LEGCO PANEL ON ECONOMIC SERVICES
立法局經濟事務委員會

26 February 2007

2007年2月26日

Replacement ATC System & Integrated CAD Building at CLK
更換民航處航空交通管制系統及在機場島興建民航處新總部

Proposal建議

- **To replace the existing air traffic control system** 更換現有空管系統
  and 及
- **To develop a new integrated CAD building at CLK to house the new ATC system and all CAD functional divisions**
  在赤鱲角發展一所民航處綜合大樓以容納新空管中心及各分部

爲何需要新空管系統及綜合大樓
Why do we need the new system and an integrated CAD Building?

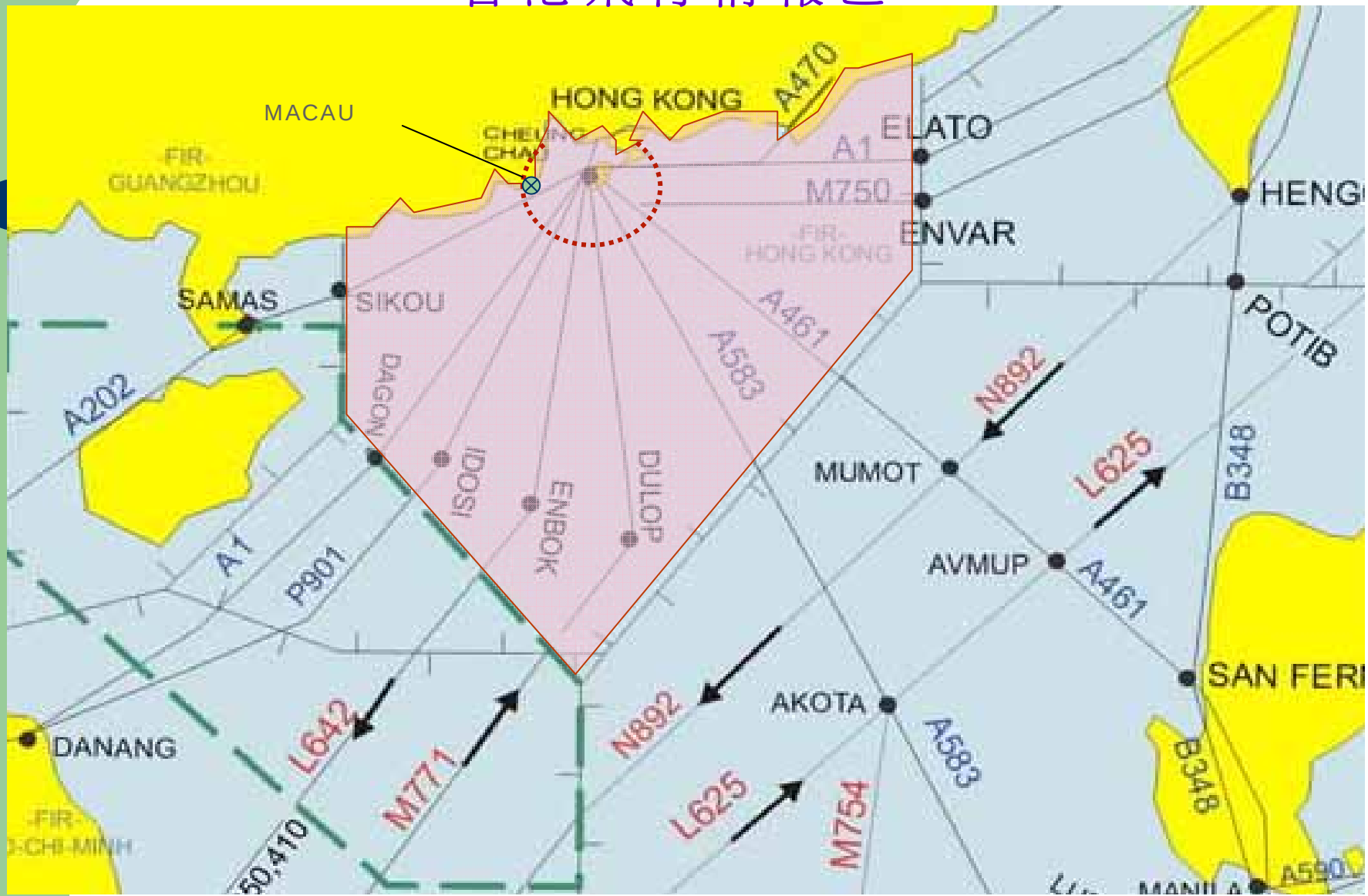
Basic Reasons 基本原因

- Traffic growth and expansion of local airlines航空交通及本地航空公司增長
- Ageing ATC facilities空管設施老化
- Scattered CAD Offices部門辦公室分散不同地點

CAD Functions 民航處主要功能

- Provider of Air Traffic Control Services 提供空管服務
- Regulator of civil aviation industry 監管航空業

Hong Kong Flight Information Region (FIR)
香港飛行情報區



工作地點

控制塔台

Control Tower

航空交通管制中心

Approach and Area Control

Duties of Air Traffic Control service provider
空管服務提供者的職責

- To prevent collision of aircraft, in the sky and on the ground 防止飛機在天空及地面相撞
- To maintain an orderly and expeditious flow of traffic 維持有秩序及流暢的航空交通
- To initiate alerting action in the event of aircraft emergencies and accidents.意外及緊急事故警報

Traffic in Year 2006
2006年空中交通數量

Movements at HKIA 進出香港國際機場航班 –

280,000 or 768 movements per day
280,000班或相等於平均每天768班

Overflying traffic 過境航班 –

140,000 or 383 movements per day
140,000班或相等於平均每天383 班

Comparing the traffic with year 1998 (the year of new airport opening at CLK)
與1998 年比較

Traffic at HKIA – has grown by 72%
進出機場航班增加 72%

Overflying traffic – has grown by 95%
過境航班增加 95%

Estimate for Future
未來流量估計

For the 5 airports at PRD, daily movement rate is expected to increase from 2,000 (at present) to 5,000 by 2020

珠三角5個機場在2020年升降量由目前每天2000班增加至5,000班

Daily overflying traffic expected to reach 850 movements by 2020

至2020年，過境航班將增至每天850 班

HKIA would need to handle 1,300 movements per day by year 2025

至2025年香港國際機場每天升降量預計達每天1,300 班

Existing facilities in ATCC(1)
現有空管中心設施(1)

- **Designed in early 90's and usable life up to around 2012**

  設計於90年代初， 預計可用至2012年左右

- **Unable to adopt the latest ATM technology due to limitations in capacity and processing power**

  未能採用最新空管科技

Existing facilities in ATCC(2)
現有空管中心設施(2)

- **Unable to provide direct data exchange with surrounding ATCC (essential ATC data still conveyed by direct voice link)** 未能支援與周邊航管中心直接交換數據

- **Limited scope for system upgrading and enhancement**系統更新及改良空間有限

Situation in nearby regions
周邊地區情況

- **Centre enhancements in Guangzhou and Shanghai in 2005**

  廣州及上海空管中心已於**2005**年提升系統

- **Centre enhancements in Singapore, Taipei and Manila in the next few years**
  新加坡、台北及馬尼拉空管中心預計在未來數年亦會提升系統

If ATC systems not upgraded in time 如空管系統未能及時提升

- **Insufficient system capacity to cope with traffic growth**

  系統容量不足以應付交通增長

  - **Unable to reap economic benefits brought by increase in traffic** 失去空運增長所帶來的經濟效益

Considerations in facility replacement
設備更新須考慮因素

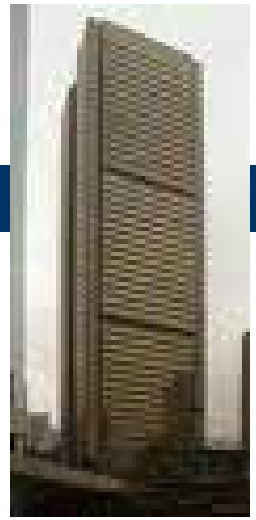
- **Need to maintain continuous ATC service**
  須維持無間斷空管服務
- **Lack of space for expansion in existing ATC Complex** 現有空管大樓沒有足夠擴展空間
- **Lack of suitable area in the vicinity of ATC Complex for expansion**
  空管大樓附近亦沒有適合擴建的空間

A new Building is therefore necessary

所以須要建造新的大樓

Scattered Offices辦公室分散

Queensway Government Office



金鐘政府合署

Passenger Terminal Building of HKIA
客運大樓

貨運中心

Airport Freight Forwarding Centre

Disadvantages of Scattered Offices
分散辦公室的缺點

- Ineffective communications (long traveling time between offices)

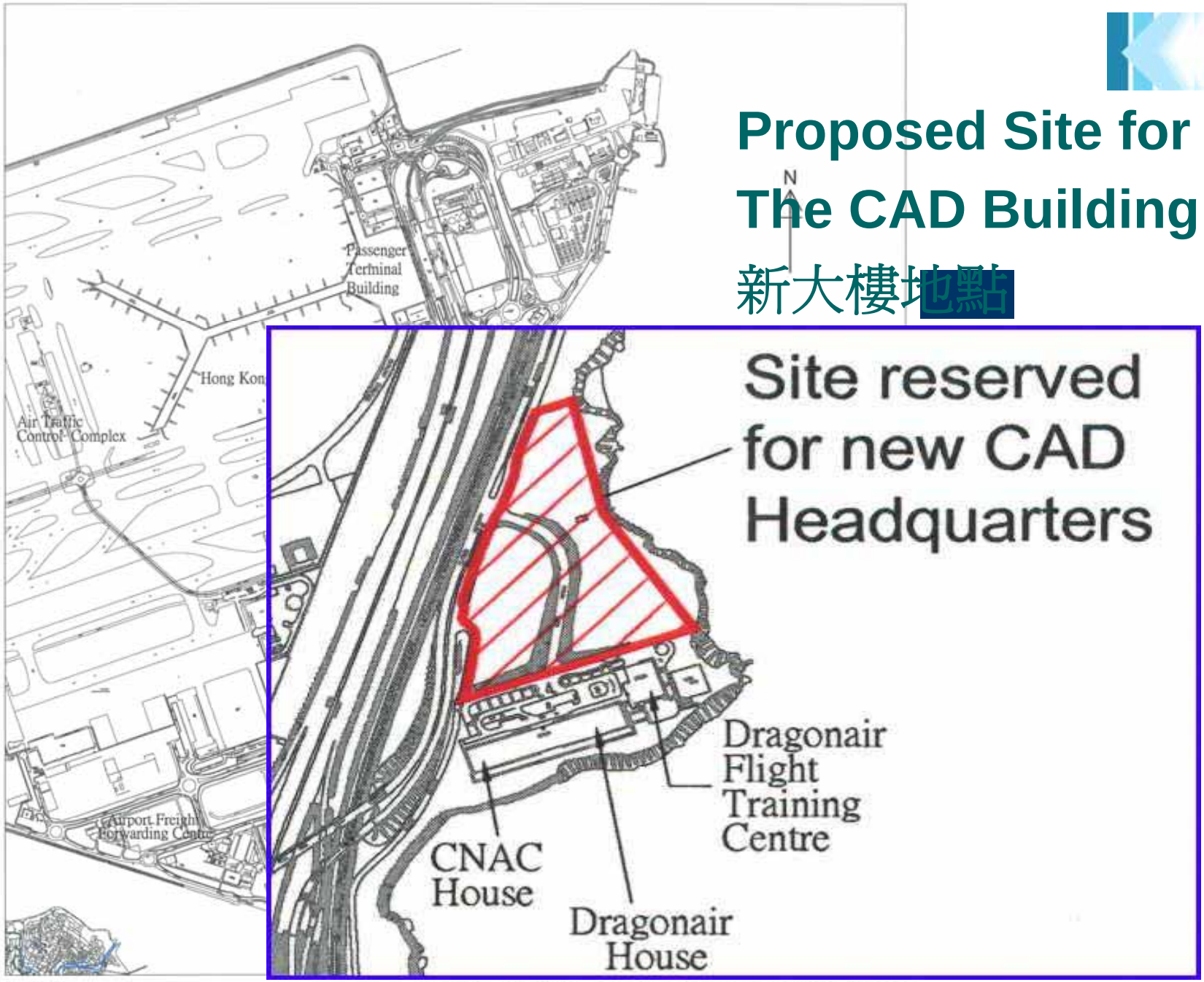
  各分部通訊及溝通未能達至最佳效率

- Duplication of support services e.g. supporting staff, vehicles etc　重複後勤支援
- Lengthened emergency response time
  延長對緊急事故的反應時間
- Hindrance of “One-Stop-Shop” service to the industry and public

  未能爲業界及公眾提供一站式服務

Proposed Site for The CAD Building

新大樓地點



Technical Feasibility Study (TFS)
可行性研究

- **Study done by Architectural Services Dept**
  由建築署評估
- **Confirmed construction at site feasible**
  證實計劃可行
- **No adverse impact on environment**
  沒有對環境做成不良影響

Cost for the Replacement ATM Systems and New CAD Building 預計費用

CAD Building with Replacement ATC systems –
大樓建築及更新空管系統

3,155 millions 31.55億

(approximately half of the cost is for the new building 其中約一半會用於大樓建築)

Funding allocation is subject to approval from Finance Committee of LegCo
撥款須由立法局財務委員會通過

Request for Manpower
要求增加人力資源

1 ADGCA (D2) for 5½ years to be supported by 41 non-directorate staff for project handling
一名爲期5½年的助理處長(首長級第二級)，由４１名非首長級人員支援以處理整項計劃

1 CATCO(D1) to be supported by 2 non-directorate ATCOs to regulate air traffic control operations
一名總空管主任(首長級第一級)，由２名非首長級空管主任支援以監管空管運作

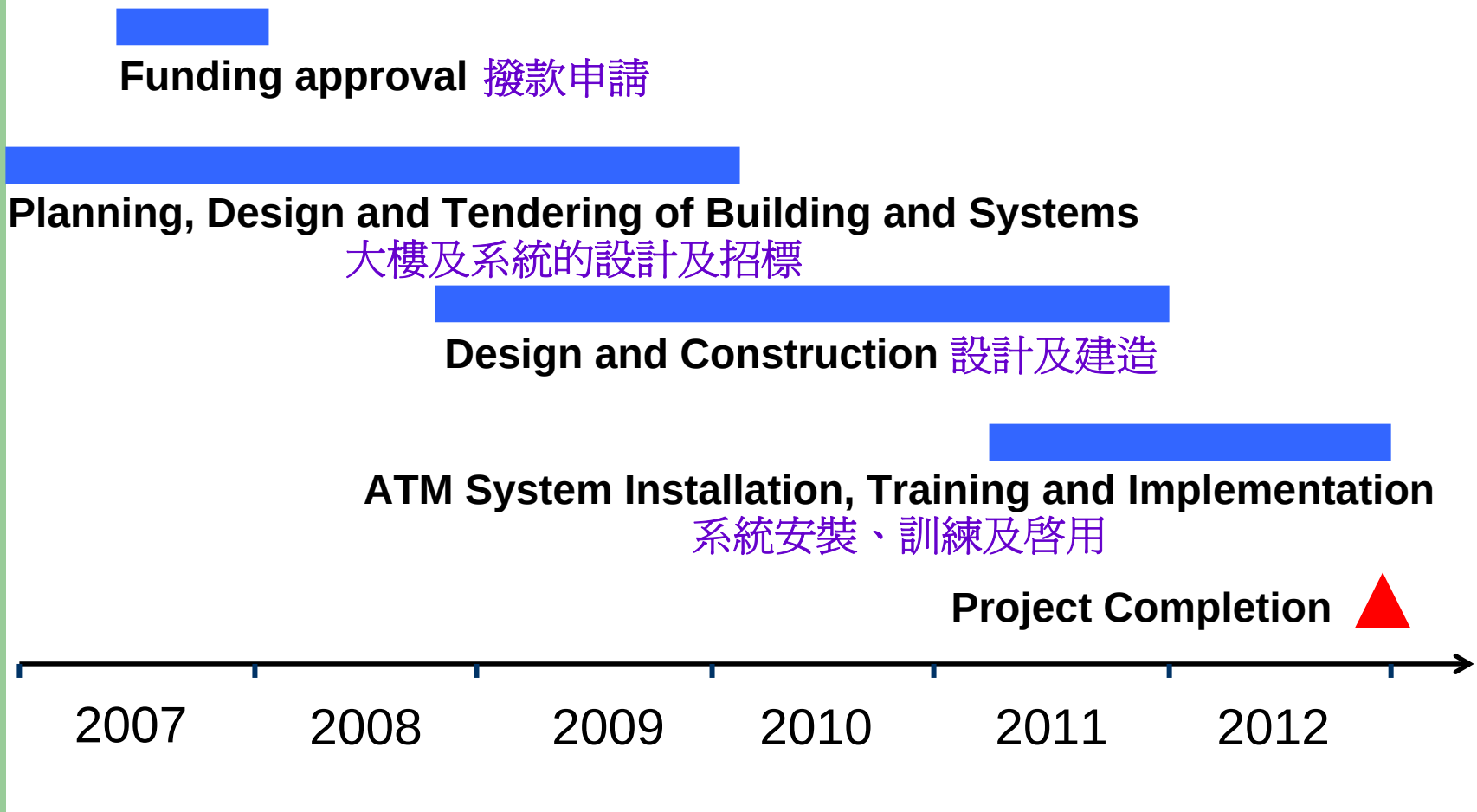
The ADGCA is required for 5½ years because
需要一名助理處長5½年，因爲

- **Project needs detailed planning and coordination at various stages throughout** 項目各階段均需仔細策劃及協調
- **Long period of parallel operations of the existing and the new systems for testing and training** 新系統和現有系統須長時間平行運作以進行測試及訓練
- **All tasks must be carefully co-ordinated with thorough risk assessment** 各項工作需小心協調並作詳細的風險評估
- **Needs adequate contingency planning** 要有足夠的應變計劃

The CATCO officer is required because
需要一名總空管主任，因爲

- **ATMSO posts only taken up by staff temporarily deployed from ATC** 空管標準辦公室職位，目前祇由空管部臨時借調
- **Regulator will need to develop the safety standards for the new system and oversee its implementation** 監管機構須參與制訂新系統的安全標準及監察其實行
- **Continuous oversight and further improvements to the new system taking account of new international standards and initiatives to optimize use of airspace** 持續監察及改善新系統以配合新的國際標準及空域改善措施

Proposed Timetable for Project
建議時間表



Thank You

多謝