WAKA KOTAHI RESEARCH SUMMARY   MARCH 2021

Latent demand for walking and cycling

How do we estimate how much people want to walk or cycle, and how do we know if our estimates are accurate and useful? The answers could ultimately help us to gather better data, to plan better for walkers and cyclists, and to have more confidence in our plans.

Various methods try to identify and measure latent demand, or the 'untapped potential', for walking and cycling. This field is an emerging science in New Zealand, and there's been limited research into the use and success of the estimating methods employed over the past decade.

Therefore, the purpose of this research was to:

- understand how latent demand for walking and cycling is currently estimated in New Zealand and overseas

- describe the best approaches to adopt throughout New Zealand, and recommend a method for developing and testing estimates of latent demand.

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HOW WAS THE RESEARCH DONE?

The researchers started with a literature review and identified the factors that lead to walking and cycling. Then they researched methods for estimating latent demand through a literature review and a stakeholder survey, and assessed and presented a stocktake of the methods used over the last decade.

Using their research findings, they created a decision tree that guides transport practitioners towards the most fit-for-purpose estimation methods. To help with forecasting demand, the researchers also noticed a need for a case study database, which they developed as a spreadsheet and populated with an initial set of case studies.

WHAT DID THE RESEARCH FIND?

Walking and cycling behaviour and behaviour change

Transport infrastructure changes affect individuals and communities in many ways. This means that latent demand estimation methods must be assessed carefully.

Methods for estimating latent demand for walking and cycling should also consider the modes separately to ensure they are adequately represented.

Stocktake of methods for estimating latent demand

The research found there are far more methods to forecast demand for cycling than for walking, and they were also more advanced. Despite the good progress in forecasting in the last decade, survey respondents were cautious about the reliability of walking and cycling forecasts. Some said that transportation forecasts are not seen as highly credible (for any mode).

The researchers categorised estimation methods for walking and cycling into six main types:

- pragmatic approaches
- demand typologies
- stated preference based
- revealed preference based
- traditional transport models
- geospatial assessments.

RECOMMENDATIONS

Improved data collection and sharing

The researchers recommend continuing to improve the routine collection and sharing of quality walking and cycling count data across New Zealand. This includes establishing data standards and using funding and contracts to promote data collection.

They also advise continuing to develop and populate the database of walking and cycling facilities and counts.

Improving demand forecasting

To improve demand forecasting, the researchers suggest:

- setting strategic targets for walking and cycling and using forecasts to prioritise reaching the targets
- promoting and using the decision-tree approach
- updating the New Zealand cycling sketch plan procedure
- ensuring that New Zealand's transport modelling guidance is suitable for walking and cycling models
- considering successfully tested open-source software tools for pilot projects, such as the Cycling Infrastructure Prioritisation Toolkit (CyIPT) and the complementary Propensity to Cycle Tool (PCT).

RR 676 – Latent demand for walking and cycling, Waka Kotahi NZ Transport Agency research report.
Available at **www.nzta.govt.nz/resources/research/reports/676**