

Information Note

Waterborne transport services in selected places

IN11/18-19

1. Introduction

- 1.1 In Hong Kong, waterborne transport services, including regular passenger ferry services, regular or on-demand "kaito" ferry services and harbour tour services have been serving the commuting and recreational needs of local residents, as well as the tourist demand. For regular passenger ferry services, the in-harbour ferry services serve as a supplementary transport mode to land-based harbour-crossing services while outlying island ferry services are essential transport services connecting the outlying islands with other parts of Hong Kong. Nonetheless, there have been views in the community that the Government should explore the provision of more in-harbour ferry routes and other service models (such as water bus or water taxi service) to supplement the already congested land-based transportation networks, as well as connecting major tourist attractions along the harbourfront.
- 1.2 In the past decade, London of the United Kingdom ("UK") and New York City ("NYC") of the United States have revived the waterborne transport services as part of their strategy to enhance the vibrancy of the waterfront/waterways and promote its usage for transportation purposes. Both places have developed and implemented a policy to promote the development and usage of waterborne transport services, leading to enhancement/expansion of the service network and increase in ridership.
- 1.3 At the request of Hon Jeremy TAM Man-ho, the Research Office has prepared this information note aiming to examine (a) the policy on the development of waterborne transport services for local commuters in selected places; (b) their service and operation features, connection with other transport systems and passengers' usage patterns, and (c) their implementation experiences, as well as the latest development. The salient features of the policy measures implemented and waterborne transport services offered in Hong Kong, London and NYC are summarized in **Appendix I**.

2. Waterborne transport services in Hong Kong

- 2.1 Waterborne transport services had been the major cross-harbour transport mode in Hong Kong before the early 1970s. The total annual cross-harbour passenger journeys of the two major ferry operators, i.e. The "Star" Ferry Company, Limited ("Star Ferry") and the Hongkong and Yaumati Ferry Company Limited ("HYF"), peaked at about 240 million in 1971. However, with the commissioning of the Cross Harbour Tunnel in 1972, the commencement of the cross-harbour service of the Mass Transit Railway system ("MTR") in 1980, the subsequent commissioning of two other cross-harbour tunnels and the continuous expansion of the railway network over the years, waterborne transport services have shifted to a supplementary role in the public transport system and their patronage has been shrinking ever since.
- At present, waterborne transport services in Hong Kong include: (a) regular passenger ferry services featuring seven in-harbour routes (see Appendix II) and 14 outlying island routes (see Appendix III); (b) 16 regular kaito ferry services and other on-demand services mainly serving remote coastal settlements; and (c) harbour tour service mainly targeted at tourists. As for regular passenger ferry services, the adult fare per trip ranges from HK\$2.2 to HK\$9.0 for in-harbour ferry services, and HK\$10.2 to HK\$65.5 for outlying island ferry services.⁴
- 2.3 Between 2008 and 2017, patronage of regular passenger ferry services as a whole had declined by 13% to 128 200 passenger journeys per day, representing just about 1% of the average daily public transport patronage (12.7 million).⁵ The patronage of in-harbour ferry services had dropped more pronounced by 20% (from about 77 000 to 61 600) compared against 5% (from about 70 100 to 66 600) for the outlying island ferry services (**Figure 1**).

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The ferry service licences of HYF have been transferred to the New World First Ferry Services Limited since 15 January 2000.

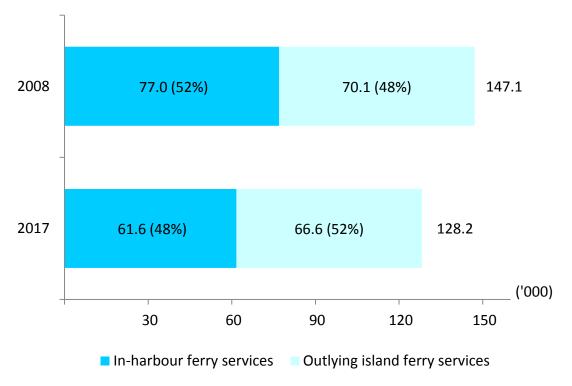
See Pang, M. D. (2001) and Transport Department (2018).

The Eastern Harbour Crossing and the Western Harbour Crossing were commissioned in 1989 and 1997 respectively.

The fare of outlying island ferry services varies by routes which may impose different fare levels according to factors such as the day of travel and types of vessels deployed.

⁵ See Transport Department (various years).

Figure 1 – Average daily passenger journeys on regular passenger ferry services



Source: Transport Department (various years).

2.4 As indicated in **Figure 2**, against the growth in patronage of MTR (33%) and cross-harbour tunnel buses (4%) for cross-harbour travel between 2008 and 2017, four of the seven in-harbour ferry services suffered decline in patronage during the period. The "Wan Chai – Tsim Sha Tsui" ferry service recorded the highest level of decline (33%) which might partly be attributable to the relocation of the Wan Chai ferry pier in August 2014. Nonetheless, some of the in-harbour ferry routes had experienced an increase in patronage, particularly the "North Point – Kwun Tong (via Kai Tak)" ferry service, reflecting that there is a sustaining demand for ferry services among some communities living along the harbourfront.

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⁶ See Transport and Housing Bureau and Transport Department (2017).

Figure 2 – Cross-harbour public transport passenger journeys

	2008		2017		Change of
Transport services	Total ('000)	Daily average ('000)	Total ('000)	Daily average ('000)	total passenger journeys
In-harbour ferry services ⁽¹⁾					
Central – Tsim Sha Tsui	15 300	41.8	14 112	38.7	- 8%
Wan Chai – Tsim Sha Tsui	7 748	21.2	5 178	14.2	- 33%
North Point – Hung Hom	1 199	3.3	1 250	3.4	+ 4%
North Point – Kowloon City	1 063	2.9	943	2.6	- 11%
North Point – Kwun Tong (via Kai Tak) ⁽²⁾	231	0.6	494	1.4	+ 114%
Sai Wan Ho – Kwun Tong	259	0.7	335	0.9	+ 29%
Sai Wan Ho – Sam Ka Tsuen	213	0.6	190	0.5	- 11%
Other ferry services ⁽³⁾	2 164	5.9	N.A. ⁽⁴⁾	N.A. ⁽⁴⁾	N.A. ⁽⁴⁾
Total	28 176	77.0	22 502	61.6	- 20%
Cross-harbour tunnel buses					
Total	205 713	562.1	214 186	586.8	+ 4%
MTR					
Total	333 040	909.9	442 489	1 212.3	+ 33%

Notes: (1) The "Central – Tsim Sha Tsui" and "Wan Chai – Tsim Sha Tsui" ferry services are operated by Star Ferry while the rest are operated by three other operators i.e. New World First Ferry Services Limited, Fortune Ferry Company Limited and Coral Sea Ferry Service Company Limited (see Appendix II).

Sources: Transport Department (2009 and 2018) and Transport Department (various years).

⁽²⁾ Diversion of the ferry service between North Point and Kwun Tong via Kai Tak Runway Park Pier was implemented from 3 December 2016.

⁽³⁾ Other ferry services include the "Hung Hom – Central" and "Hung Hom – Wan Chai" ferry services which ceased operation in March 2011 after expiry of the service licences granted to Star Ferry, and the harbour tour service.

⁽⁴⁾ N.A. refers to "not applicable".

Policy on ferry services

- 2.5 According to the latest Public Transport Strategy Study published by the Government in June 2017, in-harbour ferry services is positioned to "perform a supplementary role as an alternative public transport service to rail and road-based harbour-crossing services" in light of the comprehensiveness of the existing cross-harbour public transport network and the variety of land transport alternatives available. In contrast, the outlying island ferry services maintain their role as essential public transport services for the outlying islands as alternative public transport services are not available or less well developed.⁷
- 2.6 Meanwhile, the Government's established policy is that public transport services should be run by the private sector in accordance with commercial principles to enhance efficiency and cost effectiveness. Government would provide the necessary infrastructure such as road links and ferry piers to support the provision of ferry services. Notwithstanding the above, amid shrinking patronage, the Government has provided support to ferry operators with a view to helping them reduce operating costs and sustaining financial viability. The support includes: (a) taking over pier maintenance responsibility; (b) waiving fuel duty; and (c) reimbursing pier rental and exempting vessel licence fees under the Elderly Concessionary Fares The Government also allows ferry operators to sub-let premises at piers for commercial purposes to generate non-farebox revenue for crosssubsidizing their ferry operation so as to alleviate the pressure for fare For outlying island ferry services, on the other hand, the Government has since 2011 provided subsidy to major routes (see Appendix III)⁸ to alleviate the burden of fare increases on passengers who have no alternative choice of transport services.

Issues and concerns

2.7 According to the Government, ferry services in Hong Kong have been facing a number of constraints which render them less competitive than the

See Transport and Housing Bureau (2017).

The scope of subsidy to the operators of the ferry services concerned covers (a) annual vessel survey fee and private mooring charge; (b) pier electricity, water and cleansing charges; (c) vessel maintenance cost; (d) depreciation cost relating to vessels; and (e) vessel insurance cost. The subsidy provided amounted to HK\$190 million for the three-year licence period between mid-2014 and mid-2017, and around HK\$410 million between mid-2017 and mid-2020.

land-based transport modes and affect the **financial viability** of ferry operations as the land-based transportation network continues to expand. These constraints include (a) **limited catchment area** as the ferry piers are located at the waterfront and are usually some distance away from the centre of activities and population centres; and (b) **less attractive service level and quality** as the operators may need to contain costs in light of the low passenger demand by operating at a relatively low frequency and deploying vessels of slower speed.⁹

- As a result, ferry services have not been a convenient choice for passengers. According to the latest Travel Characteristics Survey released by the Transport Department in 2014, 10 a higher proportion (69%) of boardings for ferry had involved interchange compared to other transport modes (33% for MTR and 29% for franchised bus) owing to the restricted catchment areas served by the ferry services. In addition, commuters generally accepted a longer waiting time for ferry services (16 minutes on average) compared to rail (6 minutes) and franchised bus services (12 minutes). Commuters also accepted a longer walking time for accessing ferry services (12 to 17 minutes on average) compared to other public transport services (10 to 15 minutes).
- 2.9 The financial viability issue of ferry operations is reflected by the cessation of the "Hung Hom Central" and "Hung Home Wan Chai" ferry services by Star Ferry in 2011 due to reduction in patronage and the financial loss incurred. Indeed, the Government did not receive any tender submission for the two ferry services in two rounds of tender exercise conducted between September 2010 and January 2011. Moreover, due to continued patronage decline of the remaining two franchised ferry services (i.e. "Central Tsim Sha Tsui" and "Wan Chai Tsim Sha Tsui"), 11 Star Ferry has counted on the non-farebox business including pier shop rental and advertising income to sustain its business. In 2016, farebox revenue 12 of Star Ferry only accounted for 54% of the total revenue from operating the two ferry services, down from 61% in 2012. 13

See Transport Bureau (2001).

See Transport Department (2014).

Star Ferry is the only franchised ferry operator in Hong Kong. Fares of franchised ferry services are determined by the Chief Executive-in-Council in accordance with the provisions in the Ferry Services Ordinance (Cap. 104), subject to negative vetting by the Legislative Council. As for licensed ferry services, fares are determined by the Commissioner for Transport.

At present, the adult fare per trip for the two franchised ferry services ranges from HK\$2.2 to

See Transport and Housing Bureau and Transport Department (2017).

In light of the congestion of the land-based cross-harbour transport 2.10 modes, there have been calls for the Government to consider developing more **in-harbour ferry routes** such as re-commissioning the "Hung Hom – Central" and "Hung Hom – Wan Chai" ferry routes, and introducing new ferry routes connecting Tseung Kwan O to Central and North Point to serve the local commuters. Some stakeholders have also suggested introducing **new ferry** routes that link up new development areas such as West Kowloon Cultural Districts and Kai Tak Development area, and explore other service models such as "water taxi" to enhance the connectivity and vibrancy of the harbourfront.¹⁴ In addition, there are views that the Government has to improve the accessibility of the ferry piers and their connectivity with other land transport modes in order to boost usage of waterborne transport services. 15 Indeed, the Government has so far not indicated any plan to conduct a systematic assessment or review on the entire waterborne transport services and the expansion potential.

Recent developments

Nonetheless, in response to the suggestion to explore more in-2.11 harbour ferry routes, the Government has planned to re-commission the "Hung Hom – Central" ferry route for commuters, which had a daily patronage of 2 800 passenger journeys on average in 2010 before the service ceased operation. 16 It will conduct basic maintenance works for the relevant piers to meet the operational needs of the ferry route. Meanwhile, in light of the recommendation of introducing water taxi service made in the Development Blueprint for Hong Kong's Tourism Industry, the Government will also launch a pilot water taxi service plying Kai Tak, Hung Hom, Tsim Sha Tsui East, West Kowloon and Central as a tourism development initiative. August and September 2018, the Transport Department invited interested parties to submit expression of interest for operating the two proposed services and have received two submissions during the specified period. Transport Department has planned to conduct a tender exercise for the two proposed ferry services after consulting the relevant stakeholders on the more detailed service proposals. At present, the Government is taking forward the

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See Baez, D. et al. (2018), Minutes of Meeting of the Panel on Transport of the Legislative Council (2017 and 2018) and Minutes of the 29th meeting of the Finance Committee of the Legislative Council (2018).

¹⁵ See Minutes of the 29th meeting of the Finance Committee of the Legislative Council (2018).

¹⁶ See Transport and Housing Bureau (2011).

pilot renovation project at the ferry pier of Lamma Island to enhance its exterior design and facilities, which is part of the transport-related initiatives in the 2017 Policy Address.

3. Waterborne transport services in London

- 3.1 In London, waterborne transport services (or river services) are mainly provided along the River Thames. 17 The services are supplementary to land-based transport. In 2017-2018, total passenger journeys of all public transport modes amounted to 4 011 million (about 11 million per day), 18 of which 56.0% were on buses, 33.8% on London Underground and 9.6% on rail. Passenger journeys on river services were about 10 million (including commuters and tourists), accounting for less than 1% of the total passenger journeys in the transport system. Notwithstanding the small share, river services have seen improvements and enhancements with growing ridership over the past decade upon introduction of related policy and measures to promote the development and usage of river services to capture the growth opportunities.
- At present, three major types of river services are provided in 3.2 London, namely: (a) regular river bus services targeted mainly at commuters: (b) regular river tour services targeted at tourists; ¹⁹ and (c) a free public passenger and vehicular ferry service linking Woolwich and North Woolwich (the Woolwich Ferry service). 20 The breakdown of the total passenger journeys on river services in 2017-2018 was about 41% on river bus services, 41% on river tour services and 18% on the Woolwich Ferry service.

The River Thames, having a length of some 210 miles, is one of the major rivers in the UK. It flows through southern England passing through London and a number of other cities and towns such as Windsor, Reading and Oxford.

See Transport for London (2018b).

River tour services are operated by private companies under the licence issued by the local government.

The local communities at Woolwich in south-east London had in the early 1880s lobbied for a free public ferry service to cross the Thames in light of the availability of toll-free bridges in west London. The local authority therefore agreed to provide a free ferry service in 1884 and commissioned the service in 1889. At present, the ferry service is operated by a private company under a contract granted by TfL which was reportedly worth £50 million (HK\$607 million) over seven years from 2013. The ferry service had a patronage of about 1.8 million passenger journeys in 2017-2018.

Experience in reviving usage of river services

- The River Thames has been considered a strategic asset for London throughout its history, providing a vital link for people and goods. However, the importance of the River as a transport route has diminished as other routes such as roads and railways were developed and river services have been **under-utilized** by local commuters. In the mid-2000s, some stakeholders urged the government to revive the usage of the River for commuting, particularly as a premium commuter service featuring a relaxed and pleasant mode of transport and congestion reliever and also catering for tourism.²¹ Transport for London ("TfL"), the local government body responsible for operating most of the public transport services, implemented some piecemeal improvement actions for reviving the usage of river services in the late 2000s.²² In light of the growth opportunities arising from new developments built or planned along the River Thames and growing tourism, TfL decided to scale up the improvement efforts. According to the local government, by reviving the river services, it would contribute to boosting River Thames' economic value in terms of the employment and investment generated, and amenity value in terms of tourist visits attracted.²³
- The local government first set a goal in 2010 to more than double the number of passenger journeys on river services to 12 million per year by 2020. Subsequently, TfL issued the **River Action Plan** in February 2013 which clearly set out the measures to be implemented for achieving the goal. Under the River Action Plan, TfL has positioned river services as **an integral part of the transport system** that offers **a reliable and relaxing way of travelling** across the city for commuters and tourists. TfL has also committed £10 million (HK\$121.3 million) and worked in partnership with stakeholders such as river service operators, boroughs along the River Thames and developers through the River Concordat Group²⁴ to implement a number of measures to boost

For example, the Transport Committee of the London Assembly conducted a review on river services in 2006 and concluded that the River Thames offered excellent opportunities for transport. The Committee also recommended TfL to devise a strategic plan to drive the development of river services. See London Assembly (2006).

Actions taken for improving river services included: (a) establishing the River Concordat Group in April 2009 comprising more than 40 organizations involved in river services to promote its development; (b) extending the Oyster system, a stored-value smart card payment system for public transport services in London, to cover river services in November 2009; and (c) improving the facilities of some piers.

²³ See Port of London Authority (2015a).

²⁴ In 2017, the River Concordat Group was merged with the London Waterways Commission, an advisory body on waterways issues, to form the Thames and London Waterways Forum bringing together stakeholders to advise the Mayor of London on river transport and waterways issues.

usage of river services. The measures are mainly two-pronged: (a) expanding and improving pier facilities and infrastructure; and (b) enhancing integration of river services with other parts of the transport system.

Measures adopted under the River Action Plan

- 3.5 If L has worked with stakeholders to **expand and improve pier facilities and infrastructure** to ensure that the piers are strategically located, highly visible, attractive to use and provide sufficient capacity to accommodate the growth in service demand. Actions taken included: (a) **improving the berthing and passenger capacity** of three strategic piers in central London; (b) working with developers and the river bus operator to **develop new piers** to serve newly developed areas along the River Thames; (c) working with private pier owners to improve and standardize the pier facilities such as the illuminated signage and ticketing facilities; and (d) developing selected piers as "**attractions**" by improving the surrounding areas and adding amenities on or nearby the piers to boost visits of tourists as well as locals. According to TfL, it has set to invest up to £1 million (HK\$10.2 million) each year going forward for renewal works and maintaining the piers.²⁵
- In addition, TfL has strived to integrate river services with the rest of the transport system and promote it as a part of the transport mix by measures such as: (a) providing relevant interchange information on river services and other transport modes, and clear signs on routes between piers and nearby transport interchanges to facilitate easier navigation to and from piers; (b) installing the river bus maps at all riverside ticket kiosks, all piers and nearby underground and rail stations; (c) providing cycle parking and/or cycle hire docking stations near piers for improving the access of river services by cyclists; and (d) making real time river bus service information available at all piers, online and via text messaging.

Expansion of the river bus services

3.7 River bus services in London are operated on a commercial basis by a private operator, MBNA Thames Clippers ("Thames Clippers") to serve primarily commuters as well as tourists. In light of the supportive policy of the local government, Thames Clippers has expanded its fleet and extended its

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²⁵ See London Assembly (2018b).

Thames Clippers started its river bus services in 1999 with an initial fleet of one boat.

network to serve new development areas such as the newly redeveloped resident and commercial areas near the Battersea Power Station in the past few years. Meanwhile, Thames Clippers offers six routes covering 22 piers in London (see **Appendix IV**). It operates a fleet of 17 **high-speed** vessels (catamaran model) with most of them having a capacity of 125-220 seats. The river bus services run from early morning until late evening with departures from major London piers every 20 minutes.²⁷

3.8 Thames Clippers has been charging a **premium fare** for the river bus services compared against other transport modes in order to keep the operations financially viable. ²⁸ Adult passengers making payment with electronic or contactless card (such as Oyster card and bank-issued debit cards) are charged at a rate ranging from £4.1 (HK\$42) to £9.0 (HK\$92) for a single trip, which is lower than the standard rate. ²⁹ These are compared against £1.5 (HK\$15.3) for a single bus trip, and £2.4 (HK\$24.5) to £5.1 (HK\$52.1) for a single underground trip using the Oyster or contactless payment card for payment. ³⁰

Observed outcomes and issues

3.9 As a result of the improvement actions taken under the River Action Plan since 2013, total passenger journeys on river services as a whole markedly increased by 19% from 8.4 million in 2013-2014 to 10 million in 2017-2018. Total passenger journeys of **regular river bus services** increased a bit more by about 21% over the same period, of which about 70% to 80% were **commuters**. Customer satisfaction with the river services maintained at

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The service hours of the river bus routes vary. For example, the river bus route that runs between Woolwich and the Battersea Power Station (RB1) operates between 5:45 am and 00:41 am and part of the route operates at peak hours in the morning only.

TfL had previously provided subsidy to Thames Clippers for operating certain routes to assist its development. According to TfL, the majority of the routes now are not subsidized as the patronage of the river bus services continues to grow. See Transport for London (2015) and London Assembly (2018b).

The standard adult fare for single journey ranges from £4.6 (HK\$47) to £10.3 (HK\$105). Passengers holding a TfL travelcard, which allows unlimited travel on specified public transport services within a specified period at a certain fare, can get about 30% off the river bus standard fares. Season tickets are also available for frequent travelers.

The daily maximum fare cap for travelling on bus or underground services using the Oyster card or contactless card is not applicable to river bus services.

³¹ See Transport for London (2018a and 2019b).

The Research Office has written to London River Services under TfL to enquire about statistics on the patronage of river bus services by routes and passenger journeys that involve interchange with other transport modes, and the peak hours of service usage. As at publication of this information note, London River Services has yet to furnish a reply.

around 90% since 2013-2014.³³ River bus services have particularly attracted commuters who live near the river where piers are accessible. Some users have reportedly indicated that they shift from using other transport modes due to the higher comfort level and/or shorter commuting time that river bus services offer.³⁴ However, the local government has not released any statistics on the diversion of usage from other transport modes to the river bus services or the impact of the growth in usage of the river bus services on the overall transport system.

3.10 Nonetheless, as ridership of river bus services expands, some stakeholders have expressed concern about the **congestion** issue at piers in central London during peak hours due to limited service capacity. There have also been calls for TfL to continue its investment in building/improving the pier infrastructure despite the financial constraints that it has been facing, and keep up the publicity efforts to promote river bus services as a viable transport option to capture the service growth opportunities. So far the financial viability of the service operator appears not an issue. However, the premium fares of the river bus services may **limit wider usage** among commuters and hinder the further growth in ridership.

Recent developments

3.11 Recently, the local government has integrated the development plan of river services into the **2035 Thames Vision**³⁸ laid down in 2016 and the **Mayor's Transport Strategy**³⁹ issued in 2018. Both strategic plans laid down the direction to achieve the goal of doubling the number of passenger journeys on river services to 20 million every year by 2035 through **extending the river**

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³³ See Transport for London (2018a and 2018b).

See The Telegraph (2017).

It was reported that TfL's financial situation had been strained due to the Mayor's policy to freeze transport fare and the additional costs incurred as a result of the delay in opening of Crossrail, a major new rail line in London that cost about £15 billion (HK\$151.7 billion). See Ship-technology.com (2018).

³⁶ See London Assembly (2018b) and Ship-technology.com (2018).

³⁷ See Transport for London (2013) and CityMetric (2017).

The 2035 Thames Vision was formulated by the Port of London Authority which is the harbour and pilotage authority responsible for maintaining the safety of navigation on the River Thames and promoting the use of the River for trade and travel. The 2035 Thames Vision sets out the goals and priority actions to develop the River Thames for trade and travel over the next 20 years.

The Mayor's Transport Strategy puts forward the policies and proposals to reshape transport in London over the next two decades.

services to key growth areas, such as east London where there is limited access to public transport, raising additional capacity at strategic piers, and promoting integration of river services with the rest of the public transport system. Besides, an emissions strategy for the River Thames will be produced with a view to reducing air pollutant and emissions from vessels.

4. Waterborne transport services in New York City

- 4.1 In NYC, the total number of passenger journeys⁴⁰ on the main transport modes amounted to about 2 494 million in 2017, of which 69% was on subway, 29% on bus⁴¹ and 2% on ferry.⁴² Although ferry services are not popular options compared with land-based transport, the local government had sought to enhance the services and explored the potential of a city-wide ferry service in the early 2010s under its strategy to promote the sustainable development of the waterfront and waterways of NYC, and introduced a new ferry service, the **NYC Ferry service**, in May 2017 after a thorough site evaluation and planning process.
- 4.2 The newly-launched city-wide NYC Ferry service is run by a private operator under contract with the local government serving commuters as well as tourists. Apart from that, waterborne transport services in NYC also include other ferry services: (a) the free public Staten Island Ferry service linking Staten Island and lower Manhattan; (b) inter-state ferry services offered by private operators linking midtown and lower Manhattan with the New Jersey waterfront; and (c) water taxi services run by private operators mainly to serve tourists. In the fourth quarter of 2017, the average weekday

See Metropolitan Transportation Authority (2018) and New York Metropolitan Transportation Council (2019).

Subway and bus services in NYC are provided by the Metropolitan Transportation Authority, a public-benefit corporation chartered by the New York State Legislature which stipulates that it must include public good as part of its company charter in addition to maximizing profit for shareholders. Ferry services are mainly provided by private operators.

The total number of passenger journeys on ferry services in 2017 is estimated based on the average weekday passenger journeys recorded in each month.

Staten Island is one of the five boroughs in NYC. The government has operated the Staten Island Ferry service since 1905. The service connects Staten Island with other city areas and has become free since 1997. At that time, each of the other four boroughs (Brooklyn, Queens, Manhattan and The Bronx) had free links with each other by bridges. Currently, the ferry service is operated by the NYC Department of Transportation on a 24-hour basis and has an annual ridership of some 25 million. It was reported that the cost per ride was about US\$5.9 (HK\$45.8) in 2016.

passenger journeys on all ferry services amounted to 112 950, of which 62% were on the Staten Island Ferry service, 28% on ferry services linking with New Jersey, 9% on NYC Ferry service and 1% on water taxi service.⁴⁴

Experience in developing a new city-wide NYC Ferry service

- 4.3 NYC is a city of islands with over 500 miles of shoreline. Based on the results of two studies completed in 2011 and 2013, and the lessons learnt from the East River Ferry pilot service launched in 2011,⁴⁵ the government of NYC concluded that there was a strong demand for a new ferry service which could **connect and activate communities across the shoreline where existing transport modes were ineffective due to poor access or overcrowding.** As such, the local government announced in 2015 its plan to develop a new citywide ferry service to fill the gaps in the transport system. In particular, the new service offers the benefits as: (a) a **congestion relief** for the existing transport system; (b) a **flexible transport mode** that can be implemented quickly, serving routes that can be easily modified to meet new developments in the city; and (c) a **relaxed and enjoyable** way of commuting.
- The government of NYC has identified a number of success factors for developing a new ferry service in NYC. For example, creating the right routes that can attract the greatest number of potential passengers at the lowest operating cost is one important success factor. The evaluation criteria for creating a ferry route include: (a) demand for ferry services in the neighbourhood and potential growth as a result of new development; (b) travel time competitiveness compared to existing transit; (c) capital costs of the pier infrastructure and vessels, and operating costs involved; and (d) community interest and opportunities a ferry service would provide the neighbourhood. Other success factors for developing a new ferry service include: (a) developing reliable service schedules; (b) requiring minimal transfer; (c) offering a pleasant ride; (d) providing reliable funding; and (e) integrating the planning of ferry services with new developments along the waterfront.

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See New York Metropolitan Transportation Council (2019).

The pilot service was converted into one of the routes, the "East River" route, of the NYC Ferry service when it was launched in May 2017.

The development of the new ferry service in NYC has been guided by 4.5 three main goals, namely: (a) providing affordable and convenient transit for communities and improving overall transportation options; (b) supporting growing neighbourhoods and connecting people to jobs and economic opportunities throughout the city; and (c) increasing the resiliency and **redundancy** of the city's transportation network. 46 As for the **resources** required, the government of NYC in 2015 committed (a) US\$55 million (HK\$426 million) for infrastructure upgrades including building 10 new ferry piers; (b) US\$10 million (HK\$78 million) for startup investments, such as vessel acquisitions/upgrades and ticketing machines; and (c) US\$30 million (HK\$235 million) for subsidizing the service operation per year, over a period of six years.⁴⁷ In May 2018, the local government further announced that it would invest US\$300 million (HK\$2,352 million) over the next five years to improve the infrastructure and expand the capacity of the fleet. 48

Features of the NYC Ferry service

- 4.6 The new NYC Ferry service, which was officially launched in May 2017, has been positioned as an **affordable**, **reliable and enjoyable transport option** for New Yorkers to connect to jobs and leisure activities around NYC. The service features six routes covering 20 piers connecting neighbourhoods which have been underserved by the existing subway and bus networks (see **Appendix V**). The commuting time for each route ranges from 34 minutes to 57 minutes depending on the route taken. The service operator, NYC Ferry, manages a fleet of 21 vessels with most of them having a capacity of about 150 passengers and a few having a capacity of 350 passengers.
- 4.7 In order to promote usage of the new ferry service with affordability, adult passengers are charged at a subsidized fare of US\$2.75 (HK\$21.6) for a single trip, a fare level that is on par with the subsidized fare of a subway or bus ride. Government subsidy amounts to US\$6.6 (HK\$52) per ride. ⁵⁰

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Ferry services had served as an important mode for transit redundancy and emergency support in a number of emergency events in the past including the September 11th terrorist attacks in 2001 and the transit strike in 2005.

⁴⁷ See City of New York Government (2017).

⁴⁸ See New York City Economic Development Corporation (2019b).

NYC Ferry operates with regular and frequent departures during weekday peak periods. Yet the frequency of departure decreases during weekends and off-peak periods.

⁵⁰ See City of New York Government (2017).

Passengers are also allowed free transfer between routes for the same ride. Besides, free shuttle bus services are offered to connect passengers to the ferry service at two of the piers.

Observed outcomes and recent developments

- According to the government of NYC, the new NYC Ferry service achieved a ridership of 2.9 million passenger journeys in 2017 since launch, exceeding the original projection by 34%.⁵¹ In 2018, a total of 4.9 million passenger journeys were recorded.⁵² Ridership fluctuated throughout the year with the highest level recorded in summer and lowest in winter. For example, the average weekday ridership in the third quarter of 2018 was 20 732 while the figure in the fourth quarter fell to 12 204.
- 4.9 The most popular route is "East River" which connects the less accessible neighbourhoods along the East River to midtown and lower Manhattan, ⁵³ followed by the route "Astoria" which connects the more remote communities in western Queens and Roosevelt Island to midtown and lower Manhattan (see Appendix V). ⁵⁴ The "East River" and "Astoria" routes accounted for 42% and 19% of the average weekday passenger journeys respectively between October and December 2018. The other four routes accounted for about 7% to 12% of the average weekday passenger journeys during the period. In addition, NYC Ferry had achieved a high level of on-time performance in 2018, ranging from 90% to 96% of the passenger trips measured on a quarterly basis. ⁵⁵
- 4.10 Surveys conducted by NYC Ferry indicated that 83% of the passengers were NYC residents, and passengers using the service during peak periods were mainly commuting to and from work or school (71%). Passengers were generally satisfied with the NYC Ferry service, with over 93% rating their

⁵¹ See New York City Economic Development Corporation (2018).

The Research Office has written to NYC Ferry to enquire about recent statistics on passenger journeys on the city-wide ferry service that involve interchange with other transport modes. As at publication of this information note, NYC Ferry has yet to furnish a reply.

The "East River" route was launched in 2011 as a pilot service and was well accepted by commuters, generating a ridership of 1.2 million in the first 14 months of service. See New York City Economic Development Corporation (2017).

The "Astoria" route was identified as one of the most promising routes in the new ferry service evaluation study conducted by the government of NYC in 2013. See New York City Economic Development Corporation (2015).

⁵⁵ See NYC Ferry (2019b).

overall satisfaction level at seven or higher out of a scale of 10. While there is no official statistics on the diversion of usage from other transport modes, the NYC Ferry was reportedly a more comfortable transport mode, and a faster option for certain locations, attracting many passengers to convert from travelling on subways or buses. However, there was concern that the ferry service had mainly benefited those neighbourhoods along the waterfront which were better-off than the average residents in NYC.

4.11 Some stakeholders on the other hand are skeptical about the cost-effectiveness and sustainability of the new ferry service because it is heavily subsidized by the local government with US\$30 million (HK\$235 million) per year. The subsidy of US\$6.6 (HK\$52) per ride for the ferry service is reportedly the double of that for the subway service. Moreover, as the capacity of the ferry is limited, its impact on relieving the congested subway system is also in doubt. Nonetheless, in light of the higher than expected ridership and favourable evaluation of the NYC Ferry service by passengers, the local government has announced in January 2019 its plan to add two new routes by 2021 to serve growing communities along the waterfront. To support the system's expansion, the government has further committed an additional US\$100 million (HK\$ 785 million) for increasing fleet capacity and building new piers.

5. Concluding remarks

In Hong Kong and the overseas places studied, passenger journeys on waterborne transport services only account for a very small proportion (2% or less) of the total passenger journeys in the whole transport system. Nonetheless, waterborne transport services fulfil the role as a supplementary transport mode that fills the gaps in the transport system to serve communities along the harbourfront or waterfront that are underserved by the

⁵⁶ See New York City Economic Development Corporation (2019a).

The "Rockaway" route could reportedly save commuting time for residents travelling from Rockaway and the "South Brooklyn" route for residents travelling from Bay Ridge. See QNS (2017) and The Village Voice (2018).

See The New York Times (2017) and The Village Voice (2018).

⁵⁹ See Curbed (2018).

The two new routes will run from Staten Island and Coney Island. Besides, two existing routes will be modified to include new stops in The Bronx and Brooklyn to serve the growing waterfront communities.

land-based transport services. In London and NYC, the local governments have developed and positioned waterborne transport services as (a) a congestion relief for the land-based transport system; (b) a relaxed and enjoyable mode of commuting; and (c) a flexible transport mode that allows easier modification of routes to meet changing demand. In NYC, waterborne transport also plays a redundancy and emergency support role in case of emergency events.

- In Hong Kong, the waterborne transport service market, particularly the in-harbour ferry service segment, has been shrinking in the past few decades due to strong competition of land-based transport options. As a result, financial viability of operating a ferry service as a niche service has been a major challenge of the operators. Besides, relocation of the major ferry piers such as the Central and Wan Chai ferry piers to less accessible locations has contributed to further erosion of the contracting market. To enable ferry operators to sustain business, the Government has introduced various measures to help them reduce operating costs and bring in non-farebox revenue. Recently, the Government has indicated a plan to re-commission a ferry route for commuters and conduct maintenance works for the relevant piers. Nonetheless, there appears a lack of a plan to review and assess the current landscape of ferry services with improvement/revival options.
- NYC have actively been involved in reviving/developing waterborne transport services to capture the potential demand and fully utilize the waterways for transport. In London, through the implementation of the River Action Plan, river bus services have been enhanced charging higher fares than underground and bus services. It is positioned as an integral part of the transport system that offers a reliable and relaxing way of travelling across the city. While the local government has not provided direct subsidy to finance the operation of most of the river bus routes, it has committed resources to (a) improving the infrastructure; and (b) enhancing its integration with the rest of the transport system. The local government also seeks opportunities for service expansion when new development or redevelopment along the River Thames is planned.

In NYC, the local government has invested in the development of a new city-wide ferry service to provide commuters with an affordable and reliable transport option after an elaborate site evaluation and planning process. Successful launch of the new ferry service in NYC has hinged on a number of factors, including service demand, travel time competitiveness, riding experience and funding reliability of the service. In order to attract usage, the local government has also provided fare subsidy and the service operator has provided shuttle bus service to connect passengers in the catchment areas to selected piers. In both London and NYC, patronage has markedly increased after launching/reviving the services. Although there are concerns on various aspects such as costs, price and effectiveness in relieving subway congestion, passengers are satisfied with the services and thus both governments have set to commit more resources for service expansion in the near future.

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Appendix I

Waterborne transport services in selected places

	Hong Kong	London	New York City		
A. Background information o	A. Background information on waterborne transport services				
Average daily passenger journeys for all transport modes	• 12.7 million in 2017.	• 11 million in 2017-2018.	6.8 million in 2017 for passenger journeys on subway, bus and ferry services.		
No. of regular passenger ferry/water bus routes	Seven in-harbour ferry routes and 14 outlying island ferry routes.	Six river bus service routes.	Six city-wide ferry service routes; one public ferry route; and a few inter-state routes.		
No. of daily passenger journeys on waterborne transport services	• 61 600 for in-harbour ferry routes and 66 600 for outlying island ferry routes in 2017.	• 27 400 for all river services and 11 000 for river bus services in 2017-2018.	About 112 950 for all services and 10 116 for the city-wide ferry service between October and December 2017.		
Daily waterborne transport patronage as % of overall public transport patronage	About 1%.	• Less than 1%.	About 2%.		
Percentage change in total passenger journeys on waterborne transport services per annum	1.4% decrease per annum on average between 2008 and 2017 for all regular passenger ferry services.	4.5% increase per annum on average between 2014-2015 and 2017-2018 for all river services.	1.9% increase per annum on average between 2013 and 2017 for all ferry services.		
Role of ferry/river bus services	Supplementary role.	Supplementary role.	Supplementary role.		

Waterborne transport services in selected places

	Hong Kong	London	New York City	
B. Experience in developing waterborne transport services				
Introduction/enhancement of waterborne transport services	Improving the existing pier facilities.	Enhancing the river services under an action plan.	Introducing the new city-wide ferry service.	
Policy objectives/guiding principles	Existing services Providing the necessary infrastructure for operators to run their services on commercial principles.	 Enhanced services Reviving the usage of river services by capturing the growth opportunities arising from new developments along the River Thames and growing tourism. 	New services • Developing a city-wide ferry service to (a) improve overall transportation options; (b) support growing neighbourhoods; and (c) increase the resiliency and redundancy of the transport system.	
Strategies/support measures	 Existing services Helping ferry operators sustain financial viability of their operations (additional measures provided to major outlying island ferry routes). 	 Enhanced services Expanding and improving pier facilities and infrastructure; and enhancing integration of river services with other parts of the transport system and promoting it as a part of the transport mix. 	 New services Thorough site evaluation in designing the ferry routes; investing in infrastructure and the fleet; and providing fare subsidy. 	

Waterborne transport services in selected places

	Hong Kong	London	New York City	
B. Experience in developing waterborne transport services (cont'd)				
Observed outcomes	 Existing services 13% decrease for all regular passenger ferry services between 2008 and 2017, of which in-harbour ferry services decreased by 20% and outlying island ferry services by 5%. 	 Enhanced services 19% increase in total passenger journeys on river services between 2013-2014 and 2017-2018, of which river bus services increased by 21%. 	 New services NYC Ferry service achieved a ridership of 2.9 million passenger journeys in the first eight months of operation, exceeding the original projection by 34%. 	
Issues and concerns	 Relocation of some major ferry piers has affected accessibility of certain ferry services; and shrinking ridership of regular passenger ferry services has undermined financial viability of ferry service operations and sustainable development of the sector. 	 Capacity issue at high traffic piers as ridership expands; high fare of river bus services may deter usage among commuters; and public investment in the pier infrastructure may be held back due to financial constraints of the local government. 	 Doubt about cost-effectiveness of the new city-wide ferry service in view of the heavy government subsidy required and limited service capacity; and limited number of neighbourhoods can benefit from the local government's investment. 	
C. Recent developments				
Recent developments	Planning to re-commission the "Hung Hom – Central" ferry service and launch a pilot water taxi service.	Planning further expansion of the river services to capture the growth opportunities, especially in east London.	Expanding the city-wide ferry service by adding two new routes and modifying two existing routes to include new stops to serve the growing communities along the waterfront.	

Appendix II

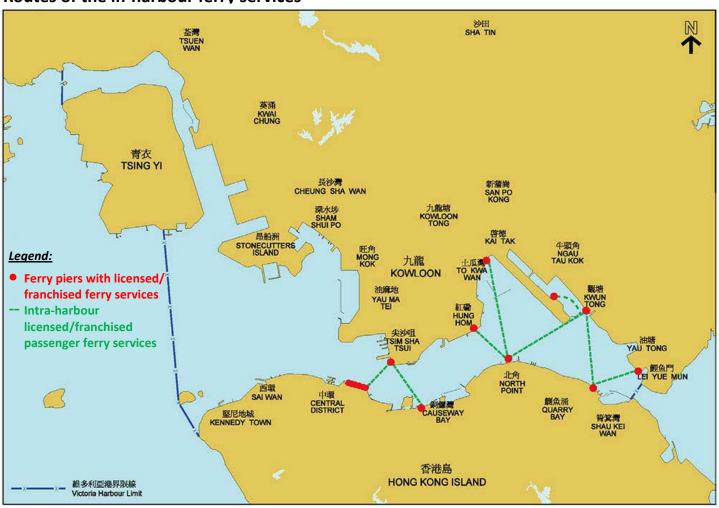
In-harbour franchised and licensed passenger ferry services in Hong Kong

Route	Operator	Service hours	Frequency	Journey time	Adult fare per trip
Central – Tsim Sha Tsui	The "Star" Ferry Company, Limited.	• 6:30 am – 11:30 pm.	Six to 12 minutes.	About nine minutes.	 Weekdays: HK\$2.2 – HK\$2.7. Weekends and public holidays: HK\$3.1 – HK\$3.7.
Wan Chai – Tsim Sha Tsui	The "Star" Ferry Company, Limited.	• 7:20 am – 11:00 pm.	Eight to 20 minutes.	About eight minutes.	 Weekdays: HK\$2.7. Weekends and public holidays: HK\$3.7.
North Point – Hung Hom	New World First Ferry Services Limited.	• 7:05 am – 7:35 pm.	• 15 to 30 minutes.	About eight minutes.	• HK\$7.5.
North Point – Kowloon City	New World First Ferry Services Limited.	• 7:05 am – 7:35 pm.	• 15 to 30 minutes.	About 14 minutes.	• HK\$7.5.
North Point – Kwun Tong (via Kai Tak)	Fortune Ferry Company Limited.	• 7:00 am – 7:45 pm.	• 30 to 60 minutes.	 North Point to Kwun Tong 12 minutes. North Point to Kwun Tong via Kai Tak – 30 minutes. 	• HK\$6.0.
Sai Wan Ho – Kwun Tong	Coral Sea Ferry Service Company Limited.	• 6:48 am – 9:40 pm.	• 30 to 37 minutes.	About 15 minutes.	• HK\$9.0.
Sai Wan Ho – Sam Ka Tsuen	Coral Sea Ferry Service Company Limited.	• 7:00 am – 10:45 pm.	• 24 to 30 minutes.	About 10 minutes.	• НК\$9.0.

Source: Transport Department (2019).

In-harbour franchised and licensed passenger ferry services in Hong Kong

Routes of the in-harbour ferry services



Source: Task Force on Water-Land Interface Secretariat (2014).

Appendix III

Outlying island licensed passenger ferry services in Hong Kong

Major routes ⁽¹⁾	(a) Central – Cheung Chau;
	(b) Central – Mui Wo;
	(c) Central – Peng Chau;
	(d) Central – Sok Kwu Wan;
	(e) Central – Yung Shue Wan; and
	(f) Peng Chau – Mui Wo – Chi Ma Wan – Cheung Chau.
Other routes	(a) Aberdeen – Pak Kok Tsuen – Yung Shue Wan;
	(b) Aberdeen – Sok Kwu Wan (via Mo Tat);
	(c) Central – Discovery Bay;
	(d) Cheung Chau – Aberdeen;
	(e) Discovery Bay – Mui Wo;
	(f) Ma Wan – Central;
	(g) Ma Wan – Tsuen Wan; and
	(h) Tuen Mun – Tung Chung – Sha Lo Wan – Tai O.

Note: (1) The six major routes have been subsidized by the Government under the "special helping measures" since 2011.

Source: Transport Department (2019).

River bus services in London

Route map



River buses operated by MBNA Thames Clippers



A river bus with a capacity of 220 seats



A river bus with a capacity of 138 seats

Source: MBNA Thames Clippers (2019).

NYC Ferry service in New York City

Route map



Note: According to NYC Ferry, some piers shown in the map have not yet been operational.

Vessels operated by NYC Ferry



Sources: NYC Ferry (2019a) and New York City Economic Development Corporation (2019a).

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