A MAGAZINE FOR AIRLINE EXECUTIVES
2005 Issue No. 1

ascend

Taking your airline to new heights

IN THE BLACK

A conversation with ...

Joe Leonard, CEO and Chairman, AirTran Airways

page 59

INSIDE

22 Lufthansa benefits from close-in re-fleeting
45 Cathay's cargo business drives revenue
76 Frontier Airlines enlists strategic partners

© 2009 Sabre Inc. All rights reserved.

wearelistening@sabre.com

A PACKAGE DEAL

By Peter Berdy | *Ascend* Contributor

Despite its highly volatile, seasonal and directional nature combined with the fact that it shifts with the ebb and flow of the world's economy, Cathay Pacific Airways' cargo business still manages to produce healthy revenues.

Cathay's cargo operation comprised more than

1/3

of the company's total revenues in 2003.

Cathay Pacific has capitalized on its location and airport resources as well as developed strong partnerships within the supply chain to help maximize revenues through a strong air cargo business. Last year was one of record-setting accomplishments for the Hong Kong-based cargo carrier, showing that an airline can boost revenue with a thriving cargo business by dominating a niche market, capitalizing on its natural geography, maintaining a sharp focus on cost control and forming strategic joint ventures.

Cathay's cargo operation, with a fleet of 100 aircraft including 15 Boeing 747 freighters, comprised more than one-third of the company's total revenues in 2003, or HK$9.4 billion (US$1.2 billion). Revenues and available ton kilometers were up 17 percent, and the company noted an improvement in cargo yield of 6.8 percent in its interim report covering the first six months of 2004.

In addition to dedicated freighters, the airline also makes use of the belly space on its fleet of wide-body aircraft. It is the launch customer for the Boeing freighter conversion of the 747-400 and plans to bring more of the same type into its fleet in coming years.

Cathay's cargo operation, which carried 972,416 tons of freight last year and achieved record-setting revenues of HK$10.4 billion (US$1.4 billion), has permeated deep into its corporate culture.

"Cargo is a part of every key decision made," said Ron Mathison, director and general manager of Cathay's cargo operation. "Cargo growth last year continued to be driven by

Photos courtesy of Cathay Pacific

TOP: Cathay Pacific Airways' cargo operation, which realized a 6.8 percent increase in cargo yield during the first six months of 2004, carried 972,416 tons of freight and achieved record-setting revenues of HK$10.4 billion (US$1.4 billion) for the year.

BOTTOM: Cathay's cargo operation benefits from the well-equipped facilities available at Hong Kong International Airport, one of the world's leading cargo airports, which enables the airline to successfully and easily serve Europe, Australia, Southeast Asia and the United States.

demand for exports from southern China. Congestion in U.S. west coast seaports helped boost demand for air cargo services as well. Business on trunk routes from Hong Kong to the United States, Europe and Japan remained strong throughout the year. Our network will be further enhanced with a new daily freighter service to Shanghai that began in January."

Mathison believes it is beneficial that Cathay's cargo operation is not part of a separate company or division. Instead, the company can take advantage of passenger aircraft that account for more than 40 percent of its cargo lift. Mathison also believes the success of the airline's cargo business is due in part from its strong network and cities, providing many options to move cargo to Europe.

The center of Cathay's activity is its hub at Hong Kong International Airport. Hong Kong occupies an ideal geographical position, enabling the airline to serve Europe, Australia, Southeast Asia and the United States from its home base as well as the European and U.S. markets from Australia.

With the shift in manufacturing to Asia, Hong Kong benefits by having major manufacturing capabilities at its doorstep. In particular, the China market is experiencing extraordinarily strong growth.

Along with the unique geography of Hong Kong, Cathay benefits from the services offered at one of the world's leading cargo airports. HKIA offers extraordinarily well-equipped facilities for cargo handling. The airport's master planning, design layout, and offering of facilities and services has enabled it to become the biggest international air cargo center in the world, with plenty of room for future growth.

Hong Kong offers more than world-class facilities to Cathay. There is a unique service-oriented work ethic in Hong Kong, and it is renowned for its industrious, highly productive, well-trained work force. A consequence is that airline workers are highly energized, as are the staffs at different forwarders, agents and suppliers that make up the supply chain.

Much of Cathay's cargo is tied to local and global trade. About 60 percent of all cargo business is to or from China. According to Mathison, the airline's cargo business has seen strong imbalances caused by currency fluctuations and rapidly changing market conditions. A strong euro benefits exports to the European Union, while a weak dollar benefits imports to Asia from the United States.

This imbalance is also mirrored in cargo volumes at the airport. In 2004, of the 3.1 million total tons moving through HKIA, almost one-third was import cargo and nearly two-thirds was export.

To deal with volatility in the cargo business, Cathay has placed a strong focus on cost control and risk mitigation, looking for ways to remove inefficiencies from the supply chain. The airline has developed a lean and efficient organization, capable of responding to the changing cargo landscape. Cathay outsources its terminal and ground handling services to avoid the burden of fixed expenses. Instead, the company pays for services on a per-kilo-handled basis. "In this business, you want to minimize your asset risk," said Mathison.

Technology and Joint Ventures

"Our broad network requires a high level of information technology support to ensure shipments are correctly assigned and arrive at their final destination on time," Mathison said. Cathay relies on its CUBIC system for booking and recording cargo information at each step along its journey. Cargo agents can determine

instantly where their shipments are at any given time, and cargo details can be forwarded prior to departure for pre-arrival customs clearance at the final destination.

Cathay also uses the *Sabre® CargoMax™ Revenue and Pricing Suite* as a cargo revenue management tool. Mathison indicated that cargo revenue management is far more complex than traditional passenger revenue management and therefore requires more sophisticated systems.

"Cargo revenue management is a multidimensional problem involving yield, volume, density, shape and position," he said. "In addition, there is very little advance booking and little opportunity to overbook to reduce risk of last-minute cancellations."

Mathison said that although cargo revenue management helps to allocate cargo capacity, the day-to-day allocation decisions are still made by human intervention. Use of cargo revenue management is essential to address the downward pressure on yields.

Cathay has a long history of partnerships with other airlines, including a close cooperation dating back to 1981 with Lufthansa.

Air Hong Kong is a joint venture between Cathay and DHL. Air Hong Kong operates overnight express services for DHL in several Asian markets. Recently, the airline acquired a minority stake in Air China. "We are exploring ways of working with Air China," said Mathison. "It has the potential of a natural fit for both companies."

Cathay has also formed Ezycargo, a one-stop shopping Internet portal for freight forwarders, in partnership with Singapore Airlines, Qantas and Japan Airlines. The portal gives online access to various partners' cargo services. Different functions are offered on the site, including viewing schedules, booking, paying and tracking shipments via any combination of carriers in the group.

Mathison said the airline obtains commitments from customers to purchase capacity on Cathay in advance, which enables the company to do a better job of planning capacity and managing costs.

Competition and LCCs

As with other successful businesses, there are emerging competitors such as neighboring airports competing for cargo business. Although 90 percent of all cargo along the Pearl River Delta is currently moving through HKIA, the number will decline as new airports emerge. The new airport in the Pearl River

Continued on page 49

Taking Cargo to the Max

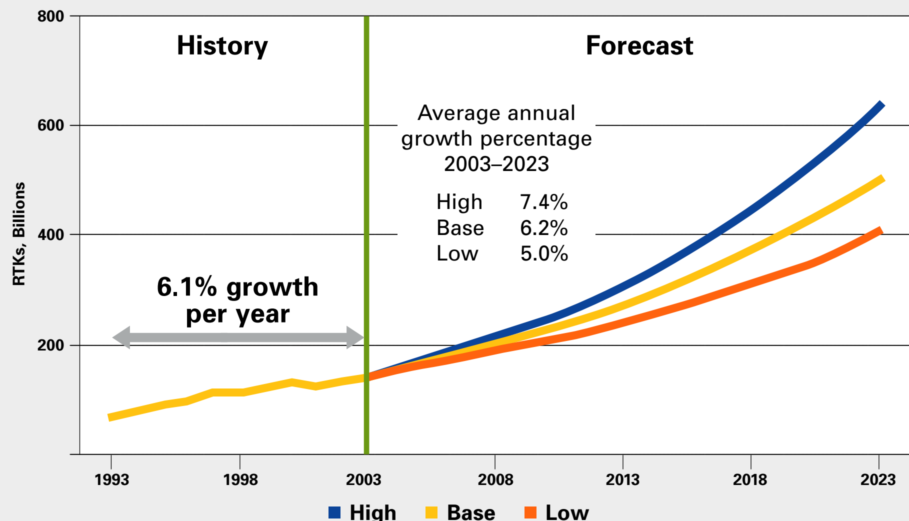
Using a decision-support system such as the CargoMax Revenue Manager*, can help airlines optimize their cargo business and capitalize on a significant source of revenue.*

By Raja Kasilingam | *Ascend* Contributor

Air cargo is increasingly becoming an important source of revenue for airlines across the globe. On average, the revenue generated from cargo operations is 13 percent of the total air traffic revenue and up to 40 percent for some airlines. According to last year's Boeing World Air Cargo Forecast for the period of 2002-2021, world air cargo growth will expand at an average annual rate of 6.4 percent. As the demand for air cargo increases, it is vital for airlines to capture as much market share as possible and carry the right types of cargo within the constraints of their network to increase revenue and maximize profitability.

Recognizing the revenue-generating potential of an efficient cargo department, experienced airlines have transformed this sideline operation into a vital component of their business strategy. The success of an air cargo operation can be impacted by a number of factors — lengthy unproductive processes, untimely flight schedule updates, inaccurate data availability, and uninformed and inconsistent decision making. Airlines require automated decision-support tools to help manage cargo operations at an optimal level, thereby increasing revenue while maximizing profit and improving customer relationships.

Technology combined with deep industry expertise is vital to the success of an airline's cargo operation.



World air cargo traffic will triple during the next 20 years. On average, the cargo business will grow 6.2 percent a year during that period, and revenue ton kilometers will increase from 156.5 billion in 2003 to 517.7 billion by 2023.

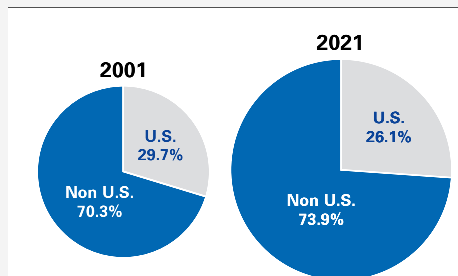
Operations and decision-support systems can help airline cargo operations improve productivity, service levels and revenue. When selecting a cargo system, airlines should look for a provider with expertise in revenue management, revenue accounting and reservations. Systems such as the *Sabre® CargoMax™ Revenue and Pricing Suite* address the specific needs of air cargo companies, including solutions to meet some of the key cargo business and operational requirements of an airline such as space control and revenue management, management reporting, performance measurement, rating, revenue accounting, invoicing, claims management, inventory control, and operations planning. *Revenue Manager*, in fact, has helped airlines generate more revenue and profitability and maintain/improve service levels.

In the early 1980s, revenue management techniques were first applied in the airline industry as a method to increase revenues resulting from passenger sales. With the success of revenue management to improve passenger revenues, these techniques were applied to other business areas such as hotel, railroad, car rental and cargo. Sabre Airline Solutions was the first to develop and install an initial version of a cargo revenue management system in the early 1990s. Since that time, *Revenue Manager* has helped airlines achieve revenue and profitability growth while maintaining service levels.

Airlines around the world generate additional revenue and profitability using *Revenue Manager* in one or more ways, including:

- Capacity planning — Accurately knowing the capacity available for sale at the very beginning of the booking period is important so that demand is not spilled or turned away. Benchmarking and post-implementation measurement of benefits from capacity planning using *Revenue Manager* shows revenue improvement of up to 5 percent.
- Allotment management — Allocating space to the right station or customer based on revenue usage or type of cargo and considering the possibilities of satisfying allocations among multiple routes considering network effects helps increase revenue from allotment sales by up to 4 percent.
- Pricing guidelines — Determining minimum acceptable prices (or hurdle prices) to sell cargo based on flight capacity, demand, service level desired, rate and density of cargo can also dramatically improve revenues. Carrying the right freight mix in terms of rate and density maximizes the revenue and contribution from the three-dimensional cargo capacity. By utilizing *Revenue Manager*, cargo companies can increase revenue by up to 6 percent according to recent benchmark studies.

Baseline Cargo Forecast



Source: Boeing

As emerging economies continue to develop, the market share of non-U.S.-based airlines will grow faster than U.S. carriers. By 2021, the market portion of non-U.S. airlines is expected to approach 74 percent of total air cargo revenue ton kilometers from 70 percent recorded in 2001.

Capacity Planning

Determining the capacity available for sale is a challenging problem for air cargo carriers given that most airlines carry cargo in the belly of the passenger aircraft. It is a two-step process. The first step involves determining the physical capacity available for carrying cargo. The second step is to increase this by a factor to consider for customers who cancel, no show, and over or under tender.

The physical capacity available for cargo is not fixed or known in advance unlike the passenger side of the business where the seats are fixed. Forecasting cargo capacity becomes complex because it is three-dimensional and is affected by everything that goes on the airplane ahead of cargo such as passengers, bags, mail, catering and company materials. *Revenue Manager* helps airlines forecast the various categories of loads that precede cargo and estimate the physical capacity available for carrying cargo. In addition, it considers several important aspects such as ground-time restrictions (turning schedule), baggage containers by class of service, tail number, aircraft container configuration and other seasonal aspects. The capacity available for sale is determined using a probabilistic optimization model considering the cost of offloads and spoilage, desired offload percentage (inverse of service level desired), and physical capacity. More accurately determining physical capacity and capacity available for sale also reduces offloads due to capacity problems.

Allotment Management

The optimal allocation of allotments to various stations and customers is a very important decision process for carriers in the Asia/Pacific region. These carriers sell almost all of the available space as allotments while carriers in other parts of the world sell anywhere from 20 percent to 60 percent of the total cargo space as allotments. *Revenue Manager* has helped carriers determine the optimal allocations to various stations and customers considering revenue, space usage, and type of cargo and has improved revenue significantly.

Pricing Guidelines

Optimizing the freight mix onboard is an important aspect of maximizing revenue and profitability. Control of freight mix onboard is typically accomplished by setting pricing guidelines based on shipment characteristics and demand. *Revenue Manager* helps carriers set pricing guidelines considering rates, density of cargo, capacity, demand and network effects.

> “Hong Kong will remain the preeminent gateway in the region and will experience strong growth. We will have a declining share of an increasing market, indicating there will be plenty of room due to rapid growth in China’s markets.”

Continued from page 47

Delta, Baiyun (Guangzhou), will take some cargo business away from Hong Kong, which will most likely impact HKIA’s ability to maintain its market share. However, Cathay expects continued double-digit growth even with the competition from new airports.

“Hong Kong will remain the preeminent gateway in the region and will experience strong growth,” said Dora Kay, head of international marketing at HKIA. “We will have a declining share of an increasing market, indicating there will be plenty of room due to rapid growth in China’s markets.”

Competition to Cathay is not new. HKIA has more cargo capacity flown by more airlines than any airport in the world.

When asked about low-cost carriers emerging in Asia/Pacific and looking at cargo business, Mathison said that, “Cathay already is a LCC. In cargo, there is no room for high-cost operators. The game is to be the lowest-cost provider of a high-value product.”

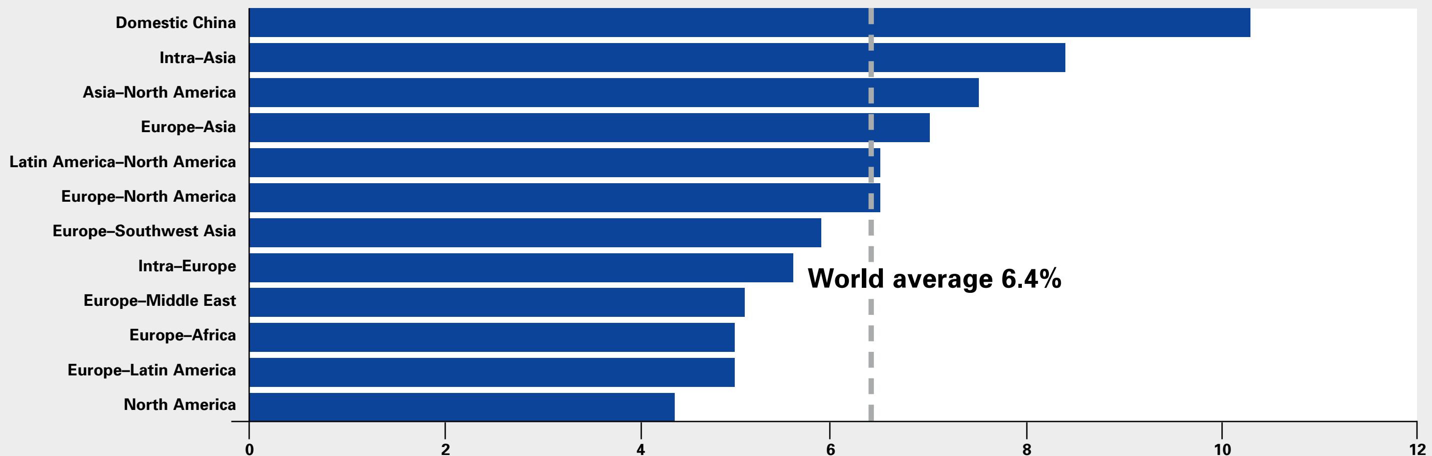
Future trends in cargo at Cathay will be the expansion of electronic booking, “paperless cargo” and e-airway bills. More than 85 percent of the airline’s business at HKIA is completed through electronic bookings, with the highest penetration of online bookings in Asia/Pacific. This, in part, is driven by the need to file electronically to speed customs requirements as well as improve efficiencies in distribution and deliver more visibility of shipments throughout the entire supply chain.

Peter Berdy is a partner for Sabre Airline Solutions Consulting. He can be contacted at peter.berdy@sabre.com.

In addition to the financial benefits of the system, airlines have realized additional benefits such as increase in productivity, up-to-date availability of data, consistency in decision making and improved response time. The extent of revenue benefits from using *Revenue Manager* depends on a number of key factors such as the level of sophistication of current revenue management methods, business process alignment with the system, data quality and availability, product acceptance at all levels within the cargo organization, and users believing and using the system.

Raja Kasilingam is vice president of cargo products for Sabre Airline Solutions. He can be contacted at raja.kasilingam@sabre.com.

Global Cargo Markets



Of Asian markets, Intra-Asia will grow the fastest, averaging 8.4 percent growth per year, while the Asia–North America and Europe–Asia markets will expand at average annual rates of 7.5 percent and 7 percent, respectively.