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Nebraska's Community Airports: A Study of Organizational, Financial, and Management Practices: Summary report

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Nebraska's Community Airports: A Study of Organizational, Financial, and Management Practices

Summary Report
November 2004

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Introduction

Rural and non-metropolitan public-use and general aviation airports play a critical role in the economic development of communities in agricultural states and states with dispersed populations. Not only do they serve as a vital link to markets and resources for both agricultural and non-agricultural businesses operating in the community, small airports provide needed transportation options for area residents. These airports also perform an important function in providing needed health and medical transport services in non-metropolitan locations. Airports can be described as critical "public assets" with needed services to the local community (Penney 2003).

This report summarizes information collected on Nebraska airports as part of the 2003 Small Aircraft Transportation Systems (SATS) project undertaken by the University of Nebraska at Omaha's Aviation Institute. Faculty from the Center for Public Affairs Research and the School of Public Administration conducted this study titled *Nebraska's Community Airports: A Study of Organizational, Financial, and Management Practices* as part of the SATS project. This study consisted of an inventory of organizational approaches to airport governance, and a survey of airport managers and officials in non-metropolitan communities (excluding Omaha and Lincoln airports). This report summarizes the organizational structures and procedures used to govern, finance, and operate public-use airports in greater and rural Nebraska. The report's latter portion describes survey findings and implications and concludes by listing a set of recommendations.

Highlights from the report include:
- Nebraska airports have a fair degree of flexibility regarding their organizational structure.
- The majority of Nebraska airports are governed by a municipal airport authority.
- Only three Nebraska airports are privately owned.
- Nearly all Nebraska airport officials believe their airport is important to the local community and local businesses.
- The perception of the local airport being important and the ability to generate net revenues make airport officials more likely to support increased local taxes for airport improvements.
- Airport officials most often consider fuel, hangars, scheduled airline services, and medical transport services among their most important services offered.
- Fixed Base Operators (FBOs) are perceived to help the airport operate more efficiently. Conversely, Fixed Base Operators also benefit from the way the airport is managed.
- A significant gap exists between the percentage who believe that understanding details of the budget and insurance is "very important" versus those who currently understand these items "very well".
- Airport managers and governing board members each want to play an active role in completing various airport activities, including those typically considered the responsibility of a specific party.
- Airport officials believe major areas for airport improvement include promoting the airport and generating new business along with developing the infrastructure on the airport property.

The first portion of this report analyzes the various organizational options employed by Nebraska localities with airports in terms of their strengths and weaknesses and the implications for state aviation policy. This information helps state government agencies identify best practices in the management of these airports in order to provide technical assistance and support. In addition, state government needs to learn what policies create a positive regulatory environment that facilitates viable local and rural airport management and development.

Part I: Organizational Structures of Nebraska Public Use Airports

Summary of Organizational Structures Employed in Nebraska

With very few exceptions, local governments such as municipalities, counties, and special districts, own and operate public-use airports in Nebraska. Local governments employ a range of organizational arrangements and structures to manage airport operations and facilities. While Nebraska State Statutes and interpretations by the State Supreme Court do not delegate local governments in the state with significant levels of autonomy in terms of governmental operations (Krane and Blair, 1999), statutes do provide a variety of organizational options and flexibility for communities, at least in terms of organizing and managing airports. These options include organizationally integrated airport departments and agencies, self-standing single-purpose special districts or authorities, and inter-local agreements and partnerships.

Table 1 lists the organizational structure of Nebraska public-use airports by airport size. The Nebraska Aviation System Plan provides a classification scheme for the nearly 90 public-use airports in the state, ranging from larger "National" airports to relatively small "Limited" airports. Community airports receive their classification category based on a set of factors that reflects its aviation requirements, including population, income, transportation network, business and economic characteristics, and pilot and aircraft registrations.

Several important observations can be made from Table 1 regarding the overall management of public-use airports in Nebraska. Of the 88 total airports, the public sector owns and manages all but three airports. Privatization of Nebraska airports, at least in terms of ownership, is not evident. However, there is evidence that a number of municipalities, often of medium size, depend on private individuals, especially fixed-base operators, to manage all or part of airport operations. (See Part II regarding the Airport Officials Survey.)

Table 1 shows that municipalities manage 72 airports, or 82 percent of the total; while counties manage less than 10 percent. The governance of Nebraska airports by local governments follows a familiar American model: owned, managed, and operated by a branch of a local or regional government (DeNeufville and Odoni, 2000: 219), especially by municipalities (Horonjeff and McKelvey, 1994: 45.) Inter-local agreements or intergovernmental partnerships manage just two airports in Nebraska, and the State operates 3 small airports. Secondly, airport authorities (either municipal or county-based) provide oversight to 59 airports, 67 percent of the total. Finally, while airport authorities comprise the most dominant organizational structure, airports in rural communities are also agencies of local government (municipalities or counties) or in inter-local agreements for over one-fourth of the time (23 airports, 26 percent.)

Of the 39 largest airports in Nebraska, or those with national and regional service areas, city-based authorities make up the largest percentage (69 percent.) City airport departments are a distant second at 21 percent. The smallest 49 airports appear to be mostly managed (51 percent) by city airport authorities.

In terms of managerial effectiveness, there are strengths and weaknesses for the organizational structures used by the majority of communities in non-metropolitan Nebraska. The following

section discusses these characteristics in general, bringing in selected provisions from Nebraska State Statutes. Discussion of state policy implications of these organizational structures follows with recommendations.

Table 1: Organizational Structure of Nebraska Public-Use Airports by Size

Size of Airport*

Structure	National	Regional	Local	Limited	Total
City Authority	9	18	13	12	52
City/Village Department	7	1	4	8	20
County Authority	1	2	2	2	7
County Department			1		1
State-Owned & Operated			2	1	3
Joint (Inter-local Agreement)	1		1		2**
Private Ownership			2	1	3
Total	18	21	25	24	88

* Size of airport determined by Nebraska Aviation System Plan

** Stuart-Atkinson Municipal Airport; Western Nebraska-Wm. B. Heilig Field (Scottsbluff County Airport Authority)

Source: Nebraska Department of Aeronautics

Characteristics of Primary Airport Organizational Structures

This section briefly comments on the strengths and weaknesses of the dominant organizational structures employed in rural and small Nebraska communities. While the municipally owned and operated airport continues to be the dominant organizational form in the U.S., and Nebraska does not appear to be an exception, especially among smaller communities, there has been a slow but steady movement in the adoption of the single-purpose airport authority structure (Wells, 2000: 393.)

Airport Authority. In general, airport authorities function as quasi-independent agencies, resulting in significant independence from direct local government control (Wells, 2000: 392). The growth of authorities as a method of airport governance results from some specific strengths of this organizational form. Airport authorities can:

1. Spread the tax base.

2. Enable decision makers to focus on technical issues.

3. Provide for economies of scale when localities employ collaborative approaches.

4. Focus on implementing realistic rates and charges (Wells, 2000: 393).

Nebraska statutes mandate that airport authorities operate like a separate body politic, conducting themselves as a public interest corporation. Nebraska State Statues (Sec. 3-502) provide for an independent city airport authority board with "full and exclusive jurisdiction over all facilities owned or thereafter acquired by such city for the purpose of aviation operations, air navigation, and air safety operation." Section 3-611 gives similar powers to county airport authorities. State statutes also provide for the creation of joint airport authorities under the Interlocal Cooperation Act (Sec. 3-702).

Airport authorities operate as single-function special districts. Nebraska is one of the leading states in terms of the number of airport authorities defined as special districts, according to the Census of Governments (Smith and Wachal, 1999.) Historically, Nebraska employs an extensive number of special districts in its government structure. Nationally, the state ranks high in the total number of this form of local government.

Airport authorities have a range of local financing options. Financing of operations and improvements may be done through rates and charges and airport authorities may levy local property taxes within state budget lids of 3.5 cents per $100 valuation (Sec. 3-504, 12). Additional levies above the lid (to maximum of 7 cents per $100 valuation) need to be approved by the local government body. Airport authorities also have the ability to issue bonds without local government approval (Sec. 3-507).

Airport Department or Agency. In this arrangement, the airport typically consists of a department that is an integral part of the organizational structure of local government. Generally, under this approach, the airport may be subject to more control by city officials than the independent airport authority. For instance, airport funding and support must compete with other community priorities. In addition to general aviation laws and applicable state statutes, local government airport agencies may be subject to general state statutes that apply to the class of city in which the agency is located.

Financing of operations and improvements is normally done through the city or county budgeting process, including rates, charges and property taxes. The mayor and city council (or city manager in Council Manager Cities) will exercise direct control over the budget and operations of an airport department. Policy direction is provided by the city council, sometimes by a separate airport commission, or an advisory board (Wells, 2000: 392).

Chapter 18 Article 15 in the Nebraska State Statutes authorizes any city or village to acquire property for the purpose of an aviation field and to operate such a facility. Cities and villages also have authority to exercise their police function over their airport (Sec. 18-1715).

Nebraska cities, however, can be creative in how they structure an airport department. In at least one city, while the airport may technically function as a city department, the airport may be

organized as a nonprofit corporation with the city council serving as the board of directors. The Kearney City Council meets once a month as the municipal airport corporation; then adjourns to conduct business as the City of Kearney. An Airport Advisory Board with appointed local citizens provides additional input to the city council and city manager.

Summary and Implications

It is clear that Nebraska communities employ a variety of organizational structures in the management of their public-use airports. There is not a single best organizational approach. The most appropriate organizational structure for an airport in a given community is a function of such factors as local custom, political tradition, and institutional culture. Clearly Nebraska local governments select the quasi-independent airport authority as the organizational structure of choice for governance.

Even though local governments, especially municipalities, govern the vast majority of public-use airports in Nebraska, local governments in the state appear to modify and use some degree of creativity in utilizing the two basic approaches: local authority or city department. While Nebraska does not give municipalities significant discretion in the operation of many local government functions and responsibilities, local governments seem to be at least moderately creative in the governance of airports. The local airport authority, with a detailed set of state statutes and significant autonomy, and the local government airport department, with few specific statutes and much latitude for creativity, appear to be opposite poles in a continuum of organizational structures.

The variation of organizational structures adopted by local airports, however, can potentially affect the manner in which the Nebraska Department of Aeronautics (NDA) assists localities in the growth and development of airports. Identifying and cultivating stakeholders in local airports is critical to the state agency. Sometimes NDA will need to work with city councils and other times with the authority boards. The regulatory effectiveness of the Department of Aeronautics may also be limited by this variation of local airport structures.

Historically, many state aeronautic agencies have not had strong and continuing developmental relations with local airports because of the influence of the federal government in this policy area. The interstate nature of air transportation permitted the federal government to initiate and maintain an influential role in state policy and planning and development. This allowed local airports to work directly with the feds, and as a result, allowed local airports to function more or less independently of state agencies. Many states, until very recently, have done little to provide funding and support for local airports (Horonjeff and McKelvey 1994: 36.)

Unlike many states, however, the Nebraska Department of Aeronautics appears to have taken a more active role in the development of local airports. Since the NDA was created in 1945, in some cases years before other states, the Nebraska aviation agency has had a longer relationship with local airports. This state agency plays an active role in the development of aviation and airport policy in the state. The NDA prepares an Annual Airport Capital Improvement Plan, and provides funding to many local airport projects.

In summary, an important function of state government is to provide technical support and assistance in the management and operation of local airports, regardless of the organizational structure employed. Rather than attempting to find a single, best approach to local airport governance and management, the Nebraska Department of Aeronautics needs to help localities learn to help themselves. A "best management practices" approach is a step in that direction. In addition, NDA could help communities explore the potential of collaborative airport organization and management. Often management efficiencies result from these inter-local organizational arrangements. Many Nebraska communities already engage in partnerships for public service delivery, but at this time only two joint airports exist in the state.

Part II: Survey of Airport Officials

Introduction

Information regarding airport organizational structure provides a base for agencies assisting the planning and development of Nebraska airports. Beyond that, information from those directly involved in airport decision making provides additional critical viewpoints for improving the success of agency efforts. This portion of the study strove to identify patterns in the perceptions of airport officials regarding the organizational, financial, and management practices employed at their local Nebraska airport.

A written survey of airport officials provided the means for identifying this information. The survey's structure asked respondents about factual airport information such as services offered, perceptions of the airport, and preferences for various alternatives given realistic, hypothetical situations. These measures provide critical information regarding the airport's structure and needs, along with insight into the viewpoints held by airport officials. The following sections of this report detail the survey procedures, findings, and implications.

Procedures

City selection
We used the 2002 Nebraska Aviation System Plan as a guide in determining which Nebraska airports to include in the study. This report classified Nebraska's airports using the size categories of National, Regional, Local, and Limited. We selected all Nebraska's airports in the three larger size categories for the study with the exception of airports located in Nebraska's metropolitan centers of Lincoln and Omaha. We excluded metropolitan airports because the scope of the Small Aircraft Transportation System (SATS) project pertains more directly to non-metropolitan communities.

We also included a representative sample of airports from the smaller "Limited" size category for the study. The Limited size category has the largest number of Nebraska airports, but these airports have relatively few services and limited infrastructure since they tend to be located in areas with reduced demand due to low population densities. Somewhat larger airports offering expanded services typically are located within a reasonable distance. We decided a sample of airports in the Limited size category would be adequate for obtaining viewpoints representative of all Limited airports. We randomly selected 10 of the 26 Nebraska airports with a Limited classification for the study. The study surveyed a total of 70 airports. See Appendix A for a detailed list of airports included in the study and their size classification.

Survey instrument
The design of the survey instrument was a collaborative effort. After initial meetings set the scope, goals, and subject areas of the project, the Center for Public Affairs Research composed an initial draft of the survey. Representatives of the Nebraska Department of Aeronautics and the Aviation Institute at the University of Nebraska Omaha then provided input. These individuals provided the appropriate terminology and suggested wording that better reflected the information sought and reduced ambiguity. They also recommended several additional topic areas to include.

After these changes, each individual had another opportunity to review the survey and ensure its suitability. We sent the survey instrument to three city administrators as a pretest. They indicated the survey seemed easy to understand and relevant for the current situation in Nebraska.

We designed the survey instrument to reflect current issues in the aviation industry for Nebraska. The survey dealt largely with perceptions of the existing facilities, the knowledge of airport officials, and identifying training needs. In general, we designed survey questions to gain information on how Nebraska airports are governed, financed, and operated.

The survey included specific sections about the airport's local community, services, facilities and infrastructure, budget and finances, and responsibilities of the airport officials. In addition, we included a section of general, open-ended questions to identify training needs, areas where the airport could improve, and areas where the airport was performing well. Finally, select background questions learned more about the characteristics of airport officials such as their number of years serving the airport and whether or not they were a licensed pilot. See Appendix B for a copy of the survey instrument.

People receiving the survey and delivery method

The scope of the study included surveying those officials associated with airport management and decision making. In addition, we considered the viewpoints of city managers/administrators regarding their local airport to be relevant. We compiled the names and addresses of city managers/administrators for cities included in the study from a League of Nebraska Cities database. The Nebraska Department of Aeronautics supplied a database of airport officials consisting of airport managers, governing board members, including attorneys, and Fixed Base Operators (FBOs). The database included the names, addresses, and telephone numbers of airport managers, a board contact person, and FBOs but did not include the mailing addresses for individual board members. The lack of individual mailing addresses presented a dilemma for sending the written questionnaire to each governing board member.

The database included a valid email address of an airport contact person for 47 of the 70 airports. We sent each contact person an email to inform them of the project and upcoming mail survey. The email requested that a list of names and addresses of governing board members be compiled, or for the contact's assistance in distributing a packet of questionnaires to the appropriate people. The email received a good response, with 29 cities (62 percent) replying. A large majority of respondents (23 cities – 79 percent) preferred that a packet of questionnaires be mailed to them, which they could distribute at their next airport board meeting. The other six cities compiled a list of board member names and addresses; hence, we mailed surveys directly to these individuals.

Given the overwhelming preference for contact people to distribute packets, we decided that mailing packets containing individually labeled envelopes would be an acceptable way to send the questionnaires. However, an attempt was made to identify some specific addresses as it was feared that not all of the contacts would take the time to distribute packets. Using the names and phone numbers included in the database and an electronic telephone directory (www.switchboard.com), we identified the "best" possible mailing address. Some airports or airport authorities had specific addresses, where we mailed individual questionnaires. Airports

governed by cities or counties often had specific office addresses for their board positions (city engineer, county clerk, etc). Finding these "best" addresses effectively reduced the risk or relying solely on the aide of airport contacts to distribute packets of questionnaires.

Figure 1 summarizes questionnaire mailing methods. We sent packets of questionnaires to 46 cities (66 percent). Five cities received mailings using the address provided in the database and we identified "best" individual addresses for 19 cities (27 percent). The percentage of individuals receiving questionnaires via each method was similar. The percentage having the survey mailed to the address provided by the database was somewhat higher as the database included an address for each airport manager; thus, we sent the manager an individual envelope except when s/he was the designated contact person and received a packet of surveys for distribution.

Figure 1: Number and Percent of Airports and Individuals Receiving Questionnaires via Various Mailing Methods				
	Airports		Individuals	
Method	Number*	Percent	Number	Percent
Packet of individual surveys	46	65.7%	273	60.4%
Address provided by database	5	7.1%	75	16.6%
Individual address identified	19	27.1%	104	23.0%
Total	70	100%	452	100%
* The number of airports is tallied by the primary delivery method. Airports may have more than one delivery method as FBO addresses were provided and sent individually regardless of whether that airport was sent a packet.				

We mailed the majority of surveys on December 1, 2003. Each person responsible for distributing a packet received a reminder letter two weeks later, requesting that the surveys be distributed as soon as possible or that they remind everyone to complete the survey if surveys had been distributed previously. We mailed Fixed Based Operators a shortened version of the survey containing only those questions relevant to FBOs on December 16, 2003.

Those people sent individual surveys received a reminder letter including another survey around December 18, 2003 if they had not already returned the survey. We placed a survey number in the upper right hand corner of each survey as a means of tracking respondents for this purpose. We made some adjustments to the individual mailing addresses at this time. When no responses had been received from a city whose surveys had been sent to an airport or airport authority address, we used the electronic phone directory to find home addresses for these individuals. In addition, only a handful of attorneys had responded, so we had reason to believe that attorneys did not regularly attend board meetings at which contact people distributed the packets of questionnaires. Thus, we identified home or work addresses for half of the attorneys who had previously been sent a questionnaire in a packet. Each adjustment proved effective in increasing the number of responses from these individuals.

Figure 2 provides a breakdown of survey recipients. The majority of surveys went to governing board members (61 percent). All 70 airports had one person designated as the airport manager. The database listed an attorney for nearly every airport. Some city managers were also listed as the airport manager or as serving on its governing board. The FBO contact name matched the airport manager in 21 cases; therefore, they were sent the airport manager survey. The shortened FBO survey was sent to 28 people; thus, a total of 49 FBOs received a survey.

Figure 2: Number and Percent of Individuals Receiving Questionnaires by Airport Position Category		
Position	Number	Percent
Airport Managers	70	15.5%
-- 6 were also city managers/administrators		
-- 21 were also listed as a FBO		
Governing Board Members	274	60.6%
-- 5 were also city managers/administrators		
Attorneys	61	13.5%
City Managers/Administrators	19	4.2%
Subtotal	424	93.8%
Fixed Base Operators (FBOs)	28	6.2%
Total	452	100.0%

**Results**

Respondents and Cities/Airports Represented

Of the 424 surveys sent, 173 were returned by the analysis cut-off date of January 13, 2004. Thus, the survey response rate was 40.8%. (Responses from the shortened FBO survey were not included in the data since the FBO survey did not contain all questions, only those relevant to FBOs.) In actuality the response rate may have been somewhat higher, as cities sent packets of questionnaires might not have been able to distribute the surveys to each individual. Of the 70 airports surveyed, 58 or 83 percent returned at least one survey. Of the remaining 12 airports, eight were sent packets. If these packets were not distributed, approximately 10 percent of the intended airport officials might not have received their survey.

All 16 surveyed airports with a National size classification returned at least one survey, as did 17 of 20 Regional airports, 19 of 24 Local airports, and 6 of 10 Limited airports. Figure 3 shows that these airports are located throughout Nebraska. Analyzing the 170 valid responses (three were invalid—two believed they had inadequate knowledge and one was deceased), 51 respondents were from National-sized airports (30 percent), 58 were returned by Regional airports (34 percent), 42 were from airports in the Local size category (25 percent), and 19 respondents were from Limited airports (11 percent). See Appendix C (page 40) which provides a frequency table for each survey item.

The respondents consisted of 99 board members, 41 airport managers, and 30 other officials (city managers/administrators, attorneys). This represents 58 percent, 24 percent, and 18 percent

respectively. (Appendix C, page 36) These airport officials had served for an average of 10.5 years, ranging from 6 months to 40 years. Roughly one-third had served for less than 5 years and another one-third for 15 or more years. (Appendix C, page 38) A little more than half of the respondents were licensed pilots. A considerable number of these had not flown in the last year or were inactive. (10 percent – Appendix C, page 39) A little more than one-third had flown 100 hours or more in the last year. Pilots averaged 96.4 hours of flight time annually.

Figure 3: Nebraska Airports Responding to the Survey
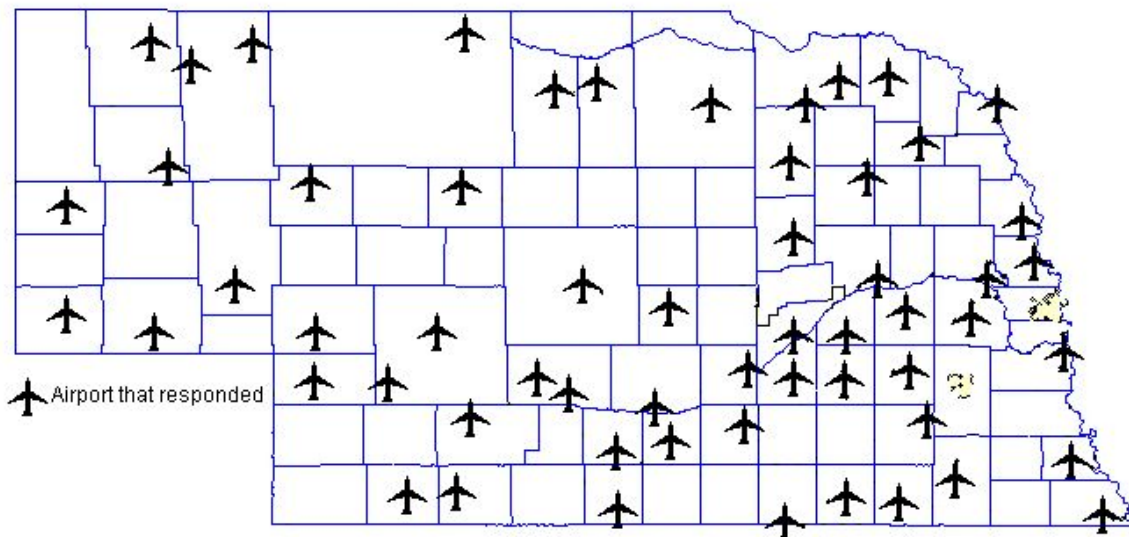
Local Community Section

In general, the respondents indicated their airports were a vital part of their communities. The airport was considered very important for the local community by 69 percent of respondents and 62 percent said the airport was very important to local businesses. For transportation, 83 percent of respondents indicated the airport met the needs of local residents at least reasonably well. The vast majority said the airport was integrated into community planning and had a strategic plan.

Airport size was a large factor in the responses given to community-related questions. Appendix D contains a description of the relationship between the survey questions and explanatory variables such as airport size. Larger airports tended to have a strategic plan and indicated that strategic planning and community integration were desired if not already achieved. In addition, larger airports tended to be more important to the local community and local businesses. (Appendix D, page 1)

Larger airports did not meet the transportation needs of residents better than smaller airports however. This appears somewhat surprising as larger airports have more means of satisfying travel demands. It is believed that respondents answered this question on separate scales based on whether the airport had scheduled airline service. Smaller airports without airline service may have thought the airport was doing a good job given it had no scheduled service whereas larger airports with airline service might have believed they could do better by increasing passengers or offering more flights to more destinations. Thus, respondents from larger airports analyzing their airline service likely answered the question differently than those from smaller airports where

13

airline service was not applicable. Pilots and those having served as an airport official for a longer time believed the airport was meeting transportation needs significantly better than non-pilots and those with relatively few years of service.

Airport Services Section
The number and type of services provided are factors that identify an airport's scope. When asked to indicate the top service provided to the community, common responses included agricultural services (23 percent), fuel (22 percent), scheduled airline service (18 percent), and medical transport (16 percent). (Appendix C, page 7)

Comparing services considered in the top three of importance to the community provides additional insight. Scheduled airline service, fuel, and cargo/air freight services were typically listed in the top three services. See Figure 4. Scheduled airline service and cargo/air freight services were not offered by many airports but were highly important in airports having those services. Charter, also offered at relatively few respondent airports, was included in the top three services less frequently, often being surpassed in importance by fuel, hangars, or medical transport services. Flight training and ground transportation were offered at the majority of respondent airports but they were listed in the top three services provided in less than 10 percent of those cases.

Figure 4: Percentage of Respondents Having Certain Airport Services and Percent Indicating that a Service was one of the Top 3 Services Provided
(Given that respondent answered 'yes' that the airport had the service)

Service was one of the top 3 services offered (percent) — Percent of Respondents having the airport service
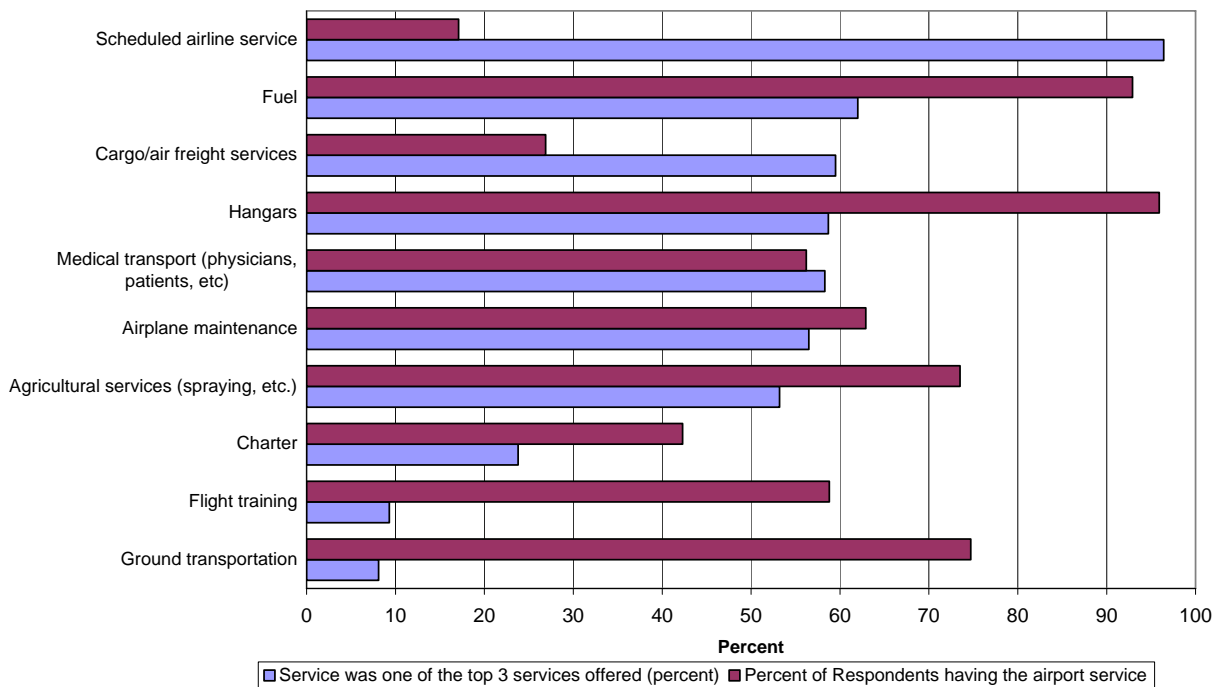
Respondents were asked to indicate the importance of each service, whether or not the airport currently had the service. Airports having fuel, scheduled airline service, hangars, and airplane

maintenance rated these services as "very important" in nearly all cases. See Figure 5. Conversely, airports having charter rated it considerably less important. This would indicate that some respondents felt that charter services were not being highly used or being used effectively, perhaps generating relatively little revenue, and thus deemed charter as less important than other services. The importance of ground transportation and flight training was again relatively low compared to other services.

Figure 5: How important was it that an airport have a service if the respondent indicated the airport currently had the service
(As shown by the average response to Question 7 - Lower numbers show increased importance)

Service	Value
Charter	1.48
Ground transportation	1.25
Flight training	1.25
Cargo/air freight	1.24
Agricultural services (spraying, etc.)	1.16
Medical transport (physicians, patients, etc.)	1.11
Airplane maintenance	1.06
Hangars	1.05
Scheduled airline service	1.04
Fuel	1.03

1.00 — Very Important
2.00 — Somewhat Important
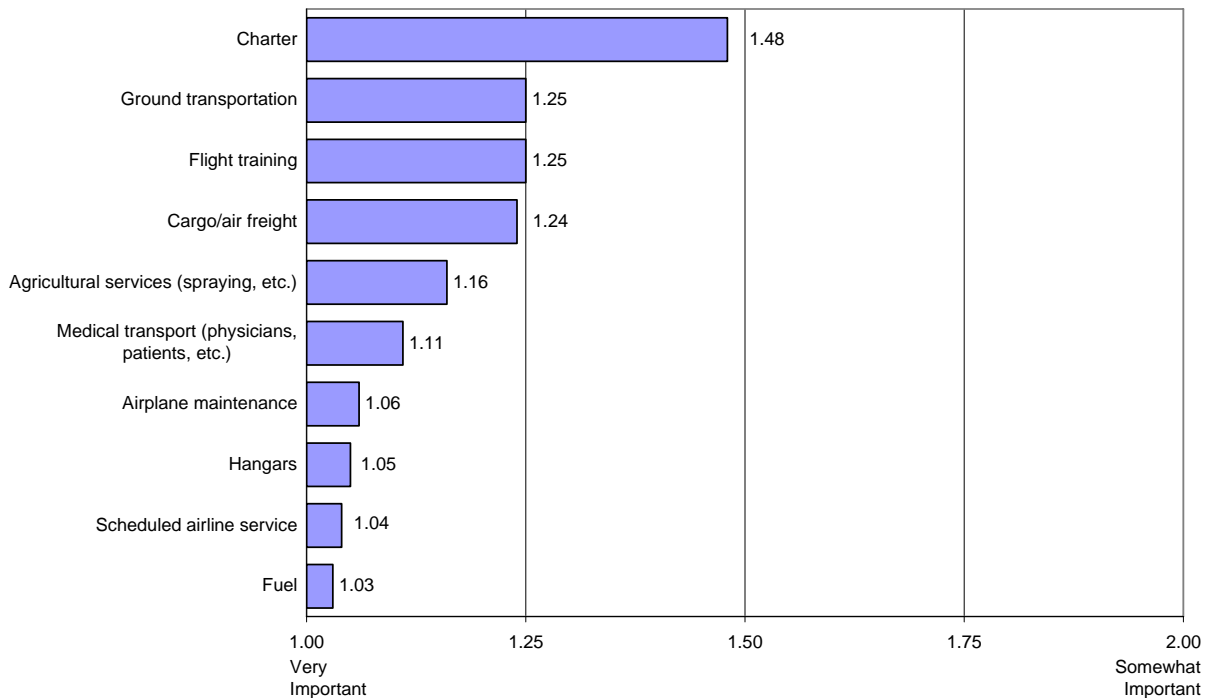
The importance of services questions in effect created a "wish list" for services not currently provided. Medical transport was the most highly desired service airports did not currently have. The critical nature of timeliness in flying patients out or bringing physicians in increased the important of this service. Flight training, ground transportation, and airplane maintenance were also relatively highly desired. This tends to go against the previous responses of airports having flight training and ground transportation which indicated these services had relatively low importance. Perhaps the perception is that these services are desirable to have, but once provided, are not used real often or are less important compared to other services. Not surprisingly, scheduled airline and cargo services were considered relatively unimportant as many airports serving small populations could not generate sufficient demand for such services, which are likely offered within a reasonable driving distance.

With the exception of agricultural services, larger airports tended to provide the services more often. While this is not surprising, it is noteworthy that larger airports rated all services other than agricultural services as more important. Even basic airport services such as hangars and

fuel, sometimes the only services offered by smaller airports, were considered more important by larger airports. (Appendix D, page 2) Medical transport, serving the common good of community residents, was also considered more important by larger airports. Agricultural services were considered more important by board members, as compared to airport managers, and by those having served fewer years. Flying related services such as flight training, ground transportation, and airplane maintenance were more important to pilots. No significant difference was found between pilots and non-pilots regarding the importance of fuel and hangars, likely due to all respondents knowing the revenue-generating potential of these services.

Smaller airports tended to include hangars and agricultural services in their top three services offered. Services associated mainly with larger airports (scheduled airline service, cargo, charter) were typically included in the top services of larger airports. In addition, airplane maintenance was a top service in larger airports. Airplane maintenance was also a top service to pilots while non-pilots tended to include flight training in their top three services, which both seem logical. (Appendix D, page 3)

About 60 percent of respondents served at an airport that had a Fixed Base Operator (FBO). Nearly all of these respondents felt the FBO helped the airport operate more effectively and that the FBO benefited from the way the airport was operated (Appendix C, pages 11-12). Larger airports tended to have a Fixed Base Operator.

The majority of respondents at an airport not having a FBO felt their airport could operate more effectively with a FBO (57 percent). Board members and those respondents having served fewer years believed the airport could be more effective with a FBO. 15 respondents also served as a FBO for their local airport. These people tended to be pilots and in all cases also served as the airport manager. Thus, it is somewhat surprising that other airport managers did not believe the airport could be more effective with a FBO. Perhaps they viewed the FBO as a competitor or simply believed that a FBO would not provide much assistance to existing operations.

Facilities and Infrastructure Section
Respondents indicated that knowing about airport facilities was important and that they had a good general level of knowledge. It was most important to understand runways, lighting aids, and taxiways. More than 75 percent of respondents indicated that knowledge of these items was "very important" and more than 60 percent indicated they knew each of these items "very well". Pilots said it was more important for them to understand facility items and they did understand each item significantly better than non-pilots. (Appendix D, page 4)

There were no significant differences in knowledge of facilities between board members and airport managers. It was hypothesized that managers would understand better since they tend to work with the facilities and grounds more directly. The number of years experience was not a large factor in differentiating knowledge levels either. Larger airports did understand automated weather systems better, likely because some smaller airports have no such system in place.

Respondents would rely heavily on state and federal grants if infrastructure needed to be expanded. More than 90 percent of respondents said state and federal grants would be "very important" for expansion compared to 48 percent for local debt financing and 60 percent for

local taxes. (Appendix C, page 20) Respondents from larger airports, those with more experience, and pilots tended to say local funding sources were more important. Respondents were more likely to indicate local sources were "very important" when they viewed the airport as being "very important" to the local community or local businesses (Appendix B, Q2 and Q3) and when they believed increasing air traffic would generate net revenues (Appendix B, Q22). Thus, if the airport was viewed as beneficial or able to attain net revenues, respondents cited an increased importance on local funding sources, implying a willingness to pursue funds from such sources as necessary, especially if no state or federal funding was available.

Most respondents (69 percent) believed their airport had "about the right amount of infrastructure" for supporting current airport services. (Appendix C, page 21) Only 4 percent thought they had more infrastructure than necessary while a considerable 27 percent believed they had too little infrastructure. The characteristics of those indicating they had too little infrastructure were not significantly different than other respondents with regard to airport size, position, years served, or being a pilot. Thus, the view of having too little infrastructure is somewhat broad and spans categories, not being limited to certain subgroups of respondents such as airport managers, small airports, etc.

Budget and Finances Section
The airport's budget was an important item for officials to understand. About 4 out of 5 respondents (82 percent) said it was "very important" to understand the budget. However, about half that number (2 out of 5 or 43 percent) indicated that they understood the budget "very well". The governing board typically determines the airport's budget. Board members indicated that it was more important for them to understand the budget but their understanding of the budget was not significantly different from airport managers. Experience was not a significant determiner of budget understanding, contrary to logical expectations.

Most respondents (83 percent) felt they understood airport revenues and expenses equally well. The remaining respondents tended to understand expenses better by nearly a 3 to 1 margin (Appendix C, page 22). It followed that more respondents wanted to learn more about revenues as 70 percent said they would like additional information on revenues compared to 54 percent requesting additional information on airport expenses.

Regarding operating funds, respondents wanted the level from non-aeronautical income, hangar rentals, and non-aviation property rentals to increase and the level of tax support, landing fees, and fuel flowage fees to remain the same. Larger airports wished to increase non-aeronautical income, landing fees, and non-aviation property rentals while smaller airports stressed increasing hangar rents. Pilots tended to favor increasing tax support, leaving flight related items such as landing fees, fuel flowage fees, and hangar rentals unchanged. Thus, pilots would sooner see others support the airport rather than paying increased expenses when they use the airport.

A similar pattern emerged when asking about the first choice in increasing operating funds. Pilot would stress tax support while non-pilots would try to attain additional landing and fuel flowage fees and hangar rents. Smaller airports would also try to increase hangar rentals first compared to larger airports favoring tax support. Differences were also witnessed according to experience as more experienced officials would rely on tax support and those with fewer years experience

wanting to increase non-aviation property rents and hangar rents. Thus, while the sources to attain additional operating funds are similar, the first choice of respondents was largely determined by their background characteristics.

A common perception is that an airport can improve its financial situation by increasing airport traffic. In this survey, 45 percent of respondents said that revenues would exceed costs if air traffic increased (Appendix C, page 25). Larger airports tended to hold this view. About 38 percent said revenues would equal costs and 17 percent said the airport would lose money if air traffic increased. Thus, the majority of respondent airports would be no better or worse off if traffic increased, showing the need for outside support to maintain the long-term viability of these airports.

Insurance was an important item to airport officials. Respondents said it was "very important" to understand insurance 71 percent of the time. However, only 28 percent indicated that they understood insurance "very well". Thus, supplying information and training regarding insurance would be beneficial. Pilots indicated that it was more important for them to understand insurance but their understanding was not significantly different from non-pilots. Those with more years experience did tend to understand insurance significantly better. (Appendix D, page 7)

Only 32 percent of respondents said their airport was "very well" protected by land use planning and zoning legislation. However, over 90 percent said they were protected at least reasonably well (Appendix C, page 26). Smaller airports tended to say that they were not as well protected so zoning might be an issue for smaller airports.

When asked to rank general statements regarding airport success, respondents overwhelmingly selected "serving those that wished to be served" as most important. Given three choices, respondents ranked this service factor first or most important 79 percent of the time. This factor was ranked highly by all categories of respondents. The next most important factor was "that the airport does not lose money" which ranked first more often than the other factor "that there is no legal claim against the airport" and ranked second nearly half the time. Non-pilots tended to rank this item as more important, perhaps reflecting their management and business backgrounds. Not having a legal claim was clearly least important, ranking third over 50 percent of the time. Pilots tended to rank this item as more important, perhaps showing a concern that a legal claim might force the airport to close or that they might be held liable in a claim. Overall, this question showed that airport officials were committed to serving the airports' customers and then fulfilling their responsibility to ensure that the airport had a manageable budget.

Responsibilities Section
Questions within the responsibilities section of the survey focused on the duties of airport officials. Most respondents understood the legal obligations of the airport manager at least reasonably well. Pilots, those with more experience, and those from larger airports tended to understand better. However, managers did not understand their duties significantly better than board members. The understanding of both groups can be described as "reasonably well".

Responses regarding the practices of airport managers and board members were as expected. Managers tended to be more involved with operating the airport, and board members worked

more closely with governing and financing the airport. Larger airports felt that their managers tended to enhance the governing, financing, and operating of the airport more frequently. The responses of managers and board members differed significantly regarding how often managers had a practice relating to financing the airport and how often board members worked with governing the airport. In general for questions 29 and 30 (Appendix B), managers believed the manager had more practices that enhanced the airport and likewise board members thought they did more for the airport.

Questions 31 and 32 related primarily to the responsibilities of the board members. Each question topic besides letters c, e, and f (promotions, major decisions, day to day aspects) were taken from the State of Nebraska Aeronautics Laws and Statutes prepared by the Department of Aeronautics regarding airport authority responsibilities. Those with more experience and pilots tended to understand the listed responsibilities better. Managers knew more about day to day aspects, compliance with FAA regulations, and determining airport rentals and fees. Large and small airport understood these items equally well. The item understood best was "being involved in the major decisions of the airport" and least understood was "being involved in the day to day aspects of the airport" (all response averages of 1.55 and 2.08 respectively).

When asked who should be primarily responsible for completing these activities, control was sought by both managers and board members. Figure 6 compares the responses from each group. On each question, managers' responses were more to the managers' side of the scale and board members similarly felt they should have a larger share of responsibility. The responses differed significantly on 7 of the 10 topics. Specifically, while board members thought they should be primarily responsible for applying for grants, determining the airport's budget, and determining how the airport should be used, managers' average response indicated the responsibility should be equally shared. While they agreed that promotion activities should be shared, they also agreed that the airport authority's statutory responsibility of determining the rentals and fees be shared. One would think that managers would let the board determine the budget completely or that board members would stay away from day to day airport responsibilities, but each, on average, thought they should have relatively more control than their counterpart. Thus, opinions differ on who should complete airport activities and the board members and managers may struggle over the power to control or be involved in various activities.

Figure 6: Average response by board members and airport managers to the questions "Who should be primarily responsible for completing the following activities associated with an airport?"
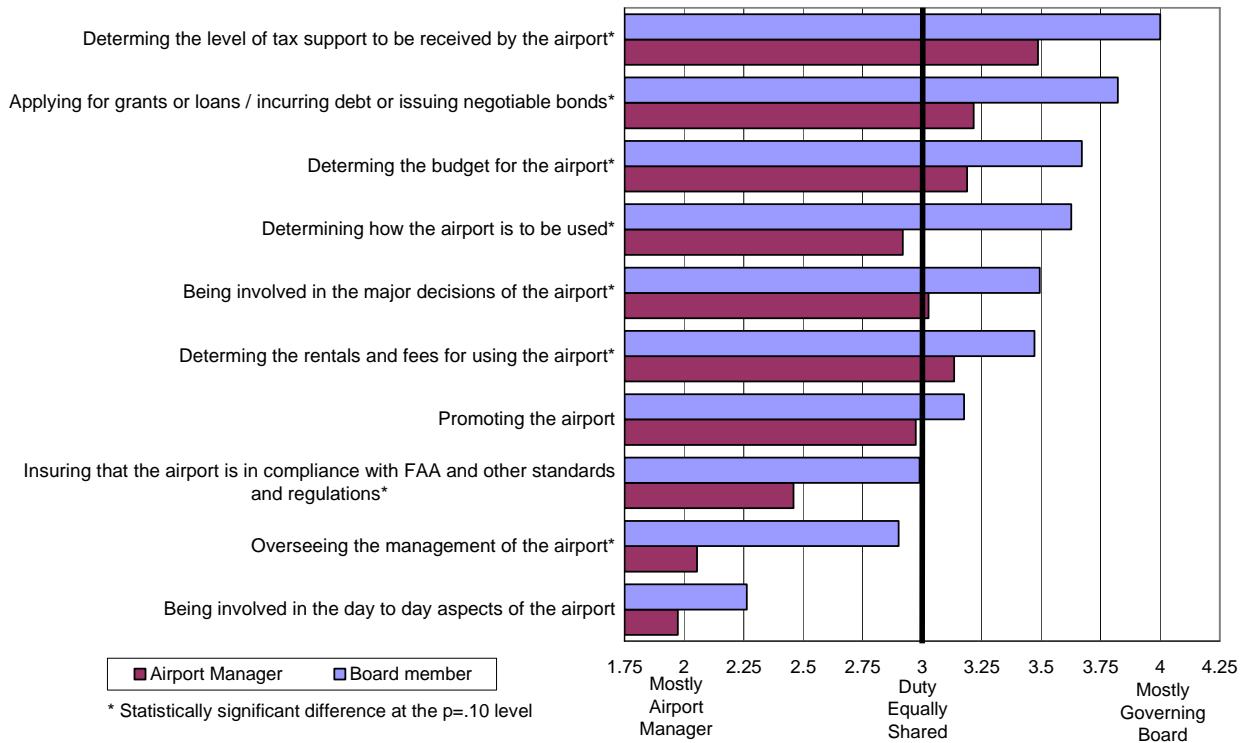
Concerns were expressed over airport security. About 60 percent of respondents were at least somewhat concerned about the security of their airfield and facilities while only 9 percent showed no concern. While concerns over cargo/air freight and passenger operations were not applicable in many Nebraska airports, a similar level of concern was expressed by airports having these services. (Appendix C, page 35) Airport officials expressed concern, regardless of the size of their airport. Likewise, both airport managers and board members showed equal concern. Those with more years of experience and pilots tended to show more concern. Pilots have been adapting to new procedures and an increased attention to security in the post September 11 aviation era, hence security continues to be an important topic for pilots.

Background Section
Data obtained in the background section explain more about the survey respondents. Airport managers and board members tended to be pilots, while other officials and attorneys tended to be non-pilots. (Appendix D, page 10) Board members and managers had served nearly the same number of years but pilots tended to have served for a longer time period, as did officials from smaller airports. Managers tended to be hired, especially at larger airports, while board members were mostly elected. These elected officials tended to know aviation well as they were often pilots, while appointed officials (city administrators) were mostly non-pilots. Airports of all sizes had roughly the same number of pilots as non-pilots. Those having served as an airport official for more years tended to fly fewer hours per year, largely due to "slowing down" or retirement from flying (becoming inactive).

Training Needs and Areas of Assistance

Several sets of questions relating to the importance of knowing an item and then how well the item was known were asked throughout the survey. This approach identified insurance issues and details of the budget as critical areas for training. About 40 percent of respondents indicated that knowing about these items was "very important" but that they did not understand these items "very well". See Table 2. In addition, as previously shown, relatively few respondents knew insurance and budget details "very well". Given the important legal aspects of insurance and the obvious attention given to the airport's budget, training in these areas would be highly beneficial.

Table 2: Summary of responses to questions of how important it was to know an item and how well that item was understood - percent in each category

Sorted by item being very important but not known very well

Category	Very important and known very well	Very important but not known very well	Not very important but known very well	Not very important and not known very well
Insurance	27.8	**43.2**	0.6	28.4
Details of the budget	42.4	**39.4**	0.6	17.6
Navigational aids	52.9	**20.9**	2.6	23.5
Other buildings (hangars, etc.)	47.5	**20.0**	10.0	22.5
Runways	61.1	**19.8**	1.2	17.9
Lighting aids	61.1	**19.7**	1.3	17.8
Automated weather systems	48.9	**18.5**	7.4	25.2
Taxiways	58.8	**16.9**	3.8	20.6
Apron	55.0	**16.3**	6.9	21.9
Vehicles/equipment	34.7	**15.3**	15.3	34.7
Perimeter fence	33.3	**13.7**	17.0	35.9
Roads/parking area	45.1	**11.1**	12.3	31.5
Terminal	49.3	**10.4**	12.5	27.8

Another area requiring training included technical equipment such as navigational aids, lighting aids, and automated weather systems. Approximately 20 percent of respondents indicated that these items were "very important" but not known "very well". These people tended to be from smaller airports, have fewer years experience, and be non-pilots. A sizeable portion of respondents indicated that they knew these items "very well". Thus, training programs should be tailored for and given primarily to those with the characteristics mentioned above.

Open ended questions allowed the respondent to indicate specific items of interest. When asked "In what areas would you like additional assistance, training, or information? (economic development, legal issues, etc)", economic development was the leading response being listed 42 times. Legal issues were second with 17 responses. Thus, the specific mention of these items in the question influenced the number of times they were selected. Items relating to operating funds, funding, or financing were listed 16 times, followed by promoting airport/marketing/new business (12), and Improving/Expanding Operations/Growth (9). Grants/grant writing and compliance with FAA regulations had 8 responses each. Thus, areas of interest tended to include economic and business development, legal compliance, and funding including grants.

Another open ended question asked "In what areas do you think the airport could improve?". Promoting the airport/marketing/new business was again a top response being indicated 32 times or approximately 15 percent of total responses. See Table 3 (end of report). New business was classified in the community category. By categorizing responses into groups, areas of interest were easily identified. Community-related items were listed 21 percent of the time, second among all categories. The category with the greatest number of responses (41 percent) related to property development and maintenance. Common responses in this category included improving infrastructure/developing the property, building or improving hangars, and improving the runway. These items relate to ease of using the airport and increasing revenues. Improving the public image of the airport and increasing local support were also commonly listed. Respondents indicated they needed to convince the public of the airport's importance, that airport tax dollars were being used well, and that the airport and associated tax dollars were a wise community investment.

Another area of improvement concerned fuel, both that it be offered for sale and improving the method of distribution with automated self-serve machines. Other airports, mostly of larger size, wanted to improve their airline scheduling and offer more flights to more destinations. A final general area of improvement was to increase revenue/make more money. This item was listed 11 times specifically, but in effect, all the topics listed above relate to an airport's overall financial situation. Improving ridership, flights, fuel service, hangars, and community relations are all in the long-term best interest of the airport. Having identified these areas for improvement, knowing how to best attain improvement remains a difficult question.

Best Aspects of the Airport

Responses to the question "In what areas do you think the airport does a good job?" indicated those aspects of the airports functioning well. Similar to other open-ended questions, responses were categorized to identify groups of related answers. The group receiving the most responses regarded the airport property, facilities, and maintenance. Specific responses in this group included being well maintained (23), having good facilities (17), runway condition (15), and their use of hangars (13). See Table 4 (end of report). A theme of good maintenance at the airport, whether on the facilities, for airplanes, or in general was apparent. There were over 100 responses classified in this category equaling 36 percent of the total.

The category with the next highest number of responses related to services. Most respondents felt that the airport did a good job of providing at least one service. Specific examples included fuel services/sales, medical services, general air services, agricultural services, and services and accommodations for pilots. Respondents stressed that medical services were important to the community. They mentioned that pilot services helped to distinguish their airport from other airports. Overall, services accounted for 28 percent of total responses regarding best airport attributes.

Another important area related to operations and management of the airport. Some respondents mentioned that the airport was always accessible and available, removing any snow in an expedient manner. Others felt that the airport was appropriately managed. Several mentioned that the airport did a good job with safety and security. Given concerns over airport security, some

airports had been addressing the issue. Some respondents mentioned their Fixed Base Operator helped improve how the airport functioned. While none of these topics had more than 10 responses, the best airport aspects related to operations and management totaled 19 percent of all responses.

The final two categories of finances and community received fewer responses. Some respondents were pleased with how the airport was serving the community. Others thought the airport was doing a good job of operating given its budget constraints. Items such as revenues, operating funds, the airport's public image, economic development, and airport promotion were mentioned on occasion as areas where the airport did a good job. More often, however, these items were listed as areas for improvement or where officials needed additional training and information.

Summary and Implications

Local airports provide important services for Nebraska communities. The number and type of services provided are determined largely by the size of the airport and community it serves. Larger airports, offering more services, tend to be more integrated into the community. As an airport's importance to the community is increased, airport officials should be more likely to pursue local taxes and local debt financing for expansion. Thus, perceived benefits may lead to increased support among airport officials and the overall community.

Airport officials have indicated a need to improve the community's airport use and support. They would like to inform the public of airport services and community benefits, showing the public what tax dollars attain. They want to improve the airport's public image, as the airport is viewed and sometimes may truly be a "country club for pilots". The community needs to be "on board" if the airport is to truly "take off" in the community. Public relations and promotions campaigns could prove highly effective for overall airport success.

Training and assistance in other areas would also likely be beneficial. Although deemed "very important", those having served as an airport official for fewer years tended to have a limited understanding of the budget and insurance. Thus, a short course or workshop providing practical information on budget determination factors and insurance issues could be designed, and new or relatively new airport officials encouraged to attend. Those with more experience tended to want information on economic development and technical items such as navigational aids. Hence, specific programs could be offered tailored to their interests and educational needs.

Most officials are placing emphasis on revenues and revenue sources. Acceptable means of increasing revenues without damaging community relations would be readily received. While airport officials did not highly desire information regarding eliminating expenses and controlling costs, such tactics could also serve to balance airport budgets. While likely less popular among aviators, the general public would be inclined to favor this as a primary means of budgetary control versus increasing revenues through tax support. Survey results show that officials are concentrating on revenue production; therefore, means of controlling expenses may not be as readily received or implemented.

Table 3: Areas for Improvement
Categories of Responses to Question 36: "In what areas do you think the airport could improve?"

Group 1	Property development and maintenance	Number	Percent
a	Infrastructure, property development	23	10.6%
b	Hangars	22	10.1%
c	Improve runway	20	9.2%
d	Taxiways	8	3.7%
e	NavAids, Lighting Aids, Automated Weather Systems, Equipment	7	3.2%
f	Getting new/improved equipment	5	2.3%
g	Maintenance (area/grounds)	3	1.4%
	Total	**88**	**40.6%**

Group 2	Services provided		
a	Fuel services/sales	12	5.5%
b	Flight instruction	8	3.7%
c	Charter service	5	2.3%
d	Cargo/air freight business	3	1.4%
e	Improving services	2	0.9%
f	Ground transportation services	2	0.9%
	Total	**32**	**14.7%**

Group 3	Operations and Management		
a	Airline scheduling/air service	11	5.1%
b	Improving/Expanding Operations	8	3.7%
c	Getting a FBO	6	2.8%
d	Getting necessary personnel	4	1.8%
e	Planning	4	1.8%
f	Legal issues	2	0.9%
g	Insurance	1	0.5%
	Total	**36**	**16.6%**

Group 4	Financial		
a	Revenues/rentals/fees/make more money	11	5.1%
b	Operating Funds, Funding, Financing	5	2.3%
	Total	**16**	**7.4%**

Group 5	Community		
a	Promoting airport/marketing/new business	32	14.7%
b	Increasing local support/improving public image/PR/increasing board involvement	13	6.0%
	Total	**45**	**20.7%**
	Total All Categories	**217**	**100.0%**

Table 4: Best Aspects of the Airport
Summary of Responses to Question 35: "In what areas do you think the airport does a good job?"

Group 1	Property, facilities and maintenance	Number	Percent
a	Maintenance (general), well maintained	23	8.1%
b	Good facilities	17	6.0%
c	Runway	15	5.3%
d	Hangars	13	4.6%
e	Maintenance (facilites/equipment)	7	2.5%
f	Maintenance (airplane), mechanics	7	2.5%
g	Maintenance (area/grounds)	6	2.1%
h	Infrastructure, property development, improvements	5	1.8%
i	Taxiways	4	1.4%
j	NavAids, Lighting Aids, Automated Weather Systems, Equipment	4	1.4%
	Total	**101**	**35.6%**

Group 2	Services provided		
a	Fuel services/sales	17	6.0%
b	Medical services	14	4.9%
c	Services (general), air services	11	3.9%
d	Ag services	11	3.9%
e	Pilot accommodations/services	10	3.5%
f	Ground transportation services	6	2.1%
g	Cargo/air freight business	6	2.1%
h	Flight instruction	2	0.7%
i	Charter service	1	0.4%
	Total	**78**	**27.5%**

Group 3	Operations and Management		
a	Easy to use, accessible, available	10	3.5%
b	Management (general)	9	3.2%
c	Safety, security	8	2.8%
d	FBO	6	2.1%
e	Customer service	6	2.1%
f	Planning	5	1.8%
g	Compliance with regulations (FAA)	5	1.8%
h	Improving/Expanding Operations, Growth	4	1.4%
	Total	**53**	**18.7%**

Group 4	Financial		
a	Managing given a budget, fiscal management	8	2.8%
b	Revenues/rentals/fees/money sources	3	1.1%
c	Reasonable rates, costs	3	1.1%
d	Operating Funds, Funding, Financing	2	0.7%
	Total	**16**	**5.6%**

Group 5	Community		
a	Serving the community/area	16	5.6%
b	Public image/PR/community involvement	7	2.5%
c	Economic development	6	2.1%
d	Promoting airport/marketing/new business	4	1.4%
e	Relations with pilots, FBO	3	1.1%
	Total	**36**	**12.7%**
	Total All Categories	**284**	**100.0%**

Part III: Recommendations

The findings from this project have led to the development of a set of recommendations listed below. While the application of these recommendations will not be a resolution to the various challenges faced by non-metropolitan Nebraska airports today, they may serve as focus points and stepping stones for improving the organizational, financial, and management practices of community airports within Nebraska and be applicable in other agricultural states and areas with dispersed populations.

With regard to the various organizational structures applied by non-metropolitan Nebraska airports:

- Identify and cultivate the base of stakeholders in local airports, including the various officials involved with airport planning and management given the organizational structure.

- Provide technical support and assistance for airport operation suited for the type of organizational structure employed.

- Utilize the best management practices and aspects of local airports found in this study as a foundation for training workshops, written resource materials, website development, etc., applying each to the various types of organizational structures utilized.

- Facilitate cooperation including inter-local organizational arrangements among airports with close proximities, especially in regard to essential services such as health and medical transport services.

Specific to improving the financial position and overall management of services provided by non-metropolitan Nebraska airports:

- Design and conduct a series of training sessions related to airport operation and management issues such as insurance, development, and budgetary items along with technical items such as navigational aids.

- Partake in public relations and airport promotion campaigns to increase airport use and show community residents, the ultimate airport financial supporters, those services and benefits that airports provide.

- Devise a set of guidelines indicating typical responsibilities of both airport managers and board members, which emphasize the statutory responsibilities of airport governing boards, in order to lessen perceived power struggles over the completion of various airport activities.

- Emphasize a two-pronged approach to solving the squeeze placed by limited airport budgets, which focuses both on revenue production and controlling costs as a means of ensuring airport fiscal responsibility.

Public use and general aviation airports will continue to face difficult challenges. Meeting these challenges is possible and in the best interest of local communities. Implementing appropriate policy and increasing educational information will aid in the decision making process of local

airports. With these efforts, airports will continue to provide essential services and link all parts of Nebraska with the rest of the world.

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