



Update to 2013 report: Driver incentive and reward schemes

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Update to 2013 report: Driver incentive and reward schemes

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Abstract

There is some evidence in Bailey (2013) that rewards can be effective in encouraging safer driving if they are specifically tailored to groups such as young drivers, some work road safety settings, and/or specific driving behaviours such as speeding. However, very few schemes are evaluated for effectiveness. Experimental studies of schemes since 2013, particularly those that reward specific driving behaviours and/or of specific categories of driver types generally afford favourable results, along with a more advanced understanding of when, where, how, and why reward schemes work well (or not). This research has been substantially assisted by sophisticated driver monitoring and feedback technologies such as telematics. However, reward schemes must be seen to use clear evaluation processes of drivers' performances, as unfair systems may well lead to complaints and repudiation of the schemes. Moreover, not all drivers respond in the same way or to the same extent to reward schemes, thus making wide-scale reward schemes of questionable cost-benefit effectiveness. Some drivers, particularly some young drivers, are motivated more by a sense of thrill when engaging in risky behaviours, than in any tangible reward for driving safely; penalties are likely to be more effective for habitually risky drivers. Effective reward schemes in fleet settings are best embedded in a company's safety culture. Fleet reward schemes can improve both eco-friendly behaviours and safe driving. Small financial rewards consistently given are likely to be more effective in improving safe behaviours than large rewards given occasionally. Reward schemes considered likely to bring most benefit include: (i) rewarding offence-free driving periods by provisional licence drivers; (ii) telematics-based monitoring of driver performance by insurance companies; and (iii) reward schemes for drivers in fleet settings. Importantly though, any establishment of new reward schemes or support for existing ones, should be accompanied by evaluations of those schemes' effectiveness in improving driver behaviour, along with commitment to modify or abandon the schemes as needs be.

Key words

Driver rewards, driver reward schemes, evaluation, incentives

Summary

Traditionally, the evidence base for adopting a reward scheme relies on presumed positive effects of providing some form of reinforcement for desired behaviours. Yet, the evidence supporting rewards in road safety has hitherto been patchy; moreover, reward schemes can be counterproductive, such as when they reduce someone's intrinsic motivation to perform a task well.

Nevertheless, there is some evidence discussed in a former report (Bailey, 2013) that rewards can be effective if they are specifically tailored to, and targeted at, certain road groups such as young drivers and some work road safety settings, and/or specific driving behaviours such as speeding. In Bailey (2013), rewarding offence-free driving periods was found to be the most common scheme type. However, very few schemes are ever evaluated for effectiveness in improving driving behaviour.

The present report reviews experimental studies of reward schemes since 2013, particularly those that reward specific driving behaviours and/or of specific categories of driver types (e.g. novice or fleet drivers). This later research generally affords a favourable perspective of reward schemes, along with a more advanced understanding of when, where, how, and why they should work well (or not). This research has been substantially assisted by increasingly more sophisticated driver monitoring and feedback technologies such as telematics. In summary, this more recent research finds that:

- Driver monitoring and feedback technologies appear to enhance reward scheme effectiveness
- GPS based technologies can provide real-time feedback to smartphones on speed limit compliance, instances of hard acceleration or braking, and maintenance of following distances
- Rewards are typically monetary-based, e.g. cash prizes, reduced driver licence renewal fees or car insurance premiums, vouchers or lottery entry, but rewards can also be non-monetary
- Reward schemes must be seen to use clear evaluation processes of drivers' performances, as unfair systems may well lead to complaints and repudiation of the schemes
- Not all drivers respond in the same way or to the same extent to reward schemes, thus making wide-scale reward schemes of questionable cost-benefit effectiveness
- Some drivers, particularly some young drivers, are motivated more by a sense of thrill when engaging in risky behaviours, than in any tangible reward for driving safely; penalties are likely to be more effective for habitually risky drivers
- Effective reward schemes in fleet settings are embedded in a company's safety culture
- Small financial rewards consistently given are likely to be more effective in improving safe behaviours than large rewards given occasionally
- Fleet reward schemes can improve both eco-friendly behaviours and safe driving.

Reward schemes considered likely to bring most benefit include: (i) rewarding offence-free driving periods by provisional licence drivers; (ii) telematics-based monitoring of driver performance by insurance companies; and (iii) reward schemes for drivers in fleet settings. Importantly though, any establishment of new reward schemes or support for existing ones, should be accompanied by evaluations of those schemes' effectiveness in improving driver behaviour, along with commitment to modify or abandon the schemes as needs be.

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1. Introduction

Schemes in which rewards and incentives are offered for indicators of safe driving began about seventy years ago and currently exist in varied formats worldwide, though not necessarily on a continuing basis. Their implementation is commonly justified, not only on the grounds of a desire to respond positively towards safe driving behaviour, but sometimes as a complement to provisions that punish or aim to deter unsafe driving practices.

The terms 'reward' and 'incentive' are commonly used interchangeably. Essentially, though, rewards are given *after* a desired behaviour is demonstrated, while incentives are offered *before* the behaviour has occurred. Hence, having prior knowledge of a reward usually acts as an incentive. Yet, incentives to drive safely do not have to involve a tangible reward; sometimes an intrinsic reward alone will be sufficient. In this report, to minimise unnecessary repetitions of both words, the term 'reward' is used to cover both rewards and incentives.

To help determine whether a driver reward scheme should be further considered in South Australia, the South Australian Government's Road User Safety Advisory Committee and the Department for Infrastructure and Transport (DIT) requested the Centre of Automotive Safety Research to prepare an update to an earlier report it had prepared for the then Department for Planning, Transport and Infrastructure (Bailey, 2013).

This update begins by reviewing the background discussion of the nature and effectiveness of reward schemes contained in the 2013 report. Next, the current report discusses the national and international schemes described in the earlier report to indicate which of those schemes are still running, which have been modified, or which have been abandoned. This is followed by an examination of relevant research since 2013, and then some concluding remarks with reward scheme suggestions for further consideration. Finally, at the request of DIT, a list of current driver reward schemes around the world has been appended for reference by relevant Departmental staff.

2. The nature and effectiveness of reward schemes

Rewards for safe driving are often considered in tangible terms (e.g. cash payments, fee discounts and vouchers), but rewards can also be intangible. It is commonly said that a driver's licence is a privilege, not a right. A driver, on obtaining a licence, is required to conform to the rules of the road in the interests of safety. In this light, for many drivers, the reward for being a safe driver is simply that they do not contravene traffic laws or are involved in crashes for which they are at fault. Consequently, some might say that there is no need to offer an additional reward to already safe drivers (e.g. Ellison, Bliemer & Greaves, 2015), and that any consideration of reward schemes should just be in relation to wayward drivers. A different view is that rewards should be offered to both good and bad drivers.

It could also be said that rewards simply favour drivers who drive infrequently and for shorter distances, thereby increasing their opportunities for remaining offence-free and increasing their chances of obtaining a reward for minimal effort to be safer on the road.

Where reward schemes have been implemented, we ought to know not just if a reward yields behavioural improvement or continuance of the desired behaviour, but also whether any improvement would have occurred had *no* reward been offered (Williams, 2012). Moreover, we should query: if the reward had been of a different size or nature, would the improvement have occurred more quickly, or could the improvement have been an even better one? To this list should be added, could the desired behaviours be more effectively promoted via less expensive means, and are there any disbenefits with the scheme? Answers to such questions, when taken together, would afford a substantial basis for informing conclusions about reward scheme effectiveness.

Traditionally, the evidence base for adopting a reward scheme relies on the presumed effects of providing some form of reinforcement for desired behaviours in a wide range of behaviour change contexts. Yet, the evidence supporting rewards and inducements in road safety tends to be patchy; moreover, rewards could be counterproductive, such as when they reduces someone's *intrinsic* motivation to perform a task well (Haworth, Tingvall & Kowadlo, 2000).

Decreases in intrinsic motivation can be explained by self-perception theory, which posits that a person attributes causes for their behaviour based on external factors (Carlson & Heth, 2007). Consequently, people pay more attention to an external reward for an activity than to the inherent enjoyment and satisfaction from performing the activity well. An increased focus on external rewards can undermine any pre-existing intrinsic motivation for performing the activity. In a road safety context, this means drivers can place more attention on receiving a safe driving reward than on being intrinsically motivated to drive safely. Safe driving has elements of intrinsic motivation in which experiencing a safe driving trip and not receiving violation notices is its own reward. In sum, the downside of providing external rewards for safe driving is that it risks weakening its intrinsic aspects.

Moreover, once rewards are no longer offered, interest in the activity and intrinsic motivation to perform it often wane. Carlson and Heth (2007) speculated that extrinsic rewards must be continually offered, and perhaps increased in size, in order to sustain the activity. Thus, for rewards that ensure drivers continue to drive safely (or more safely) they may need to be continually available and even increased in size over time. Doing this may increase public support for rewards and for driving safely, but the resultant dependency on external rewards is likely to diminish intrinsic motivation to drive safely.

The former *National Road Safety Strategy 2011-2020* indicated that the main aim of its Safer People focus was to “increase support for responsible road use”. The related actions did not mention incentive/reward schemes; with the strategy instead merely noting that while there have been some attempts to promote responsible road use through incentive schemes, “the effectiveness of this approach is unproven” (p.83). In fact, neither the *2021-2030 National Road Safety Strategy* nor *South Australia’s Road Safety Strategy to 2031* contains any reference to reward or incentive schemes.

Nonetheless, while there is patchy evidence for the effectiveness of reward schemes generally, there is some evidence discussed in Bailey (2013) as well as in this update that they can be effective if specifically tailored to, and targeted at, certain road groups such as young drivers and occupational drivers (e.g. delivery drivers), and/or specific driving behaviours such as speeding. In this regard, it is worth noting that novice drivers are accorded detailed discussion in the *2021-2030 National Road Safety Strategy*. Moreover, workplace road safety, along with risky road use behaviour, are among the strategy’s nine priorities. Such coverage is reflected in *South Australia’s Road Safety Strategy to 2031*.

Additionally, the Dutch traffic safety administration authority (SWOV, 2011) reviewed various experimental and field trial studies, finding that rewarding safe road behaviours can improve safety among specific groups such as fleet drivers or novice drivers, rather than among drivers generally. The SWOV also found rewards to be effective for improving specific behaviours such as not speeding, using seatbelts and choosing safer routes. In most cases, the rewards in the studies were financial ones, such as cash bonuses, shopping discounts, or reduced insurance premiums. Yet, the SWOV also noted that many questions about overall effectiveness remain unanswered, including which types of reward and their size are most effective, noting also that other research, such as that by Banks, Davey, Biggs and King (2010), has cast doubt on the effectiveness of reward schemes in fleet settings.

The following chapter revisits the reward schemes discussed in Bailey (2013).

3. The reward schemes discussed in Bailey (2013) — A revisit

Mindful of the evidence discussed in Bailey (2013) that reward schemes can improve safety if they target specific road user groups or behaviours, the earlier reviewed schemes are summarised in Table 3.1, but with annotations as to their operational status in 2022.

Table 3.1
Reward schemes for infringement-free periods of driving as reviewed in Bailey (2013)

Scheme name	Jurisdiction	Date began (if known)	Status in 2022	Comment
Safe Driver Awards	Queensland	1950s	Discontinued in 1995	A Queensland Transport review found the program was neither cost efficient nor effective in changing behaviours
Good Behaviour Bonds	All Australian jurisdictions		Ongoing	These schemes allow drivers facing suspension to continue driving (the reward) but subject to a requirement to drive relatively offence-free. The schemes do not appear to have been evaluated for road safety effectiveness.
Early non-display of P-plates by P2 drivers	SA	2005	Discontinued in 2014	P1 drivers with 12 months demerit point free driving could advance to P2 (no P-plates required) otherwise were on P1 for 2 years. No known evaluation study. The scheme was discontinued due to a suite of Graduated Licensing Scheme changes in 2014 aimed at streamlining the State's licensing process.
Safe Driving Points	Virginia, USA		Ongoing	Safe driving points are earned for every year of offence-free driving, which can be traded against any demerit point accumulation. No known evaluation.
Free Driver Licence Extension	California		Discontinued	Offending drivers receive free licence extension if they are offence-free in the following year. Program deemed 'may have merit' (Hartley & Forgione, 1999).
Safe Driver Incentive Plan / Insurance Points	North Carolina	1957	Ongoing	Reduced insurance premiums given for periods of offence-free driving. No known evaluation, but as many insurance companies, including in Australia, have such schemes, companies may hold relevant evaluation data.
White Points	Dubai/UAE	2012	Ongoing	One white point is earned for every month of offence free driving. Point winners can enter a raffle for a new car, or trade off against demerit (black) points. No evaluation information is available.
Road Safety Reward Campaign	South Africa	2012	? Likely not operational	All drivers were automatically entered into an annual raffle, but can only claim a prize if offence free. No evaluation information is available.
Driver Improvement Points System	Singapore	1983	Ongoing	Drivers with no offence history for 3 years receive points plus a discount off motor insurance premiums; points can be traded for any subsequent demerit points. No evaluation information is available.
Fair Go For Safe Drivers	New South Wales	2012	Ongoing	Drivers with no offence history for 5 years receive 50% discounted licence renewal fees. No evaluation information is available.

Safe Driver Discount	Victoria	2006	Discontinued in 2013 but to be reinstated from October 2022	Any driver who is offence free during the previous 3 years will be entitled to a 25% discount off their next licence renewal charge.
Offence Free Rewards	Tasmania	2008	Scheme revised in 2021	Scheme is currently called Safer Driver Rewards. Drivers who are offence free throughout their P1 and P2 periods (2 – 3½ years, depending on age) receive a free 3 year full licence. No evaluation information is available.
Safe Driver Reward Scheme	Western Australia	2006	Ongoing	Drivers who are offence free throughout their P1 and P2 periods (2 years) receive free 1 year full licence. No evaluation information is available.

It can be seen in Table 3.1 that those schemes in Bailey (2013) rewarding infringement-free driving periods by drivers appear to be the most common scheme type. Also, the majority of infringement-free schemes reviewed in 2013 are still operational in 2022, albeit with some in a revised format. Where no current information about a scheme was available on the internet, it was presumed that the scheme no longer exists, unless there was an indication of a deliberate decision of abandonment. None of the schemes, however, appears to have been evaluated at some formal level.

Apart from rewards for infringement-free periods, the remaining schemes reviewed in Bailey (2013) focussed variously on rewarding take-up of safe driving courses and also safe driving behaviours as observed by police. These schemes are summarised in Table 3.2.

Table 3.2
Remaining reward schemes reviewed by Bailey (2013)

Scheme name	Jurisdiction	Date began (if known)	Status in 2022	Comment
Frequent Shopper Points	Tasmania	1980s	Discontinued	Free Shopper Points were awarded to breathalysed drivers found to have zero blood alcohol. The program was discontinued, partly due to questions about its effectiveness.
Reduced insurance premiums for taking driver safety courses	various		Ongoing	Some insurance companies offer premium discounts to (usually young) licensed drivers who take an approved course. Some schemes no longer operate, but some (e.g. AAMI's) still do. There is much research evidence suggesting extra courses for licensed drivers have little if any safety benefit (e.g. Hartley & Forgione, 1999; Christie, 2011). Note, South Australia's former Driver Awareness Course in the 1990s for P1 drivers to advance earlier to P2 was disbanded in 2014 primarily on these grounds.
Young Driver Challenge	ACT		Discontinued, probably around 2001	Challenge involved a 30 min review by a driving instructor of practical driving skills of a young licensed driver, with cash prizes. Effectiveness of the program was questioned by Davies (2001).
Fuel vouchers	France		Ongoing	Gendarmes in some prefectures monitor roads and stop drivers who are observed wearing seatbelts correctly, who are not using mobile phones, and/or who are keeping safe following distances, etc, and reward them with fuel vouchers. No evaluation information is available.
Gift vouchers and lottery tickets	Canada	2012	? Likely not operational	Local police in an Albertan town photo recorded licence plates of vehicles travelling under the speed limit. Names of those drivers were entered in a weekly draw for cash prizes. No evaluation information is available.
Safe Driving Lottery	Sweden	2010	Discontinued 2011	Portable photo-radar systems recorded vehicles obeying the speed limits, with the owners being sent a lottery ticket. The scheme, which was only a trial, was discontinued due to its operating costs.

Similarly to Table 3.1, it can be seen in Table 3.2 that none of the listed schemes appears to have been evaluated, although in two cases the scheme was discontinued due to questions or concerns raised about effectiveness.

The next chapter examines reward programs and related research since 2013, with a focus on schemes targeting specific groups such as novice drivers and company fleet drivers, and/or specific behaviours.

4. Reward scheme research evidence since 2013

While numerous studies have examined the effectiveness of penalties and enforcement as a tool for changing driver behaviour, rewarding good or appropriate behaviour is rarely highlighted in road safety circles (Elias, 2018). Moreover, as was seen in Tables 3.1 and 3.2, past and current reward schemes and programs are rarely evaluated. Hence, it is necessary in this chapter to focus on *experimental* studies since 2013 into rewarding drivers rather than scheme evaluations. This was particularly for experimental studies that rewarded specific driving behaviours and/or of specific categories of driver types (e.g. novice or fleet drivers).

This research affords a generally more favourable perspective of reward schemes, along with a more advanced understanding of when, where, how, and why they should work well (or not), compared to the pre-2013 analyses. This development has been substantially assisted by increasingly more sophisticated driver monitoring and feedback technologies such as telematics. However, as Elias (2021) has pointed out, unlike when applying sanctions to detected instances of unsafe driving behaviour, reward and incentive schemes assume that drivers will be rewarded for the routine behaviour of driving safely. To be able to do this, reward schemes require constant monitoring of drivers' behaviours, such as by using appropriate technologies. Such constant monitoring can be a condition of employment in fleet driving settings, but western driving culture historically views the vehicle as an extension of the home; in other words, a private place where the driver is entirely autonomous. Consequently, many drivers may refuse to install monitoring technologies in their vehicles (Carsten, 2012). As well, drivers may be concerned about ownership and confidential storage of their driving data, as well as the risks of telematics systems being hacked.

4.1. Rewards for not exceeding speed limits

In part of a Canadian study, Mullen, Maxwell and Bédard (2015) recruited 28 male licensed drivers, aged 18 to 28, to participate in a study involving a reward system for avoiding speeding during a 'journey' on a driving simulator. The simulator had a speed feedback facility that displayed a green light if participants drove under 93.5km/h, but red if above (this was representative of a 90km/h 'signpost' speed limit, but with a 3.5km/h tolerance). Drivers subjected to the reward system could receive a point every time they drove for 15 seconds at or below 93.5 km/h. Earning 12 points entitled a driver to a C\$1 gift card, reaching a maximum of \$10.

The 28 drivers were split into 4 groups:

- i. a group who received speed feedback via the red/green light, but were not subject to the reward system
- ii. a group subject to the reward system but not feedback
- iii. a group subject to both speed feedback and rewards
- iv. a control group who drove the simulator but without feedback or rewards.

The control group (iv) and the feedback-only group (i) received a \$10 gift voucher regardless of any speeding behaviour displayed.

The researchers found that reward-only drivers (group ii) demonstrated speed reductions similar to the drivers who received a combination of feedback and rewards (group iii). While the researchers

considered these results suggested that the reward system by itself was sufficient to achieve a reduction in drivers' speeds, they believed that a combination of feedback and rewards would produce the most enduring results and hoped this could be tested using a more nuanced feedback system in a real-world driving context, and with a larger sample. Such a scenario was realised in the following Australian research.

Some recent reward studies have relied on telematic installations in drivers' vehicles that provide timely feedback to a driver and/or any monitoring third party (e.g. employer, insurance company) of the driver's on-road driving. Stevenson, Harris, Wijnands and Mortimer (2021) recruited 174 self-volunteered drivers aged 17 to 35 who were insured with a local motor insurance company that offered to install a telematics-based On-Board Diagnostic Device (OBDD) into the driver's vehicle. The recruited drivers were randomly allocated across three groups:

- i. group receiving a weekly summary by SMS text message to their phone of their OBDD-recorded driving performance relative to the crash risk factors of speeding, hard acceleration and hard braking; more detailed feedback was available through a secure website
- ii. a group receiving the above text message-based feedback, but also a monthly adjustment to an initial reward balance of \$200 involving a \$25 deduction for a driving performance score for one day or more, that attracted a red, orange or yellow score (as opposed to a green (safe driving) score (see Fig. 4.1); drivers also received a weekly SMS summary of their reward balance
- iii. a control group who had an OBDD installed, which provided feedback only to the researchers; these drivers received brief SMS messages of adverse weather conditions that could affect driving.

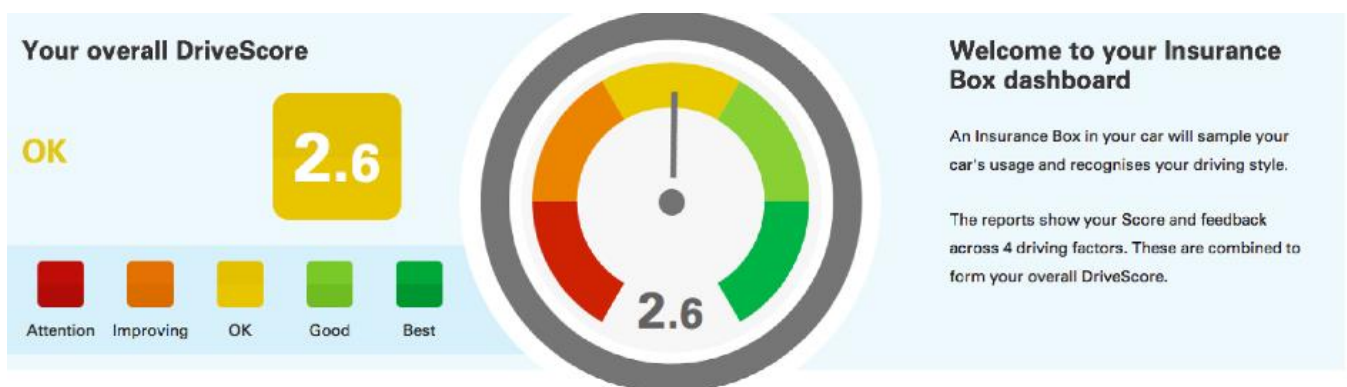


Figure 4.1 DriveScore illustration from Stephenson et al. (2021)

All three groups were monitored via the OBDD for 24 weeks. It was found that, for the *probability* of speeding, hard acceleration and hard braking on any given trip, the feedback plus reward group improved their driving records relative to the two other groups; however, this improvement was not statistically significant. Based on the DriveScore score (green to red coding; refer Fig. 4.1), a statistically significant improvement was observed, however, for the feedback plus reward group compared to the control group. The researchers concluded that, combining telematics-based feedback with financial incentives can deliver potentially important and statistically significant reductions in risky driving behaviours; moreover that this is an important finding for policymakers weighing the costs and benefits of telematics-based behaviour change interventions.

The exponential growth in smartphone use, especially among young drivers, holds great potential for monitoring and feedback. As the phones typically incorporate global positioning systems (GPS), accelerometers, and a camera, they can serve as in-vehicle monitoring and feedback devices and thus reduce adaptation barriers related to installation complexity and cost of specially designed monitoring devices installed in vehicles (Lotan, Musicant & Grimberg, 2014).

Besides the study by Stevenson et al. (2021), other research comparing the effectiveness of feedback either on its own or with a financial reward found that, in many cases, personalised feedback alone is sufficient to induce significant changes, but that the largest reductions in risk are observed when drivers are also awarded a financial sum (Ellison, Bliemer & Greaves, 2015). In his reward and feedback study of 107 Sydney drivers, Ellison (2013) found that the drivers could be divided into three groups: (i) drivers who respond best to a monetary incentive to change speeding behaviour, (ii) drivers requiring just information to change their speeding behaviour and (iii) drivers that appear unresponsive to either monetary incentives or feedback. Thus, Ellison (2013) has encapsulated the range of driver responses to rewards and feedback from positive behaviour changes among rewarded drivers to drivers who are unaffected by either approach.

The phenomenon encapsulated by Ellison (2013) has been explored in other research. In a field trial using in-vehicle technologies to monitor speed limit compliance and safe following distances, in which both detailed feedback and reward points were provided, two participant clusters were identified: those described as mostly compliant, and those who mostly were not (Merrickpour, Donmez & Battista, 2014). It was found that, over a twelve-week period, the feedback plus reward intervention closed the behavioural gap between the two groups. In particular, the group of drivers who were less speed and headway distance compliant during the original baseline measurements, and hence had a greater need of the intervention, benefited most from it during the two-week post intervention phase.

Stephenson et al.'s (2021) study stemmed from an earlier trial by his research team. In the earlier study, Mortimer, Wijnands, Harris, Tapp, and Stevenson (2018) explored the effect on 78 drivers (aged 17 to 25) of high versus low value rewards as well as high versus low penalties. The drivers were randomly assigned to one of those four reward/penalty groups to undertake a simulator 'drive' for approximately 12.5km or 15 minutes. The high and low reward groups were told if they obeyed all speed limits, traffic signs and road rules they would earn \$15 and \$5 respectively. The two penalty groups were told they would begin with \$15 and \$5 respectively, with that balance reducing depending on the extent they had disobeyed speed limits, signs and rules during their 'drive'.

The research team found, that while rewards were unsurprisingly preferred over penalties, penalties may be more effective than rewards of equal (financial) value to avoid or reduce instances of risky behaviours such as speeding and swerving. The team also considered their results suggested that low-value rewards can still deliver net reductions in risky driving behaviours. Consequently, increasing the dollar-value of rewards will not necessarily increase their effectiveness. The researchers considered that the task ahead is to set a financial reward at a dollar-value sufficient to change behaviour, but not so high as to compromise the cost-effectiveness of the reward scheme. In this research into the cost effectiveness of a financial reward scheme, Elvik (2014) used Norwegian Government data to calculate the financial cost to the community of a road fatality measured against Norwegian fatality rates due primarily to speeding. In his analysis, Elvik studied three driver groups with various speeding histories at three different financial reward levels (x 1, x 15 and x 60) for those drivers incurring no speeding offences in a year. Benefits (i.e. costs of lives saved) were found to be *smaller* than total reward expenses for each of the three reward levels. Moreover, costs also outweighed benefits in all driver

groups, except those high-risk drivers who were offered a base (x1) level or x 15 level (but not x 60) annual reward for not speeding. Thus, Elvik's analysis indicates that, adopting a *wide scale* financial reward system for safe driving is likely to be *not* cost-beneficial, except perhaps for high-risk drivers, a group for whom punitive measures may well be more effective in changing behaviour.

Other research using similar driver monitoring systems includes that by Yüksel and Atmaca (2021) who identified a set of risky driving behaviours and their risk levels, as advised by a panel of traffic officers. A sequence of algorithms developed, with a very high degree of accuracy, a set of various risky driving scenarios. This facilitated the development of a low-cost driver 'black box' which, the authors concluded, can open new horizons for insurance companies to promulgate usage-based policies, in which customers who drive safely per distance are rewarded with lower car insurance premiums, thus encouraging others to do likewise.

Nonetheless, there are some drawbacks to insurance companies offering lower premiums to drivers willing to be monitored technologically. Such drivers tend to self-select themselves into a monitoring program and, while they can become up to 30% safer while being monitored (Jin & Vasserman, 2021), companies may find that in order to remain competitive they have to offer greater premium discounts to avoid drivers switching to other companies with more attractive rewards. At the same time, an insurance company's drivers who do not select their monitoring program receive no further motivation from them to drive more safely.

4.2. Rewarding drivers who ignore (in-vehicle) distractions

The Texas A&M Transportation Institute, as a component of its peer-to-peer safe driving program 'Teens in the Driver Seat', has developed an incentive-based smart phone application (app) (Henc, Munira & Tisdale, 2021). Essentially, the app is a reward system in which drivers earn points for miles driven without having any interaction with their smartphones. Points earned can be redeemed for rewards and are used as a basis for competitions and achievement of safe driving levels. The authors commented that this app exemplifies a practical implementation of the Teens in the Driver Seat's marketing slogan: 'Responsibility has its own rewards'.

To activate the app and earn points, drivers select a green "Start Trip" icon on their phones at the start of each trip. The app does not activate while the car is in motion, so the vehicle has to be parked (or not moving) to officially start a trip. Upon arriving at their destination, users select a red "End Trip" icon, which automatically appears once the vehicle comes to a complete stop, to initiate related point and mileage calculations. Users of the app receive five points for every distraction-free mile driven over the course of a trip. If a distraction (i.e. interaction with phone) occurs at any time during a given trip, no points are earned. Once a distraction-free trip is complete, users receive a "thank you" note for being a safe driver, and their total points earned for the trip are logged. If any interaction with the phone is detected, users receive a note indicating no points have been earned.

Phone use while driving datasets were collected from two distinct deployments of the app — one in 2017 (drivers aged 15 to 19) and one in 2018 (drivers aged 15 to 24) — each over a timespan of several months. The datasets included over 12,200 trips and more than 100,000 miles logged using the app. Statistically significant reductions in distracted driving were shown to have occurred when rewards were earned for zero phone interaction while driving. Incidentally, in the 2018 deployment, the phone app had the added capacity of detecting the risky behaviours of hard braking, hard cornering and sudden acceleration, and statistically significant reductions over the period were also found in these.

The researchers concluded that, using a reward-based smartphone app can exert a positive influence on young drivers and consequently that implementing and sustaining such an intervention is valuable and warranted.

4.3. Rewarding safe behaviours by young drivers

The studies reviewed in sections 4.1 and 4.2 tended to either focus on young drivers, or included them in their sampling. This may be serendipitous, seeing many young tertiary students are willing to be research participants if they are paid for their time. Fortuitously, however, it is useful to recruit young drivers seeing they are the age group most likely to be involved in crashes. Reward scheme studies with focuses on young drivers all tended to reveal or show potential favourable effects of reward schemes (e.g. Stevenson, Harris, Mortimer, Wijnands, Tapp, Peppard & Buckis, 2018). Although, as pointed out by Elvik (2014) and Mortimer et al. (2018), the trick is to find a balance in reward size that yields desired results, but not at too great an expense.

Some research has found that low-value rewards for safe driving can work among young drivers in a peer group context. Musicant, Lotan and Grimberg (2015) investigated providing peer group incentives that encouraged use of a smartphone app providing *g*-force based feedback (hard acceleration and braking) to young drivers and their pre-arranged sponsor (such as a parent). Nearly 300 participants in this Israeli study downloaded the app and used it to win rewards for the group (e.g. group tickets to events). Additionally, friends were recruited by participants to use the app to help their group win rewards. The research team concluded that the study confirmed their earlier pilot study, that barriers to adoption of the feedback app by young drivers can be overcome by choosing low-cost, suitable peer group reward schemes. Other research has also shown that peer group rewards can be as effective as individual rewards increasing safer driving (e.g. Pentland & Shmueli, 2018).

Aside from reward size, there are other factors to consider with regards to gauging reward effectiveness for young drivers. While exploring which factors make a road safety intervention successful for young drivers, Weston (2016) considered that young drivers, particularly males, tend to be more motivated by the possibility of rewards than do drivers from other age groups, and that some young drivers are more motivated by rewards than other young drivers. However, for young drivers, what is a reward can be experiencing a thrilling sensation from a risky driving behaviour or peer group approval of such risky driving, that are valued more highly than the appeal of any financial or other tangible reward (Scott-Parker & Weston, 2017; Vankov, Schroeter & Twisk, 2021). Further, drivers prone to sensation seeking may be persuaded to drive safely if any tangible reward is given *in the shorter term*, as opposed to any reward given later, even if a delayed reward is of higher value (Qu, Zhang & Ge, 2020). This diverse nature of how rewards influence young drivers contributes to questions surrounding reward effectiveness. Essentially, *some* young drivers *may* modify their behaviours if rewarded tangibly, but not necessarily all. Due to personality differences for example, some young drivers are more sensitive to the notion of a reward, and different sorts of rewards than other young drivers, (Scott-Parker, Watson, King & Hyde, 2012). Hence, not all young drivers will respond in the expected way, nor indeed the same way, or to the same level to particular rewards. Moreover, rewarding drivers for safe driving as evidenced by not experiencing any crashes or incurring offences over a given period may lead to underreporting of crashes and encouraging drivers to avoid police detection (Scott-Parker, Goode & Salmon, 2015).

Despite such concerns, Weston (2016) believes that rewarding young drivers for safe driving is still worthy of inclusion in a suite of measures to influence young drivers.

In August 2022, Victoria introduced a scheme called 'unsafe2safe'. It is a trial program aimed at transitioning 18 to 25 year old, regionally dwelling drivers into a safer car. As an incentive scheme, rather than a reward scheme, drivers can apply for a \$5000 subsidy to replace their old cars (defined as over 16 years old) with newer, safer ones.

4.4. Rewarding safe driving in fleet settings

Although the *2021-2030 National Road Safety Strategy* contains no reference to reward or incentive schemes, the topic has been considered at a national policy level in fleet contexts. Australia's National Road Safety Partnership Program (NRSP) (2017) has released a discussion paper on the role of incentives in workplace road safety. The paper takes pains in drawing the distinction between incentives and rewards such that: "...incentives differ from traditional rewards because the benefits are conditional on employees' *future* safe driving practices, not previous driving practices (p.1). The paper goes on to note that the three forms of incentive that have demonstrated effectiveness on safer fleet driving are peer and supervisor recognition, tangible rewards such as commemorative plaques and vehicle upgrades, and monetary benefits. Moreover, the choice of incentive(s) should be a matter of consultation with employees, and incentives can be individual or work-group (peer) based. They can be applied to time-periods or distances driven that are incident-free, or they can be applied to demonstrated reductions in recorded incidents. While much of the paper's remainder outlines examples of successful incentive programs with respect to workplace road safety in a range of industrial contexts, there is some discussion on how an incentives program should be seen, not as a stand-alone entity, but as a component integrated into a company's evolving culture of safety. Such a culture should be pro-active in regularly monitoring reward scheme effectiveness and in making sure incidents that occur are used as learning opportunities for improvements.

In investigating what strategies fleet managers have used to improve safety, such as developing and promoting a culture of safety, Camden, Hickman and Hanowski (2022) compiled case studies of nine commercial motor vehicle fleets that had successfully improved their safety performance. The successful strategies were organised according to the Haddon Matrix (road infrastructure, vehicles and human factors mapped against pre-crash, crash & post-crash phases). Their results showed that there was no one single strategy that fleets used to improve safety. Instead, fleets relied on a comprehensive approach, focusing on pre-crash countermeasures, including addressing hiring practices, driver training, fleet safety culture, safety technologies, scheduling, and maintenance. Importantly, however, as pre-crash measures, an enhanced safety culture and advanced safety technologies were identified as *critical* components to their companies' safety improvements.

An American study by the New England University Transportation Center (Pentland & Shmueli, 2018) examined the effectiveness of monetary rewards using real-time monitoring of 60 fleet car drivers over 5 months. Driving behaviours were measured continuously using in-vehicle data recorders, pre-installed to enable naturalistic, objective and concise measurements, including of speeding, extreme braking and acceleration, sharp-turns, lane changing, and short headway spaces. Using text messages and a dedicated smartphone app, drivers were provided with daily feedback about their improvements and the reward they had gained for that day (varying according to the degree of improvements achieved). An average improvement of 25% in driving behaviours was found, whereas a control group (receiving feedback but no reward) showed no improvement at all.

In addition to promoting safer driving, rewards have also been successfully used to encourage fleet drivers to operate in fuel-efficient ways. A study of 91 employees in a German transport logistics

company (Schall, Wolf & Mohnen, 2016) found that both monetary and non-monetary rewards (e.g. vouchers for cinemas, restaurants, etc) improved the frequencies and amplitudes of more fuel-efficient journeys. However, some Spanish research on promoting eco-driving has cautioned that, in fleet settings, reward schemes must be perceived to involve clear evaluation processes for individual driver's performances, as unfair systems could lead to discomfort, complaints, and repudiation of the schemes (Pozueco, Tuero, Pañeda, Pañeda, Melendi, García, Orueta & Rionda (2019). This point of course, is equally germane to schemes that reward safe driving behaviours. Other research has also shown that monetary rewards can effectively improve eco-driving (e.g. Pentland & Shmueli, 2018).

In fact, there is substantial cross-over between promoting safe driving practices and promoting fuel efficient driving, whether or not in fleet settings. For example, eco-driving behaviours include, smooth acceleration and deceleration and anticipating the traffic flow to minimize the use of brake and accelerator, practices that, along with adherence to speed limits and keeping a safe following distance, are integral to safe driving (Vaezipour, Rakotonirainy, Haworth & Delhomme, 2019). One German company (HUK-Coburg, 2022) promoting use of its 'Eco-Drive' telematics-based phone-app, merely spruiks safety as a *side-benefit* of eco-driving! Nonetheless, just as some drivers are more likely to engage in risky driving for the reward of a thrilling sensation rather than receiving a tangible reward for not doing so, many drivers place a high priority on caring for the environment but subvert that in the interests of convenience and saving time (Harvey, Thorpe & Fairchild, 2013).

As was noted in Chapter 2 of the present report, one of the hitherto poorly explored questions surrounding reward schemes relates to reward size and frequency. Research by Elias (2021) shed some light on this in a real-world study involving 133 bus drivers in Israel. Various financial reward combinations of size and frequency were studied in relation to improving safety performance in regard to speeding, tailgating, and lane changing without signalling. It was found that small financial rewards consistently given were more effective in improving safe behaviours over the longer term than large rewards given occasionally. Moreover, small rewards that were predicable were more effective than large rewards that were given unpredictably. The author concluded that a combination of driver surveillance, financial rewards and real time driving performance feedback produced a significant decline in traffic violations (at least in fleet settings).

Finally, there are schemes within fleet settings that collate feedback from the public about the driving behaviours of employees. Such schemes tend to focus on safe or courteous behaviours generally rather than specific driving behaviours, and may or may not involve rewards for drivers. There are also companies that manage the collation of public reporting for feedback to individual companies that have a contract with an umbrella company.

In the UK, for example, Safe Driving Scheme (2022) has a website whereby the public can log both positive and negative driving behaviours via an online report form. While reporters have to supply a valid email address, their reports are treated anonymously (though the company monitors IP addresses to help identify hoax reports). Individual companies signed up to the Safe Driver Scheme require their vehicles to display a decal (Fig 4.2).



Figure 4.2
Decal, Safe Driving Scheme (2022)

Safe Driving Scheme regularly forwards collations of reports it has received to individual companies for investigation and/or any further action. While no further details are available on the company's website, Safe Driving Scheme claims that research has shown that companies signed up to the scheme have reported 22% fewer incidents and a 52% reduction in incident costs. About 10% of reports relate to commendations of safe driving behaviour.

4.5. Key point summary of research evidence since 2013 on driver rewards

- The latest driver monitoring and feedback technologies appear to enhance reward scheme effectiveness and popularity
- GPS based technologies can provide real-time feedback to smartphones on speed limit compliance, instances of hard acceleration or braking, and maintenance of following distances
- Typical rewards are monetary-based, e.g. cash prizes, reduced driver licence renewal fees or car insurance premiums, or lottery entry
- Some non-monetary reward systems involve points, earned either individually or for a peer group
- Reward schemes must be seen to use clear evaluation processes of drivers' performances, as unfair systems may well lead to complaints and repudiation of the schemes
- Not all drivers respond in the same way or to the same extent to reward schemes, thus making wide-scale reward schemes of questionable cost-benefit effectiveness
- Some drivers, particularly some young drivers, are motivated more by a sense of thrill when engaging in risky behaviours, than in any tangible reward for driving safely; penalties are likely to be more effective for habitually risky drivers
- Reward schemes in fleet settings are best embedded in an industry's or company's safety culture
- Fleet reward schemes can be used to promote eco-friendly behaviours, as well as safe driving
- Small financial rewards consistently given are likely to be more effective in improving safe behaviours than large rewards given occasionally
- Companies can invite the public to report safe driving behaviours for consideration of providing rewards.

5. Concluding remarks and suggestions

Despite scant research into their effectiveness, reward schemes remain a popular behavioural intervention. Most of the schemes reviewed in Bailey (2013) are still operational in 2022, although a few have been modified in some way. However, none of the nineteen schemes summarised in Tables 3.1 and 3.2 appear to have been evaluated as to their effectiveness. Where a scheme has been modified or discontinued, this was due either to administrative costs or to consideration of research which cast doubt on reward scheme effectiveness.

Central questions about reward scheme effectiveness include:

- Whether it is necessary to have high-value rewards for achieving desired behavioural changes; in other words, would low-value rewards produce the same result?
- To what extent are disbenefits of rewards influential, for example, by decreasing intrinsic motivation to drive safely, and hence increasing driver reliance on rewards being given?

While relevant research since 2013 has explored the first question more so than the second, it is significant that current road safety strategic directions of federal and state governments do not mention possible use of reward schemes. However, those documents do consider improving the safety of young drivers and occupational drivers as strategic priorities; indeed much research into reward scheme effectiveness since 2013 has been in relation to these two driver groups. These research efforts have been substantially assisted by increasingly more sophisticated driver monitoring and feedback technologies that afford tailoring of reward processes for safe behaviours such as speed limit compliance, safe following distances, and distraction free driving, and for young drivers and fleet drivers in particular. In summary, such research has found that:

- Combining telematics-based feedback with financial rewards can deliver significant reductions in risky driving behaviours (Mullen et al., 2015; Merrikhpour et al., 2014; Henc et al., 2021; Musicant et al., 2015; Elias, 2021)
- Some drivers are unresponsive to feedback, even when any accompanying monetary rewards are given (Ellison, 2013; Merrikhpour et al., 2014), and hence require punitive interventions (Mortimer et al., 2018; Elvik, 2014)
- Small financial rewards consistently given are likely to be more effective in improving safe behaviours than large rewards given occasionally (Elias, 2021)
- For some young drivers, the reward of a thrill from a risky driving behaviour can be valued more highly than any tangible reward (Scott-Parker & Weston, 2017; Vankov et al., 2021)
- Hence, not all drivers respond in the same way or to the same extent to reward schemes, thus making wide-scale reward schemes of questionable cost-benefit effectiveness (Elvik, 2014)
- In fleet settings, any scheme to reward safe driving should be integrated within a company's evolving culture of safety (Camden et al., 2022); and may be linked to rewards for eco-friendly driving (Schall, 2016; Vaezipour et al., 2019)
- Reward schemes must be perceived to involve clear evaluation processes for drivers' performances, as unfair systems could lead to complaints and repudiation of the schemes (Pozueco et al., 2019).

The above concluding remarks and summary of research since 2013 underpin the following suggestions regarding reward schemes that could be considered.

5.1. Rewards for offence-free driving during the provisional licence phase

As was seen in Table 3.1, along with some overseas countries, four Australian jurisdictions operate schemes to reward offence-free driving. In Tasmania and Victoria, drivers who have been offence-free throughout their provisional licence phase are eligible for a free 3-year full licence, while a free 1-year licence renewal is offered to such drivers in Western Australia. The New South Wales scheme rewards a driver of any age with a 50% discounted licence renewal fee if they have 5 years of offence-free driving. However, as stated, none of these schemes appears to have been evaluated in terms of to what extent rewarded drivers continue to exhibit offence-free driving.

Consequently any future consideration of a scheme to reward novice drivers' offence-free periods should be on a trial basis. The trial would be contingent on an evaluation through monitoring of subsequent offences, if any, incurred by previously rewarded drivers. If it were found that a majority of the rewarded drivers subsequently committed offences in the next 2 to 3 years, then the scheme should be abandoned. On the other hand, if it is found that rewarded drivers on the whole continue to be offence-free (albeit perhaps with an occasional minor infringement), or at least have a lower rate of offending compared to the average offence rate of a jurisdiction's drivers, then the scheme could be maintained, depending on overall financial cost.

An alternative approach could involve offering offence-free provisional drivers automatic entry to a lottery offering a licence fee refund to, for example, 1000 such drivers each year. However, no Australian jurisdiction uses a lottery-based reward system and such a scheme, if it were implemented, could be perceived to be unfair to offence-free drivers in a jurisdiction who are *not* rewarded with a licence fee refund.

5.2. Telematics-based monitoring by motor insurance companies of driving performance

Currently telematics-based monitoring by motor insurance companies, such used in those studies discussed in Chapter 4, is relatively new in Australia. Two companies that do this are Youi and UbiCar (Mozo, 2022), who use smartphone-based apps provided by the company that provide feedback to drivers. Drivers who take up this option receive no reward directly, such as a fixed premium discount, but instead are assigned an insurance policy premium based on how they drive.

It is suggested that, in the first instance, the local motor insurance industry could be approached to better understand the extent of take-up of telematics-based monitoring of drivers in this State and any appetite for expansion of this approach among insurance companies. Such insurance companies may be interested in exploring the possibility, either as an alternative option, or additionally offering fixed premium discounts to driver clients willing to be monitored.

5.3. Reward schemes for drivers in fleet settings

The studies reviewed in Section 4.4 (Camden et al., 2022; Schall, 2016; Vaezipour, et al., 2019) indicate that reward schemes in fleet settings can result in improved driver safety and in eco-friendly driving. The reward schemes are most likely to be successful if (i) a fleet setting embraces and pursues a culture

of safety; (ii) employee drivers are consulted about the kinds of rewards they would be willing to receive for various indicators of improved driving practices; and (iii) the company uses telematics or smartphone apps to monitor and provide tailored feedback on driving performance. The Australian National Road Safety Partnership Program's (NRSPP) (2017) discussion paper supports these views through its appended selection of case studies of reward schemes in Australian fleet settings. Significantly, along with government agencies, and road safety bodies and transport associations, a range of large and small companies who employ delivery drivers are represented in the NRSPP (e.g. Toll, City of Sydney, UnitedCare).

CASR suggests that, in the first instance, relevant local industry bodies (e.g. road transport associations) be approached to explore which local companies operate reward schemes for their employee drivers and the nature of any schemes, with a view towards gauging the extent of local appetite for expansion of reward schemes to other companies' fleets.

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Appendix – Current reward schemes around the world

This list has been compiled from searches of the Transport Research Database TRID, and Google, and includes current schemes from Tables 3.1 and 3.2 and, while not claiming to be an exhaustive list, has been made as comprehensive as possible. For example, numerous motor insurance companies around the world commonly offer reduced renewal premiums for drivers making no at-fault claims, and the listing below can only accommodate a few as representative indications. Instead, in selecting overseas schemes for inclusion on the list, the focus was on diversity in scheme nature.

Table A1
Current schemes rewarding periods of offence-free driving

Scheme name (or description)	Jurisdiction	Date began (if known)	Comment
Fair Go For Safe Drivers	New South Wales	2012	Drivers with no offence history for 5 years receive 50% discounted licence renewal fees. No evaluation information is available.
Free Licence Scheme	Victoria	2006	Probationary (i.e. provisional licence) drivers who were offence free during their 4-year probationary period received a free 3 year full licence. No evaluation information is available. This scheme was discontinued in 2013, but is to be reinstated from October 2022. Any driver who is offence free during the previous 3 years will be entitled to a 25% discount off their next licence renewal charge.
Safer Driver Rewards	Tasmania	2008	Drivers who are offence free throughout their P1 and P2 periods (2 – 3½ years, depending on age) receive free 3 year full licence. No evaluation information is available.
Safe Driver Reward Scheme	Western Australia	2006	Drivers who are offence free throughout their P1 and P2 periods (2 years) receive free 1 year full licence. No evaluation information is available.
Licence renewal fee discount	ACT	2021	ACT residents are eligible to receive a 30% discount on their driver licence renewals if they have not recorded any of the following offences in the previous 5 years: committed a traffic or camera detected traffic offence; been convicted of a major offence such as drink or drug driving; or, been convicted of a motor vehicle related traffic offence. No evaluation information is available.
Free licence for safe novice drivers	Northern Territory	2015	Offence-free provisional drivers can get a free 10-year full licence. No evaluation information is available.
Good Behaviour Bonds	All Australian jurisdictions		Schemes allow drivers facing suspension to continue driving (the reward) but subject to requirement to drive relatively offence-free. Schemes do not appear to have been evaluated for road safety effectiveness.
Early non-display of P-plates by P2 drivers	South Australia	2005	P1 drivers with 12months demerit point free driving advanced to P2 (no P-plates required) otherwise on P1 for 2 years. No known evaluation study. Scheme discontinued due to suite of Graduated Licensing Scheme changes in 2014 aimed at streamlining the State's licensing process.
AAMI Insurance Safe Driver Rewards	Australia		Drivers insured with AAMI get increasing discounts on their renewal premiums for every year free of at-fault claims (i.e. claims for crashes where drivers are not charged with traffic offences), unless the driver of the insured's car is not declared. No evaluation information is available, though the company's own records could be studied. Other Australian motor insurance companies, e.g. GIO, have similar schemes.

Safe Driving Points	Virginia, USA		Safe driving points earned for every year of offence-free driving; these points can be traded against demerit point accumulation. No known evaluation.
Free Driver Licence Extension	California	1970s	Offending drivers receive free licence extension if they were offence-free in past year. The Motor Vehicles Department's own evaluation (Hurano & Hubert, 1974) concluded the program did not reduce subsequent traffic convictions, but the program 'may have merit' (Hartley & Forgione, 1999).
Safe Driver Incentive Plan / Insurance Points	North Carolina	1957	Reduced insurance premiums with periods of offence-free driving. No known evaluation.
White Points	Dubai/UAE	2012	One white point earned per month for offence-free driving. Point winners can enter a raffle for a new car, or trade off against demerit (black) points. No evaluation information is available.
Safe Driver Rewards	US & Canada	2015	Trucking fleets reward drivers with points for achieving offence-free driving periods. Points are exchanged for a choice of 750 products obtainable via a website. Drivers can accumulate their points to exchange for higher value prizes.
Safe Driver Awards	Canada	2002	Scheme is operated within one company, Bison Transport. Awards are earned for periods of 'safe driving' (not specifically defined, but likely to be offence-free periods). Awarded drivers receive salary increases, certificates, badges, vehicle decals and gold rings for 8-year good records.
Auto Rewards	Ontario, Canada	2014	A telematics device, plugged into a vehicle tracks sudden braking, rapid acceleration, plus total distance driven and times of day. Transport companies in the cooperative who sign up to the scheme receive an automatic 5% premium discount, plus discounts of up to 25% off premiums, depending on their drivers' collective safety record. Individual drivers receive feedback on their safety record.

Table A2
Current schemes rewarding specific driving behaviours

Scheme name (or description)	Jurisdiction	Date began (if known)	Comment
Fuel voucher scheme	France		Gendarmes in some prefectures (e.g. Dordogne) monitor roads and stop drivers observed wearing seatbelts correctly, not using mobile phones, keeping safe following distances, etc, and reward them with fuel vouchers. No evaluation information is available.
Safe Driving Rewards	New Zealand	2019	NZI commercial vehicle insured transport operators with telematics recording of driver behaviour in heavy vehicles have excess waived in event of a crash. Speeding, hard braking & acceleration are monitored. Drivers get a safety rating in relation to other employees. Current version of program lasts until May 2023. (Previous version: 2015 to 2017).
Safe Driver Reward Scheme	Ontario, Canada	1933	Scheme recognises commercial drivers “who practise the principles of safe, courteous and defensive driving”. Awarded drivers receive a yearly certificate and a badge, coloured according to the number of years of at-fault collision free driving.
The Floop Rewards Scheme	UK & USA	2022	The Floop is an international company providing telematics options to insurers of transport companies to monitor employee’s driving behaviour. One popular option is as the basis of driver reward schemes which, the company claims, has improved driver safety scores by 54%.
			(Note: there are numerous UK-based companies, whether or not insurance-based that offer rewards to drivers demonstrating good records if they are prepared to have telematics monitoring apps installed on their mobile phone or in their car, e.g Vitality, Carrot Insurance, IMS, BrightMile. Rewards include: cash prizes (some donate-able to charities), free discount cards, reduced car insurance excess.)
Yes Reward Scheme	UK		A British driving school called ‘Yes’, whose students pass their driving test first time receive a £500 reward. Students must take a minimum 25 hours of driving tuition with the school to qualify.
Designated Driver Scheme	UK	2021	An entertainment venue encourages patrons to nominate their designated driver who has elected to remain alcohol free for forward and return journeys, with the designated driver receiving a refund of the cost of their show tickets.
Speed sensor scheme	The Netherlands	2018?	The city of Helmond trialled a speed camera that recorded drivers obeying the speed limit. Each vehicle thus recorded earned half a Euro, with the reward going towards a local community project such as a new sports playing field.
US Postal Service Safe Driver Awards	USA		Rewards are given for ‘incident-free’ driving records maintained over 1-45 years and/or total distances driven. Rewards include uniform shoulder badges, lapel pins, certificates and wall plaques.
Safe Driver Award	Ontario, Canada		Infrastructure Health & Safety Association provides lapel pins for incident-free driving records for companies’ drivers.
ORDP	Kansas, USA		In this scheme, individual occupational drivers rather than companies sign up to the scheme, with the advantage that drivers can maintain the bonus points they receive if they move to another company (or are employed by more than one company).
Safe Driver Recognition Scheme	Saskatchewan, Canada		Basic motor insurance premiums (i.e. without comprehensive cover) are reduced for periods of incident-free driving. Discounts range through 2% for a year of incident-free driving to 25% for 25 years of incident-free driving.

Smart Drivers	Belgium		Young drivers can download a smartphone app that in real-time records behaviours such as speed, acceleration and braking, smartphone use while driving, time of driving, and road type. Feedback involving safe driving scores and personalised feedback, tailored to reflect individual motivation for safe driving (e.g. intrinsically wanting to be a safer driver or ability to earn rewards for safe driving). The nature of any rewards received is not clear, but includes an opportunity to share scores etc., on social media for those responsive to peer-feedback.
Put phone down app	Ireland		Drivers download a smartphone app from Toyota Ireland that can detect if the phone is facing downwards while the vehicle is in motion. Drivers accumulate points for keeping their phone down, which can be exchanged by a participating retailer for a free hot drink. If a driver turns over their phone while driving, all accumulated points are lost.