Chapter Six: S.W.O.T Analysis and Factors Influencing Air Service in Iowa

INTRODUCTION

One of the primary objectives of this study is to provide information to the airports that positions them to take advantage of their air service opportunities. To fulfill this objective, this portion of the statewide air service analysis examines general strengths, weaknesses, opportunities, and threats (S.W.O.T.) as they relate to the ability of the commercial airports in Iowa to retain or improve their scheduled airline service. In this chapter, the S.W.O.T. analysis is discussed under the following sections:

- Statewide and regional factors impacting air travel demand
- Airline factors influencing air service

The ability of commercial airports in Iowa to retain and/or improve their commercial airline service is influenced not only by passenger demand, but also by general conditions within the commercial airline industry. As part of this chapter, a general overview of strengths and opportunities within the commercial airline industry will be discussed. This discussion will focus on strengths and opportunities that have the greatest potential for influencing the ability of the commercial airports in Iowa to either retain or improve their scheduled airline service. Conversely, weaknesses in and threats facing commercial carriers will also be reviewed within the context of how it may impact existing or improved service at the commercial airports in Iowa.

STATEWIDE FACTORS IMPACTING AIR TRAVEL DEMAND

Population, employment, and income are often highly correlated with a state's or an area's demand for commercial airline travel. The following sections help to frame Iowa's overall demand for commercial airline travel within the context of these indicators.

As earlier sections of this report concluded, the statewide average commercial airline trip generation (0.83 trips/person) is under the average for the entire U.S. (1.48 trips/person). This section compares historic and projected demand indicators for both Iowa and the U.S. These comparisons help to shed light on the causes for Iowa's lower than average per capita demand for commercial airline travel. Understanding the factors that influence commercial air travel demand is important to the S.W.O.T. analysis.

Statewide Population

Table 6-1 displays Iowa's historic and projected population as estimated by Woods & Poole Economics, Inc. Woods & Poole. is an independent firm that specializes in economic and demographic projections. Woods & Poole uses more than 900 variables to develop forecasts for each county in the U.S. The firm maintains a database of historical data for each county. The database is updated annually.

Between 1990 and 2005, Iowa's population increased from 2.78 million to 2.97 million, representing a compounded annual growth rate (CAGR) of 0.4 percent; lower than the national annual growth rate of 1.2 percent for the same time frame. Between 2005 and 2010, population in Iowa is expected to increase at an average annual rate of 0.5 percent, below the projected national rate of 1.0 percent for this period.

Table 6-1
Iowa and U.S. Population
1990, 2005, and 2010 Projection

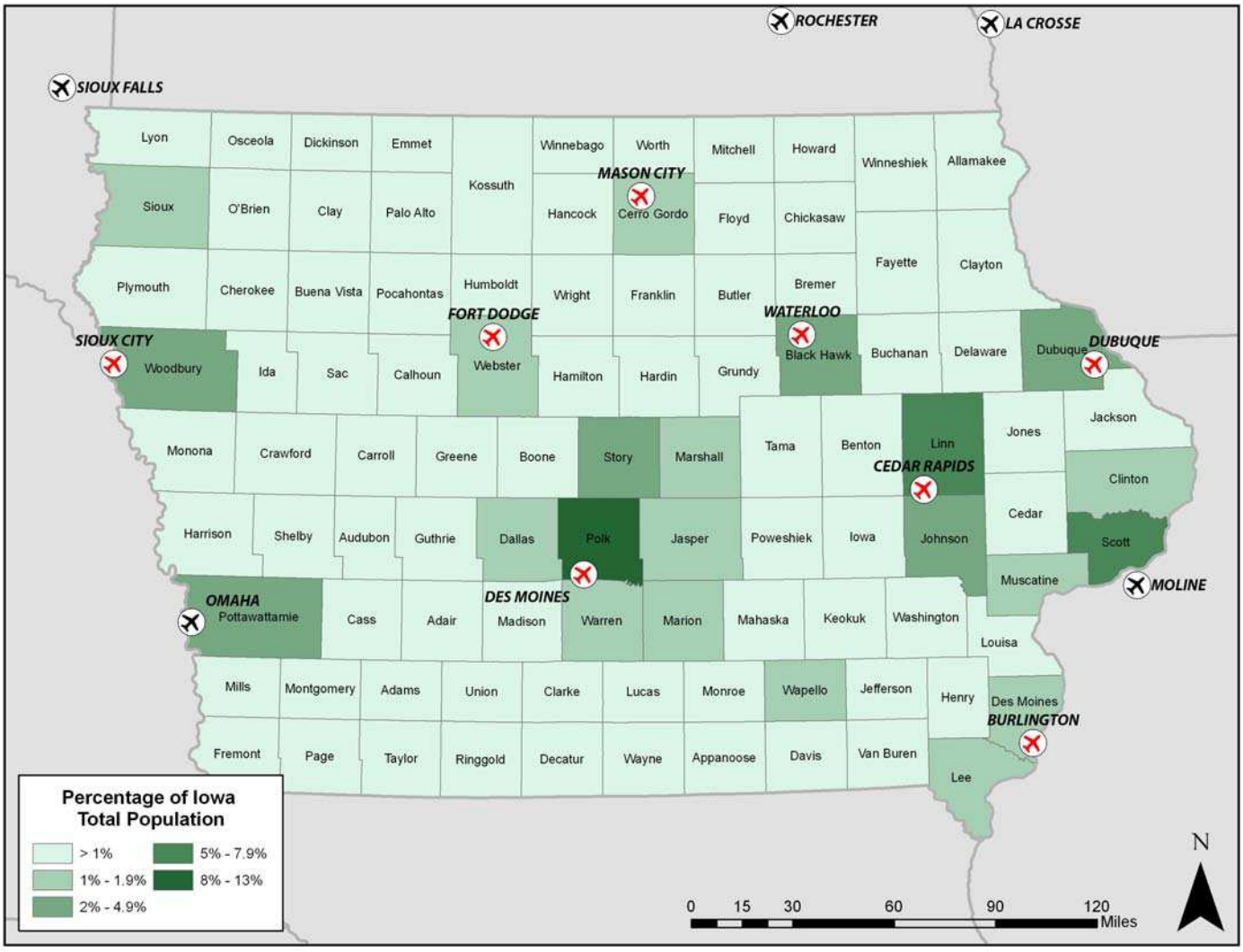
Region	1990	2005	1990-2005 CAGR	2010 Projection	2005-2010 CAGR
Iowa	2,781,018	2,966,334	0.4%	3,035,321	0.5%
United States	249,622,814	296,410,404	1.2%	311,843,984	1.0%

Source: Woods & Poole Economics, Inc.
Note: CAGR=compounded annual growth rate

Iowa's population has increased at an average annual rate less than half that of the U.S. Iowa's projected average annual rate of population growth from 2005 to 2015 is expected to increase slightly, while the U.S. rate is expected to decline slightly. Even so, the projected rate of population increase for the U.S. is over double the rate of the projected Iowa increase.

Exhibit 6-1 illustrates 2005 population distribution by Iowa county. Between 1990 and 2005, 44 of Iowa's 99 counties experienced a decline in population, while the other 55 experienced growth. The largest population decline in terms of percent occurred in Kossuth County. Located in north central Iowa, this county lost 1,420 residents between 1990 and 2005. Two other Iowa counties experienced population declines of more than 1,000 people during this time frame. They are Cherokee County located in northwestern Iowa and Clinton County located in the far eastern portion of the State.

Exhibit 6-1
Percentage of Iowa Total Population by County



Source: Woods & Poole Economics, Inc.

There are four Iowa counties whose population increased by more than 10,000 residents between 1990 and 2005. These counties are: Dallas, Johnson, Linn, and Polk. Both Dallas and Polk counties are located in the central part of the State and are in the market area for Des Moines International Airport. Linn and Johnson counties are located in the eastern half of the State and are in the market area for The Eastern Iowa Airport. Polk County, home of the Des Moines International Airport, is the

State's leader in terms of population with 375,804 residents. Since 1990, Polk County's population has increased by 47,273 residents.

As Exhibit 6-1 shows, most counties in Iowa are thinly populated. Generally speaking, counties with the highest population concentrates are within the market areas of the eight commercial airports in Iowa or near one of the Border Airports.

Statewide Employment

Table 6-2 presents Iowa and U.S. historic and projected employment growth. As with population, Iowa's rate of historic growth in employment has lagged behind the U.S. average. In 1990, there were 1.65 million employed persons in Iowa. By 2005, this number had risen to 1.96 million, representing a compounded annual growth rate of 1.2 percent, lower than the national annual employment growth of 1.4 percent. By 2010, employment in Iowa is to increase to 2.08 million. This represents a compounded annual increase of 1.2 percent, below the national annual employment growth rate of 1.5 percent for the same period.

Table 6-2
Iowa and U.S. Employment Trends
1990-2005 and 2010 Projection

Region	1990	2005	1990-2005 CAGR	2010 Projection	2005-2010 CAGR
Iowa	1,645,944	1,960,305	1.2%	2,079,793	1.2%
United States	139,380,891	172,587,009	1.4%	186,079,920	1.5%

Source: Woods & Poole Economics, Inc.
Note: CAGR=compounded annual growth rate

The top three employment sectors in Iowa are services (29 percent of the total), retail trade (17 percent), and manufacturing (12 percent). **Table 6-3** presents the percentage of total Iowa employees associated with each sector. The percentage of total U.S. employees associated with each sector is also provided for comparison purposes. Other major employment sectors in Iowa include state and local government, finance, farming, and construction.

Table 6-3
Iowa and U.S. Employment Sectors, 2005

Employment Sector	Percent of Total Employment	
	Iowa	United States
Services	29.0%	33.5%
Retail Trade	16.7%	16.4%
Manufacturing	12.1%	9.5%
State and Local Government	11.8%	11.2%
Finance, Insurance, and Real Estate	7.5%	8.3%
Farm Employment	5.4%	1.8%
Construction	5.0%	5.6%
Transport, Communications, and Public Utilities	4.8%	4.7%
Wholesale Trade	4.4%	4.3%
Agricultural Services, Other	1.5%	1.4%
Federal Civilian Government	1.0%	1.6%
Federal Military Government	0.7%	1.3%
Mining	0.1%	0.4%
Total	**100.0%**	**100.0%**

Source: Woods & Poole Economics, Inc.

As Table 6-3 reflects, for the most part, employment by sector in Iowa is similar to that for the U.S. The U.S. has a higher concentration of jobs in the service sector; this sector tends to have higher than average demand for commercial airline travel compared to other several other sectors. Iowa has a higher concentration of jobs in the manufacturing sector, a sector which tends to have a higher than average dependence on commercial airline service. Iowa also has higher concentrations of employment in farming; demand for airline travel in this sector is among the lowest.

According to a 2004 Iowa Workforce Development study, manufacturing will not add jobs as rapidly as many of the other major industry groups. Health care and social assistance will generate the largest number of jobs through 2014. The growth will be fueled by the retirement of the baby boomers which is expected to occur between now and 2025. Although not entirely dependent on commercial service, service-producing industries will play a dominant role in the state's future job growth.

Iowa Top Employers

There are seven *Fortune 500* companies with operations located in Iowa; these are: Principal Financial Group, John Deere (2 locations), Tyson (2 locations), Alcoa Mills, Wells Fargo Home Mortgage, UPS, and Qwest. **Table 6-4** presents Iowa's leading employers in terms of total jobs provided. The University of Iowa and Iowa State University are the State's largest employers. Iowa's third largest employer, Rockwell Collins, has 9,500 employees. Recent growth in state employment includes the establishment of John Deere Dubuque Works as the headquarters for John Deere's Forestry Engineering Center in January 2006.

Table 6-4
Top Employers in Iowa

Exhibit 6-2 No.	Company Name	Sector	Employees
1	University of Iowa	Services	15,362
2	Iowa State University	Services	13,843
3	Rockwell Collins	Manufacturing	9,500
4	Principal Financial Group Inc.*	Finance, Insurance, and Real Estate	8,540
5	University of Iowa Hospital/Clinics	Services	7,500
6	Iowa Health Systems	Services	6,470
7	Mercy Medical Center- Des Moines	Services	5,500
8	John Deere*	Manufacturing	4,700
9	Nationwide Allied Insurance	Services	4,048
10	Pella Corporation	Manufacturing	4,000
11	Cargill	Manufacturing	4,000
12	Heartland Community Church	Services	3,319
13	Winnebago Industries Inc.	Manufacturing	3,875
14	Covenant Medical Center	Services	3,000
15	Aegon USA Inc.	Finance, Insurance, and Real Estate	2,800
16	Transamerica Life Insurance Company	Finance, Insurance, and Real Estate	2,800
17	North Iowa Mercy Health Center	Services	2,750
18	Tyson Fresh Meats*	Manufacturing	2,700
19	Amana Refrigeration Products	Manufacturing	2,600
20	Life Investors Insurance Company	Finance, Insurance, and Real Estate	2,600
21	Iowa Methodist Patient Info	Services	2,500
22	Alcoa Mill Products*	Manufacturing	2,400
23	St. Luke's Hospital	Services	2,600
24	Wells' Dairy, Inc.	Manufacturing	2,316
25	University of Northern Iowa	Services	2,091
26	Waverly Health Center	Services	2,067
27	Electrolux	Manufacturing	2,000
28	Genesis Health System	Services	2,000
29	John Deere Dubuque Works*	Manufacturing	2,000

Table 6-4, continued
Top Employers in Iowa

Exhibit 6-2 No.	Company Name	Sector	Employees
30	Omni Centre	Services	2,000
31	Wells Fargo Home Mortgage*	Finance, Insurance, and Real Estate	2,000
32	Vermeer Manufacturing Co.	Manufacturing	2,000
33	Swift & Company	Manufacturing	1,980
34	Tyson Foods Inc.*	Manufacturing	1,850
35	Fisher Controls Intl LLC	Manufacturing	1,800
36	US Veterans Medical Center	Services	1,800
37	UPS*	Transport, Communications, and Public Utilities	1,800
38	Allen Memorial Hospital	Services	1,767
39	Kraft Foods/Oscar Mayer	Manufacturing	1,765
40	Mercy Medical Center-Cedar Rapids	Services	1,700
41	Mercy Medical Center-Sioux City	Services	1,652
42	Alliant Energy	Transport, Communications, and Public Utilities	1,650
43	McLeod USA Inc.	Transport, Communications, and Public Utilities	1,645
44	Communications Data Services INC	Transport, Communications, and Public Utilities	1,600
45	Bridgestone/Firestone	Manufacturing	1,600
46	Smithway Motor Xpress Corp.	Transport, Communications, and Public Utilities	1,600
47	Qwest Corporation*	Transport, Communications, and Public Utilities	1,580
48	Kirkwood Community College	Services	1,564
49	Berthel Fisher Company Financial	Finance, Insurance, and Real Estate	1,515
50	Graham Manufacturing Corporation	Manufacturing	1,500

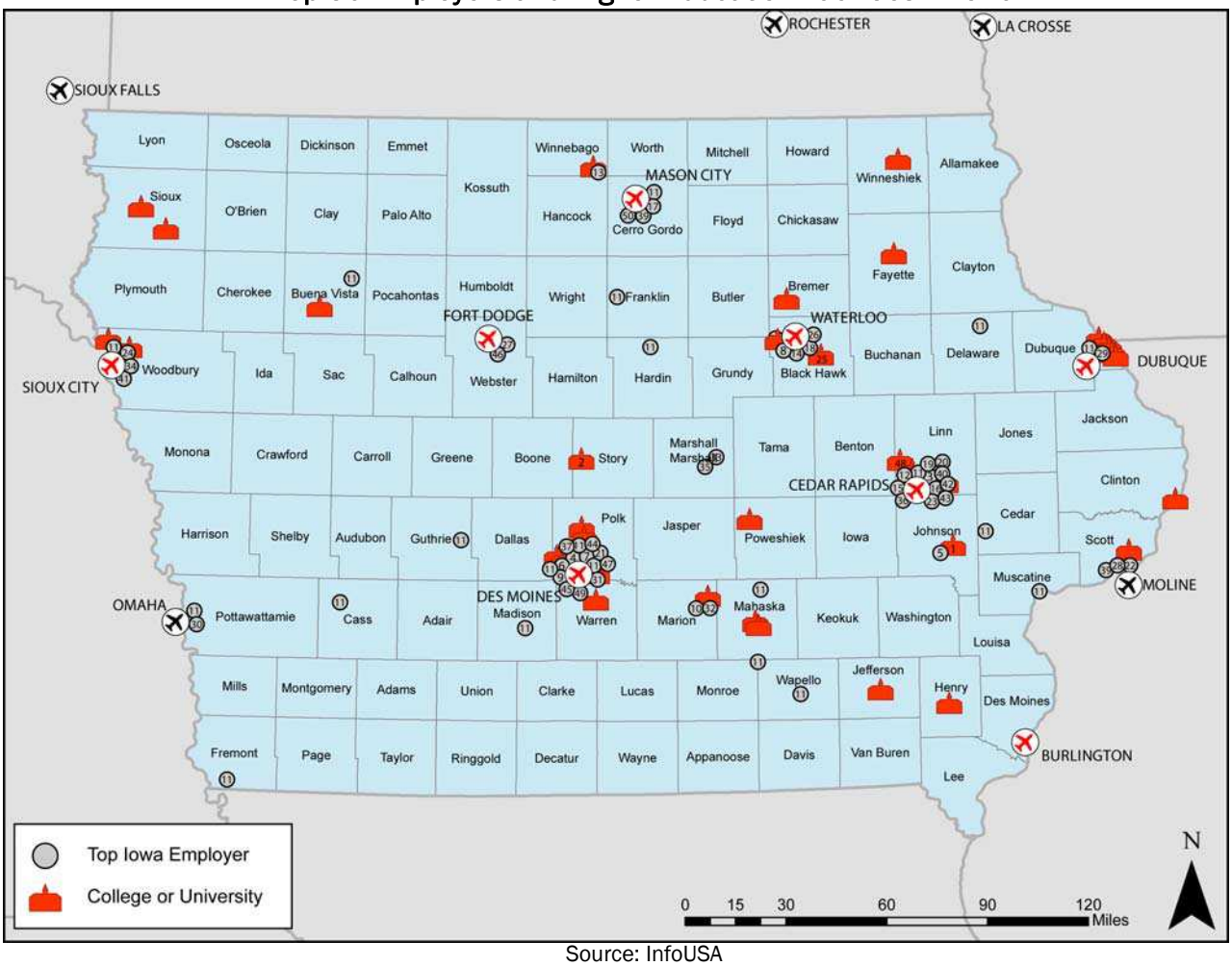
Sources: InfoUSA, 2007, company websites, community websites, and 2006 Iowa Business Survey results
Notes: *Fortune 500 Company; excludes retail trade, accommodation and food service, government, and school districts

Business travelers are often the backbone of an airport's demand for commercial airline travel. Because business travelers tend to place a higher value on their time, generally speaking, they are more likely to use their local airport. A consistent stream of business travelers is important to maintaining and improving airline service.

An overview of Iowa's top employers helps to set a context for the S.W.O.T. analysis. Many of Iowa's top employers in the "service" category are hospitals or healthcare providers. Generally speaking, these types of service employers do not have high demand for commercial airline travel. Most manufacturing and finance, insurance, and real estate employers have an average or above demand for commercial airline travel. Military and government employers typically have below average demand for airline travel.

Many of Iowa's top employers are located near study airports. Understanding the location of demand generators in relationship to the airports is important to the S.W.O.T. analysis. **Exhibit 6-2** shows the general relationship of the airports and large employers who may generate air travel demand. The institutes of higher learning throughout the State are also depicted.

Exhibit 6-2
Top 50 Employers and Higher Education Facilities in Iowa



Source: InfoUSA

Per Capita Personal Income

Per capita personal income (PCPI) increased at a slightly higher rate in Iowa than it did in the rest of the United States. From 1990 through 2005, PCPI in Iowa increased at a compounded annual rate of 3.9 percent, versus the national rate of 3.8 percent. **Table 6-5** presents this information. Average PCPI in Iowa has lagged behind the U.S. average. The gap between the PCPI in Iowa and the U.S. is increasing. In 1990, the difference between average PCPI in Iowa and the U.S. was $2,088; by 2005, this difference had increased to $3,236. According to the Woods and Poole forecast, by 2010 the difference will be $3,710.

Table 6-5
Iowa and U.S. Per Capita Personal Income Trends
1990-2005 and 2010 Projection

Region	1990	2005	1990-2005 CAGR	2010 Projection	2005-2010 CAGR
Iowa	$17,389	$30,750	3.9%	$37,635	4.1%
United States	$19,477	$33,986	3.8%	$41,345	4.0%
Source: Woods and Poole Economics, Inc.					
Notes In current dollars; CAGR=compounded annual growth rate					

Income levels, especially disposable personal income levels, influence demand for commercial airline travel. Lower levels of PCPI make air travelers more price sensitive, causing them to bypass local airport and drive longer distances to access lower airfares. There is a direct correlation between high income levels and high demand for commercial airline travel. As previous chapters of this report noted, Iowa's ratio of population per enplaned commercial airline passengers lags behind the U.S. average. Lower average levels of PCPI contribute to this difference.

Gross State Product

Gross State Product (GSP) is a measurement analogous to Gross Domestic Product (GDP), the commonly accepted measure used to calculate the total annual value of goods and services produced by a nation. Similarly, GSP estimates the value of goods and services produced at the state level. From 1990 to 2005, the GSP of Iowa grew at a slower rate versus the national GDP, 2.5 percent and 2.9 percent, respectively. By 2010, the compounded annual growth for Iowa's GSP is expected to drop to 1.9 percent. At a projected compounded annual rate of 2.2 percent, the national rate is expected to drop as well, but will remain above the State rate. **Table 6-6** details this data.

Table 6-6
Iowa GSP and U.S. GDP (in millions)

Region	1990	2005	1990-2005 CAGR	2010 Projection	2005-2010 CAGR
Iowa	$64,968	$93,968	2.5%	$103,137	1.9%
United States	$6,641,007	$10,122,360	2.9%	$11,275,033	2.2%
Source: Woods and Poole Economics, Inc. Notes: In 1996 dollars; CAGR=compounded annual growth rate					

Iowa's GSP as a percent of the GDP is decreasing. In 1990, Iowa's GSP represented 0.98 percent of the GDP, by 2005 this relationship fell to 0.93 percent. Woods and Poole data show this relationship

further declining to 0.91 percent in 2010. Iowa's weakening financial position could influence its relative ability to maintain and improve commercial airline service.

Table 6-7 summarizes the statewide factors discussed in this section as they relate to strengths/opportunities and weaknesses/threats for maintaining and improving commercial airline service in Iowa.

Table 6-7
S.W.O.T. Summary
Statewide Factors

Strengths/Opportunities	
Population	Iowa's fastest growing and most densely populated counties are in proximity to one of the eight commercial airports.
Employment	Iowa's projected CAGR of employment increase exceeds the State's historic CAGR for this indicator.
Employment Sectors	Iowa's manufacturing sector employment is 12.1% compared to 9.5% for the U.S.; the manufacturing sector typically has above average demand for commercial airline travel.
Major Employers	Iowa hosts operations of seven Fortune 500 companies; the State's top 50 employers are in employment sectors which generate above average demand for commercial service.
PCPI	Iowa's PCPI is growing at an average annual rate above the U.S. average.
GSP	Iowa's GSP is projected to increase from $93.3 billion in 2005 to over $103.1 billion in 2010.

Weaknesses/Threats	
Population	Iowa's historic and projected population growth rates are about half of the U.S. average.
Employment	Iowa's average annual rate of growth for employment, both historic and projected, lags behind the U.S. average.
Employment Sectors	Iowa's farm/agricultural sector employment is 6.9% versus 3.2% for the U.S.; this sector has lower than average demand for commercial airline travel.
PCPI	Iowa's PCPI is lower than the U.S. average.
GSP vs. GDP	The GDP is growing at a rate faster than Iowa's GSP; Iowa's GSP as a percent of GDP is decreasing.

REGIONAL FACTORS IMPACTING AIR TRAVEL DEMAND

To gain understanding of the strengths, weaknesses, opportunities, and threats for each commercial airport in Iowa, research was conducted on factors that can influence demand for commercial airline travel. These factors include historic enplanements, major employers and higher education facilities within 60 minutes of each airport, and socioeconomic trends and projections.

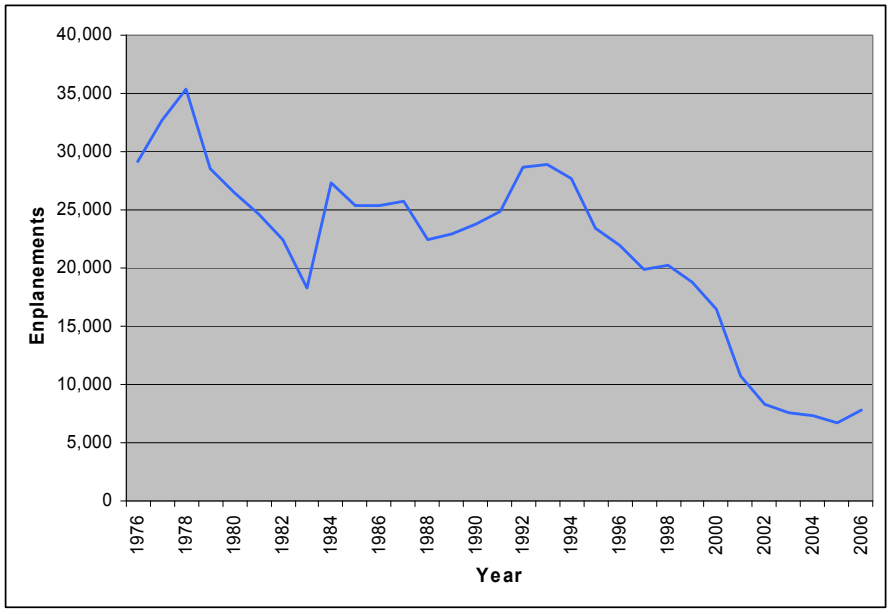
The area used for this analysis is a 60-minute drive time from each commercial airport. For socioeconomic factors, counties were included this "region" if their center fell within the 60-minute drive time.

Burlington– Southeast Iowa Regional Airport (BRL)

Historic Enplanements

Enplanements at Southeast Iowa Regional Airport have been on a general decline since airline deregulation in 1978 (**Exhibit 6-3**). Enplanements peaked above 35,000 in 1978. Since 1978, enplanements at Southeast Iowa Regional have fallen at an average annual rate of 5.3 percent. In 2006 the airport served nearly 7,800 enplanements. Although Southeast Iowa Regional enplanements had surges in the mid-1980s and mid-1990s, enplanements have experienced a decline far below the average annual increase of 1.4 percent for the State and 4.1 percent for the U.S. for the same 30-year period.

Exhibit 6-3
Historic Enplanements
Southeast Iowa Regional Airport



Source: Iowa Department of Transportation

Socioeconomic Trends and Projections

Six counties in Iowa fall within a 60-minute drive of Southeast Iowa Regional Airport. In the fifteen year period from 1990 to 2005, the summed population of these counties remained somewhat stagnant, increasing by less than one tenth of one percent annually (**Table 6-8**). This is just slightly less than Iowa's rate of population growth for this period and far less than the national rate of growth for the same time period. The 2005 to 2010 period is expected to see population in the region decrease slightly compared to an increase in population on the statewide and national level.

Table 6-8
Regional Historic and Projected Population
Southeast Iowa Regional Airport

County	1990	2005	1990-2005 CAGR	2010 Projection	2005-2010 CAGR
Des Moines	42,668	42,291	-0.1%	40,640	-0.8%
Henry	19,296	20,303	0.3%	20,553	0.2%
Jefferson	16,313	16,165	-0.1%	16,111	-0.1%
Lee	38,632	37,939	-0.1%	36,432	-0.8%
Louisa	11,620	12,172	0.3%	12,008	-0.3%
Van Buren	7,683	7,823	0.1%	7,827	0.0%
TOTAL	**136,212**	**136,693**	**0.02%**	**133,571**	**-0.5%**
Iowa Total	2,781,026	2,928,239	0.3%	3,035,322	0.7%
United States	249,622,814	296,410,404	1.2%	311,843,984	1.0%

Source: Woods and Poole Economics, Inc.
Note: CAGR=compounded annual growth rate

Population in the Burlington region has not grown. To the degree that demand for commercial airline travel is tied to population, this would indicate that demand for commercial airline travel in the region has and will continue to remain flat. As implied in Exhibit 6-3, the airport has captured a decreasing percentage of the market area's air travel demand. Over time, the passengers located in this airport's market area have left at increasingly higher rates to use other airports for their commercial airline travel.

Similar to trends in population, employment growth in the Burlington region is below State and national rates (**Table 6-9**). From 1990 to 2005, employment grew by 0.5 percent annually in the region, while State and national employment grew at rates of 1.2 percent and 1.4 percent, respectively. From 2005 to 2010, employment growth in the region is projected to increase to 0.9 percent annually. However, this is still below projected employment rates of growth for the State and the nation for the same period.

Table 6-9
Regional Historic and Projected Employment
Southeast Iowa Regional Airport

County	1990	2005	1990-2005 CAGR	2010 Projection	2005-2010 . CAGR
Des Moines	26,648	28,930	0.5%	30,243	0.9%
Henry	12,722	13,963	0.6%	14,697	1.0%
Jefferson	10,358	12,055	1.0%	12,884	1.3%
Lee	21,894	21,749	0.0%	22,255	0.5%
Louisa	5,307	5,773	0.6%	6,045	0.9%
Van Buren	3,481	3,574	0.2%	3,642	0.4%
TOTAL	**80,410**	**86,044**	**0.5%**	**89,766**	**0.9%**
Iowa Total	1,645,944	1,960,305	1.2%	2,079,793	1.2%
United States	139,380,891	172,587,009	1.4%	186,079,920	1.5%

Source: Woods and Poole Economics, Inc.
Note: CAGR=compounded annual growth rate

Below average rates of increase for employment in this region indicate that its demand for commercial airline travel is most likely not as robust as regions that will experience more notable growth in employment.

Employers in the service and manufacturing sectors often have average to above average demand for commercial airline travel. Hospitals and healthcare provides (which are part of the service sector), however, typically have below average commercial air travel needs. Businesses in retail trade, state/local government, and farm/agricultural sectors most often have below average need for commercial airline travel.

Major Employers

As presented in **Table 6-10**, the largest employer in the region is Great River Medical Center. Six out of the top eight employers in the region are in the manufacturing sector, including GE and Vista Bakery.

Table 6-10
Top Employers in Region
Southeast Iowa Regional Airport

Company Name	Sector	Employees
Great River Medical Center	Services	1,400
General Electric	Manufacturing	800
Vista Bakery, Inc.	Manufacturing	700
CNH (Case Corporation)	Manufacturing	550
American Ordinance LLC	Manufacturing	500-1,000
Champion Spark Plug	Manufacturing	500-1,000
Maharishi University of Management	Services	450
Winegard Company	Manufacturing	400

Sources: Burlington Chamber of Commerce, Dunn and Bradstreet Small Business Solutions

Employment by Sector

Table 6-11 presents total employment by sector in the six-county region. Despite manufacturing companies being the largest individual employers, the service sector is the largest employment sector in the region with 26.8 percent of total employment. However, the manufacturing sector for the Burlington region is nearly double the national percent of total employment. The four largest employment sectors in this region are services, manufacturing, retail trade, and state and local government. These sectors are also the four largest at both the State and national levels.

Table 6-11
Employment by Sector
Southeast Iowa Regional Airport

Employment Sector	Percent of Total Employment		
	Region	Iowa	United States
Services	26.8%	29.0%	33.5%
Manufacturing	18.2%	12.1%	9.5%
Retail Trade	18.0%	16.7%	16.4%
State and Local Government	10.5%	11.8%	11.2%
Farm Employment	5.7%	5.4%	1.8%
Transport, Communications, and Public Utilities	5.1%	4.8%	4.7%
Construction	5.0%	5.0%	5.6%
Finance, Insurance, and Real Estate	4.6%	7.5%	8.3%
Wholesale Trade	3.3%	4.4%	4.3%
Agricultural Services, Other	1.2%	1.5%	1.4%
Federal Military Government	0.8%	0.7%	1.3%
Federal Civilian Government	0.6%	1.0%	1.6%
Mining	0.1%	0.1%	0.4%
Total	**100.0%**	**100.0%**	**100.0%**

Source: Woods and Poole Economics, Inc.

Higher Education Facilities

Three higher education facilities are located in the region (**Table 6-12**). They have a combined student body of 5,084 students. The majority of Maharishi University of Management and Iowa Wesleyan College students come from out-of-state. In fact, many of the students at Maharishi University of Management are international students and likely rely on commercial airline travel.

Table 6-12
Regional Higher Education Facilities
Southeast Iowa Regional Airport

Institution Name	City	Enrollment		
		In-State	Out-of-State	Total
Southeastern Community College	West Burlington	3,320	0	3,320
Maharishi University of Management	Fairfield	73	842	915
Iowa Wesleyan College	Mount Pleasant	331	518	849
TOTAL		**3,724**	**1,360**	**5,084**

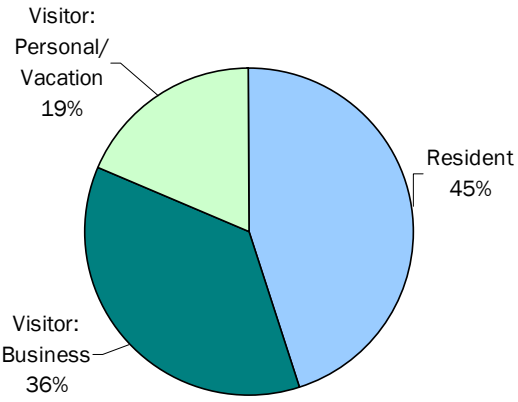
Source: Collegeboard.com

As a result of the nature of their business, higher educational facilities often stimulate commercial air travel demand. Given reported enrollment levels in the region, these institutions are most likely not significant demand generators. However, the high percentage of out-of-state enrollment may influence visitor travel.

Visitor and Resident Travel

As seen in **Exhibit 6-4**, 55 percent of the passengers at Southeast Iowa Regional Airport are visitors. Resident travel accounts for the remaining 45 percent of the airport's enplanements. Personal/vacation-related travel may be artificially depressed because many market area travelers are using other airports where they access lower fares for this type of travel.

Exhibit 6-4
Resident and Visitor Passengers
Southeast Iowa Regional Airport



Source: 2006 Passenger Survey and US DOT *O&D Survey*

Visitor Travel

Personal/vacation-related tourism to this airport is tied to population which is not expected to experience growth.

Resident Travel

Resident travel is influenced by population, employment, type of employment, and income. As the discussion of the Burlington region has shown, most factors which are typically indicative of higher or increasing demand for commercial airline service are not present in this region.

Fare Comparison

Table 6-13 details fares to several of the largest U.S. markets when departing from Southeast Iowa Regional Airport in March 2007. A leisure ticket includes a Saturday night stay and a 21 day advanced purchase. Business fares have no Saturday night stay; while tickets may be purchased somewhat in advance, it is not 21 days. Finally, walk-up fares are typically those available at the time of travel.

Table 6-13
Fare Comparison by Passenger Type
Southeast Iowa Regional Airport

Destination	Passenger Type		
	Leisure	Business	Walk-up
Atlanta (ATL)	$268	$398	$729
Chicago/O'Hare (ORD)	$411	$417	$1,534
Dallas/Fort Worth (DFW)	$350	$422	$1,338
Denver (DEN)	$468	$660	$1,294
Las Vegas (LAS)	$378	$378	$966
Los Angeles (LAX)	$410	$592	$966
New York City (LGA)	$303	$318	$934
Orlando (MCO)	$289	$417	$1,280
Phoenix (PHX)	$451	$571	$849
San Francisco (SFO)	$456	$580	$1,503
Seattle (SEA)	$390	$760	$1,399
Washington (DCA)	$301	$349	$914
Average	**$373**	**$489**	**$1,142**
State Average	$387	$565	$813

Source: Iowa Department of Transportation
Note: March 1, 2007 snapshot of airfares

Leisure fares from Southeast Iowa Regional Airport average $373 to the 12 popular destinations, below the State average fare of $387. At an average fare cost of $489, business passengers also pay below the State average for these destinations ($565). The average walk-up fare from the airport to these 12 destinations is $1,142. This average walk-up fare is the highest in Iowa and is higher than the State average of $813.

Southeast Iowa Regional Airport Summary

Table 6-14 summarizes regional S.W.O.T. information for Southeast Iowa Regional Airport discussed in this section.

Table 6-14
Regional S.W.O.T. Summary
Southeast Iowa Regional Airport

Strengths/Opportunities	
Employment	Projections show employment is expected to increase at average annual rate above the market's historic rate.
Employment Sectors	45% of the employment is in the service and manufacturing sectors which often have above average demand for commercial airline travel.
Major Employers	Major employers are most often in sectors that typically have above average demand for commercial airline travel.
Visitor Travel	While the number is not significant, several area colleges/universities have high percentage of out-of-state (including international) enrollment.

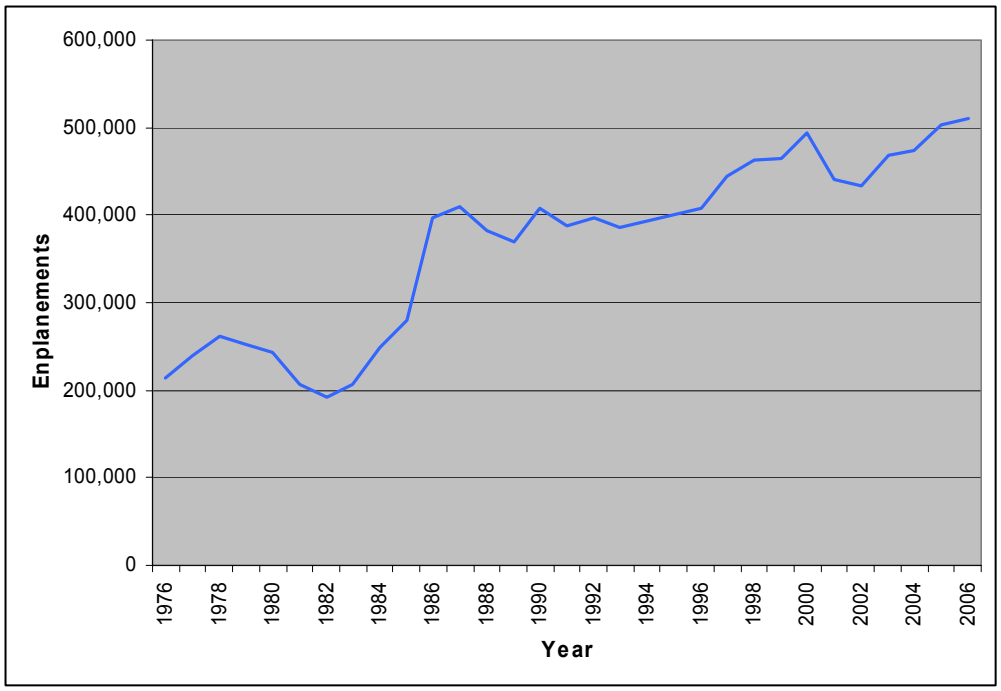
Weaknesses/Threats	
Employment	Employment has and will continue to grow at rates that are below both the State and national averages.
Population	Regional population is projected to decline; this will have a negative impact on both resident- and visitor- related travel.
Resident/Visitor Travel	Projected rates of growth, which are below average for both population and employment in the region, may depress demand for commercial airline travel.
Enplanements	Enplanements in the region have shown a decreasing trend since deregulation

Cedar Rapids – The Eastern Iowa Airport (CID)

Historic Enplanements

Enplanements at The Eastern Iowa Airport have been steadily increasing over the last thirty years (**Exhibit 6-5**). Deregulation in 1978 caused a bit of a drop, but by the early 1980s enplanements were again on the rise. Overall, The Eastern Iowa Airport enplanements increased at an average rate of 3.0 percent annually since 1976. This is the highest rate of enplanement growth among commercial airports in Iowa and higher than the State's average annual growth rate of 1.4 percent for the same time frame. This rate of growth was still below the national average annual average growth rate for enplanements of 4.1 percent.

Exhibit 6-5
Historic Enplanements
The Eastern Iowa Airport



Source: Iowa Department of Transportation

The historic enplanement trend for The Eastern Iowa Airport is considered a strength in this airport's S.W.O.T. analysis. Despite dips, the airport's enplanements have shown consistent growth. This is important to carriers when they are contemplating improving or adding new airline service.

Socioeconomic Trends and Projections

There are fifteen Iowa counties within 60-minutes of The Eastern Iowa Airport. From 1990 to 2005, the combined population of these counties increased at a compounded annual rate of 0.5 percent. This rate of increase was slightly higher than the Iowa annual rate, but lower than U.S. historic growth rate. The Cedar Rapids region is expected to grow annually at a compounded rate of 1.2 percent from

2005 to 2010. This expected rate of growth is higher than the projected Iowa average rate of growth and also higher than the projected national rate of increase for population (**Table 6-15**).

Table 6-15
Regional Historic and Projected Population
The Eastern Iowa Airport

County	1990	2005	1990-2005 CAGR	2010 Projection	2005-2010 CAGR
Benton	22,425	25,344	0.8%	28,513	2.4%
Black Hawk	124,155	127,911	0.2%	126,610	-0.2%
Buchanan	20,842	21,080	0.1%	21,248	0.2%
Cedar	17,447	18,219	0.3%	18,623	0.4%
Delaware	18,046	18,396	0.1%	18,419	0.0%
Iowa	14,618	15,716	0.5%	16,326	0.8%
Johnson	96,595	111,267	0.9%	129,203	3.0%
Jones	19,480	20,215	0.2%	20,806	0.6%
Linn	169,295	192,245	0.9%	211,516	1.9%
Louisa	11,620	12,172	0.3%	12,008	-0.3%
Muscatine	39,969	41,799	0.3%	43,425	0.8%
Poweshiek	19,035	18,843	-0.1%	18,941	0.1%
Scott	151,304	158,732	0.3%	166,097	0.9%
Tama	17,436	18,077	0.2%	17,985	-0.1%
Washington	19,617	20,720	0.4%	21,977	1.2%
TOTAL	**761,884**	**820,736**	**0.5%**	**871,697**	**1.2%**
Iowa Total	2,781,026	2,928,239	0.3%	3,035,322	0.7%
United States	249,622,814	296,410,404	1.2%	311,843,984	1.0%

Source: Woods and Poole Economics, Inc.
Note: CAGR-compounded annual growth rate

There is a positive correlation between population and demand for commercial airline travel. The fact that population in this region historically grew at a rate above the State average is considered strength in this airport's S.W.O.T. analysis. Even more important, projections that indicate population in this region will increase at a rate above both the State and national average, may point toward the airport's ability to support new or improved commercial airline service.

Employment levels in the Cedar Rapids region increased at a compounded annual rate of 1.5 percent since 1990, a higher rate of growth for employment than the rate of growth for both Iowa and the United States. Projections show that employment in the region will continue to grow, at a slightly lower rate of 1.4 percent annually. This rate of employment growth is still above that for Iowa and just under the national rate (**Table 6-16**).

Table 6-16
Regional Historic and Projected Employment
The Eastern Iowa Airport

County	1990	2005	1990-2005 CAGR	2010 Projection	2005-2010 CAGR
Benton	9,719	11,553	1.2%	12,517	1.6%
Black Hawk	74,398	89,013	1.2%	93,563	1.0%
Buchanan	8,613	10,049	1.0%	10,326	0.5%
Cedar	8,331	9,504	0.9%	10,086	1.2%
Delaware	8,563	10,813	1.6%	11,765	1.7%
Iowa	11,190	13,819	1.4%	14,743	1.3%
Johnson	65,900	99,162	2.8%	109,437	2.0%
Jones	8,547	9,815	0.9%	10,477	1.3%
Linn	114,186	144,923	1.6%	157,128	1.6%
Louisa	5,307	5,773	0.6%	6,045	0.9%
Muscatine	24,515	27,824	0.8%	29,216	1.0%
Poweshiek	12,820	13,759	0.5%	14,409	0.9%
Scott	87,707	107,878	1.4%	116,229	1.5%
Tama	9,171	8,304	-0.7%	8,459	0.4%
Washington	9,866	10,537	0.4%	10,947	0.8%
TOTAL	**458,833**	**572,726**	**1.5%**	**615,347**	**1.4%**
Iowa Total	1,645,944	1,960,305	1.2%	2,079,793	1.2%
United States	139,380,891	172,587,009	1.4%	186,079,920	1.5%

Source: Woods and Poole Economics, Inc.
Note: CAGR=compounded annual growth rate

Demand for commercial airline travel is also closely correlated with employment. Higher historic and projected rates of employment growth in the region are important to justifying air service improvements at the Eastern Iowa Airport. Increasing employment in the region can be used to help support a base for new or improved commercial airline service.

Typically employers in the service, manufacturing, and finance, insurance, and real estate sectors have above average demand for commercial airline service. Hospitals, which are in the service sector, do not generally generate high volumes of commercial airline travel demand. Additionally, employers in the retail trade and state/local government sectors also do not typically generate high volumes of commercial airline service demand.

Major Employers

The top employers in the region are University of Iowa and University of Iowa Hospital and its system of clinics (**Table 6-17**). The University alone employs over 15,000 people in the region. Aviation electronic and communications maker, Rockwell Collins, is the second largest employer with 9,500 employees. Following these companies are a variety of service, manufacturing, medical, and finance/insurance employers.

Table 6-17
Top Employers in Region
The Eastern Iowa Airport

Company Name	Sector	Employees
University of Iowa	Services	15,362
Rockwell Collins	Manufacturing	9,500
University of Iowa Hospital/Clinics	Services	7,500
John Deere (Waterloo)	Manufacturing	4,700
Heartland Express	Services	3,319
Covenant Medical Center (Waterloo)	Services	3,000
Transamerica Life Insurance Company	Finance, Insurance, and Real Estate	2,800
Aegon USA Investment Management LLC	Finance, Insurance, and Real Estate	2,800
Amana Refrigeration Products	Manufacturing	2,600
Life Investors Insurance Company	Finance, Insurance, and Real Estate	2,600
St. Luke's Hospital	Services	2,600
US Veterans Medical Center	Services	1,800
Mercy Medical Center-Cedar Rapids	Services	1,700
Alliant Energy	Transport, Communications, and Public Utilities	1,650
McLeod USA Inc.	Transport, Communications, and Public Utilities	1,645
Kirkwood Community College	Services	1,564
Berthel Fisher Company Financial	Finance, Insurance, and Real Estate	1,515
Pearson PLC	Services	1,200
ACT, Inc.	Services	1,100

Source: Cedar Rapids Chamber of Commerce, City of Iowa City, Dun and Bradstreet Small Business Solutions, Greater Cedar Valley Alliance
Note: Some companies listed are also located within Waterloo Regional Airport's 60-minute drive time

Employment by Sector

Table 6-18 shows percent of total employment by employment sector in the region. The four largest employment sectors, services, retail trade, state and local government, and manufacturing, are also the four largest sectors at the State and national levels. With 30 percent of the total regional employment, the service sector is the largest employer.

Table 6-18
Employment by Sectors
The Eastern Iowa Airport

Employment Sector	Percent of Total Employment		
	Region	Iowa	United States
Services	26.8%	29.0%	33.5%
Manufacturing	18.2%	12.1%	9.5%
Retail Trade	18.0%	16.7%	16.4%
State and Local Government	10.5%	11.8%	11.2%
Farm Employment	5.7%	5.4%	1.8%
Transport, Communications, and Public Utilities	5.1%	4.8%	4.7%
Construction	5.0%	5.0%	5.6%
Finance, Insurance, and Real Estate	4.6%	7.5%	8.3%
Wholesale Trade	3.3%	4.4%	4.3%
Farm Employment	3.1%	5.4%	1.8%
Agricultural Services, Other	1.4%	1.5%	1.4%
Agricultural Services, Other	1.2%	1.5%	1.4%
Federal Military Government	0.8%	0.7%	1.3%
Total	**100.0%**	**100.0%**	**100.0%**
Source: Woods and Poole Economics, Inc.			

Higher Education Facilities

The University of Iowa is the largest of the six universities located in the region (**Table 6-19**). With over 26,000 students, more than 11,000 of these students are from out of state. Kirkwood Community College also has a large enrollment, but a limited number of out-of-state students. None of the other universities in the regional have a student body greater than 1,500 students.

Table 6-19
Higher Education Facilities in Region
The Eastern Iowa Airport

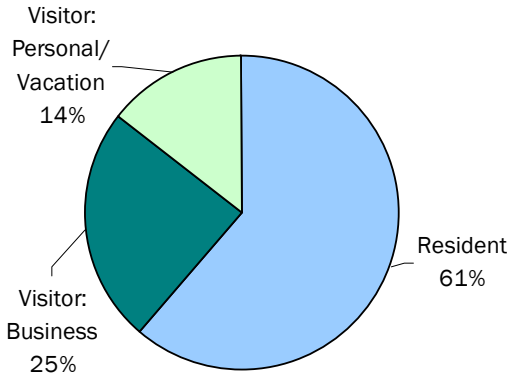
Institution Name	City	Enrollment		
		In-State	Out-of-State	Total
University of Iowa	Iowa City	15,264	11,515	26,779
Kirkwood Community College	Cedar Rapids	14,612	452	15,064
Mount Mercy College	Cedar Rapids	1,334	148	1,482
Coe College	Cedar Rapids	884	416	1,300
Cornell College	Mount Vernon	348	773	1,121
Allen College	Waterloo	400	26	426
TOTAL		**33,242**	**13,356**	**46,598**
Source: Collegeboard.com				

The fact that there are an estimated 13,356 students that travel to region from beyond the State indicates additional support for commercial airline travel. Faculty, alumnae, and sporting teams and fans also may rely on air travel at a large university such as the University of Iowa.

Visitor and Resident Travel

Exhibit 6-6 presents the split of resident- versus visitor-related commercial service passengers at The Eastern Iowa Airport. Visitor-related travelers accounts for 39 percent of all enplanements at the airport.

Exhibit 6-6
Resident and Visitor Passengers
The Eastern Iowa Airport



Source: 2006 Passenger Survey and US DOT *O&D Survey*

Visitor Travel

The region has a growing base of both population and employment. This growth, coupled with travel demand associated with area universities, indicates the potential for increased visitor-related travel (both business and pleasure).

Resident Travel

Regional employment and population growth are among the strongest in Iowa. Another important strength in the S.W.O.T. analysis for this airport is the presence of major employers who have a higher propensity to rely on commercial airline travel. This suggests that the market area has the ability to support new or improved airline service.

Fare Comparison

Table 6-20 details fares to top markets throughout the United States when departing from The Eastern Iowa Airport. Leisure fares from The Eastern Iowa Airport average of $368 to the 12 popular destinations, below the State average fare. The average business fare is $468, below the State average for these 12 destinations ($565). The average walk-up fare to these popular destinations is $633, also well below the State average.

Table 6-20
Fare Comparison
The Eastern Iowa Airport

Destination	Passenger Type		
	Leisure	Business	Walk-up
Atlanta (ATL)	$390	$768	$1,093
Chicago/O'Hare (ORD)	$329	$499	$579
Dallas/Fort Worth (DFW)	$331	$509	$700
Denver (DEN)	$402	$510	$510
Las Vegas (LAS)	$365	$409	$605
Los Angeles (LAX)	$388	$456	$640
New York City (LGA)	$300	$300	$360
Orlando (MCO)	$285	$430	$538
Phoenix (PHX)	$376	$432	$646
San Francisco (SFO)	$435	$470	$783
Seattle (SEA)	$482	$442	$750
Washington (DCA)	$335	$390	$390
Average	**$368**	**$468**	**$633**
State Average	$387	$565	$813

Source: Iowa Department of Transportation
Note: snapshot of airfares on June 1, 2007

The Eastern Iowa Airport Summary

Table 6-21 summarizes strengths/opportunities and weaknesses/threats for The Eastern Iowa Airport.

Table 6-21
Regional S.W.O.T. Summary
The Eastern Iowa Airport

Strengths/Opportunities	
Employment	Regional employment is expected to grow at a rate that is above State average.
Employment Sectors/Major Employers	Almost 50 percent of regional employment is in services, manufacturing, and finance. These sectors and several of the major local employers have above average demand for airline travel.
Enplanements	Enplanements at the airport have exhibited steady growth; the average annual rate of growth for enplanements is the highest in the State.
Fares	Average fares between the airport and major U.S. markets are below the State average for large markets.
Population	Regional population is expected to increase through 2010 at a rate above both the State and national rates.
Resident Travel	Strong population and employment growth support growing commercial air travel demand.
Visitor Travel	High out-of-state enrollment and other university-related activities help stimulate visitor travel demand.

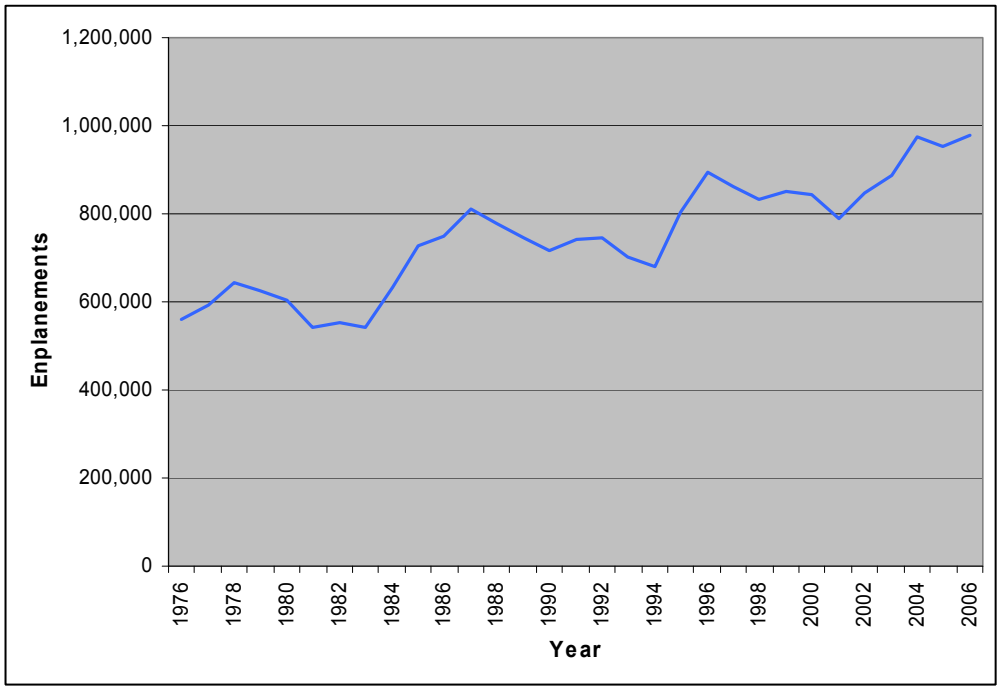
Weaknesses/Threats	
Employment	The projected rate of growth for employment is expected to be just below region's historic rate of growth and just under the projected national rate of increase.
Employment Sectors	Over 30% of employment is in state/local government and retail trade; these businesses typically have below average demand for commercial airline travel.
Major Employers	Five of the top employers in the region are businesses in health care which typically have lower than average demand for commercial airline travel.
Enplanements	Enplanements have increased at a rate above the State average but this rate is still well below the national average rate of increase for enplanements.

Des Moines – Des Moines International Airport (DSM)

Historic Enplanements

Enplanements at Des Moines International Airport have generally increased for the last 30 years (**Exhibit 6-7**) and have nearly doubled from 561,186 in 1976 to 978,900 in 2006. This represents an average annual increase of 1.9 percent since 1976, higher than the State rate of 1.4 percent, but below the national growth rate of 4.1 percent annually.

Exhibit 6-7
Historic Enplanements
Des Moines International Airport



Source: Iowa Department of Transportation

While enplanements at this airport have followed national trends for periods of decline, the airport has exhibited its ability to attract consistently higher levels of passenger demand. This is important to airlines who are contemplating new or improved service.

Socioeconomic Trends and Projections

There are 15 counties within a 60-minute drive of Des Moines International Airport. Population in these counties has increased at a moderate compounded annual rate of 0.7 percent since 1990 (**Table 6-22**). This rate of increase is higher than the 0.3 percent statewide rate increase, but less than the 1.2 percent national rate of increase for the same time frame. For the 2005 to 2010 period, regional population is expected to increase by 1.8 percent annually. This expected rate of compounded annual increase is higher than both the State and national rate of population increase for this time frame.

Table 6-22
Regional Historic and Projected Population
Des Moines International Airport

County	1990	2005	1990-2005 CAGR	2010 Projection	2005-2010 CAGR
Adair	8,400	8,210	-0.2%	7,870	-0.8%
Boone	25,200	26,254	0.3%	26,781	0.4%
Clarke	8,301	9,195	0.7%	9,674	1.0%
Dallas	29,904	41,058	2.1%	55,667	6.3%
Decatur	8,303	8,683	0.3%	8,639	-0.1%
Guthrie	10,941	11,351	0.2%	11,747	0.7%
Jasper	34,829	37,251	0.4%	38,405	0.6%
Lucas	9,059	9,411	0.3%	9,724	0.7%
Madison	12,516	14,064	0.8%	15,453	1.9%
Marion	29,995	32,120	0.5%	33,905	1.1%
Marshall	38,301	39,324	0.2%	39,643	0.2%
Polk	328,531	375,804	0.9%	418,220	2.2%
Story	74,382	80,026	0.5%	82,831	0.7%
Union	12,774	12,281	-0.3%	11,824	-0.8%
Warren	36,170	40,801	0.8%	45,689	2.3%
TOTAL	**667,606**	**745,833**	**0.7%**	**816,072**	**1.8%**
Iowa Total	2,781,026	2,928,239	0.3%	3,035,322	0.7%
United States	249,622,814	296,410,404	1.2%	311,843,984	1.0%

Source: Woods and Poole Economics, Inc.
Note: CAGR=compounded annual growth rate

Historic and projected population for the Des Moines region is indicative of its strength. The notable correlation between commercial air service demand and population is a strength noted in this airport's S.W.O.T. analysis.

Regional employment in has increased at a rate higher than both the State and the national rate since 1990. Regional employment has grown at 1.5 percent annually, as compared to an average annual rate of growth of 1.2 percent for Iowa and 1.4 percent for the United States (**Table 6-23**). The projected rate of growth for employment in the region is 1.2 percent annually, equal to the projected rate of growth for the State but lower than the 1.5 percent annual rate of growth projected for the United States.

Table 6-23
Regional Historic and Projected Employment
Des Moines International Airport

County	1990	2005	1990-2005 CAGR	2010 Projection	2005-2010 CAGR
Adair	4,484	5,699	1.6%	5,894	0.7%
Boone	11,540	14,179	1.4%	14,907	1.0%
Clarke	4,849	6,742	2.2%	7,309	1.6%
Dallas	12,339	20,681	3.5%	22,453	1.7%
Decatur	4,211	4,639	0.6%	4,829	0.8%
Guthrie	5,074	5,320	0.3%	5,530	0.8%
Jasper	17,705	20,321	0.9%	21,224	0.9%
Lucas	4,911	5,488	0.7%	5,689	0.7%
Madison	5,405	6,767	1.5%	6,959	0.6%
Marion	18,095	23,028	1.6%	24,340	1.1%
Marshall	22,968	24,113	0.3%	24,861	0.6%
Polk	257,268	325,717	1.6%	347,700	1.3%
Story	47,813	55,951	1.1%	59,824	1.3%
Union	7,412	8,176	0.7%	8,440	0.6%
Warren	12,518	15,217	1.3%	16,288	1.4%
TOTAL	**436,592**	**542,038**	**1.5%**	**576,247**	**1.2%**
Iowa Total	1,645,944	1,960,305	1.2%	2,079,793	1.2%
United States	139,380,891	172,587,009	1.4%	186,079,920	1.5%

Source: Woods and Poole Economics, Inc.
Note: CAGR=compounded annual growth rate

Strong growth in regional employment is a characteristic of a region that has the potential to support new or improved air service.

Many employers in the service; finance, insurance, and real estate; and manufacturing sectors tend to have above average use of commercial airline service. Few employers in the retail sector, except some employees of the "big box" stores, rely on commercial air service on a regular basis. Often times, state/local government also has a lower propensity to use commercial airline service. However, as the center of Iowa's state government, employers in this sector often rely on commercial airline service. Strong future growth in insurance and other professional services also points to continued demand for local air service in the region.

Major Employers

With nearly 14,000 employees, Iowa State University (located in Ames) is the largest employer in the region. **Table 6-24** displays the top employers in the region. Hospitals and other medical facilities are large employment generators. Iowa Health Systems and Mercy Health Center, employ thousands within the region. Insurance companies and manufacturers are also large regional employers.

Table 6-24
Top Employers in Region
Des Moines International Airport

Company Name	Sector	Employees
Iowa State University	Services	13,843
Principal Life Insurance Company	Finance, Insurance, and Real Estate	8,540
Iowa Health Systems	Services	6,470
Mercy Health Center- Des Moines	Services	5,500
Nationwide Allied Insurance	Finance, Insurance, and Real Estate	4.048
Pella Corporation	Manufacturing	4,000
Wells Fargo Home Mortgage	Finance, Insurance, and Real Estate	2,000
Vermeer Manufacturing	Manufacturing	2,000
Swift & Company	Manufacturing	1,980
Fisher Controls Intl LLC	Manufacturing	1,800
United Parcel Service	Transport, Communications, and Public Utilities	1,800
Nationwide Insurance	Finance, Insurance, and Real Estate	1,675
Dahl's Supermarkets	Retail Trade	1,650
Bridgestone/Firestone	Manufacturing	1,600
Communications Data Services INC	Transport, Communications, and Public Utilities	1,600
Qwest Corporation	Transport, Communications, and Public Utilities	1,580
Air National Guard	Federal Military Government	1,525
Pioneer Hi-Bred International, Inc.	Manufacturing	1,450
Electronic Data Systems, Corp.	Services	1,400
Wellmark, Inc. (Blue Cross)	Finance, Insurance, and Real Estate	1,400
Source: City of Des Moines Office of Economic Development, Dun and Bradstreet Small Business Solutions		

Many of the employers shown in Table 6-24 have a higher than average dependency on commercial airline travel. In addition, these Iowa-based companies have customers, suppliers, and vendors who use commercial airline service to reach them.

Table 6-25 shows employment sectors as a percentage of total employment in the region. Services, which include medical, (with 30 percent of the total) and retail trade (16.9 percent), are the two largest employment sectors. With 11.8 percent of total regional employment, the finance, insurance, and real estate sector employs a higher percentage in the region than the State (7.5 percent) or nationwide (8.3 percent) level. Iowa Workforce Development reports similar levels of employment by sector.

Table 6-25
Employment by Sector
Des Moines International Airport

Employment Sector	Percent of Total Employment		
	Region	Iowa	United States
Services	30.0%	29.0%	33.5%
Retail Trade	16.9%	16.7%	16.4%
State and Local Government	12.3%	11.8%	11.2%
Finance, Insurance, and Real Estate	11.8%	7.5%	8.3%
Manufacturing	8.7%	12.1%	9.5%
Construction	5.2%	5.0%	5.6%
Wholesale Trade	4.8%	4.4%	4.3%
Transport, Communications, and Public Utilities	4.2%	4.8%	4.7%
Farm Employment	2.8%	5.4%	1.8%
Federal Civilian Government	1.4%	1.0%	1.6%
Agricultural Services, Other	1.1%	1.5%	1.4%
Federal Military Government	0.7%	0.7%	1.3%
Mining	0.1%	0.1%	0.4%
Total	**100.0%**	**100.0%**	**100.0%**

Source: Woods and Poole Economics, Inc.

Higher Education Facilities

Iowa State University has a student body of over 25,000 in total, accounting for more than half of the 42,818 college students in the Des Moines region. A total of 16,067 out-of-state students are enrolled in regional colleges and universities. **Table 6-26** details higher education facilities in the Des Moines region..

Table 6-26
Higher Education Facilities in Region
Des Moines International Airport

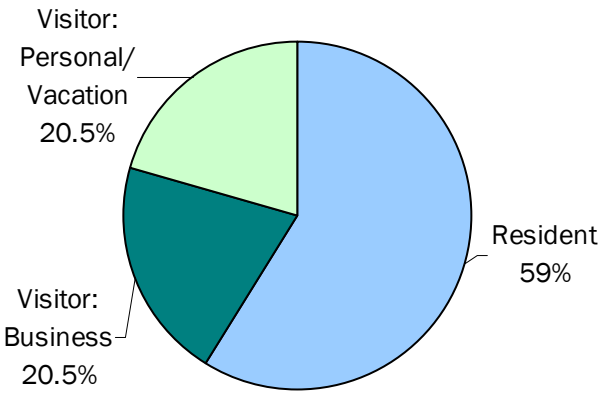
Institution Name	City	Enrollment		
		In-State	Out-of-State	Total
Iowa State University	Ames	18,017	7,006	25,023
Drake University	Des Moines	1,506	2,924	4,430
Graceland University	Des Moines	641	1,922	2,563
Simpson College	Indianola	1,833	227	2,060
Grand View College	Des Moines	1,774	133	1,907
William Penn University	Oskaloosa	949	912	1,861
Central College	Pella	1,205	402	1,606
Grinnell College	Grinnell	222	1,367	1,589
Des Moines University	Des Moines	418	888	1,306
Faith Baptist Bible College and Theological Seminary	Ankeny	150	169	319
Vennard College	University Park	37	117	154
TOTAL		**26,752**	**16,067**	**42,818**
Source: Collegeboard.com				

These institutions generate demand for commercial airline service based on the level of out-of-state student enrollment, sporting and other college events, faculty trips, and other visitors to the colleges.

Visitor and Resident Travel

Exhibit 6-8 illustrates the percent of passengers at Des Moines International Airport by residents, business visitors, and personal/vacation visitors.

Exhibit 6-8
Resident and Visitor Passengers
Des Moines International Airport



Source: 2006 Passenger Survey and US DOT *O&D Survey*

Visitor Travel

Forty-one percent of this airport's enplanements are attributed to visitors. Growth in regional population and employment indicate visitor-related travel to and from the airport should remain strong. Regional businesses and institutions also attract clients, suppliers, vendors, and students who arrive via commercial air carriers.

Resident Travel

The region expects some of the largest growth in population and employment in the State and growth above the national average. Growing population and employment typically signal increased demand for commercial airline travel.

Fare Comparison

Table 6-27 details fares to major U.S. destinations when departing from Des Moines International Airport. Leisure fares, business fares, and walk-up fares from Des Moines International Airport are below the State average to these 12 popular destinations.

Table 6-27
Fare Comparison
Des Moines International Airport

Destination	Passenger Type		
	Leisure	Business	Walk-up
Atlanta (ATL)	$406	$653	$1,063
Chicago/O'Hare (ORD)	$369	$581	$713
Dallas/Fort Worth (DFW)	$289	$777	$827
Denver (DEN)	$331	$504	$983
Las Vegas (LAS)	$349	$309	$359
Los Angeles (LAX)	$323	$667	$697
New York City (LGA)	$293	$647	$953
Orlando (MCO)	$241	$360	$533
Phoenix (PHX)	$260	$313	$450
San Francisco (SFO)	$360	$393	$666
Seattle (SEA)	$547	$547	$982
Washington (DCA)	$259	$644	$641
Average	**$336**	**$533**	**$739**
State Average	$387	$565	$813

Source: Iowa Department of Transportation
Note: data are current as of June 1, 2007

Des Moines International Airport Summary

Table 6-28 summarizes the information for the Des Moines region discussed in this section.

Table 6-28
Regional S.W.O.T. Summary
Des Moines International Airport

Strengths/Opportunities	
Employment	The region has Iowa's largest concentration of jobs.
Employment Sectors & Major Employers	Percent of employment in finance, insurance, and real estate sector, which often has higher than average demand for commercial airline travel, exceeds the national average for employment in this sector.
Enplanements	Enplanements in the market area have exhibited a general upward trend over the past 30 years.
Fares	Fares offered between the airport and several major U.S. airports are below the state average fares to these markets.
Population	Projected rate of growth for population in the region is above both State and national rate of growth.
Resident Travel	Major employers and population/ employment growth should support increased resident-related demand for commercial airline travel.

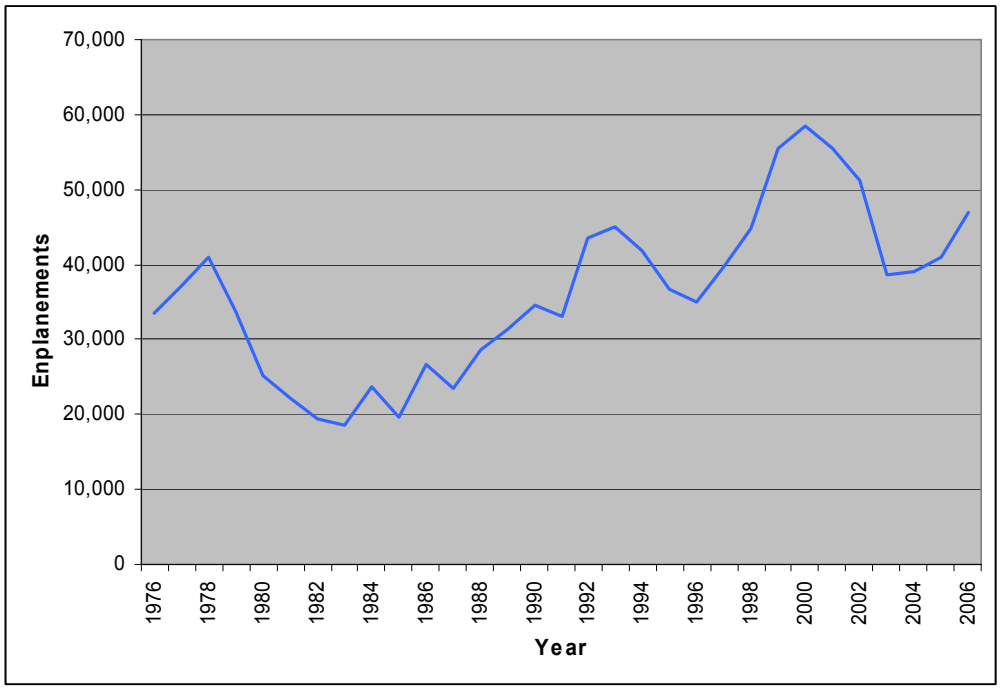
Weaknesses/Threats	
Employment	Rate of employment growth in the region is expected to slow and grow at a rate equal to the Iowa average rate but below the U.S. average.
Employment Sectors	Service industry employers in hospitals and health care typically have lower than average demand for commercial airline travel.
Enplanements	Enplanements in the market area have grown at a rate below the national average annual rate of growth.

Dubuque– Dubuque Regional Airport (DBQ)

Historic Enplanements

Airline deregulation had a pronounced impact on enplanements at Dubuque Regional Airport. Enplanements did not reach 1976 levels until the 1992-1994 timeframe. Enplanements peaked in 2000 at over 58,000. 9/11 and related airline financial difficulties contributed to the decline in enplanement following 2001. Overall, for the 30 year period, as shown in **Exhibit 6-9**, enplanements have grown at a compounded annual rate of 1.1 percent. This is lower than the State annual growth rate of 1.4 percent, and far below the national annual growth rate of 4.1 percent.

Exhibit 6-9
Historic Enplanements
Dubuque Regional Airport



Source: Iowa Department of Transportation

In 1983, this airport's enplanements dipped below 20,000. With the exception of a notable drop in the 1995-1996 time frame, by 2000, enplanements had grown to almost 60,000. This positive and sustained growth is an important strength to consider in the S.W.O.T. analysis. However, enplanements fell sharply after 9/11 and have not fully recovered; this must also be considered in the S.W.O.T. analysis.

Socioeconomic Trends and Projections

There are five Iowa counties within 60 minutes of the Dubuque Regional Airport. **Table 6-29** details population trends and forecasts for these counties. For both the historic and the forecast period, regional population growth has been and is expected to continue to be lower than the State and national rates of growth. At a compounded annual rate of increase of only 0.1 percent, population in

the region has grown only slightly since 1990. A slightly higher rate of population growth is expected through 2010, but the area's average annual rate of population increase will still be below the State and national averages.

Table 6-29
Regional Historic and Projected Population
Dubuque Regional Airport

County	1990	2005	1990-2005 CAGR	2010 Projection	2005-2010 CAGR
Clinton	51,091	50,078	-0.1%	49,283	-0.3%
Delaware	18,046	18,396	0.1%	18,419	0.0%
Dubuque	86,462	89,261	0.2%	93,420	0.9%
Jackson	19,909	20,311	0.1%	20,580	0.3%
Jones	19,480	20,215	0.2%	20,806	0.6%
TOTAL	**194,988**	**198,261**	**0.1%**	**202,508**	**0.4%**
Iowa Total	2,781,026	2,928,239	0.3%	3,035,322	0.7%
United States	249,622,814	296,410,404	1.2%	311,843,984	1.0%

Source: Woods and Poole Economics, Inc.
Note: CAGR=compounded annual growth rate

Below average rates of population growth have a dampening effect on the growth of both visitor and resident-related commercial airline travel.

In the five counties, employment has grown 1.0 percent annually since 1990 (**Table 6-30**). This is lower than both the State (1.2 percent) and national (1.4 percent) annual rates of increase in employment. The compounded annual rate of growth for employment is expected to increase between 2005 and 2010. The projected increase in the rate of regional growth for employment is above the Iowa average, but just below the national average for the period.

Table 6-30
Regional Historic and Projected Employment
Dubuque Regional Airport

County	1990	2005	1990-2005 CAGR	2010 Projection	2005-2010 CAGR
Clinton	26,855	29,384	0.6%	30,626	0.8%
Delaware	8,563	10,813	1.6%	11,765	1.7%
Dubuque	55,529	65,291	1.1%	70,562	1.6%
Jackson	9,899	10,992	0.7%	11,665	1.2%
Jones	8,547	9,815	0.9%	10,477	1.3%
TOTAL	**109,393**	**126,295**	**1.0%**	**135,095**	**1.4%**
Iowa Total	1,645,944	1,960,305	1.2%	2,079,793	1.2%
United States	139,380,891	172,587,009	1.4%	186,079,920	1.5%

Source: Woods and Poole Economics, Inc.
Note: CAGR=compounded annual growth rate

While the historic rate of employment growth in the region has been below the State average, in the near term regional population expected to increase more rapidly. Higher rates of growth for region's employment could have a positive impact on the demand for commercial airline travel.

Retail trade, state/local government, and farm/agriculture typically are not higher generators of demand for commercial airline travel. With the exception of hospitals, many other employers in the service sector generate demand for commercial airline travel. Commercial airline travel by employers in the manufacturing sector tends to be above average.

Major Employers

Manufacturing companies such as John Deere, Eagle Window, and Flexsteel Industries together employ nearly 3,500 in the region. Mercy Medical, Finley Hospital, and Medical Associates also employ a significant number of people in the Dubuque region **Table 6-31** details the region's top employers. Several local employers have recently noted additional expansion plans including John Deere, Entegee Engineering Technical Group, Kendall/Hunt Publishing Company, U.S. BioEnergy, and Sedgwick CMS.

Table 6-31
Top Employers in Region
Dubuque Regional Airport

Company Name	Sector	Employees
John Deere Dubuque Works	Manufacturing	2,000
Mercy Medical Center - Dubuque	Health Services	1,324
Eagle Window & Door Co.	Manufacturing	1,000
Medical Associates Clinic	Health Services	935
Finley Hospital	Health Services	920
Prudential Retirement	Finance, Insurance, and Real Estate	600
Woodward Communications	Transport, Communications, and Public Utilities	600
Loras College	Educational Services	400
Flexsteel Industries	Manufacturing	400
Diamond Jo Casino	Services	400

Sources: Greater Dubuque Development Corporation, Dunn and Bradstreet Small Business Solutions, 2006 Business Survey results

Table 6-32 shows employment sectors as a percentage of total regional employment. Services, retail trade, manufacturing, and state and local government are the four largest employment sectors in the region.

Table 6-32
Employment by Sector
Dubuque Regional Airport

Employment Sector	Percent of Total Employment		
	Region	Iowa	United States
Services	33.0%	29.0%	33.5%
Retail Trade	16.8%	16.7%	16.4%
Manufacturing	14.3%	12.1%	9.5%
State and Local Government	8.1%	11.8%	11.2%
Farm Employment	6.2%	5.4%	1.8%
Finance, Insurance, and Real Estate	5.3%	7.5%	8.3%
Construction	5.0%	5.0%	5.6%
Wholesale Trade	4.9%	4.4%	4.3%
Transport, Communications, and Public Utilities	3.8%	4.8%	4.7%
Agricultural Services, Other	1.1%	1.5%	1.4%
Federal Military Government	0.7%	0.7%	1.3%
Federal Civilian Government	0.5%	1.0%	1.6%
Mining	0.1%	0.1%	0.4%
Total	**100.0%**	**100.0%**	**100.0%**
Source: Woods and Poole Economics, Inc.			

For this airport's S.W.O.T. analysis, it is important to note that the percent of employment in the manufacturing sector in this region exceeds the State and national average.

Job Growth

Greater Dubuque Development developed a program for job growth called the River Valley Initiative in 2002. Under this initiative, the community developed a five-year goal of creating 5,100 new jobs. The campaign was highly successful, reaching their job goal in early 2007 and creating $254 million in new commercial construction. The community has recently developed another aggressive growth plan called *Destination for Opportunity*, which calls for the creation of another 5,500 jobs and $300 million in new commercial construction by 2012.

In a 2006 ranking compiled by Moody's/Economy.com, Dubuque ranked 22nd in terms of job growth among 387 U.S. cities. It was the only city in the Midwest to break the Top 25. Also, in the Forbes Magazine ranking of "Best Small Places for Business" in 2007, Dubuque ranked 15th out of 179 U.S. cities. According to a Milken Institute ranking of job growth released in September 2007, Dubuque ranked 11th in terms of one year job growth among 386 other U.S. cities.

According to Iowa Workforce Development (IWD), Dubuque ranks number one and has surpassed all other metro areas in Iowa for job growth over the last three years. Between February 2006 and February 2007, Dubuque accounted for just three percent of Iowa's population, but created 19.1 percent of all jobs over the period.

Overall job growth in the region and continued economic development initiatives by the community can be considered a strength when developing the regional S.W.O.T for the Dubuque Regional Airport. Airlines value strong and growing business community when considering air service improvements.

Higher Education Facilities

The five colleges in the Dubuque region have a combined student body of over 4,500 (**Table 6-33**). In addition, the colleges have higher percent out-of-state students than they do in-state students. Activities and regional student enrollment are most likely not significant enough to have a notable impact in demand for commercial airline travel.

Table 6-33
Higher Education Facilities in Region
Dubuque Regional Airport

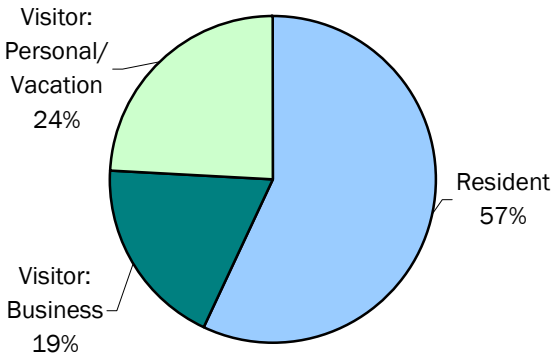
Institution Name	City	Enrollment		
		In-State	Out-of-State	Total
Loras College	Dubuque	870	803	1,673
University of Dubuque	Dubuque	530	795	1,325
Clarke College	Dubuque	601	601	1,202
Emmaus Bible College	Dubuque	73	219	292
Divine Word College	Epworth	-	54	54
TOTAL		**2,073**	**2,472**	**4,545**

Source: Collegeboard.com

Visitor and Resident Travel

Exhibit 6-10 shows the distribution of passengers at Dubuque Regional Airport between resident and visitors. Visitors to the area account for 43 percent of air travelers.

Exhibit 6-10
Resident and Visitor Passengers
Dubuque Regional Airport



Sources: 2006 Passenger Survey and US DOT *O&D Survey*

Visitor Travel

Slower population growth may dampen the area's growth for personal/vacation-related visitor trips. Higher rates of employment growth, however, could attract more business-related visitors.

Resident Travel

As with the other commercial airports in Iowa, the largest percentages of this airport's enplanements are tied to residents. Future resident-related enplanements will be driven by population and employment growth. While regional population is expected to increase at a rate below the State average, regional employment is expected to grow at higher rates and there are aggressive local campaigns underway to continue increase local jobs. This indicates that the employment increase may balance out the more conservative population growth leading to an increase in resident demand for commercial airline travel.

Fare Comparison

Table 6-34 details fares to major U.S. markets when departing from Dubuque Regional Airport. Leisure fares average $353 to the 12 popular destinations, below the State average fare of $387. The average business fare of $531, is also below the State average for these 12 destinations ($565). The average walk-up fare from Dubuque to these destinations is $632, below the State average of $813.

Table 6-34
Fare Comparison
Dubuque Regional Airport

Destination	Passenger Type		
	Leisure	Business	Walk-up
Atlanta (ATL)	$230	$380	$600
Chicago/O'Hare (ORD)	$289	$459	$539
Dallas/Fort Worth (DFW)	$332	$662	$735
Denver (DEN)	$397	$659	$945
Las Vegas (LAS)	$411	$590	$601
Los Angeles (LAX)	$469	$522	$715
New York City (LGA)	$200	$303	$430
Orlando (MCO)	$330	$390	$508
Phoenix (PHX)	$357	$541	$692
San Francisco (SFO)	$475	$782	$670
Seattle (SEA)	$522	$705	$712
Washington (DCA)	$226	$384	$439
Average	**$353**	**$531**	**$632**
State Average	$387	$565	$813

Source: Iowa Department of Transportation
Note: snapshot of airfares on June 1, 2007

Dubuque Regional Airport Summary

Table 6-35 summarizes factors included in the S.W.O.T. analysis for Dubuque Regional Airport discussed in this section.

Table 6-35
Regional S.W.O.T. Summary
Dubuque Regional Airport

Strengths/Opportunities	
Employment	Employment is expected to grow through 2010 at a rate above the projected State average.
Employment Sectors	Employment in the manufacturing sector is above both the State and national percentages; often employers in this sector have higher than average demand for commercial airline travel.
Job Growth	This market ranks #1 rank in Iowa and in the top 25 in the U.S. in terms of job growth. Community has aggressive initiative in place to ensure future job growth.
Major Employers	The region has major employers who generate their own air travel demand and they have customers and suppliers who use commercial airline travel to reach them in Iowa.
Population	The projected rate of population increase is above its historical rate of increase.
Resident/Visitor Travel	The impact of growing employment may stimulate resident- and visitor-related commercial airline travel.
Fares	Fares in this market are below the State average

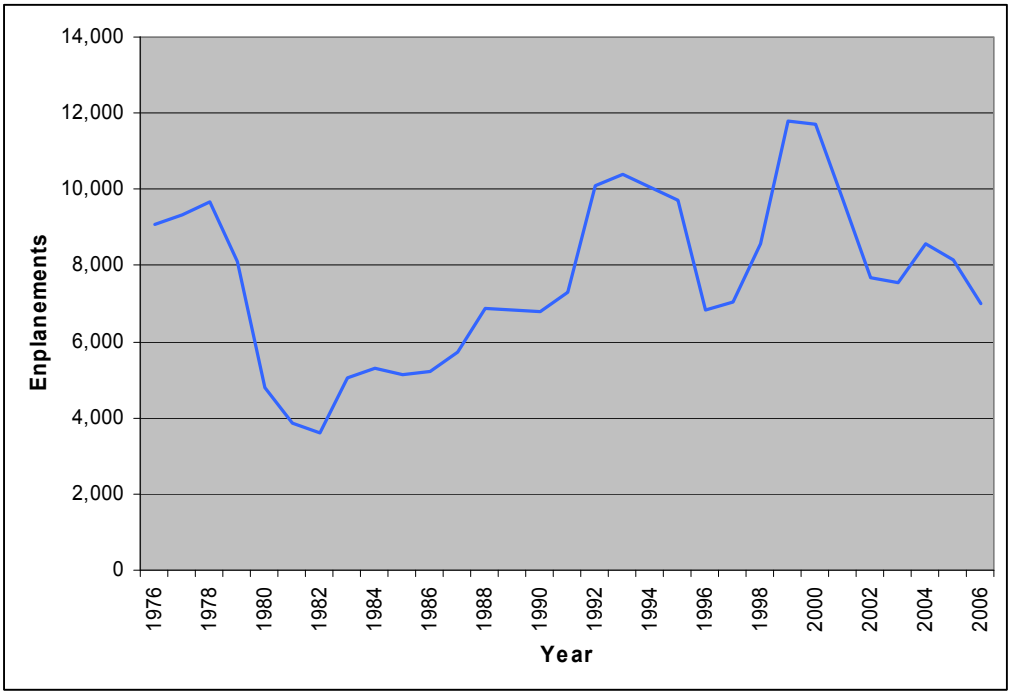
Weaknesses/Threats	
Employment Sectors	Regional percent of employment in transportation and finance (sectors which typically generate higher demand for airline travel) is below State average for employment in these sectors. Percent of employment in farm/agriculture exceeds the State average. It generates below average demand for commercial airline travel.
Major Employers	Many of the major employers in the region are hospitals that typically do not have a high demand for commercial airline travel.
Population	Regional rate of population growth is below State and national rates.
Enplanements	Travel demand at the airport has grown at rates below both the State and national averages and enplanements have not rebounded to pre-9/11 levels

Fort Dodge – Fort Dodge Regional Airport (FOD)

Historic Enplanements

Airline deregulation had a negative impact on enplanements at Fort Dodge Regional Airport (**Exhibit 6-11**). Between 1978 and 1982, annual enplanements dropped from nearly 10,000 to below 4,000. Enplanements bounced back; and by 2000, enplanements were at a record high of 11,729. Since 9/11, enplanements at Fort Dodge Regional have dropped and are now at levels lower than they were prior to deregulation. Overall enplanements at Fort Dodge have decreased at an average annual rate of 0.9 percent since 1976. This average annual rate of decrease is in contrast to increasing average annual rates for both the State and the U.S. This decreasing trend in enplanements must be considered as part of this airport's S.W.O.T. analysis.

Exhibit 6-11
Historic Enplanements
Fort Dodge Regional Airport



Source: Iowa Department of Transportation

Socioeconomic Trends and Projections

There are nine counties within a 60-minute drive of Fort Dodge Regional Airport. As a whole, these counties have lost population at a rate of 0.1 percent annually since 1990 (**Table 6-36**). The rate of population decline in this region is expected to increase to 0.7 percent between 2005 and 2010. In contrast, population in Iowa and in the U.S. has increased historically and it is expected to increase in the future. With the close correlation between commercial airline enplanements and population, declining regional population may have a negative impact on future demand for airline travel.

Table 6-36
Regional Historic and Projected Population
Fort Dodge Regional Airport

County	1990	2005	1990-2005 CAGR	2010 Projection	2005-2010 CAGR
Boone	25,200	26,254	0.3%	26,781	0.4%
Calhoun	11,501	11,088	-0.2%	10,436	-1.2%
Greene	10,028	10,345	0.2%	9,920	-0.8%
Hamilton	16,049	16,425	0.2%	16,406	0.0%
Humboldt	10,755	10,372	-0.2%	9,896	-0.9%
Kossuth	18,551	17,131	-0.5%	16,089	-1.2%
Pocahontas	9,493	8,614	-0.6%	7,700	-2.2%
Webster	40,345	40,194	0.0%	38,588	-0.8%
Wright	14,272	14,324	0.0%	13,510	-1.2%
TOTAL	**156,194**	**154,747**	**-0.1%**	**149,326**	**-0.7%**
Iowa Total	2,781,026	2,928,239	0.3%	3,035,322	0.7%
United States	249,622,814	296,410,404	1.2%	311,843,984	1.0%

Source: Woods and Poole Economics, Inc.
Note: CAGR=compounded annual growth rate

Unlike population, regional employment has actually grown since 1990 (**Table 6-37**). At a compounded annual rate of 0.6 percent, however, regional employment in this has grown at a rate only half that of the State and less than half of the national rate. Between 2005 and 2010, employment in the region is projected to increase by 0.9 percent annually. This projected rate of regional employment increase is greater than the historical average, but still below State and national rates.

Table 6-37
Regional Historic and Projected Employment
Fort Dodge Regional Airport

County	1990	2005	1990-2005 CAGR	2010 Projection	2005-2010 CAGR
Boone	11,540	14,179	1.4%	14,907	1.0%
Calhoun	5,712	5,929	0.2%	6,224	1.0%
Greene	5,142	5,704	0.7%	5,873	0.6%
Hamilton	9,973	11,121	0.7%	11,504	0.7%
Humboldt	5,499	6,779	1.4%	7,068	0.8%
Kossuth	10,750	10,894	0.1%	11,312	0.8%
Pocahontas	5,494	4,474	-1.4%	4,574	0.4%
Webster	22,871	25,342	0.7%	26,799	1.1%
Wright	8,100	7,983	-0.1%	8,240	0.6%
TOTAL	**85,081**	**92,405**	**0.6%**	**96,501**	**0.9%**
Iowa Total	1,645,944	1,960,305	1.2%	2,079,793	1.2%
United States	139,380,891	172,587,009	1.4%	186,079,920	1.5%

Source: Woods and Poole Economics, Inc
Note: CAGR=compounded annual growth rate

As has been previously noted, there is a positive correlation between commercial airline demand and employment. It is important to note that while regional employment is expected to increase, the projected rate of increase in still below rates projected for the State and nation.

Major Employers

Electrolux, with 1,900 employees in the Fort Dodge region, is the largest single employer (**Table 6-38**). However, Electrolux has plans to downsize in 2008. Smithway Motor Xpress is also a major employer in the region.

Table 6-38
Top Employers in Region
Fort Dodge Regional Airport

Company Name	Sector	Employees
Electrolux	Manufacturing	1,900
Smithway Motor Xpress Corp.	Transport, Communications, and Public Utilities	1,600
Trinity Regional Medical Center	Services	950
Decker Truck Line	Transport, Communications, and Public Utilities	890
Wyeth/Fort Dodge Animal Health	Services	835
Fort Dodge Correctional Facility	Services	310
United State Gypsum	Manufacturing	250
Nestle Purina PetCare Company	Manufacturing	150
Source: Fort Dodge Chamber of Commerce, Dun and Bradstreet Small Business Solutions		

Table 6-39 displays employment by sector in the Fort Dodge region as a percentage of total employment.

Table 6-39
Employment by Sector
Fort Dodge Regional Airport

	Percent of Total Employment		
Employment Sector	Region	Iowa	United States
Services	24.1%	29.0%	33.5%
Retail Trade	15.2%	16.7%	16.4%
State and Local Government	12.7%	11.8%	11.2%
Manufacturing	12.3%	12.1%	9.5%
Farm Employment	9.4%	5.4%	1.8%
Transport, Communications, and Public Utilities	5.9%	4.8%	4.7%
Finance, Insurance, and Real Estate	5.7%	7.5%	8.3%
Construction	5.0%	5.0%	5.6%
Wholesale Trade	5.0%	4.4%	4.3%
Agricultural Services, Other	3.0%	1.5%	1.4%
Federal Civilian Government	0.9%	1.0%	1.6%
Federal Military Government	0.8%	0.7%	1.3%
Mining	0.1%	0.1%	0.4%
Total	**100.0%**	**100.0%**	**100.0%**
Source: Woods and Poole Economics, Inc.			

Health care providers in the service sector are not typically higher generators of commercial air travel demand. Some of the largest employers in the service sector for the region are hospitals. Retail trade, state/local government and farm/agriculture also do not typically generate high volumes of commercial air travel demand. On the other hand, manufacturing employment does typically generate higher than average demand for commercial airline travel. The percent of employment in the

manufacturing sector in the region exceeds both the State and National percentage. Manufacturing jobs in the region are projected to grow as well.

Higher Education Facilities

As shown in **Table 6-40**, there are several colleges located in region. Iowa Central Community College in Fort Dodge has an enrollment of 5,491 and has limited out-of–state enrollment. Buena Vista College in Storm Lake is located about 60 miles away. There is a campus of Iowa Lakes Community College located in Algona and a center of Buena Visa University located in Fort Dodge, but there was no enrollment information available.

Table 6-40
Higher Education Facilities in Region
Fort Dodge Regional Airport

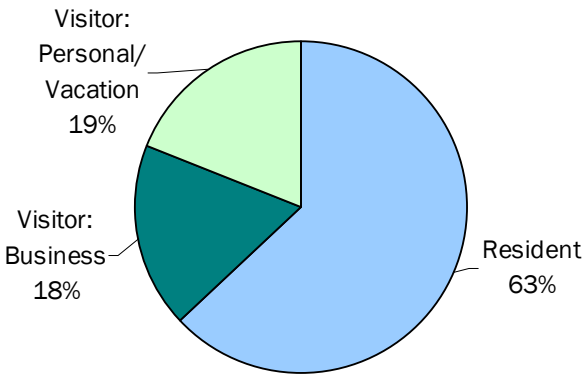
Institution Name	City	Enrollment		
		In-State	Out-of-State	Total
Iowa Central Community College	Fort Dodge	5,216	275	5,491
Buena Vista College	Storm Lake	934	295	1,229
TOTAL		**6,150**	**570**	**6,720**
Source: Collegeboard.com				

As a result of the nature of their business, higher educational facilities often stimulate commercial air travel demand. Given reported enrollment levels in the region, these institutions are most likely not significant demand generators.

Visitor and Resident Travel

Exhibit 6-12 shows resident and visitor enplanements as a percentage of total enplanements at Fort Dodge Regional Airport. Passengers visiting Fort Dodge Regional Airport for personal or vacation reasons account for 19 percent of total enplanements. Visitors coming for business account for 18 percent of all enplanements. Residents account for 63 percent of this airport's enplanements.

Exhibit 6-12
Resident and Visitor Passengers
Fort Dodge Regional Airport



Source: 2006 Passenger Survey and US DOT *O&D Survey*

Visitor Travel

As shown, visitor-related travel constitutes only 37 percent of all enplanements for the airport. This percent is among the lowest in the State and is reflective of stagnant population and lack of colleges/universities and large employers. Employment sectors in this region also do not attract high volumes of business-related visitor demand. Demand indicators for this region point toward limited growth in visitors.

Resident Travel

Population and employment are closely correlated the market's demand for commercial airline service. While no growth in regional population is forecasted, a limited level of growth in regional employment is projected. The S.W.O.T. analysis for this airport will reflect that fact that the regional indicators do not point toward robust growth in demand for resident-related commercial airline service.

Fare Comparison

Table 6-41 details fares to several major U.S. destinations when departing from Fort Dodge Regional Airport. Leisure fares average $421 to the 12 destinations, higher than the State average fare of $387. At an average cost of $663, business fares are also higher than the State average for these 12 destinations ($565). The average walk-up fare at Fort Dodge Regional to destinations is $897, more expensive than the State average of $813.

Table 6-41
Fare Comparison
Fort Dodge Regional Airport

Destination	Passenger Type		
	Leisure	Business	Walk-up
Atlanta (ATL)	$480	$958	$1,088
Chicago/O'Hare (ORD)	$378	$656	$865
Dallas/Fort Worth (DFW)	$395	$889	$1,100
Denver (DEN)	$461	$606	$969
Las Vegas (LAS)	$533	$499	$749
Los Angeles (LAX)	$496	$684	$714
New York City (LGA)	$298	$652	$952
Orlando (MCO)	$383	$585	$562
Phoenix (PHX)	$368	$614	$799
San Francisco (SFO)	$390	$685	$1,185
Seattle (SEA)	$629	$550	$980
Washington (DCA)	$240	$574	$799
Average	**$421**	**$663**	**$897**
State Average	$387	$565	$813

Source: Iowa Department of Transportation
Note: snapshot of airfares on June 1, 2007

Fort Dodge Regional Airport Summary

Table 6-42 summarizes the regional S.W.O.T. discussion for Fort Dodge Regional Airport.

Table 6-42
Regional S.W.O.T. Summary
Fort Dodge Regional Airport

Strengths/Opportunities	
Employment	Regional employment is expected to grow at a higher rate between 2005 and 2010 than it did historically.
Major Employers	Some of the larger employers in the region are included in the manufacturing and services sectors; employers in these sectors tend to have a higher than average demand for commercial airline service.
Enplanements	Between 1982 and 2006, the airport recorded positive growth in its enplaned passengers

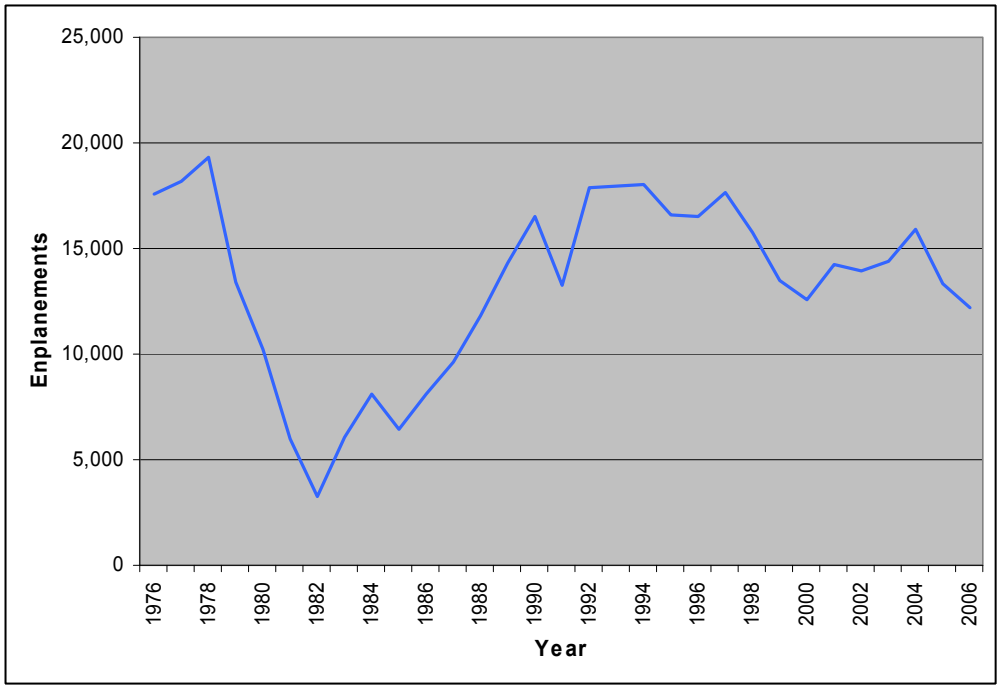
Weaknesses/Threats	
Employment Sectors	With the exception of manufacturing and some services, most of the other major employment sectors in the region are not high generators of commercial air travel demand.
Population	Regional population has declined historically and the rate of decline is projected to increase between 2005 and 2010.
Resident/Visitor Travel	Limited employment/population growth, employment sectors in the region, and lack of colleges/universities all dampen demand for both visitor and resident travel.

Mason City – Mason City Municipal Airport (MCW)

Historic Enplanements

Like the other single carrier commercial airports in Iowa, airline deregulation in 1978 had an adverse impact on enplanements at Mason City Municipal Airport (**Exhibit 6-13**). In the four years following deregulation, enplanements fell from nearly 20,000 to just over 3,000 annually. Enplanements began rising again and leveled out in the early 1990s. They have since dropped slightly, but have remained above the 1982 low. Enplanements have decreased at an average annual rate of 1.2 percent at Mason City Municipal. This historic rate of decline is in contrast to the average annual increase in enplaned passengers for the State of 1.4 percent and the 4.1 percent nation for the same time frame.

Exhibit 6-13
Historic Enplanements
Mason City Municipal Airport



Source: Iowa Department of Transportation

Mason City Municipal is one of the single carrier commercial airports in Iowa whose current enplanements are lower than pre-deregulation levels. This trend can be considered a weakness in S.W.O.T. analysis for this airport.

Socioeconomic Trends and Projections

There are eight counties within a 60-minute drive time of Mason City Municipal Airport. From 1990 to 2005, regional population decreased at a compounded annual rate of 0.1 percent (**Table 6-43**). Between 2005 and 2010, the rate of population decrease in the region is expected to become greater. Between 2005 and 2010, regional population is expected to decrease at compounded rate of 0.6 percent.

Table 6-43
Regional Historic and Projected Population
Mason City Municipal Airport

County	1990	2005	1990-2005 CAGR	2010 Projection	2005-2010 CAGR
Cerro Gordo	46,773	46,336	-0.1%	44,795	-0.7%
Floyd	17,056	16,863	-0.1%	16,514	-0.4%
Franklin	11,351	10,689	-0.4%	10,691	0.0%
Hancock	12,610	12,103	-0.3%	11,961	-0.2%
Mitchell	10,919	10,871	0.0%	10,850	0.0%
Winnebago	12,131	11,759	-0.2%	11,144	-1.1%
Worth	7,980	7,911	-0.1%	7,794	-0.3%
Wright	14,272	14,324	0.0%	13,510	-1.2%
TOTAL	**133,092**	**130,856**	**-0.1%**	**127,259**	**-0.6%**
Iowa Total	2,781,026	2,928,239	0.3%	3,035,322	0.7%
United States	249,622,814	296,410,404	1.2%	311,843,984	1.0%

Source: Woods and Poole Economics, Inc.
Note: CAGR=compounded annual growth rate

As opposed to regional trends in population, employment has risen since 1990 (**Table 6-44**). Between 1990 and 2005, the average annual rate of regional employment growth was lower than the State rate and the national rate. From 2005 to 2010, regional employment is expected to increase at a rate of 0.7 percent annually, slightly up from the historic growth rate. This rate of average annual growth is still less than both the State and national rates for the 2005 to 2010 period.

Table 6-44
Regional Historic and Projected Employment
Mason City Municipal Airport

County	1990	2005	1990-2005 CAGR	2010 Projection	2005-2010 CAGR
Cerro Gordo	29,639	34,414	1.0%	35,871	0.8%
Floyd	8,803	8,677	-0.1%	8,743	0.2%
Franklin	5,790	6,539	0.8%	6,785	0.7%
Hancock	8,570	10,924	1.6%	11,281	0.6%
Mitchell	5,442	6,091	0.8%	6,270	0.6%
Winnebago	7,044	6,773	-0.3%	7,113	1.0%
Worth	3,639	3,294	-0.7%	3,368	0.4%
Wright	8,100	7,983	-0.1%	8,240	0.6%
TOTAL	**77,027**	**84,695**	**0.6%**	**87,671**	**0.7%**
Iowa Total	1,645,944	1,960,305	1.2%	2,079,793	1.2%
United States	139,380,891	172,587,009	1.4%	186,079,920	1.5%

Source: Woods and Poole Economics, Inc.
Note: CAGR=compounded annual growth rate

While regional population has not grown, modest growth in regional employment has occurred. While employment is expected to increase, its projected rate of increase is well under anticipated rates of growth for Iowa and the U.S.

Major Employers

Table 6-45 shows top employers in the Mason City region. Manufacturing is an important employment sector in the region, with employment being led by Winnebago Industries, located in Forest City. While North Iowa Mercy Health Center is a major employer in, health care facilities are not usually large generators of commercial air travel demand.

Table 6-45
Top Employers in Region
Mason City Municipal Airport

Company Name	Sector	Employees
Winnebago Industries Inc.	Manufacturing	3,875
North Iowa Mercy Health Center	Services	2,750
Cargill-Sunny Fresh Foods	Manufacturing	2,000
Graham Manufacturing Corporation	Manufacturing	1,500
Woodharbor	Manufacturing	330
Kraft	Manufacturing	200
IMI Cornelius	Manufacturing	174
Waldorf College	Services	170
Source: Dun and Bradstreet Small Business Solutions, Mason City Economic Development Corporation		

Table 6-46 shows employment sectors as a percentage of total employment in the region.

Table 6-46
Employment by Sector
Mason City Municipal Airport

	Percent of Total Employment		
Employment Sector	Region	Iowa	United States
Services	27.7%	29.0%	33.5%
Manufacturing	16.9%	12.1%	9.5%
Retail Trade	15.6%	16.7%	16.4%
State and Local Government	9.8%	11.8%	11.2%
Farm Employment	8.3%	5.4%	1.8%
Finance, Insurance, and Real Estate	5.8%	7.5%	8.3%
Construction	5.0%	5.0%	5.6%
Wholesale Trade	4.0%	4.4%	4.3%
Transport, Communications, and Public Utilities	3.5%	4.8%	4.7%
Agricultural Services, Other	2.0%	1.5%	1.4%
Federal Military Government	0.7%	0.7%	1.3%
Federal Civilian Government	0.6%	1.0%	1.6%
Mining	0.1%	0.1%	0.4%
Total	**100.0%**	**100.0%**	**100.0%**
Source: Woods and Poole Economics, Inc.			

As noted, most businesses in the service and manufacturing sectors typically have higher demand for commercial airline service. This market has a higher percentage of its labor force in the manufacturing sector than does either Iowa or the U.S. Demand for commercial airline travel associated with the retail trade, farm/agriculture, and state/local government sectors is usually below average.

Higher Education Facilities

There are two colleges in the Mason City region. North Iowa Area Community College has limited out-of-state enrollment. Waldorf has a total student body of 670 students, 281 of which are non-Iowa residents. This level of enrollment most likely has a negligible impact on commercial air travel demand. This information is presented in **Table 6-47**.

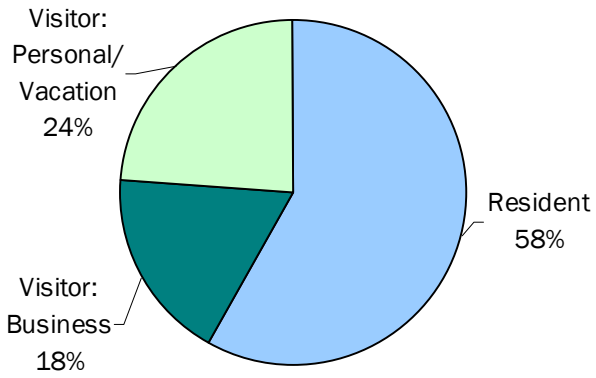
Table 6-47
Higher Education Facilities in Region
Mason City Municipal Airport

Institution Name	City	Enrollment		
		In-State	Out-of-State	Total
North Iowa Area Community College	Mason City	2,937	290	3,227
Waldorf College	Forest City	389	281	670
TOTAL		**3,326**	**571**	**3,897**
Source: Collegeboard.com				

Visitor and Resident Travel

Exhibit 6-14 shows the percentage of resident and visitor enplanements for Mason City Municipal Airport.

Exhibit 6-14
Resident and Visitor Passengers
Mason City Municipal Airport



Source: 2006 Passenger Survey and US DOT *O&D Survey*

Visitor Travel

Total visitor travel at this airport accounts for 42 percent of all enplanements. Low regional population growth will impact the growth of personal/vacation visitor-related travel. Employment by sector in this region indicates that business-related visitor travel could experience growth. Limited enrollment in local colleges and universities will not create notable visitor-related demand.

Resident Travel

Resident-related commercial airline travel is influenced by regional population and employment. Declining population in the region has contributed to lack of growth in enplanements.

Fare Comparison

Table 6-48 details fares to several major U.S. markets when departing from Mason City Municipal Airport. Leisure fares from Mason City Municipal average $400 to the 12 destinations, higher than the State average fare of $387. Business fares are also higher than the State average for these destinations. The average walk-up fare from Mason City Municipal to the 12 destinations is $794, less than the State average of $813.

Table 6-48
Fare Comparison
Mason City Municipal Airport

Destination	Passenger Type		
	Leisure	Business	Walk-up
Atlanta (ATL)	$410	$734	$1,088
Chicago/O'Hare (ORD)	$378	$656	$865
Dallas/Fort Worth (DFW)	$280	$790	$1,100
Denver (DEN)	$417	$606	$1,066
Las Vegas (LAS)	$452	$614	$675
Los Angeles (LAX)	$545	$623	$603
New York City (LGA)	$306	$652	$952
Orlando (MCO)	$277	$507	$871
Phoenix (PHX)	$548	$492	$428
San Francisco (SFO)	$390	$611	$542
Seattle (SEA)	$550	$550	$755
Washington (DCA)	$248	$586	$582
Average	**$400**	**$618**	**$794**
State Average	$387	$565	$813

Source: Iowa Department of Transportation
Note: snapshot of airfares on June 1, 2007

Mason City Municipal Airport Summary

Table 6-49 summarizes the regional S.W.O.T analysis for Mason City Municipal Airport.

Table 6-49
Regional S.W.O.T. Summary
Mason City Municipal Airport

Strengths/Opportunities	
Employment	Employment in the region has increased and its projected rate of increase between 2005 and 2010 is slightly above the rate that it has grown historically.
Employment Sectors & Major Employers	The average percentage of employment in the manufacturing sector is 9.5% for the U.S. and 12.1% for Iowa; for the region, it is 16.9%. Businesses in this category typically generate higher than average demand for commercial airline travel.
Resident Travel	Modest growth in regional employment is projected for the region. This may help to increase demand for commercial airline travel.

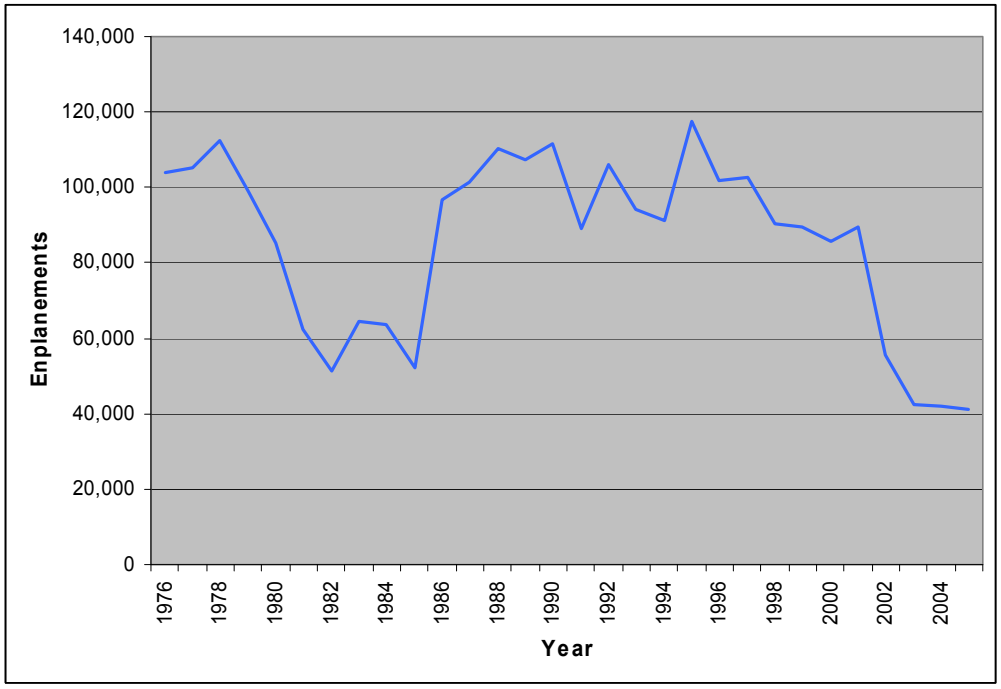
Weaknesses/Threats	
Employment	Rates of growth for employment are higher for both the State and the U.S. than they are for the region.
Population	Regional population has decreased and the rate of population decrease is expected to increase between 2005 and 2010.
Visitor Travel	Visitor-related travel to the region will be dampened by low population growth and the lack of universities/colleges in the region to attract visitors.

Sioux City – Sioux Gateway Airport (SUX)

Historic Enplanements

Enplanement levels at Sioux Gateway Airport declined following airline deregulation in 1978 (**Exhibit 6-15**). By the late 1980s, enplanement levels had bounced back, reaching a peak in 1995 of over 117,000 enplanements. However, since this peak, enplanement levels have dropped. In 2006, 33,600 passengers enplaned flights at Sioux Gateway, the lowest level in the 30-year period. Since the 1995 peak, the airport has lost enplanements at a rate of 11 percent annually. Over the entire 30-year period, the airport has experienced a decrease in enplanements at an average annual rate of 3.7 percent. This is in contrast to enplanements at both the State (1.4 percent annually) and national (4.1 percent annually) level that grew over this same time frame.

Exhibit 6-15
Historic Enplanements
Sioux Gateway Airport



Source: Iowa Department of Transportation

As shown on Exhibit 6-15 while enplanements fell after deregulation, over a 10 year period from 1987 to 1997, enplanements hovered around 100,000. By 1995, after Southwest Airlines entered the Omaha market, enplanements began to decrease, a trend that was further accelerated by 9/11. Unlike most commercial airports whose enplanements have rebounded since 9/11, enplanements at Sioux Gateway have continued to decrease. 2007 enplanements rebounded somewhat with Frontier Airlines beginning service at Sioux Gateway in October 2007.

Socioeconomic Trends and Projections

There are six Iowa counties within a 60-minute drive of Sioux Gateway. From 1990 to 2005, these counties experienced an average annual population increase of 0.2 percent, just under the State rate of increase of 0.3 percent, but lower than the national average annual rate of increase between 1990 and 2005 of 1.2 percent (**Table 6-50**). From 2005 to 2010, the region is expected to lose population at a rate of 0.1 percent annually. By 2010, regional population is expected to fall below 2005 levels.

Table 6-50
Regional Historic and Projected Population
Sioux Gateway Airport

County	1990	2005	1990-2005 CAGR	2010 Projection	2005-2010 CAGR
Cherokee	14,107	13,018	-0.5%	12,173	-1.3%
Ida	8,341	7,807	-0.4%	7,287	-1.4%
Monona	10,003	10,005	0.0%	9,425	-1.2%
Plymouth	23,382	24,866	0.4%	25,284	0.3%
Sioux	29,927	31,575	0.4%	32,909	0.8%
Woodbury	98,506	103,868	0.4%	103,560	-0.1%
TOTAL	**184,266**	**191,139**	**0.2%**	**190,638**	**-0.1%**
Iowa Total	2,781,026	2,928,239	0.3%	3,035,322	0.7%
United States	249,622,814	296,410,404	1.2%	311,843,984	1.0%

Source: Woods and Poole Economics, Inc.
Note: CAGR=compounded annual growth rate

Since population is a primary driver of demand for commercial airline service, the fact that population in this region is expected to decline will need to be noted in the S.W.O.T. analysis.

From 1990 to 2005, employment in the region increased at a compounded annual rate of 0.9 percent (**Table 6-51**). This historic rate of employment increase is below both State and national rates of growth for the same period. While a higher rate of growth than historic rates, this annual rate of growth is still below State and national rates of growth for the 2005 to 2010 time frame.

Table 6-51
Regional Historic and Projected Employment
Sioux Gateway Airport

County	1990	2005	1990-2005 CAGR	2010 Projection	2005-2010 CAGR
Cherokee	7,922	8,556	0.5%	8,823	0.6%
Ida	5,077	5,410	0.4%	5,674	1.0%
Monona	4,963	5,630	0.8%	5,905	1.0%
Plymouth	12,272	16,054	1.8%	17,259	1.5%
Sioux	18,797	23,703	1.6%	25,038	1.1%
Woodbury	59,088	64,270	0.6%	67,607	1.0%
TOTAL	**108,119**	**123,623**	**0.9%**	**130,306**	**1.1%**
Iowa Total	1,645,944	1,960,305	1.2%	2,079,793	1.2%
United States	139,380,891	172,587,009	1.4%	186,079,920	1.5%

Source: Woods and Poole Economics, Inc.
Note: CAGR=compounded annual growth rate

Employment is another primary driver for commercial airline travel demand. Modest increases in employment will help to some extent to off-set the lack of growth in population.

Major Employers

Table 6-52 details the top employers in the Sioux City region. Healthcare is a top employment sector, with Mercy Medical, St. Luke's and Floyd Valley Hospital all having a large number of employees. Wells' Dairy Inc, with over 2,300 area employees, is the top employer in the region. Manufacturing companies, such as Tyson Fresh Meats and John Morrell, are also important employers in the region.

Table 6-52
Top Employers in Region
Sioux Gateway Airport

Company Name	Sector	Employees
Wells' Dairy, Inc.	Manufacturing	2,316
Tyson Fresh Meats	Manufacturing	1,850
Mercy Medical Center-Sioux City	Services	1,652
John Morrell & Company	Manufacturing	1,450
St Luke's Regional Medical Center	Services	1,258
Air National Guard	Federal Military Government	800
Sioux City Government	State and Local Government	737
Wilson Trailer Company	Manufacturing	450
Sioux City Brick & Tile Company	Manufacturing	250
Gelita North America	Manufacturing	220
Terra Industries Inc.	Manufacturing	200

Source: Dunn and Bradstreet Small Business Solutions, Siouxland Economic Development, 2006 Iowa Business Survey results

Table 6-53 displays employment sectors in the Sioux City region as a percentage of total employment.

Table 6-53
Employment by Sector
Sioux Gateway Airport

Employment Sector	Percent of Total Employment		
	Region	Iowa	United States
Services	29.0%	29.0%	33.5%
Retail Trade	17.5%	16.7%	16.4%
Manufacturing	13.1%	12.1%	9.5%
State and Local Government	9.5%	11.8%	11.2%
Finance, Insurance, and Real Estate	5.4%	7.5%	8.3%
Farm Employment	6.6%	5.4%	1.8%
Construction	5.4%	5.0%	5.6%
Transport, Communications, and Public Utilities	4.9%	4.8%	4.7%
Wholesale Trade	5.0%	4.4%	4.3%
Agricultural Services, Other	1.9%	1.5%	1.4%
Federal Civilian Government	1.0%	1.0%	1.6%
Federal Military Government	0.7%	0.7%	1.3%
Mining	0.1%	0.1%	0.4%
Total	**100.0%**	**100.0%**	**100.0%**
Source: Woods and Poole Economics, Inc.			

Most employers in the service and manufacturing sectors typically rely on commercial airline service. However, employers in the healthcare, retail trade, state/local government, and farm/agricultural sectors typically do not rely on commercial airline service. There is limited reliance on commercial service in the fastest growing industries in the region.

Higher Education Facilities

Seven colleges and universities are located within in the Sioux City region (**Table 6-54**). Nearly one third of these students are non-Iowa residents. This level of enrollment most likely does not have a notable impact on demand for commercial airline travel in the region.

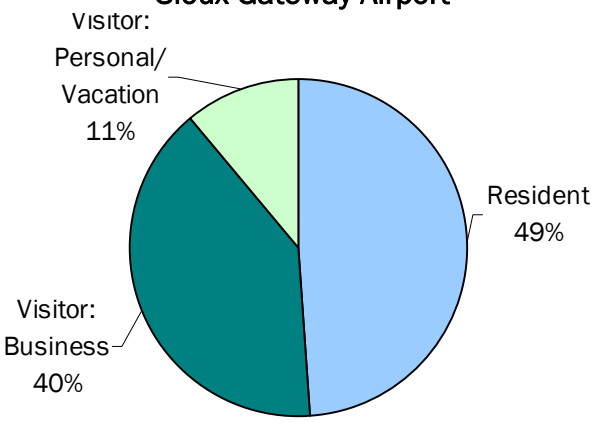
Table 6-54
Higher Education Facilities in Region
Sioux Gateway Airport

Institution Name	City	Enrollment		
		In-State	Out-of-State	Total
Western Iowa Tech Community College	Sioux City	4,016	1,268	5,284
Morningside College	Sioux City	1,102	620	1,722
Northwestern College of Iowa	Orange City	658	684	1,342
Dordt College	Sioux Center	479	782	1,261
Northwest Iowa Community College	Sheldon	1,224	0	1,224
Briar Cliff University	Sioux City	577	554	1,131
St. Luke's College	Sioux City	177	2	179
TOTAL		**8,233**	**3,910**	**12,143**
Source: Collegeboard.com				

Visitor and Resident Travel

Exhibit 6-16 splits total passengers at Sioux Gateway into resident passengers, business visitors, and personal/vacation visitors. Those visiting Sioux Gateway for personal and vacation reasons account for 11 percent of the total, according to this study's passenger surveys. Personal/vacation-related travel may be artificially depressed because many market area travelers are using other airports where they access lower fares for this type of travel.

Exhibit 6-16
Resident and Visitor Passengers
Sioux Gateway Airport



Source: 2006 Passenger Survey and US DOT *O&D Survey*

Visitor Travel

This is the only commercial airport in Iowa where visitor-related travel is more prevalent than resident- related travel. As shown, most of visitor-related travel is tied to business. Business visitors are most likely linked to the manufacturing firms in the region. There is limited personal/vacation-related visitor travel to this airport; according to passenger surveys. The region's solid base of manufacturing employers attracts business travelers.

Resident Travel

While employment in the market is expected to have modest growth, population is not expected to grow. With no population growth expected and only modest employment growth expected, growth in demand may be more reliant on additional visitor-related travel.

Fare Comparison

Table 6-55 details fares to several major U.S. destinations from Sioux Gateway Airport. Leisure fares average $418 to the 12 destinations, higher than the State average fare of $387. The average business fare cost is $604; business fares are higher than the State average for these 12 destinations ($565). The average walk-up fare from Sioux City to the noted destinations is $920, higher than the State average of $813.

Table 6-55
Fare Comparison
Sioux Gateway Airport

Destination	Passenger Type		
	Leisure	Business	Walk-up
Atlanta (ATL)	$445	$944	$1,235
Chicago/O'Hare (ORD)	$386	$684	$950
Dallas/Fort Worth (DFW)	$387	$829	$1,251
Denver (DEN)	$409	$467	$1,044
Las Vegas (LAS)	$425	$445	$435
Los Angeles (LAX)	$442	$575	$1,020
New York City (LGA)	$335	$358	$631
Orlando (MCO)	$303	$889	$1,079
Phoenix (PHX)	$479	$624	$843
San Francisco (SFO)	$523	$664	$1,021
Seattle (SEA)	$593	$510	$929
Washington (DCA)	$284	$259	$599
Average	**$418**	**$604**	**$920**
State Average	$387	$565	$813

Source: Iowa Department of Transportation
Note: data are current as of June 1, 2007

Sioux Gateway Airport Summary

Table 6-56 summarizes the regional S.W.O.T. analysis for this airport.

Table 6-56
Regional S.W.O.T. Summary
Sioux Gateway Airport

Strengths/Opportunities	
Employment	Employment is expected to grow between 2005 and 2010 at an average annual rate that is close to that expected for all of Iowa.
Employment Sectors	The region has a higher than average percent of its employment in the manufacturing sector which tends to have higher than average demand for commercial airline travel.
Major Employers	Many of the region's top employers are in the manufacturing sector.
Resident/ Visitor Travel	The high concentration of manufacturing employers helps to attract business-related visitors to the region.

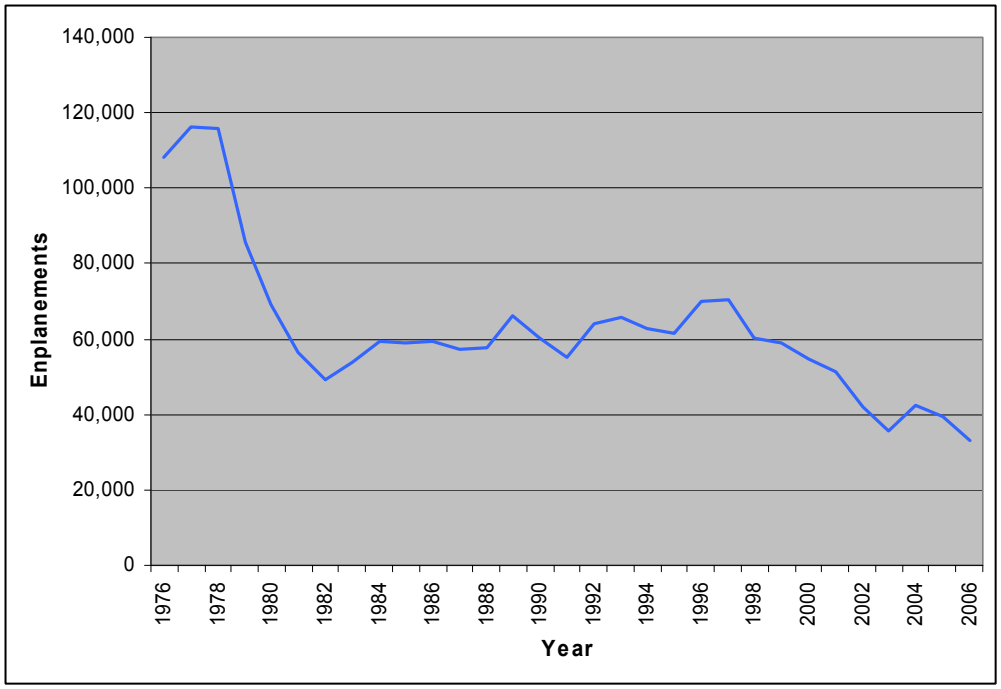
Weaknesses/Threats	
Employment Sectors	Several of the top employment sectors, retail trade, state/local government, and farm/agriculture, do not typically generate high demand for commercial airline travel.
Population	Population grew between 1990 and 2005, but is expected to decline between 2005 and 2010.

Waterloo – Waterloo Regional Airport (ALO)

Historic Enplanements

Since airline deregulation, enplanements at Waterloo Regional Airport have decreased at an average rate of 3.9 percent annually (**Exhibit 6-17**). Although there was a period of modest recovery from the early 1980s to the mid 1990s, it was minimal. Enplanements have now dropped to their lowest in the 30 year period. The airport's average annual decrease in enplanements is in contrast to an increase in enplanements at both the State (1.4 percent annually) and national (4.1 percent annually) levels. The fact that the airport's enplanements remained stagnant from 1982 to 1998, and then continued to decline may influence air service opportunities.

Exhibit 6-17
Historic and Projected Population
Waterloo Regional Airport



Source: Iowa Department of Transportation

Socioeconomic Trends and Projections

There are eleven counties within a 60 minute drive of Waterloo Regional Airport. Since 1990, population has risen at a compounded annual rate of 0.4 percent, higher than that of the State, but still under the national rate of annual increase of 1.2 percent (**Table 6-57**). The region's rate of annual population increase is projected to double to 0.8 percent between 2005 and 2010. This compounded annual rate of growth for regional population is above the rate of growth projected for Iowa for the same period but under the rate of growth expected for the United States as a whole.

Table 6-57
Regional Historic and Projected Population
Waterloo Regional Airport

County	1990	2005	1990-2005 CAGR	2010 Projection	2005-2010 CAGR
Benton	22,425	25,344	0.8%	28,513	2.4%
Black Hawk	124,155	127,911	0.2%	126,610	-0.2%
Bremer	22,854	23,295	0.1%	23,884	0.5%
Buchanan	20,842	21,080	0.1%	21,248	0.2%
Butler	15,713	15,319	-0.2%	14,992	-0.4%
Chickasaw	13,288	13,071	-0.1%	12,465	-0.9%
Fayette	21,889	22,002	0.0%	21,226	-0.7%
Grundy	12,017	12,373	0.2%	12,526	0.2%
Hardin	19,099	18,822	-0.1%	17,844	-1.1%
Linn	169,295	192,245	0.9%	211,516	1.9%
Tama	17,436	18,077	0.2%	17,985	-0.1%
TOTAL	**459,013**	**489,539**	**0.4%**	**508,809**	**0.8%**
Iowa Total	2,781,026	2,928,239	0.3%	3,035,322	0.7%
United States	249,622,814	296,410,404	1.2%	311,843,984	1.0%

Source: Woods and Poole Economics, Inc.
Note: CAGR=compounded annual growth rate

Regional employment has grown at a compounded annual rate equal to Iowa's since 1990, 1.2 percent (**Table 6-58**). Both the region and the State average annual rate of employment increase are projected to remain steady through 2010. The national average annual rate of employment increase expected to increase slightly from 1.4 percent to 1.5 percent.

Table 6-58
Regional Historic and Projected Employment
Waterloo Regional Airport

County	1990	2005	1990-2005 CAGR	2010 Projection	2005-2010 CAGR
Benton	9,719	11,553	1.2%	12,517	1.6%
Black Hawk	74,398	89,013	1.2%	93,563	1.0%
Bremer	11,975	13,953	1.0%	14,607	0.9%
Buchanan	8,613	10,049	1.0%	10,326	0.5%
Butler	6,558	7,041	0.5%	7,324	0.8%
Chickasaw	7,137	7,468	0.3%	7,727	0.7%
Fayette	10,803	11,956	0.7%	12,456	0.8%
Grundy	6,177	6,245	0.1%	6,462	0.7%
Hardin	11,203	10,971	-0.1%	11,446	0.9%
Linn	114,186	144,923	1.6%	157,128	1.6%
Tama	9,171	8,304	-0.7%	8,459	0.4%
TOTAL	**269,940**	**321,476**	**1.2%**	**342,015**	**1.2%**
Iowa Total	1,645,944	1,960,305	1.2%	2,079,793	1.2%
United States	139,380,891	172,587,009	1.4%	186,079,920	1.5%

Source: Woods and Poole Economics, Inc.
Note: CAGR=compounded annual growth rate

Both population and employment are expected to exhibit growth in the Waterloo region. This is one of the few single carrier markets in Iowa where both population and employment growth are projected.

Employers in the service; manufacturing; and finance, insurance, and real estate typically have above average demand for commercial airline service. Employers in retail trade and state/local government generally have lower demand for commercial airline travel.

Major Employers

Table 6-59 details the top employers in the Waterloo region. John Deere is the largest employer in Waterloo and also ranks 98th on the Fortune 500 list. Other manufacturing companies located in the region include Tyson Fresh Meats, Omega Cabinet, and Bertch Cabinet Manufacturing. Two medical facilities in the area (Covenant Medical Center and Allen Memorial Hospital) employ nearly 4,700 people combined. Higher education facilities employ an additional 2,500.

Table 6-59
Top Employers in Region
Waterloo Regional Airport

Company Name	Sector	Employees
John Deere Waterloo Operations	Manufacturing	4,700
Covenant Medical Center	Health Services	2,900
Tyson Fresh Meats	Manufacturing	2,700
University of Northern Iowa	Educational Services	1,781
Allen Memorial Hospital	Health Services	1,767
Omega Cabinet	Manufacturing	1,350
Bertch Cabinet Manufacturing	Manufacturing	1,288
Hawkeye Community College	Educational Services	774
GMAC Mortgage	Finance, Insurance, and Real Estate	734
Area 267 Education Agency	Educational Services	650
CBE Group	Finance, Insurance, and Real Estate	606
Target Regional Distribution Center	Distribution Center	572
Source: Greater Cedar Valley Alliance		

Table 6-60 shows the regional employment by sector as a percentage of total employment.

Table 6-60
Employment by Sector
Waterloo Regional Airport

Employment Sector	Percent of Total Employment		
	Region	Iowa	United States
Services	29.5%	29.0%	33.5%
Retail Trade	16.2%	16.7%	16.4%
Manufacturing	13.0%	12.1%	9.5%
State and Local Government	10.7%	11.8%	11.2%
Finance, Insurance, and Real Estate	7.1%	7.5%	8.3%
Transport, Communications, and Public Utilities	6.6%	4.8%	4.7%
Construction	5.0%	5.0%	5.6%
Wholesale Trade	4.4%	4.4%	4.3%
Farm Employment	4.3%	5.4%	1.8%
Agricultural Services, Other	1.5%	1.5%	1.4%
Federal Civilian Government	0.7%	1.0%	1.6%
Federal Military Government	0.7%	0.7%	1.3%
Mining	0.1%	0.1%	0.4%
Total	**100.0%**	**100.0%**	**100.0%**
Source: Woods and Poole Economics, Inc.			

Higher Education Facilities

Table 6-61 shows the higher education facilities in the Waterloo region. Several of the higher education facilities located in Cedar Rapids (Kirkwood Community College and Coe College) are also located in the region, but are not included in Table 6-61. The five institutions have a combined student body of 20,971. The University of Northern Iowa in Cedar Falls, very near Waterloo Regional Airport, has over 12,000 students of its own. In total, only 1,821 students at these colleges are from out-of-state. This will most likely not have a notable impact on enplanements.

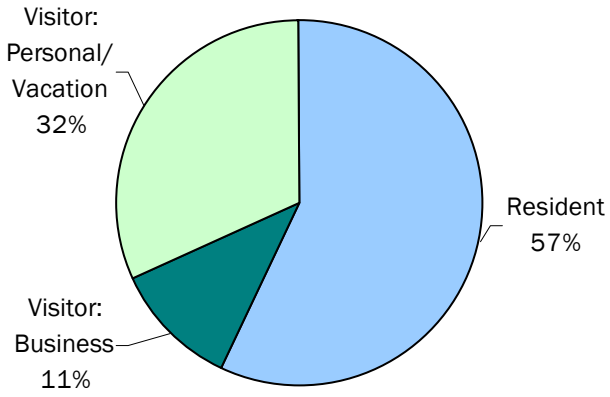
Table 6-61
Higher Education Facilities in Region
Waterloo Regional Airport

Institution Name	City	Enrollment		
		In-State	Out-of-State	Total
University of Northern Iowa	Cedar Falls	11,341	986	12,327
Hawkeye Community College	Waterloo	5,745	58	5,803
Wartburg College	Waverly	1,309	460	1,769
Upper Iowa University	Fayette	355	291	646
Allen College	Waterloo	400	26	426
TOTAL		**19,150**	**1,821**	**20,971**
Source: Collegeboard.com				

Visitor and Resident Travel

Exhibit 6-18 displays resident and visitor passengers as a percentage of total passengers at Waterloo Regional Airport.

Exhibit 6-18
Resident and Visitor Passengers
Waterloo Regional Airport



Source: 2006 Passenger Survey and US DOT *O&D Survey*

Visitor Travel

Since both population and employment are expected to grow, visitor travel will also likely increase. College faculty-related travel should also attract visitors to this region.

Resident Travel

This is the only single carrier market where both population and employment are expected to grow. Therefore, the S.W.O.T. analysis for this airport will reflect a potential for increased demand based on projected increases in population and employment.

Fare Comparison

Table 6-62 details fares to major U.S. markets from Waterloo Regional Airport. Leisure fares from Waterloo Regional average $431 to the 12 destinations, higher than the State average fare of $387. At an average cost of $616, business fares are also higher than the State average for these destinations ($565). The average walk-up fare from Waterloo Regional to the 12 destinations is $746, less than the State average of $813.

Table 6-62
Fare Comparison
Waterloo Regional Airport

Destination	Passenger Type		
	Leisure	Business	Walk-up
Atlanta (ATL)	$411	$946	$1,100
Chicago/O'Hare (ORD)	$390	$602	$734
Dallas/Fort Worth (DFW)	$355	$699	$706
Denver (DEN)	$526	$739	$1,092
Las Vegas (LAS)	$460	$628	$615
Los Angeles (LAX)	$472	$456	$640
New York City (LGA)	$306	$385	$360
Orlando (MCO)	$291	$538	$708
Phoenix (PHX)	$539	$646	$801
San Francisco (SFO)	$470	$600	$783
Seattle (SEA)	$614	$760	$894
Washington (DCA)	$335	$393	$528
Average	**$431**	**$616**	**$747**
State Average	$387	$565	$813

Source: Iowa Department of Transportation
Note: snapshot of airfares on June 1, 2007

Waterloo Regional Airport Summary

Table 6-63 summarizes the regional factors impacting the S.W.O.T. analysis for Waterloo Regional Airport.

Table 6-63
Regional S.W.O.T. Summary
Waterloo Regional Airport

Strengths/Opportunities	
Employment	Regional employment area is increasing at a rate similar to the State rate; this is one of the few single carrier markets in Iowa where both population and employment are expected to show growth.
Employment sectors	Manufacturing, as is finance, insurance, and real estate, are both major employment sectors in the region and both sectors typically have higher than average demand for commercial airline travel.
Population	The rate of growth for regional population has outpaced the State rate of growth; this rate of growth is expected to double and continue be higher than the State average.
Resident/ Visitor Travel	Growing population, employment, and high out-of-state college/university enrollment should stimulate both visitor and resident travel in this region.

Weaknesses/Threats	
Employment	Even though regional employment is growing, the rate of growth is below the U.S. rate of growth for employment.
Fares	Both leisure and business fares in this market are above the State average.
Major Employers	There are many health care providers in the region in the service sector and these employers typically have limited demand for commercial airline service.

AIRLINE FACTORS INFLUENCING AIR SERVICE IN IOWA

Previous sections of this chapter provided information on statewide and regional factors that may have a direct impact on the ability of the eight commercial airports in Iowa to sustain or improve their airline service. Of equal importance are conditions pertaining to the airline industry and to the carriers themselves.

Carriers contrast and compare their ability to operate all new or additional flights at a profit. Within the U.S., the commercial airline industry has matured. New connecting hubs are no longer being opened. There are fewer new start-up carriers. Some facets of the airline industry have actually retracted as carriers have eliminated some routes or have reduced flight frequencies. Current conditions within the airline industry are directly linked to the poor financial performance of many carriers. Airlines will be expanding cautiously for the foreseeable future.

The commercial airline industry is currently characterized by little real growth. While many of the legacy carriers do have aircraft on order, most of these planes represent fleet replacement, not growth. Most of the real growth in aircraft that are on order is attributed to the three largest low cost carriers: Southwest, AirTran, and JetBlue. None of these carriers currently serve any of the commercial airports in Iowa.

A number of legacy carriers do have regional jet aircraft on order; it is worth noting that all of these aircraft seat in excess of 70 passengers. Consequently, these regional jet aircraft may not be well matched to the single carrier airports in Iowa. Furthermore, the turboprop fleet operated by commercial carriers is declining, falling at a rate of about 10 percent per year. There are no replacement aircraft being manufactured for these aircraft. As the turboprop fleet continues to shrink, these aircraft will become more costly to operate and maintain. This is not a positive trend for smaller markets served by a single carrier.

This final section provides information on industry strengths and opportunities that may benefit the commercial airports in Iowa. The section also notes weakness and threats within the airline industry that could have a negative impact on commercial airports in Iowa as they seek to maintain and improve commercial airline service. Finally, carrier-specific factors which may have a positive or negative impact on sustaining or improving commercial airline service in Iowa are discussed.

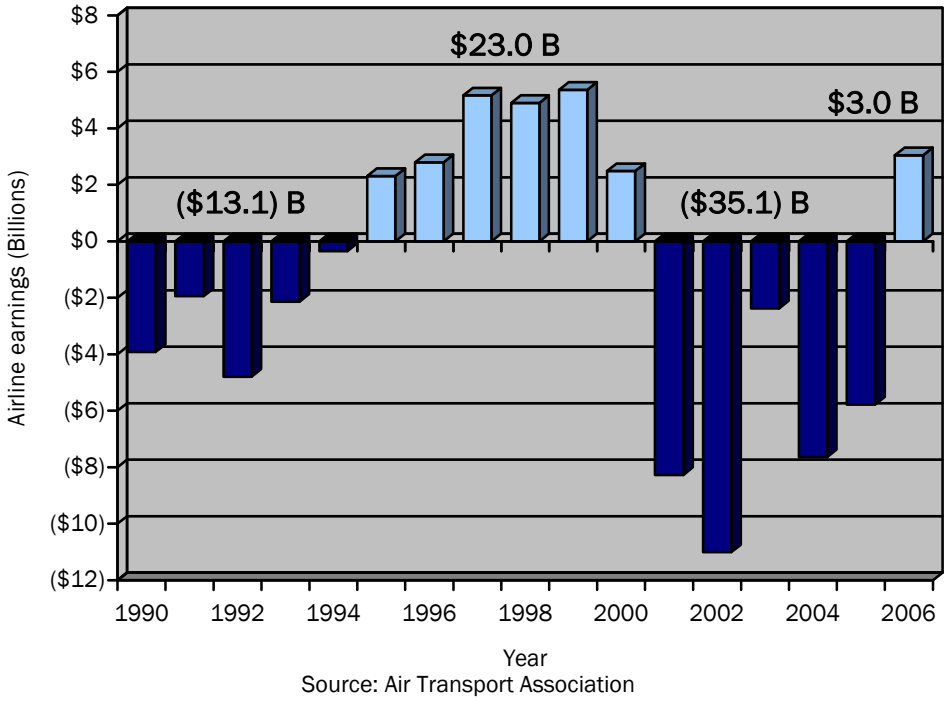
Chapter Two of this report provided a discussion of recent trends within the airline industry. As the chapter noted, the airline industry is constantly changing. Important to any strategies, ultimately identified in this study to maintain and improve commercial airline service, is the need to remain on top of change. Conditions reported here and classified as strengths and opportunities or weaknesses and threats may change. Conclusions drawn in this discussion will need to be re-visited on a continual basis by the airports following the conclusion of this study. It is incumbent upon the airports themselves to monitor the airline industry for all changes which may impact their commercial airline service.

This report has been conducted during a period of airline re-structuring brought on by several years of poor financial performance. As a result, there are many more weaknesses and threats that face all commercial airports than there are strengths and opportunities, especially as they relate to securing new airline service.

Weaknesses and Threats

Even before 9/11, the commercial airlines in the U.S. were in a downward financial spiral. While the most recent quarters for financial results have been promising, debt and losses sustained between 2001 and 2005 are staggering and will take years of exceptional financial performance to erase (**Exhibit 6-19**).

Exhibit 6-19
US Airlines' Annual Net Profits



Source: Air Transport Association

Airline Bankruptcies

As Chapter Two of this report discussed, many of the nation's most recognizable carriers filed for bankruptcy protection during the recent downturn. Bankruptcy filings included United, Delta, and Northwest. While these carriers have re-organized and emerged from bankruptcy, changes have taken place impacting the ability of commercial airports in Iowa to maintain and improve their commercial airline service.

One of the by-products of airline bankruptcies has been a reduction in the number of aircraft being flown by the carriers. In an effort to be more profitable, carriers have reduced the number of aircraft they fly. This in turns helps to raise passenger load factors, helping the carriers to have a greater number of flights that operate at a profit. Fleet reduction has been undertaken to better match capacity (number of seats available to actual travel demand). While fewer planes is a positive financially for many carriers, this results in far fewer opportunities for new airline service for the commercial airports in Iowa.

Because of fleet reductions, there have been cuts in service and even route eliminations. Small hub, non-hub, and non-primary airports (all of the eight commercial airports in Iowa) have been the airports most impacted by fleet reduction. Many carriers are choosing to focus on the largest airports, making air service opportunities for commercial airports in Iowa more scarce.

Table 6-64 displays a comparison of weekly scheduled seats in July 2007 compared to July 2001 for each of the commercial airports in Iowa to non-Iowa destinations. All eight airports in Iowa experienced reductions in seats. Downsizing of the St. Louis hub by American Airlines in 2003 had a significant impact on airline service in Iowa.

Table 6-64
Weekly Scheduled Seats from Commercial Airports in Iowa
To Non-Iowa Destinations

Iowa Origin	Destination		Departures			
			2001	2007	Change	% Change
Burlington	STL	St. Louis	494	**	(494)	-100%
Cedar Rapids	ATL	Atlanta		650	650	100%
	CVG	Cincinnati	1,400	900	(500)	-36%
	DEN	Denver	1,568	1,518	(50)	-3%
	DFW	Dallas/Fort Worth	1,050	1,874	824	78%
	DTW	Detroit		950	950	100%
	LAS	Las Vegas		750	750	100%
	MCI	Kansas City	589		(589)	-100%
	MSP	Minneapolis/St. Paul	3,062	2,092	(970)	-32%
	ORD	Chicago-O'Hare	5,593	5,314	(279)	-5%
	SFB	Orlando-Sanford		450	450	100%
	STL	St. Louis	5,179	650	(4,529)	-87%
		Subtotal	**18,935**	**15,148**	**(3,787)**	**-20%**
Des Moines	ATL	Atlanta	1,050	1,290	240	23%
	CVG	Cincinnati	1,700	1,300	(400)	-24%
	DCA	Washington-National	660	350	(310)	-47%
	DEN	Denver	3,248	3,046	(202)	-6%
	DFW	Dallas/Fort Worth	1,740	2,050	310	18%
	DTW	Detroit	966	1,400	434	45%
	IAH	Houston-Intercontinental		572	572	100%
	IFP	Bullhead City		168	168	100%
	LAS	Las Vegas		900	900	100%
	LGA	New York-La Guardia		259	259	100%
	MCI	Kansas City	2,004		(2,004)	-100%
	MDW	Chicago-Midway	780		(780)	-100%
	MEM	Memphis	483	1,050	567	117%
	MKE	Milwaukee	979	800	(179)	-18%
	MSP	Minneapolis/St. Paul	3,967	2,652	(1,315)	-33%
	ORD	Chicago-O'Hare	6,069	6,188	119	2%
	PHX	Phoenix	1,400	700	(700)	-50%
	PIE	St. Petersburg		300	300	100%
	SFB	Orlando-Sanford		450	450	100%
	SLC	Salt Lake City	700	350	(350)	-50%
	STL	St. Louis	5,131	1,278	(3,853)	-75%
		Subtotal	**30,877**	**25,103**	**(5,774)**	**-19%**

Table 6-64, continued
Weekly Scheduled Seats from Commercial Airports in Iowa
To Non-Iowa Destinations

Iowa Origin	Destination		Departures			
			2001	2007	Change	% Change
Dubuque	MSP	Minneapolis/St. Paul	476		(476)	-100%
	ORD	Chicago-O'Hare	1,361	1,358	(3)	0%
		Subtotal	**1,837**	**1,358**	**(479)**	**-26%**
Fort Dodge/ Mason City	MSP	Minneapolis/St. Paul	**884**	**612**	**(272)**	**-31%**
Sioux City	MSP	Minneapolis/St. Paul	2,530	1,064	(1,466)	-58%
	STL	St. Louis	810		(810)	-100%
		Subtotal	**3,340**	**1,064**	**(2,276)**	**-68%**
Waterloo	MSP	Minneapolis/St. Paul	1,156	1,030	(126)	-11%
	ORD	Chicago-O'Hare	589		(589)	-100%
	STL	St. Louis	780		(780)	-100%
		Subtotal	**2,525**	**1,030**	**(1,495)**	**-59%**
Total			**58,398**	**44,315**	**(14,083)**	**-24%**

Source: APGDat schedule files for July, 2001 (pre 9/11 schedule) compared to July, 2007
Note: **Burlington service lost from March-October, 2007 during change of EAS carrier.

Further evidence of airline downsizing can be measured by reviewing average weekly available seat miles flown by airline in their entire U.S. network. **Table 6-65** displays the average domestic available seat miles per week for the airlines serving Iowa.

Table 6-65
Total Domestic Average Available Seat Miles (ASMs) Per Week

Airline	Average ASMs Per Week (millions)		% Change
	Year Ended June 30, 2006	Year Ended June 30, 2007	
Allegiant Air	39	56	42%
American Airlines	2,351	2,318	-1%
Continental Airlines	1,216	1,278	5%
Delta Air Lines	2,147	1,986	-8%
Midwest Airlines	100	110	10%
Northwest Airlines	1,109	1,072	-3%
Sun Country Airlines	47	48	2%
United Airlines	1,853	1,888	2%
US Airways	1,504	1,481	-2%
Total Airlines Serving Iowa	**10,366**	**10,237**	**-1%**

Source: APGDat
Note: Domestic operations only; inbound/outbound

Major carriers are concentrating growth in international markets and in most cases are shifting aircraft out of the U.S. domestic operation and into international markets with higher fares and less competition. This limits growth opportunities for Iowa airports at this time with most of the major airlines. Smaller carriers such as Midwest and Allegiant are still concentrating on U.S. domestic growth and reflect strong growth during this period.

Table 6-66 provides a comparison of scheduled seats for each of the marketing carriers serving Iowa broken down by operating airline. Since 2001, major carriers have shifted their operations largely to regional carriers that operate smaller aircraft. For example, American and TWA mainline service

to/from Iowa in 2001 was replaced with service on regional partners including American Eagle, Chautauqua, and Trans States. These carriers use smaller aircraft to provide service to Iowa. Delta, Northwest, United, US Airways and Midwest each replaced most or all of their mainline jet service with smaller aircraft operated by regional partners.

Table 6-66
Iowa Weekly Scheduled Seats by Airline

Marketing Airline		Operating airline		Weekly Scheduled Seats			
				2001	2007	Change	% change
AA	American Airlines	AA	American Airlines	7,252		(7,252)	-100%
		MQ	American Eagle		10,535	10,535	100%
		RP	Chautauqua Airlines Inc.		528	528	100%
		TW	Trans World Airlines	12,394		(12,394)	-100%
		AX	Trans States Airlines		1,400	1,400	100%
CO	Continental Airlines	CO	Continental Airlines		572	572	100%
DL	Delta Air Lines	DL	Delta Air Lines	4,850		(4,850)	-100%
		EV	Atlantic Southeast Airlines		1,590	1,590	100%
		OH	Comair		2,550	2,550	100%
		OO	SkyWest Airlines		350	350	100%
G4	Allegiant Air	G4	Allegiant Air		2,850	2,850	100%
NW	Northwest Airlines	NW	Northwest Airlines	13,524	1,544	(11,980)	-89%
		9E	Northwest Airlink		6,800	6,800	100%
		XJ	Mesaba Aviation		2,856	2,856	100%
SY	Sun Country Airlines	SY	Sun Country Airlines		168	168	100%
TZ	American Trans Air	TZ	American Trans Air	780		(780)	-100%
UA	United Airlines	UA	United Airlines	13,966	3,804	(10,162)	-73%
		OO	SkyWest Airlines		5,048	5,048	100%
		S5	Shuttle America		1,470	1,470	100%
		YV	Mesa Airlines		750	750	100%
US	US Airways	US	US Airways	1,273		(1,273)	-100%
		HP	America West Airlines, Inc.	1,400		(1,400)	-100%
		YV	Mesa Airlines		700	700	100%
YX	Midwest Airlines	YX	Midwest Airlines	2,959		(2,959)	-100%
		AL	Skyway Airlines, Inc		800	800	100%
Total				**58,398**	**44,315**	**(14,083)**	**-24%**

Source: APGDat schedule files for July, 2001 (pre 9/11 schedule) compared to July, 2007

Three airlines currently provide 78 percent of all capacity to commercial airports in Iowa. As such, the economic well-being of American Airlines (28 percent), Northwest Airlines (25 percent) and United Airlines (25 percent) is very important to Iowa air service. With Delta Airlines (10 percent) and Allegiant Airlines (6 percent) included, the total dependence of the airports in the State increases to 95 percent.

Statistics from the US DOT show that the large and medium hub airports in the U.S. account for almost 89 percent of all passenger enplanements. While there are over 500 airports in the U.S. served by commercial carriers, there are fewer than 70 of these that are classified as large or medium hub airports by the FAA. That means the remaining 430 smaller commercial airports are competing for approximately 11 percent of all U.S. travelers. Or said another way, the 430 airports are in competition with each other for the limited number of new air service opportunities that the carriers will provide to smaller commercial airports.

Poor Financial Performance

The poor financial performance of many carriers has caused them, understandably, to be averse to risk. To address their financial concerns, carriers eliminated less profitable routes. Note here that the key term is "less" profitable. In many cases, even though flights may be operating at a profit, carriers can decide that their aircraft can be used to serve another airport and make more money. Table 6-67 summarizes operating revenue and profit or loss for the airlines currently serving Iowa. In 2005, Allegiant Air was the only airline serving Iowa that reported an operating profit. By the first quarter 2007, only United reported an operating loss. In the current operating environment with fewer aircraft to fly, carriers look critically at all airports they serve.

Table 6-67
Airline Profitability

Airlines Serving Iowa	Operating Revenues			Operating Profit/Loss		
	CY 05	CY 06	1Q 07	CY 05	CY 06	1Q 07
Allegiant Air	$133	$172	$80	$9	$12	$11
American Airlines	$20,657	$22,493	$5,402	-$351	$816	$183
Continental Airlines	$11,108	$13,010	$3,145	-$92	$410	$46
Delta Air Lines	$16,112	$17,339	$4,189	-$1,197	$31	$147
Midwest Airlines	$439	$572	$145	-$38	$4	$11
Northwest Airlines	$12,316	$12,555	$2,863	-$895	$782	$205
Sun Country Airlines	$186	$226	$80	-$14	-$9	$1
United Airlines	$17,304	$19,334	$4,374	-$241	$451	-$89
US Airways	$10,610	$11,845	$2,801	-$334	$557	$130
Total Airlines Serving Iowa	**$88,864**	**$97,547**	**$23,079**	**-$3,154**	**$3,053**	**$646**

Source: APGDat
Notes: Data for 1Q07 is preliminary release data and is not yet final; All values are reported in millions

Even if an airport is profitable, if the carrier determines that another market has the ability to provide even greater profit, there is a chance that service can be cut or cancelled. Carriers simply are not willing to stay in or to bring new service to markets that they consider to be under performing.

Carriers are generally far more cautious about expanding into new markets. Expansion of a carrier's route structure takes money for facilities, personnel, and marketing. Spending money for service expansion is not in line with a primary objective for most carriers which is to cut or reduce costs. Carriers are expanding service only in select instances. Eliminating points of service now looms as one of the ways that carriers may consider achieving even greater savings in their operating costs. This makes maintaining and/or attracting new airline service to Iowa challenging.

Maturity of the Airline Industry

While demand for commercial airline travel continues to grow, there are many signs that point toward the commercial airline industry as being one that has matured. One example of this maturity is the fact that no new airline connecting hubs are being developed. In fact, many airlines have taken the opportunity to "deconstruct" connecting hub complexes that they once had.

For the most part, and especially for airports in the small hub, non-hub, and non-primary categories, airline service is still very much aligned with the hub and spoke route structure. Examples of some hubs that have been deconstructed include US Airways at Pittsburgh and Delta at Dallas. While Dallas continues to be a major connecting hub airport, Delta ceased to operate a connecting hub complex at this airport. American Airlines decision to significantly reduce the St. Louis hub had an even greater impact on Iowa air service.

Since the commercial airports in Iowa are largely dependent on the hub and spoke system for their airline service, the fact that no new hubs are being developed impacts opportunities for new air service. Deconstructed hubs can have a negative impact on both new and continued airline service.

With no new hubs opening and others closing, the maturity of the airline industry itself looms as a threat to commercial airports in Iowa seeking to improve and maintain commercial airline service.

Lack of Capacity at Large Hubs

As service has been consolidated at many of the large hub airports, congestion and capacity constraints at some large airports have escalated. Operational delay has a very significant impact on airline profitability. One way that the airlines themselves can have a positive impact on reducing delay is to fly larger planes that carry more passengers. It takes five regional jets take offs and landings to carry the same number of passengers as one B-757.

While carriers have not made a whole sale change to larger aircraft in light of capacity constraints at airports such as Chicago O'Hare and Atlanta, increasing existing or providing additional service to airports using smaller planes may not be completely in the best interest of the airlines. With more and more travel demand being focused on fewer large airports, the prospects for additional connecting flights on smaller regional type aircraft are lessened. This trend has a negative connotation for all commercial airports in Iowa.

The FAA's Next Generation Air Transportation System Financing Reform Act of 2007 (NexGen) proposes several changes to reduce congestion in the sky. Passenger demand has returned to pre-9/11 levels and the FAA projects that U.S. commercial airlines will carry more than one billion passengers annually by 2015. The busiest airports will feel the most stress and associated delays of the increased demand. The proposed NextGen system will accommodate two to three times the current traffic levels by shifting to satellite-based, cockpit-to-cockpit enabled air traffic management. In addition, NextGen technologies will give pilots and air traffic controllers more detailed information, allowing flights to go from point to point, while maintaining high levels of safety.

If funding for NexGen is authorized, it may provide needed relief for capacity constrained airports, including hubs that are served from commercial airports in Iowa including, Chicago-O'Hare, LaGuardia, and Atlanta. This should in turn help improve on time arrivals departures and flight reliability at commercial airports in Iowa. Also, with NexGen technology in place, smaller regional jet aircraft may remain part of airline fleets, since the pressure to decrease operations at larger airports will decline. This will be beneficial for the airports in Iowa that are well-suited for smaller regional jet aircraft.

Increase in Regional Aircraft Size

Fewer carriers are flying turboprop aircraft. It is a fact that the number of turboprop aircraft being used for scheduled airline service is declining at a notable rate. Many regional carriers are

abandoning 50-seat regional jets in favor of larger 70 and 90-seat versions. While customer preference certainly influences where the industry is headed in this regard, rising fuel cost are driving this trend. To cover higher fuel costs, carriers that fly aircraft which seat fewer passengers must increase the cost of their tickets since they have fewer customers to spread their increasing costs among.

Higher fuel costs have a disproportionate adverse impact on smaller aircraft. It is for this reason the carriers have ceased to order new turboprop aircraft to put into commercial service and that they are moving to even larger regional jets. **Table 6-68** shows all orders by U.S. operators for 19-seat or larger turboprop and regional jet equipment. All current orders or options through 2015 are for 70-seat or larger aircraft with the exception of SkyWest and Trans States with 50-seat aircraft on order.

Table 6-68
Airline Orders/Options

Airline	Aircraft*	# seats	Delivery Year									Total
			2007	2008	2009	2010	2011	2012	2013	2014	2015	
Delta Air Lines	CRJ 900	84	5	12	12	13	12	6				60
Frontier Airlines	DHC-8-400	74	9	6	5							20
Horizon Air	CRJ 701	70			6	9						15
	DHC-8-400	74	1	9	5	6	6	6	6	1		40
JetBlue Airways	ERJ 190-100	100	6	15	18	19	21	23	25	27	20	174
Mesa Airlines	CRJ 701	70	2	7	3							12
	CRJ 900	86		4	6							10
Northwest Airlines	CRJ 900	76	14	26	26	26	26	13				131
	ERJ 170-200	70	15	24	25	7						71
Pinnacle Airlines	DHC-8-400	74	6	16	12	11						45
Republic Airlines	ERJ 170-100	70			16	19	18	18	4			75
	ERJ 170-200	70	13	8								21
SkyWest Airlines	CRJ 100/200/440	50			6	25	8					39
	CRJ 701	64			24	24	12					60
Trans States Airlines	ERJ 145	50		6	4							10
US Airways	ERJ 170-100	72			5	8	7					20
	ERJ 190-100	86	5	8	8	8	8	8	7			52
Total			**76**	**141**	**181**	**175**	**118**	**74**	**42**	**28**	**20**	**855**

Source: Back Aviation Solutions
Notes: CRJ and ERJ aircraft are regional jets and the DHC–8-400 is a large turboprop aircraft; Orders/options include turboprops or regional jets with 19 seats or greater; US operators only

This trend has implications for commercial airports in Iowa. Five of the eight commercial airports in Iowa are now served only by a single carrier. Passenger demand in markets of this size is not typically sufficient to support larger aircraft. None of the single carrier airports in Iowa is served by an aircraft larger than a 50-seat RJ and most are served by a mix of 50-seat RJs and 30 seat turboprop aircraft.

The fact that airlines are moving to larger aircraft could certainly result in decreased flight frequencies for airports with lower passenger volumes. For example, one 70-seat RJ can carry more passengers than two turboprops. In the worst case scenario, demand may not be sufficient to support larger aircraft and service would be terminated. In the current operating environment, carriers are always seeking to match aircraft to market demand.

Low Cost Carriers

Low cost carriers present both a threat and a potential opportunity to commercial airports in Iowa. Most of the real growth in the airline industry in terms of new aircraft on order and new markets being served rests with the low cost carriers.

Currently, Allegiant serves Iowa with flights to Des Moines International and The Eastern Iowa airports. Frontier Airlines began service to the Sioux Gateway Airport in October 2007. Low cost carriers currently have a larger presence at both Omaha (ExpressJet, Frontier and Southwest) and Moline (AirTran), with many Iowa air travelers now using service at these Border Airports.

Low cost carriers do stimulate some latent demand for commercial airline travel. In other words, because low fares are available some passengers who would not otherwise travel or would travel by another mode, decide to take an airline trip. Most often, however, low cost carriers seek developed markets where they can "steal" passengers from other carriers.

Low cost carriers can have a positive impact on demand. Often times the presence of a low cost carrier causes other carriers to lower their fares resulting in an increased number of passengers. As noted, a low percentage of these passengers are a result of stimulated demand; most are already traveling and have been diverted from another carrier.

More low cost carrier service in Iowa could have a few different outcomes. One would be that passengers that are now leaving the State may decide to use a commercial airport in Iowa instead. Depending upon where a low cost carrier provided service in Iowa, this service could result in passengers leaving one Iowa airport to use another. If the larger airports in Iowa attract additional low cost carrier service, it is possible that this service could have an adverse impact on single carrier airports. If single carrier airports experienced a decrease in their enplaned passengers, this could put existing service at the single carrier airports at risk. Low cost carrier service at larger airports could also negatively impact service on existing legacy carriers.

If low cost carrier service to Border and/or Outlying Hub airports increases, there is a potential to see a higher number of Iowa-related passengers leave the State to use one of these airports for their travel needs. This could pose a threat to maintaining or improving commercial airline service to commercial airports in Iowa.

Strengths and Opportunities

As previously noted, in today's highly competitive environment, all 500 commercial airports in the U.S. are in competition with each other for the limited number of new commercial service opportunities that present themselves. The following sections provide an overview of some of the strengths and opportunities that may enable the commercial airports in Iowa to effectively maintain and/or compete for improvements to their commercial airline service.

Facilities and Services

Airlines are seeking ways to limit their operating costs. Airports that have facilities that are ready for airline occupancy are usually more attractive to the airlines than are airports where major improvements are needed.

Airlines need space for processing passengers in ticketing and boarding areas. Airlines need additional space for baggage and personnel. Airports that have existing space to offer to prospective carriers have an advantage over airports where facility expansion is needed to accommodate a new carrier or notable expansion by an existing carrier.

Most of the commercial airports in Iowa currently have space that is immediately ready to support additional airline service. This gives the commercial airports in Iowa an advantage over airports that would need terminal expansion to accommodate additional airline service. In the case of terminal expansion, airports have historically partnered with airlines to fund such projects. In the current operating environment, airlines are very hesitant to, and, in most cases, do not want to participate in funding terminal expansion projects.

Airports that have airfield facilities that include adequate runway length, lighting, and approach aids also have an advantage over airports that need capital improvement projects to meet carrier requirements. Along these same lines, airports that have existing gate or ramp space for commercial aircraft parking also are at an advantage.

Most of the commercial airports in Iowa noted that they have airfield facilities in place that carriers seek. With existing facilities in place, commercial airports in Iowa may have an advantage over other airports that need airfield improvements to meet carrier needs.

Commercial airports in Iowa are at an advantage over airports that are seeking to attract commercial airline service for the first time. Commercial airports in Iowa currently have all appropriate FAA operating certifications. Commercial airports in Iowa also have in place staff and equipment to meet security guidelines set forth for commercial airports by the Transportation Security Administration (TSA).

Airline Costs

When comparing airports for new service, airlines give careful consideration to their costs to operate at the airport. Within the industry, airport-related costs for the commercial airlines are most often expressed on a per enplaned passenger basis.

Airlines also consider fueling costs at the airports they serve. In particular, they consider whether they will be charged a flat rate for fueling, on top of the cost of the fuel, or if they will be charged a per gallon charge to re-fuel. Generally speaking, costs to the airlines at the commercial airports in Iowa are very competitive.

Essential Air Service

The commercial airports serving Burlington, Fort Dodge, and Mason City qualify for airline operating subsidies under the Essential Air Service (EAS) program. This strength/opportunity does not apply to all of the commercial airports in Iowa.

While there are some limitations to service available at the EAS airports, without subsidies, these three airports would likely not be able to sustain commercial airline service. As a result, EAS is viewed as a strength for these airports in terms of their ability to maintain commercial airline service.

At the same time, it must be mentioned that there are concerns about the EAS program. While it appears that the re-authorization of AIP will fund EAS at its current levels and that rules for participation will remain essentially unchanged, fewer carriers are participating in this program.

Costs to comply with FAR Part 121 have impacted many carriers who historically participated as an EAS carrier. Of even more concern is the rising cost of fuel. Because most of the EAS carriers fly turboprop aircraft, increasing fuel costs have had a disproportionate impact on these carriers. When this fact is considered along with the fact that many carriers are choosing not to operate turboprop aircraft, the cause of concern is justified.

Also important to EAS communities in Iowa is the limited availability of small turboprop aircraft. There are no smaller turboprop aircraft with advanced technology being manufactured. The number of 19-seat and 30-seat aircraft still being flown by regional carriers is declining at a current rate of about 10 percent per year. Mesaba (Northwest codeshare carrier) has indicated that they do not plan to replace their 30-seat aircraft. EAS airports in Iowa need to monitor this trend. If aircraft with smaller seating capacities continue to disappear from the operating fleet of the regional airlines, commercial air service at EAS airports could be at risk.

Small Community Air Service Development Program

Communities in Iowa have already taken advantage of this program for various types of air service initiatives. Application to the US DOT must be made to secure funding from this program, and there are typically a number of airports competing for a smaller number of grants. Nevertheless, this program provides a potential source of funding that the commercial airports in Iowa should consider to help maintain and improve their commercial airline service.

Incentives/Risk Reduction

For the airlines, starting new service presents a risk. Airlines are often looking for communities who are willing to assist in minimizing their risk to introduce new service. New service ventures are typically more risky for smaller airports. Therefore, commercial airports in Iowa may be able to strengthen their position for maintaining or improving airline service if they are willing to help minimize carrier risk.

It is important for communities to be able to demonstrate to the carriers that they are willing to support new service. Airlines are particularly interested in making sure that the local business community is engaged in and is supportive of new service since business travelers are often critical to the success of this service.

Risk reduction incentives can be viewed from both the community and airline perspective. For the community, it helps them achieve service improvements on a more accelerated time table. For the airline, it helps them to breakeven during their initial months of operation; those that are typically most critical to the long term success of the service.

While there are many types of approaches to help minimize risk to the airlines for new or additional service, some of the most common types of incentives are discussed below. When preparing to enter a market, most carriers today assume that a combination of these incentives will be provided by the

airport. Marketing and reduced airport fees are typically required by airlines and subsidy arrangements including revenue guarantees or travel banks are often desired.

Revenue Guarantees/Subsidy Arrangements

There are various forms of subsidy including revenue or seat guarantees, "escrow" accounts, straight payment, and advance purchase ticket accounts or travel banks. In general, these subsidy arrangements require airports to guarantee the airline will make a certain profit level regardless of the type or level of service that is provided. In principal, these agreements are structured such that the airline agrees to provide so many daily trips from the local airport to another airport in return for a set fee.

With straight subsidies, the community pays the carrier a "lump sum" for providing new service. With this type of risk reduction, there still can be issues with quality of service and mechanisms for encouraging community use of the new service. According to AAAE, most airlines favor this form of risk mitigation because it is the least complex.

In the case of seat guarantees and escrow accounts, the community uses the subsidy as an account. In revenue guarantees, the carrier presents a plan for a reasonable amount of revenue that they need to realize over a given amount of time, most often one year. The community then typically sets up an account that is used to offset any shortfall in revenue that the carrier experiences. Recent revenue guarantee programs require funds from surrounding communities as well as state and federal sources. Revenue guarantees have ranged from $500,000 to $3 million per year. Several communities have also been able to secure Small Community Air Service Development Program grants to assist with the revenue guarantee. These types of programs are often cumbersome to administer, they often fail to hold the airline responsible for providing "quality" service, and there is limited incentive to promote community use of the new service.

Some communities have successfully used advance purchase ticket accounts or ticket banks to off-set airline risks and to secure new service. Ticket banks require strong support from the local business community. With a ticket bank, funds are typically deposited by local businesses in an account that can only be used to purchase tickets to support the new service. If the funds are not used within a specified period (typically one-year), they are transferred to the airline. This use-it-or-lose-it feature promotes early ridership reducing the airline's risk during the start-up period. Ticket banks help to "vest" the community in the success of the new service. This subsidy form is more of a start-up approach to ensure the feasibility of the service during the critical start-up phase. This approach has proven successful in several cities; however, it is difficult and expensive to administer which causes some airlines to avoid this program. The Small Community Air Service Development Program has not allowed travel banks to be used as a local match in recent years.

Marketing

Probably the most common type of incentive used by communities to help carriers offset the risk of new service is to provide help marketing or advertising the new service. Airlines typically have a limited budget that they can spend for such activities. Obviously, the success of new service is heavily dependent upon the community knowing that the new service is available. The community's willingness to fund advertising is helpful in this regard. Other marketing

efforts by a community include custom mailing to travel agents and businesses in the community announcing new service, press releases announcing service additions, announcement on airport website, and inaugural events in coordination with an airline's commencement of service.

Reduced or Waived Airport Fees

Although there are certain FAA restrictions on this type of incentive, airports can reduce or waive operating fees for a specified period of time to help attract new airline service. However, because airport fees typically represent such a small percent of the airline's overall cost to provide service, this type of incentive is not as powerful. Airports can also absorb common use or shared costs, including common security, skycap, tug drive, and law enforcement charges.

Ground Handling

This form of incentive to help offset airline costs and minimize risk of start-up service is gaining more recognition. With ground handling, the airport may provide either or both personnel or equipment that would normally be provided by the carrier. This helps to reduce airline operating costs. Some of the commercial airports in Iowa have actually acquired ground handling equipment through grants from the Small Community Air Service Development Program. These airports are equipped to provide this type of incentive.

Facilities

In some instances, if terminal improvements are needed to accommodate new airline service, the community/airport may provide the needed renovation or expansion at their cost to help reduce the airline's risk of providing new service. Airports may want to offer facility start-up assistance in covering all or part of approved design and construction costs associated with new or updated facilities.

Table 6-69 summarizes the strength/opportunities and the weakness/threats for commercial airports in Iowa for the airline industry as a whole. Table 6-70 provides similar information for airlines currently serving Iowa.

Table 6-69
S.W.O.T. Summary
Airline Industry

Strengths/Opportunities	
Airline Costs	Costs per enplaned passenger at the commercial airports in Iowa are competitive.
Essential Air Service	The Essential Air Service program provides a mechanism to help the smallest commercial airports in Iowa maintain their airline service.
Facilities and Services	Iowa airports generally have in place terminal, ramp, and airfield facilities required to meet the needs of potential carriers.
Incentives/ Risk Mitigation	To help secure improved air service, airlines are often seeking risk mitigation communities. Airports in Iowa provide incentives such as marketing, reduced fees, ground handling support, and financial assistance.
Small Community Air Service Program	This federal program has and can be used by commercial airports in Iowa can to support various types of air service initiatives.
New Technology	New technologies associated with FAA's NexGen may help improve congestion and delays and allow for additional service between large hubs to Iowa airports. This program is several years away.

Weaknesses/Threats	
Airline Bankruptcies	Bankruptcies have resulted in fleet reductions; fewer aircraft flying results in service cutbacks and fewer new service opportunities.
Capacity at Large Hub Airports	As large hub airports that Iowa depends on for airline service become more congested, there are fewer opportunities for new service. As carriers focus on using larger planes to carry more passengers with fewer flights, smaller airports with demand matched to small aircraft could be impacted.
Increased Aircraft Size	Carriers are moving away from turboprop aircraft and 50-seat RJs are being replaced with 70 and 90-seat models. Some commercial airports in Iowa, including those subsidized by EAS, do not have sufficient demand to support larger aircraft. Fewer carriers are applying to provide EAS service and the number of aircraft with smaller seating capacities, matched to demand in EAS markets, is dwindling.
Low Cost Carriers	Additional low cost carrier service at Border and/or Outlying Hub airports could result in additional Iowa-related demand choosing to depart from one of these airports. Low cost carrier service in Iowa could result in passengers leaving one airport market area in favor of using another. Additional passenger leakage could put airline service at single carrier airports at risk.
Maturity of the Airline Industry	Commercial airline service in Iowa is heavily dependent upon the connecting hub and spoke system run by many legacy carriers. No new connecting hubs are opening, some hubs have been closed, and other hubs are being downsized. This results in fewer new service opportunities.
Poor Airline Performance	Poor financial performance has caused airlines to be risk adverse; this has resulted in fewer opportunities for new service. Introducing new service cost money which carriers are often not willing to spend. Financial performance has also resulted in service being focused on only the most profitable markets. There is increased competition among the more that 500 commercial airports in the U.S. Carriers tend to favor service improvements at the largest airports.

Table 6-70
S.W.O.T. Summary
Airlines Serving Iowa

Airline Serving Iowa	Financial Performance		Fleet Acquisition		Route Schedule	
	Strengths/ Opportunities	Weaknesses/ Threats	Strengths/ Opportunities	Weaknesses/ Threats	Strengths/ Opportunities	Weaknesses/ Threats
Allegiant Air	Continued profitability			No turboprop or regional jet orders/options	Growth in smaller markets	
American Airlines	Improving profitability		Regional partner acquiring 50-seat RJs		Strong in Iowa	Decreasing seats/ASMs
Continental Airlines	Improving profitability			No turboprop or regional jet orders/options	Growth in Iowa/system seats/ASMs	
Delta Air Lines	Improving profitability	Emerging from bankruptcy	Regional partners acquiring 50-seat+ RJs			Decreasing seats/ASMs
Midwest Airlines	Improving profitability			No turboprop or regional jet orders/options	Growth in Midwest system ASMs	Decreasing seats in Iowa markets
Northwest Airlines	Improving profitability. Emerged from bankruptcy in 2007		Regional partners acquiring 70-seat+ RJs/ turboprops	No turboprop or RJ orders/options less than 70-seats	Strong in Iowa	Decreasing seats/ASMs
Sun Country Airlines		Operating loss last two years		No turboprop or regional jet orders/options	Growth in Iowa/system seats/ASMs	
United Airlines	Emerged from bankruptcy in 2006	Continued operating losses	Regional partners acquiring 50-seat+ RJs		Growth in United system ASMs; Strong	Decreasing seats in Iowa markets
US Airways	Improving profitability		Orders/options for 70-seat+ RJs	No turboprop or RJ orders/options less than 70 seats		Decreasing seats/ASMs

SUMMARY

As this chapter documented, there are statewide, regional, and airline factors that have the propensity to influence growth for airline travel in Iowa. Armed with this analysis of strengths, opportunities, weaknesses, and threats, individual communities and the State now have a better understanding of which factors impact their current levels of service and where difficulties or opportunities may lie for improving air service.

The airports in Iowa and the regions they serve have varying characteristics that may make them attractive to commercial airlines seeking to increase or expand scheduled service. There is typically a direct correlation between the level of air service at a commercial airport and socioeconomic indicators. Growth in population and employment and the types of employers in an airport's market area are a few of the regional factors that impact an airport's ability to attract additional demand.

At the same time, conditions within the airline industry itself and with the carriers themselves are not highly conducive to expanding service. Airlines continue to announce cutbacks, mergers, and bankruptcies, providing even further stress on communities trying to expand their air service options. The commercial airports in Iowa face stiff competition for the limited number of new service opportunities that will be available in the near term.

The information presented in this chapter and an understanding of demand associated with the airports in Iowa, developed previously, assist in the identification of realistic opportunities for air service improvements in the State. The next chapter of this report, Chapter Seven, provides a statewide and airport summary of options for air service improvements.