

Virginia G. Piper Charitable Trust and Arizona State University Launch the Knowledge Exchange for Resilience—a \$15 Million Initiative to Help Strengthen Maricopa County’s Community Resilience



When the recession hit in 2008, it manifested itself in the housing collapse in the Valley that tested the resilience of nearly every community. “Upside down” in their mortgages, neighbors left over night. Houses were abandoned. Communities faced holes in them that took years to fill. The collapse tore at the social fabric of nearly every Maricopa County community.

All communities experience stresses. They can be sudden shocks (floods, earthquakes) or they can be long-term, constant stresses. In each instance, how well the community survives the stress or shock—through proactive planning, nimble actions and openness to evolution—and how quickly it can bounce back is a measure of its resilience.

Now, with a grant from Virginia G. Piper Charitable Trust, ASU scientists have begun a new initiative that aims to make the people and the communities of Maricopa County more resilient so that when a shock hits, they can survive and get back to their normal lives as quickly as possible.

Piper Trust awarded \$15 million to launch the Knowledge Exchange for Resilience (KER) initiative. KER will work to build community resilience by partnering with and studying the community up close and finding the gaps that exist in services. By embedding in the communities of Maricopa County and tapping the expertise of research scientists, citizen scientists, community members and partner organizations, KER is designed to become a community resource destined to collectively address pressing issues and needs, fostering positive change and building resilience.

“There really has never been anything like this for social systems,” said Elizabeth Wentz, the principal investigator of KER and dean of social sciences in ASU’s College of Liberal Arts and Sciences. “It is geared toward learning about people and their lives and turning that information into something that can be used by municipalities, NGOs and other agencies to improve the lives of the people who are living here.”

To do this, KER researchers will bring together representatives from all sectors to identify and focus on the vulnerabilities of the community.

“Engaging the public, the people who are experiencing the event, is extremely important to us,” said Wentz, also a professor in ASU’s School of Geographical Sciences & Urban Planning. “KER is a partnership between the community and ASU.”

Wentz added that a unique power of the KER resides within the “knowledge exchange.” It provides the opportunity for community members to be partners in every stage of the research—from identifying issues to data collection, to decision making to implementation. The combination of information, knowledge, diverse viewpoints and open discussion is expected to enhance the collective ability to make informed decisions and plan for the community’s future. ASU’s Decision Theater also will be engaged to bring the data collected through KER to life through powerful visualizations.

A KER pilot project is focused on long-term exposure to heat in Maricopa County.

Heat has always been an issue in the Valley and science suggests summer temperatures will continue to rise, threatening individuals’ health, well-being and economic security, particularly affecting older adults and families with children.

For example, 2017 was one of the warmest years on record in Phoenix with a few periods when the daytime highs never were below 110 and the nighttime lows rarely were less than 90 degrees. Not surprisingly, the number of heat related deaths (155) in 2017 was a record for Maricopa County, surpassing 150 in the year 2016.

Mapping heat exposure

This past summer, KER researchers worked to learn more about how everyday people deal with the summertime heat. In the HeatMappers project, ASU researchers sampled the heat exposure of nearly 70 Maricopa County residents. To do this, each participant was given a data collection kit that provided the tools to obtain detailed information on daily heat exposure and coping habits of the residents.

“For the Phoenix area, a long-term environmental stress is urban heat,” Wentz said. It can dramatically affect elderly adults and families with children. “Understanding resilience to urban heat and the strategies used to deal with the heat, is a goal of the pilot project.”

In the project the ASU researchers worked with the local governments of Maricopa County and community support organizations like AZCEND, the Salvation Army and the Utility Assistance Network.

While gathering new and more detailed data on heat exposure, the KER pilot project also aims to analyze the social networks of those who participated.

“What are the heat relief strategies being employed, like going to a neighbor’s house or a friend’s house,” Wentz asked. “We want to understand their social networks, as well as their daily heat exposure.”

ASU-Piper Trust relationship

Since 2002, Piper Trust has funded 19 ASU projects for a total of nearly \$56 million. The projects span the gamut from improving the health of Maricopa county residents, through appreciation of the arts to improving K-12 education. All of it geared toward communities in the Valley.

“What makes us passionate about the KER Initiative is its long-term impact on our community,” said Mary Jane Rynd, president and CEO of Piper Trust. “A resilient community leverages its assets to mitigate economic, social and environmental vulnerabilities. That’s what we’re doing by bringing cross-sector expertise together through KER. Through planning ahead and using the collective knowledge of the university and the community, we can solve complex issues, build resilience and improve lives.”

“The tremendous outcome of this initiative is that it is a people focused, quality of life focused, Maricopa county focused resilience center that we think will be transformational,” said ASU President Michael Crow.

“Piper Trust has been supporting ASU for nearly 20 years,” Rynd added. “This grant is another example of how much confidence we have in the university and what it can do to strengthen our community.”