



ENGINEERS
AUSTRALIA

Engineers Australia's submission form: Victoria's draft 30-year infrastructure strategy

Topic/area:	Across Sectors
Recommendation name:	Prepare and publish infrastructure sector plans to shape Victoria's cities
Recommendation number:	35
1. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part
2. Tell us why	Publishing infrastructure sector plans will allow the public to see how decisions are made, fostering trust and accountability. This will also allow industry to give feedback on assumptions for future population, jobs, and land use ensuring the Victorian government is using best practice to reach its goals.
3. Share any supporting evidence or examples	
4. Include proposed changes and improvements	

Topic/area:	Across Sectors
Recommendation name:	Improve asset management of all government infrastructure
Recommendation number:	37
5. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part

6. Tell us why	By training and resourcing asset managers to better understand the condition, use, and performance standards of all government infrastructure, the Victorian Government can develop effective asset management strategies and prioritize funding. This proactive approach will help prevent the higher costs associated with inadequate maintenance, such as those seen in road and pavement maintenance where simple pothole filling does not address underlying water ingress damage.
7. Share any supporting evidence or examples	For further information please see Institution of Public Works Engineering Australasia's white paper on Asset management
8. Include proposed changes and improvements	While the recommendation focuses on improving asset management, the Victoria Government could consider implementing a centralized asset management system that integrates data from all government departments. This system could provide real-time insights into asset conditions and maintenance needs, further enhancing the efficiency and effectiveness of infrastructure management.

Topic/area:	Across Sectors
Recommendation name:	Use digital technologies to better design, build, operate and maintain government infrastructure
Recommendation number:	39
9. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part
10. Tell us why	By using digital technologies such as building information modelling (BIM) on major infrastructure and housing projects, the Victorian Government can reduce errors and clashes on site, improve efficiency and implement more innovative methods of construction.
11. Share any supporting evidence or examples	For further information, please see Consult Australia's paper on Digital by Default .
12. Include proposed changes and improvements	While the recommendation focuses on piloting digital technologies, an alternative approach could involve mandating the use of BIM for all government-funded infrastructure projects. This would help to standardise the use of advanced digital tools across the board, ensuring consistent quality and efficiency improvements in all projects.

Topic/area:	Across Sectors
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Recommendation name:	Create and preserve opportunities for future major infrastructure projects
Recommendation number:	43
13. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part
14. Tell us why	By planning and preparing now for major infrastructure projects that may be required in the future, the Victorian Government can reduce total project costs, prevent conflicting land use, and allow for better coordination and planning. This proactive approach ensures that when the need for these projects arises, they can be initiated quickly, providing timely benefits to the community.
15. Share any supporting evidence or examples	
16. Include proposed changes and improvements	To be competitive, Victoria must integrate engineering and engineering based thinking into the provision of government services, delivery of nation-building infrastructure and public policy. Victoria should reestablish the Office of the Chief Engineer to provide governments a link between them and the expertise of the engineering profession. Good governance requires access to engineering knowledge. This knowledge enables governments to act as informed buyers. Chief engineers can provide leadership and independent strategic advice on a range of issues. The Chief engineer is a real value for money proposition with established track record of success both at home and abroad.

Topic/area:	Climate Change
Recommendation name:	Reduce greenhouse gas emissions from infrastructure
Recommendation number:	24
17. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part
18. Tell us why	Adopting a standard value associated with embodied, operational and enabled carbon in Victoria's infrastructure is a sound first step to understanding where there are opportunities for significant emissions reductions.

	Procurement policies can also be reviewed to mandate a minimum amount of recycled or low-carbon materials for infrastructure projects over a certain dollar value.
19. Share any supporting evidence or examples	
20. Include proposed changes and improvements	<p>To equip engineers with measuring, reporting and mitigating embedded carbon in products and projects, Engineers Australia have developed the Carbon Measurement Fundamentals for Engineers. This tool could inform, or be adapted and applied to Victorian infrastructure projects.</p> <p>Lessons could be learned from the New South Wales (NSW) Environmental Protection Agency's (EPA) Protection of the Environment – Sustainable Construction policy (in development) to understand how the work to mandate minimum amounts of recycled materials for infrastructure projects in Victoria.</p> <p>Victoria should also adopt a common definition of infrastructure net zero as outlined in the Australian Sustainable Built Environment Council paper - A solid foundation: A common definition for net zero infrastructure and how to get there</p>

Topic/area:	Climate Change
Recommendation name:	Better prepare infrastructure for climate change
Recommendation number:	27
21. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part
22. Tell us why	Adaptation is underfunded globally compared with mitigation, and Australia is no exception. Allocating funding is a first step to safeguarding Victorian infrastructure.
23. Share any supporting evidence or examples	
24. Include proposed changes and improvements	<p>In addition to funding high-priority, cost-effective infrastructure adaptation actions, there will need to be decisions made around infrastructure that requires adaptation to remain functional but is considered too costly for the conditions under which business cases are currently developed.</p> <p>Ultimately, all sectors in Victoria will require adaptation plans (not just the energy sectors). Sectors are also not isolated from one another, and a systems approach will be required to understand how critical failures in one sector can impact other sectors too. The</p>

	<p>piloting of the energy sector plan will be important to learn and improve upon for other sectoral plans.</p> <p>As mentioned above, the reestablishment of the Victorian Chief Engineer could help to assist in the coordination of infrastructure and climate change efforts. Specifically, the Chief Engineer could bring in expertise around, disaster management, resilience planning and workforce capacity to discussion on infrastructure.</p>
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Topic/area:	Climate Change
Recommendation name:	Use new flood maps to revise planning
Recommendation number:	28
25. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part
26. Tell us why	Local, climate change-informed flood mapping is essential for making infrastructure adaptation decisions.
27. Share any supporting evidence or examples	The Australian Rainfall and Runoff (ARR) Guidelines, published by Geoscience Australia, has recently been updated (with the help of Engineers Australia) to offer design guidance that considers the impacts of climate change in flood estimation and management. The updated chapter can be used now to guide infrastructure decisions to account for the increased risks of extreme rainfall and resulting flood while locally relevant flood maps are developed.
28. Include proposed changes and improvements	

Topic/area:	Community Infrastructure
Recommendation name:	Make government infrastructure more accessible
Recommendation number:	6
29. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part
30. Tell us why	Improving accessibility in government infrastructure benefits not only people with disabilities but the broader community, including parents with prams, elderly individuals, and those with temporary injuries. By designing public spaces with universal access in mind, we create environments that are safer, more efficient, and more

	inclusive for everyone. Ensuring that accessibility improvements align with national standards guarantees consistency, legal compliance, and long-term usability, preventing the need for costly retrofits. A commitment to accessible design strengthens social equity and enhances public infrastructure for all Australians.
31. Share any supporting evidence or examples	
32. Include proposed changes and improvements	
Topic/area:	Energy
Recommendation name:	Coordinate faster delivery of key energy infrastructure
Recommendation number:	29
33. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part
34. Tell us why	<p>Engineers Australia acknowledges both the urgency of responding to the challenge of climate change and the business opportunities the energy transition affords. Australia has the critical minerals needed for existing and new low-emissions industries, excellent sunshine and wind to power renewables, and the engineering expertise to develop and deploy new technologies and industries. With the electrification of household and industrial energy, the demand for electricity is growing. Faster infrastructure delivery is essential for meeting climate change targets and ensuring a reliable and sufficient energy supply.</p>
35. Share any supporting evidence or examples	<ul style="list-style-type: none"> • Energy infrastructure projects create jobs and stimulate economic activity. • Efficient infrastructure reduces transmission and operational costs, which can lower end-user energy bills. • Energy infrastructure projects can bring jobs and investment to regional communities. • Energy-intensive industries can leverage Australia's natural resource advantages to reduce costs, add value and improve global competitiveness through cheap power. • Establishing a coordinated project pipeline will be beneficial for understanding workforce needs. <p>For further evidence, please refer to Engineers Australia's paper Making a Clean Transition</p>

36. Include proposed changes and improvements	
Topic/area:	Energy
Recommendation name:	Invest in home, neighbourhood and big batteries for more energy storage
Recommendation number:	31
37. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part
38. Tell us why	Batteries provide an essential solution for time-shifting renewable energy. Batteries can store excess energy generated by solar during the day for use when solar production is low and/or demand is high.
39. Share any supporting evidence or examples	<ul style="list-style-type: none"> • By supporting renewable energy sources and reducing reliance on fossil fuels, community batteries can contribute to lower emissions and a cleaner environment. • Home and community batteries can save consumers costs, which is particularly important in a cost-of-living crisis. • Batteries can help smooth out demand peaks, improving grid stability and reliability. • Home and community batteries can provide backup power during outages, such as extreme weather events, ensuring essential services and appliances continue functioning. • Grid-scale batteries can help maintain grid stability during extreme weather events or other disruptions, enhancing overall grid resilience. • Community batteries can enable more households to benefit from renewable energy, even renters and those who cannot install rooftop solar. • Grid-scale batteries provide potential for commercial “revenue stacking” in different ways: <ul style="list-style-type: none"> • Arbitrage - charging batteries at times of the day when renewables supply is high and prices are lower and selling during peak periods when more expensive assets drive prices. • Grid services that stabilise the power grid. Battery assets provide frequency regulation, but there is also growing demand for additional services such as reserve, reactive power, and black start. • Capacity payments to ensure 24/7 supply.

40. Include proposed changes and improvements	
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Topic/area:	Energy
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Recommendation name:	Determine long duration energy storage needs
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Recommendation number:	32
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41. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part
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42. Tell us why	<p>As coal-fired power plants are phased out, LDES will maintain grid stability and ensure a reliable electricity supply. The NEM has an identified need for long duration energy storage (LDES) of four to eight hours, or even 12 hours. Australia has approximately 3 GW of storage capacity, including batteries, virtual power plants (VPPs), and pumped hydro. AEMO's Integrated System Plan (ISP) forecasts at least 49 GW of storage by 2050 to reach net-zero emissions.</p> <p>The NSW and Federal governments use the Capacity Investment Scheme to support LDES. Long Term Energy Storage Agreements (LTESA) are only available for battery energy storage systems (BESS) longer than four hours.</p> <ul style="list-style-type: none"> • Pumped Hydro Energy Storage (PHES) is a well-established technology for LDES. • As battery storage costs continue to fall, the business case for long duration battery storage will improve. • Other technologies are developing, for example Compressed Air Energy Storage (CAES), and we should maintain a technology agnostic approach.
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43. Share any supporting evidence or examples	
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44. Include proposed changes and improvements	
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Topic/area:	Energy
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Recommendation name:	Speed up household energy efficiency and electrification
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Recommendation number:	34
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45. Do you support this topic or recommendation?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> In part
46. Tell us why	<p>Speeding up household energy efficiency and electrification offers significant benefits, including reduced energy bills, lower carbon emissions and improved health outcomes.</p> <ul style="list-style-type: none"> • Energy-efficient homes will lower greenhouse gas emissions and a smaller carbon footprint. • By reducing emissions, we can mitigate the impacts of climate change, such as extreme weather events and rising sea levels. • Electric appliances and vehicles produce less pollution, leading to improved air quality. • Energy-efficient homes and appliances consume less energy, resulting in lower household energy bills.
47. Share any supporting evidence or examples	
48. Include proposed changes and improvements	<p>The requirement for Victorian homeowners to disclose the energy efficiency of their homes at the time of sale or lease may be difficult to verify and may create excessive red tape and cost to homeowners. There must be cost effective ways to provide this information.</p>

Topic/area:	Freight
Recommendation name:	Make rail freight competitive, reliable and efficient
Recommendation number:	41
49. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part
50. Tell us why	<p>Environmental Impact: Rail freight produces significantly lower greenhouse gas emissions compared to road transport, contributing to a reduction in overall carbon footprint.</p> <p>Cost Efficiency: Studies have shown that rail transport can be more cost-effective for bulk goods, reducing transportation costs for businesses.</p> <p>Reliability and Speed: Investments in rail infrastructure have been proven to enhance the reliability and speed of freight services,</p>

	ensuring timely deliveries which allows rail freight to compete with road options.
51. Share any supporting evidence or examples	
52. Include proposed changes and improvements	<p>Technological Upgrades: Implementing advanced technologies such as automated systems and real-time tracking to improve operational efficiency.</p> <p>Policy Support: Developing supportive policies and incentives to encourage businesses to shift from road to rail freight.</p>
Topic/area:	Freight
Recommendation name:	Encourage off-peak freight delivery in urban areas
Recommendation number:	42
53. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part
54. Tell us why	<p>Reduced Congestion: Off-peak deliveries can significantly reduce traffic congestion during peak hours, leading to smoother traffic flow and shorter travel times for all road users.</p> <p>Improved Air Quality: By shifting freight deliveries to off-peak times, we can reduce the number of vehicles on the road during peak hours, leading to lower emissions and improved air quality in urban areas.</p> <p>Operational Efficiency: Off-peak deliveries can enhance the efficiency of freight operations by reducing delays caused by traffic congestion, leading to more reliable and timely deliveries.</p>
55. Share any supporting evidence or examples	
56. Include proposed changes and improvements	<p>Incentive Programs: Implementing incentive programs for businesses that adopt off-peak delivery schedules, such as tax breaks or subsidies.</p> <p>Technological Solutions: Utilizing advanced technologies like smart traffic management systems and real-time data analytics to optimize delivery routes and schedules.</p> <p>Stakeholder Collaboration: Engaging with stakeholders, including businesses, local governments, and logistics providers, to develop coordinated strategies and policies that support off-peak deliveries.</p>

Topic/area:	Transport
Recommendation name:	Run faster bus services, more often, in Victoria's largest cities
Recommendation number:	9
57. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part
58. Tell us why	<p>More frequent and faster, more direct bus trips will encourage higher ridership. Planning for bus stops within 400 meters of everyone's house in the past has resulted in circuitous routes, which are less efficient. Observations from Dublin in the early 2000s showed that buses running at 4-minute intervals along a busy route led to very high ridership, as people did not worry about timetables or missing the bus. This made bus travel a faster alternative to driving.</p>
59. Share any supporting evidence or examples	
60. Include proposed changes and improvements	<p>While the recommendation focuses on improving bus services, an alternative approach could involve integrating bus services with other modes of public transport, such as trams and trains, to create a seamless and efficient public transport network. This would ensure that all areas, including those not directly served by buses, have reliable and accessible transport options.</p>

Topic/area:	Transport
Recommendation name:	Build a new bus rapid transit network
Recommendation number:	10
61. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part
62. Tell us why	<p>More frequent and faster, more direct bus trips will encourage higher ridership. By creating dedicated bus rapid transit routes, the Victorian Government can provide a reliable and efficient public transport option that will reduce congestion, lower emissions, and improve overall transport efficiency.</p>
63. Share any supporting evidence or examples	

64. Include proposed changes and improvements	While the recommendation focuses on building a bus rapid transit network, an alternative approach could involve integrating these routes with existing tram and train services. This would create a seamless public transport network, ensuring that all areas, including those not directly served by buses, have efficient and reliable transport options.
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Topic/area:	Transport
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Recommendation name:	Extend metropolitan trains and run more services in Melbourne's west
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Recommendation number:	11
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65. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part
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66. Tell us why	Population growth in Melbourne's west requires more services to be available to meet the increasing demand. Extending and electrifying metropolitan trains to Melton, along with building new stations, will significantly improve access to public transport for residents in these rapidly growing areas. This will reduce road congestion, improve travel times, and enhance the overall quality of life for the community.
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67. Share any supporting evidence or examples	
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68. Include proposed changes and improvements	There is strong support for improving train services in the eastern suburbs, ensuring that all regions benefit from enhanced public transport infrastructure. This comprehensive approach will help balance the transport needs across Melbourne, providing equitable access to efficient and reliable public transport
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Topic/area:	Transport
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Recommendation name:	Run more bus and coach services in regional Victoria
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Recommendation number:	12
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69. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part
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70. Tell us why	More frequent and faster, more direct bus trips will encourage higher ridership. By delivering more bus services in regional cities
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	and running more V/Line coach services to better connect small towns to regional cities, the Victorian Government can provide a reliable and efficient public transport option that meets the needs of regional communities. This will improve access to jobs, education, and healthcare, reducing reliance on cars and enhancing overall quality of life.
71. Share any supporting evidence or examples	
72. Include proposed changes and improvements	While the recommendation focuses on improving bus services, an alternative approach could involve integrating bus services with other modes of public transport, such as trains, to create a seamless and efficient public transport network. This would ensure that all areas, including those not directly served by buses, have reliable and accessible transport options.

Topic/area:	Transport
Recommendation name:	Make off-peak public transport cheaper and simplify regional fare zones
Recommendation number:	13
73. Do you support this topic or recommendation?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> In part
74. Tell us why	Cheaper off-peak travel will encourage people to choose their time of travel more flexibly, thereby spreading the peak demand. This will reduce congestion during peak hours, making public transport more efficient and comfortable for all users. Additionally, simplifying regional fare zones will make public transport more affordable and easier to use, particularly for those in regional areas.
75. Share any supporting evidence or examples	
76. Include proposed changes and improvements	While the recommendation focuses on off-peak fare discounts, an alternative approach could involve implementing dynamic pricing for public transport. This would adjust fares based on real-time demand, and distance travelled, further encouraging travel during less busy times and optimizing the use of the transport network.

Topic/area:	Transport
Recommendation name:	Make local streets safer for children and communities

Recommendation number:	14
77. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part
78. Tell us why	<p>Engineers Australia and Transport Australia Society (TAs) support improving the integration of transport and land use planning, using demand management to reduce traffic volumes on city streets, and implementing measures specifically designed to improve safety and connectivity for vulnerable street users. Designing urban streets to improve safety for pedestrians and cyclists, without unduly restricting other vehicle movement, is essential. Traditional road design has prioritised the needs of cars and large vehicles, often neglecting the needs of pedestrians and cyclists until it is too late to include a safe, integrated solution at an acceptable cost.</p>
79. Share any supporting evidence or examples	<p>For further information, please see TAs' paper Towards safer and more livable urban streets</p>
80. Include proposed changes and improvements	<p>TAs recommends urban speed regulations based on three speed limits (30kph, 50kph, and 70kph), reducing default lane widths, converting four-lane undivided streets to two lanes, implementing safer pedestrian crossings, and providing tighter corner radii and raised pedestrian refuge islands. These measures align with the goal of creating safer, more interconnected urban streets.</p> <p>TAs also recommends developing a comprehensive Australian street design guide that incorporates best practices from both Australian states and other countries. This guide would ensure a consistent and fit-for-purpose approach to urban street design, further enhancing safety and connectivity for all street users.</p>
Topic/area:	Transport
Recommendation name:	Build safe cycling networks in Melbourne and regional cities
Recommendation number:	15
81. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part
82. Tell us why	<p>Currently, the level of cycling is constrained due to the lack of a safe, connected network of cycling routes in Australian cities. Setting ambitious targets and developing a comprehensive network of safe, well-connected cycling routes will encourage more people to cycle, reducing car usage and improving urban mobility.</p>

	Developing a principal bicycle network with physical separation from traffic, a secondary network linking major centers, and safe local cyclist connections will create a safer and more attractive environment for cyclists. Supporting policies, behaviour change programs, and education initiatives will further promote the benefits of cycling and encourage more people to take up cycling as a mode of transport.
83. Share any supporting evidence or examples	The vast majority of potential cyclists will not consider cycling if they are required to share the roadway with motorists at speeds above 40 km/hr. Experience in Australia and internationally has shown that "business as usual" planning will not significantly increase the mode share of cycling. However, cities like Portland have demonstrated that with targeted efforts, cycling mode share can increase from very low levels to between eight and 10 percent over a relatively short time.
84. Include proposed changes and improvements	While the recommendation focuses on building cycling networks, focus should be given to integrating cycling infrastructure with public transport systems. This would provide seamless connections for cyclists to access public transport, further enhancing the convenience and attractiveness of cycling as a mode of transport.
Topic/area:	Transport
Recommendation name:	Use modern traffic control technology for efficient and safe journeys
Recommendation number:	40
85. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part
86. Tell us why	The Smarter Roads program has demonstrated the benefits of traffic light optimization, real-time signal operation, dynamic pedestrian detectors, and enhanced incident response services. By continuing to expand and invest in these technologies, the Victorian Government can ensure that the road network operates more efficiently and safely. This proactive approach will help prevent congestion and improve overall traffic flow.
87. Share any supporting evidence or examples	

88. Include proposed changes and improvements	
Topic/area:	Water
Recommendation name:	Advance integrated water management and use more recycled water
Recommendation number:	25
89. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part
90. Tell us why	<p>Integrated water management considers the supply of water, wastewater, and stormwater services as a joint system, which can improve water security, public health, urban amenity, and the environment. By working with partners to fund and deliver integrated water management projects and determining the costs and benefits of introducing recycled drinking water in Melbourne and Geelong, the Victorian Government can make significant strides in sustainable water use. This approach will help reduce the demand on traditional water sources and ensure a more resilient water supply for the future.</p>
91. Share any supporting evidence or examples	
92. Include proposed changes and improvements	
Topic/area:	Housing
Recommendation name:	Build more social housing
Recommendation number:	1
93. Do you support this topic or recommendation?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> In part
94. Tell us why	<p>Increasing the availability of social housing is crucial to ensure that vulnerable populations have access to secure and affordable housing. As Engineers Australia, we recognise the critical role engineers play in delivering these homes to the highest standards. Engineers are essential in designing, planning, and overseeing the</p>

	<p>construction of social housing, ensuring that projects are completed efficiently and to the highest quality.</p> <p>To meet the demand for more social housing, we need a sufficient number of skilled engineers. Engineers ensure that housing projects are completed efficiently and to the highest quality, addressing the housing crisis effectively.</p>
95. Share any supporting evidence or examples	
96. Include proposed changes and improvements	<p>Workforce Development: Investing in education and training programs to increase the number of qualified engineers, ensuring we have the workforce needed to meet the demand for social housing projects. For further information see Engineers Australia's report Engineering Tomorrow</p>
Topic/area:	Health
Recommendation name:	Invest in digital healthcare
Recommendation number:	19
97. Do you support this topic or recommendation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> In part
98. Tell us why	<p>Investing in digital healthcare technologies such as telemedicine, electronic health records, and AI-driven diagnostics can significantly enhance the quality and accessibility of healthcare. However, for this investment to be truly effective, it must be accompanied by parallel investment in critical infrastructure such as reliable electricity, internet connectivity, and data security systems. Without stable power sources, these technologies cannot function consistently, limiting their impact.</p>
99. Share any supporting evidence or examples	
100. Include proposed changes and improvements	

Future Option: Charge People to fairly use roads

Support: The future option to charge people fairly to use roads is a crucial step towards updating road-based revenue models and managing travel demand effectively.

Reason: Given the growing costs and falling road-related revenues, the Australian, state, and territory governments face an urgent need to update current road-based revenue models. Introducing a system of

road pricing presents an opportunity to manage travel demand and achieve the most efficient use of the road network. Historically, Australian governments have used road tolls primarily for revenue collection to fund road construction, rather than to improve amenity, equity, or transport system performance. A shift towards dynamic road user charging, managed by state governments, would ensure that revenue collected is hypothecated for expenditure on transport infrastructure and demand management.

Evidence: The draft strategy highlights the need for a national framework for road charges, which would provide authority for states to develop and implement road transport user charging schemes. This framework would allow for variable demand management-based charging schemes, replacing the existing Commonwealth petrol and diesel fuel excise charge. The public perception of road user pricing is often negative, seen as an additional revenue-raising approach by governments. However, by explaining the models transparently and ensuring they are revenue-neutral at the time of introduction, the community can be assured that there will be no overall increase in the costs of road use.

Alternatives: While the recommendation focuses on implementing road user charging, an alternative approach could involve a layered system of charges. This could include a base layer charge per kilometer traveled, an emissions charge layer based on vehicle emissions, and a congestion charge layer applied during peak times in congested areas. This comprehensive approach would ensure that those who travel the most and contribute to congestion and pollution pay their fair share, while also incentivising the use of low-emission vehicles and public transport.

Engineers Australia recognises that any road pricing option must be used to achieve broader goals, including equity, environmental sustainability and efficiency goals being achieved. It is recognised that lower-income people often need to travel further (usually by car) to get to work (because housing is cheaper further from cities), or to drive between multiple jobs. Low-emissions cars are also usually more expensive, and so can be cost-prohibitive for low-income earners. So any road use charge needs to consider equity issues so that lower-income earners are not disproportionately disadvantaged.