

JETS INTERNATIONAL – JETS.COM: A NEW WAY TO FLY

Air travel provides many benefits, such as: speed of flight, ability to cover great distances in a very short time, and at a reasonable cost. On the other hand, today's frequent air traveler is inflicted with an increased number of delays waiting for connecting flights, an increased amount of time spent in delays, and an increase in the overall "hassle factor" of flying due to increased security concerns in today's air transport environment. A confluence of disruptive technologies is now combining forces to create a revolution in the air transportation business.

The global airline industry was in a downturn prior to September 11, 2001 due to many factors, including significant reductions in travel by business and first class passengers. After September 11, air traveler concerns about safety, corporate drives to reduce costs, and an increase in the hassle of air travel all worked to significantly reduce the number of passengers using air transportation. Current forecasts suggest a smaller number of international airline operators will increase their focus on global markets. New competitors entering the domestic or short-haul airline industry are using less expensive, more efficient aircraft to provide more responsive, hassle free travel at an affordable price to travelers. By using e-business technology, Jets International has created value in a declining market by matching aircraft owners with individual travelers seeking hassle free travel at a reasonable price. Jets International differentiates itself through attention to safety, quality of the flight experience, and convenience.

Recent Challenges in the Air Transport Industry

Air transportation was one of the defining technologies of the 20th century. For decades, airlines operating in every continent around the globe combined to make the world more accessible to millions of people and accelerated the delivery of goods to the far corners of the globe.

This case, prepared by Professors Tom W. Gilligan and Michael W. Coombs from public and private sources, is intended as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

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According to Air Transport World, in 2000, the 523 airlines in operation around the world carried 1.8 billion passengers for 3.2 trillion revenue passenger kilometers (RPKs) and carried cargo for 137 trillion freight tonne kilometers (FTKs), while employing more than 17,900 aircraft (Mak, 2002). In 2000 the largest providers of air transport services for passengers and freight, respectively, were the United States (38.8 percent of all passengers, 35.5 percent of all RPKs, and 30.7 percent of all FTKs). European registered airlines accounted for 29.6 percent, 31.1 percent, and 26.8 percent respectively. Airlines registered in Asia-Pacific accounted for 20.4 percent, 22.5 percent, and 33.4 percent respectively. The busiest interregional market was the North America-Europe market where volume increased by 50 percent between 1992 and 1998. The fastest-growing interregional market was expected to be flights between Northeast Asia and Southeast Asia. (Mak, 2002; Exhibits 2 and 3). While goods shipped by air accounted for over a third of the value of world merchandise trade, passenger revenues had declined in 2000 to 72.2 percent of total revenues for US registered airlines from 76.8 percent in 1990. Revenue growth in the 1990s declined to 2.3 percent. Thus, the airline industry was struggling prior to the tragedy of September 11, 2001.

In September 2001 four US airliners were hijacked by terrorists and flown into the World Trade Center in New York City, the Pentagon in Virginia, and a farm field in Pennsylvania as passengers tried to overpower the hijackers. There was an immediate impact upon airline travel as flights within and to the United States were grounded. Passengers decided to cancel their future plans to reduce their risks. The airlines faced additional costs as security and insurance expenses soared. Elaborate procedures were implemented at US airports for screening passengers boarding airliners in an effort to reduce the possibility of any similar occurrence.

This increased the numbers of hours that a passenger is required to report at the airport for pre-boarding screening and processing to 3 or 4 hours. The most significant security measures were imposed on international flights as well as flights within a continental area, such as Europe, Asia, United States, and South America.

The United States airline industry was deregulated in October 1978. While this has been beneficial to passengers in terms of the cost of air travel—some sources estimate passengers paid 26 percent less for air travel in 1996 than they would have if the industry had remained regulated—some of the established carriers have gone bankrupt. Many new entrants entered the industry to challenge the incumbents. Most did not compete successfully and have disappeared. On the other hand, the low-cost segment of the market remained strong, with several airlines achieving significant growth. Southwest Airlines, the United States' no-frill leader, in 2003 had a market capitalization of US\$10.7 billion, twice that of the other major carriers combined. For instance, Easyjet, the United Kingdom's low fare airline, boosted revenues by 35 percent, and in August 2002 bought its competitor Go. Ireland's Ryanair, modeled on Southwest, and has not only increased revenues by 35 percent but improved profit before tax by 71 percent in 2002. (AT Kearney, 2003). Commuter airlines stepped into the breach for short haul routes, replacing one or two jet touchdowns a day with much more frequent small-plane service (Yergin and Stanislaw, 2002).

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The negative financial effects of September 2001 were heaped upon an industry already struggling with significant structural changes in response to rising costs of fuel and employee benefits. In response, the major airlines tried to reduce costs by slashing the number of aircraft utilized on major routes, reducing ticketing services, eliminating on-board catering and other amenities. A number of airlines in the United States and Europe either had filed for bankruptcy or were considering it. Some sought government relief. Thus, the industry which played a significant role in the growth of the global economy was confronted with a perfect storm. In an effort to reduce the stress and loss of time from these new restrictions travelers who could afford the extra expense were turning away from the major airlines to smaller companies providing charter or jet card services.

Nathan McKelvey reflected on these significant events as he gazed out the window of his Quincy, Massachusetts office and contemplated the movement in an industry he joined over 6 years ago. In 1999 he created Jets International to benefit two groups: (1) travelers seeking convenient, on-demand travel and (2) the owners of aircraft, typically charter jet operators and corporate aircraft departments seeking to maximize the use of their aircraft. His approach allowed aircraft owners to bid on travel requests made by members of Jets International. Aircraft owners could bid on flight requests made by customers when the aircraft was not otherwise reserved. Frequently this reduced the number of times an aircraft flew empty legs on returning from a one-way flight. Customers could watch the bidding process and select the service provider which met their itinerary and financial targets. The concept found acceptance. In 2001 Jets International earned \$1.2 million in revenue. Three years later the company was averaging \$1.5 million per month. "Demand picked up around Thanksgiving," says CEO McKelvey. "Planes have been more difficult to find." In November 2005, INC. magazine recognized the firm as one of the fastest growing companies based on its 1,108 percent increase in revenue over the past three years. McKelvey has since changed the name of the firm from CharterAuction to Jets International (www.jets.com).

In spite of this enthusiastic acceptance of his business, McKelvey also recognized that competition was increasing in this air transportation market which was previously the province of corporate aircraft departments. Now there are multiple alternatives for travelers interested in the business or regional jet market. While Jets International has no aircraft, nor a host of employees, some competitors are full-service operators and are increasing the number of aircraft and services in the domestic market. Still other competitors have partnered with or acquired similar companies in other countries in order to expand their offerings to a worldwide market. The increased business captured by these point-to-point airlines is spurring aircraft manufacturers to increase production of smaller aircraft for this growing market. For example, Boeing is looking at building smaller, more efficient 100 to 200 seaters that can service smaller airports.

In addition, a small number of new aircraft manufacturers are developing small jet powered aircraft which will hold 6 to 8 passengers with a range of around 1200 miles (Exhibit 1; Daly, 2005). The least expensive of these very light jets (VLJs) is called the Eclipse and is estimated to sell for \$1.3 million dollars (US) when it enters the market in

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early 2006. This would be about one quarter the cost of currently available aircraft being used for regional jet service by the airlines and charter operators. McKelvey recognized that this would increase the availability of less expensive aircraft, but would also lower the barriers to entry for outsiders seeking to enter this emerging market. Indeed, Robert Crandall, retired CEO of American Airlines, and a partner have already placed orders for 75 eight passenger AdamJet A700s for an air taxi company he is forming. (Brown, 2005).

PRIVATE AVIATION

Private aviation, the emerging alternative to the major airlines is rapidly growing due to the increased number of travelers who are adversely affected by the sharp deterioration of the airline experience. Typical customers are high net-worth individuals or small business owners who travel frequently and gain a benefit from better utilization of their time than shuffling through airport security lines. For most travelers the benefits include:

- **Flexibility:** You decide when and where you go, and can change the departure or return time easily.
- **Convenience:** Small airports may be closer to your home and/or destination. This may drastically reduce the time spent going to/from your destination and the airport.
- **Security and Safety:** Everyone knows who and what is on their airplane. Security is handled behind the scenes with background checks and rigorous surveillance operations, not through intrusive physical screening. The top service providers have standards for crews and maintenance far above those required by federal regulation. Independent auditing companies such as ARG/US and Wyvern can provide prospective customers with the necessary information to choose the companies meeting the highest industry standards.
- **Productivity:** Your time in the air on a private aircraft can be more productive since there are fewer distractions in the cabin. No interruptions. Alternatively, time can be spent in meetings if flying with co-workers or completing your own work.
- **Accessibility:** Scheduled airlines serve about 450 airports in the U.S., and 70% of all traffic is concentrated at just 30 of those, which means that most flights require a time-consuming connection between aircraft. Private aircraft, on the other hand, have direct access to more than 5,000 airports.
- **Life Enhancement:** Benefits to your mental and physical states. Less stress. Less delay. "There is no wear and tear on your body when you travel this way," says entrepreneur and fitness expert Jake Steinfeld who utilizes private aviation for business and family travel.

NEW PRODUCTS and SERVICES

A host of first-rate providers are bringing new products, opportunities, and a wide variety of aircraft and services to the market through a rapidly expanding range of options including (1) charter, (2) jet card programs, (3) fractional ownership, and (4) outright ownership. Fractional shares, jet cards, and charter flights can be charged on American Express cards making it very convenient to use these services. Each of these options was recently summarized in a special advertising supplement in Forbes magazine (Patiky, 2005).

FRACTIONAL OWNERSHIP PROGRAMS

In fractional ownership programs individuals can obtain as little as one sixteenth of a share (typically 50 annual hours) and get the tax benefits of ownership and are entitled to a set number of guaranteed hours per year for the five year contract period. Fractional owners pay a monthly maintenance fee and an hourly charge for onboard flight time. Fractional ownership best matches the needs of an individual or a company that want the service of a business or private aircraft but who would typically have modest utilization requirements (less than 200 or 300 hours per year).

The major fractional providers such as: NetJets, Bombardier Flexjet, Flight Options, and CitationShares are unique and differentiated by the aircraft in its fleets and service options. For example, the ability to use multiple aircraft simultaneously, to utilize more or less than the number of contracted hours in any year, or the option to upgrade or downgrade to a larger or smaller aircraft as needed.

NetJets, a Berkshire Hathaway company, invented the fractional ownership idea two decades ago. The company remains the largest provider with the widest range of aircraft choices. But in addition to fractional shares, NetJets has partnered with Marquis Jet which offers NetJets aircraft in prepaid, single price 25 hour chunks.

Bombardier Flexjet specializes exclusively in Bombardier aircraft, including a full line of Learjets and Challengers. Since it can be difficult to estimate annual utilization, Flexjet created the Versatility Plus program which allows owners to sell unused hours or purchase needed hours from an owner's exchange pool and even buy time in an aircraft other than the one they own. Flexjet has also waived peak travel day restrictions on the use of multiple aircraft. That means while you may own a fraction of an airplane, you can actually command a fleet of two or more. This can be beneficial when you are bringing family members together for the holidays or for a corporation flying in board members for meetings.

Flight Options, owned by Raytheon, offers a full range of small-to-large-cabin aircraft choices, ranging from the popular Raytheon Hawker 400 XP through the midsize Hawker 800XP and the fast Citation X to the ultra-large cabin Embraer Legacy, which is priced like a mid-sized jet but boasts one of the most spacious business jet cabins. The spacious

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cabin provides three distinct areas, making it ideal for larger groups to travel with efficiency and comfort. Flight Options is the exclusive fractional ownership provider of this unique aircraft.

CitationShares, owned by Cessna aircraft and TAG Aviation, confines its fleet to small- and midsize-cabin Cessna Citations that significantly lower the cost of entry into the world of private jet travel. These aircraft are ideal for two-to three-hour flights; but the company has recently added nonstop, coast-to-coast with its latest midsize Cessna Citation Sovereign. CitationShares is one of the only fractional providers to offer a 3/32nd (75 hours a year) share.

CHARTER FLIGHT PROGRAMS

For occasional use, charter flights provide more flexibility. You can buy what you need, when you need it, without further commitment. Most aircraft available for charter are owned by individuals or corporations that make the aircraft available when they would not otherwise be in use. Some fractional providers such as TAG Aviation and Bombardier Skyjet may contract with charter companies when demand exceeds supply. While on-demand charter may have been the least costly method for obtaining private jet benefits, there may be some additional charges such as repositioning fees for bringing the aircraft to the customer and the return flight leg if the charter customer is flying one-way. Some fractional and charter ownership organizations found a solution to this problem with the jet card—the hottest idea yet for gaining the advantages of a private jet.

JET CARD PROGRAMS

Card programs provide the consistency and guaranteed availability of fractional programs with the simplicity and convenience of charter. Like prepaid debit cards, jet cards are sold in fixed-dollar denominations for use on a variety of aircraft or in hourly increments for specific aircraft types or categories. Unlike fractional ownership, there are no major long-term investment costs or monthly management fees. And unlike charter, there are no repositioning or empty leg costs. Each trip's cost is deducted from the card balance, and flight charges are only for the time aboard based on know-before-you-go, one-way pricing.

Marquis Jet Cards are sold in 25-hour increments in a variety of NetJets aircraft, which are guaranteed when and where you need them.

Flight Options introduced its own JetPASS 25-hour jet card. Card members fly with crews and aircraft from the Flight Options fleet, unused hours are 100% refundable and the card has no expiration. This is an easy way to sample Flight Option's service and aircraft as well as providing an opportunity to segregate business and personal executive travel.

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CitationShares Vector jet card works in a similar way, but they reduced the entry cost further with a 20-hour single-payment card available for any aircraft in its economically priced fleet of Cessna Citations.

TAG, one of the world's largest and most experienced flight management and charter companies, is also the newest entrant in the jet card marketplace. TAG recently launched its own JetCard, offering an alternative to on-demand charter. One call and 12 hours notice is all that is needed for a guaranteed flight to or from anywhere in the United States. TAG experts are on hand 24 hours a day to help you select the best aircraft for your needs and offer a highly personalized concierge service. Like most card programs, you pay only for the time aboard, so there are no positioning or empty leg fees and no surprises. The JetCard comes in increments of \$100,000, \$250,000, and \$500,000. Card members can select from seven groups of aircraft in four cabin-size categories. Pricing is offered for round-trip or one-way flights and charges are deducted from the card with full credit given for any unused balance.

Bombardier Skyjet offers convenient, pay-as-you-go on-demand jet charter, but the company's flagship product is its own branded jet card available in a variety of aircraft categories from light, superlight, midsize, large, or ultra-long range. Skyjet card members can reserve blocks of 25, 50, 100, or more hours and pay a flat hourly rate for the hours flown. With just 12 hours notice an aircraft is guaranteed when and where you want it without positioning or empty-leg costs. Rather than using a fractional ownership fleet, Skyjet utilizes a select group of the nation's top charter companies with the highest ranking for excellence in safety and service that meet Skyjet's own stringent safety and quality standards.

Jets International also has a premium offering, the Titanium Luxury Club Program, which the company guarantees a fixed hourly rate with 12 hours notice. Members join the club by establishing an escrow account of \$100,000, which is used to pay for flight time. Examples of the fixed prices available through the club include \$2100 for an hour aboard a light jet such as a Cessna Citation CJ2 on a round trip flight. A one-way trip on a larger aircraft such as a Bombardier Challenger 604 may cost \$7350 (Robb report.com).

OWN YOUR OWN AIRCRAFT

While aircraft ownership in the past has been the province of large companies or the service providers mentioned above, aircraft ownership is rapidly becoming more affordable. A number of new players are entering the manufacturing market at a variety of attractive price points. Vern Raburn, founder of Eclipse Aviation and a pilot for 40 years, has conceived of a very light jet (VLJ) which he expects to offer for sale in early 2006 for around \$1.3 million—about one third the price of the current least expensive jet on the market now. The new Eclipse 500, designed to carry six people, can fly at 430 mph and reach altitudes of 41,000 feet. "Eclipse Aviation is in the business of designing, certifying, and producing modern, affordable jet aircraft that will revolutionize the transportation market," exclaims Raburn (eclipseaviation website). The vision of Eclipse Aviation is to create a safe, fast and efficient mode of air transportation travel that can

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offer “point to point” travel. Today’s travelers are demanding the ability to move directly from one city to another in an on-demand basis.

Most commercial airlines today use a hub-and-spoke delivery system focused primarily on 31 large airport hubs. Large aircraft increase the number of passengers on a flight and reduce the airlines’ costs in flight crew and economies of scale in the operation. For the passenger this requires traveling to major airports where hundreds of people shuffle from ticket counters to security screening and loading gates before boarding the aircraft. In addition to the often lengthy distance between each of these locations, several energy draining hours must be spent passing through each of these obstacles prior to the airplanes actual departure.

In contrast to the typical commercial airline operations, the performance characteristics of the Eclipse and other similar VLJs would allow access to as many as 10,000 airports. The large number of small airports increases convenience and reduces the time to travel. Less time will be spent waiting for connecting flights, and ground transportation enroute to the final destination. This is convenience of the highest order. In many instances an individual traveling in private aviation can be at their destination while a commercial traveler is still in the airport terminal awaiting departure.

As you might expect, technology with such disruptive potential will have its critics. Major opposition comes from the existing airline industry which likely will see some of their customers migrate to the more convenient VLJs. Some critics complain that these VLJs will clog the single-lane highways in the sky above 18,000 where large jets fly. Commercial aircraft, such as the Boeing 737 used by the few point-to-point airlines fly at 500 mph. VLJs flying at 430 mph would be “like cars going 45 mph on the freeway,” says Jim May of the Air Transport Association.

The FAA predicts an increase in General Aviation activity in the near term with the strongest growth occurring in the turbojet community (Exhibit 2, Table I-5; and Exhibit 3, Table I-7). In other reports they forecast at least 4500 VLJs will be in service 10 years from now. NASA projects 20,000 in 2010. Thus, smaller regional aircraft, such as VLJs, have the potential to revolutionize the air transport business as well as disrupt it. Based upon the difficulty some legacy airlines have had trying to launch regional carriers of their own, such as, United’s TED and Delta’s Song, it is unlikely that the large established carriers will adapt to the new technology as rapidly as the emerging charter aircraft carriers. Harvard professors Christensen and Overdorf state:

“In general, disruptive innovations occur so seldom that larger companies have no routine for handling them. Large companies often surrender emerging growth markets because smaller, disruptive companies are more capable of pursuing the emerging markets. . . . “Disruptive innovations create an entirely new market through the introduction of a new kind of product or service, one that’s actually worse, initially, as judged by the performance metrics that mainstream customers value. For example: early personal computers were a disruptive innovation relative to mainframes and minicomputers. PCs were not powerful enough to run

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the computing applications that existed at the time they were introduced. These innovations were disruptive in that they didn't address the next-generation needs of leading customers in existing markets. They had other attributes, of course, that enabled new market applications to emerge—and the disruptive innovations improved so rapidly that they ultimately could address the needs of customers in the mainstream of the market as well” (Christensen and Overdorf, 2000).

Brazilian aircraft manufacturer Embraer (one of the top 4 aircraft manufacturers in the world) is an exception to this rule and has announced plans to build a VLJ that is expected to be one of the largest in the current market. As may be expected of an existing manufacturer, Embraer will adapt an existing aircraft design to create their VLJ rather than use an entirely new design and materials utilized in smaller aircraft. Hence, the Embraer VLJ will be the larger entrant into this growing market. Their new model offers seating for eight plus a private lavatory and is expected to enter service in 2008. Embraer, like Eclipse, believes that attractive, affordable pricing will draw a vast new audience to the VLJ market, including small businesses and individuals who in the past could only dream of owning or flying their own jet. However, current forecasts suggest that it will be more than twice the price of the six passenger Eclipse. Embraer also believes the VLJ will spawn a new air taxi market where travelers pay by the seat, not by the airplane, and will be able to connect from major airline hubs to local communities across the nation that are currently forsaken by commercial airline service.

Other aircraft manufacturers are also entering the market and expect to complete flight tests within the next two years. Cessna, will offer a six seat Mustang, to anchor the bottom end of its nine-model business jet lineup. Customers who appreciate Cessna's long history and established service and technical support network will probably be willing to pay more than asked by the startup manufacturers such as Eclipse or the Adam Aircraft A700 which is expected to seat 8. The Adam Aircraft A700 was designed by Burt Rutan, builder of the SpaceShipOne rocket ship and will be built from carbon-fiber composite material in an effort to save weight. Competition is expected to be intense, as each of these VLJ's will have very similar performance characteristics as shown in Exhibit 3 (Brown, 2005).

In addition to the established aircraft manufacturers this market is also receiving scrutiny from non-commercial operators. A report prepared for the National Business Aviation Association (NBAA) by Honeywell in November 2005 (Daly, 2005) estimates a 10 year demand for 4,500 to 5,500 ultra light jets from traditional and general aviation operators, not including air taxi and fractional demand. The business aviation environment has increased 35% in the number of aircraft delivered. Fractional share ownership sales are up 24% in 2004, but flat in 2005 Q1 and Q2. Shareowner baseline is up 30%. Rapid growth in jet card sales coupled with shareowner flight activity is straining the current fleet capacity. Hiring of pilots for fractional providers increased 143% in 2004 vs. 2003. Netjets is adding 300 new pilots in 2005.

The current forecast assumes the introduction of low priced micro jets starting in 2006, with the market growing to 4,500 by 2016. This is a relatively conservative assumption

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compared to some industry estimates. NASA estimates 20,000 VLJs will be in operation by 2010. If the higher industry estimates are correct, the general aviation active jet fleet and hours flown could be considerably higher than forecast. In a separate report on aircraft manufacturing to meet the demand, Merrill Lynch analysts are estimating 8-10 quarters of continued growth in business jet deliveries, with demand peaking in 2007 or 2008. (Los Angeles Times, 10/29/2005).

AIR TAXI OPERATORS

Ed Iacobucci, founder of DayJet in Daytona, Florida, expects to have close to 300 Eclipse 500 VLJ's operating as air taxis. He expects to keep his airplanes in the air as much as possible, amortizing their purchase price over many customers, and in doing so, bringing down the cost of flying to where non-tycoons can afford it—somewhere in the range of \$1 to \$3 per mile. But if it saves half a day of work and a hotel bill, it might not be all that expensive. Many regional travelers are spending so much time going to airports, sitting in airports, flying to hubs, changing planes, and sitting in more airports that they could almost drive an auto faster to their final destination. In a recent editorial in Forbes magazine the author indicates that a recent trip which consumed 7 hours and 45 minutes using commercial transports could have been completed in 4 hours and 30 minutes in a single engine piston airplane (Karlgaard, 2006). The saving in time would be even greater in a jet-powered aircraft. By going point-to-point when the passenger wants to fly, DayJet plans to replicate that driving experience but with a chauffer and at over 400 mph. (Cringley, 2005).

The Impact of Government Regulation on Air Transport

Establishment of a scheduled air carrier business as Mr. Iacobucci plans could require changes in government regulations in order to allow small aircraft operators to make very frequent trips between cities over the same route on a scheduled basis. Current FAA regulations specify different rules for “scheduled” air carriers versus “on-demand” carriers. “Scheduled operators include passenger operations in which the departure location and time and the arrival location are offered in advance by the operator.” The Department of Transportation (DOT) Part 380 requirements on transport operators restrict scheduled flights per operator on the same route to 4 flights per week. On the other hand, public charter operators who provide services “on-demand” to customers are non-scheduled and negotiate the departure time, departure location and arrival location with customers (faa.gov/library/manuals/examiners_inspectors/8400/media/volume2/2_001.pdf-).

Efforts are underway by competitors to change such regulations. Last year, Executive Jet Management (EJM), a NetJets company, filed an application with the government that would allow the Cincinnati-based charter and aircraft management specialist to provide scheduled air service connecting the Chicago, Los Angeles and New York metropolitan areas under Part 380 of the DOT regulations. EJM estimates there will be approximately 30 round-trip flights a week between Westchester County Airport in White Plains, New

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York and Chicago Midway Airport, and approximately 10 round-trip flights a week between Westchester County Airport and a yet-to-be-identified airport in the Los Angeles metropolitan area. While the current DOT regulations might not affect EJM's initial plans to operate aircraft carrying fewer than 10 seats, it might place a limit on future expansion. (see tomsvrcekindigo.ppt).

Jets International: Sustaining Market Presence

Since it's founding in 1999, Jets International has positioned itself as a broker/aggregator of services between the customer and the aircraft owner. INC. magazine in its nomination of the firm as one of the fastest growing businesses says:

CharterAuction (now known as Jets International) enables people who own private planes to bid on charter flight contracts. Founder Nathan McKelvey has helped make an inefficient, word-of-mouth market easier to navigate. Plane owners can easily pursue business outside their local market, and customers can shop for flights based on price and level of service (INC. Magazine, November 2005).

McKelvey's genius was positioning the firm in the market so as to satisfy the needs of both of his customers: (1) travelers and (2) aircraft owners. Aircraft owners seek to keep their planes active in order to increase the return on their investment. Travelers appreciate quality, safety, and consistency at a reasonable cost when they travel. Customers emphasis on these critical success factors will vary within the industry. Private aviation programs differ in whether they are asset-based or non-asset based. The asset based category includes any program where the customer is forced to purchase all or a piece of an asset. Exhibit 5 compares market segments against customer satisfaction dimensions to identify a specific customer market. Asset-based operators provide their own equipment and employees, while non-asset based operators such as Jets International do not. The asset-based category tends to increase the cost, but also increases the consistency of the service and flight experience. On the other hand, the traditional charter programs where customers call various operators themselves and book planes directly offers the lowest cost and consistency. Jets International and the card programs offer concierge, flight tracking and safety check services to increase the quality of the charter programs.

It is the level of service which sets Jets International apart from the rest. The firm has a large number of existing clients. Jets International is currently one of the largest 3 aircraft brokers in the country. Their business model includes low overhead with no ownership of planes, pilot hires, or training. Their main competency is using technology to track, locate, book, and service clients at a lower cost than any competitor.

Nathan McKelvey contemplated his next move. How can he differentiate his service from the other providers in this market? How will he get to a size where he can aggregate and fill enough trip requests to capture the lions share of this market? Should he seek an exclusive partnership or merger with aircraft providers in the domestic market who have

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a large number of planes? Or should he stay focused on his technology and cost competitiveness?

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There are a number of light jet and very light jet (LJ and VLJ) manufacturers whose company profiles are available in Hoover's, Business & Company Resource Center, and OneSource, but these links also contain some very good information:

UBS Warburg CEO Roundtable with Embraer

(http://www.embraer.com.br/institucional/download/UBSWarburgAbril03_.PDF)

Rolls-Royce ([http://www.rolls-](http://www.rolls-royce.com/civil_aerospace/overview/market/outlook/downloads/outlook2003.pdf)

[royce.com/civil_aerospace/overview/market/outlook/downloads/outlook2003.pdf](http://www.rolls-royce.com/civil_aerospace/overview/market/outlook/downloads/outlook2003.pdf))

NetJet (<http://www.columbustechnology.org/img/presentations/1>) PPT presentation

Air Limos/Taxis/ MicroJets:

<https://www.linearair.com/072505AviationWeek.pdf>

Robb Report commentary on luxury business jets (<http://www.robbreport.com/Articles/Wings-Water/Business-Jets/Index.asp>)

Private Jet Cards:

<http://jetchartersmagazine.com/story/print.cfm?storyid=45654>

Government statistics and reports:

FAA Aerospace Forecast, 2005-2016 (Regionals/Commuters: Chapter 4: pg. 120-147)

http://www.faa.gov/data_statistics/aviation/aerospace_forecasts/2005-2016/media/Forecast05.pdf

Regional Jet Service Yet to Reach Many Small Communities (GAO Report, 2001 available through HOMER)

<http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=gao&docid=f:d01344.pdf>

This is an MSNBC news story on Vern Raburn from May 5, 2004:

<http://www.msnbc.msn.com/id/4864129/>

DayJet; this is a link to a PBS program on,

<http://www.pbs.org/cringely/pulpit/pulpit20050428.html>

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Exhibit 1: Forecasted Demand for Ultra Light Jet Aircraft. Source: Daly, 2005).

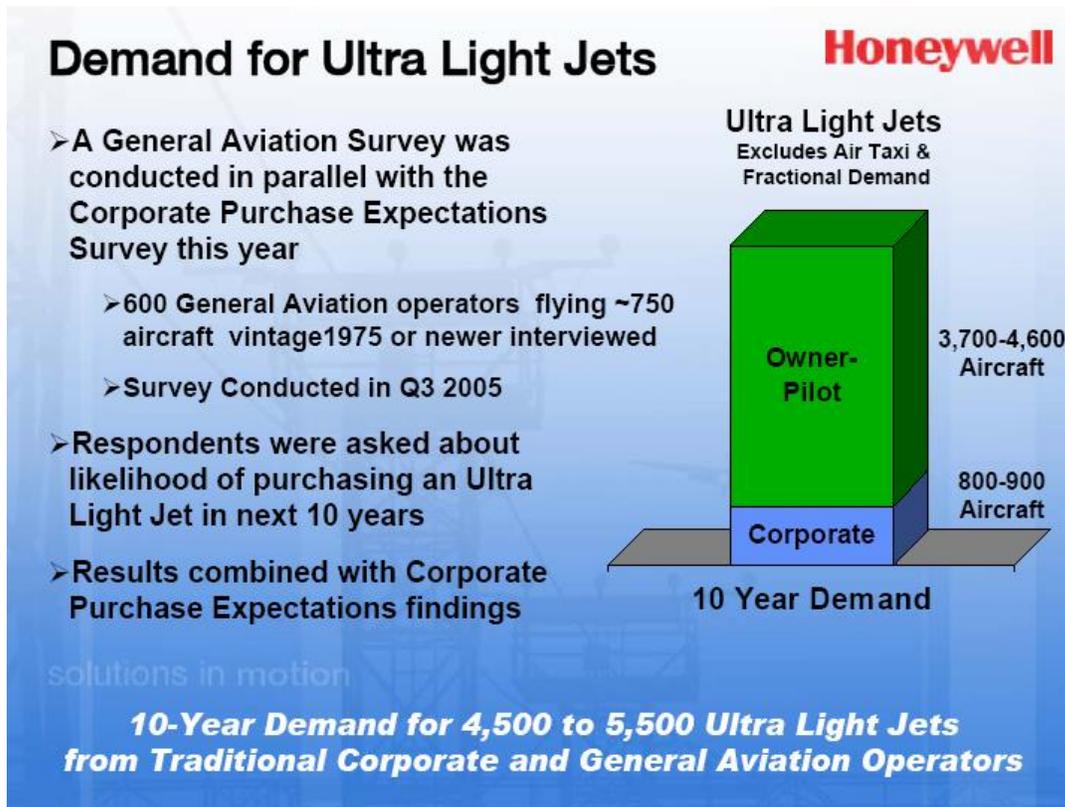


Exhibit 2: Aviation Demand Forecasts and Assumptions – Regional /Commuters

TABLE I-5
 AVIATION DEMAND FORECASTS AND ASSUMPTIONS
 REGIONALS/COMMUTERS
 FISCAL YEARS 2005-2016

AVIATION ACTIVITY	HISTORICAL			FORECAST			PERCENT/POINT* AVERAGE ANNUAL GROWTH					
	2000	2003	2004	2005	2006	2016	00-04	03-04	04-05	05-06	04-16	
REGIONALS/COMMUTERS												
<u>Enplanements (Millions)</u>												
Domestic	79.7	105.1	125.0	143.8	158.3	237.3	11.9	19.0	15.1	10.0	5.5	
International	3.1	3.5	3.9	5.0	5.2	8.2	5.9	11.0	27.2	4.4	6.3	
System	82.8	108.6	128.9	148.9	163.5	245.5	11.7	16.7	15.4	9.9	5.5	
<u>RPMs (Billions)</u>												
Domestic	22.8	39.3	51.6	63.0	70.9	117.7	22.6	31.2	22.1	12.5	7.1	
International	0.8	1.1	1.5	2.1	2.2	3.7	16.2	33.8	39.7	5.4	7.9	
System	23.6	40.4	53.1	65.1	73.0	121.4	22.4	31.2	22.6	12.3	7.1	
<u>ASMs (Billions)</u>												
Domestic	36.3	60.6	75.8	91.2	102.3	165.1	18.6	25.1	20.2	12.2	6.7	
International	1.3	1.9	2.3	3.1	3.2	5.1	14.3	20.9	34.7	4.6	6.9	
System	39.7	62.5	78.1	94.3	105.5	170.2	18.5	25.0	20.7	11.9	6.7	
<u>Fleet (As of December 31) 1/</u>												
Turboprops/Pistons	1,704	1,216	1,182	1,156	1,130	1,001	(8.7)	(2.8)	(2.2)	(2.2)	(1.4)	
Jets	570	1,349	1,630	1,857	2,069	2,960	30.0	20.8	13.9	11.4	5.1	
Total	2,274	2,565	2,812	3,013	3,199	3,961	5.5	9.6	7.1	6.2	2.9	
<u>Block to Block Hours (000) 1/</u>												
Jets	5,359	6,087	6,677	7,181	7,642	10,246	5.7	9.7	7.5	6.4	3.6	
<u>Average Aircraft Size</u> (Seats per Aircraft Mile)												
Domestic	38.4	44.1	46.3	48.1	49.2	54.9	2.0	2.2	1.8	1.1	0.7	
International	41.8	46.4	47.5	51.2	51.7	56.7	1.4	1.1	3.7	0.5	0.8	
System	38.5	44.2	46.3	48.2	49.3	54.9	2.0	2.1	1.9	1.1	0.7	
<u>Average Trip Length (Miles)</u>												
Domestic	286.5	374.4	412.7	437.9	447.7	496.0	31.6	38.4	25.2	9.7	6.9	
International	260.0	312.2	376.4	413.3	417.3	451.3	29.1	64.2	36.9	4.0	6.2	
System	285.5	372.3	411.6	437.1	446.7	494.5	31.5	39.3	25.5	9.6	6.9	
<u>Average Load Factor (Percent)</u>												
Domestic	59.5	64.9	68.0	69.1	69.3	71.3	2.1	3.1	1.1	0.2	0.3	
International	60.8	58.6	64.9	67.3	67.8	72.8	1.0	6.3	2.4	0.5	0.7	
System	59.6	64.7	67.9	69.0	69.2	71.3	2.1	3.2	1.1	0.2	0.3	

Source: Regionals/Commuters; 2000-2004, Forms 298-C and 41, U.S. Department of Transportation; 2005-2016, FAA Forecasts
 1/ Historical and forecast data on a calendar year basis
 * Enplanements, RPMs, Fleet, and Hours Flown: annual percent change; all other series: annual absolute change.

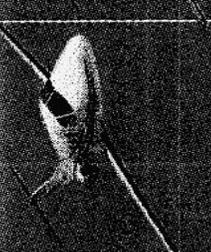
Exhibit 3: Aviation Demand Forecasts and Assumptions - General Aviation

TABLE I-7
**AVIATION DEMAND FORECASTS AND ASSUMPTIONS
 GENERAL AVIATION
 CALENDAR YEARS 2005-2016**

AVIATION ACTIVITY	HISTORICAL				FORECAST			PERCENT AVERAGE ANNUAL GROWTH				
	2000	2003	2004	2005	2006	2016	00-04	03-04	04-05	05-06	04-16	
GENERAL AVIATION												
Total Active Fleet (000)	217.5	210.6	211.3	219.8	223.1	240.1	(0.7)	0.3	4.0	1.5	1.1	
Total less Sport Aircraft (000)	217.5	210.6	211.3	212.1	212.1	224.7	(0.7)	0.3	0.4	0.5	0.5	
Pistons	170.5	161.6	161.7	161.8	162.0	165.2	(1.3)	0.0	0.1	0.1	0.2	
Single Engine	149.4	143.9	144.0	144.2	144.4	148.0	(0.9)	0.1	0.1	0.2	0.2	
Multi-Engine	21.1	17.7	17.7	17.6	17.6	17.2	(4.3)	(0.1)	(0.3)	(0.2)	(0.2)	
Turbine	12.8	15.4	15.7	16.2	16.7	24.3	5.4	2.4	2.7	3.4	3.7	
Turboprops	5.8	7.2	7.3	7.4	7.5	8.4	6.1	1.4	1.4	1.4	1.2	
Turbojets	7.0	8.2	8.4	8.8	9.2	15.9	4.7	3.3	3.9	5.1	5.4	
Rotorcraft	7.2	6.8	6.9	7.0	7.1	7.9	(0.9)	1.5	1.4	1.4	1.2	
Experimental	20.4	20.6	20.8	21.0	21.2	21.4	0.5	1.0	1.0	0.9	0.2	
Sport Aircraft	NA	NA	NA	7.7	10.0	15.4	NA	NA	NA	29.9	NA	
Other	6.7	6.2	6.2	6.2	6.1	5.8	(2.0)	(0.5)	(0.5)	(0.5)	(0.5)	
Total Hours Flown (Mil)	30.0	27.0	27.3	27.9	28.3	32.8	(2.3)	0.8	2.4	1.5	1.6	
Total less Sport Aircraft (Mil)	30.0	27.0	27.3	27.5	27.9	32.3	(2.3)	0.8	0.9	1.4	1.4	
Pistons	21.5	18.8	18.8	18.9	18.9	19.5	(3.3)	0.2	0.2	0.3	0.3	
Single Engine	18.1	16.5	16.5	16.6	16.6	17.3	(2.2)	0.2	0.3	0.3	0.4	
Multi-Engine	3.4	2.3	2.3	2.3	2.3	2.2	(9.3)	(0.3)	(0.4)	(0.2)	(0.3)	
Turbine	4.6	4.5	4.6	4.8	5.0	8.3	0.0	3.2	3.7	4.6	5.0	
Turboprops	2.0	1.8	1.8	1.9	1.9	2.2	(2.2)	1.8	1.6	1.6	1.4	
Turbojets	2.6	2.7	2.8	3.0	3.2	6.2	1.6	4.1	5.0	6.4	6.7	
Rotorcraft	2.2	2.2	2.2	2.3	2.3	2.6	0.4	1.5	1.8	1.3	1.3	
Experimental	1.3	1.3	1.3	1.3	1.3	1.4	0.4	0.3	1.2	1.1	0.4	
Sport Aircraft	NA	NA	NA	0.4	0.5	0.8	NA	NA	NA	29.9	NA	
Other	0.4	0.3	0.3	0.3	0.3	0.3	(7.0)	(1.8)	0.0	0.0	(0.3)	
Total Aircraft Utilization (Hrs)	137.7	128.4	129.0	126.9	127.0	136.7	(1.6)	0.4	(1.6)	0.0	0.5	
Total less Sport Aircraft (Hrs)	137.7	128.4	129.0	129.7	130.9	143.8	(1.6)	0.4	0.5	0.9	0.9	
Pistons	126.0	116.2	116.4	116.5	116.7	118.0	(2.0)	0.1	0.1	0.1	0.1	
Turbine	363.1	292.8	295.1	297.8	301.2	342.2	(5.1)	0.8	0.9	1.1	1.2	
Rotorcraft	306.4	322.8	322.9	324.3	324.2	328.5	1.3	0.0	0.4	(0.0)	0.1	
Total Active Pilots (000)	631.6	625.0	618.6	635.0	647.6	750.3	(0.5)	(1.0)	(1.0)	2.7	2.0	
Total less Sport Pilots (000)	631.6	625.0	618.6	627.5	637.7	738.4	(0.5)	(1.0)	1.4	1.6	1.5	
Instrument Rated Pilots (000)	315.1	315.4	313.5	318.5	324.0	379.2	(0.1)	(0.6)	1.6	1.7	1.6	

Source: Fleet and Hours: 2000-2003, FAA General Aviation and Air Taxi Activity Survey; 2004-2016, FAA Forecasts
 Pilots: 1995-2004, FAA Aeronautical Center; 2005-2016, FAA Forecasts

Exhibit 4: Comparison Chart of Four Very Light Jets (VLJs) (Brown, Stuart F., Fortune, December 26, 2005).

Cheat Sheet Based on company claims, here's how the jets stack up.		 ADAM AIRCRAFT A700	 CESSNA CITATION MUSTANG	 ECLIPSE 500	 EMBRAER PHENOM 100
Price	\$2.1 million	\$2.4 million	\$1.4 million	\$2.75 million	
Passengers*	8	6	6	8	
Cruising speed*	391 mph	391 mph	430 mph	437 mph	
Flying range	1,265 miles	1,265 miles	1,472 miles	1,334 miles	
Notable fact	Far-out design	Most trusted	Cheapest jet ever	Roomiest cabin	

*Maximum.

Jets International--Jets.com: A New Way to Fly

Exhibit 5: Comparison of Market Segments and Customer Satisfaction Dimensions

