CHAPTER 6

FINANCIAL MATTERS ADVISORY GROUP'S RECOMMENDATIONS

(**Important Note**: All figures shown for the financial analysis in Sections 6.1 to 6.6 are in terms of net present value at year 2006 unless otherwise indicated.)

6.1 Background

6.1.1 The role of the FMAG is to advise the Consultative Committee on the financial implications of developing and operating the arts and cultural facilities recommended by the other two advisory groups. To facilitate the work of the FMAG, HAB appointed GHK (Hong Kong) Limited as the Financial Advisor (FA). The FA has conducted a detailed financial study to assess the financial implications of the WKCD project.

6.2 Guiding Principles, Constraints and Limitations

6.2.1 The FMAG has undertaken its work in accordance with the following guiding principles -

(a) develop a world-class integrated arts and cultural district to meet public aspirations;

(b) continue designating the project area on the West Kowloon Reclamation for the development of a Cultural District;

(c) explore Public Private Partnership (PPP) in taking forward the WKCD project with a view to bringing in market creativity and vibrancy; and

(d) set up an independent statutory body to take forward the WKCD project.

Development Parameters

6.2.2 In response to public views, the Government proposed in October 2005 additional development parameters ("the October 2005 Package") for the WKCD project under the IFP process. The FMAG was tasked to assess the financial implications of the proposed arts and cultural facilities strictly on the basis of these development parameters which include the following -

(a) setting the maximum overall plot ratio for the whole WKCD site at 1.81, giving a total GFA of about 726 000 m^2; and

(b) capping the residential development at no more than 20% of the total GFA of the WKCD.

6.2.3 In addition, new building height restrictions for developments in the WKCD have been proposed by the Planning Department on the basis of Chapter 11 of the Hong Kong Planning Standards and Guidelines (HKPSG) promulgated in November 2003. The proposed building height restrictions range from 50 to 100 metres PD (principal datum) and have been taken as part of the development parameters for the purpose of financial assessment. These proposed building heights are more stringent than those in the IFP (launched before Chapter 11 of the HKPSG was promulgated) which allowed building heights of up to 130 metres PD under the Canopy and further building height flexibility at the Commercial Gateway outside the Canopy.

6.2.4 In carrying out its task, the FMAG had to operate within two major constraints. First, the CACF facilities to be provided in the WKCD should be based on those recommended by the PATAG and the MAG (i.e. the expenditure side). Secondly, the development parameters (i.e. upper plot ratio limit, GFA cap on residential land use, etc.) should be based on those contained in the Government's October 2005 Package (i.e. the revenue side).

6.2.5 In estimating the costs and revenues of developing and operating the CACF, the FA has made reference to relevant local facilities as well as comparable overseas facilities. The FA has worked closely with HAB and relevant bureaux and departments in coming up with very detailed assumptions underlying the estimation of the capital costs and the operating costs and revenue of the various facilities of the WKCD. It is also important to note that, at this stage, without any master layout plan (MLP) for the WKCD, designs of the various facilities, framework of future mode of operation of the facilities, or any specific PPP arrangements to be adopted, the assessment of the financial implications inevitably had to be conducted on the basis of a number of key assumptions. As such, the estimated financial implications presented in this report should be considered in this light. The estimates will need to be adjusted in the context of detailed planning and in the light of changing circumstances.

6.3 Methodology of Financial Analysis, PSI Scenarios and PSC

6.3.1 The Net Present Value (NPV) approach has been adopted in appraising the project cash flows over a project period of 50 years. This method uses discounted cash flow techniques to calculate a present day value equivalent of the overall cost, allowing easy comparison between facilities or procurement options. The NPV approach is considered the most suitable approach for assessing the financial implications of the project which spans over a long period of time and for comparing the results between different facilities.

6.3.2 Two development approaches have been adopted by the FA in exploring possible private sector involvement (PSI) scenarios. The first one treats the arts and cultural facilities and transport and communal facilities as financially separate from land sales, i.e., an unpackaged development approach. The second approach seeks to package some arts and cultural facilities and infrastructure facilities with commercial and residential developments, i.e., a packaged development approach. Under these two approaches, three PSI scenarios combining a range of alternative procurement options for individual facilities were tested in the financial assessment.

PSI Scenarios under the Unpackaged Development Approach

6.3.3 Two PSI scenarios under the unpackaged development approach have been considered -

Scenario 1A

6.3.4 Under this scenario, the private sector would design and build the CACF and communal facilities to agreed price and specifications under Design and Build (DB) contracts let by the public sector or the future WKCD Authority. This is the conventional mode adopted for delivering Public Works Programme projects. The operation, maintenance and management (OMM) of the completed facilities would be undertaken by different private sector parties to specified level of performance under OMM contracts let by the public sector or the WKCD Authority, i.e. the outsourcing mode. Maintenance of engineering works, such as drains, is assumed to be undertaken by relevant Government departments.

6.3.5 There would be no private sector financing involved and no use of land to directly subsidize development and operation of CACF and infrastructure facilities under this scenario. This is the scenario where the cost of developing and operating the CACF would be most transparent; it transfers the least risk to the private sector.

Scenario 1B

6.3.6 Under this scenario, the private sector would build and maintain most of the CACF to specified conditions and service level under Design-Build-Finance-Maintain (DBFM) contracts let by the public sector or the WKCD Authority. Upon completion, the private sector would operate the CACF and communal facilities under Operation and Management

(OM) contracts. Maintenance of engineering works is assumed to be undertaken by relevant Government departments.

6.3.7 Like Scenario 1A, there will be no use of land to subsidize development and operation of the facilities under this scenario. But it is comparatively more aggressive in terms of risk transfers; the public sector does not have to pay upfront for the costs of designing and constructing the designated performing arts facilities but will pay the private sector through regular payments.

PSI Scenario under a Packaged Development Approach

6.3.8 Under this scenario (Scenario 2), proceeds from land sales are directly used to subsidize the development and operation of some facilities. As the cost of developing and operating those packaged CACF is met through a reduced land premium, the drawback of this scenario is the lack of transparency. This might give rise to accusation of Government circumventing LegCo or transferring interest to the private sector, both were indeed major criticisms against the IFP.

The Public Sector Comparator

6.3.9 As a reference case, a public sector comparator (PSC) has been constructed by the FA as if the WKCD project were to be financed, owned and implemented by the public sector. A PSC is usually produced for comparative purposes, as part of a procurement exercise. Importantly, the PSC is not necessarily the public sector undertaking all activities such as building construction. Rather it is the risk adjusted cost of public sector procurement practices. In Hong Kong, these include contracting out some services including building design, building construction, and services such as cleaning and security to the private sector.

6.3.10 Experience overseas indicates that a PSC cannot be calculated accurately. Insofar as the current practice in the United Kingdom and Australia where a PSC is drawn up, this is increasingly used as a reference tool only. It should be realized that the PSC is merely one of a number of assessment tools which may be used in preparing for a PPP approach to the delivery of services but not a pass/fail test.

6.4 Estimated Capital Costs and Operating Deficits over the 50-year Project Period

6.4.1 The estimates of the capital costs and operating deficits by the FA are based on the following assumptions on development and operation programme -

Year(s)	**Development/Operation Programme**
Phase 1:	
2008	Establishment of WKCD Authority
2008–2009	Completion of master layout plan by the WKCD Authority
2010	Commencement of the 50-year project period – land sale – design competition for **M+** and commencement of detailed planning, design and construction of other facilities
2015	Completion of construction of all Phase 1 CACF, OACF, transport and communal facilities and engineering works
2014 onwards	Operation of various arts and cultural facilities in stages
Phase 2:	
2022–2025	Planning/design of phase 2 performing arts facilities and construction of these facilities
2026	Operation of phase 2 performing arts facilities commences
2028–2030	Detailed planning/design and construction of phase 2 **M+**
2031	Operation of phase 2 **M+** commences
2059	End of 50-year project period

6.4.2 The estimated capital costs include the following -

(a) capital costs of the CACF recommended by the PATAG and MAG, and OACF, transport and communal facilities and engineering works; and

(b) operational costs of the future WKCD Authority from 2008 till 2015 when the Phase 1 CACF are completed, including the masterplanning costs during the period 2008-2009. For financial assessment purpose, these operational costs are capitalised and treated as capital costs so as to distinguish them from the operational deficits during the operation period of the WKCD.

6.4.3 The operating deficits include the following -

(a) operating deficits of the CACF, OACF, transport and communal facilities, engineering works; and

(b) operation costs of the WKCD Authority (mainly in area management).

6.4.4 The capital costs and operating deficits expressed in NPV at year 2006 for the three PSI scenarios and the PSC are summarized below.

Summary of Capital Costs and Operating Deficits (NPV in $billion)

Costs/deficits	**PSI 1A**	**PSI 1B**	**PSI 2**	**PSC**	Formula
Capital costs	(21.6)	(22.0)	(16.3)	(21.7)	(a)
Operating deficits	(8.4)	(8.4)	(8.6)	(11.1)	(b)
Finance cost	-	(1.3)	(0.8)	-	(c)
Total deficits	(30.0)	(31.7)	(25.7)	(32.8)	(d) =(a)+(b)+(c)

( ) = Negative NPV

Estimated Land Premium

6.4.5 On the basis of the permissible plot ratio of 1.81, the 20% cap on residential developments and the GFA taken up by CACF recommended by PATAG and MAG, the land premium of the commercial and residential sites in the WKCD is estimated by the FA at $20.9 billion in NPV terms at year 2006 assuming land sale to take place in 2010. The estimation is based on generally acceptable methodology and the general market situation as at end 2006. The outcome shows that the estimated land premium is significantly lower than the capital costs and operating deficits, as shown below -

Comparing land premium with capital costs and operating deficits (NPV in $billion)

Costs/Revenue	PSI 1A	PSI 1B	PSI 2	PSC
Total Capital Costs and Operating Deficits	(30.0)	(31.7)	(25.7)	(32.8)
Estimated Land Premium	20.9	20.9	14.2	20.9
Difference (Funding Gap)	**(9.1)**	**(10.8)**	**(11.5)**	**(11.9)**

( ) = Negative NPV

6.4.6 It should be noted that part of the capital costs and operating deficits under PSI 2 (packaged development approach) is reflected in a lower land premium. The disadvantage of this approach is therefore a lack of transparency on the capital and operating costs. The base costs under PSI 1A and PSI 1B are basically similar, but they become higher under PSI 1B after taking into account the financing costs and the higher risk premium. It is also worth noting that the funding gap under PSI 1A which adopts a more traditional way of private sector involvement is smaller than the other two PSI scenarios and the PSC scenario.

6.5 Key Findings

6.5.1 The FMAG notes the following key findings of the FA's financial analysis -

(a) none of the proposed arts and cultural facilities is financially self-sustainable (taking both capital costs and operating costs into account);

(b) only two venues might operate with a surplus - the Exhibition Centre and the Mega Performance Venue;

(c) there would be a significant funding gap if we were to take on board all the recommendations on the CACF made by the PATAG and the MAG, and adhere to the initial development mix; and

(d) as indicated by the FA's market sentiment testing exercise, there is very limited market interest in participating in life-cycle PPP arrangements owing to expected construction and operating risks and deficits. Moreover, there is a lack of competent market players. Instead, private sector involvement in operations with operating subsidies, would have more potential to attract private sector interest. As a result, most procurement should take the form of traditional Design and Build contracts, and separate operation and management contracts.

The above findings are in line with relevant international experience which indicates that arts and cultural facilities are typically loss-making and require significant public subsidies in both capital and operating costs. There should be sufficient recurrent income to sustain the long-term operation of the facilities. The cost recovery rates of some relevant overseas facilities as advised by the FA are set out below for reference -

Overseas Facility	Cost Recovery Rate*
Centre Pompidou, France	27%
Queensland Performing Arts Complex, Australia	62%
South Bank Centre, UK	43%
Sydney Opera House, Australia	74%
The Tate, UK	54%
New York Museum of Modern Art, USA	57%
The Esplanade, Singapore	38%

* This is the self-generated revenue as a percentage (%) of operating costs which exclude depreciation, tax, interest and collection acquisition costs.

6.5.2 Taking into account the above findings, the FMAG agrees to the FA's conclusion that there is very limited scope for the WKCD project to adopt PSI scenarios adopting a life-cycle PPP approach requiring the private sector to finance the development and maintenance of the facilities, and to operate the facilities over a long period of time. There is also limited scope for cross-subsidy between venues. As such, PSI 1A is the preferred scenario for involving the private sector in developing and operating the arts and cultural facilities of the WKCD.

6.5.3 The FMAG could have completed its task and submitted its findings above to the Consultative Committee. However, in order to assist the Consultative Committee in its further deliberations with the assistance of a costing team, FMAG considered it necessary to seek guidance from the Consultative Committee on key parameters with a view to identifying ways to address the significant funding gap.

<u>*Guidance of the Consultative Committee*</u>

6.5.4 The Consultative Committee accepts the following principles subscribed to by the FMAG in drawing up the financing approach for the WKCD -

(a) the financing approach should provide funding stability (free from land price fluctuation - according to the FA, the long term trend in property price indices in the past 10 years have shown considerable volatility with the peak prices about 3 or 4 times the trough prices) conducive to arts and cultural development;

(b) the financing approach should preserve maximum flexibility in terms of some "land bank" for Hong Kong to create a cultural hub of international status, which could meet not only existing shortfall in facilities and further supply-induced demand, but also to cater for further demand built up through arts education, audience development, inbound tourism etc.;

(c) the financing approach should ensure early delivery of the project, as we are paying a significant opportunity cost by leaving the land idle; and

(d) the financing approach should be affordable to the Government and ensure the CACF are financially sustainable in the sense that the WKCD Authority should have available to it such sources of revenue as to be able to underpin the **operation** of the CACF without direct recourse to Government.

Recommended Financing Option

6.5.5 The FMAG has identified and assessed several financing options. Based on the FA's analysis and taking into account the above guiding principles, as well as views expressed in the early stages of the WKCD development, the FMAG recommends the following financing option to finance the WKCD.

Upfront Government endowment and vesting of commercial sites for RDE facilities with WKCD Authority

6.5.6 This option would require an upfront Government endowment to the WKCD Authority to cover the capital costs of the CACF, OACF, transport and communal facilities, engineering works, masterplanning and area and project management in both phases as well as the capital costs for the RDE. No land revenue from the WKCD site would be hypothecated to develop and operate CACF but Government would vest the commercial sites for RDE facilities with the WKCD Authority which would develop and rent them to generate ongoing income to cover the operating deficits. The total rental income stream from the RDE over the project period estimated by the FA is greater than the estimated operating deficits of the WKCD. However, it should be noted that both the rental income and operating deficits may fluctuate over the project period. As to the impact on land revenue, the Government has to forgo the land premium of the RDE sites. Adopting this option would render the operation of the WKCD financially sustainable. The funding requirement therefore would be confined to financing the capital costs only.

6.5.7 The FMAG has also explored several other financing options. These options are not preferred, given their weaknesses as set out below -

(a) an upfront Government endowment to cover both the capital costs and operating deficits - the funding requirement would be huge and it may be difficult to convince the public and the LegCo;

(b) Government to finance the construction of various facilities under the Public Works Programme and to fund the operating deficits by annual subvention – it would be better to leave the development work to the WKCD Authority which can provide a platform to enable greater participation by the arts and cultural and professional sectors;

(c) upfront Government endowment to cover the capital costs and use part of the land premium to cover the operating deficits - subject to fluctuating land prices and involving hypothecation of land revenue; and

(d) use all the land premium to cover the capital costs and operating deficits together with an upfront Government endowment to meet the funding gap - also subject to fluctuating land prices and involving hypothecation of land revenue.

6.6 Possible Measures to Bridge the Funding Gap

6.6.1 In view of the significant funding requirements estimated for the WKCD project which far exceed the revenue that could be brought about by the land resources in the WKCD, the FMAG has considered different ways to reduce the funding requirement and the gap between the estimated land revenue and total deficits. There are basically only two possible options to achieve this – (a) increasing the land revenue generated within the WKCD by relaxing the constraints such as the 1.81 plot ratio and the 20% cap on residential GFA **or** (b) reducing the CACF footprint so as to release more GFA for land sale while lowering the development and operating costs of the CACF. The FMAG considered that the former option went beyond financial considerations as this option should be considered from a wider social, political and planning context. Having considered a number of possible measures, the FMAG sought a steer from the Consultative Committee on 26 March 2007, based on the preliminary estimates produced by the FA.

6.6.2 The Consultative Committee advised that -

(a) development parameters set out in the October 2005 Package should remain unchanged. Whilst raising the 1.81 plot ratio and/or 20% cap on residential GFA to produce more revenue would have a very positive effect on reducing the funding gap, such measures would be very controversial, likely to face major social, political and planning obstacles that are difficult to overcome, and hence cannot meet the policy objective of making an early start on WKCD;

(b) self-sufficiency and living within the means, i.e. funding for WKCD, both capital and recurrent, should be met entirely from the revenue generated from the 40-hectare WKCD site;

(c) financial sustainability on a long term basis, i.e. operation of the arts and cultural facilities in WKCD should not be dependent on recurrent Government subsidy or become a burden on public finances;

(d) organic growth. i.e. WKCD should have adequate capacity to grow by reserving adequate land for future development;

(e) phased development should be pursued as a more realistic approach; and

(f) the FMAG should touch base with the two Advisory Groups to find ways to reduce the funding requirements.

6.6.3 The possible measures proposed by the FMAG aim at reducing the capital costs and operating deficits on the one hand, and increasing the revenue that may be generated from the land resources on the other. In view of the longer term potential of West Kowloon for developing prime office facilities outside the Central Business District to support the growth of Hong Kong as an international finance and commercial centre, the FMAG considered that any GFA released from the proposed measures should be allocated for office development.

6.6.4 FMAG sought further steer and guidance from the Consultative Committee at its meeting on 14 May 2007. The Consultative Committee endorsed in principle the adoption of the financing option of upfront Government endowment and vesting of commercial sites for RDE facilities with WKCD Authority, as well as the following package of measures to bridge the funding gap -

(a) reducing the scale of the CACF while the timeframe for the architectural design of the **M+** and iconic performing arts facilities should be aligned;

(b) allocating the GFA so released for office development;

(c) reducing the GFA for hotel and RDE facilities and allocating the GFA so released for office development, but there should be flexibility as to whether the 28 000 sq.m. hotel GFA (i.e. one-third of the total hotel GFA) should be allocated for office development, so that the appropriate hotel/office mix could be decided by market forces when the land is sold; and

(d) WKCD Authority to be responsible for the open space, automated people mover and car parks; the remaining transport and communal facilities and engineering works to be undertaken by the Government through separate funding under the Public Works Programme.

These measures are analysed below.

(a) Reducing the Scale of the CACF; Released GFA for Office Development

*(i) Reduce the area of the **M+**, fine tune the split of its Phase 1 and Phase 2 area and use a lower NOFA/GFA ratio ; released GFA for office development*

6.6.5 The FMAG notes that the proposed GFA for **M+** would be bigger than many renowned museums of similar nature around the world (e.g., Centre Pompidou, Tate Modern or New York Museum of Modern Art, see Chapter 5). Having sought the views of the MAG on 17 April 2007, the FMAG considers that there should be scope for down-sizing the **M+** without unduly compromising its vision while enabling it to achieve its intended objectives with room for achieving economies of scale, thereby reducing the NOFA required. The FMAG recommended to adopt the following measures -

- reducing the on-site NOFA of the **M+** by 30% ;
- fine tuning the phasing of the development of the scaled down **M+** in two phases at a 70%/30% ratio; all the off-site area (storage and conservation laboratory) will be developed in Phase 1; and
- reducing the NOFA/GFA ratio to 1:1.5.

6.6.6 With the above measures, the total resultant GFA of the **M+** would become 78 750 sq. m., comprising 61 950 sq. m. on-site area and 16 800 sq. m. off-site area. This on site GFA is split into 43 365 sq. m. for Phase 1 and 18 585 sq. m. for Phase 2 according to the 70%/30% ratio. The MAG has deliberated these revised GFA. Noting that the revised GFA is still comparable to renowned museums overseas such as the Museum of Modern Art in New York and the Tate Modern in London, the MAG did not consider that the vision and objectives of **M+** would be significantly affected by this reduced scale and phasing arrangement. The MAG however considered that the size of the **M+** should only be limited in terms of GFA without any specified NOFA in order to give maximum flexibility to the architectural design of the building.

(ii) *<u>Use a lower NOFA/GFA Ratio for the Performing Arts Facilities; released GFA for office development</u>*

6.6.7 FMAG notes that the PATAG's recommendations on the performing arts facilities are expressed in terms of seating capacity only. In estimating the capital costs and operating deficits for these recommended facilities, the FA has adopted a NOFA/GFA ratio of 1:1.5, taking into account the space requirements for these facilities to be built to world class standards and with iconic designs in certain facilities.

6.6.8 As part of the sensitivity tests, the FA has estimated the costs and deficits of the CACF using lower NOFA/GFA ratios including the 1:1.25 ratio adopted in the

IFP. While the FA has cautioned that reducing the ratio to 1:1.25 may not be entirely practicable due to the specific requirements of the arts and cultural facilities and that some of them should have iconic designs, the FA considered that a modest adjustment of the ratio to 1:1.4 for the performing arts facilities would be a viable option.

6.6.9 The PATAG noted the NOFA/GFA ratio of 1:1.4 for the performing arts facilities and have not made any adverse comments on the ratio.

(iii) *<u>Align the approach and timing for architectural competition for iconic facilities</u>*

6.6.10 The Consultative Committee recommends that the timeframe for the architectural design competition for the **M+** recommended by the MAG (paragraph 5.1.11) should be reduced through organizing a competition by invitation instead of an open competition, and that there should also be architectural design competition (by invitation) for the iconic PA venues, i.e. the Xiqu Centre and the Concert Hall/Chamber Music Hall. This would align the development timing for both the proposed **M+** and the performing arts facilities requiring iconic architectural design. The impact on the capital costs and operating deficits would be insignificant.

(b) ***<u>Reduce the GFA for Hotel and RDE Facilities and Allocate the Released GFA for Office Development</u>***

6.6.11 The FA had assumed that a total GFA of 84 000 sq. m. would be required to build three hotels in the WKCD giving a total of 1 400 rooms. FMAG considered that two-thirds of this GFA (i.e. 56 000 sq. m.) for hotel developments in the WKCD would already be quite significant. A GFA of 28 000 sq. m. could therefore be released for office development.

6.6.12 The FA had also assumed that all the residual GFA after making provision for the CACF, OACF, communal facilities, residential and hotel developments would be allocated for RDE facilities giving quite a substantial GFA of

148 609 sq. m. The FMAG considered that there should be scope to reduce the GFA for the RDE taking into account also the recommended reduction in the scale of the CACF. Accordingly, FMAG recommended to replace 20% of the GFA for RDE (i.e. 29 609 sq. m.) by office development.

6.6.13 The total GFA for office development arising from all the recommended measures discussed above would amount to 107 683 sq. m at an estimated land premium of $2.4 billion. This GFA of office development would be of a reasonable scale for office development. The FMAG considered this provision for Grade A offices development within the WKCD to have the long-term potential of developing West Kowloon into an office node outside the Central Business District. The office developments would also provide an essential base load of weekday consumers for the RDE facilities.

6.6.14 Taking into account the Consultative Committee's view at the meeting on 14 May 2007, the FMAG further proposed to leave some flexibility as to whether the 28 000 sq. m. hotel GFA (i.e. one-third of the total hotel GFA) should be allocated for office development, so that the appropriate hotel/office mix could be decided by market forces when the land is sold. As the appropriate mix is to be determined by the market, the FMAG did not see the need to make any adjustments to the estimated land revenue.

(c) ***WKCD Authority to be Responsible for the Open Space, Automated People Mover and Car Parks; the Remaining Transport and Communal Facilities and Engineering Works to be Undertaken by the Government***

6.6.15 Strictly speaking, the transport and communal facilities, such as roads, drainage, fire station, public piers, etc. and engineering works which are designed to support the whole WKCD including residential, commercial and hotel developments should not be the core responsibility of the WKCD Authority. The FMAG considered that it would be more appropriate for these facilities and engineering works to be built and maintained by the Government like other public facilities and infrastructure facilities. On the other hand, the FMAG appreciated that the open space, car parks and the Automated People Mover would have a direct bearing on the operation of the WKCD and should therefore be put under the WKCD Authority's responsibility.

6.6.16 However, it is necessary to distinguish between financial obligations and development requirements and oversight. From a consumer standpoint, the WKCD Authority should still have a role to play in ensuring that the infrastructure and communal facilities, in particular the transport linkages, are properly put in place.

6.6.17 Combining the recommended financing option with the above measures will reduce the capital costs to $19.2 billion and the land revenue to $18.9 billion. The capital cost funding gap is therefore virtually removed. The revised operating deficits (estimated at $6.7 billion) can be totally met by the revised net rental income generated from RDE facilities (estimated at $7.5 billion). In other words, an upfront endowment of about $19 billion (NPV at 2006) would be required for the WKCD to be developed and operated in a self-sufficient and sustainable manner within the 40-hectare WKCD site.

6.6.18 If the above recommended measures are implemented, the recommended development mix of the WKCD, as compared with that under the IFP, is as follows -

Recommended Development Mix			IFP		
Facilities	**GFA (sq. m.)**	**% of Total GFA**	**Key Development Components**	**GFA (sq.m.)**	**% of Total GFA**
M+	61 950[20]	8%	Museum Cluster	94 187	13%
Exhibition Centre	12 500	2%	Art Exhibition Centre	12 500	2%
Performing art venues	188 895	26%	Theatre Complex and PA Venues	107 263	15%
Sub-total	**263 345**	**36%**	**Sub-total**	**213 950**	**30%**
Other arts and cultural uses	15 000	2%	Other arts and cultural facilities	(Subsumed below)	
Communal facilities	20 000	3%	Others (to include GIC facilities and utility facilities)	20 000	3%
Sub-total	**35 000**	**5%**			
Residential: Villa Houses & Apartments	145 257	20%	Commercial/ office, hotel/ residential, entertainment/ retail/ restaurants	492 335 sq. m. (or 67%) in total, covering other arts and cultural facilities above as well	
Hotel	56 000	8%			
Office[21]	107 683	15%			
Retail, Dining & Entertainment	119 000	16%			
Sub-total	**427 940**	**59%**			
Total	**726 285**	**100%**	**Total**	**726 285**	**100%**

[20] This excludes offsite storage and conservation laboratory with a total GFA of 16 800 sq. m.

[21] In line with the recommendation in paragraph 6.6.14, this includes 28 000 sq. m. of GFA which may be used for hotel or office development depending on market forces.

6.6.19 The FA's broad estimates indicate that there will be about 15 hectares of public open space at ground level, plus 3 hectares of piazza areas. Additionally, 5 hectares of public open space will be provided on terraces and roof top gardens etc., making a total of 23 hectares public open space in WKCD.

6.6.20 The FMAG Report is available at http://www.hab.gov.hk/wkcd/.

6.7 Economic Impact Assessment

6.7.1 Upon the request of the FMAG, an Economic Impact Assessment (EIA) was conducted by the Government Economist for the WKCD project from January to May 2007.

6.7.2 The WKCD project is an important investment in Hong Kong's arts and cultural infrastructure and a strategy that supports the long term development of Hong Kong as a creative economy and a world city. The WKCD project is expected to bring about not only substantial tangible economic impacts, but also various significant intangible benefits.

6.7.3 The tangible economic benefits include value added contribution to the Gross Domestic Product (GDP) and the employment created by both the construction of the facilities in the WKCD in the shorter term, as well as the operation and management of such facilities, and the economic activities involved in the programmes of the various arts and cultural venues in the longer term. Spending by tourists (including those induced by the WKCD to visit Hong Kong and those extending their stay in Hong Kong) and local visitors also constitutes a significant source of economic value added and job creation arising from the WKCD. Such tangible economic impacts are assessed taking into account the direct, indirect and induced impacts.[22]

[22] Direct impact is the impact directly arising from the activities generated by the WKCD. Indirect impact comes from the intermediate input needed to support the activities. Induced impact is the "multiplier effect" resulting in increased spending in the rest of the economy.

6.7.4 Taking into account the recommended measures to bridge the funding gap (see Section 6.6), the economic impact assessment shows that the key tangible economic benefits include the following -

(a) the WKCD will bring $2,660 million value added contribution[23] to GDP when operation of all Phase 1 Core Arts and Cultural Facilities (CACF) commences. Upon the operation of all Phase 2 CACF in year 16 [24], the value added contribution will rise to $5,280 million. The contribution would reach $5,670 million per annum by year 30, when operation of the CACF matures. During its operation stage over a total of 46 years, the WKCD will contribute a cumulative $71,040 million value added (in present value terms) to the Hong Kong economy;

(b) a total of 9 980 jobs will be created when operation of all Phase 1 CACF commences, increasing to 20 080 jobs in year 16 and further to 21 540 jobs in year 30;

(c) around 2.4 million tourists are expected to visit the WKCD when operation of all Phase 1 CACF commences, consisting of about 0.9 million tourists attending the exhibitions/arts performances there and another 1.5 million tourists visiting the WKCD for sight-seeing purpose only. By year 30, over 4.5 million tourists will visit the WKCD annually, bringing an additional $3,720 million spending per annum;

(d) the construction of the WKCD, including residential and commercial portions, is expected to bring around 11 020 construction and related jobs

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[23] All monetary figures in the EIA are expressed in real terms at 2006 prices, unless otherwise specified. All figures on job creation are on full-time equivalent basis, unless otherwise specified.

[24] Year 16 means 16 years after the operation of all Phase 1 CACF of the WKCD.

providing a total employment of around 33 700 man-years of construction job opportunities. The spillover effect of the construction on the rest of the economy would generate a further 18 360 man-years of job opportunities. In terms of income generation, the construction spending and the associated stimulation to the economy would generate a total of $15,700 million in value added (in present value terms) to the economy.

6.7.5 In addition to the substantial tangible economic output and employment, the WKCD is also a strategic investment to enhance Hong Kong's longer term standing and competitiveness as an international city through a host of intangible economic benefits as follows -

(a) fostering the development of a creative economy;
(b) nurturing local talents;
(c) attracting and retaining investors and talents;
(d) raising quality of life;
(e) reinforcing economic integration with the Pearl River Delta; and
(f) branding Hong Kong as a world city.

6.7.6 To sum up, the EIA concludes that the WKCD project would bring about substantial tangible economic output and employment, as well as various significant intangible benefits. The FMAG agrees with the EIA's conclusion that the WKCD is a strategic investment for Hong Kong, and recommends that the EIA's findings should be shared with the public, in order to put the financial implications of the project in the proper perspective.

6.7.7 An Executive Summary of the Economic Impact Assessment of the WKCD is at **Annex I**.