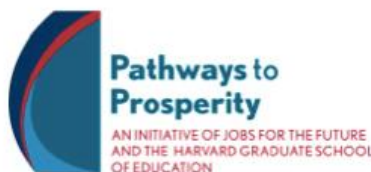
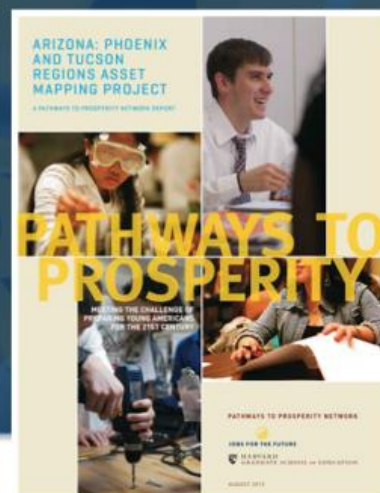


ARIZONA: PHOENIX AND TUCSON REGIONS ASSET MAPPING PROJECT

EXECUTIVE SUMMARY

A PATHWAYS TO PROSPERITY NETWORK REPORT
AUGUST 2015



A team from Jobs for the Future and the Harvard Graduate School of Education carried out asset-mapping work in the Phoenix and Tucson regions that will serve as the basis for the development of grades 9-14+ pathways aligned with the Pathways to Prosperity framework. The Pathways to Prosperity Network – a collaboration of states, Jobs for the Future (JFF), and the Harvard Graduate School of Education (HGSE) – seeks to ensure that many more youth complete high school, attain a postsecondary credential with currency in the labor market, and get launched into a career while leaving open the prospect of further education. State and regional stakeholders from across education, business, and government lead the work in each Pathways to Prosperity state, with the long-term goal of creating statewide systems of grades 9-14+ career pathways that serve most students. Key sectors for building pathways aligned with labor-market demand include STEM fields such as information technology, health care, and advanced manufacturing. Overall, Arizona is well positioned for success in building grades 9-14+ pathways linked to local labor market needs. Many of the key building blocks for this work are already in place, including a dynamic state-level leadership team and educational institutions that are working to increase rates of high-school graduation and postsecondary completion and to create programs of study aligned with labor-market demand. In addition, the stakeholders who were interviewed by the asset-mapping team repeatedly voiced enthusiasm for the work and a willingness to contribute to it. However, substantial work remains to be done to create career pathways and ensure that all young people in Arizona are prepared for college and careers.

ARIZONA AND PATHWAYS TO PROSPERITY

Arizona joined the Pathways to Prosperity Network in June 2014 and has benefitted from the energy and dedication of the state-level team spearheading the Pathways work. The state's core planning team currently includes representatives from important partners in education and industry: Maricopa Community Colleges, the University of Arizona, and the Center for the Future of Arizona. The Center for the Future of Arizona, a "do tank" with a history of building partnerships aimed at improving opportunities for Arizonans, is leading the work with funding from the Governor's Office of Workforce Development and Arizona Community Foundation. The Center for the Future of Arizona has played a key role in other statewide education initiatives, including Move On When Ready (MOWR), a performance-based high school education model designed to increase academic achievement and prepare all students for college and careers.

Several state-level structures and initiatives are in place that may be used to support the Pathways work in Arizona. The state-convened High School Graduation

Rate Task Force has served as the impetus for exploring nontraditional methods to retain students in high school with coursework that provides high rigor and high relevance. The Arizona Ready education reform initiative, launched in 2011, established a series of state education goals for 2020, including increasing the number of third graders reading at grade level, increasing the high-school graduation rate from 75% to 93%, and doubling the number of baccalaureate degrees issued by Arizona colleges. The Arizona Department of Education and legislature have also acted on providing more opportunities for teachers to obtain CTE certification and passed a statute to establish a diploma and funding mechanism for Move On When Ready.

Arizona's membership in the Pathways to Prosperity Network provides a foundation for pathways development in the state. The Pathways framework outlines what a systemic initiative would look like. In each Pathways to Prosperity state, state and regional stakeholders from across education, business, and government lead the work with the long-term goal of

creating statewide systems of grade 9-14+ career pathways that serve most students.

The Pathways framework identifies 5 key levers for implementation:

1. **Career pathways** with clear structures, timelines, costs, and requirements linking and integrating high school and community college curricula and aligning both with labor market needs
2. **Employer engagement** that leads to learning opportunities at the workplace and support for the transition of young people into the labor market
3. An early and sustained **career information and advising system** strong enough to help students and families make informed choices about education and career pathways
4. Local or regional **intermediary organizations** to provide the infrastructure and support for the development of such pathways.
5. **Enabling state policies** (e.g., dual enrollment policies, sustainable funding, and financial incentives) and a high-visibility, state-level stakeholder group whose members support the regional work as public spokespeople and champions

PROMOTING EDUCATIONAL EQUITY AND ATTAINMENT

Current projections indicate that, over the next ten years, an additional quarter of a million people with college degrees will be needed in order to meet Arizona's workforce needs. However, nearly a quarter of high school students in Arizona do not graduate on time, and almost half of high school graduates do not go on to earn two- or four-year college degrees. As of 2012, 26.6% of Arizonans over age 25 held a bachelor's degree or higher. Substantial inequities exist for students of color and those from low-income families.

Postsecondary attainment rates for Latino students are notably below those of white students. Among Latinos, 9% of those ages 25-34 have a Bachelor's degree or higher, as compared to 32% of white Arizonans in the same age group.

State Pathways to Prosperity leaders and other stakeholders are committed to addressing these disparities through strategies that include the Pathways work. The High School Graduation Rate Task Force issued a report, *Necessary But Not Sufficient*, in June 2014 that recommended several strategies, centered on personalized access and progress, rigorous models, and pathways aligned with students' interests, that are well-aligned with the Pathways to Prosperity framework. The Pathways to Prosperity framework is designed to expand

options for **all** students by increasing the number of students who graduate from high school with the skills they need both to pursue further education and to launch careers.

KEY INDUSTRIES AND CONSIDERATIONS FOR PATHWAYS DEVELOPMENT

Unemployment rates in both the Phoenix and Tucson regions are relatively low, yet poverty rates in these regions remain high. A key reason for this is that retail and accommodation and food services are currently among the largest industries in both regions, but many jobs in these industries do not offer living wages. In both the Phoenix and Tucson areas, efforts are underway to shift the labor market and regional economy away from low-wage service-sector jobs and toward more promising opportunities in STEM fields.

Data from Economic Modeling Specialists, Inc. (EMSI) and the Bureau of Labor Statistics (BLS) show that, in both the Phoenix and Tucson regions, health care, manufacturing, and professional, scientific, and technical services are promising industries in which to develop career pathways. Health care and professional, scientific, and technical services are both projected to experience robust growth by 2023. In the manufacturing sector, large numbers of retirements are likely over the next several years, and employers are eager to develop a robust talent pipeline.

As stakeholders in Arizona move forward with the Pathways work, it will be critical to develop opportunities for young people that recognize the important distinction between jobs and career pathways. Defining features of pathways include coordinated involvement from major employers in the area, opportunities for young people to enter and move up within a company with increased education and experience, and a focus on careers in which young people can expect to earn a family-supporting wage. In using labor market data to inform pathways development, it is therefore important to ensure that pathways do not simply target occupations and industries in which large numbers of job openings are projected. While consideration of labor-market demand is important, stakeholders should also seek to develop pathways into careers in which young people can expect to move up within their chosen fields as they gain additional education and experience.

In order to provide young people with opportunities to move into careers in which they can expect to earn family-sustaining wages, it will be important to carefully consider which industry sectors, or occupations within an industry, offer the best chances for young people seeking to build careers and support families.

9-14+ CAREER PATHWAYS

Grades 9-14+ career pathways expand the range of options available to young people by preparing them for success in both college and careers. Pathways through associate's degrees represent a first step on students' career ladders. Students who complete associate's

degrees may choose to enter to the labor market and/or to pursue further education, including bachelor's and graduate degrees. Many key pathways elements are in place in Arizona, but greater coordination of the work already being done, including increasing alignment between secondary and postsecondary programs of study and deliberate planning that leverages all available resources, is needed to create seamless grades 9-14+ pathways. It is likely that efforts to expand on this work will be successful as stakeholders shifting to thinking about pathways in a regional context.

The development of grades 9-14+ pathways in Arizona will benefit from the widespread understanding of the value of career-focused learning among stakeholders in the Phoenix and Tucson regions. Arizona's JTEDs provide strong models for CTE programs in the state. In addition to these JTED programs, numerous school districts offer very strong CTE programs. However, Stakeholders identified two key challenges that have emerged in connection with CTE programs in the Tucson and Phoenix regions. The first is that student interest in particular programs of study is often not aligned with labor-market demand. Second, transportation is a challenge that must be addressed in order to ensure that all students are able to access all programs of study or to travel to work-based learning placements.

Educators at both the secondary and postsecondary levels recognize the importance of dual enrollment opportunities in ensuring students' success. In both the Tucson and Phoenix regions, there is widespread interest in early college models, which were identified by the High School Graduation Rate Task Force as an avenue for raising graduation rates. Numerous early colleges already exist in Arizona, and several additional districts, including Tucson Unified and Scottsdale Unified, are exploring the possibility of creating early college high schools.

The strength of Arizona's postsecondary institutions will be a major asset to the Pathways work. The Maricopa Community College (MCCD) system is particularly effective at designing pathways that connect students to high-skill, high-wage employment and allow students to earn credits toward a degree at a four-year institution. The power engineering pathway structured by MCCD could serve as an exemplar for other pathways development. Under new leadership, Pima Community College is committed to strengthening its relationships and dual enrollment agreements with secondary schools in the Tucson region and Pima College is also home to exemplary pathways initiatives.

Despite having elements of the 9–14+ career pathway model in place within the K-12 and higher education systems, there is evidence that the two systems do not collaborate as well as they could. There was a stated need for the two systems to spend more time mapping academic requirements for students back to high school

and providing a clear path to earning credentials. In order to help the K-12 system prioritize a suite of dual enrollment and work-based learning options, the community college system may need to focus on providing supports for a narrower range of career programs of study and targeted pathways.

CAREER INFORMATION AND ADVISING

Middle- and high-school students often have little access to information about the world of work, even though they are at an age where their choices may affect their future opportunities. Earlier and more systematic career information sharing with youth and their parents will be necessary to help expand 9-14+ career pathways and to promote attendance in those programs. A strong career information and advising system should provide students with a continuum of experiences—from awareness to exploration to immersion—that familiarize students with the world of work and the range of career possibilities available to them. Stakeholders in the Phoenix and Tucson regions agreed that a more systematic approach to providing career information and advising is needed to ensure that young people are able to make informed choices about their futures. The Pathways work presents an opportunity to better align and expand the opportunities currently available to middle and high school students and to ensure that students have access to a clear sequence of career exploration activities.

EMPLOYER ENGAGEMENT

Preparing young people to join an educated and skilled workforce requires employer engagement. Pathways must be responsive to labor-market demand if they are to lead young people to satisfying and family-sustaining careers that contribute to regional economic development. Employer engagement in the pathways work includes collaborating with educators, providing work-based learning opportunities to students, and supporting young people's transitions into the labor market. A skilled workforce is needed in Arizona to continue to attract and retain employers in fields such as manufacturing and IT. While employers in the Phoenix and Tucson regions are generally supportive of efforts to better prepare young people for careers, and some companies offer a few internships or work-based learning opportunities, the engagement of most employers in such efforts, particularly at the K-12 level, is currently rather limited. Developing a framework for employer engagement that systematizes the role of employers in the Pathways work will be useful both in scaling up work-based learning opportunities and in providing employers with a better understanding of how to engage effectively and efficiently.

One promising employer-driven initiative is the Arizona Manufacturing Partnership (AMP). AMP is a statewide project that aims to educate young people about the opportunities available in manufacturing and to ensure that secondary and postsecondary programs of study incorporate the skills young people need to succeed in manufacturing jobs. The program, which functions as the

education and workforce development arm of the Arizona Manufacturers Council, brings together a cross-sector group of stakeholders, including the Arizona Chamber of Commerce and Industry, Arizona Commerce Authority, the Department of Education, employers, and secondary and postsecondary partners. Employers work with educators to develop curricula, and students earn credentials aligned with the Manufacturing Institute's Manufacturing Skills Certification System. While the AMP initiative has provided a means for employers to engage with educators and to participate in curriculum design, and employers have opened their doors for field trips and other one-time events, internships and similar work-based learning opportunities for students remain limited.

INTERMEDIARIES

Intermediaries play a key role in regional Pathways to Prosperity strategies by facilitating collaboration among employers, educators, community-based organizations, and labor to sustain career pathways for young people. By focusing efforts and lessening the burden of participation for each partner, intermediaries increase all partners' return on their investments. The work of intermediaries includes two broad sets of functions. First, intermediaries hold the vision for the pathways work and convene key stakeholders. Second, intermediaries support the development of work-based learning opportunities by establishing a role for employers that ensures they see a return on their investment in the education of young people and by supporting high schools and colleges in securing, developing, and sustaining sequenced, systemic work-based learning opportunities. A single organization may take on the entire intermediary role, or the intermediary functions may be spread across multiple organizations. For example, a regional steering committee could play the convening role, while an employer association could broker work-based learning opportunities.

The Center for the Future of Arizona, which is already coordinating the Pathways work at the state level, is also prepared to take on the convening intermediary role at the regional level in both the Phoenix and Tucson regions. However, there is still a need for regional intermediaries positioned to aggregate and broker work-based learning opportunities are needed to scale up and coordinate work-based learning across each region. Some work-based learning intermediary functions are now being carried out by existing regional agencies and organizations. In addition, collective impact efforts are underway in both regions, and it will be important to ensure that the Pathways work is closely aligned with these initiatives in order to avoid duplication in programs.

CONCLUSION

The wide community support for the Pathways work indicates strong potential for successful Pathways implementation. While some work remains to put in

place elements of the Pathways levers, it is likely that this can be done, given stakeholders' enthusiasm for the system will both ensure that young people in Arizona are prepared for college and careers and promote economic development and strengthen business and industry. Phoenix and Tucson are therefore both positioned to address important community challenges and to create models with lessons for replication across the state.

The following recommendations could form the basis for a stakeholder conversation preliminary to constructing a Pathways to Prosperity work plan:

- **9-14+ Pathways.** Arizona benefits from energetic and committed secondary and postsecondary education leaders, but greater coordination and alignment is needed in order to create seamless grades 9-14+ pathways aligned with regional labor-market demand. A shift from thinking at the school or district level to thinking about the work in a regional context will be a key component of successful pathways development.
- **Career information and Advising.** While students have some opportunities to learn about the world of work, these are not always clearly sequenced or integrated into programs of study. Stakeholders in Arizona will need to develop a more systemic approach to providing students with career information and advising in order to ensure that students are able to make informed choices about their future careers.
- **Employer Engagement and Work-Based Learning.** Employers in key industries, including manufacturing and energy, are committed to the development of a talent pipeline and have worked to develop partnerships with educational institutions. However, work-based learning opportunities for youth are relatively rare now and should become a top priority. It will be important to develop approaches to work-based learning that are of benefit to both employers and students, and to ensure that work-based learning is fully integrated into grades 9-14+ pathways.
- **Intermediaries.** The Center for the Future of Arizona has taken on a convening intermediary role in the state, but it will also be important to identify regionally based intermediary organizations with the capacity to connect young people to work-based learning opportunities. Currently, several organizations in the Phoenix and Tucson regions have taken on some intermediary functions, and collective impact work is underway in both regions. An immediate action is to determine how the intermediary functions will be filled for the Pathways work and how best to encourage additional coordination and collaboration among existing intermediary organizations.

