BASED MEASURES AND INDICATORS

**Purpose:** To support officers in meeting some of their due diligence requirements under the HSWA.

Number of H&S training programmes completed by officers (Resources)

Number of new pieces of H&S information obtained to remain up to date in H&S (e.g. prosecutions, regulatory changes and court decisions (Resources/Risks))

Number of H&S assurance results and data reviewed this quarter to gain confidence that H&S is being managed and resourced appropriately (Risks/Resources)

Number of H&S assurance results and data challenged this quarter to gain confidence that H&S is being managed effectively (Risks)

Number and variety of sites visits undertaken where H&S is considered (Risks/Relationships)

Number of pieces of work identified and commissioned annually to manage critical risks (Risks)

Number of conversations about H&S with workers exposed to key risks (Relationships)



**Government  
Health & Safety Lead**