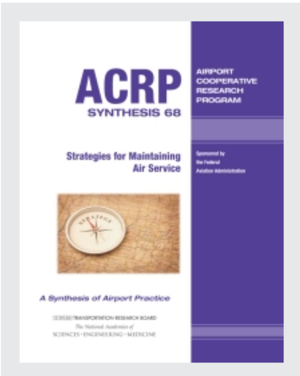

Strategies for Maintaining Air Service

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AIRPORT COOPERATIVE RESEARCH PROGRAM

ACRP SYNTHESIS 68

Strategies for Maintaining Air Service

A Synthesis of Airport Practice

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AIRPORT COOPERATIVE RESEARCH PROGRAM

Airports are vital national resources. They serve a key role in transportation of people and goods and in regional, national, and international commerce. They are where the nation's aviation system connects with other modes of transportation and where federal responsibility for managing and regulating air traffic operations intersects with the role of state and local governments that own and operate most airports. Research is necessary to solve common operating problems, to adapt appropriate new technologies from other industries, and to introduce innovations into the airport industry. The Airport Cooperative Research Program (ACRP) serves as one of the principal means by which the airport industry can develop innovative near-term solutions to meet demands placed on it.

The need for ACRP was identified in *TRB Special Report 272: Airport Research Needs: Cooperative Solutions* in 2003, based on a study sponsored by the Federal Aviation Administration (FAA). ACRP carries out applied research on problems that are shared by airport operating agencies and not being adequately addressed by existing federal research programs. ACRP is modeled after the successful National Cooperative Highway Research Program (NCHRP) and Transit Cooperative Research Program (TCRP). ACRP undertakes research and other technical activities in various airport subject areas, including design, construction, legal, maintenance, operations, safety, policy, planning, human resources, and administration. ACRP provides a forum where airport operators can cooperatively address common operational problems.

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FOREWORD

Airport administrators, engineers, and researchers often face problems for which information already exists, either in documented form or as undocumented experience and practice. This information may be fragmented, scattered, and unevaluated. As a consequence, full knowledge of what has been learned about a problem may not be brought to bear on its solution. Costly research findings may go unused, valuable experience may be overlooked, and due consideration may not be given to recommended practices for solving or alleviating the problem.

There is information on nearly every subject of concern to the airport industry. Much of it derives from research or from the work of practitioners faced with problems in their day-to-day work. To provide a systematic means for assembling and evaluating such useful information and to make it available to the entire airport community, the Airport Cooperative Research Program authorized the Transportation Research Board to undertake a continuing project. This project, ACRP Project 11-03, "Synthesis of Information Related to Airport Practices," searches out and synthesizes useful knowledge from all available sources and prepares concise, documented reports on specific topics. Reports from this endeavor constitute an ACRP report series, *Synthesis of Airport Practice.*

This synthesis series reports on current knowledge and practice, in a compact format, without the detailed directions usually found in handbooks or design manuals. Each report in the series provides a compendium of the best knowledge available on those measures found to be the most successful in resolving specific problems.

PREFACE

By Gail R. Staba
Senior Program Officer
Transportation Research Board

In many communities, airports are struggling to maintain the air service that they currently enjoy and require in order for their communities to thrive. In response, airport managers are evaluating current and traditional strategies to both attract and maintain air service, as well as new strategies being pursued by many smaller and medium-sized airports designed to reduce the start-up and ongoing costs to incumbent carriers and to increase long-term market viability. Through a literature review and interviews with 61 airports and four airline route planners, this report describes those practices that smaller airports use to maintain air service.

Michael J. Gordon and Melissa Galvan-Peterson, Sixel Consulting Group, Inc., Eugene, Oregon, collected and synthesized the information and wrote the report. The members of the topic panel are acknowledged on the preceding page. This synthesis is an immediately useful document that records the practices that were acceptable within the limitations of the knowledge available at the time of its preparation. As progress in research and practice continues, new knowledge will be added to that now at hand.

CONTENTS

1 SUMMARY

3 CHAPTER ONE INTRODUCTION
The Problem That Exists Today, 3
Literature Review, 8
Approach to the Issue, 9
Organization of the Report, 9

11 CHAPTER TWO METHODOLOGY AND RESPONDENT CHARACTERISTICS
Data Collection, 11
Respondent Characteristics, 11

15 CHAPTER THREE FACTORS INFLUENCING AIR SERVICE
The Three Cs: Cost, Communication, and Community Engagement, 15
Controllable Aspects of the Three Cs, 17
Uncontrollable Aspects of the Three Cs, 20

24 CHAPTER FOUR STRATEGIES FOR MAINTAINING AIR SERVICE
Successful Techniques, 24
Strategies Based on Characteristics of Airports, 29

31 CHAPTER FIVE CONCLUSIONS AND SUGGESTIONS FOR FURTHER RESEARCH
The Three Cs, 31
Importance of Engagement, 31
Managing Community Expectations, 32
Importance of Understanding the Airline Route Process, 32
Suggestions for Further Research, 32

33 GLOSSARY OF ACRONYMS

34 REFERENCES

35 BIBLIOGRAPHY

36 APPENDIX A SURVEY: AIRPORTS

37 APPENDIX B SUMMARY OF RESPONSES: AIRPORTS

48 APPENDIX C SURVEY: AIR CARRIER NETWORK PLANNING STAFF

50 APPENDIX D SAMPLE AIR SERVICE INCENTIVE PROGRAM

Note: Photographs, figures, and tables in this report may have been converted from color to grayscale for printing. The electronic version of the report (posted on the web at www.trb.org) retains the color versions.

STRATEGIES FOR MAINTAINING AIR SERVICE

SUMMARY

In many communities, the connectivity and ability to access the air transportation system drives the local and regional economy. However, airports across the United States are struggling to maintain the air service they currently enjoy and require in order for their communities to thrive.

The reasons service levels are maintained or increased at one airport rather than another is perplexing. In a dynamic environment such as the aviation industry, the rules of conduct or behavioral patterns of an airline are extremely fluid. With airline consolidation, pilot shortage, regional jet retirements, and ever-changing regulations, airports across the country are faced with the challenge of retaining their air service while differentiating themselves from competing airports.

In response, airports are evaluating current and new strategies to maintain air service. These include offering a variety of incentive packages such as above- and below-wing services, reconsidering the method used to charge airlines for the provision of services, and rethinking other functions which have traditionally been the responsibility of airlines. Further strategies include reducing airline costs and abating risk, along with involving the community in attempting to stimulate additional passenger travel. Although some attention has been given to traditional strategies for attracting new air service, there is less information on new strategies being pursued by smaller and medium-sized airports to reduce the start-up and ongoing costs to incumbent carriers and to increase long-term market viability.

A purposive sampling of 61 airports and four airline route planners was surveyed as a means to understand how airports maintain air service today. Obtaining data was difficult, as many airports and airlines initially contacted were unresponsive or declined to participate. The airports and airlines that did participate were diverse, and their information provides insight into strategies and tactics for maintaining air service that are of interest to all airport operators. The same suggestions surfaced consistently throughout the report and became a key component in the data: Communication. Communication with the incumbent or prospective airline, communication with the community, and communication with the governing board on airport costs.

An observation resulting from the study is that airports behave differently depending on their proximity to airline hubs and how important community engagement is to maintaining air service. Evidence suggests those airports that are located closer to a medium or large hub have more robust community engagement programs; perhaps simply being in a larger airport's backyard forces them to be more inventive and seek new ways to market their services. Airports in a more isolated region or within a less populated area of the country (i.e., North Dakota, Montana, and Wyoming) have an advantage in their isolation. Passengers, more often than not, will utilize the air service at their local airport simply because the alternative is driving long distances to another airport. Business travelers are especially prone to this, while leisure travelers tend to weigh the benefits of driving great distances compared with the average fare savings in order to determine their course.

Another issue brought to light through the process was the definition of "maintaining service." If an airline previously provided two flights a day to point A from airport X with a CRJ 200 with a capacity of 50 seats but now is replacing the two flights a day with one aircraft in an approximate 100-seat configuration, has the service been "maintained" or "reduced"? The airline went from offering a single-class product to offering a dual-class product that may suit the business flyer more than the leisure traveler. One side might argue a reduction has occurred based on the number of frequencies, with the other side seeing a net zero effect with no loss of seats. Airports may instead define "success" or "maintaining air service" based on what is important to their community.

CHAPTER ONE

INTRODUCTION

The objective of the synthesis report is to investigate and describe how non-hub and small- and medium-sized airports and their communities maintain air service. The report will provide non-hub and small- and medium-sized airports access to successful strategies to guide decisions on effective tactics for air-service retention.

The report does not include an evaluation of the essential air service program or the small community air service development program. It also does not evaluate merits or opinions of various airports on their livelihood. All interviewee information remains confidential and is aggregated.

THE PROBLEM THAT EXISTS TODAY

Airports of all types are essential economic engines to the local and national economy. Airports facilitate the movement of both people and goods throughout the vast transportation network and link communities together. In September 2014, CDM Smith published an economic impact report for the ACI-NA that analyzed the economic impact of 485 commercial service airports across the United States using data from the calendar year 2013. The report found that, "The total economic impact from commercial airports in the United States in 2013 is estimated at more than $1.1 trillion in output. Those 485 airports supported 9.6 million jobs with a total payroll of $358 billion" (CDM Smith 2014). With such statistics, it is clear why retaining air service is of such importance: To lose service or experience a reduction in frequency can be devastating to a community and have a lasting, negative economic impact.

The airline industry in present form did not exist 10 years ago. As depicted in Figure 1, numerous consolidations have occurred since the airline industry was deregulated. In addition to new pilot-duty regulations, the industry has experienced the retirement of 50-seat regional jets and continued fuel volatility. These events, coupled with evolving airline business models and regulatory changes, have redefined the airline industry. Airports are competing for air service more urgently than ever. Following are brief outlines of several issues that affect the aviation industry as a whole and thus the ability of an airport to maintain air service. The issues are interconnected, and unintended consequences develop with the modification of any one.

Airline Consolidation and Fleet Issues

As a result of mergers and acquisitions in the industry, domestic network capacity for the 61 surveyed airports decreased 7.2% between 2009 and 2013. Consolidation has forced air carriers to focus their respective networks on markets that prove worthy of their resources as determined through higher yields and load factors. Community patrons might be making money for the airline, but may not provide enough money to ensure continued service. The hardest-hit sector appears to be small community air service, where fuel costs and escalating maintenance costs have led legacy carriers to reduce the number of 50-seat aircraft in their fleet. At this time, there are currently no replacement aircraft in production for these jets, and with 48% of commercial airports in the United States being served by at least one flight per day on a regional jet, the potential impact is not limited to one size or category of airport—it is an industry-wide economic concern. Figure 2 illustrates airports in the United States served only by regional jets on a scheduled basis; there are 73 in total. Of those 73 airports, the list can be further compressed into 50-seat regional-jet airports only; Figure 3 displays those airports and recognizes some are included in the Essential Air Service (EAS) program.

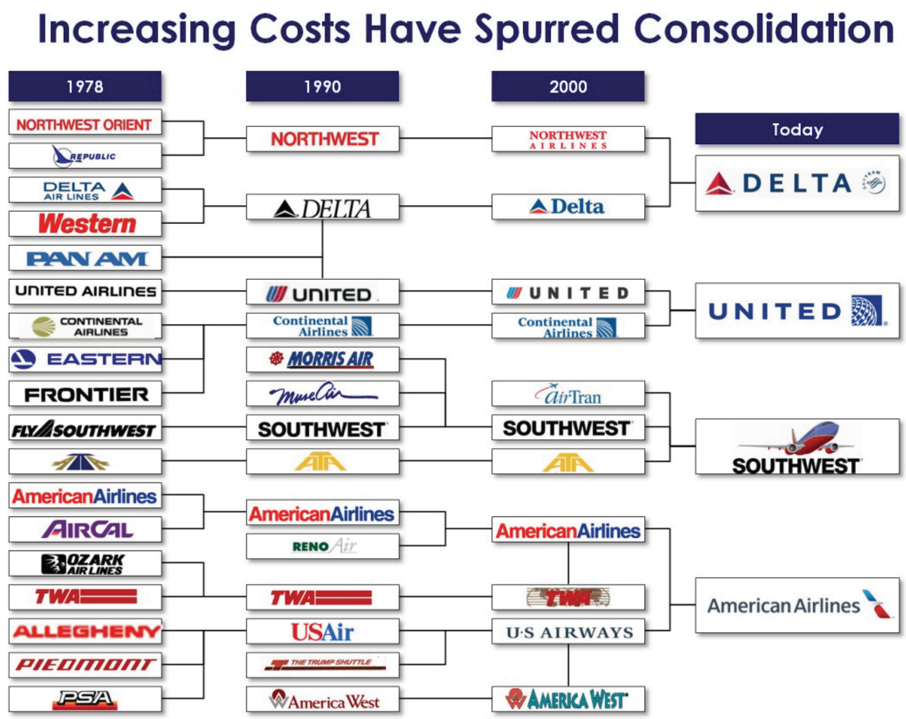

FIGURE 1 Airline consolidation since 1978 (*Source*: Penning 2014).

Air carriers can be categorized into three groupings: network or legacy carriers, low-cost carriers (LCC), and ultra-low-cost carriers (ULCC). Legacy carriers include Delta Air Lines, United Airlines, and American Airlines. Legacy carriers often partner with regional carriers to fly on their behalf. Low-cost carriers such as Southwest Airlines, JetBlue Airways, Alaska Airlines, Virgin America, and Hawaiian Airlines pride themselves on limiting costs to the passenger. Ultra-low-cost carriers are viewed as "no frills" air carriers where almost all amenities come at an extra cost. Airlines in this

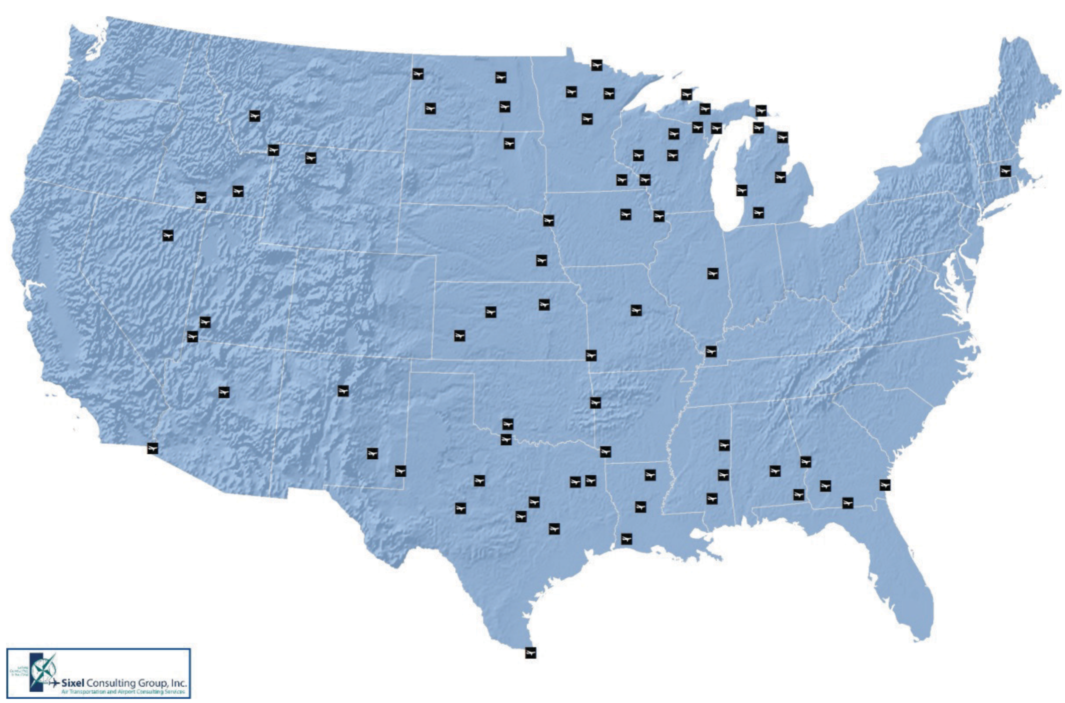

FIGURE 2 U.S. map of airports with only regional jet service (*Source*: Compiled by Sixel Consulting Group, Inc.).

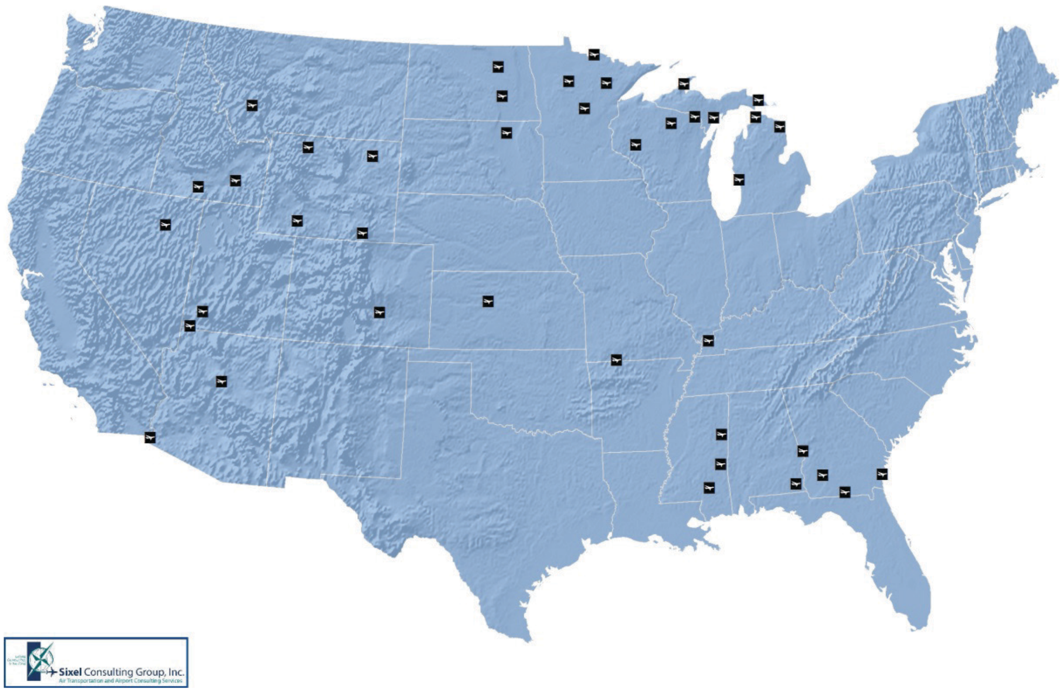

FIGURE 3 U.S. map of airports only served by 50-seat regional jets (*Source*: Compiled by Sixel Consulting Group, Inc.).

category include Spirit Airlines, Allegiant, and the newest entrant, Frontier Airlines. It is possible for an airport to have all three types of carriers serving its community, as each services a distinct segment of the traveling public.

Regulatory Modifications Affecting Market Conditions

Regulations or modifications to regulations typically begin with the intent to improve safety or alter an issue in a way that has been deemed in the best interest of the public. However, new regulations and adjustments to existing regulations may have unintended and, occasionally, unforeseen consequences. According to a 2011 report published by the American Aviation Institute, new regulations may have substantial economic implications:

> Direct compliance costs—revising websites, changing systems and retraining employees—are coupled with substantial indirect costs from lost revenue and cancelled flights. While good intentions may drive consumer protection, the poor design of regulations, opaque enforcement guidance, and stated need for "flexibility" by the [U.S.]DOT cause uncertainty. Both airlines and consumers pay the price through capacity cuts, higher fares and flight cancellations (Jenkins et al. 2011).

The following section briefly reviews several new regulations and modifications to existing regulations that have changed the market conditions for airlines, ultimately affecting airports.

Regulatory Changes and the Pilot Workforce

Regulations enacted in the past several years intended to increase safety have directly affected the pilot workforce. The Flight and Duty Limitations and Rest Requirements: Flightcrew Members, Title 14 of the Federal Code of Regulation Part 117 governs pilot rest rules with key changes being minimum rest allotment and flight-duty periods. Air carriers operating under 14 CFR Part 121 must now provide a minimum rest period of 10 hours, increased from the previous eight hour mandate, which affords the pilot the opportunity to obtain eight hours of sleep. The new flight-duty period limits the length of a pilot's flight-duty period based on the time of day a pilot starts, coupled with the number of landings the pilot is to perform. The former rule did not take pilot start time or number of landings into consideration.

The second regulation is the Airline Safety and FAA Extension Act of 2010, Public Law 111-216, 124 Stat. 2348 (2010), commonly referred to as the “1,500 Hour Rule” or the “first officer qualification rule.” The two sections that are of relevance to this synthesis pertain to the new minimum hourly requirement and the Air Transport Pilot Certificate (ATP). The 1,500 Hour Rule mandates that each Part 121 First Officer hold an ATP, but in order to qualify, the pilot needs at least 1,500 flight hours’ training. This is a significant change from the rule it replaces, which mandated a minimum of 250 flight hours. (The rule does allow for credits reducing the amount of flight hours if training was received at an approved institution and for military training.) The requirements to obtain an ATP were modified as well. The training requirements now require 10 hours in a simulator, with at least six of those hours being in a Class “C” simulator, defined as “a multiengine turbine airplane with a maximum takeoff weight of 40,000 pounds or greater” (14 CFR 61, Subpart G).

These regulations, which were put into place as safety improvements, had an unintended consequence: the need for additional pilot labor. Part 117’s new rest rules force Part 121 air carriers to have additional pilots in order to staff their current networks; this does not take into account those needed for future expansion. Part 121 carriers often had to adjust pilot schedules to accommodate the law, which meant hiring additional pilots. According to initial estimates by the University of North Dakota, additional staffing requirements resulting from Part 117 range from 2% to 10% (Lovelace 2014). The pilot pool was once plentiful. However, the 1,500 Hour Rule prohibits using a pilot who does not meet the new minimum flight hour prerequisites and, ultimately, the ATP threshold in air carrier operations. This is reducing the number of qualified pilots entering the field, as it is regarded as a barrier to those interested in a career as a pilot.

Another, less measurable factor is expected pilot retirements. The 2007 Fair Treatment for Experienced Pilots Act, Public Law 110-135 also known as “The Age 65 Law” was signed into law extending the mandatory pilot retirement age to 65 up from age 60. The natural attrition of pilots’ retiring provides opportunity for pilots with regional carriers to flow to the major airlines. The flow-through of pilots is expected to leave an even larger hole in the regional air carrier sector and a smaller pool of pilots to backfill the regional carrier needs. In a February 2014 *Wall Street Journal* article, Neil Roghair, vice president of the Allied Pilots Association representing American Airlines pilots, was reported to have estimated that

> half of American’s pilots will leave the company in the next eight to 10 years. The union expects 25 pilots to retire each month by 2018 and 60 to 70 to retire each month in the early part of the next decade. “We’ll have to hire 100 pilots a month to keep up,” said Mr. Roghair. American and US Airways merged in December to form American Airlines Group Inc. The average American pilot is 53 years old, and US Airways pilots are a similar age (Carey and Nicas 2014).

Wright Amendment Regulations

The paradigm an airport operates under often determines whether an industry change is viewed as beneficial or detrimental to the current level of air service. One example is the recent expiration of the so-called “Wright Amendment” named for then-Congressman Jim Wright of Texas, enacted into law in February 1980 as part of the Aviation Safety and Noise Abatement Act of 1979 [Pub. L. No. 107, 94 Stat. 50 (1980)]. To understand how the law came into being, one must look to the history of Dallas/Fort Worth International Airport (DFW).

In 1968, the federal Civil Aeronautics Board (CAB), precursor to the FAA, refused to continue to fund the airports in Dallas and Fort Worth, Texas, as the CAB determined neither airport could adequately handle future air traffic needs. Together, the communities consolidated into one new airport which opened for commercial service in January 1974 as Dallas/Fort Worth Regional Airport, later modified to “International.” In order to protect the federal government’s investment in infrastructure as well as airlines’ significant investment in the new facility, the communities reached an agreement to end commercial passenger service at their respective airports.

Southwest Airlines was not an original party to that agreement, as Southwest did not inaugurate service until after the agreement between the communities and the CAB was signed. Southwest argued it would be detrimental to its business model to ask their passengers to drive to the new airport and filed a suit to remain at Dallas Love Field. In 1973, a federal court ruled Southwest could remain at Dallas Love Field as long as the airport remained open.

In response to the ruling, nonstop flights out of Dallas Love Field were allowed to continue but only to the bordering states of Louisiana, Arkansas, Oklahoma, and New Mexico. In 2006, a compromise was reached to repeal the Wright Amendment at a future date, October 13, 2014. As part of the compromise, Dallas Love Field was to remain limited to domestic travel only, with no more than 20 gates. Since October 2014, some airports that once benefitted from the Wright Amendment requirements are at risk for a reduction in service and/or frequency, while others view the reversal as an opportunity to include Southwest service in their community.

Figures 4 and 5 depict the nonstop Southwest Airlines departures in 2009 versus in 2015.

Regulations Over Airport Slots and Perimeter Rule

There exists a handful of airports throughout the country where air traffic control restricts the daily number of scheduled takeoffs and landings. The total scheduled flight operations at these airports, commonly referred to as "slots," are heavily restricted by the federal government and viewed by air carriers as highly desirable for a competitive business advantage. Air carriers often utilize the slots in high demand markets that enable them to maximize their revenue potential. Two major airports that currently have these operational restrictions are Ronald Reagan Washington National Airport in Washington, D.C. (DCA) and New York's LaGuardia Airport (LGA). Both these airports also have very restrictive perimeter limitations curbing the allowable nonstop stage length to and from the airport location. With the exception of a handful of Rocky Mountain and West Coast destinations, the DCA nonstop routes are limited to a maximum of 1,250 statute miles. Except for Saturday operations, LGA has a perimeter rule limiting long-haul operations to 1,500 statute miles. The perimeter rules were put into place decades ago to limit nonstop routes at DCA and LGA, and to encourage the growth at the alternate airport options in the region.

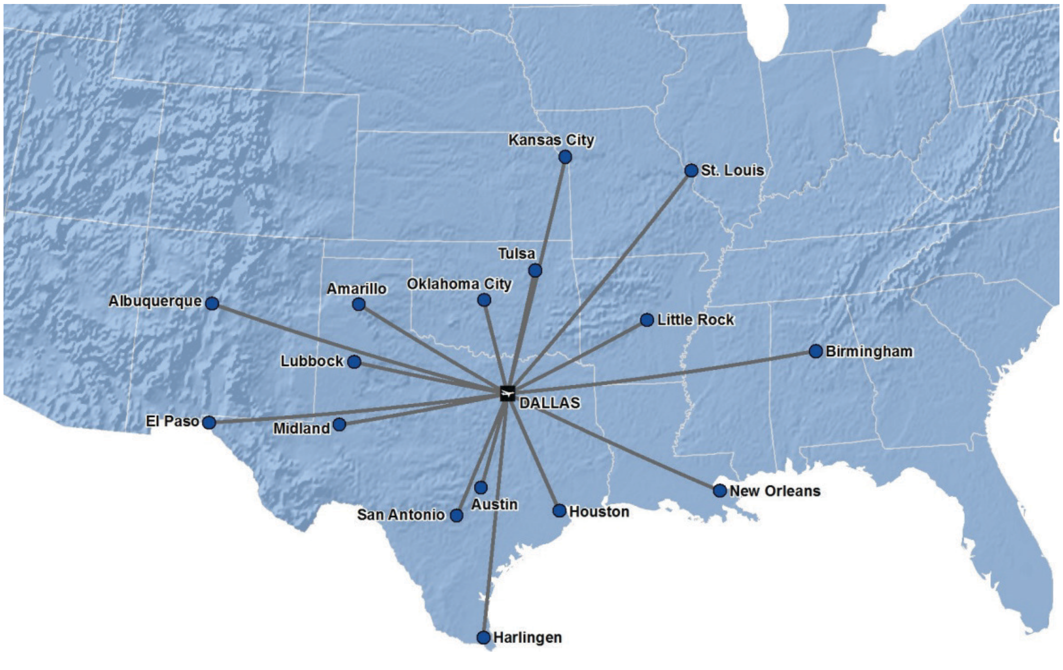

FIGURE 4 First quarter 2009 nonstop Southwest Airlines routes from Dallas Love Field (*Source*: Compiled by Sixel Consulting Group, Inc.).

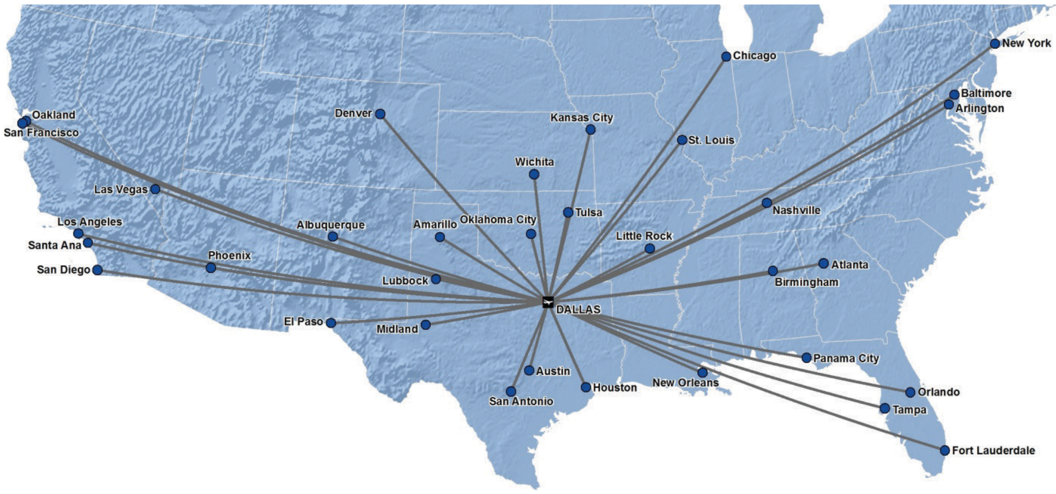

FIGURE 5 First quarter 2015 nonstop Southwest Airlines routes from Dallas Love Field (*Source*: Compiled by Sixel Consulting Group, Inc.).

Evolving Business Models

Air carriers are developing new business models to manage yield and increase revenue for shareholders; one example is Frontier Airlines. Since the divesture of the airline to Indigo Partners in 2013, the airline has evolved from a daily, low-cost carrier to a less than daily, ultra-low-cost carrier with multiple focus cities. Although some small- and medium-sized communities have lost service, others have benefited. Allegiant Travel Company is another example: Initially linking small cities with limited flight options to larger, leisure destinations on a less than daily basis, Allegiant is moving to include medium-sized cities with some competition, which means shifting limited aircraft assets. Even with a strong business case and community partnerships, smaller airports may not be able to maintain their Allegiant service as aircraft resources are limited and larger markets may be viewed more favorably as a result of the business model's fluctuating.

Fuel Volatility

Fuel price volatility is increasing worldwide. While fuel costs may have declined in recent months, price volatility creates an unknown and unpredictable cost center for air carriers of all sizes. On average, 35% of an airline's operating expense, the single largest cost, is fuel (Yamanouchi 2012). *ACRP Report 48: Impact of Jet Fuel Price Uncertainty on Airport Planning and Development* notes, "Carrier reactions to fuel price spikes depend not only on whether they believe the increases to be temporary or more permanent, but also on the demand for aviation services by consumers in the context of the overall macroeconomy, and how sensitive that demand is to changes in air fares" (Spitz and Berardino 2011). A sudden rise in fuel may cause air carriers to exercise capacity constraints to reduce the effect fuel volatility has on their operation. In contrast, a decline in fuel price may yield larger revenue for the air carrier, which may or may not choose to pass those savings on to the consumer.

With all these factors affecting the industry, nothing is off the table when it comes to evaluating route optimization and potential consolidation. This synthesis attempts to identify successful strategies airports have employed to retain their existing air service.

LITERATURE REVIEW

The initial literature review on the topic of "Maintaining Air Service" revealed no similarly undertaken study. There was, however, literature that pertained to air service development programs and components that may be included in such a program. *ACRP Report 18: Passenger Air Service Development Techniques* (Martin 2009) was used as background information concerning the competitive challenges communities, especially smaller communities, face in the competitive air service market. The report identifies the importance of establishing air service development goals and objectives as well as various techniques employed to build effective air service presentations. The report further delves into issues such as engaging stakeholder groups for community support and provides examples of evaluation criteria communities may wish to use to determine the success of any air service development program.

An industry white paper published by the Massachusetts Institute of Technology International Center for Air Transportation, *Trends and Market Forces Shaping Small Community Air Service in the United States* (Wittman and Swelbar 2013), provides a holistic assessment of the air service marketplace, including capacity discipline evolution, which ties in with this synthesis's focus on evolving business models. The white paper lays out market characteristics based on hub size and evaluates how air service has been consolidated, bolstered, or cut depending on market forces. It briefly touches on regulatory changes which were expected to impact the industry in various ways if legislation passed and on the essential air service program. Overall, the white paper provided a "state of the industry" update with many predictive conclusions having come to pass. Though the approach to data collection and objective were different, Wittman and Swelbar's assertions agree with the results of this synthesis report.

FAA guidance on the use of incentive programs to assist in air service development was explored as well. The 2010 *Air Carrier Incentive Program Guidebook: A Reference for Airport Sponsors* published by the FAA is a useful resource in structuring a thorough incentive program. Although incentive programs are not required, airports across the country have implemented assistance programs to aid a new carrier's venture into a market, thereby reducing start-up costs. The guidebook provides real-life scenarios to aid in the understanding of allowable incentives and frames the discussion in a variety of contexts to aid airports of all classifications.

Finally, a 2009 overview of EAS by the Office of Aviation Analysis within the U.S.DOT was reviewed, along with the history of the program. The five-page report details regulatory changes that have occurred since inception and provides a framework for eligible communities (U.S.DOT 2009). It is noted that the EAS programs are included in the synthesis.

As in-depth interviews were conducted, interviewees identified follow-up sources to review and the list of resources grew substantially longer.

APPROACH TO THE ISSUE

The review of available and pertinent literature was conducted to develop a baseline of information already available to airports. From that information, in-depth telephone interviews were conducted with 61 airport operators and four route planners.

(For the purpose of the synthesis, the FAA's definition and categorization of airports is utilized and detailed in Table 1. The common name will be used throughout the synthesis when referencing airport size such as non-hub, small hub, etc. It is also noted that nonprimary commercial service airports, which are also known as essential air service airports, were not interviewed as part of the synthesis report. While similar tactics may be used at such an airport, this report is geared toward non-hub and small- and medium-sized airport categories.)

Domestic air carrier planning staff was interviewed in the same manner as airports. Four agreed to participate: two self-identified domestic network legacy carriers, one domestic regional air carrier, and one low-cost air carrier.

ORGANIZATION OF THE REPORT

The intended audience for this synthesis includes airport management, those tasked with airport marketing, governing airport bodies, and vendors supplying above- or below-wing services, as well as external agencies such as economic development agencies, convention and visitors bureaus, and

TABLE 1
FAA CLASSIFICATION OF AIRPORTS

Airport Classifications		Hub Type: Percentage of Annual Passenger Boardings	Common Name
Commercial Service: Publicly owned airports that have *at least 2,500* passenger boardings each calendar year and receive scheduled passenger service **§47102(7)**	**Primary:** Have *more than 10,000* passenger boardings each year **§47102(11)**	**Large:** 1% or more	**Large hub**
		Medium: At least 0.25%, but less than 1%	**Medium hub**
		Small: At least 0.05%, but less than 0.25%	**Small hub**
		Non-hub: More than 10,000, but less than 0.05%	**Non-hub primary**
	Nonprimary	**Non-hub:** At least 2,500 and no more than 10,000	**Nonprimary commercial service**
Nonprimary (Except Commercial Service)		Not Applicable	**Reliever** **§47102(18)**

Source: FAA 2014.

business chambers. It is believed these groups will find the information helpful in defining their role in maintaining air service at the local airport, the complexity of their situation, and ways in which their organizations can affect change.

Chapter one presents the problems that this synthesis report is attempting to mitigate. Chapter two describes the report methodology and the challenges to obtaining data. Chapter three delves into the factors influencing air service, including controllable and uncontrollable aspects. Chapter four describes strategies employed by participants in maintaining air service, including three case studies. Chapter five presents the conclusions and summarizes the key elements of the synthesis, and suggests topics for further research. These are followed by a list of acronyms used in the report, full citations of the references cited in the text, and a bibliography.

Appendix A is reproduces the initial survey questions e-mailed to airports; Appendix B presents the interview questions and summarizes participants' responses. Appendix C is the survey provided to air carrier's network planning staff. Appendix D is a sample air service incentive program from a participating airport.

CHAPTER TWO

METHODOLOGY AND RESPONDENT CHARACTERISTICS

DATA COLLECTION

Airports compete with other airports for airline resources, and not solely with the airports within a specific geographic region. Increasingly, airport competition is not only down the road but across the country. Hence, it was expected a certain percentage of airports would not be willing to participate in the survey as they might fear it would lead to "secret sharing" being used against their community in the future.

At the beginning of the synthesis survey, 75 airports selected for diverse geographic location and classification, using calendar year 2013 enplanement data, were contacted. For a variety of reasons, some elected not to participate, while others did not respond to the request.

In an attempt to maintain a broad sample of airports, each small or medium-sized airport that declined or was deemed non-responsive was replaced by another airport of the same classification. Ultimately, 61 airports were willing to participate in the interview process. Figure 6 indicates the airports included in the survey by state, with green indicating where airports choosing to participate are located.

Synthesis questions were submitted by e-mail to airports (Appendix A), followed by personal telephone calls requesting further assistance and scheduling in-depth interviews. Depending on how forthcoming the interviewee was, these phone interviews lasted between 30 minutes and three hours, and averaged one hour. The phone interview questions and summaries of the responses can be found in Appendix B.

Air carrier planning staff were concurrently e-mailed a survey and asked to provide input based on their experiences. Full carrier survey questions are included in Appendix C. Air carriers were identified for participation based on their commonly accepted, self-described business model. These included domestic network legacy air carriers, domestic regional air carriers, low-cost air carriers, and ultra-low-cost air carriers. Of the 10 air carriers contacted, only four agreed to participate, two domestic network legacy air carriers, one domestic regional air carrier, and one low-cost air carrier; no ultra-low-cost carriers agreed to participate. Despite the small sampling, data from air carriers provides insights of interest to airport operators and so is included.

Although data collected from 61 airports and four domestic air carriers may not represent the industry as a whole, the results received provide readers information on effective practices for maintaining air service and insight into the world of air carrier planning.

To increase survey participation, all participants, whether airport or air carrier, were given the option to remain anonymous. To maintain anonymity, survey results are aggregated.

RESPONDENT CHARACTERISTICS

Six broad characteristics of each respondent were investigated to identify successful strategies: regional makeup; airport size based on 2013 enplanements; enplanement trends; seats, frequency, and number of carriers; destination characteristics, that is, whether the airport serves as a gateway

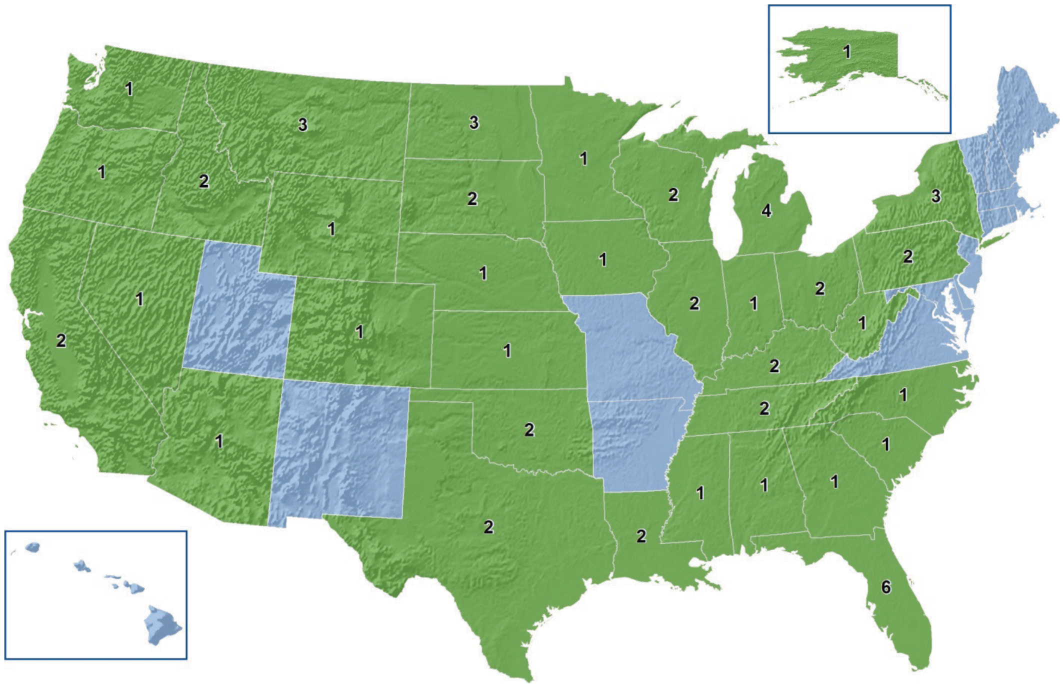

FIGURE 6 U.S. map by state and number of airports surveyed within each state (*Source:* Compiled by Sixel Consulting Group, Inc.).

to vacation destination); and community characteristics (i.e., does the airport serve mostly leisure or business traffic).

Regional Makeup

To identify strategies based on geographic location, the 61 airports were grouped into regional categories, portrayed in Figure 7. The vast majority reside in either the East North Central Region or the West North Central Region.

Airport Size

According to the calendar year 2013 enplanement data from the FAA, Of the 61 respondents, 35 (57%) are classified as non-hub airports. The remaining 23 are classified as small-hub airports. Medium-hub airports were included in the survey, but only one chose to participate.

Enplanement Trends

Airports were asked whether they had experienced an increase or decrease in passenger enplanements, total seats, or departures over the last five years. Twenty-six (26, or 43%) of the surveyed airports have seen a reduction in total enplanements; the largest decline an airport experienced was a 22% decrease. The other 35 airports reported an increase in passenger travel. With all participating surveyed airports combined, enplanements are up just 2.6%, to 28.4 million. One airport reported a 231% increase in total passengers; however, in that case, the economy of the region and the airport's geographic isolation affected the passenger numbers more than any actions by, or changes at, the airport.

Data compilation regarding the average one-way fare for the 61 airports was accomplished by utilizing the quarterly and annual traffic reports air carriers provide to the U.S.DOT. Altogether, the average one-way base fare (net of taxes) for the respondent airports rose 24% in five years to just under $200 for domestic departing passengers. Although steep, the average fare increase is attributed

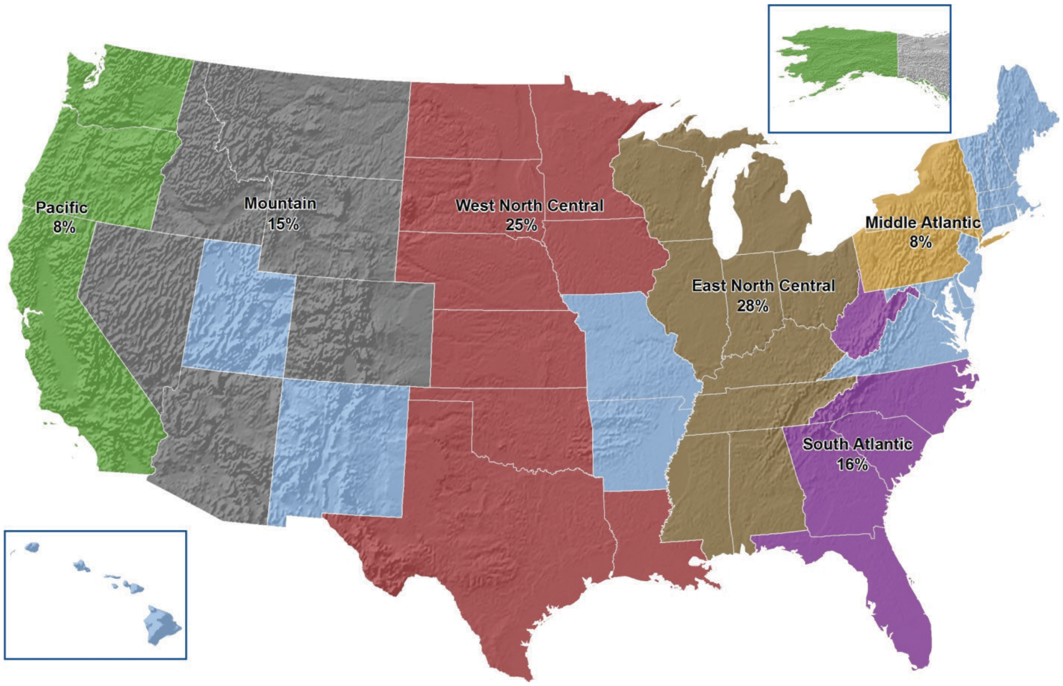

FIGURE 7 U.S. map depicting number of survey respondents in each region (*Source*: Compiled by Sixel Consulting Group, Inc.).

to improving economies, airline mergers, smaller gauge equipment, less frequencies, and, ultimately, total seat capacity reduction to the small- and medium-sized airports. Figure 8 depicts the year-over-year average one-way fare increases within the synthesis study group.

Seats, Frequency, and Number of Carriers

Three of the 61 airports surveyed have only one scheduled airline, while one of the medium-sized airports has nine scheduled airlines. The majority of respondent airports, 52, have three or more

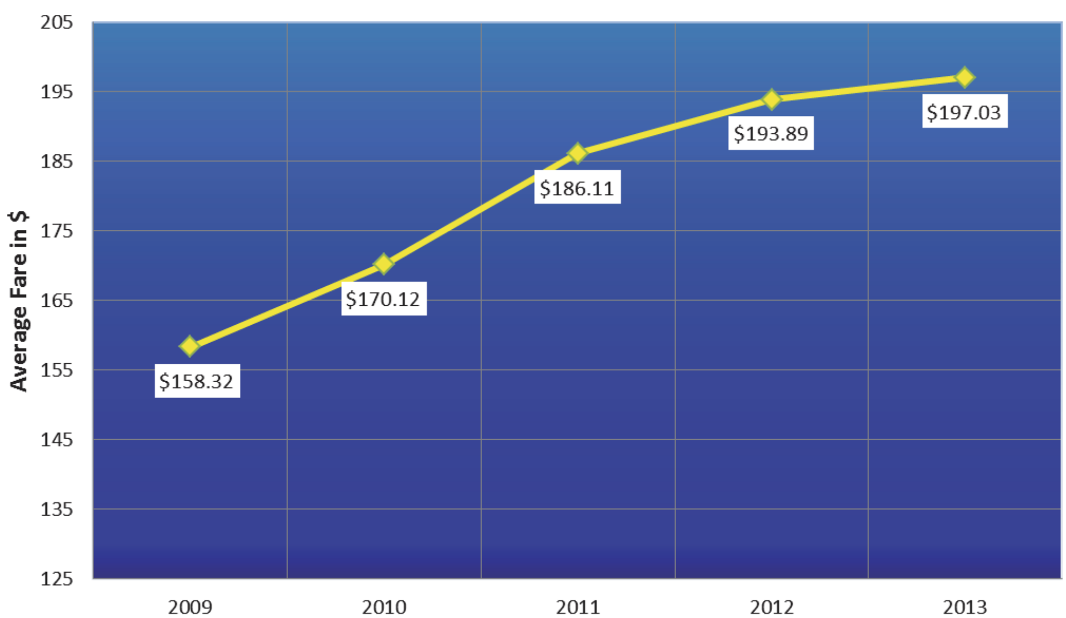

FIGURE 8 U.S. average one-way fare comparison for survey participants (*Source*: Compiled by Sixel Consulting Group, Inc.).

TABLE 2
NUMBER OF CARRIERS AT RESPONDENT AIRPORTS

Total Carriers	1	2	3	4	5	6	7	8	9	Total
Total Airports	3	6	11	12	17	7	3	1	1	61

Source: Compiled by Sixel Consulting Group, Inc.

airlines serving the community; 49 of the airports have five or fewer airlines providing service (Table 2).

Of the 61 airports surveyed, 53 currently have some form of mainline service. With the continued retirement of the 50-seat regional jet, the airports are noticing larger dual-cabin aircraft replacing the retired equipment. Thirty-nine (39) of the airports have ULCC service through Allegiant, Frontier Airlines, and/or Spirit Airlines.

Regarding total seats, just 25 of the surveyed airports experienced an increase over the last five years. With all surveyed airports combined, the total seat capacity declined 1.8%. More noticeable is the frequency reduction, down 7.2%. Larger-gauge aircraft flying less frequently continue to replace smaller-gauge equipment, and the effects of these changes are reflected in the markets.

Destination Characteristics

Destination characteristics were utilized to evaluate whether an airport was viewed as a “vacation” destination or a gateway to a nationally recognized vacation or leisure destination. Factors included well-known beaches, national parks, historic monuments, and outdoor recreation (i.e., skiing, white water rafting). Among the 61 airports interviewed, 21 are deemed “destination” airports. This is not to say the airports do not handle business traffic; rather, the total traffic more heavily represents inbound passengers.

Community Characteristics

Community characteristics were assessed to determine the business-leisure traffic mix at an airport. Forty (40) airports had a strong business-centric or business-majority mix of total traffic and, therefore, are not considered destination airports. Another aspect that was considered was whether an airport had access to a major hub within a two-hour drive radius; 12 of the participating airports did.

CHAPTER THREE

FACTORS INFLUENCING AIR SERVICE

THE THREE Cs: COST, COMMUNICATION, AND COMMUNITY ENGAGEMENT

Based on their responses, airports and air carriers see three main factors influencing air service: cost, communication, and community engagement.

Cost was identified by both airports and air carriers as a primary factor in maintaining service to a community and cannot be underestimated. This includes the total cost of operating at the airport, not just what an airport views as within the realm of responsibility. Air carriers noted the importance of knowing the cost per departure (CPD) versus the cost per enplanement (CPE) in order to understand the true cost of operation at an airport. There may be actions within the airport's control that can be undertaken to mitigate these expenses, but which specific actions should be taken cannot be known until the cost centers are correctly identified.

What is included in airport cost?

Airport cost is defined as any cost associated with operating at an airport. Costs may include landing fees, space rental fees, jetbridge fees, and even the cost to turn an aircraft. The lower the airport cost, the better positioned an airport is to maintain and expand air service.

(*Source*: Compiled by Sixel Consulting Group, Inc.)

Air carriers were asked which common performance indicator was used or was considered more pertinent in route analysis: CPD or CPE. The broadest category of cost is the air carrier CPD and from that the CPE can be derived. Air carrier cost per enplanement is best described in the 2011 *ACRP Report 19A: Resource Guide to Airport Performance Indicators*, where it is defined as:

> Average of what airlines pay per enplanement to the airport for use of airfield (landing fees, ramp/apron fees) and terminal space (space rentals net of any credits and reimbursements, plus gate charges). Includes payments for aircraft parking positions (e.g., hard stands, tie-downs), federal inspection fees, and security reimbursements paid by the airline whether to the airport or another agency. Typically excludes special airline facilities self-financed by an airline (e.g., terminal facilities to be operated by the airline). Excludes ground or facility rentals for ancillary buildings (e.g., cargo buildings, hangars); airline self-funded construction (e.g., build-out of terminal space); other costs incurred by the airline to operate at the airport (e.g., fuel, maintenance, personnel, services, supplies and equipment) except where the airport provides these services directly (e.g., deicing services at some airports). Does not include delay costs. (Hazel et al. 2011, pp. 96–106)

This not only defines what CPE is but what it typically is not. If CPE is the average of what an air carrier pays to the airport per enplanement, then the ensuing definition for CPD is the collective average of what an air carrier pays to the airport per departure. It is worth noting that while CPE and CPD are metrics used separately, they are one metric overall.

It should also be recognized that there are circumstances in which an airport's CPE might decrease or increase as a result of outside forces not within the airport's control. One such case concerns Seattle–Tacoma International Airport (SEA).

Over the past two years, Delta Air Lines has expanded its Seattle operation exponentially. Delta has grown from an average of 9,000 available seats per day with 18 nonstop SEA markets in July of

2013 to an average of 16,000 available seats per day with 35 nonstop SEA markets anticipated for July 2015—a 78% increase in anticipated total seat capacity for a single airline. With the continued growth and added capacity from all carriers serving Seattle, there is now an average of 76,000 total available seats per day for July 2015. The total SEA increase for all carriers rose 16.5% in two years. The augmented capacity helps to enplane more total customers at SEA, thus lowering its overall CPE, but it cannot be foreseen whether the added capacity and expansion is just a short-term competitive issue or will be maintained in the future. SEA is one example of an outside force—an air carrier—influencing the airport's CPE, although the airport itself benefits without having to adjust costs.

All four air carriers responding to the initial survey reported that CPE was viewed as more relevant than CPD when analyzing a route and the performance of the route.

The previously quoted definition shows that some charges listed are well within the boundary of the airport to affect change, but the question of whether an airport should charge and at what rate can only be determined on a local level. Airports may benefit from auditing and revising rates and charges on a routine basis for purposes of benchmarking against their perceived competition. Constantly seeking alternatives to raising air carrier rates and charges is beneficial for the airport in maintaining current air service.

> "Stability of rates is very important; no curve balls."
>
> –Air carrier analyst

Stability of the previously mentioned costs is also significant. Showing a consistent trend implies sound financial management and reduces any apprehension an air carrier may experience with large swings in cost trends. If there is major facility work or a rebuild for the main runway on the horizon, air carriers need to be made aware. Surprises are not viewed favorably by an air carrier trying to return value to shareholders. As one air carrier analyst said, "As an airline, we don't differentiate airport costs versus non-airport costs on the ground. When you sum up the total ground costs from one airport and compare them to the next, that is what we look at."

This leads into the next major correlation discovered: communication. Airport staff need to establish communication with air carriers, both legacy carriers and regional carriers; with ground handlers and third-party vendors providing services to air carriers; and, perhaps most importantly, with the public. Communication can be accomplished in a variety of ways with varying levels of frequency, including e-mail correspondence, conference calls, and face-to-face meetings either at industry-related conferences or headquarters meetings.

Frequency of those communications was also mentioned by both airports and carriers. Those who stay on top of communication recognize and hear from the air carrier sooner if a route is performing poorly. With a standing appointment for discussion on service at an airport, planners are apt to pull the performance metrics of the flight more often and provide a detailed analysis of it, rather than letting the market lapse unintentionally for several months or quarters. The quick notice allows the airport to formulate a plan of action to improve the route and long-term stability.

Educating an air carrier regarding what is occurring in the market with the business community and with leisure travel is essential, even if a carrier has been there for a number of years. This allows it to hear feedback straight from the airport and to make adjustments as necessary. It also displays a willingness to absorb all information given and establishes rapport among the airport, community, and air carriers. The airport becomes the "expert" on things in the community with the air carrier, not the local chamber of commerce or state aviation division.

Finally, both groups emphasized the importance of engaging the community. Opportunity for community engagement presents itself in various forms, but it all leads back to interaction: through marketing, through visits and presentations to business groups, and through being open to public feedback and listening to requests. Engagement was also viewed as essential to the success not only of the airport but the air carrier's service. Interestingly, it was also identified as a potential strategy for maintaining a route identified for cancellation. Being prepared to pull community partners together to react immediately to any downturn in a route is a respectable business practice. This quick reaction can only occur if a relationship has already been cultivated by the airport and the business community trusts the advice it receives.

CONTROLLABLE ASPECTS OF THE THREE Cs

Air Carrier Incentive Programs

One aspect of control all airports have available is the option to develop an air carrier incentive program. An air carrier incentive program is commonly used to enhance service at an airport by removing or reducing barriers to entry on qualifying routes for a specific amount of time. Any air carrier incentive program offered by an airport must comply with numerous federal laws and policies if the airport accepts federal grants, including Grant Assurance 22 and 23, respectively known as Exclusive Rights and Economic Nondiscrimination. A full list of common federal laws and policies can be found in the 2010 *Air Carrier Incentive Program Guidebook: A Reference for Airport Sponsors* located on the FAA's website at www.faa.gov (FAA 2010).

Forty-nine (49) airports participating in in-depth interviews stated they had an airport-approved incentive program to offset initial costs of qualifying routes; eight reported they do not have an incentive program; and the remaining four stated other entities in the community offer incentives and therefore they refrain from doing so.

The FAA provides guidelines on allowable air carrier incentives through a set of federal regulations detailing what is permissible for an airport to offer versus what is in violation of federal grant assurances (FAA 2010). Allowable airport incentives include, but are not limited to, waiver or reduction of landing fees; waiver or reduction of rental fees; waiver or reduction of fuel flowage fees; and marketing assistance.

FAA makes a clear distinction between what an incentive is and what it is not. An incentive is defined as, "any fee reduction, fee waiver, or use of airport revenue for acceptable promotional costs, where the purpose is to encourage an air carrier to increase service at the airport" (FAA 2010). Incentives on qualifying routes are viewed by FAA as allowable so long as the incentives are not a direct subsidy.

FAA further describes the importance of defining the incentive timeline, which for an air carrier can range anywhere from a few months up to two years, depending on the structure of the approved incentive program. According to the FAA's 2010 *Air Carrier Incentive Program Guidebook: A Reference for Airport Sponsors*, "An incentive program tests the viability of discrete markets. It is not a subsidy to air service. If the service cannot stand on its own after two years, it may not be viable at this time" (FAA 2010).

Greenville–Spartanburg International Airport Air Service Partnership Plan

The Greenville–Spartanburg International Airport Commission provides a policy which sets the tone for why an "Air Service Partnership Plan," as it refers to it, is necessary.

"In an effort to stimulate air carrier growth and provide an incentive to incumbent and new entrant airlines for the addition of new air service at the Greenville–Spartanburg International Airport (Airport), the Commission should establish a range of options that it will make available. This policy provides the parameters within which Staff will be able to negotiate air service development on behalf of the Commission" (Greenville–Spartanburg International Airport Commission Policy and Procedure Manual 2010, pp. 76–78).

An air carrier incentive program typically contains items directly related to all three Cs: offsetting initial costs of operation, thereby lowering the barrier to entry; designating marketing funds to communicate the applicable service to the community; and engaging the public by providing a call to action such as, "Flights begin October 1. Book now!"

Having a properly structured air carrier incentive program in place prior to discussions with a potential carrier is advantageous; it allows the airport to provide said air carrier with a program that is defined and ready to implement. The air carrier incentive program, with fee waivers and/or reductions in play can aid the air carrier in immediately determining the operating costs of a new potential route. It also showcases the commitment of the airport to decreasing the barriers to entry. One air carrier analyst noted just how integral air carrier incentive programs were to decision-making: "As a carrier thinking about entering the domestic scheduled service market, in addition to using raw data to evaluate a potential market, we also compare potential financial incentives and marketing support. Of course, those airports with active community organizations that are able to provide revenue guarantees are of particular interest."

An example of an air carrier incentive program from the Greenville–Spartanburg International Airport is included as Appendix D. The Greenville–Spartanburg International Airport Commission offers an air carrier incentive program with a range of options available to negotiate not only for new service but for the potential establishment of a crew base or scheduled international service, as well as increased capacity to an existing non-stop or hub destination. The program lays out the possibilities while pointing out the possibility that funds may not be available should the budgetary allotment be exhausted in any fiscal year.

Cost per Departure and Cost per Enplanement

> "As a carrier thinking about entering the domestic scheduled service market, cost per enplanement is very important . . . right behind PDEW, average fare, and competition in given market."
>
> –Air carrier analyst participant

Both CPD- and CPE-related issues arose in discussion with both airports and air carriers; however, CPE was identified as more pertinent when analyzing a current or prospective route (with the caveat that there might be outside forces at play affecting an airport's CPE).

As CPE comprises all of the monies an air carrier remits to an airport for use of facilities and associated infrastructure, divided by the air carrier's enplanements for the period, it is somewhat controllable. It is important that the FAA mandate to be as financially self-sufficient as possible be considered, but doing so at the expense of the incumbent carriers is not advantageous. Diversifying airport revenues is one way to prevent an increase in rates and may be enough to decrease air carrier rates as well. Performing a rate and charges audit to compare to peers in the region may provide an indication of any alterations necessary to be more competitive. The least common denominator, when compared against similar airports and communities, will continue to be the CPE. Air carriers will use the value, in most cases, to help confirm when and where future growth is best maximized.

Communication with Air Carriers

Prior to opening discussions with any air carrier, it is important that the airport understand the carrier's position in the industry. This can be accomplished by reviewing Wall Street presentations, investor presentations, and quarterly financial results. Often, the articles will also have information on upcoming fleet changes and carrier strategy enhancements. Staying abreast of industry topics and the air carrier's stance on the topic is important as well. These are all within the airport's control and provide additional background information leading up to discussions.

> "It's always easier to retain the existing service than it is to get back lost service or actually get new/additional service."
>
> –Airport director

An inexpensive option available to every airport is communication with incumbent air carriers. A conversation regarding route-specific and market performance on a monthly or quarterly basis does not entail a vast amount of time, money, or energy, but provides an opportunity for interaction that may lead to the identification of areas of concern and trends related to seasonality within the market an airport may not be aware of.

In addition, it also establishes a relationship with the air carrier and the assigned planner. Throughout the course of the year, large meetings, conferences, or events may take place in the community. An established relationship affords an air carrier planner the ability to ask for an increase in capacity for a specific time period from an airport he/she knows and trusts. The likelihood of having the request granted will depend on individual circumstances, but the air carrier may consider the request to be more valid if each party has invested time discussing the market.

Communication Leads to Community Engagement

Scheduling time to attend events, luncheons, business meetings, or hosting such events at the airport is all within the realm of airport control. In 2009, *ACRP Report 18: Passenger Air Service Development Techniques* laid out a framework from which to begin air service development as well as what to expect during the process (Martin 2009). Furthermore, the research identified three groups that play an integral role when developing air service: major employers, the local chamber of commerce and tourism board, and the local economic development agency and/or other parts of the local municipal government. As the report states, these groups are key to attracting additional service, but they are also integral for maintaining an air service route once initiated. Open and consistent dialogue with the main groups presents opportunities to provide updates on how the service is performing as well as to receive feedback from the actual users of the route. The communication may not always be positive or in support of the service, but the comments are relevant. Addressing such comments immediately and following up with the individual and/or group will show good faith efforts on the part of the airport to ensure the service is germane to the key groups.

Harsh Realities

Airport respondents provided examples of information uncovered through community engagement activities. Some were able to address the issue with the air carrier immediately while others are still attempting to identify a workable solution. Issue include:

- **Key misconnecting flights:** Business travelers making it to a hub but thereafter misconnecting to an important destination, and travelers making it to a destination but not making a return the same day.
- **Aircraft fleet issues affecting grieving families:** Government agencies and funeral homes unable to ship human remains from local airport as the result of mainline aircraft being swapped out with smaller-gauge equipment with limited cargo holds.
- **Fare disparities:** Often occurred between non-hub or small-hub airports and alternate airports with lower fares for the point of departure.

Communication with the community (often referred to as community outreach or community engagement) is also accomplished by means of marketing and public relations. The American Marketing Association defines marketing as "the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large" (American Marketing Association 2015). Air carriers view this type of communication as essential to the airport-air carrier partnership and to the overall long-term success of the market. Engaging with all segments of the market, including both corporate travel accounts and leisure travelers, not only boosts the route, but also promotes brand awareness when travelers are in the mindset to book.

Elizabeth Flores, the executive director of community development and marketing for Sixel Consulting Group, defines community engagement as "the process by which a community organization (airport) and individuals and corporations within the community build ongoing, permanent relationships for the purpose of applying a collective vision for the benefit of a community. Airports can utilize community engagement/outreach to reach multiple target audiences including, but not limited to, corporate/business travelers and leisure travel audiences" (E. Flores, personal communication, Jan. 11, 2015). Flores continues,

> The airport-airline relationship has evolved over the past decade. Travelers of today make informed decisions based upon the information made available to them. Airline corporate sales departments rely on the support of

local airports to inform regional communities about both airport offerings and available airlines and routes. By developing partnerships with local economic development, government, tourism partners, and local corporations, airports can maximize related partnership marketing efforts. These partnerships can help the airport to grow and maintain a solid image and reputation as a strategic air transportation leader in the region.

Ongoing dialogue with key stakeholders in the community is vital. Understanding travel patterns and working to ensure current service needs are met will assist in safeguarding the route's future by increasing awareness.

Resources Available to the Airport

A host of tools and entities exist to assist in evaluating and analyzing current and future routes, as well as assisting in benchmarking against a peer set; some are free tools available to those willing to invest the time. Organizations also exist to provide up-to-date industry information. The following are a few examples of resources an airport can explore further:

- Air carrier websites (tracking daily/weekly frequency and scheduled equipment adjustments)
- Business information websites such as *USA Today* Today In The Sky
- Airport consultants
- Data products (i.e., Diio, Sabre)
- FAA governmental reports (Form 127 to assist in benchmarking cost)
- Professional organizations (i.e., AAAE)
- State groups and airport associations (i.e., Florida Airports Council).

Air Service Development Consultants

Air service development consultants offer a variety of services in various price ranges to assist an airport with their needs. Among typical services are:

- Business case analysis for potential and current routes
- Leakage and retention analysis
- Fare structure and pricing analysis
- Airline schedule analysis
- Airport/new route economic impact analysis
- U.S.DOT data and statistical reporting/analysis at various intervals.

UNCONTROLLABLE ASPECTS OF THE THREE Cs

Above- and Below-Wing and Third-Party Vendor Costs

Third-party vendor costs can fit into both the "uncontrollable" and "controllable" categories. However, based on the respondents' answers, this cost is generally viewed as uncontrollable. Airports may consider assisting, or offering through their own staff, above- and below-wing services. At this time, for a variety of reasons, the majority of respondents (89% of them) do not, nor do they assist in any financial form. Of the 61 airports interviewed in depth, only seven answered "yes" to the question: Does your airport assist with above- and below-wing services to help air carriers contain costs? Others are reviewing and discussing the potential. One major obstacle cited is the cost of coverage through airport insurance providers.

Lifting of the Wright Amendment

The recent expiration of the Wright Amendment was not viewed favorably by all airports, especially those losing service or experiencing a frequency reduction. An airport may be a low-cost facility and have above-average load factors and revenue results. However, if an air carrier desires to reallocate equipment to markets with, from their point of view, more potential, and is legally able to do so, it may choose to do so regardless of the incentives or marketing assistance an airport provides. Such regulatory modifications also go hand in hand with evolving business models, opening up new opportunities for air carriers.

A case in point is El Paso International Airport (ELP). Southwest Airlines reduced frequency from ELP, specifically, the San Diego route. Although the route had high load factors, the yields left room for improvement. Southwest did not communicate the route cancellation until after the change had been loaded into the system, at which point it was too late. The ongoing changes resulting from the expiration of the Wright Amendment and the evolving business model of Southwest Airlines, coupled with average yields on the nonstop route, may have factored into the decision of Southwest to reallocate the aircraft to another viable market outside of ELP. A review of Southwest Airlines' service from 2009, in comparison to today, shows the loss of several routes (Figures 9 and 10).

Communication with the Community

It is not uncommon for individuals to travel to another airport in pursuit of a "good deal" on airfare without taking into consideration the cost of fuel, parking fees, and drive time associated with the supposed bargain. Once those factors are considered, more often than not the savings are minimal at best. Engaging those individuals in an honest discussion about air service and educating them on not only the aviation community but what the airport is doing to enhance or address the issues of concern is the first course of action. Through education, the individuals may begin to understand that the lower airfare at a neighboring airport does not save them money and ultimately hurts their local economy.

However, not all communication is accurately interpreted. The airport cannot control how patrons perceive the message, nor the impact it may have on them. In this situation, it is most effective to combat the problem by redirecting the information to those who will listen and to provide talking points to community partners to stress the airport's message rather than allow the naysayers to control the debate.

Fuel

Few factors affect an air carrier's bottom line as much as fuel costs do. John Heimlich, vice president and chief economist for Airlines for America, was quoted in March 2012 by Kelly Yamanouchi

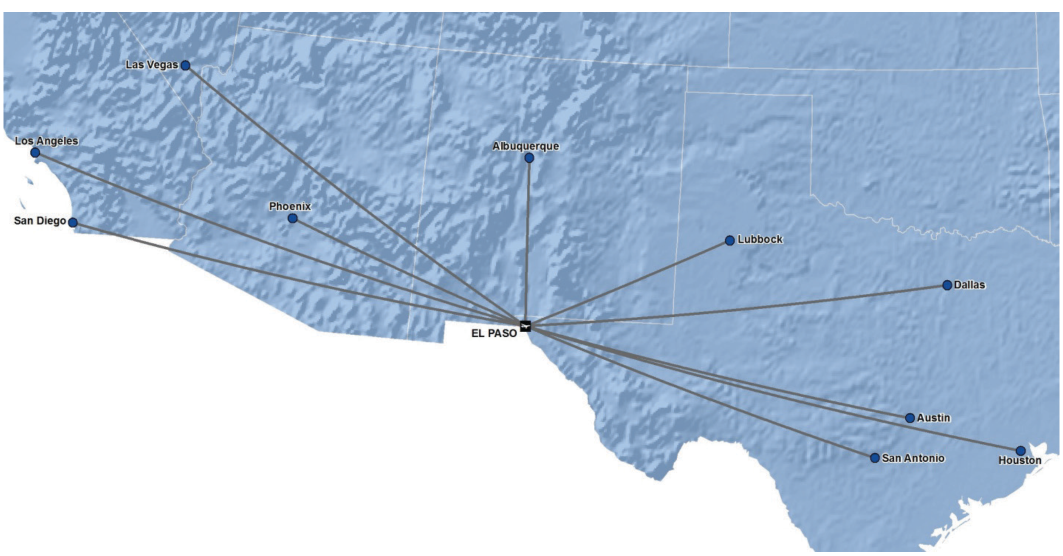

FIGURE 9 First quarter 2009 Southwest Airlines service from El Paso International Airport (*Source*: Compiled by Sixel Consulting Group, Inc.).

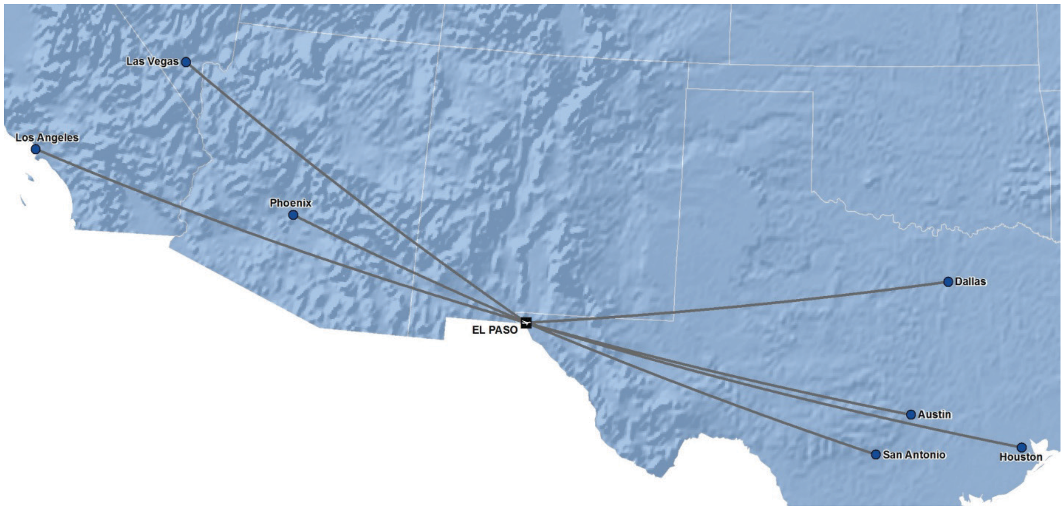

FIGURE 10 First quarter 2015 Southwest Airlines service from El Paso International Airport (*Source*: Compiled by Sixel Consulting Group, Inc.).

in the *Atlanta Journal-Constitution* as saying, "Fuel costs make up about 35% of airline operating costs." Fuel cost volatility is of such importance to the bottom line that Delta Air Lines purchased an oil refinery in 2012 as a way to combat one of the largest and most volatile expenses it carries: jet fuel (Mouawad 2012). For an air carrier at the mercy of jet fuel prices, there is little an airport can do directly to reduce fuel expense. Waiver of fuel flowage fees as part of an incentive program, or simply not including a fuel flowage fee in the airport's rates and charges, are both options; however, neither addresses the tremendous cost and variability of jet fuel prices. There is a tipping point where fuel price and the market metrics of the route no longer make financial sense for an air carrier. That tipping point is well beyond the control of the airport.

Aircraft Fleet Issues

As the airline industry progresses, expands, and reinvents itself, the equipment fleet continues to age and fuel the demand for airlines to order, purchase, and add new aircraft.

With its first commercial flight nearly 20 years ago, the 50-seat regional jet opened up numerous markets to first-ever nonstop service in key business centers that were not previously available to the marketplace. This was frequently because of limitations with older types of aircraft that were either too large for the market and passenger demand, or the inability of a smaller aircraft, at times propeller-driven, to fly the stage length.

The 50-seat regional jet aircraft is no longer being produced and the aging jets are being retired because of the cost benefits of fluctuating fuel prices and the future demand for equipment with a higher payload and an expanded seating compartment.

An interesting post factum effect of the AirTran Airways and Southwest Airlines merger was the divesting of the AirTran Airways B-717 Boeing fleet. With Southwest Airlines remaining solely a B-737 operator, there was a push to sell off the excess equipment. Delta Air Lines, requiring a suitable replacement for its retiring aircraft, has been the benefactor. As Delta Air Lines accepts delivery of the B-717s, the older and much smaller single-class aircraft are quickly being replaced with the larger dual-cabin 110-seat Boeing aircraft. This has been an added benefit to many small- and medium-sized airports throughout the country. Airports and their communities previously limited to the 50-seat single-class "coach only" aircraft now have daily scheduled service with a "first and coach" dual-cabin option. Initial feedback from the business community has been very favorable.

Local, National, and International Economy

Crises affecting the local, national, and international economy are certainly not within the airport's realm of control but have the potential to negatively affect existing and future air service routes. The events of September 11, 2001, the housing collapse, and ensuing economic recession, among others, have all affected the economy and, thus, air service demand in communities across the country. Even events beyond our borders, such as the recent Ebola outbreak in Africa and terrorist violence in the Middle East, continue to affect it. Acknowledging that an airport cannot control what an air carrier decides to do with a route as a direct result from an economic event is important. If negative economic forces are at play, even risk mitigation efforts such as increasing marketing awareness on a route may not be enough to convince the air carrier to retain a route.

CHAPTER FOUR

STRATEGIES FOR MAINTAINING AIR SERVICE

As a result of years of dedicated work in the airports and airlines industries, the 61 participating interviewees were able to provide detailed information that was of great benefit in identifying effective strategies.

SUCCESSFUL TECHNIQUES

> "Be very aware of the *total* costs for the airline to do business with your airport. That can and will be the determining reason an airline decides to fly or not fly there."
>
> –Airport director

When asked about strategies for maintaining air service at their facilities, survey respondents emphasized that controlling costs and lowering them as much as possible was of paramount concern. The first step to understanding how an airport compares to others is to audit current charges and benchmark them against a peer set. This can serve as a baseline for future internal discussions to determine whether an increase in rates and charges is appropriate. Often the audit will highlight discrepancies between airport costs and those of competing airports and can provide data-driven answers as to why service levels are not being maintained. Faced with the dichotomy between the FAA grant assurance to be as financially self-sustaining as possible while keeping costs low to attract and retain air service for the community, an airport must factor into the decision whether or not to charge for certain costs the overall financial situation of the airport and upcoming expenditures (i.e., facility improvements, runway maintenance costs, etc.). Benchmarking against a peer set goes hand in hand with knowing the market and is essential to identifying opportunities to cut costs.

Other proposed cost control measures at an airport include providing ground-handling services as a means for providing competition to existing ground handlers. An airport may choose to provide ground-handling services to control the customer experience as well. In the first case example, Rapid City Regional Airport in South Dakota provides insight on why the airport chose to enter the ground-handling market.

Case Example #1: Rapid City Regional Airport (RAP)

RAP is located in the heart of the Black Hills of South Dakota and is home to a major tourist attraction, Mount Rushmore. The proximity of a national attraction helps the community attract air service, as 60% of the traffic is inbound leisure traffic; and with the community's geographical isolation and an air force base located nearby, healthy fares can be emphasized in a business case. However, the airport recognizes the need for reliable, year-round service for the community, and as discussed, that is one factor in the decision to maintain a route year-round. Hoping to assist in air carrier start-up and ongoing ground-handling costs, RAP explored the option of providing airport ground-handling services. The airport even went so far as to submit a ground-handling bid to Allegiant on two occasions. Both times, Allegiant remained with the current ground-handler, and the bid process was productive. The submittal of a realistic bid with the intent of providing the service upon award allowed all bidders to put their best offer on the table. As the director and interim director put it, "By [our] at least submitting a bid, Allegiant was able to reduce their costs with the existing provider" (P. Girtz and C. Humphres, personal communication, 2014). The reduction in current cost ultimately aids the airport in maintaining service.

RAP Airport Statistics

- Calendar year 2013 enplanements: 263,246.
- Nearby airports: Denver International Airport 398 miles to the southwest, Gillette–Campbell County Airport 157 miles to the west, and Sioux Falls Regional Airport 345 miles to the east.
- Number of staff involved in marketing: Two staff members with 20% of each employee's time allocated.

Communication

Survey respondents report that airports and air carriers communicate in a variety of ways include:

- Phone calls
- Conference calls
- E-mail correspondence
- Industry air service conference meetings (i.e., JumpStart, Routes Americas)
- Headquarters meetings
- Invitations for community tours.

Scheduling a monthly, quarterly, or semiannual conference call in order to facilitate interaction between the airport and the air carrier route planner assigned, at a minimum, is applauded. If nothing else, it allows the entities to connect and foster a relationship built around a mutual concern: serving the community.

> One airport manager explained the reasoning behind attending multiple industry conferences, "The idea is to put a name with the face," referring to building the relationship with the air carrier planner and the airport.

The way in which air carriers prefer to interact with airport partners is very similar. They prefer scheduled interactions, including face-to-face meetings. One air carrier, wishing to remain anonymous, noted:

> We meet with airports at conferences or at our HQ. We generally prefer to avoid a "delegation" as this often involves political leaders with little information regarding the airport/airline relationship. For airports that we fly to, we typically welcome them to our HQ on a once-per-year basis. Airports with active projects may occasionally see more activity. For airports that we do not fly to, we prefer HQ meetings once every three years. At conferences, we will meet with nearly any airport if there is available time, but we have to create a priority list based upon activity with the carrier.

This particular carrier mentions avoiding a delegation with political interests. However, it is not only an air carrier suggesting this. In response to Question 36 of the interview survey, one airport manager stated, "Limit the airline HQ meetings to just the airport staff. The HQ staff prefers basic facts—less salesmanship." Often political leaders and others unfamiliar with the way air service works will participate in discussions, but when participants do not have a thorough understanding of the environment or industry, it becomes difficult to have an effective conversation and may cause air carrier staff to be more cautious with their choice of words. For an airport to build credibility with an air carrier takes time, and in the span of an hour, any progress made previously can be destroyed by including individuals in the meeting who have inadequate or incorrect information. If an airport chooses to include members such as community leaders or political figures in the delegation, an advance discussion on what to expect at the meeting with airline personnel is strongly suggested. It is not inappropriate to express a word of caution and define each member's role at the meeting.

The second case study provides an excellent example of an airport's exceeding expectations in communicating with air carrier partners.

Case Example #2: Reno–Tahoe International Airport (RNO)

RNO is an exceptional model of an airport in constant communication with incumbent air carrier partners. Located five minutes from downtown Reno and 40 minutes from some of the most popular ski resorts and outdoor recreation in the country, RNO touts itself as the Gateway to Lake Tahoe. The airport board of trustees has five goals, the first of which is to maintain existing service. The strong relationship the airport has with regional business groups and its desire to maintain and expand service with its incumbent airlines is evident. In return, the airline take-away is how invested the community is in the service it provides. Airport staff also invites airlines to tour the region in order to better understand the market. In RNO's words, it is important for the airline headquarters staff to see the airport and community first-hand.

Furthermore, airport staff meets quarterly with the property departments at the airport. Airline headquarters meeting takes place on an annual basis. For airline headquarters meetings, the airport schedules enough time to meet with not only the airline planning department but also marketing and property staff. The airport notes this balanced relationship is a great improvement over what it previously was, as the entire picture is discussed and evaluated. The market is about 40% business travelers and 60% leisure travelers, a healthy mix for the airlines serving RNO.

RNO Airport Statistics

- Calendar year 2013 enplanements: 1,756,471.
- Nearby airports: Sacramento International Airport 143 miles to the southwest, Salt Lake City International Airport 516 miles to the east, and Las Vegas–McCarran International Airport 456 miles to the southeast.
- Number of staff involved in marketing: One employee with 50% of time allocated. Three additional staff members may assist with up to 20% of time allocated.

One airport respondent cited an example of an occasion when proper communication was not followed. The airport manager reported that the desire was to ensure the community was aware of the new service. The airport advertised locally through billboards, but because the air carrier did not approve the initial ad, the air carrier asked the airport to remove the billboard.

It is also important to distinguish between the ticketing carrier and the actual operating carrier. With all of the expected consolidation completed as of this publication, there are many regional carriers flying for major carriers throughout the system. Although an operating carrier may have the legacy carrier brand and subsequent code on the aircraft, it is (in most cases) a separate entity. It is important to determine whether to establish communication with the operating carrier or with the legacy carrier. First, unless the operating carrier is providing the flight under an "at-risk" agreement, the operating carrier will have little control over setting airfares, frequency, equipment type offered, or advertising in the market. For discussions concerning those issues, the network legacy carrier is the correct contact, as it generally controls the asset under contract. However, if operational performance is the basis of the concern, both the operating carrier and the ticketing carrier would be involved. In an at-risk agreement, the regional carrier is allowed to use the network brand, but the regional carrier controls the airfare, frequency, and equipment type offered. It is also a "risk-reward" situation: if successful, the regional carrier retains the profit and, if not, the regional carrier absorbs the loss, not the legacy carrier. If an airport has at-risk service, it is important to be in communication with the regional carrier.

Communication with the right department is as important as it is with the correct carrier. If operational performance is a concern, speaking directly to the operations department is most effective. The same can be said for marketing. The only department that is often difficult to contact is air carrier pricing. Communication regarding pricing concerns is often handled through network planning. Network planning then passes the information to the pricing and revenue management departments to evaluate and provide a decision.

Each carrier is unique in the way it prefers to communicate. Ultra-low and low-cost carriers tend to be open for discussions on marketing initiatives and promotions, while legacy carriers are not necessarily interested in those opportunities unless a new market is being launched. Knowing the preferences of the air carrier with which the airport is communicating is essential. If questions arise, contacting acquaintances and consultants within the industry can provide valuable background information on an air carrier's preferences and procedures.

Participants in the surveys and interviews noted that when communicating with airports and airlines, it is advantageous to present factual supporting data to assist in outlining a business case. While the question of airport consultants was not directly raised in the survey, two airport managers suggested hiring an air service development firm to assist in not only the attraction of new service but the retention of existing service. Both airports independently noted that an air service development firm can assist in focusing on the airport and the community as well as on the larger goals and the way in which the airport will fit into the air carrier's model. This expertise can be brought in house with the airport choosing to bring a professional on staff, as is the case with larger-hub airports. This would lead to fewer outsourced items, thereby reducing consulting costs. Oftentimes, however, non-hub and small-hub airports operate with a limited staff, and thus outsourcing this role to a consultant makes financial sense. Regardless of whether an in-house professional or a professional consultant is employed, being able to access various types of data and tailoring the data to the topic being discussed is important.

Community

A broad spectrum of community groups is willing to assist in making a route successful and is available to assist airports and air carriers. During the survey process, a list was developed of agencies and partnerships that airports seeking to maintain air service can establish relationships with and to whom they can turn to for support. The list is not meant to be inclusive, as each airport and community is different, but provides an overview of groups worth exploring. They include:

> "The airport itself doesn't have the funds or horsepower to go it alone; work with and alongside community groups."
>
> –Airport director

- Chamber of commerce and associated committees (i.e., an air service committee, regional transportation task force)
- Economic development groups
- Municipal government and associated committees (i.e., vision fund committees, preservation committees)
- Convention and visitors bureaus
- Travel agency groups
- Industry specialized groups relevant to the community and route (i.e., petroleum, mining, wind energy)
- State organizations (i.e., aeronautics division)
- Major employers key to the local economy
- Service organizations (i.e., Rotary Club, Kiwanis, young professionals)
- Professional industry memberships relevant to aviation (i.e., public or state airport associations).

From the groups listed, sample opportunities for engagement include:

- Business breakfasts
- Lunch-to-learn presentations
- After hours social networking events
- Professional development courses (i.e., leadership for the next generation)
- Speaking engagements at service organizations
- Obtaining a seat on a committee to advise on aviation related matters.

Although the groups listed previously may have the economic best interest of the community, region, and/or state in mind, it is prudent to be aware of overstepping boundaries. Asking to partner directly with a state agency without first, or simultaneously, including the local affiliation may backfire and cause difficulties in the future. The local affiliation is often needed to engage the local membership, whereas the regional or state affiliation may be tasked with looking at the bigger picture, thus not committing the necessary time or funds to the local community directly affected.

> "An airport can never become complacent thinking they have done enough or that the level of air service is not going to get any better. An airport always must work to not only maintain the current level of service but look for new opportunities to grow."
>
> –Airport director

Presenting the relationship with an airline as an economic opportunity may make it more attractive for local economic groups to commit to the relationship as the correlation. After all, an air carrier entering the community is a new business and has the same concerns a new bricks and mortar company would. Approaching the economic development group from this perspective and tailoring what is currently offered to other new business entities to the airline, only on a larger scale, is a suggested starting point.

Airports surveyed that currently have robust engagement programs appear to be more successful in maintaining air service and have a more positive outlook, suggesting that those markets understand the dynamic forces at play and proactively work toward creating the most effective situation for the air carrier at the airport. This does not necessitate vast expense, but it does entail time to establish the partnerships and engage the various entities through conversations, meetings and a true understanding of travel patterns. One area uncovered in the interview process is the correlation between the success of a route and customer service. Customer service may not always relate directly to the air carrier but rather to the airport experience.

The airport experience is just one facet, along with fare and a host of other factors, that influence why a traveler chooses any given airport to travel from—especially for a leisure trip. An observation that surfaced repeatedly during the preparation of the synthesis was the perception of the quality of third-party ground handlers' customer service skills. With nearly every airport reporting the airline(s) had a contracted ground-handling vendor for at least a portion of the above- or below-wing service, not one airport had a positive word to say about their customer service skills. This common perception creates room for a discussion regarding what can be done to improve this skill set while maintaining competitive ground handling costs. Customer service is vital and, if the airport is engaged with the community and listening to feedback regarding personal experiences, the airports may elect to address the issue through customer service training or other methods.

The last case example showcases how one airport is engaging the community through the use of an online newsletter and the director's viewpoint on airport participation.

Case Example #3: Community Engagement at Rogue Valley International–Medford Airport (MFR)

MFR is located in southwestern Oregon adjacent to the city of Medford, serving the southern Oregon and Northern California region. Over the course of the last several years, MFR has been gaining traction in the area of community engagement with a program titled ACE, which stands for Airport Community Enthusiasts. MFR and the Jackson County Airport Advisory Committee developed the free program to assist those who advocate the positive attributes of the airport. With more than 7,000 members, this extension of the airport advisory committee is a tremendous asset to the airport. A quarterly electronic newsletter provides an update to members about events at the airport as well as a number of fun facts designed to pique the public interest. It is a cost-effective way to engage stakeholders and at the same time educate them on not only the value of the airport to the community but, when necessary, the current state of affairs in the aviation industry. As an incentive for joining and maintaining a free membership, ACE members receive up to two hours of free parking near the main terminal on a first come, first served basis. Local businesses in the community support ACE by assisting in covering the cost of the member parking.

In addition to the successful ACE program, the airport director acknowledges the importance of engaging the community through direct speaking engagements and involvement in events. Unless absolutely necessary, his staff does not turn down a chance to promote the airport. Interactions with the community are viewed as opportunities to educate the community on realistic expectations regarding incumbent air carriers as well as potential future carriers. One example is the desire expressed by some in the community for upgraded aircraft. The airport director uses speaking engagements to educate those in attendance on why greater frequency is more important than larger aircraft. Feedback from these sessions has been positive. Through such interactions, the airport gains advocates, and relationships are built with allies the airport can call upon in the future.

MFR Airport Statistics

- Calendar year 2013 enplanements: 325,715.
- Nearby airports: Eugene Airport 175 miles to the north, Redding Municipal Airport 159 miles to the south, and Del Norte County Airport 111 miles to the southwest.
- Number of staff involved in marketing: Two employees each with 25% of time allocated.

STRATEGIES BASED ON CHARACTERISTICS OF AIRPORTS

Investigation into whether successful strategies could be identified based on the listed characteristics in chapter two are evaluated here. However, the overriding theme is using the three Cs previously identified as strategies for maintaining service. The three Cs have the ability to work regardless of any of the identified characteristics; tailoring them to the airport's message, goals, and vision is the key. In some cases, a strategy could fit into several airport characteristics such as the technique of tracking license plates (as detailed below), which can easily fall in the airport size category or the destination characteristics category.

Regional Makeup

After investigating regional geographic aspects, the surveyors concluded that while some airports may have an advantage in their isolation (lack of competition), airports still stated the three Cs were important, perhaps even more important. Communication in isolated regions involves discussions with incumbent carriers regarding why the service is essential. Airline equipment change in isolated regions impacts the ability to ship and receive cargo. Three airports specifically noted the transportation of human remains has been negatively affected as a result of air carrier equipment changes in their communities. All three of the airports are in an area of the country with limited access to a major hub.

Airport Size

Strategies for all classifications of airports remain similar as all participants acknowledged controlling costs, communicating with air carriers, and engaging the community are essential factors. However, non-hub airports skewed towards their own data collection to assist in communicating with the community through marketing. Innovative and inexpensive data collection, such as the tracking the number of Canadian license plates nightly in the airport parking ramp, was mentioned. This grassroots data collection assisted the airports in positioning their marketing resources to reach their clientele. Although such methods are not the recommended method of placing effective media, these airports were constrained by budgets that dictated funds be allocated in other fashions; thus the airports were creatively applying what was within their realm of control.

Enplanement Trends

Airports with increasing enplanement numbers were found to be actively engaging in the three Cs. The degree to which the airport invited community engagement and involved it in marketing was explored. One airport with a marketing budget of $1.5 million saw a direct increase in enplanements. Passengers per day each way, or PDEW, rose from 313 in 2009 to just over 500 PDEW in 2013, an increase of 60%. PDEW is one metric used to identify whether an airport's customer base is increasing, decreasing, or unchanged. If PDEW is increasing, it indicates that enplanements in general are increasing. This airport was able to grow its passenger base through an awareness campaign aimed at communicating with the public, and therefore maintain its service levels.

Seats, Frequency, and Number of Carriers

With the exception of one airport, those airports experiencing an increase in seats in the market, additional frequencies, and a steady or growing number of air carriers were all actively engaged in the three Cs. The exception is an airport where the economy and relative isolation is encouraging a dramatic upturn in air service. The remaining airports are all participating in community engagement and are communicating on a routine basis with the incumbent carriers. These airports focus on maintaining service by reviewing areas in which they can improve, such as load factors.

> "The first thing we represent is a destination. It's not what the airport does. We play a role in the community and that's the approach the airport has taken. There are very few airports that people fly to, to see the airport. This location is the first or last thing the customer sees when they come to visit."
>
> –Airport director

Destination Characteristics

When asked how an airport can maintain current air service one respondent off-handedly stated, "Have a national park nearby." This remark acknowledges that an attraction markets itself, rather than the airport having to self-identify. The national attraction, coupled with seasonality data, did the marketing for the airport to the air carrier analysts. The influx of people to the area during certain times of the year is enough for an airline to justify service, albeit on a seasonally adjusted basis. Understanding this phenomenon leads the director to assist in selling the attraction much as if the airport was a tour sales operator. The airport understands the uniqueness of the situation and embraces it.

The key is to link the airport to the attraction, whatever that might be. One airport in this category noted it has taken measures to ensure the airport is tied in with the attraction. This airport mentioned modifying the official name of the airport, as well as partnering with the convention and visitors bureau to co-locate marketing signage. The airport recognized the huge asset in the national park and, rather than set itself apart from it, has embraced the proximity. Knowing that the local convention and visitors bureau and other entities market in other regions, the airport devotes a large portion of its marketing budget to where its partners do (an exact percentage was not available to include with this synthesis). This ensured that every time an individual saw an advertisement for the national park, he/she also saw which airport to use to travel there.

> "We have a business community with many high quality revenue passengers as well as a growing number of international passengers. These passengers want first-class seating and all the perks that come with their frequent flyer program status. The airlines know this and have upgraded equipment and offer the frequency that the business traveler needs. We also strive to keep costs low and absorb many costs that legally could be passed on to the airlines."
>
> –Airport director

Community Characteristics

Communities with a high ratio of business versus leisure traffic still utilize all three of the three Cs. However, the efforts to educate the economic groups and major employers were more developed. For example, one airport mentioned it set up a specifically corporate travel advisory group with membership and representation by invitation only. This ensures it has the key players at the table to engage in matters pertaining to air service in the community. Another airport developed a similar focus group to engage the top 30 businesses within the community that frequently travel. During their meetings, they discuss routes with weak performances (based on airline feedback) and then, if they are able, modify their travel plans to assist in filling up those flights.

CHAPTER FIVE

CONCLUSIONS AND SUGGESTIONS FOR FURTHER RESEARCH

THE THREE Cs

Maintaining air service is not a one-size-fits-all problem. Indeed, many airports interviewed employ a variety of methods to support their service and continually fine-tune the message. Understanding the local economy and the air service market in the community and abroad, and consistently striving to build airline-airport relationships, will allow airports to endure a turbulent future.

Cost, communication, and community engagement were themes repeated throughout the entire study period by both airport and air carrier participants. Controlling these factors, to the extent it can, is essential to an airport's ability not only to attract additional service but to maintain existing service. Knowing the true cost for air carriers to operate is the first step and is essential to the air carrier partner. A rates and charges audit and benchmarking are suggested strategies to understand cost metrics. The air carrier considers all of the costs, whether within the airport's control or not, as a comparison tool for allocating resources. Alternative revenue sources and a diversified revenue base are key factors since, in the current dynamic economy, an airport's budget cannot be solely reliant on air carrier revenue. Competition among airports in the region will quickly identify airports with out-of-line costs and set the fiscally responsible leaders apart from the pack.

Communication was the second most common theme, referring to communication with both air carriers and with the community. The airport needs to know the market and setting realistic expectations for what an air carrier can achieve in the marketplace. Establishing a good airport-airline relationship through regular communication is imperative; this includes being open to criticism if a route is performing poorly. Successful airports understand this and arrange regular conference calls and headquarters meetings to maintain and strengthen the relationship. Respondents recommended against assuming partners believe that "no news is good news." Airport staff is tasked with a variety of responsibilities, but a top priority for the manager or director is maintaining air service relationships.

Communication with the community is equally important. Community partners will be an airport's allies long after an air carrier has left if the relationship is built on accurate information and education through constructive criticism and informative discussions. Community partners become the sounding board for how the service is viewed in the community and can offer ways to correct any misconceptions. However, the airport cannot take full advantage of this relationship if communication is not maintained.

IMPORTANCE OF ENGAGEMENT

The last most common theme was community engagement and, ultimately, marketing. At all sizes of airports, engagement is crucial to maintaining air service. People will not use a service if they do not know about it. Building a community engagement and marketing program into any incentives offered is encouraged, but it is unclear what happens when those incentives are exhausted. Partnerships with community groups can provide another marketing source, and cooperative marketing with these groups can be accomplished without a large budget. As demonstrated in the Rogue Valley International–Medford (Oregon) Airport case example, community engagement does not necessarily involve a vast sum of money but, rather, a desire to speak with, and listen to, community groups. An electronic newsletter can be an inexpensive way to engage with the community. Marketing can be used to brand the airport and control the message or be designed for a specific event. The key is not how much is spent, although a limitless budget can help significantly; it is how consistent the message is and where the message is placed that matters the most. Given the limited staff time at most of the airports interviewed, a marketing professional could be extremely beneficial. Marketing was also identified as a potential strategy for maintaining a route when it might otherwise be cancelled.

MANAGING COMMUNITY EXPECTATIONS

Community engagement can also be beneficial in educating the public and key groups on realistic expectations. Putting the airline industry into perspective and using data to support the case is advised. For example, if a community expresses the desire to attract a carrier such as Southwest Airlines, it may be helpful to provide data on community size of existing carrier markets at an economic group meeting. A graphic map and corresponding background information on the carrier might also assist in managing the community's expectations. If the community does not quite fit into the carrier's model, a discussion on a plan of action to extend the community may be worthwhile.

In addition, controlling the release of information on upcoming air carrier meetings is another way to manage expectations. The airport community understands industry air service conferences and the opportunity they provide to meet with a variety of carriers, but the community may not. If an airport were to share the list of air carriers, local media might pick up the story and provide false hope to the community. Determining what to release, and what not to release, is as important as how and to whom information is presented.

IMPORTANCE OF UNDERSTANDING THE AIRLINE ROUTE PROCESS

How an airline perceives strategies for maintaining service is not all that different from the way airports view them. The focus of air carriers, though, is to turn a profit, and they make decisions based on facts and a plethora of data. They are seeking realistic projections, which mean the airports vying for limited resources are required to provide factual information. Data and facts drive decisions; simply "knowing" and relaying it to an airline will not yield results. It is important that data be pertinent to the business case and current; utilizing data several quarters old does not build a convincing case. This is where an airport consultant can assist in compiling data that is not only accurate but is the latest available.

SUGGESTIONS FOR FURTHER RESEARCH

Another issue which surfaced during preparation of the synthesis was the perception of a lack of customer service skills among third-party ground handlers. While nearly every airport reported having a contracted a ground-handling vendor for at least a portion of the above- or below-wing service, not one had a positive comment regarding ground-handler customer service skills when comparing them to direct air carrier employees. The prevalence of this perception indicates the need for a discussion regarding improving this skill set while remaining cost-competitive. As discussed briefly in the synthesis, customer experience factors into whether a customer books from an identified airport or, if possible, opts to fly from ("leaks to") another airport. This suggests that further research may help airports develop strategies to improve customer service for third-party vendors, as well as to create a training guide they could utilize for instructional purposes.

GLOSSARY OF ACRONYMS

ATP	Air Transport Pilot
CAB	Civil Aeronautics Board
CPD	Cost per departure
CPE	Cost per enplanement
DCA	Ronald Reagan Washington National Airport
DFW	Dallas/Fort Worth International Airport
EAS	Essential Air Service
ELP	El Paso International Airport
LCC	Low-cost carrier
LGA	LaGuardia Airport
MFR	Rogue Valley International–Medford Airport
PDEW	Passenger per day each way
RAP	Rapid City Regional Airport
RNO	Reno–Tahoe International Airport
SEA	Seattle–Tacoma International Airport
ULCC	Ultra-low-cost carrier

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APPENDIX A

Survey: Airports

INITIAL SURVEY QUESTIONS FOR AIRPORTS AND COMMUNITIES

Airport Cooperative Research Program

Strategies for Maintaining Air Service–Pre-Survey Questionnaire

The Competitive Issues and Alternate Options Affecting Your Airport

- How have you been able to maintain service for your airport?
- What is your current level of air service?
- What are the main competitive advantages of your airport versus the alternate airport(s) in your catchment or region?

Current On-Site Airport Marketing Staff

- Please list the number of full- and part-time staff that are actively involved in managing the marketing program for current air service.

Air Carrier Corporate Interaction

- How does the airline marketing, sales, and planning departments interact with you, your airport staff, and community programs?
- Does your airport have scheduled *mainline carrier* service?
- Do you see a difference in relationship between the operating air carrier and the marketing air carrier?

Current Status and Opportunities

- What are the things that you do to maintain your air service?
- What are your major concerns moving forward with your airport's air service?

Airport's Current Community Outreach and Efforts of the Airport in the Past Two Years

- Has the airport engaged community partners (economic development groups, tourism entities, government) to promote existing service to the region? Please detail what efforts were successful and those that weren't.

APPENDIX B

Summary of Responses: Airports

ONE-ON-ONE SURVEY QUESTIONS FOR AIRPORTS AND COMMUNITIES

Airport Cooperative Research Program

Strategies for Maintaining Air Service–One-on-One Questionnaire

QUESTION 1: HOW HAVE YOU BEEN ABLE TO MAINTAIN SERVICE FOR YOUR AIRPORT?

Typical responses from participants:

The three most common responses from airports deal with the three Cs: cost, communication, and community engagement through marketing. Participants noted containing costs and holding down the cost per enplaned passenger (CPE) as a primary factor in maintaining air service. With fierce competition and the consolidation of the airline industry, developing non-airline revenues is essential to keeping operating expenses low.

The second C, communication, was premised on the airport-airline relationship. The airline planner cannot possibly know everything about a community; many believe it is up to the airport to educate them and keep them aware of changes. The airport is "the eyes and the ears" of the airline and, as such, has a responsibility to communicate what they know to be an issue, what the community has coming up that could affect the need to increase air service (i.e., major conferences), and what their own expectations are. One comment specifically mentioned that a strong relationship with the airline planners can make the difference between an airline discontinuing service at your airport or another when cuts need to be made.

The third C, community engagement through marketing, specifically refers to keeping all passengers in your catchment area aware of not only the airport but also the service available from your airport. Traditional forms of engaging the community through marketing such as traditional media is largely done, but other events such as speaking at civic groups and chamber of commerce breakfasts and being available to speak positively about the airport at any time was also cited by respondents.

In short, all three Cs were discussed with the respondents as having direct influence on how they have been able to maintain air service. No hierarchy emerged within the Cs; they are all viewed as equally important.

Unique responses from participants:

For a number of airports, when queried on the question of how they maintained air service, the response was tied directly to one event or geographic feature. Some indicated the airport was able to exist simply because of its proximity to a major national attraction.

One airport candidly stated it was the discovery of new technology that lead to extraction of a natural resource as the reason the airport has nearly doubled in size with expansion opportunities underway. From the director's perspective, the airlines it does have are simply happy to be able to capture a portion of this high fare traffic, which leaves the director time to focus on issues other than maintaining air service.

Two airports staunchly advocated for hiring an air service development firm to assist in not only the attraction of new service but the retention of existing service. Both noted that hiring an air service development firm can assist in focusing not only the airport but the community on the larger goals and how the airport can fit into the air carrier's model.

Thought-provoking responses from participants:

One airport responded with a rhetorical question: In the current environment, how much of an impact does the condition of the marketplace and industry have versus what the local airport is doing to maintain service? If economic factors are critical, it would mean a new paradigm for most communities. Instead of selling passengers per day each way (PDEW) to airline planners, the economic strength, coupled with the major industry, would drive the conversation. In theory, this works until the facts and data requests launch into the need for the PDEW information. Instead of an either/or approach, the rhetorical question should be incorporated into discussions of economic sectors in the community and coupled with the three Cs from the previous section for a comprehensive approach to maintaining air service.

QUESTION 2: WHAT IS YOUR CURRENT LEVEL OF AIR SERVICE?

Of the 61 airports surveyed, 53 airports currently have some form of mainline service. With the continued retirement of the 50-seat regional jet, the airports are noticing that larger dual-cabin aircraft are replacing the retired equipment. Thirty-nine (39) of the airports have ultra-low-cost carrier (ULCC) service through Allegiant, Frontier Airlines, and/or Spirit Airlines.

Three of the 61 airports surveyed have only one scheduled airline. Six airports have two airlines and 11 airports have three scheduled airlines serving their airport. One of the medium-sized airports surveyed has nine scheduled airlines currently serving their airport.

Total Carriers	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**Total**
Total Airports	3	6	11	12	17	7	3	1	1	**61**

QUESTION 3: COMPETITIVE ADVANTAGES VERSUS ALTERNATE AIRPORTS

Respondents were asked, "What are the main competitive advantages of your airport versus the alternate airport(s) in your catchment or region?" Again, an overwhelming majority responded similarly.

Typical responses from participants:

Airports stated they have a competitive advantage based on their location, ease of access to the airport itself, and the convenience of their services (i.e., small terminal, short TSA lines, close-in parking). What is noteworthy is the number of people who believed this was a competitive advantage when they were *not* close to a major hub. They felt their airport was superior to an airport just down the road because of the aforementioned conditions, while the other airport also cited the same superior, competitive conditions as advantageous for their airport.

Unique responses from participants:

One airport stressed it had a competitive advantage because of its geographic isolation. In order to seek another airport, passengers must first go down a mountain, and then go up another mountain which, in the winter months, is problematic.

Thought-provoking responses from participants:

One airport specifically stated its competitive advantage lies within its ability to address any issues or problems immediately. Having a quick, thoughtful reaction to any complaints or issues is intended to show the community the airport cares about their customer experience.

QUESTION 4: WHAT CHANGES HAVE YOU SEEN IN YOUR AIR SERVICE IN THE PAST FIVE (5) YEARS?

Airline consolidation and related market reductions have affected all of the airports surveyed, according to the respondents.

QUESTION 5: HAS YOUR AIRPORT EXPERIENCED AN INCREASE OR DECREASE IN PASSENGER ENPLANEMENTS, TOTAL SEATS, AND DEPARTURES OVER THE LAST FIVE (5) YEARS?

Twenty-six (26) of the 61 surveyed airports, 43%, have seen a reduction in total enplanements with another 35 airports, or 57%, experiencing an increase. With all participating surveyed airports combined, enplanements are up just 2.6% to 28.4 million. It is noted one airport experienced a 231% increase in total passengers, but the economy of the region and isolated geography assisted the passenger numbers more than anything the airport itself undertook. The airport with the largest decline in total passengers experienced a 22% decrease.

Just 25 of the surveyed airports experienced an increase in total seats over the last five years. With all surveyed airports combined, the total seat capacity is down 1.8% from five years ago. More noticeable is the frequency reduction being down 7.2%. Large-gauge aircraft flying less frequently continue to replace smaller-gauge equipment.

QUESTION 6: HOW ARE SERVICE ISSUES FROM THE AIRPORT'S PERSPECTIVE DEALT WITH?

Airports are all unique, but one thing they all have in common is service issues, especially airports of similar size.

Typical responses from participants:

As in the first question, one typical response was to communicate with the airline and the community. The type of issue (i.e., frequency reduction, flight time changes) dictates the "normal" response. For minor service issues, communication begins with the airline, and, once feedback is received, information is filtered to the community at large through a variety of mediums. For a major issue (potential loss of service or an airline merger), communication is ongoing from the minute the news is received in an effort to stem the loss or negate its possible effects.

Communication regarding unexpected maintenance or weather delays is also key to keeping customers informed. If it becomes a reoccurring problem, airports mentioned they become proactive, purchasing necessary equipment themselves if their budget allows (i.e., huffer cart or air start).

Unique responses from participants:

As it relates to passenger service, some airports have taken the step of recognizing exceptional customer service to reward those going above and beyond. They have instituted an airport-wide customer service program.

QUESTION 7: IS YOUR COMPETITION NEXT DOOR, DOWN THE ROAD, OR ACROSS THE COUNTRY?

Four airports mentioned competition is down the road, 29 airports said competition was next door, 17 airports said the competition was across the country, and the remaining 11 airports responded, "all of the above."

QUESTION 8: DOES YOUR BUSINESS COMMUNITY EXPRESS CONCERNS ABOUT THE LACK OF LARGER AIRCRAFT EQUIPMENT AND/OR LACK OF A PREMIUM CABIN? PLEASE DESCRIBE THE FEEDBACK.

As more and more legacy carriers partner with a variety of regional carriers, the likelihood of an airport seeing smaller regional jets is greater.

Typical responses from participants:

An overwhelming number of respondents mentioned the community expresses concerns over fares and/or frequency of flights more often than it does about the ability to utilize a premium product. The concerns they do hear from the community relate to the single-class product on longer stage lengths. Extra room and the ability to receive the perks of first class are desired.

Unique responses from participants:

Three airports responded that larger aircraft are needed in the market for the transporting of human remains. The ability to ship human remains by means of cargo is a necessity especially in highly isolated communities. However, the influx of regional jets makes it difficult to handle more than one casket at a time. The inability to transport human remains puts even more stress on an already grieving family if it is forced to drive farther to travel with, or receive, their loved one's remains.

Thought-provoking responses from participants:

One respondent mentioned it did not receive complaints over the aircraft size because it makes a concerted effort to educate the public on "right-sizing" the aircraft for their market.

QUESTION 9: DOES YOUR AIRPORT ASSIST WITH ABOVE- AND BELOW-WING SERVICES TO HELP AIR CARRIERS CONTAIN COSTS?

Seven of the surveyed airports answered "yes." Seven, or 11%, of the airports do assist with the above and below-wing services to assist air carriers. A handful of airports are reviewing and discussing the possibility. One major obstacle is the cost of coverage through the airport insurance provider.

QUESTION 10: DOES YOUR COMMUNITY PERCEIVE THE LOCAL AIR SERVICE POSITIVELY OR NEGATIVELY?

Forty-seven (47), or 77%, respondents answered "positively". Only six airports, or roughly 10%, said "negatively." Eight airports did not provide a clear response to the question.

QUESTION 11: WHAT IS YOUR CURRENT (ESTIMATED) COST PER ENPLANEMENT (CPE)?

The CPE ranged from $1.90 to approximately $16.60.

QUESTION 12: HOW BEST WOULD YOU DESCRIBE THE FARE ACTIVITY FOR YOUR AIRPORT?

Most of the airports responded that local fares are generally at, or just above, competing airports in their region, and continue to increase as a result of a lack of competition and limited capacity. Several airports mentioned their local fares have increased owing to the AirTran-Southwest merger and Southwest Airlines pulling all AirTran Airways service from their airport.

QUESTION 13: WHAT CHANGES (POSITIVE OR NEGATIVE) HAS YOUR AIRPORT EXPERIENCED WITH FARES?

Overall, the change in fares is viewed negatively. Higher fares are the result of less frequency, less capacity, and fewer nonstop options currently available.

QUESTION 14: HOW DO YOUR AIRPORT FARE LEVELS COMPARE TO YOUR PEERS AND ALTERNATE LOCATIONS?

Although some airports did respond that their airport price points are lower than alternate locations, most of the airports responded fare levels are generally competitive and on par with the alternate regional airports.

QUESTION 15 and 16: HOW DOES THE AIRPORT DEAL WITH ANY AIR CARRIER FEEDBACK ON PERFORMANCE OF FLIGHTS (LOADS, YIELDS, AND REVENUES)? HAS THE AIRPORT INITIATED ANY EFFORT TO IMPROVE THE PERFORMANCE OF THESE FLIGHTS? IF SO, HOW?

Feedback from an air carrier is essential to understanding its mind-set when evaluating performance of a route.

Typical responses from participants:

The majority of respondents reported that once they received an indication or feedback from the carrier on a route, their first instinct was immediately to increase their marketing to "spread the word" through social media, which is very cost-effective in terms of both the message and the impact it can have on the audience.

In addition, after receiving feedback from a carrier on a route, one airport chose to look at the companies most likely to utilize that route. It found one of the major companies was not able to utilize it because of a misconnecting flight time. The airport reported this to the carrier, who then took corrective actions. This was one example where the airport led efforts to improve the flight performance.

Unique responses from participants:

One community has developed a quarterly travel forum to engage the top 35 businesses that travel from within the community. During their meetings, they discuss routes with weak performances based on airline feedback and then, if they are able, modify their travel plans to assist in filling up those flights and markets that indicate weakness.

Thought-provoking responses from participants:

After receiving consistent feedback that a route was underperforming, one airport took the unexpected step of asking the carrier to discontinue service. The airport's data showed a better market where the airline could make a profit; by discontinuing the unsuccessful service, it freed up an aircraft to fly the data-supported route.

QUESTION 17: WHAT IS THE AIRPORT'S PROCESS FOR TRACKING THE PERFORMANCE OF THE POST-DEPARTURE RESULTS BOTH AT THE AIRPORT ITSELF AND IN RELATION TO OTHER BENCHMARKED AIRPORTS (AND DOES YOUR AIRPORT BENCHMARK)?

Tracking patterns of air service is useful to identify trends not only within your airport but also within the region that are typical of competitive airports..

Typical responses from participants:

Airports reported that tracking the performance on routes, including revenue, traffic, and seats, on a monthly, quarterly, and yearly basis was the most beneficial. Several mentioned having to report the data to a state agency, which, in turn, compiles the commercial service airports' data and disseminates it to all.

Tools exist (i.e., Diio) for airports to compile their own data, but more times than not airports relied on consultants to assist them in the data collection.

QUESTION 18: CURRENT ON-SITE AIRPORT MARKETING STAFF

Eight airports have contracted marketing-related activities to an outside firm, 28 airports have just one full-time staff member, 10 airports have just one part-time staff member, and nine airports have one full-time staff member and one part-time staffer. The remaining six airports have more than one person devoted full-time to marketing.

QUESTION 19: FOR ANY STAFF THAT IS NOT SOLELY MARKETING, WHAT PERCENTAGE OF THEIR TIME IS SPENT WITH MARKETING RESPONSIBILITIES?

The percent of time ranged from less than 5% to about 50%. No definitive measurement of time was given.

QUESTION 20: PLEASE LIST THE 2014 MARKETING BUDGET FOR THE AIRPORT.

The mid-range is around $225,000, with a low of $600 and a high of $1.5 million.

QUESTION 21: AIR CARRIER CORPORATE INTERACTION: HOW DOES THE AIRLINE MARKETING, SALES, AND PLANNING DEPARTMENTS INTERACT WITH YOU, YOUR AIRPORT STAFF, AND COMMUNITY PROGRAMS?

With airline staff being asked to accomplish more with less, this question seeks to identify if the airline interacts on a weekly or monthly level, or if it is driven by demand.

Typical responses from participants:

Most noted the air carrier marketing, sales, and planning departments interact on a per-event basis (i.e., inaugural flight, special anniversary). Of the departments that are most willing to engage with the airport, airline planning and marketing rank high. Some airports noted airline sales departments have changed their threshold for interaction with clients and, as such, they no longer have a dedicated sales staff member to contact. It is ultimately left to airline planning to provide a contact within the airline to respond to airport personnel.

Certain air carriers also engage the airport on a more frequent basis from a planning perspective, while the marketing departments of the low-cost carriers are typically easier to interact with for promotions. Airports indicated that the airline pricing department is hard to communicate with and believe there is room for improvement there.

QUESTION 22: DOES YOUR AIRPORT HAVE SCHEDULED MAINLINE CARRIER SERVICE?

Fifty-three (53) of the 61 airports surveyed have scheduled mainline service.

QUESTION 23: DO YOU SEE A DIFFERENCE IN THE RELATIONSHIP BETWEEN THE OPERATING AIR CARRIER AND THE MARKETING AIR CARRIER?

Typical responses from participants:

There is not a significant difference between the operating regional carrier and the mainline or marketing carrier. Airports commented that the biggest challenge is the above- and below-wing contracted vendors who need significant improvement in customer service skills.

Unique responses from participants:

One airport stated the issue at the airport is not the operating carrier being different from the mainline carrier but rather the front line staff's being paid minimum wage and having little to no airline operation experience, which negatively affects the airport. It is a constant challenge to maintain a positive image with the community when the vendor has no incentive to provide customer service that is even adequate.

Thought-provoking responses from participants:

The most striking thing about this particular question is the majority of airports that took the opportunity to criticize the third-party vendor relationships for ground handling.

QUESTION 24: HOW ARE YOU UPDATED AND KEPT AWARE OF SCHEDULE CHANGES AND ADJUSTMENTS FROM THE AIRLINE'S PLANNING DEPARTMENT?

The minutia of an airport's flight schedules is just as important as the big picture. How are airports notified by their airline partner of schedule changes?

Typical responses from participants:

For major changes such as a new route or a route's being cancelled, airline planners assigned to the airport will communicate directly with the airport. However, for minor schedule changes (i.e., frequency reductions, up-gauging aircraft), the airline planner is less involved. The notifications appear to come from the station manager or through the airport's being vigilant in checking frequency.

Unique responses from participants:

One airport commented that there have been occasions where its vigilance in checking future schedules has resulted in the airport's knowing about the change before the local ground-handling company became aware of the modification.

Thought-provoking responses from participants:

A handful of airports mentioned there have been times passengers have actually alerted the airport to the proposed schedule change. When this occurred, it was usually a negative change. It is notable because there are tools available to airports for minimal cost that will track changes for them; the information about these tools and how essential they are for up-to-date information needs to be supplied. Free tools exist (i.e., airline websites) that can also be utilized; however, some airports are not taking advantage of these tools

QUESTION 25: WHAT DO YOU OBSERVE TO BE THE MOST IMPORTANT CONSIDERATIONS OF YOUR AIRLINE PARTNERS IN THE MARKET OR CATCHMENT AREA AND AT YOUR AIRPORT?

Typical responses from participants:

The airports indicated they often spend the time during discussions with the carrier talking about growth of the community and business expansion plans. The economic diversity of the community provides opportunity for an airline to grow and be prosperous.

Unique responses from participants:

One airport noted the local business environment was the most important consideration of its airline partners. To assist the airlines gain information on current changes and fluctuations in the business sector, the airport undertakes a survey to identify business travelers' needs. The data are then shared with the airline. This survey is updated about every three years.

Thought-provoking responses from participants:

With 50 to 60 markets per planner, one airport wondered if there was any other consideration besides yield.

QUESTION 26: DO YOU SEE A MAJOR DIFFERENCE IN INTERACTION AND COOPERATION BETWEEN THE AIRLINES SERVING YOUR AIRPORT AND THE CARRIER'S HEADQUARTERS STAFF?

Of those participating, 20% indicated they did not see a difference in interaction between the airlines serving the airport and the headquarters staff, 9% indicated there was enough of a difference to worry, and the remaining 71% of the respondents said it depended on the airline if there was a difference.

QUESTION 27: CURRENT STATUS AND OPPORTUNITIES: WHAT ARE THE THINGS THAT YOU DO TO MAINTAIN YOUR CURRENT AIR SERVICE?

This question, while relating to the very first question in the survey, focuses on current activities and opportunities.

Typical responses from participants:

Most airports listed advertising, marketing, and community engagement as their current activities to sustain air service in addition to the importance of keeping costs low. Standard speaking engagements was suggested as a way to educate the community on the basics of air service development. This also serves to keep the airport top-of-mind and identify the manager or director as the authoritative source for air service related matters in the community.

Unique responses from participants:

When marketing in the local market or catchment area has been exhausted, look to other markets to assist. One airport mentioned it was marketing to inbound traffic and tourism to boost demand rather than to local traffic, which assists in maintaining their service.

QUESTION 28: WHAT ARE YOUR MAJOR CONCERNS MOVING FORWARD WITH YOUR AIRPORT'S AIR SERVICE?

Typical responses from participants:

A vast majority of respondents indicated the major short-term concern is the pilot shortage issue. Anticipating the situation will get worse before it gets better, airports are in fear of not only losing frequency from an airline but also losing service as a whole, as at this point there simply are not enough pilots to backfill. For example: Michigan has 13 commercial service airports and almost all of them are dependent on the 50-seat jets utilized by regional carriers. What happens to the airports as the regional carriers cannot staff their aircraft? Coupled with the knowledge that 50-seat regional jets are being eliminated by some carriers and there is no replacement aircraft in production, the status of the next several years is clearly unknown.

Other concerns expressed dealt with facility needs; as terminals and runways need repair and upkeep, how does one finance the project without raising rates?

Unique responses from participants:

Owing to low unemployment rates in the region, one airport mentioned it was hard to staff its above- and below-wing contracts to handle what they had. How and where can this airport look to find qualified individuals to run the operation?

Thought-provoking responses from participants:

One airport mentioned that *every* airport is one phone call away from losing all their service, especially as the carriers are combining into large conglomerates. This airport believed all airports need to be afraid of that phone call.

QUESTION 29: WHAT ARE THE REASONS YOUR CUSTOMER BASE MIGHT USE AN ALTERNATE AIRPORT FOR THEIR TRAVEL NEEDS?

Interviewees identified five primary reasons for customers' using an alternate airport: lower fares, higher frequency, nonstop opportunities, larger aircraft size, and a lack of available seats from the local airport. Several airports also mentioned that passenger traffic will drive to the connecting hub location when flying to an international destination. These customers were concerned that if they flew locally, their originating flight could be delayed, thus making them missing the single nonstop connecting flight departing overseas.

QUESTION 30: DESCRIBE THE CURRENT AIRLINE INCENTIVE PROGRAM AT YOUR AIRPORT.

Typical responses from participants:

Forty-nine (49) of the 61 airports indicated they have an airline incentive program, eight respondents noted they do not, while the remaining four stated other entities in the community offer incentives while the airport refrains from doing so. Items included in the incentive programs ranged from fee waivers for terminal space, landing fees, fuel flowage fees, aircraft rescue and firefighting fees, security fees, and marketing support. Many tied the level of incentives offered to a set guideline: How many flights will there be per week? Is the route already served by an incumbent airline? Is the route domestic or international?

Unique responses from participants:

One airport offered industry standard incentives such as those listed earlier. However, it went one step further and partnered the airline directly with the local tourism marketing group. The marketing group was able to offer more flexible guidelines for its marketing efforts after the standard airport incentive period was over.

QUESTION 31: ARE THERE MARKETING INCENTIVES?

Most of the airports do offer marketing incentives. The value of the marketing incentives is based on several criteria:

- New carrier?
- New nonstop market?
- Amount of frequencies?
- Duration of the service—seasonal or year-round?

Marketing incentives will help assist with TV, radio, print, on-line, and social media advertising. In almost every case, marketing incentives will help assist with new service and exclude currently served nonstop routes.

QUESTION 32: HAS YOUR AIRPORT FUNDED A "TRUE MARKET/LEAKAGE STUDY" IN THE PAST FIVE (5) YEARS?

Forty-four (44) airports have completed a leakage study in the past five years; 12 have not, while the remaining five airport managers surveyed indicated they were new to the position and did not know when the last was completed or that they were undergoing one at the time of the interview.

QUESTION 33: HAS THE AIRPORT CONDUCTED BRAND RESEARCH TO UNDERSTAND THE PERCEPTIONS OF TRAVELING AS THEY RELATE TO COMPETING AIRPORTS?

This question investigates steps taken by airports to understand how they are viewed by the passengers who use their facilities.

Typical responses from participants:

Numerous airports admitted an airport specific brand survey or marketing study has not been done. The airports did acknowledge a desire to improve upon this as they see value in it.

Unique responses from participants:

Two airports continually survey their passengers by requiring them to complete a short survey in order to take advantage of the airport's free Wi-Fi. This provides constant data.

QUESTION 34: WHAT ARE YOUR MOST IMPORTANT CONSIDERATIONS IN RETAINING YOUR AIRPORT'S AIR SERVICE?

Typical responses from participants:

Two considerations emerged from the responses: efficiency and profitability. Efficiency pertained to what the airport could control. Cost structure and identifying alternate revenue sources are essential components in retaining current service for the majority of the airports, as that is the area over which the airport has the most control. Efficiency was coupled with profitability—the ability of the airline to make a profit in the market. Each airline sets its own metrics in what it deems "profitable." Understanding what those metrics are is imperative for airports, as they can then track and identify trends to assist the airline achieving greater profitability.

Unique responses from participants:

Because of the global economy, one airport stated it was important to it to maintain as many connecting opportunities as possible. This showcases that you can get "there" from "here" without traveling to a hub airport.

Thought-provoking responses from participants:

One respondent pointed out that whenever an airport loses a market, however disappointing, it also raises a red flag to the remaining carriers as they, in turn, assess their route profitability.

QUESTION 35: DO YOU HAVE ANY OTHER EFFECTIVE PRACTICES OR FURTHER WORDS OF WISDOM TO ADD THAT WOULD AID OTHER AIRPORTS WORKING TO MAINTAIN THEIR AIR SERVICE?

While the survey questions were intended to capture all of the strategies airports across the country are utilizing to maintain their air service, this question asked respondents to detail if there was something important that had not yet been covered.

Typical responses from participants:

Air service development is an ongoing effort. An airport can never become complacent thinking it has done enough or that the level of air service is not going to get any better. Looking for new opportunities to grow, coupled with maintaining service, is beneficial in the long run. In this regard, airports need to recognize their own limitations. Several airports again mentioned the hiring of a consultant, whose experience and ability to objectively look at a competing airport can shed light on avenues the airport can use internally to control costs and becoming more attractive to an airline. Bottom line from many directors: Do not go it alone.

Another clear message received dealt with incentives. Airports felt very strongly that offering incentives and understanding the federal regulations on incentives was worth exploring.

Unique responses from participants:

One airport pointed out that there has to be a business case for the airline to operate in the market. The demand however, is the local community's responsibility; not the airline's. If statistical passenger traffic data in a community shows a need, the airline will add additional service. It is not an "if you build it they will come" environment.

Thought-provoking responses from participants:

One airport stated that you need to know your market. Do not be unrealistic regarding what you can support, and continue to appreciate what you already have.

QUESTION 36: DO YOU HAVE ANY "BEST PRACTICES" OR RECOMMENDATIONS THAT MIGHT BENEFIT SIMILAR SIZE OR TYPE OF AIRPORTS THROUGHOUT THE UNITED STATES?

Typical responses from participants:

Most airports felt they did not have a "best practice" tip to provide other than to keep the lines of communication open between the local business community and the airline planners.

Unique responses from participants:

One airport advised gaining charters and less-than-daily service first, as it helps to create buzz. This airport felt that it helps create goodwill in the community and offers the opportunity for the airline to explore service needs without commitment. The other unique response dealt with the "team" the airport needs in order to recruit new service while sustaining current levels. It viewed it as a three-legged stool, one leg being the airport, another being the potential airline, and the final leg of the stool being the air service development consultant.

Thought-provoking responses from participants:

Know when to bring in the local economic community and when to leave them out of the conversation. The example given was an airline headquarters meeting: Limit those meetings to just airport staff.

QUESTION 37: WOULD YOU BE WILLING TO HAVE AN EFFECTIVE *PRACTICE* CALLED OUT IN A TEXT BOX WITH YOUR AIRPORT NAME IDENTIFIED, OR WOULD YOU RATHER WE MAINTAIN CONFIDENTIALITY AND NOT IDENTIFY YOUR AIRPORT NAME SPECIFICALLY?

Most of the airports surveyed are open to the idea and opportunity to be identified for a very specific practice, but general responses were negative.

QUESTION 38: COMMUNITY OUTREACH EFFORTS WITHIN THE PAST TWO (2) YEARS. PLEASE SELECT WHICH COMMUNITY PARTNERS THE AIRPORT HAS COLLABORATED WITH IN MARKETING EFFORTS OVER THE PAST TWO YEARS. (PROVIDE DETAILS ON WHICH EFFORTS WERE SUCCESSFUL, AND THOSE THAT WERE NOT.)

Economic development organizations are important to attracting and retaining air service. Which group do most airports contact for collaboration?

Typical responses from participants:

Typical community outreach efforts for community partners include the following: convention and visitors bureaus and other tourism organizations, economic development boards and associations, chamber of commerce, at times congressional delegations, specific hotel groups in the area (i.e., advisory groups), and major industry groups (i.e., petroleum council, energy sector). All of these groups have local and state agencies; in some cases, if the airport is able to, it makes sense to partner with both.

Unique responses from participants:

One airport mentioned it specifically set up a corporate travel advisory group with membership and representation by invitation only. This ensures they have the key players at the table to engage them in matters of the airport and air service.

Thought-provoking responses from participants:

While most airports reported actively engaging their community partners, they also stated their hesitation to include them in headquarters or air service development conference type meetings.

QUESTION 39: HOW ACTIVELY IS THE AIRPORT INVOLVED IN RECRUITMENT EFFORTS TO ENTICE PROSPECTIVE BUSINESSES TO RELOCATE TO THE REGION?

While it is generally agreed the airport needs the business community's involvement in order to ensure air service is successful, what role does an airport play in bringing new business to town?

Typical responses from participants:

Airports were evenly split on this question with roughly 50% indicating they were active and 50% indicating they were not. For those who were active, the airport often had a seat on the local economic development board or chamber committee and actively assisted in recruitment efforts. For those who were not active, it was not because they did not want to be. Often the reason they were not actively involved was because the economic development groups only engaged them when a question regarding air service or air cargo was specifically asked by the prospective entity.

Unique responses from participants:

Some airports are actively recruiting non-aeronautical businesses to their airport-owned industrial park.

Thought-provoking responses from participants:

One airport which is not currently active in pursuing prospective businesses within their community admitted they needed to be better at getting involved; they simply didn't have the time with limited staff.

QUESTION 40: HAS THE AIRPORT CONDUCTED RECENT RESEARCH OR FOCUS GROUP EFFORTS TO GAUGE THE OVERALL COMMUNITY PERCEPTION OF AIR SERVICE IN THE REGION? IF YES, HOW WELL RECEIVED WAS THE INTERACTION WITH THE COMMUNITY AND BUSINESSES?

Engaging the traveling public on its view of the available air service in the region is important to providing insight into any disconnect between the airport and its customers, and showcases areas where additional marketing can be effective.

Typical responses from participants:

With the exception of a handful of airports, the overwhelming response was that the airport had not conducted recent research but that their community partners had (i.e., chamber of commerce). They were able to glean information from the survey and, at times, assisted in building the questions. Several of the airports further explained that air service perceptions as a whole were explored through their master plan updates.

Unique responses from participants:

One airport went so far as to place information in the local paper about its desire to hear from the traveling public regarding the state of air service in the region. This was accomplished by hosting an open house of sorts where a number of nationally known speakers were brought in and the public was invited to join in the dialogue. The evening session was deemed a success, as the turnout far surpassed expectations. The airport used it as a way to educate the local community on the topic of air service as well as to gather feedback on the public's perception of the service. The airport believed it was very beneficial and that it gained valuable information by hearing the thoughts and ideas presented.

QUESTION 41: DESCRIBE THE AIRPORT'S RELATIONSHIP(S) WITH THE LOCAL BUSINESS TRAVEL COMMUNITY

Typical responses from participants:

Many of the respondents felt they had a positive relationship with the local business travel community. Many sit on tourism boards and chamber committees and present information on the airport based on the feedback received. They mentioned their reward for being involved is that, when the airport needs something in return, they know the major players and they are able to receive quick responses to their appeals for assistance.

Successful airports are also willing to talk one-on-one with organizations to address their specific concerns. All acknowledged that doing so has proven valuable, as the airport is now the local "expert" on all things air-service related. In addition, all recognized there is always room for improvement in engaging the community groups to ensure the airport maintains a finger on the pulse of air-service needs.

These questions and answers, while subjective at times, provide insight into the views of small- and medium-sized airports across the country. It is clear that airports of all sizes have more in common than they have differences.

APPENDIX C

Survey: Air Carrier Network Planning Staff

QUESTION 1: CAN YOU SHARE EXAMPLES OF AIRPORT ACTIONS THAT HAVE LED TO MAINTAINING SERVICE THAT WAS OTHERWISE LIKELY TO BE CUT?

Determining the strategies air carriers view as persuasive in retaining a route that was identified for cancellation was the basic premise of the question.

Typical responses from participants:

Direct subsidies have allowed service that was otherwise going to be cut to be continued. In the past, certain airports have dedicated additional marketing funds to stimulate the local airport market as well as the hub traffic.

Thought-provoking responses from participants:

In addition to using raw data to evaluate a potential market, an air carrier considering entering the domestic scheduled service market also compares potential financial incentives and marketing support. Those airports with active community organizations able to provide revenue guarantees are of particular interest. Marketing co-ops capable of assisting in educating the public about service are also of interest to one airline, which is interesting because it supports what an airport also views as essential to include in an incentive program.

QUESTION 2: WHAT ROLE, IF ANY, DO AIRPORT-CONTROLLED COSTS PLAY IN NETWORK PLANNING DECISIONS?

Typical response from participants:

Cost per enplanement (CPE) is very important to a carrier considering entering the domestic scheduled service market. CPE is close behind PDEW, average fare, and competition in a given market in the list of factors an airline takes into consideration. An airport that is able to control its costs is essential to the discussion on whether or not an airline will commence service.

Unique responses from participants:

The broadest measure is cost per departure (CPD), and from it, cost per enplanement is derived. Regional jet operators are sometimes penalized when airport costs appear low, reasonable, or tolerable, but high because those costs are driven by large aircraft operations, not regional jets.

Thought-provoking responses from participants:

The stability of airport rates is extremely important; no curve balls.

QUESTION 3: HOW DO OTHER LOCAL COSTS (GROUND HANDLING, FOR EXAMPLE) THAT ARE NOT DIRECTLY CONTROLLED BY THE AIRPORT FACTOR IN TO SERVICE LEVEL DECISIONS?

Typical response from participants:

There was not a pattern that emerged as a common response to this question.

Unique responses from participants:

One airline specifically mentioned an area in the country that is an "outlier" element in its decisions, while acknowledging that it may be less of a factor in the decision in most states. In North Dakota, airlines cannot find enough workers at the normal pay scales owing to the oil boom. Driving ground-handling costs down has resulted in poor customer service from a poorly motivated and poorly trained (high turnover) ground staff, which ultimately has a negative impact on customer service.

Thought-provoking responses from participants:

As an airline, we do not differentiate airport costs versus non-airport costs on the ground. We look at the sum of the total ground costs from one airport and compare them to the next. This is instructive in that it encourages airports to ensure they are aware of the entire cost of doing business there, even if they cannot control those costs.

QUESTION 4: WHO IS PRIMARILY RESPONSIBLE FOR WORKING WITH YOUR AIRPORT PARTNERS IN CITIES SERVED BY REGIONAL CARRIERS WHEN YOU MAKE DECISIONS TO CHANGE SERVICE?

Where does the responsibility lie when altering service—with the operating carrier or with the mainline carrier?

Typical response from participants:

It depends on the change. Assuming a change in frequency and/or gauge in a market that is not pro-rated, the mainline partner performs the communication. If the market is a pro-rated market, the regional carrier will take the lead on communications with the airport.

QUESTION 5: HOW DO YOU PREFER TO MEET WITH YOUR AIRPORT PARTNERS WHEN THEY WANT TO DISCUSS EXISTING SERVICE LEVELS?

Typical response from participants:

The most common venues were annual route development conferences or limited headquarters visits by airport delegation only—no community partners.

Unique responses from participants:

This depends on the status of the airport. We meet with airports at conferences or at our headquarters, as needed. For airports that we fly to, we typically welcome them to our headquarters on a once-per-year basis. For airports that we do not fly to, we prefer headquarters meetings once every three (3) years. At conferences, we will meet with nearly any airport if there is available time, but we have to create a priority list based on our activity.

In summary, how an airline perceives strategies for maintaining service at airports is not all that different from the way airports view them. The focus of an air carrier, though, is to turn a profit, and they make decisions based on facts and a plethora of data. They are realistic in their projections, which mean the airports vying for their limited resources need to be as well.

APPENDIX D

Sample Air Service Incentive Program

Organizational Policy & Procedure **Administrative**
Section 116.00 – Air Service Partnership Plan

SECTION 116.00 – AIR SERVICE PARTNERSHIP PLAN

OBJECTIVE

To prescribe the range of options available for air service development for the Greenville Spartanburg International Airport Commission (Commission).

METHOD OF OPERATION

INTRODUCTION

In an effort to stimulate air carrier growth and provide an incentive to incumbent and new entrant airlines for the addition of new air service at the Greenville Spartanburg International Airport (Airport), the Commission should establish a range of options that it will make available. This policy provides the parameters within which Staff will be able to negotiate air service development on behalf of the Commission.

INCENTIVE PROGRAM

For new nonstop service to one of Greenville-Spartanburg's top 30 destinations based on U.S. Department of Transportation data or a new hub destination, the following range of options will be available for use in negotiating air service development at the Airport with current and prospective air service carriers:

- Marketing and advertising of new service up to $150,000.

- Waiver of one or more of the following fees/rents for a period of up to 12 months:
  - Landing Fees for the new service.
  - Rental fees for new or expanded preferential lease space (ticket counter and office space).
  - Rent for common use areas (baggage claim, tug drive, screening).
  - Airport imposed security fees.

- Assistance with airport facility improvements and/or equipment purchases may be negotiated on a case by case basis.

For new direct (single plane service) service to one of Greenville-Spartanburg's top 30 destinations based on U.S. Department of Transportation data or a new hub

GSP Airport Commission
Policy and Procedure Manual
Page 76

destination, the following range of options will be available for use in negotiating air service development at the Airport with current on prospective air service carriers:

- Marketing and advertising of new service up to $100,000

- Waiver of one or more of the following fees/rents for a period of up to 12 months:

    - Landing Fees for the new service
    - Rental fees for new or expanded preferential lease
    - Space (ticket counter and office space).
    - Rent for common use areas (baggage claim, tug drive, screening)
    - Airport imposed security fees

- Assistance with airport facility improvements and/or Equipment purchases may be negotiated on a case by case Basis

For increased capacity/passengers to an existing nonstop or hub destination, the following range of options will be available for use in negotiating air service development at the Airport with current air service carriers:

- Marketing and advertising of the new service up to $50,000.

- Waiver of one or more of the following fees/rents for a period of up to 12 months, which will be based on the increased capacity/passengers using a rolling two (2) year average for each category unless the air service carrier has provided service for less than two (2) years:

    - Landing fees for the expanded portion of the service.
    - Rental fees for expanded and preferential lease space (ticket counter and office space) as a result of the expanded service.
    - Rent for common use areas (baggage claim, tug drive, screening) related specifically to the expanded service.

For the establishment of an airline crew base and/or scheduled international service, the range of options available for use in negotiating air service development at the Airport shall be consistent with those items outlined above for the initiation of new nonstop service.

Note: An air service carrier simultaneously initiating and maintaining air service to four (4) or more new non-stop/direct destinations for a twenty-four (24) month period may be eligible for a waiver of fees/rents for up to an additional twelve (12) months for a total of twenty-four (24) months.

REQUIREMENTS

For those items identified under the "Partnership Plan" section of this policy, a formal contract is not required. However, Staff will codify the arrangement and provide air service entity with a written outline of the components that have been negotiated and approved.

APPLICABILITY

This policy applies to both incumbent and new entrant commercial or scheduled charter air service entities utilizing the Airport and desiring to provide new or expanded nonstop or hub service. The options outlined above are based on new year round daily service being provided. Seasonal and/or charter service may be eligible for benefits as determined by Staff.

The District budgets for air service incentives annually. Therefore, once the District budgeted funds are exhausted for a given fiscal year further incentives may not be available until the next fiscal year.

RIGHT TO AMEND POLICY

The Greenville-Spartanburg Airport District reserves the right to adopt such amendments to this policy from time to time as it determines is necessary or desirable to reflect current trends of airport activity for the benefit of the general public or the operation of the Airport.

APPROVAL AND UPDATE HISTORY	
Approval **Supersedes**	Original: 7/12/2010

Abbreviations and acronyms used without definitions in TRB publications:

A4A	Airlines for America
AAAE	American Association of Airport Executives
AASHO	American Association of State Highway Officials
AASHTO	American Association of State Highway and Transportation Officials
ACI–NA	Airports Council International–North America
ACRP	Airport Cooperative Research Program
ADA	Americans with Disabilities Act
APTA	American Public Transportation Association
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
ATA	American Trucking Associations
CTAA	Community Transportation Association of America
CTBSSP	Commercial Truck and Bus Safety Synthesis Program
DHS	Department of Homeland Security
DOE	Department of Energy
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FMCSA	Federal Motor Carrier Safety Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
HMCRP	Hazardous Materials Cooperative Research Program
IEEE	Institute of Electrical and Electronics Engineers
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITE	Institute of Transportation Engineers
MAP-21	Moving Ahead for Progress in the 21st Century Act (2012)
NASA	National Aeronautics and Space Administration
NASAO	National Association of State Aviation Officials
NCFRP	National Cooperative Freight Research Program
NCHRP	National Cooperative Highway Research Program
NHTSA	National Highway Traffic Safety Administration
NTSB	National Transportation Safety Board
PHMSA	Pipeline and Hazardous Materials Safety Administration
RITA	Research and Innovative Technology Administration
SAE	Society of Automotive Engineers
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (2005)
TCRP	Transit Cooperative Research Program
TDC	Transit Development Corporation
TEA-21	Transportation Equity Act for the 21st Century (1998)
TRB	Transportation Research Board
TSA	Transportation Security Administration
U.S.DOT	United States Department of Transportation

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