life on the

Will the transit oriented developments we see popping up around the world become widespread in Australia? They may improve our carbon footprint by reducing the need for cars, but do we really want to live and work on top of train stations? Words by Caia Hagel

"Look at this paradise!" says Bokcph architect Bo Christiansen, as he sweeps his hand across Ørestad City's skyline. We have just climbed off the automated train that he helped to design, which took us here in less than ten minutes from central Copenhagen. The dust of construction greets us with the wind off the sea that borders the expanse of experimental buildings that are being erected on this 3.1 square kilometres area of reclaimed land, joined to the world by this new cutting edge rail line. Some of the dwellings are lived in already: the colourful VM Houses, modular spaces that were sold out off the plan and then self made by their owners with dividers, and which house private dwellings, retail, office space, day care services, health services, and shared common spaces. In the bowels of the adjacent building is a strata parking garage illuminated with pastel lights that make it look like a disco, which is mostly how it is used, because the large majority of these alternative home dwellers are not car owners.

"It is very hip with young professionals," says Christiansen, "but also older couples whose children have grown up and who want to downsize, and new families who are attracted by the affordability," referring to both living without a car and investment in multi dimensional housing villages. Here, residents can take their kids downstairs to day care, cross the hall to their office and go to street level for lunch and groceries. They can also dash for the train and be in the centre of town in a few minutes, or in an office in Sweden in half an hour. There is no traffic jam to contend with, no stress and road rage, and no money to spend on the increasing costs of petrol. This is what it means to live in a transit oriented development (TOD). "It seems that sustainability, innovation, experimentation and a new variety of cohabitation coalesce in a very successful way here because people understand the limits of natural resources now and are happy to mix together to facilitate easier and more sustainable living," says Christiansen.

The train is the vagus nerve of this living experiment. It is sometimes referred to as facilitating "the largest crossroads in Scandinavia", and is noted for its attractive design and excellent infrastructure. Its reach includes the Ørestad metro, the Oresund Railway, the Copenhagen Airport and the Øresund Bridge, meaning travellers can get to Copenhagen Airport in six

PHOTODISC/THINKSTOCK

minutes, to Copenhagen Central Station in seven minutes, and to the Central Station in Malmö, Sweden's third largest and fastest growing city, in twenty nine minutes.

Transit oriented developments is not a term in Europe. Small geographical areas, surplus populations, and the unique opportunity after 1945 to "rebuild a bright new world" has made vertical, multi use, mixed income, train dependent, often architecturally innovative building, a natural phenomenon. A similar phenomenon is true in Asia.

In Australia, the traditional urban organisation has followed the "American Dream" model of the 1950s. That is horizontal sprawl across a vast landscape, resulting today in either leafy suburbs featuring large houses and large cars, two or more to a family, which link them to the city via congested highways; or, more detrimentally, suburb ghettos where poverty and social problems resist growth. The British colony cities of North America, Australia and New Zealand were built around dependence on cars, gasoline and oil, and homogeneity. But this model is proving itself obsolete. On the one side, long traffic jams and commute time, high oil prices and ecological mandates have made the cost of living of this old model both economically unviable and ecologically unsustainable. On the other, perpetuating isolated pockets of lower income and culturally specific living circumstances isolates an aspect of society that through greater integration can foster movement, interaction, safety and prosperity. So what Europeans and Asians have had to implement to survive population explosion is catching on in Australia as a future thinking model of better living.

TOD is the proposed answer to this. They are multi use, mixed income vertical buildings whose axes are a well serviced rail line and communal green spaces that encourage walking, cycling, community interaction, and diversity.

Peter Newman, professor of sustainability at Curtin University, who has written and spoken extensively on TOD, says the greatest obstacle to implementing widespread TOD in Australia is lack of communication and cooperation between the arms of urbanism, from government to construction firms, and public opposition to TOD, "which they misinterpret as suburban living like it was in the '70s and '80s". Because of this, it has been the big businesses that have taken the greatest leap in TOD building. These buildings are based on »

largely the same principles but exclude the live in element. "Diversity is still key," says HASSELL Principal Chris Melsom, whose firm has been responsible for some of Australia's most interesting and innovative TOD complexes. One40william in Perth's CBD, for example, will be an energy efficient building of offices and retail situated directly above an underground train station. It is the largest building in Western Australia to gain a five star Green Star Office Design rating and is touted to greatly effect new commercial development in Australia.

Another of TOD project in the making will experiment with diversity in another way. "The Cockburn Coast District Structure Plan we're working on currently, located just outside Fremantle in Western Australia, will redevelop 335 hectares of coastal land in a way that will attract a diverse range of people, not just those who can traditionally afford to live next to the beach. Housing and land use diversity together with planned public transport links are key to the success of the project," says Melsom.

The residential criteria of TOD, however, has been more challenging to build. It puts tremendous pressure on existing infrastructure and involves coordinating the governmental, construction, transit, design and private sectors. It also challenges the ideas of personal space.

Mixed commercial and residential complexes have been studied as part of many long term city greening plans in Australia. To have mass appeal, they have taken cost into greater consideration than commercial building needs to. "Affordability is desirable because it gives everyone the opportunity to make sustainable choices and it fosters a mixing of the population," says Brian McMahon, Principal TOD Consultant/Senior Professional Associate of Environment and Planning at Parsons Brinckerhoff. "One key to avoiding pockets of despair is to integrate the affordable units in with the mid range and more expensive units."

Affordability is also critical "since cities are meant to foster interaction and transaction. By bringing a mix of incomes, interests and perspectives together, we can attract more people and activity onto our streets and important places. In turn, good street life makes the trip nearly as desirable as the destination, which entices people out of cars and reduces demand for sprawling suburbs. As long as TOD complexes provide each family with a personal outdoor room to commune with themselves and nature, such as small gardens, plazas, or balconies, people will be willing to give up yards to experience cities," says McMahon.

PHOTODISC, THINKSTOCK

He cites the government project Subiaco in Western Australia as the best showcase for TOD in Australia to date. "It successfully blends and integrates affordable homes with luxe addresses, giving people who cannot or choose not to pay for a single family home with high hidden transport and health costs an alternative that brings them together. Subi also seamlessly integrates with the existing heritage precinct, promotes the 'trip not taken' [by car], and has become a coherent, vibrant neighbourhood in its own right. The development ticks all the boxes of what makes up a special place to live, work or visit while making it desirable to walk, bike or use public transport. Subi is on every planner's and politician's TOD pilgrimage itinerary."

Importantly, he adds, "A key lesson from Subi is that a dedicated redevelopment authority can cut through the several

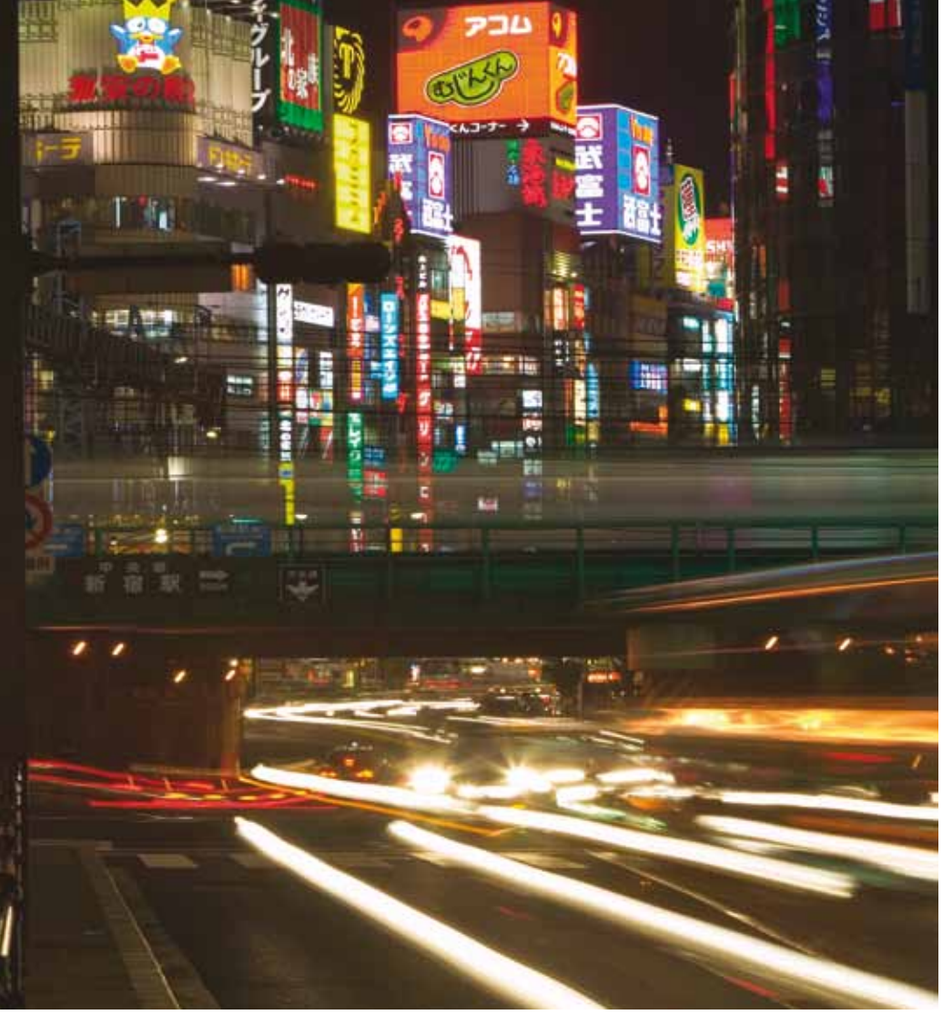
Living the high life

Futako Tamagawa Station
Tokyo, Japan

Currently a bustling suburban centre that shuttles more than 100,000 passengers daily on its two train lines, Futako is already a dense and colourful promenade of shops and services. It is currently under a massive add on development that will make it Japan's most impressive TOD so far. Phase I, due for completion in late 2010, will be a sixteen storey retail and office highrise. Phases II and III, set for completion in 2011, will be sister highrises joined by outdoor green spaces and will comprise residential, hotel, medical, school and other amenities. The development is being funded and executed by The Tokyu Corporation, which owns nine railway lines in the Tokyo/Yokohama metropolitan area and much of its real estate. TODs are successfully undertaken by the private sector in Japan because its railway has a larger market share than in other countries and focus in property development is on extremely high density, train connected housing.

West Kowloon
Hong Kong

In Hong Kong, the megastructure concept finds its most practical application in responding to its unique urban challenge: just 20.3 per cent of its buildable land area



layers of government and address community concerns."

Sociologically, Australians seem to be approaching a point of tidal shift. Empty nesters are looking more at coming back to vibrant, walkable neighbourhoods that are well served by transit, and younger adults don't seem as interested in the expense of maintaining a car. They are also increasingly interested in taking responsibility for a cleaner environment.

"What's important is using compact forms to explore new ways of dealing with social interaction, climate change and more sustainable forms of energy use," says HASSELL Principal Adam Davies. "This is a real opportunity to develop new architectural and urban forms, which are resilient and adaptable."

Australia would like to be a showcase for the new world order of built environments in geographically enormous spaces, where the push to be green or to accommodate an explosive population is less acute but whose forward thinking prowess is fulsome. "Everywhere I go, I get support for the polycentric city of the future built around upgraded transit, but Australia needs a TOD zoning to make delivery more practicable," says Newman. In other words, with continued persistence in working with TOD ideals and breaking paths to greater communion between the many factions of infrastructure creation, we could successfully lead the way to a paradise model of our own.

New developments back home

The Milton in Queensland is the first TOD development launched to the public under the new South East Regional Plan for the State Government. Its orchestration was a delicate balancing act between the interests of local government (council), State Government, state rail networks, planning and infrastructure, without whose mutual consensus, the project would not have been financially feasible. This icebreaking cooperation will result in a thirty level mixed residential and commercial building directly adjacent to the Milton rail station and aims to turn this area of inner city Brisbane into a showcase for a high density community. When completed in 2013, the area's population will grow and its street life will be rejuvenated by an influx of new employees and shop and office users connected to the area by train.

"TODs are about encouraging increase residential densities and associated mixed uses around transport nodes. This objective quite often means changes in use strategies for land around transport nodes, which can be controversial. Higher concentrations of residential accommodation lead to cafés, restaurants and shops. It creates increased numbers of people along streets, which adds vibrancy and potentially better safety in the public domain," says Stuart Shakespeare, chief architect and design director of The Milton project.

Because this innovation is a statement for other municipalities to look to for guidance and inspiration, special attention has been given to its appearance. "We are activating the podium facade along its street frontage with offices and residences overlooking the street and urban art. The other podium facades have been embellished with graphic treatments reminiscent of transport rail infrastructure," says Shakespeare.

The greening principles that make highrises successful in TODs abroad are also employed here. The apartments will have generous internal balconies to provide ample private outdoor spaces and a natural airflow though the individual apartments. •

(1104 sqm) accommodates seven million people. In the densest areas, that translates to 25,350 people per square km. Land reclamation has been imperative in Hong Kong and Kowloon is its greatest showcase. West Kowloon is the latest arm of the megastructure vision of greater Kowloon. It is based on the success of Olympic City (2001), a comprehensive development that includes a shopping mall, cinemas, residential towers, commercial arcades, schools and sports facilities. Olympic City is highly serviced by the MTR rail network, which is planned to be extended to West Kowloon to complete the land reclamation TOD megastructure area.

Hongqiao Transport Hub

Shanghai, China

Like Tokyo and Hong Kong, Shanghai's density requires compact vertical building that comprises amenities and connects its huge populations to the core of the city via state of the art public transport. Hongqiao Transport Hub, which will cover an area of 240,000 square metres, will encompasses the Hongqiao Airport, a high speed railway station, the Maglev train station and several metro lines, bus terminals, hotels, and commercial and residential estate projects.

When completed in 2010, in time to service World Expo, it will be the largest transport hub in the world. It is expected that this Hub will reach an annual turnover of 52.72 million people by 2020, and will improve the links between Shanghai, the Yangtze River Delta and eventually all other cities in China. It will also bring vitality to a new area of Shanghai that was traditionally used as a touch down spot but not a destination.