SKYTEAM

A Strategic Alliance

Leon E. Pennington

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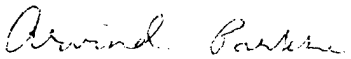
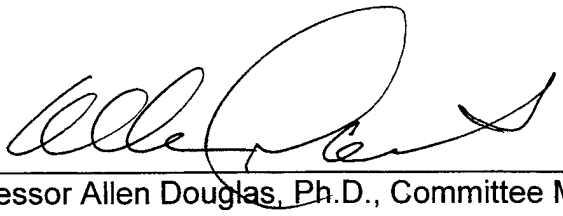
Professor Roy Gardner, Ph.D., Committee Chairman



Professor Arvind Parkhe, Ph.D., Committee Member



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For Mom, Kathy,
Tommy, Tony, and Megan

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Introduction

In the world of business, customers often initiate product development. Successful companies are the ones which can deliver what the customer wants more efficiently than the other guy, and in the world of transportation by air, the customer wants the benefits of Anywhere to Everywhere right now. Thus was born a need to develop a cooperative effort among the airlines. Since any one airline could not provide the product customers wanted, perhaps a grouping of like-minded airlines with diverse route structures could. These cooperative efforts became known as strategic alliances in the business world, and for the airlines, a method by which they can provide a seamless Anywhere to Everywhere flight experience for customers.

Ninety-seven years since the discovery of powered flight by the Wright Brothers has seen the development of aviation to a degree not even conceivable in 1903. Once invented, airplane technology progressed from the most rudimentary designs to complex vertical takeoff vehicles capable of speeds well in excess of Mach 2.

As these flying vehicles became more common, industrious man quickly found a use for them and governments stepped in to promote their development with research funding and contracts. Besides being used as spotters in combat, airplanes were contracted to carry mail. Airmail led to the transport of passengers for hire, and eventually to the formation of corporate airlines.

While advancement of technology enabled airlines to deliver their

passengers to remote destinations at breathtaking speed, it was the shortcomings of technology which led the airline industry to the use of strategic alliances. In a perfect world, all airlines would be able to comply with Delta's motto: From Anywhere to Everywhere. But Anywhere and Everywhere are very large places and it is impossible with current and foreseeable airplane technology to meet this requirement with the resources of any one company.

Crucial to the development of strategic alliances in the air transport industry has been the cooperative efforts of the governments involved. Without a political environment conducive to international cooperation, strategic alliances in the air transport industry would have been constrained to a limited domestic application. The real strength of alliances come from their ability to cross cultural and political boundaries. As such they have become the most frequent and useful ambassadors in history: useful because of their capacity to carry passengers and cargo in two directions, and frequent because of their daily contact with the people of other nations.

In the air transport world of today, use of strategic alliances has become a way of competitive life. This paper examines the political environment which led to the use of strategic alliances in the airline industry today. Next, an in-depth look at two airlines, one on each side of the Atlantic Ocean, is conducted to determine operational strengths and characteristics before and after the alliance. This paper examines how each airline is organized and run, the resources available to each, and how they conduct their operations.

In the last chapter, the strategic alliance is described and analyzed,

leading to the conclusion that the Delta/Air France strategic alliance has been beneficial to its member airlines. Indeed, one mark of its success has been the rapid growth which has taken place since this research project was initiated six months ago. The alliance has grown from two to four, possibly five airlines, and now reaches into every inhabited continent in the world.

Chapter One: The Political Environment

Executive Summary:

The airline industry began in the United States in 1934 with passage of the Air Mail Act. This legislation provided a steady stream of income to the fledging air transport services which enabled them to put money into development and infrastructure. The same sort of thing happened in Europe as technology developed, and both regions of the world used government intervention as a method to promote the development of airplanes and the air transport industry. As the industry grew, so grew the need to form cooperative agreements at the international level.

The Convention on International Civil Aviation met in Chicago in 1944 to promote international travel and efficiency. From this meeting was born the International Civil Aviation Organisation, the centralized body for coordination of all international flights.

By the late 1970's, the airline industry had progressed to the point where government assistance was no longer warranted. Deregulation took place, first in the United States, then in Europe. Deregulation led to market-based economics for the airline industry, and operational efficiencies began to develop. Airlines transitioned from point-to-point service to a hub-and-spoke model of operation, greatly improving logistical and personnel management. A distinct division developed between regional and major carriers.

As international travel grew, so did cooperation among airlines and national governments. Cooperative competition was permitted and strategic

alliances became the norm. This enabled the industry to fly passengers from one point to any other location on the globe. Strategic alliances and seamless service became standard in the industry.

Introduction

In the world of business today, few corporations are as well recognized for their international presence as the airlines. Airlines serve not only the flying public but are considered essential to government, business, and military leaders in the conduct of their duties involving international coordination. Airlines conduct multiple flights on a daily basis in and out of international airspace. Since the airline business is exposed to political environments it must be adaptable to various changes which occur in those environments. These changes are many and varied, ranging from currency convertibility policies and its subsequent effect on logistical expenditures, to intergovernmental agreements which dictate specific route structures, ports of entry and quantities of air terminal gates available for use by competing airlines. Once regulated, corporations in today's transatlantic airline industry are relatively free to enter into competitive agreements with other airlines, including foreign flagged carriers. Although subject to specific guidelines and regulatory restrictions, strategic alliances have served as a valuable competitive tool in the airline industry. Requirements like the United States (US) 'open skies' regulation and the European Union (EU) 'ownership criteria' exist to encourage competition and improved access across national barriers. Meanwhile, the European Court of Justice (ECJ) provided a background in which European-involved strategic alliances were able to form and

develop. Rulings by the ECJ in regards to the air transport sector paved the way for the Council of Ministers to initiate a series of phased reforms of the then-regulated air transport industry in Europe. The ECJ ruling stated that air transportation must adhere to previously established competitive rules which effectively opened the door to cross-border agreements.

Industry guidelines on international travel are codified as "bilateral aviation service agreements (ASA) between the governments of the host country and the carrier's country (Bartett 449)." These agreements allow foreign airlines to fly passengers to a port of entry within the host country. From there, a traveler wishing to fly to another destination within the country has to deplane and fly on a domestic airline. In the airline industry this domestic air transportation system is referred to as 'cabotage.' Politically, the integration of West European countries into the EU created a large European domestic market. This raises the possibility of a cabotage arrangement for the new domestic airspace of the EU.

US BEGINNINGS

In the US, the air transport industry got its start in 1934 with the passage of the Air Mail Act. This legislation was intended to promote the air transport industry and facilitate delivery of US Mail in an expeditious manner. Unfortunately, the Air Mail Act did not adequately centralize operations. Instead of one agency overseeing costs, route structure, and postal contracts, responsibility was divided among three agencies. The Postal Service knew where the mail had to go, so the responsibility for scheduling and route structures fell to them. The Interstate Commerce Commission established rates, and the

Department of Commerce determined specific equipment requirements the bidders had to comply with in order to compete for the highly desirable mail routes (Byrnes 22).

Regulations Implemented

These problems led to the establishment of the Civil Aeronautics Board (CAB) in 1938, just prior to the start of hostilities in Europe. The CAB successfully integrated the various air transport industry responsibilities into a single administration. It was under the guidance of the CAB that the industry was able to resolve outstanding problems of standardization, training issues, safety concerns and fare and route structures. During WW2, the US air transport industry showed rapid gains. Material, supplies, personnel, and equipment were flown at greater rates than ever before to support the war effort at home. The CAB regulated the industry and subsidized its operations during its initial years of high costs and low revenues. The CAB set airfares as well as route structures. Even as late as the 1960's, smaller airlines like Delta, Braniff, and Continental were given route preferences over the majors like United, Trans World, and American in an effort to foster competition.

International Political Considerations

The establishment of the CAB in the US was similar to the establishment of the Confederation of British Industry in Great Britain in 1965. This confederation was formed as a "result of the amalgamation of the Federation of British Industries . . . the British Employer's Confederation, and the National Association of British Manufacturers. It sought to bring together the resources . . .

to form a more efficient servicing body . . . representative of industry's needs in discussion with government (Norton 155)." Like the US CAB efforts to streamline the process of business development in a nascent industry, the actions of British industry demonstrated their recognition of the importance of legislative support.

International Agreements Formed

The Convention on International Civil Aviation met in Chicago in 1944 to promote international travel efficiency and cooperation. The convention initiated the use of multilateral governmental agreements based on the principle that "every state has complete and exclusive sovereignty over the airspace above its territory (Oum 17)." Representatives from the worlds leading airlines attended this convention. This convention formed the International Civil Aviation Organization (ICAO). ICAO was established as the centralized body for the coordination of all international bilateral use agreements, regulations, and procedures for aircraft involved in international flights. ICAO rules are still in force today and closely resemble the Federal Aviation Administration (FAA) rules and regulations. In fact, even US military aviators wishing to fly in international airspace (for other than combat operations) must comply with ICAO procedures.

Since ICAO rules apply to all aircraft, including military, general aviation, and air carriers, the airlines decided to establish an additional association to deal with issues relating strictly to airlines. In 1945 the International Air Transport Association (IATA) was established for that reason. It serves as an airline company representative and presents the views of its members to the appropriate body, whether it is a government agency like the FAA, or an

international organization like ICAO. Before deregulation the IATA was responsible for setting airfare and cargo rates and served as a clearinghouse for settling inter-airline accounts.

Prior to deregulation, airfares were structured identically across the industry for the same routes and times. Fares were coordinated by the IATA with the approval of the CAB. This protectionist activity was justified because the airlines needed the fare protection to build and run a very expensive operation. Many years were required to get the airlines into a profitable position and fare protection was necessary in help the fledging industry grow. Fare protection enabled the airlines to provide adequate route coverage for consumers and was permitted for this reason. With deregulation, market forces became dominant and fare prices dropped. More people could afford to fly as a result of the price drop. This increased the passenger-per-seat ratio and resulted in greater profits for the airlines, which enabled them to expand their market saturation. Some airlines were not able to withstand the loss of fare protection and eventually failed. The successful ones like Delta and American moved from a point-to-point to a hub-and-spoke operation. First established in Atlanta in 1955 (*Delta* 3), Delta pioneered the use of this centralized system of connected flight routes. They were able to reduce costs by coordinating their maintenance, fuel, and personnel logistics in a centralized location. Centralization also enabled them to become involved in air transport industry-related business ventures like hotels and airline food preparation.

International Political Considerations

Though politically influenced, market forces should drive infrastructure development in industry. The development of the US air transport industry had tremendous impact in American politics. The industry had grown and was worth billions of dollars, producing many opportunities for the involvement of political spending. In particular, these opportunities enabled Senators and Congressmen to tap into public funds in order to develop aviation industry in their own state. These 'pork barrel' budget items went a long way to building an aviation infrastructure in the various states. Similarly to the French system of centralized budget planning by experts, the US system empowers the legislative with substantial opportunities to participate in public spending decisions. A part of the French committee system since 1982, the *Commission nationale de planification* (National Planning Committee) relies on working committees comprised of civil servants and interest-group officials from many areas of expertise (Oum 25).

EUROPEAN BEGINNINGS

Because of the international influence of organizations like IATA and ICAO, aviation policies and procedures of airlines based in the countries of Europe developed along similar lines as the US. However, while the US was undergoing a lot of regulatory adjustments, airline operations in Europe remained relatively unchanged in operation from the end of WW2 to 1984. This was the year the European Commission initiated the first deregulatory actions. Until that time, European airline operations were heavily subsidized by the owning nation-states.

Cooperative Agreements

The air transport industry in Western Europe has always been characterized by a higher percentage of international versus domestic travel. "In fact, over 80 percent of all airline flights are international, most under 2 hours in duration (Oum 25)." An abundance of multilateral and bilateral agreements supplement the European regulatory system. European airlines did not deregulate as early as the US, nor was deregulation accomplished in the same fashion. Until European deregulation, governments agreed on price structures and cooperated on routes and schedule coordination. Coordination of two carriers on the same route included the agreement that all revenues for the route were split between the two carriers. In essence, the carriers were regulated bilateral cartels (Molle 352).

International Political Considerations

"Air traffic has shown the most spectacular growth of all modes (of transport). Over the 1960-95 period, the total number of passenger kilometers flown by the major European airlines increased seventeen-fold (Oum 26)." The impact of this statistic was not lost upon the political leaders of the EU. Faced with increasing incursion of US air carrier service, the reality of having to compete on a global scale become very apparent. With the US pushing for greater liberalization and more 'open skies' agreements, the Commission decided the time to initiate change was upon them (Oum 27). US 'open skies' meant each agreeing country would have unlimited access to any of each other's civilian airports from any host country city, including unlimited routing capability to

access those airports.

First Steps

In 1984, the European Commission published Civil Aviation Memorandum No. 2, which effectively set in motion a move towards European deregulation of the air transport industry. It called for improved coordination and a looser hold on routes that until that time were mandated by separate governments. The Commission included the principles introduced by the Rome Treaty which came into force in 1958. The treaty established a European Economic Community in order to merge the various member nations markets into one market. This was done to enable the free movement of people and material among the member nations.

Essentially, the air transport industry in Europe was a grouping of companies with common interests acting in a competitive environment. The airlines coordinated fare structures, routing, scheduling, etc., in order to conduct efficient operations, yet competed for passengers in marketing, distribution, and key routes. Cooperation helped member companies to make a profit yet was competitive enough to garner toleration and encouragement from the national governments, who in large part were owners of the assets involved.

Deregulation Process

The winds of change began to sweep across Europe, no doubt from the deregulatory activities across the Atlantic Ocean in the United States. After the US deregulated from 1978-1983, the European Commission published Civil Aviation Memorandum No 2 in 1984. This significant piece of European

legislation led to greater harmonization of the various nation-states air transport policies and set aside many existing bilateral agreements. Although it did not make the existing agreements illegal, the memorandum did introduce Treaty of Rome competition rules into the air transport sector (Simmenthal 1). There were some problems with full implementation right away, though. France and Italy questioned Memorandum No. 2 on sovereign issues, and it wasn't until 1987 that the full Council of Ministers signed a formal agreement on the introduction of competition principles into the air transport sector (Oum 27).

The UK

Following this pivotal legislation and acceptance by various members of the European Union, the United Kingdom initiated the first liberal bilateral agreement with the Netherlands in 1984 under the revised procedural regulations. Success of the new agreement was evident and it was realized that more liberal air transport policies would eventually rule over the previously established way of doing business. In 1985 further deregulatory measures were taken between the UK and the Netherlands. For example, unlimited routing and airport usage was now permitted by the airlines of both nations in each other's airspace. By 1985, travel between the two countries was effectively deregulated.

The UK signed several additional agreements after their success with the Netherlands. These agreements were similar to the Netherlands agreements, but were tailored to each countries specific situation. The additional countries included Germany, Belgium, Luxembourg, Switzerland, and Ireland (Oum 27). Agreements signed with the US contained an open skies requirement. Although

each country would have unlimited access to any of each other's civilian airports from any host country city, the open skies agreement did not include cabotage, which was a privilege reserved for domestic carriers.

International Political Considerations

Willingness to take unilateral action has characterized the estrangement of the United Kingdom from the Continent. In this case, the leadership shown by the Prime Minister in implementing these international agreements has been instrumental in moving the EU member nations from the regulated past to the deregulated future. This is an example of a role played by the executive branch of government, in this case the Prime Minister of the UK, which is to take action promoting the welfare of the people for the common good of the nation.

The European Court of Justice

In addition to the ECJ, the Council of Ministers was also in favor of the Treaty of Rome competition rulings being applied to the air transport sector. In the *Nouvelles Frontiers* case, the ECJ ruled that competition regulations could be applied in all the Member States from the date of their entry into force and for so long as they 'continue in force.' Also, 'in accordance with the principle of the precedence of Community law, the relationship between provisions of the Treaty and directly applicable measures of the institutions on the one hand and the national laws of the Member States on the other is such that those provisions and measure... by their entry into force render automatically inapplicable any conflicting provision of ... national law (Simmenthal 1)."

International Political Considerations

This is an example of how the ECJ interprets and expands its powers to move federalization of the EU forward. By adding another building block to the cases already in place, it makes an argument based not only on the language of the law, but also on previous rulings. Putting in place a body of law and opinions shape the direction and powers of not only the court but of the EU as a political entity. This is especially meaningful given the historical context because the UK (although having already passed the 1972 European Union Act) was a relative outsider in matters concerning the continent.

Three Packages

After a successful period of limited deregulation in the European air transport industry, the Council of Ministers passed a series of liberalization measures from 1987 to 1993 in order to fully deregulate the industry. The liberalization measures were implemented in three phases, or 'packages.'

First Package. The first package was implemented in 1987. It was the weakest and least effective of the three packages. It was designed to 'ease' change in rather than bring it suddenly about. It included measures to implement Rome Treaty's competition rules into the air transport sector in a fair and equitable fashion. It also included measures to relax restrictions on fares, capacity, and entry barriers. This served to level the playing field by allowing the heretofore-restricted major carriers from implementing the full benefits of scale economics. However, as a first step, it did allow for block exemptions and granted immunity for collusive practices from industry members who had been

involved with government intervention from the beginning.

Second Package. The second package was implemented in 1990. This legislation called for phasing out of the revenue and capacity sharing agreements by January 1, 1993 (Government 23). These agreements were the backbone of the government-sponsored air travel industry, and their loss was a significant change in the European air transport sector. This change resulted in a zonal fare system of price determination. The new system meant freedom and flexibility for fares, lower prices, and greater responsiveness to the marketplace by allowing the individual airlines the capability to react to market forces. The second package also liberalized the multiple-designation of airline ticket-coding procedures. This allowed a reduction in thresholds for capacity-access requirements, permitted a double disapproval system of fares, and most importantly, prohibited nation-states from discriminating against non-national airlines by ensuring conformance with technical and safety procedural standards.

Third Package. The third package became effective in January 1993. These additional liberalization measures were built upon the previous packages and were the most comprehensive to date. Using the US regulatory system as a model, they included a phased move to construct the European system along the same lines to promote international standardization. Not only did this offer a viable method of standardization for the nations of Western Europe, but it also aligned them with the prevailing standardization trend in the rest of the world. This would be crucial in forming open sky agreements later on with not only the US but also the nations of the Far East. By April 1, 1997, the phasing

progressed to a significant step. As of this date every nation in the EU (plus Norway and Iceland by agreement) became a part of the domestic system of flight. This meant that cabotage was now unrestricted for all EU registered aircraft. Finally, criteria for ownership came under EU guidelines as opposed to national requirements. These final steps in the deregulatory process were essential to combine the air transport industry in the EU. Now, instead of 15 separate nation-states competing in the growing international market of airline passenger travel, the EU was poised to take advantage of the economic efficiencies available to global-based industries.

MARKET-BASED ECONOMICS

Corporations, especially those operating in the global marketplace, have to be sensitive to the political changes in their environment. They react to governmental regulatory changes, consumer-driven marketing adjustments, and economically driven profit requirements. Being under the control of strict (and restrictive) governmental regulation for over 40 years numbed many air carriers to the changing economic forces of the global market. In the face of these changes, several air carriers failed. As they left the marketplace, their assets were redistributed and absorbed by other companies better positioned to take advantage of new opportunities left behind. In the US, the hub-and-spoke system was the pattern of operations was found to be the most successful.

Logistics

In the hub-and-spoke system the airlines base out of a central location in a population-dense region of the country. For example, in the US, the primary hub

for Delta is Atlanta. For American Airlines, it is Dallas; and for United Airlines, it is Chicago. Due to the size of the US, each major airline has also established secondary hub systems across the country to facilitate their operations. A good example is Delta, an Atlanta-based airline with secondary hubs in Boston, Cincinnati, Dallas-Fort Worth, Los Angeles, Orlando, and Salt Lake City.

Operations

In a hub-and-spoke operation, virtually all flights travel to and from the hub like spokes of a wagon wheel. Travelers in city A wishing to fly to destination B normally do not fly to their destination nonstop direct. Most are routed to hub C, where additional passengers also wanting to travel to destination B can get on the plane. Not only does this provide convenience for passengers who would like to catch a plane to destination D (which may not be served from their city), it simplifies operations and maintenance of the airlines controlling hub C.

Operations are simplified because of several reasons. Pilot training can be facilitated with large numbers of crew seats flying in and out of a central location. Management is centrally located allowing rapid decisions to be made if necessary. Logistical reshuffling of assets can be made easily if most of the company's aircraft are available in the local area.

Maintenance

Timely maintenance is crucial in the airline industry. The centralized hub system allows for a changing of planes if necessary, and preventive maintenance procedures can be accomplished by well-trained team of mechanics whose quality levels can be monitored and applied to every aircraft owned by the

company. A central location also allows for strategic utilization of key employees and the lack of unnecessary labor repetition saves the airline high personnel costs.

Strategic Alliances

As a result of the deregulatory process in both the US and the EU airline companies have had to adapt to the marketplace and the economic forces that exist under a competitive playing field. The larger a corporation grows, the more it needs to incorporate large-company competitive advantages. These advantages bring greater profits to the corporation enabling it to sell more products, hire more employees, and generate wider ranges of goods to appeal to broader segments of the targeted consumers. In order to grow faster, some companies 'take over' other companies; some enter into mergers, and some form strategic alliances. All three methods can be found in the airline industry, but strategic alliances have become a very popular way to extend an air carrier's field of operations and satisfy the increasingly sophisticated demands of the flying public.

Strategic alliances are agreements that connect networks. They allow an airline the ability to offer its customers a much wider variety of destinations and flight schedules than would be available with just the assets integral to the airline without an alliance. Not mergers per se, airlines still maintain their autonomy, yet agree to cooperate on several levels. From a simple code-sharing agreement to actual equity-based financial partnering, strategic alliances serve as a method to capture greater market share and take advantage of global economies of scale

without the normally prerequisite expenditure of capital.

As the complexity of these agreements grows, network competition results. Competition in the airline industry is not between two companies, or two alliances, but rather between groupings of alliances formed by multi-level agreements. The successful companies are able to align themselves in such a way as to take advantage of the most advantageous financial, political, and technological opportunities in this competitive network system.

Some examples of international strategic alliances include (Government 23):

US Airlines		European/EU Airline
Northwest Airlines	and	KLM (Holland)
United Airlines	and	Lufthansa (Germany)
Delta	and	Air France (France)

Source: GAO, International Aviation, *Report to Congressional Requestors*, 1998.

This is not to say that strategic alliances are permanent arrangements. Most agreements have exit clauses built in with any partner of the alliance able to sever ties if it is in their own best economic interest. For example, the strategic alliance between US Air and British Airways ended in May 1997 after almost five years of planning and partnership. British Airways opted to join with American Airlines in June 1996 (Government 40), apparently opting for a partnership with the larger American Airlines over US Air. Strategic alliances among the airline industry sometimes tie together more than two air carriers. The goal is to build a virtual global capability of interconnected regional networks. Carried to the logical end, the most connected airline company would be able to take you from your home city to any other city on the globe. It is the hub-and-spoke arrangement on

the international scale.

Airlines form strategic alliances to overcome the technical limitations of their aircraft, establish presence in new markets, and offer seamless service to their customers. Seamless service is achieved when fare-paying passengers can travel from home location A to destination Z without ever having to re-ticket or touch their baggage. The fact that they may change air carriers two or three times would be unnoticed in an ideal seamless experience.

The first strategic alliance formed in the air transport industry was the agreement between Air Florida and the British Island airline in 1986. In this alliance, Air Florida fed all of it's US originating traffic to the British Islands flights on the London-Amsterdam route structure. Both airlines implemented code sharing to facilitate this exchange (British 2).

International Political Considerations

In Germany, one government policy influencing body that could promote the same type of successful alliance structuring is the Bundesverband der Deutschen Industrie-BDI (Federation of German Industries). As integration of former East Germany accelerates, the influence of the BDI can promote successful business-related policies within the government as the "single most important representative of business interests within the policy process . . . (Dalton 246)." Just as airlines use strategic alliances as a competitive tool, emerging firms in the now combined Germany can also take advantage of the benefits of strategic alliances as they enter the global marketplace. The BDI can represent these firms at policy-making levels of government, thereby improving

the chances of success in a very competitive environment.

Levels of Integration

According to the Government Accounting Office (Government 24), the US government recognizes six levels of integration between US and foreign airlines. Levels of integration not requiring governmental approval are no integration, separate airlines, and separate airlines with simple marketing agreements. Levels of integration that do require government approval include airlines with marketing agreements + code sharing, 'merger' model - joint operations, and 'investor' model – large equity stake. At this time, genuine international airline mergers are not permitted under US regulatory structure.

Separate Airlines

Separate airlines compete in all markets and across all competencies. They may process other airline tickets for through-flights but effects are minimal. Each airline is subject to and takes advantage of standard interline agreements that apply across the industry.

Separate Airlines with Simple Marketing Agreements

Separate airlines with simple marketing agreements are those which may coordinate their schedules to accommodate the greatest number of passengers. They may share facilities such as tickets counters or gates in the airport terminal. Their frequent flyer programs may be linked together, and they may participate in joint marketing promotions to maximize their passenger/seat fill capability. Up to this point, government approval has not been required because the separation between the individual airlines has been significant enough to ensure the interest

of the public (in terms of illegal trust and monopolistic practices) is maintained. Government approval is required for the next three levels of integration.

Airlines with a Marketing Agreement + Code Sharing

Airlines with a marketing agreement and code sharing include all the possibilities of the lower levels, but add additional administrative and physical coordination. Code-sharing is the administrative procedure which enables the customer to switch between air carriers without having to check in at the flight counter or be involved in changing of their bags from one air carrier to another. This is done by encoding on the original ticket the code of both air carriers servicing the flight for each segment of the flight. Also involved are airlines efforts to facilitate their passenger throughput by co-locating their gates and coordinating arrival and departure times of various flights.

An example of this can be found in the United/British Midland's passenger density on flight between the US and Glasgow before and after the code-share alliance. During the months of January to March in 1992 there were less than 100 passengers who traveled with the two airlines. One year later, after the alliance had been coordinated, passenger totals were over 1000, with competitor British Airways taking the biggest drop in passenger emplanments (Government 46). The next two levels of integration involve coordination so involved as to possibly merit the need for antitrust immunity.

'Merger' Model - Joint Operations

The 'merger' model and joint operations agreement features revenue pooling, fares and inventory control, joint marketing and sales, network planning,

standard servicing contracts, and shared marketing data. Revenue pooling is a process used by different airlines to share the receipts on a given route structure or network. This is commonly used with business travelers who fly to and from neighboring cities. In order to maximize the capability to handle all the available passengers, airlines A takes off from city A to city B, while airline B departs city B for city A. The process is reversed in the evening, with airline A transporting the passengers delivered by airline B. This puts twice as many aircraft in the air at the same time, with revenue sharing effectively doubling the exposure to market for both airlines.

Fares and inventory control are essentially collusion on pricing, and require antitrust immunity from the government. These controls allow airlines to forecast costs and stabilize prices in extremely tight markets. It also enables them to provide air transport services where they might not otherwise be able to do so profitably. Therefore the public has access to convenient air travel in the less popular regions of the country.

Joint marketing, sales and sharing marketing data enable the airlines involved to maximize the alliance opportunities. By advertising and promoting their capabilities, two airlines can share advertising costs while increasing passenger density, thus taking advantage of economies of scale in their advertising and promotion budget.

Network planning and standard servicing contracts minimize inefficiencies and maximize labor and material costs. Coordinating their maintenance requirements by adjusting and planning their network resources, two companies

can take advantage of bulk purchases of repair parts, oils, and lubricants. Standard servicing contracts enable them to work together on large jobs, resulting in less employee turnover. As the airlines improve their efficiency and standardization in the area of preventative maintenance, safety practices are engineered into the process, resulting in less frequent unscheduled maintenance and safer aircraft available for the flying public.

'Investor' Model – Large Equity Stake

The 'investor model and large equity stake level of integration includes all the features of the previously described mergers. Current US laws restricts the level of ownership of a US carrier to no more than 25%, and requires US citizens to retain control of the airline.

EU Mergers

Opportunities for European-only mergers to form have existed since the recognition of domestic airspace encompassing all of the airspace above the member nations. The EU mergers follow the requirements of the European Commission and are subject to European law.

CONCLUSION

The higher the level of integration in a strategic alliance, the more the political dimension becomes important. A simple code-sharing agreement to facilitate movement of passengers is easily understood and is an open arrangement. However, the 'Merger Model, which involves the strategic partners in a complex joint operation, requires close intergovernmental scrutiny and agreements. Unforeseen emergencies could develop and former national

strategic assets may be pressed into service. Political leaders of nation-states have a higher duty to security of the nation than maximizing economic opportunities for the airlines industry.

Strategic alliances are an important economic competitive tool for the air transport industry. Airline representatives are typically the first ambassadors of a nation, and their presence facilitates all other contacts and coordination. It is important for the future of trade, political stability, and world peace to ensure the airline industry can operate profitability and without undue governmental restraint. Along with communications technology and computerization, global travel capabilities are the surest way for people of the nations of the world to learn about other countries, get to know one another, and work to sustain a peaceful coexistence in our ever shrinking world. Formed from a diverse political environment, strategic alliances have proven themselves to be a successful competitive tool for the airlines in the transatlantic air transport industry.

Chapter Two: Delta Airlines – A Case Study

Executive Summary:

Delta Air Service began as a small crop dusting operation in Macon, Georgia in 1924. Their name came from the Mississippi delta region where they conducted crop dusting services. Founded by Collett Everman Woolman, the small company began passenger flights in 1929 and changed its name to Delta Air Lines, Inc. when they moved to Atlanta in 1941. The airline grew quickly, and by 1961 had flown over 11 billion passengers.

Delta first flew internationally to London in 1978 and by 1994 was flying to over 320 cities in 44 countries around the globe. The first to transition to a hub-and-spoke model of operation, Deltas rapid growth came from the purchase of smaller airlines which were losing ground in the fast-growing environment. Delta's international strategy is focused on providing seamless service from Anywhere to Everywhere, and to this end they have entered into a series of carefully planned codeshare agreement and strategic alliances.

Delta has a fleet of 584 owned and leased aircraft which are utilized domestically in four regional services. Besides normal passenger service, they offer; Delta Express which services the Northeast-Florida leisure travel, Delta Shuttle which provides hourly service between Washington, D.C., Boston, and New York, and Delta Connection which helps passengers make their connections at the Atlanta hub in the South and Midwest.

Delta's strategic alliance with Air France was formed in November 1999. This alliance has enabled Delta to continue its growth to destinations such as

Vietnam, Russia, and the African continent.

Introduction

Delta's stated goal is to become the number one airline in the world. In order to do that, they believe that forming strategic alliances are the best means to that end. Their goal is to forge "(a) great global, multi-carrier network (Global)." Multi-carrier alliances are necessary according to Leo Mullin, because "airline customers today must be able to travel or ship cargo from anywhere in the world to everywhere else, but no one airline can meet this demand alone (Global). "

Strategic Alliances are agreements formed to further the interests of all parties involved. Alliances are found in every industry. A company enters into a strategic alliance in order to take advantage of a partner's strengths and minimize the effects of their own weaknesses. Reasons vary from obtaining a foothold in a new market area to reinforcing a weak core competence such as research and development.

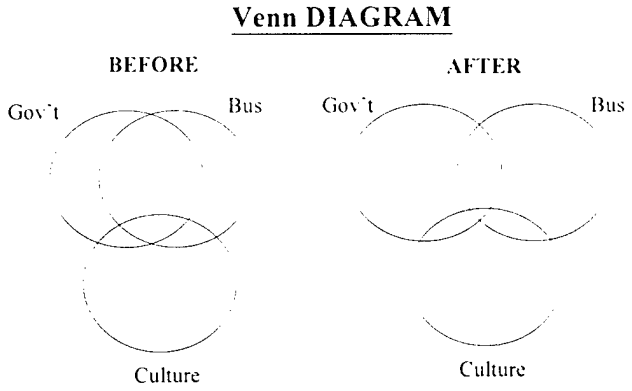
The Airline Industry

The air transport industry in America got its start in 1934 with the passage of the Air Mail Act. This legislation was intended to promote air transport industry and facilitate delivery of US Mail in an expeditious manner. As the number of airmail carriers grew and the need for coordinated services became more and more complex, an administrative organization was needed.

The Civil Aeronautics Board (CAB) was establishment in 1938. The CAB successfully integrated various air transport industry responsibilities into a single administration. The CAB regulated industry and subsidized operations during its

initial years of high costs and low revenues.

When deregulation took place in 1978, market forces became dominant and airfare prices dropped. Some airlines were not able to withstand the loss of price protection and eventually failed. Successful companies like Delta moved from a point-to-point to a hub-and-spoke operation. The hub represents the geographically-centered base of operations that the airplanes originate from and travel to in their flight routes. This strategic operational move helped Delta become one of the largest airlines in America. The Venn Diagram below graphically depicts the greater separation between government and business resulting from deregulation.



Source: Subjective analysis by author.

Delta Air Service

Delta's role as a business entity is to "provide scheduled air transportation for passengers, freight and mail over network local and international routes (Annual)." Delta Airlines is the third largest airline in the world today. It began as a crop-dusting service in Macon, Georgia in 1924.

Founded by Collett Everman Woolman, Delta Air Service was named for the Mississippi delta region that comprised its operational area. One of the first key steps in Delta's evolution was the beginning of passenger flights in 1929 from Dallas, Texas to Jackson, Mississippi. Adding paying passengers to the flights taken by management was a natural outlet for the use of their aircraft.

As success of this change in domestic strategy became apparent, they moved their operation to Atlanta in 1941 and changed the name of their company to Delta Air Lines, Inc. By this time their annual gross revenues had grown to over 1.1 million dollars and 58 thousand passengers. By 1947, their fleet of modern Constellation aircraft had over 640 passenger seats available. By 1961 the airline received a National Safety Award for flying over 11 billion passengers without a single fatality. Revenues for that year topped 146 million dollars (Lewis 5).

Pursuing international growth, when the Airline Deregulation Act was passed in 1978 London became Delta's first destination across the Atlantic. In 1989, annual revenues topped 8.5 billion dollars with 67 million passengers flown. In 1991 Delta acquired virtually all of Pan Am's transatlantic flight authorities and became a global air carrier.

In 1994 Delta was named the official airline of the 1996 Centennial Olympic Games and was named the Best Airline by Robb Report's "Best of the Best" in 1995. Delta was the first airline to initiate code-sharing in the mid '90s, expanding their service to 323 cities and 44 countries around the globe. Code-sharing is the process by which one airline affixes its designation to another

airline's passenger ticket, thereby routing the passenger through the affiliated partner.

In 1998, one year after Leo Mullin was named CEO and President, Delta and SwissCargo entered into the first international cargo alliance. Delta's common stock split two for one. The year 1998 was also the first year of net earnings in excess of $1 billion dollars resulting from revenues of over 14.1 billion dollars (*Delta* 3).

As the environmental forces became more conducive to promoting growth internationally with passage of the Airline Deregulation Act, Delta took advantage of their successful merger and acquisition experiences, as well as improved aircraft technologies, to establish a transatlantic presence with destinations to London by purchasing the Pan Am flight authorities. These steps were critical in the company's evolution as a global air carrier.

Competition

Delta competes in every area associated with the airline industry, both domestically and internationally. Global competition is significant because of the growth potential and profitability of the early entrants to the market.

Transportation by air is the fastest means of traveling and is virtually unconstrained by geographic barriers. As the world becomes more modernized and smaller in the virtual sense, the need for rapid travel options to any part of the world becomes greater and political barriers will become even easier to cross. Companies demand access to remote areas for a variety of business reasons, and the leisure market grows more sophisticated every day. Car trips to

Florida have been replaced by plane trips to the Bahamas and South America.

Early entrants have a tremendous advantage because of the cost associated with building an airline. Delta started small and grew incrementally, as did most companies. In order to enter the market now and be competitive, it's virtually impossible unless you start with a small fleet of aircraft and the associated infrastructure.

Areas of competition include passenger service, air cargo, computerized reservations systems, as well as several add-on interests in hotels and restaurants clustered around hub locations.

The 10 largest airlines operating in the domestic US market are listed below. The figures are as of 1997, and are in order of revenues and passengers. As of 1999 figures, Delta is still number one in its numbers of passengers carried (Government 30).

No	Airline	Revenue (Billions of $)	Airline	Passengers (Millions)
1	American	18.6	**Delta**	**103.1**
2	United	17.4	United	84.2
3	**Delta**	**13.6**	American	81.1
4	Northwest	10.2	US Airways	58.7
5	US Airways	8.5	Southwest	56.0
6	Continental	7.2	Northwest	54.7
7	Southwest	3.8	Continental	38.8
8	Trans World	3.3	Trans World	23.4
9	America West	1.9	America West	18.3
10	Alaska Air	1.7	Alaska Air	12.3

Source: GAO, International Aviation, *Report to Congressional Requestors*, 1998.

Delta's competitors overseas include British Midland, British Airways, and Lufthansa. Although most of the other foreign airlines are affiliated as strategic alliances or code-share partners, the alliance partners still compete for

passengers. Using a code-share works well to offer the passenger a seamless-service flight experience to widely disconnected cities, but it is to each airline's advantage to actually fly the passenger in the airline's aircraft as opposed to a partner's. A seamless flight experience is achieved when passengers use more than one airline without having to re-ticket, re-check-in, or handle their baggage from a departure point served by one airline to a destination served by a different airline. Ideally, the passenger would be totally unaware of the change in airlines because their flight experience was 'seamless' in terms of convenience. Only the seats occupied by paying customers are reflected in the annual operating revenue totals. Competing alliances include the Star Alliance, Oneworld, and KLM/Northwest.

INTERNATIONAL STRATEGY

Delta has grown domestically by buying other airlines. From its initial partnership with Chicago & Southern Airline in 1935 to its purchase of Atlantic Southeast Airlines in 1999, Delta recognized the value of buying into a smaller airline's hard-won market share in regions with profit-potential. This trend started when Delta merged with longtime partner Chicago & Southern Airlines in 1953, continued when they merged with Northeast Airlines in 1972 (Lewis append 1), acquired Western Airlines in 1987 (Bartlett 458), acquired the transatlantic route authority of Pan Am in 1991, and purchased Atlantic Southeast Airlines in 1999. One key to their domestic success was taking over already existing operations.

Delta's international strategy is based on a carefully crafted system of strategic alliances and code-share agreements. These agreements extend their

capability to offer their passengers 'seamless service' to a much greater number of cities than Deltas own aircraft could possibly take them. As Leo Mullin states in their 1999 Annual Report, his goal is to "develop an airline network that takes passengers from anywhere to everywhere (Annual)."

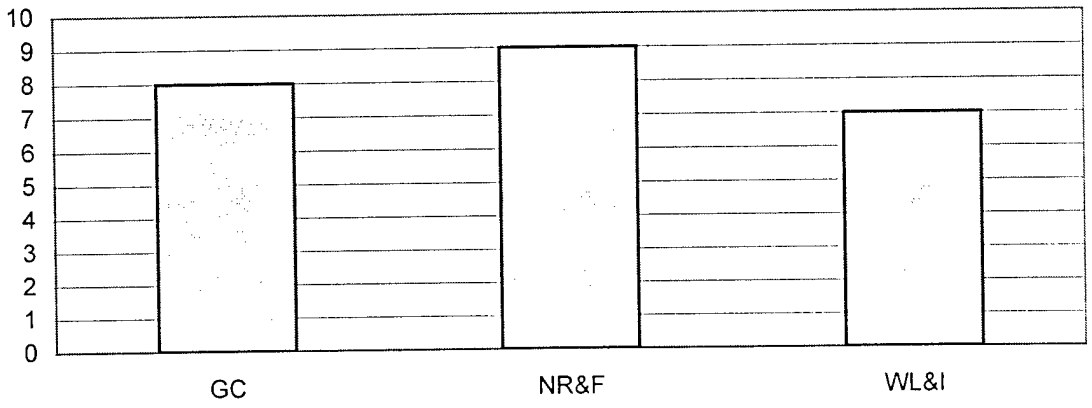
With today's technology and regulatory anti-monopolistic restrictions, it is impossible for any one airline to ferry passengers 'from anywhere to everywhere' without interline cooperation. Strategic alliances, regional alliances, market agreements, code-sharing, etc., are all tools available to global companies to enable them to penetrate markets and tap into the benefits of global economics. By sharing the costs of advertising, gate spaces, maintenance assets, etc., economies of scale can be achieved in some areas by the airlines, reducing costs and increasing profit.

The future looks good for Delta with their present plan of expansion. They are focusing on their core competencies as evidenced by their improved customer service scores, maintenance awards, and records revenue receipts, and are forging new alliances in order to move into markets unreachable in any other way. The next logical step for them would be to acquire a small foreign airline. While their first three major acquisitions were just less than 20 years apart, they acquired Atlantic Southeast Airlines after only 8 years of post-merger growth. Although not currently permitted under US law, a genuine international merger with a foreign airline (like Swissair, with 1989 revenues of 1.9 billion dollars) could provide additional opportunities to take advantage of global-level economies of scale and scope.

Evaluation of Strategic Imperatives

But to judge overall effectiveness of their operations, an evaluation of their Global Coordination, National Responsiveness & Flexibility, and Worldwide Learning & Innovation is necessary.

Evaluation of Strategic Imperatives



Source: Subjective analysis by author.

GLOBAL COORDINATION

Delta Air Lines, Inc. is global company with a global business. Their aircraft and crews coordinate with and visit dozens of different countries every day. Anytime their aircraft leaves domestic airspace, Delta is projecting a global presence. Like other large corporations such as Coca Cola, McDonalds, or Ford, global coordination for Delta is absolutely crucial. Integrating the various aspects of the air transport industry such as gate access, route sharing, and pooling maintenance assets, Delta is able to take full advantage of network size, reducing overall expenses which results in a larger bottom line for their shareholders. Additionally, Delta's global coordination focus is regulatory and transitory in nature, dealing with governmental policies and joint-use agreements

that are based upon fluid demand levels. This results in a necessity for national responsiveness and flexibility, and worldwide learning and innovation.

NATIONAL RESPONSIVENESS AND FLEXIBILITY

Delta's level of national responsiveness and flexibility is also a byproduct of the unique nature of the airline industry. They must and have been very flexible in their plans and have proven to be adaptable to changing circumstances. For example, this flexibility in the domestic passenger service area prompted them to initiate region-specific flight services. Instead of operating solely out of their innovative hub-and-spoke centers, they recognized the need for passenger service like Delta Shuttle and Delta Express. Aircraft purchases are another area in which they have demonstrated flexibility. Unable to reach an agreement with their pilot's union on four Boeing 777 aircraft already in production, Delta responded by entering into an agreement with the manufacturer to replace those aircraft with Boeing 767s, a model already approved for use by the union. In the strategic alliance area, Delta just this year sold its equity in Singapore Airlines in response to the sagging Asian economy and its dampening effect on transoceanic passenger ticket sales. Delta has demonstrated a high degree of flexibility and national responsiveness.

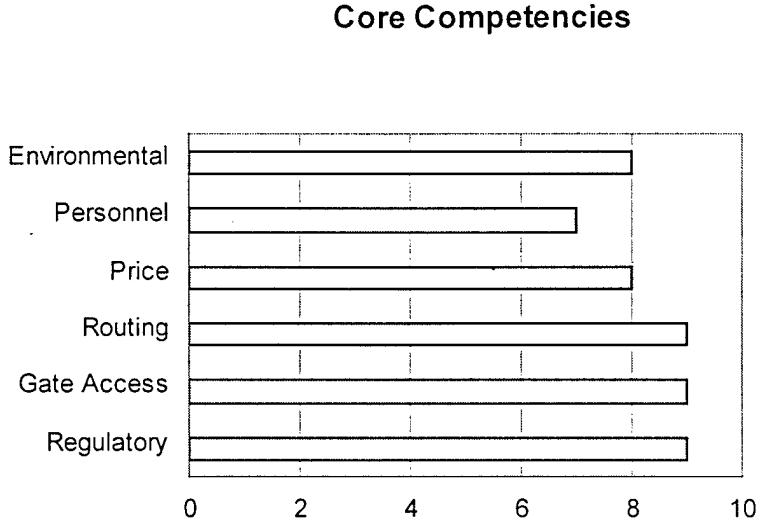
WORLDWIDE LEARNING AND INNOVATION

How Delta adapts itself to changes in the global market is due to its pattern of worldwide learning and innovation. In early years of regulated operations, Delta was able to succeed in an environment governed by a set of rules and procedures. As long as they were able to conduct their operations

efficiently, they could be successful by adding additional routes and government contracted flight authorities. With deregulation, competition from new entrants to the industry forced their learning curve to rise sharply. During the late '80s and early '90s, Delta and the industry as a whole lost its focus on customer service. In an effort to capture market share and reduce costs, the customer was losing priority over mechanical efficiencies. This resulted in the development of the Passenger Bill of Rights and the recent signing of the Airline Customer Service Commitment. Indications are that things are improving in this area, but Delta and the industry have a long way to go. Some demonstrated areas of improvement for Delta include the Airport Customer Service Gate and Boarding Project, and the renewed focus on customer service that resulted in their third-place showing in Customer Complaints.

Evaluation of Core Competencies

Delta has successfully matched its core competencies to key industry success factors. Delta has excelled in achieving market placement and gate access with their emphasis on strategic alliances, code-share agreements, and domestic mergers and acquisitions. Delta's ongoing compliance with the various regulatory requirements meets the standard for the industry and they have voluntarily established additional customer service initiatives. Although in compliance with environmental laws, they have been identified as a potentially responsible party with respect to certain Superfund Sites (Form 7). They are addressing their price performance with the Internet and are working with their pilot's union to resolve problems related to the cancellation of the Boeing 777.



Source: Subjective analysis by author.

ORGANIZATION AND OPERATIONS

Global Business Management

Delta Air Lines is based in Atlanta, Georgia. Although it leases airport passenger gates at most airports and reservation sales offices in several cities around the world, it does not maintain a corporate presence in any location other than its headquarters in Atlanta. Operations in areas other than corporate headquarters take the form of lease arrangements for physical space, government coordination in terms of landing rights agreements, flight operations, and customs requirements.

Delta has approximately 74,000 employees, including the employees of their recently acquired wholly owned subsidiary, Atlantic Southeastern Airlines. Functional duties are centralized at corporate headquarters under the various executive functions. Delta has six Executive Officer-headed divisions.

POSITION	EXECUTIVE (as of 12/99)
CEO and PRESIDENT	Leo F. Mullin
Executive Vice President of:	
-OPERATIONS	Malcolm B. Armstrong
-HUMAN RESOURCES	Robert L. Colman
-CUSTOMER SERVICE	Vicki B. Escarra
-MARKETING (CMO)	Frederick W. Reid
-FINANCE (CFO)	Edward H. West

CEO and PRESIDENT

Leo F. Mullin is Chairman, President, and CEO. He is 56 years old and earns an annual salary of $1,896,518 dollars. The board of directors hired him in 1997. Harvard educated, he is the former Vice Chairman, Unicom Corporation and Commonwealth Edison Company, and the former President and CEO of First Chicago Corporation. An outsider to the company with a reputation for making tough choices, he suspended an order for 13 Boeing 777's after pilots threatened not to fly them if their demands were not met. Currently the company has phased out the two Boeing 777s it obtained, and is negotiating with Boeing on the cancellation of their remaining order of 11 additional Boeing 777s.

Under his leadership, the company has experienced its greatest level of revenue and profits in the company's 70-year history. In 1999, Delta was the largest airline in the world in terms of numbers of aircraft departures and passengers enplaned (Annual).

OPERATIONS

Delta's operations can be described in terms of current performance, organization and services.

1999 Performance

Delta's 1999 operational revenue was over 14.7 billion dollars with over 106.9 million passengers flown. In 1999, Delta was named "Airline of the Year" by *Air Transport World* and recognized as the "1999 Best-Managed Major Airline" by *Aviation Week & Space Technology*. Aviation Week & Space Technology also honored Delta with the 1999 Maintenance, Repair & Overhaul Business Innovation Award (Annual).

Organization

The organizational chart below graphically illustrates Delta relationship with its domestic and international partners.

DELTA AIR LINES ORGANIZATION CHART

Strategic Alliances

Air France
+Austrian Airlines
Malev Hungarian
+Sabena
*Singapore Airlines
+Swissair
*SAair Group

Code-Shares

Aeroflot
Aeromexico
+Austrian Airlines
Malev Hungarian
+Sabena
*Singapore Airlines
+Swissair
Transportes Aeroes Pertugeueses
Varig

WORLDSPAN
Computer Reservations
Systems Partnerships

++Delta (40%)
Trans World Airlines
Northwest Airline

Domestic Air Lines

Delta Express
Delta Shuttle
Delta Connection
**Atlantic Southeast Airlines
Business Express
++Comair (22%)
++Skywest (13%)
Trans State Airlines

LEGEND

+Atlantic Excellence Partners
*Sold equity stake 1999
++Percentage of equity ownership
**Wholly owned subsidiary

Note: Chart data derived from Form 10-K, 1998 Annual Report, Delta Airlines; Form 10-Q, Quarterly Report, Delta Airlines; *Global Alliance*, Delta Air Lines at www.delta-air.com; and the International Aviation Report to Congressional Requestors, Government Accounting Office, April 1995.

Services

Passenger Service

Competition in domestic and international markets is fierce. Airlines generally compete for passengers in three categories: first class, business class, and coach. First class passengers pay a premium for their seats and receive a variety of additional customer benefits, including membership opportunities in Delta's Crown Room Club. First class passengers typically receive additional mileage credit on their Frequent Flyer Program (Delta SkyMiles). Some airlines offer special incentives to switch plans in order to sign up as many full-fare passengers as possible.

Business-class passengers are the mainstay of large airlines, especially on the international routes. Business professionals typically fly during the week at times convenient to work hours, and demand for seats tends to keep prices high. Also, business professionals must sometimes fly on short notice, which is also more expensive than booking in advance. Airlines compete for business-class passengers by offering in-flight amenities like comfortable seats, seats with data ports for laptop computer use, and first class-like personal service from flight attendants. The best method to lure the business traveler is convenience of departure and arrival times and excellent on-time records. Accordingly, Delta offers the Delta Shuttle in the Northeast part of the US with hourly service to three major US cities and special comforts like leather seats.

Coach class is widely used but yields the least amount of profit per seat mile. Coach tickets are normally sold to families on vacation or to business

persons who wish to economize and can book a nonrefundable flight at least two-three weeks in advance. Airlines compete by offering package deals through travel agents and reducing costs associated with the sale of these seats. Companies are turning to the Internet more and more as further cost savings are being realized in that distribution channel.

Delta's domestic hub-and-spoke operations are centered on their Worldport located at the Hartsfield Atlanta International Airport in Atlanta, Georgia. They fly to 184 cities in 44 states, Washington, D.C., Puerto Rico, and the Virgin Islands. Delta's fleet is composed of the following aircraft (Annual).

Type	Owned	Leased	Total
Boeing 727	110	10	120
Boeing 737	8	79	87
Boeing 757	59	41	100
Boeing 767	62	32	94
Boeing 777	2	--	2
L-1011	30	--	30
MD-11	8	7	15
MD-88	63	57	120
MD-90	16	--	16
Totals	358	196	584

Delta divides the domestic market into four regional services, staging aircraft at the closet available hub for efficiency. Besides the overall domestic passenger service, Delta offers Delta Express, Delta Shuttle, and the Delta Connection passenger services.

The Delta Express focuses on high volume traffic departing the Northeast for leisure destinations in Florida. Delta Express flies 168 daily flights between 17 Northeast and Midwest cities to five Florida cities utilizing 37 Boeing 737 aircraft.

The Delta Shuttle provides hourly service between Washington, D.C.,

Boston, and New York. It uses 16 Boeing 727s equipped with leather seats. Their on-time departure rate of 97% is the most reliable in the industry.

The Delta Connection operates in the South and Midwest and utilizes a variety of regional jets to transport passengers to smaller cities outside of the hub utilization area. Their wholly owned subsidiary, Atlantic Southeast Airlines, is a part of the Delta Connection network (Annual).

Air Cargo Service

Air cargo companies such as Federal Express and United Parcel Service dominate the competition for air cargo business. The percentage of air cargo to passenger service for the airline industry is approximately 15% of total operating revenue, of which typically 75% is international and 25% is domestic cargo. As a strategic operational move to expand their cargo industry, Delta has established a wide-body aircraft presence in Las Vegas and managed to increase its cargo volume by 300% from last year. As the Base Realignment and Closure program continues converting old Air Force bases into civilian use, the capability of Delta to expand into new markets at a low cost increases (Trunick 27-30).

Delta's air cargo service, known as Delta Dash, together with mail freight represents approximately 4% of Delta's total airline operating revenues. Although total revenues are small the percentage of profit is much higher. This is partly due to the charging of cargo costs to the passenger revenue side of the business. Although offset somewhat by the inclusion of non-attributable costs such as ticket agents, stewardesses, and passenger gates, the profit potential of the air cargo division is growing.

Delta has formed agreements with several domestic regional carriers, which make up the Delta Connection network of airline and computer reservations system organizations. Additionally, Delta has formed one strategic alliance and several code-share agreements with international air carriers.

Computerized Reservation Systems (CRS) Service

CRS is a computerized reservation system used by the ticket agents, hotels, car rental agents, etc., to book passengers on flights. WORLDSPAN is owned by Delta (40%), Northwest Airlines (34%), and Trans World Airlines (26%). Airlines pay a servicing fee to travel agents as an incentive to book flights on their aircraft. The servicing fee is changing as the Internet becomes more widely used, and the percentage-amount of fees paid is decreasing across the industry (Form 13).

The following chart depicts the various CRS systems in use by region and their affiliated airlines.

Global Region	CRS	Airlines
Pacific Rim	Abacus	Cathay, Singapore, Malasiane, Brunei, Philippine, China
	Fantasia	Qantas
	Japan	JAL
Europe	Galileo	British, Swissair, KLM, Alitalia, Sabena, Olympic, Austrian, Air Portugal, Aer Lingus, Covia
	Amadeus	Air France, Iberia, Lufthansa, SAS
USA	Apollo	Covia, Swissair, United, U.S.Air, British, KLM, Alitalia, Air Canada
	Gemini	Air Canada, Canada International
	WORLDSPAN	Northwest, TWA, **Delta**
	System 1	Texas Air
	SABRE	American

Source: *Test, Cases, and Readings in Cross Border Management*, 3rd Ed., Irwin McGraw-Hill, 2000 (Bartlett 458).

Competition in the CRS business is not restricted to airline employees. Hotels and travel agents also use CRSs to schedule flights. There is a high barrier to entry in the CRS field because the complex systems require a lot of time to learn how to use. Most CRSs work by inputting a series of codes as opposed to a more user-friendly system such as a Windows-based environment. Delta ranks WORLDSPAN CRS behind SABRE and Galileo in penetration of market share among travel agents in the US (Form 14).

HUMAN RESOURCES

There are two labor unions currently representing two groups of employees. The Air Line Pilots Association International represents Delta's pilots and the Professional Airline Flight Controllers Association represents Delta's Flight Superintendents. These employee groups equal approximately 12.4 percent of the total number of employees. As of March 10, 1999 the National Mediation Board, in accordance with the Railway Labor Act, notified Delta the Transport Workers Union of America were seeking to represent the approximately 110 pilot ground training instructors. The matter is still pending as of December 1999.

Delta historically pays the highest wages and has fewer employees represented by unions than any other domestic airline. According to a recent recruiting visit by the company on the campus of Indiana University, the company's policy of meeting or exceeding industry standards in matters of pay and benefits has resulted in Delta being considered "the varsity" team in the domestic airline industry (Statement).

CUSTOMER SERVICE

The airline industry has a history of customer service problems. In 1997, Delta had the lowest percentage of the 10 major domestic airlines with an On-Time Arrival percentage of 74.1 and an industry average of 77.7 percent (*Airline* 16). Complaints, delays, and mishandled baggage incidents were becoming systemic. In 1999, in response to proposed "Bill of Rights" legislation aimed at forcing airlines into to solve the customer service problems, the Airline Transport Association and the major U.S. airlines created a voluntary program known as the "Airline Customer Service Commitment." This program is designed to address customer service problems.

Delta has improved performance in this area. Their on-time performance ranked number four and two in 1998 and 1999, respectively (*Airline* 15). In 1999, they also ranked number two in mishandled baggage, and number three in customer complaints (Annual).

Additionally, Delta has instituted new customer service technology intended to improve customer service even more. According to Air Transport World, Delta has "overhauled obsolete information technology with leading-edge technology that will help achieve operational excellence, give a big boost to customer service and even contribute to revenue performance (Flint 68-69)."

Known as the Airport Customer Service Gate and Boarding project, it is expected to be fully in place within the next two years. The heart of the project is a real-time display available to the gate agents. They will be able to inform passengers of the exact status of their baggage, number of seats available on

the jet pulling into the gate (in case of stand-by), and whether or not a customer has checked-in or needs to be rebooked for a later departure. It will also keep track of customer problems, enabling gate agents to spontaneously offer a free upgrade for a customer who had mishandled baggage or some other problems on a previous flight.

MARKETING

Although Delta ranked number three among domestic airlines in terms of revenue, they carried 107 million passengers in 1999, more than any other airline (Annual). Delta is also involved in local Atlanta community support activities, which serves to put the corporate name in the public eye and increases good will for the company. Company presence on the Internet and commitment toward Internet-based technologies such as the 16.8 million dollar investment in priceline.com, demonstrates effective strategic marketing direction as well as potential cost-cutting benefits. As an example, online booking reduced booking costs from approximately 17 to 14.5 percent of passenger revenues for Continental Airlines from 1994 to 1998 (Feldman 61-64).

Savvy passengers in the global marketplace plan ticket purchases in order to obtain the most frequent flyer miles. According to a recent report, 'the key factor for (strategic) alliances affecting decision-making was frequent flyer miles. Fifty-nine percent of those who said alliances would affect their planning cited this reason (Travel 1)." Delta has a comprehensive frequent flyer program, and in 1999 entered into an agreement with priceline.com to sell ticket inventory through its Internet-based e-commerce system (Annual).

Access to Delta

Internet

delta-air.com
e-Delta
iXL
priceline.com

Frequent Flyer Program Partners (Celestino 74-75)

Air Line Partners

Aer Lingus, Air Mexico, Air France, Air Jamaica, All Nippon Airways, Austrian Airways, China Southern, Korean Airlines, Malaysia, Sabena, Singapore Airlines, Swissair, TAP, Air Portugal, United Airlines

Hotel Partners

Best Western, Conrad International, Crowne Plaza, Forte, Hilton, Holiday Inn, Hyatt, Inter-Continental, Marriot, Preferred, Radisson, Renaissance Hotel, Sheraton, Swissotel, Westin

Other Partners

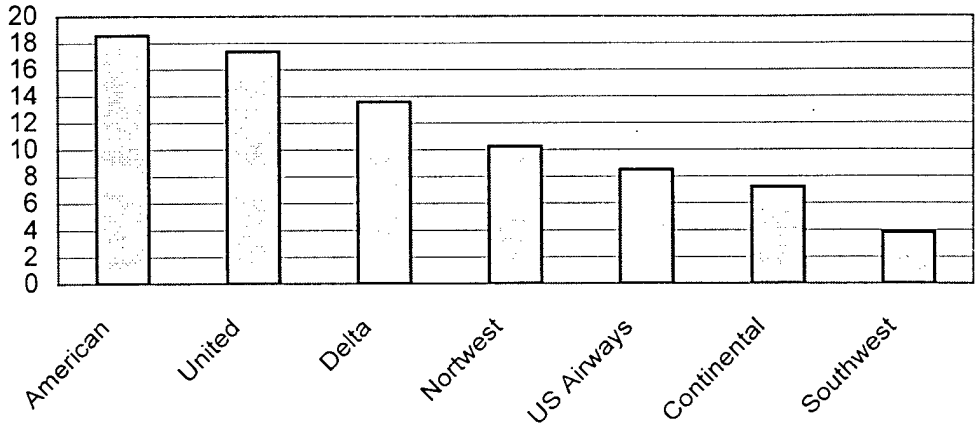
Better Homes and Garden Real Estate, Charles Schwab & Co., American Express, 1.800 Flowers, North American Mortgage, MCI, Radisson Seven Seas Cruises, Renaissance Cruises

FINANCE

In 1999 Delta's operating revenue was over 14.7 billion dollars and they earned a record 1.1 billion dollars in net income. Despite reduced revenue of approximately 20 million dollars due to Hurricane Floyd during the last calendar-year quarter of 1999, consolidated unit cost declined one percent to 8.81 cents per available seat mile. Additionally, stage length (average route miles) declined 9 percent due to integration of newly acquired Atlantic Southeast Airlines. According to Ed West, Delta's Chief Financial Officer, "The fact that unit costs declined on a nine percent drop in stage length reflects Delta's careful attention to costs (Annual)."

Financial performance can be evaluated in terms of revenue, and in 1997 Delta ranked third behind United and American airlines in gross revenues.

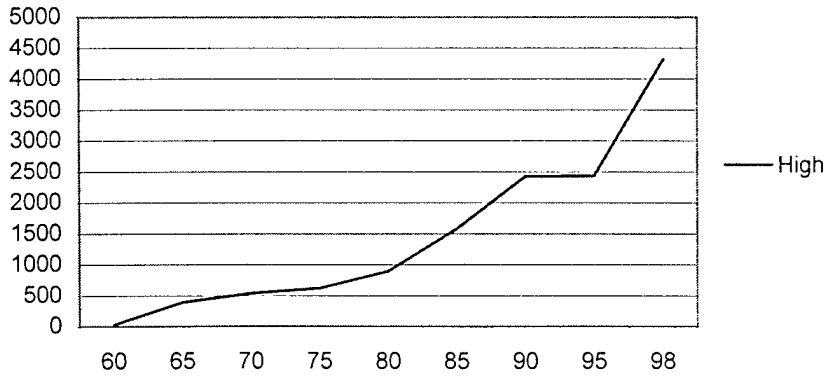
Revenues
(Billions of $)



Source: Information compiled from *Air Transport World*, dated Jan-May 2000.

The success of Delta can also be graphically illustrated by tracking the value of a single share of stock sold in 1960 to its value as of 1998. The following chart demonstrates an average annual rate of return of approximately 18.4% resulting in over 137 dollars for every dollar invested in 1960.

Dollar Value of One Share of Delta Common Stock
1960-1998



Source: Chart data derived from Delta Investor Relations memo dated 4 JAN 99 to Delta Stockholders which listed stock prices and activity from 1960 to 1998.

Geographic Subsidiary Management

DOMESTIC

Currently, Delta has one subsidiary, Atlantic Southeast Airlines (ASA). ASA was a small, regionally based airline serving the Southeast when they formed an agreement with Delta to perform as a Delta Connection carrier. ASA was Atlanta's largest regional carrier with service to 44 markets (Annual). Success of the agreement led to Delta's acquisition of ASA in May 1999. As a wholly owned subsidiary, the CEO of ASA reports directly to Delta.

INTERNATIONAL

Internationally, Delta schedules flights to 42 cities in 29 foreign countries. In 1999, their operating revenues from international operations were approximately $2.64 billion dollars. Delta's internal assets as well as a series of cooperative agreements with other airlines take care of Delta's international operations. The cooperative agreements primarily take the form of strategic alliances and code-sharing.

Strategic Alliances

Delta's strategic alliances include the Atlantic Excellence Alliance, comprised of Swissair, Sabena, and Austrian airlines. Delta sold all of its holdings of 35.19 million shares of Singapore Airlines in October 1999 to end a 10-year period of the strategic alliance. Domestically, Delta has increased its regional capability with the acquisition of Atlantic Southeast Airlines.

Delta's primary strategic alliance is with Air France, and the reverse is also true, according to the Chairman and CEO of Air France, Jean Cyril Spinetta,

"This strong and lasting alliance with Delta, with whom we have worked well for some time, is a very important step for Air France." However, like Leo Mullin, he is not satisfied with what has been accomplished, "while our carriers (Delta and Air France) are the cornerstones in Europe and North America for the worldwide alliance to come, we are already exploring opportunities with other potential founding partners (Annual)."

Code-Shares

Offering seats from additional departure points benefits Delta by gaining passengers who desire a seamless flight experience. For example, by having the ability to code-share on Air France flights to Paris additional departure points are created, as is evidenced by the chart below. Connections in Paris are then available to a wide variety of destinations served by Delta and Air France, as well as their other code-share partners. Air France alone flies to 174 destinations in 85 countries in Europe, Africa, the Middle East, and Asia (Annual).

Delta Service to France		
Atlanta	to	Paris
Cincinnati	to	Paris
New York	to	Lyon
New York	to	Nice
New York	to	Paris

Delta Code-Share to France		
Atlanta	to	Paris
Boston	to	Paris
Chicago	to	Paris
Los Angeles	to	Paris
New York	to	Paris
San Francisco	to	Paris
Washington	to	Paris

Source: 1999 Annual Report, Delta Air Lines, Inc.

CONCLUSION

It is apparent Delta is doing something right. Analysis of the company's heritage, strategic direction, and operations has been very beneficial for understanding how the company is presently organized and run. Delta's past

decision to move into the airline industry during the industry's growth period resulted in their dominant position in the global marketplace. Their move to a hub-and-spoke operation enabled them to position themselves for future growth by locating strategically in dense population regions. Although they are third in size behind United and American they consistently achieved growth and expansion without sacrificing customer satisfaction. As the only domestic airline to place in the top three positions in important customer related performance measures (on-time performance, fewest mishandled bags, and fewest customer complaints) they have proven themselves as an airline able to respond to the needs of the marketplace. Customer satisfaction has been and always will be a critical measure of performance in a service-oriented industry and Delta's performance ranking is especially noteworthy given the complexity of the air transport industry itself.

Delta's financial performance, while not stellar, has been steady and profitable. Understanding the motivations for their decisions to merge and acquire regional airlines reveals their ability to respond appropriately to an expanding domestic market. Although a relatively late entrant in the international strategic alliance business, their success in establishing the Air France alliance demonstrated their ability to move strategically. The Air France alliance should prove to be an effective one in terms of geographic and market-access significance.

Chapter Three: Air France – A Case Study

Executive Summary:

Transaérienne began in 1909 as a water-based dirigible aviation service in France. The company aircraft were powered by propeller and could carry up to 20 passengers over and around the French canal system. By the beginning of WW1, Transaérienne had flown over seven thousand passengers, and was the first to provide international service.

Later, in the 1920-1930's, two other French aviation companies began flying mail throughout Europe, North Africa and South America. In 1932 the largest aviation companies in France were merged into what became known as Air France.

Air France grew quickly as the official government airline, and by the 1970's was providing non-stop service from Paris to Los Angeles. Deregulation in the late 1970's forced Air France to improve efficiency and they became partially privatized in 1999.

Air France's international strategy is focused on forming strategic alliances to leverage their competitive advantages. Centrally located in Europe, they are working to make their hub airport, the Loissy-Charles de Gaulle, the main gateway into Europe.

Air France's core activities focus on passenger service, cargo operations, contract maintenance and catering. They provide domestic and international flight service to over 219 destinations in 88 countries via their long-haul, medium-haul and shuttle services. Cargo operations utilize 12 Boeing 747's, and overall

they have a fleet of 210 aircraft. Air France is one of the largest providers of contract maintenance and catering services in the world.

Air France entered into a strategic alliance agreement with Delta Airlines in November 1999 and have increased their North American flight exposure to 12 gateway cities.

The Airline Industry

In Western Europe, airline industry began soon after discovery of the principles of flight and rudimentary aerodynamics. After the Wright Brother's historic flight on December 17, 1903, pioneer aviators in Europe were well on the way to realizing the dream of powered flight in their own countries.

As in the United States, government sponsored mail service provided the initial revenue source for the fledging air transport companies. Mail service was a government function, and once contracts were won income was regular and dependable. Routing was to and from major cities of the region as mail was generally directed towards the population centers and then distributed onward. Because airmail was faster than overland, mail service customers paid a premium for air delivery. The added income helped offset government expenditures (Espérou 12).

As the reputation for dependable mail delivery spread, pilots and aircraft owners quickly realized profits could be made by providing passenger seats in addition to the cargo they were carrying. Thus, the air transport of persons for hire was developed, as it had been in America.

In the beginning, there was no overall European control of the air transport

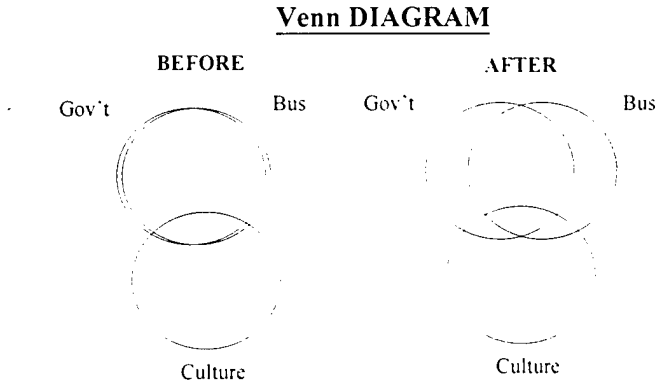
sector. Each country in Europe developed its own air transport system somewhat independently of every other country (Espérou 13). Progress was tracked by attendance and participation in annual air shows like the Paris Air Show. These events served to instill confidence and boost public interest in aviation as well as showcase the latest technological developments by various manufacturers. But the high cost of flying kept the airlines primarily nationalized (Espérou 13).

This pattern of government subsidies began to change in the late 1970's, following the lead of the United States. The United States passed the US Deregulation Act in 1978, effectively removing price controls and government support for airlines that were deemed to be capable of self-support in their operations. Previously the government allowed bidding for different route structures in a pattern that essentially favored the smaller companies so as to promote industry growth and service competition.

Deregulation in the United States caused serious competitive problems in Europe, and national airlines found themselves losing revenues to the now less expensive American carriers operating under competitive market forces. This led to restructuring and alliance forming on the part of the national carriers (Espérou 117).

What followed was privatization for some carriers. *Le groupe Air France*, in particular, after enduring CGT [*Confédération générale du travail]* sponsored strike activity in October 1993, was finally partially privatized in 1998 (Worldscope 2). This action, along with the adoption of the successful hub-and-spoke operation centered on the Loissy-Charles de Gaulle airport enabled Air

France to begin to turn its operations around. The Venn Diagram below graphically depicts the changes resulting from privatization.



Source: Subjective analysis by author.

Transaérienne

In France, the first air transport company to successfully provide dependable flight service was called 'Transaérienne' (Espérou 11). This company was started on March 2, 1909, and utilized a dirigible and what was known then as a hydroavion, or a seaplane, today. Passengers in the dirigible were carried in a gondola beneath the huge container of hydrogen gas, and the craft was propelled by the use of a propeller. It was capable of carrying approximately 20 passengers and was controlled by airfoils in the front and rear of the passenger compartment.

A seaplane was also used, and was very similar in structure and shape to the Wright Flyer but carried its passengers and pilot in a seated position rather than lying down. It had a pusher-prop, and instead of wheels was equipped with two floats as landing gear which enabled the plane to land and takeoff from the water. This was considered at the time to be a desirable safety feature. The

company even marketed the use of this feature: << *Parce que les voyages au-dessus de l'eau, en hydroaéroplane, présentent une sécurité presque absolue* >> [Because the trips by seaplane are over water, they are nearly totally safe] (Espérou 11-12). With this in mind, pilots would fly primarily along the rivers and canals around Europe as opposed to taking the chance of a crash landing on hard ground. This had the added benefit of making aerial navigation simpler for the pilots, who simply followed familiar terrain on their way to and from their destinations. Both of these conveyances were very popular for touring the countryside, and by 1912 the company had an established air route which included the cities of Lucerne, Menton, Monaco, Cannes and Nice. By the beginning of WW1, Transaérienne had flown over 7 thousand passengers using 5 or 6 dirigibles and seaplanes (Espérou 13). After WW1, international service between Paris and London was initiated by the joining of two air transport companies, Aircraft Transport & Travel of Great Britain, and Transaérienne of France. The enterprise was short-lived, lasting only until 1921, but is listed as France's first international airline company.

Like in the USA, the first major customer for the fledging airline companies was the governmental postal services. These companies included *Compagnie des messageries aériennes*, [Aviation message company] which used its postal contracts with the government to launch a successful air transport business between Paris, Lille, and Bruxelles. The planes themselves were improving. One month before the armistice was signed, a prototype twin-engine bomber was produced and later put into service as a passenger plane. The Farman *Goliath*

had 12 seats and was capable of transcontinental flight which opened the North African continent to service. From Toulouse to Casablanca, with stops in-between, the introduction of the larger aircraft enabled the air transport industry to increase in popularity. By 1923 over 1500 flights had been accomplished between London and Paris alone.

The next decade from 1923-1933, a number of small air transport companies were started, including the *Compagnie générale aéropostale* [General airpostal company] and the *Société générale de transports aériens* [General company of transport aircraft]. These companies greatly expanded use of air travel to countries in and around Europe, North Africa, South America, and the Orient. Bolstered by the availability of aircraft and aircraft production facilities during the post-war years, travel by air was gaining in popularity as the easiest and quickest way to travel. Although expensive, there was enough interest to enable the small companies to grow and prosper.

As one of the major users of air transport with courier service and mail transport contracts, the French Government had always been very involved in the progress of the air transport industry. With the introduction of all-metal fuselages and more powerful motors the capacity of the aircraft cargo and passenger space grew, as did their ability to cross long-distances safely and conveniently. As aircraft capability expanded, further growth was hampered by the expense. The more complicated the aircraft, the less able individual private companies were to develop improved equipment because of the heavy expenses involved. Meanwhile, neighboring countries were expanding the use of the

government in research and development of the air transport industry while France was involved with the Third Republic's frequent changes of government (Espérou 18). Something had to be done to help the struggling air transport industry in France before it became technologically outdistanced.

The Ministre de l'Air at the time was Pierre Cot. He devised a plan to bring together the four major airline companies of the time: Air Union, Air Orient, S.G.T.A., and C.I.D.N.A. He wanted to merge the companies into one entity for the purpose of saving the future of the French airline industry. This merger of companies was approved by law on 11 December 1932, and was implemented less than a year later. On 1 September 1933, Air France was born (Espérou 21).

In the years before WW2, Air France developed air routes throughout Europe from London to Bucharest and from Lisbon to Stockholm. They had flight service to every major country in and around the continent and based their Paris-London-Paris flights marketing efforts on speed and comfort. Stewards were first employed on the London-Paris flight, and traffic increased from 29% of the total in 1937 to 39% in 1938.

Air routing for Air France's transcontinental flight was far-reaching and successful. South America was accessed with regular scheduled postal service from Dakar in Northern Africa to Natal as of 1935 (Espérou 33). Initially equipped with large four-motor seaplanes, the seaplanes were eventually phased out in 1937. As the equipment improved passengers were permitted and flights were conducted all along the South American eastern continental coast.

In the Mediterranean, Air France employed routing which stretched from

Spain to the Middle East. In this area, four-motor seaplanes were quite useful because the route traced the coastal waters. When the aircraft needed service, a large crane on a nearby dock was employed to lift the plane totally out of the water and position it for the mechanics needs. The capacity of these planes ranged from small four-seats planes to the larger all-metal models capable of seating up to 26 passengers.

North African flights were concentrated mainly on northwestern coastal regions and served to provide France an easy means of transportation with its colonies, while flights to the Orient ranged as far as Hong Kong and Saigon. In 1933, flights to Saigon took more than a week to complete, in part because the plane only flew during the day due to the lack of nighttime navigational aids. In 1937 and 1938, just prior to France entering WW2, the Air France acquired seaplanes capable of making a transatlantic crossing from Biscarrosse to New York (Espérou 35).

Resources of Air France were shifted to the war effort from 1939-1945. Its civil transportation flights were gradually reduced until 26 June 1940, when Air France ceased all civil activity.

After WW2, the former civilian company was reborn as a national airline. *La Compagnie nationale Air France* was created on 1 January 1946. It was formed to provide domestic and international flight services (Espérou 38). The newly named airline company was able to continue in its role of providing flight service to new as well as old destinations. Using the capability of the high-performance aircraft available from WW2, the transatlantic crossing was once

again established as a permanent route structure. The company spent the two years after the war, from 1946-1948, in a reconstructive phase. What emerged from this phase was an airline company able to meet high passenger demands of the post-WW2 era.

Air France acquired several new aircraft during this time. These aircraft included the Lockheed *Constellation* in 1946, the Lockheed *Superconstellation* in 1953, and the Lockheed *Superstarliner* in 1957. Also acquired was the infamous DC-3, known as << *l'avion qui a changé le monde* >> [The airplane that changed the world]. Each new aircraft came with more seats and greater comfort and convenience than before. For example, passengers traveling from Paris to New York in 1953 were afforded a choice of a private cabin, reclining seats and two onboard salons.

The years of 1959-1976 are referred to as the age of modernization for airplane development, and Air France took advantage of the improved technology and equipment. Passenger capacity and speed grew while flight times shrank, and government supported price controls enabled more and more people to travel by air. The use of new Boeing 707's enabled non-stop service from Paris-to-Los Angeles and from Paris-to-Rio, and ground-control of flights with radar and radio became standard.

These years were also marked by changes in France's political system. With formation of the 5th Republic in 1958 and decolonization of former French colonies, the air transport service was divided into the T.A.I. (*Transports aériens intercontinentaux*) and l'U.A.T. (*Union aéromaritime de transports)*. Air services

were divided among along former colony lines, and the airline entity formerly known as Air France became the *Union de Transport Aeriens SA (UTA)*. This designation lasted through US deregulation, which, along with the oil shortages, caused a time of crisis from 1976-1997 in the French air transport industry (Espérou 55).

Competition

The world air transportation system had become interdependent by the 1970's, so when the US deregulated the airlines, it created a financial burden on state-controlled airlines of Western Europe, including the French national airline. With deregulation, US airlines were forced to compete on price; this led to fare cutting throughout the US domestic market. The policy extended to flights into Europe on US-flagged aircraft, and the once lucrative American market for European-flagged carriers was suddenly gone as passengers deserted higher priced European carriers for less expensive American carriers. Additionally, US carriers were able to access lower-cost petroleum products produced domestically, while the import cost for petroleum was higher for airlines based in Europe.

The result was a retrenchment for the French airline. Forced to concentrate on more profitable routes, focus shifted to profit-over-prestige. With day-to-day practicalities out of synch with their slogan << *plus long réseau du monde* >> (the longest flights in the world), the airline began to restructure itself.

Taking it's cue from successful American airline operations like Delta, the French airline established a hub-and-spoke system originating at Roissy-Charles

de Gaulle airport in Orly and reorganized under the name *le groupe Air France.* Air France reduced the total of European destinations from 82 in 1988 to (67 as of 31 March 1999) (Espérou 57 & Business 17). As of 1999, Air France owns 136 aircraft and leases an additional 78 more (Business 42). Also, as of 1999 figures, Air France is the third largest airline in Western Europe (Business 8).

Air France has entered into a variety of code-sharing and alliance agreements with US-flagged carriers. In February 2000, Continental Airlines ended a cooperative agreement with Air France after Air France and Delta Airlines formed an alliance in November (Airline 1). Competing alliance include Oneworld and the Star alliances. Virtually all significant alliances include at least one Us major carrier because of the size of the US market.

INTERNATIONAL STRATEGY

The recent success of Air France after privatization and a cooling of its industrial labor relations has enabled the company to look abroad for growth. The CEO of Air France, Jean Cyril Spinetta indicated alliances are key to Air Frances future:

"Our belief is that alliances are necessary and our project is to grow our business and never stop getting better," he says, but cautions: "There are, however, announcements still to be made that will deeply change the alliance scene (in general). There is still a long way to go (Warburton 'Promises' 2)."

In addition to the alliance formed with Delta Airlines, Air France is also expanding its relationships with other airlines. They are following a strategy of maximizing their potential exposure to profitable routing and customer bases

while minimizing the capitalization requirements of establishing a physical presence in other regions and countries.

As a privatized airline company, Air France is exploring benefits of forming strategic alliances to leverage their competitive advantages. On the international scene, their advantages lie in the proximity and size of their hub airport, Roissy-Charles de Gaulle, in Orly, France. They hope to make this hub the entry and exit point for all of Europe and overcome the dominance of London as the entry point from the United States. Air France senior vice president general operations, Pascal de Izaguirre, believes that London's power could wane as Europe's historical gateway to North America as the Delta-Air France alliance takes shape.

"Our main asset is Charles de Gaulle," notes Izaguirre, adding: "This is not true for London as Britsih Airways traffic is split between several airports – that goes against logic as far as I am concerned. London could benefit from a hub, which is why we believe Charles de Gaulle will become on of the most profitable hubs in Europe (Warburton 'Talks' 2)."

Air France is taking advantage of their hub and alliances with Delta to forge strong ties with the US market. The airline plans to expand its reach into the US market by providing additional flights into Cincinnati in the spring of 2000, followed by adding additional cities as soon as practicable. Their current US gateways include Boston, New York (Newark and JFK), Miami, Washington (Dulles), Atlanta, Houston, Chicago, Los Angeles, and San Francisco. According to Pascal de Izaguirre, they hope to add others.

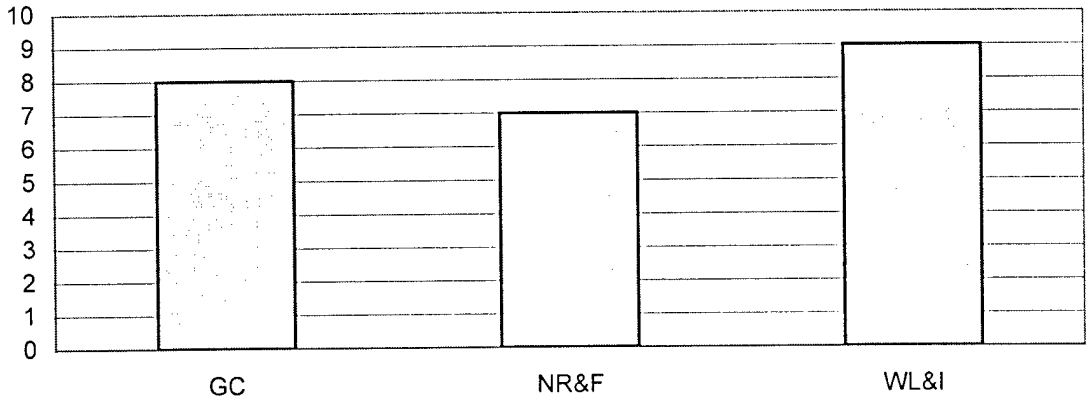
"Detroit, Philidelphia and Dallas are candidates for new service,"de

Izaguirre says, "and we are keen to fly two-times-daily to most of our gateways (Flint 2)".

Evaluation of Strategic Imperatives

An evaluation of their Global Coordination, National Responsiveness & Flexibility, and Worldwide Learning & Innovation is described below.

Evaluation of Strategic Imperatives



Source: Subjective analysis of author.

GLOBAL COORDINATION

Air France operates in a worldwide environment everyday and has demonstrated a capability to forge critically important alliances to take advantage of network economies. A leader in forging profitable strategic alliance with the United States, Air France has leveraged its position as a world-class air carrier into one of the most profitable and lucrative markets available in the air transport industry. This reflects their understanding of the need to share assets, routes, gates, and services in pursuit of more efficient economies of scale.

They could expand this pursuit into other areas of the globe and capitalize

on their historical use of South American, South Asian, and Oriental routes and destinations. Once this occurs, then they will have achieved a larger market share and stronger global coordination advantages.

NATIONAL RESPONSIVENESS AND FLEXIBILITY

As a primarily state-owned airline, Air France is naturally restricted in its ability to act independently in the competitive marketplace. Along with safety and regulatory restrictions placed on all the members of the air transport industry, Air France has to respond to governmental control and oversight due to 63% ownership of the company by the government. Despite this more restrictive environment, Air France has proven itself to be capable of flexibility in conducting its operations. From establishing code-share agreements and servicing arrangements with competing airlines in Europe to forging alliances with Delta, AeroMexico, and Continental, Air France has demonstrated nimbleness and freedom of action required to produce profits in the competitive air transport industry.

WORLDWIDE LEARNING AND INNOVATION

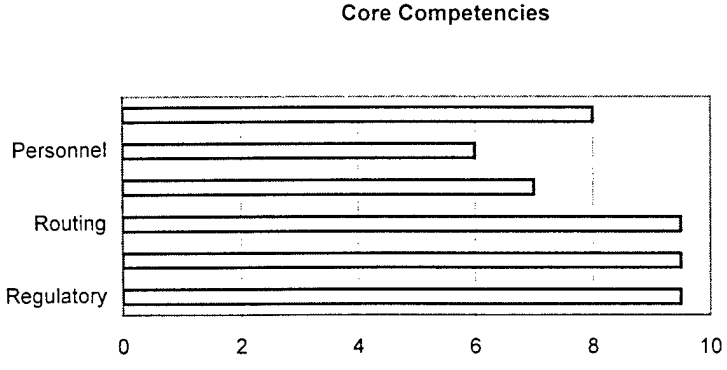
To move from a government subsidized operation with dependable routes and subsidies to a competitive marketplace requires a high degree of worldwide learning and innovation. By adapting itself to the market forces and overcoming its dependence on governmental control, Air France has demonstrated the ability to adapt and overcome significant challenges it faced. Although not fully resolved, Air France has been able to mitigate the damage done by their pilot's labor strike; their understanding of the pilot's concerns displayed a capacity for

learning and adapting to governmental and unionized labor requirements.

Air France is also growing in the use of the Internet to develop and expand their market exposure. Along with e-commerce partners British Air, Lufthansa, Iberia, Swissair, KLM Royal Dutch Airlines, and Alitalia, they are planning to establish a joint online travel agency. This commitment to the use of the Internet as a distribution channel is indicative of Air France's awareness of the value of technology to the future of air transport.

Evaluation of Core Competencies

Air France has successfully matched its core competencies to the air transport industry key factors of success. With their focus on forging vital strategic alliances in order to capture market share, they have demonstrated their ability to provide routing, gate access and regulatory compliance as needed to ensure efficient operations. While labor disputes have been handled for now, they still remain a problem which will have to be addressed. Their environmental compliance has been satisfactory and they are trimming costs in an effort to become more price-competitive by the use of the Internet as a distribution tool.



Source: Subjective analysis by author.

ORGANIZATION AND OPERATIONS

Global Business Management

The headquarters of Air France is in Paris, France, with a centralized hub system based out of Loissy-Charles de Gaulle airport in Orly. The airline has approximately 54,300 employees represented by the CGT union. With a long history of flight service to South America, South Asia, the Orient, and North Africa, Air France has established a complex worldwide-based organization. Its subsidiaries include three major groups, Groupe Parficom, Groupe Servair, and Groupe Air France Finance. Locations of these subsidiaries range from France to the USA, the Republic of Ireland, and Guyana. Although their main business is scheduled air transportation, their operations include industrial services such as the maintenance of aeronautical equipment, tour operator services and handling services for other airlines. Air France also charters aircraft belonging to Air France, Air Inter, and Air Charter (Financial 1). The operational breakdown is charted below.

Percentage of Revenue Sources – Fiscal1999

Passenger traffic	72
Cargo traffic	11
Servicing	6
Other Air Activities	4
Catering	1
Other	6

Source: Dow Jones Interactive 3/1/00

Le groupe Air France includes the newly acquired Regional Airlines, the last remaining independent French airline. Together with its subsidiaries and partners, Air France now controls approximately half of the French domestic network (*Aviation* 'Buys' 1).

Administrative and management positions at Air France are in compliance with the French Civil Aviation Code and include five board representatives appointed by the French State by decree (Business 98). The executive committee is divided into the following functional areas as part of the Executive Committee.

Position	**Executive (as of 4/99)**
CHAIRMAN and CEO	Jean-Cyril Spinetta
PRESIDENT and COO	Pierre-Henri Gourgeon
CFO	Philippe Calavia
DEPUTY COO-General Coordination	Auguste Gayte
Senior Vice President of:	
-GROUND & FLIGHT OPNS	Alain Vidalon
-SOCIAL POLICY	Jacques Pichot
-INTL COMMERICIAL AFFAIRS	Patrick Alexandre
-COMMERCIAL FRANCE	Christian Boireau
-MARKETING & DEVELOPMENT	Marc Lamidey
-NETWORK MANAGEMENT	Bruno Matheu
-INDUSTRIAL LOGISTICS	Alain Bassil
-AIR FRANCE CARGO	François Bachelet

CHAIRMAN-CEO and PRESIDENT-COO

The Chairman-CEO of Air France is Jean-Cyril Spinetta and the President-COO is Pierre-Henri Gourgeon. During their tenure, Air France had its shares quoted for the first time on the Paris Stock Exchange. On February 22, 1999, 20% of the capital held by the French State was floated on the market.

Air France was ranked 3rd among European airlines in international passenger transportation and 4th in terms of amount of cargo tonnage transported internationally in 1999. M. Spinetta and M. Gourgeon are members of the Executive Committee. In 1999, the Executive Committee's 16 members were compensated FF 16.6 million for their work on the committee (Business 100).

According to the 1998-1999 Annual Report, M. Spinetta's vision is to grow Air France from a Flag Carrier into a Major Airline. To this end, he has formulated a series of 19 priority projects which range from customer satisfaction and guaranteed quality service to developing the Loissy-Charles de Gaulle airport into the primary European gateway (Annual 3).

CFO-FINANCE

Be Profitable – for Everyone's Benefit (Annual 34)

The 1999 operating revenue for the fiscal year ending 31 March 1999 was FF 59.7 billion with a net profit of FF 1.64 billion. This was accomplished with a fleet of 210 aircraft serving 219 destinations in 88 countries.

The focus for Air France's financial managers is to focus on profitability for 'everyone's benefit.' Attitude is important for management to put across to their some 55,000 employees. A key to Air France's success in this area will be avoiding the flight-canceling strikes that are prevalent and well-supported in the French labor market (Safran 60). The two-day 'lightning strike' in February 2000 forced Air France to cancel approximately 5% of flights.

Cost-cutting

Air France expects it's operations-generated cash flow and cutting costs to finance its development of a strategic pattern of growth (Annual 34). To accomplish their cost-cutting plans, they have set an Operation Control Center to control the impact of delays, cancellations, etc. Additionally, they are committed to a 10% reduction in structural costs over a 3-year period (Annual 34).

Investments

Flexibility in investing is central to Air France's plans for equipment modernization, aircraft and engine standardization, and marketing strategies. To this end, Air France will be investing in a smaller number of "aircraft families" and focus on standardized cockpit arrangements. Not only will this plan produce dividends in equipment purchasing and upgrades, but it will also reduce training costs associated with transitioning pilots to newer versions of the same basic airframe. Standardized aircraft configurations will also allow for ability to cross-schedule aircraft across route structures with greater ease and flexibility. Air France expects to replace aging and noisy Boeing 737-200 and 747-100 aircraft with Airbus equipment, making their fleet predominately Airbus (Annual 35). As of 31 March 1999, the average age of their fleet was nine years (Business 41).

GROUND AND FLIGHT OPERATIONS

Air France's core activities can be described in terms of passenger, cargo, maintenance, catering, and other air transport operations.

Passenger Operations

Passenger operations increased overall during the 1999 fiscal year in spite of poor returns of flights to Seoul, Korea. Sales for the Asian region grew over 20% and accounted for 9% of the 1997-98 fiscal year sales (Business 36). In the domestic market, Air France ranks third behind British Air and Lufthansa in numbers of passengers carried, and third overall in international flights.

The social unrest that affected Air France flights resulted in a stable capacity for the first half of the 1997-98 fiscal year, but this increased in the later

half of the year (Business 36). The overall effect on passenger operations has proved to be negligible – so far. In the future, however, the ability of Air France to operate dependably will hinge upon their ability to handle their labor disputes. Due to the wide-spread support of the public for striking employees, it is possible that future passenger operations may be affected as greater numbers of the sympathetic flying public refuse to fly, traveling instead by the readily available and well-developed rail system.

Cargo Operations

Sales in cargo operations suffered due to the Asian crisis. Nearly 75% of Air France's cargo business is international, with 23% of it in the Asian market (Annual 25). Air France is committed to cargo business. They have 12 Boeing 747 aircraft designated as freighters, and also utilize the baggage compartment on passenger aircraft as needed (Annual 25).

As a measure to improve and streamline operations and customer service, Air France cargo is equipping its 'Express' service with a time-sensitive, three-way contractual agreement between the airline, freight forwarder and customer. Although cargo revenues were down over 12% for fiscal year 1998-99, capacity grew over 6% when they added another Boeing 747 freighter, which brought the number of Boeing freighters to 12 (Business 36). This additional capacity is an indication of Air France's commitment and belief in long-term profitability of cargo business.

Maintenance Operations

Air France performs it's own internal maintenance and also services the

aircraft of other airlines. The services rendered by Air France consist of engines (40%), flight equipment (15%), airframe overhaul (20%), specialized fleet support (15%), and general maintenance (10%) (Business 37). Air France services fleets of several airlines such as Air Canada, Air Toulouse, and Air Afrique, among others.

Having maintenance facilities positioned at the Charles de Gaulle airport provides Air France with a strategic resource to conduct maintenance operations for other airlines. As one of the major hubs and a gateway into Europe, planes from smaller countries can rotate their aircraft in and out of required services as they conduct their normal flight operations. With most of their maintenance support centralized, Air France is capable of servicing a great number and variety of aircraft. Also, as Air France continues to build alliances throughout North Africa and Eastern Europe, it can assure the safety and quality of its alliance partner's aircraft while they are providing service in the name of Air France. Thus, maintenance operations play a key public relations role in the success of Air France in the emerging markets.

Catering Operations

Just as Air France alliance partners can depend on the quality of Air France's maintenance division, so can they depend upon the high quality of food and beverages available from Air France's catering operations provided by it's subsidiary, Servair.

Although catering revenues were down .9% for fiscal year 1998-99, Servair's contribution to the Air France revenue topped FF 809 million (Business

37) and they are ranked third worldwide (Annual 28). Their revenues includes sales in the rail sector, as Servair also provides rail-catering services.

Other Air Transport Operations

Air France also receives revenues from leasing operations, seat block-sales, interline commissions and postal operations for it's other air transport operations. These revenues declined over 4% from the 1997-98 fiscal year to the 1998-99 fiscal year.

SOCIAL POLICY

According to their 1998-99 Annual Business Report, Air France assists in prevention of child sex tourism. In 1999, in association with the ECPAT (End Child Prostitution Pornography and Trafficking), Air France provides teddy bears on flights to support rehabilitation and family support associations. In addition, they also show a video to inform their passengers about the problems of child prostitution and abuse (Annual 11).

Tied in with operational requirements, Air France has been proactive in promoting the use of quieter jets in an effort to not only comply with noise regulations, but to do so to a greater extent than is required. To this end, they have retired some of their noisiest aircraft and replace them with more noise-sensitive models. To date, 91% of the group's subsonic aircraft meet or exceed the regulatory requirements for noise levels (Business 120).

INTERNATIONAL COMMERCIAL AFFAIRS

Air France has a well-developed international route structure for their freight and passenger service. In large part due to their historic beginnings and

colonization efforts, Air France today enjoys the experience of decades of flying in and out of several countries on different continents (Espérou 26).

Flights into the Americas represent their principal market, providing over 21% of scheduled passenger revenues (Business 14). North America in particular is a large market for Air France. Air France has over 144 weekly flights to several gateway cities, and an additional 142 destinations when combined with the recently formed Delta alliance (Business 14). There are also daily flights to Brazil and Mexico City and weekly flights to Caracas, Bogotá, Rio de Janeiro, Sao Paulo, Montevideo, Santiago, and Buenos Aires. The importance of this market was underscored by the recent comments of Pascal de Izaguirre, executive Vice-President and Chief Operations Officer-Americas.

"The Americas, and particularly the USA, have been selected as the strategic area for the commercial development of Air France and they will benefit from the biggest increase in capacity," he stated in and interview with Air Transport World (Flint 1). This is reinforced by the comments of Arvind Parkhe, Professor of International Business, who wrote that the "United States market alone accounts for approximately 40% of global air traffic and is so important that at least one major U.S. carrier is part of all global alliance networks in this industry (Parkhe)."

In the Asian market, Air France is looking to initiate a code-share alliance with Korean Air, as well as China Southern and China Eastern. They hope to boost their cargo business and provide a springboard into a growing Pacific market (*Aviation* 'Confirms' 2).

Air France Code-Share Airline Partners

ACES	AeroMexico	Air Austral
Aircalin	Air India	Air Guadeloupe
Air Mauritiu	Air Seychelles	Austrian Airlines
British Midland	Continental Airlines	Crossair
Czech Airlines	Delta Air Lines	Eurowings
Indian Airlines	Japan Airlines	Luxair
Maersk Air	Malev	Polish Airlines
Royal Air Maroc	Taag Angola Airlines	Tunisair
Tyrolean		

Chart data from Air France web site: www.airfrance.net and 1998-99 Air France Business Report pg. 12.

Being the leading French airline, future growth for Air France lies in its ability to capture and hold international market share. Well entrenched in Europe, Air France has targeted the United States domestic market as pivotal to their strategy of expanding from a flag carrier to a major airline (Annual 3). Additionally, their pursuit of other foreign markets continues unabated. Recent agreements with AeroMexico and Korean Air Lines indicate a desire to tap into emerging markets with cargo as well as passenger services.

COMMERCIAL FRANCE

Le groupe Air France is comprised of several subsidiary companies related to the air transport industry. It major subsidiaries and affiliates include Servair Group, Amadeus, CRMA (Construction et Réparation de Matériel Aéronautique), Sodetair and Sodexi (air cargo), the Société d'Exploitation Aéropostale, and Air France Finance (Business 28).

Servair Group

Previously covered under the catering section, the Servair Group is the in-flight caterer for Air France and contributed over FF 809 million to the Group's

operating revenue in 1998-99 while preparing over 80,000 meals and cleaning aircraft 700 cabins a day (Annual 28).

Amadeus

Air France owns 29.2% of Amadeus, the most popular CRS (Computerized Reservation System) in Europe. It is also widely used in South America, and is the most popular and utilized CRS in the world by professional travel agencies. The Amadeus CRS competes with three other major systems: Sabre, Galileo and Worldspan (Business 26). The Amadeus system has access to the following.

Service	Number
Airlines	480
Hotel Chains	300 (approx. 51,000 hotels)
Car rental firms	54

Source: 1998-99 Air France Business Report, page 25.

In addition to its share of Amadeus, Air France also owns 66% of Amadeus Air France. Amadeus owns the remaining 34%. Estérel manages the functions of this subsidiary for Air France. Estérel is another Air France subsidiary that provides CRS access terminal assistance to SNCF (the French rail operator) SNCM (a Mediterranean ferry company), and Club Mediterranée (Business 26).

CRMA (Construction et Réparation de Matériel Aéronautique)

CRMA is a wholly owned subsidiary of Air France and provides all of their aircraft maintenance and industrial services. In addition to servicing its own aircraft, it also performs services for competing and alliance aircraft. CRMA is licensed and certified by both US Federal Aviation Regulations and European

Joint Aviation Requirements in aircraft and engines, equipment, and parts reconditioning (Business 27).

The subsidiary had 298 full-time employees as of 31 March 1998. CRMA has operating revenues of approximately FF 261 million and contributed FF 55 million to the Group in fiscal year 1998-99 (Business 27).

Sodetair and Sodexi

These two subsidiaries of Air France work the cargo end of the business. Sodetair is a wholly owned transit and forwarding agent providing air cargo transport services. It has 164 employees and handles all import and export functions for Air France (Business 27).

Sodexi is 60% owned by Air France and is their express delivery service provider. They specialize in high-value cargo and employ approximately 240 people. In fiscal year 1998-99, they handled over 29,700 tons of freight (Business 28).

Société d'Exploitation Aéropostale

Aéropostale is a domestic company which provides nightly postal cargo transport and newspaper distribution throughout France. The company operates 20 aircraft, 15 of which are passenger capable for added flexibility. Air France is a 50/50 partner with the company and schedules their aircraft during the under-utilized daylight hours for primarily domestic flights (Business 28).

Air France Finance

Air France Finance is a wholly owned subsidiary whose primary function is to provide financing for aircraft purchases. It is a holding company with net

holdings of FF 297 million as of 31 March 1999 (Business 28).

MARKETING AND DEVELOPMENT

Marketing

The goal of the Air France marketing team is to attract and build a strong, loyal customer base. Travel-savvy customers in Europe and the United States have many choices for spending transportation dollars. Air France is working hard to upgrade services as the best option to take care of customers needs.

A key area of concern to the flying public is punctuality. After safety, this is the next most important consideration (Annual 32). Air France has established a target of 100,000 saved minutes per month, which works out to approximately 6 minutes per flight. Because over 52% of flight delays have external causes, Air France is working with Civil Aviation Authorities, air traffic control, and airport authorities to streamline the process of getting the public on the airplane and the airplane into the air safely (Annual 33). Each member of the Air France team is aware of trying to gain those 6 minutes per flight and are working hard to improve on-time service reputation.

Because customers have different needs and resources, Air France offers a variety of seating arrangements and service levels based upon the customer's willingness to pay. Levels of service range from Tempo level for the leisure, economy-minded traveler to the first class L'Espace 180, which provides a seat that converts into a real bed. Like other airlines, Air France offers its frequent travelers an opportunity to take advantage of their lounge, found in most of the world's main airports (Annual 33).

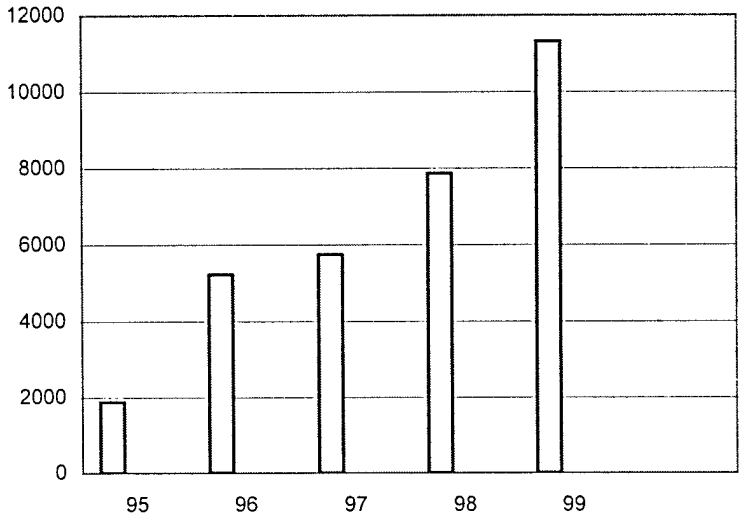
Fréquence Plus, the Air France frequent flyer program, is used to promote customer loyalty. In addition to Air France, a member may earn miles with partner airlines, hotels, and car rental agencies. Air France also has an agreement with American Express to provide the Air France-American Express payment card. The Fréquence Plus program has over 2.5 million members worldwide (Annual 33).

For journeys of two hours or less, Air France faces strong competition from the TGV (high-speed train), but partners with them for mutually beneficial schedule cooperation. Although primarily a domestic service used to connect most of France's major cities with Paris, the TGV Eurostar provides high-speed service to major cities in neighboring countries (Business 11).

Development

Development of the Roissy-Charles de Gaulle airport as the central Air France hub has been important to the success of Air France. In 1998-99, over 1,300 new personnel were hired and trained to man a new terminal (2F), which is expected to handle over 28 million passengers per year (Business 13). The number of new connections available at the Roissy-Charles de Gaulle hub has been increasing annually as Air France continues to develop this hub into the main entry point into Europe.

Weekly Connections in Less Than 2 Hours



Source: 1998-99 Air France Business Report, page 13.

Growth in the US domestic market is seen a key to Air France's growth strategy. They recognize the potential for accessing the large American market and have taken steps to ensure their access to this market. Forging alliances with Continental and Delta Air Lines, Air France is committed to tapping into the US market (Business 14). In addition to the US market, Air France has developed frequent service to Mexico. In conjunction with AeroMexico, their weekly services have increased to fourteen flights in Mexico City alone.

NETWORK MANAGEMENT

Air France divides its flight operations into three distinct categories: long-haul network, medium-haul network, and the distribution network.

Long-Haul Network

It is important to build operating flexibility into aircraft scheduling. There are many variables, known and unknown, which can impact the availability of a

particular aircraft for schedule flights. The lack of such flexibility is a source of unforeseen costs (Business 13).

The long-haul network maintains some of its flexibility by the ability to convert cargo aircraft to passenger service and vice versa. In the summer of 1999, Air France served 80 long-haul destinations, plus an additional 78 destinations pursuant to code-share agreements in the United States. This passenger traffic accounted for 52% of gross passenger revenues for Air France (Business 13). According to statistics contained in a traffic chart on page 14 of their 1998-99 Business Report, the Americas-Polynesia posted the greatest volume of traffic, followed by Asia-New Caledonia, Caribbean-French West Indies-Indian Ocean. The least volume of traffic was from the Africa-Middle East region.

North America was Air France's principal market. In 1998 they offered non-stop service to 15 destinations and the number of weekly flights increased from 144 in the summer season of 1998 to 162 in 1999 (Business 14). There is a daily Concorde flight (with a flight time of 3 hours and 45 minutes) from Paris to New York. Flights to Chicago and Washington were doubled in 1999 (Business 14).

To continue growth in this region, special marketing efforts are being made. Introducing the Boeing 777 aircraft resulted in a 40% increase in forward cabin reservations. Rear cabin yield has been targeted as an area in need of improvement, and should increase with the added efficiency of distribution efforts like the Internet and prorating contractual commissions (Business 15).

Air France serves the Asia-Pacific New Caledonia region with 15 destinations in 10 countries. The number of weekly flights is 65 due to an increase of 9.5% in traffic (Business 15). However, financial problems in Japan forced Air France to cancel its flight service to Nagoya. This was overcome by adding two extra flights to Osaka (Business 15). Air France is planning to improve its exposure in this market, with non-stop service on Boeing 777 aircraft to Singapore, Jakarta, Ho Chi Minh City, Hanoi, and China. Service to China includes six flights to Beijing and thrice-weekly service to Shanghai (Business 15).

Air France occupies a strong position in the Caribbean-French West Indies-French Guiana-Indian Ocean region with a load-factor of 81.8%. Load factor is the percentage of seats purchased to capacity available (Business 16).

Air France is the leading airline in French-speaking Africa, and serves 23 African destinations. In this oil-producing region, the introduction of "Petroleum Club" serving passengers working for the oil industry has become an effective customer 'loyalty-building' tool (Business 15).

Medium-Haul Network

Growth in the medium-haul network was only 1.1% for fiscal year ending March 31, 1999. This region, geographically consisting of Europe and North Africa, serves 106 destinations accounting for 12.8% of Air France's total traffic (Business 17). Of these destinations, 67 are in Europe.

In an effort to boost revenues, a 'premium-economy' class was added in 1998. Tempo Challenge was introduced to attract business travelers not flying

first class, and is roughly equivalent to US business-class service. Domestically, Air France divides it's 57 routes as depicted in the following table.

French Domestic Network

Roissy-CDG	Major French Cities	13 (shuttle)
Orly	Bordeaux, Marseille, Nice, Toulouse	4 (shuttle)
Paris-Orly	French regional airports	18
Lyon-Satolas	French regional airports	10
Intra-regional	Intra-regional	12

Source: 1998-99 Air France Business Report, page 17.

The French domestic market is the most important of all European markets but faces strong competition from the highly developed network of TGV high-speed trains. A characteristic of the domestic service is the number of round-trip flights on offered routes, an average of five per day. This allows for greater flexibility for the business traveler, which accounts for over 50% of market utilization.

The La Navette shuttle is Air France's busiest, most concentrated flight service. The shuttle runs every half-hour throughout the business day on three domestic routes. It departs Orly, a suburb city of Paris, to Nice, Toulouse, Marseille and Bordeaux. The shuttle flies a total of 83 flights daily and provides schedule flexibility to the business traveler. Market share for La Navette increased from 64% to 76% on the Orly-Marseille route, and from 58% to 71% on the Orly-Toulouse route between the 1996 summer season to the 1998 summer season (Business 18).

Distribution Network

Air France sells seats on its flights through a variety of venues, ranging from the ticket counter to the Internet. In France, business travelers can take

advantage of 10 Business Centers that provide advisory services for corporate customers. There are 63 additional ticket offices located throughout the country in larger French cities and towns.

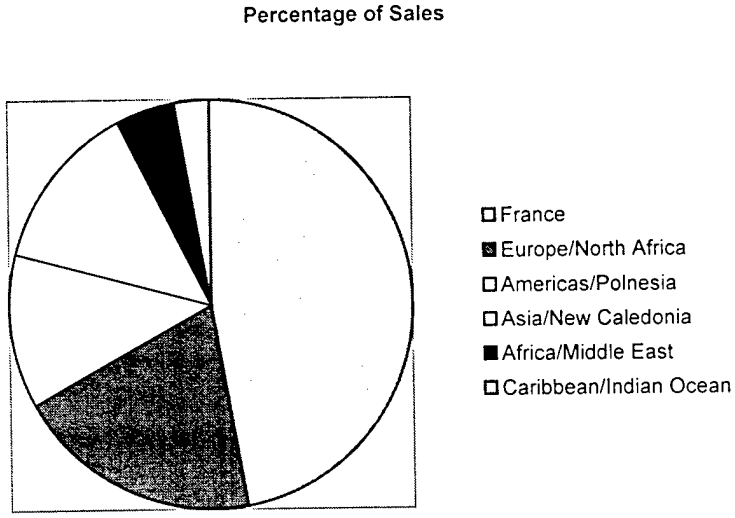
Air France has signed agreements with leading distribution networks such as Carlson Wagonlit and American Express. In January 1999, Air France began complying with a memorandum of understanding with domestic travel agency representatives whereby Air France pays a flat 7% commission with incentives for sales growth and volume. This policy replaced old rates that were based on domestic versus international fare sales.

Internationally, Air France sells tickets from centrally located offices which coordinate sales for the region. Its London sales office serves all of Europe except for France. In North America, offices in Montreal and Fort Lauderdale are electronically linked to coordinate sales efforts for North America. On the Internet, customers have been able to purchase tickets electronically since July 12, 1999 (Business 18). A relative latecomer to Internet sales, Air France plans to incorporate products services and sales in e-commerce by the end of the year 2000. According to Pierre Reville, Vice President of Sales, this is in response to overwhelming customer demand.

"There will definitely be a form of e-commerce product . . . by the end of this year . . .. Our customers are telling us there is a huge demand for e-commerce but we are a little bit behind on this," he said in a interview with Air Transport Intelligence (Warburton 'AA2000' 2).

The following chart graphically demonstrates Air France's scheduled

passenger operating revenues by origin of sales for the fiscal year ending 31 March 1999.



Source: The Distribution Network, 1998-99 Air France Business Report, page 18.

INDUSTRIAL LOGISTICS

The Industrial Logistics division of Air France is the department that controls activities of CRMA (Construction et Réparation de Matériel Aéronautique), a wholly owned subsidiary, as well as the Maintenance Division and Industrial Engineering Division. These two divisions handle internal maintenance requirements of Air France and provide maintenance services for other airlines. The Maintenance and Industrial Engineering Division maintenance services are sold under the "Air France Industries" brand name to over 100 airlines worldwide. In fiscal year 1998-99, they serviced 306 engines, 60 aircraft, and over 60,000 parts (Annual 27).

Maintenance Division

The Maintenance Division handles specific requirements of aircraft that are in-service and operating on a flight schedule. Employees of this division

handle daily checks of less than 2-3 hours in duration, pre-flight checks, and some more in-depth inspections that may ground an aircraft for 1-2 days (Annual 26).

These hour-based interval checks are designed to maximize efficient use of aircraft parts and avionic components. It is a team effort as line mechanics complete their inspections; expert technicians for specific component services sometimes assist them.

This type of procedural crosschecking is common as well in US Army aviation services. As part of an inspection, a crew chief (lead mechanic) may enlist the services of a prop-and-rotor technician or an engine technician. Depending on the level of service required, it may be necessary to have a maintenance officer start the aircraft and take it through a series of power-on checks to ensure it's airworthiness.

Maintenance checks are driven by hours of time flown as well as the calendar. Just like a car's odometer, aircraft employ a usage meter in the form of a clock which records run-time on the engines and major sub-components like transmissions and auxiliary power units.

These services are well-planned and are in compliance with a conservative wear-out life of parts contained within the assembly. The life of every part of an aircraft is tracked, from it's manufacturing history to its usage on an aircraft. Predetermined repair and replacement schedules are strictly followed. It is expected that parts will fail at some point in their useful lifetime, but that failure can never be tolerated while the aircraft is in operation. To avoid this

dangerous situation, the Maintenance Division of Air France follows well-established preventative maintenance procedures.

Industrial Engineering Division

The Industrial Engineering Division follows a similar rationale and are responsible for major maintenance operations. They handle such things as engine overhauls and complete aircraft teardown and inspections. Services are done about every 5-6 years and last 6-8 weeks (Annual 26). The division is responsible for ensuring its overhauls; inspections are in compliance with regulatory guidelines of the country in which the aircraft is registered. In large part, due to their experience with the Air France fleet of Boeing and Airbus aircraft, this division is a main provider for major maintenance services in Europe.

AIR FRANCE CARGO

The Air France Cargo division consolidates activities of all Air France cargo operations. They control interaction between Sodetair and Sodexi as well as Air France Cargo and Air France Express. Overall, they are ranked fourth in the world in revenue per tons carried by kilometer (Business 19).

In October 1998, Air France opened GIXL, the largest and most modern cargo hub in Europe. GIXL is based at Roissy-Charles de Gaulle airport. The hub is based out of terminal No.1 and centralizes all cargo operations. Air France invested more than FF 400 million (Business 20), and it covers 107,000 square meters in size. It utilizes automated wire-guided vehicles for pallet transport, electronic tracking of parcels, and a computerized logistics system (Annual 25).

Although GIXL posted a decrease in operating revenues for fiscal year

1997-1998, investment in facilities and computerized technology should enable Air France Cargo to handle greater amounts of cargo on a cost-efficient basis. The savings should result in greater carrying capacity and will offset some of the initial capital investment. This will help Air France generate additional traffic into Roissy-Charles de Gaulle. This will further the strategic aim of Air France to make Roissy-Charles de Gaulle hub a key entryway into the European market by providing cargo carrying capacity to attract new business.

Chapter 4: Skyteam – An Analysis

Executive Summary:

Six months after Delta and Air France entered into a strategic alliance, which has been tentatively named Skyteam, there has been expansion in the alliance, stock prices have risen, traffic share has increased, and global economy level cost-cutting measures have been taken. Growth rate of the two airlines has exceeded industry averages and the alliance itself has enlarged from two members to four. This expansion has deepened alliance exposure to the lucrative American market and opened a strategic door in the high-growth-potential Asian market. These indicators point to a successful, growing alliance which has taken advantage of strategic, market-based economics, global-level responsiveness and flexibility, worldwide learning and innovation, and global coordination.

Introduction

The development of the Skyteam alliance, based on two of the world's largest airlines, is a globally competitive move necessary in today's economic environment. Alliances are seen as necessary to compete in global markets. According to a report by the U.S. Department of Transportation, "multinational alliances have fueled enormous increases in connecting traffic . . . and are the only practical way to provide better service to thousands of passengers in long distance, low-density international markets (International 2)."

When Delta and Air France first joined in a strategic alliance partnership, both airlines were involved in other alliances. Delta was a member of Atlantic

Excellence, and Air France was and remains heavily involved in the African continent. These outside relationships provided an immediate benefit to the Skyteam alliance by expanding the reach of the alliance outside of North America and Europe. Delta's involvement in the high-quality Swissair-Sabena group convinced Delta that top-level quality is critical to a successful European presence. Delta put this experience into practice when they chose Air France as their initial European partner. Air France needed to reach across the Atlantic to achieve growth in the dense North American market, and by forming this alliance has demonstrated an ability to take decisive action in pursuit of worldwide competitive advantage.

The newly formed alliance moved quickly. Air France added ten additional gateways in North America, and Delta passengers from North America can now fly via codeshare agreements to previously hard-to-get-to places like Warsaw, Prague, and 30 other European/African destinations. To access the markets in other areas of the world, Korean Air was added to open East Asia via Seoul and AeroMexico added a Central and South American depth to Delta's North American dominance. Korean Air is located at Inchon International Airport, the only 24-hour capable airport in the geographic vicinity. This stronghold completes a triad of strategic positioning and its around-the-clock operations enable the level of global coordination required to respond to the needs of business in any time zone in the world.

Currently, there are talks underway with British Air. Adding this airline will deepen the alliances share of the high-volume transatlantic market. British Air is

a member of the Oneworld alliance with American Airlines. They may be considering leaving the Oneworld alliance for Skyteam (Agence 1), but as of yet it is too early to determine the validity of this possibility.

Role of Government

The French and United States governments provide regulatory oversight in the marketplace to maximize competition and fair industry practices. Support by the government is necessary, yet at the same time, the governments must answer to the will of the people. What this means for the growth of any industry is the necessity of working within the political agenda, an agenda which at times is not conducive to profitable operations for an airline. Good examples are environmental concerns and noise abatement procedures mandated by local and national governments.

All airlines must adhere to environmental regulations designed to protect natural resources. Contaminated fuel and oil must be properly disposed of and measures taken to ensure growth does not encroach upon protected areas of the country. Noise abatement procedures are costly in terms of fuel consumption due to the necessity of avoiding large populated areas in the vicinity of airports.

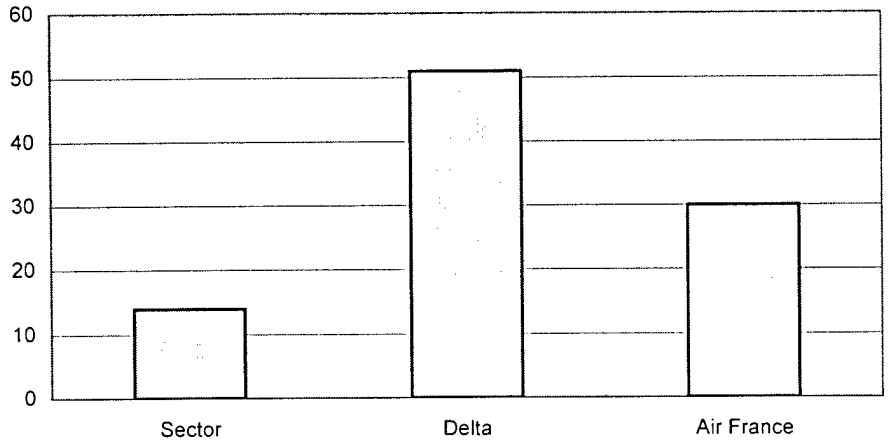
The Alliance

According to Standard & Poor's Industry Survey for Airlines, factors used when analyzing an airline include traffic, costs, financial asset and service performance, and equity valuation (Standard 23).

Traffic

Delta's traffic from France to the US during the first quarter rose 37% higher than the average rise in the airline industry sector. Overall market share increased 2.0%. Air France posted a 16% rise in traffic from a year earlier and a 10% increase in capacity.

Percentage Rise in Market Share



Source: "Air France and Perrier Soaring and Sparkling," (Barkin) and "Delta Air Lines Wins Market Share in Departures from France Thanks to Links with Air France." (*Les*)

Delta's turnover for flights from France to the US rose 51% during the first quarter compared to the same time the previous year, while the average rise in that sector was only 14%, according to Patricia Hurley who is responsible for Air France at Delta. Market share for Paris to US rose from 6.9 to 8.9% over the same period (*Les* 1). For Air France, the November load factor at 76.5 per cent was due to 16 % year-on-year rise in traffic and a 10 % increase in capacity. For the first eight months of fiscal 99-00, traffic was up 14.8 % and capacity increased 13.4 % (Barkin 1).

This performance is especially noteworthy given predictions from the International Civil Aviation Organisation. Overall, the International Civil Aviation Organisation (ICAO) expects airline traffic to grow 5% in 2000, compared to 4% in 1999, with Asia growing the fastest (Jasper 3). Here, an alliance with Korean Airlines will prove crucial to developing penetration into the Asian market. The location and capability of the Korean Airlines connection is valuable for the potential it provides in global coordination. Access to the Inchon International Airport near Seoul, "the only true 24 hour connection hub in Asia," according to Ben Darnell, Delta's director of alliances (Kelly 1), will be very important in developing the Asian market for the alliance.

While the year isn't over and airline statistics are necessarily based on annual figures due to traffic fluctuations, the performance of Delta and Air France has been noteworthy. Suffice it to say, Air France has committed it's well-established maintenance division to assisting Korean Air revamp it's procedures. This is due to the dismal safety record of Korean Air which last year threatened to derail the alliance agreement.

Cargo

An Air France specialty, cargo has always been an important part of Air France's growth plans. With 12 Boeing 747 aircraft dedicated to servicing diverse cargo needs, Air France has recently initiated a four-pronged program to handle every conceivable cargo requirement.

In part due to the addition of east-bound belly space provided by Delta under their alliance agreement, Air Frances capacity increased by 14.5% over

April 99 and air cargo traffic raised 11.9 % over the same month last year (Todd 1). The addition of Korean Airlines as an alliance partner works well for the cargo division, as the centrally located Seoul-based airline is the "biggest carrier of cargo based in Asia (Coleman 1)". With Asia identified as the area of the world with the greatest potential for growth in coming years, the alliance is poised to take advantage of the market. This is an excellent example of global responsiveness and flexibility demonstrated thus far by the alliance.

Delta is coming onboard the cargo bandwagon and is relying on the expertise of Air France to help it generate capacity and capability to move into this growing business. Air France focuses on cargo more than other airlines, and is trying to convince Delta to expand into the cargo area. "We are trying to demonstrate to Delta that cargo can be a useful addition to their passenger tool," said Francois Bachelet, head of the Air France Cargo division, in a recent interview (Hailey 2).

The win situation for Delta is new growth in the parts of the world where Air France plays a dominant role, as well as expanding the scope of their air transportation services to include cargo on a larger scale. Thus, the alliance itself plays a valuable role in the global learning process the member airlines will necessarily undergo in order to remain competitive in the rapidly evolving air transportation system.

Costs

Cost factors include load factor, labor, fuel, and maintenance. The load factor is obtained by dividing airline revenue passenger miles/kilometers by its

total available seat miles/kilometers. The load factor reflects a percentage of capacity. An aircraft which is filled to capacity with paying customers has a load factor of 100%.

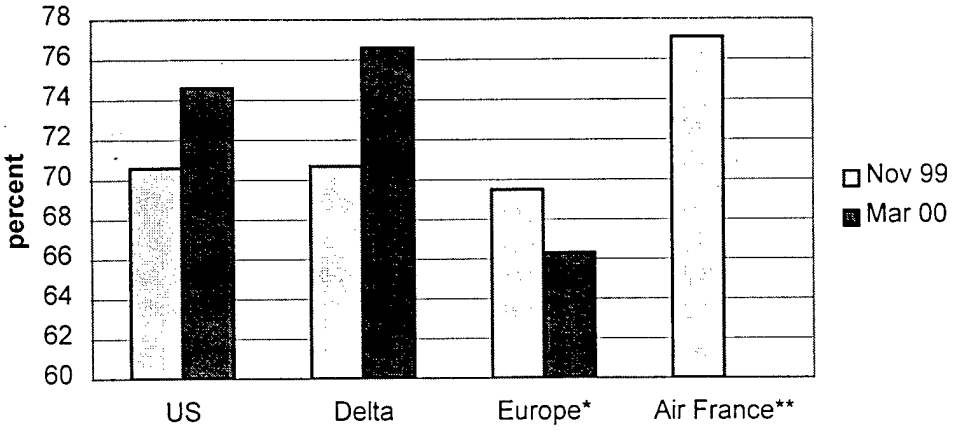
Load Factor

The chart below compares the load factor of Delta with the US industry average load factor, as well as Air France with the European industry average load factor. The value of this information from an analytical point of view would be to determine if the load factor was higher after formation of the alliance, and how the level compared with overall industry average.

Information displayed on the chart depicts in November 1999, Delta, the US industry and the European industry were roughly comparable at approximately 71 %. Air France, with a load factor of over 77% is clearly the leader as of this date, which was before the alliance.

By March 2000, load factors for US industry had risen, while Delta's load factor exceeded even the strong gains by the US industry. Europe's figures of February 2000 show a decline. Figures for Air France's March 2000 load factors were not available, but total passenger traffic rose 13.8% over the North Atlantic. This increase was directly attributed to an improved network at its Paris hub and increased frequencies with partner Delta Air Lines (O'Leary 1).

Load Factor



Source: Information compiled from Trends, *Air Transport World*, dated Jan-May 2000.
*Mar 2000 data reflects Feb 2000 figures. March 2000 figures are not available.
** Mar 2000 figures are not available.

Labor

Delta is the largest major airline in the United States which operates a predominantly non-union shop. Although flight crews are unionized, the majority of their hourly workers and management is not. Delta takes special pains to stay ahead of the national industry in wages and fringe benefits because top-level management likes the flexibility of a non-union shop and the freedom it offers their management team. This approach works well for Delta, and they generally have no trouble in attracting the most experienced personnel from other airlines and related industries. The future of the alliance is positive, as Delta is able at any time to bring in a union shop if it serves the interest of the company. They retain the flexibility management desires without the problems associated with restrictive union requirements.

Air France has a reputation for employee problems, but as this a cultural characteristic of the French as a people, it is not out of place within the French

economy. However, in a global economy which is highly dependent upon a complex system of moving parts from other countries, these labor disputes could pose eventual significant problems for Air France and its future in a profitable alliance situation. For example, if the airline is shut down by an employee strike, it could jeopardize the alliance and poison Air France to any other potential alliance partners. Air France must keep labor problems in check and not allow them to become an obstacle to the success of the now partially privatised company.

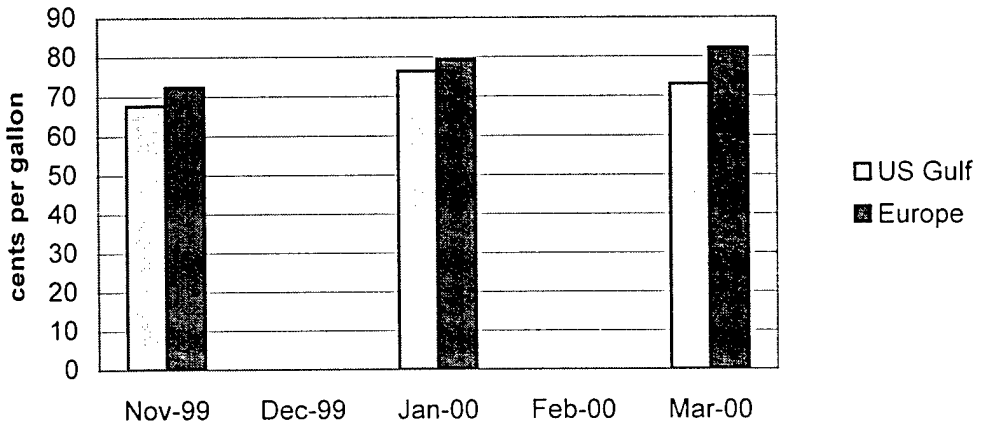
In order to enhance coordination, Delta and Air France are planning to integrate their information technology systems (Lott 1). This will enable them to hand passengers more seamlessly from one connection to another, regardless of which alliance partner is doing the actual flying.

Fuel

Airlines spend between 8-12% of their revenues on fuel costs. As the chart below indicates, fuel costs are higher in Europe than in the Gulf region of the United States. To alleviate some of the costs, the Skyteam alliance is breaking new ground in terms of fuel logistics. Delta, Air France, and AeroMexico are consolidating fuel purchases to take advantage of global economies of scale (*Oil* 1). The alliance plans to evaluate jet fuel purchases from a global perspective. They have selected 17 target airports to initiate the plan with an order of 500 million gallons of jet fuel per day. Although this is just a small percentage of their annual fuel consumption of 2.8 billion gallons, this global

coordination as already resulted in 'significant results' being achieved in Japan (*Oil* 1).

Fuel Costs



Source: Information compiled from Trends, *Air Transport World*, dated Jan-May 2000. February 2000 figures unavailable.

Taking advantage of their new consolidated buying power strength is an excellent example of an application of global learning and innovation. By identifying potential cost-saving measures which have resulted from their increased strength as an alliance, the Skyteam group will reap benefits of less costs achieved with global scale economics.

Maintenance

As discussed in Chapter 1, the hub and spoke system of airline management resulted in greater economies of scale due to centralization of key personnel and logistics. The same benefits apply on the global scale, but with the added benefit of networking being available at a smaller, local level. Control and supply which takes place at the global level enable the local user to network among allies and competitors alike in order to achieve greater efficiency and use

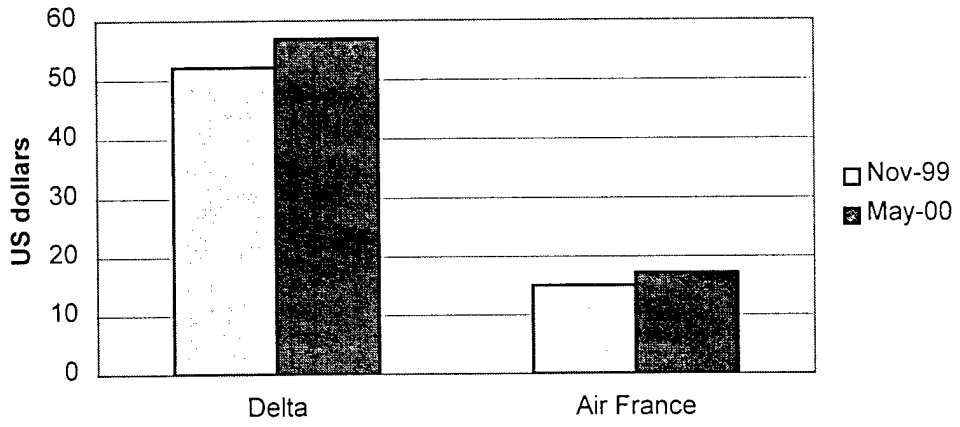
of resources. The Skyteam alliance also benefits by greater standardization of Airbus systems among Air France and AeroMexico, and Boeing products used primarily by Delta and Korean Airlines.

Financial analysis

Financial analysis tools include yield, profitability, P/E ratios, and equity valuation. Stock prices provide an estimation of overall value of the airline and its performance over a measured time frame.

Equity valuation

Stock Prices



Source: Information compiled from Bloomberg Finacial Analysis, Air France and Delta Airlines, 16 May 2000 (Bloomberg), and Birmingham Post, "Air France and Perrier Soaring and Sparkling," 18 Dec. 1999 (Barkin 1).

Stock increases of 10-14% over this relatively short time indicate a positive trend which could be the result of the publics warm reception to the formation of the alliance. This feeling is reflected in "buy" recommendations from airline analysts at Dresdner Kleinwort Benson in London, Merrill Lynch, Deutsche Bank, Commerzbank, and CCF Securities, all of whom recently upgraded their Air France recommendations (Barkin 1).

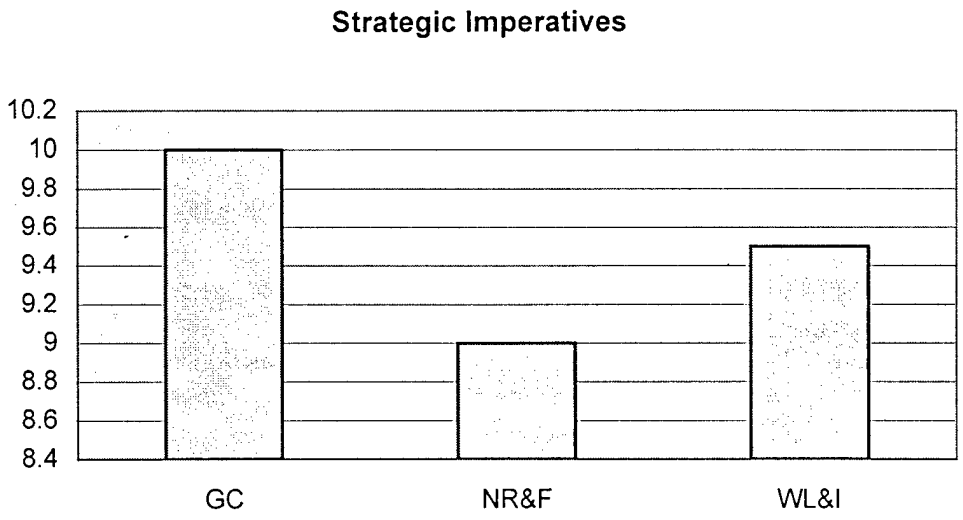
Service and Safety Record

Delta and Air France have excellent reputations for service and quality, but this will have to offset the dismal safety record of Korean Airlines. Working together to solve some of the problems associated with substandard maintenance, Air France dispatched a team of experts to train and revamp the maintenance division of Korean Airlines when it became apparent that a fix was in order. Fast reactions of Delta and Air France to both support a potential partner and at the same time distance themselves from too close of a relationship reflects the consumer-savvy abilities of top-level management in both airlines.

As of March 2000, Korean airlines passed a stringent Canadian Transport Ministry review. In a notice published by the Canadian Transport Ministry, it was determined that "By every measurement, these actions (the airline's $200 million safety upgrade program) clearly depict Korean Air's commitment to the strengthening of operational fundamentals and its determination to match or exceed international safety standards (Coleman 1)." This commitment to the alliance partnership demonstrates a high level of global coordination.

Evaluation of Strategic Imperatives

The following is an evaluation of the alliances Global Coordination, National Responsiveness & Flexibility, and Worldwide Learning & Innovation.



Source: Subjective analysis by author.

GLOBAL COORDINATION

The strategic alliance of Delta Air Lines/Air France/AeroMexico/Korean Air Lines is an alliance which has enabled member airlines to take advantage of each other's strengths to overcome individual weaknesses. As member airlines choose prospective partners, key items considered are the route access the new entrant would provide, and commonality of equipment. The more standardized, the better the alliance can manage the logistical cost of upgrading to new technologies. The alliance flies into every corner of the globe and their service-oriented beginnings has served them well in the far-flung global economy. As an alliance, they have been able to pull together complex agreements ranging from massive fuel purchases to new partner acquisitions, all the while increasing their depth of coverage in key passenger revenue producing areas. Keenly aware of the importance of communication and presence, they have ensured their alliance evolves with major airlines in each geographic region that are equipped with

assets able to respond effectively to the dynamic aviation environment. Key coordination efforts resulted in enabling Delta passengers for the first time to fly to Vietnam and Moscow with a seamless experience. These efforts also opened the American heartland for convenient flights to the main gateways of the European continent. Further coordination efforts may result in the addition of British Air as a major partner, increasing depth of service across the Atlantic.

NATIONAL RESPONSIVENESS AND FLEXIBILITY

By responding effectively to the unique needs of an ever-changing air transportation environment, the alliance partnership has demonstrated an ability to react with speed and decisiveness to demanding situations. When Air France sent key maintenance personnel to help out the ailing Korean Airlines, they helped not only themselves and Korea Air, but also the reputation of the alliance as a whole. When Delta was able to turn over it's belly-space cargo capacity on westbound routes to Air France, it demonstrated a level of teamwork resulting in putting needs of the alliance ahead of the individual airline. This flexibility and responsiveness has made a difference on a global scale as the airlines have demonstrated an ability to work together on everything from cargo space to maintenance to scheduling. Air France has demonstrated flexibility in not only cargo and maintenance areas, but in route selection and scheduling as well by committing to a higher level of direct flights to and from American gateways.

WORLDWIDE LEARNING AND INNOVATION

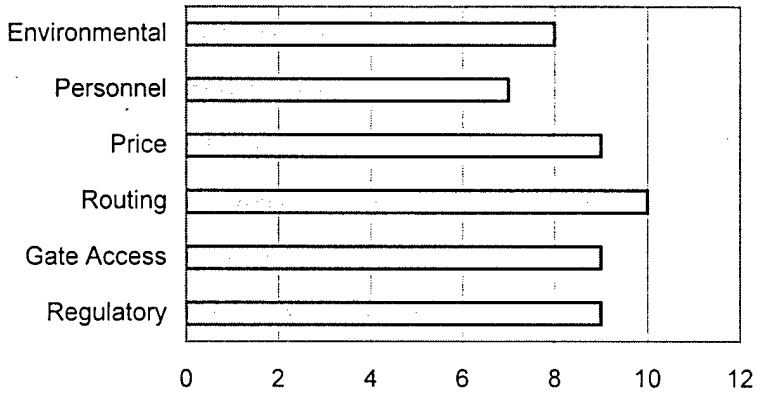
The alliance adapted well to a partner-driven mode of operations. Delta and Air France adapted their individual airline to the collective benefit of the

alliance. This in turn has provided benefits in terms of increased passenger revenues and higher stock prices over the time of the alliance. Each was innovative in coordinating massive fuel purchases to take advantage of global scale economies, and their experience with other alliances taught them importance of quality and customer perception. This was demonstrated by the quick reaction of top-level management to Korean Airlines safety problems. After distancing themselves from any involvement with the operational aspects of the airlines, they moved in quickly to help restore their future partner to health and waited until the system worked and Korean Airlines was able to pass inspections before closing a deal on an alliance. By helping their competitor they were helping themselves, because when Korean Airlines finally did become a partner, they were able to take advantage of what Korean Airlines brought to the alliance – a strategic Asian location and proven cargo capability.

Evaluation of Core Competencies

The Skyteam alliance scores well in an evaluation of the industries core competencies. It has excelled in routing and regulatory compliance, and its environmental compliance is noteworthy with no faults noted in research. It has achieved a high level of coordination on key customer points like gate access for convenience, and seems committed to keeping prices low as it integrates information technology systems and focuses on e-ticketing and electronic distribution channels.

Rating of Core Competencies



Source: Subjective analysis by author.

Conclusion

This paper began with a brief history of the development of the airplane and the airline industry in the United States and Europe. Use of aircraft for mail delivery and passenger travel was discussed as well as political environments and stages of development which led to the emergence of airlines themselves.

As airlines developed and international travel became common, international political considerations of this activity were examined. This activity impacted the development of use of strategic alliances in the airline industry. Market-based economics were discussed, and the permitted level of cooperative effort among the airlines was examined from a historical and current point of view.

To determine the impact of strategic alliances in the air transport industry, a detailed examination of the structure and operational aspects of two member airlines in a newly formed alliance was conducted using historical and current information from industry sources in English and French. Each member airline,

Delta Air Lines, and Air France, was examined with comparative reasoning in order to evaluate their operations in a standardized fashion.

The analysis chapter, an evaluation of the effectiveness of the strategic alliances the member airlines had formed, was conducted using objective, industry-wide criteria. This analysis led to a conclusion that strategic alliances in the air transport industry are beneficial and essential to provide an Anywhere to Everywhere service to customers.

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Vita

Leon E. Pennington

EDUCATION	Aug 00	Master of Arts (West European Studies)	Indiana Univ, IN
	Dec 93	Bachelor of Arts (Major: Political Science) (Minors: Physics & French)	Troy State Univ, AL
LANGUAGES		English and French	
FAA RATINGS	Mar 90	Pilot, Single-Eng Land	Private
	Dec 84	Pilot, Rotorcraft	Comm-Instrument
FLIGHT EXPERIENCE		Total Hours	1498
		Pilot-in-Command	458
		Night Vision Devices	248
		Weather	118
		Combat	18
U.S. ARMY TRAINING EXPERIENCE	May 99	Basic French Course	Def. Lang. Inst, CA
	Apr 98	Combined Arms Staff	Ft. Leavenworth, KS
	Nov 93	Airborne School	Ft. Benning, GA
	Jun 92	Aviation Advanced Crse.	Ft. Rucker, AL
	Apr 90	Aviation Basic Course	Ft. Rucker, AL
	Sep 89	Officer Candidate School	Ft. Bragg, NC
	Feb 89	Survival Course (SERE)	Ft. Benning, GA
	Dec 84	Helicopter Pilot	Ft. Rucker, AL
	Apr 82	Helicopter Repairer	Ft. Rucker, AL
U.S. ARMY WORK EXPERIENCE	96-98	Company Commander	Hunter AAF, GA
	95-96	Bn Intelligence Officer	Hunter AAF, GA
	95	UN Air Planning Officer	Haiti
	94-96	Bn Asst Opns Officer	Hunter AAF, GA
	94-98	UH-60 Pilot (Mech Inf)	Hunter AAF, GA
	90-92	Co Exec Officer	Ft. Campbell, KY
	89-90	Platoon Leader	Ft. Campbell, KY
	89-92	MH-60 Pilot (Spec Ops)	Ft. Campbell, KY
	85-89	UH-60 Pilot (Light Inf)	Ft. Ord, CA/Panama
	84-85	UH-60 Pilot (Air Cav)	Rep. of Korea
	82-84	OH-58 Mechanic	Ohio Natl. Guard
MEMBERSHIPS	99	Gideons International	
	89	Night Stalker Assoc.	
	75	Mensa International	

MEMORANDUM TO Commander, Defense Technical Information Center,
8725 John J. Kingman Road, Suite 0944, Fort Belvoir,
Virginia 22060-6218

FROM Captain Leon Pennington, 3532 John Hinkle Place, Bloomington, Indiana 47408

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2. Distribution is unlimited.

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CPT, AV
FAO-Indiana University