The Role of the FBO and Management Functions

Speaker: Randall L. Brookhiser

What is General Aviation? General Aviation is "any type of flight operation other than the Military and Scheduled Part 121 Airlines." To better understand the term "General Aviation" we have to define what an "Aviation Operation" is. An "Aviation Operation" is anything that flies and the support of anything that flies. Next, we see that an "Aviation Operator" is any person(s) or entity that causes, directs, or controls any aviation operation. This exact definition is important because many people think that an aviation operator is a pilot or required crewmember such as a flight engineer. Crewmembers include pilots, flight engineers, and navigators. A pilot operates the aircraft which is part of a larger scope aviation operation. What is an FBO? The term FBO is the aviation business located at an airport known as a Fixed Based Operator. The FBO is the backbone of all flight operations because the business is an essential part of aviation infrastructure. The FBO is the heart of general aviation operations and is essential for even military and airline operations both of which depend on aviation services.

A great amount of change has occurred in the aviation industry since its rapid growth after World War II. Reciprocating round radial engines turning propellers have been replaced with pure turbine powerplants, either turbo-propeller or pure turbojet. The pure turbojet propulsion system has been replaced with the fanjet on private corporate jets and commercial airliners. The fanjet incorporates some propeller advantages with the large fan while producing high thrust output from the turbojet core. Aviation electronics or avionics and instrumentation have changed from heavy and large analog devices to digital microelectronic devices with computer processors at the core. Early radios and amplifiers had vacuum tubes and were heavy and created heat. Later tubes were replaced with much smaller transistors and the capabilities steadily increased. By 2006, the glass cockpit revolution dominated the industry with over 80% of new aircraft being delivered with advanced technology glass cockpits. The cathode ray tubes or CRTs found in avionics equipment such as onboard radar displays are now digitized computer displays on liquid crystal display panels. Heavy and bulky air driven gyroscopes have been replaced with very small light weight attitude sensors that incorporate acoustic sound wave technology or laser technology. Communications have gone from the telephones connected directly by a twisted pair of copper wires to wireless satellite and microwave transmissions making cost effective global communications a reality. In the 70s, weather information was disseminated over telephone lines to facsimile machines that would type out characters with special coding. With satellites, aircraft can now receive near real time color graphics continuously right in the cockpit. The power of the high speed internet has eliminated many travel agencies who marketed airline travel by selling paper tickets. Now you can instantly get the best airline ticket price and secure an electronic ticket online so that you can print out your boarding pass at home or pickup up your boarding pass and check in baggage using your credit card just before going through security.

General Aviation air charter companies started in the 60s and 70s using 6-place light twin engine airplanes such as the Cessna 310 flown by the once famous "Sky King" cowboy pilot. Today, many charters service companies offer air taxi service through several FBO airport locations instead of one.

Corporations now time share jet aircraft using a fractional aircraft ownership management company. This corporate fractional ownership can reduce travel costs with the benefit of flexibility and the ability to avoid security checks. Increased foreign oil dependency and the growth in the world economy has led to much higher fuel costs and the airlines have had to reduce operating costs by acquiring new aircraft that only need two flight crew members instead of three by eliminating the flight engineer position.

The September 11, 2001 attack on the World Trade Center has also changed the aviation industry. The need for airline security after 9/11 was the reason for creating the Department of Homeland Security and the formation of the Transportation Security Administration or TSA. Instead of a technical crewmember, we now incorporate air marshals. In the 70s, airline crews would comply with the demands of a hijacker expecting to land at an airport where negotiators on the ground would defuse the situation or a SWAT team would take the hijackers out with high powered rifles. Today airline crewmembers can receive training and carry their favorite model of Smith and Wesson pistol or other brand. In the 70s most GA small aircraft used 80/87 octane aviation gasoline or AVGAS, while today only 100LL is the only small aircraft fuel available. New aviation fuels are being developed to both replace AVGAS as well as conventional jet fuel. Some of the new fuels are made from algae, a renewable fuel source. The first commercial airmail pilots preserved their lives by bailing out of their bi-wing falling airplane with a parachute. Now many small GA aircraft have aircraft parachute recovery systems to save lives.

Since the Reagan growth economic years in the decade after deregulation of the airlines until the recession of 2008, air travel has about doubled in the U.S. and has increased globally during the same time period despite the September 11, 2001 terrorists attacks. There has been fluctuation in the level of activity, however, in the long term the industry has continued to grow. Here are some reasons why air transportation has grown. More people are alive today than two decades ago and families are spreading out over the country and to foreign countries. Close relatives no longer live in the same town and most people relocate to find employment, usually in larger cities. Despite what we hear on the news, the affluence of Americans and other societies across the globe has steadily increased. Children today have more than their parents had as a young person and much more than their grandparents had. Nearly all of the personal income tax to the government comes from wealthy people making up less than 5 percent of the population. We truly live in a global market. In the 1980s during the Reagan years, our economy greatly expanded because of two factors: the reigning in of government entitlement spending and the development of new markets for U.S. products and services overseas. Many general aviation customers are in or from foreign countries. Airline travel and corporate business travel with shared fractional ownership is cost effective. Depending on the number of people traveling, the cost of a vacation using airline travel to the vacation destination is equal to or less than the cost of traveling by car and paying for additional lodging costs and the loss of productivity with the much greater travel time.

Many countries have experienced significant economic growth and have a high demand for air travel as a result of improved trade relations with the U.S. Time sensitive freight and passenger travel naturally increases as a result. China has expanded its aviation industry so much that the airports have reached capacity and cannot handle more traffic. Just in time inventory is manufacturing strategy to reduce

production costs by eliminating large parts warehouse facilities. The longer parts stay in the warehouse the less the cash flow and the greater the cost of supplying the parts to the production line. Just in time inventory is a system where the parts needed for the assembly line flow in a steady pace from suppliers just before they are needed so that only a small amount of parts is in storage or transit on a production day. Any interruption in the just in time supply line requires the use of air freight transportation services to get an emergency supply of parts to the line to avoid a shut-down of the assembly line. With the internet, many products are easily and conveniently ordered and paid for online. Many items can be found at a good price, but are hundreds or even thousands of miles away. Overnight air freight, even though much more expensive, is being used to get the item to the consumer in short time. Some items are simply time sensitive such as fresh flowers or certain foods. Even legal documents can be shipped by air to close a deal that may run up interest costs by thousands of dollars if not signed and executed immediately. General aviation is able to fly directly to the intended final destination without wasting time at congested hub airports. New aircraft designs incorporating new materials and technologies have increased the efficiency so much that the cost of operation has dropped significantly increasing the demand for use of the aircraft. New Light Sport Aviation rules allow pilots to be certified in much less time and at a much lower cost in aircraft certified as light sport aircraft. This rule has increased the interest in general aviation by the general public to create new customers who may later trade up to larger aircraft and train to a higher level of certification.

The general aviation business has some unique characteristics to consider. Unlike most other businesses, the GA business has little or no ownership or control of the very facilities their business is totally dependent upon. If an airport closes, the GA business at that airport also closes or has to bid for and win a contract at another airport which is no easy task. A great portion of the GA business is federally regulated. The Federal Aviation Administration regulates aviation operations including aircraft, pilots and crewmembers, mechanics, technicians, airports, security, and airspace. Other federal agencies must be dealt with, such as the Transportation Security Administration (TSA), and the Environmental Protection Agency (EPA). In addition, local city or county governing boards have local ordinances and requirements that the GA business has little control over but could greatly affect the business's bottom line. Anytime you have government involved such as in aviation there is what I call "airport politics." Since airport improvements are typically funded with matching local and federal grants with the government providing 90% of the cost and the local government providing the balance of 10%, there is competition for limited tax revenues and some people could exercise political tactics to influence governing board decisions. The GA business tends to become more like a public utility at smaller airports. The public airport governing body expects the GA business to provide a full range of services regardless of whether or not the GA business can provide the service profitably. At the same time the local government expects to receive back a portion of the revenues earned by the GA business to fund the operation of the airport. Typically the local government will receive a fee based on the number of gallons of fuel pumped in order to pay for the fuel tank storage system.

The GA business is affected by adverse weather and environmental issues such as an approach facility out of service, or a runway closed, or if the President of the United States happens to be in town. Anytime aircraft are grounded profits are lost because the fixed costs continue when aircraft are not

flying. The cost of securing assets in a GA business is very high. Even medium sized GA businesses may have to have over a million dollars invested in just a few aircraft. The profit margin for a typical GA business is a much smaller percentage than for your average non-aviation business. In other words, millions of dollars of cash must flow through the company every year to earn a profit of just a hundred thousand dollars. The cost of paying for the initial investment of the aircraft, the depreciation, insurance, and maintenance of the aircraft, without even considering any inflation, can easily exceed a million dollars on a single GA aircraft in one year. The smaller the GA business, the less that business is able to afford to pay increased wages to retain the employee that is gaining valuable technical experience. Therefore, small GA businesses experience a high turnover of employees with high technical skills and experience as they move on to larger companies that offer much greater benefits. Because of the high turnover of employees, the smaller GA business is always training and developing the entry level employee and may not be able recoup the training and development costs before the employee moves on to another higher level position in a larger company. Even larger GA businesses are faced with turnover and the cost of training, but may be in a better position to control the turnover rate and associated costs. Since GA fuels are a very small percentage of the total fuel distilled at the refineries, the cost of GA fuel is much higher, and sometimes more than double the cost of automobile fuel. For some aircraft the cost of fuel is 30-40% of the hourly cost of operating the aircraft and could even be higher when there is a supply problem. Insurance liability costs can be high at a GA business when the level of business activity falls and there is a smaller insurance dollar pool to draw upon. When customer demand falls when the general economy is in a down cycle, competition for the smaller customer base greatly increases. The GA business cannot afford to have their aircraft sit and will lower the price or offer more services to keep or gain a customer even if a profit cannot be made. Most GA FBO businesses have two or more departments or profit centers increasing complexity requiring more management effort. Since GA business profit margins are small and the company has huge asset values even a slight change in the economy affecting demand and affecting interest rates or credit can have a huge impact on the company's ability to generate a profit. One economic change could be triggered by a government policy or tax law such as capital gains or mandatory health benefits or a change in employee taxes.

The components of the aviation industry include flight crewmembers such as pilots, flight engineers, navigators, flight attendants and include aviation support personnel such as FAA certified maintenance technicians and personnel as well as dispatchers and line service personnel. The airport systems and the Air Traffic Control and Air Navigation System set the capacity limits for the aviation industry. Even with an increased market demand for flying, without the vital infrastructure aviation flying will be capped along with all other components of the industry. Aviation Manufacturers potentially could help the industry with more efficient aircraft that can be operated at a lower cost. Lower costs lead to more travel if we have the infrastructure. The percentage of business clientele using scheduled air carriers is declining in my opinion, while the percentage of business clientele using General Aviation is increasing. Fractional ownership has reduced the cost of business travel in private jet aircraft to nearly the same as the scheduled airlines, and the fractional ownership flying is much more enjoyable. Business travelers do not like flying in small regional airlines with young inexperienced crews and they do not enjoy going through security and sitting a long time on the ramp. Vacation travelers do not like the airline service sometimes, but the only alternative is to drive a car or take a bus. Obviously, flying activity creates the

demand for all other aviation services. General Aviation must continue to fly a large number of aircraft flight hours to continue to be viable. The sources of the aircraft that can be flown in General Aviation include ownership including fractional ownership, rental of aircraft with no pilot exclusive use, lease – long term, rental, wet or with fuel, dry without fuel, or a lease back situation, charter with pilot and exclusive use, and Air taxi with pilot and other passengers. Clearly, GA managers must be knowledgeable of legal aspects of ownership, rental, charter, and lease options. Because of the nature of the costs in flying, sharing the use of aircraft to maximize flight hours is needed to keep the hourly costs in check.

Aircraft from various sources can be used for two general purposes: one as a mode of transportation, and two for the purpose of accomplishing an activity while airborne. Aircraft as a mode of transportation activities fall into two categories of Commercial Transportation Activities and Personal Transportation Activities. Some of the commercial transportation activities include a business owner or manager piloting a company owned or rented aircraft and business executives flying in aircraft piloted by a pilot paid by the company. Air Freight is another example of a commercial transportation activity. Obviously freight is transported by air to greatly reduce the transit time. Parts flown to an assembly line at a manufacturing facility is a good example of a reason to fly freight in rather than truck it in. Some freight items such as flowers, food items, or even baby chickens are perishable and must be air freighted. Organs for transplant are flown by air because of the limited time that organs can remain viable for transplant. Another type of air freight is the transportation of items that are top secret and must be kept secure or the item has high value or is very delicate. Items could be legal documents or top secret plans or investigative information.

Aircraft as a platform for accomplishing an activity while airborne fall into two categories of Commercial Flying Activities and Personal Flying Activities. Examples of commercial flying activities for the purpose of accomplishing an activity while airborne include agricultural aerial applications such as seeding, fertilizing, pesticide spraying, cattle management, and crop surveillance. Observation of timber or spotting fish could also be a commercial activity in this category. Sales and demonstrations of aircraft, as well as aircraft use in oil exploration, production, and conservation are examples too. A unique activity for a commercial purpose could even be banner towing and sky writing. Examples of personal flying activities for the purpose of accomplishing an activity while airborne include instructional flying for initial or additional certifications as well as maintaining proficiency. Personal flying activities in the category of accomplishing a purpose while airborne could be simply for recreation and as a sport. There are many different types of new light sport aircraft and in fact we have a new Light Sport Aircraft category and new associated pilot certification and operation regulations to operate this category of aircraft. One purpose of simply flying the airplane without going somewhere and landing is for preventive aircraft maintenance. If an aircraft is not flown on a regular basis engine parts can start to corrode and O-rings and seals can fail due to lack of exercise. I have even heard of men renting an airplane to take their fiancé up in the air to be able to read a “will you marry me?” message on the ground.

Many aviation industry groups have formed over the years that help protect and promote the general aviation industry. These organizations are becoming more important as political leaders write bills that

could greatly harm the GA industry such as charging user fees to use air traffic control or prohibiting the use of leaded fuels. Most politicians do not have the technical knowledge of aviation in some cases and do not realize the consequences of passing certain pieces of legislation or simply do not like GA and favor the airlines. I suggest that you take the time to search the internet for some of the names of these organizations to learn more about their purposes and goals. These Aviation Industry Groups include the Aircraft Owners and Pilots Association, American Association of Airport Executives, Experimental Aircraft Association, General Aviation Manufacturers Association, National Air Transportation Association, National Agricultural Aviation Association, the National Business Aircraft Association, Professional Aviation Maintenance Association and Women in Aviation International. I like the Aircraft Owners and Pilots Association because they have been very successful in lobbying in Congress to prevent harmful legislation from being passed. The AOPA organization provides many online services such as daily e-briefs of what is going on in the aviation industry, and makes air safety resources that help pilots to become safer pilots available.

For many years schools of business management have identified four main management functions of Planning, Organizing, Directing, and Controlling. The size and diversity of services offered at the FBO varies considerably. Very small FBOs at airports serving small towns with populations less than 10,000 people may only have one business owner who is the manager for the entire business while FBOs at large metropolitan airports have hundreds of employees and multiple departments with managers over each department and with additional support staff. Large companies may have multiple business locations at airports across the country. These four functions cannot be neatly divided and scheduled in managing a business, but the work of the manager will necessarily include each of these four functions. I believe that if the four management functions are performed properly, many mistakes can be avoided. One error leads to another error and a chain of errors develops. In our study, focusing on than the right way to perform each function is the best approach rather than focusing too much on mistakes. For example, poor planning and organizing can result in loss of income that puts economic pressure on the manager to violate business ethics by cutting corners in performing maintenance or cheating the customers in some way. “Successful management requires obtaining a certain knowledge and skill set through education and real world experience.” Depending on the size and scope of the business, the manager will require a certain amount of technical knowledge and skill in addition to basic business and finance management knowledge and skills. “Management of a company is the ability to accomplish the goals of satisfying the customer while making a sufficient profit at the same time.” “Management therefore must have a goal orientation.”

Planning is the first and most important function. You may have heard the statement “Fail to Plan, Plan to Fail.” This statement is very true. Planning is the first phase in management but it also continues on a regular daily basis. Your planning needs to be market oriented because, after all, the purpose of the business is to sell services and products that your customers truly need and demand. Planning is part of an ongoing assessment process. You look at where you are going and the progress you have made to analyze what course corrections may be needed, and then you plan for the implementation of the actions needed for the course corrections. After several cycles of assessment and planning you will be able to develop a long term strategy for obtaining long term goals. The goal of any business should be to

maximize profits while maximizing customer satisfaction. Profit is not a dirty word. When your company has higher profits it is able to provide better or expanded services and products in the future. When a business lacks profit orientation and has little or poor planning profits will go down along with customer satisfaction as you begin to cut back in your efforts to provide the best possible service or products. Every business needs a formal written business plan to be able to communicate to investors, financial institutions, other management personnel, and to cast a vision for all employees in the company. Sharing at least an overview of the plan with existing and potential customers may even help to promote the business in marketing. Later we will look at the typical sections of an aviation business plan.

There are many online resources and software packages that a person can obtain to help develop a formal business plan. In the scope of this course we will only look at the basic characteristics and use of a business plan. Let's look at the typical sections of an aviation business plan. The Executive Summary includes a paragraph stating what the new business or major change in an existing business is being presented in the plan. For example: *"…XYZ Flight School will be formed to offer advanced flight instruction at XYZ airport. XYZ flight school will use recently retired airline pilots and career flight instructors to provide commercial and instrument flight instruction leading to commercial single and multi-engine certification and to offer training to experienced flight instructors to obtain an Airline Transport Rating multi-engine…."* The Executive Summary also includes descriptions of such items as the Company and Services, the Market, the key objectives for the business, keys to success, and the mission statement. The Company Summary covers the details about the company including ownership, start-up information, and description of the company location and facilities. The Services section describes exactly what services are being offered and the differences in the product or services offered by the competition. The equipment and technologies employed in the service are described as well as the venues for advertising the business. Future services are included in the Services section as well. The Market Analysis Summary section is where each of the market segments is identified. In this section a target market strategy is stated. Hard data must be included in the report to back up the statements made. Market trends, needs, and growth complete a total analysis of the company's ability to satisfy customer needs and make a profit. Competition also has to be identified and factored into the Market Analysis Summary section.

The Strategy and Implementation Summary covers how you are going to execute the business plan to assure success in the future. Strategy rather than tactics are employed. Strategy is planning for the long term successful realizing that initial investments and early success will lead to future opportunities and greater success in the future. Tactics are actions taken in time critical situations for an immediate result. Tactical decisions make produce an immediate and beneficial result but in the long term may have an adverse effect. For example, lowering the flight instruction rates to undercut the competition may immediately improve the cash inflow but may cause the quality of the service to go down in the years ahead as revenue may not be available to maintain or upgrade equipment, eventually resulting in a loss of business to a higher price competitor offering a better service. The last section is the Appendix which contains the technical or supporting documentation that is referenced in the other sections of the plan.

Once the initial planning in establishing or expanding a business is complete, the company managers must effectively organize the company for proper function and on a daily basis employ the function of organizing in the details of managing the business. In a later unit we will look at various formal company organization structures, but for now the concept of organizing as a function must be learned. One of the main purposes of organizing is so that all of the work in the business is spread out and divided up in such a way so as to have an efficient and effective system. The concept of division of labor is very important. Manager to employee vertical relations, as well as employee to employee horizontal relationships, breakdown when the work is not divided fairly or inefficiently. Obviously if one employee has to do less work and has less responsibility than another employee but earns the same pay as the other employee, problems will develop. Under using the talents of personnel can cause lower company performance. One important concept in management is the concept of responsibility authority parity. The manager cannot waste his or her time by doing some of the subordinates' work or by trying to micro-manage every detail of the work and therefore must hand over the work to subordinates. The more responsibility handed over, the more authority must go along; this is the parity of responsibility and authority. This handing over work is what is called delegation. Delegation is getting work done through others. The responsibility or obligation to do the job is delegated along with an appropriate amount of authority or right to do the work. Coordinating is the work of directing and controlling several operations at the same time to achieve the results that benefits the whole. This often involves setting priorities and schedules so that every task is completed without interfering with other tasks. Controlling is a very important management function, but is not the same as delegating or coordinating. Controlling is setting limits and standards in a business activity to keep the company on track to reach the goals of the company. For example, controlling on the quality of flight instruction service provided by a flight school can be accomplished by taking action to replace or retrain an instructor who fails to have their students achieve the first time pass rate of 8 out of 10 students passing the FAA Practical Test. Controlling involves setting goals or standards, analyzing information sources of a business activity, and deciding on a course of action to maintain or bring the activity outcomes within the acceptable limits or to reach the set goals.

The leadership style of management can have an effect on the success of managers' efforts in reaching the primary goal of satisfying the customer while maximizing profits. The autocratic leader "my way or the highway" is one extreme. The autocratic leader is not open to hearing, let alone accepting, creative ideas or suggestions from subordinates. The autocratic leader is the sole provider of new ideas and many times misses out on a better idea that may come from a subordinate. The opposite style of leadership is when the manager tries to keep everyone happy. Really this "therapeutic" leader simply wants everyone to like him or her. This type of leader is easily controlled by certain subordinates who know how to complement the leader or threaten the leader. Other subordinates often are offended by any favoritism that occurs as a result of the control. Some leaders are charismatic and often become a narcissist, someone who loves himself or herself, because they are a hero in everything they do. The best management style has some characteristics of the three styles mentioned. The ideal style is for the manager to encourage subordinates to offer ideas and suggestions in a fair and balanced forum not showing favoritism to any person. The manager should not make a decision by a democratic vote on the course of action by the subordinates in every case, but should help lead the subordinates to come to a

consensus as to the best course or courses of action that should be taken to benefit the whole company. The final decision on a significant item will have to be made by the manager that is ultimately responsible for the consequences of the decision. Decisions of low significance can be made by subordinates with manager guidance.
