



Waka Kotahi research summary

August 2021

Impacts of a public sector e-bike scheme

In late 2019, Waka Kotahi NZ Transport Agency launched the public sector e-bike purchase support initiative. It aimed to exemplify and promote sustainable, active travel for employees by supporting employers to set up e-bike purchase schemes with approved suppliers. How successful is it so far?

The initiative initially targets public sector employees but is open to others also. It includes salary advances, employee loans, product discounts and interest-free finance terms. Suppliers also provide support such as advice and e-bike trials.

In 2020, researchers evaluated the scheme with a literature review, surveys of registered organisations and participants, and interviews with scheme coordinators, e-bike suppliers, and employees who had purchased e-bikes.

Identifying success factors

The literature review identified several success factors for such schemes, including:

- the opportunity to trial e-bikes
- localised/sustained campaigns
- targeted financial incentives
- a range of products
- simplicity
- accessibility
- integration with other enablers
- a partnership approach
- monitoring and evaluation.

The researchers examined the national initiative against these factors as well as other criteria.

Organisation survey results

The survey of organisations showed that by May 2020, 112 public sector organisations had registered interest in the initiative. Of the 58 organisations that completed the survey, 22 had established an e-bike purchase scheme and 13 were establishing schemes. However, 60% of the organisations said that COVID-19 slowed their planning and progress, so the programme still had unrealised potential.

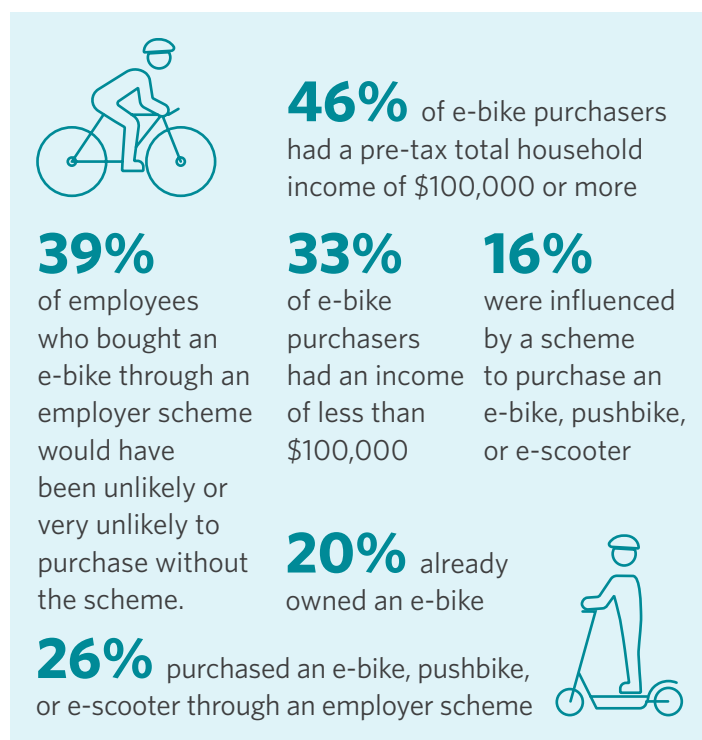
The initiative was highly relevant to stakeholders. They found it easy to understand, access, and implement, and pre-purchase support was effective. They also recommended ways to enhance these criteria.

However, the initiative scored lower for financial incentives, and equity and sustainability. For example, salary advance and employee loans are generally not available to core public service staff, which leaves product discounts and interest-free terms as the main incentives. Discounts alone, at the rate sustainable for suppliers, usually aren't enough for lower-income earners.

Suppliers also questioned discounts if they were the only incentives, mainly because the investment risk fell on suppliers. This suggests that employees need better access to salary advance and loan facilities, and that purchase subsidies may also be required.

Participant survey results

The researchers surveyed 492 participants about trips they'd previously taken by car. They found that:



Most respondents used their bikes for commuting – the main type of weekly trip. The average number of weekly e-bike trips increased as the length of ownership increased, which shows that uptake and mode shift develop over time. Overall, at least 50% of weekly e-bike trips were trips previously undertaken by car.

On average:

- employees who already owned an e-bike biked 90 km weekly that they'd previously travelled by car
- employees who bought an e-bike through a scheme replaced 64 km of weekly car travel and were active for 4.4 days per week (previously 3.2)
- pushbike riders replaced 44 km and increased their number of active days from 4 to 4.4.

These figures increased with the length of ownership.

In addition:

- about 25% of employees who purchased any type of bike were more likely to reduce or maintain the number of cars in their household
- many e-bike purchasers had encouraged others to trial or buy an e-bike
- many e-bike purchasers reported positive family impacts such as biking with family members.

Modelling also showed that if 10% of all public sector employees purchased e-bikes, it would replace 96,397,600 km of car travel annually and save 18,508,339 kg of carbon emissions each year.

Recommendations

The researchers conclude that e-bike support initiatives in Aotearoa New Zealand should continue to meet criteria of relevance, awareness, access, efficiency and ease.

Buyers were generally higher-income earners, and financial incentives to purchase e-bikes need to reduce the price for people on lower incomes. Many scheme product discounts were similar to those available to the general public, and many employees bought e-bikes independently of schemes or would have purchased them anyway.

Employees suggested enhanced financial incentives, including greater price discounts, while suppliers questioned the feasibility, equity and sustainability of discounts alone and described barriers to bulk purchase discounts.

The researchers recommend that salary advance and employee loans should be widely available, and the mix of incentives should include purchase subsidies.

The opportunity to trial e-bikes is important, as is support for local schemes to encourage leadership buy-in, support and resources.

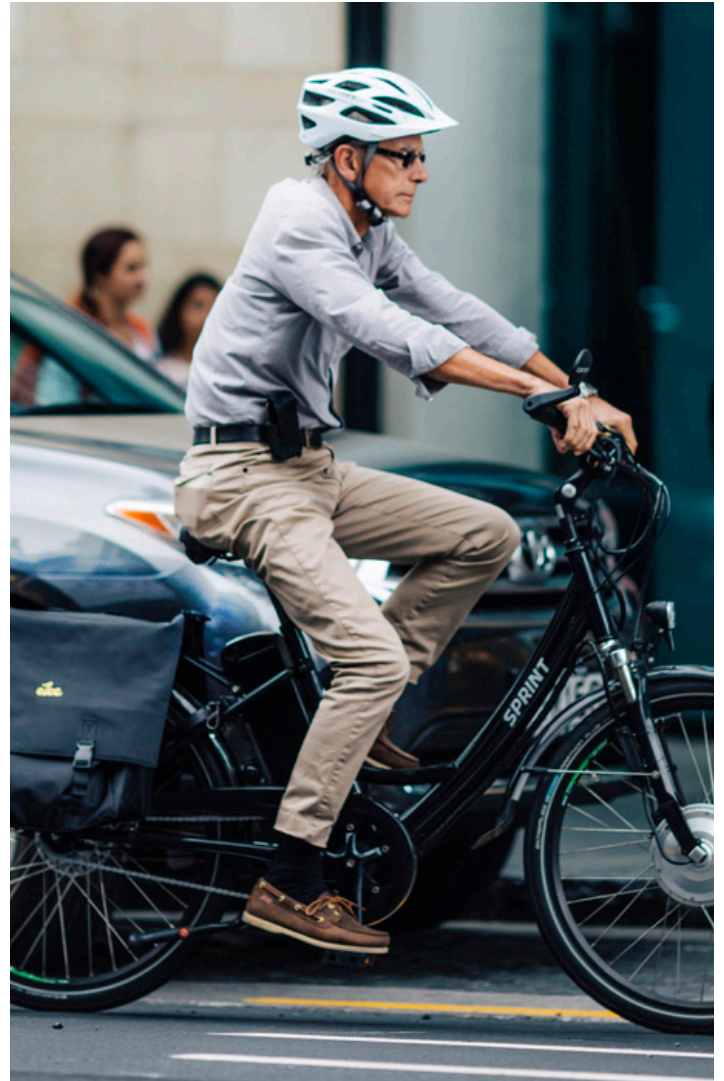
Scheme coordinators may also require further training, particularly if they aren't experienced cyclists. Future initiatives should also support access to safety and security equipment, secure parking and end-of-journey facilities.

Conclusion

From the evaluation results, the researchers found that:

- the initiative is performing strongly
- there's demand for e-bike schemes, and they're relevant
- the initiative is worthy
- further investments in e-bike schemes are warranted.

They also suggest further programme design improvements, reducing the purchase price of e-bikes, and investigating the mix of incentives to encourage uptake.



RR 678 – *Impacts of a public sector e-bike scheme*, Waka Kotahi NZ Transport Agency research report. Available at www.nzta.govt.nz/resources/research/reports/678