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26 July 2024

Marisa Purvis-Smith
Deputy Secretary, Transport
Department of Infrastructure, Transport, Regional Development, Communications and the Arts
GPO Box 594 Canberra ACT 2601

Dear Ms Purvis-Smith

Transport and Infrastructure Net Zero Consultation Roadmap

Thank you for the opportunity to provide comment on the Transport and Infrastructure Net Zero Consultation Roadmap and commitment to reducing transport sector greenhouse gas emissions.

The Heart Foundation welcomes the release of the Consultation Roadmap and the intention to develop the Final Roadmap and Action Plan. We provide our support to achieve net zero by 2050 and the development of long-term policy and investments to achieve this. We commend the inclusion to rethink our transport networks and systems and promote active and public transport as the first subject-based chapter within the Roadmap. Our comments and submission largely relate to this topic.

We further commend the Australian Government on the recent announcement of a $100 million investment in Active Transport initiatives across the country over a four-year period.

Please find our detailed submission at **Attachment A.**

If you have any questions relating to our Submission, please contact Anna Gurnhill, Senior Active Living Officer, by email to Anna.Gurnhill@heartfoundation.org.au

The Heart Foundation wishes you all the best in finalising the Roadmap and Action Plan following the close of public exhibition and look forward to its final version, as well as an opportunity to comment on other sectoral plans being developed, including that for the built environment.

David Lloyd
Chief Executive Officer
National Heart Foundation of Australia

ATTACHMENT A

Summary of recommendations

1. Reinforce personal transport mode hierarchy of walking first, followed by cycling and other wheeled forms of mobility, public transport and, lastly, private vehicle
2. Establish how this document will be integrated across other relevant Australian Government departments and agencies
3. Fund an investment program to assist local councils across the country to upgrade lighting at public transport stops and for people walking and cycling
4. Reference the need for inclusive actions to prioritise transport accessibility not only for people living with disability and disadvantage, but also for the young and the elderly
5. Include discussion and action items for government to better support active travel to school infrastructure and initiatives and a healthy futures program for primary school age children
6. Support the transport needs of our ageing population
7. Further consider the barriers of transport poverty in regional areas, and provide specific actions to support active and public transport in regional areas
8. Strengthen positive provisioning for active transport infrastructure
9. Commit to allocating 20% of annual transport budgets to infrastructure for non-motorised forms of transport
10. Recognise that convenience, time constraints and habit are barriers to active and public transport
11. Ensure that cost-benefit analysis of transport infrastructure projects include the financial impacts associated with physical activity and inactivity associated with active and public transport, and continued car dependency
12. Strengthen the critical role that active and public transport has in reaching net zero
13. Provide a positive commitment that the Australian Government will take strong leadership towards active and public transport mode shift
14. Develop a National Active Transport Plan
15. Support state and territory governments for a range of active and public transport initiatives including to adopt 30kph speed zones in urban and built-up areas
16. Provide a consistent approach to prioritise actions that reduce car dependency
17. Develop long-lasting and far-reaching community education and awareness campaigns
18. Develop action items to train, upskill and educate students and practitioners, as well as local decision makers
19. Acknowledge the need for digital, remote and flexible working to accommodate mental and physical health and wellbeing

Designing for heart health

The Heart Foundation is Australia's trusted for-purpose organisation working to improve heart disease prevention, detection, and support for all people living in Australia. Cardiovascular disease is the cause of 1 in 4 of all deaths in Australia,[1] with more than half of the population having 3 or more key risk factors for cardiovascular disease.[2] Physical inactivity remains a major health issue and is calculated to cost Australia $2.4 billion each year in additional health costs alone[3]. Most cardiovascular disease risk factors are preventable through a healthy lifestyle, including a healthy diet, regular exercise and maintaining a healthy weight. Currently, 4 in 5 adults aged 18-64 years in Australia do not get sufficient physical activity for health [4], placing them at increased risk of a range of chronic diseases.

The built and natural environments, together with transport mode choice, play a significant role in helping people engage in regular physical activity, reducing their risk of developing cardiovascular disease. Urban design and transport planning that considers the health of local communities contributes significantly to physical activity outcomes[5], and therefore reduced cardiovascular disease, by making walking, cycling and use of public transport, the easy choice to get from point A to point B. Research shows that people who live in walkable communities are 1.5 times more likely to get enough physical activity[6] and nearly 2.8 times more likely to have a healthy cardiovascular risk profile[7] than those who live in areas where walking is unsafe, inconvenient or difficult.

The Heart Foundation has a particular interest in ensuring the walkability of urban areas and local neighbourhoods across the country, for both transport and recreation purposes. Healthy Active By Design is a key program of the Heart Foundation's National Walking Initiative, funded by the Australian Department of Health and Aged Care to support the goals of the *National Preventive Health Strategy 2021-2030*. The current funding grant will expire in June 2025. We are currently preparing a new, three-year funding bid for 2025-2028.

The National Walking Initiative has been extremely successful and achieved much that is not only consistent with the goals of the National Preventive Health Strategy, but also the objectives of the Consultation Roadmap.

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[1] Australian Institute of Health and Welfare (2024), Heart, Stroke and Vascular Disease – Australian Stats, https://www.aihw.gov.au/reports/heart-stroke-vascular-diseases/hsvd-facts/contents/about; date accessed 20 June 2024.
[2] Australian Institute of Health and Welfare (2024), Heart, Stroke and Vascular Disease – Australian Stats, https://www.aihw.gov.au/reports/heart-stroke-vascular-diseases/hsvd-facts/contents/about; date accessed 20 June 2024.
[3] Australian Institute of Health and Welfare. 2023. 'Economics of Sport and Physical Activity Participation and Injury. Date accessed 22/9/2023. https://www.aihw.gov.au/reports/sports-injury/economics-of-sport-and-physical-activity/contents/about
[4] Australian Bureau of Statistics. Physical activity. 2022. Accessed 24 June 2024. https://www.abs.gov.au/statistics/health/health-conditions-and-risks/physical-activity/latest-release
[5] Giles-Corti B et al. 2019. Action area 1: Built environments. In: White K, editor. Blueprint for an Active Australia 3rd ed. Melbourne: National Heart Foundation of Australia.
[6] Monica L. Wang, Marie-Rachelle Narcisse, Pearl A. McElfish, 2022, 'Higher walkability associated with increased physical activity and reduced obesity among United States adults', published in *Obesity – A Research Journal*, 12 Dec 2022, Vol 31 Issue 2, pp553-564. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9877111/
[7] Makram et. Al., 2023, 'Favourable Neighbourhood Walkability is Associated with Lower Burden of Cardiovascular Risk Factors Among Patients Within an integrated Health System', https://www.sciencedirect.com/science/article/abs/pii/S0146280623000592

Our Healthy Active by Design resources to support urban planning practitioners incorporate eight active living design features and a training module to support active living for healthy active ageing. We are currently preparing a training module to support walkability in areas of disadvantage.

The eight design features are:

1. Public open space
2. Community facilities
3. Buildings
4. Destinations (density)
5. Movement networks
6. Housing diversity
7. Sense of place
8. Healthy food.

Active and public transport provide multiple benefits toward improving cardiovascular health[8] [9]. These include improved rates of physical activity and reduction in sedentary behaviour as well as improvements in air quality by reducing emissions associated with motorised modes of travel.

We share the Australian Government's excitement about the opportunities for positive change and innovation in decarbonising the transport and infrastructure sectors and the benefits for all people living in Australia. We further note and concur on the complexity of the challenges and solutions and the need for an inter-disciplinary approach requiring a mix of technologies, policy and planning using an evidence-based approach.

General comments

As a general comment, we ask that the Roadmap reinforce the hierarchy of personal transport mode prioritisation by referencing walking first, followed by cycling and other wheeled forms of mobility, public transport and, lastly, private vehicle. Many jurisdictions across Australia have taken this approach in strategic policy documents and we encourage the Australian Government to do the same.

While we recognise the timeline presented on page 7 of the Consultation Roadmap represents technology pathways, active and public modes have not received the focus that is required to be future thinking to support a people first approach. We would welcome this reference to be featured more prominently within this high-level overview including, at the least, that active and public transport initiatives feature as the top priority for 'enabling systems'.

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[8] Patterson R, Webb E, Hone T, Millett C, Laverty AA. Associations of Public Transportation Use With Cardiometabolic Health: A Systematic Review and Meta-Analysis. Am J Epidemiol. 2019 Apr 1;188(4):785-795. doi: 10.1093/aje/kwz012. PMID: 30689686; PMCID: PMC6438807

[9] Celis-Morales C, Lyall D, Welsh P, Anderson J, Steell L, Guo Y, Maldonado R, Mackay D, Pell J, Saattar N, Gill J, 2017, 'Association between active commuting and incident cardiovascular disease, cancer and mortality: prospective cohort study', published in *The BMJ*, 19 April 2017, 357:j1456, https://doi.org/10.1136/bmj.j1456

Recommendation 1

The Roadmap should reinforce the hierarchy of personal transport mode prioritisation by referencing walking first

A holistic, multi-disciplinary and integrated approach

To improve urban areas and built environments across Australia, a holistic approach is needed – one which is cross-disciplinary, and which creates cohesion and collaboration across various Government Departments and agencies. This includes but is not limited to the Cities and Suburbs Unit, Infrastructure and Transport, Net Zero, Climate Change, Health and Aged Care, and Road Safety. We recommend that the Roadmap set out the ways in which this strategy will be integrated across this cohort of agencies and departments.

The Heart Foundation welcomes the identified connectivity of this Roadmap with proposed sectoral plan for the built environment. We look forward to the opportunity to review and comment on the built environment sectoral plan once it is drafted.

The Consultation Roadmap notes that “transport activity is heavily influenced by trends in population, economic growth and settlement patterns” (p.18) and that “better planning of our cities through integrated land-use planning, including high-density and mixed land use developments could reduce trip lengths and support mode shift” (p.22). The Heart Foundation welcomes this clear recognition of the correlation and interconnectedness between settlement patterns, transport and the built environment. Transport and urban planning must be considered in unison to achieve net zero.

We further welcome the Consultation Roadmap’s statement that “the Australian Government will need to work closely with state, territory and local governments to rethink the planning of our cities, transport networks and systems to support active and public transport infrastructure” (p.24).

Recommendation 2

Establish how this document will be integrated across other relevant Australian Government departments and agencies

Inclusive and equitable public transport

Research shows that people experiencing socioeconomic disadvantage, including those living in socioeconomically disadvantaged neighbourhoods, are significantly less likely to meet physical activity guidelines and more likely to be sedentary than more advantaged individuals[10].

The availability and quality of transport has a direct impact on issues of social equity as people's lives are directly affected by the accessibility to amenities, destinations and services, as well as transport affordability and options to access services[11]. People who cannot easily travel can face challenges in accessing healthcare, employment and education[12].

Social inequity arising from lack of transport options can further impact on cardiovascular health. Studies have found a positive relationship between the presence and density of public transport stops and walking across all age groups[13]. Increased physical activity can significantly reduce heart disease and the burden of a range of other chronic diseases[14].

In addition to issues of equity in transport, research shows that women do not feel safe at night in public places and women's perceptions of safety have a high impact on their willingness to use public transport, especially at night[15]. The Heart Foundation encourages the Australian Government to consider a funding and investment program specific to lighting upgrades and improvements for local councils across the country, including at public transport stops and for people walking and cycling.

There is a need that infrastructure and services, including local schools, shops and reliable public transport are established as new residents move into growth areas, and that these are located within a 15-minute catchment of walking, cycling, wheeling and/or public transport[16].

Vehicle dependency is amplified in low density outer-suburban and growth areas where geography and location already pose disadvantage[17]. This is evidenced in places like Western Sydney, NSW,

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[10] Cleland V, Ball K, Dollman J, & Turrell G. (2019). Action area 7: Disadvantaged populations. In *Blueprint for an active australia. 3rd ed*. Melbourne, Australia: National Heart Foundation of Australia.
[11] Cantilina et. al. 2021. 'Approaches and barriers to Addressing Equity in Transportation: Experiences of Transportation practitioners'. Published in Sage Journals 8 June 2021, Vol. 2675, issue 10. https://journals.sagepub.com/doi/full/10.1177/03611981211014533
[12] Ward, C, Walsh D, 2023, 'I just don't go nowhere: How Transportation disadvantage reinforces social exclusion', published in *Journal of Transport Geography*, Vol 110 June 2023, https://doi.org/10.1016/j.jtrangeo.2023.103627
[13] McCormack et. Al. 2008. 'The relationship between destination proximity, destination mix and physical activity behaviours'. Published in Pub Med Journal vol 46 Jan 2008. https://pubmed.ncbi.nlm.nih.gov/17481721/
[14] Heart Foundation. 2019. 'Blueprint for an Active Australia'. Third edition. https://www.heartfoundation.org.au/getmedia/6c33122b-475c-4531-8c26-7e7a7b0eb7c1/Blueprint-For-An-Active-Australia.pdf
[15] Stace et al 2023. Applying a Gender Lens for inclusive Active Transport. New Planner Journal, Planning Institute of Australia NSW Chapter p38-39 https://www.planning.org.au/membersresources/new-planner
[16] Grodach C, Kamruzzaman L and Harper L, n.d.'20 Minute Neighbourhood – Local Living Research project', Monash University, Mambourin Report – Staging Community Infrastructure, Prepared for Resilient Melbourne, https://www.planning.vic.gov.au/__data/assets/pdf_file/0026/653255/Mambourin-Report-Staging-Community-Infrastructure.pdf
[17] Giles-Corti et.al., 2022. 'Spatial and socioeconomic inequities in liveability in Australia's 21 Largest cities: Does city size matter?'. Published in health and Place Journal Vol 78, Nov 2022. https://www.sciencedirect.com/science/article/pii/S1353829222001605

with continued greenfield development and reduced access to services and transportation leading to higher car dependency[18], and therefore reduced physical activity and increased health risks, as well as impacts on climate change from transport emissions associated with private vehicle use.

In Western Sydney, new growth areas are also being developed at long distances from strategic centres and employment opportunities[19], forcing residents to depend on private vehicles for transport. Public transport options need to provide connectivity not only within the key strategic centres, but also to provide network movements to enable those living in outer suburbs to access strategic centres[20].

In addition, the delivery of schools and other local community facilities is often delayed after new residents move into new growth areas, forcing children to travel long distances each day, often by private vehicle[21]. Research shows that children who live within 800m of their school are more likely to walk or ride to school[22].

For these reasons, the Heart Foundation welcomes the Consultation Roadmap's guiding principles for inclusion and equity and agrees that "no-one should be left behind on the journey to net zero" (p.13). We acknowledge the Australian Government's recognition that inclusive, equitable actions to decarbonise can also support liveability, health and other outcomes. The Heart Foundation welcomes initiatives that ensure everyone living in Australia has transport choice that is affordable, viable and feasible.

We ask that the Roadmap includes specific reference for inclusive actions to prioritise transport accessibility not only for people living with disability and disadvantage, but also for the young and the elderly. We would welcome specific discussion and action items for government to better support active travel to school infrastructure and initiatives and a healthy futures program for primary school age children. We would also welcome the introduction of active travel initiatives through education curriculums in each jurisdiction and for the Australian government to provide support for

[18] WSP Australia Pty Ltd. N.d. 'Western Sydney Centres: Beyond Recovery – Great Places Leading Our Liveability and Economic Success'. Date accessed 21/9/2023. https://www.westernsydney.edu.au/__data/assets/pdf_file/0006/1782933/western-sydney-centres-beyond-recovery-report.pdf

[19] SGS Economics. 2020. 'Western Sydney Growth Infrastructure, Compact program Land use Scenario Forecasts'. Report Prepared for Greater Sydney Commission. https://sgsep.com.au/assets/main/SGS-Economics-and-Planning_appendix_3_-_western_sydney_pic_land_use_scenarios_forecasts.pdf

[20] Saelens et. al., 2003. 'Environmental correlates of walking and cycling: Findings from the transportation, urban design and planning literatures'. Accessed via Heart Foundation, Healthy Active by Design, Design Features: Movement Networks. Date accessed 21/9/2023. https://www.healthyactivebydesign.com.au/design-features/movement-networks

[21] Sarkar et. Al. 2021. 'New Housing Supply, Population Growth, and Access to Social infrastructure'. Australian Housing and Urban Research institute Ltd Melbourne. https://www.ahuri.edu.au/sites/default/files/migration/documents/AHURI-Final-Report-356-New-housing-supply-population-growth-and-access-to-social-infrastructure.pdf

[22] Larsen K, Buliung R, Faulkner G, 2013, 'Safety and School Travel: How does the environment along the route relate to safety and mode choice?' Transport Res Rec, pp 9-18.

this to occur. The reduction in the percentage of children walking or cycling to school in Perth, WA from 75% in 1981 to 25% in 2021[23] underscores the importance of such measures.

Support for the transport needs of our ageing population will also be required, including infrastructure that accommodates anticipated increased use of personal mobility devices, during use and while parked.

The Heart Foundation would welcome further consideration of the barriers presented in the Consultation Roadmap (active and public transport, p. 25) regarding transport poverty in regional areas. We acknowledge there are very real challenges presented for mode shift to active and public transport in regional areas. However, there are also many opportunities. Many regional townships across Australia are, effectively, 15-minute neighbourhoods; and can provide local communities with the opportunity to walk or cycle within 15-minute catchment areas to access most of their daily needs. The Heart Foundation recommends that this be noted in the Roadmap and that actions be developed specifically to support walking and cycling in regional areas.

Recommendation 3

Fund an investment program to assist local councils across the country to upgrade lighting at public transport stops and for people walking and cycling

Recommendation 4

Reference the need for inclusive actions to prioritise transport accessibility not only for people living with disability and disadvantage, but also for the young and the elderly

Recommendation 5

Include discussion and action items for government to better support active travel to school infrastructure and initiatives and a healthy futures program for primary school age children

Recommendation 6

Support the transport needs of our ageing population

Recommendation 7

Further consider the barriers of transport poverty in regional areas, and provide specific actions to support active and public transport in regional areas

[23] Department of Transport, State Government of Western Australia, 2021, 'The declining rate of walking and cycling to school in Perth', https://www.transport.wa.gov.au/mediaFiles/active-transport/AT_P_Declining_Rate_walking_cycling_to_school_in_Perth.pdf

Infrastructure investments

The Heart Foundation notes that infrastructure investments for active transport are largely the responsibility of state, territory and local governments. We further note the role of the Australian Government to invest in active transport infrastructure as part of large-scale projects. We would like to see further strengthening of positive provisioning for improved active transport infrastructure related to the Infrastructure Policy Statement's economic, social and environmental objectives, particularly around the theme of liveability. The Heart Foundation further recommends that the Australian Government, and state, territory and local governments commit to allocating 20% of annual transport budgets to infrastructure for non-motorised forms of transport, as recommended by the United Nations[24].

The Heart Foundation welcomes and supports the Consultation Roadmap recognition that low-carbon modes of transport (including active and public transport) also result in lower emission transport infrastructure. Not only do active transport modes themselves produce a much smaller amount of greenhouse gases per person, per kilometre compared to driving; they also produce smaller amounts of greenhouse gases per kilometre of new infrastructure requirements.

We welcome recognition in the Consultation Roadmap of induced demand whereby decisions around "where and what infrastructure we build influences the greenhouse gases emitted by the transport sector. For example, the building of roads could increase the emissions from light and heavy vehicles by enabling this transport mode" (p.5).

By way of example for how this could be achieved, in 2019 in the state of Colorado, United States of America, legislation was introduced to reduce greenhouse gas emissions by 90% by 2050. The Transport Commission of Colorado adopted a formal rule in 2021 that requires an emissions reduction assessment of all new major projects, including highways. In 2022, over $900 million USD was reallocated from highway expansions to active and public transport infrastructure. Some other U.S states have also followed this lead[25].

To support the continued uptake of active and public modes of transport, improved separation between different modes and speeds of travel will be needed. This can only be achieved through road space reallocation which prioritises a people-first approach. Further comments below address this in more detail.

[24] UN Environment 2016.Global Outlook on Walking and Cycling 2016 UN Environment, Nairobi, https://www.unep.org/resources/report/share-road-global-outlook-walking-and-cycling-october-2016

[25] New York Times, 5 May 2024, 'Colorado's Bold Approach to Highways – Not Building Them', https://www.nytimes.com/2024/05/31/headway/highways-colorado-transportation.html#:~:text=New%20York%20Times-,Colorado's%20Bold%20New%20Approach%20to%20Highways%20%E2%80%94%20Not%20Building%20Them,turning%20their%20eyes%20to%20transit.&text=When%20Interstate%2025%20was%20constructed,highway%20engineers%20moved%20a%20river.

Recommendation 8

Strengthen positive provisioning for active transport infrastructure

Recommendation 9

Commit to allocating 20% of annual transport budgets to infrastructure for non-motorised forms of transport

Active and public transport

The Consultation Roadmap establishes a sound context outlining the many barriers to active and public transport use and, again, the interconnectivity between transport and urban planning. We would recommend adding to the list of barriers presented on page 25 the elements of convenience, time constraints and habit.

The Consultation Roadmap notes that "there is also a significant cost to governments in investing in public and active transport infrastructure" (p.25). The Heart Foundation wishes to emphasise that there is significant cost (environmental and health) if investment in public and active transport infrastructure and supporting initiatives is not provided[26].

Investment in public and active transport infrastructure requires significantly lower cost than infrastructure costs associated with light vehicles, as well as having broad positive outcomes across a range of cost-benefit analyses[27]. It is estimated that a $2 return on investment is provided for every kilometre of active travel infrastructure[28]. The Heart Foundation recommends that the Roadmap identifies the need for cost-benefit analysis of transport infrastructure projects to include the financial impacts associated with physical health outcomes achieved through active and public transport, and the costs associated with physical inactivity of continued car dependency.

We recommend that the discussion on the challenges and opportunities to support a mode shift towards active and public transport be strengthened. The document notes that "increased use of active and public transport will be part of reaching net zero" (p.25). The statement should be strengthened to reflect the critical role that active and public transport will and will play in reaching net zero.

The Heart Foundation recommends a positive commitment from the Australian Government regarding its responsibility to demonstrate and deliver strong leadership in this area, acting on best practice research and evidence, focusing not only on the environment but also for long term interest

[26] Mueller N et. Al., 2017, 'Health Impacts associated with urban and transport planning: A burden of disease assessment', Environment International Vol. 107, p243-257, Oct 2017, https://doi.org/10.1016/j.envint.2017.07.020
[27] Litman T, 2024, 'Evaluating Active Transport Benefits and Costs: Guide to Valuing Walking and Cycling Improvements and Encouragement Programs', Victoria Transport Policy Institute Canada
[28] Climate Council of Australia, 2023, 'Shifting Gear: The Path to Cleaner Transport', ACT, https://www.climatecouncil.org.au/wp-content/uploads/2023/05/CC_MVSA0354-CC-Report-Road-to-Personal-Transport_V5-FA-Screen-Single.pdf

of the health and economic advancement of the Australian community. The Consultation Roadmap cites examples of other cities who have successfully overcome similar challenges and barriers. The same can be achieved in Australia. However, strong leadership is required to enact positive change for the future.

The Heart Foundation supports the proposal for a "comprehensive national policy framework for active and public transport that includes infrastructure development, public engagement, legislative reform and technological advancement" (p.26). We would welcome the development of a National Active Transport Plan, to be agreed across all levels of government.

We support the elements noted for the Government as leader and investor at pages 26 and 27 of the Consultation Roadmap and commend the Australian Government on the initiatives outlined here. The Heart Foundation would welcome inclusion of the following items under existing elements:

- Urban planning and zoning reform
    - support for transport-oriented developments and reduced car parking minimums
    - strengthened regulations for end-of-trip facilities in new and existing buildings
- Active transport infrastructure improvements
    - adequate lighting for active transport infrastructure and at public transport stops to address issues of safety
- Incentives for public and active transport
    - subsidies and incentives for e-bike purchases

A critical component to improve the walkability of the built environment and local neighbourhoods includes road safety and the need to prioritise speed limits of 30kph in built-up urban areas and local neighbourhoods, including around schools. Research shows that there is a 10% chance of fatality when a person walking or cycling is hit by a vehicle travelling at 30 kph, compared with 20% at 35kph, 40% at 40kph and 90% at 50kph[29]. While this is the responsibility of state and territory governments, the Heart Foundation encourages the Australian Government to offer support with a national statement to achieve this.

Recommendation 10

Recognise that convenience, time constraints and habit are barriers to active and public transport

Recommendation 11

Ensure that cost-benefit analysis of transport infrastructure projects include the financial impacts associated with physical activity and inactivity associated with active and public transport, and continued car dependency

[29] Jurewicz C, Sobhani A, Woolley J, Dutschke J and Corben B, 2016, 'Exploration of Vehicle Impact Speed – Injury Severity Relationships for Application in Safer Road Design', published in Transportation Research Procedia V14 2016 pp4247-4256, Exploration of Vehicle Impact Speed – Injury Severity Relationships for Application in Safer Road Design - ScienceDirect

Recommendation 12

Strengthen the critical role that active and public transport has in reaching net zero

Recommendation 13

Provide a positive commitment that the Australian Government will take strong leadership towards active and public transport mode shift

Recommendation 14

Develop a National Active Transport Plan

Recommendation 15

Support state and territory governments for a range of active and transport initiatives including to adopt 30kph speed zones in urban and built-up areas

Light vehicles

While "the main *technology pathway* to reduce light vehicle emissions will be electrification" (p.35, emphasis added), the Heart Foundation maintains that the main *pathway* to reduce light vehicle emissions will be mode shift to active and public modes of transport. In accordance with the Consultation Roadmap's framework for "avoid-shift-improve", we would welcome recognition in Chapter 3 to this effect, with a clear note that what is proposed in Chapter 3 – travel by light vehicle – is the last element in a tiered hierarchy of prioritised efforts toward net zero.

The Heart Foundation recommends shifting the focus of role of low and zero emission vehicles to providing greater attention to reducing car dependency through a focus on prioritising alternative modes of transport. Improvements in fuel efficiency and electrification are important components on the path to net zero. However, they are one component and there needs to be greater attention given to active and public modes of transport, as well as the associated interconnectivity across other areas of government including housing, planning and the National Urban Policy – all of which will help reduce car dependency (avoid and shift, before improve).

There is a growing body of evidence about the level and impact of non-exhaust emissions from motorised vehicles, including particles from abrasion and wear of brakes, tyres, rotors and the road surface[30]. These emissions – comprising heavy metals and microplastics – are believed to exceed

[30] Fussell J, Franklin M, Green D, Gustafsson M, Harrison R, Hicks W, Kelly F, Kishta F, Miller M, Mudway I, Oroumiyeh F, Selley L, Wang M, Zhu Y, 2022, 'A Review of Road Traffic-Derived Non-Exhaust Particles: Emissions, Physiochemical Characteristics, Health Risks and Mitigation Measures', *Environ Sci Technol*. June 7 2022, Vol 56 Issue 11: pp 6813-6835, 10.1021/acs.est.2c01072

emissions from tailpipe exhausts, with tyres alone generating, globally, 6 million tonnes of particles per year[31].

Fuel-efficient and electric vehicles will continue to produce non-exhaust emissions and resulting air pollution that impacts health outcomes, as well as continue to contribute to traffic congestion, car-dependent lifestyles and physical inactivity.

Twenty-two percent of worldwide deaths from coronary heart disease and 15% from stroke were attributed to air pollution in 2019[32]. In addition to the direct cardiovascular impacts of unhealthy natural environments, healthy natural environments can support improved cardiovascular health through physical activity opportunities. Places where there is clean air and water, native urban forests, biodiversity habitat and limited noise pollution are more conducive to support walking, cycling and other forms of physical movement to improve heart health.

Despite Australia's population being forecast to continue to grow, we must seek to simultaneously reduce the number of light vehicles on our roads.

The Heart Foundation welcomes many of the Government's initiatives presented through the Consultation Roadmap. However, some chapters and references within the document appear to accept a continued culture of car-dependency, which will continue to contribute to climate and health impacts from a car dependent nation. We recommend the Roadmap provide consistency throughout the document for a modal shift to increased active and public modes of transport.

Recommendation 16

Provide a consistent approach to prioritise actions that reduce car dependency

Partnerships and mobilising communities

Complimentary to the need for strong leadership noted above is the need for a mass community education campaign to address the Consultation Roadmap's noted challenge of behaviour change.

The Heart Foundation welcomes the recognition in the Consultation Roadmap of the important role that states and territories, local communities and others play. It is recommended that education and awareness campaigns are developed to support communities to engage meaningfully with government investment and interventions affecting transport mode choice.

For the Australian Government to achieve the vision set out in the Consultation Roadmap, strong community support is needed for ambitious projects at the state/territory and local government levels. It is recommended that the Australian Government develop a far-reaching campaign to

[31] Tan Z, Berry A, Charalambides M, Mijic A, Pearse W, Porter A, Ryan MP, Shorten RN, Stettler MEJ, Tetley TD, Wright S, Masen MA. Tyre wear particles are toxic for us and the environment. Imperial College London (2023). doi: https://doi.org/10.25561/101707

[32] World Heart Federation. World Heart Report 2024: clearing the air to address pollution's cardiovascular health crisis. 2024. Accessed 24 June 2024. https://world-heart-federation.org/resource/world-heart-report-2024/

socialise and normalise the initiatives set out in the Consultation Roadmap, particularly around the "avoid-shift-improve" framework and hierarchical priority towards active and public modes of transport.

The Heart Foundation offers support for a shift from traditional road design to a focus on designing streets to maximise safe access for shared use to achieve a transition to net zero.

We would welcome inclusion in the roadmap of discussion and action items which address this matter through training, upskilling and university-level educational opportunities for traffic engineering, transport planning, public works and asset management, as well as local decision-makers. We believe that a dedicated investment and cross section collaboration is requires to support road space reallocation and prioritisation towards more active and public modes of transport. To achieve this, a people-first approach needs to be applied in all design and planning stages, as well as community education campaigns to raise awareness about optimising the use of public space.

Recommendation 17

Develop long-lasting and far-reaching community education and awareness campaigns

Recommendation 18

Develop action items to train, upskill and educate students and practitioners, as well as local decision makers

Digital technology

The Heart Foundation further supports the Consultation Roadmap's proposal for greater use of digital communication technologies to allow people to work from home more and/or to travel for work less, where appropriate and applicable. There are many benefits that can be achieved through this approach across transport, the environment and health. This includes opportunities to walk or ride children to school, to support businesses within one's local neighbourhood and to engage more with the local community.

However, there can also be unintentional consequences of flexible and remote working including social isolation, loneliness and other mental and physical health matters[33]. The Heart Foundation recommends that items in the Roadmap associated with Digital Technology be strengthened to acknowledge the need to manage mental and physical health and wellbeing.

[33] Ending Loneliness Together. Ending Loneliness Together in Australia. 2020. Accessed 24 June 2024. https://www.endingloneliness.com.au/resources/whitepaper/ending-loneliness-together-in-australia

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Acknowledge the need for digital, remote and flexible working to accommodate mental and physical health and wellbeing