GROWING WITH HONG KONG
The first step of the master planning process is to determine the long-term air traffic demand forecast up to 2030. International Air Transport Association (IATA) Consulting has been commissioned to undertake this task, which is a very structured process involving –

(a) Evaluating the best model to apply for the forecast;
(b) Compiling gross domestic product (GDP) forecast;
(c) Producing preliminary traffic forecasts based on GDP;
(d) Adjusting traffic forecasts based upon the latest market changes;
(e) Carrying out reality checks with aviation-related industries;
(f) Determining a set of primary projections for passenger and cargo traffic and air traffic movements (ATMs, also known as flight movements); and
(g) Conducting sensitivity analysis to produce a range of estimates for high, low and base cases.

GDP FORECAST

Compiling a GDP forecast is a very important step as it provides the essential building block for the entire traffic demand forecast. IATA Consulting’s research clearly demonstrated that air traffic growth bears a strong correlation with the global GDP growth. Figure 3.2 shows the two trends in the past four decades.

As Hong Kong is an international city with an open market and externally-oriented economy, the correlation between air traffic growth and GDP growth in Hong Kong is even more pronounced, as can be seen from the close correlation between historical traffic derived from the regression formulae used by IATA Consulting and the actual traffic (see Figures 3.3 and 3.4). For passenger demand forecast, IATA Consulting adopted simple linear regression based on Hong Kong
GDP. For cargo demand forecast, IATA Consulting adopted multiple linear regression based on Hong Kong and global GDP.

Despite the global economic slowdown and Severe Acute Respiratory Syndrome (SARS) epidemic in 2001-2003, Hong Kong’s GDP experienced an increase by almost 4% per annum between 2004 and 2009. Following the recovery from the global financial crisis and economic downturn in 2008-2009, the Government estimated 6.5% GDP growth for 2010. On the basis of input from Economist Intelligence Unit (EIU) of July 2009 and Global Insight (July 2009), IATA Consulting compiled the following GDP forecast between 2008 and 2030 –

(a) Hong Kong’s GDP will grow at a Compound Annual Growth Rate (CAGR) of 3.2%;
(b) Mainland’s GDP will grow at a CAGR of 7%; and
(c) The global economy will grow at a CAGR of 4%.

1 HKSAR Government, November 2010.
2 The Economist Intelligence Unit (EIU) is the world’s leading resource for economic and business research, forecasting and analysis. Founded in 1946 as an in-house research unit for The Economist, it now delivers trusted business intelligence and advice to over 1.5 million decision-makers from the world’s leading companies, financial institutions, governments and universities.
3 Global Insight was founded in 2001 through the merger of Wharton Econometric Forecasting Associates and Data Resources, Inc. In October 2008, Global Insight became part of the Information Handling Services (IHS) family. Based in the New England Region in the US, IHS Global Insight provides comprehensive economic, financial, and political country and industry intelligence products to support planning and decision making.
AVIATION MARKET OUTLOOK: THE MAINLAND AND GPRD

IATA Consulting forecasts that air traffic to and from the Mainland will reach nearly 2.1 billion trips by 2030, while cargo traffic will reach 44 million tonnes. This projection is supported by a number of observations. On the passenger side, the World Tourism Organisation forecasts that the Mainland will become the world’s fourth-largest tourist source market and the largest domestic tourist market by 2015. The Mainland’s GDP per capita will reach approximately US$14,000 in 2030; and as the economy grows, the desire and ability of the people on the Mainland to travel both domestically and internationally will grow rapidly.

The Mainland is also the manufacturing capital of the world, and its cargo must be delivered to their overseas destinations around the world. Rising foreign direct investment, improving living standards, more liberal trade policies and a growing express cargo and logistics sector support a robust cargo growth projection. Also, cargo traffic of Mainland airports has increased by a CAGR of over 10% each year in the past decade, reaching 9.5 million tonnes in 2009. The Mainland’s substantial trade volume and growing economy will be key factors in its cargo growth.

The Pearl River Delta (PRD) – HKIA’s catchment area – is one of the Mainland’s most diverse and fastest growing regions. It is one of the Mainland’s centres of manufacturing and most affluent areas. With the
continuous growth in trade and in the overall economy, IATA Consulting estimates that the aviation market in the Greater PRD (GPRD) will grow to 387 million passenger trips and 18 million tonnes of cargo by 2030 (see Figure 3.5).

Within the GPRD, there are five major airports, namely, HKIA, Guangzhou Baiyun International Airport, Shenzhen Bao’an International Airport, Macao International Airport and Zhuhai Airport (see Figure 3.6). Having taken into account the anticipated increase in the handling capacity of the five airports in the next 20 years, IATA Consulting forecasts that there would still be a significant unfulfilled demand for air services both in the medium term up to 2020 and in the long term up to 2030 (see Figure 3.7).

* For HKIA, the capacity assumed is 60 million based on completion of the committed Midfield Phase 1 Development Source: CAAC, IATA Consulting analysis and estimates

7 The Greater PRD comprises PRD plus Hong Kong and Macao.
In 2008, we handled about 80% of GPRD airports’ international passengers (excluding Hong Kong – Mainland traffic) and about 90% of its international cargo throughput. As long as our handling capacity is not constrained, we are well positioned to continue to capture a handsome portion of this growing market by leveraging our extensive international air network.

**ADJUSTMENT FACTORS RELEVANT TO HKIA**

IATA Consulting has specifically looked into a range of special factors (namely, air services agreements, cross-strait direct flights, trade agreements, travel policy, tourism development, cross-boundary infrastructure development, passengers’ travelling preferences, modal competition from containerised shipping, developments of surrounding airports and airlines’ strategies) that might affect its air traffic demand forecast. Most, if not all, of them have been found to be either having negligible impact or have already been factored into IATA Consulting’s economic models. The assessments on the two most frequently cited factors are set out below.

### Cross-Strait Direct Flights

Hong Kong/Taiwan has for many years been the busiest air route out of HKIA with currently about 50 flights per day. Before cross-strait direct flights first commenced in July 2008, passenger traffic segments potentially impacted by direct flights constituted about 16% (i.e. 7.7 million) of our total throughput in 2007, which has been decreased to 10% (i.e. 4.9 million) in 2010. Cargo traffic was reduced from 17% (i.e. 0.6 million tonnes) of our throughput in 2007 to 13% (i.e. 0.5 million tonnes) in 2010. However, this short-term negative impact has been partly mitigated by the relaxation of the policy for Mainlanders to visit Taiwan and the new demand for air travel stimulated by increased cross-strait economic activities. In 2010, overall passenger and cargo traffic between Hong Kong and Taiwan grew 4% and 14% respectively, over 2009. Looking ahead, increasing tourism and trade activities across the strait is expected to stimulate further growth in the Hong Kong/Taiwan passenger and cargo market.

### High-Speed Rail

The high-speed rail would cut current rail travel time by nearly two thirds and is therefore generally expected to compete with air services on short-haul and overlapping markets. With the development of the Express
Rail Link (XRL) connecting Hong Kong to the Mainland’s high-speed train network, and further expansion of the high-speed rail network within the Mainland (see Figure 3.8), the high-speed rail could potentially affect the competitiveness of air travel between Hong Kong and short-haul Mainland destinations like Shantou, Changsha, Nanning, Xiamen, Wuhan, Nanjing, Nanchang and Fuzhou (see Figure 3.9). However, all these regional Mainland routes combined contributed only about 3% of HKIA’s passenger throughput in 2010. Therefore, any negative impact from XRL would unlikely be significant. On the other hand, trains provide
convenient and frequent link-up to second-tier and third-tier locations outside major cities, thus potentially enlarging the catchment area for HKIA. Experiences in Europe and Japan indicate that the introduction of high-speed rail may negatively affect short-haul and overlapping markets but it can increase people’s willingness to travel and, in the medium to long term, increase the overall market size for both rail and air transportation, thereby compensating (or, as in most cases, over-compensating) for the potential air traffic loss on individual short-haul routes.

AIR TRAFFIC DEMAND FORECAST

According to the GDP regression based forecasting model, and taking
into account various aspects of HKIA’s market environment, such as industry trends, regional market dynamics, changes in policies and so on, IATA Consulting estimates that air traffic demand forecasts for HKIA will fall within the range of 89 – 105 million passengers and 8 – 9.8 million tonnes of cargo by 2030, growing at respective CAGRs of 2.8% – 3.6% and 3.7% – 4.6% between 2008 and 2030. Flight movements will reach about 550,000 – 650,000, growing at a CAGR of 2.8% – 3.6%.

The IATA Consulting analysis included, among other things, a “reality check” of its traffic forecast against the projections of the global aircraft manufacturing industry, which are considered to be particularly relevant. Traffic forecasts from both Boeing and Airbus indicate that over the next 20 years, global passenger and cargo traffic will each grow at around 5% a year. Asia Pacific – driven by the Mainland – will see even higher growth, at about 6%, due to the region’s development potential. These projections have already taken into account the recent financial and economic events of 2008-2009. They also acknowledge the traditional resilience of air travel to external shocks and the strong long-term fundamentals of the industry.

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<tr>
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<tr>
<td>Cargo</td>
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**Figure 3.13 Traffic Forecasts from Boeing and Airbus**