

Walkable City, Living Streets

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About Civic Exchange

Civic Exchange is a Hong Kong-based non-profit public policy think tank that was established in October 2000. It is an independent organisation that has access to policy-makers, officials, businesses, media and NGOs—reaching across sectors and borders. Civic Exchange has solid research experience in areas such as air quality, energy, urban planning, climate change, conservation, water, governance, political development, equal opportunities, poverty and gender. For more information about Civic Exchange, visit www.civic-exchange.org.

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Preface and Acknowledgments

This is one research project where almost every person at Civic Exchange played a role in. We mapped out walking routes in various parts of Hong Kong and created a system on how to assess each route. While some of the routes were familiar, but by being a conscious walker, we discovered many things about the journeys. That experience has deepened the entire organisation's understanding to the importance of making the city easily walkable. A barrier-free walking experience enables us to walk much further. Moreover, if the experience is also pleasant, we enjoy the experience and this has the capacity to change our behavior. For example, we linger longer in nice surroundings but rush away when they are unpleasant.

We are convinced that by investing in good pedestrian experience throughout the city, it is an excellent investment for the HKSAR Government to make because it benefits a very large number of people by improving their quality of life. It helps to build community in a specific locality and along certain routes, as well as make walking an important mode of transport that is free, emissions-free and good for health. It may well be good for the economy as well, especially if districts are well-planned and public spaces well-maintained. Indeed, improving walkability can be one of the government's major social, economic, environmental and quality of life policy.

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List of abbreviations

API—Air Pollution Index

AQO—Air Quality Objectives

CBD—Central Business District

CGO—Central Government Offices

HKSAR—Hong Kong Special Administrative Region

IFC—International Financial Centre

LEZs—Low Emission Zones

MTR—Mass Transit Railway

MTRC—Mass Transit Railway Corporation

NO₂—Nitrogen Dioxide

PlanD—Planning Department

PM_{2.5}—particulate matter up to 2.5 micrometres in size

PM₁₀—particulate matter up to 10 micrometres in size

PRD—Pearl River Delta

TD—Transport Department

UV—Ultraviolet

WHO—World Health Organisation

WKCD—West Kowloon Cultural District

WKRA—West Kowloon Reclamation Area

WKT—West Kowloon Terminus

Executive Summary

Reclaiming walking in car-oriented cities

Walking is one of the most natural human activities. Throughout history, walking connected people not only to what they needed to do, but also to each other socially. Walking is not just a means to an end, but an experience in itself.

However, the advent of modern transport modes has enabled people to travel beyond walking distances, resulting in changes in city design. Having a car became a “must”, especially in the economically advanced cities. In developing economies where walking once was the key mode for low-income residents, rapid urban development and motorization has turned city planning into a race to accommodate the rising number of vehicles, accompanied by traffic jams, air pollution and noise.

Against such trend, walking has slowly regained ground in the past decade and a half, for the sake of human health, environmental sustainability and city liveability. Many cities like New York and Paris have developed streets as public spaces which not only act as major thoroughfares, but also as engaging hotspots for social interaction, and in doing so foster a sense of community and social connectedness. Walkability generates vitality, which in turn attracts visitors and talent to a city.

The need for a pro-pedestrian approach in Hong Kong

In Hong Kong, much of our vibrancy is associated with our compact built environment, mixed land use and the perpetual stream of people and activities on our streets. Unfortunately, our urban and transport development strategy over the last forty years has focused mainly on building large scale housing and transport infrastructure projects which sometimes conflict with, and mostly override, the pedestrian scale. Roadside air quality is poor, neighbourhood connectivity is fragmented, and there is an ongoing conflict between vehicles and pedestrians.

All the above have prompted a call for pro-pedestrian policies and planning in Hong Kong, with a shift in the city’s development agenda from mega-scale to human-scale infrastructure. This will improve air quality at street-level, enhance local accessibility and connectivity, provide quality street environments for pedestrians and cyclists, promote better mobility for all, and create safe and attractive public space for everyone to share.

Learning from international examples

Indeed, Hong Kong is not alone in this new journey of city and transport planning. The best practices of ten chosen cities from around the world, namely Barcelona, London, Melbourne, New York, San Francisco, Seoul, Shanghai, Singapore, Tokyo and Toronto, were studied and key lessons for Hong Kong highlighted. Unsurprisingly, strong leadership, overarching goals and strategies, a people-first planning mentality, and stakeholder partnership are identified as common key ingredients for change.

Learning from local case studies

In addition, four local districts— Central and Tsim Sha Tsui for the waterfront area, Mongkok for an old, dense urban district, and Ma On Shan for a new town – were selected as examples to illustrate three different types of transformations required to improve walkability in Hong Kong. Local surveys of several selected sample routes were conducted in those areas in order to understand the merits and demerits of the walking environment, identify district-specific and common walkability issues in

Hong Kong, and ultimately raise public awareness on this important matter. Recommendations for specific districts were provided for further discussion and deliberation.

Strengths and weaknesses of walkability in Hong Kong

Hong Kong as a layered city has some excellent examples of good walkability. For instance, there is an extensive elevated footbridge system that connects major commercial buildings, shopping malls, and public transport nodes in Central. There is also a well-developed underground pedestrian networks stemming from main MTR stations. In some transit-oriented development sites, such as Shatin, integration between transport and land use has enhanced the vertical and horizontal movements of people.

Unfortunately, there are also complaints about the urban pedestrian environment— difficult wayfinding, lack of at-grade crossings, poor permeability, inconsistent signage and maps, over-crowding, long detours, street obstacles, inadequate universal access, lack of seating, and unattractive street aesthetics. These are the main areas for improvement.

Tackling root issues

While effort and resources have to be directed towards fixing the problems listed above, one must not lose sight of one or two fundamental questions: how do we define a street and how do we plan our city? To improve walkability in Hong Kong, we need to plan our city for people rather than cars, and we also need to consider streets as destinations. Apart from their transport function, streets are also public spaces for interaction, and access to quality public space is a right for everyone, not a privilege for a chosen few.

A new planning framework for pedestrians

To make Hong Kong a world-class city for pedestrians, we need an overarching vision for the city that is people-based, low-carbon, sustainable and equal; an audit of existing facilities and planning processes to identify bottlenecks and barriers; and an engagement plan which involves different stakeholders including local communities, where talent can be tapped and partnerships be nurtured. Specifically, holistic planning is preferred over piece-meal efforts; shared space should be emphasized rather than priority for vehicles over pedestrians; a top-down plus bottom-up approach is a more effective means to connect different stakeholders; hardware and software are both essential for improving the walking environment; promoting and preserving street life is extremely important; and planning for district networks, not just station networks, is the way to go.

Benefits of a walkable Hong Kong

A walkable Hong Kong will enhance pedestrian movement with more people walking, and walking for longer distances. Better streets will enrich social life and strengthen community bonding. Improved accessibility and public space will enormously enhance the well-being of low-income groups, who have limited options for transport and social activity. In other words, better walkability will act as a social equalizer to improve social justice and equity in Hong Kong.

1 Introduction

1.1 Walking and walkability

1.1.1 The importance of walking in cities

Walking is not just a means to an end, but an experience in itself

Walking is one of the most natural human activities, like breathing and talking. The human body is designed to walk. Walking upright is the most energy efficient way for bipeds to move around,¹ and humans can walk for considerable distances if unobstructed.

In the course of human history in cities, people mostly walked from place to place to conduct their daily activities, and along the way, they greeted their neighbours and friends to pass on news and exchange ideas. Walking connected people not only to what they needed to do but also to each other socially. In other words, walking is not just a means to an end, but an experience in itself.

With the advent of rail, and the popularisation of motor vehicles, came the development of mass transport and construction of roads and highways. City design began to change, as people could travel beyond walking distances from home to places where they conducted their activities. In the most extreme cases, such as in North America, distances between home and work are so great that driving a car is the default transport mode of residents, especially when public transport is poorly provided for. Having a car became a “must” in such cities, as walking will not get one very far.² Moreover, not only does owning a private car define an individual’s socio-economic status, but the degree of car ownership plays a role in defining the status of an economically advanced city.

Figure 1



Chinese city smog.
Source: Wikimedia
Commons. Photo by
Berserkerus.

At the same time, there are still many cities in developing economies, such as in Asia, where walking remains a key mode of getting around because it is free for low-income residents with limited transport choices.³ However, as economies develop, the car symbolises progress and city planning changes to accommodate the rising number of private and commercial vehicles. Chinese cities provide sobering examples of that change—the ubiquitous bicycle has been replaced by spluttering cars and roads are choked with daily traffic jams and air pollution. Many developing cities embody these problems of rapid urban development and motorisation (see Figure 1).

Walking is regaining ground in some cities

In the past decade and a half, the idea of walking has regained ground from driving a car. Walking is now seen as healthy compared to sitting behind the wheel. Many European cities promote walking and cycling to reduce vehicular traffic, improve air quality and noise levels, and reduce climate change impacts arising from burning fossil fuels for motorised transport.⁴

Engaging public spaces define great cities

Moreover, a place's walkability is increasingly recognised as a key component of liveable cities. A vibrant street culture is vital to giving cities like New York and Paris a “buzz”, a distinctive personality that imparts economic benefits to various sectors, from real estate to tourism. These cities have developed public spaces that not only act as major thoroughfares, but also engaging hotspots for social interaction.

To become socially and economically vibrant, cities need to support social cohesion in communities. Public spaces are important platforms for fostering a sense of community (see Figure 2). Therefore, the availability of and access to these spaces are essential for this purpose, as the ease of walking should be a right for all layers of society. Walkability should encompass all of these elements. Planning for walkability can impact on community cohesion in several ways,⁵ such as:

- Influencing the quality of the public realm, e.g. pavements, parks, paths and streets;

Figure 2



Old Town Square in Prague, Czech Republic. Source: Wikimedia Commons. Photo by Kham Tran.

- Influencing the amount of walking that occurs amongst the inhabitants, and therefore opportunities for interaction;
- Influencing land use mix, such as parks, schools, stores and cafes that affect the frequency of interactions; and
- Influencing the diversity of housing (type and price), which affects the demographic mix and opportunities for interaction between people of different incomes and ethnic backgrounds.

1.1.2 Much more than just walking

A liveable city is designed, through the built environment, to facilitate the well-being of its people

The walkability of a city or neighbourhood is increasingly seen as a core component of its liveability, and bridges issues on transportation, public space, density, ecological sensitivity, social inclusion and public health. Effort needs to be made to embed walkability into the DNA of cities,⁶ but this will require a holistic approach to the planning of streets, rather than the conventional planning silo, because a person takes the entire walking environment as one.

Walkability is not only about increasing the amount of walking, but to encourage a pace of travel, via walking, that allows for positive interactions between inhabitants to take place. People will only be encouraged to walk when the pedestrian environments reinforce their various pursuits. Therefore, studies on walkability have focused on how well the built environment is designed to suit a city walker's priorities. Indeed, a liveable city is designed, through the built environment, to facilitate the well-being of its people.

Trend towards greater pro-pedestrian planning and design

A pedestrian having to cross a high-traffic road not only has to take more time to cross but also faces a risk from the traffic plus a health risk from the polluting emissions. The pro-pedestrian trend is having a major impact on ideas for city planning and design. By changing the relative weighting given to vehicles versus pedestrians and public transport, some cities are tearing down highways while others are designating bicycle lanes and expanding pedestrian-only zones.⁷ The planning goal is to give pedestrians priority and to create a pleasant experience for them, thus enabling and encouraging people to walk further distances.

New York City Mayor Michael Bloomberg calls this “re-purposing of the public right of way”,⁸ and is leading a strategic effort to redesign some 10,000 km of New York's streets and roadways to provide greater space and safety to non-motorised travelers. The most famous example is Times Square, which attracts more than 365,000 people each day (see Figure 3). On an ordinary day, there is an unbearable crush of pedestrians on its pavements, making it the city's busiest street. During the summer of 2009, when the mayor's department piloted a programme to close off sections of Broadway in the Times Square precinct to motorised traffic, pedestrians could finally flow safely into the new open space. Whereas pedestrians used to take up 11 percent of available public space, during this period they enjoyed 41 percent within Times Square. A permanent plaza is now planned in the area, and due for completion in 2014.⁹

Rejuvenating the city centre can have a much larger effect on a city's well-being. Improving the walkability of a neighbourhood street benefits its residents, but improvements within the downtown area can have a

Figure 3



Pedestrianized Times Square in New York City, USA. Source: Wikimedia Commons. Photo by Mario Roberto Durán Ortiz.

multiplied effect on city improvements. The new Times Square plaza has inspired the development of 50 new neighbourhood plazas across five boroughs that will transform underused streets throughout New York City into vibrant public spaces.

1.1.3 Planning for cities, planning for people

What are the conditions that make cities work for their people?

Two dominant visions of cities in the last century

City planners and designers have tackled this question in a multitude of ways. Two eminent thinkers have been particularly influential on the development of contemporary metropolises. The architect Le Corbusier initiated the modernism movement in the 1920s, turning his back on the traditional urbanism of Victorian cities which he felt was dark, cramped, confusing and uninviting. He visualised cities that sprawled beyond urban limits, and segmented according to different functions, creating industrial areas that stood apart from residential districts.

His point of departure was the well-being of the individual, which led him to design buildings that emphasise interior comforts, and seek a degree of density in buildings that created conviviality from within, rather than on the street. His concept of the “radiant city” included majestic skyscrapers, and featured personal mobility as its preferred form of transport, with elevated motor tracks branching out into the residential zones.

Jane Jacobs countered the modernist stance in the 1960s, after the postwar years which unleashed the modernist ethos to town planners

across the globe. While Le Corbusier's eyes saw the city from the sky, Jacobs brought the focus of city planning back to the ground, and onto the streets. She argued that the sparseness of modernist cities reinforces isolation and destroys community life. Rather, a busy pavement, used day and night by different people on their way to work, home or leisure, is a deterrent against crime. Her focus is thus on the community, as opposed to the individual. The neighbours and shop proprietors act as "eyes on the street", providing surveillance and building trust amongst residents.¹⁰ Jacobs suggests that a safe street has three qualities: public and private spaces are clearly defined; there must be "natural proprietors" that keep a look out on the street; and there is a sufficient amount of users on the pavements, which induces people in buildings to be watchful.

Clearly, both approaches diverge on the conditions that make cities work. Take, for instance, the role of the city park. Le Corbusier envisions cities as a series of grand parks that separate the city by its functions. The central business district (CBD) of glass and steel towers is girt by a green belt, with residential areas expanding from the city's centre. He sought to rationalise the traditional urban density and saw the role of parks as a natural partition.

Jane Jacobs, on the other hand, argues that a park does not have a function in itself. Rather it is the city that brings life, in the form of activity, density and interest, to parks. The lack of sufficient life in the city makes the parks within it both dull and dangerous.¹¹

The dual visions can be found everywhere, but are poorly integrated

For many modern cities, and especially the emerging megacities, the challenge is to manage the escalating issues of overcrowding and extreme density, and the need to find more space within the city's spatial and ecological limits. Some have sprawled horizontally, like many North American cities, extending their margins repeatedly in the last century. Others have sought to build upwards or to go deeper, while simultaneously consuming former satellite towns into their urban conglomerates, like many Chinese cities. Both the influence of Le Corbusier (where the city is a three-dimensional space) and Jacobs (where the city exists at the street level) are evident in the former and the latter forms of city expansion, but they are integrated poorly. Every city exhibits such examples, from car-jammed roads in city centres and the noxious air and noise levels they inflict on pedestrians, to shopping malls that reduce the density on the street, but trap people within the building's internal environment. The aim of high-density cities should be a sensible mixture in which the elevated and underground layers of a city can also achieve the Jacobian vision of street life that is inviting and safe.

1.2 Potential for unobstructed walking in a city

"One of the great, but often unmentioned, causes of both happiness and misery is the quality of our environment: the kind of walls, chairs, buildings and streets we're surrounded by."
—Alain de Botton, *The Architecture of Happiness*.

In an industrial and warehouse area of Manhattan, New York, known as the "meatpacking" district, lies a disused, elevated rail track. Out of operation since the 1980, the track was slated for demolition until local

Figure 4



The High Line in New York City, USA. Source: Wikimedia Commons. Photo by Jim Henderson.

New York City's newest public space celebrates the walking environment

activists fought for its preservation in the courts, and won. The locals had a different vision for the structure, imagining that the aerial space could be re-purposed as a park.

It took several more years before they could convince public officials to rezone the structure, and in the meantime, sought private funding for the rail track's overhaul. The High Line, which was opened to the public in June 2011, creates a unique walking experience as it immerses visitors in the heart of a dense, urban environment (see Figure 4). Hovering at 25 feet above the ground, people are "at once connected to street life and far away from it".¹²

The reinvention of the public space, by reclaiming an artifact of the city's recent industrial past, has raised the value of land around the High Line, catalysing some US\$2 billion in private sector investments. In accepting Singapore's 2012 Lee Kuan Yew World City Prize for Leadership in Sustainability, Mayor Bloomberg highlighted the redesigned High Line as "the organising principle for a new neighbourhood", leading the way forward for development in the populated city.

New public spaces can rejuvenate entire neighbourhoods

New public spaces such as this have the power to rejuvenate an entire neighbourhood. It does not only apply to public parks, but also to harbour promenades, pedestrianised streets or public squares. Just as innovative public spaces can define and revitalise a neighbourhood, a walkable street can have a similar effect on the residents, vendors and visitors that use and enjoy it. The urban planner Michael Mehaffy described walkable streets as the "urban trellis" on which strong neighbourhoods and cities are built. There are no prescriptive methods for which walkable streets within successful cities are constructed. Indeed, the best cities are accentuated by a sense of "organised complexity", where the right elements are pieced together at the right scale.

1.2.1 Elements of a walkable street

The walkability of a place depends on its diversity, design, density, and destination accessibility

A walkable street is one that is inhabited with people. People choose to walk on a particular street when there is a valid reason for them to walk, and also when they find the street to be safe, comfortable, and interesting. The American urban thinker, William H. Whyte, found that people in big cities tend to behave more like their counterparts in other world cities than their fellow citizens in smaller cities. The centres of big cities tend to have high pedestrian volumes, and concentrate a mixture of activities, prompting big-city people in general to walk faster.¹³ Hence, while no two streets are the same, there are certain elements in the built environment the world over that render some streets more walkable than others.

Varying the built environment to moderate travel behaviour is one of the most heavily researched areas in urban planning studies. Three essential factors influence a place's walkability, which can be summarised as the three D's, i.e. diversity, design and density.¹⁴ "Destination accessibility" was highlighted in later studies as also having significant influence.¹⁵ Together, these factors are recognised as a set of criteria for the walkability of an area:

Diversity

Diversity of a neighbourhood provides a reason to walk

Neighbourhoods that possess a mixture of uses and attract a large variety of businesses tend to encourage their residents to walk. For starters, these places have the amenities of daily life, such as groceries, restaurants, libraries and playgrounds within walking distance.¹⁶ Residents generally take shorter trips, and those shorter trips are likely to be by walking.¹⁷ They generate for the walker a *reason* to walk, as well as an *interesting* walk with varying visual temptations along the way. Diversity of land use has therefore been recognised as a crucial factor for walkable neighbourhoods.

Jacobs goes one step further in advocating mixed urban development—integrating different building types and uses, whether residential or commercial, both old and new. Her idea is that community vitality is created when a diversity of businesses and residences is used by people of different ages, at different times of the day. It is this intermingling of different uses and users that is central to economic and urban development.¹⁸

Containing diversity within a structure can isolate community life. Whyte refers to megastructures, such as malls and multipurpose complexes that combine offices, hotels and shops, as urban fortresses. While they are often rationalised as the salvation of downtown areas, their internalised environments create blank and windowless walls that appear as a solid face of concrete at street view.¹⁹ A crucial enemy of pedestrian interest is repetition, which can easily breed boredom. Jacobs famously wrote that "almost nobody travels willingly from sameness to sameness".²⁰ No single architectural solution should occupy more than a few hundred metres of pavement edge, yet this is just the kind of megaprojects that are proposed, and approved, by Hong Kong's major developers.

Density

Whyte argues that in order to thrive, cities need more congestion, not less.²² Streets should be busy and bustling, with business and social life spilling onto the street pavement.

Box 1: Key element of diversity—seating

Having choice for a pedestrian can accentuate enjoyment and interest along a street. This applies to having more than one route to reach one's destination, or in the choice of seating. Benches, ledges and chairs enhance the capacity for people to stay, drawing them to remain and linger. Whyte noticed, in his observation of New York public squares, that it was not only important for people to have a choice of seating alternatives, but that people wish to exercise that choice. He noticed people's tendency to move a chair around before sitting in it, only for the chair to end up where it was in the first place. Such moves are not pointless, but an application of one's autonomy, which is ultimately satisfying.²¹



Figure 5: Seating outside Cologne Cathedral, Germany.
Photo by Wilson Lau.

Streets should be busy and bustling, with businesses and social life spilling onto the pavement

There have been two contested views on density. Orthodox planning theory has connected high density with crime, pollution, poor sanitation and poor public health, leading 20th century planners to turn their backs on tight-knit urban quarters for expansive suburban living environments. Countering this view are those that recognise the difference between overcrowding and high density. While the former is a result of inadequate service provision for the masses, the latter, it is argued, is essential for city life, economic growth, and prosperity.

The perplexity about density is understandable when one considers how questionnaire respondents often convey their longing to get away from it all—to escape and seek emptiness and quiet. Rarely would they comment that they like to sit in the middle of a crowd. Yet, their behaviour is contrary to this. Whyte's study of the public squares²³ of New York in the 1970-80s, as well as more contemporary work, reveals that people, in fact, like to go where other people are.²⁴

Conventional wisdom might suggest that increases in density naturally heighten the propensity of its residents to walk, but this is not always the case.²⁵ Dense settings are commonly areas of central location, containing mixed uses and shorter blocks. This supports Jacobs's idea that density alone does not produce healthy communities *per se*; rather it is the propensity of a built environment to encourage positive interactions between people that create vibrant communities.

Design

Streets should be safe and comfortable to walk on

A walkable street is one that feels safe and comfortable to walk on, and this can be a function of how a street is designed. It may become unsafe to walk because of the threat of fast-moving vehicles near the pavement. Hence the key to safer streets is to keep automobiles at reasonable speeds.

Certain conventions of street design can reduce traffic speed, such as ensuring that the width of lanes is not so wide that it encourages drivers to speed up. Two-way traffic restrains drivers from the “road racer” frame of mind. Limiting kerb cuts and clearly marking driveways across a pavement should be standard measures for guaranteeing pedestrian safety.

Design characteristics that are relevant to an area’s walkability tend to focus on its street networks. Streets can vary from dense urban grids to sparse suburban networks. Measures of street design include pavement coverage;

Box 2: Key element of diversity—street trees

Street trees contribute powerfully to the safety and comfort of a city, and consistent tree cover can provide a slew of environmental benefits such as reduction of overall urban temperature, reduction of stormwater runoff, absorption of precipitation and tailpipe emissions, as well as UV protection.²⁹ A canopy of trees creates a sense of enclosure for walkers. While people enjoy open space and great vistas, they also need a sense of refuge to feel comfortable. People are most comfortable in spaces with well-defined edges, and as early as the Renaissance, it has been estimated that the ideal street space should have a height-to-width ratio of 1:1. In contrast, a ratio of 1:6 fails to provide that sense of enclosure, inducing people to flee.³⁰ Trees arguably create a more pleasant walking environment, and increase pride, sense of ownership, and eagerness to provide surveillance to the neighbourhood block and civic spaces.



Figure 6: A tree-lined street in Paris. Photo by Wilson Lau.

average building setbacks, street width, number of intersections and pedestrian crossings, number of trees and other physical characteristics.²⁶

The importance of a well-designed street grid was identified as more influential in encouraging walking, more so than a neighbourhood that possesses a mix of commercial and residential uses. A recent meta-analysis that synthesised 50 separate empirical studies found that a well-connected street network, as measured by a high density of intersections in an area, strongly sways the decision to walk.²⁷ This is because streets that are well-connected allow walking routes to be shortened.

Not only is intersection density the most important factor for walking, it also leads to increases in public transport use and reductions in kilometres driven. It is also significant in improving pedestrian safety. Larger blocks suffer as much as three times more vehicular fatalities than smaller blocks.²⁸

Destination accessibility

The accessibility of places is not only about proximity to a diversity of goods and services, but also the ease of getting there

Lastly, and perhaps most crucial, is that people need a *reason* to walk.

Destination accessibility measures the ease with which trip destinations can be reached. Of course, there are many reasons for travel, which means that having access to a diversity of businesses within close proximity is likely to encourage residents to walk. The meta-study found that destination accessibility is the most important factor in reducing the rate of driving, more so than neighbourhood density, mixed land use, or street design combined.³¹

The accessibility of places is not only about proximity to a diversity of goods and services, but also the ease of getting there. An urban fabric with obstacles, such as highways, can act as barriers and devastate its connectivity.

The lost connectivity at the street level can have a much wider implication than an area's connectivity. When people can be deterred from walking to local businesses, there are fewer interactions on the street, with no warm bodies to invigorate public spaces or build social capital. Problems with walkability cultivate car dependency, which not only isolates those who can't drive, but causes congestion, degrades air quality, depletes natural resources and contributes to climate change.³²

Overcoming barriers in urban environments has been of interest to urban planners for decades. Primarily, the urban environment should be continuously walkable, and a degree of structural engineering should be employed to surmount barriers, ensuring that paths can continue.³³ Bridges perform such functions on rivers, as can public parks, which can act as both a walking track and a place of congregation.

1.3 Benefits for the city

1.3.1 Walkability generates vitality in a city

“Streets and their sidewalks, the main public places of a city, are its most vital organs. Think of a city and what comes to mind? Its streets. If a city’s streets look interesting, the city looks interesting; if they look dull, the city looks dull.” —Jane Jacobs, *The Death and Life of Great American Cities*

Lacklustre planning leads to poor quality walking environments.

As the vitality of streets is of such importance to the spirit of the city, then ensuring that streets are walkable should take precedence in city planning. Yet, in many of the world’s great cities, streets are so full of obstacles, pavements chocked with people, and roads plagued with vehicular traffic that it is uncommon to feel stressed or frustrated by the poor and slow pace of pedestrian planning. Surveys of the theatre district along Broadway in New York City found that 30 percent of all buildings in the area are covered with scaffolding, spawning an area of poor visual quality.³⁴ The visual splendour of the harbour and waterfront promenades in Sydney, Australia’s largest city, has conversely fostered a neglectful and lacklustre planning approach for the rest of the city.³⁵ Like many cities, planning for pedestrians and cyclists has lacked priority in the past, despite the city’s ambition to become a sustainable city.³⁶ Both cities have suffered from what Mehaffy calls the paradox of “induced demand”, where the more that is built for mobility, the more it is lost.³⁷ Walkability and connectivity is compromised in favour of vehicular movement.

A growing interest in issues of social justice, sustainability, community health and happiness are pushing the needs of pedestrians and utility of public spaces into the forefront of discussions about urban life.³⁸ Hence,

Figure 7



Huangxing Lu, a lively pedestrian street in the older part of Changsha, China. Source: Wikimedia Commons. Photo by X. Zhou.

to focus on the walkability of a city is to take a holistic approach to urban planning and design. Such an approach is urgently needed considering that cities are concentrations of such human concerns.

These issues may be complex and intricately related, but their enormity can be deduced when we examine the effect of walkability of a city, or lack thereof, at the street level.

1.3.2 Social capital

Built environment affects the extent of community interaction and trust

The way we design and build a neighbourhood affects the degree to which its residents are likely to get involved in their community. The idea is that some neighbourhood designs encourage and enable social ties and connections, while others do not.³⁹ Such interactions can be intentional or accidental, but the context with which they occur has historically been on the street, and in the pavements. This is why the street, and the accompanying built environment, has been the subject of intense research focus. It is the spontaneous “bumping into” neighbours, the hellos and the brief, seemingly trivial conversations that encourage a sense of trust and connection between people and the place they live.⁴⁰ The sense of familiarity and predictability that is developed is of great importance in fostering “a web of public respect and trust, and a resource in time of personal or neighbourhood need”.⁴¹ In this way, the built environment helps to develop a community’s social capital, which is the social networks and interactions that generate trust and reciprocity among people.⁴²

The walkability of streets and neighbourhoods is crucial for developing this sense of familiarity and connections between people. Studies have found that more walkable neighbourhoods scored higher on every measure of social capital than less walkable ones.⁴³ A walkable community

Box 3: Social connectedness is key to happiness

A recent Irish study⁴⁵ emphasises the importance of social connections for happiness. The study looked into the various factors that have an influence on reported happiness in ten cities. The researchers drew from Gallup’s 2007 poll on quality of life, extracting results from 1,000 people in each city, including: New York, London, Paris, Stockholm, Toronto, Milan, Berlin, Seoul, Beijing and Tokyo.

The rich literature on adult happiness has identified several areas of influence; Leyden and others have condensed them into the “Big Seven”: wealth and income (especially in relation to others); family relationships; work; community and friends; health; personal freedom and personal values.

What was missing, according to the researchers, was the sense of connectedness that urban conditions bring, which they propose as an additional determinant of happiness. It is posited that urban design can foster, or inhibit, people’s sense of connection with a place. For instance, gated communities tend to hamper social connections and interactions. Some can even devolve into antisocial places due to crime and other negative influences. Finding the right kind of neighbourhood design that suits social connectedness should be an imperative, and quality places that are cultural and distinctive are often the kind of place that people connect with.

provides residents with easy access to amenities, such as the post office, parks and playgrounds, shops, restaurants and key meeting places. They have a greater tendency to participate in community projects and to volunteer, and are less likely to describe television as their primary form of entertainment. They also reported better health and perceived to be happier than those in less walkable neighbourhoods.⁴⁴

Asian cities are fast replacing traditional street blocks that encourage mixed uses

Many Asian cities are undergoing radical changes, as part of postindustrial economies, which bring a vastly different form of urban design into the city environment. The mixed use fabric of traditional urban life contrasts drastically with contemporary megaprojects: constructions of single-use street blocks, such as shopping malls, residential complexes and commercial districts. Social interactions are usually conducted by invitation, not by chance encounter. The trend towards modernist towers and rapid renewal of old districts are transforming the once diverse and spontaneous street life into redeveloped constructions that are uniform and homogenous, a byproduct of the kind of urban design that globalisation brings.⁴⁶

Older districts in Asian cities tend to cultivate social connections and sustain the character of a city largely because they are more amenable to change (see Figure 7). Shopfronts and buildings can change ownerships and invite different uses according to market demands, much more effortlessly than purpose-built new constructions can.⁴⁷ Preserving historic built environments has become not only an issue of built heritage, but conserving the culture that is amenable to change in use. If mixed use is essential for a city's walkability, then walkability in turn is critical for promoting the quality of life of its citizens.

1.3.3 Health benefits

From a health perspective, the solution to obesity is to increase the total amount of walking

Labour-saving devices today are both a blessing and a vice. Our lives are made much easier, but they have made us much less physically active, leading to what the medical profession describes as a slew of modern diseases that is crippling to public health. Diabetes, heart disease and obesity are degenerative diseases that have manifested in the last century as our lifestyles become increasingly sedentary.

The problem is twofold. We are not expending energy on a daily basis because of inadequate exercise. At the same time, we are increasingly choosing high-calorie diets, such as Western fast food meals, that provide us with far more energy than we expend. The build-up of this excess energy creates our current dilemma in the prevalence of man-made diseases.

To explain which does the greater damage, a study in the *British Medical Journal*⁴⁸ found that "gluttony", as measured by cars per household and television viewing per week, correlated with obesity much more than "sloth", as measured in the amount of energy or fat in the diet. This was found to be the case in their longitudinal study from the 1950s to the 1990s, suggesting that a sedentary lifestyle and reduced physical activity was a greater cause for weight gain and obesity problems.

From a health perspective, the solution is to increase the total amount of walking. The health and recreational benefits of regular exercise are widely understood, but walking as an exercise regimen should not be underestimated. The World Health Organisation (WHO)⁴⁹ recommends

Figure 8



Walking for exercise in Burgos, Spain. Photo by Wilson Lau.

Figure 9



Cafés at Venice's St. Mark's Square. Photo by Wilson Lau.

at least 30 minutes of moderate-intensity activity, such as walking or jogging, several times a week. A UK government study found that regular walking and cycling are the only realistic way for the whole population to get its daily fill of moderate exercise to keep reasonably fit.⁵⁰ This is relevant for urbanites that are increasing sedentary, where walking distances are becoming shorter as a result of better transit connections and access to public transport, and changing diets that are high in fats and sugars.

The benefits and reduction in health risk are substantial. Among women, a 33 percent decrease in the risk of cardiovascular disease can be achieved by walking ten blocks per day or more.⁵¹ For men, the risk of dying of cardiovascular disease is three to five times higher amongst men in the lowest quintile of physical fitness than others who are more fit.⁵² Physical fitness has been found to safeguard against cancer, cognitive decline, depression, osteoporosis, and other common diseases.⁵³

Studies overseas have emphasised the problems of suburbanisation on encouraging idleness of individuals, young and old.⁵⁴ Even within dense Asian cities, the trend towards reduced activeness is perceptible, as evident in the rise in obesity from historically negligible levels.⁵⁵ Public health professionals are emphasising the need to shift people's mindsets, from the ingrained notion of doing *less* to make life easier, to doing *more* to make life more livable. Modifying the city environment to render the walking experience more pleasant and enjoyable can assist this shift from inactive lifestyles to more active lifestyles (see Figure 8).

1.3.4 Economic benefits

Street life is important to attract corporations, citizens and young entrepreneurial talent

Successful places are not merely collections of buildings and architectural landmarks. Instead, they are areas that cater to a mix of uses and activities, facilitate social interaction and choice, while being sensitive to local character. People-friendly cities provide formal places such as city squares, or informal places that foster congregations of people and a degree of liveliness. A range of different activities engages people to gather in shared spaces and can create a sense of security, openness and excitement (see Figure 9).⁵⁶

The ability of places to achieve this kind of street life is important as cities compete to attract corporations, citizens and young, entrepreneurial talent.⁵⁷ Particularly important are the creative class and millennial workers, who tend to favour communities with street life, a pedestrian culture that is derived from walkability.⁵⁸

A more walkable neighbourhood also attracts higher property values. Walkscore, an online measure of a neighbourhood's walkability, was utilised in a study that examined the effects of walkability on housing prices.⁵⁹ It found that the more an address was accessible to everyday services, such as grocery stores or banking outlets, the higher its housing value (US\$700-3,000 increase for each walkscore point). Incidental improvements to an area that simultaneously improve walkability, may also have an impact on the property price. The High Line, a newly developed park on a disused railway track in New York City which was opened in 2010, is already attracting property developers to a generally lacklustre part of the city. However, one downside of the gentrification of this former industrial area is the tendency to drive out existing tenants that cannot afford the higher rental costs.⁶⁰

1.3.5 Environmental benefits

Walking is the most sustainable form of transport

A commitment to societal sustainability and climate change action incorporates a commitment to pedestrian life.⁶¹ An increase in walking that decreases the amount of driving has a positive impact on the environment. Short motor vehicle trips in highly dense urban areas have the highest per-kilometre cost and pollution emissions,⁶² and reducing the amount of such trips can bring significant environmental benefits. "Walking is the most sustainable form of transport",⁶³ consumes no power, generates no pollution, is free and encourages social interaction.⁶⁴ The potential for reducing a neighbourhood's environmental impact should be encouraged only if such impacts are not passed off to surrounding districts. This requires careful urban planning that supports realistic shifts in transport mode.

1.4 The Hong Kong cityscape: key challenges

1.4.1 Street life in Hong Kong

Perhaps the most enduring aspect of Hong Kong is the perpetual sight of people. One is never alone on the streets of Hong Kong. Statistically, it is one of the densest cities in the world, with 6,580 persons per square kilometre,⁶⁵ with the metro regions of Kowloon and Hong Kong Island combined having a similar level of density as the densest municipality in the world, Dhaka.⁶⁶

Pavements and public spaces in Hong Kong are often where multiple uses take place

Much of Hong Kong's vibrancy as a city is associated with its built environment which fosters mixed land use. The intense range of consumption possibilities on the street, and confluence of people and consequent congestion is a symbol of the city's character and economic drive. This distinctive street pattern is a fundamental component of "place" in Hong Kong.⁶⁷ As a result, its local character is identified largely by the coexistence of different activities and forums, rather than with any architectural landmarks. Rem Koolhaas's idea of Asian cities as "a tenuous quality of unrest which makes previous configurations expendable, but also each future state provisional",⁶⁸ is a description which is particularly apt for Hong Kong. In many ways, the city presents itself as a chameleon, with temporary changes that include vehicular streets that moonlight as night markets, restaurants that percolate onto the pavement with temporary outdoor seating, billboards and signage that take up every perceivable space, or the early closing time for banks and other businesses that provide blank walls for hawkers to hang up their wares. This temporary occupation of the pedestrian realm means that the building form must be flexible enough to enable such layering of uses to take place.

In Hong Kong, and indeed for many Asian cities, the concept of public space should be considered separately from western urbanism, particularly in terms of "edge". In the west, boundaries clearly demarcate two different spaces, usually a private and a public space. In traditional Asian cultures, the edge that divides such spaces is treated as a transitional threshold, a twilight zone of sorts, and should arguably be treated as a separate space in its own right.⁶⁹ It is the informality with which these spaces are used and managed that makes Hong Kong's public space distinctive, and contributes to a sense of security via the continuous stream of activity which provides natural surveillance over the public realm.

1.4.2 Connecting to the water

The vibrancy of the city centres does not extend well to the waterfront

A symbol of a city's urbanism is its skyline. For Hong Kong, the skyline is certainly apparent as a landmark, appearing "magical at night but largely anonymous by day".⁷⁰ The combination of the harbour and tall buildings, against a mountain backdrop, captures the essence of the city's spectacle. The harbour itself, the most identifiable aspect of the city, is an essential part of the urban fabric, as it is the very reason the city came into existence. To encapsulate this historical relationship between land and water, the waterfront as an interface needs to be well articulated.

The vibrancy of the city centres does not extend well to the waterfront. Much of the harbour's edge is lined by unsuitably scaled buildings, and increasingly so by vast residential megacomplexes that defy the traditional urban grid. What results is a severing, visually and functionally, of the water's edge with the city districts at ground level. This constricts pedestrian access into the harbour (see Figure 10).

Reconnecting people with the waterfront will require ground-level and elevated landscaped channels that enable a variety of uses along these routes, such as restaurants and cafes. It needs to be well integrated and designed with landscaped promenades and precincts of a maritime character, to join the vitality and exhilaration from the water's edge to core city districts and transport zones. These physical features act as markers for orientation towards the waterfront and its vista.



Figure 10

Piers at the Central waterfront in Hong Kong. Photo by Wilson Lau.

These challenges that have arisen are a much bigger issue than merely the use and design of streets. Rather, they are a symptom of Hong Kong's urban development over the decades, and its focus on developing a well-integrated transport network, which sometimes conflicts with, and indeed overrides, the pedestrian scale. This is hardly isolated to Hong Kong, but a trend that is found in many international cities. They, too, are beginning to conceive of new ways to reshape streets and engage communities. The following chapter traces Hong Kong's urbanisation and its efforts, to date, to deal with the needs of pedestrians, and ends with a review of international best practice and what lessons it offers for Hong Kong.

2 Hong Kong's urban & transport development

2.1 Urban development

The desire to keep Hong Kong moving has led to heavy investment in reliable, safe and efficient transport systems

In just over a century and a half, Hong Kong has evolved from a small fishing village on the southern coast of China to one of the most renowned metropolitan cities in the world. During that transformation, Hong Kong's economic functions diversified from being an entrepôt for China trade in the early years into one of the four newly industrialised economies in Asia during the 1970s and 1980s, and more recently into a service economy and a major international financial centre.

Over the same period, Hong Kong also experienced rapid urbanisation. Hong Kong's population doubled between the early 1960s and the mid-1990s, from 3 to 6 million, and we are now home to 7.1 million people.⁷¹ The growing population has made the timely and adequate provision of housing units difficult. To this end, a largely public housing-led new town development programme was initiated in the early 1970s, culminating in the creation of generations of new towns on the outskirts of Hong Kong's urban core, and in some cases deep into the more remote parts of the New Territories. It is estimated that Hong Kong's new towns now accommodate 3.3 million people,⁷² or almost half of Hong Kong's population.

Despite the dispersion of population into new towns, Hong Kong has always maintained a strong urban core stretching along the northern shore of Hong Kong Island and the southern part of Kowloon Peninsula, and notably in Central District, where most of our business and commercial activities take place. Such an urban structure demands an efficient transport system to cater for the inward movements of people to the CBD area during the morning peak, and the homeward-bound movements after work hours. The desire to keep Hong Kong moving has driven the city over the last few decades to invest heavily in reliable, safe and efficient transport systems that have become the envy of the world.

While long-distance movements between districts come at greater ease, travel at short distances ironically gets more difficult

The transport infrastructure that has served Hong Kong so well over the years has helped to bridge the distances between central and far-flung districts, but this has also led to a strong emphasis on road and rail building. Structures such as residential complexes and shopping malls are built to match the scale and pace of transport development, but they become monoliths that dominate the landscape, and overshadow those of a more human scale. While long-distance movements between districts come at greater ease, travel at short distances ironically gets more difficult. Walkability at the neighbourhood level is easily compromised for highway-style thoroughfares that cut through the district. What has transpired is that the needs of pedestrians and cyclists, the ideal travel mode over short distances, get drowned out. Focal places in a district get hogged and prioritised for road and rail development, which is increasingly a cause for alarm.

2.2 A world-class transport system

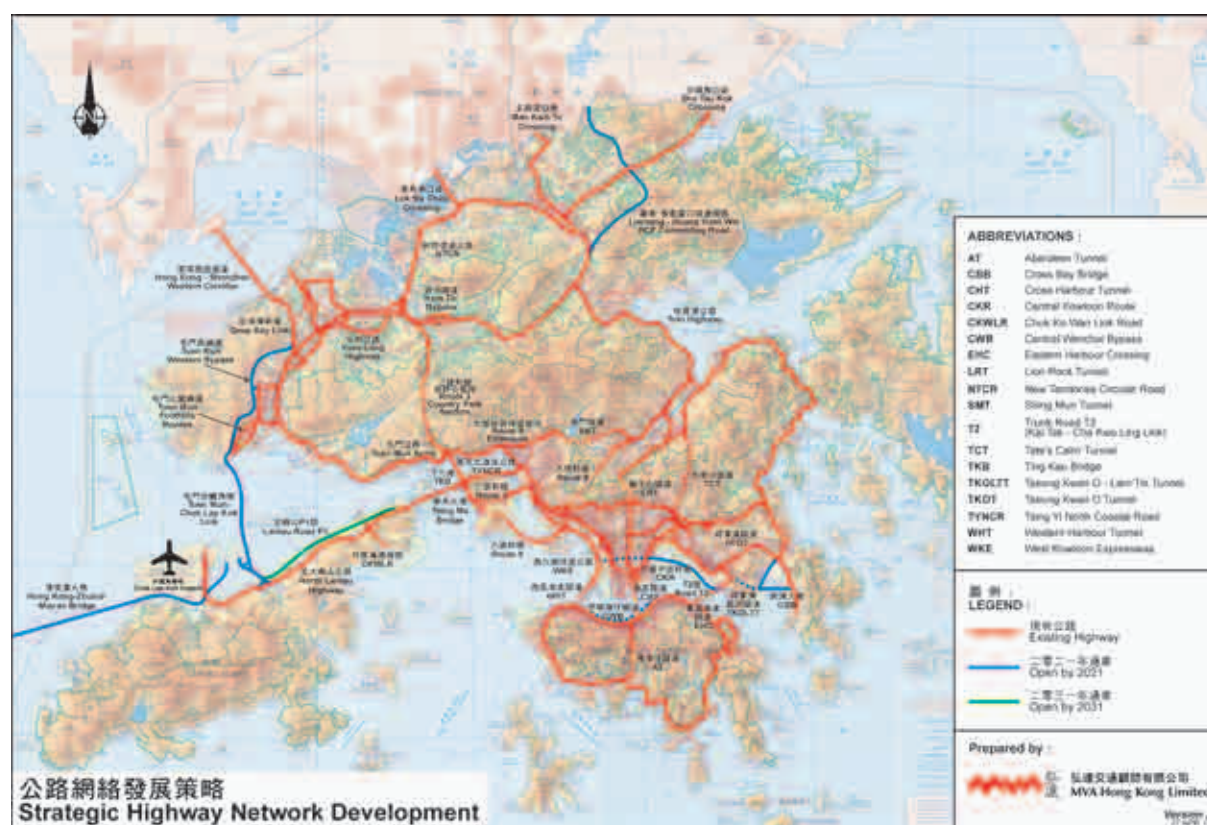
2.2.1 Strategic transport infrastructure

Transport links between Hong Kong and Guangdong province has helped to integrate them economically and socially

Hong Kong's transport development was driven by an increasingly trade-oriented economy. Since the 1970s Hong Kong has built modern highway and railway networks to the highest standards, established a state-of-the-art airport and operates one of the largest container ports in the world. All of these were built to meet the escalating mobility needs of both people and goods, and to serve our urban and economic growth.

From the early 1980s onward, with the economic liberalisation of China and the establishment of special economic zones in neighbouring Guangdong Province, efforts were made to facilitate cross-boundary movements of people and vehicles. To a certain extent, this was related to the relocation of Hong Kong's manufacturing sector to the Pearl River Delta (PRD) for lower production costs, but also the sector's continual reliance on the Port of Hong Kong for the exportation of its products. New border checkpoints were opened, and strategic highways were constructed or improved to connect with the border. After the Handover in 1997, and especially in more recent years, Hong Kong and Guangdong Province have become even further integrated, both economically and socially. Growing supply-chain activities in the PRD and the easing of visitor travel to Hong Kong from Mainland China have led to a huge surge of cross-boundary traffic. New road and rail links were built to accommodate over half a million travellers and 40,000 vehicles each day.⁷³

Figure 11



Strategic highway network development. Source: MVA internal database.

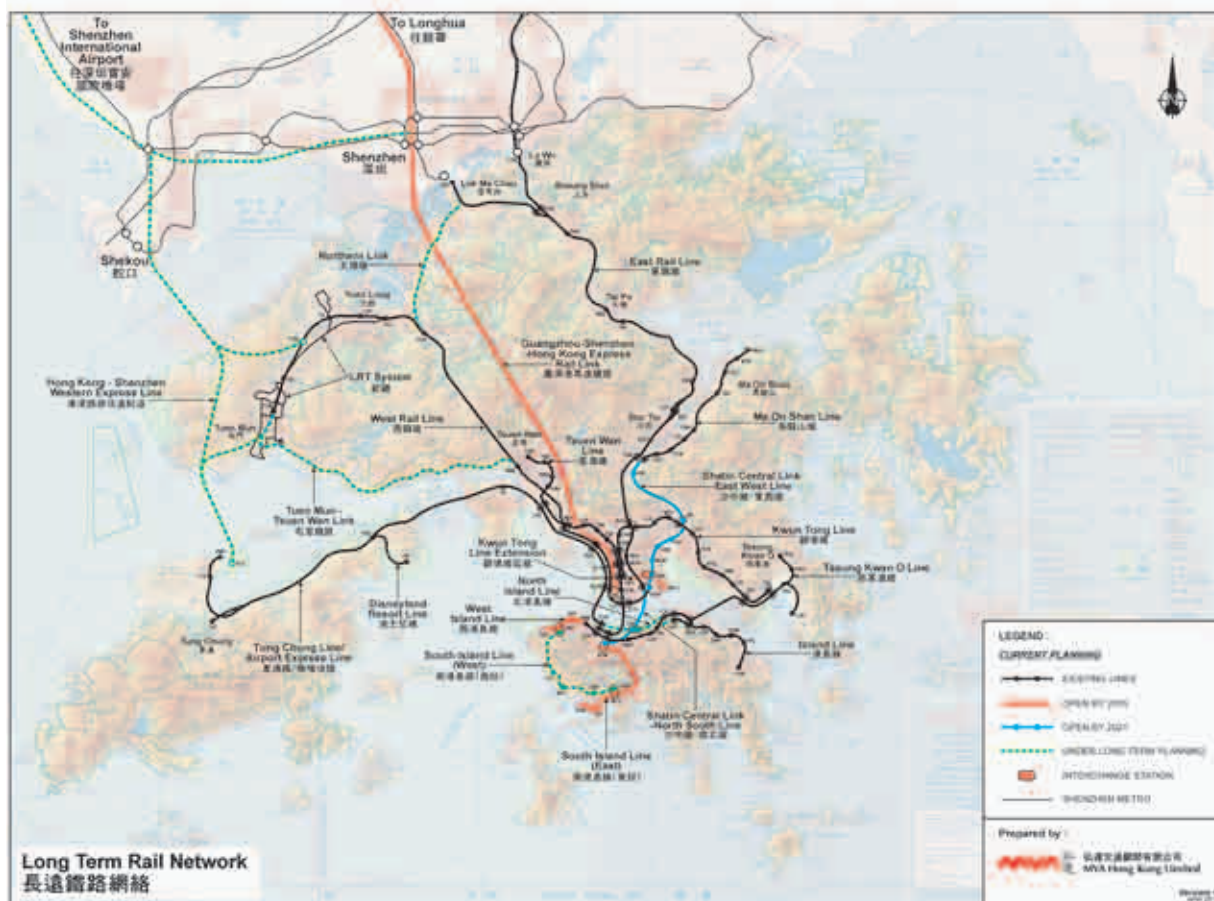
Based on current trends and future needs, it is anticipated that the infrastructure commitments for the next 10 years will extend and infill the road and railway networks and provide the strategic framework for Hong Kong's long-term development. Planning beyond 2020 is now largely focused on filling gaps in the strategic network and adding new boundary crossings (Figures 11 and 12). Transport infrastructure development has slowly but surely taken a broader regional perspective.

2.2.2 Efficient public transport

Public transport account for around 85 percent of local travel in the HKSAR, and 95 percent of trips to the Mainland

Over the same period Hong Kong has successfully maintained a policy of giving priority to public transport over private traffic and containing vehicle ownership through high fiscal charges. This is particularly suitable and crucial for a compact city like Hong Kong, given the lack of space to build more roads and a high urban density that favours public transport operation. Today public transport accounts for around 85 percent of local travel in the Hong Kong Special Administrative Region (HKSAR) (see Appendix 1), and over 95 percent of trips across the boundary with Mainland China (see Appendix 2). Singapore, which is similar to Hong Kong in terms of urban structure and density, is hoping to raise public transport mode share to 70 percent by 2020 under their latest land transport master plan,⁷⁴ but will still fall short of Hong Kong's level.

Figure 12



Strategic railway network development. Source: MVA internal database.

In terms of modal co-ordination, the Hong Kong Government decided to accord priority to rail as the backbone of Hong Kong's passenger transport system, under their last transport strategy announced in 1999. Since then, our rail network has expanded to over 200 kilometres,⁷⁵ putting 70 percent of our people and 80 percent of our jobs within one kilometre of a rail station, so as to reduce our reliance on road-based transport. Nevertheless, public franchised buses remain a major passenger carrier in the city, complemented by other modes such as minibuses, taxis, ferries and trams.

2.3 Transport externalities and the need for a new approach

Our transport system is putting a significant cost on society in the forms of poor air quality, traffic noise, and traffic congestion

Despite all these achievements, it is important to stress that our transport system is putting a significant cost on society in the forms of poor air quality, traffic noise, and traffic congestion. The externalities of our transport system are not shared equitably by all members of the general public. This exacerbates the social inequality in Hong Kong.

2.3.1 Roadside air quality

The air quality in Hong Kong discourages people from staying outdoors

Roadside air quality in Hong Kong is third-world standard. Goods vehicles, diesel buses, coaches and shipping are all major contributors to air pollution. In 2011, the three roadside air quality monitoring stations recorded 63 to 92 days when the Air Pollution Index (API) was above 100 (Appendix 3), that is, up to three months of the year. According to the HKSAR Government, an API of above 100 means it is unsuitable for people with cardiac and respiratory disease to stay outdoors. Vigorous outdoor physical activities should also be avoided as much as possible.

The air quality objectives (AQO) currently in use in Hong Kong have not been revised since 1987 and are much lower than the WHO standard and those of other advanced regions of the world (summarised in Appendix 4). The government has proposed to update the AQOs, scheduled to be implemented in 2014, but they are still less stringent than those already in place in many other countries.

The University of Hong Kong has recently found that the concentration of pollutants (i.e. PM_{10} , $PM_{2.5}$ and NO_2) has a positive statistical relationship with the number of natural deaths in Hong Kong, which may possibly be due to the effect of these pollutants in inducing cardiac and respiratory diseases.

A study prepared by Civic Exchange, published in 2007, compared the air quality management measures of London and Los Angeles, and provided a number of suggestions for Hong Kong in managing air quality, for example, improving Hong Kong's air quality monitoring network; implementing congestion charging and Low Emission Zones (LEZs); recognising the risk of air quality to public health; formation of a cross-border jurisdiction to manage air quality; as well as legislating air quality management under one single legal document.⁷⁶

Meanwhile, a number of measures have been proposed by the government to improve the air quality in order to meet the new AQOs, including upgrading the emission standards for vehicles, setting up of LEZs and pedestrianised areas,

Figure 13

Traffic fatalities by class of road users 2010

Road User Groups	Hong Kong ⁷⁷			Singapore ⁷⁸			London ⁷⁹		
	No. of deaths	%	Per 100,000 population	No. of deaths	%	Per 100,000 population	No. of deaths	%	Per 100,000 population
Driver	16	14%	0.229	14	7%	0.280	30 ⁸⁰	24%	0.390
Motor-cyclist	11	9%	0.157	89	46%	1.780	28	22%	0.360
Cyclist	10	9%	0.143	16	8%	0.320	10	8%	0.130
Pedestrian	69	59%	0.986	55	29%	1.100	58	46%	0.750
Passenger	11	9%	0.157	19	10%	0.380	--	--	--
Total	117	100%	1.671	193	100%	3.860	126	100%	1.640

and the rationalisation of bus routes. But the details of these measures are yet to be seen. So far, only some pedestrianisation schemes have been used as a means to reduce traffic in commercial areas.

2.3.2 Conflict between vehicles and pedestrians

Commercial areas typically have a mix of heavy traffic volume and dense pedestrian flow

In 2010, a total of 69 pedestrians were killed in road accidents in Hong Kong. If cyclists are included, the total rises to 79 deaths, indicating non-motorised modes account for more than two-thirds of all traffic fatalities. As shown in Figure 13, the pedestrian mortality rate per capita is broadly similar to other world cities such as Singapore and London, which are not severe. Even so Hong Kong has a particular challenge with its mixture of heavy traffic volumes and dense pedestrian flows in commercial areas.

Hong Kong has predominately approached the issue by partitioning its roads with barriers that confine vehicles and pedestrians within their own spaces. Despite the reduction in traffic accidents, enabling motor vehicles to continue travelling at speed, especially through busy commercial areas with high pedestrian levels, persistently poses a degree of danger. In pedestrian dominated commercial streets and in residential and village areas, speed limits remain at 50 km/hr and only in very few areas are lower speed limits implemented, unlike in most advanced countries (Figure 14). There is currently institutional resistance to such speed restraints.

2.3.3 Neighbourhood connectivity

Effort to separate people and vehicles has led to a proliferation of physical and spatial barriers

Hong Kong's transport network offers a wide range of choices and modes at varying costs, connecting the community to jobs and social activities. However, people live, work and play in neighbourhoods that contain commercial, residential and social land uses, facilities and activities. The strategic-level successes for transport have not always been paralleled at the local and street level. The worn-out use of buzzwords such as "people first" by the government and others, has not been matched by actions in much of our day-to-day living space. Walking in many neighbourhoods, whether commercial or residential,

Figure 14

Examples of speed limits below 50 km/hr in foreign countries, in residential (left) and urban (right) areas.



Source: Wikimedia Commons. Photo by Lewis Clarke.



Source: Flickr. Photo by Gateway Streets.

is often difficult and unpleasant and is too frequently adversely affected by heavily trafficked and pedestrian-unfriendly street environments (Figure 15).

In short, key problems found in the urban area that hamper pedestrian activities include:

- Pavements, which are simply too narrow to carry the heavy pedestrian movement. Plots in urban area have been redeveloped over the years with augmented plot ratios, hence, more residents or business activities. However, the neighbouring streets and pavements may not have been upgraded to cope with the increased demand, leading to pedestrian overcrowding;
- Traffic arrangements, which have often prioritised vehicular traffic over pedestrian movement. Frequent interruptions and delays occur to pedestrians, particularly at junctions. Where through-traffic movements are given priority, pedestrians are required to use subways or footbridges. These measures on the one hand help to ensure the safety of pedestrians, but on the other forces pedestrians to spend more effort to climb up and down when using tunnels and footbridges, which is especially problematic for those with limited mobility;
- Heavily trafficked carriageways, which sever neighbouring communities by physically blocking pedestrian movements between locations that are spatially close and functionally related to each other;

Figure 15

Examples of undesirable walking conditions.



In Sai Ying Pun, the community is separated from the waterfront by a trunk road, with a footbridge as the only access. Source: MVA internal database.



Pedestrians are required to use a footbridge to cross Chatham Road South and Granville Road opposite the Science Museum in Tsim Sha Tsui. Photo by Dave Choi



Pedestrians weaving through traffic at a junction in Sheung Wan. Source: MVA internal database.



Overcrowded pedestrian footpath with bus stops on Kwun Tong Road, Kwun Tong. Source: MVA internal database.

- Loss of effective width along pavements due to street furniture and spillover of commercial activities reduces capacity and lowers service level; and
- A lack of comprehensive planning for district-wide pedestrian networks as well as for different defining functions along this network, which can facilitate convenient longer distance movements, match street environment with activities and provide for all mobility groups.

2.3.4 A call for pro-pedestrian policies and planning

As explained earlier, Hong Kong has become a service economy, and an international financial centre. The PRD is also aiming to upgrade its industries, and a constant topic of discussion is how Guangdong Province and Hong Kong need to collaborate to create an economically vibrant, environmentally sustainable, low-carbon “quality living area”.⁸¹

Improving liveability will require a shift in HK's development agenda, from mega-scale to smaller-scale infrastructure

In other words, the development paradigm has shifted from quantitative economic expansion to quality transformation for the region as a whole. A greater focus on improving liveability will require a shift in Hong Kong's development agenda, from the mega-scale to smaller-scale infrastructure. Hong Kong must make a choice in how it defines the next phase of the city's development.

Hong Kong also faces the challenge of closing the wealth and income gaps between the rich and poor,⁸² addressing the city's poverty and improving low-income housing are significant but long term challenges. One relatively easier way to improve the quality of life for all is to improve district liveability so that people in lower socio-economic sectors can enjoy the neighbourhoods and districts where they live and be able to easily access many parts of the city by public transport and non-motorised transport means.

All the above adds up to the need for people-based planning at the district or community level, and instead of supplying more transport infrastructure, emphasis should be placed on delivering local-scale improvements: improving local roadside air quality, enhancing local accessibility and connectivity, providing quality street environments for pedestrians and cyclists, promoting better mobility for all, and creating safe and attractive public spaces to share.

An integrated approach to achieving air quality targets at street level that are up to international standards, and improving liveability of neighbourhoods must be coordinated with pedestrian planning for Hong Kong.

2.4 Pedestrian planning in Hong Kong

2.4.1 Past efforts

A slew of pedestrian schemes have been implemented, but have stalled in recent years

Over the past thirty years, there have been many well-intentioned initiatives and plans for improving the pedestrian environment. Some of them were implemented in full or in part, but many were left in the "too hard" basket for a variety of reasons.

The Central/Mid-levels Transport Strategy in the early 1980s put forward a quite radical (at the time) and comprehensive pedestrian network for Central District which led to extensive elevated and underground networks, the Mid-levels Escalator and many street level pedestrian schemes which have mostly been shelved. In the 1980s and 1990s, other schemes were put forward in Mong Kok, Causeway Bay, Wan Chai, and Yuen Long amongst others which led to some improvements and many disappointing deferrals (Figure 16).

The directions embodied in both the 1999⁸³ and 2000⁸⁴ Policy Addresses put great emphasis on pedestrians in transport and land use planning. A new initiative to raise the quality of living and street environments spawned a second round of proposals, mostly pedestrianisation and traffic calming plans that had previously been shelved. The pedestrianisation of 50 metres of Russell Street in Causeway Bay heralded a series of schemes from Transport Department (TD). Creditably, in the period from 2000 to 2005, TD was active in implementing schemes, many dating back to the 1980s and 1990s, in Causeway Bay, Mong Kok, Central, Tsim Sha Tsui, Wan Chai, Jordan, Sham Shui Po and Stanley, etc., in an incremental fashion (see Appendix 5 and Figures 17 to 20). A special unit (Pedestrian Facilities Division) was established under TD and was responsible

Figure 16

Pedestrian plans from the 1980s and 1990s⁸⁵



Pedestrian schemes were drawn up in the 1980s and 1990s but few were implemented. Source: MVA internal database.



Pedestrian footbridge in Mong Kok. Photo by Dave Choi



The Mid-levels Escalator in Central. Photo by Dave Choi

Figures 17-20

Past pedestrian schemes by Transport Department.

Figure 17, right: Traffic calming measures at Great George Street.

Figure 18, below left: Full-time pedestrian street at Jardine's Crescent.

Figure 19, below right: Full-time pedestrian street at Russell Street.

Figure 20, bottom: Part-time pedestrian street at Sai Yeung Choi Street South.

Photos by Carine Lai.





Figures 21-23

Private sector pedestrian schemes.

Figure 21, above: Footbridge on Mong Kok Road and Sai Yee Street.

Figure 22, left: Tunnel connecting Admiralty MTR Station and Three Pacific Place.

Figure 23, below: Traffic calming zone in Taikoo Place.

Sources: MVA internal database



for the design, implementation and public consultation of proposed pedestrian schemes including full-time pedestrian streets, part-time pedestrian streets and traffic calming streets. However, this admirable initiative stalled around 2006 with the completed implementation of most of the pedestrian schemes on the books. Since then, any further pedestrian improvement planning and responses to requests and complaints have been handled by individual district engineers of TD on a scheme-by-scheme basis or as specific infrastructure projects.

2.4.2 Private sector and transport operators

The private sector has been proactive in developing pedestrian networks

The private sector has also promoted better accessibility and better street environments for pedestrians. Many schemes were put forward in conjunction with improved access to railway stations and public transport facilities. The private sector changed its mindset and was keen to open up commercial areas to circulating pedestrians and help create pedestrian networks. Such actions were easier within sites or at underground or elevated levels. Examples include the subway connections between Admiralty and Three Pacific Place, the traffic calming zone at Taikoo Place, and the footbridges linking Mong Kok Station to Nathan Road, as shown in Figures 21 to 23. The Mass Transit Railway Corporation (MTRC) was also very proactive in developing pedestrian schemes to extend its catchment and improve the travelling environment such as the subway system connecting Tsim Sha Tsui and East Tsim Sha Tsui Station. Although proposals were made, only limited success was achieved at street level and proposals have faced many implementation hurdles.

Institutional arrangements were also put in place to encourage developers to provide pedestrian links and public space. The government and the private sector co-operated to create pedestrian networks; property owners would dedicate pedestrian corridors for public use in exchange for plot ratio bonuses. Today these potential “win-win” approaches have become ensnared in controversy and legal wrangles and government is now found to be blocking proposals to improve pedestrian facilities and environments—the real losers being the walking public.

Figure 24



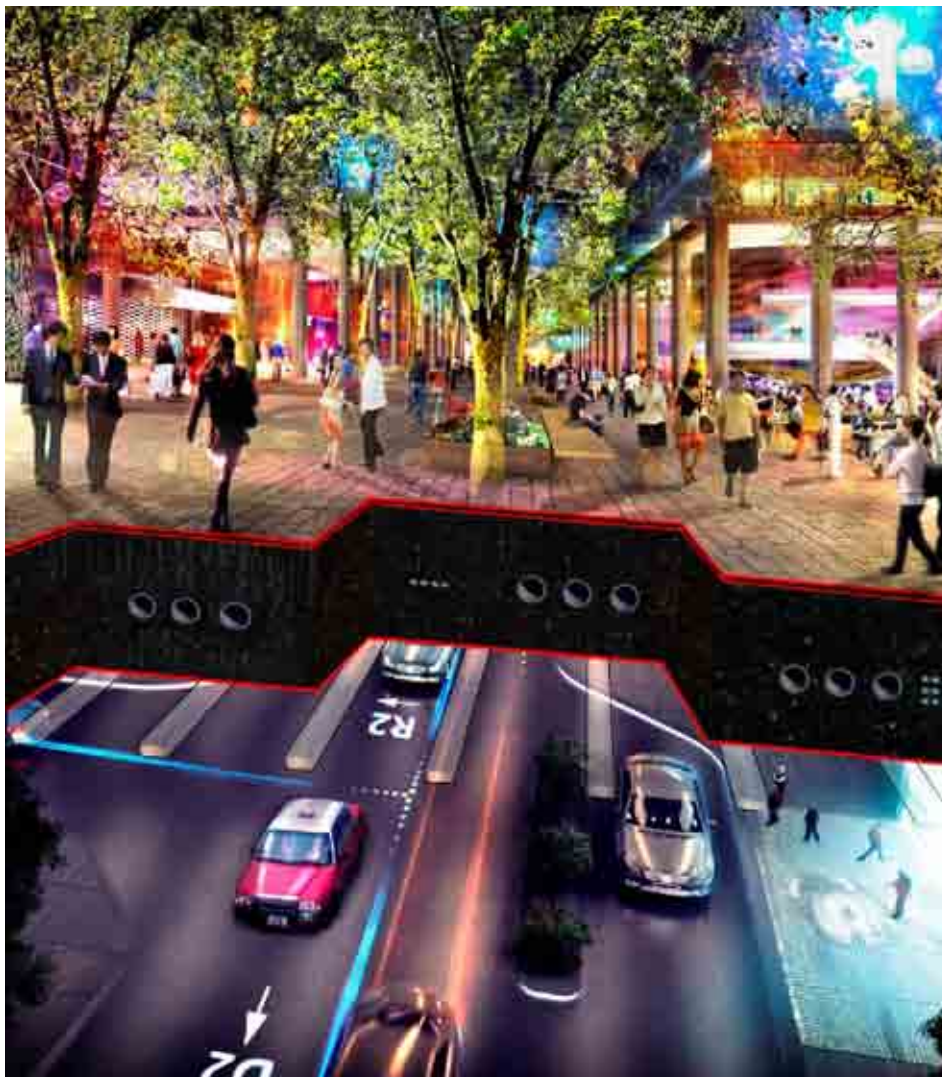
Proposed pedestrian system in WKCD.
Source: MVA Internal database.

2.4.3 New direction: West Kowloon reclamation area

Plans for a ground-level pedestrian zone in West Kowloon as a benchmark for Hong Kong

The West Kowloon reclamation area is home to the Airport Express Kowloon and Tung Chung Line stations, East West Line Austin Road Station, China Ferry Pier, major bus termini and in 2015 the Express Rail Link (XRL) High Speed Railway West Kowloon Terminus (WKT) forming a major international/ domestic transport hub. The Elements shopping centre and airspace residential development will have new neighbours in the form of the WKT commercial development and the West Kowloon Cultural District (WKCD). The overriding goal of the plans for the sub-region is to put “people first” and the whole ground level of the WKCD and interconnecting decks to WKT, Kowloon and Austin Road stations as traffic-free pedestrian zones. Road traffic is off site or at basement level. The scheme, when it comes to fruition, will demonstrate what can be done albeit on largely “greenfield” sites. Much harder are the onward connections into Tsim Sha Tsui and Jordan, now under study. The evolution and implementation of the plan has involved a wide range of government agencies, stakeholders and the public at large through public engagement. The plans shown above (Figures 24 and 25) are a benchmark for the future way of thinking about comprehensive pedestrian planning in Hong Kong and the benefits of co-ordinated pedestrian planning for a subregion.

Figure 25



Artistic impression of pedestrian-vehicle segregation in WKCD. Source: MVA internal database.

2.4.4 Towards a walkable network

Everyone is a pedestrian one way or another, but mobility levels vary among the elderly, the very young, parents with children, the physically handicapped, people with shopping or luggage and so on. To date, there is no comprehensive implementation strategy for delivering pedestrian mobility for all. There are many laudable initiatives financed by government, the MTRC and the private sector. Recently, Hong Kong has begun to seriously address the mobility needs of the population at large. The Pedestrian Facilities Division of TD introduced a new “shared surface street” where pedestrians have higher priority, although road closure is not possible because of vehicular access requirements. This type of street offers a level surface across the street to facilitate the disabled. The design of the scheme should be such as to maintain a clear distinction between footways and driveways by means of bollards and tactile pavers, as shown in Figure 26.

Even so our planning is a long way from creating a comprehensive walkable network with ease of movement for all citizens as part of the overall pedestrian network development.

2.4.5 Public transport accessibility

Frequent and accessible public transport creates higher rates of walking trips

Hong Kong has a high overall public transport usage. Over 85 percent of trips in Hong Kong are by public transport (including taxis). Within public transport, about a third of the trips are made by heavy railway and another third by franchised bus among other modes.

Maximising public transport requires high-quality pedestrian accessibility to stations or stops in order to compete with door-to-door travel by private vehicles and taxis. In the Hong Kong climate, travellers are normally willing to walk up to 300 m in the street grid with multiple road crossings. If segregated walking routes (pedestrianised streets, subways, elevated walkways) with limited gradients are available, this range easily stretches to 500 m and beyond for strategic railway stations using travelators, as illustrated conceptually in Figure 27. Also, more than half of the walking trips made are shorter than 10 minutes (Figure 28).

The walkability of the neighbourhood is a crucial factor in public transport usage. Making walking easier and more pleasant raises public transport accessibility and therefore increases public transport usage, hence reducing road traffic. This brings economic, social and environmental benefits and helps to keep fares down.

2.4.6 Assessing street quality

Standards and guidelines for pedestrian planning exist, but require more widespread implementation

In recent years the government, through TD and the Planning Department (PlanD), has researched the technical requirements for developing pedestrian facilities and networks. The *Transport Planning and Design Manual*,⁸⁶ specifically volume 6, chapter 10, contains a wealth of technical advice on the preparation of Pedestrian Action Plans. PlanD spent around two years in the preparation of the *Study on Planning for Pedestrians*,⁸⁷ which also provides extensive advice and examples on the design and implementation of pedestrian schemes. Findings or guidelines on the design of pedestrian facilities such as footpaths have been incorporated into the *Hong Kong Planning Standard & Guidelines*.⁸⁸

Figure 26

Measures to enhance walking “friendliness” on street.



Top left: Paving requirement in streets with pedestrian priority (map). Source: MVA internal database.

Top right: Dropped kerb at crossing. Source: MVA internal database.

Bottom left: Example of shared surface street on Nanking Road in Jordan, between Nathan road and Parkes Street. Source: Transport Department.

Bottom right: Lift for the disabled accessing MTR station. Source: MVA internal database.

Though the various documents contain many good practice standards and guidelines, there is no standardised process for assessing the level of service and accessibility at strategic, district or local levels. Key performance indicators are yet to be developed, in the same way as for traffic engineering, to determine the need for and evaluation of improvements at network-wide and local levels.

2.4.7 Public engagement and socio-economic impact

Even small changes to the streetscape can impact on the community in a multitude of ways

In many urban streets where vehicles rule, the poor environment depresses values and quality of life. However, any change to the streetscape has social, environmental and economic impacts that affect different sections of the community in different ways. Pedestrianisation radically changes the values of property and the appropriate uses as even the tiny Russell Street scheme reveals. The Mid-levels Escalator dramatically changed the accessibility of an older area of the city, bringing changes in value and activities, and as a

Figure 27

Approximate range of walking in various pedestrian environments.

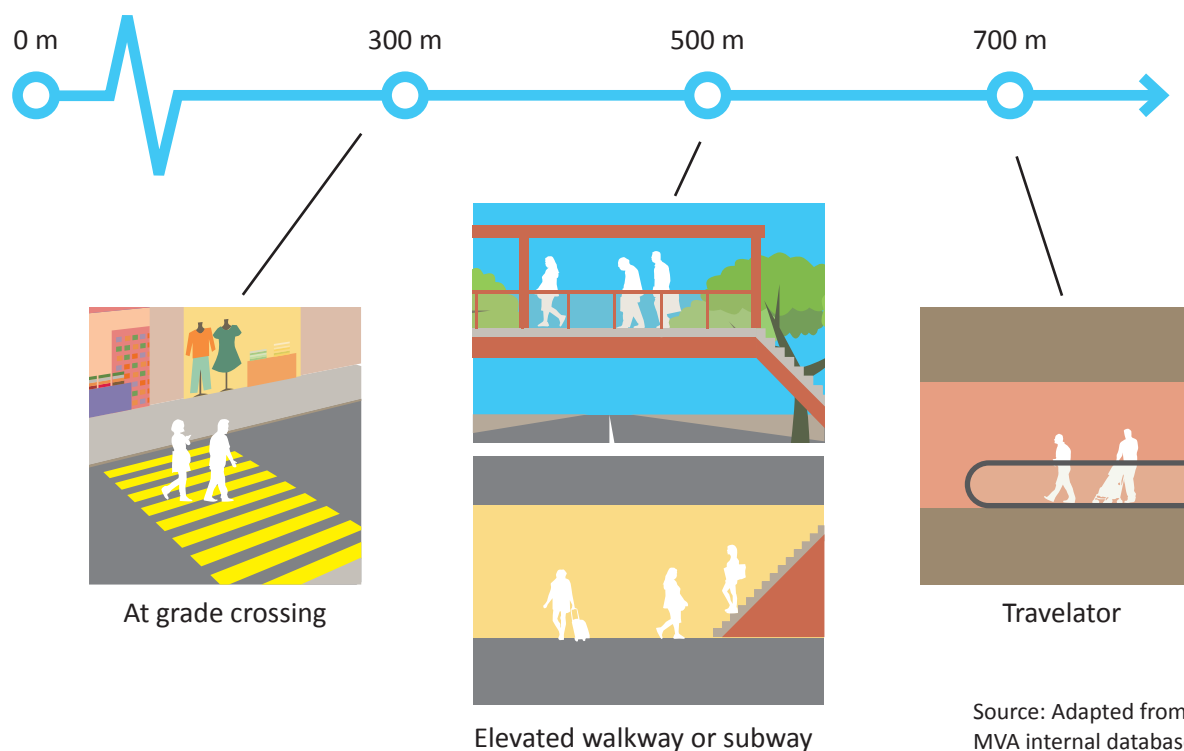
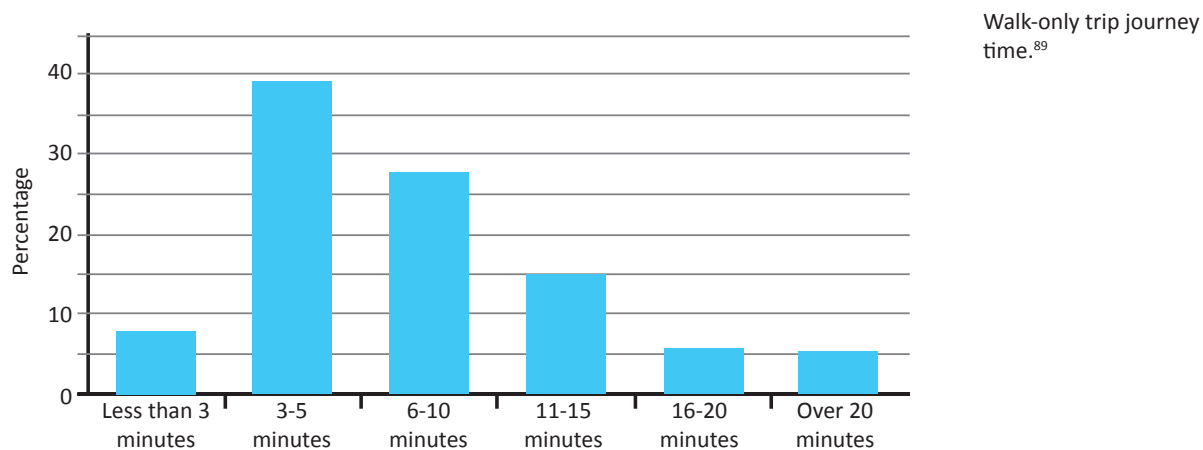


Figure 28



consequence major social impacts on the residents. There are winners and losers in an urban landscape of constant change in function and value. Socio-economic impact assessment is required to evaluate proposals comprehensively.

It is also essential that a public engagement strategy is undertaken for the planning and design of pedestrian network improvements in order to capture all the impacts and opportunities and integrate the schemes into the social fabric. This is now being done as a standard part of the planning and implementation of major schemes such as in West Kowloon.

2.4.8 The act and art of travel

Need new ideas with the right institutional arrangements

The brief overview of both pedestrian and transport direction and policies indicates that what is needed is not only an injection of new ideas on how to best utilise the streets for all users, but the institutional arrangements required to make it happen.

Several government departments are currently responsible for pedestrian planning

The responsibilities for pedestrian network and facility planning have been spread amongst many different planning stages and agencies. In the new towns and major reclamation areas, they have fallen under the Civil Engineering and Development Department or previous integrated government agencies. In the urban areas, they have been developed by PlanD under the Outline Zoning Plans preparation and overseen by TD in the course of Area-wide Traffic Studies or as Pedestrian Action Plans, or by the Highways Department as part of infrastructure planning and design. The private sector and the MTRC have also prepared Master Plans and schemes as part of Comprehensive Development Areas. Actual implementation involves numerous government agencies, public engagement and the private sector.

Rail planners have understood that people are not only looking to get from A to B

The perception of pedestrians needs to be revised. Just as rail planners understand that getting from A to B is not only about an efficient rail network, but also cleanliness, comfort and safety, so too does a pedestrian look for this on the street. The act of travel is not just about accessibility, but should encompass other considerations such as personal health and well-being, the natural environment, as well as fostering community cohesion and neighbourhood vitality. Hence, the art of travel must come into the fore, and it remains a challenge for Hong Kong to integrate these aspects of walkability into pedestrian planning.

A comprehensive plan for enhancing walkability need to integrate transport with other liveability aspects

Today, despite clear policy statements proclaiming “pedestrians first”, there is no functioning process in government that plans, designs and implements pedestrian networks and facilities under a comprehensive walkability framework. Future efforts to this end should include:

- Integrity of the network plans, which is often lost during implementation. Pedestrian networks need to be planned in the same hierarchical manner as roads or public transport and form part of an overall well-defined design and implementation process;
- Integration with land use, public transport, traffic, living space design etc.: single mode planning and implementation does not work. The previous multimodal Area/District Transport Studies by TD put forward very effective pedestrian schemes integrated with other modes as a comprehensive plan. However, interdepartmental co-ordination was not always effective in the implementation stage; and
- Neighbourhood networks and living space—liveability, functionality and level of service should lead the planning of pedestrian networks and facilities, as opposed to engineering or aesthetic/architectural designs. The design standards and associated evaluation criteria need to be adjusted accordingly.

Site-specific (large or small, public or private) balance of compliance and creativity is needed in the context of overall comprehensive plan and quality standards. Clear requirements need to be written into planning briefs

for sites and Comprehensive Development Areas to protect the integrity of overall comprehensive networks. Conversely the government should encourage innovation if developers can improve on the basic requirements.

2.5 International examples

Hong Kong is not alone in facing the downsides of pro-vehicle policies and planning. While not all cities are as dense and compact as Hong Kong, many places have also executed transport policies and developed infrastructure where the priorities of vehicular road users have overridden the needs of pedestrians. San Francisco, for instance, once had a highway along its waterfront which obstructed views and created a psychic divide between the city and its superb waterfront. Vehicles clog up the streets in the city centres of London, Beijing and Paris; temporary construction scaffolding obstructs the limited pedestrian space in New York; and high-rise structures in Seoul and Tokyo act as blockades to street connectivity and indeed creativity, in the many monotonous façades of little visual interest.

Many cities have charged ahead with different initiatives and innovative ideas for tackling their own issues and meeting their citizens' aspirations

The pressures of injecting new pro-people elements into city planning, within broad sustainability and liveability goals, have become somewhat ubiquitous. To the growing delight of their people, many cities have charged ahead with different initiatives and innovative ideas for tackling their own issues and meeting their citizens' aspirations. We have reviewed some of the best practices and actions around the world, and have selected ten cities to illustrate how bold policies, robust planning processes and daring initiatives are transforming ways of life and creating vastly improved living environments. The cases also demonstrate that by addressing the walkability of the city's streets, endemic problems such as congestion, pollution and conflicting uses can be resolved. Importantly, the ten cities are of a development level and scale similar to Hong Kong, and possess stirring examples and invaluable lessons that could be applied here.

Toronto, for instance, has staked its claim on becoming a great walking city by devising a Walking Strategy and a Pedestrian Charter. Meanwhile, Seoul has embarked on a massive urban restoration plan to daylight a previously buried stream, creating a walker's paradise in the heart of the city. Barcelona has integrated various transport modes into a sustainability-minded transport plan, and many others are guided by bold and brash leaders that are regenerating city centres into walkable environments, just like in New York.

The best practices of the ten cities—New York, Toronto, San Francisco, London, Barcelona, Melbourne, Tokyo, Seoul, Singapore and Shanghai—are discussed in detail in Appendix 6. Consolidated findings and key lessons are summarised in Figure 29.

These global best practices provide an inspiring way forward for pedestrians everywhere. Hong Kong has much to learn from this, for, as described earlier in this chapter, there are serious flaws in its policies and plans which continue to devalue the needs of pedestrians. The focus of this report will shift in the next chapter, from the global to the local perspective, where three districts will be put under the microscope to identify how walkability is being played out in Hong Kong, where the most concerning areas are, and where opportunities lie for quick wins and sustainable outcomes.

Figure 29

Global best practices

Lesson	Details	Cities
Leadership	<ul style="list-style-type: none"> Explicit support from the Mayor helped to focus attention on particular pedestrian issues. Strong vision from leadership can transform the urban landscape. 	London New York San Francisco Seoul
Overall strategy/ policy/plan	<ul style="list-style-type: none"> Transport planning must be incorporated into overall land use policies. An overarching municipal sustainability policy with the full endorsement and support of the city's leadership is the backbone of sustainable development. A long-term planning concept supplemented with shorter-term plans, or giving planning authority to local districts allows for strategic planning and flexibility as the city's needs evolve. 	Barcelona London New York San Francisco Singapore
Stakeholder engagement	<ul style="list-style-type: none"> The government should take the responsibility of providing a forum for relevant stakeholders to discuss and resolve conflicts around transport policy. This includes involving grassroots community members in high-level working groups, and convening meetings regularly. Intergovernmental co-ordination and co-operation is the key. Undertake different forms of consultation to draw a more representative sample of stakeholder views. Involving and engaging with an active community is an important part of keeping a sense of place and encouraging stakeholder buy-in. 	Barcelona San Francisco Toronto
Cities for pedestrians	<ul style="list-style-type: none"> The road belongs to the people, so decision making must engage the interest of all road users. Transport policy must be apportioned to users equitably. 	Barcelona
A sense of place	<ul style="list-style-type: none"> Create pedestrian solutions that suit the area, rather than simply adopting "one size fits all" solutions. Consider the seasons and climate when planning walkability. Improve connectivity by considering the look and feel of surrounding neighbourhoods. Extending the walkable grids in developing neighbouring areas may act to drive foot traffic into a new area. 	San Francisco Singapore Toronto
Greenery	<ul style="list-style-type: none"> Integrate greenery into urban landscapes. Parks at the centre of a neighbourhood can provide a focal open space that enables walkers to take short cuts, and supports a sense of community. 	London San Francisco Singapore Toronto

Continued overleaf

Figure 29

Global best practices (continued)

Lesson	Details	Cities
Give roads back to pedestrians	<ul style="list-style-type: none"> Reclaiming roads for pedestrians is a good way to bring new life to deserted areas. Old city designs, made for non-motorised transport, are a gem for pedestrians. Shared spaces for vehicles and pedestrians increase accessibility and reduce pedestrian injuries as traffic naturally is slower. Creative use of public space can be inexpensive, improve traffic flow, and increase business to retailers. Consider demolishing existing structures to facilitate redevelopments that beautify surroundings. 	London New York Shanghai Tokyo
Transport to support pedestrians	<ul style="list-style-type: none"> A public transportation and pedestrian-first transport policy is the foundation for walkability. Municipal transport strategies must recognise walking as a legitimate transport mode. This must prioritise public transportation and pedestrian accessibility. 	London New York Toronto
Administrative support	<ul style="list-style-type: none"> Sufficient staff in municipal governments also affects the effectiveness of pedestrian and bike plans. Co-ordination between districts is a must on projects that span a city's jurisdictions. 	San Francisco Shanghai
Work with developers, but allow for "retail-free" space	<ul style="list-style-type: none"> A development-first, pedestrians-later method is not ideal, as pedestrian needs will have to be addressed retroactively. Private-public partnerships can work to maintain public spaces. Pedestrian thoroughfares can be provided by private entities, but public access should not be hindered. Gross floor area concessions may be a way to encourage private developers to think about making streetscapes more engaging. 	London New York Shanghai Singapore Tokyo
Declutter	<ul style="list-style-type: none"> Remove unnecessary and/or redundant signage Consolidate street furniture, such as lampposts with attached rubbish bins, or one post for several signs, to reduce clutter on the pavement. Remove temporary advertisements. 	London Singapore
Wayfinding	<ul style="list-style-type: none"> Improve signs by making them consistent city-wide, to support users of public transportation. 	London New York
Streets as destination	<ul style="list-style-type: none"> Make the streets places where people want to stay. Provide street furniture and a pleasant environment. 	London New York Shanghai

3 Improving walkability in Hong Kong

3.1 Three types of transformation

Four case studies

This chapter takes the overall discussion in Chapter 2 down to specifics by using four examples in three geographical areas in Hong Kong to illustrate the barriers and opportunities to improving liveability, walkability and the overall well-being of residents.

The four examples have been selected because of their potential to showcase many barriers and opportunities, and to create “talking points” and “quick wins” so as to command public attention and thus attract the attention of decision makers and opinion shapers.

There should be various aspects of each of the four examples that can also be applied to other districts and areas in Hong Kong, Kowloon and the New Territories when considering how to improve walkability and connectivity points to transport services, thus enhancing liveability and a sense of well-being of the people.

3.1.1 Victoria Harbour—waterfront transformation

From large-scale development to smaller district plans

This has been chosen because of its importance to Hong Kong. It includes the current CBD on Hong Kong Island, the evolving commercial area in Tsim Sha Tsui and West Kowloon, as well as the potential area in South East Kowloon. This is an area where there will still be some reclamation and major development—the WKCD and Kai Tak Development—and key transport infrastructure links—the Central-Wan Chai Bypass and Sha Tin-Central Link. While the public focus has been on major urban and transport plans, as these are put in place, there is a necessity to focus on smaller district plans to ensure the visions for continuous waterfront promenades are well designed and walkability enhanced on both Hong Kong and Kowloon sides of the harbour. This area has received high-level government attention through several rounds of anti-reclamation court cases, and the establishment of the Harbourfront Commission, which has led to effective public-private-community sectors collaboration to connect design plans and align responsibilities of many government departments.

Central and Tsim Sha Tsui were selected to provide excellent examples of the need to integrate large- and small-scale planning and administration, cross-sectoral collaboration, and the potential for integrating a walking perspective into every aspect of the harbourfront including articulating the wider benefits it would bring to Hong Kong as a whole.

3.1.2 Mong Kok—old, dense urban district transformation

Need major urban upgrades to be driven by local needs

As part of the Yau Tsim Mong District, Mong Kok is an old urban district with very high population density. It is an area where people live and work, and is also visited daily by overseas visitors. It has an array of markets, shops, hotels, restaurants, food stalls and many streets with unique characteristics—such as Ladies’ Street, Temple Street, Bird Garden, Flower Market Road,

Goldfish Market, Tile Street, Dundas Street—just to name a few. Newer facilities include Langham Place and Argyle Centre—all of which are close to subway stations. Streets are on the whole narrow with heavy traffic. Parts of Mong Kok are ideal for establishing pedestrian zones. While there have been some successes in urban upgrades, the obvious solution of pedestrianising more parts of Mong Kok has been far from easy due to resistance from local interests concerned about inconveniencing commerce and residents. A key stakeholder group is District Councillors, who are effective in articulating constituents' concerns but not necessarily able to consider quality upgrades that require substantive change (such as redirecting traffic, moving bus and minibus stops, restricting vehicular access, restricting delivery times, etc).

This case study provides excellent examples of both the need for improvement and barriers to change that effectively block substantive quality upgrades. The potential for transformation depends on convincing major stakeholder groups that they are better off exploring change rather than opposing it. The use of envisioning tools and extensive stakeholder engagement is needed to open minds and shift attitudes.

3.1.3 Ma On Shan—new town transformation

Providing for recreational amenities

This is a new town along the eastern coast of Tolo Harbour in the New Territories and a part of Sha Tin District. It has a small town centre and several major public and private housing estates. It is close to major country park areas with magnificent walking trails, and is served by the Ma On Shan MTR line, which connects to the East Rail Line and urban areas.

This case study provides an area in the New Territories where residents commute in and out for work on a daily basis, and visitors travel to for recreation, particularly over weekends and holidays. The walkability and connectivity quality of such an area must take into account facilitating recreation, such as the transport of sporting equipment, including bicycles, and possibly even water sports gear. In addition, this case study looks into the proximity of private housing residents to the Ma On Shan promenade versus the inaccessibility of public housing residents, who live further inland and are separated by Sai Sha Road, to the same amenity.

This example should help to create “talking points” and “quick wins” for other New Territories stations to open minds on enhancing rail integration with other public transport modes, private cars, walking and cycling, and show how Hong Kong can improve its recreational experience, as well as creating well-being and social harmony.

3.2 Local surveys

A handful of sample routes were picked to highlight the merits of the current walking environment

Site reconnaissance was carried out in the four study areas during February 2012. The first step was to send the team out and get a sense of the quality of the walking facilities and the pedestrian environment in each of the districts, and based on those observations to devise and finalise a common methodology for carrying out site surveys in a detailed manner.

In March and April 2012, local surveys were conducted by various team members, supported by volunteers. In each district, several routes were

selected for a close look. There were no constraints about the length and nature of the routes, but for each district we chose a set of routes that represented an array of challenges and characteristics. Given the limit of time, our objective was not to provide a comprehensive review or scientific analysis of walkability for each study area. Rather, we picked a handful of sample routes in each district for highlighting the merits and demerits of the current walking environment, which in turn became the starting point for our enquiry into the deeper problems. This exercise will also allow us to identify district-specific and common walkability issues in Hong Kong, raise public awareness, and look for solutions.

Figure 30 below summarises our survey design. For each sample route, or an origin-destination pair, we asked our team to perform several walks:

- Shortest walk—this is what we called an insider walk, which was done by team members who know the area inside out. It is the type of route that a resident will take to get groceries in the neighbourhood, or to get to a public transport node during rush hour. Insider walks include short cuts and less crowded streets.
- Next best walk—this is also an insider walk, but against the insider's wish this is not the most direct one. Nevertheless, it is still an attractive alternative. In reality, for each route, there will be more than one alternative, depending on how the blocks and streets are laid out and where the pedestrian facilities are provided.
- Visitor walk—this is an outsider walk, which was done by team members with no prior knowledge of the area. This is the type of walk that tourists experience a lot in a foreign location, or someone from other districts who just comes in for a meeting, a movie or a concert. Naturally, outsiders will rely a lot on maps, signage and landmarks for directions, bearing and navigation.

In addition, one sample route in each study area will be selected for a pram walk:

- Pram walk—this is a walk that replicates the experience of (i) people moving in a wheelchair; (ii) people travelling with a pram; (iii) people carrying loads of luggage; and (iv) elderly or disabled people looking for barrier-free facilities.

Figure 30

Survey design



For each walk, a number of tasks were carried out as explained in the following paragraphs:

3.2.1 Route description

Obstacles, wayfinding tools and pedestrian facilities were marked along the route

Information about the pedestrian network in the study area was collected ahead of the survey, from sources such as Lands Department's map products, MTR station maps, and other web-based map systems. During the survey, efforts were made to record the physical form of each part of the route (such as pavement, elevated walkway, subway, crossing, stairs, slope, elevator, escalator, public open space and shopping mall). Special attention was paid to finding pedestrian facilities that were missing from the maps. One common example is the underground network that goes beyond an MTR station into a private, commercial property such as a shopping mall.

In addition, obstacles (such as railings, dead ends, car park entrances, newspaper stands, phone booths, mailboxes, fire-hoses, lampposts and advertising stands) and wayfinding tools (like directional signs, maps and signage for barrier-free access) along each route were marked. Features such as shade, shelter, seating and other amenities like public toilets were also recorded.

3.2.2 Walking time, distance and energy

Walking time was recorded for each walk. Comparing the time distance of the different walks along the same route shows a changing level of walkability and accessibility for different pedestrian groups, including local residents, tourists, and people with different mobility needs.

In addition, energy distance was also estimated to account for the extra energy required from a pedestrian to negotiate stairs and slopes. For simplicity, a uniform factor of 2 was applied to the distance covered by stairs or slopes along the route.⁹⁰ It will give a longer walking distance, as the additional energy used during level changes would cover a longer distance for normal walking (that is, on level ground).

After the field survey, the different walks taken along a route were overlaid on a base map to calculate direct (straight line) distance and walking distance.

3.2.3 Score-card

To get a sense of the walking environment for each route, a simple score-card was developed for route assessment. Team members were required to fill in a score-card for each walk. The walking experience was assessed in terms of (i) connectivity; (ii) obstacles; (iii) wayfinding; (iv) physical features; and (v) walking conditions.

3.3 Victoria Harbourfront—Central

3.3.1 Area characteristics

Battle for preservation and progress are executed especially hastily in Central

When Hong Kong was initially ceded to the British, the area now known as Central became the nerve centre for its entrepôt activities. The importance of the sea to the early development of Hong Kong can be seen in the vast number of boats that once plied the harbour, and it was not until the turn of the twentieth century that the population residing on water was outweighed by those residing on land.

This maritime heritage might be unrecognisable from the usual vista of Central today, save for the travel advertisements that portray Hong Kong as an iconic junk on Victoria Harbour, with the modern gleaming skyline as its contemporary backdrop. Indeed, the harbour has become less important as a means of livelihood, nor as a transport route for people's daily commute into Central. Despite this, one of the few enduring opportunities for people to access and enjoy the harbour is the Star Ferry, and its continued operation is a testament to the psychic hold that Victoria Harbour still has on the people and the city's identity.

This is but one of numerous examples of how the old and new is juxtaposed in Hong Kong, where the battles for preservation and progress are executed especially hastily in Central District. The major thoroughfares, offshoot streets and steep staircases are still prevalent here, and even if the paving on the ground has been dug up and covered over countless times, the design of the streets is still largely the same in the older parts of the district. These time-tested walkways are being linked up with the newer parts of Central, those structures built on reclaimed land, and to the water's edge itself, through a warren of paths that takes pedestrians from the street level to footbridges, along indoor plazas and across car-choked boulevards.

With the Central-Wan Chai bypass due to come on-line in the next few years, and the waterfront being redrawn once again, new connections will have to be established with the existing walkways. It is timely to examine Central during this transitional phase, and a study of its walkability could provide nascent food for thought on how new developments on the waterfront could bring people closer to the harbour.

3.3.2 Study area

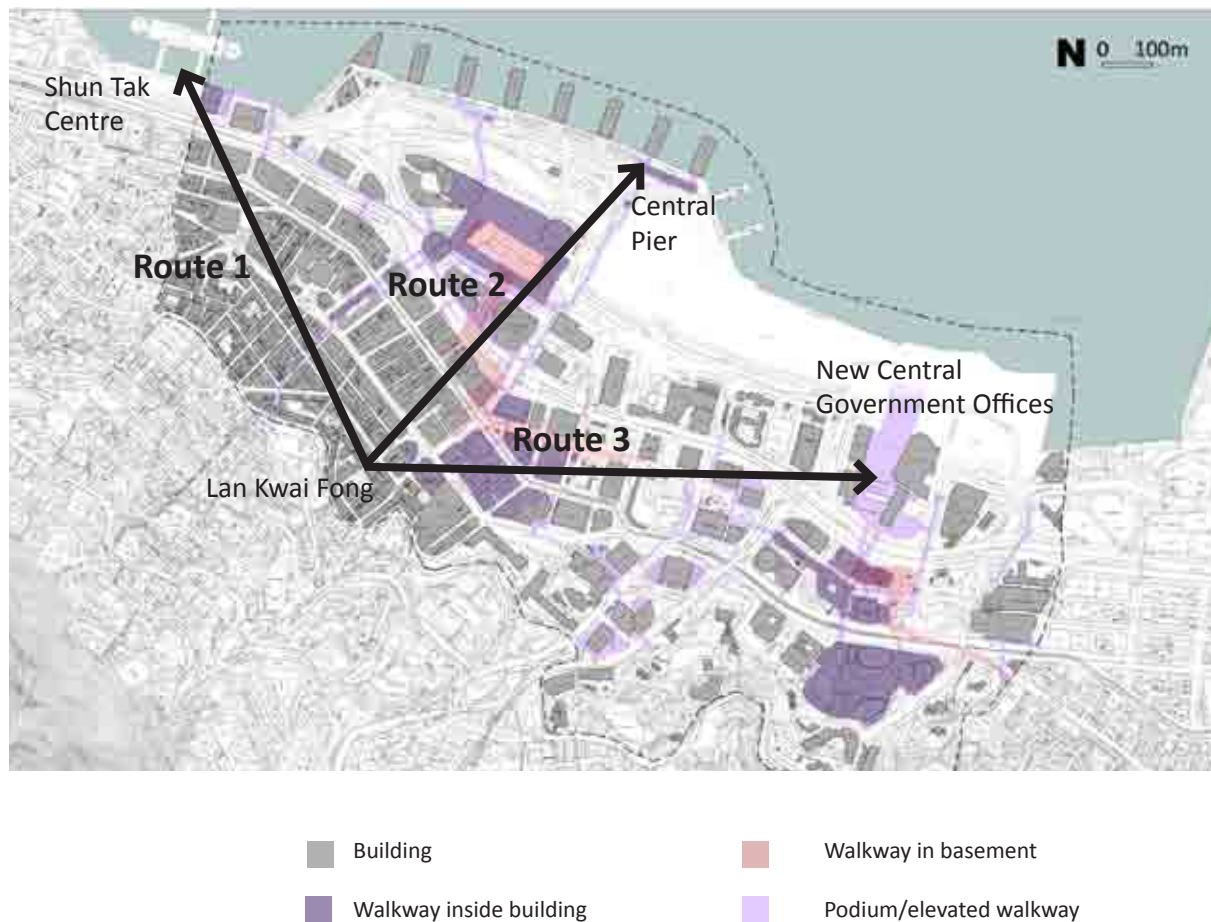
The boundaries between Central and its neighbouring districts, including Admiralty, Sheung Wan, and the Mid-levels are not clearly defined, and the study area extends into these areas. As Figure 31 overleaf shows, the study area is bounded in the north by the ferry pier, in the south by the lush green of Hong Kong Park, in the west by Shun Tak Centre, and in the east by the new Central Government Offices (CGO).

3.3.3 Pedestrian network

Unlike Mong Kok, where the flat terrain allows a relatively uniform street grid to sprawl out, Hong Kong Island is dominated by steep hills. For the early colonialists, these limitations led to successive ventures to reclaim

Figure 31

Central study area with sample routes. Source: Civic Exchange.



Extensive elevated walkway connects pedestrians from hills to harbour

land from Victoria Harbour, beginning as early as 1855.⁹¹ The vestige of these efforts is a natural divide that is carved by Queen's Road Central, the first major roadway on Hong Kong Island. South of Queen's Road Central, one finds narrow streets and alleyways that zigzag in a seemingly jumbled manner, at times in line with the contours of the slope, and other times not.

North of Queen's Road Central, the streets are wider and multilane roadways are possible. It is also here that elevated walkways are widespread, in recent years extending all the way to the water's edge, and uphill with the Mid-levels Escalator. If the streets appear disordered, the elevated system continues on this convention. This pedestrian-only network is thankfully fitted out with directional signage, and a sea of commuters that could assist a disoriented visitor out of unfamiliar territory.

3.3.4 Sample routes

Chosen routes tests walkability to harbourfront locations

Lan Kwai Fong has been chosen as the origin for all three routes, due to its central location within the study area. The routes take our project team to Shun Tak Centre, Central Ferry Pier and the new CGO, which are all popular destinations for pedestrians.

Central Route 1: Lan Kwai Fong to Shun Tak Centre

All three walks required getting onto the elevated network

Lan Kwai Fong is a narrow and sloping street crammed with bars, clubs and restaurants. Due to its compact size and the number of visitors to the area, restricted vehicular access has been applied from 7pm to 4am on Friday, Saturday, Sunday, and public holidays. From here, walkers on Route 1 head towards Shun Tak Centre, an important transport hub in the Central area for Macau-bound ferries (Figure 32).

There are a number of alternative paths that can be taken on this route, but all three walks taken by our project team require getting onto the elevated network to cross over Connaught Road Central, arriving at Rumsey Street multi-storey car park, which is a short walk to Shun Tak Centre (Figure 33).

The route taken by the visitor spends the longest period at the elevated level. The network of elevated pedestrian-only corridors provides a safe and all-weather passage above some heavily car-trafficked roads, but

Figure 32

Direct distance, shortest, next best, and visitor walks on Central Route 1. Source: Civic Exchange.

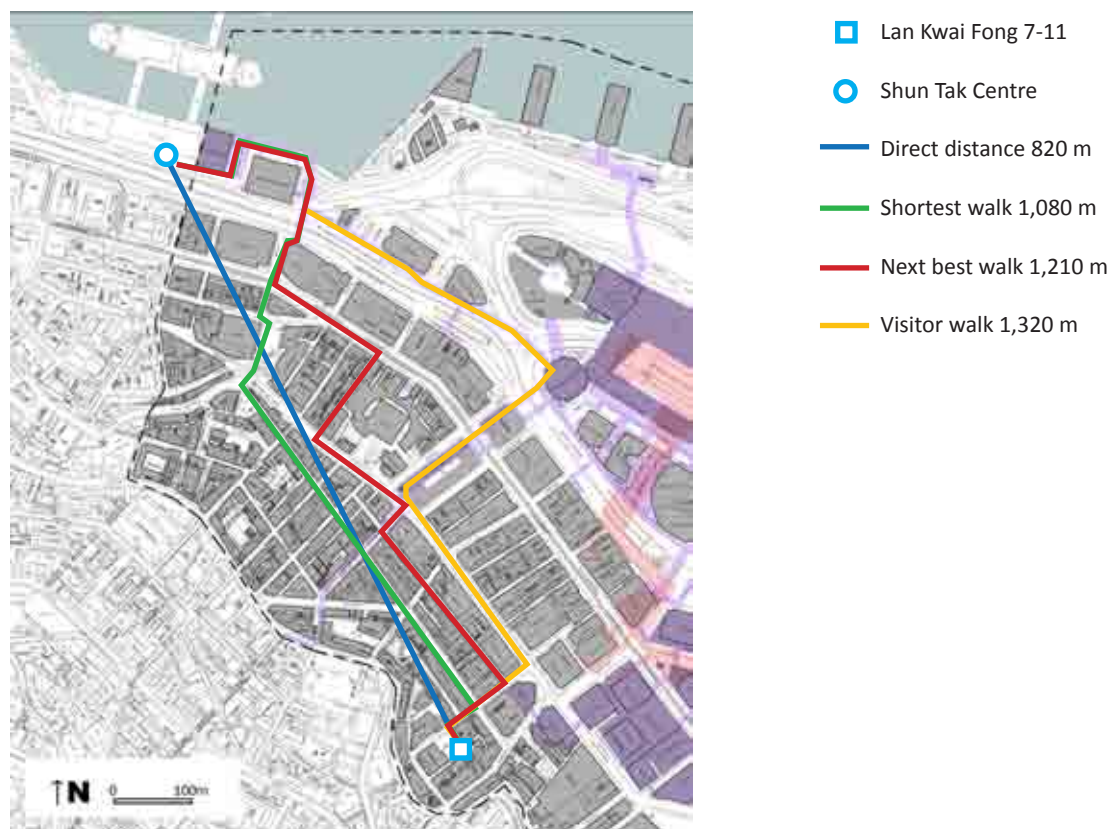


Figure 33

Time and distance measurements of Central Route 1

Route 1	Direct Distance	Walking Distance	Energy Distance	Time (min, sec)
Shortest walk	820 m	1,080 m	1,207 m	16 m, 24 s
Next Best walk		1,210 m	1,436 m	19 m, 47 s
Visitor walk		1,320 m	1,448 m	20 m, 00 s

the walk was also the most time consuming and energy intensive due to level changes. As well, their popularity has meant that heavy traffic flows can be found in the elevated network at peak times.

Central Route 2: Lan Kwai Fong to Central Ferry Pier No. 7

Few alternatives to get to the harbourfront other than the single footbridge system

More than half of Route 2 takes place on the elevated network. This is primarily because the route to Pier 7 includes two adjoining footbridges extending from Chater House, on one side of Connaught Road Central, all the way to the waterfront. All three walks completed the journey using these footbridges as there are no ground-level crossings for some of the roads (Figure 34 and 35).

The street blocks between Queen's Road Central, Des Voeux Road Central and Connaught Road Central are lined with commercial towers with luxury shopping malls on their lower floors, including The Landmark, Alexandra House and Chater House. In their effort to channel people off the street and into their buildings, a system of elevated footbridges are in place to provide an

Figure 34

Direct distance, shortest, next best and visitor walks on Central Route 2. Source: Civic Exchange.



Figure 35

Time and distance measurements of Central Route 2

Route 2	Direct Distance	Walking Distance	Energy Distance	Time (min, sec)
Shortest walk	871 m	983 m	1,116 m	16 m, 35 s
Next Best walk		1,090 m	1,130 m	17 m, 53 s
Visitor walk		1,070 m	1,082 m	21 m, 00 s

indoor, continuous trail, allowing a pedestrian to skip several traffic lights, level crossings and a main through road. Designed, however, for consumers rather than commuters, navigating through these buildings is not easy, especially for first-time visitors. As a result, there is a heavy reliance on directional signage, though these too can vary. Our unfamiliar walker on the Visitor walk found that the signage inconsistency led to confusion, and the need to stop for wayfinding meant that the walk took longer than others on the same route.

Central Route 3: Lan Kwai Fong to the new CGO

Directional signage can be improved along this route

Route 3 takes pedestrians from Lan Kwai Fong to the new CGO, located on the previously reclaimed Tamar site on the Central waterfront. Assessing the walkability of this route is important largely because of its location across Queensway and the 10-lane Harcourt Road, which isolates it from the activities in Admiralty on the opposite side (Figure 36). This means that additional infrastructure was needed to link the complex with the existing street grid.

Figure 36

Direct distance, shortest, next best and visitor walks on Central Route 3. Source: Civic Exchange.

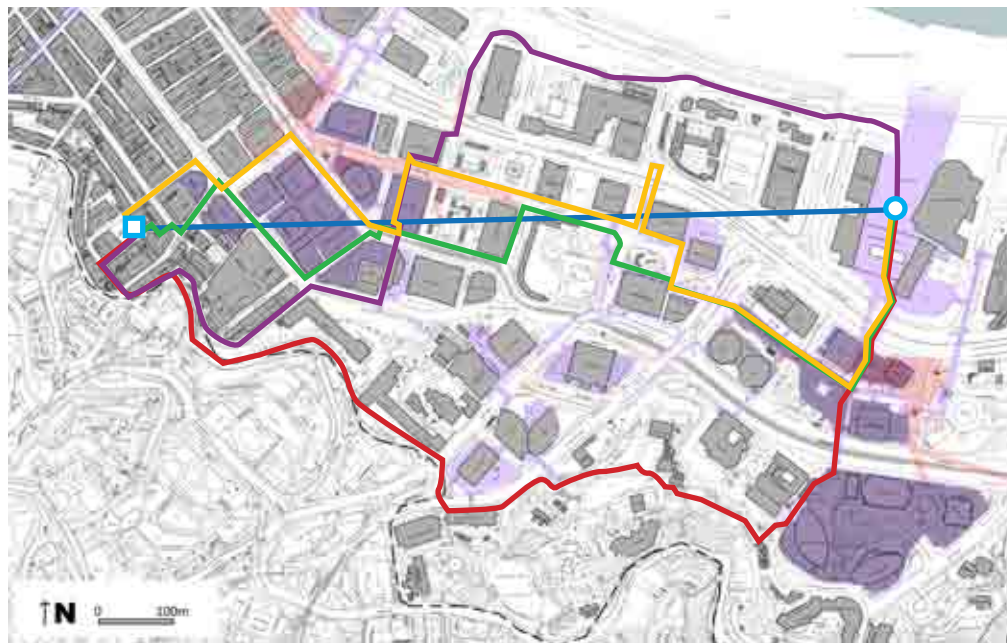


Figure 37

Time and distance measurements of Central Route 3

Route 3	Direct Distance	Walking Distance	Energy Distance	Time (min, sec)
Shortest walk	1,030 m	1,690 m	1,864 m	20 m, 23 s
Next Best walk		2,030 m	2,873 m	28 m, 45 s
Visitor walk		1,800 m	2,072 m	35 m, 13 s
Pram walk		1,690 m	--	27 m, 56 s



Figure 38

Footbridge replaces at-grade crossing at Des Voeux Rd. Photo by Dave Choi.

The Next Best walk was the most lengthy of the four walks on this route, as it travels through Lower Albert Road and the calm of Hong Kong Park. It was also the most energy intensive, with the undulating slopes on this walk requiring 54% more energy than the Shortest walk, which journeyed along the flatter Chater Road towards Admiralty MTR station (Figure 37).

The Visitor walk was also noteworthy because of the additional time taken for wayfinding. The visitor spent 9 minutes searching for a suitable route, attesting to the poor signage in this area for directing pedestrians to the government offices. The walker on the tram route was equally perplexed by the route. Signage for barrier free access was difficult to find, and as much of the waterfront is still a construction site, weather protection is likely to be poor.

3.3.5 Route evaluation

Connectivity

Good connectivity along elevated network, but worsening on street level

On the whole, connectivity in Central is quite satisfactory. The challenge of overcrowding and land use conflict between vehicles and pedestrians is resolved with the development of an elevated pedestrian network that stretches as far south as the Mid-levels, and north to the waterfront. A limited subway system also exists through the MTR network. It is the extensiveness of these alternative networks that has enabled Central to achieve a degree of permeability that has yet to be attained in the other study areas. This is particularly true for established destinations like the Shun Tak Centre, its connectivity with the existing street grid having been tested for almost three decades. Other study routes in Central are less established, and have been shown to be especially difficult for new visitors to locate.

The sample routes also assessed the ease of accessing the Central waterfront, with all three routes finishing at harbourfront locations. Both the Shun Tak Centre and Central Ferry Pier have one primary footbridge that connects the structures with the rest of Central (Figure 38). For the

CGO, at least one additional route was taken (the pram walk), but involved walking adjacent to a construction site.

The street level network is becoming more and more difficult to navigate in Central, as many routes lead pedestrians to the elevated system to cross the wide thoroughfares such as Connaught Road Central and parts of Des Voeux Road, which offers no place for crossing at-grade. This is much less of an issue when connectivity between the network levels is done well, however, level changes are a challenge for wheelchair and pram users, who frequently have to backtrack to gain access. A noteworthy example is the poor connectivity between the CGO footbridge and Admiralty Centre, where a connection at the elevated level does not exist (Figure 40).

Figure 39



The Mid-levels Escalator. Photo by Dave Choi.

Figure 40



A glass wall divides the footbridge at the new CGO from Admiralty Centre. Photos by Eva Tam.

Figure 41



Storage of goods along the route creates pedestrian obstructions. Photos by Eva Tam.

Figure 42



Tree-lined Lower Albert Road and Hong Kong Park was one of the few green and leafy places encountered on the sample routes through Central. Photo by Dave Choi.

Figure 43



Uneven steps on Wellington Street make walking more difficult. Here, pedestrians are seen walking in the road. Photo by Dave Choi.

Obstacles

Goods storage on the street, as well as temporary construction structures are especially problematic in Central's inland areas, where the pavements are narrow and obstructions become additionally inhibiting (Figure 41). The elevated and subway levels are generally devoid of obstacles, save for the intermittent rubbish bins that are usually well spaced.



Figure 44

Footbridge in Central carries commuters between the MTR station and office buildings. Photo by Dave Choi.

Wayfinding

Once on the elevated network, directional signage and maps are generally well provided, but for the newer routes, such as Route 3, their availability and consistency still need to be improved. Signage for barrier free access, which is essential for wheelchair and pram users, was difficult to find on this route.

Physical features

Seating, greenery and pavement quality can be improved

Few of the sample routes in Central took pedestrians through parks and open spaces, except for one that travelled through the leafy Lower Albert Road and Hong Kong Park (Figure 42). Pedestrians in Central are not always commuters looking to dash from one place to the other. Many are people that wish to stroll and stay, but the network provides poorly for these individuals. Seating and greenery only becomes more prevalent once at the waterfront, with lawns at the CGO and seating at the ferry pier providing some much needed amenities for pedestrians. A good exception is Central Oasis, located at the old Central Market, which provides a temporary pit-stop for pedestrians needing a seat in a non-commercial environment. There is room for improvements in the pavement quality on the street level, especially in inner Central where uneven staircases can pose a concern for walking safety (Figure 43).

Walking condition

Public art can enliven Central's streets

Crowds can be an issue in Central, but with good pedestrian flow and a well-connected network, they rarely become a problem, as few places have stationary pedestrian traffic that impedes flow, which might exist at traffic light crossing in other areas.

Central's skyline is spectacular, especially when viewed from the opposite side of Victoria Harbour. Yet the view from street level is devoid of the drama that might be gleaned from afar, with a general absence of public art and visual aesthetics. However, there are plenty of opportunities for improving this, as exemplified by the colourful walls of the Central Oasis (Figure 45).

Figure 45



Seating at Central Oasis (old Central Market). Photo by Eva Tam.

3.3.6 Main issues

Dependence on an elevated pedestrian network means providing barrier-free access is vital

Central today exists in layers, and has done well in dealing with overcrowding and connectivity issues that plague other areas of Hong Kong. This is especially true for Central's inland areas, where the street and elevated levels provide dual pathways for pedestrians to travel on. For the informed insider, walking through Central can approach seamlessness, where short cuts and level changes become habit. However in the newer parts of Central, with structures taking up larger blocks of land close to the waterfront, the street level tends to suffer from poor connectivity. The result is a lack of activity and utilisation. Pedestrian crossings are missing along key routes (Figure 46). The main disadvantage of the extensive elevated level in Central is the fact that the elevated network has replaced street level facilities in some areas.

Universal access is an important issue in Central. The hills and slopes in the southern part of the district create a natural handicap. Even on flatter ground, where barrier-free access should be more easily provided for, the removal of street level provisions for pedestrians, in favour of the elevated or underground levels, has produced a great necessity to provide easy access for those in wheelchairs, those pushing prams and the elderly. Sadly, the extensive elevated network has not ensured that connectivity and accessibility is available for all.

3.3.7 Recommendations

Waterfront development provides unique opportunity to enhance Central's walking corridors

1. Prioritise street level connectivity, activity and intimacy. The Central-Wan Chai Bypass currently under construction gives another opportunity to improve the permeability of the pedestrian networks around the Central waterfront (Figure 47). Strong connectivity at street level must be ensured at the development phase, where permanent infrastructure can make a lasting impact on the area's walkability. Key elements include a selection of walkways that extend from existing corridors from Central's inland areas to the waterfront, as well as at-grade crossings and greater street activity in the newly developed area.

Figure 46



Lack of street-level pedestrian network near the IFC. Photo by Eva Tam.

Figure 47



A new waterfront in Central awaits. Photo by Dave Choi.

2. Extend walking paths to neighbouring waterfront areas in both the east and west, providing the potential for continuous harbour access for pedestrians. This is one important way of ensuring that the waterfront remains in public hands.
3. Improving universal access is vital. This involves ensuring that lift access is well provided for at key level change junctures, as well as a consistent format for maps and signage throughout the Central area.
4. Create greater opportunities for public art and street performances throughout the street and elevated network levels, to cultivate an active street life.

3.4 Victoria Harbourfront—Tsim Sha Tsui

3.4.1 Area characteristics

Throughout the twentieth century, TST experienced a continuous renaissance and reinvention

On the Kowloon side of Victoria Harbour lie the cape of Tsim Sha Tsui. Since being ceded to the British Empire in 1860, Tsim Sha Tsui has morphed from a much narrower neck of land with twin hills to a flatter and much greater territory due to successive reclamation of its waterfront, creating new development clusters such as Tsim Sha Tsui East and West Kowloon. This has coincided with increasing transport links with the rest of Hong Kong, beginning with the Star Ferry in 1888 that linked Central with the Kowloon Peninsula, followed by the Kowloon-Canton Railway in 1915, which connected Kowloon to the border with Mainland China, and established Tsim Sha Tsui as a key staging point for business and trade.

As Hong Kong became a vital entrepôt in Asia, Tsim Sha Tsui started to attract a variety of traders, most notably Indian and Parsi merchants, that enlivened the district with different traditions, food and cultures. Low-rise residential blocks were built here before any other place in Kowloon, to house the growing number of workers for trading companies on the harbourfront. Tourism, too, started early. The Peninsula Hotel was opened in 1928 and has withstood a Japanese invasion and been graced by international superstars, but importantly the hotel set the vogue for other tourist establishments to be built here, extending towards Tsim Sha Tsui East and in recent years to Hung Hom. In fact throughout the twentieth century, Tsim Sha Tsui experienced a continuous renaissance and reinvention, whether as a thriving port, a railway and bus terminal, a nucleus for the tourist trade, or a platform for cultural, fine arts and religious activities. It is the stunning setting, with its world-class waterfront and promenade, as well as a diverse and thriving street life that continues to sustain Tsim Sha Tsui's appeal to locals and visitors alike.

Figure 48



View of vehicle-choked Nathan Road. Photo by Dave Choi.

3.4.2 Study boundary

As illustrated in Figure 49, the study area for Tsim Sha Tsui covers five main roads, including Canton Road, Kowloon Car Park Drive, Nathan Road, Chatham Road South and Salisbury Road. The permeability of the pedestrian network of the areas enclosed by these main roads, as well as travels across them, will be assessed.

3.4.3 Pedestrian network

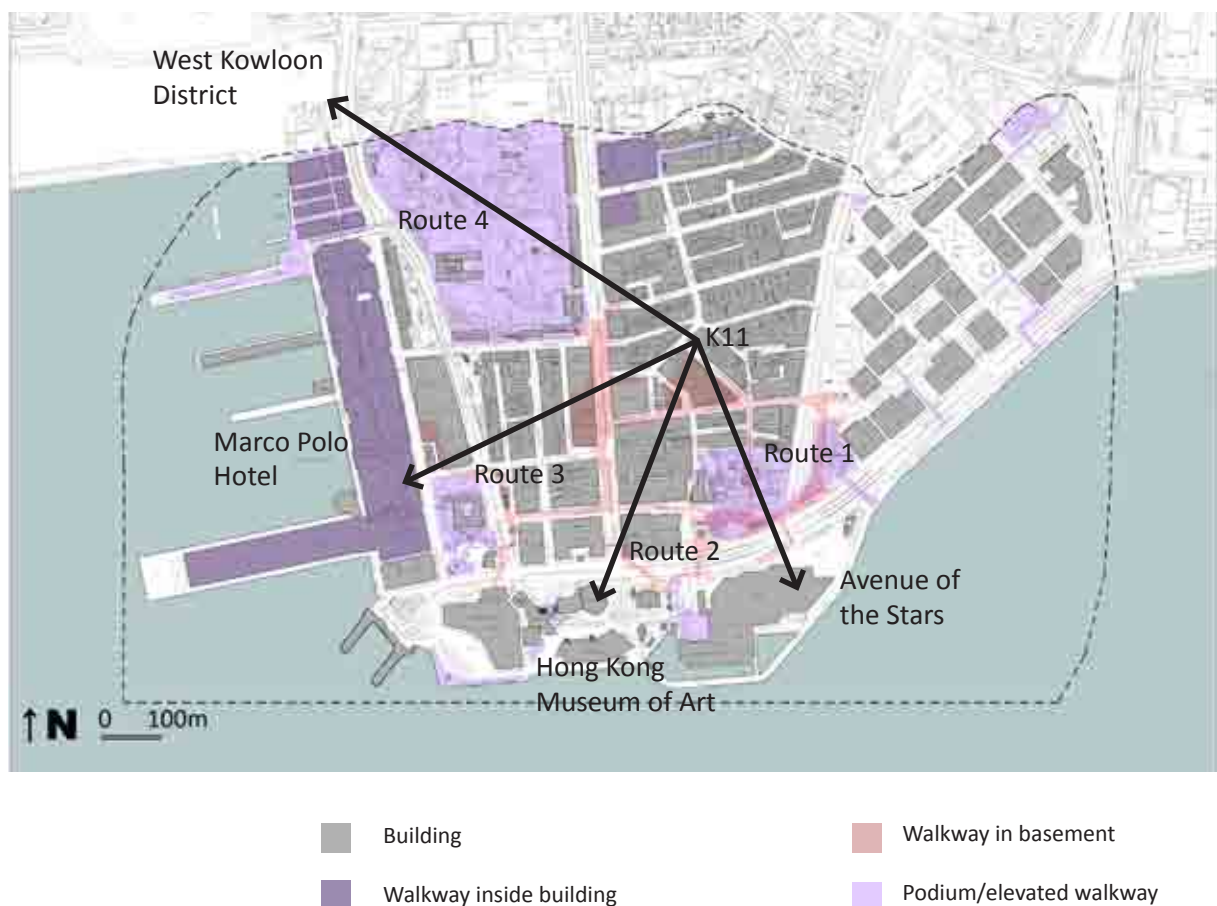
An extensive underground network

The main feature of the pedestrian network in Tsim Sha Tsui, as shown in Figure 49, is an underground subway system that stretches along the central spine of Nathan Road, from the waterfront end and along parts of Salisbury Road, up to Cameron Road in the north. It also extends to Tsim Sha Tsui East and as far west as 1881 Heritage, a jumping off point for the Star Ferry, an all-weather alternative to pounding the pavements at street level.

The wide thoroughfares such as Nathan Road and Haiphong Road, which from early evening onwards heave with the walking masses, give way to smaller tributary streets with narrower pavements. On some of these paths, where pedestrians frequently stray onto the road, street calming plans have been put in place. An extension of these initiatives may ease pedestrian conflicts with motor vehicles in other trouble spots.

Figure 49

Tsim Sha Tsui study area with sample routes. Source: Civic Exchange.



In certain places along the road network in Tsim Sha Tsui, footbridges and subways have replaced street level crossings. This may have been viewed as a win-win for pedestrian safety and the flow of cars and buses, but in many cases, the loss of a proper traffic light controlled at-grade crossing has meant lengthy, and often confusing, detours for pedestrians. This is most distressing at the Salisbury and Nathan Road intersection, as well as the Peking Road and Kowloon Park Drive intersection.

3.4.4 Sample Routes

Four sample routes to different points along the harbourfront

Four sets of sample routes were selected, each starting at K11, a shopping mall that is located at the centre of Tsim Sha Tsui (see Figure 49). From here, three of the routes took the project team to popular tourist destinations, namely the Avenue of Stars, the Museum of Art, and the Marco Polo Hong Kong Hotel. The last route ventured to the future grounds of the WKCD, an important test of its pedestrian connectivity with the existing fabric of Tsim Sha Tsui's street grid.

Tsim Sha Tsui Route 1: K11 Shopping Mall to Avenue of Stars

Getting across Salisbury Road requires significant diversions for pedestrians

Getting to the Avenue of Stars from the K11 Shopping Mall obliged the walker to use either the underground or elevated levels, or both (Figure 50). Walking towards Chatham Road South was in fact the most expedient (shortest walk), but once the road was crossed, the pedestrian is required to travel on the elevated walkway, onto the rooftop of the Tsim Sha Tsui public transport interchange. Signage then directs people to the waterfront through a footbridge across Salisbury Road. This walk expended the least energy, with the shortest amount of time, because an escalator is available to get the pedestrian up onto the elevated level.

If one decided to stay as much as possible at street level (Next Best walk), a staircase connecting Minden Row and Middle Row provides pedestrian-only access. However, crossing Salisbury Road still requires the walker to head underground, through Tsim Sha Tsui's subway network before exiting at the other side of the road. From there, one must take a large detour to actually get to the waterfront, owing to the construction of New World Centre, which prevents a more straight-line route to be taken. Due to this diversion, this walk takes slightly longer than the shortest walk, and considerably more energy owing to the underground level change (see Figure 51).

A new visitor to this part of Tsim Sha Tsui might choose to take the subway network, thinking that the good directional signage underground might mean less effort for navigation. On this route, however, they would be mistaken. The visitor walk on Route 1 started the journey at K11 by heading down to the subway, walking along the subterranean Mody Road and Chatham Road South, before exiting at Middle Road. The walker then heads to the street level, and immediately up to the elevated Middle Road Children's Playground. This is a good choice for unhurried amblers, but actually demands some backtracking in order to cross Salisbury Road for the waterfront, a considerable time and energy waster.

Tsim Sha Tsui Route 2: K11 Shopping Mall to the Hong Kong Museum of Art

Attempting to stay at street level to get to the Museum of Art will require the walker to take one of two walkways. For the first, a pedestrian should head

Figure 50

Direct distance, shortest, next best and visitor walks on Tsim Sha Tsui Route 1. Source: Civic Exchange.

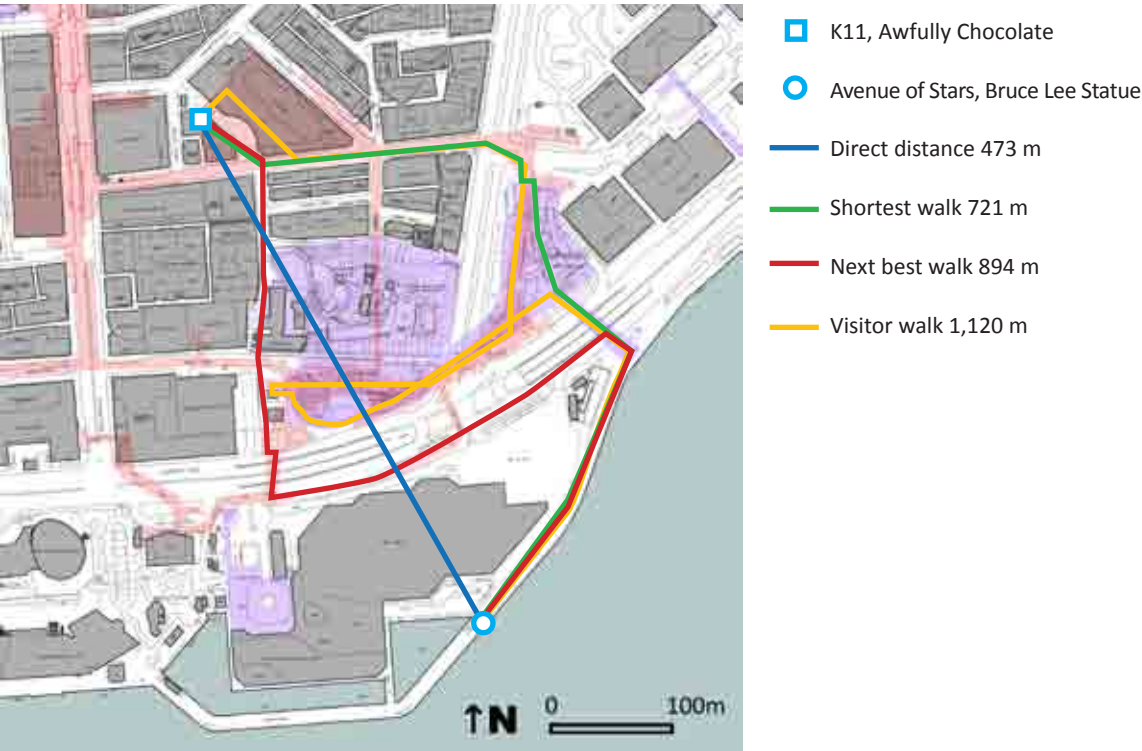


Figure 51

Time and distance measurements of Tsim Sha Tsui Route 1

Route 1	Direct Distance	Walking Distance	Energy Distance	Time (min, sec)
Shortest walk	473 m	721 m	733 m	15 m, 50 s
Next Best walk		894 m	952 m	16 m, 21 s
Visitor walk		1,120 m	1,123 m	19 m, 20 s

back to Nathan Road via Mody Road (Shortest Walk). This walk is relatively straightforward and even pleasant, in that the street did not exhibit the same degree of crowding at 11 a.m., when the walk was taken, compared to the evening periods. Just when a walker reaches Salisbury Road, with the water within view, one must head to the subway level in order to get across.

The other option is to take the stairs that connect Minden Row and Middle Road (Next Best walk), but again, the underground is the only option for crossing over Salisbury Road and onto the harbourside. Due to the additional staircase, this walk took up the most energy of all walks on Route 2 (see Figures 50 and 51).

Travellers are led to an underpass to get across Salisbury Road

A visitor (Visitor walk) is likely to think of heading towards Nathan Road from K11, from where the Museum of Art and the waterfront is a direct straight line. The walkway along the subway system is easy for navigating, but with the lack of visual landmarks, a visitor might head above ground once they arrive at Nathan Road. Yet, unbeknownst to a visitor, it would be more time and energy efficient to remain at the subway network, because Salisbury Road can only be crossed underground.

Figure 52

Direct distance, shortest, next best, and visitor walks on Tsim Sha Tsui Route 2. Source: Civic Exchange.

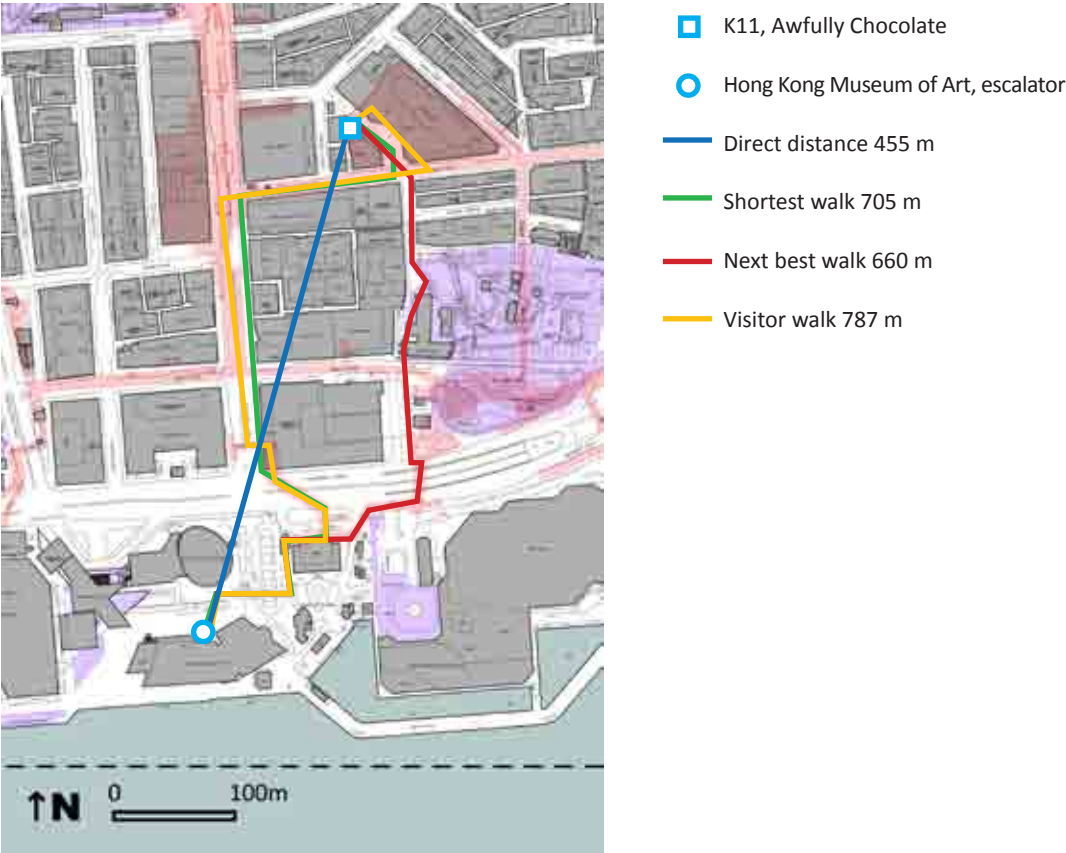


Figure 53

Time and distance measurements of Tsim Sha Tsui Route 2

Route 2	Direct Distance	Walking Distance	Energy Distance	Time (min, sec)
Shortest walk	455 m	705 m	712 m	09 m, 56 s
Next Best walk		660 m	739 m	10 m, 45 s
Visitor walk		787 m	796 m	12 m, 23 s

Tsim Sha Tsui Route 3: K11 Shopping Mall to Marco Polo Hotel Hong Kong

Getting across
Kowloon Park Drive
also requires travellers
to go underground

On Route 3, the project team experimented with taking a walk to the Marco Polo Hotel, on the western end of Tsim Sha Tsui, on both a weekday lunch-time (Shortest walk) and weekend lunch-time (Next Best walk) (Figure 54 and 55). The difference was minor, but it did reveal that the weekend crowds were slightly bigger, and the walk more time consuming, than on the weekday.

Peking Road is split by Kowloon Park Drive, and pedestrians are led to an underground subway to get to the opposite side. To avoid this, walkers can take Haiphong Road, which requires one to first locate Nathan Road. Our visitor walker found it easiest to head underground, looping back up at Kowloon Park, before heading in the direction of the Marco Polo Hotel. While the street

Figure 54

Direct distance, shortest, next best, visitor and pram walks on Tsim Sha Tsui Route 3.Source: Civic Exchange.

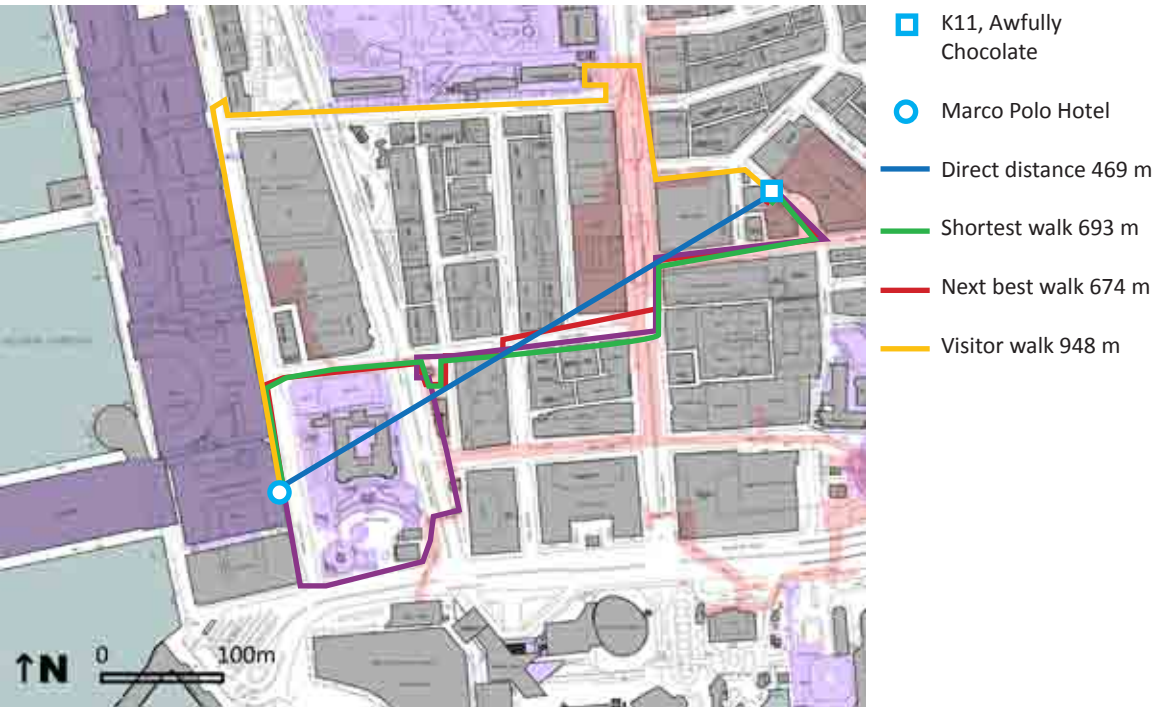


Figure 55

Time and distance measurements of Tsim Sha Tsui Route 3

Route 3	Direct Distance	Walking Distance	Energy Distance	Time (min, sec)
Shortest walk	469 m	693 m	710 m	12 m, 14 s
Next Best walk		674 m	725 m	12 m, 56 s
Visitor walk		948 m	982 m	14 m, 10 s
Pram walk		948 m	--	18 m, 15 s

level directions are straightforward from here, what the visitor did not realise was that it may have been easier to stay on the street the entire way, crossing Nathan Road at-grade instead, which would have saved time and energy.

Walking with a pram illustrates the frustrations of the futile attempt to complete a walking route at street level. The lack of an at-grade crossing across Kowloon Park Drive meant that our pram walker had to backtrack twice before realising that the only way across was through the subway system. As a result, a considerable amount of time was consumed by wayfinding.

Tsim Sha Tsui Route 4: K11 Shopping Mall to West Kowloon district

Connections to West Kowloon through Kowloon Park are currently lacking

The most direct route from the K11 Shopping Mall to the Tsim Sha Tsui Fire Station, which is situated at the edge of the future WKCD, is a diagonal walk through Kowloon Park, exiting at the northwest corner (Figure 56). This connection does not currently exist, so pedestrians have to either take the street pavements along Canton Road (Shortest walk), or enter into Kowloon Park but exit at one of the existing gates off Canton Road, as the Next Best walk illustrates.

Figure 56

Direct distance, shortest, next best and visitor walks on Tsim Sha Tsui Route 4. Source: Civic Exchange.

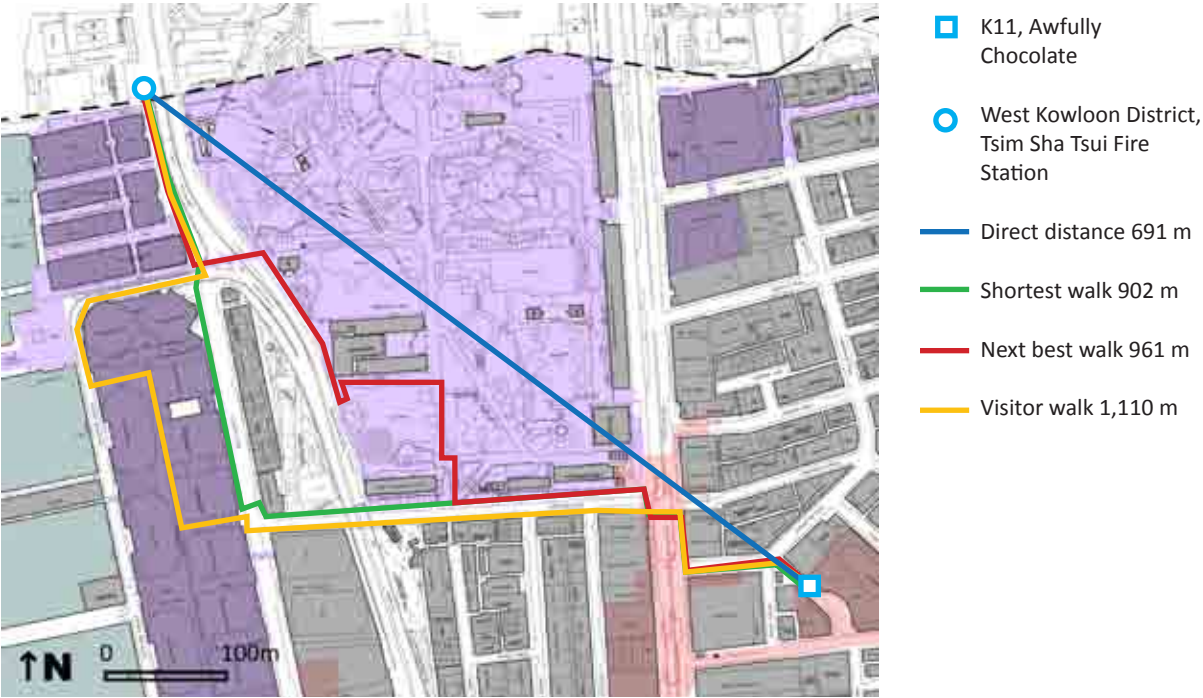


Figure 57

Time and distance measurements of Tsim Sha Tsui Route 4.

Route 4	Direct Distance	Walking Distance	Energy Distance	Time (min, sec)
Shortest walk		902 m	905 m	15 m, 54 s
Next Best walk	691 m	962 m	1,247 m	18 m, 12 s
Visitor walk		1,110 m	1,111 m	18 m, 22 s

The walking distance between the two options were minor, but when time and energy levels are considered, it is clear that the shortest walk is preferable. In fact, the walk through Kowloon Park requires 40% more energy than staying on the street pavement, as Figure 57 shows.

The Visitor walk on Route 4 is of note because the walker's efforts to reach the West Kowloon District by heading as close as possible to the water's edge was ultimately stumped by a lack of pedestrian connectivity, where buildings actually block the way through. As a result, the visitor had to eventually veer back onto Canton Road to arrive at the Tsim Sha Tsui Fire Station.

3.4.5 Route evaluation

Connectivity

TST necessitated more detours than any of the other study areas

Unlike Mong Kok, where a tight street grid with short blocks and frequent intersections still remain, routes along Tsim Sha Tsui require substantial detours. These walking routes can diverge considerably, meaning that a

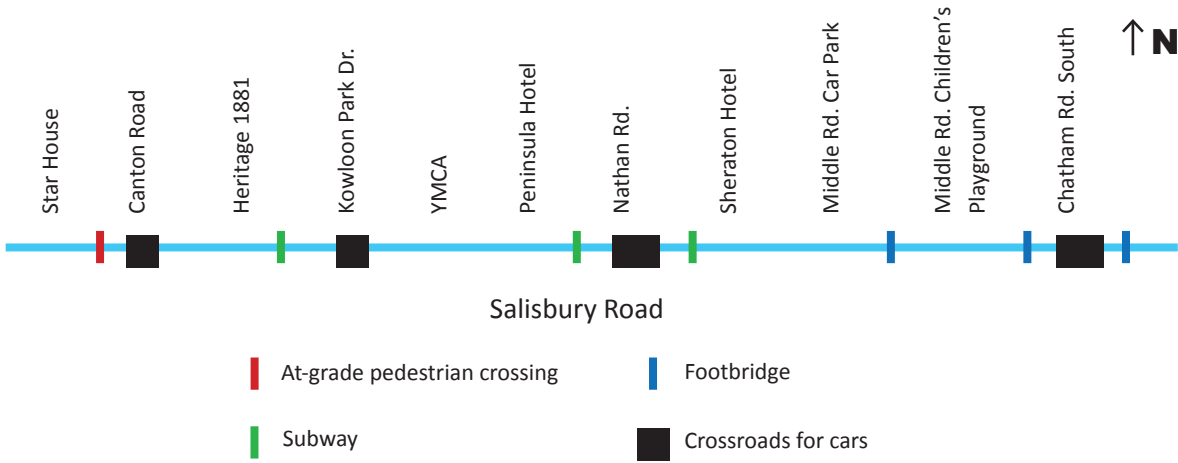
Figure 58



Pedestrians are led underground to cross Salisbury Road. Photo by Eva Tam.

Figure 59

Schematic of Salisbury Road. Source: Designing Hong Kong.



pedestrian can walk up to double, or even triple the distance compared to the distance of a hypothetical straight line from point to point. Overall, the walking routes in Tsim Sha Tsui necessitated more detours than any of the other study areas, despite the investments in recent years to implement pedestrian connectivity with a widespread subway system.

Footbridges and subways can be useful if they provide an equal or greater convenience for pedestrians. But for many people, the existing subway network in Tsim Sha Tsui requires some degree of navigation, not to mention the time and energy required to move from the street level to the underground, and eventually back up.

Figure 60



Government-owned areas (left) and privately-owned areas (right) of Tsim Sha Tsui subways offer inconsistent signage. Photos by Eva Tam.

The elevated network is limited but offers a better connection. The elevated open space that is integrated with walking paths offers clear sight of landmarks, such as a footbridge over Salisbury Road, where the water acts as a visual marker, facilitating wayfinding.

Obstacles

The removal of at-grade street crossing creates a major obstacle for getting around TST

As in most urban areas in Hong Kong, the pavements in Tsim Sha Tsui are obstructed by the usual objects such as bins, signposts, phone booths and railings. During the evening peak, these objects can be an obstacle to pedestrian flow. These items do far less damage, however, than permanent obstructions such as buildings and roads that upends footpaths. The Tsim Sha Tsui sample routes have unveiled the connectivity issues along the waterfront, that a continuous link between the Tsim Sha Tsui promenade and the West Kowloon District is impeded by the Ocean Terminal complex. In addition, the troubling trend of removing at-grade crossings barricades one section of Tsim Sha Tsui from another, as experienced along Salisbury Road (Figure 59) and Kowloon Park Drive.

Figure 61



At Tsim Sha Tsui/East Tsim Sha Tsui station, the wayfinding maps do not include non MTR-owned subway networks (left). On the right, we have superimposed the missing subways to complete the map. Photos by Eva Tam.

Wayfinding

The extensive subway network is completely furnished with maps and directional signage which guide pedestrians to key destinations, and divided into colour-coded zones. For visitors who are unfamiliar with this system, it can take considerable navigation to locate the route to their destination. More distressing is that the signs are not always consistent, and even when they do, can mean a substantial diversion (Figure 60). Moreover, the map of the subway network is incomplete (Figure 61). It fails to provide a complete image for map readers.

Physical features

Underground tunnels have little visual interest

The underground tunnels are ideal for pedestrians eager to get from A to B, but what if one does not have a destination? The majority of the passageways underground are merely tunnels with little visual interest or

Figure 62

Underground pedestrian subways in Tsim Sha Tsui.



Low foot traffic for subway with zero activities. Photo by Eva Tam.



Higher foot traffic for subway with economic activities and seating areas. Photo by Eva Tam.



Figure 63

Crowding in the late afternoon along Haiphong Road. Photo by Dave Choi.

landmarks that act as natural signposts (Figure 62). This contrasts with the street level, where even for the most unfamiliar, one is likely to be able to see where you are in relation to the water. Much can be done to enhance the enjoyment level of the subway network.

Walking conditions

Overcrowding and roadside pollution is an issue on TST's major pedestrian thoroughfares

The walking areas in Tsim Sha Tsui are well maintained. Pavements are generally free of litter, and laid with attractive paving material. Like many urban areas in Hong Kong, the visual stimulation can be overwhelming, being crammed with advertising above the pedestrian sightline. Overcrowding continues to be an issue during the evening peak, especially along the tributary roads off Nathan Road (Figure 63). It is not difficult to find pedestrians using hands or handkerchiefs to cover their faces at the roadside, especially at crossings of Humphreys Avenue, Haiphong Road and Nathan Road.

3.4.6 Main issues

Streets have become people-expressways with little motivation for conversations and social life

The segregation of pedestrian and vehicular traffic has been less successful in Tsim Sha Tsui than in places like Central. Where Central has a well-connected elevated system, the extensive subway network in Tsim Sha Tsui hinders rather than eases the movement of the pedestrian masses. Certainly, efforts in recent years to create an underground and elevated system in Tsim Sha Tsui have expanded the pedestrian space, but in certain key locations, the street level accessibility has been decimated, and at-grade pedestrian crossings have been replaced by road traffic corridors that enable buses and other vehicles to move in and out of Tsim Sha Tsui at speed. In crowded areas of Tsim Sha Tsui, what pedestrians need is a choice of pathways, whether

over- or underground, some suitable for short cuts, and others suitable for strolling or staying. The subway and elevated levels should increase the diversity of pedestrian corridors, rather than to replace existing ones.

When people and activities are focused away from the street level, conviviality and street life is channeled into pocket areas—on rooftop park areas, in enclosed shopping malls, or a waterfront that is separated from the street grid. The spaces in between are mere people-expressways with little motivation for conversations and social life. Even places designed for lingering, such as Kowloon Park or the Tsim Sha Tsui Promenade, are exemplified by their separateness from the street—the joy of accidentally stumbling upon such places, or wandering into a scenic spot *en route*, are made more difficult when streets are seemingly oriented towards directing people to pass efficiently by rather than to remain.

Tsim Sha Tsui as a tourist spot should have ample provision for access, parking and loading of vehicles. However, Figure 65 illustrates the lack of facilities resulting in roadside parking and double-parking of coaches, which impacts the pedestrian experience of the area.

3.4.7 Recommendations

Pedestrian network planning needed, from reinstating street level crossing to integrating with parks and properties

1. Plan for district networks, not just station networks.
2. Prioritise pedestrian connectivity at street level:
 - a) Reinstate at-grade crossings on Salisbury Road to provide the dual option of street and underground level access to the waterfront;
 - b) Reinstate at-grade crossing of Kowloon Park Drive at Peking Road;
 - c) Widen effective footways (remove obstacles, widen pavements);
 - d) Integrate parks and properties into pedestrian network planning; and
 - e) Enable pedestrian connectivity between the existing street grid and the master plan for the WKCD. A contiguous green pedestrian network using Kowloon Park can be created, as well as a continuous waterfront promenade from Tsim Sha Tsui to the WKCD.
3. Provide a comprehensive climate-controlled grade-separated network:
 - a) Consolidate all below-ground links as one network;
 - b) Expand the underground network; and
 - c) Provide a direct link from the Tsim Sha Tsui MTR station to the waterfront.
4. Simplify and co-ordinate signage and maps throughout the district, to ameliorate confusion and enhance wayfinding:
 - a) Use a consistent set of signage (symbols and icons) to indicate the underground network (currently either a MTR logo or a wire figure going downstairs is used);

Make signage, maps and the naming of landmarks consistent throughout TST

- b) Create a consistent system of names/numbering for entrances and exits to the underground network, whether it is an MTR exit (e.g. Exit A1) or a subway exit;
 - c) Name each tunnel (same name as road above);
 - d) Extend visual identity of properties underground (landmarks);
 - e) Standardise direction signage to entrances;
 - f) Standardise maps and direction signage inside; and
 - g) Replicate a busy street: shops, seating, busking.
5. Enhance wayfinding:
- a) Develop a mapping system for a layered city;
 - b) Create navigation applications for handheld and other devices;
 - c) Make sure that on all maps, north is north;
 - d) Create one consolidated pedestrian information system irrespective of ownership; and
 - e) Single naming system for entrances & exits.
6. Enhance finding of barrier-free access:
- a) Identify barrier-free routes;
 - b) Directional signage to barrier-free access facilities; and
 - c) Notices (such as lift repair) should be bilingual.
7. Introduce temporary art and performance activities along the subway system to enliven the atmosphere. Bring the outside in, and allow daylight, wherever possible, into the subway network.
8. Ensure that the new development at the New World Centre site is pro-pedestrian, creating seamless links from the street to the waterfront with both over- and underground connections.

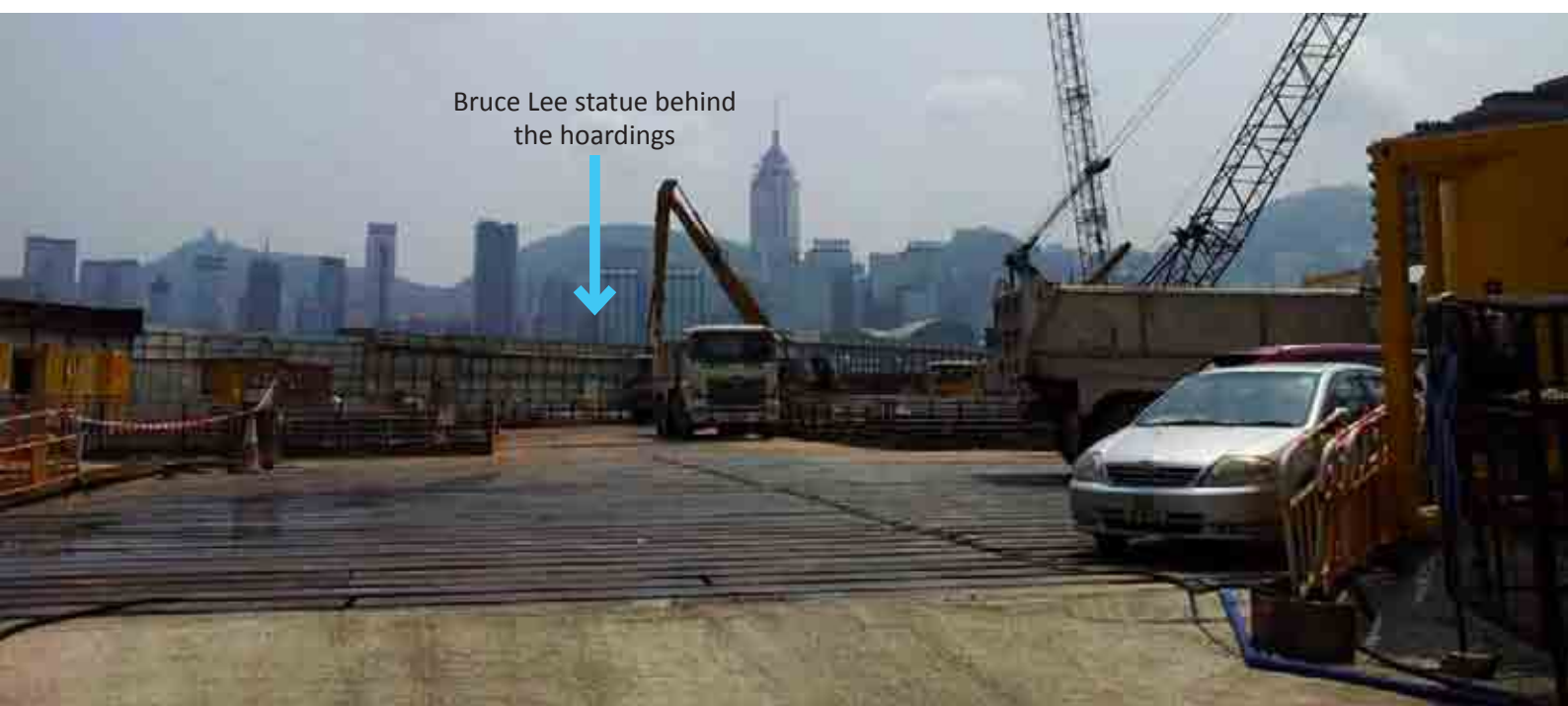


Figures 64-66

Figure 64, top: Lack of seating at street level. Photo by Eva Tam.

Figure 65, left: Tour coaches occupy Salisbury Road. Photo by Eva Tam.

Figure 66, below: Entrance of construction site for former New World Centre, where pedestrian connectivity is critical. Photo by Eva Tam.



Bruce Lee statue behind the hoardings

3.5 Mong Kok

3.5.1 Area characteristics

Long reputed as a marketplace and, owing to its centrality, a key transport hub

Mong Kok has long been a place to congregate. It began to flourish as a busy market in the early 1900s, with sellers who brought their wares across the bamboo fence along Boundary Street that once divided Kowloon with what was then China. The area was soon segregated by the products and wares that were sold, as immortalised by the formal and informal names given to the various streets within Mong Kok's street grid, such as Fa Yuen Street, Sai Yueng Choi Street, Ladies Market, Goldfish Street, and Bird Street.

The area's standing as a food and shopping hub continues today thanks to the influx of an evolving range of items and shops that vie for limited commercial space at street level. The pressure for real estate has driven commercial interests up—whether in the repurposing of a residential low-rise into a building of trendy cafes, or the Langham Place development that has shoppers spiraling up its 15-level shopping mall. Changes are happening as well on the street level, with Sai Yeung Choi Street South becoming a part-time pedestrian way, which has encouraged street performance, demonstrations, and more sellers heckling for the attention of the passers-by.

The area may have benefited from its history as a market-place, but its persistence as an important focal point of activity is more likely due to its location in the geographical centre of Hong Kong. In fact, development sprawled both east and west of Mong Kok during Hong Kong's heady days as a manufacturing hub, and in new towns that sprung up in the New

Figure 67



A Mong Kok street at night. Photo by Dave Choi.

Figure 68

Mong Kok study area with sample routes. Source: Civic Exchange.



Territories. Business interests have also travelled northwards from the costly rents of Central and Tsim Sha Tsui. Most significantly, its centrality has helped to establish Mong Kok as a major transport point, with its dual connecting lines along the MTR, a train line that extends to the border with China, buses through Kowloon's major artery, Nathan Road, and as a minibus starting point to almost anywhere in Hong Kong. Both its colourful history and its central position continue to draw interest amongst residents and non-residents, as well as international tourists.

3.5.2 Study boundary

The study area is bounded by MTR Mong Kok East Station and its railway track to the east, Dundas Street and Waterloo Road to the south, Shanghai Street to the west and Prince Edward Road and Flower Market Road to the north.

3.5.3 Pedestrian network

The street grid is designed with short blocks and numerous intersections

As Figure 68 shows, the street level network in Mong Kok is designed in a grid-like manner with short blocks and numerous intersections, which makes it highly permeable for walking. Several places, however, are particularly problematic for pedestrians, including Nathan Road, Argyle

Figure 69



Footbridges serve as an alternative route option for pedestrians. Photo by Dave Choi.

Street and Sai Yee Street. Nathan Road, for example, divides the two sides of the district, requiring pedestrians to make detours despite having five at-grade crossings and three subways.

Two footbridges take pedestrians onto the elevated Mong Kok East Station, crossing over Argyle Street and stretching along Mong Kok Road (Figure 69). These footbridges are frequently used, especially in places where at-grade crossings have been eliminated, such as in crossing Sai Yee Street at Bute Street, and Argyle Street at Yim Po Fong Street.

3.5.4 Sample routes

Three sets of sample routes have been selected, taking the surveying team through different network levels, local landmarks, pedestrian hot spots and key thoroughfares.

Route 1: Park-in Commercial Centre to Mong Kok East Station

Route 2: Mong Kok East Station to Cité 33

Route 3: Flower Market to Langham Place

Mong Kok Route 1: Park-in Commercial Centre to Mong Kok East Station

Barrier-free access is available but requires some diversion

This route traverses through the east side of Nathan Road, along some of the busiest and most congested parts of Mong Kok. The small blocks and numerous intersections make cautionary (unsafe) crossing tempting. It ends at the elevated Mong Kok East station, necessitating a level change (Figure 70).

Of the four walks on Route 1, only the Shortest walk offered some respite from the crowds, travelling on the quieter Yim Po Fong Street before reaching the footbridge that leads to the Mong Kok East station. The Next Best walk took the walker along the sloping Luen Wan Street, where energy use is 30% more than that of the Shortest walk due to the persistent incline of this stretch to the station (Figure 71).

The pram walk is of particular interest. A large map dedicated to showing barrier-free access to lifts up to the station is provided on a wall underneath the footbridge to the station. Yet it instructs these walkers to backtrack a few hundred metres before getting to a lift, in order to reach the elevated station. This costs the pram walker a substantial amount of time and energy.

Figure 70

Direct distance, shortest, next best, visitor and pram walks on Mong Kok Route 1. Source: Civic Exchange.



Figure 71

Distance measurement and timing for Mong Kok Route 1

Route 1	Direct line distance	Walking distance	Energy distance	Time (min, sec)
Shortest walk	708 m	955 m	970 m	16 m, 00 s
Next Best walk		1,029 m	1,251 m	22 m, 00 s
Visitor walk		1,030 m	1,045 m	23 m, 00 s
Pram walk		1,476 m	--	29 m, 30 s ⁹²

Mong Kok Route 2: Mong Kok East Station (Exit C) to Cité 33

Good connectivity at the street level

This route focuses on the northern end of Mong Kok, travelling from east to west while passing its many themed streets, and finally traversing the heavily trafficked Nathan Road (Figure 72).

Route 2 has good connectivity at both the street and elevated levels. Two of the walks travel along Bute Street, a busy thoroughfare that links the traffic corridors of Nathan Road and Sai Yee Street. Sai Yee Street is a tree-lined avenue, which offers a degree of climate control, and exemplifies what can be done in a car-choked area to address air pollutants.

Figure 72

Direct distance, shortest, next best, visitor and pram walks on Mong Kok Route 2. Source: Civic Exchange.



Figure 73

Distance measurement and timing for Mong Kok Route 2

Route 2	Direct line distance	Walking distance	Energy distance	Time (min, sec)
Shortest walk	477 m	608 m	703 m	11 m, 00 s
Next Best walk		904 m	999 m	16 m, 00 s
Visitor walk		584 m	701 m	17 m, 00 s

This is a straightforward route, and differences in the walks are minor, differentiated by the Shortest and the Next Best walks, which remained at the street level, and the Visitor walk, which ventured across Nathan Road with the underground subway (Figure 73).

Mong Kok Route 3: Flower Market to Langham Place

Overcrowding at Argyle Street and level changes are unavoidable on this route

The origin and destination of this route are two key landmarks in Mong Kok, but the distance between them makes certain pedestrian black spots, such as the overcrowded Argyle Street, as well as level changes, unavoidable (Figures 74 and 75).

This route showcases some of the more troubling spots in Mong Kok, such as navigating through road traffic and fumes on Nathan Road, and the utility of the footbridge and underground MTR network as the preferred walking network for those unfamiliar with Mong Kok's tight-knit streets. This is due to the clarity of directional signs and maps at these levels that help the uninitiated to traverse through various parts of Mong Kok.

Figure 74

Direct distance, shortest, next best, visitor and pram walks on Mong Kok Route 2. Source: Civic Exchange.



Figure 75

Distance measurement and timing for Mong Kok Route 3

Route 3	Direct line distance	Walking distance	Energy distance	Time (min, sec)
Shortest walk	683 m	949 m	949 m	17 m, 00 s
Next Best walk		863 m	863 m	22 m, 00 s
Visitor walk		995 m	1,035 m	24 m, 00 s

3.5.5 Route Evaluation

Connectivity

Mong Kok scores well on connectivity but improvements needed to subway quality

Mong Kok generally scores well on connectivity, with ample choice of routes that provide subtle changes in walking experience. The street level is generally well connected, as are the network changes between the elevated and underground levels, where clear directional signage is displayed. The prevalence of signage makes Mong Kok relatively easy to navigate.

Some subway paths are underused, and suffer from inadequate lighting, cleanliness, and/or signage (Figure 76). The lack of an elevator on the Bute Street side of the footbridge can inhibit wheelchair and pram users when coming from the elevated Mong Kok East station.

While there are lift facilities for walkers with prams and heavy luggage to support the level change to the station, it can take significantly longer and even double their walking distance (see Route 1).

Obstacles

Overcrowding and street-side obstacles are major issues

A plethora of signage is posted throughout Mong Kok’s street and public areas, especially advertising banners that knuckle for space with bus and minibus stands, rubbish bins, mailboxes, phone booths, lampposts and temporary structures such as road maintenance and goods storage (Figure 77).

Figure 76



The subway level could do with a facelift. Photo by Eva Tam.

Figure 77



Street corners are often used for storage. Photo by Dave Choi.

Figure 78



Argyle Street. Photo by Dave Choi.

A good example is Bute Street, where the road is often crammed with packed cars, double-parked loading vehicles and temporary goods storage, all potential obstacles for a secure passage. During peak times, the narrow pavements are insufficient to hold the masses of pedestrians, leading many to meander onto the road and its many hazards. The crowds themselves are also an obstacle, especially on main and pedestrian streets, where crowding is aggravated with cross, counter and stationary flows of pedestrians at transport terminals, shop entrances, road crossing areas and junctions.

Wayfinding

With frequent directional signage and visitor maps on popular street intersections, wayfinding is not difficult for visitors. Key landmarks such as Nathan Road, Argyle Road, Fa Yuen Street and Langham Place provide notable visual markers that ease navigation.

Some inconsistency in signage can be found on the elevated footbridges, the station and shopping malls, which should be made consistent to ease wayfinding. The smaller stretches such as Nullah Road and Sai Yuen Choi Street South along Route 3, as well as the exits in Mong Kok East Station, lack adequate directional signage and maps, despite being a hot spot for visitors and major pedestrian thoroughfares. Signage for barrier-free access on entrances of footbridges, subways and stations is unclear or insufficient.

Physical features

Noise and air pollution is a significant problem in this district

Mong Kok has a number of areas of open space and greenery, but they can be isolated and not always equipped with seating. The enjoyment of these areas can be imperiled by poor air quality, overcrowding, and unacceptable noise levels, but at the same time, may be enhanced with the rich street attractions like the sights and sounds of Sai Yueng Choi Street South.

Some black spots do exist. Crossing Nathan Road, Argyle Street and Mong Kok Road, while safe with proper traffic signals, can be arduous because

of the noise and air pollution from passing road traffic. Being stuck in the middle of the road on pedestrian islands, at the epicentre of exhaust fumes, can be off-putting enough to compel people onto an elevated or underground walkway in order to avoid it. The poor pavement quality along parts of Dundas Street can be uninviting for some pedestrians.

Walking conditions

Overcrowding is the primary cause for safety concern in Mong Kok, especially on the pedestrian-only streets and the more popular themed streets. Unsafe crossing is very common along Dundas Street, Sai Yeung Choi Street South (outside of pedestrian zone hours), Sai Yee Street, Fa Yuen Street, Bute Street, and Nullah Road. The perception of poorer personal safety, such as petty theft, is particularly concerning along the crowded Argyle Street and pedestrian zones (Figures 79 and 80).

3.5.6 Main issues

Mong Kok faces a dilemma: to control overcrowding without losing its charm

A peek at a typical Mong Kok street in the evening reveals a place heaving with people, shopfronts blinking for the attention of the passer-by, street artists and hawkers alike on the charm offensive. The crowds during the peak periods give the impression that Mong Kok's streets and infrastructure are designed to hold a leaner population (Figure 81).

A tight street grid with short blocks and countless intersections creates an intimacy that has encouraged a variety of activities to coexist, a tradition that has created a number of streets with unique themes and identities. Yet the huge variety of roles that it fulfills—as a shopping, transport and commercial hub—is weighing heavily upon its streets. Hence, Mong Kok faces a dilemma. In order to sustain its prime position as a centre for consumer goods and services, it needs to consider how the district can continue to control overcrowding and maintain its charm, lest it becomes more of a turn-off for local and international visitors. Much more can be done to improve the

Figure 79



Vehicle and pedestrian traffic intersect in precarious ways on Mong Kok streets. Photo by Dave Choi.

Figure 80



The bustling streets of Mong Kok. Photo by Dave Choi.



Figure 81

Overcrowding is a major issue in Mong Kok. Photo by Dave Choi.

walking experience, and ensure that the connectivity of the district is not further compromised by obstacles and the poor walking conditions of the street. This requires much more than just addressing the problematic black spots. Rather, the street environment should be improved in a way that is aesthetically gratifying, allowing freedom of movement and ensuring that public safety is upheld.

3.5.7 Recommendations

Improve the functional and aesthetic quality of pedestrian networks through street management and greening works

1. Street management measures could help ease the already clogged pavements of obstacles, especially in restricting commercial activities, promotional stands and goods storage in the pedestrian zone to improve the flow of walkers. Time restrictions should apply to the loading of goods beyond the pedestrianised streets to minimise road hazards. Proper surveillance may be necessary in the pedestrian zone to avoid crimes and accidents and ensure public safety.
2. Mong Kok as a whole has good directional signage, but differing maps could confuse visitors. Making these maps consistent throughout Mong Kok is an imperative, and could start with orientating “north” on all maps in the same direction. There is no map outside of the station, but the helpful customer service counter in the mall adjacent to the station serves as a useful wayfinding tool. Signage for barrier-free access between different levels should be made clear on every visitor map.
3. Widening the entrance of the subway, adding barrier-free access and improving lighting and aesthetic of the subway environment, as well as reconfiguring the walkway with air circulation in mind, could boost its appeal.
4. Greening projects are desperately needed along key vehicular corridors such as Dundas Street, Argyle Street, Sai Yeung Choi Street South, Nathan Road and Mong Kok Road, to improve the overall street environment and reduce air and noise pollution levels.
5. To control overcrowding of pedestrian streets, flow can be diverted to streets with low crowding levels, such as Yim Po Fong Street and Sai Yee Street.

3.6 Ma On Shan

3.6.1 Area characteristics

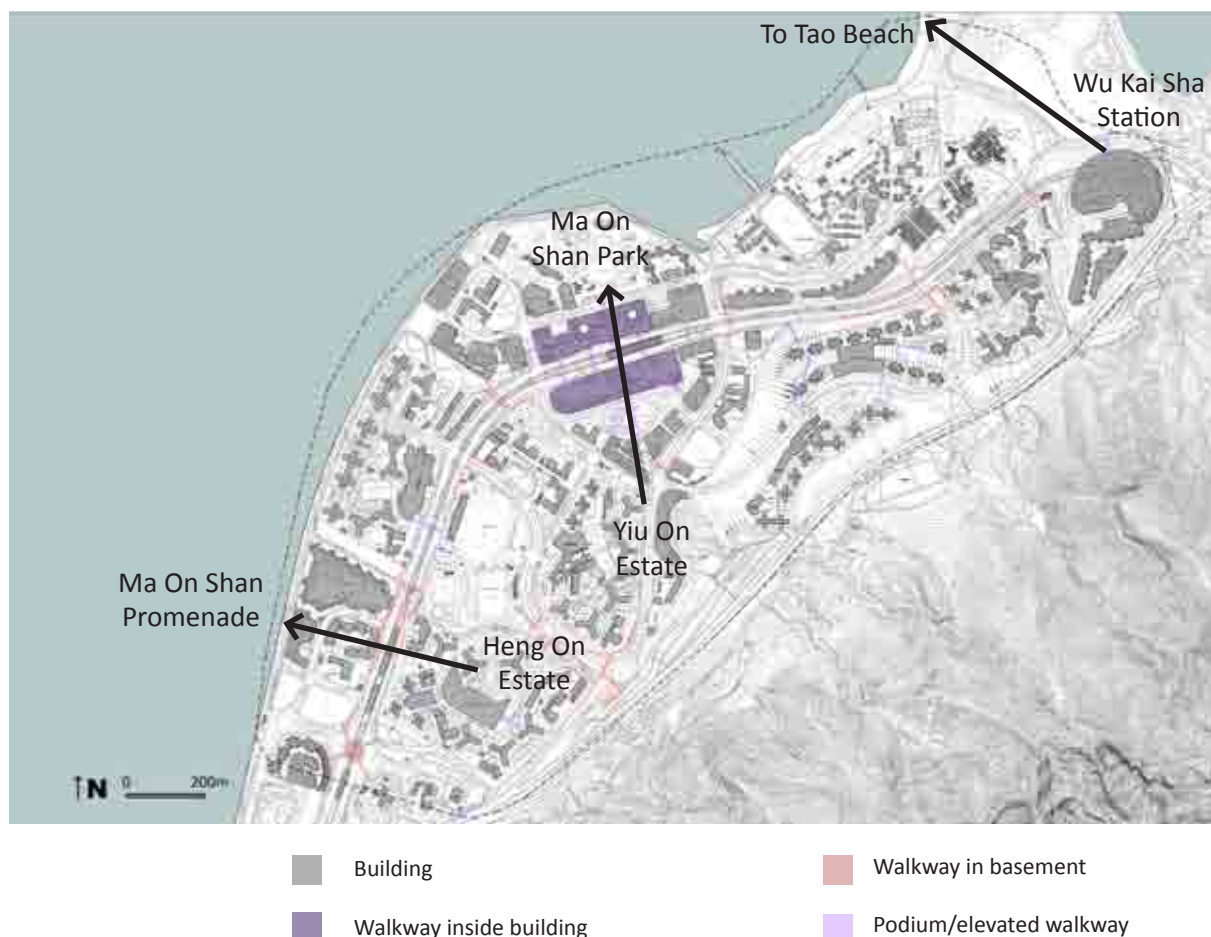
Ma On Shan is primarily a residential area, with some commercial and retail land use

Today, Ma On Shan is administratively part of Sha Tin District. However in the 1980s, Ma On Shan was originally planned as an extension of Sha Tin new town. Early development was largely led by the construction of public housing estates, such as Heng On Estate and Yiu On Estate, which was soon followed by private housing development. Ma On Shan is primarily a residential area, with some commercial and retail land use. Transport connections between Ma On Shan and the rest of Hong Kong are extremely important for residents to get to their workplaces, schools and other destinations every day, and the area is well linked to other districts by strategic highways and public transport. The Ma On Shan MTR line has become a key public transport mode for commuters since its opening in December 2004 (as part of the former Kowloon-Canton Railway Corporation network). Buses and minibuses remain a popular alternative for local people for intra- and interdistrict journeys.

Ma On Shan is also located near the countryside and has a strong connection with the natural environment. Numerous leisure and recreational opportunities are available here for local residents, people from other districts and tourists. For example, Sha Tin District is very popular for cyclists. The cycling track that connects Tai Wai to Tai Po via Tolo Highway is always crowded. With the development of Ma On Shan and the completion of Ma

Figure 82

Ma On Shan study area with sample routes. Source: Civic Exchange.



On Shan Promenade, a good cycling network is complete, and cyclists are now presented with a new, wonderful route from Tai Wai to Wu Kai Sha.

3.6.2 Study area

The study area of Ma On Shan is on a different scale from Central, Tsim Sha Tsui or Mong Kok. Instead of bounding the study area by roads, the study area of Ma On Shan is taken roughly as the combined catchment area of three rail stations, namely Heng On, Ma On Shan and Wu Kai Sha (see the area bounded by the dotted line in Figure 82).

3.6.3 Pedestrian network

Connectivity between different pockets of development in general is low

Unlike Central or Tsim Sha Tsui, there is no extensive elevated walkway system or underground pedestrian network developed in Ma On Shan, very much due to the lower level of activities and density here. Nevertheless, the three levels of pedestrian network can still be found in this area, as will be explained in the next paragraphs.

As shown in Figure 82, the study area is dissected by Sai Sha Road (and the elevated Ma On Shan MTR line) into two parts, one stretching along the Sha Tin Hoi/Tolo Harbour waterfront, and the other situated on the land side of Sai Sha Road closer to Ma On Shan Country Park. To a lesser extent, Ma On Shan Road and Hang Hong Street further divide this area into smaller blocks or islands. Within a single block, connectivity at street level is reasonable, facilitated by sidewalks and cycling tracks. However, connectivity between different pockets of development and hence permeability in this area in general is low. There are very few at-grade crossings for pedestrians along the major roads, so as to maintain the flow of vehicular traffic. Instead, footbridges and subways were built, often integrated with rail stations and nearby shopping facilities, as an alternative means for pedestrian movements. As a result, at-grade pedestrian facilities are disjointed, and residents must change levels in order to get to the other side of the road, or to move between the waterfront promenade and the inland area.

The most comprehensive elevated network was developed near Ma On Shan Station, connecting Sunshine City (different phases of residential development and shopping centres) to the south and the Bayshore Towers/ Ma On Shan Centre/Tolo Place complex (residential plus shopping malls) to the north. There are five covered footbridges crossing Sai Sha Road, and a few more footbridges that extend further inland or towards the waterfront.

In Heng On and its neighbourhood, a subway network was developed and integrated with Heng On Station. It is the main pedestrian network for local residents to cross Sai Sha Road, either on foot or on a bike. Between Hang On Estate and Yiu On Estate, two of the oldest public housing estates in this area, another subway system was constructed to facilitate pedestrian flow under Hang Hong Street.

3.6.4 Sample routes

To assess walkability in Ma On Shan, three routes were selected for further analyses: (i) from Heng On Estate to Ma On Shan Promenade; (ii) from Yiu On Estate to Ma On Shan Park; and (iii) from Wu Kai Sha Station to To Tao Beach.

Ma On Shan Route 1: Heng On Estate to Ma On Shan Promenade

Sai Sha Road divides the public estate from the waterfront

Heng On Estate is a crowded public housing estate situated to the east of Sai Sha Road. Ma On Shan Promenade is a popular place with recreational facilities such as a jogging trail, fitness stations, Tai Chi areas and a cycling track, located to the west of Sai Sha Road. For pedestrians to walk from Heng On Estate to the Promenade, they will have to cross Sai Sha Road.

Figure 83 shows the direct distance (blue), Shortest walk (green), Next Best walk (red) and Visitor walk (yellow) on the map. It is interesting to note that for Route 1, the walking distance of the Next Best walk (785 m) is actually shorter than the Shortest walk (837 m) (Figure 84). However, the energy distance of the Shortest walk (837 m) is lower than the Next Best walk (874 m). In other words, the insider who performed this sample route had possibly taken into consideration level changes (like stairs and ramps) and the extra energy required when the Shortest and the Next Best routes were chosen. For the Visitor walk, about one minute was spent for wayfinding, which is not too bad. However, the outsider spent about 7 minutes more than the insider getting to the destination.

Figure 83

Direct distance, shortest, next best, and visitor walks on Ma On Shan Route 1. Source: Civic Exchange.

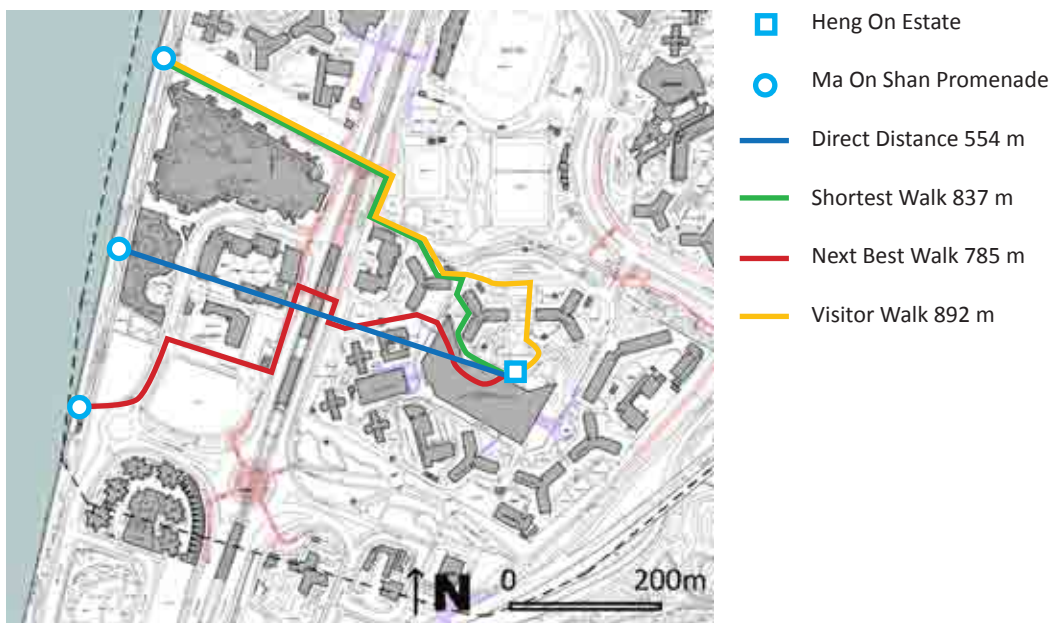


Figure 84

Time and distance measurement of Ma On Shan Route 1

Route 1	Direct line distance	Walking distance	Energy distance	Walking time (min, sec)
Shortest walk	554 m	837 m	837 m	09 m, 05 s
Next Best walk		785 m	874 m	11 m, 30 s
Visitor walk		892 m	892 m	16 m, 08 s ⁹³

Ma On Shan Route 2: Yiu On Estate to Ma On Shan Park

The most direct route is through the shopping mall, but requires level changes through escalators and lifts

Yiu On Estate is another major public housing estate in Ma On Shan, and the route to Ma On Shan Park is also a very busy one, as pedestrians are moving in the same direction to Ma On Shan Station and the main shopping malls in the neighbourhood.

There are many walking routes from Yiu On Estate to Ma On Shan Park, and the walking survey suggests that these routes may vary considerably in terms of walking time and distance. The Shortest walk had to go through a number of shopping malls and footbridges, and the route almost followed a straight line towards the waterfront except inside a large shopping mall (Figure 85). The Next Best walk followed a path inside a park, crossed Sai Sha Road via a regress, and then got back to street level after climbing a ramp. Because of the ramp, additional energy was required (Figure 86). For the Visitor walk, an extra kilometre was covered, and from the map (Figure 85), a lot of time was lost inside the shopping malls.

Figure 85

Direct distance, shortest, next best, visitor and pram walks on Ma On Shan Route 2.
Source: Civic Exchange.

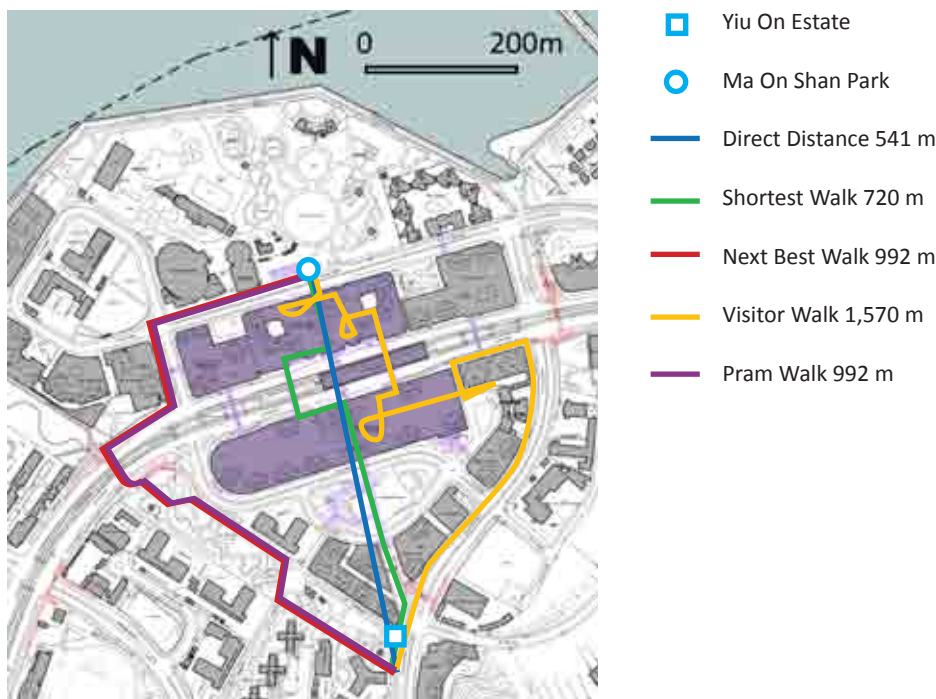


Figure 86

Time and distance measurement of Ma On Shan Route 2

Route 2	Direct line distance	Walking distance	Energy distance	Walking time (min, sec)
Shortest walk	541 m	720 m	738 m	09 m, 30 s
Next Best walk		992 m	1,062 m	11 m, 35 s
Visitor walk		1,570 m	1,578 m	19 m, 05 s ⁹⁴
Pram walk		992 m	--	14 m, 17 s

This route was also chosen for the Pram walk, and by coincidence the pram user took the same route as the insider's Next Best route. This route is ideal for prams and wheelchair users as the only obstacle along the route is a gentle ramp. If the pram user had decided to go inside the shopping malls, he/she would have had to find elevators for level changes.

Ma On Shan Route 3: Wu Kai Sha Station to To Tao Beach

Directional signage to the beach is poor

The route from Wu Kai Sha Station to To Tao Beach is mainly for leisure rather than commuting. Once you cross Sai Sha Road via a footbridge extending from the station, you will head into a rural setting with no high-rises (though there are construction sites along the way, and tall residential blocks are coming). At a roundabout, you turn either right or left to continue, as there is no signage to direct you to the beach.

Based on survey findings (Figures 87 and 88), the Shortest walk and the Next Best walk are fairly close in terms of walking time, distance and energy level. However, as there are only a couple of signs showing the name of To Tao Village just outside the road entrance leading into the village, and during the survey there was barely anyone to ask for directions, our outsider team member took a long detour before finding the right way to get to To Tao Beach. More than one-third of the walking time (almost 7 minutes) was spent wayfinding.

Figure 87

Direct distance, shortest, next best, and visitor walks on Ma On Shan Route 3. Source: Civic Exchange.

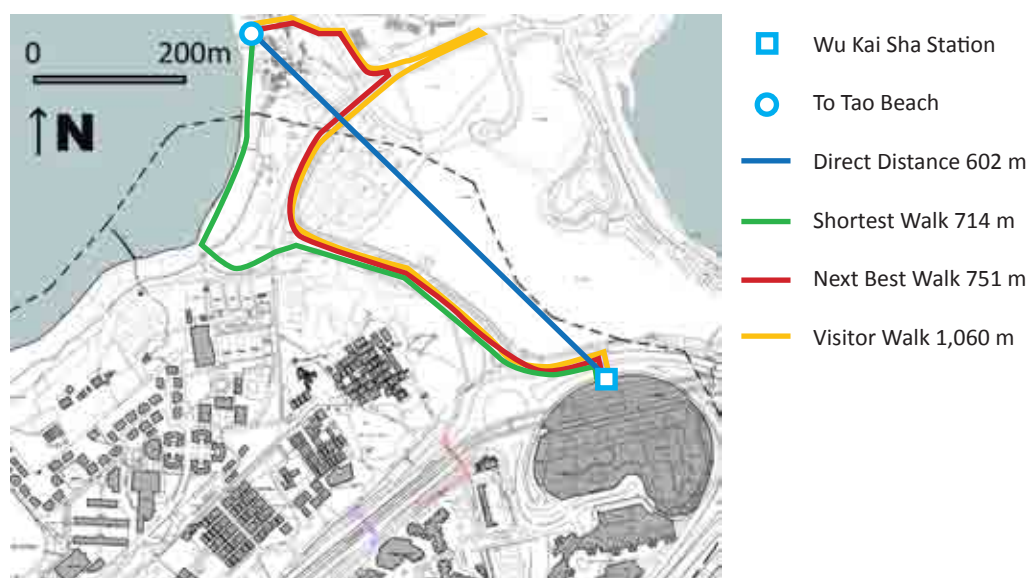


Figure 88

Time and distance measurement of Ma On Shan Route 3

Route 3	Direct distance	Walking distance	Energy distance	Walking time (min, sec)
Shortest walk	602 m	714 m	794 m	13 m, 08 s
Next Best walk		751 m	863 m	16 m, 30 s
Visitor walk		1,060 m	1,172 m	19 m, 08 s ⁹⁵

3.6.5 Route evaluation

Connectivity

The elevated levels provides good connectivity, and has become the district's focal point

Generally speaking, the street level pedestrian network in Ma On Shan is poorly connected, and at-grade crossings at major junctions are lacking. Some of the street blocks are isolated and are only linked with one another by footbridges or subways. On the contrary, Ma On Shan Station and the adjacent shopping centres are well-connected at the elevated level (Figure 89). The entire complex has become the focal point of the district.

Another aspect of connectivity involves vertical circulation, that is, movement between different levels. In Ma On Shan, pedestrian movements between the street level, the elevated and underground pedestrian levels are uncommon. Such movements are mainly served by staircases, escalators, elevators and ramps. The degree of service is satisfactory, but Figure 90 shows a spot where steps are the only option to reach the podium and to get to a footbridge.

Obstacles

Obstacles are a lesser problem in Ma On Shan than in the urban districts. This area is more spacious and the pavements are less crowded as we found out in the field surveys. Lampposts, mailboxes, rubbish bins, and phone booths can be found everywhere, but they rarely obstruct the way (Figure 91). However, the situation gets worse closer to the shopping malls, where loading and unloading activities sometimes interfere with pedestrian movements.

In the rural part of Ma On Shan, such as Wu Kai Sha, some pavements are disconnected. For example, we found a number of dead ends along Ma On Shan Route 3 (Figure 92).

Wayfinding

In the built-up areas of Ma On Shan, especially those adjacent to a rail station, wayfinding is not an issue. Signage showing directions and locations

Figure 89



Footbridges connect people on the elevated pedestrian network. Photos by Simon Ng.

Figure 90



Going from the street to the elevated level usually involves escalators, and in some occasions, staircases. Photos by Simon Ng.

Figure 91



Items such as bins and signage are common but are rarely an obstruction. Photos by Simon Ng.

Plentiful green space and outdoor seating; crowding is not an issue

is adequate and conveniently placed. Further away from the rail stations, however, with less signage and information, finding your way can become more difficult. For example, there is no signage for To Tao Beach, a fairly popular spot near Wu Kai Sha.

Physical features

Ma On Shan is doing quite well in this respect. There is plenty of seating in open areas, and lots of greenery (Figure 93). Pavement quality is good. In terms of climate control, Route 2 fairs better than the other two routes, as a majority of the route is either covered or air-conditioned.

Walking conditions

Pedestrians are segregated from vehicles in most locations, and it feels safe to walk around. Crowding is not an issue, except inside a rail station or a shopping mall. There is very little street activity based on our observation during the field surveys. Maybe it is good for efficient pedestrian

Figure 92



Some dead ends in the pedestrian pavement network in Ma On Shan.
Photos by Simon Ng.

movements from one place to another, but there is nothing on offer in the streets to enrich people's walking experience.

3.6.6 Main issues

There is poor access for residents to the district's good quality open space

Ma On Shan has built some quality open spaces for its residents. Ma On Shan Park and the Promenade are good examples. However, it was observed during our field surveys that accessibility to these locations is far from satisfactory. It is particularly inconvenient for residents living on the land side of Sai Sha Road to get to these amenities near the waterfront. Crossing Sai Sha Road is always a challenge; with no at-grade crossing pedestrians have to take a footbridge or a subway to cross (Figure 94). This is unattractive to senior members of the community and people who require barrier-free access. In addition, block size becomes bigger closer to the Promenade, crossing points get further apart, and permeability to the water gets worse. For example, there are more than a dozen entry/exit points along the 3.2 km Promenade, but some of them are not well connected to the pedestrian network that reaches to the inner core of Ma On Shan. If you live along the waterfront, then you may have short and direct access to the Promenade.

The prevalence of blank walls exacerbates the lack of street life on ground level

Because of the permeability issue, grade-separated pedestrian facilities become a common and feasible solution to maintaining pedestrian flow. A prime example is the elevated walkway network at Ma On Shan Station and its nearby residential and retail land use. The merits of an elevated pedestrian system are manifold—safe right-of-way for people with zero conflict with vehicles, shelter from the sun and rain, air-conditioned environment in some cases to counter the heat, and also convenient access to home, shops and transport nodes (Figure 95). However, as most activities and people are now concentrated at the elevated levels, there is less activity on the ground, and street life becomes less vibrant. There are only a handful of shops at street level, sitting next to blank walls of residential estates and car parks (Figure 96). The streets, which are an important public space for people's social life and enjoyment, become increasingly unattractive.

Figure 93



Seating and greenery are in abundance in Ma On Shan's public areas. Photo by Simon Ng.

Ironically, public space is in abundance in Ma On Shan relative to the more compact urban areas like Mong Kok. However, little has been done to make them more accessible and attractive to everyone living in this area. Quality public space that is accessible to all would go a long way in knitting the people and the community together.

3.6.7 Recommendations

Install street level crossings, and connections to the waterfront promenade and the natural environment

1. Consideration should be made to provide at-grade crossings at main road junctions, as this is the option most preferred by pedestrians. The second best option is to provide gently sloping underpasses for pedestrians to cross busy roads, without the need to climb stairs. It may require more space to build such facilities, but there is plenty of space in Ma On Shan.
2. The connection between the promenade and the pedestrian network should be enhanced to improve permeability.
3. Promote street activities in designated open spaces to add vibrancy to the pedestrian environment, to encourage walking, and to facilitate social/community interaction.
4. Strengthen Ma On Shan's connection to the natural environment, and promote walking/cycling as the means to access nature. It can be done through improving pedestrian facilities, extending the cycling infrastructure (tracks and parking), and providing directions and navigational tools.

In this chapter, walkability was examined under three different geographic settings, using four local districts as examples. Area-specific issues were identified and discussed. In the next chapter, these issues will be considered in the broader context of Hong Kong, making specific reference to city development and planning. An attempt will be made to understand the root problems of suboptimal pedestrian environments, and to suggest possible strategies to improving walkability in Hong Kong.



Figures 94-96

Figure 94, above: Pedestrian access to the waterfront.

Figure 95, left: A continuous elevated pedestrian network.

Figure 96, below: The street level lacks commercial and human activity.

Photos by Simon Ng.



4 Making Hong Kong a world-class city for pedestrians

4.1 The state of walkability in Hong Kong

4.1.1 Crowded, compact and layered

In a city like Hong Kong where time is money, it is considered necessary to keep people out of the way for efficiency and safety reasons

Hong Kong has developed into a layered city, where pedestrians can travel along the elevated, street and underground levels (Figure 97). A key rationale for this was to segregate vehicles from pedestrians, as a way to minimise conflict and guarantee the personal safety of different users. As our four case studies (Chapter 3) indicate, an important consequence of this is that people have been channelled away from the street level, and as streets become more car oriented, pedestrians are sometimes forced to take an indirect and longer route either above or underground. The flows of vehicular traffic are given priority at the expense of people's accessibility. In a city like Hong Kong where time is money, it is considered necessary to keep people out of the way for efficiency and safety reasons.

Of course, there is also a fundamental need for Hong Kong to grow in layers. Given our density and the lack of land to fit in more people, Hong Kong has for many years taken the route of vertical growth and compact development to handling the pressure of urbanisation. Skyscrapers are erected in the city. Car parks and shopping malls have also expanded into the basement levels. Efficient vertical circulation of people becomes increasingly important in a multilayered city.

4.1.2 Elements of good walkability

A key element of good walkability is a well-connected and comprehensive pedestrian network

Central has developed an excellent elevated pedestrian network that connects major commercial buildings, shopping malls and public transport interchanges. People are well connected over an extensive area with all-weather protection and a safe environment to walk. To a lesser extent, Admiralty and Wan Chai have also developed their own networks, and the government is planning to integrate the three networks in the future.

Extensive underground pedestrian networks also extend from major rail stations to adjacent areas. For example, Admiralty Station is now connected to as far as Queen's Road East in Wan Chai. The integrated underground walkways between Central and Hong Kong Stations, as well as those between Tsim Sha Tsui and Tsim Sha Tsui East Stations, have built a comprehensive system for rail patrons and other pedestrians at the two respective locations. Many rail stations have become important nodes for the vertical and horizontal circulation of people.

4.1.3 Areas for improvement

A walkable neighbourhood is much more than good connectivity. Our assessment of the four case studies has identified a number of other factors that need to be improved to enrich walking experiences in Hong Kong. While these case studies are by no means representative of other districts, they

Figure 97



Multiple pedestrian layers in Mong Kok. Photo by Dave Choi.

highlight certain themes and planning approaches that have prevailed across Hong Kong, meaning that they are likely to have much in common.

Minimise long detours by reinstating at-grade crossings

To begin with, the permeability in some districts is rather poor. At-grade crossings have to be added or reinstated at major road junctions. Block size can be used as a planning tool to improve permeability and pedestrian movements. Long detours are time consuming, energy wasting, frustrating and unattractive to all pedestrians. In addition, permeability between levels is also an issue in areas with limited vertical circulation points.

Wayfinding is another key factor that reduces walkability in Hong Kong. Consistent and clear signage and maps are essential to provide bearings and directions to people. Both local people and tourists will benefit enormously from improved street and location information.



Figures 98-102

Figure 98, left: Pedestrian zones in New York's Times Square (top) and Broadway (bottom). Sources: Flickr. Photos by rnyestreets and Patrick Razenberg, respectively.

Figure 99, above: Shared space on Exhibition Road in London. Source: Flickr. Photo by diamond geezer.

Figure 100, below: Shibuya crossing, Tokyo. Source: Flickr. Photo by wallyg.



If Hong Kong cannot tolerate road obstacles for motorists, the same can be said for pavement obstacles for pedestrians

Street obstacles are a serious threat and barrier to pedestrians. Street corners are often used for temporary storage. Street fixtures such as lampposts, phone booths and news-stands occupy valuable space on the congested sidewalks. If Hong Kong cannot tolerate road obstacles that would slow down traffic and be considered unsafe to motorists, the same mentality should be applied to pavement obstacles and pedestrians.

Provision of barrier-free facilities has improved a great deal over the years, but more is needed to provide better access for the elderly in an ageing society and for the disadvantaged with special mobility needs.



Figure 101, left and above: Quality public spaces in Melbourne. Sources: Flickr. Photos by LeeAnne Adams and Design for Health, respectively.

Figure 102: Chikagai in Tokyo. Source: Flickr. Photo by Yasa.



4.2 Lessons from overseas and insights for Hong Kong

An overarching walking strategy, active community involvement and strong leadership are lacking in HK

Creating walkable environments is far from a one-step process. As illustrated in Chapter 2, cities that have committed to a walkability agenda have taken some common steps to reshape their city's streets. Many have developed an overarching walking strategy and action plans, adopted processes that engage the community in decisions about street use and transport plans, and have strong leadership that has backed a strong vision for change. These

In cities like New York, London and Melbourne, the concept of “shared space” is strongly promoted

are but some of the ingredients that Hong Kong currently lacks, and we see the consequence of this at the district level, where vehicles and pedestrian continue to compete for space, and bold improvements for pedestrians are few and far between.

Beyond policy and procedural factors, the walkability measures that various city governments have adopted are a much-needed inspiration for Hong Kong's streets. Pedestrian zones have been created in Hong Kong over the years, primarily to address the overcrowding that occurs at peak times. Even so, much more can be done to improve the city's walking conditions.

In cities like New York, London and Melbourne, the concept of “shared space” is strongly promoted with determined actions. Roads and urban spaces are being reclaimed from cars and related land uses, and reallocated to people in prime places such as Broadway and Times Square (Figure 98). Pedestrian-only streets are making a comeback, creating better urban spaces for pedestrian use and enjoyment.

Exhibition Road in London had its kerbs stripped out in order to create a continuous “shared space” for pedestrians and cars. The separation of people and vehicles is diminished as a significant signal of equity in urban space (Figure 99). In Melbourne, street spaces are shaped and decorated in a manner that facilitates social activities and to attract more people to come and stay (Figure 101).

4.3 Root issues

Better allocation and sharing of road space is just one of a plethora of measures that has been adopted overseas, which provide valuable lessons for Hong Kong. In order to make the city better for pedestrians, however, we need to take the process beyond a problem-solving exercise. Instead, it is a fundamental question of how we define “streets” in our city, and how we plan our city.

In the past, streets were defined by their main function as a corridor for the flow of people. Emphasis was placed on their design, standard and capacity. Streets, like transportation as a whole, are a means to an end.

Streets should be seen as an asset to people's well-being and a city's liveability

Many cities have begun to redefine streets as active public spaces that are integral to people's social life and experience. They are an asset to people's well-being, and to a city's liveability. To this end, efforts are made to make streets active and attractive places to go and stay, as destinations. There is a strong desire to give everyone equal access to street space as a right, rather than a privilege. At its core, it boils down to a shift of attitude from planning a car-based city to one that considers all types of users on a street.

4.4 A walkability framework for Hong Kong

To shift towards a planning intention that is pro-pedestrian will require a widespread commitment at different levels of government, and across stakeholder groups. What Hong Kong needs is a process that addresses existing bottlenecks, builds support and incrementally moves Hong Kong

Box 4: Ingredients for change

As we have seen from overseas examples (Chapter 2), a number of factors are critical to making effective and lasting change on a city's walkability:

- Leadership—first and foremost, strong leadership is extremely important in knitting everyone (government officers and stakeholders) together toward a long-term vision;
- Overarching strategy—comprehensive strategy that integrates land use, transport and sustainability planning for the long term;
- Planning for pedestrians—we want to plan and build a people-based city where the interest of pedestrians is prioritised, and excessive road space reclaimed;
- Promotion of non-motorised transport and public transport—priority must be given to public transport and its integration with non-motorised modes such as walking and cycling;
- Streets as destination—make sure that any pedestrian facilities are attractive to make people stay, such as by providing street furniture or by making it a pleasant environment;
- Administrative support—co-ordination between government agencies, and between different government levels (such as central and district levels) must be strengthened to handle multidisciplinary issues; and
- Working with stakeholders—local representatives and property developers are among many different stakeholders that need to be involved in pedestrian planning.

towards more walkable neighbourhoods. The following are key aspects of a framework for a walkable Hong Kong.

4.4.1 An overarching vision

Plan the city with people in mind, not vehicles

Develop a long-term vision for the city that leads to better access, urban spaces, and quality of life for all. There are three main reasons for this:

- People are the core element of a city. It makes sense to plan the city with people in mind, rather than the segment of people that can afford to drive;
- Social justice and equity can be better achieved with a city that is planned and built for people; and
- Given our poor track record on the environment in the last several decades, there is great urgency to plan or to reinvent cities in a low-carbon and sustainable manner.

4.4.2 Audit of existing processes

Identify bottlenecks

Even before specific measures are designed, it is important to understand the baseline, that is, appreciate all the good work and evaluate the weak links in the system. We have to acknowledge certain bottlenecks that need to be removed and actively work towards this end. This may require substantial review of the institutions that have a stake in road planning, and to spark collaboration between different government departments.

4.4.3 Engage the community

Quick wins that are perceivable by the community generate enthusiasm for change

It is crucial to get the support and buy-in of the community, and some effort needs to be exerted to get people excited about new pedestrian ideas or in applying overseas best practice locally. For the purpose of communicating the benefits of improved walkability, quick wins can be invaluable. Fast and cost-effective measures implemented within a short period of time can be inspiring for the community, and kick-start their involvement in tackling deeper issues. Public support is the basis of any successful pedestrian-led planning.

Getting inputs from the local community is critical for pedestrian planning to work, and a process that engages a wide range of stakeholders is a useful platform for collective thinking. It is also a key process for empowering communities and educating people about the benefits of improved walkability in the long term (Figure 103).

Figure 103



Community participation is a major feature of mobility planning in Barcelona. Source: Wikimedia Commons. Photo by Electro07.

4.5 Strategies and actions for a walkable, layered city

4.5.1 Holistic planning versus piecemeal approach

Shifting street priority to pedestrians requires a bottom-up approach

Hong Kong first emerged as a layered city by accident rather than by careful planning. New layers were added or extended in an ad hoc manner. As a result, walkability within the layered network varies from one district to another. There is no doubt Hong Kong will continue to grow in layers. A holistic district-wide strategy for pedestrians needs to be developed to ensure walking routes are well-connected and pleasant to walk, while avoiding cumbersome detours.

4.5.2 Shared space over priority for vehicles

The second strategy is to promote and implement the concept of “shared space” in Hong Kong. It is an improvement over the pro-vehicle mentality, but one that would require time to change the common mindset. Road space will be reclaimed and equally assigned to all street users, and the use of space will not be restricted to pedestrian flow. Street space becomes a free commodity for shared use and enjoyment.

4.5.3 Bottom-up plus top-down approach

Instead of relying on the conventional top-down approach, a new strategy must emphasise the need to have both a bottom-up plus top-down approach. The dual approach is crucial for effective pedestrian planning, as government agencies are responsible for delivering an overarching policy from the top, whereas stakeholder groups are responsible for providing ideas and support from the grassroots.

4.5.4 Hardware and software

The fourth strategy is to emphasise the need to improve both the hardware and software for a better pedestrian environment. Previously, emphasis was placed on the hardware—such as the quantity and capacity of sidewalks, crossings, footbridges and signage. However, the study shows that the software is equally important in enhancing walkability. For example, the information provided on a street sign or a map, as well as street activities that are allowed or promoted in pedestrian space.

4.5.5 Promote street life

A degree of flexibility is needed to enable existing mixed use, and hence a vibrant street life, to persist

Colourful and vibrant street life is one key element that makes Hong Kong’s streets an attractive destination for local people and overseas visitors. For example, Mong Kok would never be the same without the street markets (Figure 104). However, as Hong Kong’s urban fabric continues to evolve in layers, and when the elevated level is extensively connected, the flow of pedestrians will be channelled to the upper layers at the expense of the ground layer. Activities at the street level will die down, and in the end it will affect the attractiveness of the district. In Ma On Shan, for example, it is observed that street life is almost non-existent near Ma On Shan Station.



Figure 104

Street markets have been an integral part of Mong Kok for decades. Photo by Dave Choi.

Therefore, the last strategy highlights the balance between the three layers in term of activities. In particular, the street level is usually the most accessible level to everyone, and making this level attractive will bring benefits to all.

4.6 Benefits of a walkable Hong Kong

A walkable city enhances people's well-being, and brings about environmental benefits and social justice

In short, improved walkability or pedestrian environment in Hong Kong will encourage people to walk more and to walk for longer distances. It is a healthy alternative, and with more people choosing to walk over taking mechanised transport, there will be fewer vehicles and less pollution and noise. A city's liveability and people's well-being increase when its walkability is coupled with thoughtful and time-efficient connectivity between walking and using public transport modes. When well designed, the outcomes can be environmentally sustainable and low-carbon.

In addition, active and attractive street space will enrich the city and social life for all. It can also create well-being, conviviality and social harmony as people become reconnected to neighbours, neighbourhoods and districts, especially if the local urban design provides appropriate open spaces for people to connect socially with each other.

A city's degree of walkability may also be seen yet more broadly to include social justice. As the economically disadvantaged live in worse conditions than the rich, the ability to walk longer distances in safety, to be able to enjoy good, affordable and efficient public transport for longer journeys, and to share the enjoyable street space, can be regarded as a social equaliser. This is in contrast to the past when road or street spaces are prioritised for those with private vehicles, which was seen as city planning in favour of the rich.

5 Conclusion

Four case studies identified common problems but also fine examples of walkability

In this report, Hong Kong's walking environment in four different areas has been reviewed. The four districts cover the harbourfront area, an old urban district, and a new town. They provide different perspectives on the level of walkability in Hong Kong.

The findings show that Hong Kong's walkability, as reflected in the four cases studied, is far from satisfactory. Common problems have been identified for further actions. Yet, it is not all bad news. The elevated walkway system in Central is one fine example to show what can be done (Figure 105). Similarly, the underground pedestrian networks stemming from major rail stations are also well developed, and they will serve as a good base for the network to expand into adjacent areas.

More importantly, this report revisited the definition of streets and the function of pedestrian space. It is useful to adopt a broader definition of street space as both a corridor for pedestrian flow and an urban space for people to stay. In this regard, better walkability will require an improvement in the physical condition of pavements, crossings and other pedestrian facilities, as well as an enrichment of activities or experience provided in the shared street space. Maintaining Hong Kong's uniqueness and allure is vital, and must take heed of the following:

- Sustaining dynamism; and
- Improving connectivity and pedestrian networks.

5.1 Sustaining dynamism

A thriving street life on all levels of the pedestrian network must be maintained

A vibrant street life is evident in a number of places in Hong Kong. It is no accident that Mong Kok, Wan Chai and Lan Kwai Fong have evolved into restaurant and night-life hot spots from older multiuse areas. Buildings of different ages and tenures provide a diverse range of space and rental conditions, which fosters the social inclusion of an assortment of enterprises and livelihoods.⁹⁶ The very idea of mixed use suggests that the kinds of uses therein are amenable to change, and the older building stock has a built-in capacity to accommodate it. The blend of street frontages also attracts pedestrian traffic, promoting a high degree of vitality.

The popularity of an area has the ironic effect of encouraging the destruction of diversity. Higher disposable incomes create the incentive to redevelop these areas with single-use high-rise towers, which supplants the very quality—the diversity and informality—that made it attractive in the first place. This is because these single-purpose buildings freeze economic conditions and priorities at one point in time.⁹⁷ As Jacobs noted, “change, as and when it occurs, should not be overwhelmingly of one kind”.⁹⁸ In this sense, the ability to foster diversity leads to, or contributes to, the success of a district.

A thriving street life on all levels of the pedestrian network must be maintained. Connections to footbridges, subways, or elevated decks must build-in the variety and activity of an active street life, making the level

change interface an inviting and colourful spatial shift. Private footbridges, often linking one shopping mall to another, are able to achieve this seamlessly. Public footbridges should be able to replicate this and make connections between levels interesting and attractive.

5.2 Improving connectivity and pedestrian networks

Routes that are frequently used and most appreciated are those that allow people to move freely. It is a combination of comprehensible street design fused with a sense of interest and exploration. Ensuring ease of pedestrian movement is fundamental for achieving this balance. There are several issues that Hong Kong must tackle in order to boost the passage of pedestrians on its streets.

Road space is skewed unjustly to drivers

- Resolve the conflict between pedestrians and motor vehicles—at peak times, pavements in Hong Kong seem to burst at the seams. Traffic control and traffic calming measures can be the most obvious tool, especially in relegating more space to pedestrians in a city with such high population densities. Yet it is also one of the least utilised methods. Several pedestrianisation initiatives have been launched over the years, and have met with success in Tsim Sha Tsui, Mong Kok and Causeway Bay. The algebra of space allocation on Hong Kong streets is skewed unjustly to drivers compared with pedestrians, and a readjustment in planning, through better street prioritisation, is necessary.

Signage along walking corridors should be consistent

- Standardize signage—as station design and signage are standardised throughout Hong Kong’s MTR network, they have become a go-to point of reference for locals and travellers alike to access street maps, or even to get from one place to another within the same district. With their central location, as well as their web of exit and entry points, MTR stations are generally well-connected to the rest of the district. Problems arise, however, once outside of the MTR stations. Here, signage tends to be less consistent, which can make navigation around a district cumbersome. Furthermore, there is a tendency for wide, heavily-trafficked road corridors to run across major pedestrian routes, which divides the area into separate and distinct parts. Much effort has been placed to connect them with footbridges and underpasses, but sometimes the additional exertion required to change levels can be a significant impediment for access to other parts of the district. The effect on street life can be distressing as roads carve up a district, creating pedestrian hotspots in separated islands when seamless connections are missing.

Focus on connectivity issues on key walking routes of districts

- Plan for district-based connectivity—there needs to be greater emphasis on planning for better connectivity within districts that focuses on typical pedestrian routes, rather than a focus on connecting people to heavy transport options such as rail and bus. The additional strain of level changes should not be underestimated. This will require a focus to develop walkable routes for districts as a whole, not only to problem spots in an *ad hoc* manner. Needless to say, a considerable amount of district-scale pedestrian planning should be prioritised, with a strong government authority to enable walking networks to develop beyond the effort of private operators such as the MTRC and shopping malls.

Figure 105



A system of elevated footbridges in Central provides thoughtful district connectivity. Photo by Dave Choi.

Before site-specific improvements are designed, the community should be widely consulted and relevant stakeholders engaged to identify what currently works well, what needs fixing and how they would like to see it changed. A framework for enhancing walkability in Hong Kong should be developed with community engagement at its core. Such planning processes are critical and urgently needed to make Hong Kong a better place to live.

The key to successful places is how well they are able to meet the needs of their residents and visitors, from all walks of life. People of different demographic backgrounds expect streets that are safe to travel on, easy to navigate, interesting in character, that enable a choice of routes, and are so convenient that walking is preferable to other modes of transport. This means a city's streets must be comfortable, intimate and lively, and instil a sense of place. A complete street in Hong Kong is one that encourages a mixture of uses and has a compact urban street grid, preserving the place's distinctive local character.

Appendix 1: Public transport journeys

Annual public transport passenger journeys by mode in 2009⁹⁹

Transport Mode	Percentage Share
Private Car	14%
Railway	25%
Franchised Bus/Minibus	46%
Taxi	9%
Other PT	6%

Appendix 2: Cross-boundary trips

Total number of cross boundary passenger trips by mode in 2009¹⁰⁰

Transport Mode	Trips (thousands)	Percentage Share
Boundary Train	3,830.7	50.0%
Coach	1,161.9	15.2%
Shuttle Bus	943.2	12.3%
Air	267.5	3.5%
Ferry	187.3	2.4%
Private Car	158.8	2.1%
Through Train	119.6	1.6%
Franchised Bus/PLB	828.9	10.8%
Others	156.9	2.0%

Appendix 3: Roadside air quality

Severity of roadside air quality in Hong Kong, 2011¹⁰¹

Roadside Air Quality Monitoring Station	No. of days with API above 100
Causeway Bay	77
Central	92
Mongkok	63

Appendix 4: Air quality standards around the world

Comparison of air quality standard of Hong Kong with international air quality standards¹⁰²

	Averaging Time	Hong Kong		WHO 2006	London	California	US Federal
		Current	Proposed				
SO ₂	15 mins	-	500 (10 min mean) ^(a)	500 (10 min mean)	266 ^(c)	-	-
	1 hr	800 ^(a)	-	-	350 ^(d)	655	-
	24 hrs	350 ^(b)	125 ^(a)	20	125 ^(e)	105	365
	Annual	80	-	-	-	-	80
NO ₂	1 hr	300 ^(a)	200 ^(f)	200	200 ^(f)	470	-
	24 hrs	150 ^(b)	-	-	-	-	-
	Annual	80	40	40	40	-	100
PM ₁₀	24 hrs	180 ^(b)	100 ^(h)	50	50 ^(g)	50	150
	Annual	55	50	20	40 (statutory) 23 (non-statutory)	20	-
PM _{2.5}	24 hrs	-	75 ^(h)	25	-	-	35
	Annual	-	35	10	-	12	15
CO	1 hr	30,000 ^(a)	30,000	30,000	-	-	40,000
	8 hrs	10,000 ^(b)	10,000	10,000	-	-	10,000
O ₃	1 hr	240 ^(a)	-	-	-	180	-
	8 hrs	-	160 ^(h)	100	100 ^(g)	137	157

Notes:

a) not to be exceeded more than 3 times a year

b) not to be exceeded more than once a year

c) not to be exceeded more than 35 times a year

d) not to be exceeded more than 24 times a year

e) not to be exceeded more than 3 times a year

f) not to be exceeded more than 18 times a year

g) not to be exceeded more than 35 times a year (also there is a non-statutory objective of this daily mean not being exceeded more than 10 times a year)

h) Not to be exceeded more than 9 times a year

Appendix 5: Pedestrian schemes in HK

Pedestrianisation schemes implemented thus far in Hong Kong

Area	Type of Pedestrian Schemes	Locations
Causeway Bay	Full-time Pedestrian Streets	Russell Street, Paterson Street and Jardine's Crescent.
	Part-time Pedestrian Street	Lockhart Road, East Point Road, Great George Street, Pak Sha Road and Lee Garden Road.
	Traffic Calming Streets	Foo Ming Street, Great George Street, Kai Chiu Road, Lan Fong Road, Lee Garden Road, Russell Street, Yun Ping Road and Paterson Street.
Mong Kok	Part-time Pedestrian Streets	Sai Yeung Choi Street South, Nelson Street, Soy Street and Tung Choi Street.
	Traffic Calming Streets	Fa Yuen Street, Shan Tung Street and Dundas Street.
Central	Full-time Pedestrian Streets	Theatre Lane and Chiu Lung Street.
	Part-time Pedestrian Streets	D'Aguilar Street, Lan Kwai Fong and Wo On Lane.
	Traffic Calming Street	Queen's Road Central, Elgin Street, Peel Street and Staunton Street.
Tsim Sha Tsui	Traffic Calming Street	Canton Road, Ashley Road, Haiphong Road, Hankow Road, Ichang Street, Lock Road, Peking Road, Minden Avenue.
Wan Chai	Part-time Pedestrian Street	Tai Yuen Street.
	Traffic Calming Street	Johnston Road, Amoy Street, Burvous Street, Lun Fat Street, Swatow Street, Tai Wong Street East and Tai Woo Street.
Jordan	Full-time Pedestrian Street	Nanking Street.
	Part-time Pedestrian Street	Temple Street and Bowring Street.
	Traffic Calming Street	Nanking Street, Pilkem Street, Shanghai Street, Bowring Street and Saigon Street.
Sham Shui Po	Part-time Pedestrian Street	Apliu Street, Fuk Wa Street, Pei Ho Street and Kweilin Street.
	Traffic Calming Street	Fuk Wa Street, Nam Cheong Street, Pei Ho Street, Fuk Wing Street, Kweilin Street and Yu Chau Street.
Stanley	Part-time Pedestrian Street	Stanley Main Street, Stanley Market Road and Stanley New Street

Appendix 6: City profiles

1. Barcelona

City structure and development pattern

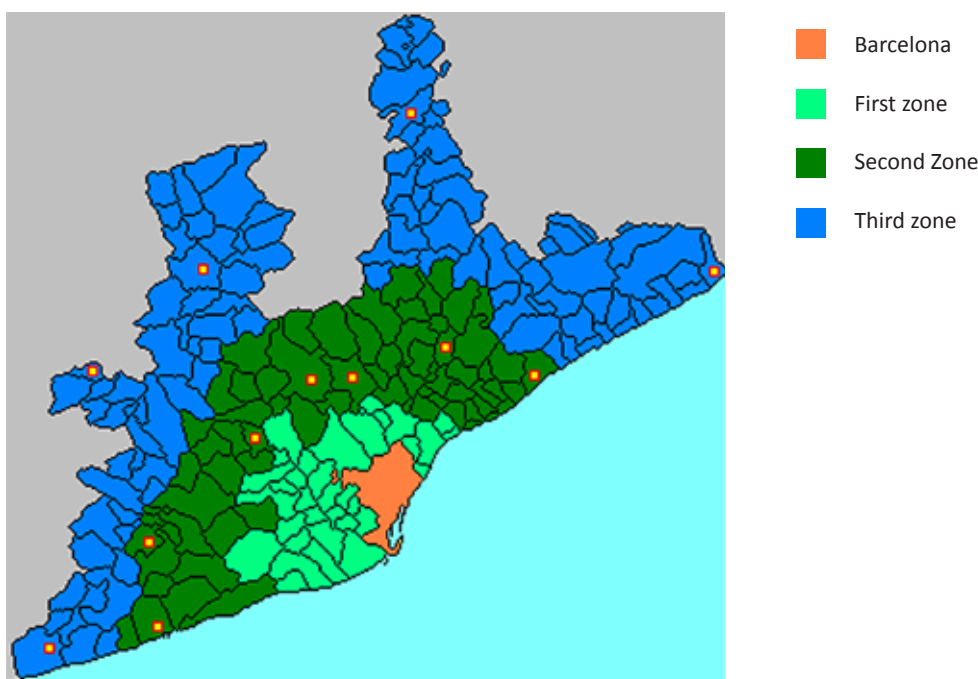
The metropolis of Barcelona spans an area of 3,200 km², with a population of 4.3 million inhabitants. The city's integrated transport network, however, embraces a larger area than the metropolitan region, with 3,900 km², or 4.5 million inhabitants, been covered under its fare integration system.¹⁰³ Mobility needs can be defined when considering the metropolitan region as three different areas:¹⁰⁴

- The central city—with a population of 2.4 million inhabitants and possessing the highest densities, the centrality of the urban areas attracts both journeys for work or study (compulsory), and leisure (non-compulsory);
- The first metropolitan ring—with 35 municipalities, this area and the central city form a single labour market, and draws a significant proportion of commute trips; and
- The second metropolitan ring—formed by 129 municipalities and a group of mature cities, they have their own labour markets and commercial areas, but maintain strong links with Barcelona.

The resulting mobility trends are that within the central city, journeys by private car accounted for a third of journeys in 2002. However, for inter-municipal journeys, private transport is used 50 percent of the time.¹⁰⁵ Walk trips are encouraged in Barcelona through mixed land use, low transit

Figure 106

Barcelona Metropolitan Area



Source: Wikipedia

fares and integrated ticketing system, and discouraging car use through high parking rates, removing traffic lanes (to widen pavements) and other restrictive measures.¹⁰⁶ As well, 7.5 percent of its revenue is spent on improving non-motorised transport, on its fleet of buses, and actions aimed at returning the use of public space to sustainable transport systems.¹⁰⁷

Plans and programmes

Policy environment

Barcelona has developed a number of plans and policies, at different levels of governance, which is designed to encourage walkability and to provide incentives for non-motorised transport.

At the State level, the *National Mobility Directives* has, for the first time, supported the planning and management of walking and bicycles. Approved by the Catalan government in October 2006, Directive 18 (of 26 directives) proposes action on enhancing the safety and attractiveness of pedestrian pathways; improving the safety and routes for bicycling; connecting green routes; and establishing traffic moderation measures such as “30 zones”.¹⁰⁸

At the regional level, the Catalan government had passed an innovative law on mobility, called the *Mobility Act 2003*. The law is not an end in itself, in its conventional means of establishing objectives for public action; but sets up the tools, and appoints responsibilities and functions to enable public decisions about mobility to be made. Therefore, the law provides a basis for plans and programmes to be created. The law’s most significant contribution was the recognition that mobility planning has to be integrated with town planning. Moreover, there is a need to incentivise public and collective transport, encouraging low or zero impact systems such as bicycle transport or walking, and new forms of mobility such as car-sharing and carpooling.¹⁰⁹ This shifts the point of reference away from automobiles in the design of cities in terms of the mobility criteria.¹¹⁰

At the municipality level, the Mobility Pact provides guidance on mobility development (described below).

Consultation process

A key component of the city’s Urban Mobility Masterplan, which came to being as a result of the Mobility Act 2003, is to make citizens’ participation a composite part of mobility planning.

The City Council (Ajuntament) of Barcelona first created the Mobility Pact in 1998,¹¹¹ which is an advisory body dealing with issues ranging from traffic to mobility management. The participatory unit involves civilians, professional organizations, political parties and advocates of different travel modes. It was designed as an instrument for citizen participation in mobility, and at its inception, required that participants shift their mentality towards negotiation between people of conflicting interests.

The Pact sets up a Mobility Board, which contains various working groups that present their proposals to the mayor annually.¹¹² Being presided over by the City Council, it is also their responsibility to resolve conflict equitably.

Specific examples and improvements

Regulating street parking

Barcelona provides a useful example of coordinated planning that is aimed at promoting alternative modes of transport for trips within and into the city centre. With increasing traffic congestion and a shortage of parking space, the authorities launched an integrated parking regulation that effectively reduced car use by restricting supply, rather than to accommodate for increasing demand. Launched in 2005, the programme was known as “Green Zone (Area Verde)”, which limited parking time using a pricing mechanism to control for street-side parking demands, while giving priority to residents. Through the implementation of parking reforms, traffic congestions have been reduced by 5-10 percent.¹¹³

District pedestrianisation

The project included converting car spaces to motorcycle parking, Bicing stations (bike-sharing programme), and expanding pedestrian areas. The historic city centre (e.g. *Barrio Gótico*) has almost been entirely pedestrianised, with some streets accessible only to taxis, residents and delivery vans. Throughout the past decade, Barcelona has been extending this move to remove parking in order to create better pedestrian streets. Gracia, another historic district, underwent a project to create superblocks (*Super Manzanera*)—conglomerating traditional city blocks into a super block, bounded by major vehicular avenues. Cars are generally restricted from entering, and are only allowed to access from the perimeter. Parking is limited, and no through-traffic is allowed (Figure 107).¹¹⁴

Reforming streets through bike-share

One of the most successful bike-sharing programmes also hails from this city. Though not the first European city to institute this programme (nearby Lyon in France introduced their scheme in 2005), the Bicing project has been the main instrument in shifting priorities to bicyclists and walkers, and pacify traffic, and thrusting a direction for the city’s transport policy. Initially, the programme fuelled complaints from car owners at the loss of parking space, and pedestrians who were forced to share its narrow sidewalks with bikers.¹¹⁵ The city’s review included infrastructure improvements, which necessitated the conversion of street space once used for car parking, for the 150 km of new bike paths, and for Bicing’s bike collection stations (Figure 108). With over 300 stations on the street, it amounts to a repurposing of 1,200 car park spaces.¹¹⁶

The influence of Bicing on transport in the city has been significant. Before Bicing began in 2006, 30,000 people were commuting to work in the city centre by bike. By 2009, there were close to 100,000. Bicing has contributed to an average of 40,000 of those trips, with 60,000 trips on private bikes.¹¹⁷ Planners have attributed the scheme’s success to a number of factors, including its pleasant climate, flat roads, and crowded central areas. The density-factor motivates local residents to make short trips and run local errands on Bicing bikes.¹¹⁸ With mode split in 2007 of roughly a third each between public transit, vehicle transport, and non-motorised transit, road infrastructure continues to shift towards enlarging sidewalks, bike and bus lanes, as well as the controversial step of lowering speed limits throughout the city.¹¹⁹

Figure 107



Gracia, Barcelona, Spain. Source: Wikimedia Commons. Photo by 1997.

Figure 108



Biking station in Barcelona. Source: Wikimedia Commons. Photo by Marcbel.

Key lessons for Hong Kong

- Transport planning must be incorporated into overall land use policies.
- Complementary sticks and carrots policy: actions to limit motorised vehicle use can be successful if it is accompanied by measures that encourage alternative means of transportation, e.g. encouraging bike use by repurposing road space.
- Governments should take the responsibility of providing a forum for which decisions about transport policy and measures can be discussed (and conflicts resolved) by disparate parties. Decentralised decision-making requires a government to supply the enabling tools, and define the responsibilities and functions, for varying entities with a stake in the city's transport outcomes.
- The road belongs to the people. As such, decision-making must engage the interest of all road users. Hong Kong's transport policy must be apportioned to users equitably, and involve all users in decision-making.

2. New York

City structure and development pattern

New York City has a population of 8.4 million people and is in the middle of a metropolitan region with 118 million residents. In 2010, New York saw 47 million visitors.

New York has 1,056 km of rail lines, making it one of the world's largest rapid transit systems. In 2005 it handled 1.4 billion passenger trips, with 6 million passengers every weekday. The city's fleet of 5,800 buses carries 2 million passengers daily.¹²⁰

The greater New York area divides land use into residential, commercial and retail areas, and as such is less integrated than other cities such as Tokyo. How land is used is a primary indicator of how people choose to travel.¹²¹ The closer New York residents are to public transportation, the less likely they are to have cars. A good rail system with stations within walking distance from points of interest is key to a city that is trying to promote rail and limit vehicle use.¹²² Currently, 87 percent of New Yorkers live within a 10 minute walk of the subway system (Figure 109).¹²³

The city covers an area of almost 800 km² with a density of 10,455 people per square kilometre, contains 10,260 km of road and has 930 km of shoreline. It has a celebrated grid pattern created on Manhattan Island in 1811 in response to public health problems and disorganised planning.¹²⁴ This pattern has since been extended to the other four boroughs.

There are 1.54 million residents living in Manhattan (Figure 115), which includes the region's CBD. 31.9 percent of workers living in the CBD and 34.1 percent who live outside of it walk or use public transportation to commute there. In contrast, 4.6 percent of residents and 29.4 percent living outside of the CBD drive to work.

Based on current projections, the city will see serious strains on the road and public transportation systems if no improvements are made. It estimates that road congestion costs US\$13 billion a year (US\$2 billion in fuel and operating costs; US\$1.9 billion in increased operating costs; US\$5 billion in time lost and US\$4.5 billion in business revenue lost). Projections suggest that by 2030 all transportation infrastructure will be beyond capacity and commuter congestion could last 12 hours daily.¹²⁵

Authorities

New York is made of five boroughs (Manhattan, Brooklyn, Bronx, Queens and Staten Island) and 51 community districts (Figure 116). Each of the communities elects a representative to the City Council, which passes legislation.

The Office of Long-Term Planning and Sustainability (OLTPS)

The OLTPS, created in 2006 as part of the Mayor's Office, works with more than 25 government agencies to implement PlaNYC. This plan,¹²⁶ launched by Mayor Michael Bloomberg in 2007, provides a comprehensive planning vision to make New York a more sustainable, economically vibrant and liveable city in the face of increasing population density, ageing infrastructure, and climate change. It promotes innovative land use, such as designating more parks, and revitalising unused harbourfront

Figures 109-111



- Manhattan
- The Bronx
- Brooklyn
- Staten Island
- Queens

Figure 109, top left: New York City subway network. Source: Wikimedia Commons. Image by Jake Berman.

Figure 110, right: Map of Manhattan, New York in 1807. Source: Wikimedia Commons. Image by Jleon.

Figure 111, left: New York boroughs. Source: Wikimedia Commons. Image by Julius Schorzman.

Box 5: 10 factors contributing to PlaNYC's success¹²⁷

- Strong mayoral leadership and cooperation between the Mayor's Office and City Council.
- A group of dedicated city agency staff performed in-depth research and analysis, involving extensive coordination and collaboration between the agencies.
- A methodical, transparent, and inclusive planning process.
- Central management and coordination provided by the Mayor's OLTPS An external Sustainability Advisory Board provided best practice advice and guidance.
- A comprehensive public outreach process generated broad public support and helped to educate the general public about climate change and sustainability issues.
- The Mayor's OLTPS strategically released the plan by coordinating announcements with key stakeholders.
- The plan included an implementation plan with a timeline and a funded budget.
- Swift transition from planning to action: the City is actively implementing all 127 initiatives.
- Openness for innovation and policy-making not driven by politics or business as usual.

land. Although a long-term vision, it includes over 120 initiatives and over 400 milestones to be implemented before the end of 2013. All of these initiatives are underway.

Several initiatives are particularly relevant to improving the pedestrian experience. First, underused street space is identified to "create or enhance a public plaza in every community". These spaces may start as temporary open spaces, and based on success, can be upgraded to permanent fixture.

Second is a tree planting initiatives to "beautify our public realm to improve the experience of every pedestrian" as planting trees "cool summer air temperature, reduce air pollution, conserve energy, and reduce storm water runoff."

In addition, there are transportation-focused initiatives to introduce improvements, including developing bicycle lanes and promoting cycling as transport (see below for case study), improving infrastructure, and enhancing pedestrian safety.

Through public education and information programmes, PlaNYC seeks to involve individuals and community groups encourage sustainability in their neighbourhoods ("GreenNYC"), and financial and technical support. The online "Change By Us"¹²⁸ platform encourages citizens to contribute ideas on how to create a "Greener, Greater New York City."

The plan implementation happens through relevant government departments. The Department of City Planning and Department of Transport are the key bodies involved with making New York more walkable with PlaNYC as a guide.

Department of City Planning (DCP)

The New York DCP uses PlaNYC as a “blueprint” for their strategic vision. It promotes city growth at strategically placed public transportation nodes while preserving neighborhood character. Its “complete neighborhoods” vision promotes choice in housing, employment, retail and open space to encourage walkable neighborhoods.¹²⁹

In addition, DCP:

- Updated its requirements for privately owned public spaces to be welcoming for pedestrians,¹³⁰ with developers getting additional gross floor area if they provide public space;
- Requires new buildings to have indoor bicycle storage capacity and indoor access for commuters;
- Requires developers to plant street trees;
- Is rezoning areas for different land use to make pedestrian-friendly environments;
- Is reducing available parking spots by shifting “from minimum parking requirements to maximum parking allowances”¹³¹ in buildings;
- Developed a comprehensive waterfront plan that includes better access, and different uses of waterfront along the diverse coast;¹³² and
- Encourages small sidewalk cafe proposals, in which cafes use 130 cm (4.5 ft) of sidewalk for tables and chairs to help create a neighbourhood feel.

The DCP’s Transportation Planning Division works with the Department of Transportation to implement five-year city transportation plans. These plans include bicycle paths, enhancing the walking environment, focusing on off-street parking, and road planning.¹³³

Department of Transportation (DOT)

The DOT, led by a dynamic Commissioner for Transport, has implemented a great number of innovative urban planning initiatives in the last five years. In 2008, it commissioned architecture firm Gehl Architects to produce *World Class Streets*,¹³⁴ a report showcasing international best practice in urban design innovation, and a vision for what New York streets might be. In addition, the DOT’s 2008 *Sustainable Streets*¹³⁵ strategic plan has 164 actions for the city, and together with PlaNYC, provides many innovative ways to use existing urban space. The DOT’s *Street Design Manual* (2009) describes policies and design guidelines for anyone developing or improving streets and sidewalks.

Given the density and mixed-use nature of much of New York, Commissioner Janette Sadik-Khan says, “the challenge is to re-engineer the real estate to deliver attractive, safe and sustainable streets.”¹³⁶

Several pedestrian safety initiatives have been implemented, and in 2009 pedestrian fatalities were down 35 percent from 2001.¹³⁷ Over 1,500 pedestrian countdown signals have been installed. To cope with increased

pedestrian traffic, the DOT is widening sidewalks, which in turn brings more business to retailers, and focuses on areas near transit points that are vulnerable to overcrowding. It also runs the *Safe Streets for Seniors* project by making specific improvements to accommodate seniors, such as longer pedestrian crossing times and shorter crossings. The DOT is also improving signage to help with wayfinding, as 9 percent of residents of all ages and about a quarter of visitors claim to have gotten lost in the previous week.

Specific examples and improvements

Bicycling

One of the DOT's largest projects and successes has been to encourage cycling by expanding New York's bicycle infrastructure. Its goal is to double bicycle commuting from 2007 levels by 2012 and 3 times by 2017. To do this, it is expanding the bike lanes by 322 km (200 miles) on narrow and wide streets alike, building 1,211 outdoor bike racks and 20 bike parking shelters (Figure 112). Cycling levels have already tripled between 2000 and 2011.

The DOT is launching a bike-sharing programme in March 2013 (Figure 113). Called "Citibike", this fleet of 10,000 bicycles will be available for hire year-round, at any time of day from 600 docking stations situated around the city.¹³⁸

Public Plaza programme

Taking after best practice in Copenhagen, New York is actively turning underused roads into pedestrian havens. The DOT is creating 144,000 square feet of plaza space amongst nine new plazas, covering all communities.

Several of these plazas are solutions to complicated intersections where Broadway cuts diagonally across the grid pattern. 65,000 square feet of Broadway

Figure 112



Bike parking in New York. Source: Wikimedia Commons. Photo by Jim Henderson.

Figure 113



Bike share demonstration. Source: Wikimedia Commons. Photo by Jim Henderson.

Figure 114



Pedestrianised Times Square, with chairs distributed by the local Business Improvement District, a public-private initiative to help revitalise neighbourhoods. Source: Wikimedia Commons. Photo by Jim Henderson.

has been converted to pedestrian and bicycle use.¹³⁹ For example, the Flatiron Plaza is 41,700 square feet large, and simplifies a 6-way intersection, improving traffic flow and pedestrian injuries (these traffic and pedestrian improvements are known as “Green Light for Midtown”¹⁴⁰). The same has occurred at Madison Square, Times Square, and Herald Square. These plazas have been immediately adopted by New Yorkers and tourists, and been enormously popular with these pedestrians, with space to sit and attractions to entertain (Figure 114). To manage these spaces, the DOT is creating public-private partnerships to manage these spaces.

Summer Streets Programme

Based on similar programmes in Paris and Bogota, from 7am-1pm on three consecutive Saturdays in the summer, about 10 km Park Avenue and feeder routes are open to pedestrians and bikes to create a “car free urban recreation corridor” from the Brooklyn Bridge to Central Park.¹⁴¹

West Chelsea/High Line

The West Chelsea/High Line Plan came about through a community advocacy, non-standard zoning, and leadership from the Mayor. It repurposed an elevated freight rail line and transformed it into a park, helped preserve an artistic district, and encourage new development (Figure 115).¹⁴²

Figure 115



High Line Park. Source: Wikimedia Commons. Photo by Beyond My Ken.

Stakeholder involvement

Many of the changes in New York have happened quickly. This has led to certain criticisms particularly surrounding the extensive bicycle lanes¹⁴³ as well as the inability for the city to introduce congestion charging. Congestion pricing was unsuccessful because of lack of public engagement, particularly with those who live outside of Manhattan and would commute in.¹⁴⁴ The Mayor's office has learned from this, and has become more active in collecting stakeholder input.¹⁴⁵ Other projects have been very community-led, such as the High Line.

Key lessons for Hong Kong

- An overarching municipal sustainability policy with the full endorsement and support of the city's leadership is the backbone of development.
- Coordination between departments is a must.
- A public transportation and pedestrian-first transport policy is the foundation for walkability.
- Converting major roads into pedestrian areas in a thoughtful way can happen successfully.
- Understanding how people move around their city can help plan bike sharing projects.
- Creative use of public space can be inexpensive, improve traffic flow, and increase business to retailers.
- Preservation—such as neighbourhood feel or the natural assets of a coastline—enhances pedestrian enjoyment and preserves what makes the city special.
- Improvements can happen quickly, but stakeholders must be included sufficiently in discussions to avoid major breakdowns.

3. London

City structure and development pattern

London has 32 boroughs plus the City of London, all run by local councils, with the most densely populated ones clustered around the city's financial centre (Figure 116).¹⁴⁶ It has a population of 7.8 million and covers about 1,500 km². Over time, London expanded to include surrounding villages, which has led to the apparent haphazard nature of its streets, irregular blocks and extensive green space. The River Thames passes through central London and is its main feature, with pedestrian and traffic bridges spanning across it.

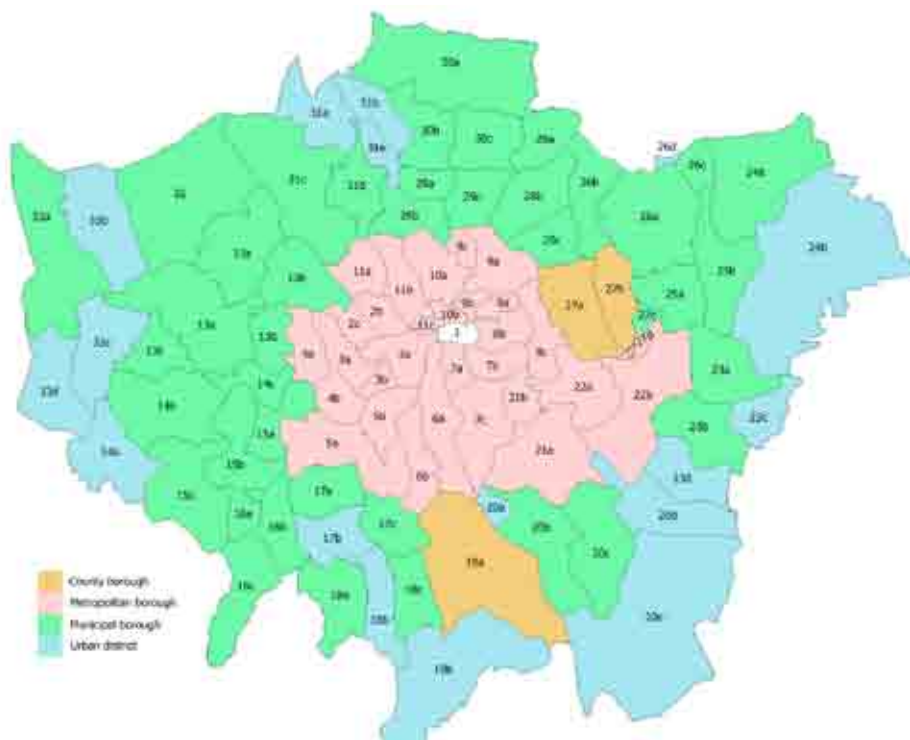
By 2025, an estimated 12.8 million journeys will be made using public transportation in London every day, up from 10 million in 2005.¹⁴⁷ 79 percent of commuters enter London during the morning rush hour by rail. Of those travelling by road, about 50 percent commute by bus, 30 percent by car, and 20 percent by motorbike or bike.¹⁴⁸ Car use levels are decreasing while bus and bicycle use are increasing: almost 12 percent of commuters cycle.¹⁴⁹ In London, about 75 percent of public space is roads.¹⁵⁰

Authorities

Department for Transport (DfT)

The UK's DfT understands that how streets are designed, look, and work affects quality of life. Consequently, the DfT is rethinking the way roads are designed, which “means embracing a new approach to design and breaking away from inflexible standards and traditional engineering solutions.”¹⁵¹

Figure 116



London boroughs.
Source: Wikimedia
Commons. Image by
MRSC, Kafuffle.

Figure 117



London's former
"bendy" bus. Source:
Wikimedia Commons.
Photo by Ultra7.

With the Department for Communities and Local Government, the DfT supplemented its *Manual for Streets* (2007) with the *Manual for Streets 2—Wider Application of the Principles* (2010). The 2007 document revealed a policy shift towards thinking of streets as destinations rather than simply traffic thoroughfares.¹⁵² The 2010 manual details how to expand this thinking to busier streets, as well as how to declutter streets.

Mayoral leadership

London's public transportation redevelopment took off in 2000 with Mayor Ken Livingston's strategy of improving public transport. The twin centrepieces of this were the controversial and successful congestion charging, which has reduced car volume into central London, and "bendy buses" (expanding the bus network, using many extended buses) (Figure 117).

Current Mayor Boris Johnson has continued many of these policies (although he phased out the "bendy buses" in 2011), and has a vision for London of his own. This is extensively described in the "London Plan", a strategic plan for Greater London, which the boroughs and the City of London Corporation must base on their own plans (see below).

"We're going to put the village back into the city....I want... an atmosphere of trust and neighbourliness and a village atmosphere in parts of our city. That is partly about driving down crime but it is also about improving the urban realm, putting in more trees, having cleaner vehicles, [and] beautifying the parks...We...are creating a safer, cleaner, kinder, gentler city where people feel [able] to cycle and indeed walk their children to school. That is our ambition for transport in London—to use transport and our investment in transport to make London the best big city on Earth."¹⁵³ —Boris Johnson, January 2011

Greater London Authority (GLA)

The GLA, a permanent body that collaborates with the Mayor of London, the London Assembly and the boroughs to administer the whole of Greater London execute the city's long-term strategies.¹⁵⁴ They aim to give "pedestrians their fair

share of London's streets,"¹⁵⁵ with the intention to create more shared spaces, and spaces that reflect the character of the neighbourhoods they are in.

Transport for London (TfL)

Part of the GLA, the TfL, is in charge of most transportation issues in the Great London area. TfL works with private companies to upgrade its public transportation systems. It follows six strategies to improve transport, including land use planning to decrease the need to travel, and encouraging people to use public transportation, bicycles and to walk through information and incentives.¹⁵⁶ TfL promotes walking on its website, www.tfl.gov.uk/walking and stresses that in many popular routes, walking may be a faster option than underground or bus.

In addition, its reports dedicated to improving walkability in London, *Making London a walkable city* (2004)¹⁵⁷ and *Improving walkability* (2005),¹⁵⁸ provide the foundation of a strategic and dedicated effort to increase walking as a mode of transport, and recognise that a walkable city is a sustainable city. While TfL provides an overall guide, boroughs must create their own walking strategies. The TfL guide states that the most walkable areas include the "5Cs" (Figure 118).

These two documents provide extensive support for boroughs improving their walkability, from strategy to policy to implementation, with an emphasis on proactive (not reactive) and creative planning.

Figure 118

The "5Cs" of Good Walking Networks¹⁵⁹

1. Connected	Walking routes should connect each area with other areas and with key "attractors" such as public transport stops, schools, work, and leisure destinations. Routes should connect at the local and district level, forming a comprehensive network.
2. Convivial	Walking routes and public spaces should be pleasant to use, allowing social interaction between people, including other road users. They should be safe and inviting, with diversity of activity and continuous interest at ground floor level.
3. Conspicuous	Routes should be clear and legible, if necessary with the help of signposting and waymarking. Street names and property numbers should be comprehensively provided.
4. Comfortable	Walking should be enjoyed through high quality pavement surfaces, attractive landscape design and architecture, and as much freedom as possible from the noise and fumes and harassment arising from proximity to motor traffic. Opportunities for rest and shelter should be provided.
5. Convenient	Routes should be direct, and designed for the convenience of those on foot, not those in vehicles. This should apply to all users, including those whose mobility is impaired. Road crossing opportunities should be provided as of right, located in relation to desire lines.

In addition, TfL's strategic overall transport planning roadmap, *Transport 2025*, provides a vision for sustainable transport in London as a way to reduce CO₂ emissions and improve urban liveability.¹⁶⁰

Plans and programmes

London Plan

This is an overall strategic “spatial development strategy” released by the GLA for Greater London that covers “integrated economic, environmental, transport and social framework for the development of London over the next 20-25 years.”¹⁶¹ It has a dedicated walking policy (“Policy 6.10”) for “the Mayor to work with all relevant partners to bring about a significant increase in walking in London by emphasising the quality of the pedestrian and street environment.”¹⁶² Walking must be safe, pleasant, “easy to navigate” and a “viable alternative to the private car.”

Better Streets

TfL wants to develop more “balanced” streets with little clutter, few obstacles, and which are suitable for mixed-use transportation.¹⁶³ This strategy includes six key principles and five stages of street improvement (see Figure 119).

Figure 119

The Six Principles and Five stages

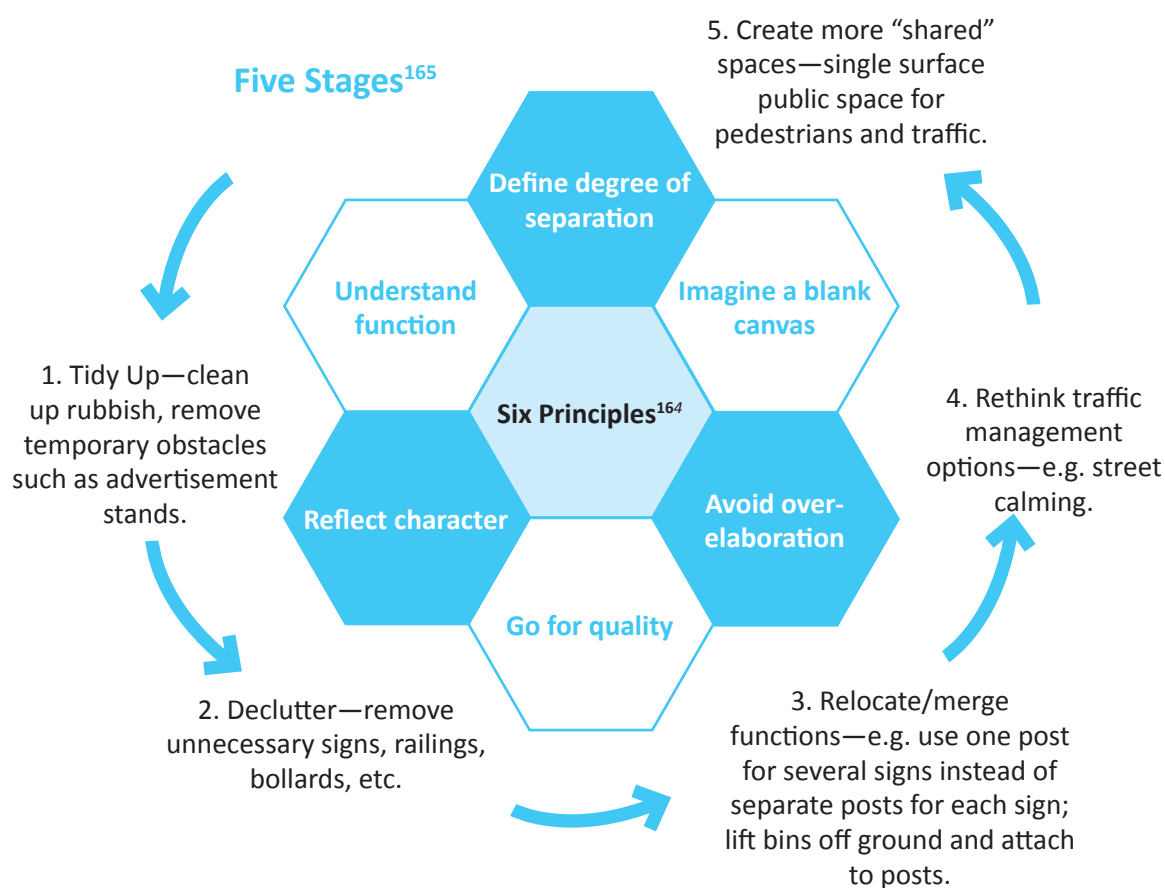


Figure 120



Exhibition Road (before pedestrianisation). Source: Flickr. Photo by Dave Patten.



Exhibition Road (after pedestrianisation). Source: Wikimedia Commons. Photo by Romazur.

De-cluttering

The Mayor's office, along with TfL and the boroughs, are removing obstacles such as unneeded road signs and railings, or combining several obstacles into one, like attaching a road sign and a rubbish bin to a street lighting pole, thus minimising the footprint of obstacles on the sidewalks.¹⁶⁶

Legible London

TfL has developed a pilot programme in four areas to improve wayfinding. It includes improved and consistent maps and signage, and is coordinated with multiple modes of transportation in order to help commuters and visitors to orient themselves when alighting transport (e.g. the Underground).¹⁶⁷ The 2012 Olympics have been a driver in producing maps for the city, especially major tourist attractions. As of March 2012, about 340 Legible London signs had been installed.¹⁶⁸

Bond Street, a major retail and tourist area, was the first "Legible London" area. Improving the quantity and clarity of signs for pedestrians, as well as upgrading maps for bus and underground users have cut pedestrian trip times by 16 percent.

Specific examples and improvements

Exhibition Road

This award-winning 800 m road has been upgraded to a shared space. Over three years, authorities removed sidewalks, barriers and clutter, studied pedestrian movement to identify an effective street plan and pedestrian layout, planted trees, installed a durable and attractive road surface, reduced the speed limit, and improved lighting. Such design has made the street accessible to people with low mobility. Neighbourhood authorities say that "by thinking imaginatively about how the space could be used we have not only transformed the road but improved the quality of life for people living and working nearby and will offer...visitors...a welcoming and enjoyable experience," (Figure 120).¹⁶⁹

Figure 121



Model showing the redevelopment of the King's Cross area. Source: Wikimedia Commons. Photo by Andrew Dunn, Solipsist.

King's Cross

The King's Cross development consists of 67 acres of privately owned mixed use land, with 25 acres of public space.¹⁷⁰ The development includes major rail hubs, and thus there is an emphasis on pedestrian activity (Figure 121). Granary Square is among the largest public spaces in Europe.¹⁷¹ Planners reconfigured this neighbourhood to reconnect it with the Thames. They opened up dead-ends and improved the riverside walkway by making it a destination as well as a functional route.¹⁷²

Critics question whether the corporations that own these spaces have the public good in mind, or if the focus is too much on retail space, or not allowing spontaneous events to happen.¹⁷³

Key lessons for Hong Kong

- Strong, creative leadership is important.
- An over-arching plan, which is regularly reviewed, should be adopted.
- Districts can be allowed to plan their own neighbourhoods, with the over-arching plan as a strong guideline.
- Shared spaces can be successful.
- Congestion charging reduces vehicle volumes, improves air quality and walking environment.
- Sidewalks should be de-cluttered for better pedestrian access.
- Signage consistency can be improved to ease the walking experience.
- The transportation department can be made responsible for promoting walking.

4. Melbourne

Structure and development pattern

Metropolitan Melbourne covers 7,700 km² and has a population of 4 million (Figure 122).¹⁷⁴ The city of Melbourne covers 37.7 km², and every day, 780,000 commuters add to its residential population of 100,000, with most heading to the 15 km² central area. Authorities predict that with the consistent growth of the residential population as well as jobs, the daily influx of people to the city will increase to 1.2 million by 2030. To accommodate this, the city is stepping up its urban renewal vision, and facilitating economic development by improving transport and liveability.

Melbourne's goal is to have 90 percent of commuters using public transportation, walking or cycling by 2020, compared with the 2006 rate of 72 percent in the centre of town.¹⁷⁵ In 2006, 4 percent of the working population walked to work, and 1 percent cycled.¹⁷⁶

Like many cities, Melbourne's planners are now creating an urban environment with multiple major centres, rather than one CBD. This is not only to reduce the transport stress on the city, but also has implications for walking, such as more mixed-use neighbourhoods, meaning people can live near where they work.¹⁷⁷

Figure 122



Metropolitan Melbourne. Source: Wikimedia Commons. Image by Diliff.

Figure 123



Map of Melbourne in 1855. Source: Wikimedia Commons. Image by Victoria. Surveyor-General.

Historically, central Melbourne followed a grid pattern of 100 m x 200 m blocks known as the “Hoddle Grid”. In the 1800s these were subdivided further as these blocks were too wide for pedestrians to walk comfortably (Figure 123). This led to the development of central Melbourne’s network of lanes and arcades to allow people to pass through more easily.¹⁷⁸

Figure 124

Walking statistics

Walking statistics: Melbourne¹⁷⁹

- 1st choice of transport for trips 1 km or less
- 73% of all road trips are on foot
- 36% of walking trips are business-related
- 49% of city residents in walkable neighborhoods are choosing to walk for transport
- 62% increase in walking trips by 2020

Authorities

“There is a direct link between the city’s economic prosperity and the safety and convenience of the pedestrian experience”¹⁸⁰

By the 1970s, the shift from an urban to suburban lifestyle meant that the city centre was left underused. In the 1980s, city authorities began collaborating with the state government to revitalise the city core. In 1994, the city published a 10-year strategic plan for transportation and open space, updated in 2004,¹⁸¹ and again in 2012¹⁸² (see below). The city works closely with other government agencies, namely Victoria State’s Department of Transport, and Department of Planning and Community Development.

Department of Planning and Community Development (DPCD)

This state department “has a central role in managing Victoria’s growth and development and building stronger communities.”¹⁸³ It does this by producing long term strategic plans for the state and its urban areas, and engages with stakeholders across the community. It also provides codes and guidelines for local authorities on land use and planning, such as for high density residential planning, and increasing green space state-wide (“open space links” in urban areas).¹⁸⁴

In 2002 DPCD published *Melbourne 2030*, an overarching long-term view of Melbourne’s sustainable development towards “one of the most liveable, attractive and prosperous areas in the world for residents, business and visitors.”¹⁸⁵ Its “Nine Directions” for policy include increasing urban density and making Melbourne “a great place to be”, which includes promoting “excellent neighbourhood design to create attractive, walkable and diverse communities” and “improve the quality and distribution of local open space and ensure long-term protection of public open space”. In addition, improving transport with “more priority to cycling and walking” is also a policy goal.¹⁸⁶ *Melbourne 2030* provides a strategic framework for many state and municipal policies across various departments such as the state’s *Victorian Transport Plan*.

The plan is subject to review. The Victorian Government responded to an audit of the plan by updating the strategy,¹⁸⁷ in light of revised projections that the city will have 5 million residents before 2030 as originally anticipated, and has changed its plans accordingly,¹⁸⁸ particularly for higher density development, more walking, cycling and public transport.

In addition, DPCD offers a range of short term projects to enhance community spaces, such as the *Community Works Program* which offers grants to local authorities of up to AUD200,000 (HKD1.58 million) to “create attractive, accessible, stimulating and pedestrian friendly spaces that encourage social interaction, informal recreation, walkability and safety” and “enhance the interface between private and public spaces.”¹⁸⁹ The preceding *Pride of Place Program 1999-2004* and *Creating Better Places Program 2005-2011* had similar goals.¹⁹⁰

Department of Transport (DoT)

While walking is part of the sustainable transportation strategy for Melbourne, Victoria State’s DoT has focused more resources on encouraging bicycle use and public transportation. However, the

department is collecting data to understand the reasons people choose or choose not to walk.¹⁹¹

The DoT provides guidelines to help regional stakeholders to improve wayfinding, and to ensure signage is more consistent across Victoria, including Melbourne. The DoT provided funding for “Local Area Access Program” case studies¹⁹². The three year “Local Area Access Program” examined how pedestrians travelled around the central Melbourne and found the most suitable places for signs. The project added 22 map information panels, 21 signs and 11 route markers, improving wayfinding in the area.

City of Melbourne

The city and state agencies have a series of strategic plans targeting different issues and time frames. Of these *Future Melbourne* plan and the *Melbourne 2030* have specific recommendations about walking, and the *Metropolitan Planning Strategy* looks at improving city liveability¹⁹³ with specific visions for improving public transport.¹⁹⁴ These strategic plans have extensive public consultation components.

The *Future Melbourne Strategy* is a long-term plan, created with the input of 15,000 stakeholders including businesses, community groups and individuals over a year, contains over 150 targets to gauge Melbourne’s efforts to be a sustainable and innovative city.¹⁹⁵ Melbourne “will be one of the world’s great walking cities” and municipal efforts will be focused on encouraging pleasant walking experience. It lists goals, indicators and outcomes to measure progress to move towards this goal.¹⁹⁶

The city provides plans on specific issues such as the *Streetscape Framework*, which provides documents and strategies for neighbourhood authorities to use to improve the street experience for pedestrians and transport. It also includes a framework for stakeholder engagement.¹⁹⁸ The *Bicycle Plan* encourages more Melbournians to cycle.¹⁹⁸

Other neighbourhoods or local councils have plans that build on the larger municipal ones, such as Kensington¹⁹⁹ and City North.²⁰⁰ The *Inner Melbourne Action Plan* is a strategy for several councils in the metropolitan area to improve the liveability across the region.²⁰¹

The city’s Transport Strategy, last updated through public consultation in March and April 2012, is a final strategy document critical to Melbourne’s walkability (see below).²⁰²

Health is a driving factor in improving the city’s walkability. Increasing physical activity is also an important part of this vision, as is improving urban air pollution, as well as addressing climate change concerns. Reducing the “urban heat island” effect is also part of the plan, and an effective way of doing this is to plant trees.²⁰³ The city’s Urban Forest strategy aims to increase the city’s canopy from 22 percent to 40 percent.²⁰⁴

“The overriding lesson from Melbourne is that even if you are a city in the new world with wide streets, with a car culture, the whole thing geared for rushing from A to B; if you are willing to give people the space they need, give the bicycles the space they need, then you can have a complete change of behaviour.”
—Jan Gehl²⁰⁵

Plans and programmes

In 2004, the city improved walkability in specific neighbourhoods by: widening and improving pavements; managing pedestrian signals at crosswalks, creating “interesting pedestrian spaces” to entice pedestrians to stay, and improve public transportation. Since then, Melbourne has also improved access at tram stops, installed more zebra crossings, shared zones with pedestrian priorities over vehicles, reduced speed limits to 10 km/h or 30-40 km/h in streets heavily used by pedestrians.

The City of Melbourne regularly reviews and updates its strategic plans, with the aim of making it “one of the ten most liveable and sustainable cities in the world.”²⁰⁶ Part of this is a transportation policy that is focused on public transport, walking and cycling. In recent years, its aim has been to “improve the municipality’s walking environment to and around rail, tram and bus stations and stops; to upgrade the cycling network in the central city; and to develop options for central city freight delivery”.²⁰⁷ This strategy coordinates transport and land use policies. Accommodating private vehicles is conspicuously absent from the Transport Strategy’s “key directions”, but supporting pedestrians and cyclists is.

Although Melbourne does not have an overall plan for pedestrians, it has an idea of what such a plan would do, including improving accessibility, wayfinding, stakeholder engagement and review of pedestrian services.²⁰⁸ The 2012 Transport Strategy lists the following Priority Actions:²⁰⁹

- Develop a municipal Pedestrian Plan.
- Work with the Department of Transport, VicRoads and Yarra Trams to design and build the municipality’s network of high-mobility streets.
- Expand the programme of opening streets for temporary pedestrianisation.
- Work with the Department of Transport to provide excellent quality pedestrian access to all public transport stops, stations and interchanges.
- Prepare pedestrian accessibility plans for the precincts around Flinders Street Station and Southern Cross Station.
- Work with the Department of Transport and VicRoads to ensure that the municipality’s Road Network Operating Plan provides a high level of priority to pedestrian trips.
- Update the Road Safety Plan to strengthen the commitment to reducing pedestrian death and serious injury without reducing pedestrian access to the road network.
- Work with State Government to reduce information and infrastructure barriers to universal access in the public transport system.
- Work with other tiers of government to advocate for universal transport accessibility.

Specific examples and improvements

Swanston Street and the Hoddle Grid

Swanston Street is in the heart of the Hoddle Grid, an area that has been at the centre of Melbourne's urban regeneration. The street is currently undergoing a transformation to create a 1 km stretch of private vehicle and taxi-free space. The plans also include implementing more urban public squares, such as revitalising City Square and creating Federation Square. The Swanston Street pedestrian area has been widened to 3.5 m on either side of the tram tracks and bicycle lanes,²¹⁰ and over 100 trees were planted. Smaller yet significant initiatives, such as creating space where people wish to stay,

Figure 125



Centre Place,
Melbourne. Source:
Wikimedia Commons.
Photo by Invincible.

and allowing for street vendors (such as flower stalls) to stay open late means more street life, more density and casual surveillance, leading to increased personal safety with more “eyes” on the street.²¹¹

Alleys and streets such as Bourke Street, Flinders Lane, Hardware Lane, Centre Place, have flourished with concerted efforts to remove traffic and encourage cafe activities. The city and citizen groups have worked together to maximise underused space, such as former loading or rubbish areas, transforming them into pleasant areas where pedestrians care to stay and sit. The grid pattern naturally did not allow for many large open squares, but pedestrianising service lanes combined with the grid pattern has led to small intimate spaces as well, which patrons can enjoy. Other streets, such as Flinders’ Lane, was reduced from a two lane road to a single lane with traffic calming features (such as speed bumps), with more space for pedestrians. These measures have helped create “village hub” with a sense of community featuring retail and local artists, thereby improving business activity in the area.²¹²

“We would rather see people take public transport into the city [and encouraging people to] walk into the city and lots more cycling. No city in the world wants to bring more and more cars into its heart—that is exactly the opposite of what great streets do.”²¹³ —Melbourne Lord Mayor Robert Doyle

Key lessons for Hong Kong

- It is important to form high-level long-term strategies which are regularly reviewed and updated.
- Outputs and goals should be adjusted based on the information gathered.
- A consistent message across departments and municipal authorities helps keep focused.
- Community stakeholders should be involved in planning and vision decisions.
- Small lanes and underused spaces can be easily revitalised.
- Small blocks can be created by unblocking lanes to encourage pedestrian flow.

5. San Francisco

City structure and development pattern

San Francisco is at the heart of the Bay Area, a region with 7 million people in nine counties, and covers an area of 18,000 km². The city and county of San Francisco is 123 km² and situated on the end of a peninsula, which leads to restricted opportunities for sprawl (Figure 126). It is an area of higher density in a low-density region.

San Francisco has a population of 805,363, with 522,229 non-San Francisco residents commuting to the city and 102,279 commuting from it daily.²¹⁴ In 2010, 36 percent of commuters drove alone to work, while 7.9 percent carpooled, 34.1 percent used public transportation, 3.5 percent cycled and 9.4 percent walked.²¹⁵ Of the 4.5 million transportation trips taken daily within San Francisco, 20 percent are walking, and an additional 17 percent use public transport, also a pedestrian activity.²¹⁶ San Francisco's public transportation system includes diesel and trolley buses, a metro system, and almost 400 km of bicycle lanes (and infrastructure to support cyclists: 2,444 bike racks, 52 bike lockers and 14 bike corrals).

San Francisco's urban centre is a grid design (Figure 127), and is one of the densest cities in the Western US.²¹⁷ It has small streets, short blocks, mixed-use neighbourhoods, which combine to make a very walkable city. The street grid persists over the city's hills, instead of streets contouring around the hills, a legacy of early settlers.²¹⁸ Short blocks and alleyways allow pedestrians to choose and vary their walking routes, although some neighbourhoods have large blocks that are not broken up by alleyways. Most pedestrian activity is focused around commercial corridors, transportation hubs and major institutions.

Figure 126



Satellite image of San Francisco Peninsula. Source: NASA.

Figure 127



Map of San Francisco central. Source: OpenStreetMap contributors.

In addition, unlike many other major American cities, San Francisco does not have many freeways that pass through the city, in part a result of the citizen-led “freeway revolt” in the 1950-60s when citizens cancelled plans for most of nine urban freeways, largely on aesthetic grounds.²¹⁹ However, current car ownership rates in San Francisco exceed the national average, and congestion is a growing problem on roads already bearing heavy traffic.

Authorities

San Francisco is divided into 11 districts. A district representative is elected to the Board of Supervisors, an administrative body that introduces policy and regulation.

Different government departments are involved with improving the pedestrian experience in San Francisco:

San Francisco Municipal Transportation Agency (SFMTA)

The San Francisco Municipal Transportation Agency (SFMTA), formed through a municipal vote, combined several existing transport-related bodies to help increase the efficiency of transportation policy and support the *Transit First Policy* (see below). Walking is a clear priority of this transport agency. The SFMTA “plans, designs, builds, operates, regulates, and maintains [the city’s] transportation network... In addition to the four modes of transportation (transit, walking, bicycling and driving, which includes private vehicles, taxis, carsharing, and commercial vehicles), the Agency directly oversees five transit modes (bus, trolley bus, light rail, historic streetcar, and cable car).”²²⁰ In the absence of a Pedestrian Master Plan, the SFMTA nonetheless focuses on enhancing the pedestrian experience, including safety.²²¹ The SFMTA also plans, designs and builds transport-related projects, and updates its strategic plan every 2 years.²²²

San Francisco Planning Department

The Planning Department is also heavily involved in improving walkability in San Francisco, primarily through the “San Francisco General Plan” which provides an overall strategy and direction of urban planning. Its sections on Urban Design,²²³ Transportation,²²⁴ and Open Space and Recreation²²⁵ have specific impact on the urban pedestrian experience. The Planning Department provides detailed information on active and completed plans on their website.²²⁶

Department of Public Works (DPW)

The DPW is in charge of infrastructure maintenance and guidelines, for example for sidewalks, lighting, curb ramps, street greenery and works in cooperation with property owners, government agencies and utility providers. It has additional guidelines for accessibility. In particular:

- Adding countdown timers to pedestrian signals to inform pedestrians when it is still safe to walk (about 65 percent of the city’s signaled crossings have countdown timers, with plans to install more);
- Maintaining sidewalks, stairs and paths, with priority given to those that pedestrians use most heavily;

- Installing curb ramps on all of the city's thousands of intersections;
- Planting and maintaining "street trees". The DPW's Bureau of Urban Forestry maintains 26,000 of the 106,000 trees on public rights-of-way. The San Francisco "Clean and Green Initiative" aims to plant 25,000 trees from 2010-2015; and
- Maintaining street lighting: 43,000 lights are operational, but experts recommended a Street Lighting Policy to improve safety and liveability.

Plans and programmes

Policy environment

There are four main policy and planning items which influence walkability in San Francisco:

- The *Transit First Policy* (1973; 1999) prioritises public transportation, including pedestrian activity and bicycles over private car ownership. Critics acknowledge that the Transit First Policy has been instrumental in preserving San Francisco's walkable neighbourhoods as it provides a clear roadmap for the direction that policies should take to maximise pedestrian safety and walkability, support public transport, and prevent San Francisco from developing in a car-focused manner like other major US cities.²²⁷
- The *Better Streets Policy* (2006) requires departments to coordinate street design, planning and use, with priority on pedestrian and bicycling activities.
- The *Better Streets Plan* (2010) gives guidelines for pedestrian space and using streets as public space. It was developed to improve coordination and communication between the stakeholders involved in executing projects, to improve the end results. There is an understanding that for the Plan to be successful, it needs to be well implemented, including maintenance, education, enforcement and funding.
- The *Complete Streets Policy* instructs any construction and planning projects to include pedestrian, bicycle and street improvements.

The city has additional plans that focus on particular areas of the city, codes to support policies in the city's General Plan and other documents, standards and guidelines for technical specifications.

In addition to municipal rules, national and state guidelines and policies contribute to San Francisco's pedestrian environment.

At the federal level:

- The *Americans with Disabilities Act* provides guidelines on improving accessibility, such as curb ramps, sidewalk widths²²⁸, but these are largely focused on private structures, with few guidelines for public spaces. The United States Access Board, an agency dedicated to improving accessibility, is developing the Public Rights-of-Way guidelines to address these issues in new developments.²²⁹

- The *Policy on Geometric Design of Highways and Streets* by the American Association of State Highways and Transportation Officials (“the Green Book”) provides best practice for street dimensions, sidewalks, etc.

At the state level:

- The *California Manual of Uniform Traffic Control Devices* provides guidelines for road infrastructure such as signals, signs and markings.
- The *California Environmental Quality Act* requires environmental impact assessment for projects undertaken in San Francisco by the Planning Department.
- The *California Vehicle Code* states that “it is the policy of the State of California that safe and convenient pedestrian travel and access, whether by foot, wheelchair, walker, or stroller, be provided to the residents of the state.... [A]ll levels of government in the state, particularly the Department of Transportation, [should] work to provide convenient and safe passage for pedestrians on and across all streets and highways, increase levels of walking and pedestrian travel, and reduce pedestrian fatalities and injuries.”²³⁰

San Francisco has been careful to adopt policies that protect what makes the city unique. This includes avoiding the development of freeways in the city itself, but also an understanding that certain pedestrian solutions would not be appropriate. For example, pedestrian only areas, such as those in old European cities, may not work in San Francisco because the segregation of land use means that areas that are active during daytime are not active at night.²³¹

Specific examples and improvements

San Francisco has a longstanding culture of community activism, and diverse advocacy groups have been contributing to shaping the pedestrian experience in San Francisco, and even the structure of some municipal departments (such as the SFMTA).

Pedestrian safety

Reducing pedestrian-vehicle collisions is a major focus for the city. Selected actions to address this are listed here:

- In response to the mayor’s Executive Directive to improve pedestrian safety,²³² the city is developing a Pedestrian Action Plan that will:
 - Provide implementation timelines and encourage walking;
 - Use the Pedestrian Safety Advisory Committee for input;
 - Collect research, provide tools and analyse city pedestrian initiatives; and
 - Identify funds for such initiatives, including supporting staff, monitoring and planning, and research.²³³

- The SFMTA has completed 29 traffic calming projects, with another nine planned.
- The San Francisco Pedestrian Safety Advisory Committee (PSAC), founded by the Board of Supervisors, acts as the public's representatives to the Board when considering pedestrian experience in new and existing city projects. This group includes members from relevant community activist groups, including pedestrian or cyclist safety organisations, child advocacy groups, environmental groups, public health groups, and residents from each of the districts. The public is invited to the Committee's monthly meetings.²³⁴

Including stakeholders in planning discussions

Community groups have been active in San Francisco advocating for walkable neighbourhoods. Municipal policy has adopted suggestions made by advocacy groups. For example, the urban development advocacy group SPUR is engaged with the Better Streets Program to work out funding and implementation strategy. Because of the active community and a history of green policy and innovation, decision makers may be more receptive to innovative transportation solutions, such as bicycle infrastructure, than other places.²³⁵

A stakeholder group can also mean inter-departmental work. The WalkFirst project was a year-long collaborative effort through which the Department of Public Health, San Francisco Municipal Transport Authority, Planning Department and the Transportation Authority are working together to create "a unified framework for identifying and prioritising pedestrian investments across the city."²³⁶ While largely focused on reducing pedestrian-vehicle collisions, the WalkFirst project also encouraged walking as a form of exercise, improving personal safety, and aimed to improve the walking environment.

Figure 128



View of Broadway, San Francisco. Source: Wikimedia Commons. Photo by Jjron.

Better Market Street project

Market Street is a 5 km major road which begins at the waterfront and supports a large amount of public transportation. While successful in this utilitarian function, in 2011 the city began a four year process of public engagement, environmental impact assessment and construction of a 3.5 km section of the street with the goal of creating a destination, a street that reflects the neighbourhoods it traverses, enhances mobility, and promotes economic development. The project is estimated to cost US\$250 million.²³⁷ This project is being led by the DPW, and involves over five agencies and community groups.

Chinatown Broadway Street design

Broadway Street is a busy 4-lane road that passes through San Francisco's historic Chinatown, one of the most densely populated areas in the United States (Figure 128). There are a high number of elderly residents in the area. Plans are underway to transform a 300 m section of this road from a vehicle-centric thoroughfare to a mixed-use, pedestrian friendly urban environment. This project is being led by the Planning Department, and two other agencies, in close collaboration with neighbourhood community development groups.²³⁸

Key lessons for Hong Kong

- An overall plan and policy that prioritises public transportation and pedestrian accessibility is fundamental.
- Involving and engaging with an active community is an important part of keeping a sense of place and encouraging stakeholder buy-in.
- Involving grassroots community members in high-level working groups, and meeting regularly.
- Inter-governmental coordination and cooperation is key.
- Explicit support from the Mayor helped focus attention on particular pedestrian issues.
- Sufficient staff in municipal governments also affects the effectiveness of pedestrian and bike plans.
- It is important to create pedestrian solutions that suit the area, rather than simply adopting “one-size fits all” solutions.

6. Seoul

City structure and development pattern

Metropolitan Seoul covers 12,446 km² and has 22.5 million inhabitants, about half of the Republic of Korea's population (Figure 129). The city proper has 10 million residents and a population density of 16,500 per km².²³⁹

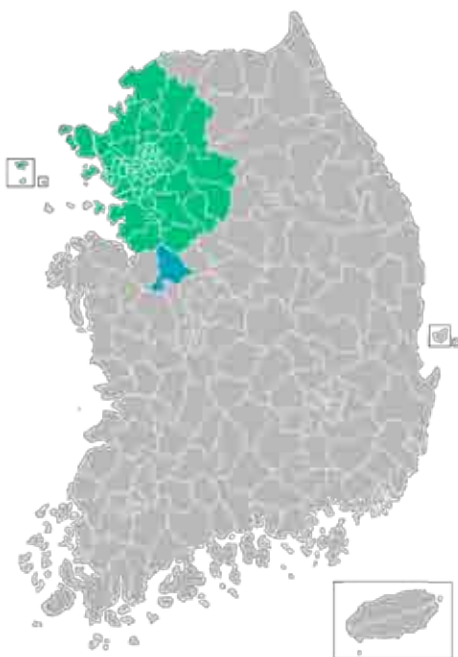
Since the 1960s, the city has grown very quickly, leading to an increasingly decentralised urban plan. However, most commuting is from satellite suburbs to a CBD, and the rapid population expansion has led to longer commutes and more daily trips.²⁴⁰ Although some commuters travel between suburbs, these trips can be quite long, as most public transportation has been focused on getting to and from the CBD.

Seoul's historical central district is characterised by narrow streets and irregular blocks (Figure 130). Following years of rapid development, Seoul is now attempting to reclaim some of its historical urban roots, such as narrow roads and wood houses, as a way to recover from the more homogenous commercial development in the late 20th century.²⁴¹ In addition, as the population growth has begun to level off, the city is beginning to prioritise "restoration and sustainability," as one city official puts it,²⁴² over building more conventional infrastructure projects.

Transport mode share

Residents take about 30 million trips in Seoul daily,²⁴³ about 63 percent of which are on public transportation.²⁴⁴ In 2002, passengers took 1,526 million bus trips, and 2,231 million subway trips.²⁴⁵ The share of public

Figure 129



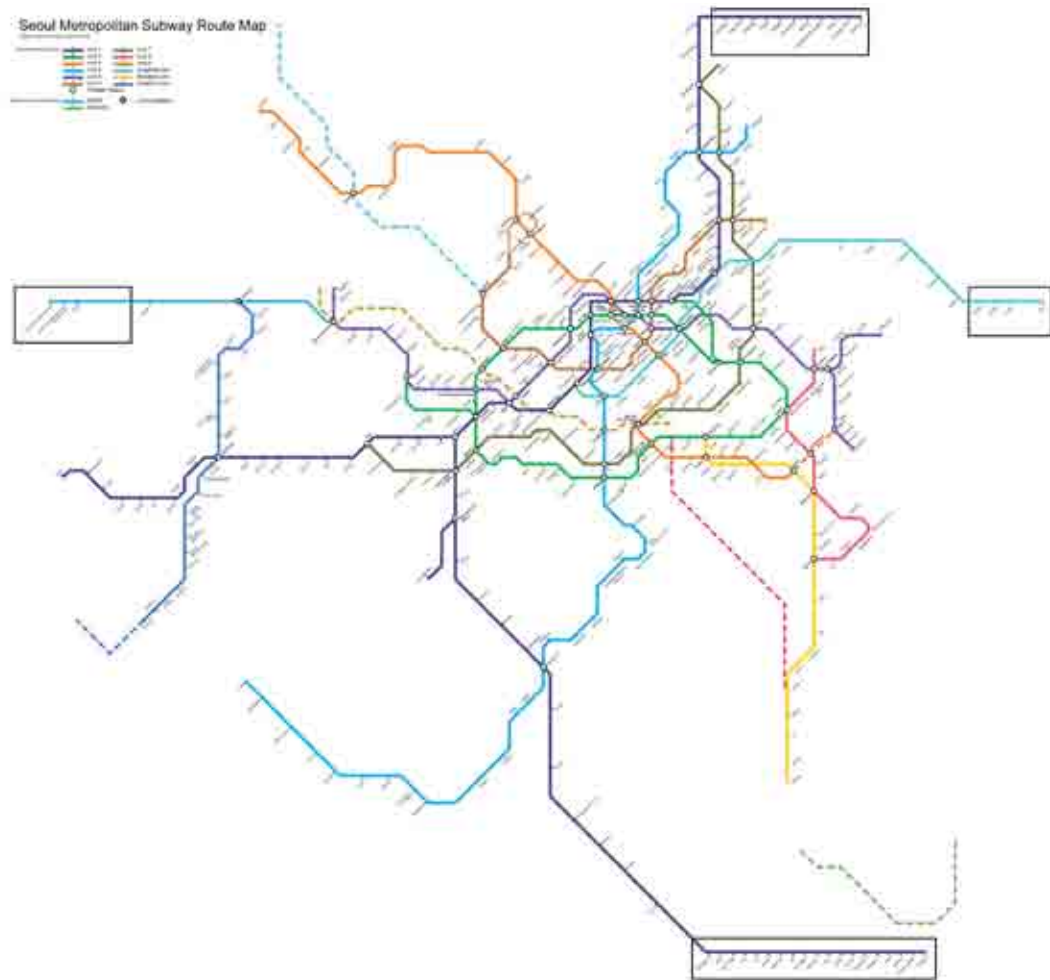
Map of metropolitan Seoul. Source: Wikimedia Commons. Image by ASDFGHJ.

Figure 130



Map of Seoul at around 1840. Source: Wikimedia Commons. Image by Kim Jeong-ho, Ras67.

Figure 131



Seoul subway network. Source: Wikimedia Commons. Image by IRTC1015.

transportation by subway in Seoul is projected to increase from 35 percent to 50 percent.²⁴⁶

Car ownership has grown quickly in Seoul from 2 cars per 1,000 people in 1970 to 214 per 1,000 in 2003. This has put considerable strain on the arterial highways from the suburbs to the CBD, and increased noise and air pollution and has raised pedestrian safety issues.²⁴⁷ The average travel speed in the CBD has decreased from 30 km/h in 1980 to 14 km/h in 2006. The cost of congestion increased approximately fivefold between 1991 and 2009.²⁴⁸

Authorities

It is early days yet, but policies and areas of focus on pedestrians and walkability are beginning to emerge in South Korea, with particular focus on public transportation and reducing carbon emissions from transportation.

National policy

In 2008, the president of South Korea announced a “Low Carbon and Green Growth” strategy for the country to reduce CO₂ emissions. Twenty percent

of South Korea's carbon emissions come from the transportation industry, with road emissions accounting for 80 percent of these emissions.²⁴⁹ Reducing transport emissions is a clear target.

Ministry of Land Transport and Maritime

South Korea's Ministry of Land, Transport and Maritime "plans and develops pedestrian priority zones to improve walking conditions"²⁵⁰ for South Korean cities.

The Ministry sees a walking distance of 1 km or 15 minutes as what pedestrians will comfortably walk, and that pedestrians want to use the shortest path. It has found that three quarters of pedestrian fatalities occur in roads that are less than 13 m wide. The Ministry works with cities to designate Pedestrian Priority Zones that will have infrastructure to improve mobility for people with disabilities, such as traffic calming, transportation signaling, fences and bollards.²⁵¹

Seoul Metropolitan Government and pedestrians

The municipal government is investing in transportation management, with particular focus on the bus system. In addition to upgrading the fleet, improving access to bus stops and introducing dedicated bus lanes, it is using technology to help commuters manage their routes efficiently.²⁵²

The city of Seoul aims to "establish a sustainable-city plan system to create a human-centred city" with a "focus on nature and history."²⁵³ Citizens are to be involved in neighbourhood planning in order to diversify development and enhance neighbourhood characteristics. The city aims to "establish a convenient transport system focused on people" with specific objectives to:

- Reduce the child-vehicle collision rate by one third. Schools, parks and other areas that children frequent will be "designated...as protected areas"; and
- Create "exclusive public transport zones where people and public transport vehicles take centre stage: decrease roadways, expand walkway spaces, and revitalise them as cultural spaces".

Figure 132



Cheonggyecheon restoration in Seoul. Source: Flickr. Photo by madmarv00

Some streets have been pedestrianised, and safety measures have been introduced at crossings.²⁵⁴

Critics warn that as pedestrian facilities become more common in the city, there must be more cooperation amongst the multiple municipal departments involved to ensure that they are implemented properly. Some have suggested that creating "an integrated organisation that is comprehensively charged with the pedestrian facility issue"²⁵⁵ would address this possibility.

Expanding the park network is also seen as key to Seoul's sustainable development. By 2014, the city will

“create 150 village parks, 4 urban agricultural parks, and 354 small field-type agricultural gardens”. Ecological restoration along the Han River (from 7 areas to 12) and its tributaries (12 to 19) plays a large part in this (see *Cheonggyecheon Project* below).

Specific examples and improvements

Bicycles and traffic management

Authorities are trying to manage traffic more effectively through charging tolls, improving bus services and parking management. Lee In-keun, the assistant mayor for infrastructure says, “we’ve basically gone from a car-oriented city to a human-oriented city.”²⁵⁶

- Bicycles—Bicycles are not widely used because of the lack of infrastructure.²⁵⁷ Authorities in Seoul plan to increase bicycle use from 1.6 percent to 10 percent in 2020.²⁵⁸ In 2004, there were 200 km of bike lanes, with more planned.²⁵⁹ Currently, 48.1 percent of those who cycle do so for leisure, and 72 percent of these cyclists are in new towns.²⁶⁰ The major barrier to more people taking up cycling is that the cycling network is incomplete.
- Parking—Some key traffic reduction programs include reducing spaces in downtown Seoul to discourage private vehicle use, as well as increasing park and ride facilities outside of the CBD.²⁶¹
- Buses—Improvements were implemented in public transportation to encourage bus use, including installing median bus lanes, improving bus routing, and improving pedestrian access to bus facilities.²⁶²

Cheonggyecheon project

Part of Mayor Lee Myung-bak’s election platform was an ambitious urban restoration project. After he was elected in 2003, Seoul began an urban stream restoration project by dismantling an elevated highway and revealing the historic Cheonggyecheon river underneath. This 5.8 km park took just over 2 years to complete, and has had several benefits beyond the park itself, such as improved flood capacity and reducing the air temperature around the site (by about five degrees). Over 4,000 stakeholder meetings were held to slowly build support for it (Figure 132).²⁶³

Despite the fact that the water feeding this stream is treated and pumped in from the Han River, an ecosystem is present: now 25 types of fish (up from 4), 36 types of birds (up from 6), and 192 insect species (up from 15) live in the water and surrounding park.²⁶⁴

Key lessons for Hong Kong

- Strong vision from leadership can transform the urban landscape.
- Policies that may not be about walkability directly can still positively affect the pedestrian experience, such as more parks.
- Technology can be used to help commuters manage their travel.

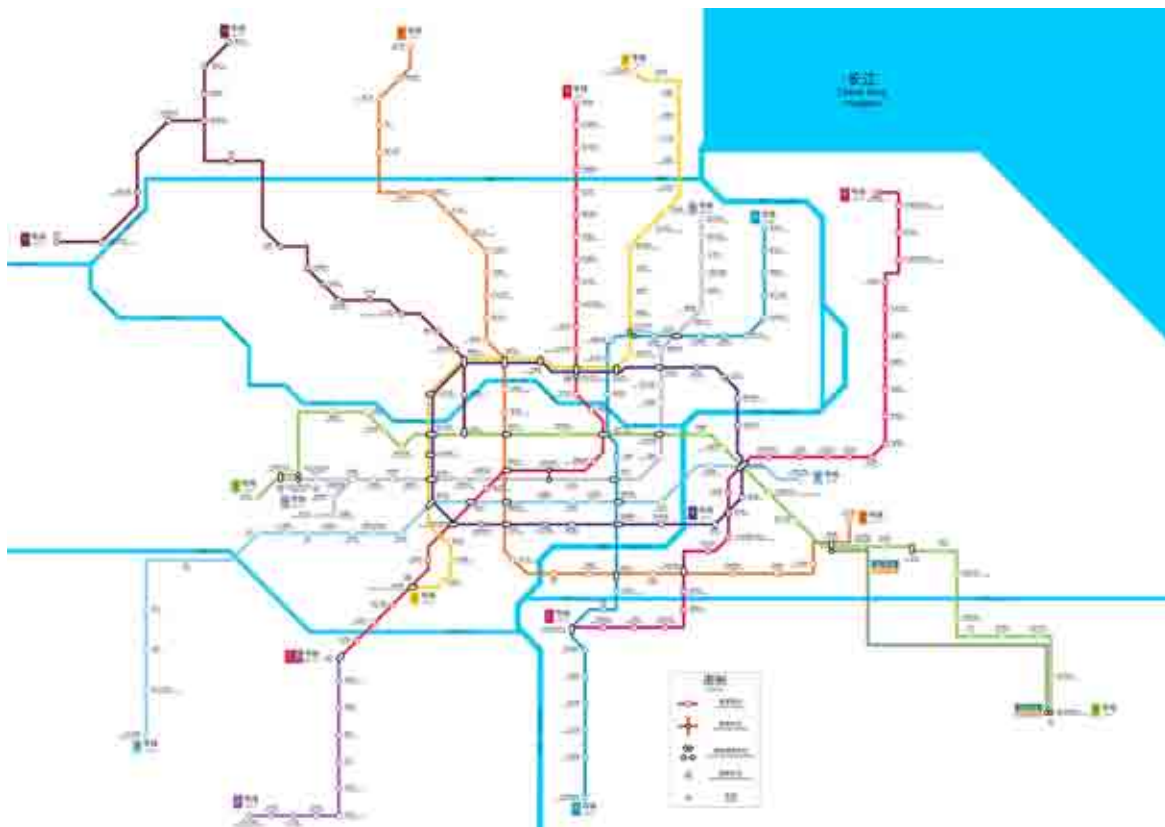
7. Shanghai

Structure and development pattern

Shanghai has a population of 18.5 million people, and a density of 2,600 people per square kilometre, rising to 40,000 per km² in the city centre.²⁶⁵ The city has 18 districts, 109 towns, 3 townships, 1,010 subdistrict committees, 3,759 neighbourhood committees and 1,781 villagers' committees.²⁶⁶ It covers an area of 6,340.5 km².²⁶⁷ In the last 25 years, it has tripled in size. Because of this growth, city planners are focusing more on decentralisation and increasing mixed land use and limiting sprawl. The older parts of the city were built for non-motorised transport.²⁶⁸

As of 2008, Shanghai had 1,041 bus or trolley routes, travelling a daily distance of 3 million km, 2.7 billion passenger trips a year with a daily capacity of 7.3 million passengers, and 54 percent of daily traffic capacity. Within the Inner Ring Elevated Road, bus stops are accessible within 300 m, and 500 m between the Inner Ring Elevated Road and the Outer Ring Expressway and suburbs.²⁶⁹ Railways accounted for 5 million rides daily and 30 percent of the city's transport capacity (60 percent within the Inner Ring elevated Road and 40 percent outside of this) (Figure 133). About 50 percent of the population travels by walking or bicycle.²⁷⁰ However, motorised trips are on the rise, while non-motorised vehicle trips are dropping, and congestion is worsening. The city aims to increase public transportation use as part of its CO₂ reduction goals.

Figure 133



Shanghai metro network. Source: Wikimedia Commons. Image by Daniel129, ASDFGH.

Figure 134

Management function of transport institutions in Shanghai²⁷³

Institution		Management function
Shanghai Urban Planning Bureau		<ul style="list-style-type: none"> Coordinate various specialised planning including transport planning and urban transport strategy
Shanghai Urban-Rural Construction and Transport Committee	Shanghai Urban Transport Bureau	<ul style="list-style-type: none"> Formulate policy guidelines and industry criteria Formulate public transportation service standards
	Shanghai Municipal Engineering Bureau	<ul style="list-style-type: none"> Nourish the transportation market Construct, maintain and administer urban roads and bridges
Traffic Police Headquarters of Police Security		<ul style="list-style-type: none"> Manage road traffic Promote order and security on public streets Administer motor vehicles, non-motor vehicles and vehicle drivers Prevent road traffic accidents

Shanghai has 24,400 hectares of park and greenbelts, including 14,800 hectares of public green areas.²⁷¹

Authorities

The Shanghai Municipal Government oversees the departments that affect pedestrian infrastructure, typically as part of a larger transportation policy. The Urban Planning Bureau and the Shanghai Urban and Rural Construction and Transportation Committee plans and manages the city's overall urban transportation policy²⁷² (Figure 134).

Plans and programmes

The *Code for Planning and Design on Urban Residential Areas* includes guidelines for public services such as markets, schools and medical facilities. Such mixed-use in close proximity to residential areas will encourage walking and cycling.²⁷⁴ Ironically, Shanghai has a goal to reduce the number of bicycle trips by half.²⁷⁵ However, national policies are supporting bicycle use and improving bicycle infrastructure. At the same time, some existing bicycle sharing programmes have had problems with theft.²⁷⁶

The national *Urban Road Transport Plan and Design Code* has rules for pedestrian infrastructure design such as pedestrian flow and safety, and accessibility of recreational areas from transportation.²⁷⁷ The 2001 *White Paper of Shanghai Urban Transport Development* emphasises the importance of walking and cycling.²⁷⁸

Because the city is divided up into several districts, some planning projects can become complicated when crossing several jurisdictions. For example, the rehabilitation of the Suzhou Creek, which spans several districts, has met several challenges because of the lack of a unified plan regarding both



Figure 135

Suzhou Creek in Shanghai. Source: Wikimedia Commons.
Photo by Shanghainese.

the look and feel of the project as a whole, as well as the balance between commercial areas and historical or cultural features.²⁷⁹

Specific Examples and Improvements

The Shanghai World Expo 2010 spurred the city to improve its public transportation,²⁸⁰ as well as certain key tourist areas, including the Bund.

Lujiazui Financial District

Some of the city's pedestrian-related efforts are centred in Pudong's Lujiazui financial district. This rapidly developing area will see an additional 45 office towers in a 3.5 km² area, adding to the 1.7 km² district core. This will add considerable strain to the already overcrowded metro line which sees 120,000 passengers daily. Pedestrian infrastructure has been planned to support this influx of people, particularly within recreational spaces such as parks. Expanding the waterfront promenade,²⁸¹ as well as overhead walkways, underpasses and amenities such as restaurants aim to make the area a multi-functional space.²⁸² Planners want to encourage evening activities to prevent the area from becoming a dead zone at night.²⁸³

Currently, the city is dealing with complaints that this area is not walkable, with large distances separating buildings, amenities and transportation hubs. The authorities are trying to rectify this by increasing the number of taxi stands,²⁸⁴ as well as overhead walkways and underpasses²⁸⁵ which may also double as commercial space.²⁸⁶

North Bund

Planners are learning from the walkability challenges in Lujiazui district in planning the North Bund area.²⁸⁷ New office buildings must now provide connecting elevated walkways to keep pedestrians off street level, and encourage mixed-use planning through requiring stores and restaurants on the first three floors of these developments.²⁸⁸ Also, a waterfront promenade along the Huangpu River is being built.

The Bund

The Bund was the centre of Shanghai's business district in the 1920-30s. Until recently, this area had a 10-lane highway separating the city and the Huangpu River. It is situated directly across from the Pudong area developments, making it an ideal place for tourists to view the skyline (Figure 136). Ahead of Expo 2010, this area was completely upgraded by converting an elevated highway into a tunnel below the Bund, totally transforming the street-level environment.²⁸⁹ Multiple pedestrian crossings were added, dramatically improving pedestrian accessibility to the waterfront from transportation hubs and commercial areas like Nanjing Road, which intersect the Bund. In addition, the riverfront promenade has distinct sections to vary the experience as pedestrians walk along the river, creating extra interest along the way.

Nanjing Road

Compared with other major commercial roads, Nanjing Road did not see much revenue generated, as the pedestrian experience was an uncomfortable one—no place to sit, not much green space, no entertainment, no reason to stay.²⁹⁰ However, in the last few years there has been a concerted effort to upgrade the street, which has been a success. Now, there are places to sit, trees, more diverse stores, and even electric “trackless train”-like vehicles to take pedestrians up and down the pedestrianised road. This has led to increased revenue in stores along the street.

Key lessons for Hong Kong

- Reclaiming roads for pedestrians is a good way to bring new life to deserted areas, such as along the Huangpu River on the Bund, or boosting businesses, such as along Nanjing Road.
- Old city designs, made for non-motorised transport, are an urban planning gift.
- A development-first, pedestrians later method, such as in Lujiazui District is not ideal, as pedestrian needs will need to be addressed retroactively.
- Coordination between districts is a must on projects that span a city's jurisdictions.

Figure 136



The Bund in Shanghai.
Source: Wikimedia
Commons. Photo by
Dounai.

8. Singapore

City structure and development pattern

Singapore covers an area of 714.3 km², a population of 5,183,700 leading to a density of 7,257 people per square kilometre (Figure 137). Singapore has 3,412 km of paved roads:²⁹¹ 12 percent of land is used for roads, and 15 percent for housing.²⁹² It has a private car ownership rate of 110 per 1,000 people.²⁹³

There are 11 million journeys taken daily, projected to rise to 14.3 million in 2020. Its rail network is made up of the Mass Rapid Transit (MRT) and Light Rapid Transit (LRT). The current network consists of 90 stations and 129.7 km of rail, with plans to extend this to 278 km, with stations accessible within 400 m in central areas.²⁹⁴ Combined, the MRT and LRT handle 2,169,000 passenger trips a day. In addition, in 2010 there were 3,199,000 bus passenger trips and 912,000 taxi rides.²⁹⁵ The average journey distance is 9.8 km.²⁹⁶

After independence in 1965, Singapore began an urban renewal programme including an extensive public housing development programme. In 1971, it produced the first Concept Plan, which planned to connect satellite high-density residential neighbourhoods by expressways, and a rail network²⁹⁷ in a spoke-and-hubs pattern. The Central Area, now the business and financial heart of Singapore, has been the centre of the city since the 1970s. Over the years, the planning focus has been to emphasise Singapore's unique identity through conservation, greening, improving the business environment, and how to be a developed city in a tropical environment. A move towards "growth through decentralisation" seems to change the direction of traditional urban development to reduce the strain on the CBD.²⁹⁸

Figure 137



Map of Singapore.
Source: Wikimedia
Commons. Image by
CIA.

Figure 138



Singapore MRT and LRT network. Source: Wikimedia Commons. Image by VSION.

Preliminary research has been conducted on walkability in Singapore, and reflects that the most walkable parts of the city are those where amenities such as public transportation, sports, food, open areas and facilities such as community centres are easily accessible. These areas are in the southern parts of the city,²⁹⁹ the city's historical origins.

Authorities

The Urban Redevelopment Authority (URA)

The URA is in charge of planning Singapore's land use, which includes regular city requirements such as residential and commercial areas, as well as water catchments and military uses. The city is divided up into five planning areas, with 55 smaller neighbourhoods. In 2001, it updated its "Concept Plan" which details a vision for Singapore with a 50-year view. It also releases a Master Plan, which is updated every 10-15 years.

In 2010 the URA held a multi-stakeholder focus group to discuss the Concept Plan and improving Singapore's quality of life. The focus group suggested that Singapore's walkability and public transportation can be improved through creating more direct walking routes and implementing traffic calming measures.³⁰⁰

Land Transport Authority (LTA)

The vision of the Land Transport Authority (under the Ministry of Transport) is for "a people-centred land transport system". The main focus around pedestrians is to move them by public transport, and Singapore's transportation network has been integrated with its high density. The LTA "plans the long-term transport needs of Singapore, taking care of those who drive as well as those who take public transport."³⁰¹ Their "Strategic Thrusts" include "making public transport a choice mode". The LTA provides transportation information to commuters through its site "PublicTransport@SG". The emphasis is on sustainable transport, but this means by rail or bus, not necessarily by foot.

The LTA's list of "Pedestrian Facilities"—484 overhead bridges, 54 underpasses, 29 footbridges, 22 km of "covered linkways" and 96,400 "street lightings"³⁰²—are designed to keep pedestrians off roads and covered from rain. It provides specs for minimum walkway measurements, improves safety at pedestrian crossings for those with physical or visual impairments, and improves signage and accessibility at major transport interchanges.³⁰³

Plans and programmes

Urban planning in Singapore has to do with improving its sustainability and becoming an environmentally friendly city.

Garden City

Making Singapore into a Garden City has been a long-time policy goal. One of the key aims, stated by Lee Kuan Yew, was to "soften the harshness of life," as "a blighted urban landscape, a concrete jungle destroys the human spirit. We need the greenery of nature to lift up our spirits."³⁰⁴ Thus integrating green space into the urban landscape was a conscious public mental health policy decision.

Singapore has the goal of increasing green cover to 50 percent of the nation's land. The URA's *Concept Plan* has the stated aim to improve accessibility to this space for recreational purposes.³⁰⁵

Specific examples and improvements

Little India

Little India is an area with small blocks and mixed development. It has seen several improvements to the pedestrian environment to enhance pedestrian safety by installing non-slip tiles, widening walkways, and changing traffic direction.³⁰⁶ In addition, decorative lamp posts have also been installed and designed to be used for hanging festival decorations, eliminating the need to erect additional temporary posts for this purpose and the obstructions that these would cause.

Orchard Road

Singapore's Tourism Board, URA, LTA, and National Parks Board worked together to upgrade the Orchard Road commercial area. This neighbourhood sees 7 million visitors a year, and thousands for work and leisure. Pedestrian connections exist through ground-level walkways as well as elevated and underground connections. Though the focus was on strolling from "mall to mall", the upgrading of Orchard Road also took place through landscaping and lighting, and increasing and upgrading street furniture.³⁰⁷ Developers received GFA concessions designed to encourage more diverse building facades at a people-scale.

Marina Bay

The 3.6 km² mixed-use Marina Bay development area is adjacent to the CBD. Plans are to integrate the two areas with each other, and develop a pedestrian network with a focus on connecting to transportation

Figure 139



Orchard Road, Singapore. Source: Wikimedia Commons.
Photo by Niall Sohan.

that includes street-level amenities such as trees, as well as overhead walkways.³⁰⁸ In addition, 1 km² will be dedicated gardens.

Other initiatives

In some areas, developers can receive additional GFA by building pedestrian walkways.³⁰⁹ Singapore is using creative infrastructure to add greenery around pedestrian areas, such as “Sky Trellis”—trellises for plants to climb and offer shade—in Clean Tech Park,³¹⁰ and in a recreational way, “Supertrees” at Marina Bay.³¹¹

Key lessons for Hong Kong

- Greenery should be integrated into the urban landscape.
- Seasons and climate should be considered when planning walkability in sub-tropical environments.
- GFA concessions may be a way to encourage private developers to think about making streetscape more engaging.
- A long-term planning concept supplemented with a master plan allows for strategic planning and flexibility as the city’s needs evolve.
- Street lighting and furniture can be thought of in a multi-purpose way.

9. Tokyo

City structure and development pattern

Tokyo has the world's most populous metropolitan area. It is estimated that the population of Greater Tokyo is around 35.7 million,³¹² with 12.8 million people living within Tokyo prefecture. Every day, this population increases by 2.5 million as commuters from surrounding prefectures within Greater Tokyo travel to the city centre.³¹³

Rail transport is ubiquitous in Tokyo. Forty-five percent of all travel in Tokyo is by public transport, and during peak morning flows, this number increases to 75 percent by rail and bus. Walking and cycling accounts for 15 percent of peak morning transit, with the rest travelling in private vehicles.³¹⁴ The popularity of public transport means that car ownership is comparatively low, having only reached the level of ownership in 1930s America during the 1980s.³¹⁵

Japan's rapid post-war growth and urban expansion was led by developments around railway stations, rather than been controlled by strict planning or a system of greenbelts. With rapid growth and floods of immigrants into the city, the resulting Tokyo is a patchwork of diverse urban spaces³¹⁶. Roads and motorways development, on the other hand, had not kept up with this growth, creating major congestion problems that remain unresolved today. In 2006, the government made plans to construct three ring roads, which is predicted to significantly ease the traffic bottlenecks throughout the city.

Figure 140



Tokyo subway network. Source: Wikimedia Commons. Image by Hisagi.

Public transit and walking as travel modes are intimately related, as the start and completion of trips by trains or buses will involve a degree of walking. Tokyoites undertake three times as many walking and cycling trips as New Yorkers within the same zone. Researchers have attributed this to differences in land use configurations, with Tokyo's clustered land use developments in housing, retail and commercial services encouraging non-motorised trips, much more so than in New York's outer suburbs where these services tend to be separated.³¹⁷

Urban planner Allen Jacobs has also argued that the design of a city's street grid has a substantial influence on the walking experience of residents and visitors. The more complex and messy the street patterns, the more walkable. Tokyo has some 381 intersections per km², making it one of the most convoluted city grid designs in the world, compared with other cities such as Paris (108 intersections per km²), New York (70 intersections km²) or San Francisco (116 intersections per km² in the Market Street area).³¹⁸

Authorities

Japan is divided into 47 prefectures, with Tokyo prefecture governed by the Tokyo Metropolitan Government. While city planning is the core activity of the Metropolitan Government, this has not always included the provision of walking infrastructure. Up until the 1970s, the government considered city planning as the supply of infrastructure for economic growth, such as highways, ports, airports, water supply and low-cost public housing.³¹⁹ Discretionary public goods such as parks, local roads or sidewalks were of low priority. Private investors were relied upon to invest in electricity, commuter railways, and housing developments, and there was little regulation over these private urban developments. Therefore, the weak planning system was less the lack of a capacity to regulate, but the government's narrow focus on urban planning.³²⁰

At the same time, citizens began mobilizing against undesirable developments in their neighbourhood. The sunshine rights movement arose in the 1970s, contesting the proliferation of high-rise blocks in their neighbourhood that deprived existing residents of light. The success of the sunshine rights groups in the courts eventually led the government to review its poorly regulated building code.³²¹

Since then, the City Planning Law has been revised and strengthened, to include the capacity to develop master plans and zoning regulations.³²² Today, redevelopments of inner city neighbourhoods remain a continuing threat for local residents, who argue that quality of life and urban liveability are given the "short shrift"³²³ against the economic incentive in redevelopments.

Plans and programmes

Policy environment

A chief shortcoming in Tokyo's planning is the lack of a clear vision for urban space. The mixed use character that persists today was an incidental consequence of loose land use regulations and market economy, which promoted some liveability aspects (walkability), but degraded others (personal space).

Recognising the importance of a broad future vision for the city, the Tokyo Metropolitan Government formulated the “Tokyo Big Change: the 10-year plan”. The plan was devised in conjunction with the city’s preparation for a 2016 Olympic bid, and was intended to set a vision and development policies for Tokyo. To implement the plan, the government established a new, interdepartmental division, called “Joint Strategic Meeting for Environmental City Building”.³²⁴

The plan aims to create a Tokyo that is both “functional” and “attractive”, developing eight goals to be accomplished in the next 10 years.³²⁵ These goals include creating a city with “the lowest environmental load in the world”, as well as a focus on advancing Tokyo’s “culture, tourism, universal design and industry” as factors of growth. An important goal for improving its liveability is to “restore Tokyo’s beauty as a city of water and greenery”, which involves actions to remove utility poles and outdoor advertisements, create vast hectares of greenery and revitalising the waterfront, hence giving Tokyo’s varied landscape a face-lift.

Specific examples and improvements

Tokyo provides an interesting example of urban regeneration in a dense city with established and compact infrastructure. Just as the railway system has been instrumental in Japan’s postwar development, railway stations have been, and continue to be important not only as transport hubs, but increasingly as a destination for social pursuits in the city.

Railway stations are rebranding themselves as “cultural symbols, social communication hubs and business centres”,³²⁶ and nowhere is this more apparent than the redeveloping Tokyo station in the city centre.

Tokyo station generates the greatest amount of income for its owners, the East Japan Railway Company, than other busy stations in Tokyo. Even Shinjuku station, which has a higher amount of transiting passengers, earns 160 million yen per day compared with Tokyo station’s 260 million yen per day.³²⁷ This is due to the higher proportion of space devoted to ancillary services than to passenger movements at Tokyo station.

Tokyo station lies at the centre of Tokyo’s most prestigious office district in Marunouchi, the shopping district of Ginza, as well as the low-key Yaesu business and entertainment area. Like most railway stations in city centres, Tokyo station creates a built barrier between these districts, encouraging different types of development on either side of the tracks.

As development around the station is dense, an extensive underground walking system connects the station and surrounding buildings in the area. Transit underground provided the opportunity to redesign the street environment as well. The streets of Marunouchi are traffic-calmed and tree-lined, with sufficient public space to host public art exhibitions and events. Despite this underground pedestrian network, and the single toll-free corridor that connects the east and west sides of the station, the huge volume and complex space dissections within the station accentuated the different roles and characters of Marunouchi and Yaesu, with the station as a barricade between the two.

The planned redevelopment of Tokyo station intends to address this separation, by:

- Creating better links between the two sides of the station;
- Better integrating the station with its surroundings; and
- Orienting the station as a destination with a unique identity.

The plans include a beautification project at street level, creating a tree-lined boulevard that stretches from the station, through the Marunouchi district, to the Imperial Palace. The boulevard is continued on the other side of the station (through Yaesu district), symbolically uniting the two sides of the station.

Two existing office buildings will have to be demolished to make way for the boulevard, but the development rights will be transferred to areas above and adjacent to the train station, which includes the Sapial tower, and GranTokyo North and South towers. A GranRoof facility, which connects all the new buildings, will in turn be connected directly with the station's Marunouchi entrance.

Developments underground further unite pedestrians from either end of the station. The First Avenue project creates two new transit corridors that runs parallel to the existing toll-free walking passageway, but situated at the northern end of the station. It houses 102 shops, with one third

Figure 141



Yaesu underground shopping promenade, Tokyo. Source: Wikimedia Commons. Photo by Abasaa.

devoted to food services, 15 shops designated as a character street (merchandise from popular television shows), and a Ramen street of eight noodle restaurants.

First Avenue is connected to the existing Yaesu shopping centre at the eastern end of the station. Although under separate ownership, there are benefits in physically connecting the shopping areas, allowing each to profit from the other's trade (Figure 141). Initial records show that visitor numbers have increased at both the old and new shopping areas. Peak traffic is no longer restricted to the midday trade of office workers, but also in the late afternoon and early evenings.³²⁸

Key lessons for Hong Kong

- Urban redevelopment is largely designated to commercial developers, as prime real estate in Tokyo tends to be owned by corporations.
- Tokyo station provides an example of a pedestrian thoroughfare which is provided by private businesses. In such cases, walking access is supplied within a shopping centre development. A toll-free passageway does exist alongside this development, which means that pedestrians have multiple walking options and experiences.
- In the dense city centre, the Tokyo Municipal Government has elected to demolish existing buildings to facilitate redevelopments that beautify the surroundings. Pedestrians may enjoy a more walkable environment as a result, but the focus is shifting towards enhancing consumers', rather than citizens', access.

10. Toronto

City structure and development pattern

Toronto city (Figure 142) has two distinct patterns of development. The first is the older districts which are characterised by “a compact, mixed-use, and fine grain of streets and transit-streetcar neighbourhoods”.³²⁹

The other is suburbs beyond the city centre that is typified by urban sprawl, with single family homes and high-rise apartment towers on arterial roads. (Figure 143). Residents of the latter tend to have poorer access to social and community services and public transit. Recent newcomers and poverty are most prevalent in such suburbs where access to essential services are poor.

Authorities

Urban planning in the City of Toronto is considered more hierarchical than other North American cities. Various civil service departments report to a deputy city manager, who in turn reports to a city manager, who eventually reports to the city council. This is unlike other cities such as New York, Boston and Vancouver, where planning departments report directly to the mayor, council, or an executive committee, respectively.³³⁰ Commentators believe that planning departments should have a close working relationship with the city council, and not filtered through a deputy manager. This is believed to have attributed to the demise of urban planning in Toronto.³³¹

Plans and programmes

City planners recognise the need to support and build a pedestrian friendly environment, where its citizens would be encouraged to choose walking

Figure 142



Map of greater Toronto Area. Source; Wikimedia Commons. Image by Mortadelo2005.

Figure 143



Satellite image of Toronto. Source: NASA.

as a preferred mode of transport. To achieve this, the city aims to create “dynamic, interesting walking environments”,³³² and have expressed a willingness to invest in “becoming a great walking city”.³³³

Policy environment

Toronto city has developed a comprehensive Walking Strategy that recognises walking as a significant mode of transport, and a list of actions that works toward creating the soft and hard infrastructure to build a walkable and sustainable city. The Walking Strategy is supported by a number of complementary strategies and frameworks:

- The *Toronto Pedestrian Charter* is the the foundation document of the Walking Strategy, and follows the International Charter for Walking framework for building pedestrian policies, programmes and actions. It details six principles: accessibility, equity, health and wellbeing, environmental sustainability, personal and community safety, community cohesion and vitality.
- The *City Official Plan* provides the policy framework for a mixed-use pattern of development which promotes pedestrians, transit and cycling.
- Action Plans for transit and cycling were created to actualise the Official Plan: Toronto Transit Commission Ridership Growth Strategy, Transit City Plan and the Toronto Bike Plan.
- The *Climate Change, Clean Air and Sustainable Energy Action Plan*, which calls for a reduction of greenhouse gas emissions by 6 percent by 2012 and 80 percent by 2050.

Consultation process

- The consultation for the Walking Strategy began in April 2007.
- It was conducted by the Public Consultation Unit of Policy, Planning, Finance and Administration, in collaboration with Transportation Services.
- Consultation with the public, stakeholder groups, pedestrian experts and staff from a cross-section of City divisions and agencies.

Different forms of engagement were undertaken:

1. *Walk21 Conference*—The International Walk21 Conference in October 2007, *Putting Pedestrians First*, provided a unique opportunity for city planners to learn about global best practices. International experts could also review and comment on Toronto’s Walking Strategy. The conference drew considerable public interest and highlighted walkability issues to the broader public.
2. *Walkability Roadshow*—In April 2007, city planners initiated a roadshow in which participants were invited to audit their community against the International Charter on Walking principles and actions. The objective was to assess what has been done locally to support walkability, and identify priorities and barriers for policies and investments in walking.

3. *Toronto walking survey*—A randomised telephone survey of 1,000 households was conducted to provide a snapshot of activity and attitudes towards walking. It assessed residents' walking behaviour, areas of opportunities, and recognition of the City's walking programmes. The results contributed to the development of the Walking strategy and action plan.
4. *Stakeholder/public meetings*—The Walking Strategy project team held a total of 8 public consultation events, focusing on urban design and gathering feedback on the Walking Strategy.

Specific examples and improvements

Pedestrian-friendly neighbourhoods are not only appealing to local inhabitants; they should also encourage people from outside of the neighbourhood into and through it.³³⁴ Street grids and transit lines are important in driving non-locals in, particularly for taking shortcuts through the neighbourhood on foot.

The St. Lawrence neighbourhood exhibited many of the conditions that support non-local visits (Figure 144). Redevelopment of the area began in the 1970s, with city planners given the task of designing an entire neighbourhood from a brownfield site adjacent to the city centre, which used to house scrapyards, warehouses, parking and truck depots.³³⁵

The primary intention of the early planners of St. Lawrence was to avoid the typical public housing projects that isolated poverty in a neighbourhood. Housing was designed to encourage inhabitants from all income levels, by constructing 3 storey town houses and medium-rise 8-10 storey apartments to appeal to people of different social strata. Specific guidelines were given to developers and architects to complement the tone of the buildings with the adjacent old town. Yet, much more important to encouraging city dwellers into the neighbourhood is the integration of the 19th century street pattern. The grid-like street blocks not only encouraged street-level activity, but together with the building design specifications, helped to recreate and extend the streetscape of the Old Town of York.

A central park linked the corners of the neighbourhood with a tree-lined public promenade, which has become the focal point for the community. The park extends from the north to the south, and enables east-west movement through pedestrian walkways, thereby facilitating walking to all parts of St. Lawrence.

An open and participatory planning process was a key feature of St. Lawrence's development. Rather than being helmed by a single developer, 16 different developers and 25 different architects were involved in interpreting the building guidelines, contributing to the diversity in building form.

Importantly, three types of planners were considered to be integral to the development project: professional planners, including the Housing Department and Planning Board; decision-makers such as city counsellors and municipal staff, who ensured the development goals of affordable housing and city integration were met; and community organisations, which represented the expectations of the public. User input continues to be a pivotal aspect of the neighbourhood's development, exemplified in the role of the Citizens Working Committee.

Figure 144



St. Lawrence in
Toronto, Canada.
Source: Wikimedia
Commons. Photo by
Magnus Manske.

Key lessons for Hong Kong

- Toronto's Walking Strategy recognises walking as a legitimate transport mode.
- Different forms of consultation should be undertaken, to draw a variety and a more representative sample of resident's views.
- The redevelopment of the St. Lawrence neighbourhood could be a useful example for Hong Kong in its development of new residential areas that are adjacent to old neighbourhoods.
- Extending the walkable grids in developing neighbouring areas may act to drive foot traffic into a new area.
- Parks at the centre of a neighbourhood can provide the centrifuge that enables walkers to take short-cuts, and support a sense of community.

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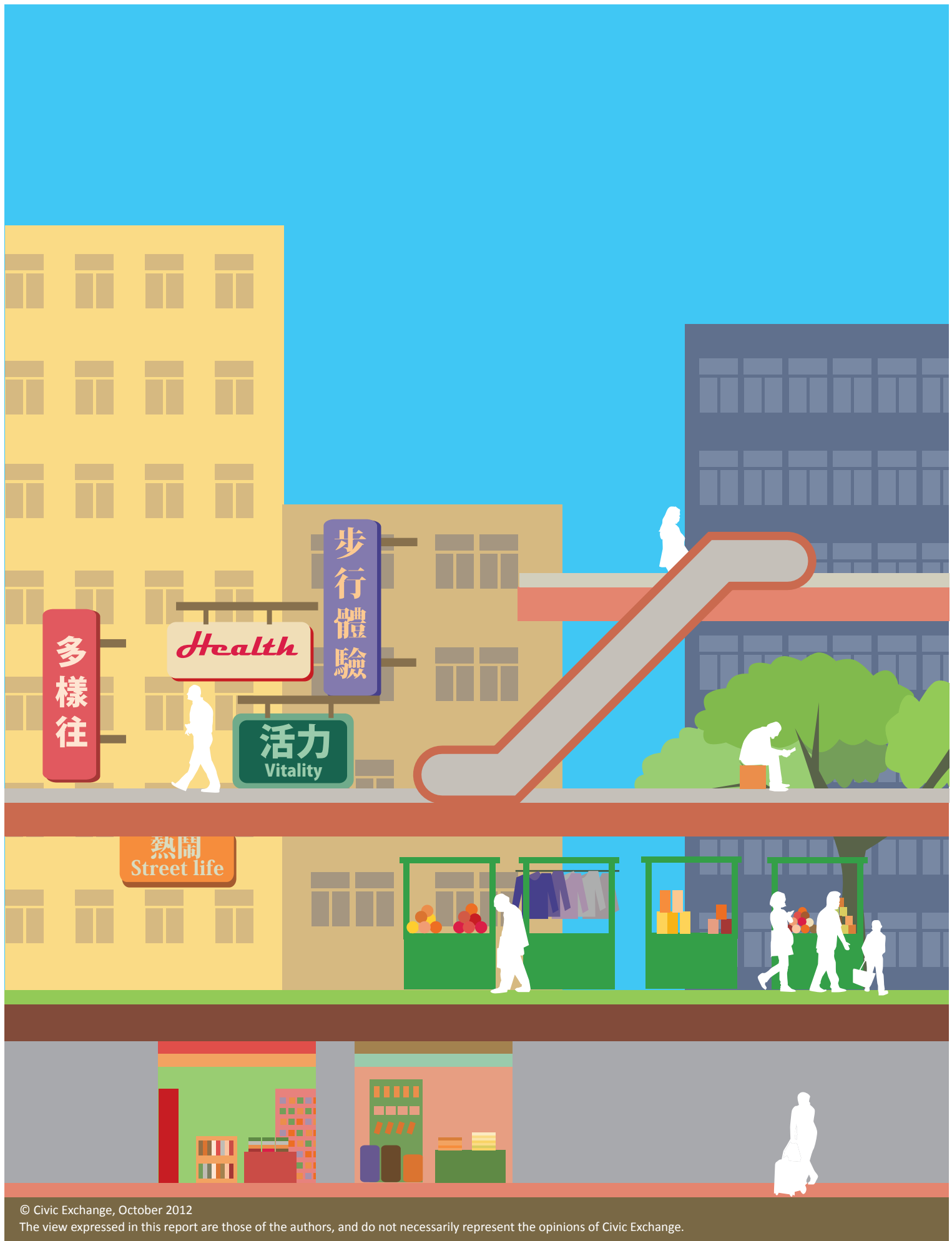
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