

# NEWSLETTER no 09

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Early delivery of equitable and healthy transport options in new suburbs: Critical reforms and tools



Source: Nearmap and PSP Beveridge Central

# Welcome

Welcome to the ninth newsletter of the “Early delivery of equitable and healthy transport options in new suburbs: Critical reforms and tools” project. This internal newsletter is to update RMIT’s project partners on activities both undertaken and planned, and to report preliminary insights. This project is funded by RMIT’s Urban Futures Enabling Capabilities Platform, the Victorian Planning Authority, the City of Casey, the City of Wyndham and Stockland Corporation.

## Activities this quarter

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In the last few months, the project team has kept working on the transport scenarios and alternative funding options. We’ve also prepared the webinars which will take place in November. Work across the three work streams has included:

- Further development and discussion of the public and active transport scenarios of low, medium and high quality, in relation to different stages in development
- Collection and aggregation of costs for transport scenarios
- Work on the benefits of the transport scenarios
- Finalising the ‘Funding Working Paper’
- Presenting and participating in webinars on our project, the impact of COVID-19 on mobility, transport and urban development, and how to move forward
- Organisation of project workshops and seminars in November

## Measuring and valuing the benefits of active transport

Active transport allows people to walk, cycle or use trains, trams or buses to move from place to place. In recent times, active transport has taken centre stage as a solution for car-oriented, sprawling cities suffering from long commute times and congestion problems. For most people, walking and cycling are easily accessible and are now viewed as a means of transportation that is a convenient way to maintain social distancing whilst still allowing people to connect with one another in open environments. However, this is only possible if safe infrastructure, particularly for cycling, is provided, and this is especially the case for more vulnerable demographics such as women, older people, children and those with disabilities. For active transport users, ideally, infrastructure such as footpaths, lighting, seating, cycling lanes, and right of way should be equitably provided and accessible for all. Active transport has a number of additional benefits. It is a more sustainable and environmentally friendly means of

transportation that in comparison to motorised vehicles has lower green-house gas and air pollution emissions and uses less road space. Active transport has health benefits associated with the physical activity component of walking and cycling and it contributes to other intangible benefits such as social cohesion and community connection which occur when people see, meet and engage with one another whilst out and about walking, cycling or using public transport.

In order to recognise and account for the benefits of active transport as part of cost-benefit analyses or for evaluation purposes, it is necessary to accurately measure or quantify benefits. Tangible benefits, such as the reduction in green-house gases, emissions or congestion from reduced car use are easier to measure than intangible ones, such as social cohesion. For example, the Australian Transport Assessment and Planning (ATAP) Guidelines document annualised benefits in terms of per kilometre generalised

## Measuring and valuing the benefits of active transport - continued



costs for car use, congestion and health. Each of these are estimated on the basis of trips and trip lengths. In the case of health, measurement relates health care costs in terms of morbidity and mortality to the average length in kilometres of walking trips, hence providing a per kilometre measure.

Benefit can also be measured as “willingness to pay”. Willingness to pay can be measured using contingent valuation, for example, by asking travellers to choose between a priced toll road which provides faster travel and a slower road which is cost-free; and how much they would pay for the option of faster travel. This trade-off is then translated into values of travel time savings based on average wages, which in turn measure the benefits from upgrading the road. Other methods to measure willingness to pay include using the ticket price, for example, the value of public transport is measured this way, however, for walking there is no ticket price and hence it is often left out of the equation when measuring benefits in cost terms.

New methods for measuring health and for estimating the reduction in chronic diseases associated with more physical activity are now being applied in academic settings (Zapata-Diomedes et al., 2019), however less research has attempted to estimate and measure the value of social cohesion. Stanley et al. (2011) have used the willingness to pay approach to value additional trip making by people at risk of social exclusion with a view on how much it is worth to a government to spend on a certain program or project when seeking to reduce social exclusion (Stanley et al., 2011). They found that the value for each additional trip taken was about \$A20

(in 2011 dollar terms) at the average household income, while the value increased as income decreased. In a follow-up publication, some of the authors extended the analysis and arrived at a slightly lower value of \$A17 (in 2012 dollar terms) (Stanley et al., 2012). The authors were hoping that these values would be used in cost-benefit analyses. However, the difficulty is that the values for social cohesion are derived on a per trip basis, meaning that to create a reasonable estimate for a population, some estimate of the quantity of trips must first be made.

Overall, measuring health and intangible benefits, whether it be on a per trip or per kilometre basis, is challenging and having access to active transport infrastructure and the social cohesion that comes with it extends their value well beyond each trip taken. The idea here is that people and communities can derive value from such infrastructure even if they are not explicitly using it. For example, a house-bound person may still talk with a neighbour who is passing by, and posties use footpaths to deliver our mail, benefitting those who receive it. Benefits accrue to everyone in the community not just those who are making the individual trips and this underscores the difficulties in how we measure the value of intangibles, such as social cohesion. Yet, intangibles are important for creating resilient communities, now of great importance in these restricted times.

Measurement of both the costs of providing and the benefits that accrue from active transport infrastructure are key components used in cost-benefit analyses (CBAs) of active transport initiatives. Inherent in CBAs



## Measuring and valuing the benefits of active transport -continued

is the use of measurement as a means of valuing such infrastructure. Measurement is a straightforward concept that enumerates a quantity, whereas valuing is more abstract and relies on individual perspectives on what is important. In the case of CBAs, measurement is the proxy for valuation and whilst there are valuation methods, such as willingness to pay and contingent valuation, they are not easy to apply.

### So where does this leave us?

Difficult-to-measure benefits accruing from active transport (e.g. social cohesion, health) are important to measure explicitly, as they balance the costs of providing such infrastructure. Accounting for them recognizes their value and importance. Currently, pragmatic approaches, such as documenting but not necessarily quantifying the amount of value that comes from such benefits are used to recognise their value in cost-benefit analyses. This also serves to highlight that some active transport benefits, and benefits that come more broadly from infrastructure that supports communities, are not only hard to measure but hard to value, potentially resulting in poor design outcomes with long run consequences for

the liveability of an area and the health of the residents.

Research shows that when active transport infrastructure is provided, there are a host of benefits that accrue including improved health and economic outcomes. Whilst planning guidelines and governments are increasingly recognising the value of active transport, measuring both the tangible and intangible benefits is an on-going process with research and methods for improving the measurement and valuation of such quantities still being developed.

### References

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- Zapata-Diomed, B., Boulangé, C., Giles-Corti, B., Phelan, K., Washington, S., Veerman, J. L., & Gunn, L. D. (2019). Physical activity-related health and economic benefits of building walkable neighbourhoods: a modelled comparison between brownfield and greenfield developments. *International Journal of Behavioral Nutrition and Physical Activity*, 16(1), 11.

## Potential funding sources for the delivery of transport options

The delivery of transport infrastructure and services costs money. A large part of this is paid for by general revenue, i.e. taxes and rates. This is true for infrastructure for motor vehicles, active transport and public transport as well as public transport services. One of the reasons for this is that mobility enables social and economic participation and is therefore considered as crucial for our society and as something that the state should support, i.e. a common good. Nevertheless, there are further funding sources outside of general revenue, such as user charges, beneficiary charges and specific (hypothecated) taxes; some of which are already used. The project team has explored funding options that could be used to support the early delivery of transport options. They were selected based on the following principles: reliable income source, substantial enough to be influential; relevant for active and public transport in new suburbs; can be implemented in Australia, not necessarily easily and short-term, but in general. A particular focus has been on

the recurrent costs of the operation of public transport, as this is an area that has received relatively little attention. Table 1 summarises the evaluation of the funding options very broadly; the detailed analysis is available in a working paper. From our analysis it seems that both transport pricing and a broad-based land tax are good and efficient solutions for funding and supporting public and active transport. They both provide recurrent funds rather than one-off payments and the revenue is relatively stable and predictable. They are also both horizontally equitable as they charge users and beneficiaries. Vertical equity can be improved through discounts for lower-income households. While broad-based land tax is not expected to have an impact on travel behaviour, transport pricing will lead to trips shifting from car travel to active and public transport. Yet, they both require large reforms and cannot be implemented in the short-term.

Table 1: Summary of the evaluation of funding options

	<b>Description</b>	<b>Advantages</b>	<b>Disadvantages</b>
<b>Transport Pricing</b>	Pricing of transport services	Is a user fee (i.e. horizontally equitable). More efficient use of transport infrastructure.	Significant restructure needed. Costly to implement. Is regressive (vertically inequitable).
<b>Public transport fares</b>	Increase fares	Already used. Is a user fee.	Potentially discourages PT use. Is regressive.
<b>Road Pricing</b>	Tolls on (all or some) roads, including cordon charges	Is a user fee. More efficient use of transport infrastructure. Reduces traffic congestion.	Restructure needed. Costly to implement. Is regressive.
<b>Distance-based charges</b>	Distance-based fees on vehicles registered in the region.	Is a user fee. More efficient use of transport infrastructure. Reduces vehicle traffic.	Significant restructure needed. Costly to implement. Is regressive.
<b>Parking charges</b>	Special property tax on parking spaces. Increase when and where public parking is priced.	Is a user fee. Reduces car trips and highlights value of land. Already used.	Is regressive. Some implementation costs.
<b>Betterment levy</b>	Special taxes on property that benefit from planning changes.	Charges beneficiaries and captures value increase.	Not a recurrent funding stream. Could potentially influence urban development.
<b>Local developer contributions</b>	A fee on new development to help finance local infrastructure.	Charges beneficiaries and future users. Already used.	Not a recurrent funding stream. Potential increase in house prices. Only for local transport.
<b>State &amp; regional infrastructure contribution</b>	A fee on new development to help finance state infrastructure.	Charges beneficiaries. Already used.	Not a recurrent funding stream. Potential increase in house prices.
<b>Property development</b>	Collect rents from PT property. Sell rights to build over stations.	Relatively easy implementation. Charges beneficiaries.	Limited potential for growth areas.
<b>Property and Land Tax</b>	Introduce broad-based land/property tax	Efficient tax. Is considered progressive.	Significant restructure needed.
<b>Sales Tax</b>	A special local sales tax.	Enables public decision for (public) transport program.	New regulations needed. Difficult to implement in Australia. Is regressive.
<b>Employment tax</b>	A levy on employees in a designated area or jurisdiction. Special income tax for transit or transportation.	Charge for commuters. Progressive with respect to income. Already used.	New regulations needed. Proof of specific benefit of commuters needed. Income tax is collected on the Commonwealth level.
<b>Fuel tax</b>	An additional fuel tax in the region.	Reduces vehicle traffic and fuel use somewhat. Already used. Is a user fee to some extent.	Is regressive. Charges fuel use and not road use.

## Potential funding sources for the delivery of transport options - continued

Other funding options that could be pursued include betterment levies, payroll tax and potentially a local increase in sales tax (GST). Betterment levies provide an adequate mechanism to capture value gain through planning decisions. However, while there is support for the concept of taxing land value uplift, betterment levies have not been a popular instrument – potentially because of vocal opposition by landowners, the large and visible amount of tax when large windfall gains occur and a sense of market interference – and can suffer from implementation problems as measurement of value gain can prove difficult and contested. Yet, in the absence of a broad-based land tax, betterment levies can be an important and fair element to capture value and to fund public and active transport.

An increased payroll tax is a successful instrument for funding public transport in France, where regional transport authorities charge 2-3% additional payroll tax. In France about 30% of public transport operations are paid through this tax. In principle this would be possible in Victoria, as the tax is collected by the state. It would need a good explanation of the reasoning behind it and the benefit of public transport to employers. It would also make sense to have different rates for regional and metropolitan businesses, as they benefit to very different extent from public transport.

In the US, sales tax is a quite successful instrument for funding public transport, but to introduce the concept of local sales – or goods and services – tax in Australia is likely to be complicated, due to current legislation and regulations. GST is collected by the Commonwealth Government and is the same across Australia, so that a local sales tax would need new regulations and/or a mechanism for redistributing it back to the state.

Changes to existing instruments are easiest to implement, as the mechanisms for collection already exist. A new payment mechanism is generally opposed while existing instruments may have already proven their worth or are at least less contested. In Melbourne these could for example be the existing parking charges and the Growth Areas Infrastructure Contribution (GAIC). Existing parking charges, such as the parking levy in inner Melbourne and priced parking could be extended in scope and collect funds for active and public transport.



The GAIC is the state and regional infrastructure contribution for the growth areas in Melbourne. It could be made more efficient and better coordinated, have a clear relation to active and public transport, and potentially collect some more money if feasible. The GAIC can already be used for five years of recurrent public transport services, which is a good way to kickstart bus services in growth areas. It could be especially used for the early delivery of bus services, as growth areas are likely to lose out when public transport services are distributed to areas with the greatest need and backlog. In the briefing paper on developer contributions in Victoria for this project, we found that two different opinions exist on GAIC public transport funds, about whether to spend it on 'smaller' (pedestrian crossings, bus interchanges, parking at rail stations) or 'larger' (train stations) projects. We would suggest the public transport fund should focus on the early operations of public transport services in growth suburbs. The GAIC currently is a mix of betterment and user pays charge. This means that the extent to which betterment is captured in the GAIC could be re-assessed. However, we would suggest charging the land owners who own the land at the point of the planning change rather than the purchaser, as this is the fairer betterment tax.

While funding is vital it is not the only element of achieving the early delivery of transport options: better coordination, more efficient processes, and supporting land uses all play a part. The broader objective behind the call for transport options should not be forgotten: achieving a more equitable, sustainable and healthier city. The COVID-19 pandemic and its consequences will have a huge impact on the delivery of

transport options, the full impact of which is not entirely clear yet. It seems that the value of local destinations accessible by active transport has come to the fore, while the reputation and use of public transport could suffer in the immediate future. It will be necessary to come up with solutions for this to counteract increasing car dependency. The further support of active transport

will help to some extent, e.g. through more active transport infrastructure as well as through urban design and planning that allows for and supports the implementation of destinations, such as retail and employment close to residential areas. A clear road-map how public transport can be used despite COVID-19 and clear messages about actual risks will also help.

## Miscellaneous

### Webinar Workshops

- 18 November: Workshop for Project Partner staff members plus further organisations
- 26 November: Workshop for Local Government staff
- 2 December: Workshop for Project Partner staff members

Please register your interest in any of those workshops by sending an email to Annette Kroen: [annette.kroen@rmit.edu.au](mailto:annette.kroen@rmit.edu.au)

### Living Locally: Creating Resilient 20-minute Neighbourhoods in Greenfield Growth Areas

A new report from Resilient Melbourne brings together the findings of four research projects funded by DELWP which explored challenges and opportunities associated with achieving 20-minute neighbourhoods in greenfield growth areas. Team members Robin Goodman and Annette Kroen are authors of one of the underlying research reports. The report "Living Locally: Creating Resilient 20-minute Neighbourhoods in Greenfield Growth Areas" outlines opportunities for collaborative approaches to create local environments that support 'living locally' and, with that, stronger social connections and community resilience.

The report can be downloaded here:

<https://resilientmelbourne.com.au/wp-content/uploads/2020/10/Living-Locally-20MN-in-Greenfield-Growth-Areas.pdf>

More detailed reports of the research projects can be found here (under the research tab):

<https://www.planning.vic.gov.au/policy-and-strategy/planning-for-melbourne/plan-melbourne/20-minute-neighbourhoods>

## Planned activities

- Finalise work on modelling and funding approaches and discuss with project partners
- Transport scenarios
- Dissemination of findings (e.g. through webinars and articles)
- Project Advisory Group: 11th November 2020 9.30-11.30 am as an online meeting

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