

**Arizona Pathways to Prosperity
Quarterly Report Prepared for the Governor's Office
The Center for the Future of Arizona
July 2017 – December 2017**

Background:

Arizona is a member state of the Pathways to Prosperity Network, a national initiative in partnership with Jobs for the Future (JFF) and the Harvard Graduate School of Education. Arizona officially joined in June 2014.

The Arizona Pathways to Prosperity (APTP) initiative will demonstrate in key Arizona regional labor markets that many more young people can complete high school, attain a postsecondary credential with currency in the labor market, and get launched on a career in a high-demand, high-wage occupation that can also provide the basis to pursue further education and career advancement.

The Center for the Future of Arizona (CFA) is leading and advancing this work in keeping with our Center's commitment to catalyze and develop innovative student-centric educational and career pathways for all students.

The Governor's Office of Workforce Development awarded CFA in October 2014 a renewable grant to support the Center's work and Arizona's national network membership fee.

Tucson and Phoenix were identified as the first two major labor markets to begin building 9-14+ early college career pathways in partnership with K-12, business, and higher education. The intent is that the work will extend into other regions in the state in future years. JFF provides technical assistance to CFA in support of the Pathways to Prosperity work in Arizona.

Work Completed in the period from July- December 2017:

- July and August- Over the course of the two-month period, CFA worked closely with K12 partners to finalize one-year implementation plans. The plans are based on a pathways inventory tool of each school completed and provides a basic assessment of current program strengths and weaknesses. With the support of CFA, the schools identified 3-4 implementation goals for this year. Goals range from implementing a program of study aligned with community college coursework and industry, to enhancement of an existing internship program. These one year plans will put schools on a path to full implementation of the 9-14+ early college career pathway over the next 3 years.
- July- Convened a group of key stakeholders to finalize a model for a 9-14+ early college career pathway in energy. The group consisted of representatives of industry, K-12, and the community college. The current pathway is only articulated to the 11th grade. This new model will demonstrate how high schools can implement the pathway. The first phase of the project is to develop teacher training, along with instructional resources, for the top 5 in-demand skills as identified by the energy industry. Next, students will receive safety training directly from energy industry representatives, and will then participate in power plant tours to better understand

occupations in the energy sector. This fall 2-3 partner high schools and Estrella Mountain Community College will be a part of implementing the teacher training. The student training and industry tours will take place in the spring.

- July- In an effort to continue to expand impact and work with partners serving a diverse student population, Dr. Aaron Ball met with leadership of Pima Vocational Partnership High School (PVPHS) in Tucson. PVPHS is an alternative school operated by Pima County and emphasizes work experience as part of the high school program. The school is officially partnering with APTP in order to improve their existing internship program, implement industry recognized credentials, and develop program of study aligned with Pima Community College to make sure every student has access to college credits while in high school.
- August- Cathleen Barton (consultant with APTP) developed, finalized plans, and facilitated a very successful trip to Denver to see CareerWise Colorado, a high school apprenticeship program, founded by the CEO of a high tech manufacturing company, and modeled after the Swiss Vocational Education and Training program. Greater Phoenix Chamber of Commerce (GPCC) and CFA co-sponsored the trip. Representatives of Raytheon, SRP, Adolfson & Peterson, and JPMorgan Chase participated. CareerWise Colorado launched business-led high school apprenticeship programs in advanced manufacturing, information technologies, business operations, and financial services. The framework Colorado is using could be a model for advancing business led apprenticeships in Tucson. As a result of the visit, Dr. Ball is working with Raytheon to implement an internship program for engineering technicians that will be the basis for an apprenticeship program. Cathleen Barton is facilitating discussions with representatives of the GPCC Cybersecurity Industry Council to explore implementing a similar model in Phoenix.
- August- Held meetings with prospective K12 partners in the Southern Arizona Region. Tanque Verde School District, and Bisbee School District are both considering joining Arizona Pathways to Prosperity. These additional partners would expand the reach of APTP further into Southern Arizona and increase the potential number of students impacted by roughly 600.
- August and September- CFA continued to work with K12 partners to implement the one year action plans. One example of the work with schools includes a course mapping process with Amphitheater High School to a newly developed Pima Community College Mechatronics Program. The Pima College program was developed based on industry input from the Arizona Office of Economic Development's Advanced Technologies Corridor Industry Summit. The program was further validated by additional local industry through the SAMP partnership. In the initial stage, Dr. Ball was able to connect the high school administration to resources at Pima to begin the dual credit process. The next stage will include Dr. Ball working directly with the high school staff to map and align the high school program to the community college pathway. This is an example of the direct technical support CFA provides to partner organizations.
- August and September- Cathleen Barton collaborated with Phoenix Union High School District to develop four key pilot projects which will be shared with the APTP districts, for engaging employers from the Greater Phoenix Chamber of Commerce and the AZ Tech Council. These

include: 1) a week-long cyber security skills and career awareness building program for high school students from the Phoenix Coding Academy, and 2) two employer led information sessions on careers in cyber security and the pathways to those careers as part of the BioScience, North and Camelback High School Fall STEM College and Career Fair. Additionally 3) 800-1000 students from 3-4 high schools, will participate in tours of cyber security operations in companies or company presentations on their high school campuses and, 4) a professional development session on careers in cyber security is being planned for guidance counselors in January.

- September- CFA submitted a funding proposal for and was awarded \$500,000 over three years from the ACF/Ellis and Rodel Foundations. This award will allow CFA to build on accomplishments from the past three years by hiring additional staff to accelerate the implementation of the 9-14+ early college career pathways. The funding represents a significant private investment to match the public funds awarded through the Governor's Office. The funding will also allow for larger impact with the eventual goal of reaching 3500 students across 25+ high schools and the community colleges in Phoenix and Tucson.
- September- Dr. Ball was designated to facilitate a job shadow project as part of the Southern Arizona Manufacturing Partners (SAMP). The project will include surveying industry regarding the interest and barriers to hosting students for job shadow experiences. The project will then work with industry to build a framework for delivering these experiences. Industry will play a pivotal role in planning the experiences in order to maximize students skill development aligned to industry needs. Initially, the project will benefit students from three Tucson high schools with approximately 20 businesses participating. If successful, the model will be expanded to other APTP partner schools, including the community college.
- September- Dr. Ball met with Charles Casey, Director of Workforce Development with Pima County. The purpose of the meeting was to establish a formal partnership with Pima County Arizona@Work. APTP has been working with the agency for the past two years, but this was the first time Dr. Ball was able to meet with the director and clarify the partnership. As a result of the meeting, Dr. Ball is now supporting work in the Summer Youth Employment Program. This partnership will have further implications for supporting employer engagement, and internships throughout the county.
- September- Dr. Ball was selected to serve on the Industry Partnerships Steering Committee for the Maricopa Community College District (MCCD) Transformation initiative. The committee will review and recommend a framework to assist the District in establishing specific organizational regulations, systems and strategies as well as structural and leadership changes that will accelerate the college's strategic plan related to industry partnerships. MCCD's strategic plan is the guide by which all 10 colleges, the Corporate College, and two skill centers operate to provide open access to higher education for students and communities.
- October- CFA was awarded funding for an additional two years in the amount of \$240,000 from the JPMorgan Chase (JPMC) Foundation. This request is not only a positive change in the year

to year funding structure JPMC has been using with APTP, but also an increase of \$20,000 per year. The grant dollars will help leverage the funding from the Governor's Office to accelerate the impact of APTP.

- October- CFA sponsored and helped facilitate a week-long cyber security "work-like" and career awareness experience pilot with 10 high school students. Students learned and utilized tools employed by cyber security professionals, developed hacking skills, and practiced soft skills including working in teams, problem solving, and communicating. Presenters from the FBI, Schwab, APS, the City of Phoenix, Terra Verde, and Merchant Information Solutions presented on the business of cybersecurity, pathways, and careers in their respective industries and companies.
- October- In recognition of our excellent work underway, Arizona was selected by our national partners Jobs for the Future, and the Harvard Graduate School of Education to host the National Pathways to Prosperity Spring Institute May 1 & 2, 2018. Member states and regions from across the national network will assemble in Phoenix to share best practices and learn from what is going well in Arizona.
- November- Completed initial skills mapping for the development of a Manufacturing Technician early college pathway, in partnership with Raytheon and Pima Community College through its Mechatronics program. Pima College aligned courses in the program to teach the skills required for this critical occupation. Raytheon will be sending approximately 30 new technicians through the program starting this spring.
- November- Worked with Empower College Preparatory High School to scope and begin implementation of a work-based learning program for all students. Plans include industry mentorships, job shadows, work-like experiences, and internships. The implementation will also be supported by ongoing career interest, exploration, and guidance activities. CFA will also help design and implement a program to build general workplace skills across the student body. This project will serve as a model for working with other schools implementing a work-based learning program that reflects industry needs.
- November- Launched a project with Pima County Arizona@Work to provide technical assistance as the organization expands internship opportunities for high school students in Pima County. Dr. Ball will be part of the planning team that will set priorities to establish Pima County Arizona@Work as the lead work-based learning intermediary for the county. This work will result in the streamlining and clarifying of the process for employers to support internships at multiple high schools sites throughout the county.
- December- Participated in West-MEC Cyber Security Advisory Committee and made recommendations for engaging industry for real world projects for classrooms, and shared materials already created by the Greater Phoenix Chamber of Commerce cyber security collaborative. CFA will help facilitate these projects and the next employer meeting in January.

- December- Finalized plans and facilitated two tours for approximately 30 high school students and two teachers to the Phoenix NAP. This was the first such tour for this medium sized Phoenix based data center and provided the opportunity for the school and business to connect directly on the opportunities in the Information Technologies Sector. Plans are already under way for five additional APTP partner high schools to participate early in the spring 2018.
- Presentations- CFA continued to communicate about APtP by presenting at the Pima Association of Government Economic Vitality Committee, the Arizona Association of Economic Development Southern Arizona, and the ACF/Ellis Foundation Board meetings.

Next Steps – January – March 2018:

- In partnership with the Governor's Office, Arizona Community Foundation, Rodel Foundation, and the Ellis Foundation, host an announcement event to launch the new public-private partnership in support of Arizona Pathways to Prosperity.
- Support and advise Raytheon as the company designs an internship/apprenticeship program.
- Continue to finalize Memorandums of Agreement with prospective K-12 APTP partner LEAs.
- Work with high school and postsecondary partners to expand the implementation of the career pathways for each of the sectors. This includes career information, exposure, and advisement; foundational career readiness skills; course structure aligned to career pathways; and work-based learning opportunities
- Implement energy training program for teachers.
- Continue to develop the Arizona Pathways to Prosperity Learning Collaborative by convening K-12 and community college partners.
- Implement work-based learning and work-like experiences for the cybersecurity pathway developed in partnership with GPCC and Estrella Mountain Community College. CFA will work with business and industry to develop a continuum of experiences to support skill development aligned to industry needs.
- Continue conducting regional information meetings led by CFA. The purpose is to broadly communicate the initiative and identify additional prospective partners in K-12 and businesses that would like to formally engage in supporting the 9-14+ early college career pathways.