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URBAN SOLUTIONS

INCLUSIVE URBAN REGENERATION

ISSUE 12 • JANUARY 2018

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Interview
Richard Florida
Cheong Koon Hean

Opinion
Marilyn J. Taylor
Adib Jalal

Essay
Alexandros Washburn
Michael Koh
Remy Guo
Susan Fainstein, Norman
Fainstein & Gurubaran
Subramaniam

City Focus
Bandung

Case Study
Barcelona
Singapore
Kigali



Inclusive Urban
Regeneration

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LIVEABLE & SUSTAINABLE CITIES: EMBRACING THE FUTURE THROUGH INNOVATION AND COLLABORATION



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Editorial Team

Michael Koh **Joanna Tan**
Nicole Chew **Tan Pei En**

Editorial Consultant

Tuber Productions Pte Ltd

Design Consultant

Redbean De Pte Ltd

URBAN SOLUTIONS welcomes feedback from readers.

Contact

Joanna Tan
T +65 6645 9560 E MND_CLC_enquiries@mnd.gov.sg
45 Maxwell Road #07-01, The URA Centre
Singapore 069118

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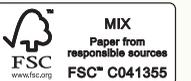
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Cover: Building the Cihampelas Terrace has allowed the city of Bandung to alleviate traffic congestion, house street hawkers and provide residents with a new retail space.





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FROM THE EXECUTIVE DIRECTOR

Rebuilding Inclusive Cities

Urban regeneration is important for city growth. More than just upgrading infrastructure, it presents opportunities to improve living conditions and create economic opportunities for residents. Of growing importance is inclusivity—that no one gets left behind in the process.

This issue of *Urban Solutions* explores how cities can achieve inclusive urban regeneration. The following insights stand out:

It is essential to **connect the old and the new**. Cheong Koon Hean shares how Singapore achieved continuity in the central business district and in public housing. We also explore how Singapore’s heritage district Kampong Glam remains relevant while staying true to its roots.

Another crucial factor is to **build for the people**. Richard Florida’s sharing of how “winner-takes-all urbanism” led to socially divided cities reminds us that neglecting inclusivity has negative consequences, while Marilyn J. Taylor emphasises the need for inclusivity in large urban projects. Even smaller projects can be impactful if they are people-centric—Bandung Mayor Ridwan Kamil’s “urban acupuncture” initiatives show that clever design can improve residents’ economic circumstances and boost public morale. Alexandros Washburn explains the “pedestrian point of view” and its role in successful urban design. This resonates with CLC’s ideas to revitalise Orchard Road by going car-lite and increasing the depth of experience. Furthermore, examples from Tokyo and Seoul demonstrate the benefits of transforming roads into useful public spaces.

In addition, we need to **plan for a variety of uses**. Susan Fainstein, Norman Fainstein and Gurubaran Subramaniam share case studies of mixed-use plans that optimise the utilisation of spaces. The introduction of other uses for Singapore’s Tanjong Pagar district has also enlivened it beyond office hours. Over in Barcelona, the 22@ district proves that planning for subsidised housing and public spaces need not jeopardise economic success.

The best way to understand people’s needs is to **engage the community** in the renewal process. Remy Guo reports on how Seoul and Singapore leveraged community engagement to refurbish neighbourhoods. Engagement processes can also have far-reaching effects beyond physically improving a space, as Adib Jalal elaborates.

Last but not least, it is important to **regenerate in a sustainable manner**. Rwanda’s commitment to protecting the environment has helped the country, particularly its capital Kigali, to prosper.

If done thoughtfully, everyone—not just a select group—can enjoy the benefits of urban revitalisation. I hope this issue can inspire you and seed ideas for inclusivity. I wish you all an enjoyable read.

Khoo Teng Chye

Executive Director

Centre for Liveable Cities



INTERVIEW

Richard Florida

Making Inclusion the Agenda

Urbanist **Richard Florida** popularised the idea that the creativity economy spurs urban regeneration with his 2002 book *The Rise of the Creative Class*. Fifteen years later, creative cities have revived but are plagued with inequality. He tells Dinesh Naidu about his new book, *The New Urban Crisis*, and how cities can spread the benefits for inclusive urbanism.

How does your latest book, *The New Urban Crisis*, describe how cities should approach urban rejuvenation compared to your previous book?

The Rise of the Creative Class was written in the late 1990s when cities were still down. I was very interested in the movement of the creative class—the scientists, entrepreneurs, business professionals, management professionals, knowledge workers and creatives—back to the city. I believed, and still do, that urban revival is a good thing.

But what has happened is that a back-to-the-city movement has accelerated and brought with it new and powerful divides. I call this “winner-takes-all urbanism”. Superstar cities like London, Singapore,

Hong Kong, Paris, New York, Los Angeles and San Francisco have attracted more and more talent from their own nations and the world. But cities elsewhere are struggling. Winner-takes-all urbanism is fractal—it occurs at every scale, between cities across the world and even within the winner cities.

The benefits of this urban revival have been very uneven. The creative class has done very well. But falling further and further behind is the old, blue-collar manufacturing class, in particular the lower-wage service workers who are 45% of the American workforce. We have to make sure to spread the benefits. It’s time to move from winner-takes-all urbanism to urbanism for all, which is fairer and more inclusive.

Richard Florida is a University Professor and Director of Cities at the University of Toronto, and a Distinguished Fellow at the New York University’s Schack Institute of Real Estate.



How can cities address this winner-takes-all urbanism?

I've learnt that there isn't going to be a lot of federal help. Cities have to go at it alone. That's a big shift because some people expect a national strategy. But increasingly around the world, certainly in the West, you're going to see very little of it.

Over the last 10 to 15 years, urban experts like Michael Porter, Bruce Katz, Edward Glaeser and myself have argued that cities have to work on their economic clusters, talent, quality of place and creativity. We gave them tools—cluster analysis, occupational cluster analysis, vibrancy analysis—to do that. The next phase has to be making people aware of the need for inclusion, developing a compelling narrative to connect equity to economic development, as well as developing the tools and techniques for more inclusionary urban development. These are what my team and I are doing now.

What are some of the specific ideas and actions for cities to address this need for inclusion?

Economic development and equity, growth and re-distribution are all part of the same thing. Now, with this great inequality and segregation, we have to make inclusion part of the economic development agenda.

Everyone wants to cram themselves into the city. We need to build more and taller, especially where land is scarce. But we don't want to create just condominium

canyons and vertical suburbs. We want to maintain our historic neighbourhoods and buildings, which are in such short supply. It is not simply physical density that matters but the activation of street life in the clash and clamour out in the streets. That's also an important part of what cities do.

We have to recommit to building affordable workforce housing. This obligation is not just on the public sector; university-based anchor organisations, medical centres and real estate developers. Tech companies should also help. If Amazon is the largest employer in Seattle and if Google is building megaplexes in London, they should do their share.

We also need transit. The United States and Canada have especially fallen behind here. We need to connect suburbs to urban areas with high-speed rail to increase the functional labour markets and the functional talent markets. That's just a no-brainer.

Most importantly, there needs to be a massive effort to upgrade service jobs. The fundamental problem in today's capitalism is the divide between high-wage knowledge workers and low-wage service workers, with the manufacturing middle falling apart. We've to make service jobs higher paying. We need higher minimum wages and a bigger wage floor. The most successful service companies with higher productivity and profits are the ones that pay workers more and involve them in work teams, lean strategies, quality improvement, customer service improvement and innovative use of their space.

“It is not simply physical density that matters but the activation of street life in the clash and clamour out in the streets.”



How do you tell the difference between good and bad density?

The late urbanist Jane Jacobs said it best: “Density in the absence of a pedestrian scale can be a very dangerous thing.” The streetscape has to be attractive and offer an incentive for people to get out and about. I worry about neighbourhoods in Manhattan filled with empty towers that people don’t live in. When a neighbourhood gets deadened like that, the creative and innovative impetus just moves away.

Neighbourhoods in very scarce supply are mixed-use industrial ones like Soho [in New York]—we don’t want to tear them down and put up new towers. David Lewis, an urban design professor at Carnegie Mellon University, said: “If you get the street right, it doesn’t matter how tall the stuff goes up around the street.” So you can build up if there’s dynamism in the streetscape, with restaurants or bars or cafes or creative activities. Too many urban economists are saying the answer is more density. It’s not just density. It’s density *plus*. Design really matters too: the design of the urban fabric, the mixture of uses and the use of public spaces. These spaces and uses don’t have to be big. They can be pocket parks or activities.

What is inclusionary prosperity, and how can cities work with the private sector to address this?

We talk about inclusionary zoning, which requires developers to incorporate affordable or social housing into their developments, but that’s just a first step. We need a bigger template and set of tools. We need to move to a much bigger and better conversation about what I call “inclusionary prosperity”.

It’s got to be more about getting urban anchor institutions to trade the ability to develop for a real commitment to the community.

“Too many urban economists are saying the answer is more density... It’s density *plus*. Design really matters too.”

You can make that flexible and say to the companies: “You could do affordable housing or workforce upgrading. But if you don’t do anything, you just pay more taxes. We will not allow you to just develop luxury towers or a high-tech innovation district for the wealthy and the skilled. You have to give something back to the city. You can orient your tenant selection to those who provide better jobs, community engagement and community prosperity.”

We really have to put pressure on the anchor institutions. We have to tell them: “You’re one of the largest companies by valuation in the world. We need your help with affordable housing and job upgrading. Do this for your service workers.”

The private sector had better wake up because people are mad! This was what happened with the New Deal, a set of programmes enacted in the 1930s to deal with the Great Depression. The private sector realised: “Manufacturing workers are striking. They are forming alternative political parties. We have to pay them better.”

But I think this has to be done at the local level. There’s very little national support for this in the United States, which is divided across geographical lines. The mayors have to work to address this. There is a rise of a new breed of progressive mayors like Sadiq Khan, Anne Hidalgo, Bill de Blasio and Eric Garcetti, the mayors of London, Paris, New York and Los Angeles respectively. They are developing policies and approaches for more inclusive cities.



01 New York's Soho, known for its mixed-use buildings and active street life.

02 Pocket parks such as the Paley Park in New York City provide welcome respite to the urban jungle and draw people to the streets.

“We need to move to a much bigger and better conversation about what I call ‘inclusionary prosperity’.”

01



What about the divide within cities? Is there an optimal mix of high- and low-income people?

Cities have always been where entrepreneurs and ambitious people flock to. They have also long attracted the unskilled who are looking for a better life. But now, we have lost the middle class and the middle class neighbourhoods that were once the platforms for upward mobility. Back in the 1970s, about three-quarters of Americans lived in middle class neighbourhoods. Now, less than 40% do. So we need to do more. At some point you have to tax people at the top proportionately more and make sure people don't get trapped at the bottom. It goes back to how you create a middle class and that's what my new book is about. It's not only the decline of the middle class that's pressing, but the decline of the middle-class neighbourhoods and how we rebuild those.

In Canada, my rich friends complain about taxes but they say: “We pay taxes to live in a civilised city with good healthcare and education”. So taxes are payment for an organised society. Higher taxes don't seem to dampen the creative spirit. In my research, I've looked at the connection between creativity, innovation and inequality. Across countries, the correlation is between innovation and more equity. I think in Canada and the northern European societies, they have got it just about right.

You advocate the inclusion of the socially marginalised, but some dismiss this as elitist. The political focus is also shifting to the economically marginalised. What's your response?

The core of a diverse and inclusive society is treating everyone with dignity and respect. That includes historically-marginalised groups like the gay and

02



lesbian community and immigrants. Every human being is creative. The real task of a truly creative society is to harness everyone's creative energies. I have no doubt that our economic growth is powered by creative knowledge and the innovative economy. So we can't take our foot off the gas. We just have to extend the inclusion to include the economically marginalised. In the US, the multi-ethnic, multi-racial, largely female-headed and precarious group called the service class needs help.

Will we see the abandonment of cities that are doing badly or can they manage their way out?

I think the latter. I don't think we can just write places off. Many people can't move, not just for economic reasons but for social reasons like their community or family ties. There are many people who love their community and want to stay and make it better. They should have that option. So we have to give every community the tools to try, even if it is to manage decline effectively. We have to give them the maximum leverage to rebuild and then support them. Even within Detroit, with whole parts of the city vacant, there are other parts that are thriving—a little piece of downtown in the older suburbs along the old rail lines. So you never know what will come back. Often times, we rip down the old too quickly. 

01 Richard Florida is a strong proponent of rebuilding the middle class to regenerate cities inclusively.

02 In Detroit, places such as Midtown have been experiencing growth.



Dr Cheong Koon Hean,
CEO of the Housing &
Development Board,
Singapore.



Cheong Koon Hean

Balancing the Old and New

From shaping the central Marina Bay district to revitalising public housing in the heartlands, **Dr Cheong Koon Hean** has overseen different facets of Singapore's development as former CEO of the Urban Redevelopment Authority (URA) and as the current CEO of the Housing & Development Board (HDB). She shares with Louisa-May Khoo about the need to balance new elements with social memory and people's needs, to inclusively rejuvenate the city.

What is urban regeneration to you?

The traditional view of urban regeneration is often about improving physically derelict buildings in an area. But to me, the contemporary definition is to have an integrated long-term vision to rejuvenating an area, with a focus on people, business, place and improving sustainability. And instead of developing an urban sprawl away from the city to cater for growth, urban regeneration of an existing area can provide opportunities to renew the city. This broader definition is more holistic whereby we also emphasise quality of life, environmental considerations, placemaking, good

governance and developing reliable urban infrastructure to rejuvenate the city.

When I was at the URA, an interesting project we did was the rejuvenation of the Bras Basah. Bugis area. We injected a new university—the Singapore Management University—to bring in thousands of young students back into the area, which used to house many distinguished schools. We converted older buildings to create an arts and museum district. Collectively, these facilities brought back civic, education and entertainment activities which increased the life and vibrancy of the city centre.

“Instead of developing an urban sprawl away from the city... urban regeneration of an existing area can provide opportunities to renew the city.”

Marina Bay on the other hand, is a good example of bringing in the new as an expansion of the city. With a greenfield site on reclaimed land, we conceptualised a new signature image for Singapore as a global city. Marina Bay was planned as a mixed-use district. Although it has a focus on the financial and commercial sectors, we didn't want a purely commercial district because it would lack vibrancy. So we injected a lot of housing, hotels and entertainment uses. We also focused on placemaking and the provision of public spaces that could bring in life and people. Look at the National Day celebrations at the floating platform, it's a venue like no other. And the district also hosts the only Formula One night race in the world. Of course, we also paid a lot of attention to the urban design, to create a beautiful skyline that people appreciate.

For Marina Bay, how did you ensure that the old and the new are not disjointed?

The starting point is always good planning. You have to understand the city. It's not just about the new; the old is very much a part of Marina Bay. Hence we kept many of the old buildings, such as the Clifford Pier and Customs House on the heritage side of Marina Bay. This area used to be seen as the “backside” of the city. Then we made an effort to turn the city around to face the water. We opened up vistas to the waterfront and new buildings were made more “porous” at the ground level for seamless pedestrian and

visual connectivity to Marina Bay and in particular the waterfront promenade.

We also ensured that it's walkable from the older to the newer areas, where the MRT (Mass Rapid Transit) stations, walkways and public spaces seamlessly plug the new city with the old.

As Marina Bay is essentially a financial and commercial centre, with many banks and financial buildings, we did not want the general public to feel alienated or out of place in this area. So, we made the bay area and waterfront fully accessible to all, with lots of public spaces and promenades. We ensured that around Marina Bay there are always public spaces for people to enjoy, for activities like marathons or performances. It's very important to have spaces meant for everyone.

How is urban rejuvenation done in Singapore's public housing estates?

We started public housing in the 1960s. We've built one million flats—some are in the more mature towns and others in the middle-age and younger towns. As the HDB houses over 80% of the population, it is important to keep rejuvenating our estates, because we cannot afford to have urban ghettos.

In 1995 we introduced the Estate Renewal Programme to raise the standard of the older towns to that of the newer ones. We upgrade the external areas, such as the parks, playgrounds and public spaces around the neighbourhoods, through the Neighbourhood Renewal Programme. We also upgrade the interior of the flats using the Home Improvement Programme. The massive Lift Upgrading Programme, executed for over 10 years, has enabled lifts to now stop at every floor, for almost every block in Singapore.



01



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01 The view from the floating platform at Marina Bay is always a highlight of National Day Parades held there.

02 People enjoying the PasarBella pop-up market on the Marina Bay waterfront.



01

Sometimes, it doesn't make sense to upgrade a very old building; it's better to redevelop. That's where the Selective En Bloc Redevelopment Scheme (SERS) comes in: where feasible, we acquire flats in an old area, demolish them and build more new flats with modern facilities. Thus, we can intensify and bring new families into the old towns.

A good example is the renewal of the old Dawson estate in Queenstown. The vision is to build "Housing-in-a-Park". We introduced a lot of greenery and the national water agency, PUB, weaved in water bodies such as the upgraded Alexandra Canal into the landscape through their Active, Beautiful, Clean Waters Programme. New and innovative public housing designs were adopted. We kept one of

the old buildings as a reminder of what was once at Dawson. We even kept many of the old trees. That's an important consideration for rejuvenation: it is about keeping social memories too.

In addition to rejuvenating the city area, we also developed new areas like Punggol Eco-Town. We introduced a lot of new design concepts and ideas. Punggol Waterway is a good example—by damming up the rivers, we created two reservoirs at Serangoon and Punggol, and connected them with a new river, which became part of the leisure facilities within Punggol. In fact, I am told that some people have nicknamed Punggol as the "Venice of Singapore".

- 01 Selective En Bloc Redevelopment Scheme (SERS) projects keep mature estates like Clementi Town vibrant.
- 02 More than 60 mature trees in seven public housing sites in Dawson estate were conserved.

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Urban regeneration is sometimes criticised for eroding traditional lifestyles. How is this addressed in Singapore?

The whole of Singapore has changed. We used to live in *kampungs* [Malay for 'village'] and old crammed shophouses, which lacked utilities and sanitation. But life has moved on—lifestyles have changed; people's income levels and expectations have risen. The economy is totally different from the days of farms and *kampungs*. The expectation is to live in well-built modern buildings served by good amenities.

Instead of romanticising old lifestyles, we have to ask the residents whether they want to continue to live that way, with no electricity, clean water and sanitation. While the rest of us may want to visit these old places and see the way people used to live in the past, the ones who are living in these old premises most likely do not want to still live like that. Nonetheless, these old buildings hold important social memories and history for us. So, practical conservation is about recognising what has changed, and adapting buildings and uses to a new lifestyle. The old buildings need to generate economic value in order for the owners to have enough income to restore and to upkeep them. It's a much more pragmatic and sustainable way to safeguard our built heritage.

“We can take cues from the past character of the place... we want to keep the sense of history, while acknowledging that lifestyles have to change.”

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But in planning an area, we can take cues from the past character of the place and even conserve some of the buildings in the area where appropriate, and give them a new lease of life. It's not exactly the same, but we do recognise that we want to keep the sense of history, while acknowledging that lifestyles have to change. This is always the fine balance we need to maintain in Singapore.

In fact, the URA won an Urban Land Institute award for the way it successfully balanced conserving built heritage with economic realities in a pragmatic way. The URA Conservation Programme has successfully conserved over 7,000 buildings and structures, much more than many other cities would have kept, even though we are more land constrained.

How do we ensure that rejuvenation efforts are in line with what people want and need?

Planners are not building for themselves. We must always remember that we're building for people. So it is very important to have a process of engagement to understand what people want.

For the Remaking Our Heartland (ROH) programme, we used to formulate the plan first and then ask people: "Do you like the plan?" But we took a very different approach when we planned ROH 3 (covering Pasir Ris, Woodlands and Toa Payoh towns) in 2016—we started from the bottom up. And because ROH projects are not in greenfield sites, we can touch base with the people living in the towns that we are trying to rejuvenate.

“We must always remember that we're building for people. So it is very important to have a process of engagement.”

So in the ROH 3 batch, we formed many focus groups with the residents and held several conversations with them over numerous weekends. They gave us good inputs including what improvements they would like to see and the places in the towns that were meaningful to them. This was the starting point: we recognised what people remember, what they would like to keep and what new things they wanted. From there, we conceptualised the plan.

Another example is in Tampines Town. There was a path leading to a neighbourhood centre that was popularly used by residents. We wanted to create a "social linkway" where people walking along this path would have opportunities to interact and meet every day. So we set up booths along this corridor, stopped people and asked them: "What would you like to see here? What is meaningful to you?" We even got them to help design some of the spaces. When we actually built this intervention, this little "urban acupuncture" project, it was really the residents' own project—the linkway was exactly what they wanted. So, it's about co-creating a plan.

01 The scenic My Waterway @ Punggol is a popular venue for recreational activities and community events.

“We initiated the ‘Friendly Faces, Lively Places’ fund that people can draw on to organise activities... to encourage community interaction.”

I think this is one of the challenges for all planners. How can we involve people in our planning process so they feel that they are doing it together with us and have a sense of ownership of their environs?

The other point is that buildings are all hardware. But after that, do people use the space? In the HDB we not only look at the hardware, but also the heartware: you want people to activate an area so that they feel it belongs to them and will take care of it. For example, we initiated the “Friendly Faces, Lively Places” fund that people can draw on to organise community activities or to improve a space, such as a void deck, so as to encourage community interaction. This encourages people to be more proactive and to take ownership, thereby fostering a greater sense of rootedness for the place in which they live.

As we build for an increasingly diverse society, how can we ensure that the tenets of inclusivity and community building still hold?

It’s a combination of policy and design. A very important principle that we’ve held on to for over 50 years is for HDB towns to foster social cohesion. When we build new towns and projects, we always ensure a mix of income and ethnic groups.



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We mix two-, three-, four- and five-room flats within each estate for different income groups. We are also experimenting with integrating rental units with sold flats.

The Ethnic Integration Programme has been a key policy that has helped different ethnic groups socialise with one another. Every town has quotas for different ethnic groups to reflect the national demographic mix. We do not want enclaves where specific groups reside. So every town is a microcosm of Singapore. That is set by policy. All of us grew up quite comfortably with neighbours who are Chinese, Indian, Malay or Eurasian. We eat at the hawker centres together and go to schools together.

You can also design spaces that provide opportunities to interact. We’ve introduced community living rooms and roof gardens where residents can congregate for get-togethers or to chat. Even our playgrounds are



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designed as 3-Generation playgrounds, where children play and grandparents and parents can exercise together. It’s not only ethnicity; we’re talking about different generations and income groups mixing together.

What do you foresee as future challenges for urban regeneration?

We need to pay attention to the changing demographics in our society—for example, we have an ageing population. When planning new areas and rejuvenating older areas, we study the demographics of the town closely. If we want people to age in place, we need facilities nearby. For example, we built two-room Flexi flats for older people who may have monetised their larger flats and decided to move to smaller ones. We always site these near a neighbourhood centre, with convenient access to facilities such as grocery stores and clinics. But we also want the young to mix with the old. So in Kampung Admiralty, we combined elderly housing with a medical centre and childcare centre. These are innovative ideas you want to continue to have for the ageing population.

Also, as more of Singapore gets built up over time, we will have more brownfield sites compared to greenfield sites, like many older cities in the world. Greenfield sites are much easier to plan from scratch and to build on. With brownfield sites, it becomes more complex to rejuvenate. Existing uses have to be moved out and these sites are infill and might disrupt surrounding areas. All these will have to be managed very carefully. I believe these are the new challenges for Singapore. ●

Watch the interview here:



<https://youtu.be/5j2j4S8ga1E>

01 Staff from non-profit group Participate in Design hold an engagement session with residents, supported by the “Friendly Faces, Lively Places” fund.

02 People of different backgrounds easily intermingle within HDB estates.



OPINION

Marilyn J. Taylor

Large Inclusive Projects Make a Difference



“Large-scale urban projects should also be inclusive, to account for the diverse and changing needs of various user groups.”

Top-down, large-scale urban regeneration efforts have catalysed the transformation of cities worldwide. By discussing the revival of a major train station in Denver, **Marilyn J. Taylor** shows how a blend of strong leadership with citizen involvement can amplify the impact of huge projects. Marilyn is an architect, leader in urban design and Professor of Architecture and Urban Design at the University of Pennsylvania.

After four decades of working with cities on large urban projects—from the transformation of Lower Manhattan from a financial quarter into a thriving mixed-use neighbourhood, to the revitalisation of neglected intercity rail stations from Washington D.C. to Boston—I have seen how these can have a huge impact. Therefore, I believe scale is an important factor in urban regeneration.

But as cities become more diverse and dynamic, large-scale urban projects should also be inclusive, to account for the diverse and changing needs of various user groups. This is especially so with the emergence of mixed-use “innovation districts” where institutions, companies and citizens come together to reap the benefits of being physically compact, transit accessible and technically wired.

The transformation of Denver Union Station into a mixed-use hub, a large-scale project I worked on for about 15 years, illustrates how partnership with citizens, driven by strong leadership from the government, can have an outsized and positive impact.

Denver—known as the Mile-High City for its elevation—sits where the prairie meets the Rocky Mountains. It is the capital of the western U.S. state of Colorado and houses 700,000 people within a larger Denver region of about 2.8 million residents.

The project I was involved in stemmed from the Denver citizens' willingness to shift from being car-oriented to transit-oriented, to reduce congestion, preserve clean air and ensure continued access to high quality of life.

However, in the project's earliest days, public transportation did not exist in a way that tied the region of 23 municipalities together. The residential and small towns to the west needed to be connected to the city centre through an integrated system of light rail, commuter rails and buses. The vision was to create convenient and quicker connections to the Amtrak intercity rail, Denver airport and skiing destinations in the nearby mountains.

The revitalisation of the then-moribund Denver Union Station was integral to this plan. But despite strong support from citizens and business leaders, the government-led

“Mr Hickenlooper and his team never lost sight of the citizens' needs and ensured that revitalisation would be relevant to the users.”

initiative failed to take off several times due to the lack of federal funding for new transit programmes.

Believing in the immense potential of this project, a series of proactive Denver mayors threw their support behind it. One mayor, John Hickenlooper, owned a microbrewery near the Denver Union Station before he was elected in 2003. He worked to realise the community's vision for the revitalised station with an emphasis on collaboration—between the authorities and the people, as well as within the government. Mr Hickenlooper even went on to become Governor of Colorado in 2011, just in time to secure federal funding that, together with local public and private resources, allowed the project to move to implementation.

The project also succeeded due to an unprecedented level of coordination among the different municipalities. To realise the project, mayors in the 23 municipalities

had to convince citizens to vote in favour of a 0.5% sales tax. Every mayor was able to gain the citizens' support. The public money raised then became a catalyst for private investment—US\$488 million (S\$652 million) of public funds invested in transport brought in US\$1 billion (S\$1.3 billion) of private investments. This mixed-financing model saw the project through. With the rapid transformation of vacant land into a thriving neighbourhood, the increased property values and retail sales taxes exceeded projections, allowing the bonds to be paid off and refinanced earlier than planned.

Furthermore, five different governmental entities came together to form the Denver Union Station Project Authority to lead the project's design, construction and delivery. The Authority in turn worked closely with a master developer, forming a strong public-private partnership.

As the project progressed, Mr Hickenlooper and his team never lost sight of the citizens' needs and ensured that revitalisation would be relevant to the users. Beyond a regional transport hub, the Denver Union Station was developed as the heart of an active, mixed-use neighbourhood. The land around the station is no longer just a business district, it has become a useful part of the city. With a mix of public areas and private uses such as retail, entertainment and housing situated around the transit system, the district is now a place where people want to both work and play.

Mr Hickenlooper's approach is not unlike that of another leader I've worked with—Mayor Michael Nutter of Philadelphia. He is an activist who spent many hours out with his citizens, saying: “What is your vision? Let's make it happen together.” His achievements (such as reactivating the formerly industrial Delaware River Waterfront and adding hundreds of miles of bike lanes to city streets) show the impact of strong leadership that takes into account the citizens.

Consider the potential of an inclusive approach to large-scale urban projects in places already known for strong and people-centric leadership. As long as city leaders keep up with the citizens' goals and needs, urban projects can be the catalysts for vibrant, mixed-use neighbourhoods that interweave 21st century businesses with a high quality of life for the people. ●



OPINION

Counterpoint: Adib Jalal

Small Projects are Closer to the Community

“When the community feels empowered to contribute... not only is the hardware of the neighbourhood being revitalised, its heartware also gets a boost.”



Small-scale urban revitalisation projects can make a big impact as they are more people-centric, argues **Adib Jalal**, co-founder of Singapore placemaking studio Shophouse & Co.

Think of urban revitalisation in Singapore and large-scale, government-led initiatives come to mind. Public agencies have led the city's urban transformation since the 1960s, including a monumental multi-agency clean-up of the then-polluted Singapore River in the 1970s. The Housing & Development Board's Remaking our Heartland programme to renew housing estates since 2007 is another example.

These programmes usually aim for large-scale physical change, and are often capital intensive as a result. Their breadth and long-term nature necessitate a clear road map, resulting in grand master plans crafted by a select group of politicians, policymakers, planners and other major stakeholders. This approach is exclusive as it places responsibility on a few individuals to decide a single vision for the masses, and relies on the government for resources. It is also susceptible to single points of failure as the entire project follows the same plan.

An alternative approach considers urban revitalisation as a series of small steps focusing on placemaking: an organic, people-centred approach of developing the character and quality of a place. Guided by a general trajectory, each step acts as a scaffold for whatever comes next. These small-scale initiatives are best achieved through collaboration with the community and can contribute to urban revitalisation in different ways—from reducing risks through prototyping to engaging the community and catalysing further action.

First, the limited size and thus contained impact of small-scale projects offer opportunities to prototype ideas to revitalise spaces while mitigating risks. For example, Shophouse & Co carried out placemaking experiments at Telok Ayer Park over a day in January 2017 to trial ways to make parks in the Central Business District more comfortable for visitors during lunch hours. Ideas such as a mobile bicycle pit-stop for delivery cyclists and portable tables were tested by the community, who provided feedback that will inform future long-term infrastructural improvements. Thus, small-scale urban experiments can offer valuable user insights to reduce the risks associated with resource-intensive decisions.

Beyond the realm of ideas, small interventions could also make revitalisation efforts more inclusive by encouraging collaboration with stakeholders. The relatively small scale of the project helps individuals, groups and companies visualise how they can make a tangible difference to the vision, thus making them more open to joining the revitalisation process. When the community feels empowered to contribute assets, resources and insights, this strengthens their sense of belonging to both the process and its outcomes. As a result, not only is the hardware of the neighbourhood being revitalised, its heartware also gets a boost.

In 2013, Shophouse & Co took over an empty, neglected commercial unit at King George's Avenue to prototype new ideas to revitalise the space. As we shared our vision for it to become a part-retail, part-workshop and part-communal space, various entrepreneurs, artists and creatives came forward to offer their support. Companies sponsored hardware improvements such as fans, artificial turf and even a kitchen carpentry unit, while creative practitioners conducted programmes such as silkscreen printing workshops to activate the space across eight weeks. This collective effort empowered the community to take ownership of the intervention and instilled a sense of pride in the project. One of the partners even leased the unit and continued the vision with a mixed-use space that contains a bar, restaurant and creative workspace.

What is perhaps most potent about a small-scale intervention is its ability to catalyse other projects for sustainable urban revitalisation.

Lastly, what is perhaps most potent about a small-scale intervention is its ability to catalyse other projects for sustainable urban revitalisation. Considered as sparks, small projects offer tangible evidence to show the community that positive change is coming. While some of these sparks will end up as nothing more than a fizzle, those that register as “quick wins” will start to trigger a reaction—stakeholders begin to believe in the revitalisation and a groundswell starts to form. One famous example is the pedestrianisation of Times Square in New York. Introduced as a six-month pilot programme in 2009, the temporary road closure and introduction of movable chairs saw an immediate spike in foot traffic and usage of public space. Its visible impact was key in overcoming the stakeholders' initial scepticism. Eventually, the initiative garnered enough support for the city to adopt it permanently in 2010.

Also, despite being small, projects that start from the ground up have the potential to generate a deep sense of ownership and authenticity that no amount of capital investment can produce. Just look at how a once under-utilised plot of land in Aljunied Crescent was transformed into a well-loved community space after a participatory design firm, community groups, residents, grassroots leaders and other stakeholders came together to share their ideas and work towards a common vision for the space.

E.F. Schumacher was referring to economics when he wrote *Small is Beautiful*, but maybe we should look at small-scale urban interventions the same way too. They can drive an inclusive process towards a brighter possibility for our urban areas, but only if we start believing more in the power of the community than just the few in a committee to improve our city. 



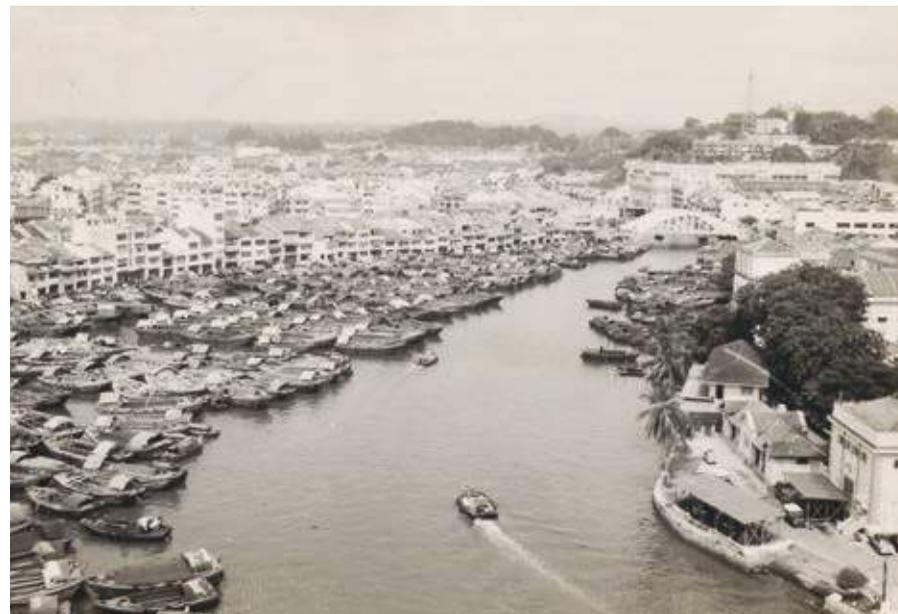
Transformed City Centres

Breathing New Life into the Old

Rapidly urbanising cities in Asia need to balance the demands of population and economic growth, while tackling social, cultural and historical challenges. In this illustration, **Yuqi Liew** highlights three examples of successful urban regeneration—Singapore, Tokyo and Seoul—and the various strategies used that made a positive impact in their respective environments.

Rejuvenating Singapore River Before the 1970s

The Singapore River was the city's lifeline during the colonial era. As a focal point for trade and industry, it attracted numerous squatter settlements, street hawkers and farms. However, lack of regulation caused oil, debris and waste from cargo transfers, rotting bumboats and human activities to severely pollute the river. By the 1970s, the river was so unhygienic that the waters emitted a stench and was uninhabitable to marine life. This prompted a state-led intervention.



1977–1987

The clean-up of the river took a full decade. Rubbish was cleared and mud was dredged out of the river. To prevent further pollution, squatters, street hawkers and vegetable sellers were also relocated away from the river. In all, the clean-up operation cost S\$300 million.



Present

Today, the Singapore River is a renewed hive of activity that resonates with its historical significance. The clean waterbody meanders along the historic Civic District, the Central Business District and hubs of entertainment and lifestyle attractions, all connected seamlessly through an extensive pedestrian network. Outdoor dining, ferry tours, water sports competitions and art installations keep the riverside vibrant throughout the year. The river is now part of Singapore's largest and most urbanised reservoir, Marina catchment, which reflects the city-state's savvy approach to capitalise on its water resources for economic, cultural and social purposes.

Reactivating Tokyo Station

Before the 2000s

Tokyo Station, the main intercity rail terminal in Tokyo, has been an emblem of the capital's modernisation and transit-oriented development. Built in 1914 in Marunouchi, Tokyo's Central Business District, the station is also the symbolic gateway to the Imperial Palace through the historic Gyoko-dori Avenue. Through the years, Tokyo Station has suffered war damage and endured economic crises like the Japanese asset price bubble collapse and the 10-year economic stagnation known as the "Lost Decade".



2006 – 2017

To restore the station to its original early 20th-century glory, major restoration works were undertaken in 2006. Costing almost ¥56.6 billion (\$680 million), the efforts reinstated the station's brickwork and domed structures, and created a new gallery space. The Tokyo Station Hotel was reborn as a luxury historic hotel and the carpark, taxi and car transfer stops were also relocated to make way for a 6,500 m² public space, known as the Marunouchi Central Square. The restoration works completed in 2012 and the square opened in 2017.



Present

Today, Tokyo Station is an important cultural landmark of Japan and an internationally renowned transportation hub. The Marunouchi Central Square weaves the building's historical significance with daily life, allowing visitors and locals alike to reclaim the space once overrun by traffic. These enhancements have strengthened Marunouchi's standing as a global business centre, attracting new investments to the district. Moreover, it cements Marunouchi's status as a popular location for annual events such as the Marunouchi summer festival, Winter Illumination and the Tokyo Marathon.

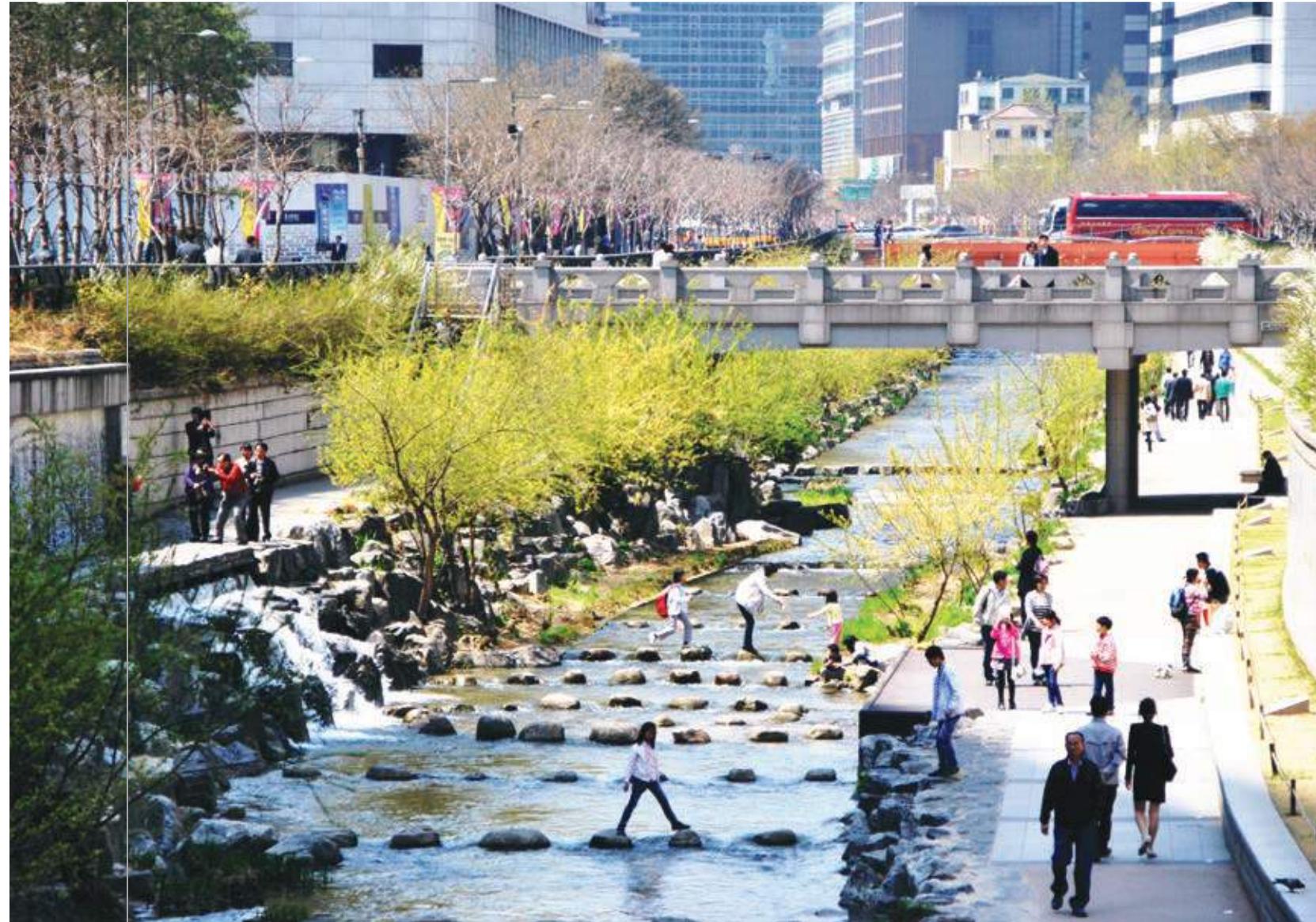
Regenerating Cheonggyecheon Before the 2000s

Originally a stream flanked by urban squatters, the Cheonggyecheon [Korean for 'clear stream'] was covered up and the Cheonggye Highway constructed over it in the late 1960s. Built to support Seoul's rapid industrialisation and modernisation, the highway was a major transport artery that cut through downtown Seoul. Commuters relied heavily on it to get to the city centre, where it carried up to 170,000 vehicles per day at one point. Over time, congestion worsened and the central business district began to lose its competitiveness to the Gangnam district.



2002–2005

To revitalise the city centre and address safety concerns for the corroding highway, the Cheonggyecheon restoration project was initiated on 1 July 2002, when Mayor Lee Myung-bak took office. The entire highway was demolished and the stream was uncovered. To allay concerns of traffic disruption, public transport infrastructure was strengthened while the use of cars was also discouraged in the city centre. The project was completed under US\$341 million (S\$453 million).



Present

The restoration project revived the 11-km-long stream, creating 163,000 m² of green public space. Air and water quality improved while noise levels were reduced. A wind corridor was also created and the Urban Heat Island effect in the area decreased by 3.6°C during the summer. These improvements attracted more private investments to the areas, which increased land values by 25–50% and created a new variety of uses in the downtown area.

Today, Cheonggyecheon has become an iconic landmark and a popular venue for cultural activities, hosting 259 events between 2005 and 2007 alone. The successful urban regeneration project exemplifies synergy between ecological restoration and improvements to quality of life for everyone.



ESSAY

Top-Down and Bottom-Up City Building

What Makes Urban Design Work

Urban design is the understanding, balancing and orchestration of politics, finance and design, argues **Alexandros Washburn**, Visiting Fellow of CLC. And for cities to succeed in urban design, there must be a commitment to enable a mix of top-down and bottom-up approaches to city planning.

Nothing important can be built in a city without an alignment of politics, finance and design. Politics is the strongest force of the three, determining the purpose and whether something can be built at all. Finance is the multiplier, allowing the project to scale at the speed of capital flow. Design is the weakest force. When politics decides on a course of action and finance figures out a way to make money at it, little time is left for design. Yet that time is critical to the success of a project—and to the success of a city.

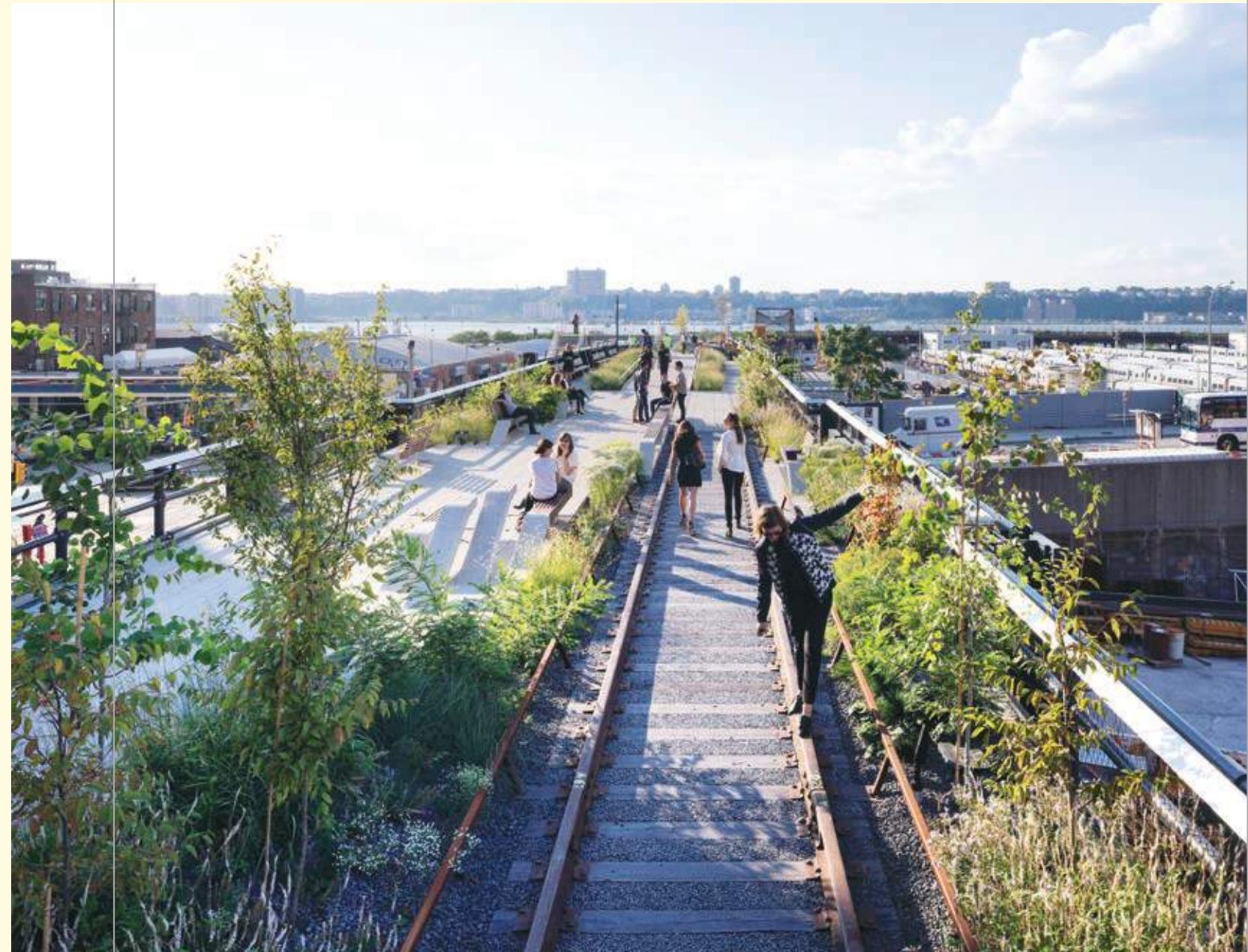
Understanding, balancing and properly orchestrating these three forces is the process of urban design.

A commitment to reality differentiates mere design from urban design. Urban designers are willing to understand and work under the intense pressure of political compromise and profit motive for good design to get built. They balance long-term perspectives with the imperatives of politics and finance, arranging for a series of short-term political and financial successes to land on, like stepping stones across a creek.

Good urban design can be a rare achievement, but the benefits of getting it right are worth it—as with the High Line Park in New York City (NYC). Once an elevated freight rail line on Manhattan's West Side, the High Line is today the most visited public park in America per acre.



Alexandros Washburn is the former chief urban designer of the New York City Department of City Planning under Mayor Michael Bloomberg and the leader of the planning firm DRAW Brooklyn LLC.



The third and final phase of the High Line concluded in 2014.

Good urban design can be a rare achievement, but the benefits of getting it right are worth it.

The High Line encompasses the ideals of my heroes of NYC urban design: the quality of community planner Jane Jacobs, the quantity of Master Builder Robert Moses, and the nature of Central Park's creator Frederick Law Olmsted. Seven years after first peeking out onto the abandoned tracks, I would walk my daughter through the finished park to her trapeze class, give many happy tours to grade school classes and prime ministers, and work on extending the High Line to Hudson Yards as Chief Urban Designer under Mayor Michael Bloomberg.

An Idea Seeded from the Bottom

Saving the High Line was the idea of two locals, Josh David and Robert Hammond, who started a civic group called Friends of the High Line. They invited a photographer to the High Line, and his images of the space enchanted the world. Among the early friends of the High Line was Amanda Burden, who eventually became Chair of City Planning when Mayor Bloomberg took office. When that happened, the project became popular politically.

However, landowners remained opposed to the High Line, fearing that the redevelopment would result in a huge drop in land values.

The solution: zoning. Ms Burden charged the Department of City Planning to develop a strategy that linked the renewal of the High Line with the renewal of the neighbourhood; the aim was to let landowners realise the value of their land and hence drop their demands for demolition.

The result was Article IX, Chapter 8, Section 98 of the New York City Zoning Code.

The goals were to transform the High Line into a unique linear park; provide new housing for the neighbourhood; preserve the character of the existing gallery district; add a mix of uses to the neighbourhood; and ensure that new buildings were shaped to enhance light and air to the new park and fit in with surrounding neighbourhoods.

The zoning created a large catchment area—the Special West Chelsea District—and the High Line Transfer Corridor, defined as “the area within which the High Line is located, where development rights may be transferred to receiving sites”. The receiving sites were in the new residential mixed-use perimeter of the district. With this, the owners of the land under the High Line could sell their old manufacturing development rights to the perimeter residential sites, allowing the High Line to stand while making a very smart profit.

With the design, specifically, the urban design, of the transfer corridor, the political problem of landowner opposition was solved with the financial gain of land use change from manufacturing to residential. This allowed value capture by both the landowners and the general public, leveraging US\$100 million (S\$133 million) of public funds into US\$3 billion (S\$4 billion) of complementary private development.

More recently, the new Hudson Yards redevelopment extended the High Line Park north to 34th Street, adding another US\$10 billion (S\$13.3 billion) in private investment. When urban design works, it really works.

The Pedestrian Point of View

The High Line started as a bottom-up project. In fact, the previous mayor had already signed an order to demolish the old elevated freight line. But the story that unfolded highlights the value of bringing a pedestrian point of view to the process.

Point of view in urban design is about making values visible. Different points of view are adapted to different value systems. A bird's eye point of view promotes order over experience. A driver's point of view prioritises personal mobility. However, values that respect the environment, economy and society are best represented by a point of view that is sustainable, humanist and experiential.

The pedestrian point of view is all of these. It is what makes walking through New York on a summer evening so exhilarating. Frank Sinatra and Alicia Keys have sung about it. The diversity and the democracy of the multitude of people pulsing through a public space is glorious.

The pedestrian point of view is also an excellent counter to the top-down approach common in master planning. NYC is unique in that it does not have a master plan. It has a Zoning Map and a Zoning Text, and a procedure to adapt them to changing conditions. It was the addition of the Uniform Land Use Review Procedure (ULURP) to the mix that made the High Line a reality.

ULURP is a legislated form of dialogue that marries top-down with bottom-up in a complex, adaptive system. The bottom-up movement is legally empowered to be heard through the land use review hearings, while the top-down structure retains the power to set the agenda of what comes before the Planning Commission.

This three-year process, which involved negotiating the terms of the zoning to align the interests of the stakeholders with the overall vision, ensured that when the zoning was finally passed and developers began building, what they built was in the public interest. This was an amalgamation of bottom-up and top-down approaches to city design.

The goals were to transform the High Line into a unique linear park; provide new housing; add a mix of uses... and fit in with surrounding neighbourhoods.



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“A city is a very complex system and making it feel ‘just right’ requires immense attention to detail from the pedestrian perspective.”



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Is Singapore Ready for Renaissance?

Singapore is a wonder of top-down planning. But have its large-scale successes come at the expense of fine-grain livability?

I would say yes. I am a law-abiding (visiting) fellow, but to avoid tripling my daily pedestrian commute from the hotel to CLC's office, I had to tread on grass, walk in the street and jaywalk. This walk, or human interface, felt clumsy and not well thought-out. If my cell phone had such an interface, I would trade it in.

It's not easy to make the pedestrian experience feel "just right". To ensure continuity for important walks, urban planners have to treat every sidewalk as an "urban room" to be designed as carefully as any work of architecture. A city is a very complex system and making it feel "just right" requires immense attention to detail from the pedestrian perspective.

One reason that Singapore is behind the global city curve on pedestrian quality is the lack of mixed-use zoning. When living and working quarters are less than 700 m apart, transportation is feet-first. Longer distances force people into vehicles. Over time, the separation between living and working becomes cultural. We spend the night in one part of a city and the day in another, and we grumble at the agonising commutes without even asking "Why?"

Perhaps what Singapore needs is a Brooklyn-like community, a kaleidoscope of walkable diversity. Tech artisans 3-D print new inventions in waterfront factories while young families stroll along a shore park outside; electrical substations sit next to gleaming new waterfront towers.

01 The vibrancy from the pedestrian point of view can be found from Times Square to neighbourhoods such as Van Brunt Street.

02 Brooklyn Bridge Park, a 2.1-km-long park that was formerly a waterfront industry.



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This is the Brooklyn culture—a renaissance that began in the late 2000s. It is a bottom-up culture, fuelled by the creativity that was chased away by high prices in Manhattan. This culture found a home in the mixed neighbourhoods of Brooklyn and quickly led to walkable neighbourhoods where everything is within reach.

This Brooklyn is also a portable state of mind. Can it make itself at home in Singapore? If so, it just needs a place with a kernel of beauty. Waterfront spaces are always beautiful. The Raffles Marina in the Tuas industrial zone was an eye-opener when I visited. Could this juxtaposition be a catalyst for a whole live-in community of creative people? It would be brawny, brainy and hold the semi-secret luxury of a waterfront marina at its heart.

Brooklyn's waterfront was affordable because vast tracks were occupied by power stations and heavy industry. Seeing Tuas Bay

reminded me of this landscape in the late 1990s. When factories were converted first to creative offices in Brooklyn, we didn't mind the adjacent power stations. They were part of the landscape. When the creative offices were later converted to luxury housing, the power stations remained and the new residents accepted them.

This would have shocked the modernists with their theory of the separation of functions in the city. They would have told us that such proximity was dangerous to our health and safety. But is it really?

First, the healthiest thing you can do in a city is to walk. A lot. Second, the risk to our health and safety has been vastly miscalculated. I have never heard of a factory or electrical substation blowing up in NYC. But I have lived through the terrorist attacks of 9/11 and the Hurricane Sandy flood. In NYC, this is the big picture on which we focus our attention and money.



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Is NYC Ready for Singapore?

Yet, Singapore does have a new mixed-use design approach to urban manufacturing that I am eager to bring back to NYC.

Our city has many hectares of vacant, former manufacturing land. We retain the manufacturing zoning hoping that factories and jobs will return one day, but at the cost of limiting housing.

We have fantasised about buildings that could combine manufacturing with housing. JTC's Space @ Tuas has actually done it, with floors of flexible factory space connected by a spiral ramp. On top, there is a garden and workers' dormitory. If only we could adapt this concept and bring it to NYC's waterfront.

Tech firms like Google found out a decade ago that the best young talent wants to live in cities. As manufacturing becomes more technical and roboticised, manufacturing

firms will discover the same applies to their workers, who will be young and technically sophisticated. An NYC version of Space @ Tuas could bring jobs to where the workers are, to mix manufacturing and housing on the shores of Brooklyn.

Given my Department of City Planning background, I have a very simple fix to the zoning code to allow such a building. Manufacturing zone M2-1 requires one square metre of parking to be built on site for every square metre of factory in Red Hook, Brooklyn. This rule—created in 1961—assumed workers drove to work. Today, young workers would rather walk to work. So let's change the rules for M2-1 to require one square metre of housing to be built on site for every square metre of factory built instead.

So let's get busy on urban design where the right combination of politics, finance and design, as well as top-down and bottom-up city planning, can make things happen. ●

01 Waterfront spaces such as the Raffles Marina could be the drawing factor for Singapore's next mixed-use neighbourhood.

02 An artist's impression of JTC's Space @ Tuas, which integrates manufacturing industrial space, a dormitory and recreational facilities for workers.



ESSAY

Diversifying Activities in a Shopping District

Reimagining Orchard Road: Putting People On the Street

With declining retail traffic in recent years, Orchard Road faces strong competition as a shoppers' paradise. CLC Fellow **Michael Koh**—who was involved in developing the 2.2 km shopping belt as an urban planner from the 1990s to 2000s—shares ideas on revitalising the district for a diverse group of users beyond just shoppers.

Orchard Road needs a bold rethink. The consensus is clear, judging from discussions in the media on ways to boost the famous boulevard's attractiveness as a shopping destination.

The question then is not whether we need to do so, but how. How can Orchard Road recover its buzz? How can it become inviting and intriguing again—both as a local street, serving the community and residents, and as an international destination, competing with the iconic shopping districts of major global cities?

From July 2016 to April 2017, CLC conducted a joint study of Orchard Road with architectural firm WOHA and the

National University of Singapore's School of Design and Environment. The study came up with two big ideas on the way forward.

The first is to implement car-lite measures to open up spaces for visitors on foot, shifting the paradigm from vehicles to people, and from driving to walking. The second is to increase the depth and richness of Orchard Road by connecting it to side lanes and neighbouring precincts, as well as activating existing spaces along the street to enhance the diversity of activities.

Both of these ideas come down to one word: experience.



Michael Koh is a Fellow with the Centre for Liveable Cities. He was the former CEO of the National Heritage Board and the National Art Gallery, and Director of Urban Planning and Design at the Urban Redevelopment Authority.



Participants flooded Orchard Road to practise yoga on one of the Pedestrian Night sessions in 2014.

“It is not just about shopping and retail...
It also has to be about engaging the
community’s wide-ranging interests.”

To be exciting, Orchard Road has to create a new experience that is richer and more vivid for visitors. It is not just about shopping and retail, although that remains important. It also has to be about engaging the community’s wide-ranging interests, and leaving a mark on the visitor in different ways throughout his or her visit.

Car-Lite Measures

Car-lite measures are important because they are often the trigger for bringing people and vibrancy back onto the streets.

This has been true in a number of successful examples, such as Cheonggyecheon Stream in Seoul—where the flyover over a river was removed, and the area around the stream was converted into an urban park—and Times Square-Broadway in New York, where road space was pedestrianised. Oxford Street in London and George Street in Sydney are following suit, with plans to go car-free by 2020, because they have seen the benefits that pedestrianisation brings in higher footfall, increased revenues for shops and a general sense of energy and dynamism.

A full or partial pedestrianisation of stretches of Orchard Road will allow road space to be transformed into public

open spaces such as linear parks, urban squares and event plazas. Traffic calming measures and more pedestrian crossings can also make life more pleasant for those walking along the street. Trial 30-second scramble walks at the junction of Cairnhill Road and Orchard Road took place on weekends and public holidays from 16 December 2017 to 28 January 2018.

Organised by the Orchard Road Business Association, the trial may be extended to two other busy junctions if it is successful.

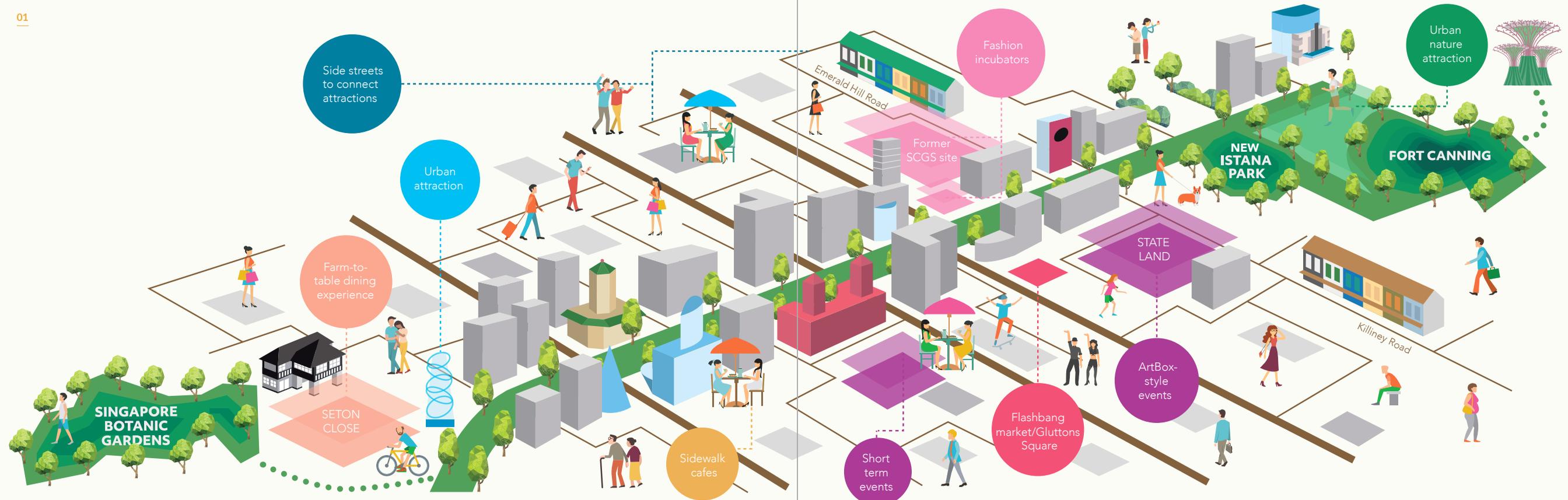
Imagine reclaimed car lanes at Tanglin Road converted into a line of pavilions and pop-up stalls, with playgrounds for children and benches for friends to simply sit and chat. Think about expanding the semi-circular square at Ngee Ann City by reclaiming the road space, to create a focal point for the whole district to host bigger festivals and events.

Or how about a green corridor along the full stretch of Orchard Road for a “Shop in the Park” experience? This walking route could connect Botanic Gardens to Fort Canning, and could even be extended all the way to Marina Bay, via the Singapore River. This pathway could also loop back to Dhoby Ghaut, with continuous sheltered walkways and other improvements to the pedestrian experience.



01 Parts of Sydney’s George Street reopened in December 2017, towards its vision of full pedestrianisation.

02 Brisbane’s Queen Street has sheltered walkways that provide a pleasant shopping experience throughout the seasons.



Orchard Road can be positioned as a flagship project for Singapore's national car-lite vision, exemplifying the benefits of a more sustainable environment.

Beyond pedestrianisation, work also needs to be done to make the walking experience more pleasant in the hot and humid weather. This can be achieved through greenery, overhead shelters, fans or cool air blowers as well as pavilions and rest stops.

Will the pedestrianisation—even partially—of Orchard Road lead to traffic jams? This is a valid concern. The CLC study examined this issue and found some mitigating

factors. Through traffic can be diverted to other alternative roads leading to or from the Downtown Core, and these roads can be upgraded or redesigned to cope with the increased traffic. Local and rear service access roads are already present, making most existing developments along Orchard Road reachable from side or rear streets. Mitigating strategies that tap these side streets can be further studied through modelling studies.

Non-car options can also be enhanced. Two more MRT stations at Orchard and Orchard Boulevard will be part of the new Thomson-East Coast line, which will result in a total of two major lines and five stations serving the district. We can also introduce bicycle lanes, or take inspiration from Sydney's George Street, which is completing an electric, wire-free tram service along the street to supplement post-pedestrianisation travel options. Zhuzhou in China is also test-bedding a cost-efficient, trackless tram system.

Considered holistically, Orchard Road can be positioned as a flagship project for Singapore's national car-lite vision, exemplifying the benefits of a more sustainable environment and attractive, non-car mobility options.

The implicit principle of going car-lite is that roads should ultimately be seen as assets belonging to the city and all of its residents, not just to car owners. Therefore, if and when it serves the public interest, the city should have the courage to reclaim the road—or parts of it—for use by people on foot, not cars.

Boosting Depth and Richness

One main issue identified in the joint study is that Orchard Road faces a structural issue of being a one-way corridor that offers little diversity, in terms of side street offerings and depth of experience. Other than Emerald Hill with its roadside eateries at Somerset,

there are few side streets that encourage secondary exploration.

In other cities, side streets in major visitor areas have resulted in longer visitor stays and better engagement. The diversity of Melbourne's side lanes and rich texture of local shops along the side streets at Tokyo's Omotesando allow for serendipitous discoveries and interesting diversions.

Fortunately, there is much potential to increase the depth of offerings at Orchard Road. In the Somerset area, there is Killiney Road, an attractive side street currently disconnected from Orchard Road. A way of connecting the two could be by activating vacant state land between the two roads, opposite ComCentre. Imagine this as a permanent site for a creative market similar to Bangkok's popular ArtBox, which attracted massive crowds in its April 2017 Singapore debut.



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The existing surface carpark behind Orchard Building at Grange Road hosted the Flashbang market over the festive period in December 2017, and can also be used as an event space to host reintroductions of the former “Gluttons Square”—a popular street dining venue back in the 1970s that was located in a neighbouring site.

Parcellation of other vacant state land near Orchard Road into smaller lots for temporary uses can similarly draw crowds. This could add a layer of alternative start-up type activities—with priority given to experimental and experiential concepts. For example, the state land behind Ngee Ann City can be used for an experiential attraction on a short term basis.

JTC Corporation, Singapore Tourism Board and SPRING Singapore recently announced plans for Design Orchard to be built at the junction of Cairnhill Road and Orchard Road. Slated to complete in late 2018, the development will feature a retail showcase for more than 60 local brands, an incubation space for designers and a rooftop event space. This concept can be further reinforced by developing a fashion incubator at the former Singapore Chinese Girls’ School (SCGS) site at the nearby Emerald Hill Road, when the current lease expires. Access into the former SCGS site will allow visitors to stroll into the historic premises and wander farther afield, into Emerald Hill, and finally completing the loop back to Orchard Road.

Together these experiences can expand the depth of activities, give the street a sense of identity and authenticity, and rejuvenate the experiential quality of Orchard Road.

Along Orchard Road, more can be done to increase the diversity of activities, by creatively adapting, reusing and redeveloping existing spaces. For example, the current black and white bungalows at Seton Close can be converted into farm-to-table restaurants, offering a new dining experience at the start of Orchard Road.

A new nature attraction can also be introduced at the two vacant land parcels in Dhoby Ghaut. This can take the form of an urban zoo or aviary, similar to Wild Life Sydney Zoo, located at the heart of Darling Harbour. With a proposed link bridge to Fort Canning, this can form a cluster of nature-themed attractions in the area.

At the other end of Orchard Road, at the nexus of Tanglin and Orchard, another urban attraction can be developed to attract crowds. It could take the form of an amusement ride such as the “Halo” free fall tower proposed for New York City’s Penn Station, or signature architectural forms such as the urban folly or convertible culture centre at Hudson Yards, also from New York.

More sidewalk cafes can be introduced in spaces between buildings, such as that between Ion Orchard and Wisma Atria, between Wisma Atria and Ngee Ann City, and between Tangs Plaza and Lucky Plaza.

01 Takeshita Street just off Omotesando in Tokyo gives pedestrians more reason to stay in the shopping district.

02 Transformation of the old Singapore Chinese Girls’ School site can follow Hong Kong’s adaptive reuse of the former Police Married Quarters into a creative hub.

03 Hosting creative markets like Artbox could draw crowds to Orchard Road.

04 Sidewalk cafes provide welcome spaces for shoppers to sit and people-watch.

“Along Orchard Road, more can be done to increase the diversity of activities, by creatively adapting, reusing and redeveloping existing spaces.”



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Working Together and Testbedding for Success

None of these changes have to happen overnight. They can be testbedded to observe how people adapt to the changes and be subsequently adjusted for greater effectiveness, just like New York City did before the permanent road closures in the Times Square area.

For example, the car-lite measures can be done over a month-long pilot period. The stretch of Orchard Road between Orchard MRT station and Bideford Road, for instance, can be closed beyond just one-night closures previously done as part of Pedestrian Night on Orchard Road in the 2015 and 2016 pilots, and be supported with proper programming and events. The month-long test would be more realistic and give residents and visitors a better sense of the benefits or inconveniences of the change. The extended pilot will allow for data-gathering and analysis on how the traffic copes, as well as changes in visitors' profiles, behaviour and retail expenditure during the pilot.

The bottom line is: Orchard Road must change to remain attractive in the face of competition from global shopping destinations, local suburban malls and online retailers.

The government has been working closely with stakeholders on this. A Ministerial Steering Committee jointly led by the Ministries of Trade and Industry, National Development, and Transport was set up in September 2017 to study how to rejuvenate Orchard Road. A public call for tender proposals for a business study on the street by the Urban Redevelopment Authority and the Singapore Tourism Board was also done in December 2017. With a common vision and an integrated plan that includes input from the private sector, Singapore can grasp the opportunity to turn Orchard Road's current challenges into an opportunity to reimagine a street for everyone. 

The writer would like to thank the CLC research team and the following individuals for their participation in the joint study:

WOHA Architects:

Wong Mun Summ, co-founder

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Tessa Grace Kok, *Year 4 student*

Liu Meilan, *Year 4 student*

The Suzin, *Year 4 student*

Zachary Kho, *Year 4 student*

01 An artist's impression of Design Singapore, due to be built by end of 2018.

02 A cross-section studio drawing of the possible future of the area at the beginning of Orchard Road at Tanglin.



ESSAY

Citizen Participation for Inclusive Outcomes

It Takes a Village to Plan a City

Drawing from a recent study, *Planning for Communities: Lessons from Seoul and Singapore*, by the Centre for Liveable Cities and the Seoul Institute, **Remy Guo** explains how citizen participation in urban planning and rejuvenation leads to inclusive outcomes.

Urban rejuvenation goes beyond the enhancement of physical assets in the city. It also involves relocating residents or businesses and overhauling their once-familiar spaces or infrastructure. Yet, these affected stakeholders tend to be left out of planning decisions, especially in traditional top-down processes that involve only public officials and experts.

Singapore and Seoul have been successfully transformed through decades of government-led urban development initiatives. These include comprehensive public housing in the former, and public-private partnerships with major development corporations in the latter. But in recent years, both cities are beginning to involve citizens more actively in the process of urban planning and rejuvenation. The following examples illustrate how this process has become more inclusive through collaboration with citizens.

Bonding the Community through Participation

Citizen participation is most commonly applied at the neighbourhood level. The intimate scale allows residents to relate meaningfully over common issues, while providing more room for decision-making by residents, with the government playing a facilitative role. This approach not only allows residents to customise solutions to local needs, but also creates more intangible social outcomes.

In Singapore, public housing neighbourhoods built by the Housing & Development Board (HDB) constitute the living environment for more than 80% of residents. Recognising the importance of neighbourhood design for social cohesion and community building, the HDB initiated a study in 2012 with the National University of Singapore (NUS) to review and distil good neighbourhood designs that facilitate community bonding.



Tampines residents discuss ways to improve the estate's community spaces using models.



Remy Guo is a researcher at the Centre for Liveable Cities.



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The study took place from 2012 to 2014 over two phases. The first phase involved focus group discussions, site observations and a survey involving 2,200 residents from various precincts. The survey revealed that residents who frequently used their precinct's amenities registered a stronger sense of community. Thus, casual exchanges at neighbourhood spaces like lift lobbies and walkways could help to deepen neighbourly relations. Nine key strategies and six design typologies to enhance community bonding were distilled from the findings from the first phase.

Two design concepts were identified in the second phase for prototyping in Tampines, a 30-year-old HDB town. One was the Social Linkway involving interventions along popular pedestrian paths to encourage interaction between residents. The other was the Neighbourhood Incubator, a one-stop hub for community activities.

Co-creating with residents is key to ... fostering a stronger sense of ownership [of neighbourhoods] to ultimately build stronger communities.

A participatory design approach was developed based on the earlier identified strategies for community bonding, to test how residents' participation could boost their ownership of community spaces. Working with relevant government agencies and the local Town Council, the HDB-NUS team involved over 1,800 Tampines residents through pop-up engagement booths, interactive boards, focus group discussions, in-depth interviews and design workshops. Through these



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activities, the HDB-NUS team learned how existing spaces were used, how they could be better designed and which social functions could be incorporated to boost usage and interaction among residents.

Residents were invited to co-create the Social Linkway at Tampines Central Blocks 830 to 863, which is made up of four segments—Green Link, Play Link, Learning Link and Art Link. At the Green Link, volunteers came together to grow plants on a trellis, while at the Art Link, residents helped to paint wall murals and art banners. Over at Block 857, the Neighbourhood Incubator was designed as a multi-functional space. Equipped with movable stools, it could be easily converted to host community workshops or get-togethers such as potluck sessions and flea markets.

After the two projects were completed in end 2015, the HDB conducted studies on the

usage rates and community interaction levels over two months. The new spaces enjoyed an average of almost 200 unique visitors daily. In particular, the average stay period at the Learning Link increased from 10.9 min to 24.4 min after the interventions were introduced, a duration long enough for a chit-chat. With the success of this pilot, the HDB aims to draw from the research findings to improve the processes for other estates' upgrading and renewal programmes.

The two projects show that physical design is only part of the solution for better neighbourhood spaces. Co-creating with residents is key to building consensus, encouraging utilisation of the planned facilities and fostering a stronger sense of ownership to ultimately build stronger communities. This calls for greater attention to bring the community on board, rather than solely focusing on the physical outcomes.

01 Residents planting on the trellises at the Green Link.

02 Residents painting art banners that would be displayed at the Art Link.

Balancing Community Benefits and Private Interests

The rejuvenation of old neighbourhoods requires a delicate balance between meeting residents' private interests and the broader needs of the community. In Seoul, until the early 2000s, the rejuvenation of older, substandard residential areas was often carried out without sufficient consideration of existing residents' needs. The process usually involved the full-scale demolition of existing neighbourhoods, to make way for large apartment complexes constructed to boost urban housing and the city's economic growth. This approach created social issues like the lack of alternative housing options and employment opportunities for displaced residents.

Since the 2000s, the Seoul Metropolitan Government (SMG) has shifted the approach for urban rejuvenation. Instead of full-scale demolition and redevelopment, it now supports community interest in local rejuvenation through relevant policies and programmes. One such initiative is the Residential Environment Management Program (REMP). Introduced in 2012, REMP aims to preserve, renew or restore existing residential areas according to the community's needs.

Seowon Village is a neighbourhood that benefited from REMP. Developed in 1979, the neighbourhood covers over 32,000 m² and houses 156 households. Prior to any discussions on neighbourhood rejuvenation in 2009, the neighbourhood retained the ambience of an idyllic village with two-storey pitched-roof houses. However, it also had issues such as the lack of parking spaces and unattractive streets hemmed in by 2-m-high property boundary walls.

As part of REMP, a resident council was set up with elected representatives. This council served as the core group for a collaborative planning process involving the district government, the SMG planners and the residents. Possible solutions were assessed

Seowon Village's success ... demonstrates the value of enabling deeper communication with residents.

from both professional and community perspectives, and rigorously debated among residents during community workshops.

For example, to accommodate additional parking spaces and address the problem of illegal street parking, the residents worked with city officials and urban designers to develop guidelines for shared parking spaces within private yards. Guidelines were customised to accommodate differences in individual properties, while ensuring consistency in the overall design. Today, low fences, open lawns and flower beds have replaced previously unfriendly boundary walls, creating a more convivial living environment.

Residents also reached an unexpected consensus on building height limits. Based on planning regulations, buildings in Seowon Village could go up to three storeys high. However, as discussions between residents and experts revealed that maximising building heights could result in negative impact on the village, such as increased traffic or reduced sunlight in the public streets, over 85% of residents agreed to a two-storey building height restriction to preserve the character of the village.

Seowon Village's success under REMP demonstrates the value of enabling deeper communication with residents. Supported by information and professional advice from experts, residents could better appreciate the implications of each proposal and make better-informed choices. More importantly, the process encouraged residents to consider perspectives beyond individual property rights to achieve more inclusive outcomes for their neighbourhood.

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01 Discussions with residents on the rejuvenation plans for Seowon Village.

02 Seowon Village's high boundary walls (left) were lowered to create a more welcoming neighbourhood (right).



Building Social Consensus through City-Level Planning

In contrast to neighbourhood-level planning, citizen involvement in city-level planning tends to be more limited. This is due to the complexity of issues or potential market sensitivities like the impact of redevelopment on private properties. In Seoul, where 53% of land is owned by private landowners, the urban planning process had been typically led by professional planners in the government and academia.

The Seoul Plan 2030—a comprehensive urban master plan to guide Seoul’s urban development until 2030—created unprecedented scope for citizen involvement. In 2011, newly elected Seoul Mayor Park Won-Soon pledged to shift the focus of the city’s policies from physical development to improving quality of life, through communication and collaboration with citizens. Under the direction of the Mayor, the SMG took a leap of faith and established a transparent and collaborative process for the preparation of Seoul Plan 2030. Seoul’s decision to actively involve the citizens is despite the uncertainties of an untested multi-stakeholder planning process, which stands in contrast to tried-and-tested passive engagement methods like surveys and exhibitions.

To develop an appropriate citizen engagement structure and establish the roles of various stakeholders for Seoul Plan 2030, the SMG first set up an Advisory Group comprising 33 experts from academia and civic groups. Based on the Advisory Group’s recommendations, a 100-member Seoul Plan Citizen Group and a 16-member Youth Group were formed to develop the planning vision. Participants were randomly selected by a research consultancy to ensure that they had no attachment to specific interests. Membership was also balanced across factors such as gender, age, residential area and

nationality. To also collect opinions from the general public beyond the Citizen Group and Youth Group, the SMG initiated platforms like a website, public debate and surveys.

The SMG organised several roundtables for the Citizen Group and Youth Group to discuss key challenges and issues, and to create a vision for Seoul’s future. The SMG held back from controlling the outcomes and limited the experts’ role to providing policy and planning information as well as professional assessments, so as to help citizens make better-informed decisions. The experts also mediated disagreements between participants. Although most citizens were initially critical of the government’s efforts, interacting with experts improved their understanding of the policies and enabled them to offer constructive suggestions.

The key outcome of the discussion was the vision statement for Seoul Plan 2030: “A happy city of citizens built on communication and understanding”. Mayor Park endorsed this vision, following which the SMG established a Development Committee for Seoul Plan 2030 to develop specific planning strategies. The committee, comprising diverse stakeholders from government to experts and citizens, focused on specific themes ranging from education and women to history and culture. The final plan was completed in September 2013 and presented to the Mayor as the collective effort of participants from various sectors.

“By incorporating diverse views through a rigorous, deliberative approach... [Seoul Plan 2030] was more readily accepted by the public.”

01 Citizen Group discussions were also open to foreigners living in Seoul.

02 The Youth Group was also involved in the discussions.

“To ensure that different stakeholders’ needs are comprehensively examined and incorporated into rejuvenation plans, city leaders need to involve citizens from the planning stage.”

While the planning process took about two years, the Seoul Plan 2030 benefited from the social consensus obtained throughout the process. By incorporating diverse views through a rigorous, deliberative approach, the plan laid out rational and inclusive strategies for Seoul’s future and was more readily accepted by the public. This support from the citizens could help to safeguard the validity of the plan in the long term, in spite of inevitable changes in the city’s political leadership. This contrasts with the previous urban master plans, which were plagued with public objection and were often scrapped whenever a new mayor took office.

It Takes a Village to Plan a City

As societies become more diverse and urban spaces get increasingly contested, passive forms of engagement—such as ad-hoc surveys or voting on pre-determined options without adequate information—may no longer suffice to give insights on deeper issues or provide directions for the future. To ensure that different stakeholders’ needs are comprehensively examined and incorporated into rejuvenation plans, city leaders need to involve citizens from the planning stage. Although this could entail longer time frames than expert-led planning, the examples from Seoul and Singapore show that active citizen participation is a surer way to forge consensus and ensure inclusivity in rejuvenating our cities. ◉



This essay is based on findings found in *Planning for Communities: Lessons from Seoul and Singapore*, published by the Centre for Liveable Cities and the Seoul Institute. Download it at www.clc.gov.sg.

01 The Seoul Plan 2030 discussions involved citizen participants, experts and city officials.



ESSAY

Creating Socially Conscious Cities

Flexible Planning for Inclusive Neighbourhoods

To deal with the increasingly complex needs of diverse communities, urban renewal projects should be socially inclusive in order to be successful, argue **Professor Susan Fainstein, Professor Norman Fainstein** and **Gurubaran Subramaniam**. In this essay, they share examples of cities that have not just transformed physical spaces, but also strengthened communities in the process, through socially inclusive planning and design approaches.

Cities are regularly confronted with the necessity of urban regeneration. However, such efforts no longer entail simply revitalising ageing infrastructure or stale urban environments to enhance land value. With increasingly diverse societies and deepening societal fault lines across ethnicity, religion and socio-

economic status, it is imperative for urban regeneration projects to also encourage social inclusion. However, not many cities have enjoyed success with this, given the incredible political finesse required to simultaneously achieve economic, environmental and social goals through regeneration.



Residents of all backgrounds frequent the Rockefeller Park at Battery Park City, New York.



Professor Susan Fainstein is a Senior Research Fellow in the Harvard Graduate School of Design.

Professor Norman Fainstein is President Emeritus and Professor Emeritus of Social and Urban Studies at Connecticut College.

Gurubaran Subramaniam is a researcher at the Centre for Liveable Cities.

From our studies of urban redevelopment projects in various cities, projects that have achieved the seemingly elusive feat of fulfilling all three objectives often do not focus on a single, dominant use. Instead they favour the infusion of mixed uses in a socially inclusive manner, through the following principles:

1. Flexible long-term plans that allow developers to incorporate relevant suggestions from the community.
2. Community engagement to ensure project stays viable and relevant to the people's needs in the long run.
3. Provision of mixed-income housing to diversify the residential population and create a vibrant and inclusive community.

This essay shows how these principles underpinned the success of inclusive mixed-use projects in New York, Amsterdam and Singapore.

Battery Park City: Evolving to Meet Needs

With a mix of residential and commercial developments as well as public spaces, Battery Park City (BPC) in New York City's Manhattan was developed using a flexible model that could adapt to community input. Its original plans in the 1960s called for a development that would include a large, modernist housing complex with equal numbers of low-,

middle- and upper-income units and some adjacent office towers, all located on super blocks. Unfortunately, only one middle-income apartment building was completed and the project stalled during the 1970s fiscal crisis.

In 1979, the Battery Park City Authority—a New York State agency—took over the site and jettisoned the original housing megaproject. The Authority pursued a mixed-use model that aimed to achieve a balance between residential, commercial, retail and public park space. A third of the area was devoted to public space while 7.2 million square feet (66.9 ha) of residential and 10 million square feet (92.9 ha) of commercial developments were built. A key initial development was the World Financial Center (WFC), a cluster of four office towers ranging from 34 to 51 storeys. This opened in 1985 and attracted the city's most prestigious financial firms.

Public spaces were interspersed within the large developments. For example, the Winter Garden, a 120-foot high (36.5 m) vaulted atrium, was created in between the WFC buildings for public use. Today it hosts regular concerts and other forms of entertainment. A waterfront walkway runs the entire length of BPC, affording stunning views of the harbour and the Statue of Liberty. Parks in the southern section are also the epitome of landscape architecture—one evokes the 18th century shoreline while another features elaborate flower gardens.



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01 The Winter Garden Atrium houses special programming and serves as a public space for New Yorkers to gather for a lunch break.

02 Pedestrians enjoy interacting and relaxing at Battery Park City's waterfront, against the backdrop of New York's iconic landmarks.



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“The focus on providing affordable housing options... public spaces and facilities, expanded BPC’s community and attracted diverse users to enjoy and liven up the area.”

Later, in response to community input, the Authority devoted the northern parks to recreation by adding facilities such as basketball courts and a large, imaginative playground. A new public high school was also built. The addition of museums, memorials, a movie theatre and hotels further boosted footfall to BPC, attracting visitors from afar, besides the neighbourhood’s residents.

Residential units in BPC were made available for either rental or owner occupancy to ensure inclusiveness and encourage diversity in the residential community. Additionally, four of the apartment buildings currently require 20% of units to be offered at below market rate, so that it is affordable for tenants earning less than US\$55,000 (S\$73,000) a year (half of the area’s median income).

The design of BPC has attracted widespread praise and recognition, demonstrated by the awards it received from professional

organisations such as the American Institute of Architects, the American Society of Landscape Architects and the Urban Land Institute. The variety of structures and uses produces a more interesting environment than typical uniform large developments. Although detractors characterise it as Disneyesque—artificially evoking a nostalgic image—it still incorporates many positive characteristics of a vibrant urban neighbourhood, such as having multiple uses, short blocks, buildings along the street line and accessible parks.

Though BPC’s development occurred over decades, the authorities ensured the area stayed relevant by allowing for flexibility in the plans to accommodate citizens’ needs and listening to the community’s concerns. The focus on providing affordable housing options, together with the development of public spaces and facilities, expanded BPC’s community and attracted diverse users to enjoy and liven up the area.



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Bijlmermeer: Rebuilding a District with the Community

The Bijlmermeer, a social housing project in Amsterdam, demonstrates a range of useful strategies for achieving inclusive outcomes, from flexibility in long-term planning and involving the community in the planning process to providing for mixed-income housing options. Built in the 1960s–1970s, the project’s initial architectural style resembled BPC’s first design. Enormous buildings intended for working class households dominated the landscape. A small and obscure mall provided for daily shopping while a railroad embankment separated the residences from a nearby office district.

In 1985, the complex had a 25% vacancy rate. Dutch families disliked its coldness; immigrants, primarily Surinamese who had larger families and fewer choices, came to dominate the area. The project was also criticised by residents and experts for its homogeneity and inflexibility.

In response to the criticisms, the planners reconceptualised the project in the mid-1980s and the 1990s to encourage a more diverse mix of residents, structures and uses, as well as an active street life. This led to the reconstruction of the entire southeast portion of the city in the late 1980s. A new shopping centre was built to bridge the railroad and connect the residential area to the neighbouring office complexes. Residences above stores, offices for small businesses and artists’ live-work spaces were also added to encourage different uses and stimulate new activities in the area.

In 1992, a public-private partnership began reconstruction of the residential buildings. Some were reduced in size while others were demolished and replaced with new low-rise buildings for owner occupancy. The remaining concrete structures were repainted in bright colours and retrofitted with elevators. Displaced residents either purchased apartments in the new structures or relocated to vacant flats within the area.

- 01 Park facilities at West Thames Park have changed thrice in response to the evolving and diverse needs of the BPC community.
- 02 Integration of housing and retail uses in the same complex encourages interaction among residents.



While top-down central planning created an unpopular project, the silver lining was the flexibility for plans to be re-drawn to strengthen resonance with the residents.

The construction of a new stadium for Ajax, Amsterdam's Premier League football team, further stimulated street activities and the surrounding entertainment offerings. Although more work remains to be done to vanquish traces of dreariness created by some of the remaining large structures, the area is now substantially livelier and more varied than its earlier self.

The redesigned project retained its ethnic mix, with multiculturalism promoted as a selling point for homebuyers. While there was initial scepticism among some planners about the appeal of relatively expensive owner-occupied units, this proved unwarranted. Many of the owner-occupants had lived in the original structures, but still chose to remain in the complex despite improvements in their economic circumstances. In 2006, there were approximately 33% Surinamese, 30% native Dutch, as well as a mix of other nationalities including those from the Antilles, Turkey and Morocco.

This Bijlmermeer example shows that while top-down central planning created an unpopular project, the silver lining was the flexibility for plans to be re-drawn to strengthen resonance with the residents. The redevelopment then proceeded more organically. Planners refrained from imposing a single model on the entire project and instead invited the

local community to play a significant role in developing the final strategy through participation in regular meetings and surveys. Physical improvements were also complemented with large expenditures on social services and programmes such as employment training. This all-rounded approach has been key to the area's inclusive renewal.

Toa Payoh: Planned for Inclusivity

Toa Payoh New Town is one of the first self-sustainable mixed-use neighbourhoods in Singapore, designed to meet the needs of diverse users. Built on what used to be vast tracts of swampland and squatter settlements in the 1960s, the town was conceptualised according to the Housing & Development Board's (HDB) "neighbourhood principle", which plans several smaller neighbourhoods around the focal point of a town centre.

To meet the needs of current and future residents, the town was planned as a self-sufficient entity with a wide range of uses and amenities. These include public and private housing developments, parks, recreational facilities, community centres, various communal spaces, schools and commercial nodes supported by efficient transportation networks. Considerations were also made for industrial land to provide employment for residents.

Toa Payoh has a mix of residents of different ethnicities due to the national Ethnic Integration Policy. This promotes racial integration by ensuring a mix of different ethnic communities in all HDB neighbourhoods and blocks, reflecting Singapore's multi-cultural make-up. The town's population is also reflective of different social economic strata in Singapore, thanks to its mix of housing types ranging from public housing to landed properties and condominiums.

- 01 Public spaces are used differently by various groups. Here, it functions as a recreational space for youths.
- 02 The Toa Payoh neighbourhood consists of public and private housing (background of the image), situated near amenities in the Toa Payoh Hub (centre).
- 03 Many festivities, such as the Mid-Autumn Festival, are held at the large public plaza in Toa Payoh Town.

“Conceived with a long-term horizon in mind... Toa Payoh depicts how sound planning can create not just a pleasant environment, but also a multicultural live-in community.”

The community is also given a stake in their estate through the cultivation of leadership at the grassroots level, as well as opportunities to exercise self-management of their neighbourhoods through the Community Centre Management Committees and Residents' Committees. Residents can play a part by organising and participating in community activities such as celebrations for National Day and significant ethnic festivals, and by collecting feedback on issues related to the neighbourhood from other residents.

Toa Payoh's development is also in line with national land use plans, which guide Singapore's development in the long run while ensuring that social, economic and environmental considerations are met. This means that although Toa Payoh was first developed in the 1960s, its neighbourhoods, amenities, public spaces and commercial offerings have been continually upgraded to meet the community's needs. For example, the HDB rejuvenated the town centre from the 1990s—this involved building an integrated mixed-use complex that has become an office, retail and transit hub. HDB's headquarters also shifted to this hub.

To boost street life, an outdoor pedestrian mall was retained and enhanced, and is now lined with independent businesses offering a range of consumer goods at low prices. The result is a lively space frequented not just by residents but also commuters and visitors attracted by the dining and retail offerings. Furthermore, the addition of buildings of various heights, the pedestrian malls, open spaces and recreational areas also softened Toa Payoh's predominantly high-rise landscape.



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Conceived with a long-term horizon in mind and continuously updated to ensure its relevance to a wide spectrum of people, Toa Payoh depicts how sound planning can create not just a pleasant environment, but also a multicultural live-in community who can make full use of the estate.

Lessons for Other Cities

As these international examples illustrate, focusing on incorporating mixed uses can be a powerful approach for urban renewal to achieve both physical regeneration and social goals. Beyond planning for mixed uses and inclusivity from the start, city leaders need to be flexible enough to adapt their plans and align with changing community needs. Only then can the transformation of spaces truly impact the people that live, work, learn and play there. 



01 This outdoor pedestrian street is a major walkway that connects people and encourages activities in Toa Payoh.

02 Parks are one of the public spaces for residents to engage in leisure and recreation.



CITY FOCUS

Bandung

Falling in Love Again with Bandung



"Urban acupuncture" projects, such as the Taman Sejarah (History Park) right behind Bandung City Hall, have revitalised the city.

Once known as the Paris of Java for its cool climate and natural landscape, Bandung is today a fast-growing metropolis plagued with snarling traffic, floods and pollution. To reclaim its beauty and restore quality of life, the city government has been aggressively pursuing improvement projects, with the private sector, to make Bandung a loveable city once more.

Bandung City, the capital of West Java Province, is one of the most important economic centres of Indonesia. Located 768 m above sea level, the city's cool climate and fast-growing economy has made it an attractive place to live, work and visit. This has led to a population boom of about 3.5% per year, making Bandung the third most populous city in Indonesia. Some six million visitors (mostly locals) also throng Bandung for its lush greenery, myriad art galleries and fashion factory outlets.

Being at the vortex of economic activity has put immense pressure on Bandung's public infrastructure: traffic congestion, pollution and flooding (due to rapid urbanisation) are among the challenges confronting the city. Residents feel the strain of living and working in a densely built urban landscape, where traffic often comes to a standstill.

To make the city more liveable and loveable, Bandung's Mayor Ridwan Kamil has spearheaded numerous efforts, in partnership with the private sector. The former architect shared in an interview that with S\$8 billion projects lined up for Bandung's improvements, "you would need nine mayors to finish the job" with the S\$2 billion per five years budget that every mayor is given.

“The mayor also named the bicycle sharing scheme Boseh, meaning to pedal, but also a clever acronym for ‘Bike On Street, Everyone Happy’.”

A significant project underway is the integrated urban mobility plan to improve roads and infrastructure, increase public transport systems, and promote walking and cycling. The hope is to shift commuters towards mass transport and reduce their dependency on motorbikes and cars. While major projects like the light rail and cable car systems are underway, the mayor has introduced smaller “urban acupuncture” initiatives to nudge behavioural change.

Every Monday and Thursday, students enjoy free public bus rides to school. Friday is promoted as the day to cycle to work. On Saturdays, a section of the city centre is closed to traffic and transformed into a bustling food street, while a main street is kept car-free every Sunday morning. The mayor also named the bicycle sharing scheme Boseh, meaning to pedal, but also a clever acronym for “Bike On Street, Everyone Happy”.



The cycling culture is picking up momentum due to initiatives like the Boseh bike-share system and car-free Sunday mornings.

The colourful skywalk attracts both locals and tourists alike, and more of such skywalks will be built in Bandung.



Bridgette See is the former editor-in-chief at Tuber Productions, the editorial consultancy for *Urban Solutions*.



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To alleviate congestion on a major shopping street, an elevated 450 m bridge known as Cihampelas Terrace was built above the popular strip.

Today, instead of tourists, pedestrians, street vendors and vehicles jostling for the same space, people can use the elevator or stairs to access the skywalk. Lined with 192 street vendors selling food, clothes and tourist souvenirs, the walkway is equipped with toilets and even a prayer space.

Another initiative has been the revamp of traditional markets to make them one-stop shopping centres that would attract locals and tourists. The new markets also house street hawkers, relocated from congested and unsanitary streetsides. The hope is for small and medium businesses to scale from informal trade to formal enterprises.

“Formerly they were disorganised and had insufficient infrastructure,” said Mayor Ridwan in an email interview with *Urban Solutions*. “[Now] we organise them to compete with supermarkets, have their own characteristics, and optimise their potential not just as economic hubs but also tourist hubs.”

Sarijadi Market was the first of four revamped markets. Clean and airy, the new four-storey market now has more than 180 stalls for rent. The monthly rental is Rp 3 million (S\$298), but the 21 original traders were offered a rate of only Rp 10,000 (S\$0.99) per month, which will only be implemented when the market is officially open.

Since Dutch colonial days, Bandung has been known for its fresh air, beautiful landscapes and parks. But urbanisation led to shrinking green and open public spaces. To create



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hangouts for social interaction and a respite from the urban chaos, the Mayor led an aggressive campaign to develop new green and open public spaces.

In three years, 10 public parks were developed, bringing a refreshing change for urban-weary residents. Some were created from “dead” spaces beneath busy flyovers, while others were cleaned up and given a makeover.

The parks appeal to a wide range of interests from music, history and photography to pet ownership. Superhero Park, previously an orchid garden, is now a popular children’s attraction with its many superhero statues. Elderly Park has facilities catering to older folks, while young people love hanging out at the Film Park where movies are screened regularly.

The free WiFi at the parks is an attraction in itself. “By providing easy access to the Internet, we encourage citizens to spend time at the park, connect with other citizens and at the same time connect with their ‘cloud friends’,” explained the social media-savvy mayor.

“What we’ve done are small-scale interventions, but they can improve citizens’ moods, connect people to places and improve mental health,” he added. “We’ve seen a slight increase in the Happiness Index since we developed the parks.”

Besides drawing communities closer, the parks have also rejuvenated the city and enhanced the value of properties around Bandung, noted the mayor.

01 The Sarijadi Market will accommodate up to 180 vendors, including the 21 original ones as well as former street hawkers.

02 The extensive retail range, generous public spaces and accessibility ramps within the market make it an attractive place for people of all interests and abilities.

“What we’ve done are small scale interventions, but they can improve citizens’ moods, connect people to places and improve mental health.”



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Another creative placemaking initiative is a prototype microlibrary in a village near the Bandung airport. Local architectural firm, SHAU, which was commissioned for the project, used recycled ice cream tubs to create an iconic, modern landmark.

With high illiteracy and school dropout rates across Indonesia, the hope is to rekindle interest in books by creating a dedicated space for reading and learning, while making books, media and courses available. “We hope it will allow community revitalisation,” said Mayor Ridwan. “In fact, it is referred to not as a ‘library’ but as an ‘urban mediascape’.”

The government hopes that when these microlibraries are replicated across Bandung, the local people will organise the content and maintain these spaces for themselves.

When Mayor Ridwan first took office in 2014, he admitted that his greatest challenge was to get residents to have a stake in improving the quality of life in Bandung.

It seems that his efforts to change mindsets have made some headway. In 2016, the “If I were a mayor” programme garnered 1,200 ideas from residents on how Bandung could be improved, some of which were implemented. With so many refreshing changes on the horizon, the people of Bandung will no doubt fall in love once more with their city. 🌍

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- 01 Dead space under a flyover was converted into Film Park, where films are screened for free.
- 02 The floating library box was built above a small square already used by the local community for social and sports activities.
- 03 Every year, the mayor works with the community to paint murals along the Babakan Siliwangi urban forest.



CASE STUDY

Barcelona | 22@

New Lease of Life

Once a dilapidated industrial ghost town, the Poblenou neighbourhood in Barcelona was refurbished and revitalised in the 1990s to become a vibrant, mixed-use district with a special focus on knowledge- and tech-based industries.

The Challenge

Poblenou, an extensive neighbourhood in Barcelona, Spain, was once dubbed the “Manchester of Catalonia” for its bustling oil, cotton and textile industries in the 19th century.

When de-industrialisation hit Spain, however, as with much of Europe, Poblenou fell into rapid disrepair. By the late 1980s, it was a sprawling ghost town of vacant factories and polluted, slum-like waterfront.

Poblenou’s fortunes changed when Barcelona was selected to host the 1992 Summer Olympics. The need to build an Olympic Village for athletes led the city to develop an area adjacent to Poblenou, which was then dotted with rundown factories and warehouses.

After the Olympic Games ended, the new neighbourhood, La Vila Olímpica, continued to attract people and businesses to become a vibrant residential neighbourhood.

The transformational success spurred the local government to do the same for Poblenou. Led by its then mayors Pasqual Maragall (1982–1997) and Joan Clos (1997–2006), the Barcelona City Council sought to expand its city limits and bring new life to the city through urban, economic and social revitalisation. The goals were to create a mixed-use area that combined affordable housing, business premises, community facilities, cultural spaces and green areas; as well as a new space for innovation in energy, ICT, media, MedTech and design economic clusters.



An abandoned factory in Poblenou.



Elyssa Ludher is an urban planner and researcher at the Centre for Liveable Cities.



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The Solution

As a result of infrastructural upgrades for the Olympic Games, Poblenuu was now situated near high speed trains at La Sagrera —a new urban centre around Plaça de les Glòries, the city’s largest roundabout—and the newly reconstructed beach and waterfront. With the planned tram and metro lines, Poblenuu would become the best-connected neighbourhood in Barcelona.

Rather than bowing to considerable pressure from the real estate sector to rezone the dilapidated district for residential purposes, the Barcelona City Council chose instead to envision Poblenuu for multiple functions.

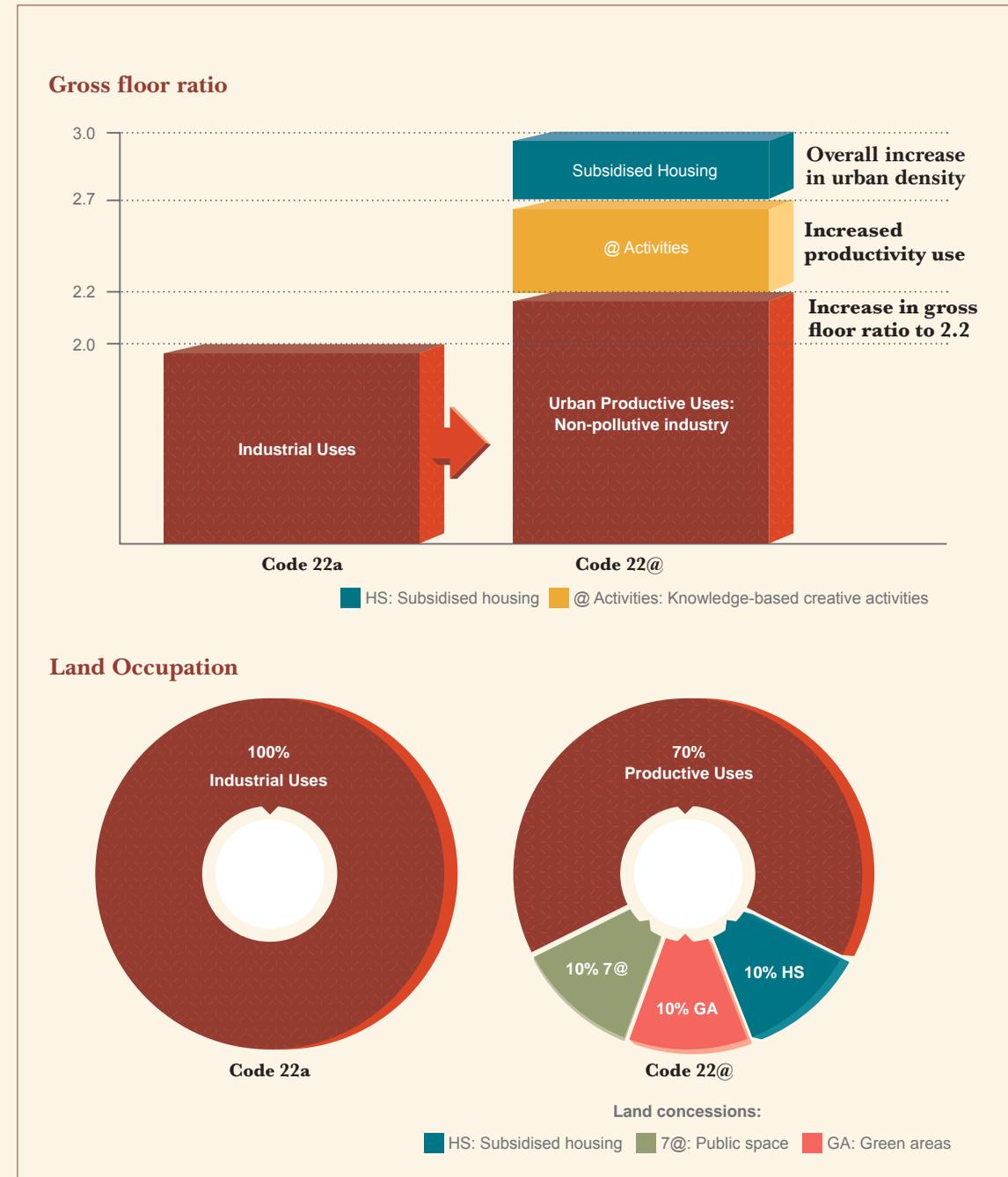
After two years of intensive debate, an “urban acupuncture” approach was chosen. In 2000, two parcels of land within the neighbourhood, with a total size of 1.98 km², were designated as 22@Barcelona districts. Sites within this area were allowed to rezone from “22a”, which denotes industrial zoning, to “22@”, which allows redevelopment of sites to office or commercial spaces with a gross floor ratio of up to 3.0, predicated on developers setting aside 30% of floor space for public space, green areas and social housing equally. The focus was to create spaces for the strategic concentration of intensive knowledge-based activities.

- 01 Enhanced connectivity allows the beach to be easily accessible to the people at Poblenuu.
- 02 Code 22@ resulted in an overall increase in urban density, while ensuring the provision of subsidised housing, green areas and public space through land concessions.

Through this, the city leveraged private redevelopment to create a district that not only facilitated job growth, but attracted people from all socio-economic backgrounds.

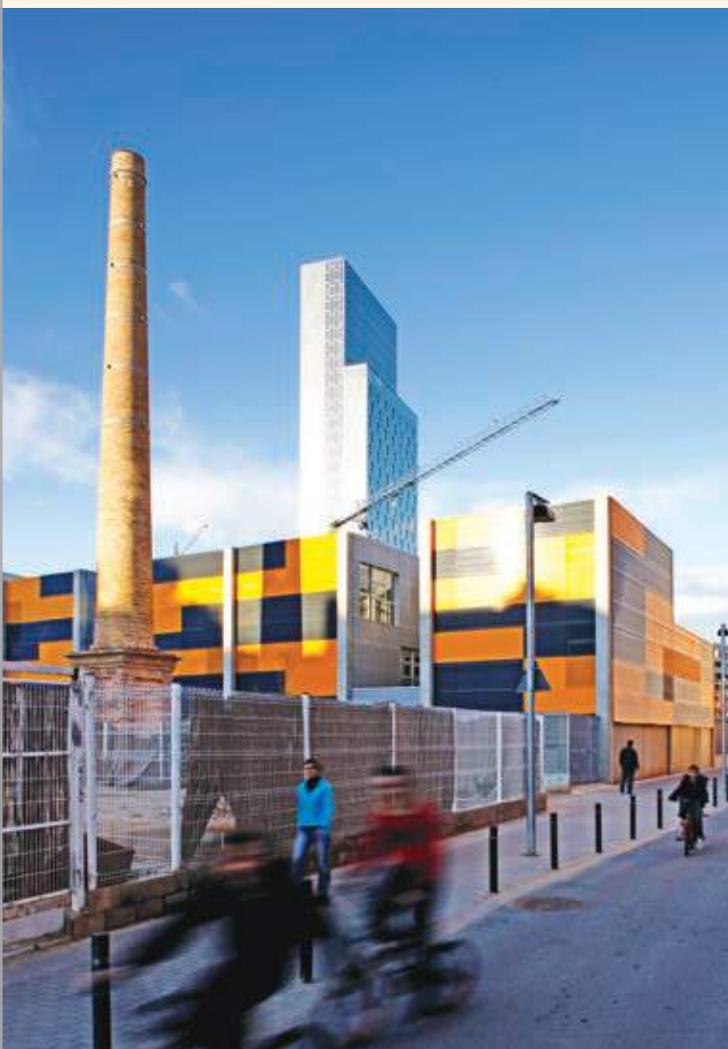
The 22@Barcelona plan’s central goal was to provide 3.2 million m² of office space, calculated to be the critical mass needed to

attract new economic activity and compete on a global scale. Concurrently, the City Council projected the development of 4,000 new subsidised housing units, preserving 4,614 pre-existing housing units, creating 114,000 m² of new green spaces and creating space for a further 145,000 m² of community facilities.



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“The city leveraged private redevelopment to create a district that not only facilitated job growth, but attracted people from all socio-economic backgrounds.”



To support the redevelopment, two innovative planning tools were introduced. A Special Infrastructure Plan for Poblenou enabled private finance mechanisms for the redevelopment of power, telecommunications and waste infrastructure; the “Modification of the Special Plan for Historical/Artistic Architectural Heritage” of the city, approved in 2006, allowed the reinforcement and preservation of 146 elements with industrial heritage or historical value. These included alleyways, industrial smokestacks, residential buildings and others. The effort ensured that the historical identity of the city was respected and maintained, for the enjoyment of existing and future residents.

To attract new businesses, the city created Barcelona Activa—a local development agency—to facilitate commercial establishment. It was thus the landing site for budding entrepreneurs and seasoned companies, based on a “Business One Door” policy, which eased set up in the area.

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01 An old factory that was converted into a nursery.

02 The public spaces in Poblenou at the 22@ district are well used by both young and old.



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The Outcome

Today, soaring red-bricked chimney stacks are juxtaposed against gleaming glass and steel buildings, while residents and commuters alike relax in the public squares and new green spaces. A few steps away from the cluster of five universities, 1,600 new subsidised housing complexes have been developed, known to be among the most attractive in Barcelona. Within a 10-min walk, a senior citizens' centre and childcare facilities ensure that the space is enjoyed not only by students, but by all ages. Three art factories, repurposed from municipal-owned spaces, have been established to encourage artistic creation and research, advancing Barcelona's vision of being a cultural centre. 22@Barcelona is also home to incubators or "business factories"; contributing to more than 8,000 businesses that provide jobs to 93,000 workers. Public spaces and local businesses thrive day and night.

Between 2007 and 2015, more than 300 delegations per year arrived to learn from the 22@Barcelona innovation district. Its concept has been replicated in Colombia's Medellín (MedellínNovation District), Tunja (Technological Innovation District) and Montreal in Canada (Quartier de l'Innovation).

The City Council continues to review its policies, particularly as the attractiveness of the 22@ district has led to higher housing prices and gentrification.

In 2016, Barcelona City Council introduced the Barcelona Right to Housing Plan (2016–2025), to address and reverse the trend of residential exclusion across the city. Measures include strengthening the mechanisms for detecting fraudulent uses of public housing, banning new tourism establishments in certain high tourist zones, preparing a Barcelona Rent Index, renovating existing dilapidated stock and purchasing flats by right of first refusal.

In Poblenou and its wider borough of Sant Martí, which has shown higher than average income disparity, the city has prioritised beefing up its mediation plans to prevent housing evictions and expand the public housing stock.

22@Barcelona's mix of uses, promotion of entrepreneurship, prioritisation of public transport and inclusion of affordable housing have created a vibrant new city centre. Its success has led to the expansion of the model to other areas, such as the Sarrià-Sant Gervasi District. Keeping it inclusionary for all will continue to be a challenge, but with the right foundation that highlights the need for integrating social and economic values, 22@ will continue to be an example for future inclusionary development. ●



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01 Delegates being shown around the Fundació Vila Casas art museum, formerly a textile factory.

02 Rambla del Poblenou, a pedestrian street popular with both locals and tourists.



CASE STUDY

Singapore | Kampong Glam

When Old is Also Hip

One of the most historically significant neighbourhoods for the Malay and Muslim community in Singapore, Kampong Glam was conserved by the Urban Redevelopment Authority (URA) at the turn of 1990. But even with successful restoration of heritage buildings and preservation of traditional trades, the district was quiet and uneventful. This prompted the government and the community to rejuvenate the area.

The Challenge

Kampong Glam was established as the site of a new palace for Malay royalty in 1824. Named after the Gelam tree, the area urbanised rapidly with the construction of two major trunk roads, known today as Victoria Street and North Bridge Road. The residential population expanded quickly with an influx of immigrants from Malaya, Indonesia and Arabic-speaking countries.

For the next century, the district grew around its various residents. Each immigrant group's specialised trade—including basket weaving, sandal making, copper crafting and tomb carving—

emerged on different streets. These businesses were run from two-storey shophouses that define the district's landscape till today. Kampong Glam also became an important centre in Southeast Asia for the Malay print industry.

In 1989, Kampong Glam was gazetted as a conservation area due to its rich architectural and cultural history. However, the area had become rundown and quiet, with most activity centred around the textile trade. Thus, the challenge was not just to conserve Kampong Glam's architecture and history, but also to make the area lively and integrated with Singapore's modern landscape.



Kampong Glam in 1984 before conservation and renewal efforts.



Katyana Melic is a researcher at the Centre for Liveable Cities.



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The challenge was not just to conserve Kampong Glam's architecture and history, but also to make the area lively and integrated with Singapore's modern landscape.

The Solution

The URA implemented a conservation plan with seven aspects for intervention: conservation of the entire area, designation of a core area, creation of a heritage park and festival street, pedestrianisation, infrastructure development, improvements to street furniture and signage, and adaptive reuse of conservation buildings.

The designation of a core area clustered "ethnic-based activities" in buildings of architectural and historical significance near the iconic Sultan Mosque and Istana Kampong Glam. This involved selecting trades



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that could remain in this area, such as the selling of batiks, sarongs and carpets. Textile businesses were concentrated on Arab Street, where they continue to be today. Incompatible trades such as bars, pubs, nightclubs, karaoke outlets and western fast-food restaurants were disallowed in the core area.

To increase walkability and street life, the area around Sultan Mosque—including Bussorah Street and Muscat Street—was pedestrianised. Bussorah became Kampong Glam's commercial flagship, injecting new life into the area. Additionally, many state-owned shophouses along the street were refurbished and put up for sale, fuelling further private sector-led rejuvenation of other shophouses in Kampong Glam.

By the early 2000s, most of the shophouses were restored and traditional trades continued to thrive. But the challenge of increasing footfall and vibrancy remained. Some business owners and visitors described Kampong Glam as so quiet that one could even go bowling down the lanes at night, as visitors dropped by primarily for daytime shopping.

01 A refashioned Kampong Glam with the iconic Sultan Mosque, Malay Heritage Centre and traditional shophouses.

02 One of the many shops in the area selling traditional fare such as carpets and lamps.



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To liven up the district, the URA put up additional shophouses for sale from 2003–2004. New businesses catering to young and diverse patrons moved in, creating an interesting juxtaposition with the traditional trades. Haji Lane, parallel to Arab Street, became home to trendy cafes and independent boutiques.

New commercial, residential and hotel developments around Kampong Glam also attracted office workers and tourists to the area. Other interesting new developments such as private museums—the Children's Little Museum and the Vintage Camera's Museum—enhanced the district's offerings.

03 A glimpse into the unique architecture of Sultan Mosque and the shophouses in Kampong Glam.

04 Haji Lane today, with boutiques and cafes set against the modern backdrop of the surrounding area.



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The increase in bars and clubs, however, raised concerns from long-time businesses, former residents and the Sultan Mosque community over the erosion of the area's integrity. Considering these perspectives, the URA and the Police Entertainment Licensing Unit of the Singapore Police Force disallowed new bars, pubs, nightclubs and karaoke outlets from operating in a larger area around the Malay Heritage Centre in 2005. This restriction was eventually extended to the entire conservation area in 2010, although previously approved businesses could remain.

Government agencies also started placemaking efforts to enhance street life and showcase Kampong Glam's heritage.

Today, heritage trails and markers guide tourists around the area, sharing oft-forgotten stories of former residents and traders.

Local businesses and community groups have also contributed to rejuvenation efforts. Since 2014, an association of local businesses, One Kampong Gelam (OKG), has partnered government agencies and arts or placemaking groups to spearhead road closures. OKG, the Malay Heritage Centre and the Aliwal Arts Centre have organised festivals to highlight the district's characteristic traditional arts and crafts, combining them with modern performances.

- 01 Pedestrianised Bussorah Street with its mix of modern restaurants and traditional retailers leading to Sultan Mosque.
- 02 Restaurants that serve various local and international cuisines line the pedestrian mall at Bussorah Street.

“Kampong Glam is now lively throughout the day, attracting tourists and locals with its blend of traditional trades and modern retailers.”



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“Ongoing conversations build understanding of the different stakeholders’ values and expectations, setting the stage for Kampong Glam to continue to grow as a place where the past and present thrive together.”

The Outcome

With these initiatives, Kampong Glam is now lively throughout the day, attracting tourists and locals with its blend of traditional trades and modern retailers. By night, office workers and tourists stream to the district’s diverse eateries. Placemaking initiatives have increased footfall by 40% over the past three years, estimates OKG’s Chairman Saeid Labbafi.

Still, not everyone is satisfied with or has benefited equally from these changes. While newer F&B establishments have benefited from the buzz, some traditional retailers have lamented that they have been left behind. Efforts to increase footfall have not improved business for some shops on Arab Street, which have closed in the past three years due to rising rents.

Reflecting on these tensions, the URA’s Director of Conservation Management Kelvin Ang explained: “Kampong Glam is an example of the next phase of conservation, beyond the hardware. We have to be involved as place managers to facilitate community conversations and look in greater detail at the expectations.”

An example is the Kampong Gelam Working Group set up in 2013 by the URA for stakeholders to discuss and collaborate for the precinct’s evolution. Business owners and government agencies have also begun discussions on creating a Business Improvement District to unite businesses. These ongoing conversations build understanding of the different stakeholders’ values and expectations, setting the stage for Kampong Glam to continue to grow as a place where the past and present thrive together. **○**

- 01 Muscat Street was upgraded in 2012 with street design and murals reminiscent of its namesake, the capital of Oman, Muscat.
- 02 A traditional dance performance along Arab Street, closed specially for the Aliwal Arts Night Crawl.
- 03 People gathering around Sultan Mosque just after prayers.



CASE STUDY

Rwanda | Prioritising the Environment

A Green Renewal

In a little over two decades, Rwanda has risen from a genocide to become one of the fastest-growing and cleanest African nations. *Urban Solutions* looks at how they put the environment at the heart of inclusive and sustainable regeneration.

The Challenge

In the wake of Rwanda's 1994 genocide, which killed an estimated 800,000 people in just 100 days, the east-central African country faced an arduous task to rebuild itself. Beyond pressing socioeconomic concerns such as reducing poverty, mending divides and boosting the economy, Rwanda had another big challenge: a deteriorating environment with strained natural resources and ecosystems.

“There was a need to ensure inclusive and sustainable growth by protecting, rehabilitating and conserving the environment for the future.”



Tay Qiao Wei is a writer and editor at Tuber Productions, the editorial consultancy for *Urban Solutions*.

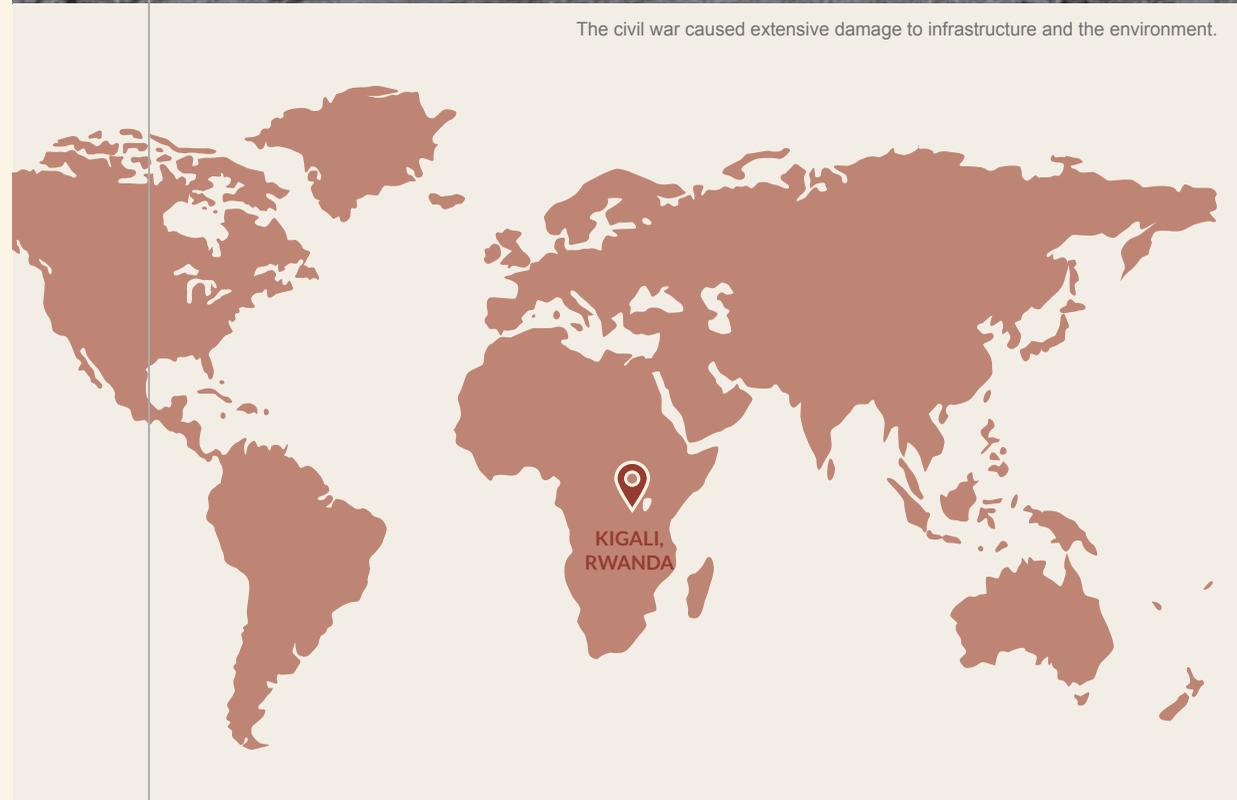
The small country relies heavily on its natural resources to drive its economy. But Rwanda's previous environmental protection efforts stalled during the 1990s civil war.

After the war, Rwanda faced environmental degradation not just from the conflict but also due to increasing pressure from a growing population and climate change. The government found from studies that environmental degradation and unsustainable depletion of natural resources in Rwanda exacerbated poverty and increased economic costs. For instance, rampant soil erosion in the 1990s caused an estimated 2% GDP loss—affecting the nation's capacity to feed 40,000 people annually.

So while Rwanda and its capital Kigali had to be redeveloped urgently, there was a need to ensure inclusive and sustainable growth by protecting, rehabilitating and conserving the environment for the future.



The civil war caused extensive damage to infrastructure and the environment.



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The Solution

Through a range of legislation, policies and programmes, the Rwandan government actively put the environment at the heart of redevelopment.

First, to guide policies, environmental protection and management is a key cross-cutting concern in Rwanda's Vision 2020, a long-term strategy adopted in 2000 to guide the country's transformation into a sustainable, knowledge-based economy within two decades. Policies and strategies for all development areas, from reducing poverty and transforming the economy to strengthening infrastructure, must also be eco-friendly.

A national environmental policy was developed in 2003, detailing measures such as the need for environmental impact analyses for development projects, as well as the conservation and management of ecosystems. In 2004, the Rwanda Environment Management Authority was set up to oversee the integration of environmental aims with national development.

Reversing deforestation is also a crucial factor in reducing poverty. The 2004 National Forest Policy introduced measures such as sustainable management of forest resources, and national reforestation and tree planting. Every year, in Kigali and other districts nationwide, Rwandans plant millions of trees during the National Forest Planting Day and Season. From 2004 to 2010, the funds for reforestation and afforestation projects increased by almost US\$1 million (S\$1.33 million). Several forests were also restored and conserved as national parks.

“The country is now looking at promoting green innovations in the industrial and private sectors, as part of its aim to pursue a ‘green economy’.”

Similarly, Rwanda's wetlands, which cover over 10% of its area, are being restored. For example, the Rugezi wetland in northern Rwanda had been drying up since 2003 due to declining rainfall and overcultivation. Its rehabilitation in 2005 not only restored water levels, creating food, water and jobs for the community, but also increased hydropower production and boosted Rwanda's fishing sector.

To reduce waste and the impact of plastic on the environment, the government has also been unafraid to implement tough measures such as a ban on plastic bags in 2008. It is now illegal to manufacture, import, use or sell polyethene bags. Violators will be fined, jailed or forced to make public confessions.

Kigali, the nation's economic hub and largest city, has led the way in green growth. Its redevelopment master plan prioritises environmental sustainability, requiring a mixed-use urban design tailored for Kigali's hilly landscape, ample green open spaces, sustainable transport and resource management, as well as the protection of nature and biodiversity. Plans are underway for a new wetland park near the city centre that will provide green spaces for recreation, boost tourism and environmental awareness, and create more green jobs.

01 Locals participate in the annual National Tree Planting Day.

02 Local women in Kigali gain employment while contributing to their city's reputation as one of Africa's cleanest.

03 Well-paved roads in the central business district of Kigali city are lined with trees.



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The country is now looking at promoting green innovations in the industrial and private sectors, as part of its aim to pursue a “green economy”. This includes a green city pilot for Kigali that will guide the future development of other sustainable cities and villages nationwide.

Rwanda’s first upcoming green neighbourhood in Kigali, Cactus Green Park, is set to feature low carbon construction materials and ample green spaces. This private-sector project is supported by a national green fund, known locally as FONERWA. Started in 2013, it aims to drive Rwanda’s green growth by funding environmental and climate change-related projects from the public and private sector, such as green villages and e-waste management.

01 An artist’s impression of the completed Cactus Green Park.

02 Kigali leads the charge in establishing Rwanda as one of the fastest-growing countries in the region.

“Rwanda’s green projects go beyond environmental benefits. For example, the restoration of ecosystems ... has boosted the country’s tourism, a main driver of economic growth.”



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The Outcome

Today, Rwanda is one of the fastest-growing African countries, with an average annual GDP growth of 7.6% in the past 10 years. It has also gained a reputation as a leader in sustainable green growth.

These days, trash is nowhere to be found on Kigali's streets. The capital has even been dubbed "one of the cleanest cities in Africa" by the UN Habitat. The Kigali city master plan, developed by urban planning firm Surbana Jurong, won the Best Planning Project at the Singapore Institute of Planners Awards (2013) for its innovative and sustainable planning. Rwanda's successful plastic bag ban has also received praise and is often cited as an example for other cities, not just in Africa but worldwide.

The country's national forest policy has increased the forest cover by over 80% from 2005 to 2017. This is a feat considering that for many developing

central and western African countries, forest cover has been declining due to population and land pressures.

Citizens and the private sector continue to play a part in Rwanda's green growth. FONERWA has funded over 33 projects, both private-led and government. It has also created 90,000 green jobs, and protected over 35,000 ha of forests and 12,800 ha of watersheds.

Rwanda's green projects go beyond environmental benefits. For example, the restoration of ecosystems such as wetlands and national parks has boosted the country's tourism, a main driver of economic growth.

The transformation into a cleaner and greener Rwanda remains a work in progress, as the country grapples with an increasing population and climate change. But with the continued emphasis on the environment, the country could very well achieve its vision of a climate-resilient, low-carbon economy by 2050. 

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01 Green jobs generated by FONERWA investments include those at the national e-waste recycling facility.

02 Kigali's master plan envisions high-rise towers alongside green spaces and hills..



CASE STUDY

Singapore | Tanjong Pagar

Continuing Life After Hours

Fifteen years ago, Tanjong Pagar was mainly an office district, quiet at night and over weekends. To liven up the area, the Urban Redevelopment Authority (URA) enhanced the mix of uses in the area to introduce more diverse people and activities.

The Challenge

Tanjong Pagar is a historic neighbourhood located in the central area of Singapore. A key precinct in the city's central business district, it has a large high-rise office cluster.

Its modern form took shape after Singapore gained independence in 1965, when the new government kickstarted urban renewal in the area by acquiring old shophouses for redevelopment. A major commercial and residential precinct from the 1900s, it was mostly filled with two- to three-storey shophouses that doubled up as living quarters for migrant workers in the upper floors and commercial spaces on the ground floor. However, by the early 1960s, the shophouses became dilapidated and overcrowded, and many were demolished to make way for a comprehensive public housing precinct.

Some of the demolished shophouses came to be replaced by high-rise commercial developments. Land parcels were also sold to private developers. Starting from 1989, shophouses that remained were gazetted for conservation and allowed for commercial use, which gave them a new lease of life. Hence these conserved shophouses and other historic buildings also established the area's identity as a heritage district.

By the 2000s, the precinct's unique urban scape, which continues till today, was formed. High-rise modern buildings stand alongside rows of orange-roofed conserved shophouses. But with a lack of post-work activities and just a small number of residents living in the precinct in self-contained estates, overall Tanjong Pagar remained quiet at night and over weekends.



The empty space shown here was originally set aside for a six-storey development.



Tan Pei En is a researcher at the Centre for Liveable Cities.



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The Solution

To rejuvenate the precinct, the URA implemented a range of policies in the 2000s that enhanced non-commercial uses in the area to encourage more activity outside working hours.

One measure was to boost the hotel industry. In the mid-2000s, the URA released more land for sale, specifically for hotel developments. This resulted in three mid- to high-end hotels being built, adding to the existing two large hotels—M Hotel and Amara Hotel—which were built in the 1980s to cater to business travellers. Collectively, the new hotels added over 900 rooms.

A sizeable hotel cluster was formed and this helped draw tourists to Tanjong Pagar. The hotels also introduced more dining and retail options, and coupled with the resurgence of new food and beverage concepts in the conserved shophouses, helped attract patrons to the area. Most recently, another 222-room luxury hotel, Sofitel, also opened at the Tanjong Pagar Centre (TPC), an integrated mixed-use development. Well connected to public transportation via a Mass Rapid Transit (MRT) station, the development's sizeable retail and residential components also spurred more human traffic.

Another measure that boosted vibrancy in the area beyond office hours was to increase

A sizeable hotel cluster was formed and this helped draw tourists to Tanjong Pagar.

the live-in population. Before 2000, most of the area's housing were clustered at Tanjong Pagar Plaza, a mixed-use, multi-storey complex that housed key amenities such as a childcare centre, wet market, hawker centre, post office and eateries for six high-rise blocks of public housing residents.

Then, the government sold three residential sites for high-rise residential developments—these became the 46-storey ICON (2007), 62-storey Altez (2014) and 71-storey Skysuites@ Anson (2014), which altogether added over 1,200 private housing units. Even the owners of two office buildings—Lumiere and Eon Shenton—have converted them to residential developments to add 300 more units to the precinct. The public housing population also increased with the completion of Pinnacle@ Duxton, a 50-storey, 1,800-unit public housing development that replaced two older public housing blocks. The proximity of homes to offices became a boon for residents, who can now easily walk to work.



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- 01 Tanjong Pagar is well-known for the South Korean restaurants that have sprung up among the conserved shophouses.
- 02 The local market at Tanjong Pagar Plaza is popular with both residents and office workers.
- 03 Tanjong Pagar Centre's basement atrium seamlessly connects from the MRT to the building's shopping mall.



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“Another measure that boosted vibrancy in the area beyond office hours was to increase the live-in population.”

At the same time, shared spaces and facilities for the community to enjoy were also added. For example, the developer for TPC built an open space atop the MRT station at street level, known as the Urban Park. Spanning 13,900 m², the park has become a green focal point and also offers a 2,970 m² civic and events space where the community, from residents to office workers, could gather for fitness workouts, performances and other events. This Urban Park will merge with a green belt that the URA has planned for the area, which will link Tanjong Pagar to surrounding parks like Duxton Plain and Pearl's Hill. This will add even more greenery and public spaces for the community's enjoyment.

- 01 The newest public housing development in the central business district, the award-winning Pinnacle@Duxton, is an impressive sight to behold.
- 02 Tanjong Pagar's skyline, comprising public housing, new hotels and private residences, as seen from Duxton Plain Park.
- 03 The Urban Park at TPC bustles with vibrant activities even at night.

“The planning measures to enhance the mix of uses ... generated round-the-clock activities at shared spaces and amenities throughout the area.”



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The Outcome

Tanjong Pagar today attracts an interesting variety of people, thanks to the planning measures to enhance the mix of uses. Tourists and business travellers are drawn by the sizeable hotel cluster. Dining and retail options that have sprung up alongside these hotels have also introduced dynamic activities. For instance, the Japanese food outlets at Orchid Hotel attract both tourists and locals, who sometimes form snaking queues to dine in.

The increased residential population, coupled with the provision of public spaces, has also generated round-the-clock activities at shared spaces and amenities throughout the area, where people mingle and enjoy themselves. Three additional office sites that were recently built also added 13.9 ha of premium office space, inviting even more footfall to the precinct daily.

The emergence of new developments and intensified mixed uses in the district have shaped its distinct skyline and character. Modern skyscrapers juxtapose with rows of conserved shophouses, while visitors and locals share parks and urban spaces. This interesting urban landscape, together with the diverse uses that continuously generates life and activity, has given Tanjong Pagar an edge as an attractive and inclusive mixed-use district, beyond its commercial importance. 

“The diverse uses that continuously generates life and activity, has given Tanjong Pagar an edge as an attractive and inclusive mixed-use district.”

01 The unique combination of conservation, commercial and residential uses has created a distinct identity for Tanjong Pagar.

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opportunities and
diverse challenges.

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You should possess:

- A Degree (preferably in Urban Planning, Sustainable Development, Environmental Management, Engineering, Geography, Architecture, Real Estate, Economics, Sociology, Anthropology or related disciplines)
- A minimum of 2 years working experience as policymakers or practitioners involved in one or more of the following areas: urban planning, development or governance, economic competitiveness, environmental sustainability or quality-of-life issues
- Experience in research and publications
- Experience in organising events and developing marketing campaigns (social media would be an added advantage)
- Experience in developing and executing training programmes
- Excellent organisation, written and communication skills

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