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Bryan Leyland: On-call shuttle vans point the way for Auckland's public transport

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The low cost and door-to-door convenience of a co-ordinated fleet of minibuses would lure many out of their cars. Photo / Michael Craig

• Bryan Leyland is a consulting engineer who has worked in more than 30 countries.

Imagine a co-ordinated fleet of minibuses that pick passengers up from where they are and drop them off at their destination. In such a system, the minibus location, the number of passengers and their destinations are all monitored by a central computer that decides which minibus to send to pick up a new passenger and sends empty minibuses to an area where demand will soon increase. Experience overseas confirms that minibus-based transport is a viable proposition. Poda-podas in West Africa, dala-dalas in Tanzania, jeepneys in the Philippines and tuktuks in India are the predominant form of public transport.

In South Africa they provide 60 per cent of all public transport. They pick up passengers along the road and drop them off at their destination.

Because they respond to demand, they concentrate at places where they are most needed - without a single transport planner's being involved!

But will something that works well in a developing country with low wages also work in a Western city? The Economist certainly thinks so: it says unco-ordinated minibus (jitney) services like this are operating profitably in New York, Dallas, Phoenix and other US cities right now. In New York rides cost US\$2 (\$2.70) and the service is cheaper and faster than a subsidised bus at US\$3.

Imagine that Auckland had a co-ordinated minibus service using modern technology. During the rush hour, the minibuses would feed some passengers to express buses and provide door-to-door service for others. Outside peak times, frequent minibuses would replace expensive, virtually empty buses pounding up and down fixed routes at infrequent intervals.

The low cost and door-to-door convenience of the minibuses would get a very large number of people out of their cars. Congestion and the need for downtown parking would be reduced. Looking further ahead, we could soon be using driverless minibuses that would be even cheaper and safer.

Minibus drivers would contract to a central co-ordinator. Little formal regulatory input is needed because the system would allow people to provide feedback on the driver and the bus. Any driver or bus with unfavourable reports would rapidly drop to the bottom of the queue - or right off it.

The rewards are enormous, the risk is minimal and the cost is probably negative.

A user would download an app on to their smart phone and register their name and credit card. When they need a ride the app will send their location, name and destination to the central computer which tells them when the minibus will arrive. The cost of the ride will automatically be deducted from the credit card. Eureka! Public transport that does the same job as a car or taxi for a fraction of the cost.

This scenario is very attractive compared with expensive trains that only serve a fraction of the population, and buses that cannot provide door-to-door transport. It would end the ever-increasing expenditure on roads, trains and buses because it would carry many more passengers on existing roads. It would also reduce expenditure on fuel and motor vehicles.

Where do we start? The airport shuttle buses are the obvious target. If they can be made more efficient and cheaper, they become a viable alternative to trains or trams. So let's get them on to computer-optimised routing to see just how well the system can work. If it is a success then it will be easy to extend the computer-co-ordinated system to cover the whole of Auckland.

Implementation should be left to private enterprise because those promoting it will need to be ingenious, adaptable and fast-moving. But Auckland Transport would need to provide the support needed and allow the minibuses to use bus lanes.

Modern technology will bring cheaper, faster and more convenient alternatives to trains, trams and buses. It is not a matter of if, but when. Before we commit more expenditure to what soon will be obsolete modes of transport, we must consider the modern, technology-driven option.

The rewards are enormous, the risk is minimal and the cost is probably negative. Let's get on with it. Auckland is in a perfect position to lead the world on this. We have a tech savvy population that is often used by overseas developers to test out new technology and we have many firms that have led the world in developing advanced software.

And we have the ideal pilot project - the airport shuttles.