ANDERSEN

Aviation Industry

Business aviation in today's economy

A guide to the analysis of business aircraft use, benefits and effects on shareholder value

The **White Paper** series Number 9 Summer 2001

The UBV Methodology

Utilization Strategies

Business Aircraft **Utilization**

34 Utilization Strategies

Transportation of Employees and Executives
- Key Employee Travel
  - Facilitate Strategic Opportunities
  - Sell and Market
  - Provide Customer Service
  - Extend Management Control
  - Investor Relations
  - Public Relations
  - Media Events
  - Government Relations and Lobbying
  - Litigation
- Corporate Shuttle
- Assembling / Deploying Teams
  - Production, Engineering and Operations Teams
  - Sales and Marketing Team
  - Management, HR, Financial Teams
  - Customer Service
- Airline Connections
- Emergency Response for Endangered or Injured Employees
- Personal Travel

Transportation of Customers
- Bring Customers to You
- Creation of a Sales Environment En Route
- Carriage of Elected Officials
- Transportation of the Press
- Transportation of Financial Analysts
- Transportation of Interest Groups

Transportation of Suppliers
- Bring Suppliers to You

Transportation of Cargo Parts, and Mail
- Courier Inter-Office Mail
- Direct Ship Packages to Remote Locations
- Shipment of Emergency Supplies or Parts to Customers
- Rapid Delivery of External Cargo or Mail

Transportation for Charity
- Transport Patients for Medical Treatment
- Emergency Evacuation
- Transport Personnel, Medicine and Supplies to Emergency Site

Direct Applications
- Aerial Surveying
- Charter Aircraft to Third Parties

Yields **Benefits** Which Yield **Shareholder Value Drivers**

39 Benefits

Increase Employee Productivity
- Save Employee Time
- Leverage Key Employees
- Increase Productivity en Route
- Access to Highly Efficient Airports
- Improve Schedule Flexibility/Reliability
  - Schedule Control
- Facilitate Critical Meetings
- Respond Rapidly
- Reduced Loss of Intellectual Capital
- Improve Employee Morale and Motivation
- Signal Management Support
- Engender Employee Pride
- Lessen Travel-induced Stress
- Reduce Aversion to Travel
- Enhance Corporate Image in the Community

Expand Markets
- Accelerate Transaction Rates and Transaction Value
- Improve Access to Markets, Thereby Increasing Market Share
- Improve Customer Access to Sales Opportunities
- Improve Customer Relationships

Secure Competitive Advantage
- Keep Up With / Get Ahead of Competitors
- Discourage the Competition

Induce Operational Efficiency
- Improve Business Process Efficiencies
- Extend Management Control and Operations Oversight
- Accelerate Corporate Knowledge Integration and Knowledge Sharing

Offset Company Expenses
- Reduce Commercial Airfare Expense
- Reduce Travel and Entertainment Expenses
- Expand Commercial Air Service Opportunities
- Reduce Shipping and Mail Expense
- Decrease Employee Replacement Costs
- Reduce Turnover and Retain Personnel
- Reduce Staffing Levels
- Offset Costs Through Charter Revenue
- Secure Maximum Return on Capital Investment (Arbitrage)
- Reduce Tax Liability

Improve Risk Management
- Improve Industrial Security
- Reduced/Eliminate Uncontrolled Public Exposure
- Secure Control Over Personal Safety of Passengers
- Protect Intellectual Property
- Control Courier Documents, Packages, etc

5 Shareholder Value Drivers

Revenue Growth — Includes critical performance components such as time-to-market and new products or services that help the company grow its revenues faster than its competitors, or capture more market share at its competition's expense.

Profit Margin Growth — Focuses on the relationship between costs and revenues. Cost controls play an important role in the realization of profit growth.

Asset Efficiency — A measurement of how well a company is able to utilize its assets and capital investment for the creation of profits and reduction of costs.

Employee Satisfaction — Evidenced by low turnover rates, and generally satisfied and productive employees.

Customer Satisfaction — Manifests when companies are able to increase the volume of business they do with existing customers based upon mutual satisfaction, relationship building and trust.

How does the analysis guide work?

The following pages present guidance on how to select appropriate aircraft utilization strategies, relate those strategies to benefits and quantify their impact on a company. In order to get maximum value from this document we recommend the following steps, which are covered in greater detail in the Appendix:

1) Read this document in its entirety.
2) Document airline and on-demand air transportation activity for your company for the previous 12 months.
3) With knowledge of that activity, and in the context of the company's strategic goals and objectives, conduct a survey of employees to determine how business aircraft are or could be used, estimating annual flight hour demand, trip range and passenger load requirements, etc. (See the Appendix for additional criteria).
4) Using these survey results, prioritize your company's business aircraft utilization strategies.
5) Based upon these priorities, complete a travel pattern analysis to help determine which aircraft will best complete the mission.
6) Review all benefits and select those applicable to your use.
7) Quantify the applicable benefits using the guidance provided in this study.
8) Assess how those benefits will affect shareholder value.

The information in this white paper is correct to the best of our knowledge and belief at the time of printing. We recommend seeking advice on your specific needs before any action is taken.

Contents

Executive Summary

Andersen was asked to identify the range of business aircraft utilization strategies pursued by corporate America, and then to assess whether each of these uses benefited a company in the form of greater shareholder value. To accomplish this task, Andersen's research team interviewed many S&P 500 companies that use business aircraft, and made an extensive review[1] of company financial performance data from 1990-2000. We developed an analytical tool useful for understanding and categorizing the complex relationships between aircraft utilization, benefits and value creation. The analytical tool has been summarized in this business aircraft analysis guide.

We thought that it could be possible to draw a connection between business aircraft use and some important drivers that "set the stage" for long term shareholder value creation. Stock prices are affected by a variety of factors, many of which are external and beyond the control of individual companies. However, we found that using business aircraft can stimulate five key shareholder value drivers — revenue growth, profit growth, asset efficiency, employee satisfaction and customer satisfaction.

The analytical framework, where ***U****tilization* yields ***B****enefits* that yield *Shareholder* ***V****alue* (the five drivers of value creation), forms our basic methodology to organize the analysis of this unique business practice. This is a new and comprehensive approach, graphically illustrated inside the front cover. For senior managers, understanding fully the "UBV" methodology as it applies to their company can effectively illustrate how the use of aircraft can improve business performance.

Companies today should formally and systematically analyze business aviation on a regular basis to determine the conditions under which the application of this form of transportation can have the greatest contribution to shareholder value. This analysis guide is intended to help catalyze and facilitate such an analysis, and can help any company, large or small, public or private, to objectively assess business aircraft use.

[1] Dyment, Michael J., and Bosco, Rodney, *Business Aviation in Today's Economy: A Shareholder Value Perspective;* White Paper Series Spring 2001, Number 4; Andersen LLP.

J. Michael Stepp, Jr.
Senior Consultant
Aviation Industry practice
Washington, DC

David M. Behrmann
Senior Manager
Aviation Industry practice
Washington, DC

Introduction

In today's economy, can business aircraft contribute to better company operating or financial performance and, therefore, to higher shareholder value? The National Business Aviation Association (NBAA) and the General Aviation Manufacturers Association (GAMA) asked Andersen to investigate this question.[2] The answer is most precise and useful when applied to a specific company. To enable executives to conduct accurate and objective assessments of business aircraft use in today's environment, we created a comprehensive but scalable methodology that includes new diagnostic tools. These tools, developed from objective financial performance research of S&P 500 public companies and in-depth interviews with the CFOs and other executives of companies using business aircraft, are included in this report.

We have learned that business aircraft can be remarkable aids to business under certain circumstances, including during economic downturns. The methodologies presented here should enable you to determine whether using business aircraft can help your company create long term shareholder value. If you already use business aircraft, these methodologies can help you optimize the value of your fleet through the understanding of proven best practices in business aviation.

> Today's economy has introduced an altered playbook — with fresh rules that challenge our thinking, business practices and even values. For example, the comfortable late 20th Century world of commerce and trade has been evolving at the speed of light. Instant marketplaces have been created through electronic globalization, and complex, highly efficient supply chains now compete for market recognition. Business alliances are assembled and then reassembled with the regularity of a Lego toy, driving management's need for greater mobility, organizational agility, knowledge integration and transaction speed. Accelerated transaction value is evident when examining the business models of companies such as General Electric, Pfizer, Cisco Systems and Time Warner. Is it really a surprise that personal relationships are becoming more, not less, important conditions of business success?
>
> — *Excerpt from* Business Aviation in Today's Economy: A Shareholder Value Perspective*, Andersen, Spring 2001*

What do aircraft have to do with shareholder value?

For the Standard & Poors (S&P) 500 company peer groups Andersen studied earlier this year, aircraft operators earned 146 percent more in cumulative returns than non-operators between 1992 to and 1999 (609 percent vs. 463 percent). A closer examination

[2] Ibid

of 32 S&P 500 companies commencing business aircraft operations after 1995's brief economic slowdown revealed that, on a return to shareholder basis, new business aircraft operators returned 343 percent to their shareholders between 1995 and 1999, versus 177 percent for non-operators. Moreover, the new operator group, which lagged behind non-operator return on equity (ROE) growth prior to 1995, surpassed non-operators thereafter, increasing ROE by 3.6 percent overall.

Mobility may have a lot to do with shareholder value creation. But each company — its competitive position, market reach, resources and talent — is different. To establish whether business aviation can help you, some careful research, thought and analysis is needed, all specific to your company.

What is the value of business aviation to your organization?

When we began this study, we discovered that very few executives fully understood — based upon substantial metrics or in-depth, data-driven analysis — how business aircraft generate value for their organization. Given the many potential uses, costs and benefits of business aviation, a data-driven analysis is necessary and complex. It must evaluate subtle benefits that can be difficult to describe, let alone quantify.

The decision to use business aviation has generally been intuitive — a common-sense feeling by the CEO that the choice of greater mobility would be good for business because of strategic competitive urgency, accelerated transaction value, improved productivity, practical realities, or some other (typically not quantified) reason.

One underlying motive for business aircraft use is recognition of the value of face-to-face communication. Although business travel undulates with the economy at some companies, many longstanding business aircraft operators have concluded that the amount and quality of information that can be gathered or delivered face-to-face exceeds that of any other communication method. While phone, fax, video conferencing or email obviously are ideal under many circumstances, some critical information sources — such as body language, the strength of a handshake, sequential or lengthy meetings or events, seeing first-hand the whole environment — make "being there" imperative. From experience, senior managers — for whom personal productivity is under extreme and endless pressure — are acutely aware of these advantages, and their personal presence is often essential. To secure this communication advantage, a growing number of companies rely on the travel efficiencies that are unique to business aviation. But this is only the the tip of the iceberg when it comes to benefits and value creation.

This document, the second part of Andersen's study of business aviation, contains the diagnostic tools to perform a shareholder value assessment of business aircraft use. The Andersen methodology calls for detailed analysis and careful consideration of aircraft uses, benefits, and the resultant drivers of shareholder value. This is a complex business issue, requiring analytical detail and effort. Given the substantial capital investment typically required for business aircraft ownership, we believe that business aircraft use should be subjected to the same asset portfolio review and fiscal scrutiny as any other major fixed asset or capital investment. Yet, for many analysts, business aircraft use may be an unfamiliar and frustrating topic. The information and diagnostic tools presented herein will help to strip away the mystery, confusion and apprehension surrounding this topic.

Who has recognized the value of business aviation?

Aircraft have been regularly flown for business purposes in the United States since the 1920s. As of mid-2001, more than 9,500 companies in the United States operated in excess of 14,500 turbine-powered fixed-wing aircraft.[3] Additionally, more than 3,000 U.S. operators fly more than 7,200 turbine-powered helicopters. Tens of thousands of additional companies and individuals operate piston-powered airplanes and helicopters for business purposes. Among the S&P 500 companies, approximately three-quarters own aircraft. It is common to find companies that have operated fleets of aircraft for more than half of the last century, and those that do not own aircraft typically charter them. In the last decade, the number of corporate flight departments in the U.S. increased by more than 30 percent. During the same period, the number of fixed-wing aircraft[4] in business service increased by 44 percent.

Andersen has observed that many flight departments have become institutionalized within their companies. For example, to secure strategic advantage flight operations within those companies are closely integrated with management decision making. Furthermore, the sophistication of some flight department operating practices can rival major commercial air carriers from the standpoint of safety, training, equipment and maintenance, including ISO 9000 quality programs. For many of these flight operations, flying globally is commonplace.

Reflecting widespread use of business aircraft, corporate flight departments often transport employees of nearly all ranks. Increasingly, a greater number of employees are able to authorize use of company aircraft.

How can you gain access to business aviation?

Several business aircraft resourcing options are available. Among them are charter, “traditional” full aircraft ownership, joint ownership, co-ownership, and fractional ownership — an ownership scheme roughly akin to a time share where owners purchase a portion of an aircraft crewed and maintained by a management company common to all owners. Each of these options has advantages and disadvantages.[5]

In recent years, fractional ownership has become increasingly popular. In 1990, only 17 business aircraft in the U.S. were fractionally owned. Today that number is more than 650, with hundreds more expected to be operating in the next few years. Recently announcing the first airline-operated fractional ownership and business aircraft charter service, United Airlines extolled the virtues of business aviation, saying, “The business aviation industry has seen dramatic growth over the last 10 years, reflecting the needs of the market and particularly the needs of our corporate customers.” United plans to operate at least 200 fractionally owned business aircraft by 2006,[6] reflecting a capital commitment of several billion dollars. Other airlines may follow suit.

To capitalize on the efficiencies of business aircraft travel, new air service concepts also are emerging. Indigo (New World Air Corporation) of Chicago Illinois, an American Express company, is one such example. Operating a fleet of corporate aircraft between Chicago/Midway, Atlanta, and New York/Teterboro, Indigo hopes to capture the time sensitive business traveler who wants to avoid the major hub airports and demands a level of service many airlines cannot provide.

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[3] Source: Aviation Data Service, Wichita, Kansas

[4] Fixed-wing turbine-powered aircraft operated in the U.S., Source: Department of Transportation, 2001

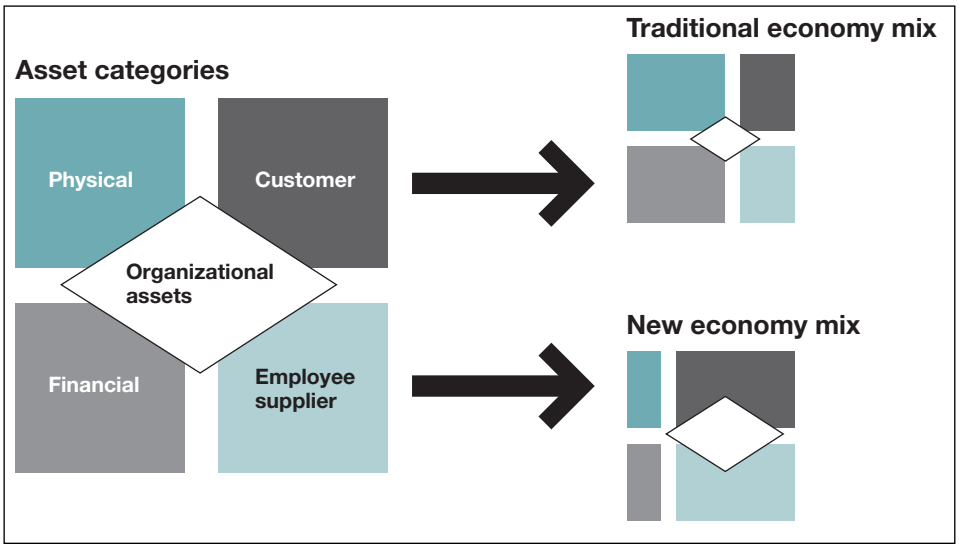
[5] See http://www.nbaa.org/resourcing for more information.

[6] UAL Corporation Press Releases, May 17 and May 24, 2001

Many S&P 500 executives with whom we spoke were aware of these trends. However, corporate silence about business aircraft use — the general rule in business today — apparently stems from three concerns: 1) Many companies using business aircraft do so for competitive advantage. Not surprisingly, they do not seek publicity for this practice. 2) Others assume that the business press, shareholders or the public at large perceive corporate aircraft as costly or unnecessary and so avoid unneeded public or shareholder relations exposure. 3) Lacking a definitive analysis to support the use of business aircraft and the resulting value to shareholders, companies are also unlikely to publicize their use of business aircraft. All of these reasons, however, are dated by today's economy, which is transforming the way companies value their assets.

In today's economy, increased productivity and the effective use of time, as well as a company's intangible assets — such as relationships, knowledge, people, brands, and systems — are taking center stage and driving shareholder value. Successful companies are utilizing and developing both old and new economy assets. In fact, it is the combination and interaction of all of a company's assets — more than any other factor — that will determine its economic success. The diagram below highlights the fact that assets have a very different role to play in today's knowledge-based economy. The traditional model gives an incomplete picture of value creation for most companies. The new model provides greater insight.

Figure 1



In this environment, the value of a business aircraft does not depend solely on their net benefits, but also on whether they enable a company to improve the efficiency or effectiveness of its intangible assets. Such assets include its people, their talent or specialist knowledge and even relationships. How people use time influences business success. Aircraft are leveraged by increasing employee productivity, accelerating speed to market, improving customer responsiveness, building employee satisfaction and retention, driving supply chain collaborations, knowledge sharing or other improvements. Companies winning in today's economy are mobile, able to move goods, people, information, and capital around the globe quickly and efficiently. Business aircraft (like computers and telephones) become "value enablers," tools that enhance an organization's ability to transfer knowledge quickly and easily.

This discussion would be incomplete without acknowledgement of the central and dominant role that scheduled commercial airline service plays in the business community. The vast majority of air travelers fly aboard the airlines. The safety, direct-cost effectiveness, and sheer volume of service provided by the airlines — particularly between airline hubs, for individual travelers, for infrequent flyers or those whose employers do not place a significant value on their time — is preferred in many situations. For nearly all companies, it will be a hybrid of commercial air service and use of business aircraft that best answers their travel needs.

Business Aircraft and Value:

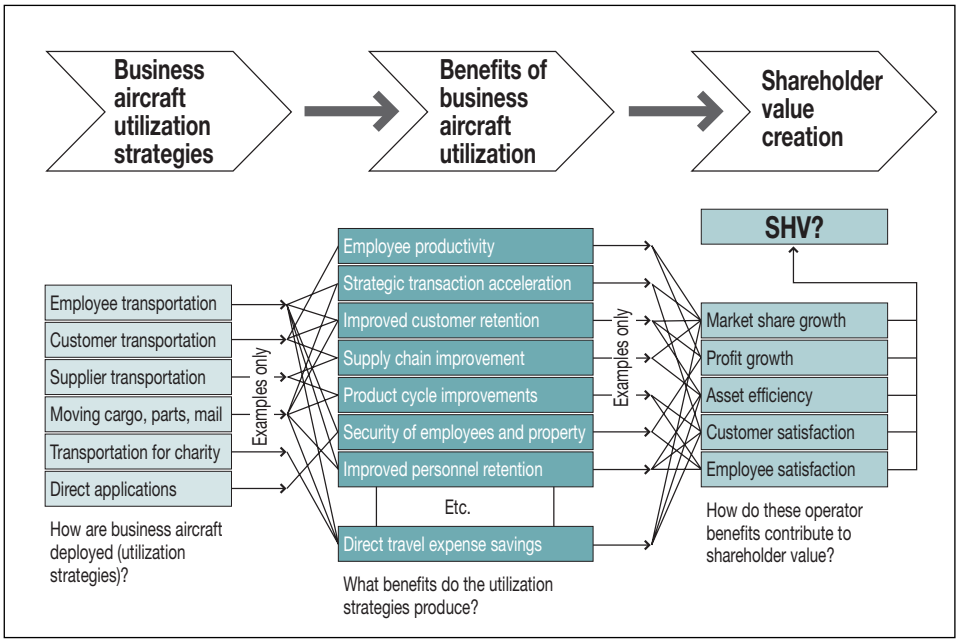
An Introduction to the UBV Methodology

So how does the use of business aircraft affect the practice and outcome of business? That ***U****tilization* yields ***B****enefits* which yield ***S****hareholder* ***V****alue* forms the basic methodology for our analysis. This "UBV" methodology can link the use of business aircraft to the fundamental drivers of a company's long-term value creation.

These relationships are not predisposed to be positive. Rather, they are dependent upon the skill of company management in taking advantage of a unique asset — the business aircraft — the use of which is almost always outside the company's core competencies. **The simple caveat, then, is that aircraft use or ownership alone guarantees nothing and like any other asset, misuse can be costly.** The challenge for any company is to identify all of the potential uses and benefits of these assets and to operate them in ways that will produce the greatest gain. Only then can management enjoy the effects of business aircraft use on long-term value creation.

Based upon interviews with many management personnel, Andersen has identified 34 business aircraft utilization strategies, 39 potential benefits from those uses, and 5 shareholder value drivers that are directly influenced by those benefits. Many are subtle. Some are clever and challenging to quantify using conventional metrics. Taken as a whole, the UBV methodology reveals and explains in objective terms the intuitive judgment many senior managers have made for decades — that business aircraft used wisely can have a marked, positive effect on company performance. The challenge is to understand how these uses and benefits can work together for specific companies in specific circumstances to provide the highest possible return to shareholders.

Figure 2 — UBV Methodology Framework



Based on **Value Dynamics**,[7] our approach to the assessment of business aircraft value rests on a UBV analysis (Figure 2). The first step is to consider the menu of business aircraft utilization strategies. Then, the potential benefits are determined and quantified wherever possible. The final step is to assess how these benefits could affect the underlying drivers of shareholder value. By conducting a UBV analysis within the context of each organization's unique financial and operating environment, companies should be better able to assess the effects of business aircraft on shareholder value.

In general, if the quantifiable benefits are greater than the quantifiable costs, business aircraft utilization should be a "must" for the company. Even beyond that simple test, however, our final effort is to trace the relationship between the benefits of aircraft use and shareholder value. We expect to accomplish this through identification of a positive impact on shareholder value drivers. Our premise was that business aircraft may make a substantial difference in how a company performs its mission, in many cases generating significant gains in the drivers of shareholder value. Increased mobility should be at the core of these gains — satisfying management's need for greater organizational agility, knowledge integration, productivity and transaction speed.

What is Shareholder Value?

When we refer to *Shareholder Value*, we do not mean a company's "stock price." Shareholder value is generated at a more fundamental level — one not subject to the short-term vacillation of the marketplace. We define shareholder value as "the business fundamentals and driving characteristics that make good companies great." These characteristics include five fundamental drivers which, when stimulated, greatly strengthen the company's position within its industry and in relation to its competitors.

Drivers of Shareholder Value

The first driver, *Revenue Growth*, includes critical performance components such as time-to-market and new products or services that help the company grow its revenues faster than its competitors, or capture more market share at its competition's expense. The second driver, *Profit Margin Growth*, focuses on the relationship between costs and revenues. Cost controls play an important role in the realization of profit growth. Third is *Asset Efficiency*. This is a measurement of how well a company is able to utilize its assets and capital investment for the creation of profits and reduction of costs. Fourth, *Employee Satisfaction* is evidenced by low turnover rates, and generally satisfied and productive employees. Finally, *Customer Satisfaction* manifests when companies are able to increase the volume of business they do with existing customers based upon mutual satisfaction, relationship building and trust. The benefits that will be discussed in detail in the following sections help companies achieve improvements in each of these areas.

Andersen has detected a shift in the way successful companies have enhanced their shareholder value through efficient use of their intangible assets. The shift away from tangible assets and towards intangible assets like relationships, knowledge, people, brands, and systems, has become a hallmark of today's economy, and an effective way to stimulate the five drivers of shareholder value. In order to understand why and how companies are succeeding in today's economy, Andersen has developed the concept of **Value Dynamics**.

By using business aircraft, a company is directly and indirectly changing the mix of its asset portfolio. While business aircraft are usually defined as physical assets, their use induces benefits in other asset categories (including several intangible categories, such as customer and employee relationships). The magnitude of the effect on these assets will depend largely on a company's utilization strategies, and the benefits that it incurs because of its uses.

[7] Samek, Steve et. al., Arthur Andersen, Cracking the Value Code — How Successful Businesses are Creating Wealth in the New Economy, Harper Business Press, New York, 2000.

Understanding the UBV Methodology —

U: Utilization Strategies

For the purposes of this study, an appropriate utilization strategy involves only the physical movement of people or cargo. Although this is a limiting definition, we believe that other tangential uses for transportation may, for the purpose of this analysis, be appropriately categorized as benefits of ownership or use, rather than as a use alone.

Of course, utilization strategies are most often about the simple need to get people — employees, customers and executives — or cargo from point A to point B efficiently. The following list of business aircraft utilization strategies was developed from our interviews with business aircraft operators.

A high-level aggregation of these utilization strategies — which answered the question: "How do you use business aircraft?" — includes six categories:

1: Transportation of employees and executives

2: Transportation of customers

3: Transportation of suppliers

4: Transportation of cargo, parts and mail

5: Transportation for charity

6: Direct applications

Detailed descriptions of the utilization strategies are found below:

Category 1: Transportation of Employees and Executives:

The most common use[8] of business aircraft is for transportation of company employees. Corporations use their aircraft in this way in order to maximize the productivity and efficiency of human resources, to optimize the allocation of assets, and to improve company performance. Listed below are the specific uses that comprise this category.

Key employee travel — The timely or discrete movement of a key person (not necessarily a senior executive) to perform instrumental tasks or functions. Key employees are individuals who, whether traveling alone or as part of a group, would require a trip to be postponed or cancelled if they alone were unavailable for the trip. Another distinguishing characteristic of key employees is their lack of "scalability." While other employees can be "scaled" by subdividing responsibilities geographically or otherwise, or adding additional personnel, this is not an alternative with key employees. Due to the demands of the individual's responsibilities or the nature of their mission, key employee travel is acutely time sensitive. It may also require great discretion. Those missions may be categorized as follows:

Facilitate strategic opportunities — Investigate, facilitate or accelerate strategic transactions, such as mergers and acquisitions; strategic alliances and joint ventures; recruitment and retention of talent; and surveying new plant locations, or other matters.

[8] See Business Aircraft Utilization Strategies: A Guide for Management, NBAA, 1999, for the results of a J.D. Power & Associates survey of business aircraft utilization strategy popularity

Sell and market — Typically to culminate a deal. Key employees are often utilized at the end of the selling process to finalize a contractual agreement. The use of business aircraft greatly facilitates transporting these key employees to a location when needed, with minimal impact upon their schedules.

Provide (internal or external) customer service — Send key employees to company or client locations in order to restore "down" facilities or provide rapid response to customer or client needs.

Extend management control — Rapidly transport managers to outlying locations, thereby improving their efficiency, effectiveness and productivity.

Investor relations — Mobilize financial personnel or other key employees to attend analyst briefings; movement of executives and company directors to Board or other meetings.

Public relations — Send key personnel to attend the inauguration of a new facility; send key personnel to attend the groundbreaking ceremony for a new facility.

Media events — Transport executives to press interviews; send company spokesperson to a special location for a press briefing.

Government relations and lobbying — Send key employees to lobby for changes to regulations; send executives to meet with government officials.

Litigation — Send experts to testify in court; send legal counsel to court.

Corporate shuttle — The movement by air of groups of employees on a regular schedule between company facilities. Companies use shuttles when commercial airline schedules are insufficient or inconvenient, or traffic conditions or distance between facilities are prohibitive to a ground commute. If there are regular, frequent origin and destination points within the company's travel patterns, a corporate shuttle may offer significant benefits to the company and its employees. Although not a typical use of business aircraft, employee shuttles move thousands of passengers each month between company facilities and offer several benefits, such as: (1) cost savings, when a shuttle provides transportation services less expensively than commercial; (2) time-savings, because employees can move between locations on a shuttle much more quickly than they could on scheduled commercial carriers or automobile and; (3) productivity gains, when "reducing time-to-market for new products is essential."

Assembling and/or deploying teams —

Production, engineering and operations — Moving employees between facilities to leverage personnel resources (e.g. making one engineering team available to five manufacturing facilities) and decreasing process or production cycle times.

Sales and marketing — Moving employees or customers between facilities to improve sales and marketing. This strategy can take many forms, such as deploying teams for a multi-city, multi-customer marketing "blitz" over the course of several days.

Management, financial and H.R. — The movement of management, finance or human resources personnel between company facilities or customers.

Customer service — The movement of employees to facilitate customer service.

Airline connections — The movement of employees to airline hubs and other commercially served airports to make commercial airline connections, particularly for international or long-distance trips. The majority of business aircraft passengers arriving at airline hub airports have flown there to make airline connections.

Emergency response for endangered or injured employees — The movement of employees out of harm's way in emergencies. Although fortunately rare, this also can include the movement of employee family members to an injured employee.

Personal travel — Although uncommon, this option can be negotiated into the employment contracts of high value employees, aiding loyalty and retention or serving as a benefit that improves employee motivation and satisfaction. [9]

Category 2: Transportation of Customers:

Although many companies have been transporting customers on company aircraft for decades, some companies are only now using business aircraft for this reason, creating a compelling differentiation from their competitors. The term "customers" can include anyone to whom the company wishes to sell or market something, including products, services, or even the company's image or business potential. Some specific tactics are.

Bring customers to you — Using the aircraft to bring customers and company personnel together contributes to improved sales, customer satisfaction and retention. The purpose for the trip can include factory or facility tours, entertainment or sporting events, investor relations, public relations or government relations and lobbying.

Creation of a sales enroute environment — Using the aircraft itself to facilitate sales. Potentially, a customer en route to any destination is a captive audience in a highly conducive sales environment.

Carriage of elected officials — Utilizing the aircraft to transport elected (or appointed) officials. Because of special reimbursement policies and other rules that govern this form of transporting elected officials, it is distinct from lobbying.

Transportation of the press — Use of a company operated aircraft to carry reporters to a company event, or merely to sequester the media with executives or key employees on the aircraft.

Transportation of financial analysts — Collecting and transporting one or more financial analysts for any of a number of transaction-related purposes including but not limited to stock offerings, mergers and acquisitions, equity swaps, etc.

Transportation of interest groups — Providing courtesy travel service to an interest group or party,allowing the parties to become better acquainted with the company.

Category 3: Transportation of Suppliers:

Building supplier relationships helps integrate and expedite the company's supply chain, potentially improving efficiency and lowering costs.

Bringing suppliers to you — Using the aircraft to move suppliers in order to improve supply chain management. Suppliers can be transported to production facilities, customer meetings and even to negotiation sessions.

Category 4: Transportation of Cargo, Parts, and Mail:

The internal movement of company cargo, parts and mail between facilities, and externally to suppliers, customers and potential customers. Circumstances appropriate for this practice can include "the next business day" being too late, or if the weight or size of the cargo makes the use of business aircraft the most cost efficient or time-effective alternative. Particularly with interoffice documents, depending on volume, this practice can substantially reduce alternative overnight transportation costs. Although the transportation of cargo, parts and documents for the company's own purposes can be a primary use of business aircraft, but is most commonly a tertiary use. Specifically, the business aircraft can be used to:

Courier inter-office mail — Use of the aircraft to courier high priority mail between company facilities. Especially useful when signatures on original documents are needed rapidly.

[9] Personal use of business aircraft has strict IRS requirements that must be met by the person or persons traveling.

Direct ship parts to remote locations — For example, shipping spare machine parts between manufacturing facilities when needed in order to maintain production levels; especially useful when suppliers cannot respond as quickly as production demands.

Shipment of emergency supplies or parts to customers — Respond quickly to customers needs due to extraordinary events or emergencies. The ability to replenish stocks at a moment's notice can leave lasting impressions and build lasting relationships between your company and your customers.

Rapid delivery of external cargo, or mail — Ship important documents or packages to customers, potential customers or suppliers. There is no substitute for the ability to guarantee on time delivery by corporate couriers every time.

Category 5: Transportation for Charity:

The "good corporate citizen" applications of business aircraft. Although the business benefit from this practice is indirect, there can be substantial direct benefit to people who account for the company's various constituencies: customers, employees, and the community at large. Most companies recognize the value of having a strong, positive and visible presence in their various communities. Consequently, they are cognizant of the importance of their role in serving their local area. Aircraft can be very powerful tools to advance community service efforts, such as:

Transport patients for medical treatment — As some patients require treatment by specialists far away from local communities, many companies transport these patients as an act of goodwill.

Emergency evacuation — When disaster strikes there often is little time to move people to a safe location. Business aircraft can be used to evacuate those most in need.

Transport personnel, medicine and supplies to emergency site — Humanitarian and relief efforts often focus on the delivery of trained medical personnel and supplies to disaster areas. Business aircraft have been utilized to deliver this assistance, as well as food and clothing.

Category 6: Direct Applications:

The use of aircraft as an aerial platform or as a profit center, including:

Aerial surveying — Includes aerial monitoring, photography and cartography. Many companies employ aircraft to survey facilities or potential facility sites, pipelines, power lines, or cattle grazing areas. Other companies use aircraft to monitor environmental changes and effects like erosion and deforestation.

Charter aircraft to third parties — The practice of outsourcing your aircraft to external parties when the company does not need it. This use is gaining wider acceptance and is an important way for some organizations with lower than desirable aircraft utilization rates to offset the costs of aircraft ownership. However, a note of caution, one limitation of chartering is the inevitable reduction of aircraft availability. As a result, chartering is best considered when aircraft utilization is expected to be low.

Understanding the UBV Methodology —

B: Benefits

Understanding the utilization strategies for business aircraft is relatively straightforward. Cataloging and quantifying the benefits that can accrue from those strategies is more challenging, particularly given that individual corporate cultures, strategies and circumstances are unique, and that business aircraft are used for many reasons other than simple transportation. Some examples:

- A CEO spends years attempting to gain access to a potentially lucrative but habitually sequestered customer located a thousand miles away. In a rare phone conversation, he learns the customer intends to travel to the west coast on business, and offers to take him there "coincidentally" with a business trip of his own. Enroute discussion results in an agreement securing several million in sales and establishing a long-term relationship.
- A Northeast trucking executive acquires carriers in Texas, Florida, Georgia, Pennsylvania and other states which he personally manages through the use of a business jet, leveraging a lean head office management staff to cover seven companies without duplicating management staff and their high-level salaries. The use of the aircraft provides practical access to these remote markets that would not otherwise be possible.

There are, of course, many other examples but the point of all is that the practice of business — enhanced by the use of business aircraft — can create a powerful synergy. Andersen recognizes that many of these benefits are similar and can overlap to varying degrees. However, they are described below with equal weight. Some are of immense business value; some may be regarded as esoteric, theoretical or trivial. They are presented here without prejudice, as in this instance, one analytical size will never fit all. Some companies will properly assess some benefits that are showstoppers, whereas others will regard these same benefits as irrelevant. We have presented a list of benefits that is as exhaustive as possible. Each benefit should be carefully considered in the unique context of your individual corporate culture, strategic goals and objectives.

The itemized benefits presented here are an amalgam of answers culled from many interviews which posed the question, "Why do you use business aircraft?" For the purpose of analysis, the benefits of business aircraft use are compared with public transportation alternatives; the most common comparison being against scheduled airline service. Other alternatives include personal or company cars, trains, buses and telecommuting.

A high-level aggregation of these benefits includes six core benefits of business aircraft use:

1: Increase Employee Productivity

2: Expand Markets

3: Secure Competitive Advantage

4: Induce Operational Efficiency

5: Offset Company Expenses

6: Improve Risk Management

In practical terms, it is common for business aircraft users to recount anecdotally how the availability and use of business aircraft during a single business event played a role significant enough to cover the cost of the aircraft or its operation, often many times over. But a more quantitative analysis is possible.

We have not included benefits that are most appropriately considered personal except to the extent there may be a specific business benefit (such as reduced employee turnover) resulting from that personal gain. "Convenience" and "lifestyle" advantages, for instance, have no direct business benefit and so would not directly affect shareholder value.

Many indirect or induced benefits are difficult to quantify. While they may not be easily converted into a dollar figure, they can have a profound effect on processes and outcomes in an organization that may in turn contribute to bottom line performance. They should not be under or over-assessed.

Also, the realization of certain benefits associated with business aircraft can be directly causal or merely probable, depending upon the circumstances. This uncertainty can be best addressed by estimating the likelihood that an event will occur. Company analysts are well qualified to make the quantitative and qualitative evaluation of the probability and frequency of each benefit as well as the financial value of each event.

Typically, three steps should be used to calculate statistical probabilities and place a likely value on a specific benefit.

1. First, the number of occurrences of each benefit in a given year should be determined or estimated based upon past experience, historical trends or future projections.
2. Second, a probability for each type of occurrence should be estimated, again based upon past experience or market research.
3. Third, the financial effect of each occurrence upon the organization should be estimated based upon similar occurrences.

The estimated value of the benefit can then be calculated as follows: **(probability x the number of events x financial benefit = estimated value)**.

Category 1: Benefits that increase employee productivity

- **Save employee time —** The productivity improvement resulting from door-to-door travel time compression and diminished travel related fatigue results in increased post-trip productivity. Employee time is a tangible cost, as salary and bonuses pay for it. Using business aircraft improves employee productivity in several ways. For example, the productivity benefit captures time savings of flying business aircraft non-stop on passenger-directed schedules between close-in general aviation airports using small, quick-access passenger facilities rather than flying scheduled airlines (and commonly making connections) on airline schedules between (distant) commercially served airports with vast passenger terminals. These conditions effectively compress door-to-door travel time for business aircraft users. Studies that have tracked this benefit stress the magnitude of the time savings afforded business aircraft users. Obviously, depending on the specifics of a given situation, the cumulative benefit for a weekly business aircraft traveler can be considerable — the annual restoration of a month or more of business or personal time versus scheduled airline alternatives over the course of a year.

To quantify productivity benefits, we explain a *cost* savings calculation method below. We also begin to outline the *value* of an employee's time, as this also will support the quantification of cost benefits and value drivers.

Translating employee time into a direct *cost* metric is a relatively easy exercise.[10] It can be determined by dividing the total of salary, benefits and bonuses (and any other direct compensation or benefits cost, including long term incentives) by the number of hours

[10] NBAA has developed a software program which incorporates an automated airline interface to calculate and track the cost and value of employee time on a per employee, per trip basis. Information on this program — called Travel$ense — is available online at http://www.nbaa.org/T$/Travel$ense.

worked annually. The resulting direct employee cost per hour, when applied to time saved through greater mobility, can be used to estimate the cost savings to an organization as a result of employee time saved.

A caution: Assumptions concerning the cost and leverage value of employee time after business hours can drive this analysis into potentially treacherous areas. If employee time is considered "free" outside of the business day, an analytical business model may push travel into those "free" hours to gain "costless" advantage. Chronic travel, which is imposed by nights, weekend stay-overs and holidays, can damage home life with collateral impact on personal productivity, motivation, and retention. Striking a successful work/life balance is one of the key advantages of the use of business aircraft. This cannot happen if non-business hours are valueless to the company. Such views are anachronistic in today's economy where people assets and their retention directly affect the collective knowledge of the organization, and can be critical to its success.

The *value* of a unit of employee time saved resulting from the use of business aircraft is more difficult to determine. At a fundamental level, the value of an employee's time must exceed its cost, as common business sense requires employees to generate more in revenue or profit improvement than they are paid — if they don't, the company will not survive. The *value of employee time concept* is perhaps most tangibly illustrated by the hourly billing rates found for personnel in service industries. These billing rates are designed to reflect the cost of compensation for that individual but also cover overhead, support, profit and other costs or financial considerations for the employer.

Methodologies used to calculate the actual employee *leverage value* to an organization are essential to determine if there will be a value-added component in the purchase of a corporate aircraft. Leverage value — the ability to generate more productive time for employees will be for many organizations the dominant factor supporting the utilization of business aircraft.

By utilizing this form of employee valuation, corporate entities can extrapolate the findings into decision-making criteria. The company can identify:

1) Those employees — including executives, specialist teams, sales and marketing employees, productivity experts, etc. — whose leverage value to the company is high enough to justify the expense of purchasing, leasing or chartering business aircraft.

2) Those areas, divisions, locations, etc., within the organization that will gain the greatest benefits from utilizing corporate aircraft.

Several methodologies are available for determining employee value to an organization. Calculations such as the *cost of replacement methodology*, which determines the costs required to interview, hire, and train a replacement, the *contribution to revenues method*, which estimates the impact an employee has on an organization's revenues, and the *contribution to profit method*, which estimates the impact an employee has on an organization's net profit, are each considered in turn. The calculation that embodies all variables needed to perform a thorough approximation of an employee's *leverage value* to an organization is a derivative of the *multivariate approach*. This approach is used in the insurance industry and is known as a "key-man" valuation tool.

The *multivariate method* consists of the following four components:

(a) The employee's remuneration package — the total value of all salary and benefits provided to the employee.

(b) The employer's total salary and benefits expense across all employees.

(c) The organization's total gross revenue as well as its earnings before interest, taxes, depreciation and amortization.

(d) The period of time estimated to recover financially if the particular employee leaves the organization (calculated in years) from the loss of the employee.

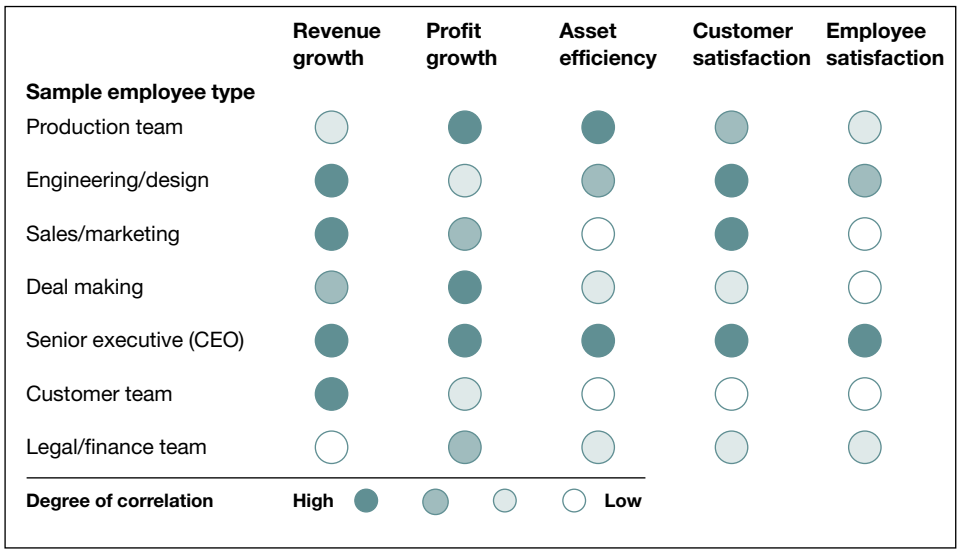
The original application of the multivariate approach by the insurance industry is used to value a particular individual in a company. This analysis can be applied to a particular position or grade level within an organization or a specific individual holding a specific position. Consequently, the benefits can recur each year, or can be recalculated annually to reflect adjustments in income levels, corporate revenues, or profitability.

In addition to the company's total gross revenue impact, we have also included a consideration of Profitability (EBITDA) as financial measurements in factor (c). We have done so because Andersen's companion study, *Business Aviation in Today's Economy, A Shareholder Value Perspective,*[11] found revenue growth and profitability growth (EBITDA) to be key drivers of shareholder value. However this does not mean that companies that fail to turn a profit or do not report profit (ie non-profit organizations) should not consider the value of business aviation. It simply implies that these companies should consider other means of quantifying the effect of the aircraft on their shareholder value propositions. These organizations should use revenues for employee time value calculations. Other drivers, such as incremental customer and employee satisfaction, also are good starting points for assessing the value of business aviation to non-profit organizations.

In addition to the multivariate factors from insurance industry sources cited above, we have included:

(e) a multiplication factor designed to recognize the *leverage value* that a particular position has in relation to its contribution towards increasing revenue or profitability. (Any analyst performing this exercise will have to make the evaluation of the *leverage value* of a specific position upon the revenue or profitability of the organization.)

As illustrated below, the impact of a specific individual or specialist team upon revenue can be quite different from their impact on profitability. In other words, some positions within an organization have a far greater influence over increasing revenues and/or profitability than other positions. On average, across the company, this factor will average 1.00 for all employees. As illustrated in the *Key Employee Leverage Table* below, the employee evaluated in the table receives 1 percent of the organization's total compensation. At 5 percent revenue leverage value (determined by the analyst) this employee has 5.0 times as much impact on the revenue and at 20 percent profit leverage (again determined by the analyst), the key employee has 20 times the impact on profit (EBITDA) growth as the average employee. Due to the individuality of each key employee's financial impact and the unique characteristics and responsibilities of each of the key employees, the relevant workforce should be evaluated on an individual basis. Repeating this exercise for all key employees who are likely to have access to business aircraft will paint the most accurate picture of the incremental value created by business aviation.



[11] Ibid

These variables are input into the following equation(s):

(Employee's Compensation Package / Total company compensation cost)* Positional Leverage Multiplier *Annual Gross Revenue (Or EBITDA)*[12] = Annual Value to the Company

The equation ((a)/(b)) (e) is used to estimate the employee's relative contribution to the company, from a salary perspective. This ratio is multiplied by (b), the company's gross revenues for the year or the company's earnings before interest, taxes, depreciation and amortization (if the company wishes to employ the profitability metric in their value equation). An illustration of this valuation calculation appears in the next benefit below.

- **Leverage key employees —** The ability to move senior decision makers and "specialist" employees around quickly and efficiently in order to maximize their efficiency throughout an organization. Business aircraft provide the opportunity to leverage highly skilled and/or experienced individuals whose uniqueness is best characterized by their lack of scalability through more traditional channels such as adding additional employees and subdividing responsibilities. The ability to scale these critically skilled individuals across a geographically diverse or broad organization is enhanced by the clever utilization of business aircraft.

In recent years, institutional investors and financial analysts are increasingly focused on the quality and ability of the company's management, particularly its executives. Similarly, in industries such as high technology, a particular scientist, engineer or engineering design team may be critically valuable to the company from a shareholder value perspective. In the overall scheme of value-added benefits, the ability of business aircraft to improve employee productivity may be one of the most valuable advantages of business aircraft use.

Key employee leverage value example	Revenue	EBITDA
Employee/executive annual compensation (Here we selected a top level executive)	$1,500,000	$1,500,000
Total organization compensation cost	$150,000,000	$150,000,000
Position compensation allocation	1%	1%
Position leverage multiplier	5	20
Position leverage attribution	5%	20%
Organizational financial measure	$500,000,000	$100,000,000
Employee's annual value to the organization	$25,000,000	$20,000,000
Incremental hourly *leverage value*	$10,682	$8,409

The employee time savings and *leverage value* approach can be applied to the analysis of many other benefits, some of which provide similar employee time or productivity improvements. When applicable, this approach will be identified under the relevant benefits that follow.

While the cost of employee time (and the billing rate for personnel in service industries) may be constant, employee productivity rarely is. The value of certain employee time can be acute, such as when negotiating a merger or acquisition, or of minimal value, such as when completing an expense report. While there is no practical way to track employee productivity on a minute-by-minute basis, an acknowledgement of this reality and acceptance of a constant time value on a per employee basis — by understanding its limited accuracy — practically addresses the variability of employee productivity.

Example: (Employee travel): A major west coast manufacturing company routinely sends employees between its San Jose headquarters and its central California facility. Heavy local traffic conditions require that anyone driving between the cities (roughly

[12] See http://www.underwriting.co.za/Financial/Key%20Man/multivar.htm.

100 miles) stay overnight or return home very late in the evening. In order to increase the productivity of employees, the company initiates an air shuttle service between facilities. Productivity analyses suggest that the time saved en route and the increases in productivity experienced by employees actually saves the company money when operating costs of the shuttle are compared to the benefits associated with operations.

Example (Specialist team travel): A five person engineering team for an Atlanta company is scheduled to travel to central Michigan, to attend a 9am meeting with a supplier. The meeting is expected to take 5 hours, including lunch. To attend the 9am meeting, the team must travel the evening before, and spend the night in a local hotel since no commercial travel alternative would allow the team to arrive in time to begin the 9am meeting. Additionally, if the team travels commercially, its members will be required to depart and return to Atlanta Hartsfield Airport (an average one hour commute from their homes), fly into Detroit, connect to Muskegon, Michigan, and then drive 27 miles to their final destination. Total travel time (including connections) is approximately 6 hours each way. If the team uses company aircraft, each person can depart and return to Peachtree DeKalb general aviation airport (an average twenty minutes commute). Total travel time is approximately 2.5 hours each way. Consequently, a two-day trip commercially is a one-day trip flown with a business aircraft.

Example (Individual specialist): A biotechnology company in California has a complex research and development network including facilities that span several states. The company's chief scientist is a Nobel Prize winner and the world's leading expert in the field. The company uses business aircraft to keep the scientist on the move between these multiple locations. Doing so enables this scientist to be available in twice the number of locations and with double the amount of productive time as would be the case utilizing scheduled commercial air service.

Quantification guidance: Begin by reverting to the analysis on employee time savings. Identify the number of projected flight hours flown in commercial aircraft on an annual basis by the affected individuals and specialist teams. In addition to the actual flight hours, the ability of business aircraft to affect employee productivity the day(s) following business travel should be considered as well (incremental gains). The issue will be left to the analyst to assign the appropriate productivity factors for business aircraft versus commercial air service for both of these categories. It is advisable to survey individuals within the organization who have had first hand experience with each type of service. Their qualitative evaluations of relative productivity factors can be used to calculate the potential incremental productive hours created by business aircraft. Applying the value of employee time to the hourly results will produce the total productivity gains attributable to business aircraft.

Event day (example only)	**En route gains**	**Door-to-door incremental gains**	**Total**
Annual hours in which productivity is effected by travel	50,000	100,000	150,000
Productivity rate: business aircraft travel	80%	85%	75%
Productivity rate: commercial aircraft travel	30%	75%	60%
Productivity increase	50%	10%	23%
Productive hours gained with business aircraft	25,000	10,000	35,000
Value of employee time($/HR)	$100.00	$100.00	$100.00
Value of all employee time saved due to increased productivity($/YR)	$2,500,000	$1,000,000	$3,500,000

- **Increase productivity enroute —** The value of the incremental work output completed by employees during travel via business aircraft versus other forms, measured door-to-door, from home or office, etc., to final destination.

For scheduled air travelers, this includes productivity accrued during

1. drive time to the airport,
2. time from parking to the terminal,
3. time at the ticket counter/baggage check-in,
4. through security,
5. at the gate,
6. on the aircraft prior to and after takeoff,
7. enroute aloft,
8. prior to and after landing,
9. in the terminal for baggage retrieval, and
10. drive time from the terminal parking lot to the final destination.

For business aircraft travelers, this includes productivity accrued during

1. drive time to the airport,
2. time from parking lot to the FBO,
3. on the aircraft prior to and after takeoff,
4. enroute aloft,
5. prior to and after landing,
6. in the FBO to ground transportation,
7. drive time from the FBO to the final destination.

General aviation airports typically are closer to the final destination than scheduled airline airports. The distance from FBO parking lot to aircraft typically is short, making the out-of-the-car/into-the-plane transition practical in a matter of moments. The office-like environment aboard business aircraft (commonly including business tools such as data lines, fax and communications equipment) can enable employees to be more productive enroute when compared to scheduled commercial airlines. Privacy, the ability to sit together, club seating arrangements and other collaborative interior designs foster the notion that work en route is the rule rather than the exception.

> *Example:* A typical business traveler in coach class on a major commercial air carrier in a high load factor environment will find it difficult to be fully productive due to finite personal space, lack of privacy, cramped working conditions and other limiting conditions inherent in commercial air service. Beyond these limitations, business aircraft commonly offer business advantages such as seat side power supplies, Internet access, email and fax transmission capabilities that are presently unavailable on commercial aircraft. These features enable an employee to be fully productive, particularly on long haul flights where the most opportunity lies for productivity loss on commercial airlines.
>
> *Quantification guidance:* In our “cost savings” and “leverage value” sections above, we have evaluated explicit time savings related to business aircraft usage and how to quantify such benefits. The value of time is an important aspect of determining the value of incremental productivity gains. Hours gained, as a result of using business aircraft as opposed to commercial travel alternatives should be counted by individual and the individual’s time value applied. In this manner productive hours gained can be translated into direct cost savings to the organization.
>
> One methodology useful to quantify productivity enroute involves estimating the relative productivity during various phases of travel against a typical office hour, counting the minutes spent traveling during those phases of travel, and multiplying

that time by the value per hour for the employee by that productivity estimate percentage. A 1997 Louis Harris & Associates poll[13] of business aircraft passengers found, "Business aircraft passengers rated their productivity in a company jet at 6.2 on a 0-10 scale which set 5 as the productivity level in an average or typical office hour. Average productivity in a company turboprop was reported as 5.2 while productivity aboard airline jets was rated as 3.2 and commuter turboprops as 2.1. Their assessment in part may be related to their reluctance to publicly display or discuss their work. Passengers responded that they use a laptop computer aboard business aircraft twice as often as they would aboard public transportation."

The Harris survey indicates that the passengers surveyed believe that they are 24 percent more productive on a company jet and 4 percent more productive on a company turboprop than in their office, but 36 percent less productive on airline jets and 58 percent less productive on airline turboprops.

- **Access to highly efficient airports —** Business aircraft grant access to more than 5,000 general aviation facilities in the United States. Many of these facilities are conveniently located nearer to specific quadrants of metropolitan areas than are most major commercial airports. Efficient and rapid access to final destinations near these smaller and uncluttered facilities can dramatically improve door-to-door elapsed travel time.

  Example: A Fortune 50 corporation headquartered in Northern Westchester County (a suburb of New York City) has a major operation in Birmingham, Alabama. The company is located 20 minutes from Stewart airport in Newburgh, New York. While there is some commercial air service from Stewart, there are only two airlines offering connections through a hub airport to Birmingham. Normally, company executives would have to drive an extra one and one half hours south to New York's La Guardia Airport to board a non-stop flight. Alternatively, utilizing the company's business aircraft from Stewart directly to Birmingham saves 2 hours each way versus driving to La Guardia, or 1½ hours each way versus flying a circuitous routing using the commercial air service available from Stewart.

  Quantification guidance: An analysis of company travel patterns and demands can be determined along with a corresponding analysis of the true origins and destinations of employees' business travel. After identifying the true origins (from house or office) and destinations (same), a door to door travel time analysis of general aviation and commercial aviation airports can be transposed to identify which alternative airports may be more conveniently located to the employee's final destination.

  In analyzing the benefit of these alternative airports, the analyst should consider the shorter elapsed time of non-stop vs. connecting flights where non-stop service does not exist. The advantage of applicable time savings from reduced ground travel at the origin and destination should be taken into account. Schedule reliability via air is a function of the reliability of aircraft, crew, management, weather, itinerary flexibility (changing course or airports mid-flight), airport congestion, the economics of specific airline flights, and ATC/center congestion and performance. These elements should be considered in turn, as they can have deleterious effects on both commercial and general aviation trips. On the ground reduced processing time for baggage checking, gate check-in, rental car pick up and return, and shorter transit times within the airport, should be considered.[14]

- **Improved schedule reliability and predictability —** Company control over schedules, routing, airports, aircraft availability, aircraft maintenance, crew and crew training, passengers and their baggage, and other factors creates a more predictable schedule, in general far more reliable than commercial travel. Extraction of employee travel from the commercial environment eliminates delays and/or cancellations related to

[13] See http://www.nbaa.org/realworld for additional Harris poll results.

[14] NBAA's Travel$ense provides a rapid method for comparing airline service with trips utilizing business aircraft. See http://www.nbaa.org/T$/Travel$ense for more information.

problems not directly relevant to the employees' specific travel plans, i.e. weather delays in other areas of the country, ATC delays at major airports, delays and cancellations due to airline labor problems, etc.

Example: An executive with a British conglomerate has a quarterly management meeting with one of its US based divisions in Columbus, Ohio. The executive is scheduled to travel from London Heathrow to New York JFK where he will board a connecting regional jet flight to Columbus. However, bad weather in the New York area necessitates a diversion to Washington Dulles where the passenger is deplaned and rerouted on a different regional airline that is unaffiliated with the main line carrier he traveled on his transatlantic leg. In the process of transferring bags to this other carrier, the luggage is misrouted to Cleveland. After a lengthy search for the luggage, it is transferred from Cleveland to Columbus on a third regional airline where the bags were delivered back to the regional airline that misrouted the luggage in the first place. The airline contacts a ground handling company to deliver the luggage to the executive's hotel. The luggage arrives just in time for his check-out of the hotel and return trip to London. Total elapsed passenger travel time: 15 hours. Total elapsed time for the passenger's luggage: 36 hours. Total elapsed time on business aircraft (passenger *and* luggage): 7 hours.

Quantification guidance: A sampling exercise of several of the company's prospective key executives who were also business aircraft flyers over the previous 6 months can be used to gauge the frequency and net effect of schedule reliability issues. Studies of actual versus published airline schedules are generally available. The results can be used as a proxy to apply to the company's total business travel provided by its corporate travel department or travel agency. After estimating the total number of productive hours lost due to commercial air service reliability concerns, the previously estimated leverage value of any given employee can be applied to produce the financial benefit resulting from use of business aircraft.

- **Schedule control —** Improved schedule reliability and predictability as well as compressed travel time (discussed in detail above) can have significant bearing on a company's ability to schedule critical meetings, especially when the meeting involves two busy executives with limited flexibility.

- **Facilitate critical meetings —** Scheduling efficiency and increased mobility produced as a result of business aircraft availability bestow a heightened flexibility on executives and employees, enabling critical face-to-face meetings that might otherwise be difficult or problematic to arrange.

Example: The ability to facilitate meetings independent of commercial airline schedules can be a critical advantage, particularly when transactions are being negotiated. This is most evident when meetings run longer than expected. In these instances, in the case of company-owned and operated aircraft, the aircraft typically will wait for the passengers regardless of the length of their delay, alleviating the need to end the meeting on any predetermined schedule and eliminating the attendant pressure that may come from public travel schedules. Emergency sales or service calls also can occur independently of public transportation schedules using business aircraft. One business aircraft user routinely responds to late-day service emergencies with, "Can you meet me at your airport tomorrow morning at eight?" — regardless of the day of the week the call comes in, and has built a successful business on his ability to facilitate these critical meetings in near real time.

Quantification guidance: The ramifications of facilitating critical meetings is another benefit requiring a unique quantification. Most frequently, companies become critically aware of their inability to reliably schedule key meetings while depending on travel alternatives such as ground transportation or commercial air service. In some cases, failure to conduct these meetings may result in loss of business, degraded operational performance, lengthened product development cycle times, erosion of product quality, or the attributable loss of specific transactions. The analyst will need to revisit the results from the management survey outlined in the Appendix to identify the

departments that may be able to utilize business aircraft to facilitate critical meetings. These departments should be valuable in determining the ramifications of not being able to conduct those meetings or the drawbacks associated with relying on other alternatives. How often will a critical meeting be missed during the year?

- **Respond rapidly —** Company operated aircraft offer the ability to set travel schedules according to business needs, and to react immediately to dynamic business conditions, sometimes even changing direction enroute. While alternative modes of travel can require significant delays or inconvenient routes, business aircraft usually provide direct access to business opportunities wherever and whenever they arise.

  Example: Companies in certain industries often have aircraft on standby, ready to fly on a moment's notice. This can be useful for rapid response to emergency situations such as those encountered in the transportation or manufacturing sectors, to the simple but powerful ability of management to physically be nearly any-where that same day. This tactic can significantly impress customers. For instance, the national sales manager of a company in Pittsburgh has been struggling against competitors to win a major order from a potential new customer in Little Rock. Late one afternoon, the purchasing manager of the company calls unexpectedly and tells the sales manager that the VP of purchasing would like to meet with him in the morning before the VP's noontime flight back to Los Angeles. The last Pittsburgh-Little Rock commercial connecting flight is departing in 15 minutes; the first connection in the morning arrives in Little Rock at 11:45am. Using the company's business aircraft, the sales manager is able to leave Pittsburgh the following morning and arrive before nine. He meets the vice president, impresses him with his responsiveness and secures a major order from the new customer.

  Quantifiable guidance: The basic principals for quantification of this benefit are 1) Being more responsive can create a competitive advantage for a given customer or a given transaction, and 2) existing management resources may be able to transact additional business because more time is freed up to spend with customers. Three key determinations that must be made to quantify this benefit. First, the annual occurrences of each benefit should be determined. Second, the probability for a given level of occurrence should be estimated. Third, the financial value of each occurrence should be assigned. The estimated value, at the shareholder value-driver level (e.g. revenue growth, profit growth, asset leverage, employee and customer satisfaction, etc.) is the product of the probability of each benefit event, multiplied by the number of benefit events and the financial benefit associated with each benefit event.

- **Reduce loss of intellectual capital —** The value of a key employee to an organization is greatly affected by their unique level of knowledge, their skills, and abilities. Internal knowledge specific to any individual employee is referred to as knowledge capital, while proprietary and valuable information is referred to as intellectual property. Knowledge capital is an important asset to any organization. When an employee leaves the organization, some subset of the employees' knowledge capital is also lost and may be expensive or impossible to replace.

  Example: An advertising agency employs a creative design team headed up by one of the brilliant creative directors in New York. The creative director is responsible for coming up with the concepts for many of this agency's key campaigns; however, the director's wife is unhappy because he is always on the road, a prisoner of the heavily congested commercial air system. As a result, the agency looses the creative director to competitors with a more local clientele. Because of his loss, the agency is very disadvantaged in the competition for a key account.

  Quantification guidance: The impact of losing employee knowledge can have drastic, negative impact on an organization. In the example above, the agency was unable to win a key account without the guidance of its key creative director. This company learned (the hard way) that knowledge-capital, and knowledge-mobility have a significant tangible value. While damage incurred from a specific knowledge-capital loss will differ by employee level and by industry, the ultimate effect is never

advantageous to an organization. This is also a risk, and may be best captured as a non-quantifiable, but extremely important factor in weighing your decision to use business aircraft

- **Improve employee morale and motivation —** Business aircraft can provide easy access to markets poorly served by commercial aviation due to lack of service, quality of service, or reliability of service. This advantage can motivate employees particularly in traveling to destinations that are inherently isolated and relatively inaccessible. Employees being required to travel in the public transportation system to remote or difficult to reach locations might find the first trip an adventure, the second a chore and the third a factor in quitting (or finding excuses for not servicing the client). The opportunity to reach markets such as these quickly and efficiently can recharge work force morale, and re-motivate the affected.

  Example: The task of entering new markets that are under-served by commercial aviation is often difficult and exhausting. The operation of business aircraft is a solution to this problem, as travel to these cities becomes easier and more practical. As a result of the use of business aircraft, companies can reach customers in new markets easier and more frequently thereby accelerating their market penetration rate and, ultimately, boosting employee performance and productivity.

  Quantification guidance: The value of this benefit is related to the incremental profit resulting from an improvement in employee morale and motivation, when compared with the baseline profits achieved utilizing commercial air service. This figure can be best estimated internally, in conjunction with the sales, marketing or other departments, which can identify opportunities for increasing revenues in this manner.

  A significant amount of a potential new opportunity can be attributable to the value generated by the use of business aircraft to effectively open markets. If the incremental profitability of the new opportunity were $10,000,000, what would be a reasonable percentage to attribute to the tool facilitating its success?

- **Signal management support —** Business aircraft can be used to recognize and reinforce the motivation of high performance employees, further improving their morale and encouraging achievement.

  Example: The CEO of a ground transportation company dispatches a company plane with no passengers or cargo aboard to California in order to retrieve his highest performing sales team and return them home. While the team could have flown home commercially, the act signals the importance of their success to the company (other sales teams take note), and the gratitude of the chief executive, who privately expects future returns on his act of goodwill to far exceed its cost to the company.

  Quantification guidance: Use of the company's assets to signal its appreciation of accomplishments and reinforce positive behavior can have a motivational effect on all employees' performance and productivity. What is the value of rewarding an employee, or encouraging employee productivity, to the company? Although noted here individually this benefit directly contributes to employee morale and motivation and may be quantified according to the guidance presented beneath those benefits.

- **Engender employee pride —** Ownership or use of business aircraft can be seen by employees as a commitment to efficiency and excellence. It can also be viewed as a visible sign of managing assets successfully. These positive impacts on employees can positively affect employee satisfaction and loyalty. This in turn can result in greater employee productivity and lower turnover.

  Example: The presence of a business aircraft adorned with the company logo and color scheme can be a visible symbol of the company's success. Employees want to be associated with prestigious, successful organizations. As a result, some employees remain with the company in spite of other employment opportunities because they perceive that the company values the employees' time and rewards their productivity with greater mobility options.

Quantification guidance: Employees' pride in their employer and the psychological value of being associated with a prestigious organization can result in lower turnover rates and higher productivity. The analyst can utilize the employee replacement costs calculated earlier and annual historic turnover rates collected from the company's human relations department. What impact does the analyst expect an increase in employee pride will have upon turnover rate? While it is doubtful that the impact of business aircraft upon employee pride will be the sole factor attributable to reduced employee turnover, some percentage attribution can be applied to reduced turnover rate. The table below is one approach to estimating this value.

Example Only

Historic Turnover Rate	20%	Annual Reduced Turnover	5,000
Improved Turnover Rate	15%	% Attributable to Business AC	1%
Turnover Reduction %	5%	Reduced Turnover Attributable	50
Employee Base	100,000	Cost Per Employee Lost	$30,000
Turnover Savings Attributable to Employee Pride due to business aircraft			$1,500,000

- **Lessen travel-induced stress —** Passenger control of schedules, routing, airports, aircraft, aircraft maintenance, crew and crew training, baggage, and other factors, alleviates many commercial travel-related pressures. Business aircraft travel provides an environment much more conducive to productive and stress-free travel. The elimination of the stress and related fatigue associated with commercial air travel can enable the employees to focus on business without the distractions inherent in airline travel.

  Example: Travelers between Chicago and New York during the summer of 2000 typically experienced commercial airline delays in excess of 45 minutes. On several occasions during inclement weather one company's employees had to wait in the aircraft for several hours before the plane was allowed to takeoff. The frustration, loss of productivity and bad will resulting from missed appointments, lead the employees to investigate alternative travel options. After learning that the company owned a business aircraft, they requested its use for trips to and from New York. Now, in addition to being able to cover more of the company's accounts on trips to Chicago, employees are more productive after returning to New York due to reduced stress and fatigue.

  Quantification guidance: The productivity increase associated with reduced stress and the corresponding increase in energy and focus are challenging to quantify. Nevertheless, these benefits are real and the analyst must make an evaluation and estimation of the financial value associated with them. A survey of individuals in the company who have had the opportunity to use business aircraft may be a good starting point for estimating the value of reduced stress among those who will have the opportunity to use a business aircraft

- **Reduce aversion to travel —** Business aircraft efficiencies eliminate many of the psychological impediments to travel, such as long delays, congested airports, lost luggage, traffic, lack of privacy, and noise (among others). The use of uncongested general aviation facilities bypasses the majority of these impediments, often reducing the resistance that some employees develop towards travel.

  Example: Lacking the ability to upgrade to first class, an employee may dread traveling in the summer when airlines experience very high load factors. Based on past experience, the employee also knows the high probability of being assigned a middle seat. As a result, the employee avoids all discretionary travel during this three-month period, servicing customers primarily over the telephone. As a result, the company unknowingly losses some orders to competitors who are calling on his accounts with greater frequency and regularity.

Quantification guidance: A business aircraft's ability to mitigate aversion to travel can translate into significant revenue increases for the company. By approaching this issue from a marketing and sales perspective, companies recognize the correlation between sales and marketing related travel and revenue. For example, the revenue impact of this benefit can be quantified in conjunction with the company's sales and marketing executives, and with HR's analysis of employee performance, travel and turnover. By reducing aversion to travel a company is actually increasing the productivity of its employees with respect to projects that involve travel.

- **Enhance corporate image in the community —** A company's image can be greatly enhanced through its visible involvement with and support of humanitarian causes and charitable organizations. Business aircraft can be deployed on high profile humanitarian and charitable missions. The goodwill created as a result these types of events can elevate an organization image in the eyes of a community.

Example: Companies routinely allow sick or injured people to fly on their aircraft to clinics or specialty care centers when commercial air alternatives are unaffordable or unavailable. This can elevate the company's broader public perception and enhance the company's local image. Charitable organizations such as the Corporate Angel Network facilitate such activities.

Quantification guidance: Analysts struggling to quantify this benefit should consider: What positive or negative impact can the company aircraft have on the company's image, and to what degree does that image affect shareholder value? What portion of a company's market value is associated with the value of the company's business franchise and image (i.e. what is the goodwill value of the company that results from actual acts of good will?) In some cases an analyst may attempt to place a value on the company's external "image" or "brand," if possible, perhaps consulting with your company's PR and marketing/sales department.

Category 2: Benefits that help to expand markets

- **Accelerate transaction rates and transaction value —** Enhanced mobility enjoyed by companies that operate aircraft can increase their ability to respond immediately to the completion of major transactions (e.g. closing business or making a competitive acquisition designed to boost revenues and/or add products). Because of limited schedules or congestion, alternative travel options may constrain the company's ability to promptly close major transactions. These constraints artificially prolong the time from transaction initiation to closure.

Example: A telecommunications giant based in Canada needed to secure agreement from several large customers to proceed with a joint marketing venture. After identifying the key executives from each company needed to negotiate and approve the transaction, as well as considering their demanding schedules, the general manager chose a specialist team from her firm, along with consultant advisors. She decided that the negotiations needed to transpire over a 2-day period and would involve moving her executives between the corporate offices of the potential partners in Phoenix, Chicago and Dallas. An aircraft was chartered and placed at the disposal of the transaction team. Two days, and five intensive senior level meetings later, the deal was agreed and ready for legal counsel approval.

Example: A major corporation in Washington State is planning to purchase a company in Sweden. In order to complete the deal, the U.S. Corporation must first complete an extensive due diligence review of the possible acquisition. The Swedish company has operations in five separate European Union States, and the due diligence review will require the expertise of six U.S.-based experts from three different locations. The experts only have four days available. The CEO authorizes the use of the company's long-range business jet for the review. The aircraft picks up the experts from the three locations and proceeds to Europe. Once in Europe, the aircraft is immediately available upon demand to fly the team to each of the eight locations, allowing the review to be complete in four days and preventing the need for another trip. This action greatly expedites the transaction process.

Quantification guidance: During complex transactions, the mobility of specialist teams often plays a key role in closing the deal. Transaction acceleration may enable companies to capture the economic value of a given deal earlier in the company's fiscal cycle relative to attempting to complete the transaction with other, perhaps less face-time-intensive alternatives. Assuming a fixed integration and ramp-up period subsequent to the closing of the transaction, the value is derived from the likelihood that more transactions can be accomplished in any given period. This benefit can be valued based upon the anticipated incremental increase in the company's daily steady state profitability or revenues multiplied by the difference in transaction days attributable to the availability of business aircraft. In some heavily acquisition-oriented businesses, transaction acceleration or transaction turnover can produce a significant increase in revenues and profits by enabling the completion of additional transactions over a comparable period.

- **Improve access to markets, thereby increasing market size/share —** The geographic reach of a company's sales or distribution channels can be extended through easy access to efficient and flexible transportation. Without a single connection service between two markets, the ability to properly sell to and service the customer base in that market may be undermined.

  Example: A sales manager for a custom industrial parts manufacturer in Burlington, Vermont with a potential account in Great Falls, Montana, would require a minimum of three domestic flights to reach the potential customer's location. This domestic trip would require over 12 hours each way. While the Montana market may be lucrative, it may not be sufficiently lucrative to justify the loss of an entire business day traveling in each direction. With the use of the company's business aircraft flying non-stop between Burlington and Great Falls, the trip could be completed in less than 5 hours. Instead of the sales manager losing three days to conduct 1 day of sales calls in Great Falls, he could conduct 1½ days of sales calls in a shorter two-day trip. This significant improve-ment in availability changes the viability of the Montana market from "effectively unavailable" to "readily available" due to the ability to reach it efficiently with business aircraft.

  Quantification guidance: Sales organizations often know the sales value of face-to-face time and direct customer access. Performance ratios such as "sales meetings per closing" or "revenues per meeting hour" might be tracked. A probability approach to statistically estimating the expected value of opening up new market opportunities can also be taken here as has been suggested for several other benefit categories. The value of these opportunities should be the net present value of the incremental revenues or profitability generated through leverage value over the individuals affected. There are many instances where "face time" will not generate new sales, but will improve credibility, visibility, trust and therefore dramatically enhance after-sales support and keep key accounts. In order to estimate the impact, the analyst should confer with sales and marketing executives for guidance on the appropriate key performance determinants, probabilities of future revenues, profit and customer service elements from these opportunities.

- **Improve customer access to sales opportunities—** As potential customers are more willing and able to travel to company facilities or sponsored events when transportation is provided and tailored to their schedules and needs, the use of business aircraft can be a highly effective customer recruitment tool.

  Example: A company in Des Moines, Iowa has a potential customer in Norfolk, Virginia. The Des Moines firm sends a sales team early in the morning on board the company aircraft. The sales team flies to Norfolk where they pick up the potential customer's representatives in the mid-morning. The representatives eat lunch onboard, and arrive in Des Moines in the early afternoon. That afternoon, the prospects receive a demonstration of the company's products at a local Des Moines customer's facility and take a tour of the company's manufacturing plant. In the late afternoon, the representatives return to the local airport where the business aircraft is waiting to depart. Dinner is served on the plane ride home, and the representatives are back in Norfolk by early evening.

Quantification guidance: Marketing and sales departments should be able to provide estimates of the revenue value related to the benefit of having business aircraft for marketing and sales purposes. In lieu of a specific valuation of potential new customers and the revenues and profit estimates associated with them, the table below should help in estimating the value of business aircraft on capturing new customers.

Example Only

Potential new customers	10	Average revenue per customer	1,000,000
Success rate without business aircraft	50%	Estimated annual revenue increase	2,000,000
Success rate with business aircraft	70%	Net profit rate	15%
Incremental success rate	20%	Estimated annual net profit increase	$300,000
Estimated new customers	2	Net present value of incremental profit	$3,100,000

- **Improve customer relationships —** Business aircraft can secure more time with customers and provide greater customer input to new product development cycles, while at the same time expand selling opportunities. It can create a chance to respond to customer needs and reinforce the customer-supplier relationship while signaling that the company values the customer. Companies can increase customer satisfaction in many ways, including responding faster to customer needs, spending more time with customers, expanding relationships with existing customers, having a more focused attention to customer needs, and demonstrating new products and services to customers.

  Example: A company in Syracuse, New York has a major new product demonstration at its headquarters. It dispatches its company plane to pick up representatives of its largest customer in Baton Rouge, Louisiana. The representatives are met early in the morning, are at the demonstration before noon, conference with the company's engineering team to have detailed technical questions answered that afternoon, leave after dinner and are back in Baton Rouge the same day.

  Quantification guidance: Marketing and sales departments should be able to provide estimates of the revenue value related to the benefit of improving customer relationships. In lieu of a specific valuation of potential incremental sales from existing customers and the profit estimates associated with them, the table below should help in estimating the value of business aircraft in terms of increased revenue and net profits.

Example Only

Current revenues without business aircraft	$100,000,000	Average % revenue increase per customer	15%
Current customers	1,000	Average revenue increase per customer	$15,000
Percent of customers affected by business AC	20%	Annual total revenue increase	$1,200,000
Current customers affected by business AC	200	Net profit rate	15%
Percent of customers increasing sales volume	40%	Annual net profit increase	$180,000
Customers increasing sales volume	80	Net present value of incremental profit	$1,900,000
Average revenue per customer	$100,000		

Category 3: Benefits that secure competitive advantage

- **Keep up with/get ahead of competitors —** Using business aircraft as a competitive weapon to out-maneuver the competition. Also, developing new products based on more customer input accelerates time-to-market. Enhanced responsiveness and increased mobility can yield a competitive advantage in a number of different business scenarios.

  Example: A Toronto based food service producer hopes to beat the competition to the Mexican market with its new line of prepared foods. Sales executives have found commercial airline schedules between Toronto and secondary Mexican markets to be poorly timed and unreliable, and they want to deploy a sales team to close these new accounts. The food company uses the company's aircraft to ship its sales and marketing team directly to the markets it seeks to penetrate. Competitors who chose to rely on the commercial air system are left behind, as the company's sales team is able to sell and service this territory on a regular and consistent basis.

  Quantification guidance: Quantification of this benefit is highly subject to the particular circumstances of each individual company. It would be useful for the analyst to determine the existence or lack of business aircraft among its primary competitors. Then a comparison of profitability, productivity and other relevant parameters across that same group of competitors can provide a valuable benchmarking of how the analyst's company compares in these areas versus key competitors. The analyst may find that the company lags in the area of both business aircraft and performance measures, in which case additional investigations could be done to determine the source and reason for the shortfall (sales?, costs?, productivity?). In addition, the analyst may find that business aircraft use is not widespread among competitors, offering a real opportunity to rise above competitors, as illustrated in the example above. Finally, the analyst may determine that a competitive imperative does not exist, nor is there a way to utilize business aircraft to gain an advantage in its industry. Before reaching these conclusions, input from a multi-disciplinary group from sales, marketing and operations should be queried for their insights and evaluation of the potential use of business aircraft. Based upon the outcome of the benchmarking, the analyst will have identified those areas in which either a competitive disadvantage can be minimized or eliminated or in which an advantage can be gained. The analysis can be conducted internally to estimate the financial impact of utilizing business aircraft to address specifically identified competitive issues.

- **Discourage the competition —** Using the aircraft as a symbol of company power and influence. Seen by the competition as an outward indication of the company's success in the marketplace. An icon of intimidation.

  Example: A medium sized Midwestern automotive CFO could not understand why his boss insisted on the purchase of a long-range business jet. For years, he wondered why, given the fact that they traveled on long trips only infrequently. One afternoon in a fit of good humor, his boss pulled him aside and told him that the reason they had the aircraft was to intimidate their competitors at trade shows. "When competitors see the plane they know they have a tough battle to fight if they want to beat us."

  Quantification guidance: It is quite difficult to place an actual dollar figure on this type of benefit. If one can estimate any sales or contracts won as a result of the intimidation of competitors (often hearsay), a value may be estimated.

Category 4: Benefits that induce operational efficiency

- **Improve business process efficiencies —** A company's business processes can be significantly enhanced by business aircraft use. The benefits are evidenced in reduction of cycle times, supplier-related process acceleration, supply chain improvements, rapid dispatch and shipping of priority cargo, parts and mail, etc. By reducing cycle times, companies maximize revenue and reduce costs. Improving time to market entails shortening each segment in the product life cycle, including design and

development, production, and after-market support. By carefully identifying components of the production cycle that could be improved by use of business aircraft (i.e. development team efficiencies, shipment of components and products that are part of the production cycle), companies can maximize these benefits.

Financial executives interviewed by Andersen stated that business aircraft helped move specialist "productivity" teams between their companies and key suppliers. These teams concentrated upon reducing unit costs of production, or uniformly improving process efficiency, quality, and time to market. In fact, over half of our CFO respondents said that being able to rapidly assemble and deploy specialist teams (knowledge integration) greatly improved their organization's efficiency and increased productivity. A financial services company executive told Andersen that "keeping the productivity team moving but getting it home for the weekend" was the flight department's major mission and allowed the specialists themselves to "be consistently productive."

Our interviews conducted with CFOs and other financial executives of the S&P 500 peer groups found a strong correlation between business aircraft benefits and drivers. Most striking were comments among national and international retailers: business aircraft enabled executives in these organizations to visit hundreds of locations, sometimes more than once a year, by customizing schedules not possible on commercial airlines. In some cases, executives visited four or five sites in one day, reviewing operations, efficiency, quality and customer service.

Example: A company based in Milwaukee, Wisconsin has a manufacturing plant in Duluth Minnesota. Each month they dispatch a two-person internal audit team for a three-day trip. There is no non-stop commercial air service between the two cities. The only connecting service is via Chicago or Minneapolis. The fastest available elapsed time for those alternatives is 3:30. Drive time is approximately 4 hours. Utilization of a business aircraft reduces the elapsed flight time to 1:00. This process improvement saves the company 10-12 hours of time per round trip and allows the audit process to be reduced from three business days to two.

Quantification guidance: Reducing business process inefficiencies is a benefit that is broadly defined and will be unique to each individual company. This would be evidenced by examining the role of specialist team mobility in targeted improvement areas including reduction of cycle times, supplier-related process acceleration and quality improvements, supply chain improvements, etc. The survey results from the Appendix should be helpful in identifying where those potential process improvements lie and the extent of the opportunity to drive profits and other key drivers of value. Follow-up interviews with the owners of those processes will be necessary in order to identify the potential revenue or cost benefits associated with each process improvement.

- **Extend management control and operations oversight —** Easy access to far-flung facilities can extend management control. Better oversight and control of critical processes and tasks through business aircraft use may become a key element of improved risk management. For companies with multiple facilities, carefully identifying components of the sales, distribution or production cycle that could be improved by efficiently deploying specialist teams, can identify business aircraft benefits. Quality improvements emerged as a theme that supported several drivers of shareholder value in Andersen's business aircraft productivity study. As one CFO told us, the chairman's methodical oversight of the company's network made possible by using business aircraft "sets the tone" across the United States and around the world, helping to ensure a single level of quality.

  Example: A company based in Rochester, NY, has an opportunity to build a "Maquilladora" plant in Anahuac, Mexico. The opportunity would come with very attractive tax and investment incentives, inexpensive land, low cost labor and a well trained manufacturing workforce. Nevertheless, the necessity to take three domestic US flights from Rochester to Laredo, endure a painstaking border crossing into Nuevo Laredo and drive another hour to Anahuac on secondary Mexican roads, would be sufficient to make this opportunity too inaccessible to be considered. Subsequent

to the addition of corporate aircraft, all economic incentive packages (which are frequently offered by some of the least accessible communities) become newly available due to the company's ability to manage its potential investment.

Quantification guidance: This issue can affect revenues and profits. Quantification is addressed in ways comparable with the valuation of new market opportunities and new process efficiencies. See the above benefits for further quantification guidance.

- **Accelerate corporate knowledge integration and knowledge sharing —** One ancillary benefit of business aircraft use is a natural increase in the interaction between employees, and between employees and their customers and suppliers. The quality and quantity of this interaction tends to improve with the amount of travel conducted aboard business aircraft or because of their availability. Corporations can maximize the efficiency of scarce human resources by better allocating their knowledge capital (the collective knowledge of an organization, including its best practices, and the wisdom and experience of its employees and executives). Strategies include facilitating strategic opportunities, exploring new markets, extending management control, and improving relations with customers, investors and the public. Business aircraft allow an organization to move people around seamlessly at a moment's notice. Because the aircraft can be used to pool resources in a single location for the purpose of problem solving or complex transaction execution, a geographically diverse company achieves the ability to draw upon areas of expertise from around the organization.

  Example: A multinational organization based in Chicago, IL with offices in Mexico and Canada flew their division heads to Washington, DC on the company aircraft for monthly information sessions with Members of Congress during the NAFTA debate. After these meetings, the same division heads were able to meet off-line and discuss strategy to approach the new integrated markets. Given the complex schedules of these division heads, such meetings and strategies would have been difficult to arrange without the aircraft. While in-flight, plans were perfected for an approach to the free trade zone. Without the deep knowledge and expertise that the division heads brought to the table, the strategy could not have been completed prior to the final NAFTA vote.

  Quantification guidance: Ultimately this benefit is closely tied to increased employee productivity, but it goes beyond productivity gained as a result of time saved. The ability of teams to work together towards a common goal increases work output for a group compared to output for the individuals that comprise the group. This example shows how teams of employees are more effective than the sum of their parts. Assignment of a monetary value to this phenomenon is a difficult process, and will necessarily depend on the circumstances unique to an organization. To begin to assign value to this benefit analysts should probe: What is the value of increased teamwork brought about by business aviation?

Category 5: Benefits that offset company expenses:

- **Reduce commercial airfare expense —** Company personnel can avoid many of the costs of commercial air travel when using business aircraft. Commercial air fares often can be minimized or avoided altogether. Business aircraft and the cost of aircraft operations (flight departments, etc.) are to be included in any thorough analysis.

  Example: The Director of an investment banking team in Charlotte, NC learns that he and his team needs to be in Boca Raton, FL for a presentation to a potential investor group the next morning. Rather than pay full coach round-trip tickets to move the entire team down and back for the day, the director reserves the use of the bank's small business jet. The director saved the bank money by opting to use the company plane as opposed to flying commercial.

  Quantification guidance: When performing the S&P 500 business aircraft study, Andersen was intrigued with whether companies paid close attention to the expense and contribution made by flight departments over time. We learned from several companies that a typical analytical approach included comparing the cost of commercial air travel against the cost of operating business aircraft. The elements of

cost varied greatly by company, but in some cases included such things as variations in the cost of hotel stays as well as meals and entertainment. While the time savings offered by business aircraft were often recognized and used in the decision making process, the corollary cost savings were sometimes considered "soft" and not included in the quantitative analysis, where Andersen believes they should be included. In order to understand the value of company savings from offset commercial air travel, a company must first thoroughly understand "door-to-door" corporate travel patterns with regard to the corporate aircraft. Travel patterns include the following variables: where the aircraft flies, when the aircraft flies, and who flies on the aircraft. With this information in hand, a company can reasonably estimate (or research and pinpoint) the prevalent airfares in the markets in which the business aircraft is used. A survey of web sites can reveal what typical tickets would cost in those markets. In addition, if the company has a travel department, the analyst should determine what commercial discounts might have been negotiated for the particular route in question. A comparison can then be made based upon commercial ticket prices, the number of passengers, and the times and dates in which passengers are traveling. Analysis can be performed trip-by-trip or can be summarized to span months, quarters or years.

- **Reduce travel and entertainment expenses —** Trip compression, often realized by company or external personnel when traveling on business aircraft, can result in the avoidance of overnight stays. For employees, customers or suppliers, avoided overnights means reduced travel costs for lodging, meals, rental cars, entertainment, per diem or other expenses incurred on trips made longer due to commercial transportation schedules and inefficiencies.

  Example: A sales team from Washington, DC has a 9am presentation in Hartford CT. The first flight from any of the three Washington area airports does not arrive in Hartford until 9:25am and requires the group to catch a 6am departure on a connecting flight to Pittsburgh. Instead of sending the team to Hartford the night before and incurring the costs of hotels, meals and additional taxi expenses, the planning director decides to schedule the company's aircraft for the meeting. By using the business aircraft to depart at 7am the same day of the meeting, the planning director is able to avoid hotel, meal and other travel expenses.

  Quantification guidance: Quantification begins with an estimation of the number of travel nights that could be eliminated by utilizing business aircraft. Once the number of nights is determined, the expenses for each night should be considered as well. Expense types include hotel rates, per diems, food, entertainment, and rental cars or other additional accommodation-related ground transportation. Determine how much the company spends on these items either by trip, or by using average annual expenses to arrive at an average daily expense amount for each expense type. Multiply the nightly travel and entertainment expense by the number of nights saved to arrive at the decreased trip expense.

- **Expand commercial air service opportunities —** By using the company aircraft in combination with commercial air service, the company can take advantage of a far broader market of available commercial air services and fares. This can provide advantages both in providing preferential scheduling alternatives as well as providing access to less expensive commercial airfares. This can be particularly valuable for passengers traveling to distant transcontinental or international destinations where flight options from the local airport are very limited and air fares are substantially higher than other airports made accessible by the company business aircraft.

  Example: A group of marketing specialists and executives for a small retail chain planned to travel to Frankfurt, Germany for a major annual industry conference. Commercial air service from Duluth was very limited, with regional service to only Minneapolis and Chicago. As a result of the limited service out of Duluth, international travel options were few and fares were high. Consequently, to fly commercially from Duluth would have required three flights on two airlines at a business class fare of $7,810 round trip. As the company's operations are primarily in the mid-western United States and their international travel demands are once per month (on average), the company did not operate a long-haul intercontinental business jet. Nevertheless, it

was able to use its medium range jet to reach any market in North America, including airports that offered lower fares and/or a shorter elapsed time to Europe. By using the company aircraft to access lower fare cities, the marketing team was able to fly from Duluth to New York's Kennedy Airport where they could pick up a non-stop flight on Singapore Airlines to Frankfurt for $4,232, a saving of approximately $3,600.

Quantification guidance: The benefit to the company of greater access to commercial air service comes from two distinct advantages. First, the time savings and productivity advantage resulting from a wider array of commercial flights relative to the alternatives available from the local airport. Second, the differential between the fares paid for a commercial flight from the local airport and the lowest available fare from any other city within the range of the company aircraft. To address the former advantage, a similar travel pattern analysis can be performed to address travel demand patterns, particularly for international travel, as was conducted to analyze the benefit of saved employee time. For the latter advantage, the company's travel department can assist with research to provide historical fare quotes from lower fare markets which parallel, in date and destination, the historical journeys (particularly international) traveled by the company's employees.

- **Reduce shipping and mail expense —** The cost of postage, shipping and overnight freight charges, and in some cases the very high costs associated with private couriers, can be avoided as a result of using business aircraft for the (often incidental) shipment of cargo, parts and mail.

  Example: An East Coast company with manufacturing facilities in the Midwest must send a critical spare part from its North Carolina headquarters to one of its facilities in Missouri in the middle of the night. The last commercial and cargo flights left hours earlier, and the 24/7 manufacturing facility has been shut down due to lack of this part, at a cost to the manufacturer of approximately $15,000 per hour. The company dispatched the part to Missouri using the company aircraft, and the facility was back on line in four hours. Private courier alternatives would have cost the company more in direct expenses and productivity loss than the incremental costs of utilizing the company aircraft. A second example might be a company shuttle which flies daily between HQ and company facilities, carrying interoffice mail and parts as needed, avoiding shipping costs.

  Quantification guidance: If business aircraft are used to courier cargo parts and company mail, the shipping offset amount can be estimated based upon the historic volume of cargo, mail and other freight that could be potentially transported on the business aircraft. A retrospective analysis correlating historic travel patterns of employees and the likely utilization of the aircraft with comparable cargo, mail and courier data is a good starting point. Secondly, an analysis of high cost courier, or charter events could be analyzed to evaluate the availability and incremental operating costs of the company business aircraft as an alternative. Finally, an analysis of opportunities where the availability of the company aircraft could have preempted other company expenses related to crises such as production line shutdowns should also be considered. If these events are unusual and irregular, costs can be estimated via a probability equation as explained earlier in conjunction with other unpredictable potential benefit events.

- **Decrease employee replacement costs —** By using business aircraft, companies can improve their personnel retention, thereby reducing the costs of turnover and retraining. Reduced attrition results from the controlled, more effective on-the-job experience for employees with access to business aircraft, as well as shorter travel schedules and increased family time. Attracting vital new hires, who are often "courted" extensively, is an associated benefit. In a competitive job market, subtle lifestyle benefits attributable to business aircraft can have a significant impact on the quality of life of potential employees. The flexibility, comfort, productivity and efficiency of business aircraft travel can mean the difference between winning and losing some individual(s) in

The War for Talent.[15] Reduced costs and accelerated benefits associated with shorter recruitment cycles can be considerable. The faster a company is able to locate, recruit and hire a replacement employee, the less cost is associated with that recruitment.

Example: After the loss of their National Sales Manager, a company in Tulsa, OK began the search process for a replacement. The labor market was tight, and the company knew that one of its chief competitors was seeking a sales representative for a comparable position. The company located an individual in Dallas who was well suited for the job. Initial conversations with the prospect uncovered that he is also interviewing with their competitor. The company dispatched their aircraft to pick up the employee for his interview. After interviewing this individual, the company determined that he was their ideal candidate. In conjunction with the company's offer, the prospect was told that he would have access to the company's aircraft. The sales executive decided to accept the offer in part due to his access to the company's aircraft and his expectation that the aircraft's efficiency would reduce his annual number of nights away from home by 33 percent when compared to the competitor's offer.

Quantification guidance: When a company determines the replacement cost for an individual, it must consider a variety of factors, including the employee's position within the company, his salary level and benefits, the degree of demand for individuals with similar skills in the market place, the value that person brings to the company (leverage value), the employee's training cost, and the costs associated with the loss of intellectual property. If desired the exercise can be done for several subgroups of employees at varying average replacement costs.

- **Reduce turnover and retain personnel —** As noted above, the impact of business aircraft on employees can result in a competitive advantage in the war for talent. The availability of business aircraft and their potential impact on the quality of employees' work and personal lives can be significant. The direct impact on employees who utilize the company's business aircraft can potentially influence turnover rates. In some industries or positions where business travel can be a significant requirement of the job, the ability to reduce nights away from home can be a significant quality-of-life improvement sufficient to sway the character of business travel from onerous to attractive.

  Example: Due to the lack of reliability of commercial air service in the local area, a New Jersey food products sales executive habitually departed the night before his 9:00 am weekly sales meetings in Chicago, resulting in one night away from home each week. This schedule was taxing on his family's traditionally close lifestyle. The availability of the company's business aircraft afforded this executive the luxury of departing in the morning and returning the same day due to improved schedule reliability and departure and en route flexibility. Weekly meetings that used to require an overnight become transparent from the viewpoint of the sales representative's spouse and children. This amounted to over 40 nights a year at home that otherwise would be spent away from his family and could well have been the difference between loosing this key employee and keeping him with the company.

  Quantification guidance: The ability of business aircraft to influence the company's turnover rate may be limited to those employees with access to the aircraft. Exit interviews from HR can provide a key to this consideration. The analyst should survey all the departments to determine the number of individuals who will be utilizing the aircraft. The direct impact on employee turnover should be estimated based upon the relevant subset of employees and historical turnovers due to excessive air travel. The evaluation of potential reduction in turnover should be made by the analyst in conjunction with the company's human resources department. A review of exit surveys could be helpful in estimating the potential impact of business aircraft on employee turnover.

[15] Michaels, Ed et. al The War for Talent, Harvard Business School Press, September 2001

Example Only

Historic turnover rate	20%	Annual reduced turnover	10
Target turnover rate	15%	% attributable to business AC	20%
Turnover reduction %	5%	Reduced turnover attributable	2
Employee base	200	Cost per employee lost	$50,000
Turnover savings attributable to employee pride due to business aircraft			$100,000

- **Reduce staffing levels —** Redundant personnel can be eliminated if individuals or teams are sufficiently mobile to perform their roles wherever and whenever needed. Business aircraft enable many employees to be effectively more scalable, enabling them to carry a larger workload covering a broader geographic area.

  Example: A Kansas City Missouri based company required five regional sales managers to cover all of North America. After acquiring two business aircraft, it was able to consolidate the regions from 5 to 4, saving the company $100,000 in annual salary and $20,000 in benefits. An additional $10,000 was saved in miscellaneous headcount-related expenses.

  Quantification guidance: With a geographically wide spread organization, one way to manage the expenses is to mobilize personnel in key positions. This provides the company with the same capabilities, but less headcount. The Aircraft Utilization Survey for Management referenced in the Appendix is a good starting point to identify potential staff reduction savings. Interviews with each of the departments potentially using the business aircraft can identify opportunities for headcount reductions resulting from productivity increases. In evaluating those savings, all related benefits and other headcount costs should be considered and quantified.

- **Offset costs through charter revenue —** A company can gain revenue chartering company-owned aircraft to third parties or executives for the purpose of personal travel, reducing overall cost of ownership. To reduce the cost of aircraft ownership, business aircraft operators with low periodic or weekend aircraft-utilization often charter their aircraft to external organizations. External charters can be an excellent way for companies to maintain highly efficient aircraft-utilization rates and earn money in the process. Obtaining FAA certification to operate company aircraft as public charters is a complex process that will require expert advice and can be time consuming.

  Example: A company based in France, knowing that it will not fully utilize its business aircraft, regularly leases weekend time on its plane to facilitate executive retreats or other business uses. Revenues earned from the charters reduce the flight department's fixed costs.

  Quantification guidance: In order to make aircraft available for charter, a company must first secure the required certification from the appropriate regulatory authority (in the United States, a FAR Part 135 operating certificate from the FAA). Once this certification is attained, the company may then offer their aircraft for hire to third parties. These operations will generate direct revenues for the company in question, usually in the form of hourly charter rates. Competitive hourly leasing rates can be roughly determined on various Internet web sites, or by contacting charter airlines for estimated hourly costs/revenues. The estimated annual hourly charter demand can be combined with the company's hourly net contribution rate (hourly charter revenue rate less cash direct operating costs) to determine the net hourly contribution to annual flight department fixed costs.

- **Secure maximum return on capital investment (arbitrage) —** The purchase and resale of business aircraft can be aggressively managed around market cycles or other conditions to minimize capital and/or operating costs or, in certain cases, to secure capital gains, partially or totally offsetting the net cost of ownership. Some savvy

business aircraft operators, recognizing a corporate aircraft's high residual values and the unpredictable changes arising from market cycles, expand or contract their corporate fleets for investment purposes.

Example: A company purchased an aircraft immediately after it was certified, which coincided with an economic recession and a manufacturer price reduction. Years later, after the economy had rebounded, the aircraft type had become one of the most popular medium range business jets available. However, the company's needs changed and it now required a larger aircraft. The company sold the medium range jet for a profit, thereby offsetting all of its original ownership costs, as well as subsidizing a portion of its newer,r larger aircraft.

Quantification guidance: Unlike many other corporate properties, when properly operated and maintained, business aircraft routinely retain a very high percentage of their original cost as residual value. If companies actively, intelligently and fortuitously manage the timing and investment in their aircraft, it is possible to offset much of the original ownership cost and potentially secure a capital gain from aircraft upon resale.

- **Reduce tax liability —** The purchase and use of business aircraft, like any piece of capital equipment, may generate certain tax advantages, which will vary by country, state, locality and other circumstances. The analyst must take into account the financing strategy for the aircraft, the ownership risks, depreciation and tax implications, the operating costs, and the tangible and intangible benefits derived. Moreover, the direct operating cost of a business aircraft flown for charitable and some humanitarian purposes is tax-deductible.

Example: A company used its aircraft to fly disaster relief supplies from Miami, FL to Guatemala in the wake of a large hurricane. All direct operating costs for the trip were tax deductible.

Quantification guidance: Tax advantages should be considered as part of owning business aircraft. Depreciation, investment tax credits and other tax benefits and incentives can result from owning business aircraft. The company's tax accountants and lawyers should carefully determine potential tax benefits of aircraft ownership based upon the company's anticipated tax situation and relevant federal, state and local taxes.

Note: We recommend that professional tax advice be sought before any action is taken.[16]

Category 6: Benefits that improve risk management

- **Improve industrial security —** Discussed in detail below, the loss of industrial secrets can have very damaging consequences for an organization and is a major category of risk that companies actively manage on a day-to-day basis. Absolute control over aircraft, crews and maintenance, can significantly reduce the risk of hijacking, cargo tampering etc.

- **Reduce/eliminate uncontrolled public exposure —** Uncontrolled public exposure during commercial business travel can subject employees to unwanted contact with shareholders, competitors or the media. In some cases, the timing and location of this exposure can reveal corporate strategy. In particular, high profile, easily recognizable CEOs can have a difficult time maintaining the necessary privacy and anonymity when traveling for highly confidential company business. In certain cases, reduced travel visibility may be a crucial benefit in executing key transactions.

Example: Rumors abounded that the merger of two software giants was imminent, and Wall Street analysts and stockholders were jockeying for any evidence that might validate merger theories. When the CEOs of the merger candidates met, they traveled via company aircraft and were spared the speculation that might have resulted from their traveling to the same cities on the same dates via public transportation.

[16] See http://www.nbaa.org/taxes or http://www.andersen.com for additional information.

Quantification guidance: Public awareness can seriously curtail business plans, especially when related to major corporate transactions. The value of these transactions varies greatly, as does the likelihood of occurrence. Each company must determine how significant or likely theses events are.

- **Secure control over personal safety of passengers —** Business aircraft operations allow management more control over the personal risks associated with door-to-door business travel of employees and customers related to schedules, routing for weather avoidance, airports, aircraft, aircraft maintenance, crew and crew training, passengers and their baggage, and other factors.

  Example: A California CEO conservatively and actively manages the selection of flight crew, their operational attitudes and training, aircraft selection and maintenance, and the accommodation of adverse weather conditions, to ensure the highest possible degree of personal safety and peace of mind.

  Quantification guidance: In determining the value of personal safety, a company may wish to consider what the value of an employee is to a company. One way to arrive at such a value is through "key-man" life insurance practices. By identifying the amount of insurance that a company is willing to take-out on an employee, a company may determine the relative worth of an employee to the company.

- **Protect intellectual property —** Privacy inherent in the secure environment of business aircraft travel allows employees to work on and discuss projects of utmost company secrecy. Often commercial travel impedes such work due to the possibility that competitors might overhear or see something of vital strategic importance to the organization.

  Example: Consultants en route to California from New York quietly discussed their strategy for winning a large system implementation project in Los Angeles. Unknown to them, a competing firm is also en route to propose on the same project. In fact, their competitor is sitting in the row directly behind them, and can hear every word that they say. The competitor quietly jots down some key strategic points and is able to work a solid response into his presentation.

  Quantification guidance: The value of the loss of industrial secrets will vary by industry and company, as well as by situation. In high tech industries, such secrets are crucial and businesses can fail if certain competitive secrets leak out. The value of secrets for any company should be seriously considered in light of the company's strategic position, the climate of the current industry and the opportunity cost associated with the loss of such a secret.

- **Control courier documents, packages, etc. —** The ability of the company to completely manage the movement of priority cargo, parts, company mail or other documents, allowing close direction of schedules and security. Situations requiring delivery of original materials involving an imminent deadline, with potentially large financial losses associated with a failure to deliver the materials, would easily justify use of the company's business aircraft. Business aircraft provide flexibility, shorter lead times and faster deliveries than would be available commercially.

  Example: During legal proceedings, a company is required to submit detailed financial records about a recent transaction. Failure to submit these documents during the discovery period, which could exonerate the company, would condemn it to lengthy and costly legal proceedings. In order to meet the discovery deadline, the company's legal and financial teams work all night arranging the documents, and then fly the documents to the circuit court early in the morning, arriving just in time to stave off a trial.

  Quantification guidance: The value of greater control over document and package delivery is intertwined with the value of the documents, packages, and parts themselves. In order to quantify this benefit, the analysts should survey the number and type of high impact deliveries that a company makes each year. Estimate the value of these deliveries (or the loss if deliveries are not made on time)

Understanding the UBV Methodology —

V: Shareholder Value

It is impossible to draw a simple correlation between business aircraft use and shareholder value creation defined only as "stock price increase." It is possible to draw such a connection between business aircraft use and drivers that "set the stage" for long term shareholder value creation. Stock prices are affected by a variety of factors, many of which are external and beyond the control of individual companies. However, it is possible to identify how using business aircraft can stimulate each of the five shareholder value drivers, which in turn can drive value creation. The five drivers of shareholder value are:

1. Revenue growth
2. Profit margin growth
3. Asset efficiency
4. Employee satisfaction
5. Customer satisfaction

Andersen's companion to this study, entitled *"Business Aviation in today's economy: A shareholder value perspective,"* provides compelling evidence that use of business aircraft can contribute to a company's better financial performance and, therefore, to higher shareholder value. The drivers of shareholder value are discussed below.

1. Revenue or market share growth.

Certain utilization strategies reap benefits that can directly increase revenues (for example, additional sales made through aircraft trips or the use of the aircraft to serve new, less accessible markets).

Benefits that can influence revenue or market share growth include, but are not limited to the following:

- Ability to respond rapidly to revenue/market share growth opportunities
- Accelerate transaction rates
- Enhance employee productivity
- Enable market expansion
- Facilitate critical meetings
- Increase customer base
- Improve customer relationships
- Protect intellectual property

2. Profit margin growth.

To calculate the increased earnings resulting from using business aircraft, a cost-benefit comparison must be undertaken to determine whether the quantifiable costs of operating the aircraft are less than the quantifiable benefits. The evaluation must take into account the financing strategy for the aircraft, the tax implications, the operating costs, and the direct, indirect, and induced benefits derived. In general, if the quantifiable benefits are

greater than the quantifiable costs, business aircraft utilization will increase shareholder value for the company. If the ratio of the change in quantifiable benefits in relation to the quantifiable costs is higher than the company's current relationship between the company's revenues and total costs, then the profit margin will grow.

Benefits that can influence profit margin growth include, but are not limited to the following:

- Employee time savings
- Accelerated transaction rates
- Decreased trip expenses
- Offset commercial airfares and shipping and mail expenses
- Decrease employee replacement costs
- Offset costs through charter revenue
- Reduced turnover
- Reduce staffing levels
- Increase customer base
- Improve customer relationships
- Improve risk management
- Protect intellectual property

3. Asset efficiency.

A ratio [sales/assets] used to measure how effectively a company is employing resources. A company can increase its asset efficiency in a number of ways including improving business processes and leveraging existing assets more effectively. Supply chain improvements fall into this category. Some specific strategies, which would cause large increases in asset efficiency, include cycle time reductions and key employee leverage.

Benefits that can influence asset efficiency include, but are not limited to the following:

- Save employee time
- Leverage key employees
- Respond rapidly
- Increase customer base
- Improve access to markets
- Offset costs through charter revenue
- Improve employee motivation
- Enhance employee productivity
- Improve business process efficiencies
- Keep up with or get ahead of competitors

4. Customer satisfaction.

Studies have shown that customer relationship management (CRM) and customer satisfaction affect shareholder value.[17] Keeping this in mind, many companies have begun to utilize new CRM technologies to improve their record in this area. Many are also using their aircraft with remarkable results; some of the utilization strategies result directly in increased customer satisfaction. Examples include bringing customers to a company's facilities to close key transactions, using the aircraft for sales and marketing blitzes, and deploying quick-response customer service teams.

Benefits that can influence customer satisfaction include, but are not limited to the following:

- Respond rapidly
- Decreased trip expenses
- Leverage key employees

[17] Hammer, Michael, Beyond Reengineering - How the Process Centered Organization is Changing Our Work and Our Lives, Harper Business, New York, 1996

- Enhance employee productivity
- Accelerate teamwork and cross pollination
- Improve business process efficiencies
- Facilitate critical meetings
- Improve customer relationships
- Improve risk management

5. Employee satisfaction.

One of the largest drivers of shareholder value, although also one of the hardest to measure, is employee satisfaction. Our research supports the fact that intangible assets (i.e. expertise, relationships, etc.) are engines of value creation. Smart companies utilize their aircraft to increase employee satisfaction by improving peoples' work environment and improving their quality of life. This translates into higher productivity returns and thus higher value.

Benefits that can engender employee satisfaction include, but are not limited to the following:

- Save employee time
- Enhance corporate image
- Engender employee pride
- Signal management support
- Improve employee moral and motivation
- Decrease travel induced stress
- Reduce aversion to travel
- Improved travel schedule reliability and predictability
- Access to highly efficient airports
- Expand commercial air service opportunities
- Enhance employee productivity
- Secure personal safety

The benefits that we discussed in the previous section all relate to one or more of the drivers of shareholder value. Consequently any net benefit gain will influence the corresponding driver of shareholder value. The graph on the following page shows these relationships at a glance. The correlations indicated are based upon Andersen interviews with business aircraft users and industry experts. After appropriate analysis, some companies may correctly conclude the correlation between their aircraft utilization strategies and the benefits indicated are different than those indicated.

Shareholder value driver/ benefits correlations

Benefit	Increased revenues	Increased profits	Asset efficiency	Customer satisfaction	Employee satisfaction
Increase employee productivity					
1. Save employee time	●	◉	●	○	●
2. Leverage key employees	●	◉	●	◉	○
3. Increase productivity en route	◉	○	●	○	◉
4. Access to highly efficient airports	○	○	◉	○	◉
5. Improve schedule flexibility/reliability	○	○	◉	○	◉
6. Schedule control	○	○	◉	●	●
7. Facilitate critical meetings	○	◉	◉	◉	○
8. Respond rapidly	◉	◉	●	◉	○
9. Reduced loss of intellectual capital	○	◉	○	○	◉
10. Improve employee morale and motivation	○	○	◉	○	●
11. Signal management support	○	○	○	○	●
12. Engender employee pride	○	○	○	○	●
13. Lessen travel-induced stress	○	○	●	◉	●
14. Reduce aversion to travel	○	○	◉	○	●
15. Enhance corporate image in the community	◉	◉	○	◉	●
Expand markets					
16. Accelerate transaction rates and transaction value	●	◉	●	◉	◉
17. Improve customer access to sales opportunities	●	◉	○	○	○
18. Enhance corporate image	◉	◉	○	◉	●
19. Improve customer relationships	●	◉	○	●	○
Secure competitive advantage					
20. Keep up with/get ahead of competitors	●	◉	○	◉	●
21. Discourage the competition	○	○	○	○	◉
Induce operational efficiency					
22. Improve business process efficiencies	◉	●	●	◉	◉
23. Extend management control and operations oversight	◉	◉	●	○	○
24. Accelerate corporate knowledge integration and knowledge sharing	◉	○	●	○	◉
Offset company expenses					
25. Reduce commercial airfare expenses	○	◉	●	●	○
26. Reduce travel and entertainment expenses	○	◉	●	●	○
27. Expand commercial air service opportunities	○	◉	○	○	◉
28. Reduce shipping and mail expense	○	◉	◉	○	○
29. Reduce employee replacement costs	○	○	●	○	◉
30. Reduce turnover and retain personnel	○	◉	◉	○	●
31. Reduce staffing levels	○	○	◉	○	○
32. Offset costs through charter revenue	●	○	●	○	○
33. Secure maximum return on capital investment (arbitrage)	●	◉	●	○	○
34. Reduce tax liability	○	◉	○	○	○
Improve risk management					
35. Improve industrial security	●	●	○	◉	○
36. Reduce/eliminate uncontrolled public/press exposure	◉	◉	◉	◉	●
37. Secure control over personal safety of passengers	○	○	○	◉	●
38. Protect intellectual property	◉	◉	●	◉	◉
39. Control courier documents, packages, etc.	○	○	◉	○	◉

Degree of correlation **High** ● ◉ ○ ○ **Low**

In order to calculate how each of these benefits affects shareholder value, you must first quantify each benefit as suggested in the prior section of this report. Then, compare the gains from the use of aircraft to the costs associated with them. As with any classic business case, the net effect upon shareholder value will be the sum of positive benefit effects and negative cost effects.

There are four main cost categories to consider, each with specific costs related to aircraft purchase, operation and maintenance. Generalizations of these costs should be avoided when possible, as they may vary considerably by utilization strategy, geographic area of operation and type of aircraft. Aircraft manufacturers or experienced consultants can assist companies in the detailed understanding and prediction of these costs. The categories are outlined below.

1. Acquisition and infrastructure costs

- Type of aircraft (capital cost of aircraft type)
- Number of aircraft to be purchased
- Financing strategy, interest, lease and other related costs
- Management costs
- Projected life span and residual value
- Related ground transportation acquisitions
- Spare parts inventory
- Maintenance tooling and related expenses
- Passenger terminals and parking leases or acquisitions

2. Direct operating costs

- Fuel
- Fuel additives and lubricants
- Complete maintenance program (scheduled maintenance)
- Maintenance labor (unscheduled or outsource maintenance)
- Power by the hour costs (engine maintenance)
- Landing and parking fees
- Crew expenses / per diems
- Catering
- Navigation chart service
- Weather service
- Management company billings, as applicable

3. Fixed costs

- Flight department personnel salaries & benefits
- Hangar fees
- Insurance (Hull and liability)
- Recurrent training
- Updates and uninsured damage
- Refurbishing
- Management company fees, as applicable

4. Tax and registration

- Depreciation and other offsetting tax effects
- Federal Excise Tax
- State Sales and Use Tax
- Personal Property Tax
- Registration Fees

Assuming that an organization has identified their uses of business aircraft, chosen an aircraft type suitable for their mission, and identified the corresponding benefits, the methodology for determining the degree of effect that business aircraft will exert upon the five drivers of shareholder value for your company can be accomplished in four steps.

1) Review the benefits that your organization realizes as a result of operating business aircraft. Determine which benefits are quantifiable for your company. What will management accepts in terms of quantified benefits? Which benefits will need to be addressed qualitatively?

2) Determine the total cost of operating the aircraft. What effects do these costs have on earnings, revenues, and total costs?[18]

3) Follow the suggested steps to quantify benefits. Note the magnitude of the resulting quantification. Does the effect of the benefit increase revenues or decreases costs? What effect does the benefit have on earnings? When compared to the net costs of operating the aircraft do the benefits outweigh the costs? This interchange between costs and quantified benefits evokes the quantifiable shareholder value drivers. Increased revenue becomes the revenue driver, profit margin growth becomes the profit driver and more sales per asset becomes the asset efficiency driver.

4) For non-quantifiable benefits, how does the benefit effect your company? Does it increase employee or customer satisfaction? Can you show how? These benefits often evoke the employee and customer satisfaction drivers of shareholder value. They are often very difficult to quantify but are also very important. Employee satisfaction can be surveyed periodically to see how levels change over time. Customer satisfaction can be measured in a similar fashion.

As we noted in the beginning, this analysis is necessarily complex. The purchase of a large, costly and intricate piece of machinery like a business aircraft should be given considerable thought, and should only be undertaken once appropriate fiscal review has been established. Some companies that are currently exploring their first use of a business aircraft, or reviewing their current operations, may not have the internal time, skills or energy to perform the analysis outlined in this report. If this is the case, please do not hesitate to call upon Andersen for assistance. Our team of aviation professionals has years of experience providing this type of analysis to clients across North America and we would be happy to assist your company to determine if business aviation is the right fit for you.

For assistance analyzing business aviation operations or investment decisions call Andersen at 703 962 4201.

[18] Visit www.generalaviation.org for links to U.S. aircraft manufacturers that can help determine the type of aircraft that best meets your travel needs, and the specific costs of owning/operation such aircraft.

Appendix

Aircraft Utilization Survey for Management — Air Transportation Needs Analysis

A clear understanding of company strategy and anticipated air transportation requirements is essential in being able to provide transportation services when and where needed. This outline details the specific information needed to complete this analysis.

The data collected, and the analysis performed, may be symbolic — using popular destinations or missions that represent a larger travel activity — or comprehensive or complete — analyzing most or all of the travel data for a given period. The depth of the analysis will stem from the degree of detail required by company management for credibility and accuracy, as well as the resources available to complete the analysis.

The outline below should be modified to serve your company's specific requirements. NBAA's Travel$ense program can automate much of the airline research and financial calculation required by this exercise, which is structured for eventual presentation to management.

1) Historical research

a) Airline Activity
   i) Obtain following data for previous 12 months for key executives/personnel from corporate travel department:
      (1) City pair analysis (note multiple leg trips)
      (2) Most popular destination frequency
      (3) Total and average scheduled airline fares
      (4) Average trip length in days
      (5) Include or factor out international trips, as applicable

b) On-Demand Air Transportation Activity
   i) Develop data similar to Airline Activity (above) for corporate, charter and fractional operations. Record positioning (deadhead) trip frequency, if applicable.
      (1) Utilization strategies employed
      (2) Popular destinations
      (3) Anecdotal evidence of value created (reasons for trips)

c) Company Strategy
   i) Obtain access to company strategic plans and/or interview key employees to gain knowledge of company plans (see below).
      (1) Overall change goals/mission
      (2) Mergers/acquisitions
      (3) New products/territories
      (4) Customer targets
      (5) Unique transportation requirements

2) Analyze data

a) Develop tables showing —
   i) Top 10 airline destinations, with frequency
   ii) Top 10 corporate/charter destinations, with frequency
   iii) Average time away from home base per trip
   iv) Costs per trip/leg or other relevant measure

b) Create maps portraying frequent trips/destinations for both airline and on-demand air transportation operations.

3) Develop interview information

a) Schedule 30 minute private interviews with key employees/air transportation users. These should be done in the subject's office to put them at ease.

b) Create baseline information

- i) Understand the interviewee's area of responsibility
- ii) Individual estimates of —
  - (1) Airline travel frequency
  - (2) On-demand travel usage (breakout by utilization strategy)
  - (3) Destinations/load factors
- iii) Why these trips are critical to accomplishing individual/company goals
- iv) Opinions regarding quality/efficiency of current/previous service —
  - (1) Airline travel
  - (2) On-demand travel

c) Develop projected usage (use 18 month time horizon)

- i) Review all utilization strategies with interviewee
- ii) Ask how they could contribute to his/her organization
- iii) Quantify how, when and where business aircraft may be used to fulfill these strategies
  - (1) Destinations
  - (2) Load factors
  - (3) Special needs
- iv) Why new trips are required and/or their effect on individual/company goals

d) Rank projected uses by frequency and value to the company

4) Create projection

a) Alternatives

- (1) Tabular data by individual or organizational division
- (2) Overall narrative estimates of change
- (3) Graphic presentation of old/new destinations/frequencies
- (4) Maps showing current and projected destinations

b) Analyze Data

- i) Create an aggregate of —
  - (1) Current uses, destinations, frequencies
  - (2) Projected uses, destination, frequencies
  - (3) Special needs
  - (4) Innovative uses
  - (5) Impact of anticipated travel on company goals/objectives

5) Analysis

a) Aircraft

- i) Requirements —
  - (1) Average and longest trip lengths
  - (2) Load factors
  - (3) Cabin size requirements, business equipment and amenities
  - (4) Airport runway/range-payload performance requirements
  - (5) Special equipment (international, etc.)
  - (6) Trip frequency, RONs (remain overnight(s)), simultaneous trip requirements (how many aircraft?

b) Staff

- i) Requirements —
  - (1) Type
  - (2) Skills
  - (3) Number

c) Facilities/Infrastructure
  i) Requirements —
    (1) Hangar
    (2) Office
    (3) Equipment
    (4) Services
d) Financial
  i) Resources
    (1) Capital expenses
(a) Current
(b) Projected
(2) Operational expenses (present as direct and indirect)
(a) Current
(b) Projected
e) Aircraft resourcing options
  i) Traditional, in-house management/operation
  ii) Joint ownership/interchange/timeshare
  iii) Charter
  iv) Fractional ownership
  v) Airlines
  vi) Combinations of the above (the most advanced and challenging option)
f) Impact
  i) See UBV sections above

6) Presentation to management

a) PowerPoint using maps, graphics, table, narrative handouts
b) Current situation
c) Future needs
d) Transportation solutions
e) Options/alternatives
  i) Specifics
    (1) Methods
    (2) Aircraft
    (3) Staff
    (4) Facilities
    (5) Finances
      (a) Capital
      (b) Operating expenses

7) Recommended alternatives

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