The Curitiba Experience

Curitiba in Brazil is often cited as a successful example of how to create a planned city with integrated urban transport outcomes. What lessons are there for our ever-expanding cities?

GTA convened a table of planners to discuss the issue over lunch. Roz Hansen, who chaired the Ministerial Advisory Committee that helped develop metropolitan Melbourne's current long term strategic plan, Plan Melbourne; Luisiana Paganelli Silva, an architect and urbanist from Curitiba's Institute for Research and Urban Planning, who is a PhD Candidate at RMIT University; Christian Griffith and Will Fooks, strategic transport planners from GTA; and Andrew Wisdom, leader of GTA's research and innovation hub – 'GTA Lab'.

Looking to the world for answers

If you put enough urban planners in a room the conversation will inevitably turn to comparing cities, and debate over whether experience gained in one place could be used to improve things elsewhere. And there are plenty of archetypes - Zurich is renowned for its trams; Vancouver for its downtown regeneration; Singapore, London and Stockholm for their cordon pricing schemes; New York for the reimagination of its urban realm.

Curitiba, a city of just under 2 million in Brazil, is one such archetype. It is routinely lauded for its long-term commitment to social inclusion and transit oriented development – Bus Rapid Transit (BRT) and land use intensification along transit corridors. This commitment has given rise to a transport system which is designed to deliver on many desirable outcomes: an integrated metropolitan network, linear development in the corridors, good access, and lower congestion rates.

The real problem for Australian cities

The initial discussion at lunch focused on the most pressing issue facing growing cities everywhere – people. Australia's largest cities are facing future populations of 8 million plus by mid-century; and of course, will continue to grow beyond that.

Historically, in Australia governments and planners have treated our cities as if space was an infinite resource. In 2000, Bob Carr, the then NSW Premier famously called this out when he declared 'Sydney is full'. Our group agreed that population density presents as the core challenge for the urban form. As Will and Christian pointed out, development in Melbourne still proceeds as if it were a flat city of 3 million, rather than one heading towards and beyond 8 million.

Participants agreed that we cannot simply keep putting more and more cars onto our roads and expect people to travel for longer distances as our cities grow. The idea that people who live on the edge of an 8 million-sized Sydney or Melbourne will commute to the urban core sits somewhere between unworkable and ludicrous. Yet our heavy rail systems, and to a large extent our road systems, were established and continue to be extended based on that premise.

Melbourne is most affected. It has retained its monocentric shape precisely because its transport system is directed to its strong core. Until Melbourne's infrastructure evolves to create highly accessible subregional centres, this is unlikely to change. However, there are glimmers of hope. Sunshine, for example, in Melbourne's west, has benefited from the construction of the Regional Rail Link, which has improved that area's accessibility; Roz predicts that Sunshine is about to see significant new development off the back of that link.

Sydney is better placed than Melbourne. Following, the announcement of a second Sydney airport at Badgerys Creek, there is an assertion, led by the Greater Sydney Commission, that Paramatta could evolve as Sydney's central CBD, with the existing established central city being thought of as an Eastern Harbour City.

Roz cautioned that current land speculation in the Melbourne CBD which strongly favours apartment style living means that the next generation of office space will need to be somewhere else. Melbourne's CBD will be reserved for high-rental A grade office for the highest value knowledge workers, forcing other offices to move elsewhere. Sydney – with high rise office in centres such as Paramatta and Chatswood – provides an indication of where Melbourne development is ultimately heading.

In a city with multiple centres, it makes sense to provide strong transport links between the various centres. In general, strong road links already exist in our cities, but satisfying ever increasing demand for private travel involves ever-wider roads, bigger intersections and eventually more traffic congestion. Sooner or later we will reach a point where the need to widen roads is trumped by other objectives – such as avoiding a car-dominated dystopia.

People power
Projected capital city populations in 2050 (million)

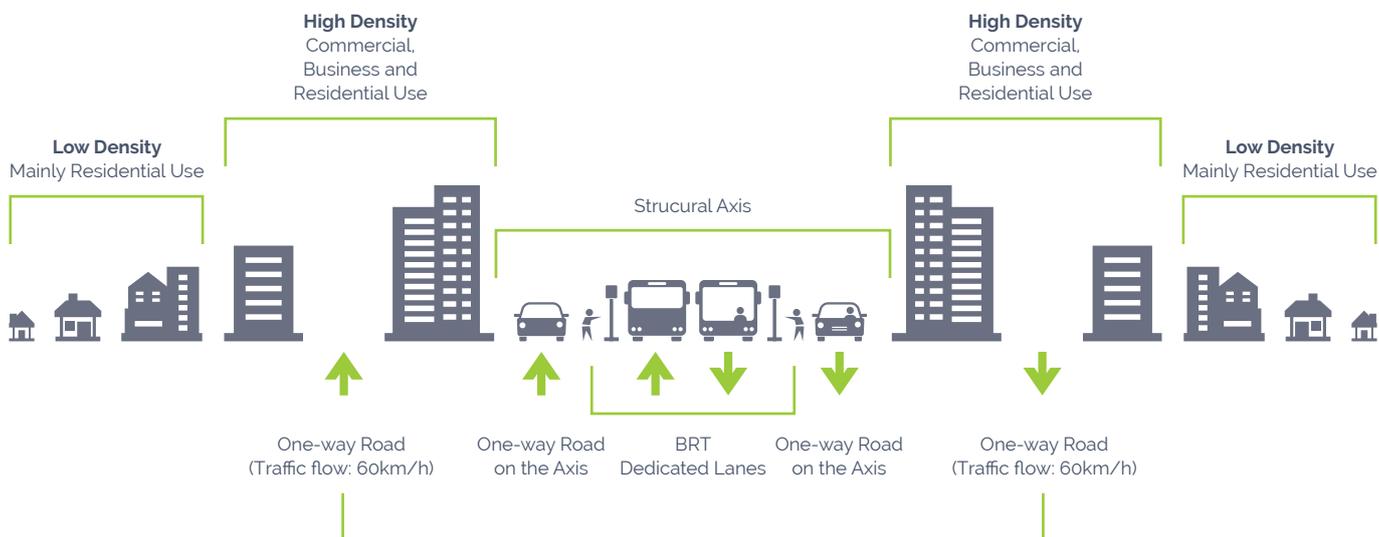| City	2012	2050	Change
Sydney	4.7	7.7	+64.2%
Melbourne	4.2	7.6	+80.0%
Brisbane	2.2	4.2	+91.5%
Perth	1.9	4.6	+143.9%
Adelaide	1.3	1.8	+40.8%

The Curitiba approach

For this reason, if for no other, effective mass transit is central to our future. Over the last 50 years, Curitiba's approach of development induced by public transport, with the creation of BRT corridors (see diagram) and intensified mixed use on both sides of those corridors has been used as a blueprint, or at least an aspirational goal, by many other cities.

Christian noted that some existing arterial road links in Australian cities could be redesigned with this purpose – either major cross-town arterials such as Melbourne's Springvale Road, or the many strip shopping streets that characterise our suburbs. As Roz notes, our High Streets are our local glue and so could be reimagined as public transport corridors and community spines.

A further opportunity to create better traffic flows in our local areas includes making changes to traffic conditions and parking regulations. For example, in the United Kingdom, there is now a change in approach to the creation of car-parking spaces for a development, they have adopted a maximum number of spaces rather than a minimum. This change is creating a significant positive impact on congestion. In Australia, parking maximums typically only apply in the CBD's.

Low Density
Mainly Residential Use

High Density
Commercial, Business and Residential Use

Strucural Axis

High Density
Commercial, Business and Residential Use

Low Density
Mainly Residential Use

One-way Road (Traffic flow: 60km/h) | One-way Road on the Axis | BRT Dedicated Lanes | One-way Road on the Axis | One-way Road (Traffic flow: 60km/h)

The planning challenge

Planning for cities of 8 million people and beyond involves plenty of development on the urban fringe. Andrew argued that the planning challenge for big cities is the urban fringe. What constitutes a working, viable, sustainable outer urban area? Managing and directing growth in Melbourne's outer suburbs is a growing challenge. Rapidly growing fringe area local governments are struggling with a serious lack of basic community building infrastructure, declining state government funding and rate caps, all of which are making their job progressively harder.

Another piece of the puzzle involves people adopting a more local focus than they have in the past. Plan Melbourne has captured this idea in its ambition to create a '20-minute city' – one where everyone is able to meet their daily/local needs within a 20-minute walk, cycle or local public transport trip from their home. If this is going to happen, then our transport system and services need to be refocused to connect people to local

and non-CBD destinations, as well as Melbourne's CBD. Only then will it facilitate more community-centric outcomes. Good access to services and jobs is fundamental to a person's quality of life; and transport, especially active modes, are critical to providing enhanced accessibility for all and not just those that can afford to live in well serviced suburbs.

Will pointed out that the bus is the workhorse of transport in global cities and provides the best and cheapest transit solution in most cases. If we do aspire to a 20-minute city, then the bus is an essential part of our future, but this will require significant commitment and investment. The question is - what does it take to get serious investment in the bus network?

One potential lesson is from London where a cordon pricing scheme hypothecated all revenue from congestion charging into public transport, in that case into buses. Further, the group acknowledged the need to embrace emerging transport trends and get more creative in the way we provide public transport, especially to meet local travel needs. This also means adopting the broader ideas of Transport or Mobility as a Service (TaaS or MaaS) in which users 'buy' their transport through a subscription, and are able to move across modes to satisfy their needs.

Playground
Shared community open space including food growing
Cycling and walking
Local shops and services
Community centres
Cycling and walking

20 MINUTE CITY

Employment centres
Local bus services
Public Transport to key centres
Work hubs
Day care centres and schools
Local gathering places

Image based on Plan Melbourne

The role of the planning authorities

A lesson from Curitiba is that coordinated outcomes depend on having a strong local authority able to make and act on land use and transport decisions with constancy of purpose, that overcomes electoral cycles. In Curitiba, responsibility for development of planning strategy and its implementation sits under the mayor who has effective end to end control of the planning process.

This centralised approach is not one we use in Australia. In our cities, the various planning authorities' responsibilities overlap and strategic metro-wide planning needs to be referenced to local government, where the responsibility for implementation of statutory planning rests.

Roz says there are 'too many fingers' in the Melbourne planning pie and regards the Greater Sydney Commission model worthy of consideration for Melbourne. Everyone agreed that the current planning model has created an environment in Australia where power has been devolved to 'blockers' of planning. The 'not in my backyard' movement has evolved, and local issues can overwhelm overarching city-wide planning outcomes. This can create a fractured planning environment, leading to suboptimal outcomes because of the trade-offs to be made along the way.

Roz believes that the current default development model in Australia is not completely aligned with good development outcomes. The lack of low income housing is a chronic problem around Australia. New York's Mayor di Blasio recently announced a plan to mandate a minimum of 25-30% affordable housing in all new housing developments in designated areas within the city. In high-cost London, affordable housing targets of 35% have been applied to developers, compared to the 5-10% proposed in the draft plans for Sydney by the Greater Sydney Commission. Whatever the magic number is, the need to establish clear targets to ensure sustainable urban development is clear.

How is Curitiba performing?

From a distance, cities tend to have an allure that is not always matched by reality. From afar, Curitiba presents as the acme of integrated transport and land use planning; yet of course nothing is ever perfect.

Jaime Lerner, famed both as an architect and urban planner, was the mayor of Curitiba responsible for the implementation in the 1970s and 1980s of the city's iconic Bus Rapid transit (BRT) system and associated densification along transit spines, is well placed to reflect on the city's progress.

In a 2017 interview with BBC Brazil, Lerner reflected that the constant innovation that was Curitiba's hallmark has currently ground to a halt, but sees no reason why it can't resume. He observes that innovation is critical to address the three core challenges for any city: mobility, sustainability and comfortable coexistence

Lerner believes that Curitiba's biggest challenge is overcoming the need to have all the answers and everyone on board before committing to action. Previously, Curitiba overcame that challenge by creating an environment in which experimentation was celebrated, providing the planning process with the flexibility and openness to adjust over time.

Curitiba still has problems. Political squabbles have led to the abandonment and then reinstatement of the compact between city and state on support for public transport, which resulted in reduced investment in the public transport system and contributed to the falling public transport patronage. In addition, changes to the federal tax system and pricing, among other external factors, now means that Curitiba experiences chronic traffic congestion and the city has the highest car ownership rate of any in Brazil.

The city is ripe for another round of innovation!

Conclusion

Planning and managing growth in cities like Melbourne and Sydney is not easy. It is often riddled with conflicting priorities and agendas and is lacking the strong leadership and across government collaboration necessary to get on with the job of implementing the plan.

Curitiba has shown that with strong leadership and visionary thinking it is possible to transform a public transport network to not only connect people to where they wish to go but develop an urban form and structure that provides convenient access to that network.