

Users are the true innovators: lessons from bicycles



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Necessity and ingenuity are both said to be the mother of invention. It is therefore with great expectations and excitement to see that [Resilient Melbourne has launched its Citymart \(open innovation\) Challenge](#). To address the dual challenge of transport congestion and social disconnection requires innovative and creative thinking that challenges mainstream ways by which people travel. As City of Melbourne Chair in Resilient Cities my research is aimed at investigating how urban innovation can be harnessed to improve the city's resilience to a range of chronic stresses and acute shocks. But can a city plan for such innovation to happen, and if so how?

Innovation is a notoriously unruly process. To turn a bright idea into a working solution, can best be compared to a journey. While travelling, the destination may change, companions come and go and you may end up in place you never anticipated beforehand. History has taught us that first ideas may evolve into quite different things than initially thought of by an innovator.

This is nicely illustrated by the history of the bicycle, in my opinion a promising candidate to address transport congestion and social disconnection. The first bicycles in the 19th century were not at all meant to provide ordinary road transportation. Before it became "King of the Road" it was the 'Prince of Parks'. First on a Dandy Horse (nowadays better known as a running bicycle but at that time there was not yet any such thing as a 'cycle' in the world of transportation) and later on high-wheeled Penny Farthings, young aristocrats rode these bicycles to show off for their friends. It was not until the arrival of the so-called safety bike a few decades later that the bicycle became a common sight in many cities for large-scale road transportation.

The story of the development of the bicycle neatly illustrates the social construction of technology and

innovation. It shows how different user-groups shape the technical design of a technological artefact. In hindsight, one could consider the first commercial bicycles an unnecessary technological detour intended only for its young, upper-class 'first users'. Perceived, however, through the eyes of bicycle producers at that time the high-wheeled design made a lot of sense as the market signalled a desire for speed and valued its quality as a macho bike over it being an unstable, unsafe bike.

More recent developments in bicycle innovation point to the central role of users and bring us closer to the notion of 'open innovation'. During my childhood in the Netherlands, I witnessed how mountain-bikes entered the scene. Mountain biking began in the early 1970s when young cyclists started to use their bicycles off road. Existing commercial bikes were not suited to this type of rough usage, so these early users put together their own equipment out of strong old bike frames with balloon tires to which they added motorcycle lever-operated drum brakes for better stopping ability.

This case shows how users actively co-created innovation and laid the foundation for the birth of a new, mountain biking industry.

Both cases illustrate the short-sightedness of a so-called linear mode of innovation in which technical experts determine so-called answers. Instead, the notion of open innovation has been instrumental to recognise the way that innovation has tended to work in practice and to democratize innovation processes beyond the realm of specialists and professionals. It has helped in recognising the value of different stakeholders and user groups in developing new products and services by openly sharing knowledge, experience and ideas.

In this spirit, the Citymart Challenge extends an invitation to all stakeholders and participants to play an active role in rethinking and reshaping Melbourne's traffic to make it more future-proof and resilient in relation to our increasing population, rapid urban development and mobility needs. To chime in with Michael Berkowitz, the president of 100 Resilient Cities – Pioneered by the Rockefeller Foundation, "you are not stuck in traffic, you are the traffic."

To continue on the theme of bicycling, Melbourne has seen some interesting and promising developments. Through the metropolitan cycling network, new bicycle paths are built and existing paths are connected, cutting across different local governments' jurisdictions. Twice a week I am an active user of this infrastructure as I take our youngest to childcare by bike. Cycling down Canning Street with a view into the CBD on a sunny morning is a terrific way to start the day. On the other hand, I have also experienced a number of pretty nasty verbal assaults by motorists while cycling down Lygon Street. Literally these are two parallel streets: in one you feel acknowledged as a cycling traffic participant while in the other you feel unwanted, excluded or made invisible in an urban space.

Copenhagen, the self-declared 'world's best bicycle city', takes a comprehensive and holistic perspective to promote urban cycling. Hard policies through infrastructure development (e.g. 'cycle super highways') are combined with soft policies that 'normalize' urban cycle mobility where cyclists become a visible part of traffic.

It seems to me that Melbourne has still quite a way to go when it comes to establishing a mainstream cycling culture (among all members of traffic). Part of that discussion would, in my opinion, do well to involve a significant group of bicycle users, namely children and youths. While a lot of attention is paid to enculture children in bicycling at an early stage, their interests, needs and voices remain often underrepresented in public debate about traffic and transport. I have a number of hopes for this Citymart

Resilient Melbourne Citymart Challenge



Challenge but one, regardless of the actual winning technology, is that we will see a number of innovations put forward by this too-often underrepresented user-group.

Get in touch

Email resilience@melbourne.vic.gov.au to contact a member of the team.

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Visit www.resilientmelbourne.com.au for more about the Delivery Office, news, events and our partners.

Resilient Melbourne incorporates all 32 metropolitan Melbourne councils and is part of the 100 Resilient Cities (100RC) program – Pioneered by the Rockefeller Foundation. 100RC helps cities around the world prepare to meet the physical, social and economic challenges that are a growing part of the 21st century.

For more information on Resilient Melbourne, download the [Resilient Melbourne Strategy](#) or make contact with one of our team members.