Innovative Cycling Infrastructure Funding Models

and their potential in Queensland

Research Summary

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This report outlines the findings of the independent research undertaken by Griffith University. The contents of the report do not reflect Queensland Government policy.

Synopsis

A lack of access to dedicated cycling infrastructure acts as a deterrent to bike riding in Queensland. Better access to safe, connected, practical and well-signed cycling infrastructure (off-road and on-road) has been identified as the number one enabler of 'more bike riding, more often' in the *Queensland Cycling Strategy*.

Funding for cycling infrastructure in Queensland is largely government-led, using State, local or federal sources, with some private sector contributions via development charges. However, government sources are often constrained and contested and are affected by the rising costs of infrastructure provision.

The Department of Transport and Main Roads (TMR) commissioned the Cities Research Institute at Griffith University to investigate innovative and alternative funding models to contribute additional funds and to expedite cycling infrastructure delivery in Queensland.

This brief report presents the findings of a review of current funding streams in Queensland, a review of new innovative schemes that could be employed, and workshops with key stakeholders that evaluated their suitability.

1. Key takeouts

Our study has accomplished the following tasks:

- **Research and investigate:** Review of current funding models in Queensland and explore alternative models globally.
- **Feasibility study and stakeholder engagement:** Evaluate the feasibility of innovative schemes with a scoring criteria We conducted two workshops involving government (n=8) and non-government (n=7) stakeholders to elicit their views.
- **Final reporting and dissemination:** Analysis and summary of findings.

1.1 Current funding observations in Queensland

In Queensland, State and local governments are the main players in cycling infrastructure funding and delivery. Comparatively, there is limited federal and/or private involvement in cycling infrastructure funding streams (Figure 1).

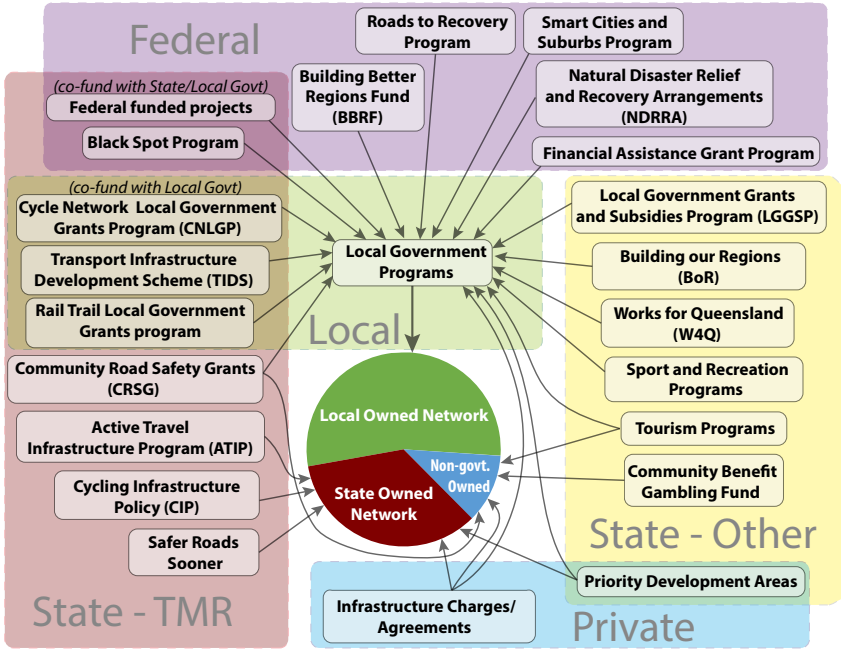

Figure 1: Major funding arrangements for cycling infrastructure in Queensland (Indicative only, not to scale)

Each of these plays a unique role in helping fund bicycle infrastructure.

- **State:** Actively provide for cycling infrastructure on State-owned assets. Also coordinate and offer grant funding to facilitate the creation of the Principal Cycling Network with local governments.
- **Local:** Local governments use their own sources, State and Federal funding to create and maintain cycling infrastructure at local-owned assets. **Federal:** Relatively limited involvement - rare examples of funding are natural disaster recovery (eg. Brisbane Riverwalk) or part of major infrastructure (eg. Moreton Bay Rail).
- **Private:** A potential source of funding but is only limited for infrastructure charges levied to developers at this moment.

1.2 Innovative schemes elsewhere

We identified 12 major alternative funding typologies (See Table 1) that are being used to fund or deliver cycling infrastructure.

Table 1: Summary of innovative schemes identified

Innovative Funding Source	What is it?	Examples	Strengths	Weaknesses	Barriers for Qld	Opportunities for Qld
Public-private partnerships (PPP)	• A service contract between the public and private sectors where the Government pays/co-funds the private sector to deliver infrastructure.	• D2N2 Local Enterprise Partnership (UK, top-down) • Greensboro Downtown Greenway (USA, bottom-up)	• Potentially large funding size (if joint-venture approach). • Benefits of greater public participation and sense of ownership (bottom-up schemes. • Could be attractive for facilities that particularly service a major land-holder.	• Long lead-time for negotiation and development of the project. • Many projects are co-funded by some public funds.	• Could be difficult to implement due to the need of attracting partners, consensus building.	• Joint-venture approach bears some similarities to Queensland's PDAs. • Bottom-up approaches are being pursued by some rail trails in Queensland. • Possibilities to incorporate cycling infrastructure in provisions of land use planning/development.
Private sponsorship through naming rights	• Selling naming rights of cycling facilities as a way to attract private sponsorship funds.	• Barclay's Cycle Superhighway (London, UK)	• Auctioning naming rights of cycling infrastructure capitalises advertisement opportunities. • Cycling is increasingly seen as a healthy and trendy way to travel and is associated with higher income spenders.	• There are public concerns about commercialisation of public infrastructure. • "Clawback" terms were included in Barclays Cycle-Hire Scheme. Barclays was able to not pay part of the promised funding if the patronage targets were not met.	• This model is not familiar in Queensland transport infrastructure as yet. • Learning from the experience in London, better planning and contract design is necessary for successful implementation.	• There is potential to attract corporate sponsorship to (co-)fund Queensland's cycling infrastructure. • Naming rights for sporting grounds are already in use and reasonably well accepted.
Industry schemes	• Cycling infrastructure development led by cycling-related industries	• New Zealand Cycle Trail (Tourism-based national cycle trail) • YouBike run by bicycle maker (Taiwan)	• May help secure tourism dollars for cycling infrastructure. • Can help to promote and expand the bicycle tourism industry. • Local job creation benefits.	• Still requires significant government funding. • Difficult to secure funds for large cycle tourism networks, as needed in a large state like Queensland.	• Queensland (or even Australia) does not have a viable bicycle manufacturing sector to fund manufacturer-led schemes.	• Cycle tourism is a growing business in Australia • Partnerships between transport agencies, local government, Tourism Queensland and with the bicycle tourism industry should be encouraged • Create new cycle tourist destinations.
Philanthropic financial contributions	• Donations (individual or corporate), in-kind support, bequests, membership fees or merchandise proceeds	• Great Lakes Waterfront Trail (Canada) • Sustrans' National Cycle Network (UK)	• Usually free from ethical/political controversy. • Attract donations and help gauge and galvanise public support. • Many cycling advocacy groups are funded in by donorships.	• Funding not usually long-lasting or stable. • Difficult to fund large scale projects alone. • Requires community organisation and strong advocacy.	• Need to create project-based trusts/non-profit organisations. • Uncertainty of sustainable philanthropic giving rates in Queensland	• Suitable for projects with strong community support (e.g. Rail trails) • New crowdfunding and other methods such as bequests or naming could be adopted • Bicycle-related businesses can offer rewards for donors.
Volunteer time/ labour	• Non-monetary, volunteered 'in-kind' support in form of labour and/or services	• Bristol-Bath path by Sustrans (UK) • Cirkelbroen bridge by Nordea-fonden (Denmark)	• Useful for labour-intensive routes such as off-road mountain bike trails. • Particularly useful on non-government land. • Able to attract public support and a sense of ownership of the infrastructure created.	• In-kind support is often limited • Volunteers may not have necessary skills, track record or equipment • Requires community organisation.	• Non-government ownership of bikeways might have public liability concerns (i.e. responsibility of accidents on these assets) • May cause discontent within non-profit groups if over-relying on volunteers.	• Design volunteerism suitable for high profile public infrastructure (e.g. bridges), which may leverage innovative designs for new infrastructure.
Gambling and lottery grants	• Divert gambling proceeds towards cycling infrastructure	• Sustrans and UK National Lottery funds • ConnectOregon scheme (USA)	• Likely a stable source of funding. • This form of funding is already used in funding community-led cycling infrastructure, such as modest investments in rail trails.	• A "sin" tax that raises some ethical implications (e.g. rationalising gambling). • May be seen as a form of government funding if managed by governments.	• Concerns about diverting funds from current recipients (e.g. sport and community uses) to cycling.	• Potential for use in larger scale cycling projects, if there was a reformulation of the state's approach to disbursing these funds.
Value capture	• Land owners who benefit from property value increase from cycling investments being asked to help fund that infrastructure	• Multimodal Districts in Tallahassee/Leon County (USA) • Transportation Impact Fees in Oregon (USA)	• Theoretically fair as the beneficiaries pay more. • Large, long-term funding might be possible through value capture schemes.	• Require complex legislative and policies tools. • Resistance to new taxes in the Australian community. • Value uplift estimation mechanisms are needed to determine the charge. • Difficult to negotiate.	• The level of property value up-lift is subject to debate. Cycling uplift is not well known. • May expect opposition from property owners/ developers. • Little experience with value capture schemes in Queensland.	• Funding for cycling infrastructure is Increasingly accepted by the development industry. • Best opportunities if infrastructure is part of a larger transport project • More specific schemes for cycling infrastructure value uplift capture could be developed
User pays (bicycle riders pay)	• Users (cyclists) pay for infrastructure	• Parking-based charges (Netherlands & Japan) • Bicycle registration to deter theft (Japan)	• Schemes where bicycle riders pay to use infrastructure are theoretically fair as direct beneficiaries pay more for the infrastructure. • Particularly useful for bicycle parking at strategic locations (e.g. public transport).	• Only suitable for key strategic areas (e.g. public transport stations or activity centres • Costs of administering large schemes (i.e. bicycle registration) may far outweigh the costs.	• User-pays cycle centre or end-of-trip facilities have struggled in Queensland . • Parking and user pay schemes could be counterproductive for cycling promotion.	• Small-scale low-fee bicycle parking may be attractive, in key locations. • Continued improvements to schemes such as bicycle lockers at railway stations.
Mobility/congestion pricing (Motorist Pays)	• Charge motorist to help fund cycling infrastructure	• London's Congestion Charge scheme (UK) • Gateway Bridge tolls are used to help maintain its bikeway	• Congestion schemes help control congestion and may make cycling more attractive. • As it offers alternatives to driving, charging motorists and diverting funds for cycling infrastructure is justified.	• Opposition from motorists is likely. • There are set-up and administration costs for car use pricing schemes.	• With strong car dependence and a lack of travel alternatives (public or active travel), such schemes are likely unpopular in Queensland cities.	• Future electrification of the car fleet will see reduction in fuel excise, road pricing to fund transport (including cycling) may become more accepted.
Share scheme levies (micro-mobility operator pays)	• Asking bicycle or e-scooter sharing operators to help fund cycling infrastructure	• Permit systems in San Francisco and Santa Monica (USA)	• Could provide an easily administrated funding source. • Helps recover the external costs (e.g. parking) of new "micro-mobility" services.	• May face opposition from bike share operators • Difficult to developing and enforce these schemes	• A lack of operators in shared mobility in regional cities,	• To develop a framework or policy to reasonably charge operators.
Social impact bonds	• Investors to help fund social services and were rewarded if it generates benefits (or savings)	• Newpin family reuniting program in Queensland	• Creates metrics to evaluate success and incentivise meeting project goals. • Taps into a wider source of finance.	• Schemes might be only workable for those that are easy to measure. • Less profitable services are less likely to attract investors.	• Needs policy and legislative changes to allow such schemes. • New designs may be required for cycling infrastructure.	• Social bonds are being offered in Queensland already. • Cycling infrastructure outcomes are relatively easy to measure (counters).
Health-related funding	• Health agencies or medical insurers to fund cycling infrastructure	• Proposed in German 2020 National Cycle Plan	• Widen source of funding (health agencies, insurers or NGOs) • Connects to one of the key benefits of cycling – health improvements.	• Few existing examples, especially in Australia.	• May require policy and legislative changes • Low levels of investment in preventive health measures in Australia and Queensland.	• Exploring opportunities for co-investment in specific projects, especially in neighbourhoods with low-levels of physical activity.

2. Stakeholder evaluation

Stakeholders were invited from the following organisations/groups:

1. TMR cycling and funding team members
2. Local government members with an involvement in cycling infrastructure
3. Bicycle groups (e.g. Bicycle Queensland, local BUGs)
4. Rail trail organisations
5. Sustainable transport advocacy groups and professional associations (e.g. PedBikeTrans)

The workshops provided useful insights on innovative funding schemes. Figure 2 shows the overall position of the stakeholder groups (State/local government in pink, and non-government in teal) in "radar charts".

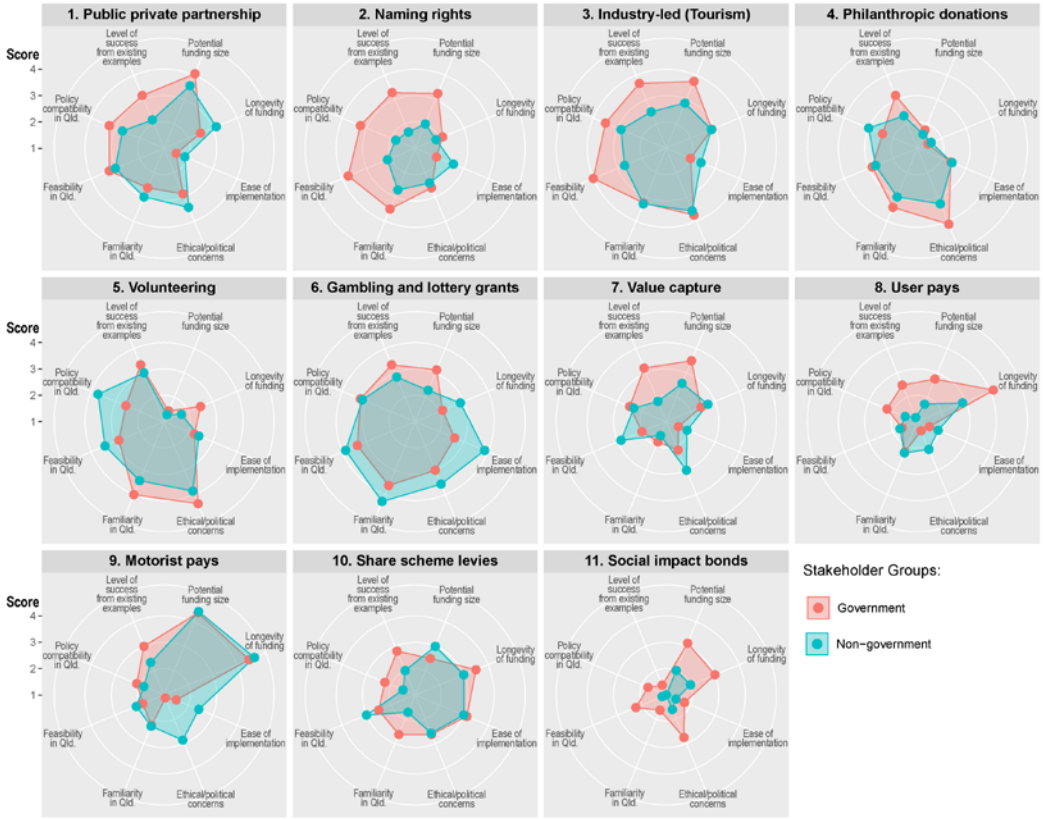

Figure 2: Scoring of the funding models by stakeholder group type

Figure 3 shows the more preferred schemes are located on the top-right quadrant (more benefits, lower risks), whereas the less preferred ones are located on the bottom-left (less benefits, higher risks). Industry (tourism schemes) and gambling grants scored the highest. The other quadrants contain schemes that do not score well on one axis, indicating trade-offs.

The stakeholder evaluation offers useful understandings of the differences in government and non-government stakeholders. The overall consensus is tourism schemes, gambling and PPPs are the more preferred options under current conditions, though in discussions during the workshops there were many statements made about how a particular scheme might work (or not work) in certain circumstances.

In summary, non-government stakeholders suggested philanthropic or volunteer schemes were more suitable for rail trails on government land. Both workshops saw participants raise the issue of low levels of Federal funding. Some suggested this should also be seen as a new "innovative" funding source in Queensland given the low levels of support currently on offer from the Commonwealth.

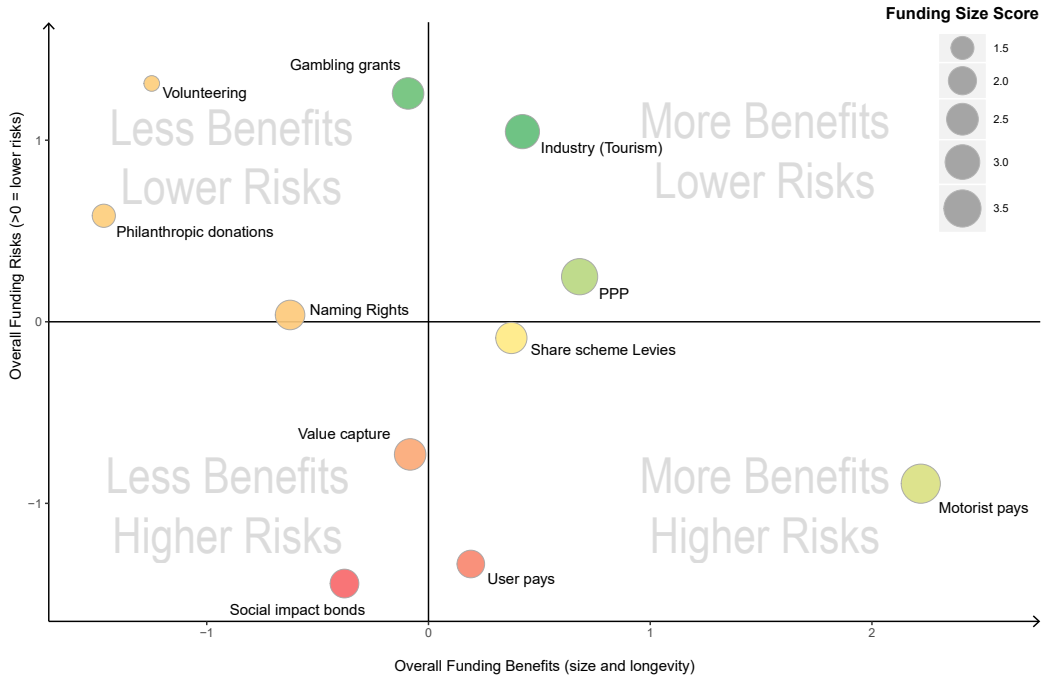

Figure 3: Stakeholder's overall weighted scoring from high (green) and low (red)), average score is indicated by 0

3. Major implications

In our study, we identified the key barriers to securing additional funding in Queensland, which include:

1. The separation of State, local and private-owned networks with separate responsibilities for construction and maintenance.
2. Limited federal involvement in cycling funding.
3. Unless funded by state/local government, cycling infrastructure is generally not classified as essential (or trunk) infrastructure (e.g. roads, sewage, water supply) and subject to piecemeal provision through developer contributions.
4. Cycling groups in Queensland are growing and are effective pressure groups or consultation partners. But they have not yet grown to the size and scale, or to take on a leading philanthropic trust role (such as Sustrans in the UK).
5. Road funding commitments are politically and culturally entrenched, with disproportionally low attention to cycling from all levels of governments.

There are specific opportunities in Queensland for innovative funding to emerge:

1. A growing awareness of cycling as a healthy and low-cost travel mode, with increasing demand for better cycling infrastructure, especially in more urbanised areas.
2. The benefits of cycling are increasingly acknowledged and are increasingly monetised in benefit and cost analysis during project appraisal.
3. A growing cycling tourism industry, which is pushing for further cycling infrastructure with obvious economic and social benefits.
4. A development industry that is beginning to see the benefits of incorporating cycling infrastructure in new developments.
5. Micro-mobility and mobility-as-a-service, which may spark public interest and attract large amounts of venture capital, as seen in dockless bicycle and e-scooter sharing services. These may, in turn, increase demand for and justify investment in bike paths and shared paths.

4. Conclusion

Despite increasing funding on cycling in recent times, there is strong community demand for better and more cycling infrastructure. This is extremely challenging under current political and economic challenges.

Our research revealed cycling funding can come from many different sources as evidenced in international cases. While there might be contextual differences prohibiting the quick implementation of newer schemes, the feasibility of new funding schemes are worth exploring so as to spearhead cycle infrastructure development.

Based on the findings, we suggest these following actions to be taken by government and community groups:

1. Provide links to non-TMR funding opportunities on the TMR website.
2. Include non-TMR funding opportunities in other existing stakeholder engagement activities.
3. Initiate a watching brief on new funding opportunities.
4. Encourage better partnerships for funding success via training, networking and skills development, especially targeting local government.
5. Capture learnings from the NSW Governments inner-Sydney bicycle network proposal to Infrastructure Australia to help unlock Commonwealth funding.
6. Consider exploring highly-ranked funding schemes in greater depth, to provide “how-to” guidance for stakeholders.

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