

Saving money through fleet risk management

Driving for work is a high-risk activity. People who drive for work are up to 40% more likely than other drivers to be involved in a crash, accounting for up to one in three road crashes in Britain.¹ Road crashes account for 39% of work-related deaths in the European Union,² and are the world's leading non-medical cause of death and serious injury.³

In addition to the human cost, these crashes create a significant financial burden for employers. The cost to employers of at-work road crashes is estimated to be more than £2.7 billion a year in the UK alone.⁴ To reduce the costs associated with road crashes, as well as ensuring the safety of their drivers and of other road users, fleet managers must take proactive steps to manage their road risk.

This Brake guidance summarises advice from academics and fleet practitioners delivered at a Brake webinar in March 2013. Brake would like to thank GreenRoad for sponsoring both this guidance and the webinar.



Understanding collision costs

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The starting point for saving money is to understand costs. Australian research⁵ suggests that the costs of workplace injuries are shared: 5% by the employer; 74% by the employee; and 21% by the community. When the injury leads to long-term absence, costs are shared: 33% by the employer; 12% by the employee; and 55% by the community.



Size and type of collision costs

After a collision, vehicle repairs are just the tip of the iceberg. Another Australian study⁶ indicates that the total cost of a fleet vehicle insurance claim is four to 15 times higher than average direct repair costs. Research from the UK Health and Safety Executive⁷ suggests eight to 36 times.

About this report

This guidance report is one of a series for fleet and road safety professionals produced by Brake, the road safety charity. These reports highlight research and best practice from papers presented at Brake events and from other relevant sources, and aim to help professionals reduce road risk through dissemination of this critical information. These reports are produced for the benefit of Brake subscribers and event participants. To subscribe to Brake or attend a Brake event, visit us online at www.brake.org.



Costs may be recoverable via insurance or other means, but this will depend on individual circumstances.

Types of cost can include:

- vehicle costs, including: recovery and storage; repair; downtime; replacement; reduced resale value; increased insurance premiums;
- driver costs, including: loss of expertise; lost productivity; personal injury; reassessment and training;
- third party costs, including: vehicle and/or property damage; loss of earnings; personal injury; legal costs; and
- other costs, including: missed sales; damaged or lost stock; company reputation; management and administration time; increased tax to cover road safety improvements.

Analysing collision costs

Once all costs are understood and quantified, they can be used to develop countermeasures and set standards and targets.

Cost data is particularly important for targeting effort. Using the example in figure 1, which shows the claims data of a typical mixed car and van fleet, slow-speed collisions (such as hitting a parked car) may appear to be the most important claim type, accounting for a higher percentage of claims. However, collisions at speed (such as rear-end shunts) account for a much higher proportion of costs, despite occurring less frequently. High-speed collisions are also more likely to involve injury to people rather than just damage to vehicles and property, so are vital to address from a safety point of view. To reduce costs, fleet managers should prioritise reduction initiatives for more expensive and dangerous claim types rather than those that occur most often, while not ignoring frequent claim types either.

Figure 1: claim costs by type

| Claim type | % of claims | % of costs |
|--|-------------|------------|
| Third party (unknown) hit client while parked | 14.6 | 11.6 |
| Hit fixed/temporary object | 12.0 | 11.9 |
| Break-in/theft | 10.3 | 5.4 |
| Vehicle returned damaged by user | 5.8 | 4.6 |
| Third party hit client in rear | 4.2 | 5.7 |
| Client hit third party in rear (rear-end shunt) | 3.6 | 14.4 |
| Third party (known) hit client while parked | 3.4 | 3.7 |
| Client reversed into third party | 2.9 | 4.0 |
| Client hit parked/stationary third party vehicle | 2.5 | 3.9 |
| Pulling out: third party into path of client | 2.0 | 4.1 |
| Pulling out: client into path of third party | 1.1 | 4.5 |
| Glass | 20.8 | 3.2 |
| Other (20+ categories) | 16.8 | 23.0 |

Cost savings made through safety countermeasures go straight to the profit margin, as shown in the worked example in figure 2. For example if return on sales (ROS) is 5%, saving £50,000 on safety costs is financially equivalent to generating £1,000,000 in new turnover.

Figure 2: safety and return on sales

| Collision costs (£\$€) | Additional sales required if ROS is 1% (£\$€) | Additional sales required if ROS is 5% (£\$€) | Additional sales required if ROS is 10% (£\$€) |
|------------------------|---|---|--|
| 50,000 | 5,000,000 | 1,000,000 | 500,000 |
| 80,000 | 8,000,000 | 1,600,000 | 800,000 |
| 100,000 | 10,000,000 | 2,000,000 | 1,000,000 |
| 130,000 | 13,000,000 | 2,600,000 | 1,300,000 |

This approach can be applied to single collisions, or to an organisation's total collisions, incidents and damage costs using the model shown in figure 3 below. This model is based on a typical collision, where a vehicle hit the back of a third party vehicle.

Figure 3: model of collision costs

| Item of cost | Sample data (£\$€) |
|---|--------------------|
| Own damage costs | 1,000 |
| Third party vehicle damage costs | 1,000 |
| Third party injury costs (e.g. whiplash) | 1,000 |
| Reported cost of collision | 3,000 |
| Total cost of collision (including hidden costs @ two times reported costs) | 6,000 |
| Revenue required to fund a single collision at 10% Return on Sales | 60,000 |
| Product sales required to fund fleet safety costs | 120,000 |

In figure 3 a hidden cost multiplication factor of two has been used (although the research, as referenced above, shows that the hidden costs can be more than twice as much as the direct costs of crashes, a figure of two is generally considered acceptable within the industry and by accountants). To cover a £3,000 collision cost would require £60,000 of revenue; the equivalent of 120,000 unit sales. Risk managers should ask: is it easier to sell 120,000 extra products, or be more proactive in preventing collisions?

Reducing work-related road safety costs

To help reduce the hidden costs of collisions companies should aim to create a 'collision free culture'. Typically this involves:

- management training and management championing of safety issues;
- proactive risk management strategy;
- detailed collision investigations and analysis;
- improved journey, vehicle, management, driver, road and site risk assessments; and
- detailed analysis of safety and operation costs, and both hidden and full costs.

Summary

Cost savings made through safety interventions go straight to the bottom line of the organisation. This cost relationship is a powerful argument for investing in work-related road safety, and useful for convincing management of the need for proactive collision reduction. Fully quantified costs, specific to an organisation, can be used to develop a business case and set standards and targets as part of the evaluation process of safety and risk programs.

A more detailed version of this paper, cost modelling spreadsheet, and good practice interventions guide are available at www.virtualriskmanager.net.

How to reduce insurance premium costs

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Many UK fleet managers will have seen motor insurance premiums increasing over recent years, due to the state of the loss-making motor insurance market. In 2010, UK underwriting (including both private vehicle and fleet insurance) made an operating loss of £1.8 billion, demonstrating the high cost of crashes.⁸



How is a premium calculated?

To demonstrate how fleet managers can influence their insurance premiums, it is necessary first to understand how a premium is calculated. The calculation begins with the base premium, which makes a provision for both large infrequent losses and expected everyday smaller claims. This is based on the underwriter's assessment of the risk profile, claims history, and – crucially – the quality of risk management in place.

On top of the base premium will be a calculation for claims handling expenses, plus administration, capital and statutory costs. These are calculated as a percentage of the base premium, so taking action to reduce a base premium will have a bigger knock-on effect on the overall premium.

Fleet size affects the premium calculation. For large fleets, the claims history will be statistically significant, so the underwriter will use this to calculate the fleet's risk. However, small fleets will not have enough data in their claims history to be statistically significant, so the underwriter will instead use combined claims data from other, similar-sized fleets in their portfolio to calculate risk.

The risk management process

The first part of the risk management process is to assess, analyse and understand the risks faced. There are four types of risk to analyse: organisational risks; proven risks; theoretical risks; and dynamic risks.

Organisational risks arise out of an organisation's everyday operating practices and procedures. These should be addressed first, as it is impossible to improve the safety of any individual driver until they are operating in a safe working environment. For example, if a company's policy says drivers should not use mobile phones, but the company requires drivers to be in regular contact at all times, that policy may not be effective. Business needs must be addressed, for example by improving scheduling and time management to eliminate the need for drivers to answer calls on the road, so employees are able to drive safely.

Proven risks are those that have already resulted in a collision. Addressing these requires in-depth analysis on all collisions, to determine how and why they occurred, and whether there are underlying management issues that contributed. For example, if a collision occurred due to fatigue, management may need to review drivers' hours and put appropriate measures in place to eliminate the risk of tired driving.

Theoretical risks are the risks that an employee will be involved in a collision sometime in the future. Tackling these requires an individual employee risk assessment.

Risk assessments should cover three key areas of work-related road safety: the driver; the journey; and the vehicle. Driver core competencies should also be assessed: their attitudes; behaviours; knowledge; and hazard recognition skills.

Dynamic risks can be identified through driver monitoring. This will identify how a vehicle is being driven at any one time, to identify any potential problems before they occur. Analysing this data will also flag up management issues that are influencing drivers to take unnecessary risks.

Once all risks have been identified and analysed, the next stage is to decide on and implement selected control measures. These should be aimed at: eliminating risks entirely; substituting high risk equipment or processes for lower risk alternatives; or reducing risks. For example, if an identified risk is high mileage, the risk reduction strategy would be:

- **eliminate** some journeys, for example by reorganising sales territories;
- **substitute** some journeys with public transport; and
- **reduce** fatigue risk through: robust policies on fatigue management; raising driver awareness; and providing guidance and training on effective route planning and scheduling.

Finally, the process should be maintained, monitored and reviewed as necessary, leading to a repeat of the cycle beginning with assessment and analysis.

Funding risk management initiatives

Although insurers may contribute some funding towards fleet risk management initiatives, it is not good practice for the insurer to contribute full funding. In Zurich's experience as a fleet insurer, where it has fully funded risk management initiatives, these have been ineffective: the company itself must have a financial stake in the process to ensure it is taken seriously. Therefore, Zurich recommends any funding it contributes should be matched by the company.

Fleet managers should consider who benefits most from implementing risk management initiatives. While the insurer will benefit somewhat from reduced claims due to better risk management, the company will ultimately benefit far more, making savings not only from insurance claims but also from losses such as time, cost and reputational damage.

Example of risk management

Car manufacturer Vauxhall UK has 600 fleet vehicles. Company managers worked with insurer Zurich to implement a risk management process in order to reduce the company's high levels of both own damage and third party claims. Risk management improvements

included: targeted e-learning focussing on driver attitudes and hazard situations; workshops for high-risk drivers; and familiarisation courses for overseas drivers transferring to the UK.

As a result, Vauxhall reduced its own-damage incidents from 110 in 2005/6 to 42 in 2009/10. This had a knock-on effect on the insurance costs for the wider Vauxhall fleet (about 6,000 vehicles, including company cars for personal use), resulting in a 20% reduction in insurance premiums over four years. This equated to a £1,200,000 premium saving each year.

Conclusion

Simply put, the best way to reduce insurance premiums is to have fewer crashes on an ongoing basis, and to demonstrate to the insurer that both collision frequency and costs are dropping year-on-year. However, it is important not to focus solely on the premium: risk management will also benefit the bottom line through savings on all the costs associated with a crash.



Reducing risk, saving money

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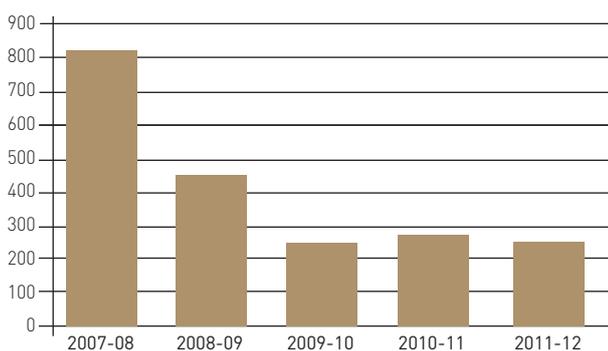
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Iron Mountain is a records management company, with more than 2,000 employees in 100 facilities in the UK and Ireland. It has 360 fleet vehicles, driving more than 10 million miles (16 million kilometres) per year.

In 2007-08 Iron Mountain had an unacceptably high number of driver incidents (see figure 4). This was leading to high costs, expensive insurance premiums, and damage to the company's image and reputation. At the time the company had only a minimal process for remedial action in place, and no specific plan to reduce the number of incidents.

Figure 4: Number of incidents by year



The solution

At the end of 2008 Iron Mountain worked with its insurers to create a business case for a comprehensive program of assessment and training. The business case consisted of four stages:

- “want to”: tackling driver attitudes to engage them with road safety;
- “what to”: teaching drivers how to improve safety, by driving defensively;
- “able to”: addressing company policies to enable drivers to work safely; and
- leadership buy-in: demonstrating the benefit to the company in both safety and financial terms.

The company began by monitoring driver behaviour to identify problem areas. All incidents were recorded and analysed to understand how and why they occurred, and identify trends. The data was used to highlight and focus on specific problems. Driver workloads and routes were assessed and revised where necessary, and remedial coaching provided if needed.

All this information was fed into creating a fleet safety policy, which formed the basis for all Iron Mountain's fleet safety initiatives, and which is reviewed on a regular basis. A number of proactive policies were introduced to tackle identified problems, including:

- driving assessments, both on recruitment and annually for all drivers;
- online risk assessments for all drivers;
- quality forms and procedures, for example for reporting defects; and
- a new driver handbook and Code of Conduct, which drivers must sign out on a daily basis.

Driver behaviour system

The GreenRoad driver behaviour system, an in-vehicle telematics system which monitors and gives feedback on driver behaviour, was trialled on 30 vehicles in 2010. It was found to improve fuel economy and reduce incidents, augmenting positive effects on driver behaviour that had already been achieved following the introduction of driver trainers earlier that year. Following the success of this trial, the software was installed across the fleet in early 2011.

Following installation, fuel efficiency (in miles per gallon) improved by 14%, and the number of incidents dropped. There were three incidents during the 10 month trial, all minor, compared to 18 incidents for the same period in the previous year.

The system gives drivers scores based on recorded performance, with a lower score indicating a safer driver. Drivers scoring 20 or below are classed as “green”, which is set as the default best category. Iron Mountain

introduced a further “blue” category, for drivers scoring 10 or below, as managers estimated the company’s drivers would reach the green target very quickly.

On average 74% of Iron Mountain’s drivers are in the blue category, scoring 10 or lower, with 25% of all drivers also scoring 5 or lower. A weekly report of the ten poorest-performing drivers shows seven to eight of these usually still fall within the green category, scoring 20 or lower.

Iron Mountain uses the driver scores from the system to focus on both good and bad driver behaviour. The scores allow the company to highlight any need for remedial coaching and driver debriefing following incidents, with regular management calls to discuss actions. Drivers are ranked in league tables, with rewards for the best performing drivers including gift vouchers for leisure ‘experience’ days and recognition through the company’s internal communications channels. The reports also allow the company to record progress against driver safety key performance indicators (KPIs) and objectives. One particular success has been the speed zone feature, which concentrates on habitual speeding offenders by providing a weekly report on all drivers with more than 10 violations. Reports revealed that 5% of Iron Mountain’s drivers accounted for one third of all of the company’s speeding violations. In the first six months of using this feature, speeding incidents reduced by 66%; violations dropped from one per 526 miles to one per 1147 miles.

Results

The program has resulted in a 70% overall reduction in incidents over the four years since its introduction in 2008. Although the reduction in number of incidents has plateaued since 2009/10 (see figure 4), incidents have continued to reduce in severity, resulting in further cost savings for Iron Mountain. The company has seen: a 57% reduction in own damage and third-party costs; a 14% reduction in insurance premiums for 2011, and a further 8% premium reduction for 2013; estimated fuel savings of more than 7%; and a 4.5% reduction in maintenance costs.

Conclusions

- Collision costs include many hidden costs, such as: legal costs; repairs; personal injury; and lost work time. Managers can usefully calculate the cost benefits of avoiding collisions, e.g. looking at the amount of sales revenue being generated simply to fund all these hidden costs.
- Fleet managers should analyse their collision data to target reduction of more expensive claim types which are the most likely to cause death and injury, as well as those that occur more frequently.
- Underwriters take risk management processes into account when calculating an insurance premium, so proactive risk management can reduce premiums.
- Risks should be identified through data collection and analysis. Managers can then seek to reduce and eliminate risks.
- Tackling driver attitudes and demonstrating the benefits of safer driving are essential in building the business case for a risk management program.
- Driver monitoring systems are useful for identifying at-risk drivers, and rewarding safe drivers.
- Improving safety directly benefits the bottom line: Iron Mountain’s crash-related costs reduced by 57% over four years.

End notes

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