Tucson Economic Blueprint

Strategic Analysis Report

Section 3: S.W.O.T. Analysis

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Prepared for TREO

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I. Introduction

This section of the Strategic Analysis Report describes the results of an exhaustive analysis of the Tucson region's strengths, weaknesses, threats, and opportunities (SWOT) for economic development. The ideas presented in this section come from various sources, but they are in large part the ideas shared with the consulting team during the Inclusion Phase of the Economic Blueprint planning process. The role of the consulting team in this process was to listen, synthesize and help to prioritize the input received.

The focus of this analysis is to identify the opportunities that will make the Tucson region more competitive and sustainable as a prosperous market for all of its citizens. Oftentimes, these opportunities present themselves in areas identified as current weaknesses of the region. If addressed, these gaps can be reversed into competitive advantages for the region. We find it encouraging and exciting that most of the opportunities identified in this report are attainable.

Most of the gaps and most of the opportunities relate to three major themes: the University of Arizona, to the attitude toward change, and the state of leadership, particularly within the private sector.

For the Tucson region to become competitive on a global stage, the region must embrace the University of Arizona (UA) as its greatest economic opportunity. The University is a central pillar of the blueprint strategies, and its goal to become a top 10 public research university can be leveraged into enhanced economic development in the region.

The second overreaching theme of the SWOT analysis is the region's attitude toward change. Tucson has succeeded for the past 35 years by good weather superseding marginal economic development decisions. This will not work in the next 35 years. A competitive future embedded within an attitude of change in the form of intelligent, managed, balanced competitive growth is the most effective vehicle for change.

The third major gap in opportunity that will define Tucson's future is leadership. Every competitive market requires dedicated private sector individuals collaborating with elected officials, focused on building and sustaining a great city, county and region. There are no exceptions. There is huge opportunity for Tucson by developing private sector leadership singularly focused and seamlessly collaborative, working for the betterment of the region. This opportunity will indeed be part of the formula for a competitive future within the framework of the blueprint.

While a number of other very important strengths, weaknesses, opportunities and threats are discussed below, the three foregoing areas most heavily influence almost every other factor. With this in mind, let us further explain the SWOT process, our findings and recommendations.

Procedure

The KMK Consulting team analyzed every stimulus that in any way affects the economic health and economic future of the Tucson region. These subjects included human resources (including workforce and education), business real estate, infrastructure, innovation resources (especially higher education based resources), entrepreneurial resources, quality of life resources, government regulations and tax policies, proximity to national and international markets, overall business image and more.

This analysis process involved soliciting and considering input from several thousand residents of Southern Arizona as part of an extensive inclusion process. In the many years KMK Consulting has conducted these analysis across the nation, this was perhaps the most inclusive planning process witnessed. In this process, KMK Consulting worked with the Economic Blueprint Steering Committee, working groups, Chamber focus groups, political and Native American leaders, and individuals from across every racial and socio-economic group in order to consider the unique viewpoints of the region.

This process was extremely robust and has added immensely to the final report. Thus, while presented here as a SWOT Analysis, the process and the many points of input form a critical foundation for the Economic Blueprint, the starting point for a new competitive future of the Tucson region.

SWOT Analysis Organization

The most important component of this SWOT analysis is to identify the strategic issues that should be addressed that will propel the Tucson region to the forefront of the global economic marketplace. Additionally, the analysis must rank issues in terms of their importance in the plan. Finally, the analysis must set goals and objectives to define how the plan will address these strategic issues.

There are generally four types of strengths and weaknesses:

- Core Resources – Factors such as real estate, financial capital, infrastructure, knowledge assets such as the University of Arizona, quality of life and workforce.
- Geographical – Physical location or geographic proximity.
- Sectoral – Industry concentration or presence.
- Organizational – The presence, absence and/or effectiveness of key organizations, programs, strategies and policies supporting economic development such as TREO, city councils, chambers of commerce, etc.

The Tucson region also possesses certain unique strengths and weaknesses (known as factor advantages and disadvantages in economics), which increase or decrease the region's competitiveness in developing particular business and industry opportunities. An area's strengths and weaknesses for economic development should not be assessed in an abstract way. Special care has been taken to identify how and why the region's major strengths and weaknesses are important to future regional economic development.

Opportunities refer to existing and future sources of economic development the region should address. Opportunities vary in the degree to which the Tucson region and its leadership have control over their development. Opportunities fall into these five categories: industry based, geographic within the region and outside the region, and with respect to markets, both business and consumer markets.

Finally, threats are those factors beyond the control of Tucson's leadership that are both external and internal. The threats must be acutely dealt with through the actions of focused and collaborative leadership.

I. Leading Economic Development Strengths

Perceived Top Strengths

The consulting team conducted an extensive survey of area leaders, economic development experts, and local citizens about the region's strengths, weaknesses, opportunities and threats for economic development. While the Tucson region is seen as having many strengths for economic development, the following resources and factors received the highest ranking as economic development strengths:

1. The University of Arizona.
2. Pima Community College.
3. Tucson's proximity to Mexico.
4. Cultural diversity in the region.
5. Tucson region's current image as a place for leisure, recreation, and entertainment.
6. Military bases in the region.
7. Recreational & entertainment resources within the region.
8. Tucson region's current image as a place to live.
9. Executive housing.
10. Art and cultural venues in the region.
11. Tucson's proximity to Phoenix.

The strengths on this list can be clustered according to their overall type. The following groupings emerge in this regard:

Higher Education Resources
- The University of Arizona
- Pima Community College

Geographic Location/Proximity
- Proximity to Mexico
- Proximity to Phoenix
- Proximity to California

Culture, Diversity, Arts and Quality of Life
- Cultural diversity in the region
- Current image as a place to live
- Executive housing
- Regional art and cultural resources

Leisure, Recreation, and Entertainment Resources
- Regional image for leisure and recreation
- Regional recreational resources.

Industry/Institutional Resources
- Leisure, recreation, and tourism cluster
- Military bases in the region (part of Aerospace and Defense cluster)

While not emerging directly from the SWOT survey, another category strength should be recognized as benefiting the economic growth of the region: Positive New Collaborative Developments. Four specific examples most noteworthy:

Positive New Collaborative Developments

- RTA Initiative
- Sonoran Desert Conservation Plan
- TREO
- Dr. Robert Shelton, New UA President

Assessment

The region’s perceived leading resource, location, and factor strengths for economic development are those related to advanced education, quality of life, the leisure, recreation, and tourism cluster, cultural diversity, and cultural and artistic resources, and the regional economy’s defense sector.

While many regions offer a favorable quality of life, high quality recreation activities, and valuable arts artistic and cultural resources, these advantages are seen by business owners and executives as supporting advantages and not driving advantages for business competitiveness and economic development. We say this, not to detract from these factors’ value, but to remind regional economic development leaders that these factors must be accompanied by strong business and economic advantages if a region is to be perceived as highly competitive and attractive for economic development.

We believe that, in particular, the following highly rated strengths are true magnets for economic development:

- The University of Arizona.
- Geographic location with proximity to Mexico, Phoenix, and the California market.
- Regional leisure, recreation, and tourism cluster.
- Regional defense and aerospace cluster.

Higher Education Resource Strengths

The University of Arizona: The Gateway to Tucson (Core Resource Strength)

The University of Arizona ("UA") is Tucson's gateway to the world, and the world's gateway to Tucson. In our assessment, the UA is the Tucson region's single most important asset for economic development. As such, the university's resources must be carefully focused on supporting economic development in the future. While the UA's resources may appear to be vast and extensive, they must be used wisely in sparking future economic growth in the Tucson region.

The UA attracts talent from around the globe, provides a social and cultural environment that ignites and connects the local and global community, significantly impacts the regional and state economies and serves as the foundation for building the region's new technology-based, knowledge economy.

The University is a major generator of economic activity in Pima County and throughout the State of Arizona. Established in 1885 as the first university in the Arizona Territory and the state's only land grant institution, the UA educates nearly 37,000 students annually and employees more than 14,400 full and part-time persons generating payroll and benefits totaling $714.9 million (source: UA website). According to The University of Arizona Economic and Tax Revenue Impacts Fiscal Year 2004, UA's annual economic impact on the state's economy is $2.3 billion resulting in the creation of approximately 41,300 jobs. Locally, the UA purchases goods and services that result in nearly 2,000 jobs and $168.8 million in earnings in Pima County.

By embracing and executing its three-fold mission of excellence in teaching, research and public service, the UA has become one of the nation's top 20 public research institutions, featuring a world class faculty in many diverse fields including astronomy, plant science, biomedical science, business, law, music and dance. The UA offers 334 fields of study in 18 colleges and 12 schools located on a 378-acre campus. As one of only 62 members in the prestigious Association of American Universities, an organization that recognizes universities with strong research and academic programs, the UA has also earned many distinguished honors and recognitions, including:

1. Department of Astronomy - Recognized as one of the top astronomy academic programs in the world offering both undergraduate and graduate degree programs.
2. Steward Observatory - One of the world's leading astronomical research centers.
3. Six UA College of Science disciplines placed among the top 20 in their field in U.S. News &World Report's recent rankings. Analytical chemistry ranked 4th, applied math 13th, geology 7th, geochemistry 16th, geophysics 12th, and atomic/molecular/optical physics 8th.
4. In the 2007 edition of U.S. News & World Reports' "America's Best Graduate Schools," the UA management information systems program is ranked

4th, higher education administration is 12th and industrial engineering is 20th.

5. The University of Arizona ranks 14th among public universities in the most recent National Science Foundation published rankings of academic research expenditures.
6. UA ranks in the top 10 of NASA grant recipients and is No. 1 in space science research. Of universities funded by NASA and the Jet Propulsion Laboratory, the UA receives more grants than the next nine combined.
7. The McGuire Entrepreneurship Program at the Eller College of Management is the only program in the nation to make the top 12 on five ranking lists, including U.S. News' graduate and undergraduate, Entrepreneur Magazine's scientific evaluation and peer ranking and Princeton Review/Forbes. The program was also ranked the #1 program in nation by *Entrepreneur* magazine and the Princeton Review.
8. The Department of Communication is ranked among the top seven communication departments in the nation in research productivity.
9. An artificial heart developed by UA physicians and researchers is the only device of its kind approved by the U.S. Food and Drug Administration. The CardioWest Temporary Total Artificial Heart is an air-driven device that helps patients stay alive until a donor heart is available.
10. UA hydrology and water resources Professor Jim Shuttleworth was awarded the Nobel Prize for hydrological science and engineering. The International Hydrology Prize has been awarded to U.S. hydrologists only five times in 25 years.

Few communities can boast about having such a top notch research university in their midst. It is a feature of Tucson that is envied by those regions without such an institution. The University attracts research funds, leading faculty and top notch students from across the globe to Tucson. It will be the beacon of light by which Tucson must affix itself if the region is to thrive.

Consider UA President Dr. Robert N. Shelton’s comments at his inaugural address on Thursday, October 26, 2006:

> *“Ladies and gentlemen, we are looking ahead, and we cannot take our eyes off of the future, not even for one second, because Tucson and Arizona are counting on us to respond to three momentous responsibilities: to discover ways to improve the human condition, to apply those discoveries to our society, and to teach our discoveries to the next generation.”*

It is with these words of encouragement, leadership, vision and commitment to success that should engender pride in all Tucsonans and inspire tremendous confidence that The University of Arizona will continue to shape, define and serve as the community’s gateway to the world.

Pima Community College – Developing Tucson since 1969 (Core Resource Strength)

Tucson is fortunate to be home to one the country’s premier community colleges, Pima Community College. Serving the region since 1969, and ranked among the top 10 largest multi-campus community colleges in the nation, Pima Community College has a long-standing involvement enhancing Tucson’s regional economy, workforce and future of Tucson.

With 168 academic programs and a mission to “develop our community through learning,” it is essential that the region continues to build upon Pima Community College’s momentum and commitment to success. Employing 368 full-time instructional and educational support faculty and educating more than 70,000 students annually, the college continues to have a large economic impact on the regional economy.

Pima Community College is also committed to elevating the skills and talents of Tucson's workforce. Through its 169 transfer and occupational programs, the college works diligently to prepare college students for the workforce. It also works closely with many of region's current and relocating companies to enhance the skills and talents of adults in the workforce by customizing workforce training programs for 30 regional employers that will serve nearly 11,500 employees annually (source: Pima County Community website). As the region moves to more of a knowledge-based economy, Pima Community College will play a major role offering worker retraining and other labor development courses.

Geographic Location (Core Geographical Strengths)

Location and proximity to major business and consumer markets are key factors in the future economic development and growth of any market. Tucson is no exception. At 60 miles from the Mexican border, 100 miles from Phoenix and within 500 miles of California, Tucson has a unique opportunity to benefit from these dynamic markets.

Proximity to Mexico

There are two somewhat distinct areas of business involving Mexico, tourism and trade/non-tourism business. Tourism appears to be more clearly defined and accepted as a critical aspect of the regional economy. Trade and non-tourism industries are less apparent in the region's regional recognition of business connection to Mexico.

Tucson's close proximity and interactive relationship with Sonora, Mexico, continues to have a significant impact on the regional economy and should be considered one of the region's greatest strengths. More than 22 million Mexican tourists visit Arizona annually to visit, shop and play, creating an economic impact of $360 million (Source: 2001; The Economic Impacts of Mexican Visitors to Arizona by the Economic and Business Research Program, Eller College of Management, The University of Arizona). Of the 22 million annual Mexican tourists that visit the state of Arizona, nearly 16,000 non-American citizens fly into Tucson International Airport from Mexico. 16% of visiting Mexican tourists spends at least one night in Tucson and 72.2% identify shopping as their primary reason for visiting.

The economic impact of cross-border tourism is not the only benefit of the close relationship between Tucson and Mexico. Both economies benefit from public policies that have helped stimulate investment and cross-border commerce. Since the passage of NAFTA and the inception of the CANAMEX Corridor Project in 1995, the Tucson region and the State of Arizona have served as a catalyst and conduit for the efficient transportation of goods, services, people and information between Canada, Mexico and the United States. From 1999 – 2003, trans-border cluster development in the Arizona–Sonora Region outpaced many other U.S.–Mexico Border States. For example, employment trends in "high technology" related sectors such as software/computer services, semiconductor manufacturing, aerospace manufacturing, precision instrument manufacturing and pharmaceutical manufacturing outperformed other bordering regions (source: Arizona – Sonora Region: Regional Economic Indicators 2006; The University of Arizona, Office of Economic and Policy Analysis).

When considering trade and non-tourism business opportunities, border crossing issues and political instability in Mexico pose challenges that threaten their success. Risk analysis studies of possible investments in this area often recommend against such proposals. For such firms, the need for instant connectivity and speed to market, guaranteed just in time delivery of goods and a reliable business environment are major factors that will determine the success of an investment. Nevertheless, Tucson is too strategically located to not have a business growth strategy related to the opportunities of critical mass and production cost advantages in Mexico.

Regional Headquarters

We believe that the most fruitful opportunity to capitalize on Tucson's proximity and relationship with Mexico is for Tucson to position itself as an administrative and executive headquarters for domestic and international companies from which to manage operations in Mexico. Tucson sits opportunistically between Baja and Sonora, Mexico and business and financial centers in the United States. Baja, in particular, has recently begun to attract more foreign direct investment, notably from Chinese firms.

More analysis is warranted in terms of the viability of positioning Tucson as the regional headquarters for firms investing in Mexico. But it is clear that if Tucson does not position itself as a connector for firms operating in Mexico someone else will surely do so.

CANAMEX Trade Corridor Project

The CANAMEX Trade Corridor Project provides a unique and distinctive economic opportunity for Tucson and for the State of Arizona. The purpose of the project is to maximize the free trade opportunities between Mexico, Canada and the United States by developing the corridor's physical and technological infrastructure from Nogales to Tucson via I–19, Tucson to Phoenix via I–10 and north through Las Vegas, Nevada, Salt Lake City, Utah, Idaho Falls, Idaho, Montana and to the Canadian Border.

Specifically, the project calls for the implementation of a "Smart Corridor" that will focus on the development of five key areas: Smart Freight Corridor, Smart Tourist Corridor, Telecommunications Access for Rural Areas, Corridor Highway Improvements and Smart Process Partnerships, including the development and maintenance of a four-lane highway spanning the entire CANAMEX Corridor. Because highway accessibility is the number one factor in a company's decision to expand or relocate to a particular market (source: Area Development Magazine 20th Annual Corporate Survey), it can be anticipated that the project will continue to have unlimited potential to generate economic prosperity and development for the Tucson region.

NAFTA

NAFTA has also contributed to the advancement of Arizona and Mexico's strong import-export partnership. Sixty percent of Arizona's total global exports are due to NAFTA markets, with Mexico as the number one destination with 32 percent (source: Arizona – Sonora Region: Regional Economic Indicators 2006; The University of Arizona, Office of Economic and Policy Analysis). Moreover, Sonora, Mexico's, exports are also highly concentrated to NAFTA markets, with the United States being the number one destination with over 90 percent of their exports (source: Centro de Investigation en Alimentacion Desarrollo).

There are many reasons for the healthy trading relationship between United States and Mexico, including the geographic proximity, openness to capital markets, high quality and productivity standards, access to both country's large domestic markets and trade-friendly public policies. But perhaps equally important are the strong ethnic, cultural and social commonalities shared by many of their regional economies, including Tucson and Sonora.

Both regions benefit from similar cultural characteristics that have helped foster and nurture healthy cross-border business relationships. Case in point, La Costeña/Arizona Canning Co., a leading Mexican manufacturer of canned and preserved foods recently selected Tucson as its new U.S. headquarters. While there were many factors in their decision to choose Tucson, including availability of real estate, the company's comfort and familiarity with the Tucson market helped secure the investment.

Tucsonans should be optimistic about the future economic benefits generated from having a strong trade relationship with Sonora and other Mexican states. With solid public policies such as NAFTA and the CANAMEX Trade Corridor, and with persistent efforts to develop stronger, more prosperous relationships, Tucson can continue to reap the economic benefits of being a primary destination for Mexican tourists and businesses.

Proximity to Phoenix

Tucson's proximity to Phoenix is a major advantage that should continue to be leveraged and marketed whenever possible. Phoenix, which is one of America's fastest growing cities and the 12th largest metropolitan statistical areas, compliments Tucson in many ways. Because the two cities are only 100 miles apart, companies, residents and visitors benefit from access to two airports, Arizona's two largest universities, year-round professional sports teams, cultural event and proximity to the State Capitol. Going forward, it is essential Tucsonans continue to work together with Phoenix to develop and implement economic development strategies that will benefit both markets.

Many urban researchers anticipate that Tucson and Phoenix's steady growth will cause both markets to eventually merge, creating a "mega region" (source: America 2050: A Prospectus). Branded as the "Arizona Sun Corridor," the mega region is expected to be equivalent to Indiana's size and population, and will become the center of one of the 10 most populated centers in the next 35 years (source: "When Phoenix, Tucson merge"; The Arizona Republic, April 10, 2006). With a current combined population of about 5 million, Phoenix and Tucson are expected to reach a population level of more than 10 million by 2040.

What does the anticipated growth and "mega region" depiction mean for Tucson? Businesses will continue to invest in the region because of the projected future growth opportunities. It also means Tucson must be highly dedicated to a priority of principled land use planning and infrastructure development. Managing growth will be the key to retaining the charm and authenticity of the region. It will be important for the community to be good stewards of natural resources such as the terrain, water and the environment.

Proximity to California

The in-migration for former California residents to Arizona has been a key contributor to Arizona's population growth. From 2000 – 2004, Arizona had the second highest average annual level of positive migration in United States with 66,344 net migrants (Source: US Census Bureau, Domestic Net Migration in the United States: 2000 to 2004), trailing only Florida with 190,894 net migrants.

In addition to the growing percentage of Californians moving to other states such as Arizona, the same trend is also true for many California-based companies. In the past 36 months, three major biotech companies have recently chosen to build new operations outside of California and create high-paying jobs elsewhere. Although all three transactions landed in Florida, these examples serve as evidence of California-based, high value companies seeking alternatives in regions outside of California.

Tucson will continue to benefit from the steady in-migration of Californians seeking a change of pace and a more affordable quality of life. To fully capitalize on this opportunity, Tucson and the State of Arizona should meticulously pursue the California-based companies who seek a more stable, cost friendly, pro-business environment. The caution, of course, is to ensure that the region maintains balanced growth in both the environment and infrastructure.

Culture, Diversity, Arts and Quality of Life (Core Resource Strength)

Tucson's natural beauty, recreational opportunities, cultural authenticity and livability are defining characteristics of Tucson's regional economy and rich quality of life. This attractive balance of amenities should continue to be promoted to help attract talented individuals and corporations to the Tucson region.

Quality of life is arguably the most overused and ambiguous phrase in economic development marketing. Even though nearly every community sells their quality of life as a distinguishing factor of their region, Tucson's quality of life is worthy of praise and branding.

Tucson's weather and landscape, featuring rolling hills, carved canyons, a horizon decorated by five mountain ranges and fertile Sonoran desert create the perfect environment to live, work and play. With nearly 350 days of sunshine - more than any other city in the United States – and an annual average high temperature of 82 degrees and low temperature of 55 degrees Fahrenheit, Tucson enjoys a mild climate that rivals any region in the country.

Founded in 1775, Tucson has done an enviable job preserving and showcasing the region's authentic and enriching cultural, recreational, and artistic assets. The city, still referred to as the Old Pueblo because of its adobe style fortresses that once defined its borders, is home to some of the finest art galleries, museums, performing arts centers, golf courses, outdoors activities, athletic venues and top spa destinations. This is not by accident. Tucsonans have worked diligently to preserve their native culture and develop new assets that have broad market appeal.

A recent example of Tucson's commitment to preserving their cultural heritage and authenticity is the recent completion of a six-year, $13 million restoration of The Fox Tucson Theatre. A cultural asset that sat vacant since 1974, The Fox Tucson Theatre now seats nearly 1,200 patrons and is home to many of region's finest arts, music and theatre performances in the region. It also contributes to the region's "cool" and "creative" factors that are widely used to attract and retain young people.

Tucsonans have also done a fantastic job showcasing their region through modern, broad-based events and attractions that will continue draw people and investment to the region. Events such as Major League Baseball Spring Training and the Puro Mexicano Tucson Film Festival draw guests that reach well beyond the regional boundaries. It is estimated that in 2007 more than 280,000 people will attend a Tucson Spring Training games generating over $30 million in economic impact (source: visittucson.org).

Proving nothing is sacred, the minor league presence is in jeopardy now. What should the region learn from this situation? Perhaps to assume that these types of activities are mobile by nature and therefore the community must be careful how much it invests to attract and keep them?

Leisure, Recreation, and Entertainment (Geographical Resources Strength)

Everybody knows that Tucson is world-renowned as a top destination for golf and spa resorts and is known for its dedication to University of Arizona sports. The region can boast top tennis and cycling facilitates, as well as mountain climbing, Major League Baseball Spring Training, and the plethora of UA sports competing year round.

Regarded as the top spa destination in the world by the renowned Zagat Survey (source: www.visittucson.org), Tucson will continue to benefit from its natural appeal of beauty, wellness and healthy lifestyle opportunities. Miraval and Canyon Ranch were voted #1 and #2 respectively in 2006 by Conde Nast Traveler readers.

Golf courses also contribute to Tucson's healthy and active lifestyle. Home to three of the world's top 100 golf courses according to the 2006 Conde Nast Traveler Golf Poll, Tucson's mild climate, breathtaking scenery and fabulous weather make the region a top golf destination all year around (source: 06- 07 Tucson Regional Economic Profile). Because the region's remarkable courses are a perfect combination of beauty and elegance, the World Golf Championships – Accenture Match Play Championship took place near the City of Marana at The Gallery at Dove Mountain for the first time in February 2007. This great event features 64 of the world's top golfers, and also showcases Tucson's tremendous quality of life.

This unique aspect of the Tucson region must continue to be marketed as a competitive advantage.

Industry/Institutional (Sectoral Resources Strength)

Tucson's hospitality and tourism cluster employs the largest number of people in the region. However, Tucson is ranked 44th in hospitality and tourism nationally as a region and 40th for entertainment. This compares to Phoenix which ranks 11th in hospitality and tourism and 16th in entertainment. San Diego ranks 8th in hospitality and tourism and 19th in entertainment. The numbers are somewhat different when comparing cities. The City of Tucson ranks 28th nationally in hospitality and tourism, 45th in entertainment. Rankings aside, the tourism cluster in Tucson is a strong, vibrant and critical business sector from a branding perspective. Tucson carries lots of respect and credibility as a center for leisure and recreation.

Another key institutional resource are the military bases located in the Tucson area. The military is a key employer in Tucson and a critical component of the aerospace and defense cluster as referenced below.

Aerospace and Defense Industry – Impact, Distinctive, High Value (Sectoral Strength)

The aerospace industry is a key employer in the Tucson region and is considered one of the community's stronger private sector economic clusters. Home to nine aerospace product and parts manufacturing companies that generate nearly $1.5 billion in total industry sales and employs 184,139 people (source: Harris Selectory Database for Pima County), Tucson has developed into a premier aerospace cluster community.

Raytheon Missile System is the largest aerospace firm in the region, employing nearly 10,800 employees. Raytheon is the second largest employer in Pima County. Other key aerospace related companies in the region include Honeywell Aerospace (740 employees), Bombardier Aerospace (600 employees), Hart & Cooley (375 employees), Precision Shooting Equipment (300 employees), Universal Avionics Systems Corp (240 employees), Sargent Controls & Aerospace (239 employees), Walbro Engine Management (150 employees), Hamilton Aerospace Technologies (50 employees) and DunnAir Business Jet Completion Center (50 employees). (source: TREO IEDC Tables – 2006 Public).

Equally important is the aerospace sector's impact on Tucson's economic distinctiveness. The aerospace sector is a high value, high skilled industry that attracts and retains top notch talent to the region. Tucson's highly concentrated aerospace product and parts manufacturing sector has an 8.35 location quotient (source: economy.com), a ratio calculated to compare a region's industrial activity level to the rest of the United States. The location quotient means Tucson is 8.35 times more concentrated in the aerospace product and parts manufacturing industry than the average of all metropolitan statistical areas across the country.

The Tucson region is also home to Davis Monthan Air Force Base (DMAFB) and the 355th Wing. DMAFB employees 8,233 people and is a powerful economic asset that attracts many private sector companies to the region (source: TREO IEDC Tables). Their primary missions are to train and provide support for A/OA-10 pilots and to provide forward air control to ground forces worldwide.

Another valuable component of DMAFB is their impact on Tucson's workforce. The civilian spouses and family members of enlisted professional stationed at DMAFB, as well as the retired military professionals that make Tucson their permanent home, provide a high quality labor force for companies in the region. Many of the aerospace industry's finest companies benefit from the vast experience of military retirees that choose to continue their professional careers in Tucson.

Positive New Collaborative Developments (Organizational Strength)

Regional Transportation Authority: 20 Year Plan to Improve the Region's Transportation Options

The passage of the Regional Transportation Authority's (RTA) $2.1 billion regional transportation plan is an outstanding example of collaborative advantage and the region's ability to demonstrate political willpower, private-sector leadership and community inclusion. Passed by a 3-to-2 margin on May 16, 2006, RTA paves the way for a 20-year transportation plan that gives the region the ability control its transportation future. The plan, which is funded through a half-cent sales tax that will be collected by the state and returned to an account managed by the RTA, initially includes 35 roadway improvement projects, including expanding Sun Tran and other public-transit services, enhancing and expanding the area's pedestrian bicycle routes, funding for wildlife corridors and providing assistance to businesses affected by the projects.

Equally as impressive as the plan itself is the regional collaboration and leadership demonstrated that was ultimately successful in achieving this important transportation planning and funding milestone. The RTA, which serves Tucson, Pima County, Marana, Oro Valley, Pascua Yaqui Tribe, Sahuarita, South Tucson and Tohono O'odham Nation, has a 9-member Board that includes representatives from all eight jurisdictions and one representative of the Arizona Department of Transportation. This structure clearly demonstrates the region's ability to unite in mission and focus to promote and advance the community's commitment to regionalism, an economic development strategy designed to strengthen the entire region.

Regionalism and community inclusion were also evident in the RTA Board's decision to create two committees designed to gather community intelligence and provide technical expertise for the RTA plan. The Citizens Advisory Committee, a 35-member committee responsible for collecting public input on regional transportation priorities, ensured all residents and groups, including the disabled, businesses, neighborhood groups, employees groups, cultural groups and transportation groups, were included in the RTA planning and development process. A 21-member Technical/Management Committee was also created. This group of technical staff and transportation experts from the region assisted on the technical aspects of the plan. Both committees were wisely created and proved to be invaluable resources that provided representation from all sectors of the community and contributed significantly to the overall passage of the RTA.

Sonoran Desert Conservation Plan

While not necessarily new, as compared to these other three examples which are highlighted, the Sonoran Desert Conservation Plan is so large in scope and significance that it is compelling to highlight it in this context as a truly great example of collaboration across many levels of the region's economy, citizenry, culture, environment and industries. This plan is a great case study for other regions around the country and this same type of collaborative priority for comprehensive land using planning should be commended within Pima County.

Tucson Regional Economic Opportunities, Inc.

TREO represents a new and exciting commitment to economic development. The City of Tucson government and Pima County get great credit, in our judgment, for exercising the leadership to form this organization and to be its primary funders. TREO's first full year in operation produced a very favorable report card, both from the many citizens who reported to us their favorable opinion of TREO and in our judgment of the organization to comparable organizations across the country.

With great focus on retention and expansion of existing business, there has also been an influx of new companies that adhere to the objectives of TREO in bringing higher value jobs providing great opportunities for Tucsonans. Much work remains to evolve TREO into a private sector led organization. But for now, the leadership of the public sector has been the significant collaborator to set this new set of economic development priorities in motion through the form of TREO, including the undertaking of this economic blueprint process.

Dr. Robert Shelton

As discussed in the context of the University Arizona in this SWOT Analysis, the new era of senior leadership at UA will also provide a new era of leadership for the community of Tucson in terms of economic development. This pledge is clearly set forth in Dr. Shelton's inaugural address on October 26th. This new level of collaboration between the University, as driven by Dr. Shelton, and the Tucson community should be expected to produce, not only an unprecedented partnership, but tangible impact in numerous economic development priorities for the next 20 years and beyond.

Population Growth: Regional and Statewide (Core Resource Strength)

Population growth plays multiple roles. It is a strength to the extent it fosters workforce and labor pool growth. Population growth is an opportunity to the extent it creates a regional consumer market. However, it is a weakness to the extent when it grows too rapidly and cannot be supported by infrastructure and services. Moreover, it is a threat to the extent that residential growth and development consume too much of an area's land resources.

To fully address population growth, especially in Southern Arizona, immigration must also be considered. Immigration is a strength for Tucson as it creates a diverse global community that enriches the region, improving quality of life and workforce diversity, specifically offering bilingual assets for employers. It also successfully expands the regional labor pool. It does, nonetheless, pose a challenge for Tucson in servicing a major influx of immigrants.

At its core, population growth is considered a strength and an opportunity for many industry sectors. It is an even more promising opportunity in Tucson because of the generational and cultural mix of high end retirees, young Hispanics with a strong work ethic and seasonal and temporary residents including those at the University of Arizona and with the military.

Tucson's population growth rate will continue to have a major impact on the region's future economic potential. As people continue to choose Tucson as a place to live, work, and play, consumer demand will increase, creating more jobs and economic opportunity. More people also translate into more workforce capacity, which can be very attractive to companies and investors.

Pima County's population has grown annually by more than 20,000 people, and is expected to reach 1 million by 2007 and 1.08

million by 2010 (Source: Arizona Daily Star, "Population Growth Drives a Vital Cycle in Tucson Economy"; 03.12.2006). This high growth rate has been largely due to the new residents moving to Tucson from other parts of the country, including a high percentage of retirees and the rapidly growing Hispanic population.

The State of Arizona is also continuing to see strong population growth, making it the country's fastest growing state in 2006 with 6 million current residents (source: www.treoaz.org). The state is projected to add another 8.5 million residents by 2036. It is estimated that 1.75 million residents will be living in Tucson in 2036, with nearly 10 million living in metropolitan Phoenix (Source: Eller College of Management; "Forecast for Arizona in 2036: A Top 5 State"; Marshall J. Vest). This growth leads many to predict metro Tucson and metro Phoenix will become a "megapolitan area," a term describing two or more metropolitan areas connected by transportation, business and culture. With the I-10 corridor already joining the two cities, the two metro markets will indeed continue to merge.

Population growth does create challenges too. It will require Tucsonans to ask important questions and make tough decisions. Where are the people going to live? Are we prepared to meet the growing transportation and infrastructure needs? What do we need to do to ensure our K-12 schools have the capacity to teach our children? Do we have the right land use policies to preserve our authenticity? Are we prepared to provide key services, such as medical services, police and fire safety?

Tucson's population growth will continue to have a significant impact on the regional economy. But to maximize the opportunities that lie ahead, it will be critical for the community to make wise decisions that balance the need for managed growth with preserving the authenticity of the region.

III. Leading Economic Development Weaknesses

Perceived Leading Weaknesses

These 10 factors were rated as the region's top weaknesses impeding economic development:

1. K-12 educational resources in the region
2. Private sector leadership
3. Downtown Tucson
4. Ability to retain and grow the region's young talent pool
5. Local political leadership in general
6. Water resources
7. Local government development review and permitting procedures
8. Interstate and other highway transportation resources
9. Entrepreneurship environment
10. Current immigration issues and trends

Public K-12 Education: The Cornerstone of Our Future (Core Resource Weakness)

Arizona's public school system must be a top priority. Businesses need an educated and highly-skilled workforce to prosper in today's knowledge-based economy, and companies interested in moving to Arizona will continue to evaluate the public system when making their decision.

When residents of Tucson were asked, Tucson schools got bad marks. When it was not asked, people offered bad marks. Statistics support the residents' negative image of the local schools. For example, consider the charts on the following three pages.

Table 1: School and Education Quotient Analysis
Source: Expansion Management: https://www.relocationtoolkit.com/

Schools	Overall Rating Percentile	School District Rating	Academic Performance Percentile	Spending on Public Education Percentile	Community Affluence Percentile
Amphitheater Unified District	81	**Blue Ribbon**	87	26	59
Catalina Foothills Unified District	85	**Gold Medal**	93	7	96
Flowing Wells Unified District	61	**Green Light**	72	2	12
Marana Unified District	46	**Green Light**	55	2	52
Sunnyside Unified District	11	**Yellow Light**	18	12	1
Tucson Unified District	64	**Green Light**	70	20	40
Vail Unified District	44	**Green Light**	47	20	78

Data expressed in percentiles with
99% = highest; 1% = lowest
All data 2006.

District Rating Key	
Gold Medal	Top 16%
Blue Ribbon	Top 33%
Green Light	Middle 42%
Yellow Light	Bottom 25%
Red Light	Bottom 10%

Table 2: Detailed Tucson Area School Comparisons

In-Depth School Report	Tucson, AZ Amphitheater Unified District	Tucson, AZ Catalina Foothills Unified District	Tucson, AZ Flowing Wells Unified District	Marana, AZ Marana Unified District	Tucson, AZ Sunnyside Unified District	Tucson, AZ Tucson Unified District	Vail, AZ Vail Unified District
Overall Rating Percentile	81	85	61	46	11	64	44
School District Rating	BLUE	GOLD	GREEN	GREEN	YELLOW	GREEN	GREEN
Academic Performance Percentile	87	93	72	55	18	70	47
Spending on Public Education Percentile	26	7	2	2	12	20	20
Community Affluence Percentile	59	96	12	52	1	40	78
Total District Enrollment	17,228	5,012	6,089	12,363	15,602	61,958	5,102
Academic Performance							
College Board Score Percentile	81	97	62	69	8	48	59
Graduation Percentile	79	71	72	29	54	87	31
Spending on Public Education							
Minimum Teacher Salary Percentile	25	28	29	32	50	55	26
Average Teacher Salary Percentile	28	9	3	3	16	29	24
Student-Teacher Ratio Percentile	17	34	12	17	25	24	31
Per Pupil Expenditure Percentile	36	15	13	6	25	34	5
Community Affluence							
Adults with at least HS degree Percentile	71	96	23	40	2	32	87
Adults with at least BA/BS Percentile	76	98	16	62	0	67	58
Poverty Households Percentile	46	90	27	73	2	26	89
Household Income Percentile	38	94	2	30	3	38	71

Table 3: State Educational Performance Data: Pima and Other Arizona Counties

AIMS Spring 2006

ARIZONA'S INSTRUMENT TO MEASURE STANDARDS

All Schools

GRADE 12

Summary Results

	MATHEMATICS						READING						WRITING					
	Number Tested	Mean SS	FFB	A	M	E	Number Tested	Mean SS	FFB	A	M	E	Number Tested	Mean SS	FFB	A	M	E
Arizona	**1378**	**661**	**61**	**23**	**16**	**0**	**1799**	**646**	**23**	**61**	**16**	**0**	**1697**	**622**	**31**	**58**	**11**	**0**
Apache	85	671	41	33	26	0	86	662	6	60	34	0	68	662	10	43	47	0
Cochise	44	651	82	11	7	0	48	642	25	65	10	0	52	612	38	56	6	0
Coconino	61	653	72	23	5	0	67	643	27	58	15	0	57	625	35	44	21	0
Gila	1	*	*	*	*	*	2	*	*	*	*	*	3	*	*	*	*	*
La Paz	7	*	*	*	*	*	8	*	*	*	*	*	7	*	*	*	*	*
Maricopa	734	662	61	22	17	0	1049	644	25	61	14	0	957	616	36	56	8	0
Mohave	11	654	73	18	9	0	11	639	9	91	0	0	11	599	45	55	0	0
Navajo	62	657	66	19	15	0	58	651	19	59	22	0	52	644	15	62	23	0
Pima	213	658	66	22	11	0	274	644	24	62	14	0	295	627	24	66	9	0
Pinal	26	672	38	35	27	0	29	657	14	59	28	0	30	625	30	53	17	0
Santa Cruz	56	670	36	41	23	0	59	657	14	59	27	0	62	650	11	66	23	0
Yavapai	10	*	*	*	*	*	13	634	46	54	0	0	15	625	33	53	13	0
Yuma	68	664	59	16	25	0	95	649	21	62	17	0	88	621	23	72	6	0

1. Performance Levels: FFB = Falls Far Below the Standard; A = Approaches the Standard; M = Meets the Standard; E = Exceeds the Standard. This number equals the percent of students in each performance level.
2. Percentages may not add up to 100% due to rounding.
3. Items of data containing information about fewer than 10 students have been replaced by an asterisk (*) to protect student privacy.

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Arizona's public education system ranks well below the national average in both education attainment and funding per student. Consider the following rankings:

- In 2002, Arizona's 8th grade students finished 42nd in reading proficiency and 40th in math performance (source: 2002 National Assessment of Educational Progress)
- 73% of Arizona's 18-24 year olds have high school certificates, ranking Arizona the 50th (source: National Center for Public Policy and Higher Education "Measuring Up: 2002")
- 26% of Arizona's 18-24 year olds enroll in college, placing the state in 45th place (source: National Center for Public Policy and Higher Education "Measuring Up: 2002")
- Arizona ranks 50th in educational spending per child (source: The Arizona Daily Star, "AZ schools' U.S. – worst ranking is denounced"; October 19th, 2006)
- Arizona's per pupil expenditures adjusted for regional spending differences place the state 49th (National Center for Educational Statistics, 2004)
- Arizona ranks last in "Smartest States" ranking (Education State Ranking 2006 -2007; Morgan Quitno Press)
- Arizona ranks 22nd for academic achievement; based on SAT, ACT and National Assessment of Educational Progress (American Legislative Exchange Council, 2006)

EDUCATIONAL ATTAINMENT

Degree	***Pima County***	***Arizona***	***U.S.***
High School	86.8%	83.8%	84.2%
Bachelor's Degree	30.1%	25.6%	27.2%
Advanced Degree	12.2%	9.3%	12.0%

Source: American Community Survey, 2005

Upgrading Arizona's public, K-12 education system will be essential for competing in today's global, highly skilled economy. If progress is not made relative to public education, the State and the Tucson region will continue to have a major competitive disadvantage when trying to attract and retain companies and high-caliber workforce talent.

Downtown: The Center of Convergence (Core Resource Weakness)

The heartbeat of most successful and prosperous metropolitan markets is their downtown. If the heartbeat is not strong, the rest of the region suffers. The same holds true for Tucson. To reach its economic potential, Tucson must transition its urban core from a floundering inner city into a safe, clean, and vibrant downtown that provides high value employment opportunities, affordable residential living, dining and entertainment options. If Tucson chooses not to make downtown revitalization a top priority, it will continue to be at risk of falling behind other markets that are aggressively reinventing their urban cores into a place of destination.

A successful downtown is critically important to both the short and long term economic health of the region. It has the ability to reenergize a community, advance its social fabric, celebrate its unique cultural and ethnic treasures, generate economic opportunity and attract people from all demographics and ethnicities to enjoy and celebrate the unique experiences that only an urban core can provide. But perhaps the greatest impact a vibrant urban core can have on a regional economy is its ability to contribute to the market's distinctiveness, a factor that is important to attracting and retaining talent.

It is widely known that "young professionals" are attracted to markets that provide a strong urban core and are viewed as a "destination market." Sixty-six percent of college-educated 25 to 34 year-olds report they will make the decision of where they want live first, then look for a job within the area second. Destination matters. Additionally, 66% of this group also says they are likely to live in or near the urban core of the city they chose (source: CEOs for Cities; The Segmentation Company; "Attracting the Young, College-Educated to Cities").

In addition, more American's hold college degrees than ever before, but they are consistently choosing to live in fewer metropolitan markets. In Richard Florida's recently published article, "Where the Brains Are," (source: The Atlantic Monthly, October 2006), he proves that America's educated elite are flocking to fewer cities and leaving the rest of the country behind. He cites many reasons for this rapidly changing dynamic, including the significance of a metro's aesthetic appeal – beautiful, energizing and a fun place to live – and the need for talented people to live in a vibrant metro market to reach their economic potential and to realize their value. According to Florida, these trends are even more common with recent college graduates. College graduates choose to live in urban environments and stay there as long as they are "making it" or a forced out because they cannot afford to live there.

Redeveloping Tucson's downtown is not only an important element of the region's future economic growth and prosperity, but it is also important to those currently living in downtown. Tucson's current urban population, which is largely Hispanic, will benefit significantly from increased investment and the successful revitalization of the urban core. Real-estate will appreciate, economic opportunity will be widespread, social activity and cultural celebrations will connect those living in the foothills with the urbanites and the community will benefit from newly-refined distinctive assets that have the potential to attract businesses, investment, retain and attract talent and elevate the perception of the region.

Although Tucson has attempted to stimulate its downtown through projects such as Rio Nuevo, a downtown redevelopment initiative designed to reinvent downtown, their efforts have not been viewed as successful from the community at large. Many Tucsonans are concerned with Rio Nuevo's lack of management, strategy, execution and accountability. Private-sector leaders are frustrated because they have been excluded from the process and with leaderships' open disagreements with the University of Arizona.

Downtown Tucson in general is falling behind. The statistics are going in the wrong direction. Fortunately, the opportunity to reinvent downtown is Tucson's greatest opportunity. Utilizing $550 Million in TIF money in a balanced fashion grounded in market based economic development projects along with a blend of lifestyle enhancements is essential to the region's revitalization. The future of downtown Tucson centers on offices and housing. With these two areas of priority, the right kind of retail will follow.

The region needs to also focus on the opportunity to physically tie the University of Arizona campus to the central business district of Tucson, a mere distance of one half mile. The opportunity for the University campus to physically become part of downtown Tucson must be a major feature of the downtown revitalization plan.

Availability of Quality Commercial Real Estate: Stalling Economic Growth (Core Resource Weakness)

Tucson continues to lose companies interested in relocating to the region because the real estate options available at the time did not meet the needs of the company. The perception survey completed by ccintellect in February 2006 clearly illustrates this point. 23 site selectors were interviewed and they consistently mentioned:

> "(The Tucson region) has made the cut but not won because…real estate moves very quickly."
> "The (Tucson region) gets on the list for higher end call centers. But the real estate is either gone so quickly or we don't have what we need at the time. If real estate works out, they (our clients) will go there."

Tucson's limited availability of quality of real estate options is a competitive disadvantage for the region. To illustrate this point, consider Expansion Management's recent "Top 40 Real Estate Markets for 2006" rankings. Tucson did not make the list while four of their eight comparative markets did, including: Albuquerque, New Mexico (#22); Salt Lake City, Utah (#23); Austin, Texas (# 24); and Denver, Colorado (#35.) The rankings were based on the region's ability to provide businesses maximum choice at the lowest price, including vacancy rates, lease rates and the steady purchase and build rates.

Availability of quality real estate makes a difference in attracting high growth firms. The recent relocation of La Costeña Foods into the former Slim-Fast plant is a perfect example of a company that was able to find available real estate that fit their needs. To improve the economic competitiveness of region, Tucson will need to improve its inventory of available real estate to prevent the region from losing companies to other markets.

Land Use and Infrastructure Planning: Changing the Past by Shaping the Future (Core Resource Weakness/Future Primary Opportunity)

Although the Sonoran Desert Conservation Plan is a truly impressive example of sound planning, overall, Tucson continues to be negatively impacted by previous land use planning and infrastructure decisions that have left the region unprepared for future quality growth. This is a policy failure of both government and the community. The gross long term failures to make sound planning decisions will continue to hinder the region and will become an increasingly more severe threat to the future of Tucson if these issues are not addressed as a top priority.

If addressed thoroughly and swiftly, the previous land use and planning and infrastructure decisions can be fixed and the current threat can be turned into a strength over the next 10 years. For this to occur, immediate action needs to undertaken in the planning and development of 10 geographic areas within the county. This effort will be difficult and costly. For example, the county is currently pursuing an $800 million bond issue to improve the region's infrastructure. If passed, the citizens will need to make the financial investment necessary to ensure the region does not continue to suffer from previous decisions that have put the community at an impasse.

The City of Tucson and Pima County could improve this situation by working more closely on a joint capital improvement plan and working on common solutions to land use issues in the City and the County.

Entrepreneurship Environment (Organizational Weakness/Current Primary Opportunity)

A current area of weakness that can transform into one of the region's core strengths is the entrepreneurship environment. This opportunity applies not only applies to the City of Tucson but across the county. As a small business community, and place where the University of Arizona is known for its entrepreneurship program, Tucson must revaluate its current small business resources and recommit to supporting entrepreneurship stronger going forward.

Many of the region's small business leaders feel passionate, if not livid, over the perceived lack of support provided to entrepreneurs. Some of them believe that small business is withering on the vine in Tucson and Pima County for many reasons. There appears to be a significant miscommunication and general lack of communication that is creating a low awareness of available services. There are too many commissions and groups supposedly helping the small business community but their report cards of success are not evident.

A byproduct of too many groups doing too little is the development of an attitude of entitlement. Being a successful small business is not about entitlements. These entrepreneurs do need support in the areas of finance, accounting, legal assistance, management and employee training, a total resource center providing information on permitting and licensing requirements, but not entitlements.

Before Tucson can fully optimize the economic benefits of its entrepreneurship community, it must first restructure its strategy and develop a robust support system to the benefit of the region's small businesses.

Tucson City and Pima County Government: The Need for More Effective Governance (Organizational Weakness)

We will start by saying that it takes leadership to not shoot the messenger when one is criticized. But the fact is that everyone, and many unsolicited, expressed open and wholesale disappointment for both City Hall and the County government. Many of the Tucson community's civic, business and government leadership identify City and County government as one of the region's biggest weaknesses.

Although many communities across the United States are challenged by what is often perceived as "weak" City and County government structures, it is especially concerning that Tucson City and County governments are consistently viewed as ineffective and anti-business governing bodies. Perhaps more so than the elected officials, the region's bureaucrats are simply viewed as anti-business across the board. We are told no one encourages them to do a good job. Many comments received focused on examples of special interest groups driving the decisions of government, with little to no input from business groups.

While there are plenty of examples to point out between the City and the County equally, a few will be touched on. Part of the concern at the City level is focused paradoxical ward system of government used during the primary election and citywide popular vote in the general election. This form of government is a concern because of the potential that an elected member of City Council may represent a specific ward while not winning their own ward in the general election. Moreover, using a ward system at all, so the perception goes, leads to decisions that are location based and not market-based.

However, more important than structural issues is the perceived anti-business attitude present at both the City and County level. From large companies, to small businesses, to even private homeowners, evidence is plentiful. The recent six-to-one vote by City Council requiring extensive impact studies on diminishing wash areas where any type of construction, even a homeowner's retaining wall within 100 feet of this so called wash area, is perplexing. Another example is the percentage of land that must be set aside in any development. Setting aside 70% or 80% of a piece of land raises a red flag about the City's attitude toward balanced development.

At the County level, the recent unfortunate decision to expand County offices by displacing private sector tenants in one of the few downtown office buildings is troubling. The central business district of Tucson is starving for private sector office workers.

Our final example of frustration and everybody's favorite topic is Rio Nuevo. This project continues to be the source of immense criticism directed toward City Council. The City of Tucson is well positioned financially to leverage its large sum of tax increment financing (TIF) resources, and hopefully it will be put to good use soon. But the incessant delays and acrimony has stripped most of the remaining confidence in the City, causing a widespread concern that the region will suffer a missed opportunity to develop and reinvent downtown. The incredible opportunity is the $550+ million in TIF money which most cities would die to get their hands on.

In Tucson, unfortunately, people have suggested time and again that unproductive politics are harmful to the community and inhibit the economic development progress significantly. This community needs to work on resolving the underlying sources of political differences which certainly seem to be rooted in race, culture, and long standing socio-economic issues.

The bottom line here is not to point the stick at government. Indeed, it is not the government's job to build a great Tucson. Nor is it the government's job to deliver successful financial statements to businesses located in the City or the County, whether large or small. Rather, it is the job and the responsibility for a partnership, both public and private, with a shared agenda, in total collaboration, vision and sustained leadership, focused on jointly producing effective governance and a PLACE where businesses thrive and offer higher paying jobs to Tucsonans. This joint effort must be pursued while maintaining reasonable and balanced safeguards for the outstanding environment that has been historically at the foundation of Tucson's attractiveness as a place to live. We are convinced Tucson can have it all. We think the opportunity is immense and perceived weakness of government as a very significant opportunity, one that is absolutely critical if Tucson is to have a competitive future.

Crime: An Unnecessary Barrier to Success (Core Resource Weakness)

Tucson's high crime rate is a weakness for the community and impediment to its prosperity. Comparing Tucson's crime rates to the US average, the results are worrisome. In every measured category, Tucson's crime rate per 100,000 people is significantly higher than the national average:

Table 4: 2004 Crimes (2005 Data available in Nov. 2006)

Crime Type	Tucson 2004 Total	Tucson Per 100,000 People	National per 100,000 People
Overall Tucson Crime Index	51917	9936.5	3982.6
Tucson Violent Crimes	4873	932.6	465.5
Tucson Murders	55	10.5	5.5
Tucson Rapes	387	74.1	32.2
Tucson Robberies	1552	297	136.7
Tucson Aggravated Assaults	2879	551	291.1
Tucson Property Crimes	47044	9003.9	3517.1
Tucson Burglaries	6302	1206.2	729.9
Tucson Larceny/Thefts	34404	6584.7	2365.9
Tucson Motor Vehicle Thefts	6338	1213	421.3

Source: www.areaconnect.com; Based on final 2004 FBI Crime Statistics

Forbes.com also ranked Tucson the worst city for crime in the top 200 metro markets in the United States. The ranking is based on crimes per 100,000 residents and sources used to collect the data include Economy.com, Sperling's Best Places and FBI Index of Crime.

Although there is some debate around the issue of how Tucson reports its crime statistics, the crime rate continues to hinder the region's image and economic prosperity. For the community to be able to reach its economic potential, Tucson will need to become a safer place.

IV. Leading Economic Development Opportunities

The SWOT survey results suggest that several sources of economic opportunity should be considered for development in the future. These opportunities are separated into two groups. The first is a list of top ranking industry sector-based opportunities, and the second is a list of broader sources of economic opportunity for the region. Each list reflects the perceived importance of the opportunities it contains.

Specific Industry Opportunities

1. Advanced health/medical services development.
2. Optics/Photonics-related development.
3. Biosciences-related development.
4. Bioinformatics-related development (Information technology applications for the biosciences).
5. Information technology-related development.
6. Aerospace/Defense-related development.
7. Environmental technology/Green business-related development.
8. Nanotechnology-related development (Development of extremely small components and structures used in electronics and other fields).
9. Travel and tourism-related development.
10. Corporate/regional office development.

In looking at the overall ranking scores for these 11 industry-based opportunities, the difference among them is fairly small.

Broader Sources of Economic Opportunity

1. Existing business retention and expansion.
2. Technology/Innovation-based economic development
3. Entrepreneurial development/New enterprise formation.
4. Increasing new local business spin-offs from UA.
5. New business attraction from other parts of the U.S.
6. Economic diversification/Changing the regional industry mix.
7. Downtown development.
8. Industry cluster/Growth industry development.
9. International trade (export) development.
10. Attraction of businesses from international locations.

The first four broader opportunities: existing business retention and expansion; technology based economic development; entrepreneurial development; and increasing UA business spin-offs were the top vote-getters.

Because the Driving Industry Analysis Section addresses the issue of future industry development priorities, no further discussion of these opportunities is provided here; except to note that the SWOT survey indicates that the region should pursue several future sources of high quality jobs and businesses.

The University of Arizona: Integration into the Regional Economic Development Strategy (Current Primary Opportunity)

The greatest strength of Tucson is also one of its greatest opportunities for the future: the University of Arizona. With all of its strength and successes at the academic level, many in the community have questioned the best role for the University in the community's economic development agenda. It is important for Tucsonans to focus on the future. With the University's very active participation in the development of the region's economy, and with President Dr. Robert Shelton's encouraging and optimistic economic development remarks made during his inaugural speech, it can only be expected that the University will set the region on the pathway to prosperity that will be aligned with the priorities of the region.

Equally as important as the UA's role in the economic development strategy of the region is the region's role in contributing to UA's strategy to continue strengthening and advancing its institution. Shared expectations are important. Both the UA and the community must continue to define ways to collaborate, share resources and serve each other. The mutual benefits derived from a healthy, innovative and continually developing partnership between the community and the UA will have a lasting imprint on the region at large.

As for the University, as strong as it is, it will continue to become a more dominant national and global player putting Tucson on the radar screen of talented people and high value businesses worldwide. In November 2006, the University of Arizona's Office of Technology Transfer reported a 44% increase in technology-licensing revenue from 2005. Recording a record high of almost of $1.7 million in revenue, which has increased sevenfold in a decade, the University also reported new highs in active license and patent applications for 2006 fiscal year (source: "UA reaping a bonanza, thanks to tech licensing"; Arizona Daily Star, Nov. 11, 2006).

Even more promising is the Office of Technology Transfer's position to achieve even stronger results in the years ahead. Over the next five years, the office will receive $4 million from Proposition 301, which will help transfer UA technology to market. In Fall 2006, the University of Arizona also opened its Institute for Collaborative Research, known as the BIO5 Institute. Under the roof of a new, state of the art facility designed to enhance research interaction and foster an interdisciplinary environment that will spark ideas and leverage new solutions, BIO5 has the potential to change the region, state and world.

BIO5 has already proven to be a success in its short tenure. Under the leadership of Director Vicki Chandler, BIO5 brings together some of the world's top scientists in the areas of agriculture, medicine, pharmacy, basic science and engineering to achieve significant advancements that improve lives and accelerate economic development. BIO5 members have filed 37 inventions and four start-up companies have been approved by the Board of Regents in the past 12 months. BIO5 has also returned more than eight times its initial funding of $7 million by obtaining more than $60 million in federal research dollars.

The University of Arizona Science and Technology Park is a high-quality economic asset that continues to hold great promise for the future. Despite its 20-minute commute from campus, the Park is one of most attractive economic assets in the region. Sitting on 1,345 acres, with only 345 acres currently utilized, the Park provides almost two million square feet of space and offers high-tech office as well as R & D and laboratory facilities (source: www.uatechpark.org). The Park's resources have attracted several high-tech companies, including three Fortune 500 companies: IBM, Raytheon and Citigroup. It is also home to emerging technology companies Sion Power and NP Photonics and a technology business incubator. With more than 7,000 employees and 27 companies, the Park is also equipped with a sophisticated infrastructure system and quick response safety resources that are attractive to many companies, including steam, de-ionized water, chiller water, compressed air, water treatment plant, central utility plant, HAZMAT response team, environmental engineer and on-site EMT and Fire Rescue services.

The University of Arizona is the primary driver of the region's future economic development success. It draws talent to the region unlike any other community asset. Its strong national and global image impacts the overall perception of Tucson unlike any other regional economic asset. As the region's center for innovation and creativity, it has the opportunity to redefine the economic landscape of this region unlike any other in community. But for the UA to continue to reach its goals and advance its national and global position profile, the community must help accelerate its growth by being a long term partner and advocate. The community and UA must work together on the rebirth of downtown Tucson, accelerating the vast commercialization of technologies born within the University, further developing the impact of the Science & Technology Park, attracting and retaining more bright, promising and successful graduates that will select Tucson as the place to develop businesses and pursue significant careers. If Tucson and the UA fail to capitalize on these goals, the region will be at risk of falling short of its economic potential.

Leadership: Integrating Tucson's Public, Private and Emerging Leaders (Current Primary Opportunity/Organizational Weakness)

Integrating Tucson's public, private and emerging leaders into the region's economic development strategy will be critical for the community to achieve its economic potential. Without regional leadership that is unified and united in mission and purpose, the community will be unable to fully capitalize on its economic opportunities and will continue to suffer from an environment that fosters a culture of fragmented leadership and personal agendas.

Tucson's private-sector leadership must be at the forefront of a sustained attitude change regarding the future of the community. Many Tucsonans acknowledge that the region has succeeded in spite of itself for the past 35 years, but that in today's global, competitive, dynamic and sophisticated world in which the region now must operate, the private-sector must take the lead on controlling Tucson's own destiny. This will require a major attitude shift that seeks to create collaborative partnerships and effective governance.

Tucsonans should be optimistic this can be accomplished. The passion and willpower to change has been demonstrated throughout the development of the economic blueprint. But those attitudes and efforts need to be redoubled and the next generation of that type of leadership needs to be developed. One big facilitator of that journey is the engagement by the extremely generous leaders that this community has leaned on so many times in the past. For them this is about legacy. Those individuals and those families can establish an unbelievable legacy of incredible impact benefiting numerous generations beyond what any of us can foresee. The success of the blueprint requires those great folks to be center stage.

Another key component of maximizing the community's economic success includes the integration of Tucson's emerging leaders into the region's economic development delivery system. There are many factors that support this integration. Tucson's emerging leaders will become responsible and accountable for the long term success of the region – after all, it will be their community someday - and they provide a different perspective from the region's senior leadership. The next generation understands better than anyone else what is most important to them and how they make decisions. But beyond the growth and learning opportunities associated with becoming a part of the economic delivery system, the next generation will also develop a deeper level of responsibility and ownership for the success of the region.

Improving the integration and collaboration of Tucson's public, private and emerging leadership is a challenge that can be fixed over time. Much progress has been made already throughout the development of the region's economic blueprint. Leaders from all segments of the community, including government, corporate, civic and academic, have come together to share their passion, knowledge and wisdom to chart an economic strategy that shape the future of the region. But this effort cannot fade after the completion of the strategic plan – the partnership amongst leaders must continue to get stronger and more robust.

Business Image: Building the Distinctive, Authentic Image that Differentiates the Region (Current Primary Opportunity/Organizational Weakness)

For Tucson to maximize its economic potential in today's global economy it must develop and implement a brand marketing strategy that is distinctive, authentic and accurately reflects the region's economic strategy. A successful brand development and management strategy will increase the region's perceived value to the target audience and thereby increase the region's brand equity. Without a newly defined brand that captures the region's unique characteristics, Tucson will continue be at risk of not fully optimizing its economic potential.

Ccintellect's perception study and the young professional analysis completed by KMK Consulting have clearly demonstrated the urgent need for Tucson to create a more dynamic regional brand that tells the community's story and reflects the region's economic strategy. Although both studies were focused on different audiences – ccintellect interviewed leaders from Tucson's business community and national site selection professionals, and KMK Consulting surveyed 25 young professionals between the ages 23 – 37 not living in Tucson – the results were similar. In essence, those not living in region, including the young professionals and national site selectors interviewed, consistently mentioned that they did not know much about the region:

> "I don't know anything about Tucson. How close is it to Phoenix?"
> - Brand Manager, Procter & Gamble, age: 37

> "I have been there before. Nice college town, but not enough life or energy downtown. What industries are in Tucson?"
> - U.S. District Attorney, age: 32

> "I really do not know anything about Tucson other than it has great golf courses and lots of money. I am not sure it's a place for young people though."
> - Hedge Fund Manager, age: 29

> "College town. Nice community. Don't know much about it."
> - National Site Selector

Tucson has a great story to tell, and now is the time to implement and execute a brand marketing strategy that captures its authentic and distinctive characteristics. And if successful, the results will have a vast contribution on the short and long-term prosperity of Tucson's economy.

Tucson's Retirees: Invaluable, Untapped and Distinctive Economic Resource (Primary Opportunity)

Engaging Tucson's retired senior executives moving into the foothills presents a unique opportunity for the region. These are individuals not only of significant wealth that contribute to

Tucson's regional economy, but they are also individuals that possess significant business expertise and, in many cases, have helped build their hometown communities and local economic development organizations. This is a significant advantage for Tucson that not very many communities across the country possess. They bring great talent, wisdom, experience and wealth, all of which can be utilized to the benefit of Tucson.

It can be expected that America's retirees will continue to choose Tucson and the State of Arizona as a place to live, play and enjoy the benefits of retirement. Of the nearly 80 million baby boomers, defined as the generation of American's born between 1946 and 1964, half have passed the age of 50, and many have recently turned 60 this year. If they continue to follow in the footsteps of the previous generation, many will choose to live in Arizona.

From 1990 - 2000, Arizona had the second highest rate of in-migration of 60+ year olds in the United States, trailing only Nevada (source: "Retirement Migration in the 2000 Census"; AARP Knowledge Management, April 2005). Additionally, Arizona was the third fastest growing state for the 60+ population.

The fundamental question surrounding the consistent in-migration of retirees is how can Tucson best leverage and integrate the talents of this valuable human resource into the fabric of the regional economy? For Tucson to optimize the benefits of the retirees, the community must develop and apply intergenerational strategies that improve social cohesion, economic growth and create an environment that fosters the formation of multi-generational relationships. It is well known that the baby boomer generation is passionate about leaving a legacy that benefits their children, grandchildren and the nation. They also desire to leave the country better than found it – the same is true for Tucson.

Business Organizations: Providing private sector leadership (Primary Opportunity/Organizational Strength)

There is a good supply of organizations in the Tucson community that play an important role in the economic development delivery system of Tucson. Organizations like TREO, SALC, the cities, the state and the University of Arizona, are all part of the overall team. Their collaboration will become more critical and their responsibilities more defined as to deliverables in the implementation pathways of the blueprint.

But another opportunity lies at the feet of the Chambers of Commerce, particularly the Tucson Chamber and the Hispanic Chamber. These two major leadership groups should play a specific role in the future of Tucson's competitiveness and implementation of the blueprint. These Chambers need the leadership and the capacity to take on new responsibilities and deliver results. In fact, the Hispanic Chamber is in the middle of developing its new strategic plan with a strong eye toward its role as a partner in the implementation of the blueprint. We think that this will reap substantial benefits for the region.

V. Leading Economic Development Threats

Culture of Development: Fear of Change, Limited Resources, Lack of Commitment

In a Gallup poll last year regarding the satisfaction of government, 22% said they do not care. This compares to Phoenix where only 9% said that they did not care. People must care, and specifically and most importantly, the business community must care. That 22% is a huge gap bridged by leadership and by education. Not caring is perhaps the biggest threat facing the future of Tucson. We cannot start to become optimistic about the future of the region if

Tucsonans do not begin to take ownership and control their own destiny.

Stated differently, the greatest threat facing Tucson is the risk of community leaders not uniting in common mission and purpose to advance the short and long-term economic prosperity of the region. Too often, communities conduct regional visioning and economic development strategic-planning exercises that result in the formation of core strategies, but, for many reasons, never reach sustained implementation. Tucson must prevent this from happening.

To maximize the region's economic potential, the economic blueprint must be implemented similar to a company's implementation of their business plan. It takes leadership from the top. Tucson's CEOs, public officials, education leaders, young leaders and others must be firmly committed to shaping the future the region. It also takes resources, both financial and intellectual. Good business cannot succeed without sufficient financial and intellectual resources. The same will be true for the economic blueprint. Financial resources and the commitment to "skin in the game" will help drive commitment and accountability. Sound intelligence, including economic data, knowledge of best practices and knowing what it takes to please your customers and attract your prospects will be important to the successful execution of the blueprint.

Critical Development Resources: Real Estate & Workforce

We have already separately highlighted each of these areas as weaknesses. We reiterate the importance of each as threats because of the importance of Tucson leadership to take action in these areas, along with the impact of competitive markets to enhance both of these key assets for themselves.

For Tucson to accelerate its economic competitiveness, it must be able to provide the real estate and workforce resources necessary for attracting, retaining and expanding businesses. If one or both are unavailable to companies seeking to do business in Tucson, the community will be risk of losing deals to other competing markets.

The availability of skilled labor will continue to be a top criterion for companies during their relocation or expansion decision-making process. Tucson's growing population will contribute to the pool of available workforce, but it will be the availability of quality workforce that will be most important. Finding creative, collaborative and innovate ways to elevate the skills of Tucson's workforce must be a top priority for the region. In doing, the region will be in the best position possible to compete for high-paying jobs. But if companies cannot find the skill sets they need to execute their business plan, they will select another market that can.

Tucson's ability to provide quality real estate options will also have an impact on the region's ability to attract businesses. Like the workforce, companies have specific real estate needs that must be met. This issue was reiterated during ccintellect's perception survey. In the 25 national site selector interviews, one of the common concerns/obstacles preventing their clients from selecting Tucson was the region's inability to provide quality and available real estate options that met the client's needs.

Providing a quality workforce and available real estate options that meet the needs of the business community must be a top priority for Tucson. If not, the region will lose economic opportunities that would have had the potential to generate significant investment, tax revenue and job opportunities. It is important Tucson does not continue to let this happen.

Raytheon deserves mention here because of its immense impact on the Tucson community as the largest private sector employer and as a critical asset which has expressed needs both with respect to talented workforce growth and real estate expansion. There is little in Tucson that is more important than keeping Raytheon secure and helping it grow.

Water: No Drinking from a Fire Hose

At the top of almost everybody's list of serious concerns for the future of Tucson is water supply. Because of its immense significance, it will be mentioned in this summary, specifically, even though its solutions are beyond the reach of anyone in the Tucson community. It is clearly the major looming uncertainty threatening to disrupt not only specific strategies for future competitiveness but strike at the very core of Tucson's economic vision. For what it is worth, it is not a problem exclusive to Tucson.

It is noteworthy and certainly encouraging that Dr. Shelton sees the University of Arizona embracing this issue as one of its own major priorities in the quest to develop a long term solution. As a major concern of many in state and local government, the expertise of UA and the focus at the state level will not disrupt Tucson's journey toward prosperity.

Unmanaged Growth: Poor Decisions Result in Poor Performance

A significant threat facing the Tucson region is the continued unmanaged growth policies that have put the community in a troublesome position. If changes are not made, there is no reason to believe the problems will improve.

It is acknowledged that Tucson's population will continue to increase, but it remains to be seen how the community will approach critical planning decisions that will have a lasting effect on the landscape of the community. Tucsonans are justifiably concerned about this issue. The fact is that land-use and planning decisions made today will impact the region for many years to come.

Bad planning decisions cause many problems. They are very expensive to fix (if they are even fixable) and they cause major disruption for the residents and businesses. Perhaps most importantly, poor planning decisions stall the economic progress of the community.

Making sound growth and management decisions will be fundamental to the future economic vitality of the region. If decisions are left for the next generation to fix, Tucson will continue to be at a major disadvantage relative to cost and prosperity. It is critical that Tucson makes wise planning decisions today to prevent the unnecessary consequences from occurring in the future.

Competitive Markets

According to the SWOT survey, Tucson's top five geographic competitors are:

1. Phoenix, AZ
2. Albuquerque, NM
3. San Diego, CA
4. Austin, TX
5. Las Vegas, NV

By a significant margin, Phoenix is perceived as Tucson's leading competitor for a variety of industrial and office related development projects. Albuquerque is a frequent second competitor for a variety of industrial and office type development projects.

Considering the survey ranking and our comparison analysis, it is of additional value to consider the overall metro comparison of

Tucson versus Austin and San Diego. We chose Expansion Management data and rankings as a credible independent source.

The following other areas are perceived as competing with Tucson from time to time, but not on a highly frequent basis:

1. Denver, CO
2. San Antonio, TX
3. Salt Lake City, UT
4. Los Angeles, CA
5. Dallas, TX
6. Portland, OR
7. Bay Area, CA
8. Seattle, WA
9. Houston, TX
10. Sacramento, CA
11. Boise, ID

Tucson is seen as competing with these eleven locations less frequently, yet they are seen as representing a competitive threat at times.

VI. Conclusion

The Tucson region is seen as a relatively competitive location for economic development.

The area's leading strengths are seen as its higher education resources, its cultural diversity, quality of life, leisure and recreational assets, its defense-related facilities and its geographic location.

Tucson's leading weaknesses are seen as public K-12 education, private sector leadership, downtown Tucson, infrastructure and real estate capacity, and retaining and attracting a talented workforce.

Tucson's leading opportunities are technology/innovation based business development, integration of UA into Tucson's economic development strategy and entrepreneurial development.

Finally, the region's leading threats are seen as failure to sustain the commitment to a new vision and water issues.

The attitudes expressed time and again at a variety of leadership levels throughout the community have been extremely encouraging. Tucson is committed to a sustained campaign to transition the Tucson market into a business environment more focused on higher value jobs, high technology and intellectual capital without sacrificing the great diversity, culture and natural environment of this wonderful community. Combining the region's commitment with the assurances from Dr. Robert Shelton to build the seamless partnership between the University and the community will make Tucson well-positioned to make great strides to improve its economic future.

We are extremely encouraged by the give and take between strengths, admissions of painful reality, great success stories, frank criticism, challenges of companies large and small, and most importantly, candid discussion by Tucsonans at all levels of society. Collectively, this has produced an attitude of great hope and irrefutable recognition that collaboration, energy and investment is the linchpin to producing a great blueprint and excellent positioning for successful implementation.

KMK Consulting greatly appreciates the tremendous level of participation from across Pima County that contributed to this SWOT analysis and inclusion process.

Appendix 1: Comparison Data Uses – SWOT Analysis

Overall Metro Area Comparisons: Tucson versus Austin and San Diego

Source: Expansion Management: https://www.relocationtoolkit.com/

All data in percentiles
99% = Highest; 1% = Lowest

Categories	Austin-Round Rock, Texas MSA	San Diego-Carlsbad-San Marcos, Calif. MSA	Tucson, Ariz. MSA
2005 Metro Estimated Population	1,528,223	3,021,562	938,356
Overall Metro Percentile	99	87	96
Overall Metro Rating	★★★★★	★★★★★	★★★★★
Overall Quality of Life Percentile	87	70	50
Quality of Life Rating	★★★★★	★★★★	★★★
Overall Logistics Percentile	80	93	70
Logistics Infrastructure Rating	★★★★	★★★★★	★★★★
Overall Metrowide Public Schools Percentile	86	39	83
Public Schools Rating	★★★★★	★★	★★★★
Overall College-Educated Work Force Percentile	93	92	91
College-Educated Work Force Rating	★★★★★	★★★★★	★★★★★
Overall Health Care Cost Percentile	50	76	25
Health Care Cost Rating	★★★	★★★★	★★
Overall Government Tax Environment Percentile	99	8	89
Government Tax & Spending Rating	★★★★★	★	★★★★★
States Included in the Metro Area	TX	CA	AZ

Categories	Austin-Round Rock, Texas MSA	San Diego-Carlsbad-San Marcos, Calif. MSA	Tucson, Ariz. MSA
2005 Metro Estimated Population	**1,528,223**	**3,021,562**	**938,356**
Overall Metro Percentile	**99**	**87**	**96**
Overall Metro Rating	★★★★★	★★★★★	★★★★★
Overall Quality of Life Percentile	**87**	**70**	**50**
Quality of Life Rating	★★★★★	★★★★	★★★

Crime	41	55	4
- *Violent Crime*	*55*	*39*	*19*
- *Property Crime*	*30*	*67*	*0*
Affordable Housing	33	3	36
- *Rental Prices*	*7*	*3*	*24*
- *Home Prices*	*63*	*3*	*53*
Public Schools	86	39	83
Adult Education	95	94	88
- *Adult HS*	*77*	*77*	*67*
- *Adult BA_BS*	*93*	*85*	*75*
- *Adult MA_MS*	*90*	*81*	*84*
- *Adult Prof Degree*	*84*	*93*	*74*
- *Adult PhD*	*87*	*85*	*85*
Living Standard	98	91	44
- *Median Family Income*	*93*	*83*	*33*
- *Per Capita Income*	*80*	*91*	*32*
- *Cost of Living*	*57*	*5*	*69*
- *Unemployment*	*68*	*86*	*86*
- *Tax Burden*	*97*	*53*	*35*
- *Per Capita Disposable Income*	*51*	*83*	*31*
Employment	39	20	28
- *Avg Annual Pay*	*7*	*7*	*38*
- *Avg Wage Per Job*	*7*	*7*	*41*
- *Labor Availability*	*33*	*15*	*15*
- *Population 18 to 34*	*93*	*85*	*43*
Traffic & Commute	21	58	66
- *Avg Commute Time*	*15*	*17*	*25*
- *Work Outside County of Residence*	*93*	*99*	*99*
Continuing Education Opportunity	75	95	58
- *Offer AA (Total)*	*YES*	*YES*	*YES*
- *Offer BA/BS (Total)*	*YES*	*YES*	*NO*
- *Offer MA/MS (Total)*	*YES*	*YES*	*NO*
- *Offer PhD (Total)*	*YES*	*YES*	*YES*
Airport Access	89	96	89
	80	**93**	**70**

Overall Logistics Percentile			
Logistics Infrastructure Rating	★★★★	★★★★★	★★★★
T&W Industry	79	91	73
- T&W Revenue	*73*	*87*	*69*
- T&W Establishments	*84*	*94*	*77*
T&W Work Force	94	97	71
- T&W Annual Payroll	*77*	*88*	*73*
- T&W Total Employees	*79*	*90*	*73*
- T&W Avg Salary	*71*	*65*	*45*
- T&W Revenue per Employee	*20*	*21*	*32*
Road Infrastructure	60	89	69
- Public Road Mileage	*99*	*67*	*9*
- Capital Outlay for Roads Bridges	*33*	*92*	*80*
- Highway Maint Per Mile	*34*	*100*	*79*
- Highway Law Enforcement	*33*	*92*	*80*
Road Congestion	25	31	4
- Roadway Miles per Capita	*29*	*2*	*47*
- Total Miles as Freeways	*64*	*84*	*8*
- Avg Daily Freeway Traffic	*7*	*1*	*20*
- Avg Daily Traffic per Freeway Lane	*9*	*1*	*20*
Road Condition	63	20	88
- Bridges Structurally Deficient	*27*	*20*	*98*
- Bridges Obsolete	*6*	*23*	*85*
- 5 Year Improvement Trend	*40*	*23*	*15*
Interstate Highways	57	94	78
- Interstate Main Routes (Total)	*1*	*3*	*2*
- Interstate Aux Routes (Total)	*0*	*1*	*0*
Vehicle Taxes & Fees	75	49	41
- Hwy User Taxes & Fees	*85*	*19*	*8*
- Motor Fuel Excise Tax	*61*	*77*	*77*
Railroad Access	72	72	38
- Railroad Carrier Service	*72*	*72*	*38*
- Railroad Cargo Tonnage	--	--	--
Water Port Access	51	85	51
- Total Cargo Tonnage	*51*	*85*	*51*
- Domestic Tonnage	*51*	*80*	*51*

- Foreign Tonnage	*55*	*90*	*55*
- Import Tonnage	*55*	*91*	*55*
- Export Tonnage	*56*	*88*	*56*
Air Cargo	85	93	86
- Air Courier Establishments	*84*	*93*	*83*
- Air Cargo Tonnage	--	--	--
Overall Metrowide Public Schools Percentile	**86**	**39**	**83**
Public Schools Rating	★★★★★	★★	★★★★
Academic Percentile	80	35	74
Education Spending Percentile	71	49	19
Adult Education & Income	94	66	35
Total Enrollment	203,887	336,932	101,024
Overall College-Educated Work Force Percentile	**93**	**92**	**91**
College-Educated Work Force Rating	★★★★★	★★★★★	★★★★★
BA/BS Percentile	94	86	81
MA/MS Percentile	90	81	84
Professional Degree Percentile	84	93	75
PhD Percentile	87	85	86
Science & Engineering Percentile	95	91	89
MD Percentile	27	60	56
Univ R&D Percentile	92	73	93
JuCo, College & Univ Percentile	89	18	153
Overall Health Care Cost Percentile	**50**	**76**	**25**
Health Care Cost Rating	★★★	★★★★	★★
Health Care Facilities Percentile	99	66	34
Health Care Providers Percentile	13	37	6
Health Insurance Cost Percentile	50	86	98
Doctor Visit Cost Percentile	58	15	29
Malpractice Cost Percentile	64	97	29
Overall Government Tax Environment Percentile	**99**	**8**	**89**

Government Tax & Spending Rating	★★★★★	★	★★★★★
State General Tax Bite Percentile	99	8	64
- *Tax Rev per Capita*	*99*	*13*	*78*
- *Tax Revenues from Corp Income Tax*	*99*	*13*	*26*
- *Tax Revenues from Indiv Income Tax*	*99*	*21*	*75*
- *Tax Revenues from Sales Tax*	*8*	*88*	*20*
- *Tax Revenues from Property Tax*	*99*	*26*	*14*
State Infrastructure Spending Percentile	41	22	68
- *State Highway Spending*	*47*	*11*	*88*
- *State Education Spending Percentile*	*81*	*41*	*55*
- *State Health Spending*	*35*	*75*	*15*
- *State Police Protection Spending*	*22*	*46*	*78*
- *State Recreation & Parks Spending*	*12*	*52*	*88*
State Debt Management Percentile	98	37	91
- *State Debt Service Ratio*	*93*	*69*	*95*
- *State Debt per Capita*	*98*	*23*	*90*
- *State Debt per Total Revenues*	*98*	*43*	*85*
5 Year Trends	99	10	65
- *TREND Reliance on Indiv Income Tax*	*99*	*30*	*73*
- *TREND Reliance on Corp Income Tax*	*99*	*15*	*50*
- *TREND Spending on Govt Admin*	*97*	*13*	*82*
- *TREND Improve Debt Service Ratio*	*83*	*38*	*30*
- *TREND Reduce Total Debt*	*99*	*19*	*25*
Right to Work Laws	Yes	No	Yes

GLOSSARY OF TERMS

SUBJECT AREAS:

College Educated Work Force -

Adults with at least a BA/BS degree, adults with at least a MA/MS degree, adults with a professional degree, adults with at least a Ph.D. degree.

Health Care Cost & Availability -

Includes a comparison of health care facilities, health care providers, health insurance cost, doctor visit cost, and malpractice insurance cost.

Logistics Infrastructure -

Evaluates the overall logistics infrastructure of the entire metro area based upon 10 major categories, including the transportation and distribution (T&D) industry, T&D workforce, road infrastructure, road congestion, road conditions, interstate highway access, vehicle taxes & fees, railroad access, water port access, and air cargo access.

Public Schools -

Compares the average quality of public schools throughout the metro area, including academic performance, public education resources, and adult education & income of the adult community.

Quality of Life -

The ability to enjoy the fruits of a middle class lifestyle at a reasonable cost. Includes nine major categories: affordable housing, public schools, crime & safety, standard of living, traffic & commuting, adult education levels, adult education opportunities, workforce employability, and commercial air access.

State Government Tax & Spending -

Compares the general tax bite, state spending on infrastructure, state debt management, 5-year trends in taxing, spending and debt management, and whether or not a state has right-to-work legislation.

MAJOR CATEGORIES:

Academic Performance -

Compares the average college board scores, as well as average graduation rates of the school district.

Adult Education & Income Levels -

Compares the education and income of the adults within the school district. This factor is used primarily for benchmarking and accounts for only 5 percent of the overage public education score.

Adult Education Levels -

Looks at the education level of the adult population, including percentage with a bachelor's, masters, Ph.D., professional degree, as well as the percentage employed in science and engineering.

Adult Education Opportunities -

Compares the availability of post-secondary education opportunities for adults, including community colleges, as well as colleges and universities that offer bachelors, masters and Ph.D. degrees.

Adults with at least a BA/BS Degree -

Percentage of the adult population with at least a bachelor's degree.

Adults with at least a MA/MS Degree -

Percentage of the adult population with at least a master's degree.

Adults with at least a Ph.D. Degree -

Percentage of the adult population with Ph.D. degree.

Adults with a Professional Degree -

Percentage of the adult population with a professional degree.

Affordable Housing -

Includes average home price and average rental costs for one-, two-, three- and four-bedroom rentals.

Air Cargo Access -

Includes the number of air courier companies, as well as the total air cargo tonnage for the metro.

Commercial Air Access -

Based upon average passenger volume of all airports located within the metro area.

Crime & Safety -

Based upon FBI per capita violent crime and property crime rates.

Doctor Visit Cost -

Includes the average cost for a visit to a doctor, dentist, and optometrist.

Employment Profile -

Looks at the local work force in terms of average annual pay, average wage per job, unemployment rate, population between the ages of 18 and 34, and the adult education levels.

Five-Year Trends in State Taxing, Spending & Debt Management -

Trends over the past 5 years in reliance on individual income taxes and corporate income taxes, as well as improvement is the state's debt service ratio, improvement in the state's total debt, and decreases in the amount of spending on government administration.

General Tax Bite -

Includes tax revenue per capita, percent of state revenues derived from corporate, as well as individual, income taxes, percent of state revenues from sales taxes and the percent of revenues derived from property taxes.

Health Care Facilities -

Includes quantity and quality of hospitals.

Health Care Providers -

Includes physicians and nurses per capita.

Health Insurance Cost -

Includes average cost of health care insurance for employers and for employees.

Interstate Highway Access -

Includes the number of interstate highways that pass through the metro area, as well as the number of interstate auxiliary routes (i.e., beltways, bypass, etc.).

Malpractice Insurance Cost -

Includes malpractice insurance premiums per doctor, as well as the AMA Medical Liability Crisis rating.

Public Education Resources -

This category measures a community's financial commitment to education and includes beginning and average teacher salaries, as well as per pupil expenditures and student-teach ratio.

Public Schools -

Overall quality of academic results of public schools based upon metro-wide average scores from Expansion Management's annual Education Quotient study of 2,800 secondary school districts nationwide.

Railroad Access -
Includes the number of railroad carriers that service that metro.

Road Conditions -
Includes the percentage of bridges that are obsolete or structurally deficient, including five-year trends, and average roughness of roads.

Road Congestion -
Includes such things as roadway miles per capita, total miles of freeways, average daily freeway traffic, and average daily traffic per freeway lane.

Road Infrastructure -
Includes public roads mileage, capital outlay for roads and bridges, highway maintenance per mile, and highway law enforcement investment.

Standard of Living -
Median family income, per capita income, cost of living, unemployment rate, tax burden and per capita disposable income.

State Debt Management -
Includes the state debt service ratio, state debt per capita, and state debt per total revenues.

State Right-to-Work Laws -
Whether or not the state has "right-to-work" legislation.

State Spending on Infrastructure -
Includes spending on highways, education, health, police protection and parks & recreation.

Traffic & Commuting -
Includes average commute time to work, as well as the percentage of population that works outside of their county of residence.

Transportation & Distribution Industry -
Number of companies in the metro area that are engaged in transportation and warehousing (T&W) industry sector, along with the annual revenue generated by T&W industry sector.

Transportation & Distribution Work Force -
Includes the total annual payroll of companies in the T&W industry sector, the total number of employees, the average salary and the T&W revenue per employee.

Vehicle Taxes & Fees -
Includes highway user taxes and fees, as well as motor fuel excise taxes.

Water Port Access -
Includes total tonnage for all ports located within the confines of the metro area.