

Water Taxis in Hong Kong: *Their Potential and Future*

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by
Daniela Baez
Josie Brashaw
Marco Intelandi
Connor McNamara

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Report Submitted to:

Paul Zimmerman
Designing Hong Kong

Margaret Brooke, Kira Brownlee, Cynthia Chan, Jackson Hui
Harbour Business Forum

Professor Thomas Balistrieri (Co-Advisor) and Professor Stephan Sturm (Co-Advisor)
Worcester Polytechnic Institute



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ABSTRACT

This project, completed at the WPI Hong Kong Project Center in collaboration with the Harbour Business Forum and Designing Hong Kong, evaluates the future of water taxis in Victoria Harbour. Water taxis exist in Hong Kong, and our team found that there is demand for this service; we observed and interviewed providers of current water taxi type services as well as gauged public interest through a survey. Based on frequent consultation with public and private stakeholders, we developed a vision for the future of water taxis. We recommend a phased development plan for the organization of water taxis in Hong Kong.

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EXECUTIVE SUMMARY

The city of Hong Kong is transforming Victoria Harbour into a vibrant hub for commercial, residential, and tourist activity. Several large scale construction projects are underway to redevelop the harbor front. As these developments proceed, there are concerns about harbor front accessibility. Currently, most forms of transport in Hong Kong are focused inland, making the waterfront difficult to access. In order to advance harbor front development, transportation which allows for easy and direct access between waterfront locations should be developed. One possibility is to revive the old water taxi or walla walla (嘩啦嘩啦) services in Victoria Harbour. While some vessels still operate as water taxis, they are not organized enough to act as an effective service. Our project explores the possibility of organizing these various services and offers a set of recommendations to bring water taxis to Victoria Harbour.

METHODS The purpose of this project is to provide recommendations for the development of an organized water taxi system in Victoria Harbour. To accomplish this goal, we recognized four main objectives:

1. Identify existing infrastructure and future developments on Victoria Harbour to determine suitable water taxi type service locations.
2. Gather information on current water taxi type services in Hong Kong.
3. Identify public interest in a water taxi service.
4. Develop recommendations for a business framework to organize water taxi services in Victoria Harbour.

In order to fulfill these objectives, we:

1. Researched existing harbor infrastructure and future harbor front developments to determine current and future locations suitable for a water taxi service.
2. Interviewed locals and water taxi providers and observed their services at nine waterfront locations in order to identify the water taxi type services operating in Hong Kong.
3. Surveyed the public to measure interest and preferences regarding a water taxi service.
4. Interviewed government officials, identified legal requirements for the service, and led a workshop with public and private stakeholders to help develop recommendations for a water taxi service in Victoria Harbour.

FINDINGS We identified the demand for a water taxi service in Hong Kong as well as the major components of an organized system.

Demand for a Water Taxi Service

Our observations show that these types of services already operate in Hong Kong, indicating demand exists; however, they are not currently known as ‘water taxis.’ This is reinforced by our public interest survey. Out of 508 respondents, 36% have used a local water taxi type service, and 89% indicated that they would like to use a water taxi in Hong Kong. Additionally, as future developments increase harbor front accessibility, we conclude that the demand for water taxis in Victoria Harbour will increase.

Organization of a Water Taxi Service

We identify six major components of an organized water taxi service: licensing, equipment, harbor infrastructure, pricing, booking, and marketing. We also conclude that for a water taxi service to be organized, an entity must exist which would be held responsible and/or accountable for water taxis to Hong Kong.

RECOMMENDATIONS Our recommendations are designed based on the fact that there is no current entity responsible and accountable for a water taxi service.

Water Taxi Business Framework

We are providing our recommendation as a phased process. For each of the six components of a water taxi system, we provide three phases which contain elements that increase in sophistication and complexity. Progression is dependent on two factors: time and the emergence of a responsible and accountable entity. Additionally, elements within each component may change phases depending on future circumstances.

Government Involvement

In order for this phased process to be implemented quickly and efficiently, we recommend that Designing Hong Kong and the Harbour Business Forum encourage the government of Hong Kong to establish a committee, containing representatives from all relevant government departments. This committee should facilitate the organization of a water taxi service by assisting in the areas of licensing, harbor infrastructure, and marketing.

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1. INTRODUCTION

The city of Hong Kong is divided into two main sections, Hong Kong Island and Kowloon; in between lies Victoria Harbour. As the central body of water, the harbor has been seen in some aspects as an obstacle to overcome. Various land reclamation projects have shrunk the harbor in an attempt to create more usable land. Measures have been implemented in order to make crossharbor movement as fast and efficient as possible. Three underground tunnels for vehicles and another three for Mass Transit Railway (MTR) lines connect Kowloon and Hong Kong Island. The harbor, though the physical center, is far from being the heart of the city.

The government of Hong Kong has been moving to increase the use of Victoria Harbour with a variety of construction projects focused around the waterfront. The New Central Waterfront project hopes to unite the inland city center of Hong Kong Island with the harbor front through a variety of attractions. With the Kai Tak Development project on the Kowloon side, the government is transforming the old Kai Tak Airport into a residential and commercial hub.

While these and similar projects will do much to build up the harbor front as a destination, the problem remains that the main avenues of transport between waterfront locations lie inland. To travel between different waterfront destinations, a person must either walk or travel inland to an MTR or bus station. The most popular marine transport, the Star Ferry, connects the Central, Tsim Sha Tsui, and Wan Chai districts, while the remainder of the waterfront is less connected. To facilitate the future development of the harbor, a form of on-demand transport connecting waterfront point to waterfront point could be developed.

One possibility is to revive the old water taxi or walla walla (嘩啦嘩啦) services. Hong Kong has a long history of small scale water borne transport; areas such as Sai Kung and Aberdeen still depend on these services, while in Victoria Harbour similar services are less accessible. Organizing and expanding these water taxi type services would improve the accessibility of the harbor.

The purpose of this project is to provide recommendations for the development of an organized water taxi system in Victoria Harbour. To achieve this purpose, we recognize four main objectives:

1. Identify existing infrastructure and future developments on Victoria Harbour to determine water taxi type service locations.
2. Gather information on current water taxi type services in Hong Kong.
3. Identify public interest in a water taxi service.
4. Develop recommendations for a business framework to organize water taxi services in Victoria Harbour.

2. BACKGROUND

In this chapter, we introduce fundamental topics related to our project. First we present an overview of Victoria Harbour, its history, and current condition. Next, we provide an overview of transportation in Hong Kong including a history of small boating in the harbor. Finally, there is an introduction to water taxis and buses.

2.1 Victoria Harbour

Modern day Hong Kong is a vibrant port city. We provide an overview of the history and infrastructure surrounding Hong Kong's main harbor, Victoria Harbour.

2.1.1 History of Victoria Harbour

Victoria Harbour is located between the northern side of Hong Kong Island and Kowloon. Despite being the centerpiece of modern Hong Kong, the harbor was originally overlooked in favor of the smaller Aberdeen Harbour (Peters, 2017). When the British took dominion of Hong Kong Island in 1841, favor began to shift to Victoria Harbour due to its ability to host English warships (Peters, 2017).

With the construction of British military bases, civilian construction and development shifted towards the northern side of the island. As commercial activity grew, the central business district and its merchants began to experience an acute land shortage. Both the military and residents refused to give up land for commercial space in the central area, and mountains limited inland development. As a result, merchants turned to the harbor, beginning a long tradition of land reclamation (Wordie, 1999).

Today some 35% of developed land in Hong Kong is land reclaimed between 1842 and 2010, much of it from Victoria Harbour (Ngo, 2014). By 1996, the harbor had been reduced to the point where an ordinance was passed to slow down reclamation efforts in order to help preserve the waterway's existence. While stricter rules were put in place, in the end the ordinance did not outright ban land reclamation projects on the waterfront, rather requiring that they pass three legal tests before construction could proceed (Harbour-front Enhancement Committee, 2004).

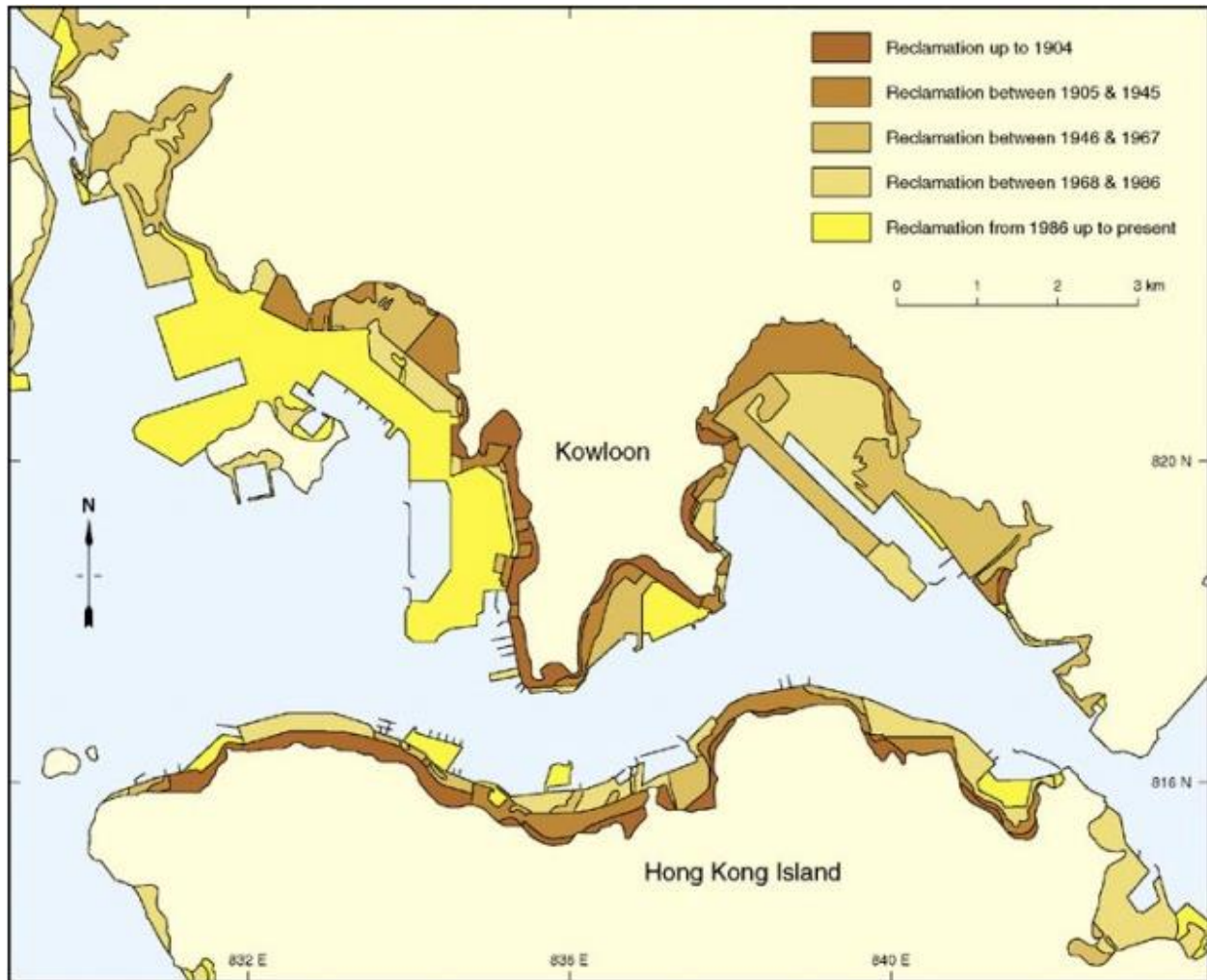


Figure 1: Victoria Harbour land reclamation (Civil Engineering and Development Department, 2000)

2.1.2 Current Infrastructure

The Hong Kong government has reclaimed about 2,830 hectares of waterfront from Victoria Harbour for the construction of industrial, municipal, recreational, and transportation infrastructure (Government of Hong Kong, n.d.). Industrial infrastructure consists of shipyards, barging facilities, container terminals, typhoon shelters, Public Cargo Working Areas (PCWAs), and mid-stream sites. Recreational infrastructure includes cruise terminals, marinas, and water sports centers. The transportation infrastructure encompasses publicly and privately owned piers. An important subcategory of privately owned piers are ferry piers (An overview of water-dependent land uses/activities in Victoria Harbour, 2012). These piers are used by licensed ferries and kaitos, which are small, motorized ferries. Sixty seven kaitos currently ply the waters

of Hong Kong (see Appendix K). Additionally, there are seven inner harbor franchised ferry services in Victoria Harbour and fifteen ferry services to the outlying islands (Transport Department, 2017).

Public piers and landing steps are types of landing facilities in Victoria Harbour available for free public use. These landing facilities make the harbor more accessible. The Civil Engineering and Development Department (CEDD) is in charge of building and maintaining most of these facilities (Holmes, Ma, Ross, & Rottier, 2017).

2.1.3 Future Developments

To further increase waterfront accessibility and use, several locations around Victoria Harbour are undergoing redevelopment, which are discussed in the following paragraphs.

In the Central and Western District on Hong Kong Island, the government has planned a harbor enhancement project called the New Central Harbourfront. The project includes multiple attractions and areas that connect the city and the harbor, including the reassembly of Queen's Pier and the reconstruction of the old Star Ferry Clock Tower (Urban design study for the new central harbourfront, n.d.). The New Central Harbourfront will be open to the public by the end of 2020 (Cheung & Lee, 2017).

On the Kowloon side of Victoria Harbour, there is an ongoing waterfront revitalization project at the site of the old Kai Tak Airport. The Kai Tak Development (KTD) will include government and community facilities, residential and commercial areas, and an extensive open networking space (Civil Engineering and Development Department, 2017a). The KTD will create “a distinguished, vibrant, attractive and people-oriented community by the Victoria Harbour.” The project is planned to be completed in 2021 (Civil Engineering and Development Department, 2017b).

Lei Yue Mun is a short channel located between Junk Bay and Victoria Harbour that separates Kowloon and Hong Kong Island. The Lei Yue Mun Waterfront Enhancement Project takes place on the northern side of the channel. This project includes the construction of a public landing

facility, the redevelopment of lookout point platforms, as well as improvements to the streetscape, promenade, and children's play area. Completion is expected to be in 2020 at the earliest (Civil Engineering and Development Department, 2015).

Lastly, the government is working on a project called the West Kowloon Cultural District. They are building a 40-hectare waterfront integrated arts and cultural district with an art venue, free space, two museums, and a pavilion (West Kowloon, n.d.).

2.2 History of Small Boats in Victoria Harbour

Victoria Harbour was once filled with small boats. In the 1800's, many of these vessels were used as transportation services, both across the harbor and to and from larger ships (Lui, 2000).

With the opening of the Star Ferry in 1898 and the Yau Ma Tei Ferry Company in 1924, crossharbor transportation via small boats declined. Taking on a supplementary role, small motorboat services, known as walla wallas (嘩啦嘩啦), operated in the early morning when the ferries were closed. Late night party-goers, fisherman, early commuters, and newspaper distributors were the main sources of business for these motorboat services, with scores of crossharbor trips being made during these hours (Lui, 2000).

Later, with the completion of the Hung Hom Cross-Harbour Tunnel in 1972 and the 1973 oil crisis, many walla walla operators closed down. With economic improvement in the 1980s, the remaining operators opted to build new, larger ships, called launches. The old walla wallas became outdated during these years, with their numbers shrinking from around 200 in the 1960s to merely 21 in 1999. Today, launches operate as chartered boats for construction companies or groups looking for a day out on the harbor. Small boats as a form of on demand transportation are mainly confined to the typhoon shelters (Lui, 2000).

2.3 Water Taxis

While small boat transport in Hong Kong has suffered over the years, it is a growing business in many major cities worldwide. These small vessels, known as water taxis, carry people to a customer specified location. Customers hail the service in many different ways, ranging from online applications to phone calling. Unlike ferries, water taxis do not have set routes (Task Force on Water-land Interface, 2012).

Several major port cities already have well-developed water taxi systems, including Amsterdam, Sydney, and Boston. Amsterdam operates on a time-based system, where rides are priced based on time traveled. Pricing starts at €7.50 [\$72.50 HKD] for pick up and an additional cost of €1.75 [\$16.9 HKD] per boat per minute in transit. Sydney's water taxis require a minimum of six people to book, and prices start at \$120 AUD [\$735 HKD], with a low cost increase for additional persons (Task Force on Water-land Interface, 2012). In Boston, rates vary by passenger age: a one way ticket is \$12 USD [\$93.9 HKD] for those 12 and up, \$2 USD [\$15.6 HKD] for children between 3 and 11 years old, and free for children under three (Boston Discovery Guide, 2017).

Instead of water taxis, other cities utilize water buses which operate similarly to large ferry services in that they carry a large amount of people and run on a schedule. Water buses operate along set routes analogous to a normal land bus system having multiple stops, in contrast with a ferry, which typically only has two terminals. Some water buses operate on a 'hop-on hop-off' service. Under this concept, riders purchase a single ticket for a flat fee, allowing them access to the system for unlimited trips within a certain timeframe (Lovers Canal Cruises, 2017). In cities such as Bangkok, Venice, Brooklyn, and London, private companies own and operate water buses. These companies run one to twelve routes within their respective cities, with each route having various stops along the waterfront at major landmarks and tourist destinations. Cost and payment structures vary greatly between locales. Seattle runs a publicly operated water bus system through the King County Marine Division and charges adults \$3.50 to \$4.50 USD [\$28.30 to \$36.10 HKD] based on the route for a one-way ticket. The water bus in Brooklyn, New York City, operated by New York Water Taxi, utilizes the hop-on hop-off payment

structure with cost of \$25 USD [\$195.5 HKD] for a full-day pass for adults and \$15 USD [\$117.3 HKD] for children (Task Force on Water-land Interface, 2012).

3. METHODOLOGY

The purpose of this project is to provide recommendations for the development of an organized water taxi system in Victoria Harbour. We recognize four main objectives to accomplish this goal:

1. Identify existing infrastructure and future developments on Victoria Harbour to determine suitable water taxi type service locations.
2. Gather information on current water taxi type services in Hong Kong.
3. Identify public interest in a water taxi service.
4. Develop recommendations for a business framework to organize water taxi services in Victoria Harbour.

3.1 Objective One: Identify existing infrastructure and future developments on Victoria Harbour to determine suitable water taxi type service locations

We are conducting archival research to identify infrastructure in Victoria Harbour that is suitable for a water taxi type service. Utilizing different sources provided by Harbour Business Forum, Designing Hong Kong, the Civil Engineering and Development Department, as well as “Giving Berth: A Study on Tying Up in Victoria Harbour” (Holmes, Ma, Ross, & Rottier, 2017), we are locating existing infrastructure. This information helps us map suitable service locations.

Additionally, we are researching development projects on the harbor to determine future water taxi service locations. Using Hong Kong government websites and news articles we are identifying specific waterfront projects. Knowledge of these projects allows us to locate potential service areas.

3.2 Objective Two: Gather information on current water taxi type services in Hong Kong

We are visiting waterfront locations, listed in Appendix A, in order to perform observational research on current water taxi type services in Hong Kong. This research includes observing these services, their vessels, and interactions between providers and customers. These observations provide us with information on what services are currently available and where they

are operating. This information in turn allows us to better tailor our recommendations to current practices. Our observations are outlined in Appendix B.

To direct our observations, we are utilizing semi structured interviews with one to three local people we encounter at each of the areas listed in Appendix A. We are asking these locals if they know of any nearby water taxi type services as well as any additional information to help us find the services. The questions are listed in Appendix E.

We are also photographing the harbor front, landing steps, and vessels in the midst of our observation. The photographs serve as visual evidence of the boats and/or the environment to supplement the data from our observations. Refer to Appendix C for photography protocol and Appendix D for selected photographs.

In the case that we hail a water taxi type service, we conduct an informal interview with the service provider to determine their service routes and pricing. For interview details, see Appendix F. If one of the vessel types is unable to be hailed during our observations, then an informal interview will be conducted via phone (see Appendix H). We are using the information gathered to understand their current operation and to take this into account when developing our frameworks.

3.3 Objective Three: Identify public interest in a water taxi service

We are surveying individuals in three different locations at our sponsors' suggestion: Star Ferry Pier in Tsim Sha Tsui, Pier 9 in Central, and Pier 4 in Central. We are sitting at a table clearly marked by a banner advertising water taxis in Hong Kong in order to attract potential customers. An online version of our survey is posted on watertaxi.hk which circulates via Designing Hong Kong's email list. These surveys give us data on public interest, desired routes, booking preferences, and pricing (see Appendix I).

3.4 Objective Four: Develop recommendations for a business framework to organize water taxi services in Victoria Harbour

First, we are performing archival research on the legal requirements for a water taxi service in Hong Kong. We are using a memorandum provided by the law firm Reed Smith Richards Butler to understand the legal aspects of captain and vessel, a booking system, and environmental issues (P. Lee, S. Siu, J. Or, & C. Ha, personal communication, February 15, 2018).

To further understand marine transportation regulations, we are conducting semi-structured interviews with the Marine and Transport Departments of Hong Kong. We are covering the legal and safety restrictions of marine transport services. This information improves our understanding on the legal regime that regulates water taxi services in Hong Kong. The semi-structured interviews allow for additional discussion on the legal aspects surrounding water taxis. See Appendix J for the Marine Department interview and protocol. See Appendix K for the Transport Department interview and protocol.

We are performing semi-structured interviews with upper management from charter boat services such as tugboats and launches to understand their business and operations. We are learning about their company structure, the regulations surrounding their industry, and their pricing. This form of interview allows for additional discussion on any issues the interviewee deems important (see Appendix L).

Additionally, we are conducting an interview with a water taxi captain from Boston Harbor Cruises (BHC) for the purpose of learning about the Boston water taxi system. We are using the information from this interview to inform our framework recommendations. We are gathering information on company history, daily operations, business structure, operating principles, as well as legal and safety concerns (see Appendix M).

Finally, we are leading a workshop with representatives from BMT Group (formerly British Marine Technologies), Designing Hong Kong, Harbour Business Forum, Harbour Unit of the Development Bureau, Harbourfront Commission, Marine Department, Motor Boats and Tug Boats Association, the legal firm Reeds Smith Richards Butler, and the Transport Department.

We are presenting the background of our study and our phased recommendations to this group of people and guiding them through a discussion. The purpose of the workshop is to gain feedback and additional suggestions from a variety of perspectives.

4. RESULTS AND ANALYSIS

The purpose of our project is to provide recommendations on the development of a water taxi system in Victoria Harbour. In this chapter, we present the results and analysis of the information we gathered through completing our objectives.

4.1 Existing infrastructure and future developments on Victoria Harbour that are suitable water taxi type service locations

To determine suitable water taxi service locations, we researched and compiled information on the existing infrastructure and future waterfront developments on Victoria Harbour. There are currently 22 landing facilities on Hong Kong Island and 28 in Kowloon and the New Territories combined that support small ferries or leisure-craft boats (Holmes, Ma, Ross, & Rottier, 2017). A map of these existing public piers and landings suitable for a water taxi service are shown below in Figure 2. Refer to Appendix N for more information on the individual facilities.



Figure 2: Public landing facilities in Victoria Harbour (Holmes, Ma, Ross, & Rottier, 2017)

Future developments along the harbor are reviewed in section 2.1.3. We created a map (see Figure 3) that depicts the waterfront areas that these development projects impact. With the addition of commercial and residential areas as well as tourist attractions, we believe that these developments are suitable water taxi service locations.



Figure 3: Future development projects on Victoria Harbour (adapted from Google, 2018)

4.2 Current water taxi type services in Hong Kong

We determined that there are three categories of water taxi type vessels operating in Hong Kong: sampans, kaitos, and launches. Sampans are flat-bottomed wooden boats, which originated as fishing boats in southeast Asia. Kaitos are a local type of small motorized ferry. Launches are motorboats that are typically chartered in Hong Kong (Merriam-Webster Incorporated, 2018).

At several waterfront locations, we observed and photographed vessels that were operating as water taxis. We conducted semi-structured interviews with local people in the area, and when we had the opportunity to take a water taxi type service, we conducted a semi-structured interview with the service provider. In addition, we conducted phone interviews with launch providers, whose services we did not find through our observations. In this way, we identified several different water taxi type services operating in Hong Kong, shown in Appendix D.

We observed sampans in the Yau Ma Tei and Shau Kei Wan Typhoon Shelters, Tsim Sha Tsui, and Aberdeen Harbour. In the typhoon shelters and Aberdeen Harbour, we used various sampans and interviewed the providers to gather information on their services. Most of these services have bargained pricing. We observed a few sampans operating in Tsim Sha Tsui that were transporting construction workers. Through an interview with one of these workers, we determined that the sampan was in a charter service agreement.

Kaitos were observed transporting passengers on fixed routes in Aberdeen Harbour and Sai Kung. We used a kaito at both of these locations and were able to gather information on the services. Aberdeen's kaito service repeatedly crosses the harbor and charges a flat rate for a one way trip. The kaitos in Sai Kung transport people to outlying islands and are priced as round trip services with rates varying between locations.

Launches proved the most difficult to find through our observations. To gather data we conducted phone interviews with the service providers. We found that most launch companies prefer monthly charter agreements and are not readily available for short time charters in Victoria Harbor. Those launches, which offer on demand services, are typically only willing to be chartered for several hours at a time or for several hundred Hong Kong dollars for brief trips.

4.3 Public interest in a water taxi service

We gauged public interest in a water taxi service via a survey. Our survey was administered both in person through an advertisement stand (see Figure 4) and online. The in person survey protocol is provided in Appendix I.

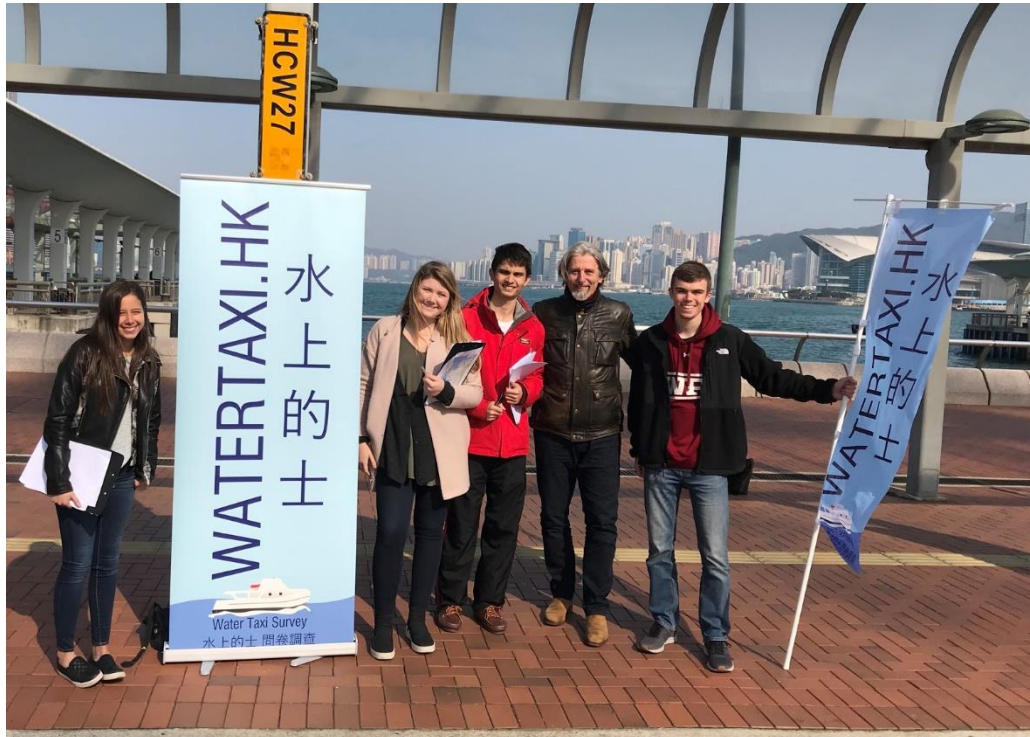


Figure 4: Advertisement stand at Pier 9 in Central. From left to right: Daniela Baez, Josie Bradshaw, Marco Interlandi, Paul Zimmerman, Connor McNamara. (credited to Paul Zimmerman)

Across three waterfront locations, our stand had a total of 133 individuals that approached us. Of those 133 individuals, 91 responded to our survey. After our on-site surveys were completed, our sponsors sent out an online version via their electronic mailing list which garnered an additional 417 responses. Between on-site and online respondents, the only major difference in responses was self identification. For on-site surveys, 67% of respondents self identified as locals, whereas nearly 100% of respondents of the online survey self identified as locals. Beyond this, the total 508 responses revealed similar trends allowing the responses to be aggregated. Analysis of these combined responses show that a slim majority of respondents had used water taxi services in some capacity before. Regardless of whether or not the respondents had used a water taxi before,

almost 90% answered that they would like to use a water taxi service in Hong Kong. In relation to pricing of the service, we found no significant trends in the responses. However, respondents had definite preferences on booking; the majority of people favored a mobile application method of hailing a water taxi, with the next most popular methods being phone calls, on-site call boxes, or physical hailing. We gathered information on one preferred route per respondent. The ten most desired routes are depicted below in Figure 5; 32% of the respondents chose one of these ten routes (see Appendix I).

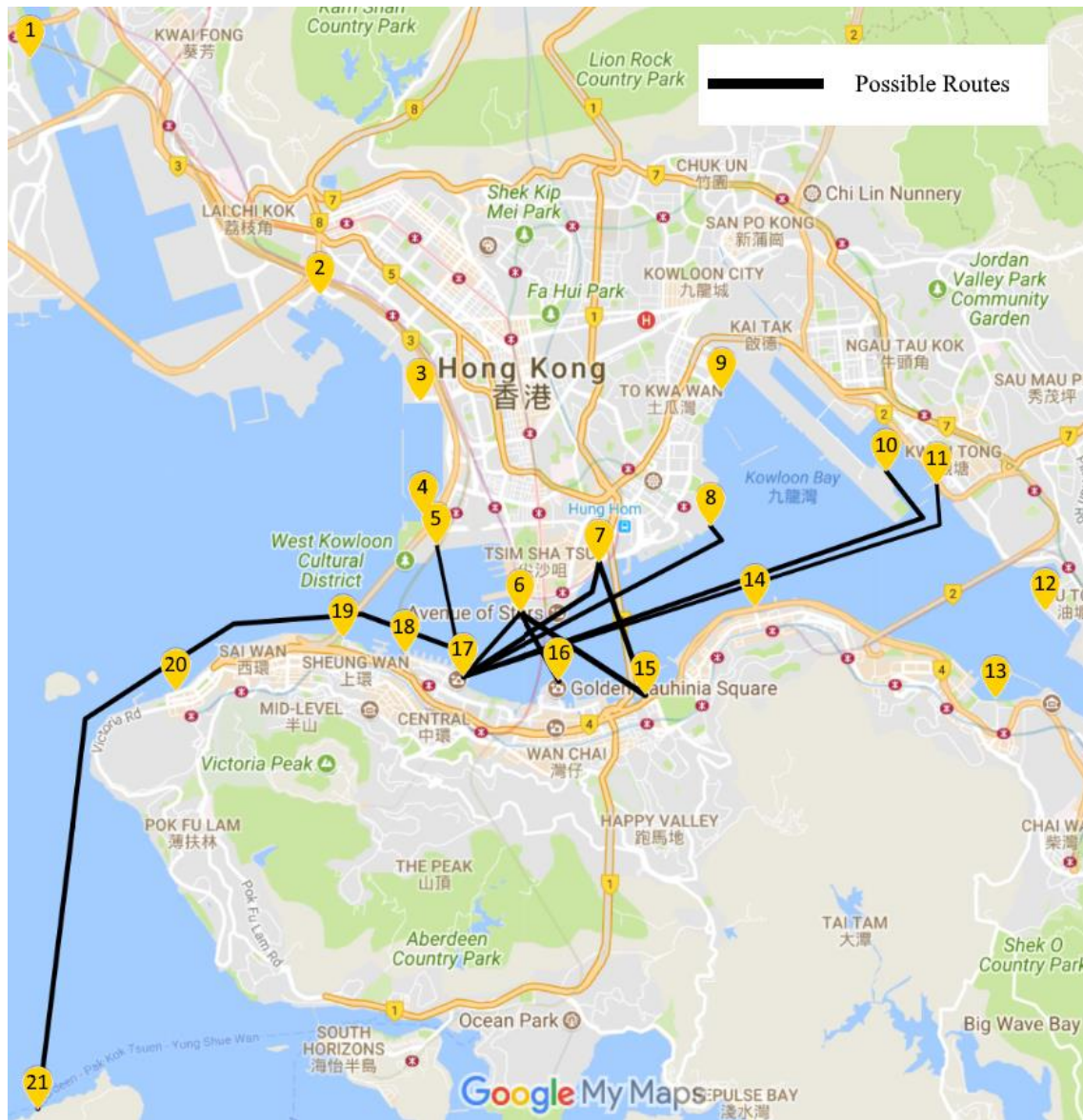


Figure 5: Ten most desired routes from survey (adapted from Google, 2018)

4.4 Preliminary recommendation for a business framework to organize water taxi services in Victoria Harbour

The law firm Reed Smith Richards Butler produced a legal memorandum regarding the legal aspects of a water taxi service in Hong Kong. The firm determined that for a water taxi to operate, it would require two Marine Department licences and may also require one Transport Department licence. The required Marine Department licences are the Certificate of Ownership, which states who owns the vessel, and the Operating Licence, which grants the owner the ability to operate the vessel and must be renewed annually. Further, the Marine Department also categorizes boats into four classes, only two of which are able to carry passengers: Class I and Class II. Class I vessels have a maximum passenger capacity greater than 12, and class II vessels have a maximum passenger capacity less than or equal to 12. The Transport Department licence is called the Ferry Service Ordinances Licence, which allows the operator to charge and transport separate individuals or groups (P. Lee, S. Siu, J. Or, & C. Ha, personal communication, February 15, 2018).

Taking into account this information, our previous research, interviews with the Transport Department and Boston Harbor Cruises, and the lack of an entity responsible or accountable for bringing this service to the harbor, we decided to structure our preliminary recommendations in the form of a phased process. The phases are dependent on two factors: time and/or an entity that is responsible and accountable for its implementation. We determined six components that describe a water taxi system: licensing, equipment, harbor infrastructure, pricing, booking, and marketing. Each of the six components contain elements in each phase that increase in sophistication and complexity. Additionally, elements within each component may change phases depending on future circumstances.

We presented these preliminary recommendations to representatives of nine different organizations at a workshop in order to gather their feedback. The key points from this workshop are stated in Appendix O. From their feedback, we clarified some of the terminology in our recommendation as well as found several topics for further study. These topics include the exploration of co-chartering or zoning for Ferry Service Ordinances license.

5. CONCLUSIONS AND RECOMMENDATIONS

Through our research, we drew several conclusions on the demand for a water taxi service in Hong Kong. Based on these conclusions we developed a set of recommendations on the organization of water taxi services in Hong Kong.

5.1 Conclusions on the demand for a water taxi service

There is a demand for water taxis in Victoria Harbour. Our observations show that these types of services already operate in Hong Kong; however, they are not known as ‘water taxis.’ From our public interest survey, out of 508 respondents, 36% have used a local water taxi type service, and 89% indicated that they would like to use a water taxi in Hong Kong. Also as future developments are increasing harbor front accessibility, we conclude that the demand for water taxis exists and will likely increase.

5.2 Conclusions on an organized water taxi service

Based on our full results and analysis, we identify and describe six major components of an organized water taxi service:

1. Licensing

The licensing component refers to how the water taxi service operates depending on its marine and transport licensing. Under the current legal regime, there are two forms of operation: a charter service or a kaito on-demand service. Charter services are unable to carry separate passenger groups on the same trip, limiting the service. While kaito on-demand services can accept multiple passenger groups, it requires an additional license and must follow its surrounding regulations. In order to improve licensing, government involvement is needed.

2. Equipment

Equipment describes the class I and II passenger carrying vessels suitable for a water taxi service. Current water taxi type services utilize sampans, kaitos, and launches, however many of these vessels are not in ideal condition for a professional service.

3. Harbor infrastructure

Harbor infrastructure encompasses what is necessary for passengers to embark and disembark from the vessel. There are fifty public landing facilities in Victoria Harbour suitable for a water taxi service. However, these facilities are not accommodating for a fully developed service. Improvements and maintenance require government oversight.

4. Pricing

Pricing is how the price of a trip is determined. Three options exist for this service: bargained or quoted fares, published fares, or dynamic pricing.

5. Booking

The booking component refers to the method of hailing the service. Options for hailing include: physically hailing, phone calling, text messaging, an on-site call box, and a mobile application. Based on our survey results, consumers would prefer to book the service through a mobile application.

6. Marketing

Marketing contains the advertising techniques to make the service more recognizable to potential customers. Examples include flyers, a social media presence, and unifying the vessels' appearances. For some marketing techniques government approval is necessary.

5.3 Recommendation for an organized water taxi service

Our recommendations are designed based on the fact that there is no entity responsible and accountable for a water taxi service. We are providing our recommendation as a phased process to provide options for the previously mentioned six components of a water taxi system. For each component, we provide three phases which increase in sophistication and complexity. Progression is dependent on two factors: time and the emergence of a responsible and accountable entity. Additionally, elements within each component may change phases depending on future circumstances. For further explanation see Appendix P.

1. Licensing

For licensing we recommend initiating this service using the current legal regime as a charter service. As the service matures, kaito on-demand services can be phased in. In the future, we advocate for the amendment of existing licences or the creation a new water taxi licence.

2. Equipment

While the current sampans, kaitos, and launches meet the legal standards to transport people, we recommend that as the service matures these vessels become fitted for purpose. For example, additional railings could be added for safety, or cleanliness guidelines could be implemented. However, to create a fully uniform water taxi service, we recommend the eventual introduction of new vessels specifically for this purpose.

3. Harbor Infrastructure

We recommend that the existing landing facilities be used for a water taxi service. In the next phase, pontoon piers may be added. As the harbor front develops, we recommend the addition of newly designed fixed landings and the upgrading of existing facilities to increase water taxi service locations and passenger accessibility.

4. Pricing

Initially, we propose that water taxi services keep the current pricing models: bargained or quoted pricing. Depending on how the services develop, we recommend that the pricing models transform into a published list of fares or dynamic pricing.

5. Booking

For booking, we suggest that water taxis continue utilizing physical hailing and phone calling but also expand their booking methods to include text messaging and perhaps a simple mobile application. Eventually, a more complex mobile application, online booking, or on-site call boxes could be developed.

6. Marketing

Currently, marketing of water taxi type services occurs mainly through word-of-mouth and flyers. To expand service recognition, we propose service providers begin developing a social media presence and attach water taxi flags onto their vessels. Ultimately, we recommend uniform flags and paint on the vessels, as well as a professional website, and on pier kiosks to advertise to potential customers.

5.4 Recommendation for government involvement

In order for this phased process to be implemented quickly and efficiently, we recommend that Designing Hong Kong and the Harbour Business Forum encourage the government of Hong Kong to establish a committee, containing representatives from all relevant government departments. This committee should facilitate the organization of a water taxi service by assisting in the areas of licensing, harbor infrastructure, and marketing. Additional details can be found in Appendix O.

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Appendix A: Waterfront Observation Locations

Protocol:

1. Using Google Maps, an orange pin marks each waterfront location.

Locations:

1. Tsing Yi Maritime Square
2. Yau Ma Tei Typhoon Shelter
3. Tsim Sha Tsui
4. Hung Hom
5. Sai Kung
6. Shau Kei Wan Typhoon Shelter
7. North Point Ferry Pier
8. Central Pier 9
9. Aberdeen Harbour

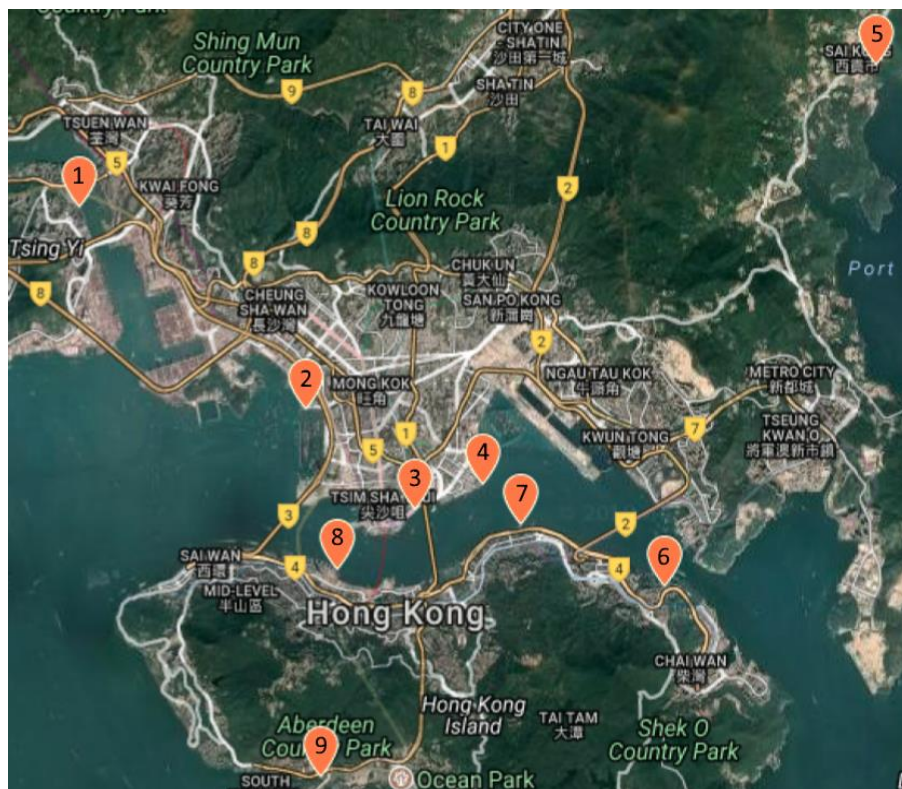


Figure 6: Map of visited and observed waterfront locations (adapted from Google, 2018)

Appendix B: Observations

Protocol:

1. Observations take place at all locations listed in Appendix A.
2. All four team members participate in the observation.
3. One team member records the observations in a private notebook. The observations include time, date, and location in chronological order.

Tsing Yi Maritime Square

Field Notes:

Date: 10 January 2018

Arrival time: 10:02 A.M.

Location is an industrial area. Small passage of water (Approximately 300m wide). There are many large boats and some with fishing equipment.

Josie and Daniela tried to hail a small boat. Response: waved back, did not stop.

The 4 team members saw the same boat return with a new passenger.

Saw 10 small boats docked in the promenade. No boats were used.

Conducted interviews with Maritime Square local #1 and Maritime Square local #2.

Departure time: 1:30 P.M.

Daily Interpretive Analysis:

We visited the Tsing Yi Maritime Square spent approximately 2.5 hours there. We did not use any water taxi type services operating near Maritime Square in Tsing Yi. We observed a small boat pass us with only the driver aboard. A short time later, the same boat returned with another passenger. We also observed ten small boats, probably less than 4 passenger capacities, tied up to the seawall. Then, we interviewed Maritime Square Local #1 and Maritime Square Local #2 before we left.

Yau Ma Tei Typhoon Shelter

Field Notes:

Date: 12 January 2018

Arrival time: 10:10 A.M.

Observed 3 small class II and III boats and 1 larger class I boat with a capacity of 44 passengers.

There was one landing step in this location.

Later, a large loading boat tugs out one of the 3 smaller boats (a class II) from before.

One class II boat docked and the operator ate some food, then the boat left 10 minutes later.

Small ferries roam the water.

Two large fishing boats dock to buy clams from each other.

A class II vessel arrives to the dock. Two men disembark to retrieve items from a car.

A class III vessel arrives and 4 passengers disembark. Three get in a red taxi car and 1 individual in a leather jacket walks away. These people did not use landing steps to get out of the boats.

Team members got on a boat and conducted interviews with Yau Ma Tei provider #1.

Departure time: 11:26 A.M.

Daily Interpretive Analysis:

We visited the Yau Ma Tei Typhoon Shelter and spent approximately 1.5 hours there. During this time, we observed several small class II and class III vessels, as well as one class I vessel. In our observation, several of these vessels docked, resupplied, and traded amongst each other. One of the class III vessels also assisted in tugging a crane barge out into the open waters outside the typhoon shelter. Later, we observed four men disembark from a class III vessel. Three of these men hailed a land taxi, while the fourth man walked off down the street. We talked to the service provider and eventually rode on the boat and conducted an interview with Yau Ma Tei Provider #1.

Tsim Sha Tsui

Field Notes:

Date: 18 January 2018

Arrival time: 10:30 A.M.

The harbor has 5 small boats and a few tugboats.

Observed a class II boat arrive at one of the public landing steps. Five construction workers got on the boat to leave.

Tugboat tugs boat.

A boat goes to a construction site and drops off a person

Two small boats were seen and team members waved, attempting to hail them. One of the boats turns around. The other boat is class II and drops off a construction worker on the landing steps.

This boat has 2 flags, one red and one that says “buildingking.”

A small boat coming towards landing step has same red flag but a different flag with a white and blue logo.

12:30 P.M. - Visit Hung Hom

2:34 P.M. - Return back from Hung Hom

Departure time: 3:35 P.M.

Daily Interpretive Analysis:

We visited Tsim Sha Tsui and spent a total of 3 hours observing to look for water taxi type services. We saw multiple class II charter boats, identified by flags emblazoned with construction company logos. About 3 of these boats were seen transporting construction workers around the harbor. We made multiple attempts to hail one of the charter boats and were refused.

Hung Hom

Field Notes:

Date: 18 January 2018

Arrival time: 12:30 P.M.

Men in swimsuits are standing and talking at the pier and two of them are swimming in the harbor. Two cruise ships passed by.

We saw a small charter boat with same white and blue flag as seen in Tsim Sha Tsui.

Multiple Star Ferries passed by.

Departure time: 2:34 P.M.

Daily Interpretive Analysis:

We observed the harbor front in Hung Hom for 2 hours. A charter boat with a flag emblazoned with a construction company logo passed by. We saw a group of swimmers talking and others swimming in the harbor. We also saw multiple Star Ferries pass by as well as cruises.

Sai Kung

Field Notes:

Date: 21 January 2018

Arrival time: 1:24 P.M.

Two people immediately approach us and show us to their boat service.

Many different kiosks and providers lining the boardwalk. All with phone numbers and pictures of services posted.

We on roundtrip to Sharp Island, conducted interview with Sai Kung Provider #1.

Interviewed Sai Kung Local #1.

Departure time: 4:55 P.M.

Daily Interpretive Analysis:

We spent approximately 3.5 hours observing in Sai Kung. Upon arrival, we immediately saw a variety of stands offering transport services to and from a variety of islands. Seeing several boats, we walked to the nearest pier in an attempt to gather data. A man pointed us towards a kaito, Sai Kung Provider #1, which we took to Sharp Island and back.

Shau Kei Wan Typhoon Shelter

Field Notes:

Date: 24 January 2018

Arrival Time: 11:27

Three small fishing boats (They are class III, identified by the C marker on their number) are roaming around.

Attempted to use of Water Taxi Service, interviewed Shau Kei Wan Typhoon Shelter locals and providers.

Departure Time: 12:34 P.M.

Daily Interpretive Analysis:

We observed the Shau Kei Wan Typhoon Shelter for approximately one hour. Upon arrival, we saw a boat stopped at a landing step once we got to the promenade. As we began to walk down the promenade, a second boat came up to the same landing step and dropped off two people. We approached them for an interview with Shau Kei Wan Local #1. As a result of the interview, we began walking to the western side of the typhoon shelter. As we walked, we saw another boat come from outside the shelter and drop off two people. This boat was similar in size to the first vessel we saw at the landing steps. We encountered Shau Kei Wan Local #2 and conducted an interview; this local directed us towards a small blue roofed boat on the other end the shelter, which we rode to a nearby jetty. On the jetty, we hailed another sampan to bring us back to shore. During our travels, we conducted interviews with both providers. Back at the promenade we noticed two people with fishing poles hail a passing boat and immediately hopped on.

North Point Ferry Pier

Field Notes:

Date: 24 January 2018

Arrival Time: 1:10 P.M.

We arrive at a nearby public pier with landing steps next to a ferry pier.

There are 10 fisherman on the pier, and one immigration vessel.

It is a windy day, with large waves.

1 Yellow Boat the “Starry Metropolis” drops off an old man in a Chinese suit.

Departure Time: 1:34 P.M.

Daily Interpretive Analysis:

We observed at the North Ferry Pier for approximately 20 minutes. Multiple men were fishing at this pier. An immigration office boat was also parked on one side of the pier. We observed a yellow boat drop off a man in a suit. The boat had the name “Starry Metropolis” on its side, which is the name of one ship of the Metropolis Cruise Group. Later, a blue class II vessel dropped off two women. Shortly after, we interviewed North Pier Local #1 and North Pier Local #2.

Central Pier 9

Field Notes:

Date: 23 January 2018

Arrival: 3:00 P.M.

Approximately 20 people (upon arrival) on the pier and 6 landing steps. There are no small boats in the area and some people are sitting on the landing steps.

One class II boat came by and that had Chinese writing on the vessel.

A junk boat arrives into dock (P99), called the Aqualuna, it ties up to the pier. Four men were fishing in the pier.

A boat comes inland, and cleans the trash. The boat has a marine department flag.

Another junk boat and garbage boat arrive.

Departure Time: 4:00 pm

Daily Interpretive Analysis:

We observed Pier 9 for one hour. At first, no small boats were seen in the area. We observed two junk boat services that tied up on the pier, rather than ramming up to the wall as we've seen before. In addition, there was a government contracted sampan collecting the trash from the water. To gather more information, we conducted three different local interviews.

Aberdeen Harbour

Field Notes:

Date: 25 January 2018

Arrival: 12:03 P.M.

There is a ferry taking people around the harbor that is Class I. Three Sampan tour boats visible.

We took a green boat across the harbor and interviewed Aberdeen Local #1 after.

Took a boat tour and interviewed Aberdeen Provider #1.

Tour boat picks up a man from a boat, 5 minutes later brings him to another boat (near engine repair area) to pick up package, and later drops him off at the original location.

Later, we interviewed Aberdeen Local #1.

Departed Ap Lei Chau, by taking a ferry across the harbor.

Departure Time: 2:47 P.M.

Daily Interpretive Analysis:

We observed at Aberdeen Harbour for approximately 3 hours. Almost immediately, a boat was seen taking people around the harbor. We spotted a person waiting at one of the public landing steps, and a small boat approached. We rode this small boat across the harbor and were dropped off at a ferry pier. After getting off of the pier, we ran into Aberdeen Local #1, who directed us to a boat tour. We rode on the tour boat and interviewed Aberdeen Provider #1. Before we left we interviewed Aberdeen Local #2.

Appendix C: Photography

Protocol:

1. All photographs will be taken by a team member's cell phone.
2. Time, date, and location of images are recorded via phone.
3. Ship numbers are logged both via photograph and notebook.
4. Photographs are transferred from phone to computer via USB cord.
5. Photographs are numbered and organized in folders based on location.
6. All personal information, company names, service provider names, codes, and faces, are blurred out using Apple Photos. Personal information is kept only on computer hard drives after transfer from phones. Once the photographs have been properly edited, the original photographs are destroyed. Edited photos are on a google drive folder and provided to Designing Hong Kong and Harbour Business Forum.

Appendix D: Current Water Taxi Type Services

Compilation of vessel photographs from Appendix C. Captions include class of boat, category of boat, location of photograph, and quoted price.

Sampans



Figure 7: Class III sampan, Yau Ma Tei Typhoon Shelter, \$100 HKD per person for within the shelter. (credited to Josie Bradshaw)



Figure 8: Class II chartered sampan, Tsim Sha Tsui. (credited to Josie Bradshaw)



Figure 9: Class III sampan, Shau Kei Wan Typhoon Shelter. (credited to Josie Bradshaw)



Figure 10: Class III sampan, Shau Kei Wan Typhoon Shelter, \$40 HKD per person for within the shelter. (credited to Josie Bradshaw)



Figure 11: Class III sampan, Shau Kei Wan Typhoon Shelter, \$10 HKD per person for within the shelter. (credited to Josie Bradshaw)



Figure 12: Class II sampan, Aberdeen Harbour, \$7.5 HKD per person for across the harbor. (credited to Josie Bradshaw)



*Figure 13: Class II sampan, Aberdeen Harbour, \$37.5 HKD per person for 30 minute tour of harbor.
(credited to Josie Bradshaw)*



Figure 14: Sampan, Shau Kei Wan Typhoon Shelter. (credited to Josie Bradshaw)



Figure 15: Sampan, Sai Kung, \$60 HKD per person for boat tour of four islands. (credited to Josie Bradshaw)



Figure 16: Sampan, Lantau Island. (credited to Paul Zimmerman)

Kaitos



Figure 17: Class I kaito, Aberdeen Harbour, \$2.2 HKD per person for across the harbor. (credited to Josie Bradshaw)



Figure 18: Class I kaito, Sai Kung, \$30 HKD per person for round trip to Sharp Island. (credited to Josie Bradshaw)

Launches



Figure 19: Launch, Sheung Wan. (credited to Connor McNamara)



Figure 20: Launch, Sheung Wan. (credited to Connor McNamara)

Appendix E: Interviews with Harbor Front Locals

Protocol:

1. Interviewees are selected from observation. We are choosing harbor front locals who are available. We are traveling at different times of the day to different locations (Appendix A) in order to encounter a variety of services.
2. We are traveling to various locations in order to encounter different people.
3. We are introducing ourselves as students and we are explaining our project.
4. We are asking to take 5 minutes of their time to interview them.
5. We are not asking for personal information and communicating that we will not use information that could be used to identify them.
6. Interviews will be completed in pairs. One person is the designated interviewer, and the other person is the designated secretary.
7. The interview is administered verbally and the responses are recorded in a private notebook.

Questions:

1. Are you familiar with this particular area of Hong Kong? How long have you lived and/or worked in this particular part or section of Hong Kong?
2. What do you know about any small boats (water taxis) in this area that transport people?
3. Where would I go locally to hire such a small boat or water taxi? (Is there a particular spot to go or someone to call?)
4. Is there anyone else locally you would suggest I speak to regarding local water taxis?

Tsing Yi Maritime Square Local #1 (translated from Cantonese):

1. N/A
2. You can use the MTR. You cannot use those small boats. (pointed to the 10 boats we observed)
3. N/A
4. N/A

Tsing Yi Maritime Square Local #2:

1. N/A
2. No small boats here. (confused)
3. N/A
4. N/A

Yau Ma Tei Typhoon Shelter Local #1:

1. A couple years
2. Yes (pointed to two sampans moving around the typhoon shelter)
3. N/A
4. N/A

Tsim Sha Tsui Local #1:

1. 20 years
2. No small boats, but you can buy a junk.
3. Piers
4. Hotel nextdoor

Tsim Sha Tsui Local #2:

1. 10 years
2. No boats, besides sampans, only the Star Ferry (confused)
3. N/A
4. Sha Tin

Tsim Sha Tsui Local #3 (translated from Cantonese):

1. Working here
2. Boats are not for tourists, only for the construction workers.
3. N/A
4. N/A

Hum Hong Local #1 (translated from Cantonese):

1. I live nearby and walk around here a lot.
2. Kowloon city pier: Small boats as well as ferries. Mostly swimmers using landing steps.
3. Unsure
4. N/A

Hum Hong Local #2:

1. A few months
2. No boats
3. N/A
4. N/A

Sai Kung Local #1:

1. A few years
2. A variety of small boats at the pier
3. Walk down the boardwalk and you'll see a lot of people advertising their service.
4. N/A

Shau Kei Wan Typhoon Shelter Local #1 (translated from Cantonese):

1. N/A
2. Boats in the shelter can take you around anywhere.
3. *pointed* on the western side of the typhoon shelter
4. N/A

Shau Kei Wan Typhoon Shelter Local #2:

1. N/A - boat owner
2. *pointed over to some boats* the blue roofed boats can take you.
3. N/A
4. N/A

North Point Ferry Pier Local #1 (translated from Cantonese):

1. For 4 years on and off
2. Never seen anyone pay for transport off of this pier.
3. N/A
4. N/A

North Point Ferry Pier Local #2:

1. 1 month fishing at the pier for 3-4 days a week.
2. I have seen people to take rides off of this pier.
3. I've seen people call up a driver to go somewhere, and take them to a place, and then pay on the return trip. The situation is really common. They take fisherman out to fish underneath bridges, and other close by or difficult to reach places.
4. Go to the fish market.

Additional question:

How do they know who to call?

Fisherman speak to other fisherman and make friends with one another. Some own boats, or have connections with boats. They call up a connection to take them out to place as part favor/part job.

Central Pier 9 Local #1:

1. 4 years in this area
2. 50 years ago, before the MTR existed, walla wallas would take people across the harbor. Walla wallas would be available at any pier and especially next to the ferry piers.
3. N/A
4. If want to ask locals, go more inland to residential area.

Central Pier 9 Local #2 (translated from Cantonese):

1. 10 years between here and TST (Star Ferry locations)
2. I do not know of anyone that take small ships to get around, i only know of big ships.
3. N/A
4. N/A

Central Pier 9 Local #3 (translated from Cantonese):

1. Fishermen
2. Directed to junk boats, \$160 HKD per head
3. No, I do not know about anything about water taxi services.
4. N/A

Aberdeen Local #1:

1. Yes, familiar with the area 30-40 years.
2. There are a lot of small boats in the area that can take you around Aberdeen Harbour.
3. You just go to the waterfront to hire small boats, there are people looking for business in the waterfront.
4. N/A

Aberdeen Local #2:

1. 20 years
2. There are two types of boats in the area: Ferries and small boats in the typhoon shelter. The small boats in the typhoon shelter are kind of like taxis, but for fisherman. In particular it is not a real business, mostly old guys doing this as a hobby. Can call out to them and will be picked up at steps. Costs around \$5-\$10 HKD. The ones with flags are tourists. \$200 HKD for 15 minutes.
3. Any of the landing steps
4. N/A

Appendix F: Interviews with Water Taxi Type Service Providers

Protocol:

1. Interviewees are selected from observation. We are choosing water taxi type service providers who are available or who offer his or her service to us. We are traveling at different times of the day to different locations (Appendix A) in order to encounter a variety of services.
2. We are asking the provider for verbal consent to use their information anonymously.
3. We are not asking for personal information.
4. Interviews are completed in pairs. One person is the designated interviewer, and the other person is the designated secretary. Notes are written in a private notebook.
5. The interview lasts about 5 minutes.

Questions:

Location

1. Where can you take me?

Cost

2. How much do you charge? (per trip, per distance, per time, per passenger)?

Additional Information

3. Is there anything that we did not ask that you would like to add?

Yau Ma Tei Typhoon Shelter Provider #1 (translated from Cantonese):

1. Where can you take me?

Within the typhoon shelter.

2. How much do you charge?

\$100 HKD per person.

3. How often do you provide this service?

I am a fisherman, so in my spare time take people around for money when i want to help out.

Sai Kung Provider #1:

1. Are there small boats in the area?
Speedboats and Sampans exist depending on where you are going
2. Where can they take us and how much?
\$30 HKD Round Trip to Sharp Island
\$40 HKD to Hap Mun Bay
There is a tour to Yim Tin Tsai for \$60 HKD
3. How many days a week is the ship operating?
Seven days a week.

Sai Kung Provider #2:

1. What small boats do you have to bring people around?
Our service has speed boats and sampans.
2. How much do they costs?
We offer a speed boat private tour that costs \$1000 HKD for 4 people

Shau Kei Wan Typhoon Shelter Provider #1 (translated from Cantonese):

1. Where can you take me?
Within the typhoon shelter
2. How much do you charge?
\$40 HKD per head.

Shau Kei Wan Typhoon Shelter Provider #2 (translated from Cantonese):

1. Where can you take me?
Within the typhoon shelter
2. How much do you charge?
\$10 HKD per person

Aberdeen Harbour Provider #1 (translated from Cantonese):

1. Who and where do you take people?

Many people often ask to call me up to get them around the harbor.

2. How much does it cost?

Cost is typically around \$20 or \$25 HKD, but for some longtime customers there are cheaper rates.

3. Miscellaneous

The woman who approached you to book the service splits the fees evenly between with me.

Appendix G: Table of Observations and Local Interviews

Table 1: Observations and local interviews

Location	Total number of observed water taxis	Number of water taxis that we rode on	Number of interviewed locals	Locals responding with YES there are water taxis	Locals responding with NO there are no water taxis	Type of Boat
Tsing Yi Maritime Square	0	0	2	0	2	-
Yau Ma Tei Typhoon Shelter	2	1	1	1	0	Sampan
Tsim Sha Tsui	3	0	3	0	3	Charter sampan
Hung Hom	0	0	2	0	2	-
Sai Kung	>20	1	2	2	0	Kaito
Shau Kei Wan Typhoon Shelter	4	2	2	2	0	Sampan
North Point Ferry Pier	1	0	2	1	1	Launch
Pier 9	0	0	3	0	3	-
Aberdeen Harbour	>20	3	1	1	0	Sampans & Kaitos

Appendix H: Phone Interviews with Water Taxi Type Service Providers

Protocol:

1. Interviewees are selected from the Chinese Chinese Consumer Yellow Pages. We are choosing water taxi type service providers who are available for interview. Interviews are conducted via phone through a Cantonese translator.
2. We are asking the provider for verbal consent to use their information anonymously.
3. We are not asking for personal information.
4. The interview lasts about 5 minutes.

Questions:

Location

1. Can you take me on a trip from Central to West Kowloon Cultural District?

Cost

2. How much do you charge? (per trip, per distance, per time, per passenger)?

Booking

3. When can I be picked up?

Hung Thai Motor Boat Co (+852)25481132

1. Yes
2. 800 HKD per vessel (small vessel 5-6 people)
3. Call 1-2hrs before the service

Laissez Motorboat Co Ltd (+852)23847428

1. No short trip service
2. N/A
3. N/A

Ming Lee Co (+852)25404161

1. Yes
2. \$800 HKD per vessel (10-20 person speed boat)
3. Call ½ hour before service

Hung Lee Motor (+852)23844617

1. No
2. N/A
3. N/A

Appendix I: Public Interest Survey

Protocol:

1. We are asking six questions to interested persons over a period of 4 hours per location, who will be drawn from three locations: Star Ferry Pier in Tsim Sha Tsui, Pier 9 in Central, and Pier 4 in Central.
2. We are traveling to various locations in order to encounter different people.
3. We are asking the surveyed for verbal consent to use their information anonymously.
4. We are not asking for personal information.
5. Surveys are completed in pairs for safety reasons. One person is the designated speaker, and the other person is the designated observer.
6. The survey is administered verbally and the responses are recorded.

Hello, we are doing a survey for a water taxi system in Victoria Harbour. A water taxi service is an on-demand small boat service. Please take this short survey to help us gauge interest.

Questions:

1. Are you a tourist or a local? (Tourist, Local, Prefer not to answer)
2. Have you ever used a water taxi service? (Yes, No)
 - a. If yes, Where? (In Hong Kong, Outside of Hong Kong, Both)
3. Would you use a water taxi service in Hong Kong? (Yes, No) (Two separate wordings, based on answer to questions on riding before)
 - a. Would you like to use a water taxi service in Hong Kong?
 - b. Would you like to use a water taxi service in Hong Kong again?

4. Please select your preferred route (origin and destination, one for each column)

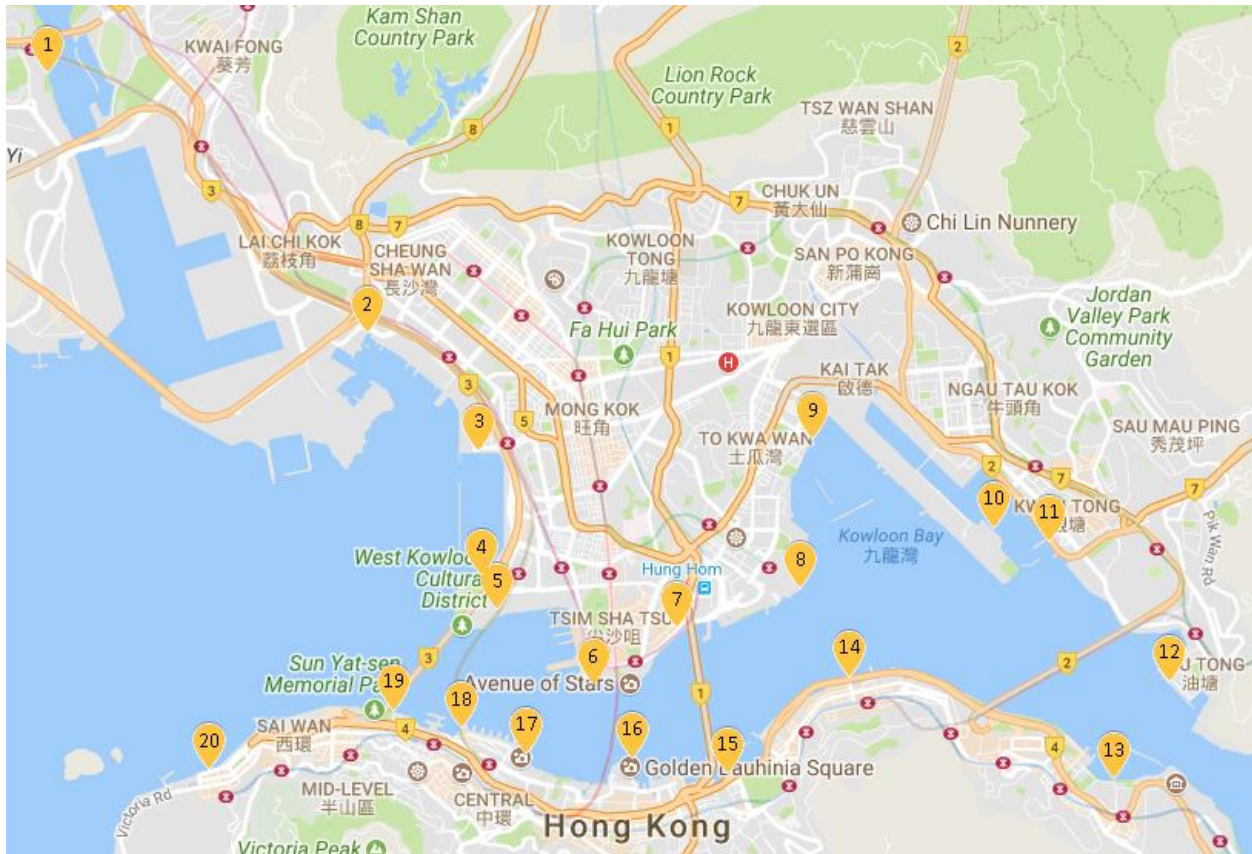


Figure 21: Survey map (adapted from Google, 2018)

5. At what price (in HKD) would you begin to think this route is too expensive to consider?
6. At what price (in HKD) would you think the route is a bargain - a great buy for the money?
7. How would you want to book/hail this service? (Select all that apply)
 - a. Phone Call
 - b. Text
 - c. App-based
 - d. On-site call box
 - e. Physically hailing (waving)
 - f. Other:

Evaluation:

1. Are you a tourist or local?

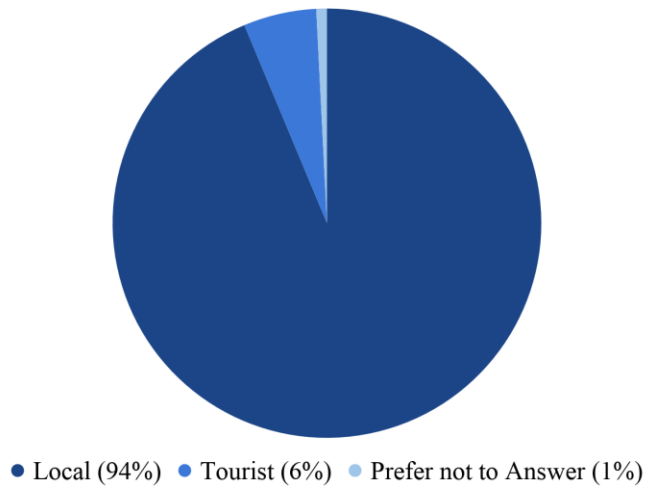


Figure 22: Responses to survey question 1

2. Have you ever used a water taxi service? (Yes, No)

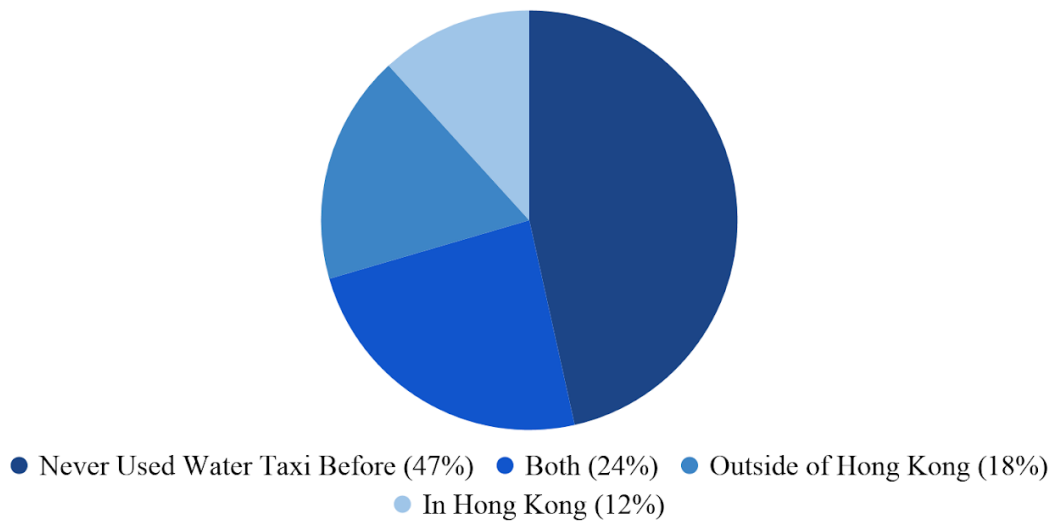


Figure 23: Responses to survey question 2

3. Would you use a water taxi service in Hong Kong? (Yes, No)

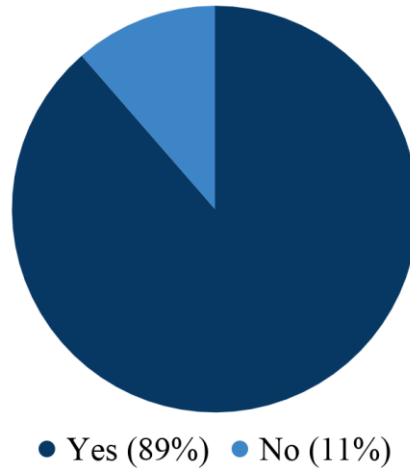


Figure 24: Responses to survey question 3

5. Top 10 preferred routes (32% of respondents chose one of these ten routes)

Table 2: Top ten preferred routes from survey¹

Origin (location marker)	Destination (location marker)	Number of respondents who preferred this route
Central (17)	Tsim Sha Tsui (6)	29
Central (17)	West Kowloon Cultural District (5)	25
Central (17)	Lamma Island (21)	22
Central (17)	Kwun Tong (11)	19
Central (17)	Kai Tak (10)	13
Central (17)	Hung Hom (8)	13
Causeway Bay (15)	Tsim Sha Tsui East (7)	12
Causeway Bay (15)	Tsim Sha Tsui (6)	10
Central (17)	Tsim Sha Tsui East (7)	10
Wan Chai (16)	Tsim Sha Tsui (6)	8

¹ Reverse routes are aggregated, i.e. Central to Tsim Sha Tsui and Tsim Sha Tsui to Central are counted as the same route.

6. Pricing with respect to distance of route

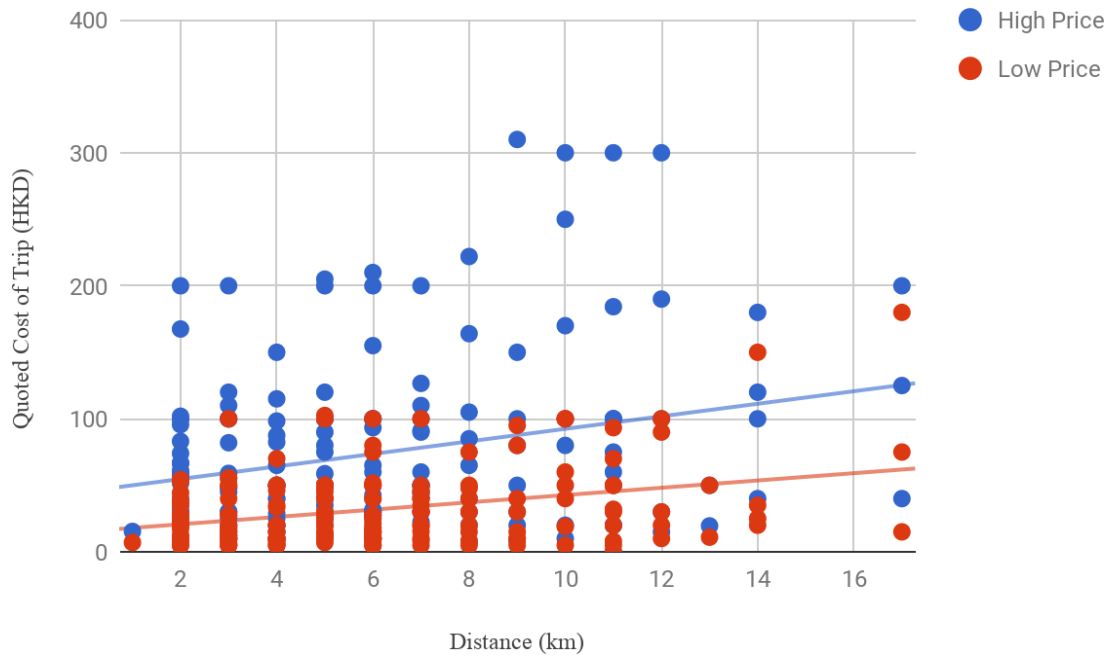


Figure 25: Responses to survey questions 5 and 6

6. How would you want to book this service?

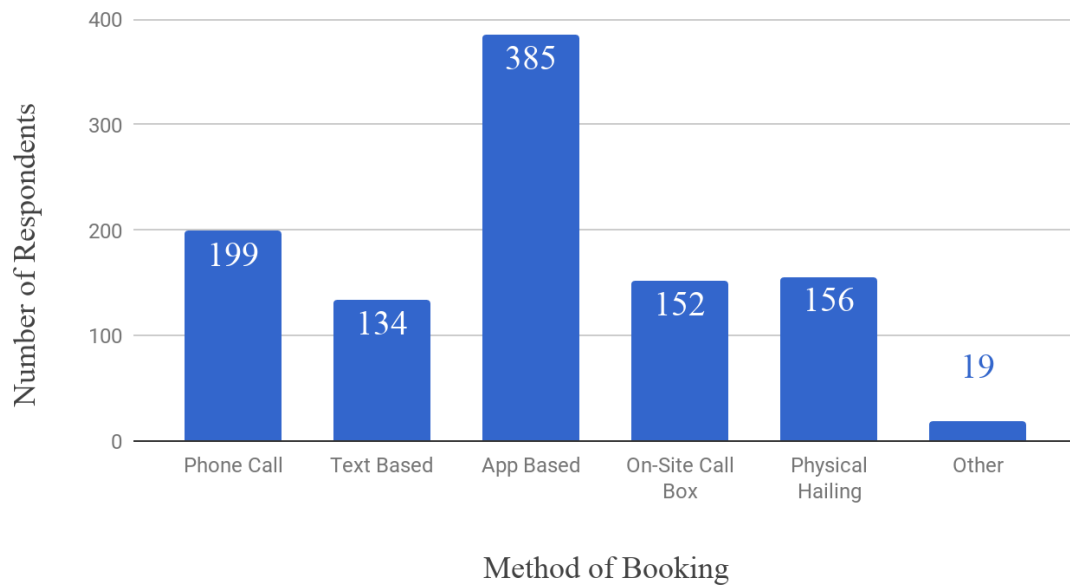


Figure 26: Responses to survey question 7

Appendix J: Interview with Marine Department Authorities

Protocol:

1. Interviews are arranged by email with individuals from the Marine Department.
2. We are asking the interviewee for written consent to use their name, occupation, and information provided. The option of anonymity is available.
3. All four group members are present at interviews. One person is the designated interviewer, two members are designated as secretaries, and the last person is designated to observe but has the option to participate.
4. The interview will take about an hour.

Questions:

Legal

1. What licenses are required to operate a water taxi type service with a small passenger carrying vessel in Hong Kong?
2. What vessel types are allowed to carry passengers in a water taxi type operation?
3. What are the major regulations surrounding the industry?

Safety

4. What are the safety concerns involved with marine transport? (life jackets, etc.)

Additional Information

5. Is there anything that we did not ask that you would like to add?

Summary:

During the meeting with the Marine Department four categories of relevant information were covered: licensure, safety regulations, marine class specifications, and Transport Department regulations.

On the matter of licensing, there are two main Marine Department licenses to consider: the Certificate of Ownership (COO) and the Operating License (OL). The COO is a document which simply registers the owner of the boat and does not have to be kept on their person. The OL grants a person the ability to operate a vessel. The OL is to be renewed on an annual basis, and the Marine Department also performs random unannounced checks to ensure the license validity and the vessel complies with Marine Department regulations.

In regards to these regulations, most of them can be found in the Marine Department Code of Practices. The Code specifies regulations for different ships based on their class, the maximum number of passengers, and a host of other variables. They claim that the Code doesn't offer unreasonable regulations.

The Marine Department divides ships into four classes: Class I is a vessel with unlimited passenger carrying capacity, Class II is a vessel restricted to only 12 passengers or below, Class III is designated as a fishing vessel, and Class IV is a privately owned vessel. Class I and II are the only vessels legally allowed to provide a water taxi service. Class I is typically exemplified by ferries or kaitos, ships which already transfer a large number of people between locations or fixed points. These ships' operations are also regulated by the Transport Department. Class II ships are typically defined as work ships, however, some of these ships exist to transport workers between working ships and the shore (launches and possibly tug boats).

Transport Department regulations do not affect most of Class II, even those which transport people, because these ships have no set destination or set fees. Should the proposed Water Taxi system desire to have a public fee rather than a contract or barter system, then transport regulations would have to be followed and obeyed. Further information can be gained by talking to the Transport Department.

Appendix K: Interview with Transport Department Authorities

Protocol:

1. Interview is conducted over email with individuals from the Transport Department.
2. Questions are italicized and answers are below.

Date: 21 February 2018

Questions and Answers:

1. *Primarily, is the Memorandum regarding the legalities of transporting people correct and proper in regard to Transport Department Regulations? Is there anything lacking, in your opinion, about the Memorandum?*

It is worth noting that there is no universal definition of water taxi. As revealed in Annex B (Research on Water-Taxi Services in Overseas Cities) of the Memorandum, the nature, mode of operation, berthing facilities and regulatory regimes of water taxi services vary from one city to another and. Whether “water taxi” services, if operated in Hong Kong, would be regulated under the Ferry Services Ordinance, Cap. 104 (“FSO”), will depend on the nature and mode of operation.

As stipulated in section 2 of the FSO, “ferry service” means “a service provided by means of a vessel, other than a vessel exclusively propelled by oars, for the conveyance by water of passengers, baggage, goods or vehicles, for reward at separate fares between 2 or more points within the waters of Hong Kong, whether or not such points are varied from time to time and whether or not the service is operated to a fixed timetable” Exception, however, is granted to a tour service, a cargo service, an employee’s service or a permitted service under the section 5 of the FSO. Moreover, section 28 of this Ordinance also set out that the Commissioner may if he thinks fit grant to any person a licence to operate a ferry service between such points as are specified in the licence.

The Transport Department (TD) is vested with the authority to regulate franchised and licensed ferry services under the FSO. Apart from two franchised ferry services, there are at present 23 regular licensed ferry services in Hong Kong. TD exercises close monitoring and control on the fares and service timetables of these regular public services. Also, there are 67 kaito services, which are licensed passenger ferry services. In view that the operation of kaito services is mainly recreational in nature, and have fluctuated passenger demand, TD allows them to have more operational flexibility for maintaining their viability for continual provision of the services.

The licensed ferry services, including “kaito” services, are primarily for public use and operation of these licensed ferry services, including but not limited to route, stopping points and fare, should be strictly adherence to the Schedule of Services issued by the TD. In other words, the suggested ferry service with negotiable fare does not fall within the licensed ferry regime.

In recent years, there have been suggestions that consideration should be given to the provision of water taxi services for facilitating the accessibility of different locations in the Victoria Harbour and to connect tourist and shopping areas on the two sides of the Victoria Harbour. In view of this, the Government would explore the feasibility of provision of “water taxi” in the Victoria Harbour and gauge the views from the potential water transport operators in the market. The Government would make necessary announcement on the provision of “water taxi” should more information is available.

Regarding paragraph 22 on the interpretation of “tour service”, we would like to clarify that according to the section 5(2) of the FSO, “tour service” means a service-

- (a) for the carriage of passengers for reward at separate fares;
- (b) whereby the passengers travel together on a vessel from one or more places of embarkation on a journey that ends at the place or places of embarkation or ends at a place from which transport on land back to such place or places of embarkation is provided as part of the service;

(c) whereby the passengers do not disembark during the journey, or disembark solely for the purpose of activities arranged or promoted as part of the service; and

(d) whereby all the passengers are carried for the greater part of the journey.

In other words, the journey of a “tour service” must not necessarily begin and end at the same place or places of embarkation as mentioned in paragraph 22 if land transport to bring the passengers back to the place or places of embarkation is provided as part of the service.

In attachment of the Memorandum, we note that the paper of “Waterborne Passenger Transportation in Victoria Harbour (“the Paper”) for discussion in the Task Force on Water-land Interface was quoted and referenced. We would like to highlight that a number of facts and figures as quoted in the Paper has been updated. Amongst the other, the Harbour Tower service operated by the "Star" Ferry Company Ltd. is no longer a licensed ferry service. Moreover, a new licensed ferry service between Aberdeen and Cheung Chau has been introduced in 2015.

2. *Secondly, do we understand correctly that each 'separate fare' booked via the Booking Platform Provider would generate one separate charter with the boat owner for that particular trip?*

a. *If these separate fares were to be consolidated into one time frame would that be legal? That is to say, if three people individually booked the service at TST, and then were all picked up by one boat, and then dropped off at their destination- Pier 9-would this still be considered a time charter service, or would this now become a ferry service?*

3. *If two people requested a boat through a Booking Platform Provider, and were then picked up by the same boat, and dropped off at the same location, but the fare was to be negotiated at the end of the trip between the provider and the separate customers, is the service a time charter or a ferry service?*

4. *What if in the above scenario the fares are negotiated before boarding the vessel?*
5. *If a boat simply decides to obtain a licence to become a ferry, and then simply provides an "on demand ferry service," would this be fully compliant with the law?*
6. *If the Booking Platform provider was some sort of exchange (something akin to Uber), matching persons to "on demand ferry services" or true time charter services depending on customer preference, would the Booking Platform be considered part of or a separate ferry service and require its own licence?*

For Q2-Q6, a general reply will be provided below:

We note that the proposed "Booking Platform Provider" system is just a means of reservation for a ferry service. Whether the proposed service would be regulated under the FSO will be subject to the nature and mode of operation. As licensed services should be with fixed routing, amongst the others, for regulatory purpose, services with frequent change of embarkation and disembarkation points should not be regulated under the FSO.

Regarding the question of "on demand ferry services", we would like to point out that there are currently "kaito" services, which are mainly recreational in nature and have fluctuated passenger demand as mentioned above. However, their operation should be strictly adherence to the Schedule of Services issued by the TD and the operators are required to keep TD informed beforehand of any changes to the operation of these services.

For the details of the chartered service, we suggest that Marine Department may be in a better position to provide comments on the matter.

Despite the above, TD would in consultation with other relevant department to consider the case in details should there be any concrete proposal of operating a regular licensed ferry service or kaito service as "water taxi" from the operators, taking into account the availability of berthing points, need for the service and the passenger catchment served, purpose and nature of

the proposed service, availability of alternative services and the possible impact of the proposed service on existing or planned public transport services.

In recent years, there have been suggestions that consideration should be given to the provision of water taxi services for facilitating the accessibility of different locations in the Victoria Harbour and to connect tourist and shopping areas on the two sides of the Victoria Harbour. In view of this, the Government would explore the feasibility of provision of “water taxi” in the Victoria Harbour and gauge the views from the potential water transport operators in the market. The Government would make necessary announcement on the provision of “water taxi” should more information is available.

Appendix L: Interview with Leading Manager of Charter Services

Protocol:

1. Interviews are arranged, method to be determined once in Hong Kong, with individuals from charter services.
2. We are asking the interviewee for verbal consent to use names, occupation, and the information they provide. The option of anonymity is available.
3. All four group members are present at interviews. One person is the designated interviewer, two members are designated as secretaries, and the last person is designated to observe.
4. The interview will take about an hour.

Questions:

Company Structure

1. Please explain the operational structure of a charter service company.
2. Please explain how the service operates on a day-to-day basis.

Legal

3. What are the major regulations surrounding the industry? Marine and Transport Licenses that you have?

Pricing

4. How much do these vessels cost to book? For charter or for a trip?

Additional Information

5. Is there anything that we did not ask that you would like to add?

Summary:

Mr. Kee talked with us about the feasibility of using launches in a water taxi system.

In Hong Kong there are at least 100 vessels which identify as passenger launches. Small launches carry around 12 people whereas the larger ones can carry up 80 people. The launches are stationed all around the harbor. Sheung Wan, Yau Mau Tei, Tuen Mun, and Wan Chai are all areas where launches are found. Most launches are operated by small companies or even individuals, most of whom speak little to no English.

Legally speaking, Mr. Kee states the “law is against them,” for entering into a water taxi business, being that they can only engage in charter services. This implies that they can only take on one passenger “unit” at a time, and multiple passengers cannot be booked together separately. This constitutes a major hurdle in starting up a functioning service according to Mr. Kee because this prevents providers from distributing the large fuel costs amongst several people. Further regulations in Hong Kong regarding the acquisition of new boats are exceptionally prohibitive, which, Mr. Kee believes is essential to starting up a proper water taxi service.

He believes new boats are required because the current boats are all very old and often in poor condition. Further, the many construction projects along the harbor has most of the possible launch captains tied up in contracts preventing them from taking ad hoc side jobs. This has caused a general shortage on available ships in the harbor. Most boats are also very small and the harbor is very rough, and Mr. Kee thinks that larger and more comfortable boats are needed to withstand the waves.

Mr. Kee also says that the majority of launch captains themselves would probably be against signing up for a water taxi service. Most launches seek to have a charter agreement where they are hired out for the entire month by a company. The company then has exclusive rights to the launch and can call them on-demand. Further, many companies are willing to fully pay for fuel costs incurred during the charter. Such a stable situation makes taxi work very unattractive.

Of those that do, the costs are prohibitively expensive for casual use. Mr. Kee stated that to send out his workers from Yau Ma Tei to an anchorage near Lamma Island, a distance of 3 nautical miles or 8 kilometers, and back for work incurred a cost of around \$4000 HKD. Even for trips within Victoria Harbour he implied base costs of \$300-\$400 HKD would not be out of the ordinary. On top that, these boats would have to compete against the currently established ferry services in Hong Kong, services which receive generous subsidies to remain in operation, and to reduce costs. It is thus very difficult for a small boat service to compete cost wise.

Appendix M: Interview with a Representative of Boston Harbor Cruises

Protocol:

1. We will be interviewing Frank Donovan at his office at Boston Harbor Cruises.
2. We are asking the interview for verbal consent to use their information.
3. The interview will be conducted by all 4 team members. Two people are the designated note taker. Notes are written in a private notebook.
4. The interview lasts about 2 hours.

Date: 12 November 2017

Question and Answers:

1. *What is your job description?*

Water Taxi Captain and Operations Manager: Deals with scheduling, training captains, training mechanics. Training Captains entails a 25 ton coast guard license, boating experience, single screw diesel inboard. Spends four hours to a full day showing all the stops on the waterfront as well as undocking and docking. He is one of two captains. The other one is name McDonald.

2. *Where are you originally from?*

Weymouth, Massachusetts

3. *Can you give a brief organizational structure of your company?*

Family owned business. Offshore department, boats for whale watch, ferries, and small boats to take people to island, and water taxis.

4. *How did water taxis come to be in the Boston Harbor?*

Rob McPherson started in East Boston going from the Airport to Long Wharf and to Seaport. Sold the business to BHC and they still own the original boat. He had 8 boats. BHC wants to expand the business in the harbor. McPherson would charge \$10 but \$20 to Charlestown. BHC spreads boats throughout harbor to cut down wait time.

6. *What sparked the need for water taxis?*

Commutative all had to do with the Airport. Mass Port built the water transport docks and provided a free shuttle from the airport (\$12 a ticket). Rob built docks and take advantage of harbor developments and public access docks.

6. *What is the hardest part of your job?*

Scheduling.

7. *What are some daily concerns that must be considered?*

Boats are running 18 hours a day. Engineers dedicated to fixing the boats, and one person to fabrication. Weather. Understanding times, docking and undocking, and transmission.

8. *Please explain the challenges brought from weather*

Six winter boats, one large for 30 people, they are heated.

9. *What are the main concerns in operating the water taxi service? What are some safety concerns?*

Life Jackets are not worn; there have been no accidents, but one must be had for each person. Dispatcher is required to write down all movement documenting destination and origin as well as number of passengers.

10. *What are some of the major regulations surrounding the industry?*

Coast Guard Inspection: they go there to inspect. Qualifications of Captains, check of all safety equipments, man overboard drills, life jackets and inspecting hull.

11. *What external factors affect you? Are there "peak" times or seasons in the business?*

Why? Describe the infrastructure for your business?

Marketing and real estate companies have built six stops and invited BHC to use them. Built for businesses and to improve home values in residential construction. Hotels, have a call director in the lobby or call boxes on site. The Seaport, airport and long wharf, are public docks. Passenger numbers increase every year to year on a month by month comparison.

12. Who are your competitors (indirect and direct)?

Rowes Wharf Water Taxi: One or two boats. Other business to come: City water taxi (bought out).

13. What is your main market? Do you target advertising? Do you also target business practices towards these people? If yes, how so?

BHC has a ferry division which commuters use to travel into the city (schedule based). Some commuters who use the water taxi everyday. Ten ride ticket for 100. A number of new waterfront developments have commuters.

Market changes.

Majority is tourism during the summer. Business travel during the winter. Commuters (lowest amount of people). Many people on travel go out to eat/pleasure.

14. What do you think about the current method of purchasing tickets?

Second year of trying to make IPAD and Bluetooth work in the marine environment. Originally a handwritten chart and log book. Ipads still working on it. Rocket Res is the software company. Still shaky on site. Frustrating of the equipment doesn't work.

15. In summer 2014, when UberBOAT had a 10 day trial at the Boston Harbor, what was your experience with them? How do you feel about UberBOATs?

Uber app seemed to work well.

Appendix N: Table of Existing Landing Facilities in Victoria Harbour²

Table 3: Existing landing facilities in Victoria Harbour in Kowloon and New Territories

	Kowloon & New Territories		
	Marine Structure No.	District	Names of Public Piers and Landings within Victoria Harbour
1*	KP 004	Sham Shui Po	Cheung Sha Wan Landing No. 3
2*	KP 006	Hung Hom	Hung Hom Landing No. 8
3*	KP 007	Hung Hom	Tai Wan Shan Landing
4	KP 008	Hung Hom	To Kwa Wan Landing
5	KP 011	Kwun Tong	Kowloon Bay Landing No. 1
6*	KP 012	Kowloon City	King Wan Street Landing
7*	KP 013	Kwun Tong	Sam Ka Tsuen Landing No. 1
8*	KP 014	Kwun Tong	Sam Ka Tsuen Landing No. 2
9*	KP 015	Kwun Tong	Sam Ka Tsuen Landing No. 3
10*	KP 026	Yau Tsim Mong	Tai Kok Tsui Landing
11*	KP 029	Yau Tsim Mong	Tsim Sha Tsui Landing No. 5
12*	KP 030	Yau Tsim Mong	Tsim Sha Tsui Landing No. 2
13*	KP 036	Yau Tsim Mong	Yau Ma Tei Typhoon Shelter Landing No. 1
14*	KP 037	Yau Tsim Mong	Yau Ma Tei Typhoon Shelter Landing No. 2
15*	KP 038	Yau Tsim Mong	Yau Ma Tei Typhoon Shelter Landing No. 3
16*	KP 039	Yau Tsim Mong	Yau Ma Tei Typhoon Shelter Landing No. 4
17*	KP 040	Yau Tsim Mong	Yau Ma Tei Typhoon Shelter Landing No. 5

² Numbers with ‘*’ indicate the landing facilities that are maintained by the CEDD.

18*	KP 048	Kowloon City	Ma Tau Kok Public Pier
19*	KP 058	Kwun Tong	Kwun Tong Public Pier
20*	KP 070	Yau Tsim Mong	Kowloon Public Pier
21*	KP 093	Tsuen Wan	Tsuen Wan Public Landing (West Rail)
22	KP 099	Yau Tsim Mong	West Kowloon South Landing
23	KP 101	Kowloon City	Kai Tak Landing
24	NP 039	Kwai Tsing	Tsing Yi Area 6 Landing
25*	NP 040	Tsuen Wan	Tsuen Wan area 2 Landing No. 1
26*	NP 041	Tsuen Wan	Tsuen Wan area 2 Landing No. 2
27*	NP 123	Kwai Tsing	Tsing Yi Public Pier
28*	NP 125	Tsuen Wan	Yau Kom Tau Pier

Table 4: Existing landing facilities in Victoria Harbour on Hong Kong Island

	Hong Kong Island		
	Marine Structure No.	District	Names of Public Piers and Landings within Victoria Harbour
1	HP 034	Wan Chai	Causeway Bay Typhoon Shelter Landing No. 8
2*	HP 037	Wan Chai	Causeway Bay Typhoon Shelter Landing No. 7
3*	HP 048	Central & Western	Central Landing No. 10
4	HP 049	Central & Western	Central Landing No. 5
5*	HP 057	Central & Western	Western PCWA Landing No. 1
6*	HP 058	Central & Western	Sai Ning Street Landing No. 1
7*	HP 059	Central & Western	Sai Ning Street Landing No. 2

8*	HP 068	Eastern	Shau Kei Wan Typhoon Shelter Landing No. 10
9*	HP 069	Eastern	Quarry Bay Park Landing No. 1
10*	HP 070	Eastern	Shau Kei Wan Typhoon Shelter Landing No. 1
11*	HP 071	Eastern	Shau Kei Wan Typhoon Shelter Landing No. 2
12*	HP 072	Eastern	Shau Kei Wan Typhoon Shelter Landing No. 3
13*	HP 073	Eastern	Shau Kei Wan Typhoon Shelter Landing No. 4
14*	HP 074	Eastern	Shau Kei Wan Typhoon Shelter Landing No. 5
15*	HP 075	Eastern	Shau Kei Wan Typhoon Shelter Landing No. 7
16*	HP 076	Central & Western	Sheung Wan Landing No. 1
17*	HP 080	Wan Chai	Hong Kong Convention & Exhibition Centre Landing
18*	HP 105	Eastern	Tong Shui Road Pier
19*	HP 137	Eastern	Shau Kei Wan Typhoon Shelter Landing No. 6
20*	HP 142	Central & Western	Sheung Wan Landing No. 2
21*	HP 150	Central & Western	Central Pier No. 9
28*	HP 151	Central & Western	Central Pier No. 10

Appendix O: Recommendation Workshop with Stakeholders

Protocol:

1. We are organizing a workshop composed of representatives from BMT Asia Pacific, Designing Hong Kong, Harbour Business Forum, Harbour Unit (Development Bureau), Harbourfront Commission, Marine Department, Motor Boats and Tug Boats Association, Reed Smith Richards Butler legal firm, and Transport Department.
2. We are presenting our recommendations and guiding a discussion.
3. The workshop will take about three hours.

Attendees:

BMT Asia Pacific (Richard Colwill, Wilson Kwan)

Designing Hong Kong (Paul Zimmerman)

Harbour Business Forum (Margaret Brooke, Cynthia Chan, Jackson Hui, Ian Brownlee)

Harbour Unit [Development Bureau] (Ian Cheung)

Harbourfront Commission (Eunice Mak)

Marine Department (Y.J. Sun, Tony Li)

Motor Boats and Tug Boats Association [MBTA] (Sammy Lee Chi Cheong, Demen Cheung Kwok Wai, Gary Kwok Pui Kit)

Reeds Smith Richards Butler (Cindy Ha, Peter Lee)

Transport Department (Christine Yuen, Anna Yeung)

WPI Water Taxi Team (Daniela Baez, Josie Bradshaw, Marco Interlandi, Connor McNamara)

Date: 22 February 2018

Notes:

Licensing

- The question arises of whether or not water taxis should be fit into the existing legal framework or if the laws should be changed.
 - The response from the team is that the current recommendations are all designed to work within the current legal framework.
 - Lawyers from Reed Smith Richards Butler indicate the memorandum they wrote regarding water taxis was written based on the current legal framework.
 - There are legal grey areas that need to be explored.
 - If there is a central booking system, when there is an accident who is responsible?
 - If there is a ‘finder’ on the harbor front gathering separate groups into one group to get around the inability to have ‘seperate fares,’ then would that be in violation of the law?
 - Possible alternatives they described in the memorandum that require follow up investigation are co-charter agreements and the possibility of publishing zone based routes in the Schedule of Routes required of a Ferry Service Transport Licence.
 - In a co-charter there are multiple charterers and one owner. In theory there is no separate fare issue, however, there are multiple parties required in an agreement making the contract and the resulting legal issues more complicated.
 - Most likely, these alternatives and any other alternatives that will be developed will require the government of Hong Kong to assist in either clarifying the legality of the issue, or in making changes to the law.
 - It is suggested by the lawyers of Reed Smith Richards Butler that an important aspect of the service is legal soundness to not only stay on the right side of the law, but also to provide consumers with peace of mind.
 - There are 235 Class I launches registered in Hong Kong.
 - This does not include kaitos or transportation sampans.

Equipment

- The word standardization is unclear.
 - Marine Department requires safety standards.
 - Market will drive the cleanliness of the vessels. Better phrasing is “fitting vessels for purpose.”
- New boats would cost approximately \$1 million HKD.
 - Speed would most likely need to be around 15-20 knots.
 - If there is a need for exceeding 15 knot speed limit, the service requires a speed exemption for harbor.
- Eastern harbor has become much calmer with the reduction of traffic due to shipping moving to the western harbor.
- Ferry services currently in the harbor could not survive without subsidies.

Harbor Infrastructure

- A major issue with harbor infrastructure is the Protection of the Harbour Ordinance which prevents “anyone from casting a shadow on the harbour.”
 - Most of the attendees agree that the government has an important role to play with regards to infrastructure.
- The current landing steps are designed for mariners, not casual passengers.
 - The government should rethink how landing steps are designed, and who they are targeted for.
- Pontoon piers exist as option for new facilities which do not run afoul of the ordinance.
 - Depending on the type of pontoon pier, questions about regulation under land reclamation ordinance.
 - Those pontoons that are likely to not need an exemption from the ordinance may not be able to survive a typhoon.
 - Those pontoons that can survive a typhoon may be unable to be exempted.
 - Who would build the pontoon piers? After construction, who is responsible for maintaining them?
 - The government needs a response for this.
 - There were once some 30 piers along the Kowloon side of Hong Kong and now there are only ten.
 - These remaining locations are also very inconvenient for residents.
 - The lack of places for ships/launches to anchor inflates costs.
 - A call from West Kowloon may have the closest ship available be in Causeway Bay.

Pricing

- Tourists and locals have different demand profiles (time of day, and use type is different).
 - Potential to raise prices for tourist demand to “subsidize” local commuter use?
- Current launch pricing:
 - \$800 HKD per hour
 - Full day charter: \$600 HKD per hour (8 hours)
 - Launch pricing is by the hour because most costs are calculated by the hour
 - Fuel in particular is priced by the duration of a trip
 - Questions arise on how frequent a trip must become before a ‘published fare’ can be made.
 - MBTA member indicates that if demand is high enough, he is willing to have ‘published fares.’
- A possibility arises that major routes have a published fare, but unique or less popular. Destinations retain the current price quote method.
- Colwill: Nobody likes dynamic pricing.

Booking

- Support in the room was mostly in favor of a mobile application (70% of people want this).
 - A member from the MBTA is exploring developing a mobile application.
 - The application is not meant for broad commercial use, however, and more for their usual customer base.
 - The lawyers from Reed Smith Richards Butler raise questions on the legality of a mobile application.
 - Most importantly, questions of liability arise.
 - Is the phone/app considered a contact point or a contract?
 - Whether it would considered a contact point or a contract will probably depend on a case by case basis.
 - The application may also legally be considered as a type of contract.
- Phone numbers exist for almost all the launches, but most of the general public cannot easily access them.
 - Paul offers his website to begin posting launch phone numbers.
- Physical waving is currently the primary form of hailing in the typhoon shelters.

Marketing

- Marketing is another area where the government can help.
 - MBTA members expressed frustration over government regulations preventing them from setting up their kiosks on the waterfront.
 - In the old days this was how boats gathered business.
 - Other MBTA members thought the government should make a large push in this area to advertise abroad to promote the harbor and Hong Kong, as well as making regulations surrounding boat design and color to help advertise.
- The nature of the waterfront is changing.
 - Tourist attractions will be on the waterfront as well as new commercial and residential areas.
 - The development drives the demand.
- Addition of flags to the boats should be done as soon as possible.
 - Generating a more unified image is crucial to recognition for the consumer.

Appendix P: Phased Process Recommendation

Table 5: Phased framework

	Phase 1	Phase 2	Phase 3
Licensing	Charter service	Kaito on-demand	Amended license regime, New water taxi licence
Equipment	Existing vessels	Vessels fitted for purpose	New water taxi vessels
Harbor Infrastructure	Existing landing facilities	Pontoon piers	Upgraded existing landing facilities, Additional landing facilities
Pricing	Bargained prices, Quoted prices	Published fares, Quoted prices	Dynamic pricing
Booking	Physical hailing, Phone call	Phone call, Text message, Simple mobile application	Mobile application, On-site call box, Online booking, Phone call, Text message
Marketing	Flyers, Word-of-mouth	Social media, Flags on boats, On-pier postings	Website, Brochures, Uniform paint and flags on the boats, Kiosk at piers

Phase 1

Licensing:

Charter services

- Marine licensure required to operate
 - Certificate of Ownership (COO)
 - Document which registers the owner of the vessel
 - Operating License (OL)
 - This license grants the owner the ability to operate a vessel
 - This license must be renewed annually
- Can only accept one fare/passenger unit at a time
 - No “separate fares,” therefore no transport licensure required

Equipment:

Existing vessels

- Class I and II vessels currently operating as water taxi type services
 - I.e. sampans in Aberdeen, launches in Victoria Harbour, kaitos in Sai Kung

Harbor Infrastructure:

Existing landing facilities

- Public landing steps and piers located around Victoria Harbour, and Hong Kong.
 - Currently 50 public landing steps in Victoria Harbour

Pricing:

Bargained prices

- Payment is agreed upon between the provider and customer
 - There is no official set price or public listing
 - Operator may charge different people different amounts

Quoted prices

- Price is quoted by the provider to the customer based on the nature of the trip
 - I.e. current launch charter services

Booking:

Physical hailing

- Vessels are flagged down by individuals or groups

Phone call

- Service providers may be called up in advance for pick up
 - Phone booking is not organised at this phase

Marketing:

Flyers

- Individual vessel owners distribute flyers to advertise their service

Word-of-mouth

- Knowledge of the service is spread through word-of-mouth through the community

Phase 2

Licensing:

Kaito on-demand

- Marine licensure required to operate
 - Certificate of Ownership (COO)
 - Document which registers the owner of the boat
 - Operating Licence (OL)
 - This licence grants the owner the ability to operate a vessel
 - This licence must be renewed annually
- Transport licensure required to operate
 - Ferry Service Ordinances licence (FSO licence)
 - The FSO licence is required in order to take on several passenger groups at once
- The kaito on-demand service is able to pick up multiple passengers

Equipment:

Vessels fitted for purpose

- Class I and II vessels currently operating as water taxi services, with the addition of standards beyond government regulations
 - I.e. cleanliness and accessibility

Harbor Infrastructure:

Pontoon piers

- The addition of temporary installments to the waterfront (R. D. Colwill, W. Kwan, & M. Curthoys, personal communication, February 8, 2018)

Pricing:

Published fares

- Service prices are predetermined and publicly available

Quoted prices

- Price is quoted by the provider to the customer when the route is not part of the listed
 - I.e. current launch charter services

Booking:

Phone call

- Service providers may be called up in advance for pick up
 - Phone numbers are publically available and organised

Text message

- Send a text message to hail the service.
 - Example: text “hkwatertaxi” with your location to hail a water taxi

Simple mobile application

- A mobile application that aggregates contact information for providers

Marketing:

Social media

- Use of social media (i.e. Facebook, WeChat, etc.) to advertise information regarding the service

Flags on boats

- Flags added to vessels operating on the service for identification

On-pier postings

- Individual vessel owners make postings or advertisements on or near the waterfront

Phase 3

Licensing:

Amended license regime

- Current charter licensing that allows separate fares without transport license
- Current kaiti on-demand licensing that allows freedom of routes

New water taxi licence

- Licence created specifically for a water taxi service

Equipment:

New water taxi vessels

- Class I or II vessels designed and purchased for the purpose of operating as a water taxi type service

Harbor Infrastructure:

Refurbished or additional public landing facilities

- Renovation of current landing facilities to better fit this service
- With the completion of new harbor front development projects, new public landing steps would be constructed

Pricing:

Dynamic pricing model

- Demand-based pricing: a higher than normal demand creates a temporary increase in prices

Booking:

Mobile application

- Mobile application (similar to Uber) to hail the water taxi through an app connected to the provider
 - Tracks the boat location, time and cost of trip

On-site call box

- On-site call box with radio or phone to connect directly to dispatcher or the provider

Online booking

- The service can be booked online via a website

Phone call

- Service providers may be called up in advance for pick up
 - Phone numbers are publically available and organised

Text message

- Send a text message to hail the service.
 - Example: text “hkwatertaxi” with your location to hail a water taxi

Marketing:

Website

- Company website with information regarding where you can get the service, pricing, and how to book it

Brochures

- Printed brochures for distribution at tourist destinations, hotels, and public places

Uniform paint and flags

- Easily identifies the service, similar to the land taxis and public light buses

Kiosk at piers

- An advertisement stand at the piers