
MĀNGERE EBIKE TRIAL

STAGE 1: "Give-it-a-go"

Ali Raja | Hamish Mackie | Karen Witten | Simon Opit

IN PARTNERSHIP WITH TIME TO THRIVE

18 AUGUST 2021



Summary

- Within the transport sector, there is a significant risk that some communities will miss out on the e-mobility revolution and the many co-benefits that come with ebikes, which may contribute to low carbon transitions being inequitable.
- Taking a strengths-based approach there is a need to understand a model for successful ebike use in lower-income communities such as Māngere.
- In April/May 2021 we co-designed a 'Give-it-a-go' ebike trial with Time-to-Thrive (TTT), a community trust, in Māngere. Participants took part in three, two-hour workshops run by TTT during which they gained skills riding an ebike, in on and off-street situations. This was followed by a hui to explore experiences of the training sessions and whether there was an appetite for further ebike use and in what contexts.
- Participants reflected on the enjoyment that came from giving ebikes a go, there was an increased appreciation and understanding of ebikes, and participants considered how they would introduce an ebike into their transport activities if given regular access.
- There was a recognition that the ebike could replace certain car trips and increase opportunities for exercise and recreation, while acknowledging that car use will continue to be needed in day-to-day life.
- This initial trial highlighted overall support for ebike use and the opportunity to undertake a more comprehensive ebike trial (in Māngere) which will further explore the experience of regular ebike use in day to day settings on a longer-term basis.

1. Background

Reducing transport-related carbon emissions will be crucial to meet the goals of New Zealand's Climate Change Response (Zero Carbon) Amendment Act 2019 and contribute to limiting the global average temperature increase to 1.5° Celsius. Mode shift from motor vehicles to walking, biking and public transport will be an important component of this transition to a zero-carbon future. Ebike use is surging internationally and in New Zealand – with 66,000 ebikes purchased in New Zealand in 2020. In addition to the decarbonising virtues of ebikes they can also generate personal benefits such as travel time savings, less parking stress, cycling ease in hilly topography, fitness, enjoyment, and mental wellbeing.

However, exposure and access to ebikes is less common in lower socio-economic suburban communities. While ebikes are currently used in local workshops (e.g. Tuariki Health outpatients using ebikes as part of prescribed treatment in Time to Thrive workshops), there is less evidence of a successful model for ebikes being used in daily life in low-income communities, most likely due to a myriad of barriers including cost. There is a big risk that lower income groups will miss out on the e-mobility revolution, the opportunity to contribute to transitioning to a low carbon future, and the many co-benefits that come with ebikes. There are also concerns that decarbonisation transport policies may disadvantage lower income communities who are excluded from alternatives to petroleum fuelled private cars. While there also needs to be a focus on fit for purpose cycling infrastructure, our Te Ara Mua – Future Streets research has found that infrastructure alone is unlikely to be the best way to trigger a culture of cycling, when a widespread cycling culture doesn't already exist. Community based activities and incentives to promote cycling and ebiking are also needed.

The activities of community groups in Māngere, such as Time to Thrive (TTT), have demonstrated a growing appetite for bikes, including ebikes, through events such as a local women's bike rave, Keep the Wheels Spinning rides, Bike Expos, and Tuariki Health/green prescription sponsored ebike workshops. Regular enquiries about ebikes follow these events in and around South Auckland but it seems the market is not currently meeting needs there. Interventions are needed to enable households in all communities to have mobility choice and contribute to reducing carbon emissions through transport mode shift.

2. Exploring the potential for ebikes in Māngere

Taking a strengths-based approach, a three-stage trial process is proposed to systematically explore the potential and practical considerations for routine ebike use in Māngere. The three stages include

- 1) "Give-it-a-go" ebike workshops: Trying various ebikes in a supportive off-road environment.
- 2) Ebike daily life trial: Using ebikes in daily life based at home, work, and community locations.

- 3) Affordable ebikes for all: Developing and testing mechanisms for affordable, safe, and user-friendly ebikes.

The three stages are designed to start from a position of success and slowly introduce, identify, and address barriers that would likely be encountered in considering and using ebikes. At the end of this series of incremental trials, we hope that a model for successful ebike use in a low-income community will have been demonstrated.

Stage 1 “Give-it-a-go” was successfully completed in the Autumn of 2021. The remainder of this document explains how it was delivered and the outcomes from it.

3. “Give-it-a-go” Trial

In April/May 2021, a ‘Give-it-a-go’ ebike trial with TTT, a community trust, in Māngere was delivered following a co-design process. Participants from the local community took part in three, two-hour workshops run by TTT during which they gained skills riding an ebike, in on and off-street situations. This was followed by a hui convened by the research team to explore experiences of the training sessions and whether there was an appetite for further ebike use and in what contexts. Interest in access to ebikes and safe cycling infrastructure was high. The series of workshops also challenged oft stated assumptions that Pacific people, particularly older Pacific women, did not cycle. The following sections will provide more details and findings from the “Give-it-a-go” ebike trial workshops and hui.



‘Give-it-a-go’ session from Stage 1 of Māngere ebike trial

Over 15 ebikes were hired or borrowed from several different suppliers – Beam, Lime, Big Street Bikers, Electric Bike Team, Old Blue Bikes, and people’s personal ebikes – highlighting the level of support that was generated for this initiative. **Auckland Transport** supported ebike hireage where it was needed (with Waka Kotahi also offering to help if needed). The ebikes were stored at the TTT bike workshop in Māngere Centre Park over the course of the trial and some were used at planned events, unplanned events, and group rides outside of the trial workshops, which highlights the demand for the use of these ebikes once they were in the community.

A group of 15-20 people regularly attended these workshops over the course of the three weeks, with participants ranging from beginner riders to experienced push-bike riders who

were new to ebikes. The workshops were structured to progressively both improve cycling skills and increase familiarity with the functions of various ebikes. The first workshop allowed people to ride ebikes around a marked off section of Māngere Centre Park car park to get familiar with riding and controlling the ebikes. The second workshop developed cycling skills further, and the final workshop involved a group ride in a loop around Māngere, including road riding (at times with cycleways and sometimes without). This final ride utilised the skills and confidence gained in the previous workshops to move outside of the safety of the car park and allowed participants to experience ebikes in a more 'real-life' context. This Stage 1 workshop trial was useful as it allowed us to envision a model by which ebikes could be introduced and used more routinely. Having ebikes stored in the community and managed by a committed and experienced bike trust (TTT) provided an opportunity for ebikes to be trialled, used regularly, and for meaningful conversations about ebikes and cycling to occur in the community.

4. Findings from the hui

A formal discussion of the experience of the workshop participants, benefits of ebikes, barriers to ebike ownership, and the possible future of ebike availability in Māngere took place at a hui a week following the final 'Give-it-a-go' workshop. The hui was attended by most of the workshop participants, including the TTT team and the research team. The key findings from the hui were as follows:

- Māngere locals enjoyed riding an ebike and started to envisage how using an ebike would fit into their lives (e.g., for short work trips, running errands and for exercise) particularly for middle-aged and older people in the community.
- Ebikes were not seen as a replacement for car ownership, with cars seen as essential for achieving some daily activities, for example getting to some work destinations, carpooling to church and grocery shopping. However, participants also felt there was an over-reliance on cars in Māngere and affirmed that ebikes could play a role in getting around locally.
- The priority in Māngere, particularly among young people, was to purchase their first car when possible and this has led to many five or six car households. However, by reducing reliance on car use for local transport, ebikes could assist in shifting this priority and encouraging more car sharing among the different generations in a household.
- Many socio-economic and place-based barriers to ebike ownership were identified. First and foremost was the barrier of cost. It was hard to justify the cost of purchasing a new ebike when a second-hand car could be bought for a similar price (without considering the ongoing running costs of both). The flexibility of a car was seen as more valuable. However, the workshop provided an opportunity for the potential value of the ebike to be demonstrated and many participants saw instances in their life where they could use an ebike instead of a car for certain trips.
- Additional factors that aggravated the barrier of cost were the potential for theft and damage or injury through riding the bike. Ebikes were seen as an "easy target" for theft and local roads continued to be viewed as unsafe for riding bikes with "crazy drivers" risking damage to the bike and personal injury.
- It was noted that many in the community were not confident cyclists, particularly with local roads busy with heavy traffic and large trucks. At the earlier workshops, the contrast between the relative safety of the carpark and the adjacent very busy and intimidating Robertson Rd was noted by most. Although local workshops, such as those delivered by TTT,

were applauded for working hard to help people develop confidence and skills and choose routes to stay safe.

- There was a desire for a systematic and structured approach to introducing ebikes into Māngere (with consistent and appropriate funding). Options discussed at the hui involved:
 - o Running more ebike workshops;
 - o An opportunity for a longer trial with participants given ebikes to trial for several weeks or months to see how they can be used to reduce household car trips;
 - o More ebikes stored at the TTT workshop (or local bike hub) and available to be used as needed with suitable expertise on hand;
 - o Ebike schemes supported by large local employers (e.g., factories and the airport) for people to trial and use for their commute;
 - o Working with local agencies (e.g., WINZ, Kainga Ora) to subsidise or provide shared ebikes.
- Finally, there were comments about the quality of local cycling infrastructure needed to support a wider range of potential ebike users (e.g., protected and well-lit cycle lanes). In particular, what might be suitable for a confident male, may be inadequate for a woman cycling alone, especially if they were still gaining cycling confidence.

Overall, the ebike trial workshops highlighted the potential value of regular access to ebikes and that there is a demand in Māngere for further investment into systems that would enable greater ebike uptake. The trial also highlighted the nuances of car ownership in Māngere and the socio-economic and other barriers for entry into the ebike market. A deeper understanding of such barriers is crucial to ensure the success of future implementation strategies.

5. What next?

Based on the success of Stage 1, planning for **Stage 2** is underway, with implementation depending on funding. This will see ebikes trialled in additional local promotional workshops, families, workplaces, and as part of housing developments and other community settings. A more nuanced understanding will be gained of the various safety, maintenance, and cost barriers to ebike usage and/or ownership in Māngere and other lower income communities. The suitability of various options to incentivise uptake will also be explored. It is hoped that this will take place over the 2021/22 summer.

If Stage 2 proceeds with positive outcomes **Stage 3** would explore a range of mechanisms that could be used to incentivise and promote ebike use in lower income communities, including the potential for partnering with WINZ, Kāinga Ora and other organisations to subsidise the purchase of ebikes or provide shared ebike schemes. A pathway for ebikes contributing to equitable transitions to low carbon neighbourhoods and challenging currently held assumptions about ebiking in low-income communities may then be more apparent.