Harbour Business Forum

Balancing the Need to Travel with the Need to Improve Our Quality of Life

Sustainable Transport Opportunities for The Harbourfront

MVA HONG KONG LTD.

February 2008

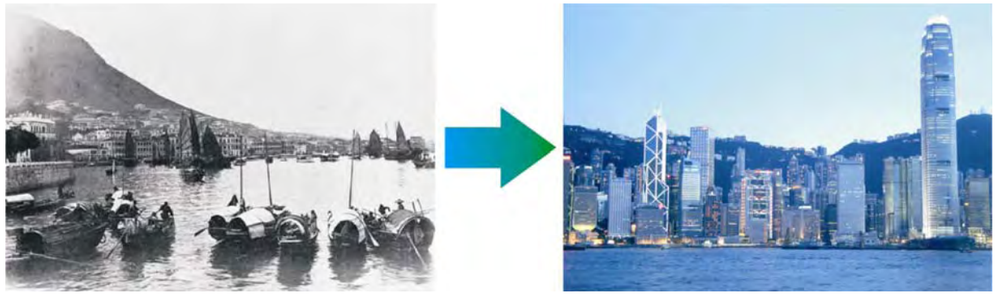
27460/REPORT/COV.CDR/LLH/26MAR08

LIST OF CONTENTS

1. INTRODUCTION

1.1 Background

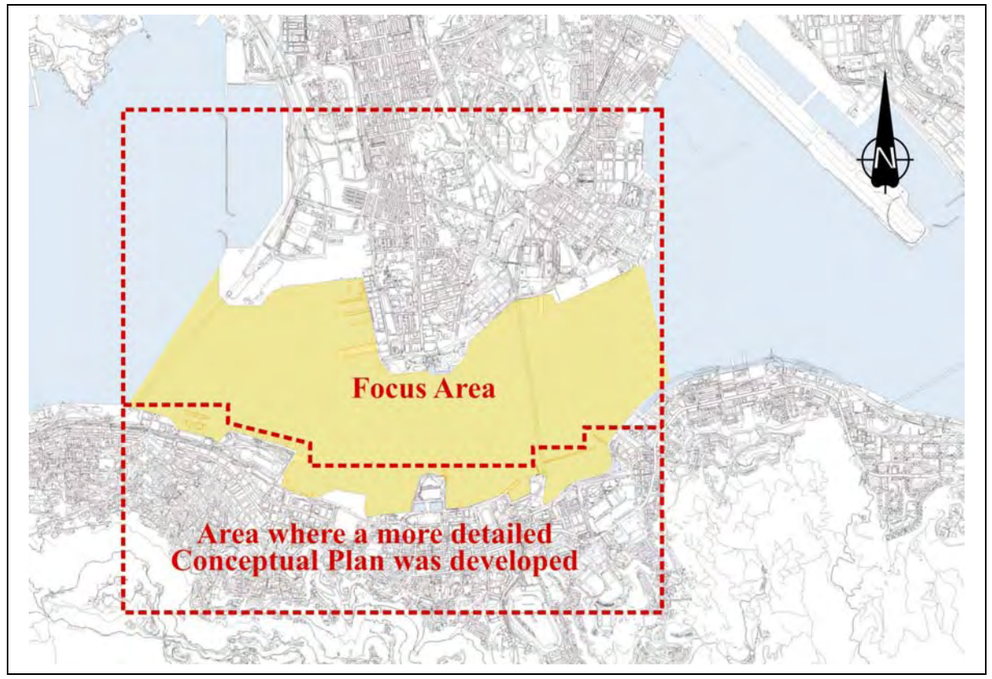
From the very beginning the harbour was Hong Kong and today it remains the focus of its business, commercial, administrative and tourism-related activities. Central contains the seat of Government and the headquarters of major corporations, while Central/Admiralty/Wanchai contains the highest concentration of high-grade office premises. Tsim Sha Tsui, Wanchai and Causeway Bay provide the focus of much of the Territory's retail, tourism and entertainment activities, as well as the largest collection of hotels. It is not an overstatement to say that for Hong Kong to be successful its harbourfront area must also be successful.



It is widely recognised that Hong Kong has one of the finest natural harbours in the world. However, there is a widespread feeling that this precious resource could be better utilized and preserved. This paper puts forward ideas as to how a more liveable and accessible harbourfront and hinterland might be created by exploring a reorientation of transportation priorities.

MVA Hong Kong Limited was commissioned by the Harbourfront Business Forum to explore transport opportunities for the Harbour Area which support long term economic, social and physical sustainability. The focus of the Study is on identifying integrated land use/transport/environmental policy directions and ideas to complement the on-going clean air initiatives through improved engine technology and fuel types being promoted by Government and various organisations. The study considered transport opportunities for the whole Harbour Area and put forward a conceptual plan for the Central and Wanchai area to demonstrate the possibilities. The goal of this paper is to stimulate discussion and debate amongst all stakeholders to help to develop a consensus on the way forward.

The Harbour Area



1.2 Objectives of the Harbourfront

Three overarching objectives have been identified:

- Promote the harbour, waterfronts and immediate hinterland as the centrepiece of Hong Kong.
- Facilitate residents and visitors to access, move around in and participate in social and economic activities in a vibrant, safe, secure and healthy environment.
- Develop the opportunities and roles of citizens and travellers in contributing to sustainable development through travel choice.

In more technical transportation terms:

- Provide a multi-modal inclusive transport system to meet the needs of all travellers.
- Create a comprehensive people-oriented travel environment to maximise opportunities for walking, social interaction and mobility.
- Promote the use of environmentally friendly mass carriers, especially railways and modern road-based public transport.
- Respect and capitalise on essential transport infrastructure provision.

- Contain road traffic growth to prevent traffic congestion and help resolve street level air quality and noise problems.

1.3 Sustainable Development and Transport

Sustainable transport forms part of the wider sustainable development movement which had its rejuvenation in the later part of the 20th century, as a result of a dawning international realisation that the earth's resources are finite and that care must be taken to use them wisely. One of the most widely held definitions is as follows:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

The international movement towards sustainable transport is in large part a reaction to some of the things that have gone radically and visibly wrong with transportation policy, practice and performance over the last half of the twentieth century. These include unsustainable resource take, energy profligacy, pollution, declining service levels despite increasing investments and poor service for specific social and economic groups. Over most of the century, it was assumed that transportation infrastructure needed to be continuously expanded to secure growth and economic development. Accordingly, the main concern of transport planners and policy makers was in the "supply" of transportation, and specifically in ensuring that the supporting infrastructure was going to be adequate to support all projected requirements. This has been termed the "predict and provide" approach.

Around the world, the sustainable transport movement has started to shift the emphasis in public spending and actions away from building and supply, to management and demand. In all cases the values of heightened respect of the environment and prudent use of natural resources are central. More recently, there has been an increased emphasis on social equity and the provision of equal accessibility to all social and mobility groups.

1.4 Sustainable Development in Hong Kong

In line with these international trends Hong Kong has in recent years initiated research and associated policy changes to pursue a more sustainable future for the city and the region as a whole. The SUSDEV21 Study (Planning Department, 2000) sets out a vision and framework of those concerned with land use, economic strategy, environmental, social and transport policy formulation, whilst the Hong Kong 2030 Planning Vision and Strategy (Planning Department, 2007) sets out physical planning options.

The report "Hong Kong Moving Ahead: A Transport Strategy for the Future" prepared in 1999 by the then Transport Bureau reinforced the fundamental policies underpinning transport development in Hong Kong:

- Land use/Transport Integration
- Balanced Infrastructure Development
- Priority to Public Transport
- Managing Road Use

These transport policies have served Hong Kong very well at a strategic level and provided a high quality transport system to meet the needs of high density living as compared to many other places around the world. However, particularly at a district and neighbourhood level, much still needs to be done to capitalise on these strong foundations otherwise future road traffic growth and environmental deterioration will threaten our sustainable future. As the paper puts forward, these enhancements and new initiatives must not only come from Government and the transport providers but also from the community at large to take on civic responsibilities through public participation and also in making more sustainable individual travel choices.

1.5 Structure of the Report

This introductory chapter is followed by ten further chapters, building up to an overall conceptual strategy.

Chapter 2 Planning Perspectives	-	Provides a brief historical perspective of the Harbour Area in the development of Hong Kong and identifies its fundamental role in the securing a sustainable future for the Territory. Key planning goals and directions are identified which must be supported by transport policies and development to bring the people to the waterfront and the harbour. At the same time legacy problems and trends are identified which need to be resolved.
Chapter 3 Travel Perspectives	-	Sets out the existing and future travel patterns and demands ranging from international gateways, through commuter flows, tourists right down to local neighbourhoods and activity areas. Current plans and programmes for transport development are reviewed and the prospects for future travel growth are assessed. Finally a range of choices is identified which could be pursued under different policy directions.
Chapter 4 Transport Directions	-	Puts forward some fundamental directions for transport development in the Harbour Area to create a liveable World City. In particular the relative roles of the different modes are identified within an integrated multi-modal network.
Chapter 5 Railways & Public Transport	-	Puts forward a coordinated railway and public transport strategy which prioritises off-street transport and rationalises the role of road-based public transport to strike a better balance between vehicles and street environment.

Chapter 6 Roads and Traffic	-	Reviews the opportunities presented by the planned road network development in the Harbour Area and reorders the network hierarchy to give greater priority pedestrians and the street environment. The future role of demand management from traffic and environmental perspectives is considered as a potential tool in promoting sustainable travel.
Chapter 7 People First	-	Puts forward the concept of a fully interconnected pedestrian network throughout the Harbour Area to create a truly walkable city with the Harbour as its central focus and feature.
Chapter 8 Harbour Travel	-	Identifies potential transport options for the Harbour itself covering commercial, tourist and leisure activities in so far as sea conditions and marine traffic might permit.
Chapter 9 Towards a Harbour Transport Strategy	-	Brings together the concepts put forward in Chapter 5 for public transport, Chapter 6 for roads, Chapter 7 for pedestrians and Chapter 8 for the harbour itself to formulate an integrated strategy illustrated using the Central and Wanchai Districts.
Chapter 10 Community Approach	-	Looks at the community and institutional responsibilities for achieving a sustainable transport system and considers the responsibilities of the individual, private and public organisations in changing their own travel behaviour as well as some key directions for transport providers including operators and Government.
Chapter 11 Future Harbour Days	-	Presents some future hypothetical "Harbour Days" by illustrating how commuters, families, students and tourists could enjoy sustainable travel around the Harbour Area.

2. PLANNING PERSPECTIVES

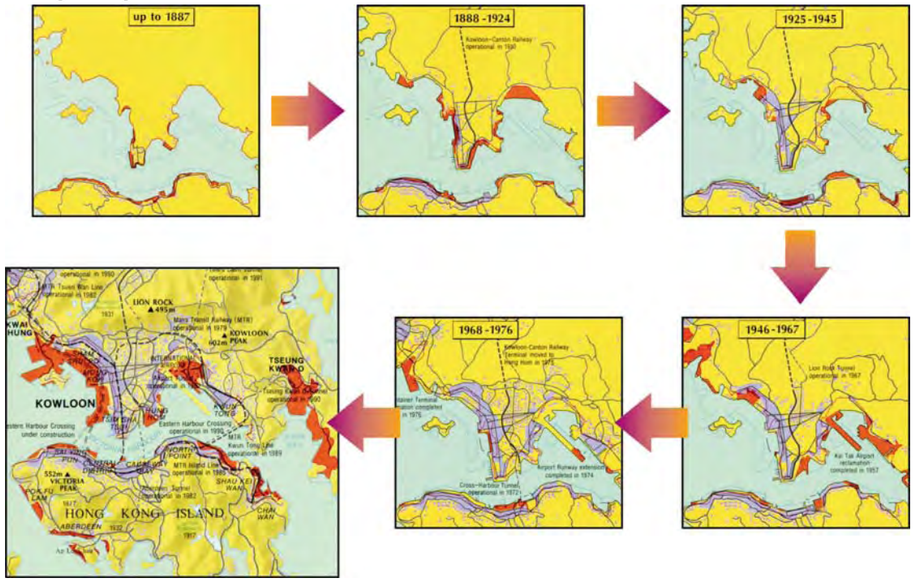
The awareness of the Government and the public of the need to follow a path of sustainable development has been increasing since the 1990's. It is now time to convert this to a civic commitment and strike a better balance from an economic, social and environmental perspectives.

2.1 Historical Perspective

Since the origins of the modern city in the mid 19th Century, the Harbour has been viewed as a source of additional land and 'solution space' for infrastructure, particularly for transport. Throughout the 20th century the Hong Kong Island and Kowloon shorelines have drawn inexorably closer together, substantially reducing the width of the Harbour. The 1990's witnessed a rethink of the Harbour Area as a fundamental asset to Hong Kong, prompted largely by grass-roots pressure. This led to the *Protection of the Harbour Ordinance,* which dictated a presumption against further reclamation in the Harbour. The Ordinance did not apply to any reclamation which had already been authorised. In 2004 the Court of Final Appeal clarified that the presumption against reclamation could only be rebutted in case of "overriding public need".

As a result of the above legislation there was a scaling-back of some already planned reclamation including Central Reclamation Phase III and the Kowloon Bay Reclamation and there continues to be healthy debate from economic, social and environmental perspectives on the intensity and type of land use on the existing and committed reclamation areas and the scale and form of associated transport infrastructure.

Hong Kong Reclamation



Source: Lands Department website

2.2 The Harbour Area Today

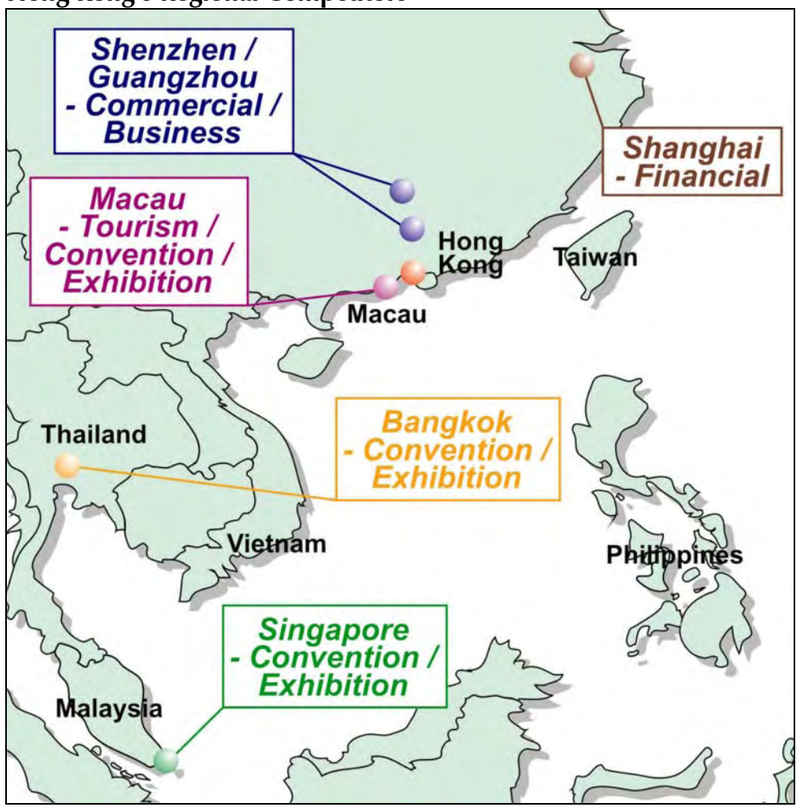
The Harbour remains the focus of Hong Kong's life and image. It provides the city's international gateway via the Airport Express Line to the Airport, East Rail to Shenzhen, Guangzhou and the Eastern Pearl River Delta region (PRD) and the cross-boundary ferry terminals to Macau and the Western PRD.

The Harbour Area is the centre of economic activity in Hong Kong providing almost 1.4 million jobs, or 42% of the Territory's total. Although not primarily a residential area, the Harbour Area is home to more than 1.1 million people, or 16% of the territory's total. According to Government's *Hong Kong 2030 – Planning Vision and Strategy* the Harbour Area will remain the focus of the Territory's economic activity and could provide more than 1.6 million jobs by 2030, as well as being home to some 1.4 million residents following urban renewal and infilling of the existing and committed reclamation areas.

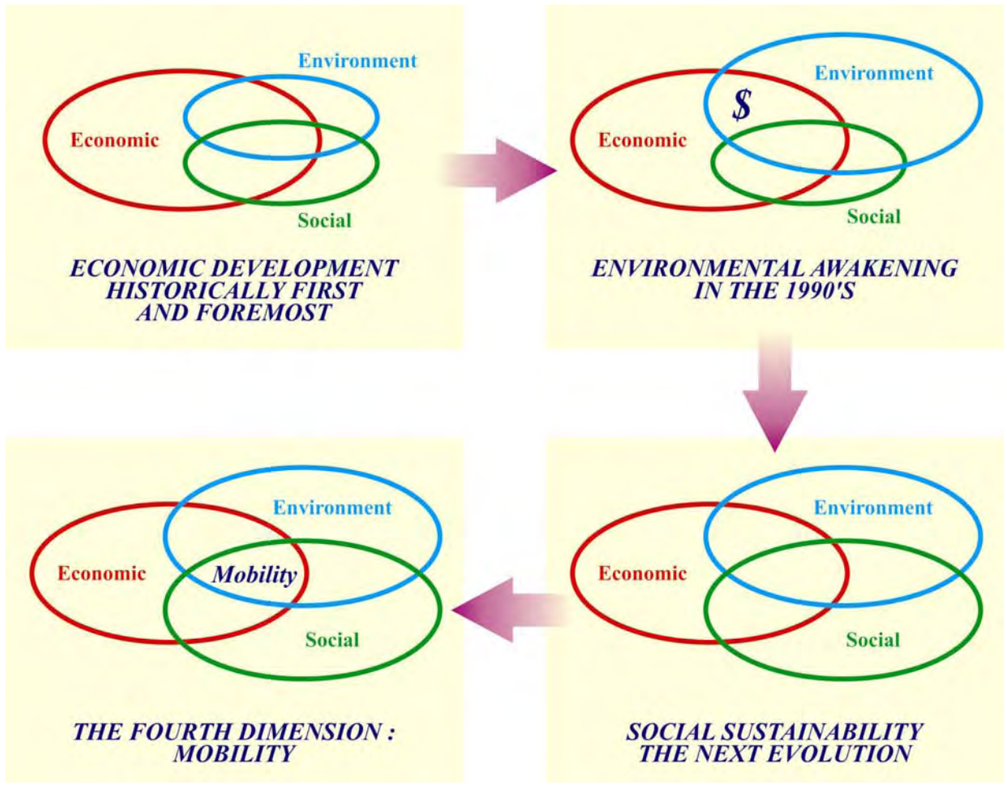
2.3 Asia's World City

Hong Kong's prestigious position in the Asian commercial/business/tourism arena is not a given. There are a number of cities in China and the wider region which compete with Hong Kong in one or more of these areas. Locally, Macau has been highly successful in improving its tourism product generating a rapid increase in visitor numbers. Shenzhen and Guangzhou have both made considerable strides in setting themselves up as competing industrial/commercial/business centres with a much lower cost base. Shanghai is promoting itself as an alternative financial centre to tap into the rapidly growing Mainland investment markets. Both Singapore and Macau are looking to expand their share of the lucrative MICE (Meetings, Incentives, Conventions and Exhibitions) market. It is essential for Hong Kong to capitalise on its own special assets, such as the harbour, in order to distinguish itself from other cities and justify its claim to be Asia's World City.

Hong Kong's Regional Competitors



Sustainable Development Evolution



2.4 Sustainable Development Perspectives

Sustainable development has been defined in the SUSDEV21 Study as follows:

> "Sustainable Development in Hong Kong balances social, economic, environmental and resources needs, both for present and future generations, simultaneously achieving a vibrant economy, social progress and a high quality environment, locally, nationally and internationally, through the efforts of the community and the Government."

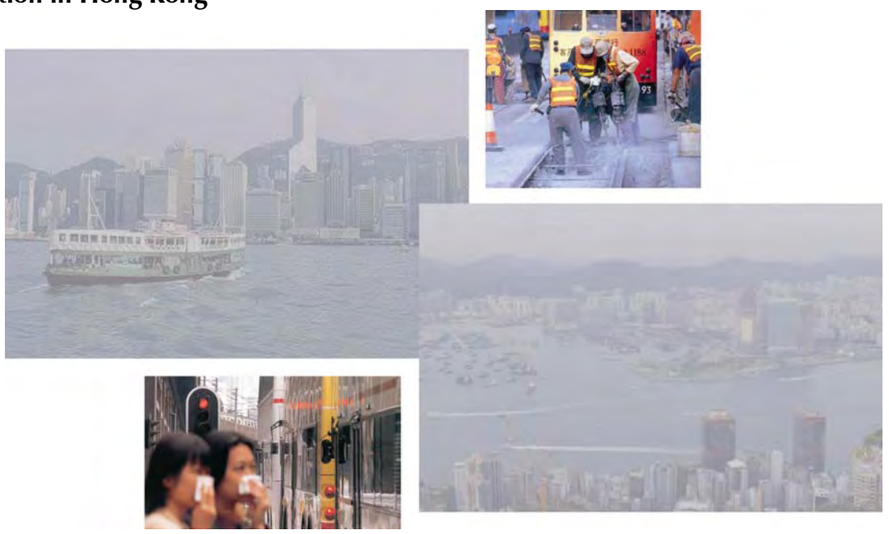
Source: HKSAR Government, SUSDEV 21 Study, 2000

Sustainable development has three main components: economic, social and physical (environmental and resources). The relative importance placed on these changes as societies develop.

The past 30 years have seen Hong Kong be transformed from a light industrial outward processing centre to become a financial, services, logistics and tourism hub. During this time prime emphasis was placed on the economy and raising the basic living standards. By the 1990s Hong Kong had achieved a Gross Domestic Product of some HK$150,000-200,000 per capita comparable with many Western European countries.

At this time the environment was noticeably deteriorating partly due to domestic pollution from local power generation and from vehicles at street-level, as well as from cross-boundary pollution from the PRD region. It is a fact that some days it is barely possible to see across the harbour. The public has become increasingly concerned and the quality of the environment is now seen as a threat to tourism and potentially to attracting international investment, expertise and talent to the city.

Pollution in Hong Kong



In recent years the public has had growing expectation to participate in the political and development process bringing new perspectives on the balance of economic, environmental, social, heritage and civic aspects. An issue at the forefront has been how best to protect and exploit the Harbour as an asset of Hong Kong for all to enjoy. Much controversy has been generated by the loss of waterfront landmarks like the Star Ferry Pier and Queens Pier on Hong Kong side and the fear that new roads and high density commercial development will take up much of the reclamation areas at the expense of civic facilities. In response Government is now making concerted efforts, within the prevailing institutional system, to consult and partner with the public and stakeholders on a number of fronts. Also a number of private groups are actively putting forward new ideas reflecting a broad range of community views.

Much of the debate centres around transport policy and infrastructure development. Mobility and access to jobs, services and social facilities are fundamental to securing sustainable development. At the same time transport, whilst an essential facilitator, also produces adverse environmental and social impacts such as pollution and severance. Hong Kong has developed a fundamentally sound transport system to promote economic growth. The next steps are to adjust the strategy to ensure that social and environmental objectives are also met to achieve overall balanced sustainable development.

3. TRAVEL PERSPECTIVES

To meet ever-increasing travel demands, Hong Kong is doing a good job developing World Class transport infrastructure and services, which provide the framework for a sustainable transport system and great opportunities for creating the world's most traveller friendly city.

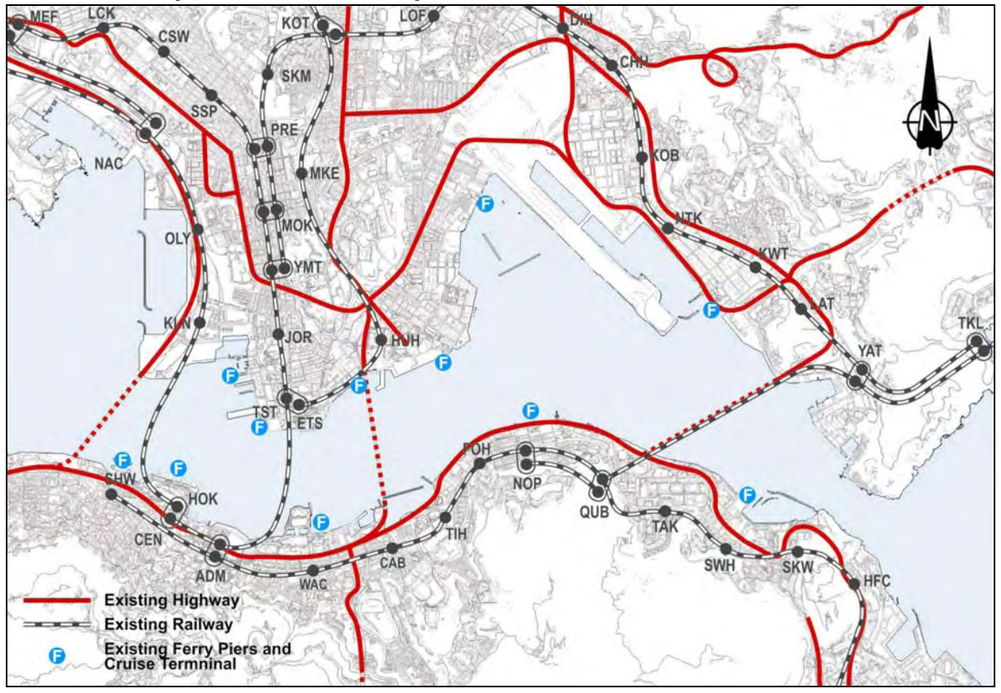
3.1 Overview of Present Situation

As the main commercial activities of Hong Kong are concentrated in and around the Harbour Area, vehicle and passenger traffic funnel through Kowloon, Victoria Harbour and enters the north shore of Hong Kong Island via a number of vehicular and railway corridors. The Harbour Area is therefore the focal point of much of the Territory's transportation network. The existing railway lines converge on South Kowloon and the Central-Admiralty area. Similarly the Strategic Road Network links the major travel corridors from the Boundary and New Territories into Kowloon where they form into three principal corridors to connect to the three harbour road crossings. Due to Hong Kong's particular geography the most intensively used roads tend to be the cross-harbour links and their adjoining networks, most obviously the Cross Harbour Tunnel.

Ferries play a twofold but now relatively minor role as a congestion-free means of transportation and as a leisure activity. Ferry services comprise intra-harbour services, outlying islands services and cross-boundary services to Macau and the PRD.

Non-mechanised modes, such as walking and cycling, currently play a subsidiary role. Most walk trips are either localized or feeder trips to mechanized modes such as rail or bus. There are notable exceptions, for example, the Mid-levels Escalator serves as a means of commuting for significant numbers of residents and as access to the Soho entertainment area. Cycling currently has a very limited role in the urban area due to high traffic densities and the lack of dedicated cycle facilities.

Harbour Transport Network Development



Source: MVA

3.2 Existing Travel Demands

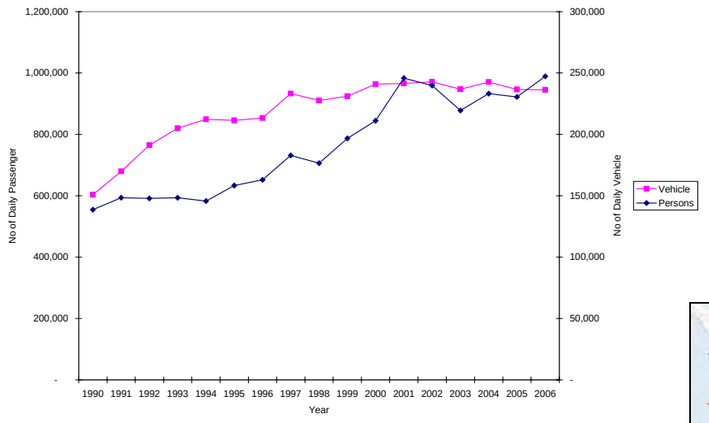
Existing Travel Demands

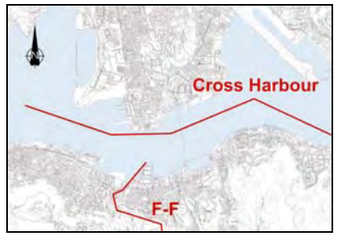
Some 8.4 million passenger trips and are made to/from/within the Harbour Area. Of these 28% of passenger trips are cross harbour amounting to 2.4 millions per day with 48% by rail, 35% by road-based public transport, 5% by ferry and 12% by taxis or cars.

Vehicle travel in/out/within the Harbour Area amounts to 1.9 million vehicles per day. Some 240,000 vehicles cross the harbour each day with the major concentration on the Cross Harbour Tunnel. Across the harbour, private cars and taxis account for around 72% of traffic flow, goods vehicles 20% and public transport 8%.

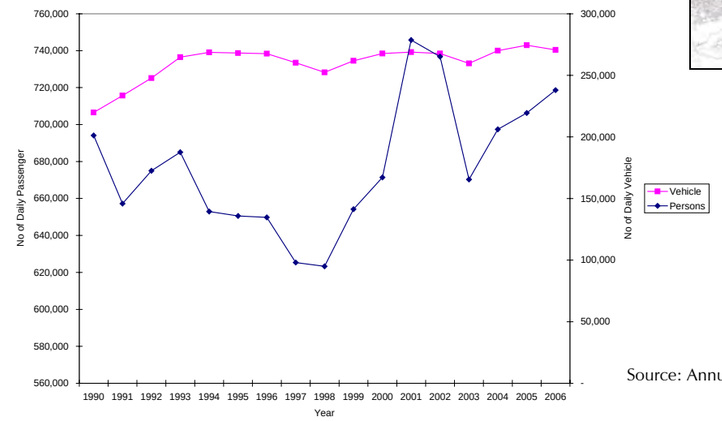
Road traffic increased steadily in the 1990s. However growth was slowed and even halted during the economic downtown and other set-backs during the 1999-2004 period. The subsequent economic recovery is now bringing a return to traffic growth.

Cross Harbour Traffic Volume 1990-2006





Screenline F-F Traffic Volume 1990-2006



Source: Annual Traffic Census, Transport Department

3.3 Future Travel Demands

Travel demands are driven by demographic and economic growth. The population of Hong Kong has grown from 4.0 million in 1970 to 6.9 million in 2006. Future prospects are for more gradual population increases as the city matures and the proportion of senior citizens increase. The key factor for expansion in the future will be the scale and demographic mix of new immigrants from mainland China and internationally. Planning scenarios for 2030 range from populations of 8.4 million to 9.2 million. For the Harbour Area this will impact in terms of population growth and more significantly in economic and social activities.

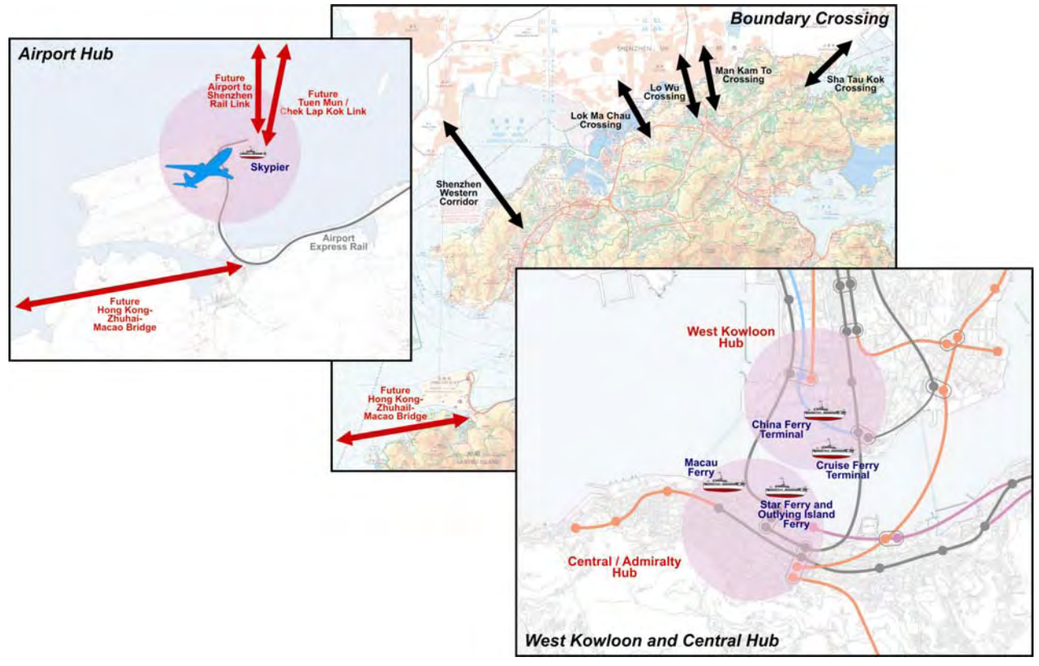
Hong Kong has witnessed an economic upswing in 2006/2007 thanks to the positive global economic outlook, in particular for Mainland China. This has underpinned a recovery in the financial and service industries in the Harbour Area, whilst tourism saw overall arrivals grow by some +8% between 2005 and 2006. This represents some 25 million visitors annually of which more than 50% are from the Mainland China. Convention and exhibition related tourism has also recorded an increase of some +30% between 2004 and 2006.

Against this background based on current Government policy and planning assumptions, vehicular travel in the Harbour Area could be further increased both across the harbour and in the urban area. Private car and taxi travel will increase the most, whilst goods vehicle demands will rise only gradually and road-based public transport vehicle volumes will decline due to railway competition.

Public Transport travel in the Harbour Area is estimated to increase, with rail raising its share given the expansion of rail system, and road-based modes share expecting a decline. However, much remains to be done to meet the challenge of road traffic growth and to realise the great opportunity presented by a large increase in rail market share and reduction in road-based modes.

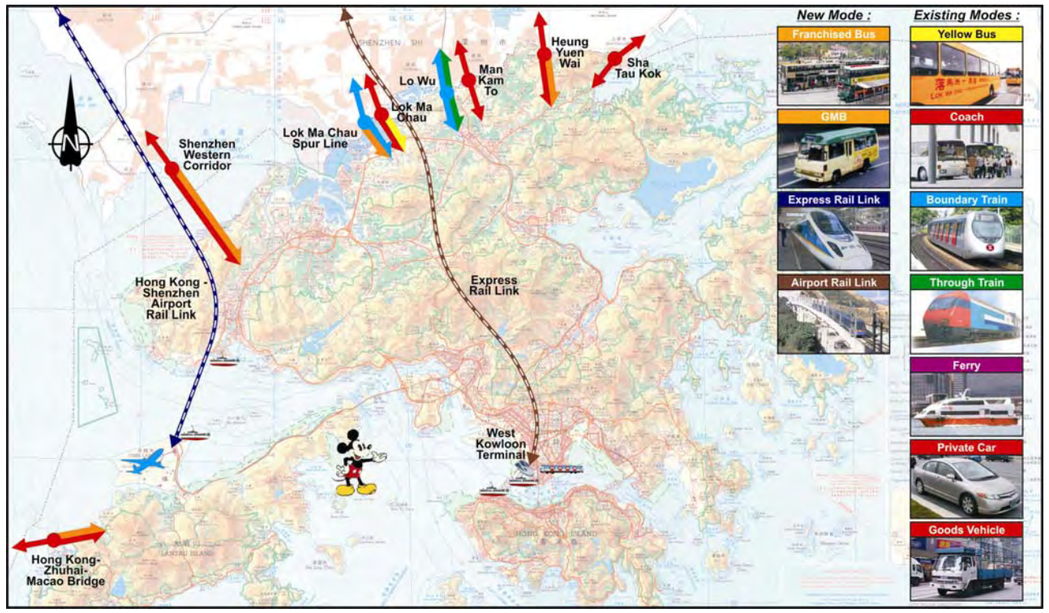
3.4 Future Opportunities

According to the latest *Chief Executive Policy Address* 2007 and the *Hong Kong 2030* study, a number of infrastructure projects for external and internal transport movements are planned to be completed in the period 2014-2020. Externally, this includes Hong Kong-Zhuhai-Macao Bridge for vehicular traffic, and the Hong Kong section of Guangzhou-Shenzhen-Hong Kong Express Rail Link and a possible rail link between Hong Kong International Airport and Shenzhen International Airport. The gateways at HKIA and particularly in West Kowloon will be expanded and become major multi- modal hubs.



The provision of the external infrastructure will further strengthen Hong Kong's position regionally in the PRD area as a commercial centre, while the new infrastructure internally within Hong Kong could open up a real opportunity to extend sustainable and environmentally friendly transport policies.

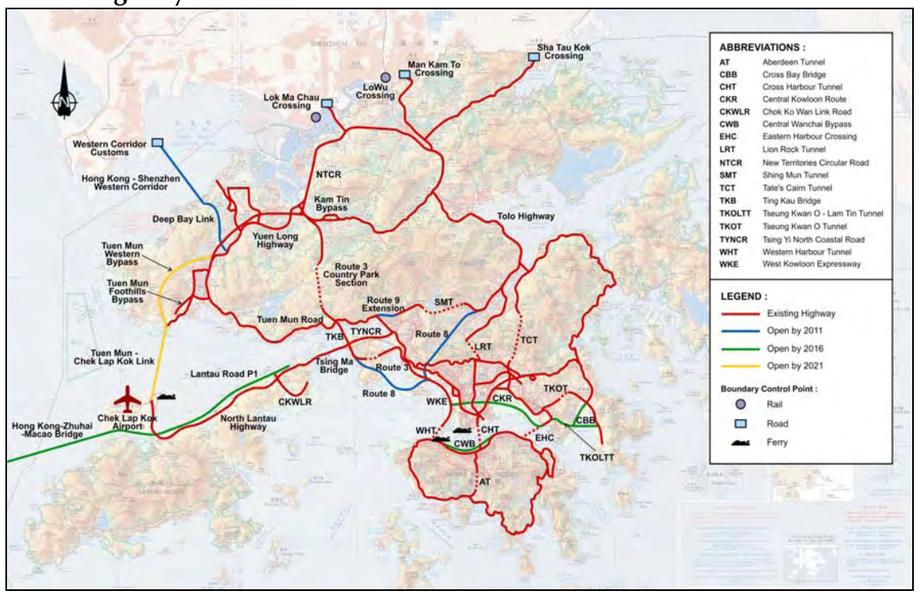
Boundary Crossings and Modes



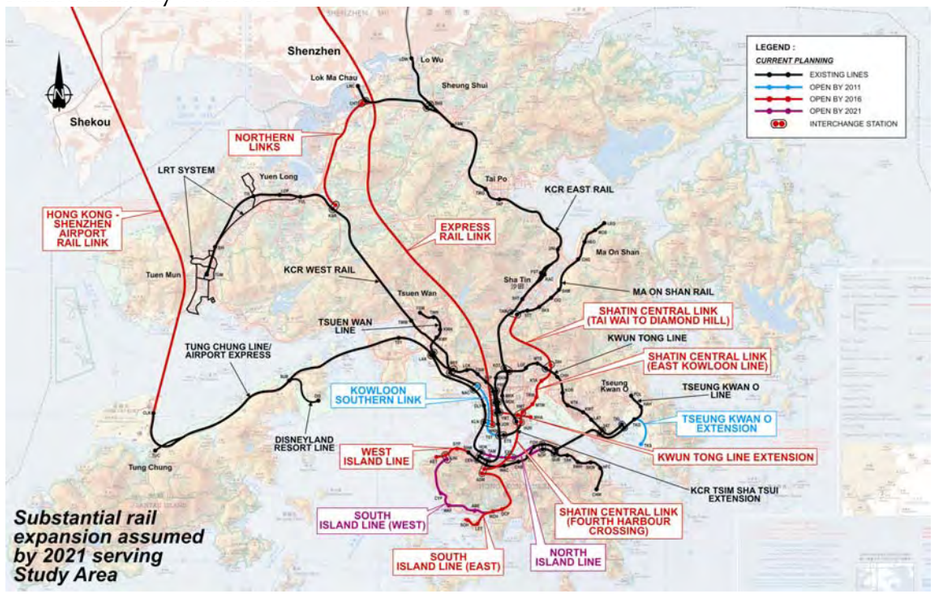
New strategic road infrastructure is planned in the urban area including the Central Kowloon Route (CKR) and Central and Wanchai Bypass (CWB). Through traffic may be displaced from district and local routes, thereby providing opportunities for achieving planning, environmental, and social objectives. Alternatively, without a comprehensive sustainable transport policy in place, additional road capacity could be "eaten" up by traffic growth in time.

The provision of additional rail links in Hong Kong will reinforce the public transport policy which uses railway as the backbone as a high quality alternative to road-based travel. It is particularly important to note that all future railway lines are planned to converge at or near the Harbour Area. By the time the railway lines are completed, all origins and destinations within the Harbour Area will fall within 500m walking distance of a railway station, which can be a catalyst to promoting sustainable transport initiatives in Hong Kong.

Future Highway Network



Future Railway Network



4. TRANSPORT DIRECTIONS

From building roads to supply management to demand management, Hong Kong will increasingly need to change its way of defining road hierarchy and associated design principles, and reallocate more road space to pedestrians and public transport to make Hong Kong a more liveable city.

4.1 The "Urban Traffic Problem"

Internationally, the 20th century witnessed a fundamental transformation in how city streets were perceived. In the early 20th century streets were perceived as public space where a significant part of the public life of a city was transacted and where people and public transport dominated. However, by the late 20th century the reverse was true in almost all developed cities. Streets came to be seen as movement space dominated by vehicles.

It is only relatively recently that the full consequences of this transformation have been realised. Negative impacts include social dislocation, deteriorating environmental conditions, road traffic accidents, severance, wasteful energy consumption and reduced economic efficiency. In response great efforts are now being made to contain traffic growth, promote public transport usage and give back streets to pedestrians through traffic calming and pedestrianisation.

What We Don't Want

What We Want

4.2 Road Building and Supply Management

Road building, led by North American examples, was seen as the solution to the traffic problem. Today planners look back with some horror at the 1950s and 1960s when the urban fabric was being torn down to make way for roads and elevated expressways were being threaded between buildings. Even cities like London and Paris had plans on the drawing board to create elevated motorway boxes and ring roads throughout the city. Hong Kong had large scale road building blueprints including many elevated roads, some of which were built.

Fortunately there has been a growing realisation since the 1990s that road building will not solve the "traffic problem" and more balanced land use/transport/environmental strategies are required to secure sustainable development.

This conclusion applies to Hong Kong as much as any city, and transport policy and infrastructure development has followed this path since the 1980s. The currently planned strategic road network in the main urban areas probably represents the essential framework and is in balance with sustainable development planning for the city. Further road building could only be justified for planning and environmental reasons, not to accommodate yet more traffic growth.

In line with road building, a further response to traffic growth was to maximise available vehicular capacity through supply management. During the 1980s and 1990s Hong Kong implemented broad ranging traffic management measures to maximise useful vehicular capacity, promote safety and where possible provide public transport priorities. The approach was supply driven giving priority to vehicles.

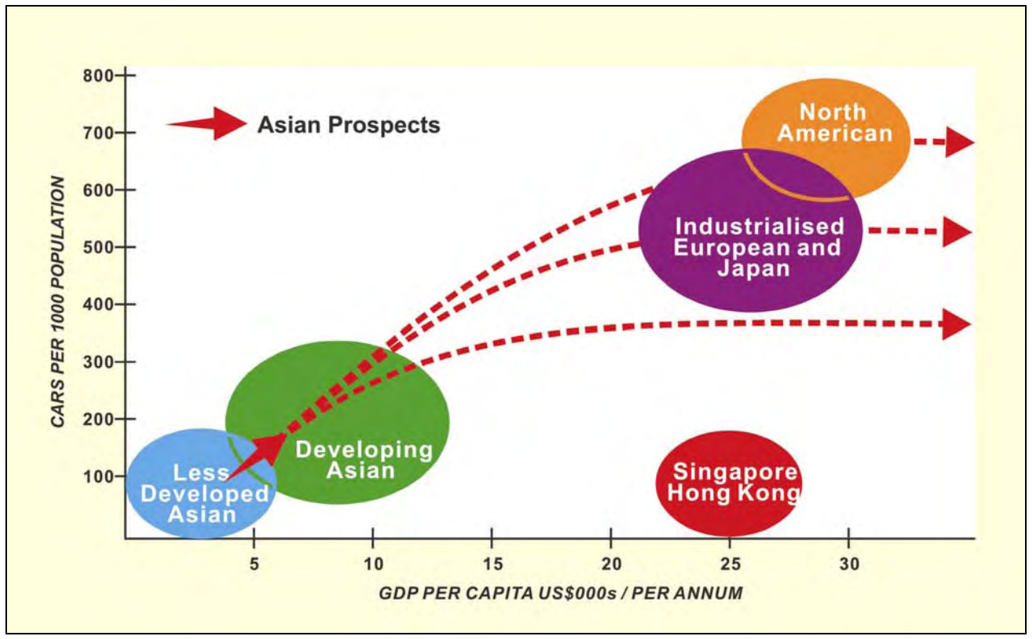
In that period, comprehensive pedestrian networks and pedestrianisation schemes were put forward but were only implemented piecemeal producing unconnected networks. In more recent years some schemes were reviewed under Transport Department initiatives and local implementation achieved on a small scale basis, but failed to garner sufficient support from business and representative bodies to be extended widely.

A change in mindset needs to be considered with respect to pedestrians and public transport priority. However "vehicle" thinking still drives much of the traffic planning and management and, it is fair to say, reflecting the attitudes of many stakeholders and representative bodies.

4.3 Traffic Restraint Policy

Hong Kong has maintained tight control on the vehicle fleet size since the early 1980s when Annual Licence Fees and First Registration Tax were hugely increased to curtail spiralling vehicle ownership and traffic congestion. This policy has been successful and over the past 25 years the private car fleet has increased by only 2.6% per annum. During the early 1990s the growth rate climbed to 8% per annum falling to around 2% per annum during the economic downtown. Looking into the future, the present transport policy assumption is for private vehicle fleet size to be contained to 2% per annum up to 2021. This is a low growth rate by world standards and as the following figure shows Hong Kong has been highly successful in managing car ownership compared to other advanced cities and countries.

Car Ownership

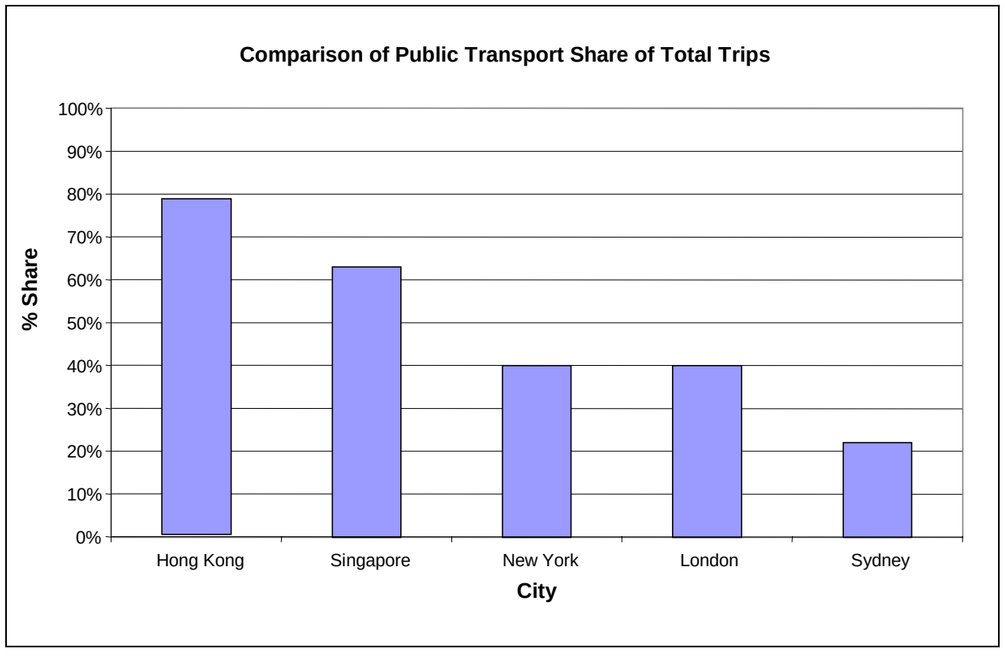


Containing congestion through car ownership restraint is a Territory-wide measure and therefore a relatively blunt instrument. It is not directly integrated with broader planning directions. More may be done in the design/implementation at the district and local level such that the benefit of strategic restraint can be realised by the street users.

4.4 New Directions

Sustainable transport strategies in high density cities are founded on giving priority to rail and public transport. Even so, vehicular travel will continue to be essential for the functioning of major cities for social and business interaction and transport of goods. Therefore, the focus must be upon reconfiguring the transport system to ameliorate the effects of motorised travel whilst promoting mobility for all citizens and visitors.

Hong Kong, and in particular the Harbour Area, is well-positioned to take up this challenge. Hong Kong already has one of the highest public transport utilization rates (close to 80%) of any city in the world.

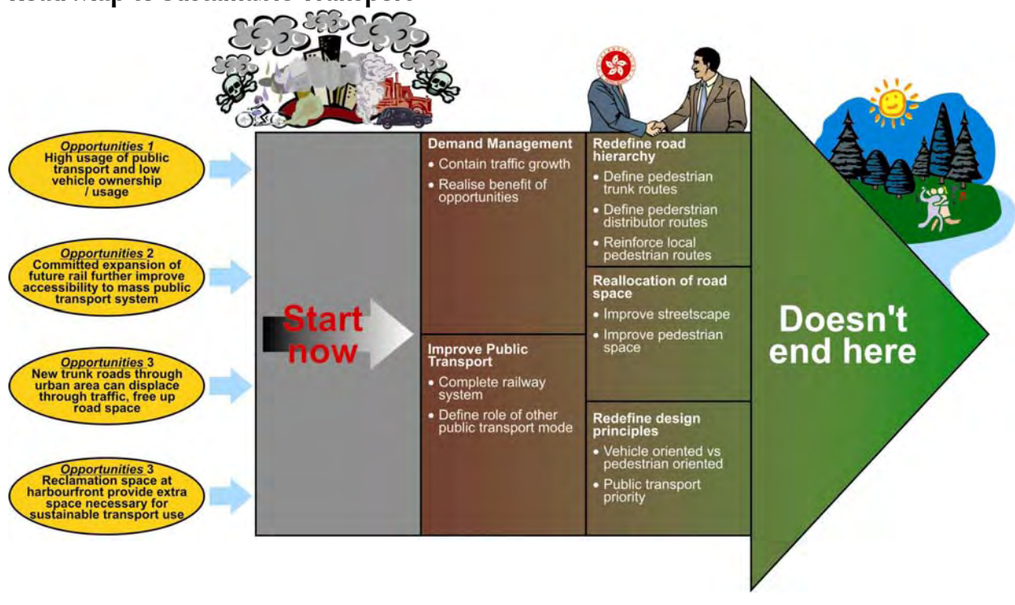


Upon completion of the Central and Wanchai Bypass and the Central Kowloon Route together with the planned railways in the Harbour Area the opportunity exists to reinforce and extend current policy directions by:

- Prioritisation of off-street transport
- Removal of strategic traffic from surface streets
- Reallocation of freed-up roadspace to public transport priorities, pedestrians and potentially cycling
- Improved street/public space environment
- Containing traffic growth
- Application of Intelligent Transport Systems
- Public education and participation

Whilst the policy directions are clear, determining the balance between the various initiatives will require extensive consultation to achieve consensus amongst the community and key stakeholders in an on-going process as the city continues to develop. The next chapters investigate the key components before putting together an integrated strategy.

Road Map to Sustainable Transport



5. RAILWAYS AND PUBLIC TRANSPORT

Whilst Hong Kong already has one of the highest public transport mode shares among other developed cities, more can be done to improve and rationalise the public transport system to grasp the opportunities presented by the many planned new rail lines and new technology buses and intermediate capacity transport system.

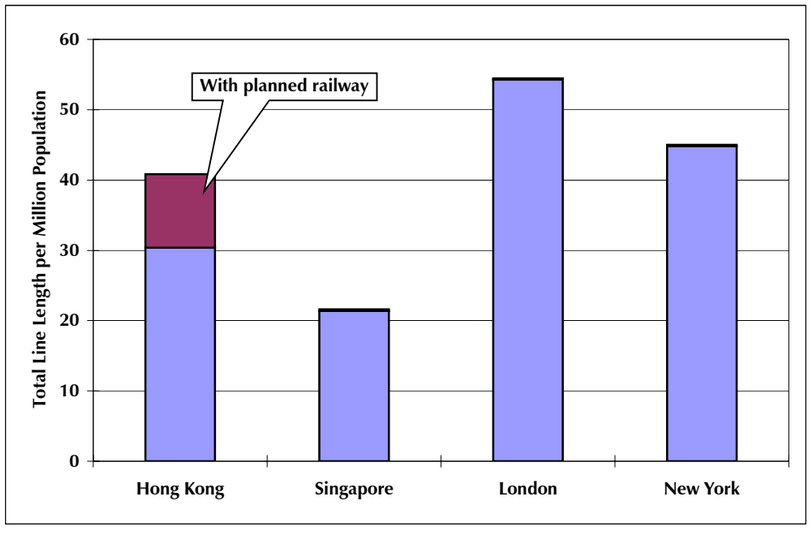
5.1 Railways in Hong Kong

Hong Kong's passenger railways are renowned for their efficiency and reliability and offer world-class services to the travelling public. The two railway corporations, MTRC and KCRC, were merged under the MTR Corporation Limited in December 2007 to secure a comprehensive and integrated network and fare system to maximise system usage and to coordinate the expansion of domestic and cross boundary lines and services.

5.2 Railway Network Coverage – International Comparisons

In Hong Kong, the railway network covers much of the built-up area, as it forms the 'backbone' of the domestic public transport system. By 2010 Hong Kong will have over 210km of urban railways which compares with some 100km for Singapore, some 550km for London (Underground plus Overground), some 750km for Paris (Metro plus RER) and 368km for New York. The recently announced new railway lines will raise rail network to around 275km or approx. 40km per million population, bringing Hong Kong more in line with other World cities.[1] The major cities in China are following the same path with Beijing, Shanghai and Guangzhou planning to build networks in the range 500 to 1,000 km.

Urban Rail Density by Population in Selected Cities

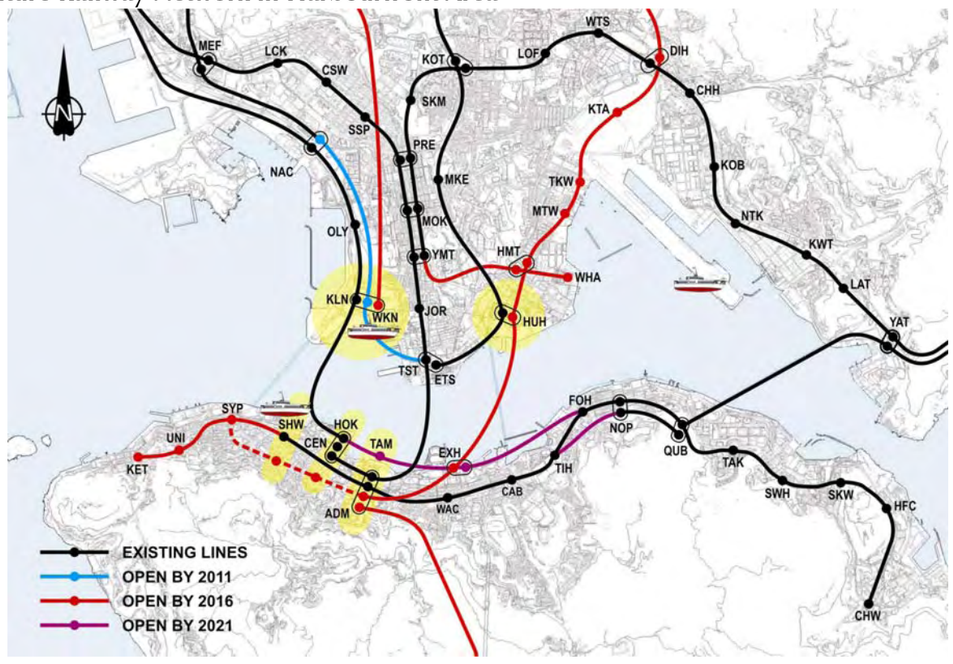


[1] Note figures exclude suburban and regional railways which extend to over 1000km in most metropolises.

5.3 Future Rail Development and the Harbour Area

To fulfil the increasing demand for transport provision in Hong Kong, the Government is committed to extend the current railway network in order to encourage commuters to switch from road transport means – private cars and taxis in particular – onto trains to reduce roadside air and noise pollution, relieve traffic congestion and improve street-level conditions in crowded urban areas.

Future Railway Network in Harbourfront Area



The proposed railway lines are at different stages in their planning and implementation. Construction of the Kowloon Southern Link is already underway, and is expected to be complete by 2009. This link will allow residents of the North West New Territories and Tsuen Wan to access the West Kowloon and Tsim Sha Tsui areas more quickly and directly, as well as facilitating direct interchange between East Rail and West Rail.

During the period 2014 to 2020, the West Island Line, South Island Line, Shatin to Central Line and Kwun Tong Line extension (to Whampoa) and the cross-boundary Express Rail Link are planned to be opened. Residents living in the western, southern and southwestern parts of Hong Kong Island, as well as those living in southeastern Kowloon, will be able to enjoy congestion-free access to the rest of the railway network. The planned North Island Line would further enhance rail accessibility, particularly to the Harbourfront and form a rail and public transport hub at Admiralty.

The Express Rail Link – to connect West Kowloon, Shenzhen and Guangzhou with a high-speed railway with the main terminal at West Kowloon – is expected to commence

operation in 2014. This will create a major rail and public transport hub interlinking international train services with the Airport Express and Tung Chung Line at Kowloon Station, the West Rail - Kowloon Southern Loop at West Kowloon station (now under construction) and the nearby China Ferry Terminal and Public Transport Terminals.

As a result of this ambitious expansion programme Hong Kong's domestic rail network will increase dramatically in scale and coverage. The Harbour Area will become ever more convenient with the new rail links in place. Rail density per unit area in the Harbour Area itself will almost double from its current level. Movement to, from and within the Harbour Area will be quicker and easier, strengthening its status as the core of the metropolitan area. It will be essential to capitalise on this major investment by providing supporting public transport and pedestrian networks.

5.4 Other Public Transport Modes in the Harbour Area

A wide variety of road-based public transport modes meet the varying demands for travel and convenience.

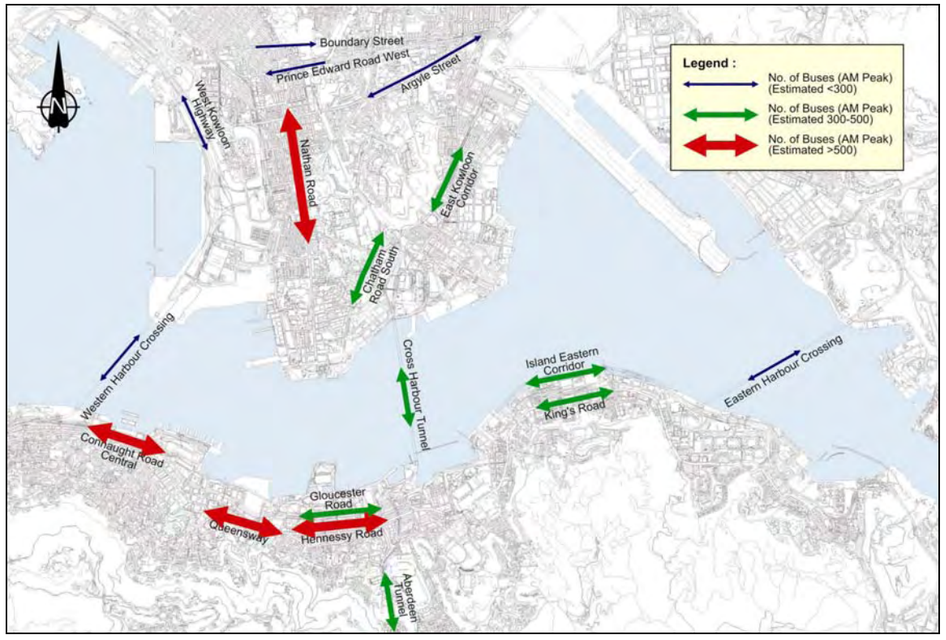
Franchised Buses

There are currently three franchised-bus operators in the Harbour Area. The services are high quality using air-conditioned, modern, largely double-deck vehicles. The privately owned and operated companies compete with rail along the main corridors, serve areas away from the railway network and also act as feeders to rail from locations outside the catchment area of the railway network.

Numerous direct bus routes link the Harbour Area with distant parts of Hong Kong Island, Kowloon and the New Territories, often following parallel routes to the rail system. Passengers are attracted by the "door-to-door" convenience and the usually lower fares. The inevitable consequence of this "many to many points" network structure is route duplication in the Harbour Area and consequent high bus volumes.

Even though buses are far more efficient users of roadspace than private cars, heavy bus volumes can still cause traffic and environmental issues. In particular, boarding/alighting activities at the most densely utilised stops can create queues of buses which block the road for other vehicles. The following clusters of corridors handle high volumes of franchised-bus traffic each day and often experience congestion partly caused by franchised buses:

Key Bus Corridor Volumes



- Canton Road, Salisbury Road, Nathan Road and Chatham Road South;
- The Cross-Harbour Tunnel, Gascoigne Road, Jordan Road and Chatham Road North;
- Connaught Road Central and Des Voeux Road Central;
- Harcourt Road and Queensway;
- Hennessy Road and Gloucester Road; and
- King's Road.

The bus companies are committed to raising fleet quality in line with international vehicle emission standards. Even so the heavy volumes in often narrow canyon corridors inevitably make them a key contributor to roadside air and noise pollution.

Non-franchised buses and public light buses

Non-franchised and public light buses mainly fulfil passenger demands which cannot be met viably by regular high-capacity public transport services, and supplement railways and buses. They also contribute by relieving the heavy demand for other public carriers during the daily peak hours.

The numbers of non-franchised buses has more than doubled since 1990 and stands at around 7,000 vehicles. These buses can generate congestion problems mainly when they wait to pick-up and drop-off passengers, sometimes in a disorderly manner, particularly in the Central and Wanchai districts. Current policy is to prevent further growth of such non-franchised Residential Services in the downtown areas and instead feed passengers to rail and public transport interchanges.

Trams

The Hong Kong Tramway is an icon of Hong Kong. Tram services operate along a 13km-long double track through the prime commercial/residential corridor of Hong Kong Island between Kennedy Town and Shau Kei Wan, and along the 3km single-track circular in Happy Valley. A flat and low $2 fare is charged.

The tram right-of-way incorporates a variety of segregated (Queensway) and priority sections, roughly about half of the route. Delay to trams caused by other motorised modes where they share the same roadspace and at junctions disrupt services aggravating the difficulties of inter-working multiple tram services.

Trams are an environmentally friendly public transport mode. However, its daily use by commuters is gradually diminishing due the aging technology causing cramped and bumpy rides, fierce competition from other modes, and the road traffic congestion mentioned above.

Ferries

Historically, ferries played a leading role in the Harbour Area. As discussed in Chapter 8, they still play a significant but reduced role for cross harbour travel and to/from the Outlying Islands, with market share being eroded by road and rail links and the narrowing of the harbour itself.

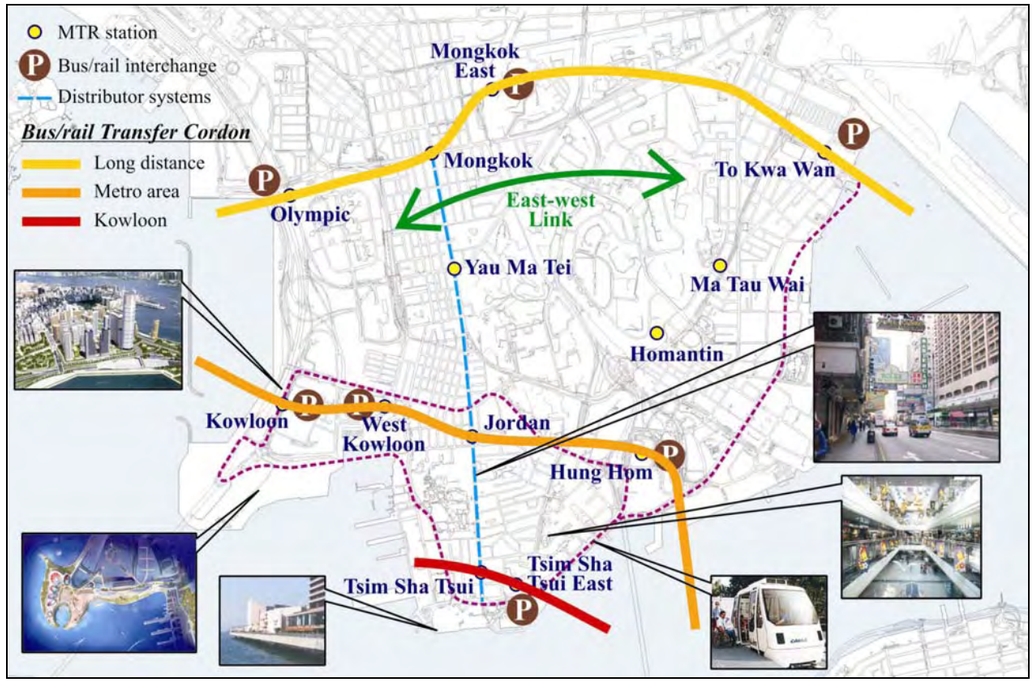
5.5 Vision for Sustainable Public Transport

Broad-brush forecasts for 2020 with all the planned railway lines in operation indicate rail travel will grow by around 40% and account for about half of travel in/out/within the Harbour Area and over 60% across the harbour. Road-based public transport will decline and rationalisation will be inevitable. Historically this has taken place through gradually "thinning" of service frequencies and maintaining network structures. Feeder services to rail have only been introduced where their independent viability as bus routes is proven. However, with a significant fall in demands in the face of rail expansion it may become less viable for operators to maintain frequencies and so many route choices, especially in the off peak periods.

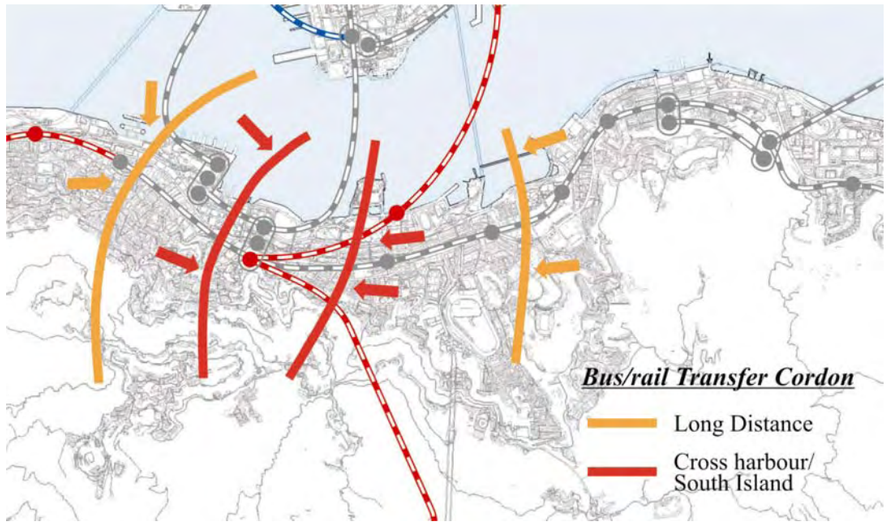
Better coordination of public transport modes

Against this future perspective a more formal network restructuring could be considered and the announced policy of having rail as the backbone of the public transport system should be reinforced with buses, trams and minibuses playing more complementary roles. The bus network could be restructured to reduce long routes penetrating across the city with relatively low loadings and high vehicle kilometres. This policy is being pursued gradually but a more formal coordinated network of rail/rail, rail/bus and bus/bus interchanges could be established. The longer distance routes would have convenient interchange with rail, tram and bus distributor routes. This enables more attractive frequencies and coverage to be maintained throughout the day, whilst peak specials or expresses may still be incorporated in the rush hours for busy area to area movements.

Kowloon Bus Optimisation



HK Island Bus Optimisation



This would reduce operating costs and help hold down fares. On the other hand travellers may feel they have less choice, may have to interchange and possibly pay more, whilst bus operators will also worry about loss of revenue. This will require a careful rebalancing from all stakeholders' perspectives.

Such policies may draw strong public opposition which will require that some duplicated bus and minibus routes be restructured or curtailed. As discussed later, it will therefore be essential to reach public consensus on this balance between choice, viability and sustainable development.

Management of bus routes and stops

A more efficient arrangement of bus routes and stops along busy corridors would help facilitate better traffic flows. This means that overlapping services along these routes should be reviewed to avoid excessive bus service provision. Specific policies would include:

- Promotion of bus-bus interchange
- Rationalisation of fares
- Bus stop rationalisation
- Capping the number of routes at any particular stop

Exclusive lanes for trams and buses

Often delays to tram and bus services are caused by other traffic. Designated tram lanes and bus lanes can effectively raise travel speeds and can also encourage passengers to switch to these mass carriers, hence stabilising overall traffic growth. Bus priority corridors have been studied in the past and implementation has been constrained in extent by general traffic demands and pressure from various stakeholders. A more aggressive approach should be considered as part of network restructuring with the development of "Quality Bus and Tram Corridors" more strongly implementing the announced policy balance towards public transport and the environment. This would then generate a knock-on benefit as such services become more attractive inducing users to switch from private modes.

Possible Upgrade of Tram System

The Tramway is part of Hong Kong's heritage dating back to 1904. Today the Tramway carries 230,000 passengers per day compared to 500,000 or more in times gone by. The right-of-way serves the primary corridor of Hong Kong Island and should be fully and effectively utilised. Today it is not. In fact, the Tramway potentially offers attractive journey times, easy access and high frequency for journeys of up to 5km, a complementary role to the MTR and franchised bus used for medium to long journeys. This advantage is being eroded by unreliable service frequencies and travel times due to traffic congestion, poor quality ride and vehicle environment. As a consequence many short journeys are made by taxi or bus that could be better made by tram. Gradual low cost improvements have been implemented constrained by the low fares and revenues but are insufficient to halt the

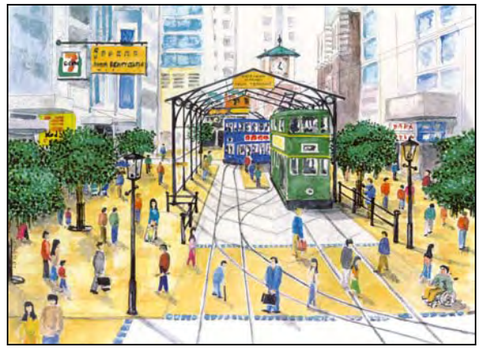
decline. Therefore modernisation would be necessary so that the service remains competitive in the local market.

The Tramway corridor has great potential to raise utilisation by priorities, tram and pedestrian precincts and integration with the surface walkway system. This will require sensitive upgrading balancing the heritage value of one of Hong Kong's icons with the key role the Tramway could play in reducing vehicular traffic in the CBD and along north foreshore of Hong Kong Island. A number of options and permutations could be considered including whether to upgrade or replace the trams themselves. This would include:

- Full modernisation for short distance travel
- Interworking heritage vehicles with a modern system
- Maintain a heritage section
- New tourist heritage loops/line on the reclamation

These are not just transport issues as the Tramway is an important image for visitors and part of Hong Kong's heritage. Furthermore the improvements should focus on enhancing the role of the Tramway for short journeys and as a feeder not to become a competitor to MTR or express bus.

Des Voeux Road Central Tram Precinct



New Modes

New forms of environmentally friendly intermediate capacity transit are being developed worldwide, but principally in Europe and Japan. These target corridor flows where an underground mass transit cannot be fully justified but are of sufficient volume to raise the option of a dedicated public transport system, complementary to rail and conventional bus.

Hong Kong has erred away from such modes and has been satisfied by the wide choice of services offered by franchised bus services which converge to produce very major corridor flows, often duplicating rail services. As part of the network restructuring, new modes could be considered in some busy corridors. Without doubt this will require extensive urban redesign not just of transport but also traffic management, pedestrian facilities, streetscape and ultimately adjacent land uses. Such routes would interchange with longer distance rail and bus services and distribute travellers in the Harbour Area and create a new tier in the transport hierarchy.

The new modes to be considered include the following:

- Bus Rapid Transit (BRT) – dedicated corridor for bus services operated as a surface railway or tramway; optionally as a dedicated shuttle or as collector/distributor/ busway.

- Modern Tramways – are being expanded throughout Europe using a variety of conventional steel-on-steel; rubber-tyred vehicles with single track guideway; and even "wireless" trams with power collection from beneath the street avoiding the visual intrusion of overhead catenary.

- Automatic People Movers – fully grade separated automatic trains (similar to the trains at Hong Kong International Airport Terminal for gate connections) which can run at high frequency and be integrated into the built and natural environment. Such systems have been considered in South East Kowloon and also for the West Kowloon Cultural District.

All these systems offer a different approach to urban transport focussed on short to medium distance travel complementing the railways and franchised buses. Their insertion into the urban fabric as discussed below needs a comprehensive urban design approach.

"Wireless" Tramway in Bordeaux, France

Automatic People Mover

Bus Rapid Transit

6. ROADS AND TRAFFIC

The Central and Wanchai Bypass and the Central Kowloon Route present a "one-time only" opportunity to rethink the road network hierarchy and traffic management strategy for the Harbour Area and give back roadspace to pedestrians and public transport.

6.1 Road Network Development

The planned road networks for the Harbour Area to be completed between 2015 and 2020 will provide a comprehensive Strategic Road Network linking the major external corridors and districts. These include:

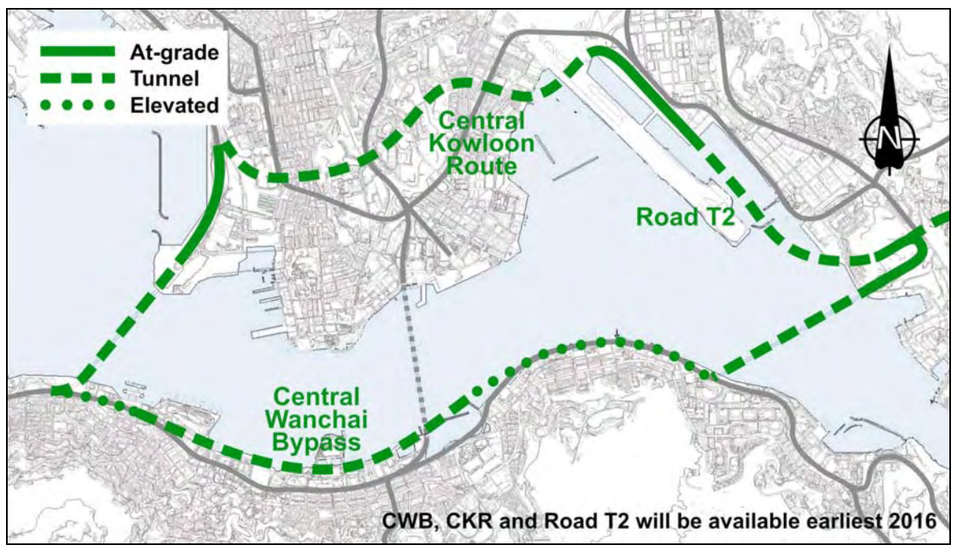
- The Central and Wanchai Bypass (CWB) - an underground dual three lane route interconnecting the Island Eastern Corridor and the Elevated Connaught Road to provide a bypass to the congested Connaught Road/Harcourt Road/Gloucester Road/Victoria Park Road corridor and new accesses to Central and Wanchai North.

- The Central Kowloon Route (CKR) - a tunnel route interconnecting the West Kowloon Expressway and the planned Route T2 serving the South East Kowloon Development Area, connecting through to the Eastern Harbour Crossing.

- Route T2 - the underground extension of the CKR connecting through to the Eastern Harbour Crossing and Tseung Kwan O.

These routes will complete a largely underground road network framing the core Harbour Area and enabling through traffic to bypass the surface street system. In addition longer distance traffic to/from the Harbour Area would be able to utilise the extended Strategic Road Network bringing further relief and providing connections to external corridors.

Future Harbour Area Road Network



6.2 Balancing Supply and Demand

Transport policy in Hong Kong has aimed to maintain a balance between supply and demand through infrastructure development and management of road use in order to secure acceptable travel and traffic conditions. For a high density metropolis road traffic flows relatively freely by international standards.

With the economy growing strongly, vehicle ownership will begin to rise, traffic volumes increase and congestion will become more widespread adversely affecting mobility and the environment. The planned road and railway expansion will bring substantial relief by around 2016, especially on strategic and primary routes. However at the district network level, network expansion is more difficult and traffic growth will continue, bringing worsening congestion and environmental conditions. Moreover in the longer term, the initial improvement in travel conditions risks being eroded by further traffic growth.

The opportunity presents itself to take advantage of the road and railway expansion, reorder the road network hierarchy and enhance policies to contain traffic growth, thereby maintaining the improved travel conditions and securing broader planning and environmental benefits. In short, in the Harbour Area, transport development, and roads in particular should be primarily to support broader sustainability objectives and not to accommodate traffic growth.

6.3 Reordering the Road Network Hierarchy

The expansion of the strategic network will initially relieve the existing and congested multi-functional corridors of through traffic and a large proportion of the external traffic to and from the Harbour Area. This presents the opportunity to reorder the overall road network hierarchy to make road standard, function and traffic type compatible and to allocate more roadspace to public transport and pedestrians.

Cross Harbour

The Strategic Road Network "box" will permit multiple route choices across the harbour, by using Central Kowloon Route and Central and Wanchai Bypass to switch corridors, will encourage use of the Eastern Harbour Crossing and Western Harbour Crossing. This would further facilitate the introduction of tolling structures to achieve a better balance of usage of the three tunnels and relieve traffic congestion in the approach corridors.

On Hong Kong Island for example the following modification could be promoted:

- Central and Wanchai Bypass – through traffic and external traffic to/from north Central and Wanchai.

- Connaught Road/Harcourt Road/Gloucester Road/Victoria Park Road – primary distributor and major public transport priority corridor.

- Causeway Road/Yee Wo Street/Hennessy Road/Queensway/DVRC – primary public transport and pedestrian corridors.

- Road P2 on the new reclamation – District Distributor and waterfront access – no through traffic.

- Environmental and Traffic Management cells – remaining streets focused on local access and environmental "people first" management including traffic calming, pedestrianisation and landscaping.

On Kowloon-side similar concept can be explored

- Central Kowloon Route/West Kowloon Expressway/Princess Margaret Road/Kwun Tong Bypass/Future Road T2 – through and external traffic corridors.

- Gascoigne Road/Chatham Road – access to/from/within South Kowloon.

- Nathan Road/To Kwan Wan Road/Austin Road/Jordan Road – public transport and pedestrian corridors.

- Environmental and Traffic Management cells – remaining streets focused on local access and environmental "people first" management including traffic calming and pedestrianisation

Existing Hennessy Road

Possible Hennessy Road

6.4 Managing Road Traffic

Road Traffic Demand Management

In order to secure the benefit brought about by the new underground roads, reclamation space and new railways it is necessary to have measures in place to contain traffic growth. Traffic Demand Management is a possible tool to achieve this end. Traffic demand management takes the following forms.

- Ownership
- Regulatory and Traffic Engineering Restraints
- Usage
- Behavioural

Ownership Restraint

As discussed in Chapter 4, the Hong Kong SAR has successfully capped the vehicle ownership to a low level as compared with other developed countries by charging a high First Registration Tax and Annual Vehicle License Fee. These are key measures in place and are fundamental to containing overall vehicle ownership and traffic levels in Hong Kong and must be maintained.

Regulatory and Traffic Engineering Restraint

Regulatory and traffic engineering restraints refers to kerbside stopping restriction, bus priorities, road closures, pedestrianisation, and traffic calming measures. Most of these are already in place to varying degrees, with the objective to ensure the smooth flow of traffic.

In future when more road space is available due to displacement of traffic to the new roads and increased use of public transport, an expansion and rethink of the regulatory restraint can be conducted putting more emphasis on public transport priorities and pedestrian movements. The initial pedestrianisation schemes have proved popular and feasible and should be the basis for convincing commercial and retail businesses, the public and District Councils to support further expansion.

Usage Restraint

Usage restraint covers of a range of measures including parking supply and pricing, fuel tax and road user charging to limit traffic growth within a densely populated area.

In Hong Kong parking supply and demands are broadly balanced through application of Planning Standards and Guidelines. To a large extent supply and pricing is in the hands of the private sector limiting the use of parking as a traffic restraint measure. In fact current polices should be continued balancing supply with traffic demands, which are then managed to be within road network capacity and to meet environmental standards.

Fuel tax offers a second means to contain traffic globally as it applies to all vehicle mileage, however it is not location specific.

Road User Charging or Road Pricing is a general term for the pricing of the use of road infrastructure for a wide variety of purposes. This may take the form of Congestion Charging, which is specifically aimed at making road users pay for the cost of the congestion that their journey places on other motorists and travellers (as in London, Stockholm and Singapore). Eco-Charging, on the other hand, can be targeted to improve environmental quality as a prime objective (as in some cities in Italy). Alternatively, road pricing can also be used to raise revenues to fund infrastructure, such as road tunnels and bridges (as in Hong Kong), or to charge goods vehicles for the maintenance and environmental costs of motorway use (as in Europe).

The Council for Sustainability recently completed public consultation on measures to achieve better air quality and a report was released in early 2008 titled "Better Air Quality Engagement Process". Whilst it was not a comprehensive survey, significant support was identified for containing traffic levels in the interests of improving air quality. The Government is also undertaking a study of congestion charging "Agreement No. CE 39/2005 (TT) Congestion Charging Transport Model – Feasibility Study". The Study Brief requires an international review of congestion charging and an assessment of such applications in Central and Wanchai Districts. Public pressure has also risen once again to address the uneven toll charges for the cross-harbour road tunnels.

Against this background there is a need to address this fragmented approach to road user charging and determine a consistent and integrated approach. This is a complex matter and could take a variety of forms. The technology is proven and schemes are operating successfully in Singapore, London, Stockholm and a number of Italian cities. Under these schemes in different urban environments, traffic demands and emissions are down typically 15-25% bringing a wide range of benefits to travellers, operators, the communities and tourists. Implementation has wide ramifications on travel behaviour, local areas, traffic access and circulation, vehicle user groups and has in the past raised issues of privacy and social equity. Therefore, whilst now in successful operation internationally, consideration of road user charging would require extensive public and stakeholder consultation to determine whether such an approach could gain adequate support and form a further measure to alleviate traffic congestion.

Behavioural

Behavioural restraint refers to measures such as car pooling, park and ride, staggered office hours, etc. are ways in which travel choices and timings can be made to reduce peak vehicular flows. These are very much culture/location specific and there is limited potential in such measures in alleviating traffic congestion at a strategic level in Hong Kong but, where appropriate, they should be encouraged because in aggregate they can still make a useful contribution. However, as discussed in chapter 11, there is great scope for reducing traffic volumes by individuals and organisations reviewing and modifying their travel choices when they can, allowing for the high pace Hong Kong lifestyle.

6.5 Waterfront Traffic and Servicing Access

The Harbourfront should be a traffic free place for people. Roads should be underground or set back inland leaving space for parks, open space and waterfront related activities.

Public transport and pedestrian networks should form the main means of access to the Harbourfront. Even so access by taxi and car is required to support the Waterfront facilities and to serve less mobile travellers. However this should not be at the cost of creating congestion spots or congregation of cars and taxis waiting with engines running next to pedestrian areas.

Underground facilities should be considered along the lines proposed in many of the proposals in the "Central Waterfront Design Competition"sponsored by Designing Hong Kong. These would be interconnected with the main pedestrian networks described in the next chapter.

7. PEOPLE FIRST – A WALKABLE CITY

A primary objective is to make Hong Kong a truly walkable city. The creation of a continuous harbour waterfront walkway linking back into the city presents a golden opportunity to develop a unique way to experience Hong Kong for residents and visitors.

7.1 Current Attitudes to Walking

According to Government figures, less than 20% of households in Hong Kong have access to a private car. Even in those households where a car is available many trips will be made by other means. The respective roles of railways and public transport and reallocation of roadspace have already been explored. However, in order to create a sustainable long-term solution for the Harbour Area it is necessary to go beyond this. In fact, there will need to be a shift in the mindset of Hong Kong residents to embrace the idea that many more trips can be made by non-mechanised modes.

Scale of Non-Mechanised Trips

Walk trips and cycle trips are generally far more difficult to quantify than trips made by mechanized modes. No fare is collected and the movements themselves are less "visible", and hence more difficult to count than movements by car or taxi, for example. Government's *Travel Characteristics Survey 2002* estimated that, on an average weekday, Hong Kong residents made some 12.3 million mechanised trips and some 6.8 million walk-only trips. In fact this amounts nearly 30 million walk trips since all mechanised journeys include walking at the start and finish. Furthermore the source indicates that walk-only trips could be significantly under-reported.

It is clear that, by any measure, walking is the most important mode. However, generally speaking, it is not always perceived as an important mode either by decision-makers or the general public.

Walking as a sustainable mode

Walking is the most sustainable form of travel because it is consumes no power, improves health, causes no pollution, is equitable and free, and promotes social interaction and public transport usage. In reality walking is the best way to live in and enjoy what great cities offer by way of changing experiences, vistas and environments whilst walking along. However only in recent years has this fundamental fact come to be appreciated once again after years of consigning the pedestrian "to be a problem to be solved to make way for vehicles".

Sustainable plans for cities are often conceived by great strategic visions of urban form and infrastructure – the top down approach. Whilst in reality the life of a city comprises the individual, families, organisations and neighbourhoods – bottom up. These social and spatial relationships take place in a people dominated spaces at a human scale. The creation of pedestrian networks must support these socio-economic relationships by creating harmonious and accessible living and activity areas.

Creating a Functional Hierarchy

Walk networks fulfil a number of functions and the design of the pedestrian ways must respond accordingly.

- Strategic – links between major activities areas, public transport and other transport facilities to enable external access/egress – where the primary purpose is to get from A to B.
- Local- links between neighbourhoods, buildings and activity areas – social connectivity.
- Active – corridors through which pedestrians can walk and selectively participate in various activities, such a shopping streets, malls.
- Passive/Recreational – areas where pedestrians can sit, stroll and participate in activities away from the general flow of travellers.

In practice in Hong Kong there is overlap within such a hierarchy and strategic and local routes pass through buildings and parks, and shopping streets. The key is to create these shared networks to the advantage of all pedestrians with their different travel purposes.

Attitudes and Barriers to Walking

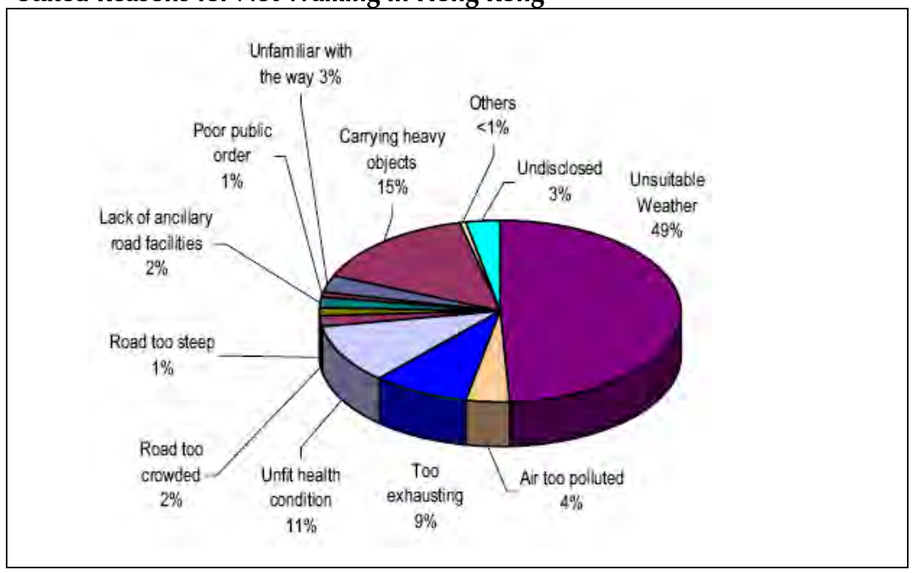
Residents of major cities raise a variety of reasons why they may not prefer to walk. However, closer scrutiny reveals a number of recurring themes:

- Route indirect and unclear
- Intimidation by road traffic/fear of accidents
- Personal safety and security

- Street-level air quality
- Poor street environment (i.e. poorly maintained pavements, insufficient lighting etc.)

Most of these also apply to attitudes to walking in Hong Kong, with air quality being a particular concern. Personal safety and security is generally considered to be less of an issue in Hong Kong because of the presence of large numbers of people on the streets and the low crime rate. Attitudinal surveys in Hong Kong seem to reveal one additional and much more heavily weighted factor, namely the climate.

Stated Reasons for Not Walking in Hong Kong



Source: Travel Characteristics Survey 2002, Final Report, p.26.

Designing for Pedestrians

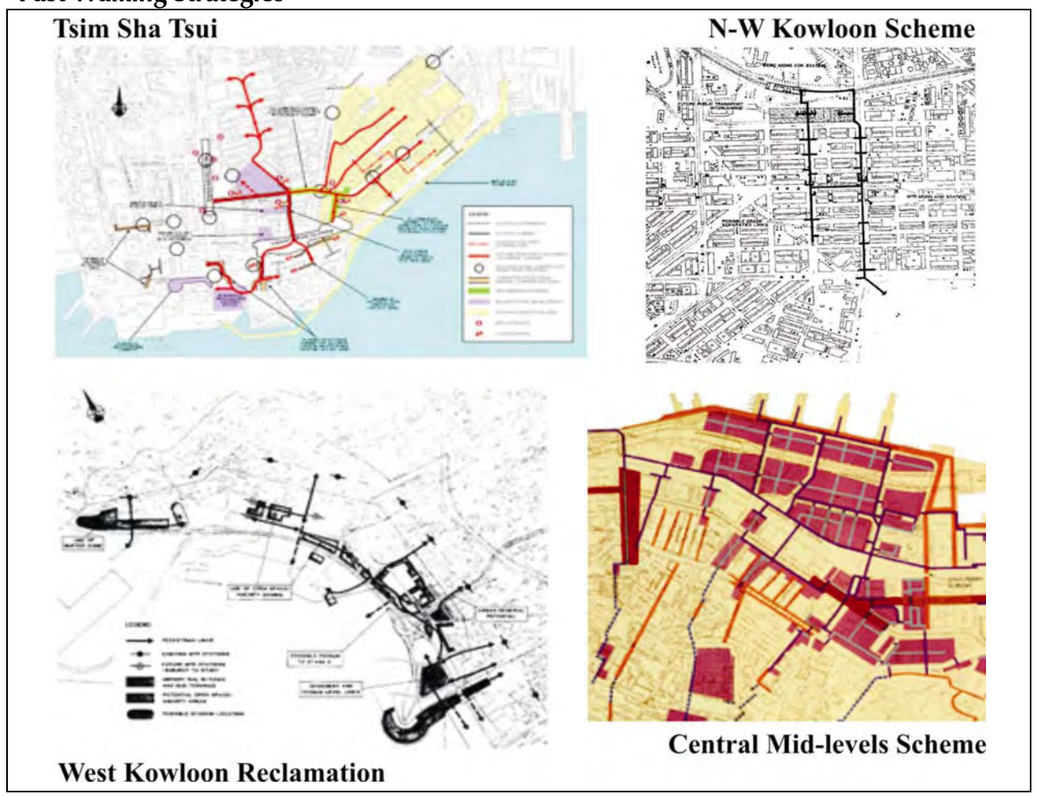
The design of pedestrian networks merits the same effort put into roads and railways but is often treated as an appendage to schemes. Successful walk networks, should be based on the following principles:

- Comprehensive and interconnected
- Comprehensible and easily followed with visual connectivity and signage
- Level/easy gradients
- Safe and secure
- Maximum segregation/protection from traffic
- Interesting and enjoyable – part of the city life
- Weather protected where practicable
- Provision for the mobility challenged
- Mechanical assistance for level changes (escalators, lifts)

In practice, networks developed on this basis will encourage an increase in walking generally and over much greater ranges as well as promote public transport usage. As an example, passengers may happily walk 600m through traffic free walkway systems to MTR stations compared to 400m of delay and discomfort through congested street networks.

The continuous walk networks will comprise interconnections of elevated walkways, buildings/malls, subways/railway stations, parks and rest areas, pedestrianised areas and streets. The interfaces should be as seamless as possible. The many schemes put forward in District Studies in the 1980s and 1990s pursued these principles, but were only implemented in a piecemeal manner.

Past Walking Strategies



Street Level Networks

Roads are traditionally designed to maximise vehicular traffic throughput and minimise delay. We used to live in a "growth-and-build" era whereby traffic growth is followed by reclamation and the construction of additional road infrastructure. The traditional approach to traffic engineering design is to minimise pedestrian crossing green time in favour of vehicular traffic green time. At locations where traffic is congested, frequently no pedestrian crossing is allowed, or is unprotected or there is provision of piecemeal footbridges, pedestrian subways and staggered crossings causing inconvenience to pedestrian movements in particular the elderly and the disabled.

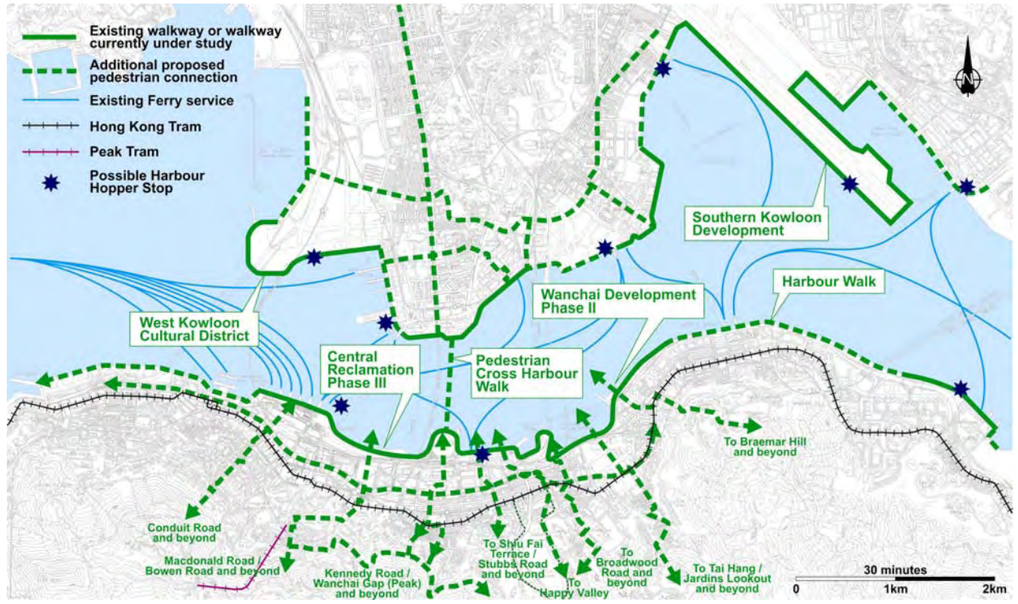
With the opportunities ahead, it is perhaps the right time to rethink whether the traditional approach can be modified in favour of pedestrian movements at street level. This applies not only to the newly reclaimed area, but should also be extended to existing built-up areas where vehicular traffic are displaced, or restrained via various management measures. Many cities are introducing greater priority for pedestrians at traffic signals with direct or even all directions pedestrian phases. The newly released Transport Planning Design Manual in 2008 has been modified in some way towards this objective.

Continuous Harbour Waterfront Walk

With the Central Reclamation underway, while Wanchai Reclamation is currently being gazetted, a large proportion of the Hong Kong Island North harbourfront is waiting to be constructed. In addition, a substantial area along the shoreline of Kowloon peninsula is also under review including the Southeast Kowloon Kai Tak area and the West Kowloon Cultural District. These projects altogether contribute to a significant portion of the Inner Harbour and present a special opportunity.

The development of a continuous Harbour Waterfront Walk is core objective for the Transport Strategy for the Harbour Area. The walkway should be functional and recreational. As a continuous route it should encourage people to walk for extended parts of their journey before catching public transport. As a civic and recreational route it should bring people to the water edge to experience the Harbour, provide vantage points to enjoy views and offer shade and weather protection to be an all year round facility.

Grasping Opportunities Ahead: Harbour Walk and Cross Harbour Walk



The Harbour Waterfront Walk should be connected into the hinterland by strategic pedestrian corridors to create a comprehensive network to extend accessibility and the range of walking. The network would interconnect with ferry, public transport terminals rail stations, Hong Kong Tramway and the Peak Tram. A further extension could be to form a Cross Harbour Walk in tunnel connecting between the Hong Kong Exhibition Centre and the Waterfront Promenade of Tsim Sha Tsui, a distance of only 900m, taking about 12-15 minutes to walk. This tunnel not only compliments the Harbour Waterfront Walk as a mean to walk/cycle across the Harbour, but its benefits are far reaching as follows:

- Connects between Hong Kong Convention and Exhibition Centre and Tsim Sha Tsui where hotels provide residence to many exhibitors and visitors.
- Interconnects the leisure and tourism districts of Tsim Sha Tsui and Wanchai to create an integrated district.
- Interconnects with the KCR Tsim Sha Tsui East Station and the MTR Tsim Sha Tsui Station with the future Wanchai North Station and onwards to Wanchai station.

The link would pick up many leisure and educational themes such as a Hong Kong history tunnel, marine life tunnel, changing exhibitions and features, as well as possible retail and other activities.

An alternative could be to incorporate a people mover in the tunnel, like in Shanghai, as a tourism and/or functional link.

The inland corridors could interconnect with pedestrian corridors within the built-up areas to form a complete network.

Integration with Tourist, Heritage and Historical Trails

Tourists enjoy meandering around the city on foot taking their time to take in the sights. Recently, initiatives have been made to promote Hong Kong's culture and history and preserve heritage buildings and points of interests, whilst Hong Kongers have long enjoyed strolling or jogging along Bowen Path and connecting into trails beyond.

The opportunity exists to link all these together into a continuous network to form a complete walkable city from the Harbour Waterfront Walk through the city and into the Country Parks – something that would surprise visitors and for the community to use for commuting, leisure, recreation or just to relax in. As revealed in the last chapter the network would provide many kinds of "Future Harbour Days" for all to enjoy.

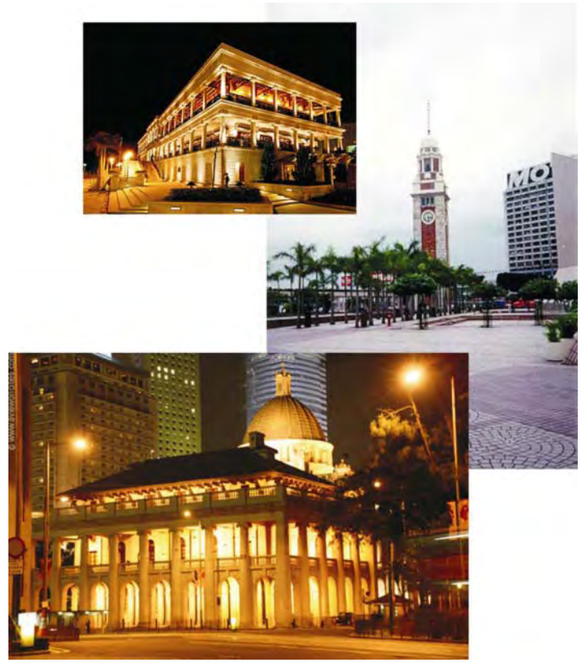
7.2 Role of Cycling

In Hong Kong, since the age of motorisation, cycling has never been a formal mode of transport especially in the urban area with safety being the main concern. There are presently no cycle tracks available in Hong Kong Island and Kowloon peninsula except a short mountain bike trial in Dragon's Back near Shek O. Cycling is allowed on vehicular carriageways but is regarded as dangerous by most people for obvious reasons. Despite the opportunities ahead of us, cycling is not expected to become a major mode of transport in the main city. The opportunity does exist to incorporate a continuous cycle and walking track as part of the Harbour Walk, thereby allowing a leisure-oriented scenic cycle route around the Inner Harbour. This may require bikes to be pushed in some sections and will require careful and safe planning.

Further extensions around the Hong Kong Island shoreline could be considered to create a whole new leisure experience for residents and visitors. It is recognised this would require very sensitive design to avoid damaging landscape and ecology at the waters edge. However, a Sunday ride from Central and Wanchai Park to Cyber Port, or even a bike and ride from Sandy Bay to the future Kennedy Town MTR station, would be an exciting prospect.

"Improvements to the pedestrian environment and encouragement of mixed use developments proposed under the HK2030 framework will help to facilitate more walking and cycling"

Source: HKSAR Government, Hong Kong 2030 Planning Vision and Strategy, Final Report.



The Vélo scheme in Paris is one of many in European cities bringing "public" cycling to the community.

8. HARBOUR TRAVEL

Hong Kong must foster a living harbour of self-supporting commercial and leisure activities, which provide transport, entertainment, interest and excitement to all.

8.1 Existing Marine Services

The waterfront usage and marine activities of the harbour have changed as Hong Kong's economic role has changed. The many wharves and cargo handling areas have been closed, overtaken by containerisation, remote wharves and land transport. Passenger and vehicular ferry services have declined as road and rail crossings have been opened, also reducing the role of the many associated waterfront public transport termini.

Even so the Harbour Area still remains the vibrant focus for the city and a great range of marine activities continue including:

- Cross-boundary ferry services to Macau and the Pearl River Delta
- Outlying Islands ferry services
- Cross-harbour ferry services
- Cruise services of varying types
- Commercial leisure/recreational services
- Private leisure/recreational services
- Government related services
- Military berths

Existing Marine Facilities

8.2 Future Role of Passenger Ferry Travel

Cross-boundary passenger ferry services serve residents and visitors alike in providing accessibility to areas not readily reached by land-based modes, principally the West side of the PRD including Macau and Zhuhai, and also to Shekou peninsula in Shenzhen. Demands for ferry travel to the Mainland PRD have stablised at around 10% of Cross Boundary travel after some decline as road and rail links have been expanded. The recent boom in the leisure and gaming industry in Macau has generated a new round of growth in ferry services which will continue for a number of years. The commitment to the Hong Kong-Macau/Zhuhai bridge may eventually halt this growth and divert some travellers to road-based modes. However, the one hour jetfoil ride to Macau from the Inner Harbour will still be very competitive and ferry services will continue to be a major mode. The China Ferry Pier and Macau Ferry Terminal will therefore continue to be key hubs for international travel to/from the Harbour Area.

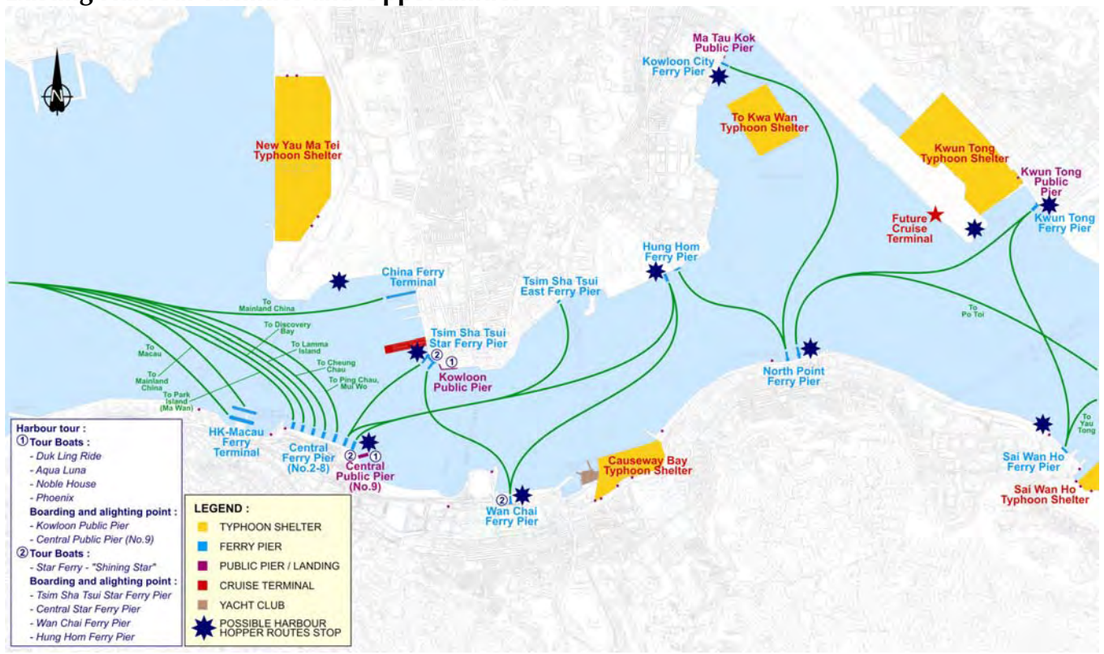
The Outlying Ferry Services will continue to provide the basic services to the Outlying Islands and there is no prospect of replacement by road links under current plans and policies. These services are supplemented by private services operated by restaurants and hotels.

Cross Harbour Ferry services, in the form of the three Star Ferry routes have maintained a mixed role of commuter and tourist services and are icons of Hong Kong. The reclamations have reduced immediate walk-in catchments and affected viability. It is therefore essential to promote access including for pedestrians both sides of the harbour to the ferries to support an image of Hong Kong in the mind of all residents and visitors. On Hong Kong side, the recent move of the Star Ferry has increased the walking distance by some 200m seaward. In future similar will happen to the Wanchai Ferry pier when the Wanchai Reclamation completes. This mainly affects local commuters but less so for tourists. On Kowloon side, the Star Ferry pier in Tsim Sha Tsui is currently very convenient for bus transfer, as well accessing the retail and cultural activities. However, the bus terminus is planned for relocation to make way for a pedestrian plaza. Whilst losing some passengers, hopefully this will bring new customers visiting the new point of interest.

8.3 Cruise Terminals

The Government is now committed to developing a new cruise terminal at South East Kowloon complementing the existing facility at Ocean Terminal. This will bring new drama and life to the Harbour and raises a challenge of access for cruise visitors and to proposed associated development located at the tip of the former airport runway, remote from the traditional Hong Kong tourist and entertainment areas. The possibility of special ferry links to the Cruise terminal should be considered to bring visitors into the main Harbour experience. Intermediate capacity public transport links have also been proposed which should be integrated with rail and public transport networks and could form part of a broader network across Kowloon but are likely to be used by residents rather than visitors.

Existing Harbour Facilities and Opportunities



8.4 Leisure and Recreation

The harbour is the scene of many commercial tour services, private junks and boats as well as the Hong Kong Yacht Club. A number of facilities have been identified by Government planning and by proposals from various interested parties and professionals for the reclamations. These facilities are to be supported to add to the vibrancy of the harbour but should not become barriers to movement to/from/along the waterfront.

The private sector has largely responded to demands for travel across the harbour. The choppy waters and need for access/egress has militated against smaller ferry services and water taxis. However the opportunity to introduce such services should be left open subject to any harbour traffic constraints. A "Harbour Hopper" for leisure/tourists which circulates around the harbour on a timetable allowing passengers to jump on/jump off at different locations and attractions along the route could prove an attractive service especially as the number of activity areas expands.

8.5 Harbour Day

Harbour Day has been held as a biennial event to encourage community involvement and enjoyment of the Harbour. The fun day is filled with interesting events such as the Island Race water sport expo, a ferry race, a marine parade, a waiter's race, opera performances, and boat rides to stimulate people's involvement and interest of the harbour. This organized event has overcome the harbour title constraints and allowed the general public safe enjoyment of the water.

As the waterfront attractions and activities are progressively extended, the Harbour Day will be able to raise the image of Hong Kong and become an international festival drawing tourists and locals alike to be an annual celebration of the city and its principal icon – the Harbour.

9. TOWARDS A HARBOUR TRANSPORT STRATEGY

The Harbour is Hong Kong - Live it, Love it – Can we?

The opportunity exists to let residents and visitors live their vision of Hong Kong by giving them direct access to all the harbour and the city behind have to offer through people oriented transport putting pedestrians first.

The Opportunity

Hong Kong has developed a sustainable transport policy based on priority towards railways, public transport and the restraint of vehicle ownership. These strong foundations and the recently announced infrastructure plans present an opportunity for this generation to bequeath a truly liveable city to future generations and fulfil the often complex sounding sustainability goals for great cities. The suggested Harbour Transport Strategy is illustrated in broad terms in **Figure 9.1**. The strategy building blocks are as follows:

- Railway expansion to put all main activity and residential areas within 500m walking distance of the railway network.
- Reordering and enhancing of the road-based public transport network to better balance choice, mobility and use of resources.
- A fully coordinated public transport system with Quality Bus and Tram corridors complementing the railway network providing comprehensive coverage.
- Introduction of intermediate capacity transport systems integrated into the living and built environment.
- Reordering the road network hierarchy to take advantage of the completion of the largely underground strategic road network formed by the Central & Wanchai Bypass and Central Kowloon Route.
- Contain traffic growth to be in balance with policy directions, network and environmental capacity.
- Create a truly walkable city with the Harbour Waterfront Walk and hinterland network as its centrepiece.
- Development of network of hubs and interchanges to interconnect all modes and walk networks and harbour facilities.
- Promote the use of environmentally friendly modes through modal policy, technology and fiscal measures.

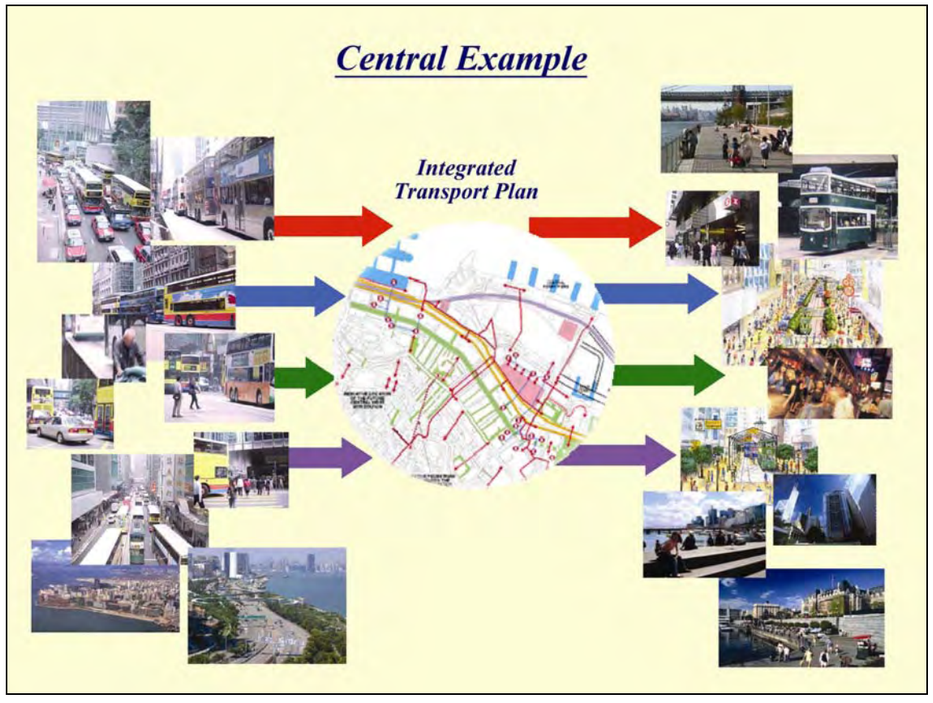
The conceptual plan indicates that in the core Harbour Area, and particularly adjacent to the waterfront, priority is given to people, railway and waterfront access; public transport and essential road access, in that order. Traffic access is restricted and road-based public transport focussed on distributor services with long distance services restricted.

The network extends within and across the harbour by means of ferry services, railway and public transport, as well as leisure services.

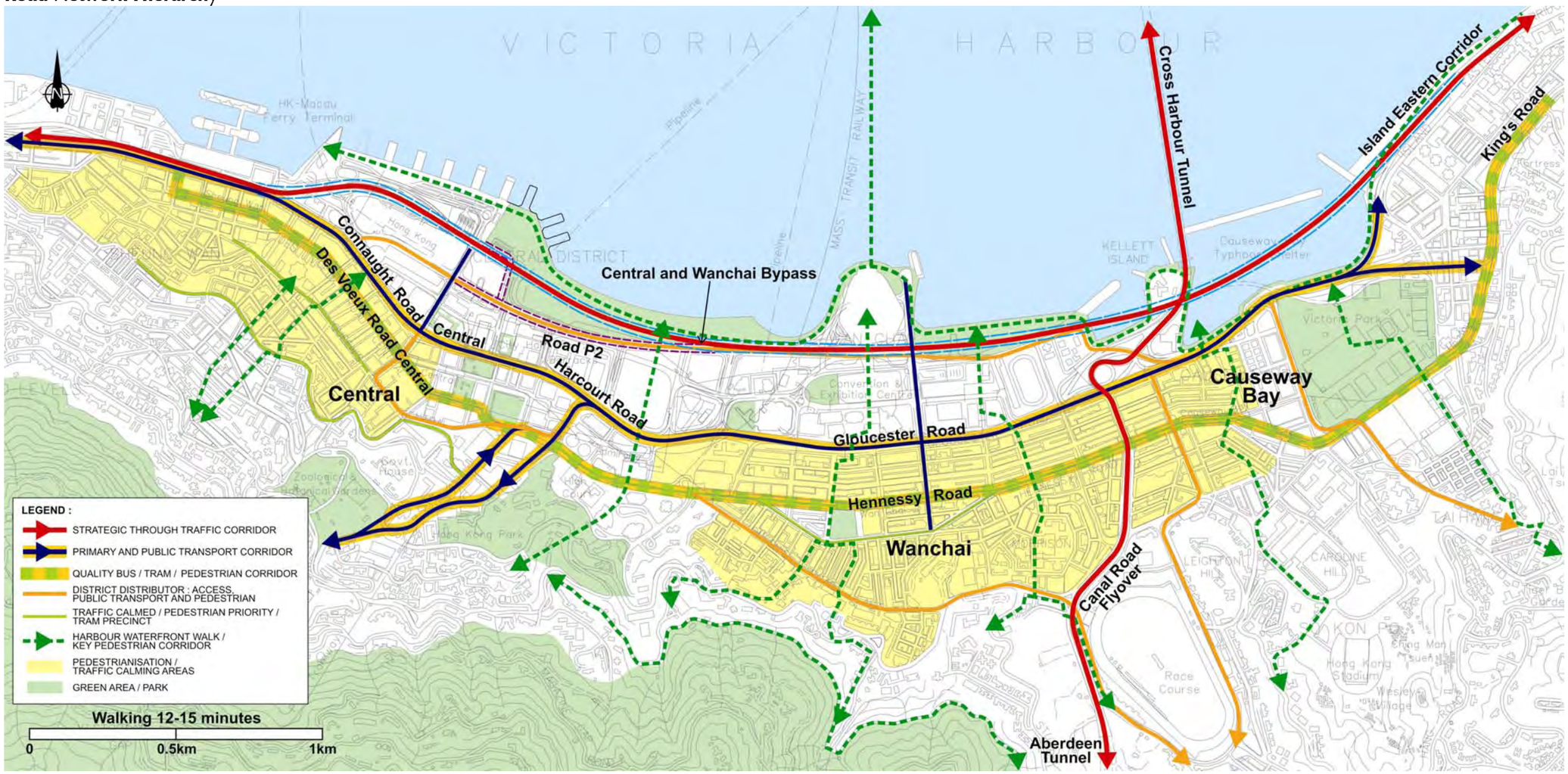
The simple concept is to provide a transport strategy for the Harbour Area where all journeys can be made by walking or public transport or a combination of the two in a convenient, safe and enjoyable environment.

Hong Kong Island

This approach is illustrated at a broader level for the Harbour Area as a whole and then in more detail for the case of Hong Kong Island for the Central, Wanchai and Causeway Bay area.



Road Network Hierarchy



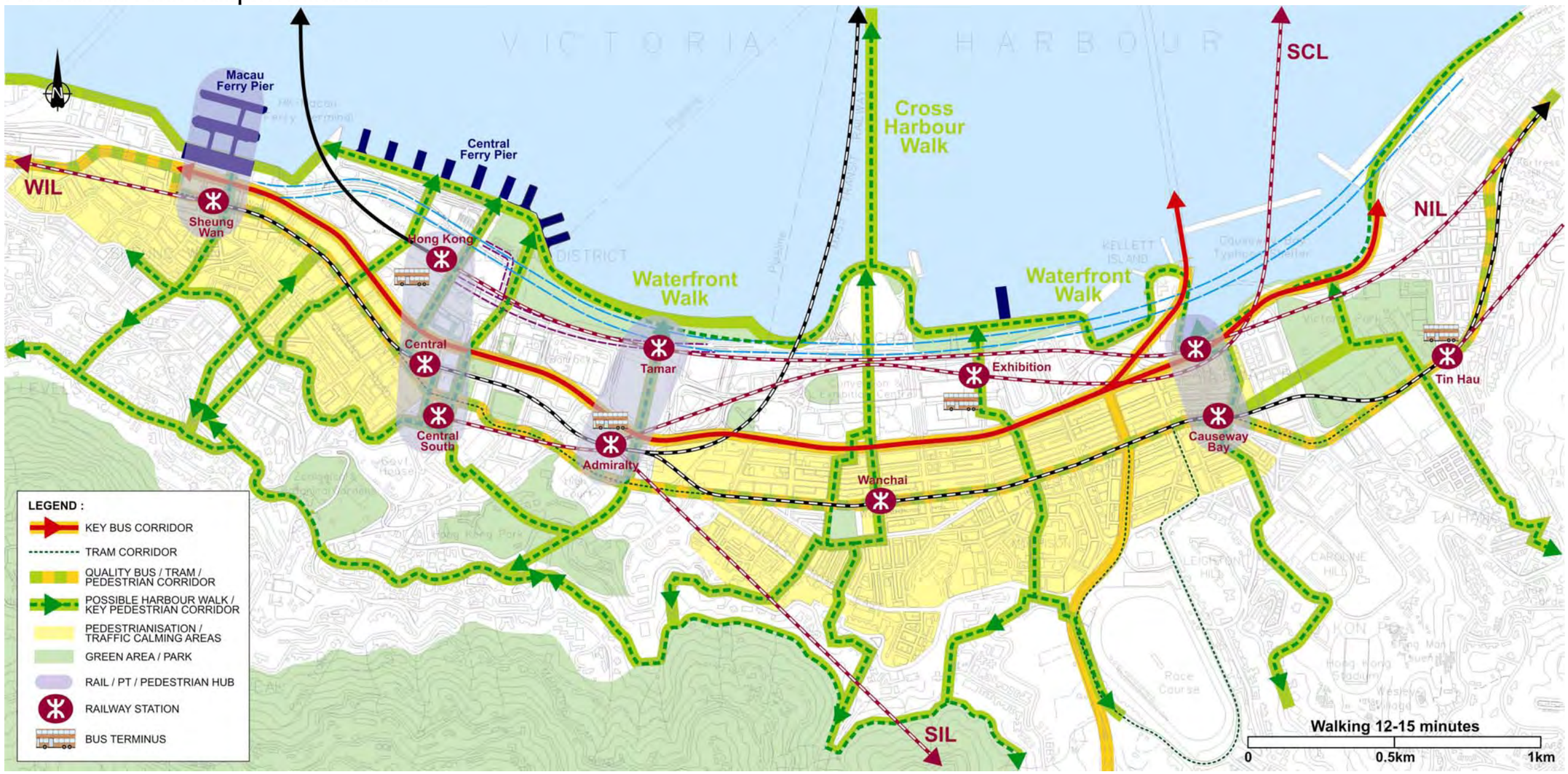
Top Down – Strategic Network

The Central and Wanchai Bypass will relieve the congested Connaught Road/Harcourt Road/Gloucester Road/Victoria Park Road corridor presenting opportunities to reorder the road network hierarchy. Road P2 on the reclamation will also provide improved local connectivity and relieve the critical Pedder Street/Connaught Place circulation. It should be designed at a scale and form consistent with adjacent natural and built environment, giving priority to pedestrian accessibility to the waterfront and should not be upgraded to become a second Harcourt/Gloucester Road.

By 2020 railway expansion will have placed all areas within walking distance of a railway stations with connections to all major districts of the Territory and Boundary. Bus volumes will reduce considerably with the railway expansion. Even so the opportunity exists to provide improved bus priorities along the Connaught Road Central/Harcourt Road/Gloucester Road/Victoria Park Road corridor and also to divert more general traffic from the District network of Hennessy Road/Queensway/Des Voeux Road Central and create a Public Transport/Pedestrian dominated corridor. As part of this, the Tramway could be upgraded to form the prime local distributor, thereby reducing further road-based travel.

This would create a Quality Public Transport Corridor through the main activity areas with MTR providing fast congestion free connections to all parts of the Territory.

Pedestrian and Public Transport Network Plan

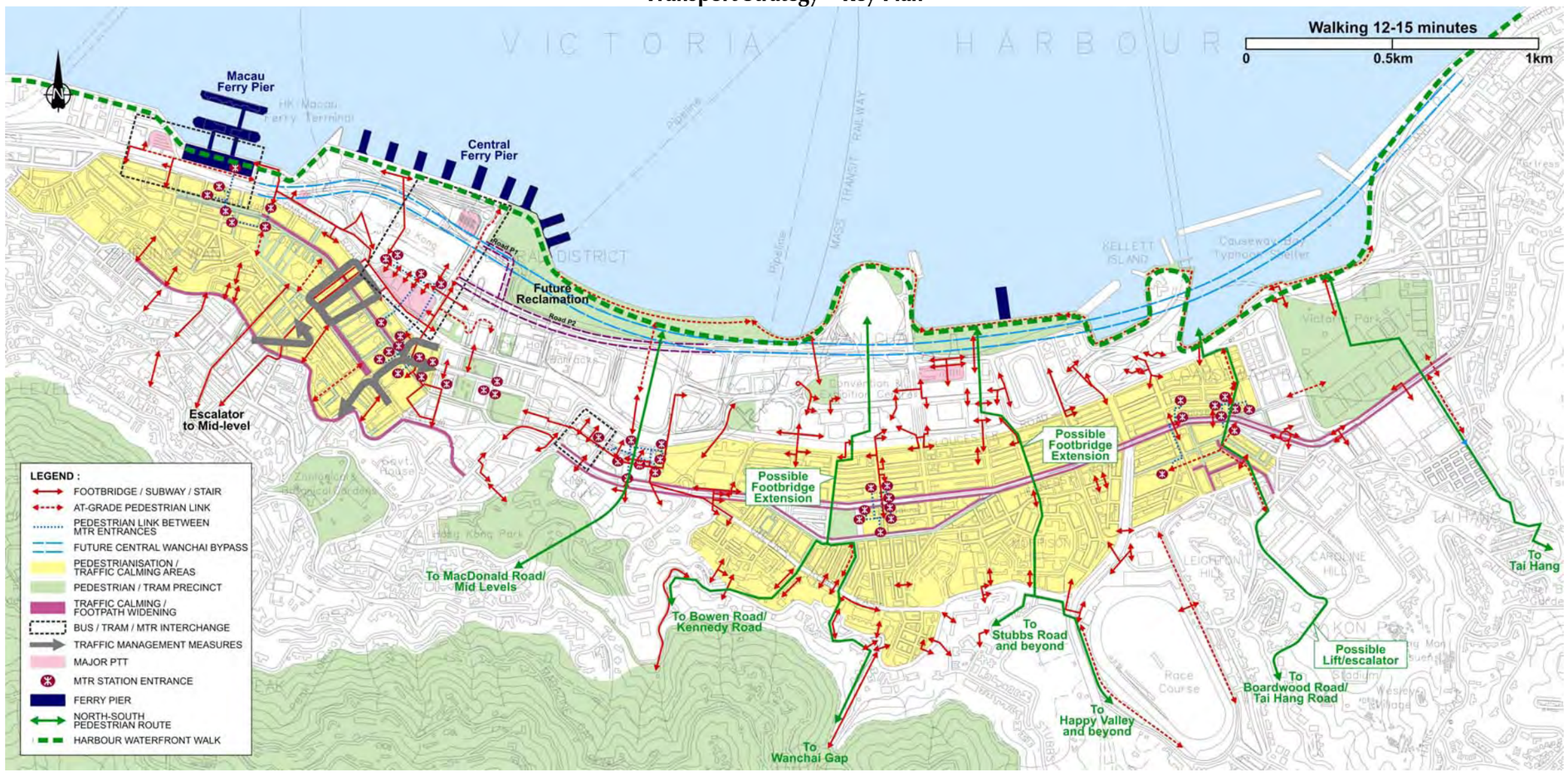


Pedestrian facilities can be expanded further by a mix of footpath widening, traffic calming and pedestrian precincts. The Tramway corridor offers opportunities for tram precincts and pedestrianisation, such as Des Voeux Road Central. Optionally, the Tramway could be diverted to Hennessy Road to open up opportunities for improving the environment in Johnston Road.

A comprehensive pedestrian network would be created built around the Tramway and MTR and public transport for east-west travel and linking north-south up to Mid-Levels with additional escalator and high capacity lift links. This continuous network would place upper Mid-Levels residents within 10 minutes of railway stations. The north-south pedestrian corridors could include:

- University – Belchers
- Sai Ying Pun
- Central – Mid-levels Escalator Corridor (existing)
- Central Government offices/Botanical Gardens
- Hong Kong Park/Admiralty/New Tamar Government offices
- Hong Kong Convention and Exhibition Centre/Old Wan Chai/Kennedy Road/Bowen Road
- New Wanchai Reclamation/Times Square/Happy Valley
- Victoria Park/Tai Hong/Jardine's Lookout.

Transport Strategy – Key Plan



East West Corridors could include:

- Waterfront walk
- Des Voeux Road/Statue Square/Admiralty/Hennessy Road/Victoria Park
- Hollywood Road/Central Police Station/Lan Kwai Fong/New CGO Park/Hong Kong Park

The pedestrian network would provide strategic links, district links, functional corridors and interconnect with passive and active pedestrians zones. Residents and visitors could walk round the whole of the District via hillside paths, interconnected buildings, street networks and waterfront promenades. At the same time safe, secure and convenient access would be possible to the many railway and other transport facilities.

These transport opportunities must be integrated into the broader urban design directions which will underpin the creation of a liveable, vibrant and sustainable Harbour Area and City.

Implementation

Many of the components are already in the pipeline. The next key step is to develop an integrated implementation programme coordinated centrally by Government. In the past plans have been split up into projects on a Departmental basis and in the end the overall cohesive functional plan has often been lost or only partly completed. Today, Government is reorganising to avoid such piecemeal implementation with the Development Bureau taking a leading role. Therefore the opportunities exists to ensure that "the whole can be greater than the parts" through coordinated development.

10. COMMUNITY APPROACH

What do people really want from their transport system? The key to a successful and sustainable transport strategy is to give travellers a balanced range of opportunities to enable them to make informed choices.

10.1 Towards a Comprehensive Strategy

This document is intended to identify the opportunities and raise the issues and not be prescriptive. The balance between the various choices and opportunities depends on community consensus. The possibility to offer new and more sustainable choices exists and will be greater with the new roads and railways and, if these are capitalised on, even broader choices in relation to walking, rail and pubic transport use can be secured.

The consultation process should not just be on individual schemes and their particular "impacts", instead it should focus on opportunities, what new choices can be made, how the public can participate not just in the consultation but in the implementation through their travel choices to create a more liveable city.

10.2 Public Support and Participation

Hong Kong has earned recognition as an exciting city with efficient infrastructure and a "can do" community. However, today Hong Kong is acquiring an international image as a city with an environmental problem and recently, unfairly, as a congested city even not suitable for Olympic training. Such evolving perceptions have to be addressed before they become reputations. The next round of infrastructure expansion provides a chance to move to new levels of sustainable development to create a liveable city with a wholly inclusive transport system. A number of choices will need to be made through public concensus.

This paper has identified a number of opportunities for enhancing mobility and accessibility in the Harbour Area. Moving towards some of the ideas put forward raises a number of issues upon which the public and various stakeholders will have a range of views. Key issues include:

- Is extending and investing in pedestrian networks and people dominated environments supported?
- Should a continuous Harbour Waterfront Walk be a high priority for Hong Kong?
- How far should public transport be restructured in conjunction with railway development to reduce bus volumes in city streets or is choice more important?
- Should priority corridors be created for public transport to promote usage and provide opportunities for new modes?
- With completion of the Central and Wanchai Bypass and Central Kowloon Route should roadspace be reallocated to pedestrian use and public transport or is accommodating traffic growth more important?
- Should traffic growth be contained to secure these benefits and environment?
- What would be the best measures to contain traffic growth?
- Should development densities be moderated?

10.3 Choice, Behaviour and the Environment

Hong Kong thrives on choice and competition. Interventions in urban transport are made by government in the interests of preventing congestion and pollution. Increasingly in the future the public will have to make choices between not only modes of travel but also quality of life as a result of their choices. Part of the consultation process must be to extend the understanding of the implications of choices. At the same time by providing alternative high quality transport services and infrastructure including pedestrian networks, railways, environmentally friendly public transport, residents can make more and better informed choices to contribute to the sustainable daily operation, as well as development of the city.

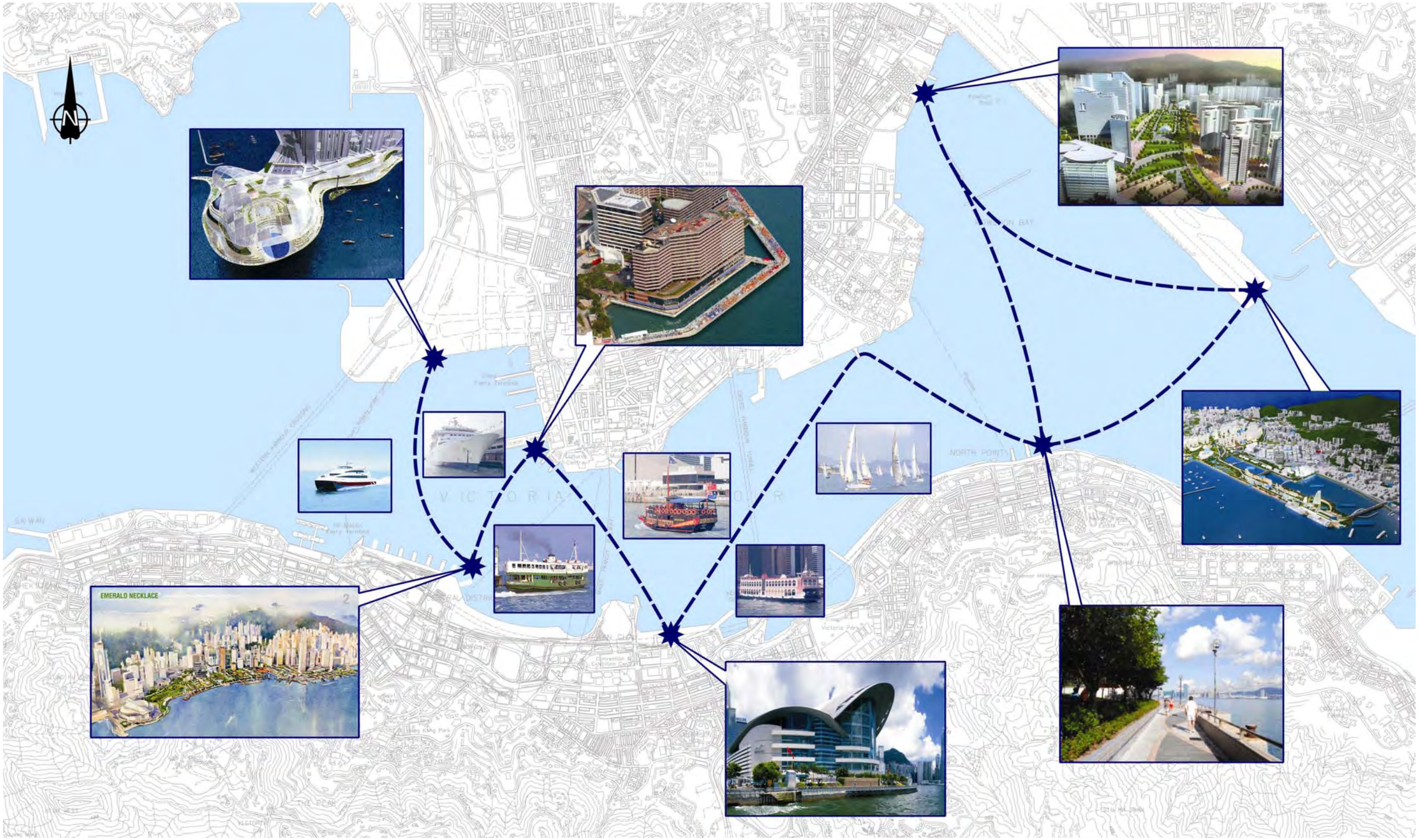
Changing Daily Routines

Some trivial calculation examples reveal the potential:

- walking to work or taking the MTR once a week reduces a car drivers environmental footprint by 20%;
- a bus user walking for 20 minutes through the enhanced walking system to catch MTR twice a week reduces by 40% the need for road-based public transport.
- a businessman may catch the improved trams to go from Central to Causeway Bay (in 15 minutes) instead of spending 20 minutes in a taxi in a traffic jam; and so on.

These changes in behaviour, some requiring a small rethink about our daily routines, others providing a travel improvement can easily add up to 20 or 30% reduction in our environmental footprint, a scale of improvement difficult to imagine through infrastructure building. In short securing the benefits of the sustainable transport opportunities requires the joint efforts of planners, government, business, institutions and the public at large.

HARBOUR HOPPER DAYS

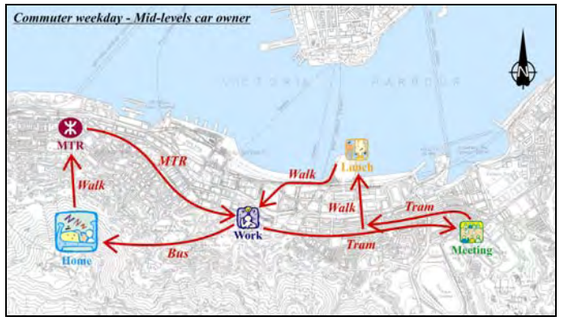


11. FUTURE POSSIBILITIES

The impact of the outline Harbour Transport Strategy can be interpreted by looking at possible future days in the life of residents and visitors.

Commuter Weekday – Mid-levels Car Owner

8.00 a.m.	Walked down escalator to new Sai Ying Pun MTR Station and ride to Admiralty to work.
10.00 a.m.	Took improved tram to Causeway Bay for meeting (8 mins)
12.00 noon	Took tram to Wanchai and followed walkway to Exhibition Centre for function
14.00	Walked through waterfront park back to Admiralty to office
19.00	Home to Mid-Levels by comfortable bus



Family Weekend – New Territories Car Owner

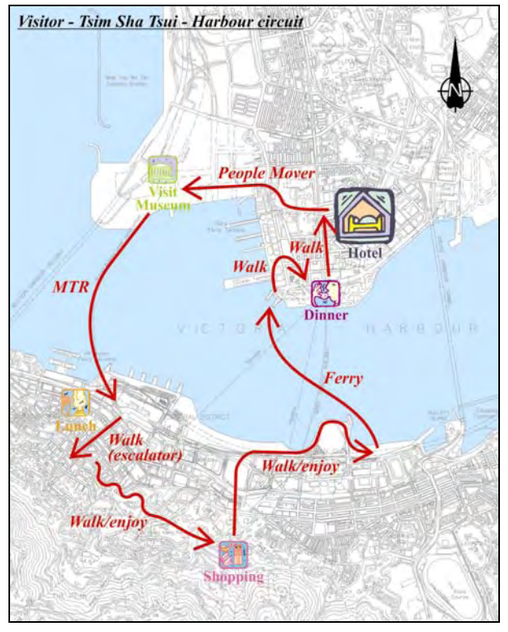
10.00 a.m.	Drove to Union Square and parked Walked through WKCD
12.00 noon	Lunch – harbour views
14.00	Ferry-ride to Central, Waterfront park and entertainment centre
17.00	Ferry back to Kowloon-Point Plaza
18.30	Early dinner at Ocean Terminal Ride on automatic people-mover back to Union Square
20.00	Drive home

Student – Ap Lei Chau – Non-Car Owner

11.30	MTR from South Horizon
12.00	Meet friends in Des Voeux Road Tram precinct Window shop and take lunch at Waterfront cafe
14.00	Ferry to WKCD to open air concert
18.00	MTR to Causeway Bay to meet friends for dinner
20.00	Harbour Walk back to Central
21.00	MTR home

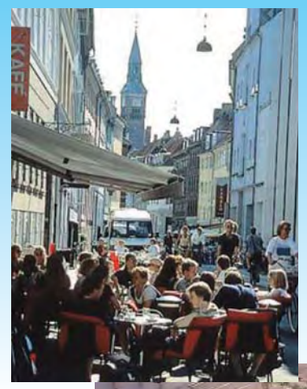
Visitor Tsim Sha Tsui – Harbour Circuit

10.00	Take people mover to WKCD to visit museums
13.00	Lunch – harbour views
14.00	MTR to Central to visit tram precinct
15.00	Escalator link up to Hollywood Road walk/CGO Park back to Hong Kong Park
17.00	Pacific Place shopping back to waterfront via Civic Plaza
19.00	Walk through Park to HK Exhibition Centre and catch Star Ferry back to Tsim Sha Tsui
20.00	Walk round Tsim Sha Tsui pedestrian zones and take later dinner
23.0	Walk home along waterfront

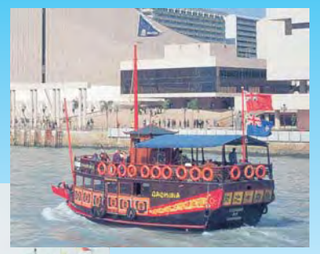


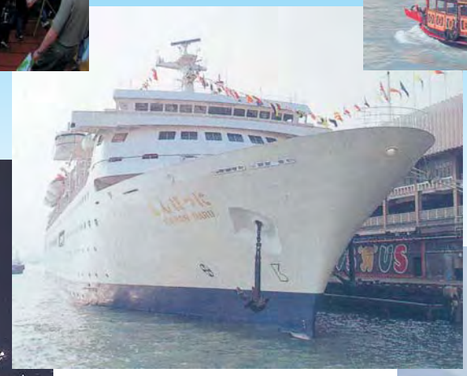
Asia's World City in 2020

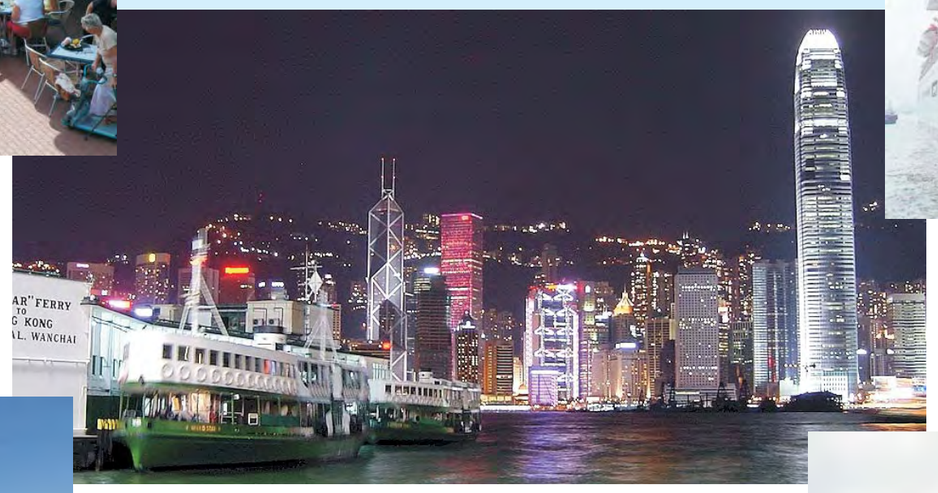
"Driving into Central is costly but I am happy to use my car only when I really need it. With the new hillside escalators and the Harbourwalk now available, I am spending 20 minutes two or three available days a week walking between Home and Office" **From a local HK resident**



"In the good old days Central was jammed with buses and cars where people can hardly breathe, With the new railway, vehicle bypass, and road pricing now implemented, Central has became a much better place to live and work and I am not late for meetings anymore"
From a businessman

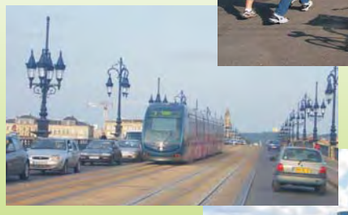






"20 years ago when I was working and living in Hong Kong Island the waterfront was not accessible. Now I can accompany my grandson to cycle using the public leisure bikes along the harbourfront from Central to Quarry Bay, take a ferry across the harbour to Kai Tak pick up bikes and ride to the Kai Tak Park ,leave the bikes and take the MTR home. The HK Government has done an amazing job!" **From a retired expatriate**

"It used to take hours for a delivery to Wanchai and Central where traffic congestion was really bad. Although there are now regulations in force such as road user charging and vehicle restrictions, I actually find it more efficient." **From a truck driver**



Hong Kong
Asia's Traveller Friendly City

"I have been in Hong Kong four days and have visited all the sites by walking, tram, ferry, railway and public transport it is the most traveller friendly city I know, you don't need to use taxis or hotel cars." **From a Tourist**

"Hong Kong is the greatest city in the world." **From a New Yorker**