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**Competitive Strategy and Master Plan to Strengthen  
Hong Kong's role as the Preferred  
International and Regional Transportation and Logistics Hub**

**Master Plan Bridging Project: Executive Summary**

**Background**

The Study of the Competitive Strategy and Master Plan to Strengthen Hong Kong's role as the Preferred International and Regional Transportation and Logistics Hub (the Master Plan) completed by McClier Corporation in September 2001 addressed physical, cyber, regulatory and human resource issues for promoting Hong Kong's logistics development. In terms of physical infrastructure, the Study recommended four projects which should be pursued in the short-term to gain an immediate benefit. These included:

- logistics platforms;
- a logistics pipeline to the eastern Pearl River Delta region (PRD) utilizing the KCR Port Rail Line;
- logistics pipelines to the eastern PRD utilizing road transport; and
- a logistics pipeline utilizing either a dedicated high speed boat or high speed Ro-Ro boat to the western PRD.

2. In considering these four projects, the Hong Kong Logistics Development Council found it necessary to define more clearly their characteristics and financial viability. The Master Plan Bridging Project (Bridging Project) was therefore commissioned in March 2002 to define and quantify the characteristics, costs, and economic benefits of the four projects. It made an initial evaluation of the financial feasibility of the projects, prioritised them to help maximise benefits with limited capital investment over a short period of time, and identified issues critical to the implementation of the Hong Kong Logistics System (LogSYS) (comprising of logistics pipelines and platforms as detailed in Figure 1) as part of the Master Plan. The Bridging Project was completed in December 2002.

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3. In order for Hong Kong to compete as a logistics and transportation hub on a regional and international basis with the required efficiencies, the individual projects should not be implemented in isolation.

## **Individual Project Evaluations**

### ***Logistics Platforms***

#### **Development of Inland Freight Villages (Project 2.1 in Table 1)**

4. The creation of inland freight villages within the PRD has the objective of serving as collectors of freight originating from the surrounding catchment area. The success of the project involves the following key requirements:

- The search for a piece of land with an area of 20 to 30 hectares and within 30 minutes drive (north) from the boundary;
- Liaison with Mainland authorities in obtaining the necessary licenses and securing on-site Customs presence; and
- Dedicated express lanes at the boundary to ensure smooth crossings.

Assuming that a site of around 30 hectares was available for creating an inland freight village, the total capital expenditure would be around HK\$300 to HK\$330 million, returned over a 10-year period.

5. As compared to the average haulage charge of HK\$3,000 from Dongguan to Kwai Chung by a Hong Kong-based drayage company, the haulage charge from a Dongguan factory to an inland freight village and from there to Kwai Chung would be HK\$500 by a Mainland drayage company and HK\$1,000 by a Hong Kong-based drayage company, which will be able to turn around its cross boundary trucks more quickly by servicing a designated inland freight village), adding up to a total cost of HK\$1,500 only. The reduction in overall cost and improved connectivity to the PRD catchment would help safeguarding the flow of cargoes through Hong Kong. However, it is important to ensure that the savings would be passed on to the customers and not only going to the stakeholders as extra profit margin.

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### Development of Pinghu Inland Port and Freight Distribution Centre (Project 2.2 in Table 1)

6. The Pinghu Inland Port and Freight Distribution Centre is a rail motivated project which would be complimentary to the Port Rail Line Project (see paragraphs 26 to 28 below). It would act as a logistics platform where changes in mode of transportation, consolidation/deconsolidation of goods and other processing activities could occur.

7. It is assessed that the capital cost associated with this project, including the cost of land for a site size of 40 hectares, would be approximately HK\$330 million. The location also possessed the potential for a real estate development focused on logistics operations to offset some of the cost for the infrastructure requirements.

### Development of Cross Boundary Freight Village (Project 2.3 in Table 1)

8. In the course of the study, an area to the east of Lok Ma Chau (LMC) has been identified as suitable for the development of a cross boundary freight village (CBFV). Since the site is located along the boundary between Hong Kong and Shenzhen, it would be possible for goods vehicles to enter the site from both sides without “crossing” the boundary.

9. It is estimated that the total capital expenditure would be around HK\$200 million. While the CBFV could greatly relieve traffic congestion at LMC, it could not be in operation until late 2005. However, with the Shenzhen-Hong Kong Western Corridor due for completion in 2005, the need for this project would be reduced.

### Development of Tai Ho Value Added Logistics Park (VALP) (Project 2.4 in Table 1)

10. The further development of the Hong Kong International Airport (HKIA) value added logistics platform involves the provision of sufficient space for freight related activities, which includes:

- Providing a secured operating environment connected to other locations on the Airport Island and other logistics platforms such as the Kwai Chung-Tsing Yi (KCTY) VALP;

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- The establishment of an air cargo express hub incorporating time critical and time definite activities, which provide air cargo express services in Hong Kong and the PRD; and
  - The creation of a multimodal capability including integrated sea, river and land linkages, incorporating the development of high-speed boat links.

11. The creation of a VALP at Tai Ho would provide an extension of the HKIA logistics platform with a focus on time critical activities. This VALP involves the reclamation and development of a portion of land at Tai Ho which would provide its users with an operational capability and advantage superior to that presently existing. According to an initial evaluation commissioned by the Airport Authority (AA), a similar development at Tung Chung East was shown to be financially viable (“Preliminary Feasibility Study on Logistics Park Development at Tung Chung East” by City Planning Consultants Ltd (around August 2001)). This evaluation was based on the assumption that the Government would meet the cost of forming the site platform and related infrastructure. It also assumed realistic but attractive rentals for individual value added logistics facility sites and a market take-up of 1,000,000 m<sup>2</sup> of Gross Floor Area over a 5-year period.

12. According to the initial evaluation commissioned by the AA, the cost to the Government for this development (site formation/ reclamation/ infrastructure/ community GIC facilities) would be around HK\$1,550 million. It is believed that this project would be best developed in conjunction with the AA in order that the necessary integration of its operations with that of HKIA could be realised in full. Its financial success is, however dependent on achieving the associated market absorption rate. It is expected that this could be achieved on a medium term basis as assumed in the initial evaluation commissioned by the AA.

13. Similar ventures in other countries such as the Dutch Distriparks and the Alliance in Texas have shown to be attractive and beneficial. It would help enhance existing infrastructure to achieve the synergies and efficiencies needed for Hong Kong to continue its involvement as part of the global supply chain.

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## Development of KCTY VALP (Project 2.5 in Table 1)

14. The creation of a VALP at KCTY is dependent on the creation of the KCTY logistics platform, which involves the improvement of the operational area serving and surrounding Container Terminals 1 to 9, including:

- Provision of a secured perimeter ring road on the periphery of the site to handle origin/destination traffic;
- Reservation of land adjoining CT9 for the establishment of value added logistics and security motivated activities; and
- Creation of a multimodal capability including integrated sea, river and land linkages, incorporating the development of a Ro-Ro/high-speed boat terminal.

The capital value of creating the KCTY logistics platform would be approximately HK\$200 to HK\$300 million in the first phase (first three years), then increasing to a cumulative total of HK\$800 to HK\$900 million by the end of the fifth year.

15. In respect of the creation of a VALP at KCTY, an evaluation of the financial attractiveness showed that this venture would provide a return of around 15%. This is lower than the expectations of the private sector given the associated risks. In addition, if the VALP is to be developed on a standalone basis, and not as part of LogSYS, such risks would be heightened.

16. Therefore, it could not be expected that such a venture be financially attractive to the private sector since its benefits are primarily strategic or economic.

## ***Road Pipelines: Express Truck Feeder*** (Project 1.1 in Table 1)

17. The bulk of freight transported from the PRD to Hong Kong arrives in container trucks. The creation of fast track road pipelines aims at achieving improved efficiencies in the movement of freight by truck primarily by providing a seamless boundary with little likelihood of physical inspection of goods other than at one or other ends of the road pipelines.

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18. The Hong Kong Air Cargo Industry Services Limited (HACIS) has already established a number of their own fast track pipelines. The first of these has its northern node at Guangzhou Airport and its southern node at Hong Kong Air Cargo Terminals Limited's (HACTL) SuperTerminal at HKIA. The pipeline is currently providing northbound service only. The arrangement is that the Customs and Excise Department could inspect the goods at any time but is in fact selecting items for inspection at SuperTerminal before the lorry begins its journey. The lorry would then be cleared and sealed. It could then proceed through the boundary control point at LMC without further inspection. Mainland Customs at Huanggang might reseat the lorry and it would then proceed through to its destination at Guangzhou or HACIS's other approved termini for full Mainland Customs clearance. There is a recognised need for a similar working model for southbound trips.

19. The congestion problem at LMC/Huanggang is also attributable to the large volume of empty container traffic. The "four-up-four-down rule" is identified as one of the reasons for this, which could generate as much as 25% more container traffic than necessary for the physical transfer of goods.

### ***Waterborne Pipelines*** (Projects 1.2.1 to 1.2.4 in Table 1)

20. The creation of waterborne logistics pipelines has the objective of creating point-to-point service between Hong Kong logistics platforms and specific logistics gateways within the catchment areas. These gateways further serve as collectors of freight originating from the surrounding catchment areas. The waterborne pipelines would focus on providing improved time critical and time definite services as part of the LogSYS. As part of the operational analysis, consideration was given to –

- Traditional Ro-Ro services (Project 1.2.1) for the movement of containers and trailers. The speed of this category of vessels ranges from 10 to 22 knots and they have a carrying capacity ranging from 25 to 250 TEUs/trailers or more;
- Ro-Ro express feeder services (Project 1.2.2) use aluminium catamaran hulls, with speed ranging from 30 to 45 knots and a carrying capacity from 30 to 40 TEUs/trailers;

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- High Speed Boat services (Project 1.2.3) connect specific logistics gateways within the PRD with the VALPs and/or the airport. The speed of this category of vessels would be up to 36 knots and have a carrying capacity of 30 to 40 TEUs; and
  - Air hub feeder services (Project 1.2.4) provide service at a speed of up to 36 knots and the movement of 40 Unit Loading Devices (ULDs). As an extension of an air service, the services connect the airport with specific logistics gateways within the PRD.

21. Given the associated costs of the vessels and the uncertainty on the rate of market capture, the creation of a traditional Ro-Ro operation as part of the LogSYS, linking Hong Kong with a location in the Western PRD, was determined to be the most financially attractive of four waterborne alternatives.

22. This project would make use of the Ro-Ro/high-speed boat terminal to be created at KCTY, at an approximate cost of HK\$80 million, as part of the logistics platform and a terminal to be utilised at an existing port in the Western PRD.

23. The financial attractiveness of this project to the private sector would be dependent on the required level of market capture while achieving the needed levels of operational efficiency. This would be facilitated by the ability to move goods as part of an integrated process from the factory of origin till the container is loaded onto the container vessel at KCTY.

24. While the waterborne feeder could be let as a concession, consideration must be given to identifying a suitable gateway location and addressing the concern of potential rate of market capture. This could be overcome by providing “minimum movement guarantee” to their operators.

25. The amount of Government participation would be limited to expenditure focused on locating and establishing the gateway in the PRD. This is additional to the expenditure for the provision of associated capabilities as part of the LogSYS at a cost of approximately HK\$20 to 30 million.

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***Rail Pipelines: Port Rail Line – Traditional and Intermodal*** (Project 1.3.1 and 1.3.2 in Table 1)

26. It is assessed that approximately 70 to 80% of Hong Kong's freight has Guangdong as its origin/destination, which is within a 300 to 400 km radius. Within such a distance, traditional rail is not considered as cost effective. However, in order to reduce congestion at ports and border, the intermodal port rail line concept is advocated.

27. The provision of a dedicated rail feeder to Pinghu as part of an intermodal operation focused on the PRD will have the following principal benefits:

- Expanding the capacity of the existing container terminals by providing a back-of-port capability;
- Facilitating cross boundary movement of freight while reducing road congestion;
- Providing a facilitated gateway and entry point to the LogSYS; and
- Acting as the means to provide future container block train movement into Western and Central China.

28. To achieve these benefits, the Government would be required to make a strategic investment in creating a new entity to implement and operate the venture. The expected cost would be in the region of HK\$3,500 million. This investment would offset part of the high capital costs for the creation of a port rail link to a congested port location. The level of such a contribution could be determined on the basis of a feasibility study, business plan and market analysis presently being conducted by the KCRC. (Post study note: The KCRC study found that the Port Rail Line project was not viable.)

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## **Macro-benefits Evaluation**

29. As a result of the complexity of the issues that need to be addressed in order to implement an initial list of target projects, a prioritisation of the merits of individual projects is required. As part of this macro-benefits evaluation, consideration must be given to issues such as:

- **The capital cost implications** of the project as a public sector expenditure;
- **The strategic and/or economic value** which can be derived for Hong Kong;
- **The immediate value to Hong Kong’s competitiveness**;
- **The business viability** of the project for implementation on a “private sector only” basis; and
- **The schedule of delivery** of the project.

30. Quantification of these issues as part of this analysis has the objective of facilitating the Government’s assessment of the characteristics, costs and economic benefits of the individual projects which are being considered as part of the short term implementation plan. This macro-evaluation is then complimented by an evaluation of the individual financial and economic benefits of the individual projects.

31. Making use of a rating system from 0 to 10, where 10 provides the highest benefit or attractiveness, with the lowest level of resources and a weighting system reflecting the relative importance of the individual criteria, the more attractive individual projects on a macro level (see Table 1 for details) are:

- Express Truck Feeder;
- Inland Freight Village;
- Tai Ho VALP; and
- KCTY VALP.

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32. Bundling of these projects will significantly impact the attractiveness of individual projects and so the packaging is also important to the decision making process. If the target projects are to achieve the desired synergies and benefits and thereby improve Hong Kong's competitiveness, their implementation must be as part of an integrated programme.

33. It is important to recognise that some individual elements of this programme cannot be implemented as commercially feasible business enterprises due to the need to address overarching operational and strategic issues – also critical to the success of the programme as a whole.

### **Implementation**

34. The Master Plan (2001) determined that time was of essence for Hong Kong to retain its role as a transportation and logistics hub. It further determined that a short list of critical projects be implemented in the immediate future, with a maximum of a two-year time frame.

35. The implementation phase of the projects is proceeding with Government acting as a promoter and facilitator of the projects. The onus has been on the private sector to champion individual projects or elements of the plan. As a result, the implementation of the projects has migrated towards becoming a “volunteer programme” involving both private and public sector participants and numerous advisory committees.

36. While Government departments have been expected to dedicate resources and/or funds to participate in the implementation phase of the projects, their involvement in this initiative is often secondary to their core activities. Similarly, the private sector's involvement has also been secondary with their primary objective being to maximise their individual competitive advantage and profitability.

37. The project implementation effort in its present form does not have the organisational structure and ability to fast track the critical projects. Therefore, the creation of a Special Purpose Vehicle (SPV), with the implementation of the Master Plan as its primary goal, as a funded dedicated entity to implement the critical elements of the Master Plan, whereby individual projects can be implemented with a focus on creating the LogSYS, is considered desirable.

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38. This SPV would be a not-for-profit entity funded by Government and other strategic partners, with an overarching purpose to develop and implement the Master Plan on a fast track basis. The SPV would then participate in projects of various ventures or enterprises with direct, indirect or social investments. Individual ventures would in turn involve different participants or stakeholders that would reflect their financial, strategic or social focus. They could utilise different funding mechanisms and guarantees as appropriate to the level of financial attractiveness.

39. The SPV will need to provide the initial “seed capital” for the development of the individual ventures or projects. With this model, the SPV would promote and participate in various ventures, with alternative levels of profitability, while meeting the overarching objective of creating the logistics gateway as a catalyst for economic development.