ROAD SAFETY
CAMERA STRATEGY

SPEED CAMERAS
USED IN THE ACT

UNLESS OTHERWISE SIGNPOSTED

50

ROAD SAFETY
It’s Everyone’s Responsibility
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Introduction

The 2014 ACT Auditor-General’s review *Speed Cameras in the ACT*, included a recommendation to develop and implement a speed camera strategy. The ACT Government has developed this ACT Road Safety Camera Strategy consistent with the Auditor-General’s recommendation. It sets clear objectives for each of the camera types used in the ACT Road Safety Camera Program. It also outlines how the Government will improve, measure and monitor the effectiveness of the cameras to inform future decisions about their use.

**Strategic goals**

The goals of this strategy are to:

1. deliver an improved strategic management framework for the camera program;
2. improve the community’s understanding of the purpose and the role of the camera program in supporting improved road safety outcomes for the Territory; and
3. provide clear objectives and measurable targets for assessing the impact and contribution of the cameras to road safety in the Territory.

**What’s the problem with speeding?**

Speed is highly implicated in a large proportion of serious casualty crashes, and contributes significantly to the severity of most crashes. In the ACT, like other parts of Australia, ongoing efforts are required to improve compliance with speed limits across the road network in order to reduce road deaths and life changing injuries.

ACT Policing reports that speeding was identified as a contributing factor in 13 of the 41 (31.7 per cent) fatal crashes which occurred between 2010 and 2013. This is similar to experience interstate, with national road crash data showing that speed is the main causal factor in around 30% of fatal crashes. Inappropriate speed is also a factor in crashes, with some drivers failing to drive to the conditions and obey advisory speed limits.

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1. ACT Policing, Performance, Evaluation and Review, PROMIS as at 20 January 2013
In 2013, there was a total of 7,863 on-road traffic crashes reported in the ACT. These crashes resulted in 792 casualties, including seven fatalities and 140 hospital admissions\(^3\). The impact of these crashes could be reduced or in some cases avoided altogether through a reduction in speed. Research confirms that even small reductions in average speeds can result in greater percentage reductions in deaths and injuries. For example, a 5% reduction in speed can result in a 10% reduction in injury crashes.

**ACT speed management approach**

The ACT Government’s speed management approach involves setting and enforcing speed limits, traffic calming and engineering treatments, and education and road safety awareness.

Camera technology supports police enforcement and has been widely adopted as a means of encouraging drivers to comply with speed limits. Cameras are also used to reduce the rate of right angle crashes arising from red-light running.

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Community Attitudes to Speed and Speed Enforcement

There are a range of views within the community regarding road safety measures and speed management in particular. This was confirmed by two recent ACT community road safety surveys in 2012 and 2013.

Road Safety Community Survey – 2013

The 2013 Road Safety Community Survey involved a telephone poll of 1,000 ACT residents who were selected using a computer based random selection of the White Pages. The survey was undertaken by an independent research company on behalf of the Government and covered various aspects of road safety, including speed limits and speed enforcement and the use of road safety cameras.

Some of the results of the survey relevant to speeding and speed enforcement included:

- 85% of participants considered that speed limits in the ACT are ‘about right’; while 12% considered they are ‘too low’ and only 3% felt they are ‘too high’.
- 75% of participants agreed that enforcing the speed limit helps to lower the road toll. Police presence was considered to be most effective (86% rating) followed by mobile road safety cameras (61%) and point to point cameras (58%). Fixed speed cameras were considered to be the least effective, with just over half of all participants rating them as effective.
- There was a moderate level of agreement that using road safety cameras helps to lower the road toll, with 56% agreeing, 28% disagreeing and the rest being neutral on this statement.
- There was moderate agreement (52%) that more road safety awareness advertising could improve road safety, and 56% believed that publicity and advertising of road safety issues is useful in changing people’s driving behaviour.

Note: Percentages expressed above may not add up to 100% as a result of rounding.

Online Road Safety Community Survey – August 2012

The Justice and Community Safety Directorate ran an online road safety community survey in 2012 which was published at www.timetotalk.act.gov.au. The online survey was a self-selecting survey and had a specific focus on speed and the role and use of road safety cameras. The survey was open for a period of six weeks from 6 August 2012 to 14 September 2012 and received 501 responses.

The main findings of the online survey included:

- 58% of participants considered that speed limits in the ACT are ‘about right’; while 36% considered they are ‘too low’ and only 4% felt they are ‘too high’.
- 58% of participants agreed that using road safety cameras helps to lower the road toll, whilst 33% disagreed and 10% were neutral.
- 70% of participants considered that police enforcement is either very effective or effective.
- There was limited belief (approximately 27%) in the effectiveness of road safety cameras, with mobile road safety cameras (30%) being considered the most effective method of camera enforcement and fixed road safety cameras (19%) being considered the least effective.

Note: Percentages expressed above may not add up to 100% as a result of rounding

The results of the 2012 and 2013 surveys indicate that there is general community support for speed management measures, but that more can be done to inform the public about the role and use of road safety cameras in speed management.

Improving community attitudes to speed and road safety cameras

The 2014 ACT Auditor-General’s review, *Speed Cameras in the ACT*, highlighted the need for improving community attitudes to speeding and developing an improved understanding in the community about the role and use of road safety cameras in reducing road trauma.

The audit report investigated the results of National Survey of Community Satisfaction with Policing surveys and cited results showing that 60 per cent of ACT drivers surveyed each year from 2009–10 to 2011–12 stated that they had driven 10km per hour or more above the speed limit. This was identified as being higher than the Australian average and higher than other jurisdictions with the exception of New South Wales in 2011–12 and Western Australia in 2010–11 where reported speeding was similar to that of ACT respondents5.

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6. Evaluation of the ACT Road Safety Camera Program, A TARS Research report for the ACT
In November 2013 the Government commissioned an independent evaluation of the ACT road safety camera program. The evaluation was undertaken in 2014 by the University of New South Wales (UNSW) and included an analysis and summary of community attitudes to speeding. The analysis was based on the results of separate community attitudes surveys conducted for the Commonwealth Government during the period 1995–2011.

Consistent with other studies and surveys of community attitudes, the UNSW analysis confirmed that there is a persistent view which exists about speed enforcement, and cameras in particular, being used to ‘raise revenue’. These views were identified as having peaked around the time fixed cameras were introduced. This demonstrates the importance of public awareness and education campaigns designed to educate the community about the purpose and role of cameras in meeting road safety objectives and road trauma reduction targets.

To improve public understanding of the need for speed management and the role and use of cameras the Justice and Community Safety Directorate will implement the recommendations of the Auditor-General’s review by publishing and promoting information about the purpose, performance and effectiveness of each camera system. This will include the publication of road safety data, infringement statistics and maintenance and calibration records. The Government will conduct further surveying of the public to measure changes in attitudes.

<table>
<thead>
<tr>
<th>Action Items</th>
<th>Performance indicator</th>
<th>Performance target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publish information on the purpose, performance and effectiveness of speed camera systems</td>
<td>Increased awareness of the role and purpose of road safety cameras</td>
<td>Increase on previous ACT community road safety survey result</td>
</tr>
<tr>
<td>Better engage the community by inviting participation, input and feedback on the use of the ACT’s road safety cameras</td>
<td>Increased awareness of the role and purpose of road safety cameras</td>
<td>Increase on previous ACT community road safety survey result</td>
</tr>
</tbody>
</table>
Opportunities for Improvement

The evaluation by UNSW included a literature review to provide evidence and guidance to support improved strategic and operational management of the ACT camera program. This section of the strategy identifies these opportunities and includes a set of action items for each of the four camera technologies used in the ACT – mobile, fixed speed, red-light and point to point.

Mobile cameras

Objective: Reduce speeds and crashes across the network through an “anywhere, anytime” enforcement approach.

Evaluation studies have consistently found that mobile speed cameras reduce mean speeds and casualty crashes in the location of mobile cameras. There is also evidence that the effect of mobile cameras can extend beyond the immediate vicinity of the camera.7

Evaluation of ACT mobile cameras

A statistical analysis of the impact of the ACT’s mobile cameras, undertaken as part of the UNSW evaluation, found that mean percentile speeds on ACT roads with mobile cameras reduced by 6%-8% in the first few years after the introduction of the cameras and remained at that level for a few years more, before increasing to pre-camera levels around mid-2006. This reduction in speed coincided with a 25%-30% reduction in serious injury crashes – which was identified as being consistent with the Nilsson Power Model8. The Nilsson Power Model provides that a 6%-8% reduction in speed will result in a 20% reduction in casualty crashes.

The reduction in crashes was not sustained, and in 2007, serious injury crashes began to oscillate between a very large increase and a very large decrease with the trend steadily increasing up to 2013 to the same levels as when cameras were first introduced. The UNSW researchers concluded that the increase in crashes and speed seemed to coincide with decreasing and less consistent enforcement at mobile camera sites. Another possible explanation offered in the report was that drivers learned to avoid mobile speed camera detection.

**Next steps**

The purpose of the ACT's mobile camera program is to improve compliance with speed limits by conducting speed enforcement “anytime, anywhere”. The Auditor-General’s report noted that, given the relatively limited number of sites where mobile camera vans may operate, and that operations are undertaken in an overt manner, the desired “anytime, anywhere” approach is currently unlikely to be achieved.

To help achieve the stated objectives of the program, the Government will amend the road transport legislation to allow cameras to be used on any road in the ACT. Currently a mobile camera can only be used on roads that have been notified in the *Road Transport (Safety and Traffic Management) Regulation 2000*. At present this consists of 177 arterial, minor and major collector roads in the ACT. The new approach will ensure cameras can genuinely be deployed “anywhere, anytime,” on any road in the ACT.

Under this strategy, deployment of mobile cameras will target:

- roads with a history of crashes and speeding;
- locations that complement and support police enforcement;
- randomly selected roads, in support of the “anywhere, anytime” approach.

Currently, mobile cameras can only be placed on approved roads at sites that meet a range of technical, health and safety criteria (for example, they must be at least 200 metres from a change of speed limit). These criteria will continue to be applied. The location of assessed sites will be published on the camera program’s website.

In addition, the ACT Government has developed a mobile camera deployment strategy. The deployment strategy addresses improved alignment of mobile camera operations with police enforcement and strategic deployment based on police information about sections of the network where speeding is either known or reported to be an issue.

On the issue of considering covert approaches to mobile camera operations, the UNSW evaluation found that in the majority of evaluations of other programs, mobile cameras were marked with warning signs to alert drivers to their presence – similar to the approach used in the ACT. Studies about the effectiveness of covert approaches in reducing injury crashes were inconclusive. In the absence of any conclusive evidence to support a covert approach to the use of these cameras, the ACT will continue to use them in an overt way.

This high visibility approach to camera enforcement helps to increase perceptions about the likelihood of being detected speeding as motorists are able to identify and see the cameras in operation.
<table>
<thead>
<tr>
<th>Action Items</th>
<th>Performance indicator</th>
<th>Performance target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allow for mobile cameras to be used on any road in the ACT</td>
<td>Legislation is amended to approve all roads and new sites assessed and being used for mobile enforcement</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td>Increase in the number of ACT residents who see mobile cameras ‘often’</td>
<td>Increase on previous ACT community road safety survey result</td>
</tr>
<tr>
<td>Implement a mobile camera operational plan, which includes improved alignment with police enforcement</td>
<td>(a) Reduction in speed and crashes on roads approved for mobile camera enforcement</td>
<td>5% reduction in mean speeds on mobile camera roads, and 10% reduction in injury crashes on mobile camera roads</td>
</tr>
<tr>
<td></td>
<td>(b) Increased compliance on roads approved for mobile camera enforcement</td>
<td>Reduction over time in the number of infringements on roads approved for mobile camera enforcement</td>
</tr>
<tr>
<td></td>
<td>(c) Reduction in number of people who self report speeding</td>
<td>Reduction on previous ACT community road safety survey result</td>
</tr>
</tbody>
</table>

**Fixed mid-block cameras**

**Objective:** Location specific treatment to address ‘black spots’ and high risk locations by reducing speed in the vicinity of the camera.

Both the Auditor-General’s review and the UNSW evaluation identified fixed mid-block cameras as an area of opportunity for improved strategic use. These cameras are confirmed in the UNSW evaluation report as having a limited localised effect, rather than a capacity to influence driver behaviour across the road network – which is the basis on which they have been deployed in the ACT⁹.

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Figure 1 below demonstrates the localised effect of these cameras where speeding drivers slow for the cameras and speed up again after the camera, (i.e. deliberate slowing for the camera) (Job 2014).

**Figure 1** – 85th percentile speeds recorded at a sign-posted speed camera in an 80km/h speed limit zone in NSW.

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**Evaluation of ACT fixed mid-block cameras**

The UNSW evaluation did not include a statistical analysis of crash impacts of fixed mid-block cameras as pre-2011 crash data does not accurately identify the crash location on the mid-block. The report notes that at least several years of data – both prior to and after the installation – is required to ensure the validity of the analysis. Since mid-block crash data is only available from 2011, mid-block camera installations could not be assessed with a before-after analysis with these data.

**Next steps**

The original proposal for the use of mid-block cameras in the ACT was based on using them on mid-block sections of road with a history of crashes or high speed offences, consistent with research at the time that the cameras could achieve a local effect at such sites. However, they were subsequently deployed based on survey data relating to traffic volumes and speeding, and environmental and technical suitability.
The siting methodology for the existing cameras was intended to provide a general deterrence across the network. However, as noted in the Auditor-General’s report, the fixed mid-blocks cannot be used to achieve this effect unless there is a high density of cameras (1 camera for every 4km of road).\(^9\)

In light of the Audit report and evaluation findings, potential responses are to: decommission or “switch off” the fixed mid-block cameras; relocate them to sites where they would achieve the objective for this camera type; or retain them at their current sites.

Any new or relocated fixed mid-block cameras will be deployed in the ACT in accordance with the objective to address locations with a known crash history or that are identified as being high risk. The Government will commission an appropriately skilled independent consultant to develop a methodology for identifying locations that are high risk or have a high frequency and severity of crashes for possible future deployment of fixed speed cameras.

The Government will not relocate any existing fixed mid-block cameras pending the development of an appropriate methodology, which may identify more suitable locations for their operation. Any consideration of relocation of the existing mid-block cameras will take account of the remaining “life span” of the cameras.

Existing mid-block cameras will be retained at their existing locations as they continue to contribute to localised speed management at these sites. This benefits road safety by reducing the increased crash risk that is known to be associated with higher levels of speed. Retaining the cameras provides a 24/7 enforcement capability at these sites which would otherwise need to be enforced by police or mobile cameras.

### Action Items

<table>
<thead>
<tr>
<th>Action Items</th>
<th>Performance indicator</th>
<th>Performance target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop methodology for identifying high risk and high crash locations for possible future deployment of fixed speed cameras</td>
<td>Methodology is developed</td>
<td>2015</td>
</tr>
</tbody>
</table>
Red-light cameras

Objective: Location specific treatment to address high risk intersections.

Red-light speed cameras are another location specific treatment and are used to address speeding and red-light running at signalised intersections where road users are vulnerable to right angle crashes. Right angle crashes are highly implicated in fatal and serious injury crashes. This is because there is less protection for the driver and occupants than a frontal impact or rear impact crash. In a side impact crash, the chances of survival rapidly decrease at impact speeds above 50km/h which means their outcomes are potentially more severe than most other crash types\(^\text{10}\).

Overall, reviews of red-light cameras have concluded that the cameras decrease injury crashes resulting from right angle crashes\(^\text{11}\). On the other hand, almost all of the reviews and studies indicate that red-light cameras increase rear-end crashes. While both crash types can be severe, as discussed above, right angle crashes are potentially more severe than rear-end crashes as a result of the lower-level occupant protection in side impact crashes.

The Auditor-General’s report noted that the purpose and resulting siting criteria used for the ACT’s speed / red-light cameras aligns with the practices in other jurisdictions in Australia. In addition, the ACT’s practice of reviewing intersections for alternate solutions to a speed and red-light camera was noted as being ‘good practice’\(^\text{12}\).

Evaluation of ACT fixed speed and red-light cameras

The ACT’s speed and red-light cameras were evaluated by UNSW as a ‘job lot’ rather than individually as the number of crashes at each site were too low to make meaningful and valid interpretations. The statistical analysis of the impact of intersection red-light and speed cameras on crashes found that serious injury crashes at intersections were generally lower following the introduction of the cameras. Crashes at intersections with cameras increased after their installation due to an increase in rear-end crashes (a less severe crash type) which was then followed by a decline to levels slightly below base-line levels.

\(^{10}\) Balance between harm reduction and mobility in setting speed limits: a feasibility study, Austroads, 2005, report AP-R272/05


\(^{12}\) Auditor-General’s report – Speed Cameras in the ACT (report 1/2014), p.38
Next steps

The ACT’s red-light cameras will be kept at their current locations following confirmation by UNSW of their effectiveness in reducing right angle crashes at controlled intersections. The Justice and Community Safety Directorate will review and, if appropriate, amend the criteria for red-light camera treatments, to determine the basis for any expansion of these cameras. This approach maintains safety at the current locations and provides a plan for identifying and addressing other intersections.

<table>
<thead>
<tr>
<th>Action Items</th>
<th>Performance indicator</th>
<th>Performance target</th>
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</thead>
<tbody>
<tr>
<td>Review and, if appropriate, amend criteria for red-light camera treatment versus alternative safety treatments at intersections</td>
<td>Siting criteria is reviewed</td>
<td>2015</td>
</tr>
</tbody>
</table>

Point to point cameras

Objective: Route enforcement to address high speed roads with known crash history or high crash risk.

Point to point cameras are an effective speed management and crash treatment when used on arterial roads and highways. There is also evidence to show that point to point camera systems can lead to reduced congestion, improved traffic flow and lower carbon emissions resulting from less speed variation. Lower traffic speed variation increases network capacity and improves journey time reliability without the need to invest in more expensive road infrastructure such as widening.13

The ACT is unique in an Australian context as point to point cameras are used on urban arterial roads. This urban environment provides some challenges for a point to point camera system as the distance between intersections is typically short (3km or less). In an urban environment there is also the possibility that motorists avoid detection through either deliberate evasion or natural churn (mid block entry and exits) at intersections located within the enforcement route.

13. Point-to-point speed enforcement, Austroads 2012, report AP-R415-12, p.16
The locations of the ACT’s two existing point to point road safety cameras at Hindmarsh Drive and Athllon Drive were selected based on a Forward Design Study undertaken by an independent engineering consultant and subsequent analysis and ranking of a range of potential sites. This work considered the suitability of a range of sites and prioritised potential point to point camera locations, based on a 50:50 weighting of safety and traffic considerations.

The Forward Design Study recognised that in implementing point to point cameras in an urban environment the impact of intersections needed to be considered in selecting sites. In short-listing sites against the ranking criteria those sites with the least non-free flow intersections per kilometre were ranked more favourably. Sites with more than one non-free flow intersection per kilometre were excluded from consideration.

In spite of satisfying the criteria developed, early analysis of the Athllon Drive site suggests that the intersections located within the enforcement area have limited the effectiveness of the cameras. Post implementation speed surveys carried out in the first month of operation showed an initial reduction in the number of vehicles travelling above the speed limit. However, this was not sustained, possibly as a result of motorists learning that the slower speed on the approach to the two roundabouts is, in many cases, enough to reduce the average speed to below the speed at which an infringement would be issued.

The Auditor-General described the use of point to point cameras on urban arterial roads as experimental and not supported by available evidence. The audit report also raised questions about the cost effectiveness of the two systems as in both cases the road length is short which means there is scope for alternatives such as fixed mid-block cameras and mobile cameras that would be capable of enforcing a similar length of road.

**Evaluation of ACT point to point cameras**

The evaluation by UNSW did not include a statistical analysis of crash and speed impacts for point to point cameras as these are recent installations and insufficient data is available for a meaningful analysis.
Next steps

JACS will develop revised siting criteria to ensure future point to point camera sites are located at sites that will provide the most effective road safety outcomes. The criteria will take account of the value for money relative to other speed management treatments by increasing the minimum length of point to point enforcement areas.

A 2012 study by Austroads into point to point speed enforcement recommended that siting criteria should at least include crash history, speed profiles and proactive identification of potential crash sites such as around new developments where traffic volumes are anticipated to be high\(^\text{14}\). The Austroads report also recommended consideration of locations where other forms of enforcement would not be possible or practical and that preference should be given to locations which have relatively high traffic volumes, no major foreseeable planned infrastructure changes, and be in proximity to mains power.

The ACT Government will review the locations of the existing point to point cameras and consider their relocation to sites where they would make a more effective contribution to road safety outcomes. The review will include an assessment of the impact of other existing or possible future road infrastructure and traffic treatments and the associated constraints on current or future performance and effectiveness of the cameras. In the meantime they will be left where they are as they are still making a safety contribution.

<table>
<thead>
<tr>
<th>Action Items</th>
<th>Performance indicator</th>
<th>Performance target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revise the criteria for siting of point to point cameras</td>
<td>Criteria is revised</td>
<td>2015</td>
</tr>
<tr>
<td>Review the locations of the existing point to point camera sites, and consider potential for relocation of cameras to locations where they would contribute more effectively to improved road safety outcomes</td>
<td>Existing camera sites reviewed</td>
<td>2015</td>
</tr>
</tbody>
</table>

\(^{14}\) Point-to-point speed enforcement, Austroads 2012, report AP-R415-12, p.127
The UNSW report provides guidance on methodology and data collection to address future evaluation requirements for the cameras. In evaluating the effectiveness of road safety cameras, factors commonly cited as potential threats to the validity of evaluations are Regression to the Mean (RTM) and spillover effects.\footnote{Evaluation of the ACT Road Safety Camera Program, A TARS Research report for the ACT Government Justice and Community Safety Directorate, July 2014, p.16}

Cameras are almost always implemented at sites that have high demonstrated crash risk and crash risk will be significantly lower after cameras are implemented if they operate as expected. RTM can impact on evaluations as it is possible that the high initial crash risk is due to natural variation in crashing that occurs potentially in any location in the road network, in which case crash risk will decrease for the same reason, rather than due to the presence of cameras. RTM effects can lead to overestimation of the effects of cameras and must be considered in designing evaluation methodologies. RTM effects can be avoided by using long periods for before and after measurement so natural variation can be captured in the evaluation.

Spillover effects, sometimes also referred to as halo effects, can also affect the validity of the evaluation studies. This occurs where the chosen control sites (ie. a similar section of road without a camera) is being influenced by the presence of a camera in close proximity. Spillover effects will underestimate the effectiveness of the camera. Spillover effects are also likely to occur due to general community awareness of speeding and speed-related enforcement that usually occurs around the introduction of cameras or other public awareness campaigns.

**Next steps**

JACS will strengthen its data gathering of speed surveys, infringement information and crashes to allow for regular analysis of the extent of speeding and the effectiveness of the cameras in reducing speeds and crashes. This will include, for example, regular reporting and analysis of infringement information. JACS will finalise a data gathering framework and analysis plan in 2015.
The ACT Government will also review this road safety camera strategy on an as needs basis such as in response to key findings of future evaluations and reviews of the road safety camera program’s operational performance.

JACS will undertake formal evaluation of the whole road safety camera program every three years. In terms of evaluating the effectiveness of point to point cameras, this cannot realistically be started until around 2016 due to the risk of RTM and spillover effects.

Table 2 below identifies criteria that will be used to guide future evaluations of the effectiveness of road safety cameras in the ACT. The outcomes of these evaluations will be an important consideration in determining the future role of road safety cameras as a component of the ACT’s road safety strategy.

The ACT Government will not set targets for the existing cameras, as there is insufficient baseline crash and speed data. It is difficult to retrospectively set a meaningful target for cameras, some of which have been in operation for up to 15 years. However, all future camera sites will have targets, including the new sites approved for mobile camera enforcement.

**Table 2 – Evaluation methodology for future evaluations**

<table>
<thead>
<tr>
<th>Camera type</th>
<th>Evaluation data required</th>
<th>Measure of effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile</td>
<td>Speeds at location</td>
<td>Reduction in vehicles exceeding the speed limit on roads approved for mobile camera enforcement</td>
</tr>
<tr>
<td></td>
<td>Compliance data</td>
<td>Increase in compliance rates and reduction in infringement rates</td>
</tr>
<tr>
<td></td>
<td>Crash data</td>
<td>Reduction in casualty crashes across the network</td>
</tr>
<tr>
<td>Red-light/speed</td>
<td>Speeds at location</td>
<td>Reduction in vehicles exceeding the speed limit at camera enforced intersections</td>
</tr>
<tr>
<td></td>
<td>Compliance data</td>
<td>Increase in compliance at intersection (both red-light and speeding) and reduction in infringement rates</td>
</tr>
<tr>
<td></td>
<td>Crash data</td>
<td>Reduction in casualties and crashes at camera enforced intersections</td>
</tr>
<tr>
<td><strong>Fixed speed only</strong></td>
<td><strong>Speeds at location</strong></td>
<td>Reduction in vehicles speeding within 500 metres of the cameras</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td><strong>Compliance data</strong></td>
<td>Increase in compliance at the camera location and reduction in infringement rates</td>
</tr>
<tr>
<td></td>
<td><strong>Crash data</strong></td>
<td>Reduction in casualties and crashes within 500m of the cameras</td>
</tr>
<tr>
<td><strong>Point to point</strong></td>
<td><strong>Speeds at location</strong></td>
<td>Reduction in speeding within the enforcement area</td>
</tr>
<tr>
<td></td>
<td><strong>Compliance data</strong></td>
<td>Increase in compliance within the enforcement area and reduction in infringement rates</td>
</tr>
<tr>
<td></td>
<td><strong>Crash data</strong></td>
<td>Reduction in crashes within the enforcement area</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Action Items</strong></th>
<th><strong>Performance indicator</strong></th>
<th><strong>Performance target</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengthen data gathering and analysis</td>
<td>Data gathering framework and analysis plan implemented</td>
<td>2015</td>
</tr>
<tr>
<td>Undertake three-yearly evaluations of the whole road safety camera program</td>
<td>Evaluations undertaken and accurate data available to support evaluation methodology</td>
<td>2017 and then three-yearly</td>
</tr>
</tbody>
</table>
Expansion of the program

It is inevitable that as Canberra’s population and traffic volumes increase, the road safety response will need to adapt, and road safety cameras will be part of this response.

Expanding the capability of the program will, in future, be aligned with evaluations of the program. This will allow for decisions to be made based on recent data and other evidence confirming that additional capability is needed to improve compliance with speed limits and, as a result, reduce fatal and serious injury crashes. For each new camera, JACS will develop an evaluation plan and set speed and crash reduction targets. Until then, the current capability of the program will be maintained. This may include replacing components of the existing network with alternate camera technologies which better meet the needs of the program without increasing overall camera numbers.
## Summary of Action Items

<table>
<thead>
<tr>
<th>Action Items</th>
<th>Agency Responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publish information on the purpose, performance and effectiveness of speed</td>
<td>JACS</td>
</tr>
<tr>
<td>camera systems</td>
<td></td>
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<tr>
<td>Better engage the community by inviting participation, input and feedback on</td>
<td>JACS</td>
</tr>
<tr>
<td>the use of the ACT’s road safety cameras</td>
<td></td>
</tr>
<tr>
<td>Allow for mobile cameras to be used on any road in the ACT</td>
<td>JACS</td>
</tr>
<tr>
<td>Implement a mobile camera operational plan, which includes improved</td>
<td>JACS, CMTEDD and ACT Policing</td>
</tr>
<tr>
<td>alignment with police enforcement</td>
<td></td>
</tr>
<tr>
<td>Develop methodology for identifying high risk and high crash locations</td>
<td>JACS and ACT Policing</td>
</tr>
<tr>
<td>for possible future deployment of fixed speed cameras</td>
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</tr>
<tr>
<td>Review and, if appropriate, amend criteria for red-light camera treatment</td>
<td>JACS, TAMS and ACT Policing</td>
</tr>
<tr>
<td>versus alternative safety treatments at intersections</td>
<td></td>
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<tr>
<td>Revise the criteria for siting of point to point cameras</td>
<td>JACS and ACT Policing</td>
</tr>
<tr>
<td>Review the locations of the existing point to point camera sites, and</td>
<td>JACS and ACT Policing</td>
</tr>
<tr>
<td>consider potential for relocation of cameras to locations where they</td>
<td></td>
</tr>
<tr>
<td>would contribute more effectively to improved road safety outcomes</td>
<td></td>
</tr>
<tr>
<td>Strengthen data gathering and analysis</td>
<td>JACS</td>
</tr>
<tr>
<td>Undertake three-yearly evaluations of the whole road safety camera program</td>
<td>JACS</td>
</tr>
</tbody>
</table>
References

Austroads 2012, *Point-to-Point Speed Enforcement*, report AP-R415-12

Auditor-General’s report – *Speed Cameras in the ACT* (report 1/2014)


