ANNEX G. AIR CARGO VILLAGE

The term ‘Air Cargo Village’ has been applied to such a broad – both in scale and in services - array of conditions as to become almost meaningless. Ideally, the term invokes the gains of efficiency represented by collocating the cargo operations of airlines (both passenger and cargo), freight forwarders, ground-handlers, trucking (both local delivery and linehaul) and federal inspections. In some sense, the ‘cargo village’ may be one single multi-tenant building with warehouse operations on the ground level and offices located on floors above or also on ground level but perhaps not having airside access. Alternatively, the ‘cargo village’ may be a collection of buildings – which cumulatively may or may not represent all of the airport’s critical air cargo functions. For example, some so-called cargo villages may not include belly-cargo operations which may be collocated with the rest of the passenger operations or may exclude the operating space of integrated carriers which tend to operate in much more of a ‘closed-loop’, rather than requiring the ground-handling and trucking services of third-parties.

The tangible benefit of a cargo village configuration is far from absolute. Intuitively one believes that having all of these services in one general area should promote efficiency – not least from improved communications. However, small (in terms of tonnage and operations) cargo airports are far more likely to have all of their commercial cargo operations in one site – simply because the local operating scale can easily be accommodated in one place. Alternatively, some major cargo airports – such as New York JFK and Los Angeles International Airport – have cargo operations spread around the airfield, as well as off-airport. Neither airport operator would suggest that having such spread out cargo operations is optimal. Movements of ground services equipment, gate utilization and security concerns are certainly complicated by such divergence. Yet one could hardly contemplate the success of either airport and establish that such conditions had prevented them from joining the top tier of cargo airports.

As with so much throughout this study, the consequences of the presence/lack of a discernible ‘cargo village’ seems to be driven by market context. Newer airports – such as Dubai International Airport – that were able to create cargo villages without displacing decades of other development have undoubtedly benefited. Yet, legacy airports at which cargo operations were essentially ‘jammed’ into any available gap in the airports’ footprint have retained their utility because cargo operators were willing to tolerate less than optimal conditions to exploit the superior frequencies, destinations and selection of carriers available.

In many developing countries, the presence of a cargo village is likely to be beneficial operationally but whether such a resource would lead to increases in operating volumes is highly debatable. What is most important is whether the market can justify the attraction/retention of carriers and forwarders, regardless of whether these can be tidily collocated in a single facility or area. The processing of large volumes necessarily applies pressure on efficiency that often does not exist with smaller volumes – which can occasionally be processed in acceptable time increments even in the face of numerous sub-optimal practices and resources. The benefit of a ‘cargo village’ may be greatest for airports that already have large-scale operations – which, paradoxically, in Europe and North America at least tend to be airports subject to the most ‘vintage’ development and therefore are least likely to have large plots of available contiguous space.

*Amsterdam Schiphol* is one successful airport that clearly believes in the benefits of the cargo village approach, which is a prominent feature in the airport’s new long-term master plan. Schiphol is actively trying to attract freight forwarders back on-airport into a proposed development that would
collocate forwarders and ground-handlers with on-ramp access to allow large forwarders to take pre-built pallets and containers directly onto the ramp. The plan also entails enhanced accommodations for trucking companies and longer-term, the establishment of air-intensive shippers, such as mobile phones and other high-value, time-definite electronics.

**Sea-Air Intermodal Transport**

In his 2005 book *Transport Logistics: Past, Present And Predictions*, Swift Freight Group Chairman & CEO Issa Baluch described the origins of the sea-air model as owing to the need for airlines to leverage underutilized capacity on international scheduled routes. Specifically, Baluch cited the United Arab Emirates in the 1970’s wherein inbound flights fed the booming oil industry but often left empty. As Baluch explained, what was initially ‘fill-in’ cargo developed into a product unto itself.

Interviewed for this study, the cargo manager of a major Middle Eastern air carrier reported that although sea/air was a small percentage of the carrier’s total volume, it has become a critical element of supply chain management for those companies for whose business it is applicable. For one example, he cited mobile phones for which the life cycle of individual models may only be six months to one year. With such a short life cycle, all R&D costs must be amortized over the first batch of production. The first wave may be transported by air (transportation time of 2—4 days), the second by a combination of air and sea (transportation time of 15—17 days) and the third transported totally by sea (30—40 days).

The cargo will be transported from Customs clearance directly to retail shelves. By the time that the first batch has been sold, the second wave has arrived and so on through the third wave. This methodology allows sellers to avoid holding inventory and related costs therein. Moreover, as slower, cheaper modes (and combinations of modes) are employed, individual unit costs go down which allows for discounting on subsequent waves – a relatively common practice with electronics.

While products originating in developing countries may be fed into sea/air combinations, the important conversion points – Dubai & Sharjah in the United Arab Emirates, Seattle and Vancouver in North America and Singapore in Asia – are in industrialized markets. Undoubtedly the competitive advantage of these sites stems from superior seaport and airport connectivity – neither of which (let alone both) is common to most developing markets, especially the air service.

Sea-air entails a compromise between cheaper, slower sea and more expensive, faster air transport. In his book, Baluch observed that the ideal sea-air hub must sit approximately midway between origin and destination, and the airfreight cost should not amount to more than 50 percent of the direct airfreight cost from origin to destination.

**Sharjah**

In 2005, Sharjah International Airport accounted for approximately twice the cargo volume of Abu Dhabi International Airport but less than half as much as Dubai. Sharjah formerly was Lufthansa Cargo’s largest operation outside of Germany, supported by a cargo-swap program with Singapore Airlines and cargo feeders into India.

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<th>Table G-1. Sharjah: 2005 cargo distribution</th>
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<td>Exports</td>
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Source: Sharjah airport website

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52 Winning Books, www.transportlogistics.com
However, Lufthansa has since routed all of its Japan and China flights over Astana, Kazakhstan but Sharjah remains the principal stop for Lufthansa’s operations to Hong Kong and Southeast Asia. Lufthansa also runs one of the airport’s cargo terminals. Sharjah is also served by scheduled freighters of Singapore Airlines, Cargolux, Martinair and Egyptair, as well as a host of charter operators. Sharjah is the hub of low-fare Air Arabia, but its narrow-body Airbus 320 fleet is not conducive to significant belly cargo operations.

Sea-Air is a significant growth business for Sharjah, having risen 47 percent in 2005 to 52,238 tons (roughly 10 percent of total cargo for the year). The Indian subcontinent is responsible for much of the Sea-Air business to Europe.

**Sea transport as competition**

For many years, cargo operators have contemplated the potential (but unrealized) competitive threat of FastShips that cross oceans in one-fourth or less of current durations: the Atlantic in four days and the Pacific in six. Less ambitious (shorter) distances have already experienced diversions from air to sea as Customs delays in some developing countries diminished the competitive advantage of more expensive, ostensibly quicker air transport. More recently, fuel costs and more efficient trucking operations have already caused diversions from air to surface transport.