

PARTNERSHIP  
PROGRAM

**Fact sheet:**  
**Total Road Incident Cost Calculator**

**Purpose of factsheet**

The purpose of this document is to:

- describe the Total Road Incident Cost Calculator, how to use it, highlight the key features, applications and outcomes of this tool;
- provide a business case resource improved fleet safety, and
- provide worked examples from different industry sectors, outlining the different structures and needs across these sectors.

**According to Safe Work Australia (2015):**

**188**  
work related  
fatalities in 2014



**116**  
of the fatalities  
involved a vehicle



**52%**  
of trauma patients  
at hospitals are  
from transport  
related injuries



**It costs \$1.5 billion**  
nationally for work  
related trauma



Developed in conjunction with:



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### **What is the Total Road Incident Cost Calculator?**

The National Road Safety Partnership Program (NRSPP) Total Road Incident Cost Calculator was designed to provide organisations with an estimate of the direct and indirect costs associated with a road incident.

The calculator presents an estimate of total incident costs in simple terms, underlining how much each incident could potentially cost an organisation in terms of lost revenue or service provision. In so doing, it helps organisations understand the cost of road incidents relative to productivity, profitability and service delivery. The calculator will help you articulate the additional production or service delivery needed to recover the Total Cost of Risk.

### **Who can use the calculator?**

The calculator recognises the differences in operations and business structure across different sectors. To this end, tailored solutions and calculations are provided for the Manufacturing and Services sector, State and Local Government sector, Health and Emergency Services and Other Community Services and Not-for-Profit organisations.

### **How does it work?**

The calculator has three main components:

#### **1. Input**

The input section is where the user enters information on the organisation, e.g. the type of sector, the main product manufactured or main service delivered, number of road incidents a year, insurance details, fleet size, annual mileage where applicable include any 'grey fleet' exposure.

What is sometimes confused by organisations is even a 'grey' fleet will contribute to additional hidden, uninsured costs should it be involved in a traffic incident. Please refer to Appendix A for templates to assist in compiling the necessary data from a variety of sources in your organisation.

#### **2. Calculate**

This information is then used to calculate the direct and indirect costs as well as other key statistics. This can be used as the first step to using the online calculator.

From a privacy point of view, the information provided in this section is not stored, instead, only the sector and output information are stored for use in future industry benchmarking.

The calculations include a number of key indicators about the **frequency** of incidents involving your fleet, such as the overall claim rate which indicates the number of incidents per 100 000 kilometres travelled, the number of kilometres travelled before an incident occurs and the overall claim rate per vehicle. These can be used for future industry benchmarking, and assist with performance monitoring and setting future targets that indicate risk improvement.

#### **3. Output**

The calculator then presents the overall financial findings which indicates the **severity** of incidents. This includes a breakdown of the total direct costs for the managed fleet (i.e. annual premiums and excess paid), total indirect costs for the managed fleet (using a conservative estimate of three times the damage bill covered by insurer) and the overall costs which include any grey fleet exposure. These costs are then related to the organisation's revenue and a typical, indicative product in the results section.

What this is designed to show your senior executives is just how many products need to be manufactured, or services provided, to cover the additional costs of your fleet risk, over and above what your Insurer provides.

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### Worked examples

To illustrate how the calculator works, several worked examples from different sectors are outlined below. The worked examples illustrate how the input information is used to articulate the potential total cost of each incident to an organisation. They highlight how the calculator can be used across different sectors and still provide outputs that is relevant to each decision maker.

#### Local government

Input information				
What is the total annual rate income from private households?				\$72,000,000
What is number of private household rate payers in your jurisdiction?				35,000
Average rate bill per private household				\$2,057.14
Annual claims data - cost of incident (insurer's costs)				\$400,000
Annual claims data - number of incidents				120
Total Number of Vehicles				500
Annual total distance travelled by fleet (km)				10,000,000
Annual Fleet Insurance Premium				\$370,000
Premium per Vehicle				\$740
Excess per claim				\$500
Insurer's annual claims payment per vehicle				\$800
Number of Grey Fleet <sup>a</sup>				25
Estimated average annual business fleet travel (km) of employees using their own vehicle <sup>a</sup>				750,000
Calculations				
Overall Claim Rate per 100,000 Kilometres				1.2
Kilometres travelled per claim for combined fleet				83,333
Overall Claim Rate per Vehicle				24%
Output				
	Annual insurance and crash costs	Insurance and crash costs as a percentage of total rates revenue	Insurance and crash costs per household in your jurisdiction	Number of household rates bill payments needed to cover insurance and crash costs*
Your direct insurance costs (Premium + Excess Payments)	\$430,000	0.60%	\$12.29	209
Estimated Indirect/Uninsured costs (x3 Damage Bill Covered by Insurer)	\$1,200,000	1.67%	\$34.29	583
Estimated total costs - managed fleet only	\$1,630,000	2.26%	\$46.57	792
Estimated total costs - all vehicles (managed + grey fleet) <sup>a</sup>	\$1,752,250	2.43%	\$50.06	852

<sup>a</sup>This worked example includes Grey fleet.

\*This information is from the results tab, relating costs to the indicative product.

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### Manufacturing

Input information				
Your Sector	General Manufacturing			
What is your main revenue earner?	Canned vegetables			
Annual unit sales of canned vegetables	10,000,000.00			
Annual claims data - cost of incident (insurer's costs)	\$400,000			
Annual claims data - number of incidents	100			
Total Number of Vehicles	400			
Annual total distance travelled by fleet (km)	4,000,000			
Annual Fleet Insurance Premium	\$290,000			
Premium per Vehicle	\$725			
Excess per claim	\$500			
Return on canned vegetables (percentage)	5%			
Gross annual turnover	\$400,000,000			
Profits from canned vegetables	\$20,000,000			
Average unit cost of canned vegetables	\$2			
Number of grey fleet <sup>a</sup>	0			
Estimated average annual business fleet travel (km) of employees using their own vehicle	0			
Calculations				
Overall Claim Rate per 100,000 Kilometres	2.5			
Kilometres travelled per claim for combined fleet	40,000			
Overall Claim Rate per Vehicle	25%			
Output				
	Annual insurance and crash costs	Insurance and crash costs as a percentage of gross turnover	Insurance and crash costs as a percentage of net turnover	Number of cans of vegetables needed to cover insurance and crash costs
Your direct insurance costs (Premium + Excess Payments)	\$340,000	0.08%	1.70%	3,400,000
Estimated Indirect/Uninsured costs (x3 Damage Bill Covered by Insurer)	\$1,200,000	0.30%	6.0%	12,000,000
Estimated total costs - managed fleet only	\$1,540,000	0.38%	7.7%	15,400,000
Estimated total costs - all vehicles (managed + grey fleet) <sup>a</sup>	\$1,540,000	0.38%	7.7%	15,400,000

<sup>a</sup>This worked example does NOT include Grey fleet.

\*This information is from the results tab, relating costs to the indicative product.

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### Emergency services

Input information	
What is your main unit of measure for services provided to the community?	Hospital beds
What is your total annual cost to provide these hospital beds?	\$50,000,000
How many hospital beds do you currently provide?	5,500
Your annual average cost to provide ONE hospital bed	\$909.09
Annual claims data - cost of incident (insurer's costs)	\$550,000
Annual claims data - number of incidents	105
Total Number of Vehicles	550
Annual total distance travelled by fleet (km)	1,500,000
Annual Fleet Insurance Premium	\$450,000
Premium per Vehicle	\$818
Excess per claim	\$550
Insurer's annual claims payment per vehicle	\$1,000
Number of Grey Fleet <sup>a</sup>	0
Estimated average annual business fleet travel (km) of employees using their own vehicle <sup>a</sup>	0
Estimated average annual business fleet travel (km) of employees using their own vehicle	0
Calculations	
Overall Claim Rate per 100,000 Kilometres	7
Kilometres travelled per claim for combined fleet	14, 286
Overall Claim Rate per Vehicle	19%

Output				
	Annual insurance and crash costs	Insurance and crash costs as a percentage of your annual costs to provide hospital beds	Insurance and crash costs per hospital bed	Insurance and crash costs are equivalent to providing the following number of hospital beds
Your direct insurance costs (Premium + Excess Payments)	\$507,750	10.15%	\$92.32	559
Estimated Indirect/Uninsured costs (x3 Damage Bill Covered by Insurer)	\$1,650,000	33.00%	\$300.00	1,815
Estimated total costs - managed fleet only	\$2,157,750	43.15%	\$392.32	2,374
Estimated total costs - all vehicles (managed + grey fleet) <sup>a</sup>	\$2,157,750	43.15%	\$392.32	2,374

<sup>a</sup>This worked example does NOT include Grey fleet.

\*This information is from the results tab, relating costs to the indicative product.

#### References

Safe Work Australia, 2015, Work-related traumatic injury fatalities, Australia, viewed 8 January 2016, <http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/939/work-related-traumatic-injury-fatalities-australia-2014.pdf>

Australian Transport Council, 2011, National Road Safety Strategy 2011-2020, Australia, viewed 20 January 2016. <http://roadsafety.gov.au/nrss/>

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### Appendix A: Calculator Input Template

#### Local government

Input information	
What is the total annual rate income from private households?	
What is number of private household rate payers in your jurisdiction?	
Average rate bill per private household	
Annual claims data - cost of incident (insurer's costs)	
Annual claims data - number of incidents	
Total Number of Vehicles	
Annual total distance travelled by fleet (km)	
Annual Fleet Insurance Premium	
Premium per Vehicle	
Excess per claim	
Insurer's annual claims payment per vehicle	
Grey fleet	
Estimated average annual business fleet travel (km) of employees using their own vehicle	

#### Manufacturing

Input information	
Your Sector	
What is your main revenue earner?	
Annual unit sales of main revenue earner	
Annual claims data - cost of incident (insurer's costs)	
Annual claims data - number of incidents	
Total Number of Vehicles	
Annual total distance travelled by fleet (km)	
Annual Fleet Insurance Premium	
Premium per Vehicle	
Excess per claim	
Return on main revenue earner (percentage)	
Gross annual turnover	
Profits from main revenue earner	
Average unit cost of main revenue earner	
Grey fleet	
Estimated average annual business fleet travel (km) of employees using their own vehicle	

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**Appendix A: Calculator Input Template**

***Emergency services***

Input information	
What is your main unit of measure for services provided to the community?	
What is your total annual cost to provide these hospital beds?	
How many hospital beds do you currently provide?	
Your annual average to provide ONE hospital bed	
Annual claims data - cost of incident (insurer's costs)	
Annual claims data - number of incidents	
Total Number of Vehicles	
Annual total distance travelled by fleet (km)	
Annual Fleet Insurance Premium	
Premium per Vehicle	
Excess per claim	
Insurer's annual claims payment per vehicle	
Grey fleet	
Estimated average annual business fleet travel (km) of employees using their own vehicle	