Chemistry Australia

The Business of Chemistry
Essential for Life

Health and Safety
Performance Report 2018

RESPONSIBLE CARE
A PUBLIC COMMITMENT

An initiative under the Australian Responsible Care® program

Contents

Message from the Chair and CEO

Welcome to the 2018 Chemistry Australia Health and Safety Performance Report. Once again, the 2018 report provides a detailed and compelling account of the health and safety performance of Chemistry Australia members from across the Australian chemistry sector.

Improved performance for the 15th consecutive year

Our annual Health and Safety Performance Report is an important long-term initiative of the Australian chemistry industry. It has provided detailed insights into the industry's health and safety performance since 2000.

The Report plays an important role in promoting the principles of health and safety to the industry's value chain partners, external stakeholders and the broader community, and allows us to share examples of best practice and encourage others to act.

However, its central role is to help our sector improve its health and safety performance. The true value of this Report is the insights it provides into areas for future improvement, and the collective learning members gain from peer companies in the sector.

This year, the Report shows that we remain one of the safest sectors in Australia and continue to lead the chemistry industry worldwide in health and safety performance.

For the fifteenth-consecutive year, our members have improved the five-year rolling average of Lost Time Injuries (LTIFR) and remain on track to meet the industry's 2022 workplace injury reduction target of 30 per cent.

Of course, there are always areas where we can do better. The Report shows the three main causes of Lost Time Injuries are still manual handling, falls on the same level, and cuts and abrasions.

The report also highlights a possible emerging trend that is at odds with our previous assumptions. For the first time, we have captured data on the employment age distribution of our membership, and it shows the age group 25-34 years is at a proportionally higher risk of Lost Time Injuries than other age groups.

These are all important areas of health and safety for our members to focus on.

Overall, we are extremely proud of the sector for its ongoing commitment to health and safety, and its adoption of new initiatives that seek to address continuous improvement.

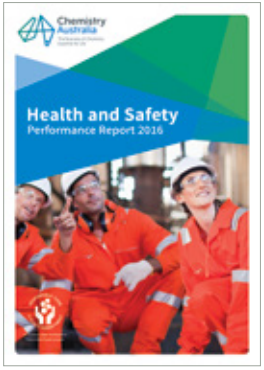
Thank-you to all our members who have participated in this important industry initiative. Congratulations on the excellent result and for your continued leadership and commitment to workplace safety.

David Hawkins
Chair

Samantha Read
Chief Executive Officer

1 Introduction

Our Health and Safety Performance Report has been tracking the performance of our members across the Australian chemistry industry since 2000. The results from 2018 continue to be impressive, with steady improvements achieved against most key indicators. The report also celebrates the industry's leadership and commitment to supporting others.



The safety of workers and communities, and the protection of the environment, are the highest priorities of the Australian chemistry industry.

The industry is focussed on ensuring that products are being made and used responsibly in workplaces, through value chains, and across the communities in which they operate.

The innovative products and technologies created by the industry also play a vital role in making the world safer and more sustainable.

Targets and tracking

The Australian chemistry industry has aligned its health and safety reporting with the Australian Work Health and Safety Strategy for more than a decade.

The Strategy was developed by Safe Work Australia to support the vision of healthy, safe and productive working lives in Australia. It provides targets and practical measures to assist governments, industry and other organisations.

The Australian chemistry industry exceeded the target set out in the 2002-2012 Strategy, of a 40% reduction in workplace injuries, which is an excellent achievement.

Consistent with the current Strategy (2012-2022), the Chemistry Australia Board and members have adopted three targets for improvement and monitoring:

Further 30% reduction in workplace injuries (based on LTIFR 5-year rolling average) by 2022

Continued tracking of chemical and non-chemical related LTIs and MTIs

Reporting and tracking of musculoskeletal injuries related to LTIs and MTIs

This Report presents detailed data and long-term performance trends against these targets and other indicators.

Sharing and learning

Chemistry Australia members recognise the value of sharing best practices and lessons, to support continuous improvement by their peers and the industry collective. To this end, Chemistry Australia also produces a companion Benchmark Report which includes case studies across the relevant Action Areas described in the Australian Strategy.

Benchmarking Report

A confidential Chemistry Australia Health and Safety Benchmarking Report is provided exclusively to companies that have participated in this initiative.

This valuable tool allows them to benchmark their own results against other participants, promote internal discussion, gain new insights and generate ideas for their workplace.

2 The Australian chemistry industry

The Australian chemistry industry is one of the largest manufacturing sectors in the country. More importantly, it plays a vital role in our economy and our everyday lives.

The industry creates the essential inputs that underpin a wide range of industry sectors. From essential infrastructure and life-saving medical products to new energy technologies, light-weight building materials and safe food packaging, almost every value chain is built upon the business of chemistry.

Supplies **104** of Australia's **108** industries

3rd largest manufacturing sector

Delivers **$38 billion** to Australia's GDP

5,500 small, medium and large **businesses nationally**

Employs more than **60,000 people** in highly skilled jobs

Every job in the industry **creates 2.5 more** in related supply chains

About Chemistry Australia

Chemistry Australia is the pre-eminent national body representing the Australian chemistry industry.

Our members are positioned across the entire value chain, and range from small businesses to multi-national enterprises. They include manufacturers, importers and distributors, raw material suppliers, logistics and supply chain partners, fabricators and compounders, recyclers, research and academia, and service providers to the industry.

We are focussed on promoting conditions for growth, jobs and investment in the industry, and the many supply chains that it enables. We also work to increase awareness of the importance of chemistry in our lives.

Chemistry Australia supports members' health and safety efforts through a number of initiatives, including the Responsible Care® program, this Performance Report and accompanying Benchmark Report, and Member Forums.

This is fundamental to the industry's social licence to operate, as outlined in our Strategic Industry Roadmap.

Go to www.chemistryaustralia.org.au for more information.

Responsible Care®

Our Responsible Care® program supports the Australian chemistry industry's leadership and commitment to the safe management of chemicals throughout their life cycle.

Australia adopted this signature program in 1989, becoming the third country in the world to do so. It is now practiced in more than 65 countries.

The program has a strong focus on health and safety, environmental management, continuous improvement and responsible business practices. Product stewardship is at the core, bringing into focus the communities and environments in which the industry operates.

Responsible Care® also highlights the role of chemistry in creating a safer, more sustainable world.

The principles are fundamentally aligned with the Australian chemistry industry's excellent culture and commitment to maintain a strong social licence to operate. It also assists our members to achieve their goal of "an industry where people are safe and free from injury and disease".

3 Health and safety performance

The following tables, figures and data provide a detailed insight into the health and safety performance of Chemistry Australia members in 2018. We have been tracking many of these performance indicators since 2004, allowing long-term trends to be shown in most charts.

Figure 1: A snapshot

	2014	2015	2016	2017	2018
Total number of employees covered	15,709	15,789	18,732	15,389	13,977
Hours worked (million)	30.70	33.25	37.98	28.21	29.18
LTIFR	3.68	3.61	3.34	2.94	2.91
LTIFR 5-year rolling average	3.70	3.54	3.44	3.39	3.30
MTIFR	5.67	6.44	5.06	5.67	6.20
TRIFR	9.35	10.04	8.40	8.62	9.12
WDLPE	0.10	0.10	0.15	0.13	0.11

0 fatalities

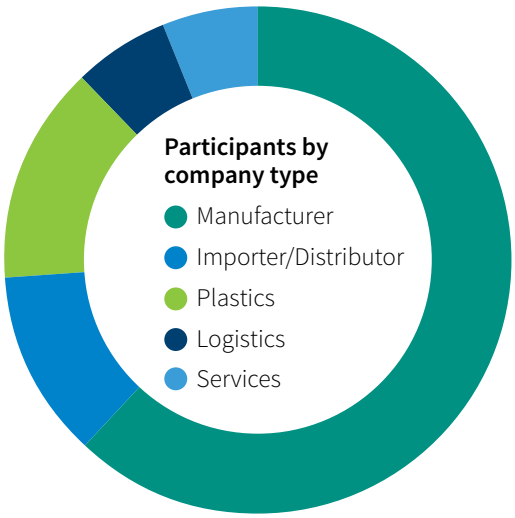
Six years without a reported fatality

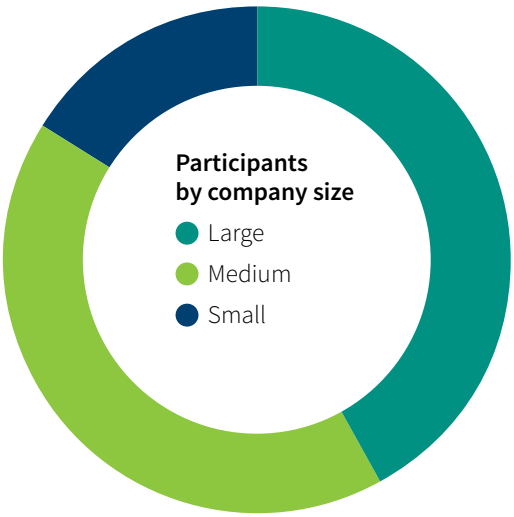
29.18

million hrs worked

13,997

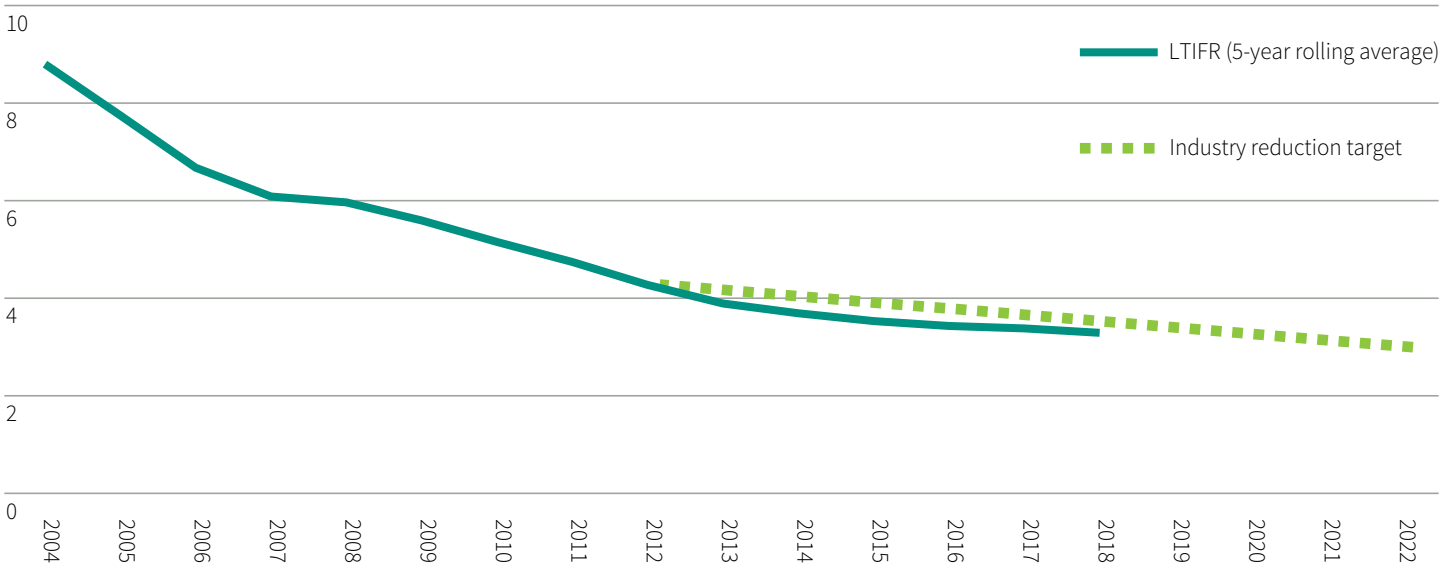
employees covered





The lost time injury frequency rate (LTIFR) 5-year rolling average is one of the key indicators we use to measure health and safety performance, consistent with the Australian Strategy. As Figure 2 shows, the Australian chemistry industry has improved against this metric every year since 2004. This is an outstanding achievement and puts the industry on the path to achieving its 2022 reduction target.

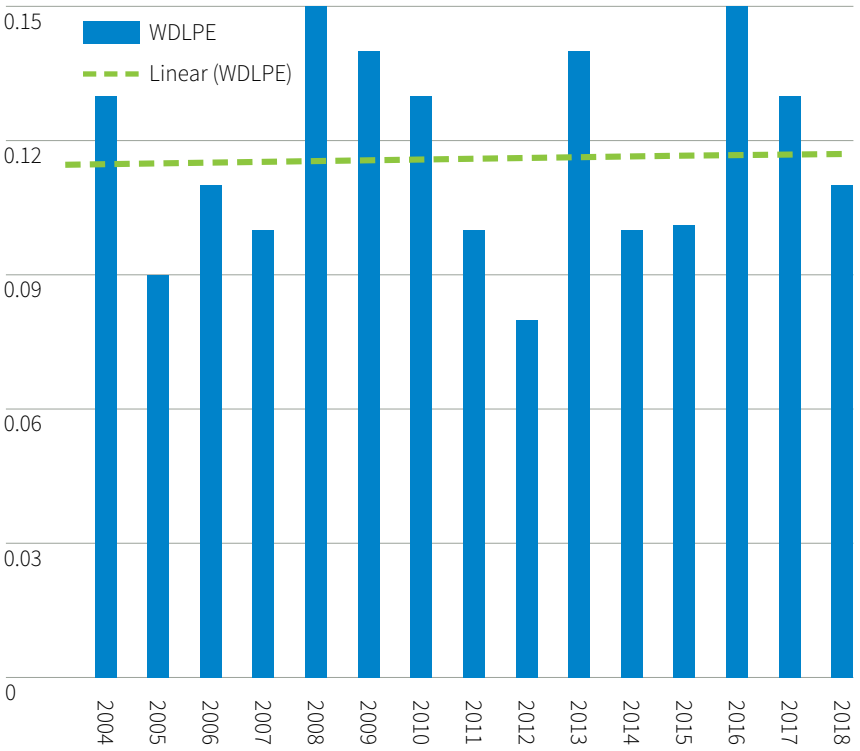
Figure 2: LTIFR 5-year rolling average versus industry reduction target 2012-2022 (see Definitions)



The metric 'work days lost per employee' (WDLPE) represents the average number of days lost through injury, per employee.

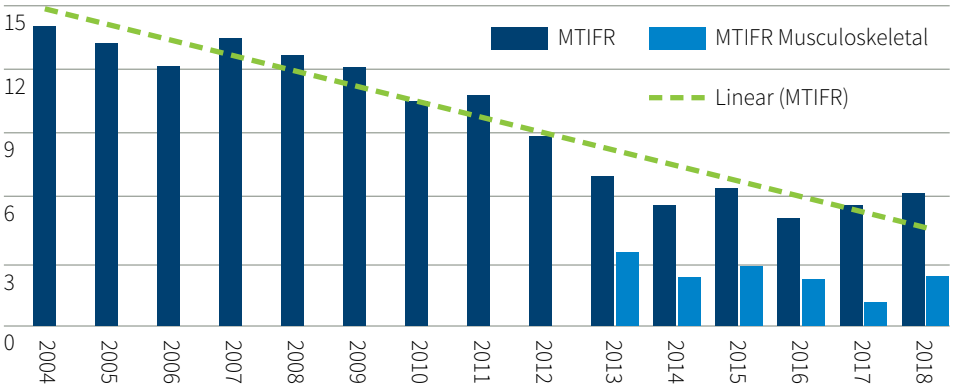
LTIFR
5-year rolling average
3.30

Figure 3: Average number of days lost through injury per employee



The figures below show the frequency of medical treatment injuries (MTIs) and lost time injuries (LTIs) reported by Chemistry Australia members. The proportion attributed to musculoskeletal disorders is also shown for the past five years.

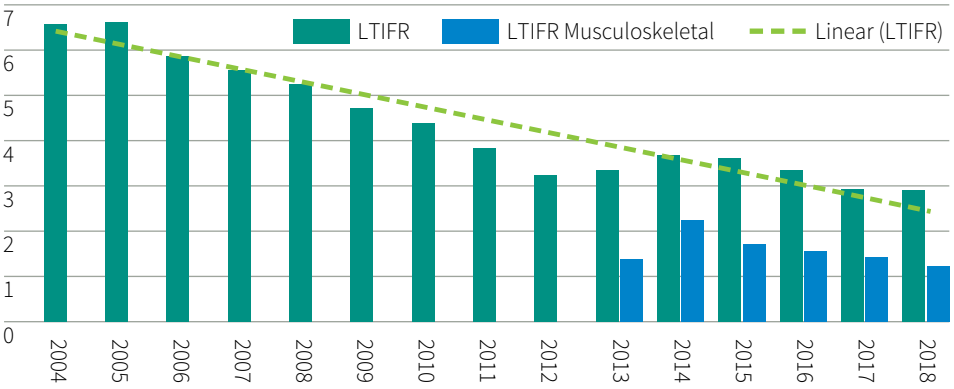
Figure 4: Frequency of injuries requiring medical treatment



MTIFR
6.20

Figure 5: Frequency of injuries involving one or more lost workdays

LTIFR
2.91



The total recordable injury frequency rate (TRIFR) indicates the total frequency of injuries or incidents resulting in lost time or medical treatment i.e. the sum of MTIFR and LTIFR. Figure 6 also shows the proportion of the TRIFR attributed to musculoskeletal disorders, the most common work-related condition in the industry.

Figure 6: Frequency of total recordable injuries

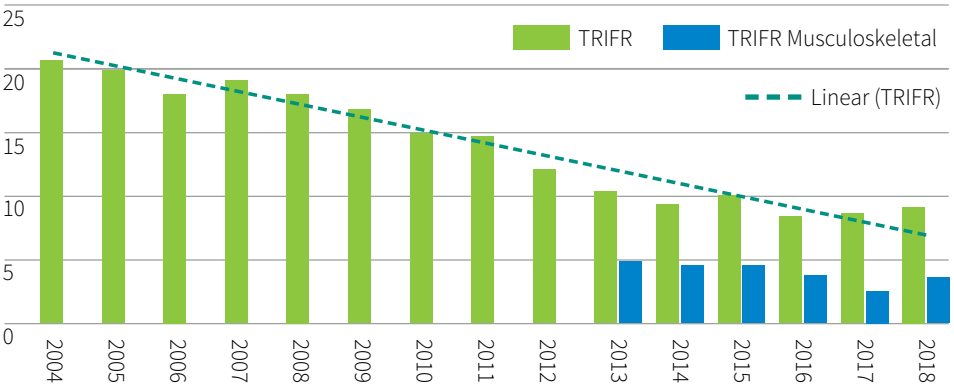


Figure 7 provides a more detailed examination of the few incidents and injuries reported by Chemistry Australia members for 2018.

The data show that manual handling continues to be the most common cause of incidents and injuries resulting in either lost time or medical treatment. This is consistent with the causes reported by members over the past two years, suggesting an ongoing trend and important area of focus. We look at this further on page 10.

As shown below, a moderate proportion of LTIs and MTIs are caused by falls on the same level and cuts and abrasions.

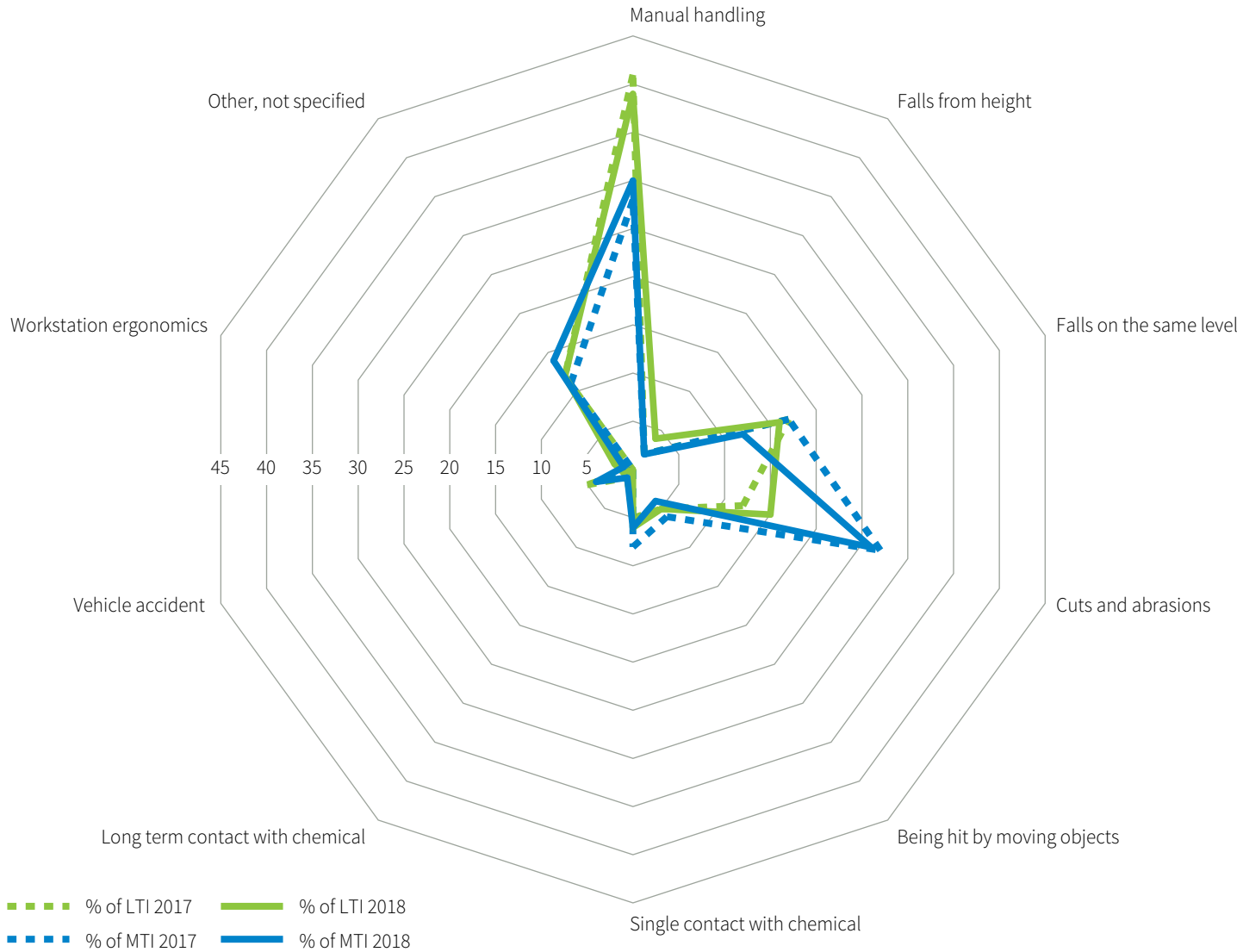
Of particular relevance to this industry, there have been no reported LTIs resulting from long term contact with chemicals, and a low percentage of injuries as a result of single contact with chemicals.

Figure 7: Causes of incidents and injuries

	Lost Time Injuries	Medical Treatment Injuries
Manual handling	39%	30%
Falls from height	4%	2%
Falls on the same level	16%	12%
Cuts and abrasions	15%	26%
Being hit by moving objects	5%	4%
Single contact with chemical	6%	6%
Long term contact with chemical	0%	1%
Vehicle accident	1%	4%
Workstation ergonomics	2%	1%
Other	12%	14%
Total	100%	100%

For the second consecutive year, the report examines the correlation between types of injuries across Lost Time Injury (LTI) and Medical Treatment Injury (MTI). The data in Figure 8 reflects the increased focus on injuries from manual handling, falls on the same level and cuts and abrasions as key areas of priority for our members.

Figure 8: Correlation between types of injury between LTI and MTI



4 One of the safest sectors in Australia

The data and figures in Section 3 demonstrated the excellent performance of Chemistry Australia members across a suite of health and safety metrics, as well as continued improvement over many years.

To provide some perspective, it is useful to benchmark this against other Australian sectors and the chemistry industry worldwide.

As shown in the following figures, our members are at the forefront of health and safety performance compared with local and international industry sectors.

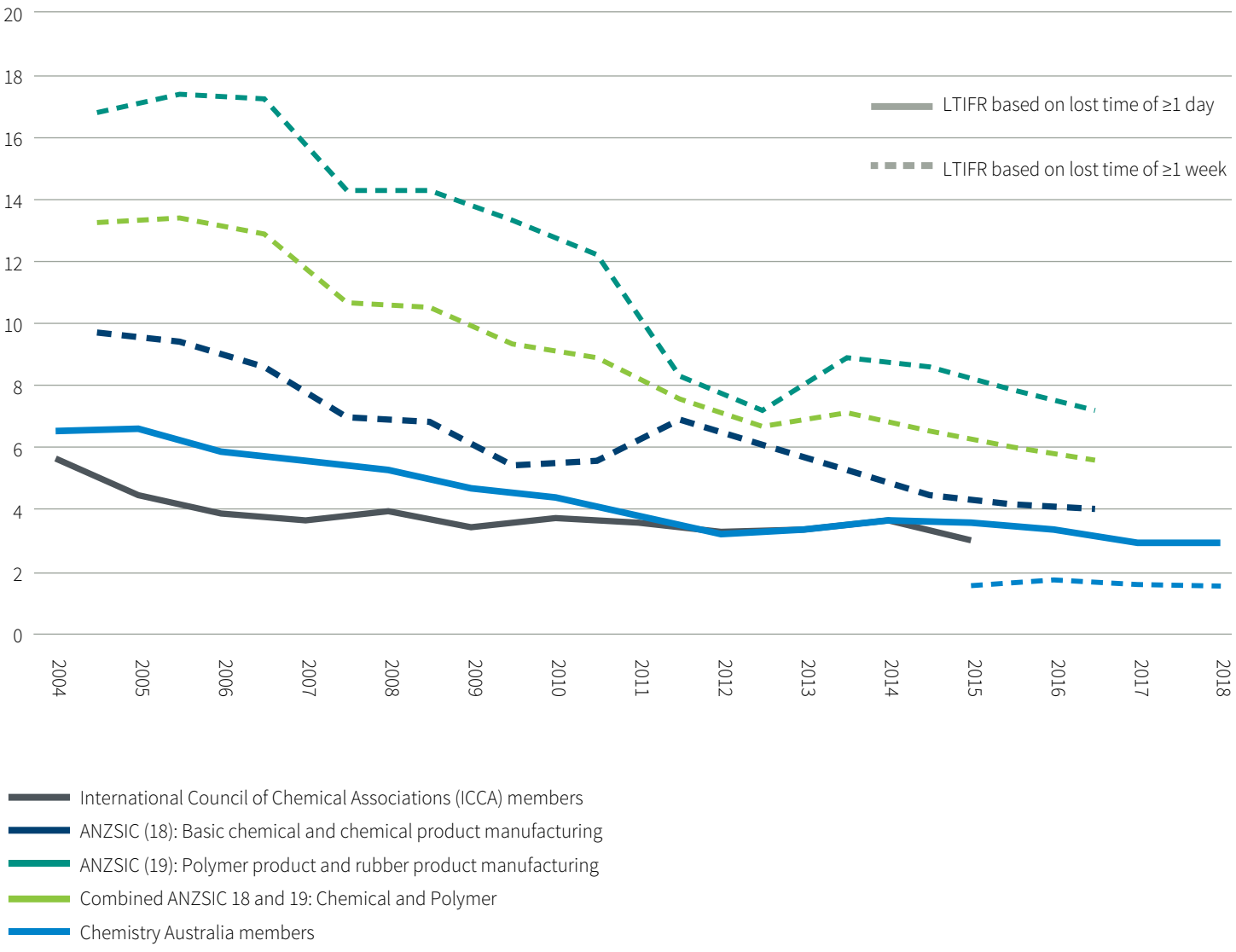
In Figure 9, the rate of lost time injuries reported by our members is shown against four comparable sectors.

The first data set, labelled 'International Council of Chemical Associations (ICCA) members', represents the collective performance of a large number of chemical companies around the world as reported to the ICCA via national chemical industry associations. The most recent ICCA data set is for 2015, representing a total of 38 countries.

The other three data sets represent the performance of subsets of the Australian chemistry industry, as reported by Safe Work Australia using ANZSIC codes.

It is important to note that the metric typically used by members of Chemistry Australia and ICCA (lost time of ≥1 day) is much more stringent than the base metric for the ANZSIC data (lost time of ≥1 week). However, for the last three years, our members have also reported their lost time injuries resulting in ≥5 days lost time, to enable direct comparison to the ANZSIC industry sector data.

Figure 9: Comparison of LTIFR across similar industry sectors in Australia and worldwide

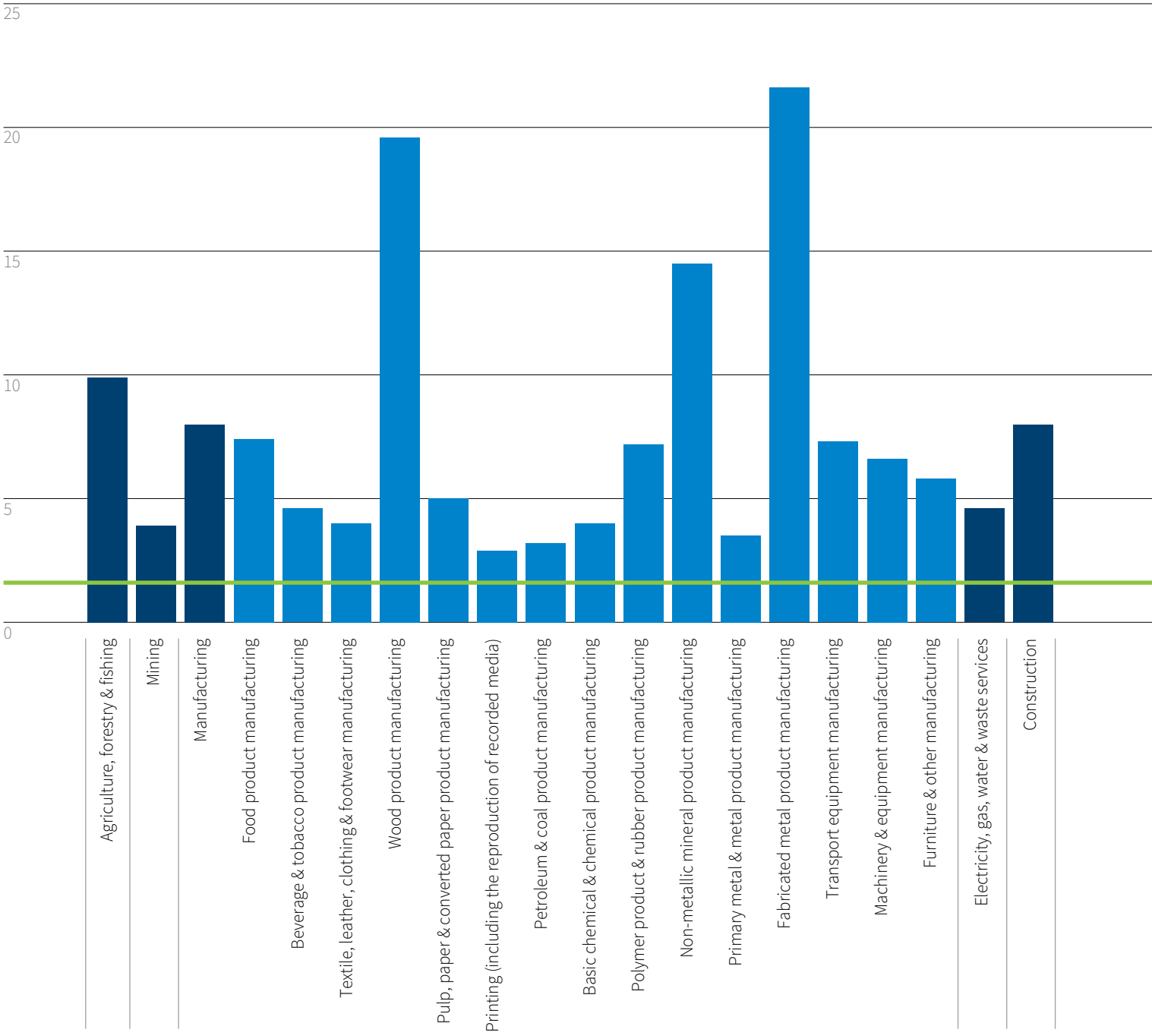


In Figure 10, the performance of Chemistry Australia members is compared with all other Australian industry sectors.

The metric generally used by other Australian industry sectors is serious claims resulting in lost time of one week or more. Chemistry Australia members take a more conservative approach, measuring all injuries that result in lost time of one day or more.

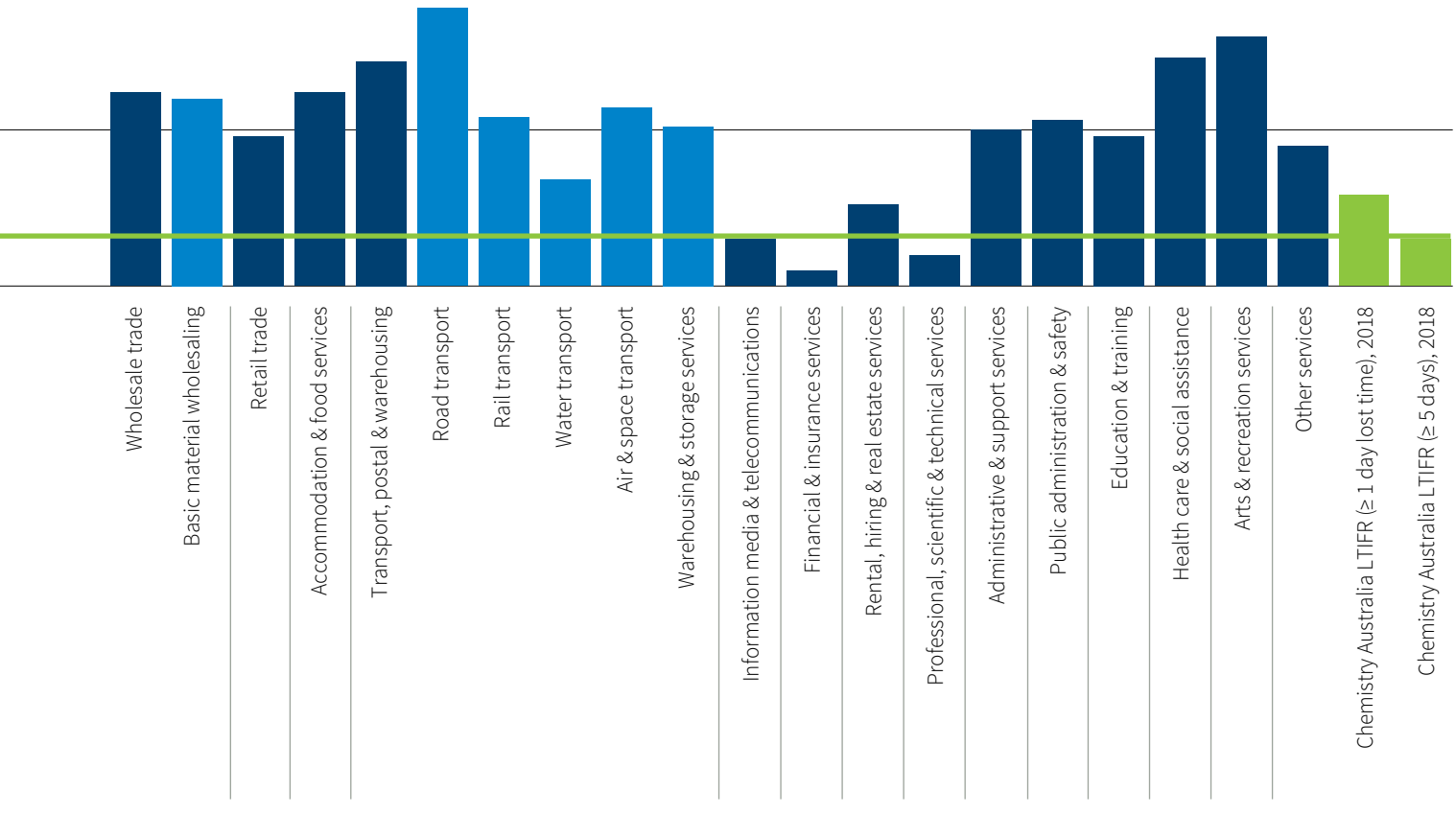
However, for the purposes of comparison our members are now also reporting claims resulting in lost time of one week or more.

Figure 10: Comparison of LTIFR across Australian industry sectors



Note: all non-Chemistry Australia members data shown is measured as lost time injuries of >1 week in 2016-17

Chemistry Australia members continue to **represent one of the safest sectors in the Australian economy**, as a result of their commitment and focus on health and safety every single day.



5 Definitions

Australian and New Zealand Standard Industrial Classification	ANZSIC	A classification jointly developed by the Australian Bureau of Statistics and Statistics New Zealand that provides a framework for organising data about businesses by grouping business units carrying out similar productive activities. It is a hierarchical classification with four levels; at the highest level there are a limited number of categories, providing a broad overall picture of the economy.
Australian chemistry industry reduction target 2012-2022		A further 30% reduction in workplace injuries (based on LTIFR 5-year rolling average) by 2022.
Australian Strategy		The Australian Work Health and Safety Strategy 2012-2022, which provides a national framework and targets to support healthy, safe and productive working lives in Australia.
Chemical related injuries		Chemical exposures, for example inhalation of fumes or burns.
International Council of Chemical Associations	ICCA	The world-wide voice of the chemical industry, representing chemical manufacturers and producers all over the world and coordinating the work of individuals from member associations (including Chemistry Australia).
Lost time injury	LTI	A work-related injury that results in time lost from work of one full day or more.
Lost time injury frequency rate	LTIFR	The frequency of injuries involving one or more lost workdays per million hours worked.
LTIFR 5-year rolling average		The average LTIFR for the last 5 years.
Medical treatment injury	MTI	A work-related injury that requires treatment by a medical practitioner, beyond the scope of first aid. When the injury has been treated, the injured person can return to work straight away or on his/her next shift due, therefore no workdays are lost.
Medical treatment injury frequency rate	MTIFR	The frequency of injuries requiring medical treatment per million hours worked.
Musculoskeletal disorder	MSD	An injury, illness or disease that arises in whole or in part from manual handling in the workplace, whether occurring suddenly or over a prolonged period of time. It does not include an injury, illness or disease that is caused by crushing, entrapment or cut resulting primarily from the mechanical operation of plant.
Non-chemical related injuries		Injuries including those related to manual handling, slips and trips, but not including chemical related injuries.
Total recordable injury frequency rate	TRIFR	The sum of LTIFR and MTIFR.
Transport incident		Any occurrence posing a danger or potential danger to life, property or the environment that results from a leakage, spillage, fire or explosion of goods during transport including loading and unloading. It is not an incident on a company site arising from the transport or storage of raw materials, products, intermediates or wastes owned by the company or prior to delivery to the customer (including at transporter's premises).
Workdays lost per employee	WDLPE	The average number of days lost through injury per employee.

6 Participating companies

We thank each of the following companies for their contribution to the Chemistry Australia Health and Safety Performance Report 2018, and congratulate them on their leadership.

3M Australia

Air Liquide Australia

Allnex

ANZ Terminals

Axieo Operations (Australia)

BASF Australia Limited

BOC

Brenntag Australia

ChemCentre

Covestro

Dow Australia

Era Polymers

FBT Transwest

Huntsman

IMCD Australia

Ixom

Lanxess

LyondellBasell

Norfoam Aust

Nowra Chemical Manufacturers

Nufarm Australia

Orica Australia

Pacific Urethanes

Plastral

PPG Industries Australia

Propac Group

Qenos

Redox

Shepherd Color International

Solvay Interox

Wacker Chemicals Australia

Wesfarmers Chemicals Energy Fertilisers

Chemistry Australia is the pre-eminent national body representing Australia's $40 billion chemistry industry

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