

**Mackie, H., Witten, K. (2019) Te Ara Mua – Future Streets: Co-designing and seeing an active travel intervention to completion. 5th International Conference on Transport and Health, Melbourne, Australia, 4-8 November. Presented by Karen Witten**

**Background:** Urban transitions for better health and environmental sustainability require a shift from car use to walking, cycling and public transport. Te Ara Mua – Future Streets is a controlled before-after intervention study of retrofitted suburban street design to prioritise walking and cycling. It has been a collaboration between a research team, local community and regional and national transport agencies. Community engagement, evidence-based design innovation and outcome evaluation have been led by researchers, and the regional transport agency has had responsibility for infrastructure funding, procurement and delivery. This paper presents outcomes of the intervention, challenges in the implementation process and learnings for future projects.

**Methods:** A co-design process involving residents, local government, researchers and transport planning professionals resulted in a modified street environment; key attributes being traffic calming, enhanced walking and cycling infrastructure, connected greenways networks and aesthetic improvements reflecting local cultural identity. Before and after outcomes measures included road-user behaviour, population health (e.g. physical activity, injury) and air quality. The strengths and challenges of the collaborative process were also investigated via pre and post construction via interviews with researchers and transport agency personnel.

**Results:** The on and off-street interventions were guided by design principles developed through engagement and informed by international research evidence. The project's vision of street design innovation was largely achieved albeit scaled back in response to budgetary constraints. Anticipated changes in road-user behaviour have been observed but significant mode shift changes have not as yet been measured. Challenges encountered during the design and implementation phases arose primarily due to: a fluctuating intervention budget and misalignment of research and delivery timelines; contrasting professional ways of working, for example a linear – design, procure, deliver – engineering methodology conflicted with the researchers' iterative participatory design process; and divergent exposure to risk between parties, individually and organisationally.

**Conclusions:** Active travel intervention research is not for the faint-hearted. Six years of consultation, planning and negotiation has delivered a unique neighbourhood scale intervention in Mangere, Auckland, New Zealand. To track changes in physical activity and other health outcomes will require repeat measures over a number of years. Critical decision points surfaced differences in priorities, pressures and constraints, and precipitated conflicts between parties. Despite the difficulties encountered, a shared commitment to delivering a better street environment in this low-income neighbourhood endured. Dedicated funding and planning mechanisms are needed to facilitate future innovative street design trials.