

Technology and the rise of the smart city

By Sarah Birkett

Australia's population is expanding at a rapid rate, and, especially around the East Coast hubs of Sydney and Melbourne, infrastructure and facilities are being drastically stretched. There has never been a better time to consider alternative approaches to urban development.

One option is the introduction of the smart greenfield city, which mixes new and emerging technologies with economic opportunities to create connected and liveable spaces for Australians.

As part of DLA Piper's recent Tech Summit, we spoke to Nick Cleary, Chairman of Consolidated Land and Rail Australia Pty Ltd, or CLARA for short, to hear his views on this issue.

Put simply, why do you think we need a new approach to our cities?

Australia has an aggressively growing population which is estimated will increase by another 16.8 million people by 2061. The majority of those people will head to Melbourne or Sydney, which puts additional pressure on those cities with regards to affordability, congestion and overcrowding. In Australia there is a real lost opportunity. We have this amazing inland but, unfortunately, we haven't made productive use of it because we've failed to provide connectivity to that inland.

At the end of the day, rapid population growth is okay. We have this huge land mass that's as big as the continental United States but has a tenth of the population. However, Australia must have a plan for managing this growth in population. We've got to provide housing, energy and other utilities in an efficient manner and also consider how we are going to make our cities smarter, more sustainable and more liveable. This is what CLARA is doing.

What is CLARA and what is its plan?

CLARA is a private consortium formed to deliver a program to change Australia. CLARA's aim is to undertake a rebalancing of our settlement and deliver new ways of imagining, planning and building cities, transport and infrastructure.

As part of this, we will build up to eight of the world's most advanced, sustainable, smart greenfield cities and connect them through a world-class high-speed rail system between Sydney and Melbourne via Canberra.

CLARA is privately funded and has developed a value capture model, which will use the proceeds from the value uplift of the land to fund the required infrastructure, including the high-speed rail.

What do you think makes a smart city?

What we are looking to build are cities that aren't just about technology. We see technology as an enabler to help a city achieve a "smart" status meaning that it is flexible and agile, including the ability to easily adapt to future technologies. It's about building cities with the capacity to easily evolve whenever new technology comes along. Because if we know one thing for certain, it's that new technology will keep coming.

Another way that a city can be smart is to be connected – both on an offline and an online basis. People want real connections with other people, in both online and offline communities. A smart city should enable people to connect on a face-to-face basis, as part of a community, as well as online. When we look at the happiest cities in the world, they are the ones that have a real sense of community.

What are ghost cities?

The perfect example of what doesn't work when looking to create new cities, these can also be called vampire cities – places where people evacuate in daylight hours only to return in darkness. What this means is people don't know their neighbors, they don't know their friends and they hardly know their families. Outside of being in a car or at work, they don't have much time for a life!

Practically, this can have huge consequences for the community and the economy as a whole. I spoke recently with an employee of a major bank who is responsible for planning new location openings. He was collecting some data about a particular location and found, between 7 am and 7 pm on weekdays, there was no one in the town. Obviously that means the bank won't be opening a storefront there.

So, a smart city is not just about building a home for someone to sleep in, it's actually about developing a place where people can live, work and play in one area.

While a city must be about more than just technology, new and emerging technologies provide massive opportunities to improve the ways that people live.

What are some of the key technology enablers CLARA is looking at?

At a high level, it's about making sure that we provide systems that are more efficient than what we currently have. For example, we have the driest continent on earth and yet we recycle only about 40 percent of our water. So we will be looking to implement a closed system that catches and recycles water for up to 400,000 people. Equally, solar, wind, gas and battery power can actually provide a lower cost of living, but to do that we have to look at a new economic model, because we can't do it under the existing regime.

As well as high-speed rail, we will also be looking at other methods to reduce congestion. We know that some cars spend up to 96 percent of the day stationary, so we need an efficient way of providing transport as a service. This not only makes a fundamental difference to congestion levels, but is also more sustainable and provides people with a real improvement to their quality of life, both by creating cost savings and giving people more free time.

As we are building on a greenfield basis, we have a remarkable opportunity to leverage new technologies and create workable and economically viable models for smaller communities. We then can retrofit these proven technologies into our existing cities.

How does data and privacy fit into all of this?

Having the opportunity to capture and use a wide range of data is important. We have the capacity to make cities as technology friendly and convenient as we wish to as a society. But this must be a democratic process. Increasingly, people are



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electing to compromise some of their privacy for the sake of convenience. This is a choice for each individual, and smart cities should offer people that same choice. It's important to highlight that we're not trying to create something that will monitor every person and family. It's about making people's lives more efficient and more convenient where we can.

So, for example, waste disposal will be monitored. This doesn't necessarily mean that the type of rubbish each person puts in the bin will be monitored and used to determine whether their sugar consumption is too high. However, if someone developed this capability, I'm sure that some people would wish to use it. We aim to be in a position where we can offer people that choice.

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