



Eliminating
serious road trauma
by **2050**

Zero Pathway Development – Zero Pathway Development FAQs

Purpose of this artefact

These FAQs help jurisdictions (and delivery partners) to:

- respond to common questions and misconceptions about Vision Zero and the Safe System approach
- explain why PfZF provides a structured, practical method to develop Zero Pathways
- support internal and external communications (including executive and political briefings)
- strengthen alignment across agencies by using consistent language and logic.
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FAQs

Frequently Asked Question	Answer
Vision zero – why should we adopt it, and does it work?	<p>International experience shows that adopting Vision Zero can deliver substantial road safety gains when it is supported by strong implementation. The strongest examples come from jurisdictions such as Sweden and Norway, which are widely recognised for sustained road safety leadership and strong performance.</p> <p>Evidence from Norway is particularly compelling. An evaluation concluded that it is <i>“highly likely that the adoption of the Safe System approach to road safety management in Norway has contributed to a larger improvement in road safety than would otherwise have occurred”</i> (Elvik & Nævestad, 2023). The study found that Vision Zero and associated Safe System policies accounted for around 60% of Norway’s substantial reduction in fatal and serious injuries between 2000 and 2021. This is a strong indication that Vision Zero is not merely aspirational; when backed by a clear implementation framework and sustained action, it can help deliver major safety benefits.</p> <p>Vision Zero is fundamentally an ethical and strategic commitment: the idea that death and serious injury should not be accepted as an inevitable byproduct of mobility, just as they are not accepted in aviation or workplace safety. The Safe System approach provides the practical framework for achieving that vision, by guiding how roads, speeds, vehicles, and post-crash care should work together to protect people from fatal and serious harm.</p> <p>The evidence also suggests that simply declaring support for Vision Zero is not enough. In some countries and cities, adoption has been followed by only limited progress. This is likely not because the vision itself is flawed, but because commitment at a</p>

Frequently Asked Question	Answer
	<p>policy level was not matched by sufficiently strong implementation, institutional reform, investment, or delivery of effective interventions.</p> <p>Importantly, even where Vision Zero has not yet been fully embedded across an entire jurisdiction, there are many examples of successful Safe System-aligned interventions. Measures such as 30 km/h speed environments in areas with high levels of pedestrian and cyclist activity, or wire rope barriers on the central medians of high-speed roads, have shown that deaths and serious injuries can be dramatically reduced when the road transport system is designed around human vulnerability and crash protection. These examples show that the benefits of Vision Zero are not only seen at the whole-of-system level, but also through practical interventions that apply Safe System principles.</p> <p>Vision Zero also aligns strongly with broader social goals. Safer streets can support walking and cycling, improve public health, reduce emissions, enhance liveability, and generate wider economic and community benefits. This makes Vision Zero more than a road safety aspiration alone; it is also a framework for creating safer, healthier, and more sustainable communities.</p> <p>Even in places where Vision Zero has only been partially adopted, it can still create value by resetting priorities, sharpening the focus on fatal and serious injury prevention, and creating momentum for more systemic action.</p> <p>Reference Elvik, R., & Nævestad, T.-O. (2023). Does empirical evidence support the effectiveness of the Safe System approach to road safety management? <i>Accident Analysis & Prevention</i>, 191, 107227.</p>
<p>Planning for Zero Framework – why should we adopt it, and does it work?</p>	<p>Working towards the elimination of death and serious injury has been identified by international experts as the most ethical approach to achieving road safety outcomes, and also the one that will lead to the most substantial safety benefits. The Vision Zero or Safe System approach has been adopted by many countries and international organisations. The adoption of Vision Zero is a philosophical approach as much as a target. It highlights that severe injuries as a result of road transport are not acceptable, in much the same way that crashes in aviation, or in the workplace, are also not. From an ethical perspective, there are strong reasons to adopt this approach. Deaths or serious injuries should not be an acceptable byproduct of transport, and we should do all we can to prevent these.</p> <p>The Planning for Zero Framework (PfZF) has been developed to provide an effective basis for reaching Vision Zero objectives. The Framework is designed to equip jurisdictions with the necessary technical guidance to establish a road system free of serious trauma by 2050. It outlines a ‘backcasting’ methodology, which provides the necessary steps to move from current conditions to a future with zero serious road trauma by 2050, a target that has been set in jurisdictions as part of a strategy.</p> <p>Crucially, PfZF is not based on the assumption of overnight transformation. Instead, it helps jurisdictions identify and</p>

Frequently Asked Question	Answer
	<p>implement incremental steps that are consistent with, and cumulatively move the system towards, the 2050 end state. This is one of its key strengths: it supports immediate and practical action while helping ensure that each step contributes to the broader, long-term shift required to eliminate serious road trauma</p> <p>Several jurisdictions have already adopted the use of similar backcasting frameworks, and these have been used as the basis for the PfZF. These have shown that significant improvements in deaths and serious injury are likely through the adoption of this approach. As an example, in New Zealand, validation of their approach was undertaken through in-depth case-by-case analysis of all fatalities. The designs ('End States') identified through that work were estimated to be able to prevent 87% of fatalities by 2050. Similar substantive results could be expected in Australian jurisdictions from the adoption of this approach.</p>
<p>Myth – we cannot reach zero, and we shouldn't try</p>	<p>Reality: Zero deaths can be reached, but this will take time, and like other sectors (such as aviation or rail), we can expect residuals for many years to come.</p> <p>A common barrier to the adoption of Vision Zero is the thinking it will be impossible to achieve, and therefore there is little benefit in trying. Some have even indicated that it may be unethical to adopt this approach, or that it would drive a country to bankruptcy if they tried, due to the cost.</p> <p>Part of the issue relates to the definition used and what we mean by 'zero'. Vision Zero clearly states that deaths and serious injuries are not acceptable. However, a practical consideration also exists. Just like in other areas of human endeavour, it is nearly impossible to remove all chance of risk or serious injury. To do so in transport would mean preventing all movement. So, just like in aviation or the rail sector, where deaths are not accepted, we should not accept deaths in road transport. This is similar to workplace health and safety requirements. However, in both instances, deaths and severe injuries do occur, and it is the job of system designers and participants to ensure that the chances of these are minimised and lessons are learnt, leading to continuous improvement.</p> <p>However, even a definition of 'near zero' seems a long way off in road transport, especially given current levels of trauma. It is important to understand that there is no expectation that we will reach zero in the next 5 or even 10 years. Our current vision is to reach this outcome by 2050, giving two and a half decades to put all of the requirements in place. With improved vehicle technologies and other safety features and approaches, it is very possible to reach our vision of zero by 2050.</p> <p>Another way to look at this issue is to break the problem down into smaller components. We can set visions for zero within a quicker timeframe for elements of the road system. For instance, we could strive for zero deaths for children (an outcome that has almost been reached in Sweden), or outside schools, or for residential streets. Many cities around the world have achieved zero deaths for one or more years. The DEKRA Vision Zero Map, developed by DEKRA, a German-based international vehicle inspection and safety organisation, includes and compiles data</p>

Frequently Asked Question	Answer
	<p>from 26 countries around the world, and identifies hundreds of cities that have reported zero traffic deaths for at least one year.</p> <p>Lastly, the setting of ambitious road safety targets will bring about better road safety outcomes. There is good evidence that the countries with road safety targets achieve better outcomes (Wong et al., 2006). This is because targets help set the direction and introduce an element of accountability.</p> <p>In summary, zero is the ethical target we should set, and put into the context of 2050 with expected improvements in roads, vehicles and broader systems, this is highly achievable. Breaking the problem down into smaller chunks can also help us reach this target, and celebrate successes along the way.</p> <p>Reference:</p> <p>Wong S, Sze N, Yip H, Loo B, Hung W, and Lo H (2006). 'Association between setting quantified road safety targets and road fatality reduction', <i>Accident Analysis and Prevention</i> 38(5): 997-1005. https://doi.org/10.1016/j.aap.2006.04.003.</p>
<p>How do we communicate the importance / value of using this Planning for Zero Framework approach?</p>	<p>Using the Planning for Zero Framework is likely to bring many benefits. These are captured in the Strategic Leadership Briefing. This document is useful to communicate these objectives to senior decision makers within organisations, as well as externally.</p>
<p>How do we fund delivery of Vision Zero activity?</p>	<p>Achieving Vision Zero will take considerable investment, especially on the high-mobility, high-speed road network. This will include costs to improve different elements of the system, including infrastructure, vehicle design, medical response and more. Different sectors in society will all need to contribute to this investment. However, in some cases, especially on lower-volume, low-speed networks, the end state can be achieved in a far more efficient way through speed management.</p> <p>The good news is that even in situations where high levels of investment are needed, the required changes are not expected to be fully delivered in the short term. The current target is to reach zero by 2050, more than two and a half decades away. The amount earmarked for investment in roads and other related activities amounts to many billions of dollars over this period. With careful planning and a strategic approach, funding can be targeted to the most effective interventions to reach the zero objective. The Pathways to Zero approach provides a framework for how to prioritise activities.</p> <p>Sometimes, the investment requirements for Vision Zero outcomes are cost-prohibitive because safety was not initially built into infrastructure when it was first constructed. Retrofitting that infrastructure downstream to make it safe can be very expensive. These costs, however, should be weighed against the very high social and economic costs of road crashes, including trauma and rehabilitation costs, lost productivity, property damage, and broader psychological and social impacts. If safety is properly incorporated into network and precinct planning and other major investments, safety can be embedded at the start of the project at very little additional cost. In some cases, the costs can even be decreased (for instance, two-plus-one road design).</p>

Frequently Asked Question	Answer
	<p>Our knowledge of the designs required to achieve safe outcomes has improved substantially in recent years, but it is important to ensure that this is embedded as early as possible.</p> <p>However, it is likely that current levels of investment are not sufficient to reach the required targets. A scaled-up approach may be required to reach adequate levels of investment. Any increase in funding will require full support from the public and decision makers, including a clear case regarding the benefits from increased investment. This will need clear evidence about the costs of road trauma, but more usefully, the benefits to society from the changes that will come from any investment. This will need to include benefits from road safety trauma reduction, but also the co-benefits that are likely.</p> <p>Further details on the benefits can be found in the Strategic Leadership Briefing.</p>
<p>How do we identify key stakeholders that can help reach Vision Zero objectives?</p>	<p>Reaching Vision Zero outcomes will require a coordinated response from a number of stakeholders, both within our organisations and externally. Please refer to Section 5 and Table 5.1, where clear and specific stakeholder mapping activities and stakeholder maps are provided.</p>
<p>How do we encourage political leadership to facilitate movement to Vision Zero?</p>	<p>It is important for political leaders to be fully briefed on the objectives and benefits of road safety improvements and the need to move to Vision Zero outcomes. It is critical that the evidence around economic benefits is captured and presented. This includes capturing benefits relating to road safety outcomes, but also the wider benefits, such as reduced fuel costs.</p> <p>Although the evidence on the scale of road safety trauma and benefits from improvements is useful, it is also important to bring personal stories to political leadership particularly through the voices of victims, families, children, and trauma professionals. Numbers, especially given the massive scale of road trauma, are often hard to comprehend. It is often only when the impacts on individuals and their friends and families are explained that the true scale of road safety damage on society can be appreciated. One concrete example of such an approach is the ‘Man on the Street’ campaign used by the TAC in Victoria. The video forces people to think about the human impact of road trauma behind the statistics, challenging conceptions around an 'appropriate' number of deaths and serious injuries on roads.</p> <p>These personal stories can be presented by individuals or through community groups who have mobilised to provide support for positive change. These groups have been very successful internationally in alerting decision makers to the importance of road safety for communities, and can counter an often vocal minority of those opposed to change. Road Trauma Support Groups have played a strong advocacy role in many Australian and New Zealand jurisdictions.</p> <p>It is also very useful to conduct detailed surveys of the public on road safety issues, as these typically identify the strong interest and support from the public (see the TAC safety monitor at https://www.tac.vic.gov.au/road-safety/statistics/about-tac-surveys/road-safety-and-marketing-surveys). As a global topic, road crashes continually lead the list of concerns expressed by</p>

Frequently Asked Question	Answer
	<p>respondents when asked about the ‘greatest source of risk to your safety in daily life’. This exceeds other factors such as crime/violence, personal health issues, climate change and war/terrorism (Gallup, 2024). These societal priorities need to be better reflected when engaging with decision makers. Similarly, there is typically very strong support for road safety interventions, including speed limit changes, when these issues are explained to the community, stakeholders and other interested groups and cohorts. This support will often not be obvious unless surveys are undertaken.</p> <p>There are many myths when it comes to Vision Zero outcomes and road safety more generally. It is very useful to be aware of these myths and to prepare responses based on the evidence to refute them. This can include fact sheets that provide robust evidence, as well as individual case studies that are relatable.</p> <p>Further guidance on the benefits of the Vision Zero approach can be found in the Strategic Leadership Briefing.</p>
<p>How do we develop a sustainable bi-partisan plan that ensures continuous investment in Vision Zero initiatives?</p>	<p>Although there is likely to be clear bipartisan support for improved road safety, the steps for achieving the required change are less amenable to agreement. Like many public policy issues, road safety interventions can become politically divisive. Reductions in speeds, an intervention that has been shown to have significant road safety and other benefits, is one such example. There are instances where political parties have included an increase in speed limits as part of their election platform. This may be done on the assumption that higher speeds will increase productivity or reduce congestion (the benefits of each are typically vastly overstated and/or demonstrably incorrect and misleading); increased speeds will have limited negative impact on safety (this is not the case, with even small changes in speed resulting in big differences in safety outcomes); and that these changes will be popular with the public (they often are not, apart from a small vocal minority who support such change).</p> <p>It is important for all political parties to be fully briefed on the objectives and benefits of road safety improvements, including speed limit changes. It is critical that the evidence around economic benefits is captured and presented. This includes capturing benefits relating to road safety outcomes, but also the wider benefits, such as reduced fuel costs. It is also helpful to capture and present evidence on community sentiment, particularly where this can demonstrate that vocal opposition does not necessarily reflect majority public views. As one concrete example, electorate-specific crash data, cost analysis, and community sentiment findings can be completed and circulated widely, including to those in opposition.</p> <p>It is also very useful to conduct detailed surveys of the public on road safety issues, as these typically identify the strong interest and support from the public. As a global topic, road crashes continually lead the list of concerns expressed by respondents when asked about the ‘greatest source of risk to your safety in daily life’. This exceeds other factors such as crime/violence, personal health issues, climate change and war/terrorism (Gallup, 2024). These societal priorities need to be better reflected when engaging with decision makers. Similarly, there is</p>

Frequently Asked Question	Answer
	<p>typically very strong support for road safety interventions, including speed limit changes, when these issues are explained to the community, stakeholders and other interested groups and cohorts. This support will often not be obvious unless surveys are undertaken.</p> <p>Clear evidence on the scale of road safety trauma, and benefits from improvements needs to be clearly articulated, but it can also be important to bring personal stories to decision makers.</p> <p>Numbers, especially given the massive scale of road trauma, are often hard to comprehend. It is often only when the impact on individuals and their friends and families are explained, that the true scale of road safety impacts on society can be appreciated.</p> <p>A number of countries have established bi-partisan groups of political decision-makers who have an interest in road safety. These groups can have a useful voice across party lines, and they can be given greater exposure to the evidence and impact of road trauma, and so can act as champions within government to bring about improvements, and maintain momentum even when governments changes. Examples include the Friends of Road Safety within the Australian government (co-chaired by Senator Glenn Sterle and Mr Llew O'Brien MP; see https://www.aph.gov.au/about_parliament/parliamentary_friendsh ip), or the Parliamentary Advisory Council for Transport Safety in the UK (https://www.pacts.org.uk/).</p> <p>Lastly, a long-term direction is needed that stretches beyond the normal election cycle. The Pathways to Zero framework gives such a plan, and so reaching an agreement on this is critical to long-term, sustainable success in road safety. This provides the pathway to 2050, and so bipartisan agreement is essential to ensure support throughout the duration of the plan.</p> <p>Reference:</p> <p>Gallup, 2024, Road Accidents Remain World's Top Perceived Safety Risk. https://news.gallup.com/poll/653084/road-accidents-remain-world-top-perceived-safety-risk.aspx</p>
<p>How do we build public support for change?</p>	<p>Community support can be built through the use of facts, stories, surveys and advocacy.</p> <p>Many members of the public do not fully appreciate the scale of trauma on our roads. It can be confronting, but useful to highlight the scale and impact (the 'facts'), not just of road fatalities, but from all crashes. Many of the non-fatal crashes on our roads lead to life-altering impacts which are felt by individuals involved as well as their friends and families.</p> <p>Although it is important to highlight the harm caused by road trauma, it is often more useful to highlight the benefits we can expect from the improvements that are made. This gives a clear indication to the public that a significant problem exists, but also that this is solvable. There is extensive evidence on the benefits to society from road safety improvements, and especially the impacts on people's lives and broader health costs to society. In addition, the broader benefits that come with road safety improvement can be highlighted. These include less damage to property, environmental improvements, broader health benefits</p>

Frequently Asked Question	Answer
	<p>from increased use of active modes, more liveable cities, and better access and participation for people whose movement is constrained by unsafe road environments.</p> <p>There are many myths in road safety, and these often act as barriers to change. For example, it is typically perceived that reduced speed limits will have a significant impact on journey times. In most circumstances, this is not the case, especially in urban areas where cars need to slow down and stop at intersections, or where speeds are already low due to congestion. It is also not the case for lower-quality rural roads, where speeds on narrow, windy roadways are already often less than the enforceable speed limit. Even where lower speed limits do result in some increase in travel time, this is often modest and needs to be weighed against the substantial safety benefits that can result. Good evidence is needed to counter these myths and remove barriers to change.</p> <p>As a global topic, road crashes continually lead the list of concerns expressed by respondents when asked about the greatest source of risk to daily life. This exceeds other factors such as crime/violence, personal health issues, climate change and war/terrorism (Gallup, 2024). It is useful to share this type of knowledge to raise the profile of road safety as an issue. It is also useful to highlight the personal ‘stories’, or the direct impact on people’s lives from the impacts of road trauma. Numbers, especially given the massive scale of road trauma, are often hard to comprehend. It is often only when the impact on individuals and their friends and families are explained to communities, that the true scale of road safety impact on society can be appreciated. These personal stories can be presented by individuals, or through community groups who have mobilised to provide support for positive change.</p> <p>It is equally important to highlight the strong community support for changes to improve road safety outcomes. The results from national and local surveys continually show this support for improvements, with similar results for more localised changes. It is important to capture these opinions and share them with communities.</p> <p>Internationally, there are a number of community groups that have mobilised to provide support for positive change. These groups have been very successful internationally in alerting decision-makers to the importance of road safety for communities and can counter an often vocal minority of those opposed to change. Such groups do exist in Australia and New Zealand — for example, the Safer Australian Roads and Highways (SARAH) Group in Australia, and Students Against Dangerous Driving (SADD) and Brake in New Zealand — but they are not as extensive as in other countries. More can be done to provide the evidence regarding road safety issues at the local level, and to facilitate local engagement. Encouraging and empowering community groups is a useful way to capture support for change. Support can be increased through various mechanisms, including Community Road Safety Grants.</p>

Frequently Asked Question	Answer
<p>How do we build internal, organisational support for change?</p>	<p>Many organisations do not fully appreciate the scale of trauma on our roads. It is important to identify the scale and impact, not just of road fatalities, but of all crashes, including serious injuries that often produce life-altering outcomes. The impacts of these crashes can be quantified, including the costs. These costs are carried by many actors in society, from the individuals involved to the emergency and health service, insurers, those who manage roads and others. It can be useful to quantify these costs, including those for individual stakeholders. Similarly, it is useful to highlight the benefits that are likely to result from making improvements. The cost-effectiveness of road safety improvements is often very high, far outstripping those from other investments. As a first step, it is important for organisations to understand these costs and the likely benefits that may come from road safety improvements.</p> <p>Some of the benefits extend well beyond road safety and reductions in deaths and injuries. These include less damage to property, environmental improvements, broader health benefits from increased use of active modes and many others. It is important to work with internal (and external) stakeholders to identify those who stand to benefit, and to ensure that they assist in delivering change where they can.</p> <p>It is important to highlight the strong community support for changes to improve road safety outcomes within organisations. Recent survey findings show that this support is often substantial. For example, in Victoria (TAC Road Safety Monitor, 2024), 80% of respondents said the state should aim for zero road deaths, while in New Zealand 79% supported the Safe System approach. In New Zealand (Road User Safety Monitor, 2025), there was also clear support for stronger road safety action, with 73% supporting greater police presence and 57% supporting more safety cameras. Putting this evidence in front of internal decision-makers can help road safety to be more confidently and effectively prioritised.</p> <p>Having a road safety strategy is a prerequisite for making substantive road safety improvements within an organisation, as is embedding this strategy and associated targets and performance indicators in related organisational and business plans. A safety strategy should map out the key internal stakeholders who are required to assist in delivering better road safety outcomes. Strategy should also include key performance metrics to set targets, allocate responsibility, and track progress towards required outcomes. Introducing the element of accountability is important to ensure those responsible are taking appropriate actions.</p>

Frequently Asked Question	Answer
	<p>In many instances, key internal stakeholders will be unaware of road safety issues and their impacts on organisational outcomes. In some organisations, there is an induction process to ensure that all new starters are aware of road safety issues and the Safe System approach, no matter what their role might be. This helps improve understanding of the importance of this issue, and the approaches required to bring about the required change. Guidance on this issue is available [Link to training note]. There is also material available for senior decision makers who are very likely to be time poor. This captures the importance of developing Pathways to Zero, and the benefits from this are listed in the Strategic Leadership Briefing.</p>
<p>How do we tackle competing demands from within our road agency or from society more broadly?</p>	<p>All organisations face a range of demands, and road safety is just one agenda amongst many for most. Road and transport agencies are particularly stretched, with requirements to build new roads and infrastructure, maintain the existing network, keep traffic moving, cater for a variety of road users, and face new challenges.</p> <p>It is important to highlight the joint benefits that road safety can bring to many of these agendas. There is increasing recognition that improvements in road safety can produce benefits beyond reduced trauma, and that initiatives pursued for other objectives — such as active travel, public health, liveability, and environmental outcomes — can also deliver important road safety benefits. Broader benefits include provision of safer environments to help encourage active modes of travel, such as walking and cycling, and the subsequent health and environmental benefits that this brings; improved streetscapes and liveability; improved commercial activity and more. One useful approach is to identify these broader benefits and work with internal stakeholders to ensure the co-benefits from safety improvements are recognised by key stakeholders and decision makers. It is also useful to acknowledge the potential conflicts but use evidence and emerging approaches to address these (e.g. movement and place to help reconcile the requirement for moving goods and people, and the safety impacts from this movement).</p> <p>It is also useful to understand community concerns better and where their priorities lie. As a global topic, road crashes continually lead the list of concerns expressed by respondents when asked about the ‘greatest source of risk to your safety in daily life’. This exceeds other factors such as crime/violence, personal health issues, climate change and war/terrorism (Gallup 2024). These societal priorities need to be better reflected when engaging with decision makers.</p> <p>It is important to identify the scale and impact, not just of road fatalities, but of all crashes, including serious injuries that often produce life-altering outcomes. The impacts and costs of these crashes can be quantified, and it is useful to present these alongside other organisational outcomes. Similarly, it is useful to highlight the benefits that are likely to result from making improvements. The cost-effectiveness of road safety improvements is often very high, far outstripping those from other road investments. As a first step, it is important for organisations</p>

Frequently Asked Question	Answer
	<p>to understand these costs, and the likely benefits may come from road safety improvements.</p> <p>Lastly, safety should be embedded within a road safety strategy, but also broader business and organisational plans. Having a road safety strategy is a prerequisite for making substantive road safety improvements within an organisation, as is embedding this strategy and associated targets and performance indicators in related organisational and business plans. This helps prevent safety from being seen as an expensive add-on and instead positions it as a core part of business, supporting a shift from a more reactive or compliance-driven culture towards a more mature, generative approach to road safety management.</p>
<p>Our agency has signed up to VZ target, but we are not making progress. What can we do?</p>	<p>It is not uncommon for progress to be slow, even with the adoption of a Vision Zero target. Acceptance of the target is often the easy part, but implementation can be very difficult.</p> <p>The Vision Zero Pathways framework provides information on the steps required to plan for implementation. Methods of embedding this approach into strategy and action plans are provided in a Technical Note [provide link here].</p> <p>It is important to reach an agreement on the required steps as part of the development of Vision Zero Pathways. This includes the establishment of targets, including Safety Performance Indicators. Constant monitoring is required to ensure that targets are being met, and adjustments are made to strategies and action plans in order to ensure appropriate progress is made. These targets also help ensure that there is accountability in implementation. Further information on monitoring and SPIs can be found in the [data note].</p> <p>It is also important to celebrate progress and successes, as there has been a lot of this through Vision Zero implementation. Often, it is easy to move on to the next project or activity. There is a need to collect relevant data (for instance, reductions in crashes, levels of public support, and the co-benefits for other agendas) and share this with key stakeholders, including decision-makers and the public.</p>
<p>How do we convert 2050 goals into strategy and action plans?</p>	<p>The Pathways to Zero framework provides a vision to 2050, whereas road safety strategies and action plans have a much shorter duration. A technical note has been prepared on the linkage between Pathways and strategies [see Technical Note on this topic].</p>
<p>How do we know we are on track?</p>	<p>The monitoring of performance is an integral part of the Pathways to Zero Framework. In order to determine progress there is a need to set targets, including those to 2050, as well as interim targets, usually set as part of shorter-term strategies. These targets include the safety outcomes, such as the number of fatalities and serious injuries. They also include intermediate or 'Safety Performance Indicators' (SPIs) such as speed compliance or emergency vehicle response times. Lastly, they should also include outputs or implementation indicators, such as hours of additional enforcement or installation of barriers. These targets should be embedded in strategy and delivery. They help ensure accountability and, with proper transparency and scrutiny, ensure</p>

Frequently Asked Question	Answer
	that delivery is on track. If things are not on track, changes to implementation should be made.
What are SPIs and how could they drive [political] accountability?	SPIs are 'Safety Performance Indicators'. These are the intermediate indicators, such as speed compliance or emergency vehicle response times, used to ensure that the required progress is being made based on interventions. They also help to ensure accountability, and through regular scrutiny (for instance, annual public review) can ensure that appropriate actions are being taken to meet road safety objectives. For further information on tracking road safety performance, please see [data note].
How do I better understand my road safety issues to reach VZ outcomes?	The approach to understanding road safety issues and risks in a Vision Zero context is outlined in the Austroads Stream 1 report on 'Charting a Path to Eliminating Road Death and Serious Injury'. This typically involves the analysis of crash and other data to determine the root cause of severe injury. It also required in-depth analysis of severe crashes. In the context of developing Vision Zero pathways, the task includes the need to identify opportunities for injury events as a result of gaps in the current system, compared to the SSES for 2050. This involves the assessment of systemic risks, or those that comprise the greatest amount of trauma. In-depth data can be used to validate the analysis undertaken based on crash data.
How do we create our own local Safe System End States when we are short on resources?	Jurisdictions have limited resources to make the required improvements in road safety, and this is particularly the case for smaller state road agencies, territories and local government. In situations where there are limited resources, existing materials developed in other jurisdictions and by Austroads can be used to help create End States. It is also likely that an incremental step approach will be needed as resources are made available. A technical note has been prepared on the local implementation of Pathways, including the development of End States [see Technical Note on this topic].
How can smaller jurisdictions and local government with limited resources tailor Vision Zero to their unique needs?	Smaller jurisdictions and local governments have very limited resources to make the required improvements in road safety. In situations where there are limited resources, existing materials developed in other jurisdictions and by Austroads can be used to help create End States. It is also likely that an incremental step approach will be needed as resources are made available. A technical note has been prepared on the local implementation of Pathways, including the development of End States [see Technical Note on this topic].
How do we select the best interventions and actions that will help us best reach Vision Zero objectives?	Selection of interventions and actions requires a good understanding of the problem that needs to be addressed. The Planning for Zero Framework process allows identification of the most Vision Zero compatible interventions and also the best way to package these up in a way to achieve targets. This involves the analysis of data from different sources, including police crash reports and in-depth analysis of severe collisions. It may also require a broader 'systems' understanding, including societal and organisational issues that impact road safety outcomes. Analysis of these sources should give good insights into the root causes of

Frequently Asked Question	Answer
	<p>crash problems. Based on this understanding, interventions can be selected to best address the issues identified.</p> <p>There is extensive literature available on effective interventions. This includes details on the types of crashes that will be addressed, the expected crash reduction, and cost-effectiveness. Some of these sources are provided in the references below:</p> <ul style="list-style-type: none"> • Austroads (2018). <i>Towards Safe System Infrastructure: A Compendium of Current Knowledge</i> (AP-R560-18). • Austroads (2016). <i>Safe System Assessment Framework</i> (AP-R509-16). • Austroads (2024). <i>Guide to Road Safety Part 2: Safe Roads</i> (AGRS02-24). • Austroads (2025). <i>Keeping People Safe When Walking: Stream 1 reports including effective pedestrian safety measures.</i> <p>Selection of appropriate interventions will be based on a variety of issues. With Vision Zero objectives, there is a requirement to aim for interventions by 2050 that will take us to near-zero deaths and serious injuries. This can be achieved through using 'Primary' or Transformational' interventions. These are typically the interventions that eliminate exposure to risk (such as switching from high-risk transport modes to safe ones, such as public transport), and those that reduce the amount of energy when crashes occur. Examples include reductions in speed, separation of road users, and provision of protective infrastructure. In the 2050 time horizon, interventions will also include improvements in vehicle technologies, including protective systems. It is likely that packages of treatments will be required to reach the required outcomes. Calculations on the most effective pathways to implement these packages of treatments are required, based on the budgets that are available. When calculating the costs and benefits, it is important to capture the broader benefits beyond safety outcomes, including reduced damage to infrastructure and changes in broader health outcomes (for instance, from reduced emissions and switching to more active modes of transport).</p> <p>Given limited budgets, it is likely that incremental implementation will be required, focusing on the highest risk locations first. In some cases, 'stepping stone' implementation is needed due to limited budgets. For example, wide centreline treatments can be rolled out at lower cost to help reduce head-on and run-off-road crashes on high speed roads. Over time, median barriers can be introduced to provide extra safety at these locations. Further information on these approaches can be found in the Technical note on local application of Safe System End States.</p> <p>Throughout this process, it is important to engage with stakeholders, including the public, about why these changes are needed and the benefits that they will bring. It is likely that greater success will be achieved if there is community demand for the required changes.</p> <p>References:</p>

Frequently Asked Question	Answer
	<p>Information on effective interventions can be found in the following:</p> <p>European Road Safety Decision Support System (SafetyCube) at https://www.roadsafety-dss.eu/#/knowledge</p> <p>Guide for Road Safety Interventions: Evidence of What Works and What Does Not Work. Washington, DC., USA: World Bank: https://www.globalroadsafetyfacility.org/publications/guide-road-safety-interventions-evidence-what-works-and-what-does-not-work</p> <p>For information on Primary road safety treatments, see Towards safe system infrastructure: a compendium of current knowledge, Austroads Report AP-R560-18, Austroads, Sydney, Australia - https://austroads.gov.au/publications/road-safety/ap-r560-18</p>
<p>Reaching Vision Zero will require reductions in speed limits, and these are not popular. How do we make progress on this issue?</p>	<p>A variety of interventions will be required to meet Vision Zero objectives. In situations where it is not possible to improve the safety of the infrastructure provided, another possible intervention is a reduction in speed limits. This might be required to bring speeds into alignment with the survivability of the road users who are present. For instance, on high-speed roads, barrier systems can be used to prevent head-on and run-off-road crashes from occurring. Safety can be improved on roads through the installation of barrier systems. However, where it is not possible to improve infrastructure (e.g. install barrier systems), reductions in speed can also bring about substantial safety benefits.</p> <p>The speed-related solutions are well known, but there is often reluctance to change speed limits due to perceptions about negative impacts. Many of these expected impacts are either overstated, or proven to be false.</p> <p>Successful implementation of speed limit reduction requires the gathering of evidence, including on the safety benefits, as well as other likely benefits (for example, reduced emissions, potential increase in walking and cycling, lower vehicle operator costs). It may also require dispelling some of the myths. As an example, the impact on journey time is often overstated. It may also be useful to survey local communities to determine their level of support. In high-risk locations, the support from communities is often very high, and evidence of this can be used to help convince decision makers regarding the benefits of change. Similarly, it can be useful to bring community voices to the discussion. This could include community groups or affected individuals.</p> <p>Where there is reluctance from decision makers for changes in speed limits, it can be useful to start in locations with obvious safety issues and/or strong community support for change. This might include locations near schools, in shopping precincts or near transport hubs, or on poor-quality rural roads.</p> <p>Reference:</p> <p>Austroads (2024). Guide to Road Safety part 3: Safe Speeds. Austroads, Sydney, Australia.</p> <p>For myths about speed, see the Frequently Asked Questions on the Speed Management Hub, hosted by the Global Road Safety</p>

Frequently Asked Question	Answer
	<p>Facility: https://www.globalroadsafetyfacility.org/speed-management-hub</p>
<p>Reaching Vision Zero will require other unpopular or difficult interventions. How do we address this issue?</p>	<p>A variety of interventions will be required to meet Vision Zero objectives. This includes improvements in the safety of infrastructure provided, and reductions in speed limits. It may also require changes to registration and licensing, and the need to use or wear protective equipment. Some of these interventions can be unpopular.</p> <p>For any intervention, it is important to bring stakeholders, including the public, along in the conversation about the need for change. Stakeholders need to understand the problem, but also the likely benefits of the interventions that are proposed. Sometimes these benefits will extend beyond safety alone. Therefore, it is important to gather evidence on the safety issue being addressed and the likely outcomes.</p> <p>In some cases, there will be myths surrounding the implementation of new or existing interventions. For example, <u>before the introduction of compulsory seat belts, there was a common myth that it would be safer to be thrown clear of the car if a crash occurred.</u> For speed limits, there is a myth that journey times will increase substantially, or that if lower speeds improve safety, then speeds should simply be reduced to extremely low levels everywhere. These arguments overlook the need for safe and appropriate speeds that reflect the function of the road, the surrounding environment, and the limits of human tolerance to crash forces. It is therefore very important to gather evidence to counter likely barriers and myths, and to present this information proactively.</p> <p>Often, reluctance to change can come from a small but vocal minority of community members, and these views can also be amplified by sensationalist media coverage that prioritises conflict, clicks, and engagement. It is important to understand the concerns raised and, where concerns are valid, to acknowledge these. However, it is more often the case that when the reasons for change are made clear and the benefits of interventions are explained, there is likely to be strong public support. Therefore, it can be useful to survey members of the public to determine the broader community response. This can help convince decision-makers of the need for change.</p> <p>Similarly, it can be useful to bring community voices to the discussion. This could include community groups or affected individuals who understand and appreciate the value of the proposed change. It is also important to anticipate and respond early to predictable misinformation, outrage-driven commentary, and routine media backlash, so that decision-makers and the public are not hearing about the intervention for the first time through a distorted or adversarial lens.</p> <p>Where there is reluctance from decision-makers for new interventions, it can be useful to start in locations with obvious safety issues and/or strong community support for change. This might include locations near schools, in shopping precincts or near transport hubs, or on poor-quality rural roads.</p>

Frequently Asked Question	Answer
<p>How do we build the right internal skills to help us reach Vision Zero objectives</p>	<p>In many instances, key stakeholders will be unaware of road safety issues and their impacts on societal and organisational outcomes. In some organisations, there is an induction process to ensure that all new starters are aware of road safety issues and the Safe System approach, no matter what their role might be. This helps improve understanding of the importance of this issue, and the approaches required to bring about the required change.</p> <p>In addition to induction and training, organisations may also benefit from undertaking a cultural maturity assessment to understand their readiness to adopt and embed Safe System practice across the organisation. This can help identify strengths, gaps, and areas where further capability development is required (Fosdick et al., 2024).</p> <p>Reference:</p> <p>Fosdick, T., Campsall, D., Kamran, M., & Scott, S. (2024). Creating a cultural maturity model to assess safe system readiness within road safety organisations. <i>Journal of road safety</i>, 35(1), 52-64.</p>
<p>What are the anticipated impacts of Charting a Path to Zero on Registration and Licensing (R&L) activities?</p>	<p>The transition to Vision Zero will require R&L activities to evolve across three stages:</p> <ol style="list-style-type: none"> 1. Current Stage: The focus will be on enhancing vehicle safety through inspections and promoting compliance with safety standards. 2. Transition Stage: Over time, there will be an increased emphasis on inspecting advanced safety technologies and adapting policies to limit road access for legacy vehicles. 3. Vision Zero Stage: Longer term, there will be a continued role for R&L in ensuring SSES, preventing tampering with safety technologies, and addressing residual crash risks. <p>R&L will remain essential for reducing residual risks and managing vehicle registration processes to support Vision Zero's long-term sustainability.</p>
<p>How will Path to Zero impact Road User Behaviour and Enforcement activities?</p>	<p>The Charting a Path to Zero will shape road user behaviour and enforcement activities as follows:</p> <ul style="list-style-type: none"> • Current Stage: Behaviour change and enforcement will continue to address high-risk behaviours like speeding and drink driving. • Transition Stage: There is likely to be a shift in focus to support Vision Zero interventions, such as ensuring compliance with technologies like Intelligent Speed Assistance. • Vision Zero Stage: While reliance on enforcement is likely to decrease due to new technologies, key activities like addressing tampering, guiding behaviours in temporary situations (such as for road works), and reducing residual crashes will persist.

Frequently Asked Question	Answer
<p>What role will Human Factors play in the Charting Path to Zero?</p>	<p>Human Factors will adapt to Vision Zero across stages:</p> <ul style="list-style-type: none"> • Current Stage: The current focus is on designing systems that mitigate human errors through enhanced signage, auditory signals, and vehicle design. • Transition Stage: There is likely to be a move to human factors contributing to refining Safe System technologies like Autonomous Emergency Braking and lane-keeping systems. • Vision Zero Stage: This is likely to involve support system refinement, counteracting the circumvention of safety technologies, and addressing residual crash risks. <p>Reference:</p> <p>Nieuwesteeg, M. (2025, May 29). The changing role of the driver on the path to Zero [Conference presentation]. 57th CIECA Congress, Porto, Portugal.</p>
<p>How do we quantify co-benefits of road safety investment?</p>	<p>The Australian Transport Assessment and Planning (ATAP) Guidelines outline best practice for transport planning and assessment in Australia. They are an infrastructure planning and decision-support framework applied to transport. Users include government departments and agencies, private firms, individuals, industry bodies and consultants.</p> <p>The Guidelines play the important role of facilitating consistent best practice across the country. They do this by providing guidance for common use across jurisdictions and by maintaining consistency and alignment with Infrastructure Australia's guidelines. Public consultation occurs across all ATAP work to ensure relevant amendments are made to the Guidelines and new guidance reflects the public feedback.</p> <p>The credibility of initiatives to progress the Pathway to Zero will benefit from applying the tools, guidance and parameters included in the ATAP Guidelines to cost-benefit or cost-effectiveness appraisals.</p>