ANNUAL REPORT 2019





Executive Summary

Since its founding, the MAP Dashboard has received international, national, state, and local recognition. In 2018, the MAP received the Impact Award from the international Community Indicators Consortium for its demonstrated ability to drive positive community change in Southern Arizona.

The content on the MAP Dashboard is constantly expanding and changing. In addition to the regular data updates in 2018, 19 feature articles and four white papers appeared on the website. These included articles on Tucson's economic outlook, Southern Arizona communities, home prices, trade with Mexico, and many others. White papers are written by University of Arizona faculty and are funded by MAP white paper grants. White papers published on the MAP in 2018 included research on rainwater as a potential resource for water independence in Tucson's communities, health and social well-being in chronically homeless women, an analysis of violent crime and density of alcohol serving establishments in Arizona, and insights into Tucson's human service sector.

The MAP Dashboard devoted several feature articles to community impact last year with the addition of the Community Spotlight. The Community Spotlight highlights how various organizations around Southern Arizona are using the MAP Dashboard. These spotlights provide insight on how to get the most out of the MAP and inspire others on new ways to use the website. In 2018, these articles featured the Freeport McMoRan Foundation, Tucson Values Teachers, Regional Partnering Center, and the Thomas R. Brown Family Foundation.

Community outreach and engagement is a key part of the MAP Dashboard. Researchers from the University of Arizona's Economic and Business Research Center gave 15 public presentations to local residents last year, reaching 1,600 attendees. These public presentations included Eller's Economic Outlook Luncheon and Breakfast with the Economists, the new MAP Talk webinar series, the Community Indicators Consortium Coffee Break webinar series, the MAP annual event, and many other public gatherings.

The Southern Arizona community continues to embrace the MAP Dashboard. The website has had 78,000 unique users since launch, with 49.6 percent growth last year, and over 335,000 page views. In addition, over 3,400 people subscribe to the MAP monthly newsletter, 290 people follow on Twitter, and 260 people follow on Facebook.

Information from the MAP Dashboard website also reaches thousands of readers each month through a full-color feature in the Sunday Business section and Monday Health section of the *Arizona Daily Star.*

During 2018, the MAP Dashboard team made several key changes to the internal operation of the website. While these are not directly visible to the user, they significantly improve day-to-day management of the data. Additional functionality was also added to the MAP in 2018 that allows our Partners and Sponsors to download data directly from the website.

This annual report provides a snapshot of the MAP Dashboard as of spring 2019, using the most up-to-date annual data. Since federal agencies release this information with significant delays, the majority of the estimates are for 2017 and 2018. In some cases, in particular the health-related data, the most recent estimates available for all comparison regions are for 2016. This is due to the time required by federal agencies to acquire and report the data. This report summarizes the latest results for all indicators and highlights key changes during the past year. It also documents changes to the website during 2018, brings together website metrics, and summarizes outreach activities.

KEY CONCLUSIONS FOR THE MAP DASHBOARD ARE AS FOLLOWS:

- Inflation-adjusted Gross Domestic Product in the Tucson Metropolitan Statistical Area (MSA) rose by 2.9 percent in 2017, after a very modest increase of 0.3 percent in 2016. The Tucson MSA includes all of Pima County.
- The Tucson MSA ranked second in 2018 among peer Western metropolitan areas in housing affordability, which has gradually declined as house prices rose faster than income.
- The Tucson MSA's job growth hit 1.2 percent in 2018, down from 1.3 percent in 2017, and slower than many peer metropolitan areas.
- The college attainment rate for the working-age population in the Tucson MSA rose modestly to 30.5 percent in 2017 but remained well below the U.S. rate.
- Median household income (\$48,676) and poverty (18.3 percent) in 2017 for the Tucson MSA continue to lag behind peer MSAs.
- Tucson MSA secondary-school teacher wages stayed steady in 2018 and ranked last among peer metros. Given recent increases in teacher pay at the state level we anticipate a rise in the wage over the coming years. The MAP was instrumental in providing accurate and comparable data on teacher wages that allowed the region to make informed data-driven policy change.
- Tucson MSA residents reported worse mental health than most peer metropolitan areas in 2016. However, the local area did better in terms of physical health.
- The share of Tucson MSA residents with broadband access hit 84.5 percent in 2017, well above the U.S. rate of 82.1 percent.
- Tucson had a relatively small share of the population working in creative occupations, ranking near the bottom among peer areas in 2017.
- During the past year the MAP Dashboard has raised awareness in the community on topics such as housing affordability, housing cost burden, educational attainment and shifting demographics in the region, as well as a continued discussion on teacher wages.



One key issue that has emerged during the past year was housing affordability. Access to affordable housing is an important issue for many households because the home is often their largest asset and its price can affect spending in other areas such as: childcare, education, health care, and leisure activities. Since personal consumption makes up the better part of the economy, and discretionary income levels are influenced by the cost of housing, affordable housing is an important factor in the local economy.

- In 2018, 66.2 percent of homes sold in the Tucson MSA were affordable to a family earning the local median income, which ranked second among peer metros. Tucson's affordability for housing far exceeded the national rate of 57.7 percent.
- Single-family housing affordability in Tucson and across the nation has declined in recent years as home prices rose faster than wages.
- The housing affordability indicator shows us that, in Tucson, homes are affordable for those earning at least the local median family income (approximately \$60,000). However, the housing cost burden indicator illustrates that those earning lower levels of income (in particular less than \$35,000) struggle to find affordable housing relative to the nation.
- Housing cost burden varied significantly between homeowners and renters in Tucson. In 2017, 52.8 percent of renters paid more than 30 percent of their income in rental costs. That is more than double the housing cost burden for homeowners at 23.4 percent.

Four-Year College Attainment Rate by Age (2017)

AGE	TUCSON	ARIZONA	U.S.
18-24	7.9%	7.5%	10.5%
25-34	28.8%	27.4 %	34.4%
35-44	31.0%	29.9 %	34.8%
45-64	31.1%	28.5 %	30.1%
65+	34.6%	28.2%	25.9%

Another key issue in Tucson is educational attainment, because an educated workforce is a key driver of economic growth. Regions with high concentrations of educated workers tend to be more innovative and generate faster, long-run income, population, and job growth.

- The Tucson MSA's college attainment rate for those aged 25 years and older rose to 31.6 percent in 2017, from 29.0 percent in 2009. This was just above the national rate of 30.9 percent.
- College attainment rates vary substantially across age groups for the Tucson MSA. Those aged 65 years and older have a much higher rate of college attainment in Tucson than across the state or nation. However, those in the prime working age group (25-34 and 35-44) fall several percentage points behind the United States.

The following pages summarize in more detail the background of the MAP Dashboard project and the current performance of all 36 indicators on the MAP Dashboard by category.



MAP Dashboard Overview

The award-winning Making Action Possible (MAP) Dashboard was formed through a unique partnership between The University of Arizona, Community Foundation for Southern Arizona, and Southern Arizona Leadership Council to develop a project to measurably improve Southern Arizona through data-driven, collective civic action and education. Subsequently, Pima Association of Governments and Sun Corridor, Inc. joined the partnership in 2016 and 2018, respectively. The partnership represents the non-profit and business communities, regional government, local economic development, and higher education. The MAP Dashboard fills a resource gap by providing a common collection of research and information upon which to evaluate and measure key socio-economic indicators in our community and collaborate to address our shared issues.

The socio-economic indicators are grouped into six categories: 1) Economy, 2) Education, 3) Health and Social Well-Being, 4) Infrastructure, 5) Quality of Place, and 6) Workforce and Demographics. For each indicator, users can learn how Southern Arizona is doing, how it compares, and what the latest trends tell us about our progress. Users can compare Southern Arizona to the United States, states in the West, and select Metropolitan Statistical Areas (MSAs). With this information, Southern Arizonans can decide priorities, shape and pursue effective policies, and seek external funding opportunities. They can also use the data to drive business and organizational decisions, as well as build collaborative and cross-sector partnerships capable of taking action throughout our region.

While the MAP Dashboard focuses on state, county, and metropolitan area data, it also includes a wealth of information for cities and towns located in the Southern Arizona region. The Southern Arizona region commonly includes the following counties: Cochise, Graham, Greenlee, Pima, Pinal, Santa Cruz, and Yuma. The MAP Dashboard also includes data for all 15 Arizona counties.

In the four years since its launch, the MAP Dashboard has received international, national, state, and local recognition. It was awarded the 2016 Award for Website Excellence by the Association for University Business and Economic Research and the 2016 DataViz Award from the Association of Public Data Users. The MAP Dashboard was one of three finalists for the Arizona Governor's Award for Innovation in Academia and received the 2016 Common Ground Award from the Metropolitan Pima Alliance. Additionally, in 2018, the MAP received the Impact Award from the international Community Indicators Consortium for its demonstrated ability to drive positive community change in Southern Arizona.

Local community support makes the MAP Dashboard possible. Funding partners include the Community Foundation for Southern Arizona, Pima Association of Governments, the Southern Arizona Leadership Council, Sun Corridor, Inc., and The University of Arizona. UA's Economic and Business Research Center in the Eller College of Management maintains, updates, and administers the MAP Dashboard website.

Financial support is also provided by community sponsors. Sustaining sponsors include the Thomas R. Brown Foundations, Tucson Electric Power, and Freeport McMoRan Foundation. Wells Fargo is a supporting sponsor, while Sundt Construction and Visit Tucson are contributing sponsors.



Economy Overview

An economy is defined by the production, distribution, and consumption of goods and services. The decisions of individuals and firms interacting in this process determine how economic resources are allocated. The quality of a region's economy reflects the opportunities available to individuals and businesses. Strong economies typically result in a high standard of living, higher wages, and consistent job growth. The economic indicators included in this section help identify where Southern Arizona stands in comparison to other economies in the western United States.



- Housing affordability declined in the Tucson MSA and across the nation in 2018 as home prices continue to rise faster than wages.
- Tucson MSA's inflation adjusted Gross Domestic Product increased substantially in 2017 to 2.9 percent, moving from a last place ranking in 2016 among peer metropolitan areas to seventh.
- Business growth in the Tucson MSA accelerated to 0.5 percent in 2017, after an outright decline in the number of businesses in 2016. Tucson's business growth was much closer to the nation in 2017 than previous years. Tucson's ranking also improved from last among peer Western metropolitan areas in 2016 to 10th in 2017.
- The Tucson MSA's job growth rate of 1.2 percent was a deceleration in 2018, down slightly from 1.3 percent in 2017. That put local growth below the national average of 1.7 percent and ranked the Tucson MSA near the bottom at 11th among peer metropolitan areas.
- Single-family housing was relatively affordable in the Tucson MSA last year, with 66.2 percent of homes sold affordable to a family earning the local median income. That was much better than the national average of 57.7 percent but a slight decline from 71.1 percent in 2017. Tucson ranked second among peer metropolitan areas.

- The Tucson MSA's median household income rose to \$48,676 in 2017 but remained nearly \$10,000 below the nation.
- Arizona patents per 10,000 workers increased in 2016 and equaled the national average of 10.0. Tucson MSA patent activity, at 17.4 patents per 10,000 workers, was well above the state and the nation in 2015, according to the latest available data.
- Inflation-adjusted Gross Domestic Product in the Tucson MSA rose by 2.9 percent in 2017, after a very modest increase of 0.3 percent in 2016. Tucson's growth was above the national average of 2.1 percent and ranked seventh among peer metropolitan areas.



Education Overview

Education is one key driver of economic success, both for individuals and for regions. Individuals benefit from education in a variety of ways, including higher productivity, higher wages, better health outcomes, and less need for publicly funded economic assistance. In addition, research has shown that the benefits of education spill over to the region as a whole. Local areas with high concentrations of highly educated residents tend to have better aggregate socioeconomic outcomes, such as higher per capita income, lower crime, and faster job and population growth. Thus, less educated residents also benefit by locating in regions with high educational attainment rates.

Tucson MSA Education Scorecard



- High school teacher wages in the Tucson MSA remained flat in 2018 and continue to be substantially below peer Western metropolitan areas.
- The college attainment rate for those aged 25 years and older stayed just slightly above the nation in 2017, but long-term trends suggest the nation is increasing at a much faster rate.
- In 2017, the Tucson MSA ranked third in the share of college graduates with majors in science and engineering or related fields, at 47.1 percent. That was well above the national average of 44.2 percent and was only exceeded by Portland and San Diego, among peer metropolitan areas.
- The Tucson MSA's four-year college attainment rate rose to 31.6 percent in 2017, from 29.0 percent in 2009. That was slightly above the nation, at 30.9 percent, and ranked seventh among 12 peer metropolitan areas.
- In Arizona, the share of public high school students graduating in four years declined to 78.0 percent in 2017, down from 79.5 percent in 2016. Arizona's high school graduation rate was below the national average of 84.6 percent.

- Pre-kindergarten enrollment in the Tucson MSA in 2017 hit 40.4 percent. That ranked Tucson 10th among peer metropolitan areas and was below the national average of 47.5 percent.
- The percentage of 3rd grade students in Pima County who scored proficient or higher on the AzMERIT English Language Arts Test exceeded 11 other counties in Arizona and, at 43 percent, was just behind Maricopa and Yavapai counties in 2018.
- In the Tucson MSA, the median annual wage for secondary school teachers remained flat in 2018 at \$39,010. Wages remained far below the national average for teachers and Tucson ranked last among peer metropolitan areas.



Health & Social Well-Being Overview

Indicators in this section identify critical trends in the health and social well-being of Southern Arizona residents. Measures of physical and behavioral well-being provide information about the health of local residents, which plays an important role in determining the overall quality of life. Households that are housing-cost burdened or whose income is at or near the poverty level are more likely to endure adverse social, economic, and health conditions. Likewise, those who lack health insurance coverage are at a greater risk for bankruptcy and illness. The data provide residents and policymakers with performance measures crucial to gauging the overall well-being of a region.

Tucson MSA Health & Social Well-Being Scorecard



- The percentage of housing cost burdened renters in the Tucson MSA during 2017 increased from previous years, while the rate for renters statewide declined.
- The teen birth rate for the Tucson MSA continued to decline in 2017 and is at a 12-year low.
- The Tucson MSA had the fourth lowest percentage of the population that smoked in 2016 when compared to peer metropolitan areas. Tucson's percentage at 13.9 percent was more than three percentage points better than the national rate of 17.0 percent.
- In 2017, health insurance coverage rates for residents of the Tucson MSA was 89.0 percent. Tucson was just behind the United States and ranked sixth among peer metropolitan areas.
- Housing cost burden in 2017 varied widely by income in the Tucson MSA. The percentage of those with a housing cost burden far exceeded the national rate at the lowest income levels in Tucson, while those with high income in Tucson did much better when compared to the nation.

- The Tucson MSA ranked eighth among peer metropolitan areas in the number of poor physical health days per month in 2016. Tucson's rate of 3.9 was just behind Phoenix and the nation.
- The Tucson MSA's 2017 poverty rate of 18.3 percent was one of the highest among peer metropolitan areas with only El Paso posting a higher rate.
- Tucson MSA's teen birth rate continued to decline in 2017 but still ranked seventh among peer Western metropolitan areas.



Infrastructure Overview

A region's overall prosperity is related to the quality of its infrastructure. People rely on transportation and communication networks for access to employment, goods, and services. Businesses also rely on infrastructure to provide access to trade, raw materials, labor, and other inputs to production. The responsible use of natural resources by residents is also important, as energy and water use can affect longterm regional sustainability. Responsive and well-planned infrastructure results from a collaborative process between residents and policymakers, improving current levels of service and meeting future demand. Data presented in this category identify key trends in infrastructure performance and provide a valuable basis to inform future decisions related to its development.

Tucson MSA Infrastructure Scorecard



- The city of Tucson's residential water use has declined significantly over the past 20 years but increased slightly during 2016 and 2017.
- The share of those carpooling to work in the Tucson MSA declined by nearly two percentage points from 2009, falling to a rate of 10.0 percent in 2017.
- Airline seats per capita declined by -0.8 percent in 2017 for the Tucson Airport. This followed a substantial increase of 5.3 percent in 2016.
- In 2016, the city of Tucson had 1.8 miles of bicycling infrastructure per square mile. That was double the miles of infrastructure available in Phoenix but less than several peer communities like Las Vegas, Portland, Denver, San Diego, Salt Lake City, and Albuquerque.
- Average residential electricity prices were relatively high in Arizona in 2017, ranking the state eighth among 10 Western states. Prices rose slightly between 2016 and 2017.
- A large share of residents in the Tucson MSA lived in a household with broadband access in 2017. At 84.5 percent, that ranked Tucson seventh among peer western metropolitan areas.
- While Arizona ranked poorly in water use compared to Western states, the city of Tucson did better, with usage rates well below the state and close to the nation in 2017.
- In 2017, the Tucson MSA ranked sixth in the share of commuters that carpooled to work, at 10.0 percent.



Quality of Place Overview

Indicators in this category capture a wide range of influences on quality of life. Individuals who feel safe in their homes and surrounding areas are more likely to be involved in their community, increase civic participation, and even overall outdoor activity. Likewise, good air quality may increase residents' ability to participate in outdoor activities. Another aspect of quality of place is access to cultural amenities, such as the arts, entertainment, and other creative activities. How an individual values the quality of a region may differ depending on a multitude of factors, such as race and ethnicity, age, socioeconomic status, gender, and personal preference. However, the indicators included in this category reflect a broad range of factors affecting the quality of life in a region.

Tucson MSA Quality of Place Scorecard



- The Tucson MSA's cost of living improved in 2016 and was 4.2 percent less than the nation.
- In 2017, the Tucson MSA's percentage of "good" air quality days declined by more than 15 percentage points to an 18-year low of 39.7.
- In 2017, the Tucson MSA air quality was rated "good" 39.7 percent of the time, which ranked Tucson eighth out of 12 peer Western metropolitan areas. That was down substantially from 54.9 percent in 2016.
- The cost of living in the Tucson MSA was 4.2 percent below the nation in 2016. That ranked Tucson third lowest among peer metropolitan areas.
- Employment in creative occupations in the Tucson MSA was below the national average in 2017, at 112.2 jobs per 1,000 residents, and ranked 10th among peer metropolitan areas.
- In 2018 the Tucson MSA posted a slight decline in the number of visits to local national parks at -0.6 percent, following a substantial increase in 2017 of 16.2 percent.
- The Tucson MSA had a rate of 499 violent crimes per 100,000 residents in 2017. That was above the national rate of 382.9 but below the state rate of 508.
- The voter turnout rate for the Tucson MSA in 2016 was 53.3 percent, just below the national rate of 55.5 percent but ahead of the state of Arizona's rate of 49.9.



Workforce & Demographics Overview

The indicators included in this section help identify the demographic mix and workforce characteristics of Southern Arizona compared to other regions in the Western United States. This data can provide government officials, policymakers, and planners with the information necessary to gauge demand for future resources. The type of resources a region may need in the future are highly dependent on the demographic mix and could range from educational needs to infrastructure to services, such as health care. Population growth is a measure of how well a community attracts and retains residents, which reflects economic opportunities. The workforce is a subset of the population and refers to those individuals who participate in the labor market. A highly educated and skilled workforce tends to generate greater economic opportunities for a region's residents.

Tucson MSA Workforce & Demographics Scorecard



- The median occupational wage for the Tucson MSA increased by 2.3 percent between 2017 and 2018.
- The Tucson MSA's labor force participation rate improved in 2017, hitting a 20-year high of 80.2 percent.
- On average, the Tucson MSA employment mix is similar to the nation. However, government jobs accounted for 19.8 percent of total employment locally in 2018, compared to 14.9 percent for the nation.
- The labor force participation rate in the Tucson MSA was 80.2 percent among prime working age adults in 2017, up from 79.3 percent in 2009. That was below the national rate of 81.7 percent and ranked the region ninth among peer metropolitan areas.
- Median wages in the Tucson MSA hit \$35,430 in 2018, up 2.3 percent from 2017. Tucson ranked eighth among peer metropolitan areas and was \$3,000 below the median wage for the nation.
- The Tucson MSA population reached 1,026,099 in 2017, up 0.8 percent from 2016. Tucson's growth slightly exceeded the national rate, 0.7 percent, but ranked ninth among peer metropolitan areas.

- In 2018, the wage distribution in the Tucson MSA was relatively equal, compared to peer metropolitan areas. The ratio of wages for high earners compared to low earners, the 90/10 ratio, was 3.9 in Tucson, compared to 4.8 nationally. That ranked Tucson first among peer metropolitan areas.
- The college attainment rate for working-age residents in the Tucson MSA increased to 30.5 percent in 2017, up slightly from 29.3 percent in 2009. Tucson's workingage college attainment rate was below the nation, at 32.3 percent, and ranked ninth among peer metropolitan areas.

National, State and Local Recognition



2016 Award for Website Excellence









MAP Dashboard Update: Web Analytics



Acknowledgements

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The MAP Dashboard is guided by an Advisory Board, consisting of representatives from Partner organizations (listed alphabetically by last name). Jamie Brown, Strategic Planning and Public Affairs Administrator, Pima Association of Governments (co-alternate member) Allison Duffy, President, Silverado Technologies Celestino Fernandez, Professor, The University of Arizona Paulo Goes, Dean, Eller College of Management, The University of Arizona Jan Lesher, Chief Deputy County Administrator, Pima County, past member Steve Lynn, Chief Strategy Officer, NüPOINT Marketing, past member Clint Mabie, President and CEO, Community Foundation for Southern Arizona, past Chair Farhad Moghimi, Executive Director, Pima Association of Governments Paki Rico, Community Affairs Administrator, Pima Association of Governments (co-alternate member) Laura Shaw, Senior Vice President, Sun Corridor, Inc. Ron Shoopman, Director of Innovation and Special Projects, Southern Arizona Leadership Council, Chair Joe Snell, President, Sun Corridor, Inc.

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