



Building Community Resilience in Maricopa County

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The assessment and this report could not have been completed without the incredible support of the staff at Piper Trust, and the willingness of so many community leaders to engage in our process and have candid interviews about the challenges and opportunities they see in their community. We are deeply grateful for their insights and their trust.

Authors

This report was written by Steve Adams, Henry McKay and Karina French with editing and design by Liz Schlegel and Lindsey Chamberlin from the Institute for Sustainable Communities. Some of the ideas presented here emerged in a series of three workshops organized by ISC with support from Sascha Petersen of Adaptation International; we wish to recognize his contributions to our thinking here.

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About The Institute For Sustainable Communities

An international nonprofit organization, the Institute for Sustainable Communities (ISC) has 25 years of practical experience working in 30 countries to lead more than 100 transformative, community-driven projects. ISC's programs are designed to facilitate peer learning and engagement among local leaders charged with the work of making their communities more sustainable. ISC works in Bangladesh, China, India, Thailand, Vietnam and the United States. www.iscvt.org

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Executive Summary

With the support of Virginia G. Piper Charitable Trust, the Institute for Sustainable Communities has completed an assessment of community resilience within Maricopa County, Arizona, provided three workshop trainings, and engaged with Trust staff over six months in late 2015 into 2016. In the course of this project, we've had the opportunity to interact with over 200 regional individual leaders in the arts, culture, social services, philanthropy, the private sector and officials in local, regional and state government. We've explored the utility of the concepts of "community resilience" as they apply to the Greater Phoenix region and how they may serve as a strategic framework to guide the evolution of the Trust's programming and grantmaking in 2016 and beyond. Our work – presented here – would not have been possible without the support of the Trustees and the Trust staff who engaged with the ISC team at every step of the process. Nor would we have been able to complete this assessment without the generous gifts of time, candor and insightful reflection provided by the many people across the region that sat for interviews, participated in focus groups or engaged with us during the workshops. This final report contains the results of our assessment, and the findings of our analysis of regional perspectives.

Defining Community Resilience

Underpinning this effort is the application of the ideas around "resilience," a concept that is increasingly common among urbanists across the nation and around in the world. Resilience connotes different ideas among various professionals: those in healthcare and mental health think of resilience as the capacity of an individual to cope well with injury or stress; economic development professionals link the idea to economic diversity and the ability to thrive even amid national or global economic shocks; ecologists apply the idea to functioning of an ecosystem.



We note the linkages among these ideas to define resilience for our purposes here:

Resilience is the ability of people, communities, and systems to manage shocks and stressors and build stronger, more prosperous communities.

With this framing, we consider "community resilience" as a function of the relative resilience found within the regional economy, social engagement, and the environmental context within which the community exists. By asking about the region's economic resilience, social resilience and its environmental resilience we can come to learn something of the region's overarching community resilience and discover opportunities to improve it. These three dimensions of community resilience serve as the analytical context within which this analysis was developed and serve as the organizational scheme for this final report.

The Greater Phoenix Region – A City in a Desert

Each major metro area offers a unique context for understanding community resilience from place to place and this context matters greatly. The Greater Phoenix metro area is a relatively young city that has experienced remarkable population and economic growth in years following World War II. Like other Sun Belt cities, the Valley's burgeoning population and economy differ significantly from older centers of commerce in both the degree to which residents feel connected to the community and the relative depth of economic institutions, local philanthropy, and the nonprofit sector organizations that contribute to the social and cultural health of community. Other contextual factors that distinguish Maricopa County from other metro areas include the intense summer heat of the Sonoran desert climate within which the Valley has urbanized, the provisioning of water, and the prevailing governance ethos that perceives a limited role for the public sector in society, with the view that individual liberty and regional economic prosperity is best served by low rates of taxation, limited regulatory intervention, and an ethic of personal responsibility. On this final factor, a vast majority of those we interviewed discussed the unique challenges for building community resilience faced by Arizonans in light of prevailing views of state-level elected officials on the role of government in addressing social problems.

Virginia G. Piper Charitable Trust's Ongoing Role in Building Community Resilience

We observed that Virginia Piper's giving in the Phoenix area during her lifetime was focused on meeting community needs that continue to contribute to regional resilience. This legacy has continued since the founding of Piper Trust, and there is a clear commitment to ongoing community investment and engagement in perpetuity. This is evident in the mission statement: "Virginia G. Piper Charitable Trust supports organizations that enrich health, well-being and opportunity for the people of Maricopa County." And we mapped the Trust's responsive grantmaking portfolios to the dimensions of community resilience:

| | Community Resilience | | |
|--|--|---|---|
| | Individual Resilience | Social & Economic Resilience | Climate/Environment Resilience |
| Healthcare & Medical Research | Building wellness by access to care | Enhanced public health and reductions in social costs of disease | Reducing vulnerability to extremes |
| Children | Happy, healthy & safe childhoods | Early life interventions to avoid social problems & ensure productive futures | Reducing vulnerability to extremes |
| Older Adults | Supporting physical & mental wellness | Connecting wisdom to community needs | Reducing vulnerability to extremes |
| Education | Empowering individuals for future success | Education is the foundation of individual and community prosperity | Knowledge and skills to be good stewards of the environment |
| Arts & Culture | Building social aptitude and connection to community | Vibrant, connected community & economic stimulus | Connecting people to place & the unique attributes of place |
| Religious Organizations | Provides the bedrock for facing adversity | Connects us to each other and the needs of others | Calls on us to be good stewards for future generations |

Further, we noted the strong linkages to resiliency within the Trust’s organizational and leadership capacity building programs as well as within Trust-initiated grantmaking. The Piper Fellows program and Piper Academies are building important linkages across nonprofit sectors and organizations that not only enhance individual organizations, but are building social capital across the sector.

As a young city in a desert, the greater Phoenix region has many unique challenges not found in other cities around the country. In the course of our interviews and focus groups, we learned a great deal about these challenges and the many ways in which organizations in the region are already applying resiliency concepts and ideas to meet them.

Assessment of Community Resilience in Maricopa County

We believe that building community resilience is a journey rather than a destination; it is an ongoing discipline rather than a desired future state. Resilient communities periodically assess progress in addressing vulnerabilities and look to identify new ones as the world changes. Based on our experience in working with communities around the world and our close observation of leading practices, we would describe a resilient community as follows:



A **resilient community** supports a vibrant and diversified local economy in which sufficient local capital is available to support ongoing investment. Prosperity generated by the economy is widely shared by all members of the community and young people, regardless of race or social class, see many potential career paths open to them. The community has sufficient capacity to address social needs and to provide a safety net during bad times. The community invests in infrastructure to support economic activity and mobility and in culture and the arts to celebrate the humanity of the people who live there while adding to social connectedness. Quality educational opportunities are available for children and adults have ample opportunity for ongoing training to enhance career skills. The population is actively engaged in civic affairs and volunteerism and demonstrates a high degree of connection to each other and to place. Older adults are actively engaged and valued as they share a lifetime of experience and wisdom for community benefit. The community understands the climatic and environmental risks of the place in which it is located, and takes care to protect natural resources, built assets, and ecosystem services for the future. The community understands the nature of natural disasters that it is likely to face and mobilizes an engaged citizenry to understand what they can do to prepare and participate in recovery.

No city has yet achieved all of these attributes, but many have articulated a vision of doing so and are busy implementing action plans to build toward their visions. With this as a benchmark, we began our interview and focus group process to better understand the relative resilience of economic, social and environmental resilience within Maricopa County. Based on the perspectives and insights on the people who live within the region, we offer the following observations.

Economic Resilience

Regional leaders in economic development and government have clearly learned lessons from the Great Recession – that the region’s traditional reliance on land development and construction is not a viable basis for the future. Greater Phoenix Leadership, Greater Phoenix Economic Council and many other partners have articulated an agenda to build an innovation economy that promises to create more and better paying jobs to grow prosperity. They clearly recognize the importance of creative placemaking as a cornerstone of this strategy and appreciate the importance of arts and cultural institutions and unique local businesses, greater density within the region’s downtowns, and transit-oriented development that is beginning to accelerate around the Metro light rail. Advocates for locally-owned small business see their role in this strategy and are working together with others to advance the vision. The remarkable community asset found in Arizona State University continues to play a positive role in these efforts. And local government is actively engaged in creating cooler, more walkable, and transit-oriented neighborhoods to support this vision.



Social Resilience

We found many nonprofit and public sector leaders focused on bringing better educational outcomes as well as better public health and other vital social services to the nearly one quarter of the pre-K through 12 school age population that live in poverty. We noted many of the challenges they face in the analysis – perhaps not least of which are a high degree of physical segregation in schools by race and class and low levels of funding reaching the classroom as compared to other states.

We found the social services sector to be comprised of remarkably resourceful and enterprising nonprofit agencies working hard to meet community needs. We found evidence of a growing spirit of collaboration and cooperation among providers in the arts community as well as the social service community in response to a more constrained funding environment. We saw evidence that providers are working with local government partners, the faith community and in some instances the private sector to meet human needs.

The single largest challenge we noted – and one is critical to the success of building resilience in all three domains – is the lack of social cohesion within Maricopa County. The indicators of social connectedness and cohesion reported by the Center for the Future of Arizona and perspectives of those we interviewed tell a story of a regional population that rarely engages with neighbors, participates in collective governance at the state and



local levels, or volunteers. There are certainly those within the community that give much of their time, energy and resources for the betterment of all, but they comprise a much smaller share of the regional population than is evident in other major metro regions. Many trace this lack of social capital to several factors, including the large proportion of the population who “aren’t from here,” the prevailing development patterns which separate neighbors, the lack of racial integration and inclusion, and the prevailing governing ethos of limited government.

Environmental & Climatic Resilience

We noted the strong tradition of careful water resource management that has served the region well, and evidence that local governments and utilities are working to strengthen through new ideas, technologies and strategies. We noted a growing awareness among local government staff on key regional vulnerabilities associated with global climate change and we noted the early emergence of strategies designed to address them. We found that local sustainability staff were acutely aware of the particular challenges of the region’s most vulnerable and were seeking to address them. On issues ranging from health impacts to children on poor air quality days, to neighborhood scale heat islands in lower income communities, we found evidence that staff were taking actions or seeking resources to address the issues.

Findings and Conclusions

In considering the views expressed by regional leaders in interviews and focus groups, it is clear that the Greater Phoenix region – like any other urban region in the country – has its share of strengths and challenges. We found that leaders working on economic, social and environmental issues were already applying resilience strategies in their work. Leaders in each area were reflective in learning from past experience and were attempting to create a stronger regional economy, more robust social services to meet community needs, and incorporating climate resilience considerations into the physical form of the urban region. At the same time, we noted particular challenges in each domain that will be remarkably challenging to address without a greater degree of integration and inclusivity. Ultimately, we conclude that the current state of community resilience within the region is quite challenged, but we see many strong assets within the region on which to build. We note the most pressing priorities:

- A need to build social capital and cohesion within Valley communities;
- Strong need to build nonprofit capacity and collaboration; and,
- Cross-sector coordination of disparate resilience building efforts using a community resilience framework.

We believe that the community resilience frame has the ability to knit together disparate efforts to build economic, social and climatic resilience by spotlighting the connections and the critical interdependencies between them. And as these connections become more apparent to the leaders in each domain of community resilience, we strongly suspect that new collaborations will emerge to shape individual efforts for greater community impact and increase the likelihood of success of each effort to build economic, social and environmental resilience for Maricopa County.

Introduction

The Institute for Sustainable Communities (ISC) is pleased to submit this final report to Virginia G. Piper Charitable Trust detailing activities over the past six months exploring the utility of the concept of “community resilience” as a strategic framework to guide the evolution of the Trust’s programming and grantmaking in 2016 and beyond. Similar to the community conversations the Trust engaged in when beginning their grantmaking efforts in 2000, this report synthesizes the perspectives gleaned by the ISC team through:

- Six focus groups containing 64 individuals and key-informant interviews with an additional 45 individuals, all of whom are leaders in academia, the private sector, philanthropy and the nonprofit sector, or government;
- Interviews with Piper Trust staff;
- A review of a wide range of relevant publications; and,
- Insights from three workshops delivered for 101 participants.

The ISC team gratefully acknowledges the generosity of the many individuals who gave their time and knowledge to participate in one of our interviews, focus groups or workshops over the past six months. We wish to note especially our gratitude for Piper Trust staff who have worked so closely with us during the course of this assessment process to better understand the landscape in Maricopa County. We found much evidence of the deep regard that local leaders hold for Virginia Piper and the Trust that continues to so ably honor her memory and generosity.



The strength of this final analysis is in large measure due to the generosity of the Trust’s staff and community leaders who are so dedicated to the health and wellbeing of Maricopa County and its people. We are deeply inspired by the dedication to community wellbeing that we experienced throughout this process.

Defining Community Resilience

The idea of “resilience” in the context of cities and communities is an increasingly common component of discussions among community leaders across the nation and around in the world as a confluence of factors – extreme weather events, increasing occurrences of terrorism, rapid changes in the economy, and climate change – become more widely understood. This is clearly evident in internet searches; Google reports that searches for the term “definition of resilience” have grown threefold over the past decade.¹ Philanthropy has played a key role in advancing resilience thinking, with significant programming from national and international grant makers such as the Kresge Foundation, the Rockefeller Foundation and the MacArthur Foundation, as well as regional and community funders including the Bullitt Foundation, the San Diego Foundation and the Miami Foundation, among others.

¹ “Google Trends: Resilience,” Accessed April 2, 2016. <https://www.google.com/trends/explore#q=Resilience>.

Common to these initiatives is the idea of “resilience,” a word deriving from the Latin *resilio*, meaning to *spring back, to rebound*. Complicating its use in common speech, the term is used with specific meaning in various disciplines. Physicians, psychologists and others concerned with physical and mental health use the term to denote the ability of a person to “cope” with physical and/or mental stress or recover from an injury or disease. Engineers commonly refer to resilience in speaking of how quickly a mechanical and/or electronic system or device can return to normal function following a system failure. Ecologists use the term to characterize the ability of an ecosystem to recover in function and in biodiversity following a “perturbation” such as a flood or wildfire.

Building from these instances of professional use, “resilience” is also being increasingly used among economic development, emergency management, sustainability and social services professionals to speak to the character of the people and communities they serve and the particular issues on which they focus. These professions each work to address community shocks and stresses in particular ways. Shocks are acute and perhaps unforeseen events such as a natural disaster, a disease epidemic or an economic recession. Stresses are chronic factors that erode community wellbeing over time such as racism and inequity, high rates of poverty, lack of access to health care, and challenges in educational attainment. With these ideas in place, we can define “resilience” as follows:

Resilience is the ability of people, communities and systems to manage shocks and stressors and build stronger, more prosperous communities.

This definition integrates the individual, systemic and environmental factors that all influence resilience. Here we see the relationships between the health and well-being of the people who live in a place, the relative prosperity provided by the local economy and the extent of social cohesion residents enjoy, and the built and natural systems in which the community exists. The diagram at right suggests something of the nested nature of these ideas and provides the basis for the current examination of the greater Phoenix-Maricopa region. By asking about the region’s economic resilience, social resilience and its environmental/climate resilience, we can come to learn something of the region’s overarching community resilience and opportunities to improve it.



The relationships among these factors are fairly consistent across communities within a given culture, but the particulars knit together within each community based on a number of underlying characteristics unique to place. We turn next to considering the context provided by Maricopa County and the greater Phoenix region.

The Greater Phoenix Region

A City in a Desert

At the root of the local context is the story of a young metro region that has grown with remarkable speed over the past three quarters of a century. From a population of just over 185,000 in 1940, the 2014 U.S. Census Bureau estimates that Maricopa County is now home to over 4 million people – Phoenix has become the nation’s sixth largest city. Mesa, the 38th largest city in the United States (population over 460,000), is larger than such iconic cities as Atlanta, Miami and Minneapolis. This rapid population and economic growth has shaped the urban region we know today and the context within which we seek to understand the current state of community resilience.



Following World War II, urban services and amenities were hard pressed to keep up with the rapidly growing population. Indeed, several interviewees noted that Virginia Piper’s philanthropy was instrumental in building the region’s healthcare, education and cultural assets. Phoenix became the distribution center for the region and enjoyed a robust high technology sector as businesses recognized the opportunity afforded by the rapidly growing local labor pool until offshoring of manufacturing began in the 1980s. As we will examine in greater detail, the business of population growth – land development and building construction – has dominated the regional economy for decades.

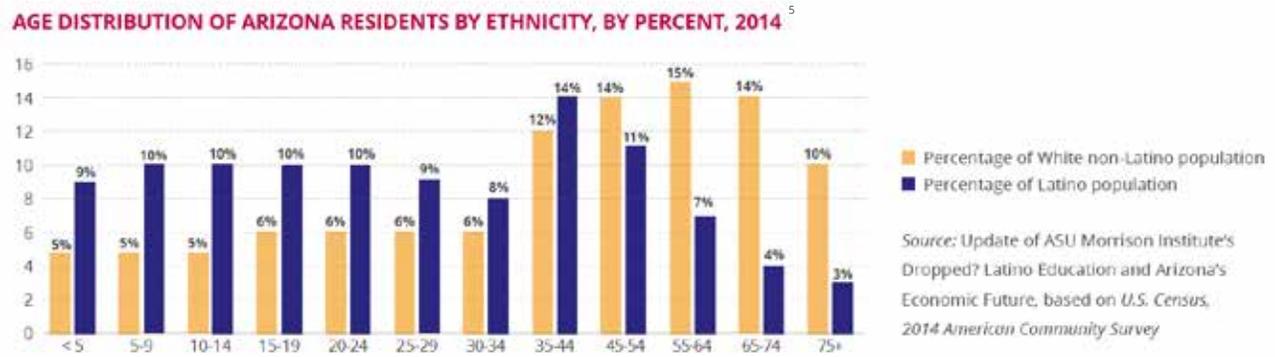
“As a city in a desert, the Phoenix region is poised to lead in community resilience.”

Susan Pepin, President and CEO, Piper Trust

The large population increase indicates a very high percentage of local residents that come from other places. A 2014 analysis commissioned by the *New York Times* found that only 38% of current Arizonans were born in the state, third only to high-growth states Nevada and Florida.² The greatest contributors include California (9% of Arizonans born there), Illinois (4%), New York (3%) and Texas (2%). One focus group participant confirmed this analysis anecdotally, commenting that, “when the Cubs are in town to play the Diamondbacks, it’s like a home game for them.” Beyond in-migration from other states, over 15% of current Arizonans were born abroad. This diversity of origin should be viewed as positive because the extent that it brings people of differing backgrounds together in ways that can foster new ideas. However, many of those we interviewed noted the challenges brought on by the lack of connection to place found among the 62% of residents born elsewhere.

² Aisch, Gregor, and Robert Gebeloff. “Mapping Migration in the United States.” *New York Times*, August 15, 2014, http://www.nytimes.com/2014/08/16/upshot/mapping-migration-in-the-united-states-since-1900.html?_r=1.

The ethnic and racial diversity of the region continues to grow with the percentage of white, non-Hispanic falling from 66% to 57% in the 12 years from 2000 to 2013.³ Population growth rates among Hispanic residents exceeds 50%, nearly 70% for African-Americans and over 100% among Asians and Pacific Islanders. According to the Arizona Office of Employment and Population Statistics, the current rates of growth will make the region a minority majority population by 2031.⁴ Several social indicators ranging from poverty and unemployment rates to preterm and low birth weight deliveries indicate disparities in outcomes by race within the region. Many of our interviewees noted racial and ethnic disparities as leading challenges facing the region, as well as the extensive national and international media coverage of state and local efforts to address undocumented immigrants.



The provisioning of resources – particularly water in a desert environment – is of vital importance to any growing metro region. Greater Phoenix has benefited from extensive federal investments in water infrastructure dating from the early 1900s Reclamation Act to the 1993 completion of the Central Arizona Project that conveys Colorado River water to Phoenix and Tucson. In addition to new source development, efforts to improve water use efficiency, reuse and improved groundwater management have enabled the region to continue to meet water demands during this period of remarkable growth. While many we interviewed stressed the uncertainty of future supply beyond the 100-year planning horizon, most felt that the current water supply was sufficient to meet the short and mid-range needs of the region.

The prevailing environmental factor in Maricopa County is the heat of summer. The average high temperatures are the hottest of any other major city in the nation with more days exceeding 100°F with an average of 107 days per year during three decades from 1980–2010.⁶ The introduction of widely available air conditioning following the Second World War facilitated the rapid population growth despite the heat. However, 13% of single family homes in Maricopa County currently do not have air conditioning or an evaporative cooler.⁷ There is evidence



³ <http://www.census.gov/quickfacts/table/PST045215/04013>

⁴ Arizona Department of Administration, Office of Employment and Population Statistics, *Maricopa County - Medium Series, 2015-2050 Projections* (Phoenix: Arizona Department of Administration, 2015). <https://population.az.gov/population-projections>.

⁵ Center for the Future of Arizona - Vision 2025: Arizona Comes of Age: http://www.arizonafuture.org/assets/docs/vision_2025_arizona_comes_of_age_report.pdf

⁶ "NOAA's National Weather Service - National Climate," *NOAA's National Weather Service - National Climate*, April 6, 2016, accessed April 07, 2016, <http://w2.weather.gov/climate/getclimate.php?wfo=psr>.

⁷ Sharon L. Harlan, et al, "Neighborhood Effects on Heat Deaths: Social and Environmental Predictors of Vulnerability in Maricopa County, Arizona," *Environmental Health Perspectives* 121, no. 2 (February 2013): 197-204, doi:10.1289/ehp.1104625.

that some residents cannot pay for air conditioning even if it is available in their residence. Statewide, 26% of Arizona's households (617,000) meet federal energy assistance requirements of earning at or below 150% of the poverty rate. During 2014, federal funding allocated to the State of Arizona assisted 30,520 households with utility bill assistance – less than 5% of the total eligible households.⁸ Residence with financial resources can more easily cope with extreme summer temperatures, but extreme heat poses serious risk to outdoor laborers, the homeless, and the nearly 14% of county residents over the age of 65.

The final contextual factor – the prevailing governance philosophy at the state and local levels – figures prominently in this assessment of community resilience. The leadership of Arizona's executive and legislative branches of government fully embrace a limited role for the public sector in society, with the view that individual liberty and regional economic prosperity is best served by low rates of taxation, limited regulatory intervention, and an ethos of personal responsibility. According to a 2012 U.S. Census Bureau analysis, Arizona ranks 12th among states in the lowest total per capita rate of taxation at \$1,979, compared to the national average of \$2,542 per capita. Some local governments within Maricopa County share this view while others embrace a larger role for government in addressing social problems. A vast majority of those we interviewed discussed the unique challenges for building community resilience faced by Arizonans in light of prevailing political views.

Virginia G. Piper Charitable Trust's Ongoing Role in Building Community Resilience

Thinking about resilience is often spurred by the threat of an imminent disaster or within the wake of an unexpected event as a community struggles to regain a sense of normality. The mention of "resilience" often conjures images of emergency workers and many in the general public would argue that building community resilience, as one interviewee noted, has nothing whatever to do with them as they go about their daily lives. "The vast majority of people in the region," he said "have no real definable understanding of all the major shocks and stresses that impact their daily lives... they are as resilient as they need to be to take care of themselves and their families." So the burden of initiating efforts to build community resilience falls to those that are most focused on community welfare and vulnerable populations and are in a position to consider community needs beyond the demands of daily life.

Importantly, in considering this scope of this current work of discovery and planning, Piper Trust recognized that one need not and should not consider resilience only in the light of disaster preparedness.

As noted resilience scholar Eric Klinenberg of Columbia University argues:

“ Whether they come from governments or from civil society, the best techniques for safeguarding cities don't just mitigate disaster damage; they also strengthen the networks that promote health and prosperity during ordinary times.”⁹

Seen in this light, one can argue that through Virginia Piper's giving during her lifetime she was focused on meeting community needs that continue to contribute to regional resilience. This legacy has continued since the founding of Piper Trust and is evident in the mission statement: "Virginia G. Piper Charitable Trust

⁸ LIHEAP data sourced via <http://energyassistaz.com/pdfx/LIHEAPFactsStatusPrognosis.pdf> and <http://liheap.org/states/az/>.

⁹ Klinenberg, Eric, "Adaptation: How Can Cities Be "climate-proofed"?", *New Yorker*, January 7, 2013.

supports organizations that enrich health, well-being and opportunity for the people of Maricopa County.” The accompanying table maps Piper Trust’s responsive grantmaking portfolios to the dimensions of community resilience:

| | Community Resilience | | |
|--|--|---|---|
| | Individual Resilience | Social & Economic Resilience | Climate/Environment Resilience |
| Healthcare & Medical Research | Building wellness by access to care | Enhanced public health and reductions in social costs of disease | Reducing vulnerability to extremes |
| Children | Happy, healthy & safe childhoods | Early life interventions to avoid social problems & ensure productive futures | Reducing vulnerability to extremes |
| Older Adults | Supporting physical & mental wellness | Connecting wisdom to community needs | Reducing vulnerability to extremes |
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| Religious Organizations | Provides the bedrock for facing adversity | Connects us to each other and the needs of others | Calls on us to be good stewards for future generations |

Beyond responsive grantmaking, we have noted strong linkages to resiliency within the Trust’s organizational and leadership capacity building programs as well as within Trust-initiated grantmaking. The Piper Fellows program and Piper Academies are building important linkages across nonprofit sectors and organizations that not only enhance individual organizations, but are building social capital across the sector. Key Trust efforts in building collaboration and shared services, such as the Maricopa Family Support Alliance and the grant to UMOM New Day Centers to implement the Homelessness Data Exchange, serve as excellent examples of resilience-building strategies.

The tools afforded by resiliency as a strategic lens – assessing relative vulnerabilities and the coping capacities of individuals in need of services and the organizations that provide them – are indeed a powerful means through which to understand how best to meet the Trust’s mission. During the course of this assessment process, the ISC team tested these tools with 101 leaders of diverse nonprofit service organizations over the course of three day-long workshops at the Trust. We found that workshop participants realized nearly equal merit in applying resilience tools to both the populations they serve and their own organizational operations.

“ This should be part of every manager’s responsibilities. Often we get caught on the grind of the daily work and don’t think about what is coming down the pipe. ”

As a young community in a desert, the greater Maricopa County region has many unique challenges not found in other places or cities around the country. In the course of our interviews and focus groups, we learned a great deal about these challenges and the many ways in which organizations in the region are already applying resiliency concepts and ideas to meet them. We turn now to documenting the perspectives of local leaders on the relative state of community resilience in Maricopa County before concluding with our analysis and suggestions for Piper Trust.



Assessment of Community Resilience in Maricopa County

Building community resilience is a journey rather than a destination; it is an ongoing discipline rather than a desired future state. Resilient communities periodically assess progress in addressing vulnerabilities and look to identify new ones as the world changes. But if resilience is an ongoing practice, is it possible to describe what a resilient community looks like?

Based on our experience in working with communities around the world and our close observation of leading practices, we firmly believe that we can say much about what constitutes a resilient community.



A **resilient community** supports a vibrant and diversified local economy in which sufficient local capital is available to support ongoing investment. Prosperity generated by the economy is widely shared by all members of the community and young people, regardless of race or social class, see many potential career paths open to them. The community has sufficient capacity to address social needs and to provide a safety net during bad times. The community invests in infrastructure to support economic activity and mobility and in culture and the arts to celebrate the humanity of the people who live there while adding to social connectedness. Quality educational opportunities are available for children and adults have ample opportunity for ongoing training to enhance career skills. The population is actively engaged in civic affairs and volunteerism and demonstrates a high degree of connection to each other and to place. Older adults are actively engaged and valued as they share a lifetime of experience and wisdom for community benefit. The community understands the climatic and environmental risks of the place in which it is located, and takes care to protect natural resources, built assets, and ecosystem services for the future. The community understands the nature of natural disasters that it is likely to face and mobilizes an engaged citizenry to understand what they can do to prepare and participate in recovery.

No city has yet achieved all of these attributes, but many have articulated a vision of doing so and are busy implementing action plans to build toward their visions. This chapter provides an assessment of where the Greater Phoenix region is on this path based on the perspectives and insights on the people who live within the region. Augmenting their views through these overviews of economic, social and environmental resilience are relevant statistics identified by the ISC team.

Economic Resilience

The Phoenix-Mesa-Scottsdale metro is the nation's 15th largest regional economy with a 2015 Gross Metropolitan Product (GMP) valued at \$228 billion.¹⁰ As of January 2016, the region has a total workforce of just over 2.2 million – an increase of 2% over the prior year – and an unemployment rate of 4.6%, lower by 1.2% from January of 2015. Average hourly earnings equal \$24.36, up 2.4% over the past year.¹¹ Over the past decade, the regional economy ranks 29th nationally in growth with a 9.9% increase in jobs, a 15.3% increase in GMP and nearly equal increase in aggregate wages. The region exceeds the national average in each indicator.¹²

ECONOMIC RESILIENCE

Regional Economic Vulnerabilities:

- Regional economy overly dependent on construction & development
- Low number of corporate headquarters compared with other major cities
- Lack of locally focused banking & lending institutions
- Racial disparities in employment, income and poverty
- International and national perceptions of intolerance toward racial and ethnic diversity
- Continued and significant decline of public investment in pre K-12 schools, post secondary education and training

Regional Economic Assets:

- Favorable costs of doing business
- Mild winter weather and 330 days of sunshine per year
- Initial investments in light rail and new transit-oriented development beginning to accelerate in key pockets of density across the region
- An increasingly dynamic and successful small business sector
- A diverse population with truly unique and vibrant blend of cultures and heritage
- World-class higher education with three public institutions: Arizona State University, Northern Arizona University and University of Arizona
- Strong Maricopa County Community College District

The regional economy ranks less favorably among indicators of economic prosperity, coming in 72nd nationwide with decadal increase in average wage gaining 4.8%, a decline in GMP per capita of 6.6% and moderate increase of 4.9% in GMP per job. The regional economy lags the national average in each of the prosperity indicators. In considering economic inclusion, the regional economy is ranked 61st nationally, with the employment to population ratio declining 3% over the past decade, a 7% reduction in median wage and a 5.4% increase in relative poverty.

GREAT RECESSION

The most significant shock experienced by the Phoenix region to date is the Great Recession that officially lasted from December 2007 to June 2009 at the national level but persisted in regions particularly vulnerable to the underlying cause – the bursting of an \$8 trillion housing finance bubble. The signal of the Great Recession is clearly evident within each indicator time series noted above, and was immediately top-of-

“ Many traditional institutions, from higher education, to the schools, to nonprofits, even the family unit, emerged from the recession weakened. ”

¹⁰ The United States Conference of Mayors, *U.S. Metro Economies: GMP and Employment 2013 -2015* (Lexington: IHS Global Insight (USA), Inc, 2010).

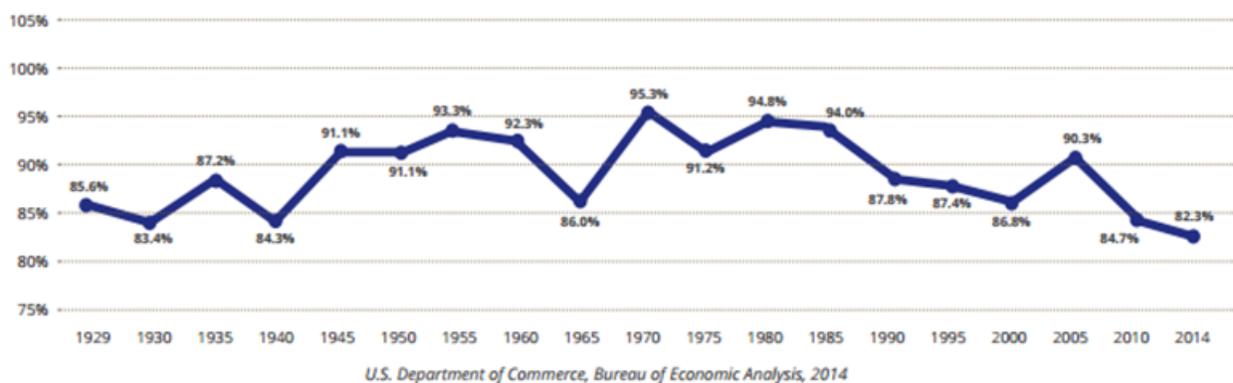
¹¹ "Phoenix-Mesa-Scottsdale MSA," *Arizona's Economy: University of Arizona Economic & Business Research Center*, last modified March 2016, accessed April 07, 2016. <https://www.azeconomy.org/data/economic-indicators/phoenix-mesa-scottsdale-msa/>.

¹² Richard Shearer, et al, "Metro Monitor 2016: Tracking Growth, Prosperity, and Inclusion in the Largest U.S. Metropolitan Areas," (Washington: Brookings. January 2016), <http://www.brookings.edu/research/reports2/2016/01/metro-monitor#V0G38060>.

mind in many interviews we conducted. One social service executive noted that, “Many traditional institutions, from higher education, to the schools, to nonprofits, even the family unit, emerged from the recession weakened.”

Economic development professionals told us that, “From a job perspective, we’ve nearly recovered the 300,000 that we lost – but these jobs aren’t at the same level of pay. For some time, we’ve been working to recover the higher-wage jobs we lost in manufacturing 25 to 30 years ago. The recession has put us back in that regard.” This observation is confirmed by an analysis from the Maricopa Association of Governments, which found that the number of high-wage jobs in advanced industries has declined from 23% of all Arizona jobs to 15% over the past 30 years. One local leader in academia noted that, “20 years ago, Motorola was the #1 employer in the state. Now it’s Walmart.”

Per Capita Income in Arizona as a Percentage of the National Average



While the Great Recession affected nearly everyone in the region, the slow and uneven recovery has been felt most acutely within the Latino and African-American communities. The latest available U.S. Census Bureau American Community Survey data from 2014 reports county-wide unemployment rate of 8.9%. Unemployment among white residents was 8.1%, 14.7% among African-Americans, 10.8% among Latinos, and 16.3% among Native Americans. Given the relative age distributions among the county’s Latino population (which is younger) and the county’s white population (which skews older), the impact of higher unemployment rates among people of color reflects the extent of poverty among children in Maricopa County – 24.1% of children under 18 – versus 7.9% among those over 65 years of age.¹³

This high degree of poverty among the region’s children represents a significant future vulnerability to the region’s economy in that low income students score below norms in academic achievement. The Center for the Future of Arizona underscores this vulnerability in Vision 2025: Arizona Comes of Age, noting that “far more of Arizona’s students live in lower-income neighborhoods than in more affluent ones. They make up a much larger percentage of our potential workforce and are key to Arizona’s prosperity and economic competitiveness in the future.” This trend is further underscored by the Center’s finding that by 2020, 68% of all jobs statewide will require post-secondary education or training.¹⁴

“Far more of Arizona’s students live in lower-income neighborhoods than in more affluent ones.”

Vision 2025: Arizona Comes of Age

¹³ U.S. Census Bureau, *2010-2014 American Community Survey 5-year Estimates* (Washington: U.S. Government Printing Office, 2015). <https://www.census.gov/programs-surveys/acs/>.

¹⁴ *Vision 2025: Arizona Comes of Age* (Phoenix: Center for the Future of Arizona, 2015). https://media.azpm.org/master/document/2015/10/1/pdf/cfa-vision-2025-final-9_22.pdf.

HOUSING & CONSTRUCTION

Nearly everyone we interviewed identified the region's "over dependence" on the development and construction sector as the most significant economic vulnerability. One nonprofit executive observed that "The recession hit us harder than the rest of the country and our recovery has been slower. This is largely because of our reliance on a few key industries related to housing and construction and the lack of good, long-range economic planning." Another economic development professional agreed, saying the regional economy continues to revolve around "consumption-based industries." In January 2016, the Maricopa County Board of Supervisors voted to adopt the *Vision 2030 County Comprehensive Plan* containing the following observations in the Economic Growth element:

“ Going forward, over reliance on population growth and certain related industries is not a strategy that will allow this area to be competitive in the global economy... While long-term growth prospects remain positive, that recession showed that economic diversity helps create economic resiliency.¹⁵”

Other structural vulnerabilities identified by focus group participants and interviewees include a lack of Fortune 500 headquarters located in Phoenix after losing such notables as PetSmart and US Airways through corporate mergers and acquisitions. Another vulnerability mentioned was the lack of locally-based lending institutions.

One economic development executive, in comparing Arizona to Texas, noted, "One not-so-obvious indicator is the number of community banks; we have 13 in Arizona, while there are over 500 in Texas. Over 90% of business deposits here are going into national banks which means that this money is getting invested in cities all over the country rather than here." Small business advocates confirmed this credit crunch and noted that it impacted minority-owned small businesses more acutely. As a "regional branch economy," one economic development officer noted, "The big decisions about what happens here are made elsewhere."

RACISM & INCLUSION

Another challenge noted by economic development executives was the national and international perception that Arizona was greatly troubled by racism. One economic development executive described a negative experience at a trade show in Mexico City in which several people raised this issue following the extensive media coverage of local law enforcement efforts in Maricopa County and the passage of Senate Bill 1070 in 2010. Small businesses owned by Latinos and other people of color now account for 25% of small businesses in Maricopa County. But, said this advocate, "Arizona must do more to address inclusion – this is vital for our economy." A regional business scholar noted that one key outcome of



¹⁵ Maricopa County, Planning and Zoning Commission, *Vision 2030 Comprehensive Plan* (Phoenix: Maricopa County Planning and Development Department, 2015), <http://www.maricopa.gov/planning/pdf/vision-2030-plan.pdf>.



the passage of SB 1070 was the “hollowing out of the labor force” among skilled construction trades labor from the region and that this loss has been felt more recently as the new construction starts are delayed by shortages of skilled tradespeople. The consensus among interviewees is that the region is not sufficiently investing in the Latino community, especially children.

While nearly all of our interviewees felt that local and regional leaders were working toward greater economic resilience, some voiced a degree of skepticism. “It is not a unanimous idea,” said one local researcher, “that this region needs to diversify or have a paradigm shift. Many still hold to the idea that ‘this too will pass.’” Given the difficulties of altering the course of economic trends with over a half century of inertia, perhaps a certain skepticism is healthy. We heard evidence that the business community is indeed considering something new for the future of greater Phoenix – most concisely stated in the recent *Velocity: A Blueprint for Transforming Greater Phoenix into an Innovation Economy*,¹⁶ detailed below (page 13). Working with the Brookings Metropolitan Policy Project, local leaders have articulated an economic resilience strategy that focuses on the prosperity indicators of increasing average wages and increasing per capita Gross Metro Product. The strategy underscores the importance of investing in education, developing new talent, and creative placemaking through increased density and transit-oriented development.

TRANSPORTATION & PLACE-MAKING

We heard further evidence of the growing dynamism among the region’s smaller businesses and the economic benefits that they are providing. Small businesses account for 47% of private sector employment and 42% of private sector payroll.¹⁷ As one economic development official observed, “Corporate headquarters are grown – they don’t move; and this is a key lesson from older cities.” By focusing on incubators, leveraging the incredible education and research resource that is Arizona State University, and creating greater opportunities for servicing more of the regional supply chain locally through locally-owned businesses, economic development officials are hoping to achieve greater economic diversity. Another advocate for small business noted that, “42 cents of every dollar spent with a local business stays in the state, while only 13 cents of every dollar spent at a chain store does so.”

Another positive factor noted by interview subjects was the development of the Metro light rail connecting Mesa, Tempe and the Phoenix downtown and midtown areas. Completed during the height of the 2008 Recession, the project has brought infill and denser development to downtowns and progressive local tax policies are encouraging affordable housing near light rail stations. Observed one interviewee, “By all



16 *Velocity: A Blueprint for Transforming Greater Phoenix into an Innovation Economy*, (Washington: Brookings, August 2014), http://www.brookings.edu/~media/Research/Files/Reports/2014/09/phoenix_business_plan/BMPP_MBP_PhoenixAug29_2014.pdf.
17 https://www.phoenixchamber.com/sites/default/files/pdf/necessity_for_change_davis.pdf

measures: ridership, development, it is overwhelmingly a positive thing for Phoenix and Maricopa County, and it links Phoenix, Tempe and Mesa. The fact that voters passed a transportation sales tax was evidence that this is something that has been a good success.” Additional growth in bike share installations and investments in additional buses are evidence that residents are perceiving the light rail as a viable alternative for many car trips in the region. A related development in Phoenix has focused on securing a “Complete Streets” policy for the city in which transportation planning is required to consider pedestrians, bicycles and other alternatives to car travel only. Spurred by Vitalyst Health Foundation, a coalition successfully advocated for development and passage of the policy in Phoenix in June 2014.

Walkability, transit-oriented development and a focus on local business are key components of the creative place-making that economic development officials stress are key to the transformation into an innovation economy. In a 2015 interview with online news portal Skift, Visit Phoenix Chief Executive Officer Steve Moore described the process that led to the successful 2009 convention center development in downtown Phoenix:

“ The convention center expansion would not have happened without the leadership from the business community... We needed to engage the Millennials. We needed to have people in their twenties come in and help us design what downtown was really going to look like. Early on we realized it had to be organic. It needed to be young. There needed to be a vibrant community of local Millennial thought leaders to attract individual small businesses and people of all ages to move into the downtown.¹⁸ ”

18 Greg Oates, “Visit CEO on How Conventions Drive Downtown Development,” *Skift*, November 4, 2015, <http://skift.com/2015/11/04/visit-phoenix-ceo-on-how-conventions-drive-downtown-development/>.

Social Resilience

A remarkable insight on the social resilience of Arizona is afforded by the Arizona Civic Health Index, developed in partnership by the Center for the Future of Arizona, the National Conference on Civic Citizenship and Gallup. The 2013 data (the latest available) rate citizen participation on actions that influence government, that build community and that build social cohesion across the 50 states and the District of Columbia. Arizona ranks among the bottom 10 states in nine of the 15 indicators, and narrowly misses doing so in another five indicators. The only top ten appearance for Arizonans – eating dinner with household members frequently; number 7 of 51 – further underscores the extent to which Arizonans are disengaged from community. Arizonans rank dead last in two indicators – attending public meetings and exchanging favors with neighbors frequently. The indicators suggest that Arizonans vote in presidential elections (#45), contact public officials (#46), belong to an organization (#47) or even talk with neighbors frequently (#42) at rates well below that of citizens in other states.

SOCIAL RESILIENCE

Regional Social Vulnerabilities:

- Low social connectedness and cohesion
- Low rates of participation in elections and governmental processes
- Perceptions of a politics of divisiveness and social exclusion at the state level
- Social needs that exceed the extent of currently available resources
- Low density land development patterns that promote social isolation
- Need for better coordination among nonprofit social service providers
- Less locally-focused philanthropy than older American cities

Regional Social Assets:

- Remarkably dedicated social service sector
- Growth in the capacity of local philanthropy over the past 20 years
- A vibrant arts and culture community

In the course of our interviews, focus groups and workshops, participants provided several insights into what they believe are the underlying causes. Some respondents cited the transient nature of the local population, with those moving into the region feeling more connected to the places they came from rather than their new home, a factor examined earlier. Others cited the low density landform and car-dependent design that disadvantage interaction with neighbors. Still others noted the legacy of racial segregation which persists in neighborhood makeup and the location of physical infrastructure. But the majority of respondents noted current state politics as the principal factor eroding social resilience in Maricopa County. We will explore each of these perspectives in turn.

LOW DENSITY LANDFORM

Many respondents described the history of suburban sprawl and dispersed growth in Phoenix, one noting that, “Since the 1960s, growth has been through building big housing developments on cheap desert land.” Another observed that, “Phoenix is a relatively new city. It emerged during the era of cars, and economic founders of the city had investment in



cars. The region invested heavily in the highway system.” This development pattern relates to social cohesion across the region in that it “perpetuates and instills segregation – people are dispersed.” One official involved in community development finance noted that, “Because of sprawl, sub-communities emerge with their own culture and it is difficult to connect them or get them to act as one.” And, went on to describe the typical suburban building structures, with walls around homes that physically isolate people from their neighbors, noting that, “The relationship between transportation and housing development causes isolation in single-passenger vehicles and lack of movement between sub-communities.” These historic land development patterns proved to be an economic vulnerability as well as a social vulnerability to the region. The community finance official observed that, “Sprawl development slowed due to the housing market crash and the loss of construction labor from SB 1070. However, there is still suburban growth.”

“All the tried and true economic development stuff has been tried, but not the cultural change piece. It needs to happen for future prosperity.”

An economic development official

Transportation and mobility are major challenges for older adults in the region who lack access or the ability to travel by car. One provider noted that, “If you can’t drive, public transportation isn’t reliable or comprehensive enough to replace it.” The car-dependent landform exacerbates this challenge and “dial-a-ride services have inadequate coverage” to mitigate this challenge. Among the region’s disabled population, transportation remains the most challenging issue. The car-centric urban design makes it hard for disabled people to get to work, to the grocery store, and to doctors’ offices. One provider noted that, “This need is especially pronounced during natural disasters.”

Three respondents noted some particular progress made against these challenges that have emerged with the development of downtown Phoenix. “For a long time,” one interviewee observed, “there were never residential areas downtown, and no dense housing. But the ASU campus downtown was essential for getting the ‘critical mass’ of people and consumers there.” As noted in the previous section, developing a walkable city core and promoting infill development is viewed by economic development practitioners as a key strategy for growing their vision of an “innovation economy.”

Another respondent noted the importance of the Metro light rail investment and accompanying local policy, commenting, “Development along the light rail line has had big impact: it was paired with an initiative to focus housing and commercial development to correspond with access to the new public transportation. At the beginning of development around light rail, we were able to get tax credits for affordable housing development project within half-mile zone. Now, the popularity of development has caused most new developments to be market-rate housing.” Another respondent focused on the quality of the downtown experience by noting that “The design of city is related to health,” and



Photo courtesy of Virginia G. Piper Charitable Trust

that downtown development in the context of the local climate must consider urban heat island mitigation through strategic shade in order to achieve the desired degree of walkability. She noted that, "Climate change is increasingly being seen as a health issue."

Many public health advocates referenced the growing acknowledgement that, "healthcare is only 20% of what affects health. Other issues, such as access to housing and urban design, can have dramatic impacts on health." One local charitable organization is focusing extensively on a wide range of local policies, tax incentives, and community engagement to alter urban development patterns toward greater walkability and other attributes that promote health.



A local arts executive noted the importance of cultural and arts institutions as anchors in the community and draws for those coming downtown: "Arts programming is a huge piece of the downtown development – all the progress around the light rail and initial investment in low-income housing was in the vicinity of art institutions downtown. Art institutions started thinking about how to make art accessible to a greater diversity of people." The community finance official voiced optimism in noting the "beginning of movement downtown. The projections say 6,000 more families will be moving downtown." If this proves to be true, these 6,000 families will experience a great many more social interactions each day than is likely in the typical detached single-family home in the Greater Phoenix region.

SOCIAL DIVISIONS BY RACE

One nonprofit social services executive described Phoenix as "an increasingly segregated community both racially and economically." Also noting that, "neighborhoods are spread out and highly segregated, and people's perspectives limited to their areas." Another social service provider observed that, "Racial segregation is a part of the physical design – there is a history of redlining, and major highways are barriers to movement between neighborhoods – all based in the segregation of the 1950s." Another respondent observed that, "People are no longer socially connecting with people outside of their racial community. There is an issue of trust, especially between older adults and immigrants."

Many respondents observed other effects stemming from the racial divide. Said one interviewee, "The racial/economic divide is actually a driver for decreased public funding; public officials feel like by funding public education, they are supporting immigrants and Latinos. It is easier to cut the budget when it is the Latino population that is affected." Another respondent articulated the lasting legacy that these decision could lock in; "This racial and economic division affects Hispanic and low-income populations' ability to succeed. The lack of sufficient public funding, the shift towards investment in charter schools, and the fear

“ People are no longer socially connecting with people outside of their racial community. There is an issue of trust, especially between older adults and immigrants. ”

of penalization stemming from SB-1070, has created an education gap between Latino, poor communities and white, middle-class communities.” Another interviewee noted that, “There are higher rates of incarceration in South Phoenix, from predominantly Latino and low-income neighborhoods. Five zip codes fill up state prisons – two of them are in South Phoenix.” The divide has implications for access to healthcare as well; as one social services executive noted, “There are no hospitals south of the river in Phoenix, only urgent care facilities.” Another care provider noted that access to healthcare is divided demographically in Maricopa County.

Issues around undocumented immigrants are perhaps the most socially and politically sensitive within the region and appear to be potent drivers of public policy. One social services executive noted that, “There is huge controversy in providing services for undocumented populations, but the reality is that we have an estimated 400,000 undocumented immigrants – about 25% of the [Latino] population. They are highly vulnerable in that they are unable to access health care, college education, certain jobs, food stamps and healthy food because of documentation status. And this presents a huge economic stressor.”

Unfortunately, a disproportionate share of Latinos lost their homes through foreclosure in the housing market crash, and one respondent suggested that this has “hurt the low-income population’s trust in the economic system.” This presents a rather large social vulnerability for the region, given the clear evidence that the demographics of Greater Phoenix are changing rapidly; as one respondent noted, “The [Latino] population will be the majority, but the community is not investing in their future.” The best opportunity to build trust among all community members while seeking to secure future prosperity may be the region’s education system, as noted by two executives in regional economic development. Past and current bias is expressed most acutely in the educational system and yet it serves as the best point of intervention to address disparities before they are carried forward into the next generation of young people. “In 20 years, the Latino population is the majority, and the demographic of uneducated and underperforming is huge. This impacts everything from democracy to the economy.”

“ In 20 years, the Latino population is the majority, and the demographic of uneducated and underperforming is huge. This impacts everything from democracy to the economy. ”

The arts are playing a positive role in building community cohesion. One arts executive discussed the importance of First Fridays in bringing community together around music, food and culture. By celebrating what is unique to the Phoenix region, arts and culture can play a role in connecting new Arizonans to their adopted home. One economic development official noted, however, that the “Young population won’t be engaging in the high-priced art experiences like the symphony in the future, so there is likely a greater return on investment in public art, storytelling, and local artists.” Local arts institutions provide opportunities for volunteer engagement and provide visitors with “something to do, and a safe place with air conditioning.”



PUBLIC POLICY CHOICES & PREFERENCES

Nearly every focus group, workshop and a vast majority of interviews that we conducted included references to the public policy decisions of Arizona's state government. Whether focusing on the fiscal policy or substantive legislation, leaders from every sector described state policies of fiscal restraint, preemption of local governments, and low regulatory standards as providing tremendous obstacles to their work. A housing advocate noted that "inclusionary zoning was made illegal by Arizona state legislature," which precludes local government efforts to integrate affordable housing into new development. The most widely noted substantive policy was Senate Bill 1070 passed in 2010, which "alienated the Latino and immigrant population, and caused a negative reputation for the state nationwide." An education official noted that, "The young generation are seeking to live elsewhere, since they don't fit in with the conservative culture."



Several interviewees cited public education as a particularly compelling case in point. Education is widely perceived as a critical public good in that, as one economic development official noted, "Gaps in access to education affect everything from democracy to the economy." A public health specialist called education "an upstream determinant of health." But nearly all interviewees who cited education were concerned about current funding, public policy and educational outcomes.

“Gaps in access to education affect everything from democracy to the economy.”

One observer noted longstanding structural challenges in that "The desire for local control has created a highly fragmented school system – 56 different schools districts in one [Maricopa] county." This is likely a major factor in a 2015 Arizona Auditor General's finding that 53.8% of operating dollars were spent by districts for instruction, as compared to the national average of just over 61%.¹⁹ Another social services executive noted that there is "very little money going towards public education due to conservative politics," observing that the "transient and older adult community doesn't have any interest in investing in education system." Another respondent noted that "only 27% of Arizona families have school age children," a statistic that we were unable to confirm but which may well validate the previous observation.

Funding levels are indeed low in comparison with other states. The Auditor General's report found that "Arizona's per-pupil funding spending continues to trail the national average by about \$3,000." A 2013 analysis of per-pupil spending among the states ranked Arizona 48th ahead of Idaho and Utah.²⁰ Educational outcomes lag national averages as well; Arizona is 43rd in the nation for its high school graduation rate of 75.1%. Benchmarks of Grades 4 and 8 reading and math skills lag the national average. One education advocate noted that, "There were huge cuts in education during the recession, but there are also cuts whenever economy grows, so I see little prospect to increase education funding." Another service executive noted that it is "hard to recruit people nationally for jobs in Phoenix because of the poorly-funded school system."

¹⁹ State of Arizona, Office of the Auditor General, *Arizona School District Spending (Classroom Dollars) Fiscal Year 2014*, (February 27, 2015). https://www.azauditor.gov/sites/default/files/AZ_School_District_Spending_FY2014.pdf.

²⁰ U.S. Census Bureau, *Public Education Finances: 2013* (Washington, DC: U.S. Government Printing Office, 2015), G13-ASPEF.

One social services director suggested that, “The economic crisis became an excuse to reduce the education budget with a sound fiscal argument. The lack of funding to public schools and the tax structure has caused the disintegration of public schools.” One respondent noted that, “Political animosity towards immigrants often translates to reduced funding for education overall, since public spending on education disproportionately affects Latinos.” Following the passage of SB 1070, the public schools saw a reduction in enrollments. Others noted the challenges associated with the rise of the charter school option in Arizona. Said one respondent, “Public funding dollars can now go to attending either a charter or a public school. Those who have the capacity to transport to another charter school further away do. This decreases the amount of money flowing into public schools, and performance declines.” A post-secondary education executive noted that higher education is also underfunded: “We went from the second highest category of state spending to fourth during recession,” and that funding streams for community colleges, “were completely wiped out by recession.”

“ Political animosity towards immigrants often translates to reduced funding for education overall, since public spending on education disproportionately affects Latinos. ”

Many providers underscored the consistent year-on-year budget cuts in services for homeless people as their primary challenge in meeting a growing demand. While most homeless funding available in Arizona comes as federal agency pass-through dollars to state government, one provider noted that, “state and local legislators are generally not friendly to social services.” One social services executive cited the recent case in which the City of Phoenix closed a homeless overflow shelter that sheltered 400-500 individuals.



Fiscal constraints were widely cited as being an enormous problem for providing health and mental health services. One service provider noted that, “Funding for public health was cut during the recession, but was already low even before the recession. The flexible funding available to the Maricopa County Public Health Department is only 10% of the national average.”

With respect to children’s health, Arizona ranks among the top five states in the country for number of uninsured children. One service provider attributed this to public policy, describing how, “In 2009, the state froze new enrollments into the Child Health Insurance Program (CHIP) for budget reasons and then closed the program in 2014.” CHIP covered

“ Funding for public health was cut during the recession, but was already low even before the recession. The flexible funding available to the Maricopa County Public Health Department is only 10% of the national average. ”

children in families who make up to 200% of poverty line, but Medicaid only covers up to 138%, leaving a gap in coverage. Under CHIP, families had no deductibles or copays and didn't need to carry coinsurance. Following CHIP closure, low-income families who had to switch from CHIP to regular insurance faced increased costs. The provider offered the opinion that, "If it weren't for federal block grants and Medicaid, Arizona wouldn't have any will to support healthcare for kids whose families can't afford it."

One care provider described Arizona as having, "Worse health indicators than national averages, but there is a lack of resolve to address them here." Policymakers are viewed as holding the "belief that health is an issue of personal responsibility, not a public policy issue." The respondent went to say that there is "lots of 'blaming the victim' that happens through the attachment of requirements to health services. This makes it hard to address underlying factors." The issue of the undocumented figured prominently in the focus groups and interviews. The estimated 400,000 undocumented residents do not have insurance or access to health care. While the Affordable Care Act has increased insurance enrollment rates, the undocumented are not addressed. One provider noted that, "They often are afraid of seeking healthcare, even for serious health issues like treatable cancers."

Service providers noted that Arizona is one of few states to drop the length of time that families can stay on Temporary Assistance for Needy Families (TANF) from 60 months to 12 months. Others noted the positive development of the First Things First (FTF) program – funded entirely by tobacco taxes – and many hoped that this funding source would be additional to other state funds for children, including health services and pre-kindergarten education programs. But one child advocate noted that overall funding has "dropped 24% since it [FTF] was founded."

MARICOPA FAMILY SUPPORT ALLIANCE

The Maricopa Family Support Alliance, supported and in part initiated by Piper Trust, is a network of over 60 public and nonprofit providers to unite the organizations and individuals committed to improving the quality of life for families in



MARICOPA FAMILY
SUPPORT ALLIANCE

Maricopa County. According the Alliance website, "the Alliance is not a service provider per se, but serves to build and support healthy, cooperative relationships among its members" acting as the "glue" of strong bonds among members for the "good of the families we serve." The Alliance enables members to share resources, coordinate services and perhaps most importantly, "empower families to achieve their goals."

In our focus group session with Alliance members, several noted the benefits of mutual aid and support that membership brings, enabling stressed and overworked executives and staff to find camaraderie among their peers and renew their sense of mission. One member of the Alliance, the Protecting Arizona's Family Coalition (PAFCO – not a Piper Trust grantee) serves as a legislative advocacy entity for the community by bringing the expertise and voices of the service community to the state legislature each session.

The Maricopa Alliance is an excellent example of leveraging the power of networks to foster collaboration, build capacity through peer learning, and strengthen the impact and effectiveness of individual organizations by working in concert on complex social needs.

Environmental & Climatic Resilience

The Sonoran Desert, in which modern Maricopa County has been built, is among the hottest and driest places in the United States. Cities in Maricopa County have long ranked at the top of hottest cities in the country. Daytime highs can reach 120°F in summer while overnight lows can remain in the 80's. The 2014 National Climate Assessment observed that the trends in average temperatures have increased in recent decades, noting that, "The period since 1950 has been hotter than any comparably long period in at least the last 600 years. The decade 2001-2010 was the warmest in the 110-year instrument record, with temperatures almost 2°F higher than historic averages, with fewer cold air outbreaks and more heatwaves."²¹ Based on multiple climate models, the NCA states that, "Regional annual average temperatures are projected to rise by 2.5°F to 5.5°F by 2041-2070 and by 5.5°F to 9.5°F by 2070-2099 with continued growth in global emissions, with the greatest increases in the summer and fall."

ENVIRONMENTAL RESILIENCE

Regional Environmental & Climatic Vulnerabilities:

- Increasing average summer temperatures and more frequent extreme heat events
- Increased frequency in extreme rainfall events and associated flooding
- Current urban landform and the propensity for urban heat island
- Poor air quality
- Upstream wildfire risk threatens quality of water supply

Regional Environmental & Climatic Assets:

- World class sustainability and resilience expertise at Arizona State University and the University of Arizona
- Significant institutional expertise in water supply management
- A high-quality network of local sustainability practitioners

In our interviews with local experts in government and academia, we found that most consider extreme heat to be the principal climatic challenge to Maricopa County in the immediate future. Our respondents noted several ways in which increasing temperatures are likely to affect the region. Many noted the public health risks to particularly vulnerable populations – children, older adults, the homeless, and those who labor outdoors. Others noted that increasing temperatures put upward pressure on energy use and water use, increasing household costs and challenging utility providers to meet demands. A public health official noted that high temperatures "means that it's harder for kids to be physically active because they can't play outside during the hot months." One local expert noted that the homeless "often seek refuge from heat in libraries or on buses, but this is met with pushback from members of the public who don't want homeless people using these places as shelter." We noted the Regional Heat Relief Network (detailed on page 31) in our early research on the Phoenix region and had the opportunity to host a focus group around the network and the lessons learned thus far. We remain very impressed with the network as an adaptive response to high heat that mobilizes public, private and philanthropic funds to meet a community need.

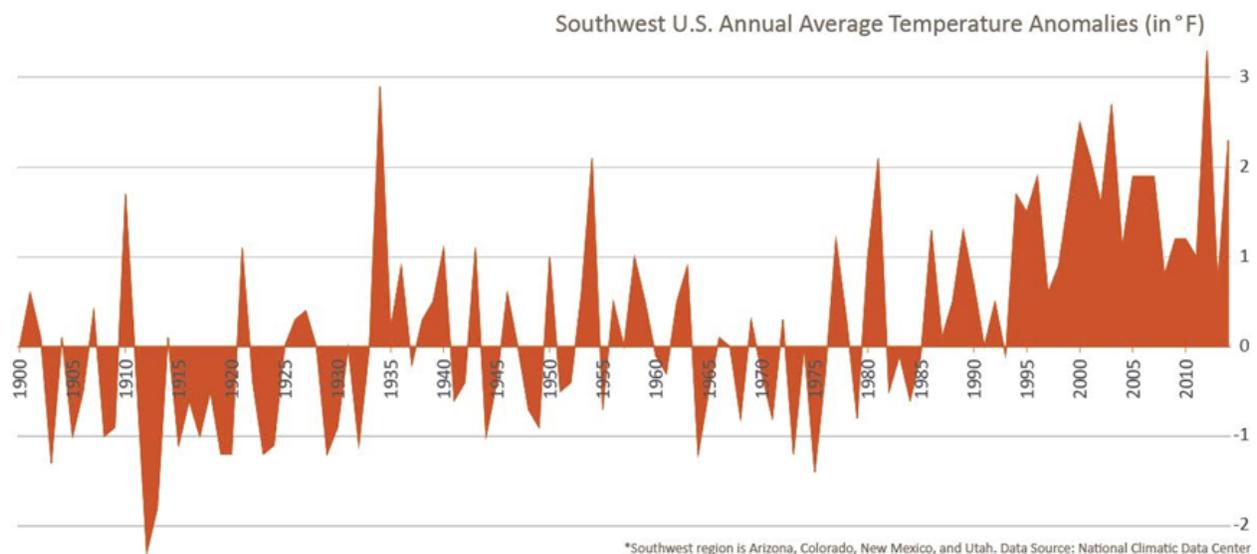
“ High temperatures mean that it's harder for kids to be physically active because they can't play outside during the hot months. ”

21 G. Garfin, et al, "Ch. 20: Southwest," *Climate Change Impacts in the United States: The Third National Climate Assessment* (Washington: U.S. Global Change Research Program, 2014) 462-486. doi:10.7930/J08G8HMN.

HEAT

Within the Greater Phoenix region, high summer temperatures are amplified by current development patterns that replace cooler native plant cover with pavement, roads and streets and single family homes. This “urban heat island” effect makes the places where people live, work and play measurably hotter than the surrounding desert natural areas. Heat islands can be mitigated by shade tree plantings, cool roofs, and so-called “green infrastructure” that brings tree cover and green spaces into the urban fabric. One local researcher noted, “Tree cover and green spaces are disproportionately missing in low-income neighborhoods,” making them hotter than other neighborhoods with greater tree cover. Local governments are recognizing the need for urban heat island mitigation and many “have tree and shade plans,” as the researcher noted, “but not much has happened on these due to a lack of funding.”

“Tree cover and green spaces are disproportionately missing in low-income neighborhoods”



The combination of dry climate and winter inversions make air quality a major concern for the region as Maricopa County rates poorly in terms of ground level ozone (smog) and particulate pollution, a finding that has both public health and economic development implications.²² Local air officials described some particular challenges they face, with just over 60% of the region’s smog originating from automobiles. They have regulatory authority over point sources of smog pollution, but very little ability to influence transportation emissions. They noted that particulate pollution is often most highly concentrated in the lowest lying areas of the region near the Salt River, which also happen to be areas where lower income people of color reside. They are addressing this issue through public engagement, such as “no burn” campaigns for those houses built before 1998 which may still



²² “State of the Air 2015,” American Lung Association, Last modified 2015. <http://www.stateoftheair.org/2015/states/arizona/maricopa.html>.

have fireplaces. Another priority for local air quality officials is creating a messaging campaign to get schools to heed air quality warnings, as they do with extreme heat warnings, to keep children indoors during recess and lunch.

REGIONAL HEAT RELIEF NETWORK



Following a two-week period during the summer of 2005 in which over 30 people perished in the Greater Phoenix region, local nonprofits and governments responded by developing the Regional Heat Relief Network. A decade later, the network is coordinated each year by the Maricopa Association of Governments and includes a number of hydration stations, refuge locations and water donation sites throughout the Valley.

In our initial assessment, we identified the Network as an existing example of resilience building; following a focus group session with public and private sector participants in the Network, **we believe that this intervention is a**

national best practice worthy of emulation in other cities considering how best to cope with extreme heat events.

The Arizona Department of Health Services recently completed a formal evaluation of the network and while several deficiencies were noted, the process has resulted in several improvements to the network that have already been implemented. Within the Network, we note several attributes of resilience strategies work: using networks to build redundancy, amplify impact and coordinate response; reflective evaluation to improve service based on lessons learned; and a resourcefulness in leveraging assets developed for other community needs that can be used for heat relief when temperatures exceed 100°F.

WATER

The provisioning of water and the extensive federal investments made in the region over the past century have made the region's growth possible. In addition to increasing source supply, the region has focused on water efficiency, reuse and requirements for new growth to demonstrate 100-year supplies in the permitting process. Excess deliveries of Central Arizona Project (CAP) water from the Colorado River are routinely banked in groundwater aquifers to make it available for times when local supplies prove inadequate.

Future climate change projections suggest that future water supply will be more challenging for the region, but most of the experts we interviewed felt that this was a longer-term challenge for the region. One expert noted that the "water sequestered



People needed rescuing in Scottsdale during the severe flooding of August 2014.

in reservoirs is huge compared to the annual flow. This could potentially last the region through a decade of drought, making water supply a long-term, not short or medium term crisis.” That said, nearly all noted that development and management decisions made today will greatly affect future outcomes.

The principal concern revolves around the future project shortage in the allocation of Colorado River Basin water, in which Arizona’s rights are junior to those of California as a condition of congressional approval of the Central Arizona Project. Closer to Phoenix, the Salt-Verde watershed provides water from mountain snowmelt in the Tonto National Forest. A particular risk to water supply is a forest at greater risk



of wildfire; we learned of collaborative efforts by the U.S. Forest Service and the Salt River Project to protect forest health in order to protect water supply. Water experts expect that any future water shortages will likely pit urban needs against those of the mining industry and agriculture. One local expert noted that the Arizona Groundwater Management Act of 1980 “preferred municipal and residential usage over agriculture, so agricultural users will feel the pressure first.”

A related issue is the growing frequency of extreme precipitation events and modeled future projections that such events will become more frequent. One local researcher noted, “In the past few years, we’ve had a couple of 200-year floods and it is happening more frequently. The community needs to look at the risk of flooding.” Another local expert noted that “flooding is related to the patterns of development.” As such events become more frequent in the future, we learned that there is some history in the region for dealing with flooding. The respondent described that, “Historically, the river flooded into the South Phoenix area that is hemmed in by the mountains, so homes in the area were often flooded and had to be rebuilt. Ultimately, flood insurance rates rose and amenities were moved out.”

FOCUSING ON SUSTAINABILITY

In the course of our interviews and during a focus group with local government sustainability staff, we learned about several promising efforts underway. But we heard also heard that local government sustainability programs have yet to recover from budget cuts endured during the most recent recession. Many local government sustainability directors, representing cities and some tribal communities statewide, participate in the Sustainable Cities Network, a unit of Arizona State University’s Julie Ann Wrigley Global Institute of Sustainability.²³ Indeed, the significant focus on sustainability at ASU is widely noted as having been hugely influential within the region. We can certainly confirm that the global profile and reach of ASU in the field of sustainability is inarguable. As such, ASU’s expertise is a significant community asset.

23 “Sustainable Cities Network,” Arizona State University, accessed March 7, 2016. <https://sustainablecities.asu.edu/>.

Local governments are engaged in a wide variety of sustainability and resilience building initiatives and are being well supported by ASU and the University of Arizona. On the issue of climate preparedness planning, one local climate scientist stated, “Emergency managers and urban planners have been exposed to general conclusions (projections of hotter, drier, more intense precipitation), but not really yet using quantitative climate estimates in their planning.” A climate science unit at the University of Arizona has been hosting community dialogues on climate variability and change: “We continue to provide information and convene forums with municipal leaders on drought planning.” Other areas of focus include renewable energy, developing “microgrids” for electric power that can separate from the regional grid during power outages, and efforts to expand “cool roofs” within their respective cities. Many local staff continue to focus on the transit-oriented development around the Metro light rail and augmenting connectivity through bike share programs and other strategies.

“ Light Rail is a resilience opportunity. The development of light rail allowed the conversation about sustainability and resilience to emerge, as people started to think about the redesign of the city. It involves engaging the community. ”

Fred Karnas, Kresge Senior Fellow

SUSTAINABLE COMMUNITIES COLLABORATIVE



Photo source: <https://researchmatters.asu.edu/stories/transit-oriented-development-helps-cities-ease-gas-3634>

The Sustainable Communities Collaborative is a public-private partnership that is focused on building equal, inclusive access to housing and services, leveraging the development of the light rail system in Phoenix.

Begun in 2007 as a partnership between state, regional and local government, nonprofits and philanthropy, the Collaborative's original working group has grown to include an additional 20 participating organizations. The Collaborative played an instrumental role in supporting local government efforts to secure funding for transit-oriented development planning around the light rail system and has since work with local governments to implement these district-scale plans. In 2011, the

Collaborative \$20M in private investment from the Raza Development Fund and LISC and joined with the mayors of Phoenix, Tempe and Mesa to launch investments in mixed-income, transit-oriented development that has to date leveraged \$375M in delivering 24 developments containing 2,044 units of affordable, workforce, market rate and mixed-used housing units along the Metro light rail system. Other notable transit-oriented development spurred by the collaborative include 200,000 square feet of commercial space that includes the Adelante Healthcare Center.

The significance of the Collaborative's efforts to build community resilience is notable in fostering social resilience by enabling people of differing income levels and cultural backgrounds to interact frequently in mixed-income housing while supporting regional economic resilience efforts to foster density and the dynamic street life that creative placemaking seeks to accomplish. **The Collaborative serves as a brilliant example of what can be achieved through collaboration across sectors when focused on tangible community needs.**

Findings and Conclusions

In the course of this assessment process, through focus groups, interviews and workshops, we've had the opportunity to interact with over 200 regional leaders from every sector working toward the betterment of Maricopa County. We've learned far more about the region that we can convey in this final report. We emerge from this process with deep admiration for the people who are working so hard to improve the lives and wellbeing of the people of Maricopa County. We are deeply grateful to the staff and leadership of Piper Trust, who have been fully engaged with us in seeking to better understand the current state of the region.

In considering the views expressed by regional leaders in interviews and focus groups, it is clear that the Greater Phoenix region – like any other urban region in the country – has its share of strengths and challenges. We found that leaders working on economic, social and environmental issues were already applying resilience strategies in their work. Leaders in each area were reflective in learning from past experience and were attempting to create a stronger regional economy, more robust social services to meet community needs, and incorporating climate resilience considerations into the physical form of the urban region. At the same time, we noted particular challenges in each domain that will be remarkably difficult to address without a greater degree of integration and inclusivity. **Ultimately, we conclude that the current state of community resilience within the region is quite challenged, but we see many strong assets within the region on which to build.**

Economic Resilience

Regional leaders in economic development and government have clearly learned lessons from the Great Recession – that the region's traditional reliance on land development and construction is not a viable basis for the future. Greater Phoenix Leadership, Greater Phoenix Economic Council and many other partners have articulated an agenda to build an innovation economy that promises to create more and better paying jobs to grow prosperity. They clearly recognize the importance of creative place-making as a cornerstone of this strategy and appreciate the importance of arts and cultural institutions and unique local businesses, greater density within the region's downtowns, and transit-oriented development that is beginning to accelerate around the Metro light rail. Advocates for locally-owned small business see a role in this strategy and are working together with others to advance the vision. The remarkable community asset found in Arizona State University continues to play a positive role in these efforts. And local government is actively engaged in creating cooler, more walkable, and transit-oriented neighborhoods to support this vision. These efforts are critical in building cohesive local identity, culture and pride that provides social capital.

Social Resilience

We found many nonprofit and public sector leaders focused on bringing better educational outcomes as well as better public health and other vital social services to the nearly one quarter of the pre-K through 12 school age population of Maricopa County that live in poverty. We noted many of the challenges they face in the analysis – perhaps not least of which are a high degree of physical segregation in schools by race and class and low levels of funding as compared to other states.

We found the social services sector to be comprised of remarkably resourceful and enterprising nonprofit agencies working hard in the face of significant challenges to meet community needs. We found evidence of a growing spirit of collaboration and cooperation among providers in the arts community as well as the social service community in response to a more constrained funding environment. We saw evidence that providers are working with local government partners, the faith community and in some instances the private sector to meet human needs. We noted the Regional Heat Relief Network as a particularly compelling example of addressing heat impacts to the most vulnerable by deploying a networked organizational model.

Environmental/Climatic Resilience

We noted the strong tradition of careful water resource management that has served the region well, and evidence that local governments and utilities are working to strengthen through new ideas, technologies and strategies. We noted a growing awareness among local government staff on key regional vulnerabilities associated with climate change and we noted the early emergence of strategies designed to address them. We found that local sustainability staff were acutely aware of the particular challenges of the region's most vulnerable and were seeking to address them. On issues ranging from health impacts to children on poor air quality days, to neighborhood scale heat islands in low-income communities, we found evidence that staff were taking actions or seeking resources to address the issues.

Need for a Focus on Building Social Capital

The single largest challenge we noted – and one that is critical to the success of building resilience in all three domains – is the lack of social cohesion within Greater Phoenix. The indicators of social connectedness and cohesion reported by the Center for the Future of Arizona and perspectives of those we interviewed tell a story of a regional population that rarely engages with neighbors, participates in collective governance at the state and local levels, or volunteers. There are certainly those within the community that give much of their time, energy and resources for the betterment of all, but they comprise a much smaller share of the regional population than is evident in other major metro regions. Many trace this lack of social capital to several factors, including the large proportion of the population who “aren’t from here,” the prevailing housing development patterns which separate neighbors, the lack of racial integration and inclusion, and the prevailing governing ethos of limited government.

The critical risk posed by this lack of social cohesion is that it directly undermines efforts across all three domains of community resilience. Cohesive local identity and culture in which residents feel a sense of belonging and pride fosters personal engagement and participation in society. By engaging on social cohesion, we see opportunities to build a stronger culture of philanthropy in Maricopa County that would encourage greater corporate engagement in social needs and increasing the percentage of individual giving for local needs against current tendencies for retirees to fund services in their communities of origin.

In our estimation, focusing effort to build social capital is the single most important means to advance the efforts of those working to build economic, social and environmental resilience, three critical aspects of community resilience.

Strong Need for Building Nonprofit Capacity & Collaboration

One key strategy area that the Trust has already focused on is building the capacity of nonprofits engaged in arts and culture and social services. Our analysis confirms the wisdom of this investment in light of what we've learned about the state of need within the community and the state of the nonprofits attempting to meet that need. One social services executive described the sector as having "a top tier of high-performing, well-managed organizations – about 20% – the rest of the social organizations have low capacity and are at a competitive disadvantage for winning grants. Because of this, social service support could be missing in some communities." Other executives described the current provider field in the region as being "scattered, fragmented, with many small nonprofits," while another described the field as "young and unsophisticated" with "few thinking at the systems level."

“A top tier of high-performing, well-managed organizations – about 20% – the rest of the social organizations have low capacity and are at a competitive disadvantage for winning grants. Because of this, social service support could be missing some communities.”

Key challenges faced by the sector include a lack of capacity in administrative or business skills and a tendency to organize work around grant funding streams. Other challenges cited by executives revolve around staffing and recruitment. One executive noted being unable "to hire nationally because of the local school system." Others noted that "many social service leaders are reaching retirement, with no new generation on the horizon." Still others cited the high "replacement cost" of staff – "in a good economy, it is difficult for us to compete with private sector wages." Smaller staffing levels, while cost effective, present challenges in meeting needs; one executive noted that "a small staff makes connecting with sprawled, fragmented communities difficult." Another noted that there was a particular need for "development staff to develop long-term [funding] strategies as we are facing higher costs due to higher community need." Several service agencies rely heavily on volunteers but doing so is a "constant challenge in building awareness and getting the message out." Another service provider noted the need for open, shared and accurate data across agencies to enable better predictions of the demand for services.

Nonprofit leaders broadly recognized the need for greater collaboration among organizations to build capacity, especially in the human services sector. The recession underscored the importance of collaboration as low funding levels declined further. Several creative financing models of nonprofit cost shares came out of the economic downturn, including efforts to share space and employee healthcare plans. Another example of collaborative effort was described by a public health official who partnered with hospitals and community health centers to collectively pay for a standard, consistent Community Health Needs Assessment (CHNA) that is required of every nonprofit using public dollars. Another hidden cost of the highly segmented nature of the service provider community is carried by government agencies that must cooperate closely to track multiple funding streams going through multiple nonprofits before ultimately serving much of the same population. Other executives we interviewed noted that there is increased competition among grant seekers for shrinking public funds and that this "makes collaboration difficult."

These challenges come even as many note the need for integrated care across different social service providers, particularly for the homeless who aren't children or older adults in need of substance abuse, mental health

and other healthcare services, for example, or addressing multi-faceted issues and long-term trends, such as a 25% child poverty rate, that require partnering across multiple sectors. Executives recognized that it is currently very difficult for populations accessing services to navigate the system; one noted the need for “either agency consolidation or a navigation service.”

Continued support for the nonprofit sector as a whole, building individual, organizational and sectoral capacity, becomes ever more important as need increases and government investment is constrained. Maricopa County’s nonprofit organizations and individual leaders, if given opportunities and incentives to collaborate, have tremendous potential to build local resilience.

The Utility of the Community Resilience Frame

In our analysis of what we’ve heard from local leaders, we hope to have made clear the interrelated nature of the efforts of those working on economic diversification, meeting social needs, and addressing environmental problems in Maricopa County. As we look at efforts in each of these domains, it is clear to us that the success of each effort depends in large measure on the progress made in the other domains. Economic resilience will not be achieved without an appreciable increase in social capital and greater preparedness for climatic change. Efforts to fully meet social needs will never be sufficient without a more robust regional economy and changes to the built environment that protect people from weather extremes. And efforts to build climate resilience will not be successful without fully addressing the economic and social needs of the community.

In the course of interviews with Piper Trust grantees, we heard perspectives that greater collaboration among funders and the development of a shared vision were important. One nonprofit executive observed that, “Funders have tended to fund in silos; as a region, we are still learning how to advance projects that are multi-sector.” Another observed that local philanthropy “has growing willingness to collaborate internally” and noted seeing a particular opportunity “to magnify impact by working together” with “new leadership at Piper Trust, Arizona Community Foundation, Vitalyst Health Foundation. Another executive made the point that there was a need for “shared community visioning to create some consensus around what people want to see in their community.” As another executive noted, “The region is not great about planning long-term, [and there is] much room for improvement, especially at the regional scale.” We recognize the challenges associated with gaining leadership engagement on a community visioning process – as one local expert noted, “Guides work better here than plans.” But in light of the fact that Piper Trust has been organized around charitable activities in perpetuity, we note the importance of the longer view in thinking about how current and future efforts will address community resilience over many decades.

“There is a need for shared community visioning to create some consensus around what people want to see in their community.”

We would note that effectively applying the community resilience frame requires an investment in evidence-based strategy development on the part of funders – a notion often referenced by resilience practitioners as “reflective practice.” The assessment of relative vulnerabilities and existing coping capacities are key to targeting limited resources and a culture of evaluative outcomes assessment enables sectoral learning around what works, what more is needed, and how rapidly changing contextual factors in the economic, social and environmental domains are affecting the populations being served.

We believe that the community resilience frame has the ability to knit together disparate efforts to build economic, social and climatic resilience by spotlighting the connections and the critical interdependencies between them. And as these connections become more apparent to the leaders in each domain of community resilience, we strongly believe that new collaborations will emerge to shape individual efforts for greater community impact and increase the likelihood of success of each effort to build economic, social and environmental resilience for Maricopa County.



We are deeply inspired by the legacy of Virginia Piper and the many people working to build community in Maricopa County that are directly supported by the Trust. We are grateful to have been entrusted by Virginia G. Piper Charitable Trust to engage in this important work and for the spirit of co-creation with the Trust staff that we have experienced throughout this process. We sincerely hope that the analysis offered here are of value to furthering Piper Trust's work on behalf of the people of Maricopa County.

Appendix

Research Methods

KEY INFORMANT INTERVIEWS

During a period beginning in November 2015 and ending in March 2016, ISC staff conducted a total of 46 interviews both in person and over the phone to assess the state of community resilience in Maricopa County. Of the interviewees, 25 were Piper Trust grantees recommended to ISC by Trust staff. The remainder were local, state, and regional experts recommended to us by Trust staff, other interviewees, and our own research. Interviewees represented a diverse swath of professionals, including private sector leaders, academics, nonprofit leaders, local government staff, and health professionals. A breakdown of the types of interviewee is below.

| Interviewee Category | | Number |
|----------------------|-----------------|--------|
| Piper Trust Grantee | Children | 10 |
| | Older Adults | 7 |
| | Health | 4 |
| | Arts | 2 |
| | Unclassified | 2 |
| Non-Grantee | Local Expert | 1 |
| | Regional Expert | 12 |
| | State Expert | 8 |

The goal of the interviews was to learn first-hand from those working to improve community resilience and study resilience-related issues about three key issues: the current state of resilience in Maricopa County, ongoing initiatives to build resilience, and opportunities to build resilience that have not yet been seized. While several of the first few interviews were conducted using a pre-written script of questions, as the interviewers' understanding of the region grew, interviews became more tailored to the specific work of each interviewee with the goal of learning about the interviewee's perspective on community resilience, even if they did not use that term explicitly. At several points during the interview period, interviewers met to discuss working conclusions and share information. This allowed the interviewers to ask subsequent interviewees about these preliminary conclusions, and modify them accordingly.

ISC staff analyzed the data collected in these interviews through a hybrid process of content analysis and grounded analysis. ISC staff first approached the data through a content analysis, based on pre-defined and nested themes of community resilience and organizational capacity.

| Content Analysis Framework | |
|-----------------------------------|---------------------------|
| Community Resilience Needs | Environmental Needs |
| | Economic Needs |
| | Social Needs |
| Community Resilience Initiatives | Environmental Initiatives |
| | Economic Initiatives |
| | Social Initiatives |
| Organizational Needs | Funding |
| | Capacity |
| | Collaboration |

After analyzing all the interview data through the initial content analysis framework, ISC staff conducted a grounded analysis of the data, producing analysis codes and a framework based on the topical content of the interviews. We first defined a set of grounded analysis codes that were common in an initial deep read of all the data. ISC staff then produced additional codes during analysis through a simple check system: data was flagged with a suggested code, and analysis codes that were attributed to multiple data points were reviewed and approved by a second party. The resulting grounded analysis framework included 27 codes:

| Grounded Analysis Framework | | | |
|------------------------------------|--------------------|--------------------|----------------------|
| Forest Fire | Arts & Culture | Rural/Urban Divide | Segregation |
| Conservation | Air Quality | Food & Agriculture | Urban Heat Island |
| Carbon Footprint & Energy | Employment & Jobs | Economic Structure | Development Patterns |
| Transportation | Latino Population | Immigration | Education |
| Housing | Health Care | Mental Illness | Civic Engagement |
| Children | Disabled Community | Public Budgets | Water |
| Corporate Engagement | Homelessness | Older Adults | |

All of the grounded analysis codes were applied to data excerpts already coded under the initial content analysis framework, so ISC staff could examine the relationship between issues specific to Maricopa County and the pre-defined community resilience framework.

To analyze the data, ISC staff investigated the relationships between different issue areas and resilience topics, based on previous research and patterns in co-occurrences of the codes. The ISC team then examined all data points (interview content) that represented those relationships, and made conclusions about the dynamics of social, environmental, and economic issues in Maricopa County. This multi-framework approach to analysis allowed ISC staff to capture the intersectional nature of these issues, and to examine the reality of issues on the ground through the lens of community resilience. This data analysis is represented in the summary and findings of ISC's report.

FOCUS GROUPS

From January 2016–March 2016, ISC staff conducted a series of six sector-based focus groups with local leaders and experts from the public and private sector. ISC facilitated two-hour dialogues on pressing issues of community resilience in Maricopa County to learn about the experience of addressing those topics and explore the possibilities of aligning efforts. The topics of the six local leader focus groups were:

- Regional Heat Relief Network (6 representatives)
- Child Health: Schools and Public Health (6 representatives)
- Local Urban Sustainability Directors (6 representatives)
- Proposed Midtown Arts District (19 representatives)
- Regional Economic Resilience (6 representatives)
- The Maricopa Family Support Alliance and the Protecting Arizona’s Family Coalition (21 representatives)

The discussions were guided to produce information around a few basic data outcomes: current status of issue or field; current challenges for practitioners or unmet needs of the field; and opportunities in building community resilience. ISC staff recorded discussion outcomes and integrated that data into the larger analysis of Key Informant interviews by integrating outcomes into the same frameworks.

STAFF INTERVIEWS

Throughout the process of gathering data on community resilience in Maricopa County, ISC staff conducted interviews with Piper Trust staff members to gather data on the Trust’s collective understanding of community resilience and capacity to engage in resilience-based programming.

ISC staff interviewed five Piper Trust staff members, representing the administration and grantmaking across all of the Trust’s program areas. Through these interviews, ISC staff gathered information about a few key questions including the application of Trust strategy to responsive grant requests and capacity-building programs, how staff learn about evolving community needs, and how they apply lessons learned from other national, regional and local grantmakers to the Trust’s programming. The data collected from these interviews was analyzed for shared and unique perspectives, and informed ISC’s analysis of Piper Trust’s potential role in building community resilience in Maricopa County.

CAPACITY-BUILDING WORKSHOPS ON RESILIENCE

ISC delivered three day-long workshops for Piper Trust grantees designed to introduce them to ISC’s holistic concept of community resilience and give them tools to assess the resilience of their organizations and/or the populations they serve. The workshops were held on January 21 (24 participants), February 16 (34 participants), and March 29 (43 participants). Piper Trust staff managed the invitations, registration, and provided space for the workshops, while ISC and Adaptation International designed the agenda, delivered presentations, and facilitated interactive sessions.

The workshop agenda, developed by ISC and Adaptation International in consultation with Trust staff, reflected ISC's belief in peer learning and interactive engagement as effective capacity-building tools. To these ends, the agenda included opportunities for participants to "bring their work with them" and apply what they were learning to actual challenges facing their organization, in concert with others working in similar issue areas.

This took the form of a three-part interactive session, where participants learned how to identify the shocks and stresses facing their organization or the population they serve, assess their vulnerability, and then use this information to build a strategy for improving resilience. For the session, each participant received a detailed worksheet to help walk them through this process should they wish to repeat it in more depth when they returned to work.

In addition to this interactive session, each workshop also included a presentation on the concept of community resilience and an assessment of the particular resilience challenges facing Maricopa County, multiple opportunities for participants to report back after each interactive session, and a concluding discussion on how these ideas could be applied in practice.

After each workshop, Trust staff circulated an ISC-designed survey to participants assessing their opinion of the workshop. Using this information, ISC was able to improve the relevance of each subsequent workshop based on participant feedback. For example, some participants from the second workshop, many of them representatives of arts organizations, felt that the discussion of "community resilience" and "populations served" was not as relevant to them as it was to participants from social service organizations. Using this feedback, ISC split the interactive sessions into two tracks, allowing participants to choose to focus either on the resilience of a population they serve or the resilience of their own organization. Feedback from the third workshop confirmed that participants appreciated this flexibility.

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535 Stone Cutters Way, Montpelier, VT 05602
802-229-2900 | www.iscvt.org