THE BORDERPLEX ALLIANCE

BORDERPLEX FUTURE OF WORK REPORT

JULY 2022

Recommendations for building a more resilient and globally competitive regional workforce system.

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LETTER FROM VP OF STRATEGY

The Borderplex Future of Work Committee, phase I, was formed to address the dire need to create a more resilient and agile education and workforce system. A group of regional leaders agreed to commit their valuable time and expertise into solving this monumental issue. After one year, 27 meetings, and 3 surveys, the Future of Work Committee produced this set of strategic recommendations.

I would like to thank the incredibly hardworking Future of Work Committee members, who dedicated many hours working on this project. It was a successful exercise in working across state and international borders that demonstrates the strength of our region and indicates a bright and hopeful future for the citizens and businesses in our community. I would also like to thank the twenty-three panelists for giving their time and expertise to this project.

This was a project identified in the Borderplex 2025 Ascend Plan, which focuses on developing agile and resilient institutions that can meet the needs of rapidly changing conditions. In 2022, no challenge was more evident or highlighted the need to be agile and resilient like the COVID-19 pandemic. Also, foreseeable disruptions such as the emergence of Industry 4.0 technology and the automation of a wide array of jobs creates an urgent need to build stronger, more cohesive systems that truly work for stakeholders.

This report is unique because industries from three states and two countries were examined as one region. Representatives from industry, academia, workforce development and economic development came together to share perspectives. Despite varying interests, physical barriers, and governmental differences, a series of common themes and priorities emerged. Many of the insights collected were uniformly identified across cities and industries, and so recommendations are general enough to be applied in a variety of contexts.

We invite the region's leaders to carefully consider the recommendations in this report and to implement them in their own organizations where possible. Change happens over time and often through coordinated activities. We are hopeful that the adoption of the recommendations will lead to stronger educational institutions, more successful workers, and more prosperity for our businesses and the economy.

Sincerely,

Natalie Littlefield
Vice President of Strategy
The Borderplex Alliance

EXECUTIVE SUMMARY

The Borderplex Future of Work Committee has created this set of recommendations for improving the institutions that are vital for generating and maintaining our region's talent pipelines. Led by the Borderplex Alliance's Binational Technology Council, leaders in business, education, economic development, and workforce development from across the Borderplex region, as well as from Austin and Silicon Valley, worked together to develop a shared focus and strategy for creating more agile and resilient education and workforce systems. The fragmented system of institutions supporting education and workforce development need better coordination, communication, and monetary support. Strengthening the collective resilience and impact of these institutions has never been more important. Disruptions are certain to occur in the future, meaning there must be comprehensive, multifaceted plans to address the workforce needs of today and of the future.

The Committee discussions operated within certain parameters. The group heard primarily from business leaders because of their status as job-creators. The meetings were focused on the region's target industries to ensure the greatest impact on the economy, with the inclusion of education as an industry due to their critical role as the engines of talent pipelines as well as being major employers. While all levels of education are important to the conversation of the Future of Work, the group focused on solutions within the scope of post-secondary education to provide a more robust and impactful list of recommendations, although a few recommendations were made around high school education. Finally, the Committee could have focused on many aspects of the Future of Work, such as specific skills required; however, this group focused on ways to improve the relationship between industry, education, and economic development to operate more as a globally competitive system rather than siloed and disjointed institutions.

The goals of this project include ensuring that businesses have access to highly skilled and productive workers, and that workers have the appropriate support to become successful. To that end, four overarching priorities were identified by the Borderplex Future of Work Committee. The four priority areas identified by the Committee are:

PRIORITY 1

Ensure there is an Agile Workforce System

PRIORITY 2

Prioritize relevance of educational programming

PRIORITY 3

Build a system that ensures talent availability

PRIORITY 4

Cultivate a thriving innovation ecosystem

The following is a brief summary of challenges and recommendations identified by the Future of Work Committee:

PRIORITY 1: ENSURE THERE IS AN AGILE WORKFORCE SYSTEM

Challenge 1.1

Disrupt traditional education delivery models to make them more agile and able to keep up with changing industry needs.

Recommendations

- Create policies to allow fast-tracking of curricula updates under certain circumstances.
- Identify and market benefits of industry involvement with local education systems and programs.
- Recognize, reward, and promote companies that have a community-focused culture that engage with educational institutions.
- Identify best practices for next-generation education delivery systems and capture data points on those that are relevant to the region.
- Foster career pathway opportunities (upskilling, reskilling, and new skilling) by using best practices for a region-centric educational delivery system that works in conjunction with local industry and educational institutions.

Challenge 1.2

Provide the necessary resources to education institutions to enable them to adapt quickly to rapidly changing environments.

Recommendations

- Invest company time and money into program development, on-the-job training, co-ops or internships, and teacher externships.
- Lend schools the use of company facilities, labs, and equipment to ease the resource burden on schools.

- Integrate basic knowledge of Industry 4.0 technology (beyond robotics) in high school curricula to share the responsibility of educating students on advanced technology.
- Foster collaborative research between universities and companies to share the cost burden.
- Leverage business engagement mechanisms to foster potential funding opportunities for educational programs.
- Dedicate private and public funding to quick upskilling and reskilling, such as through a general obligation bond and US Department of Labor training funds for Industry 4.0 training and job automation response.

Challenge 1.3

Build a stronger talent pool by increasing graduation rates and bringing more stop-outs back into the higher education system.

Recommendations

- Integrate career-connected learning philosophy in schools, such as Career and Technical Education and Early College High Schools, which evidence shows prevents dropouts. Include industry-recognized certificate preparation.
- Offer shorter-term industry certifications in colleges and universities.
- Offer education programs with flexible times and locations.
- Present tangible goals within the degree program that connect directly to a career path.
- Redefine success using multiple success points. Present multiple definitions of academic success to reinforce the relevance and value proposition of higher education.
- Ramp up student services like childcare, transportation, engagement with nonprofit community partners to have direct links offered to students.
- Adopt policies for subsidizing childcare services (private or governmental).

Challenge 1.4

The community should promote the attraction and retention of higher education faculty who are willing to adapt to changes in the marketplace.

Recommendations

- Create programs that will co-locate industry professionals and faculty.
- Create programs that will incentivize industry professionals to work as faculty.
- Promote the hiring of entrepreneurial faculty who are willing to adapt to changes in the marketplace.
- Automate customer-facing processes to overcome challenges to providing quality customer service posed by remote work.

PRIORITY 2: PRIORITIZE RELEVANCE OF EDUCATIONAL PROGRAMMING

Challenge 2.1

Align workforce development strategies to company and economic development strategies around emerging sectors to ensure that skilled talent is available.

Recommendations

- Form education-corporate partnerships with companies from both outside and inside the region to identify needed skillsets in emerging industries. Create programs around both teacher development and curriculum development.
- Prioritize integration of emerging technology and skillsets into teacher education programs to create sustainable talent pipelines.
- Identify or create an intermediary to be an information hub for emerging industries and data to ensure relevance, quality, and uniformity of programs for regional businesses and education institutions.

Challenge 2.2

Address skills gaps in advanced technologies and industries to help sustain and grow businesses.

Recommendations

- Create internal company rotation programs for younger generations. Provide formal training on leadership skills, organization, time management, flexible organizations, marketing, and teamwork.
- Begin augmenting education programs with skills in emerging technologies, e.g., augmented reality and virtual reality, as well as soft skills.
- Identify experts in technology who can teach the region's teachers and businesses. May look outside region for expertise.
- Team up across schools to develop micro-credentials that incorporate Industry 4.0 into the target industries.

Challenge 2.3

Align workforce development strategies to company and economic development strategies around emerging sectors to ensure that skilled talent is available.

Recommendations

- Create forums for ongoing communication between business and education on a regional level. Develop trust and share best practices. Maximize visits of universities to companies, and companies to universities and colleges.
- Build regional industry-college program for skills training and career awareness.
- Re-educate teachers on broad career opportunities in the region and what skills and education paths exist.
- Promote technical career paths and communicate the strength of those careers.
- Place a greater emphasis in schools on passive and foundational sciences.
- Integrate the art of software development across disciplines, e.g., python language.

PRIORITY 3: BUILD A SYSTEM THAT ENSURES TALENT AVAILABILITY

Challenge 3.1

Retain the region's talent pools and attract talent from outside the region.

Recommendations

- Improve competitiveness of wages. Connect to education-business partnerships that demonstrate money saved through that partnership, justifying higher wages. Program to provide analysis of profit-loss to help employers figure out how to increase wages.
- Create better corporate internal training, apprenticeship, and internship programs.
- Provide alternative, flexible pathways for those who want to finish their degree while continuing to work or care for relatives, etc.
- Utilize augmented reality and virtual reality in education to give professionals a more realistic training experience.
- Conduct a regional marketing campaign to control message about quality of life (e.g., search engine optimization campaign). It must target expats and current residents and demonstrate that it is a wonderful place to live.

Challenge 3.2

Raise awareness of emerging regional economic opportunities to encourage more workers and educational programs in those fields.

Recommendations

- Increase frequency and depth of communication between national labor departments, economic development organizations, and education regarding substantial workforce data. Add more specificity to the knowledge and skills needed for jobs in company job posts and governmental labor department resources.

- Make sure that schools have accurate and up-to-date labor market information to ensure that the skills taught to students are aligned with target industry needs. Ensure that schools are promoting existing jobs and careers as well as emerging industry opportunities.
- Create an initiative to raise public awareness of the current and future target industries and available jobs (must be a binational campaign).

Challenge 3.3

Ensure that employers have experienced talent pools from which to draw.

Recommendations

- Create border “bridge” programs to help professionals gain the knowledge needed to pass exams and gain professional credentials in the neighboring country.
- Develop “boomerang” programs that incentivize expats who have left the region to come home to fill high demand jobs.
- Create a skilled immigrant program to expand labor pool for high demand jobs.

Challenge 3.4

Enable workers to be successful at remote work to ensure remote job productivity.

Recommendations

- Fund, build, and support regional broadband infrastructure initiatives.
- Create and promote customized training programs for managers of remote and hybrid-remote teams.
- Train workers on remote working best practices through micro credentials.

Challenge 3.5

Create more holistic, people-focused strategies for increasing educational attainment, labor participation, and productivity.

Recommendations

- Provide manager training for creating a highly productive team to include empathy training.
- Offer flexible workplaces that accommodate people of diverse backgrounds and expectations. Offer non-traditional work environments, flexible schedules, remote work options, and different training options.
- Provide wraparound services to employees, such as mental health and free yoga.
- Provide employees with education on how to be self-sufficient (financial literacy, calculating cost of living, salary, etc.

PRIORITY 4: CULTIVATE A THRIVING INNOVATION ECOSYSTEM

Challenge 4.1

Reverse the current trend and begin generating pipelines of talent with design and development skillsets.

Recommendations

- Create employer-led education curriculum development and teacher development around design and development.
- Incentivize business engagement to provide problems to be solved.
- Create new ways to keep up with the speed at which events are happening in the world and affecting the company, with the same resources and new value generated for the future. Identify real-world problems to be solved; educational institutions have some skills needed but they do not have real world problems to work on.

Challenge 4.2

Integrate entrepreneurship and innovation education throughout every level of school and across programs to cultivate the necessary skills for business and technology creation.

Recommendations

- Create regional program for sharing knowledge of emerging, industry changing technology.
- Promote unique partnerships between higher education, innovation centers, and business.
- Systematically send locals to visit and study other areas that are adopting and using advanced technologies.
- Systematically bring experts from outside the region to share knowledge of advanced technology.
- Use schools and students to provide free design and prototyping services for local companies.
- Fund, build, and support regional broadband infrastructure initiatives.

INTRODUCTION

The emergence of advanced technology, the automation of jobs, and the COVID-19 pandemic have underscored a need for the region to build a more agile and resilient education and workforce development system to ensure that workers are successful. As change is the only constant, success depends on the ability to adapt quickly and efficiently.

There is a fundamental relationship between the workforce and the health of the economy that makes the future of the workforce a top priority for the region's leaders. A long-disjointed industry-education relationship has fueled a widely felt skills gap and productivity lag, and so the need for businesses and education to work in concert is imperative. The systems communities have relied on are no longer sufficient to meet employer needs, optimize opportunities, and withstand unforeseen disruptions.

According to an article by Politico, the U.S. workforce development system "is actually fairly broken, and it's not super responsive to industry need," said Cheryl Oldham, vice president of education policy at the U.S. Chamber of Commerce. "We're in this crazy dynamic economy; jobs are changing faster than ever before … and yet we have this system that continues to do things the way it always has."[i]

"This is a crisis point," said Boston University professor Scott Solberg, vice president of research for the Coalition for Career Development Center. "We have to have a national conversation about how we're going to elevate career readiness, because it's all about economic competitiveness."[ii]

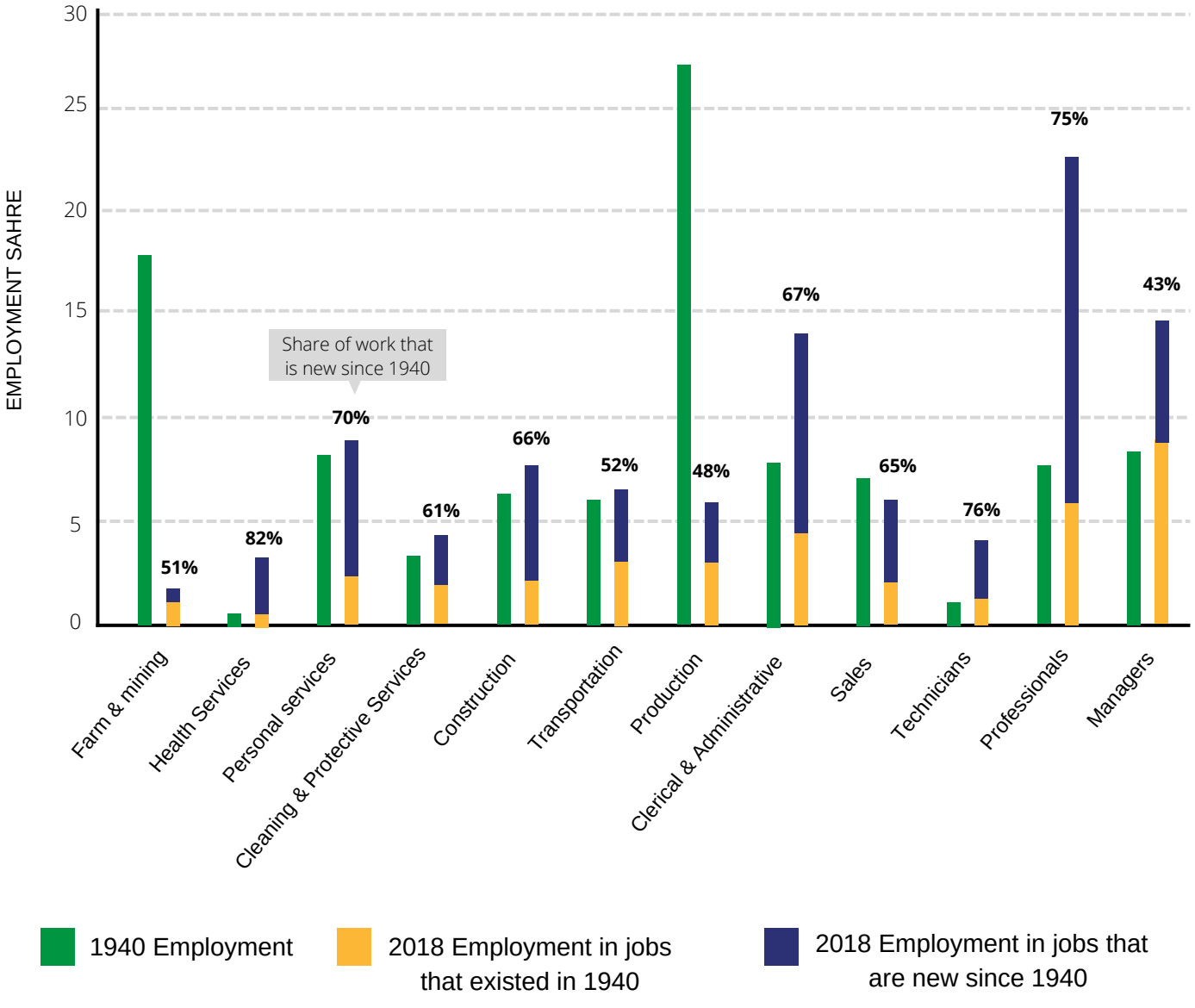
In addition to systemic barriers, there are pervasive challenges having widespread impact, such as technological change, remote work demands, and a shift in labor participation, and they are likely to have stamina well into the coming years.

Technological advancement can improve productivity, leading to increased revenues, new job creation and increased wages. Regarding wages, when workers are scarce, wages rise naturally; therefore, as unique new jobs requiring new skillsets are created, then the initial scarcity of workers for these jobs should result in wage increases.

On the other hand, the increase in automated jobs is a particular concern because it will impact many jobs across industries, especially jobs requiring lower skillsets. In its “Future of Jobs Report 2020,” the World Economic Forum estimates that 85 million jobs will be displaced while 97 million new jobs will be created across 26 countries by 2025.[iii]This shift, while initially difficult, will significantly increase the region’s GDP. According to PwC’s Global Artificial Intelligence Study, by 2030, AI will lead to an estimated $15.7 trillion, or 26% increase, in global GDP.[iv]

Past technological advancement and the change in job roles was evidenced in the past and can give a glimpse into the change in jobs of the future.

Figure 2. More than 60% of jobs done in 2018 had not yet been "invented" in 1940

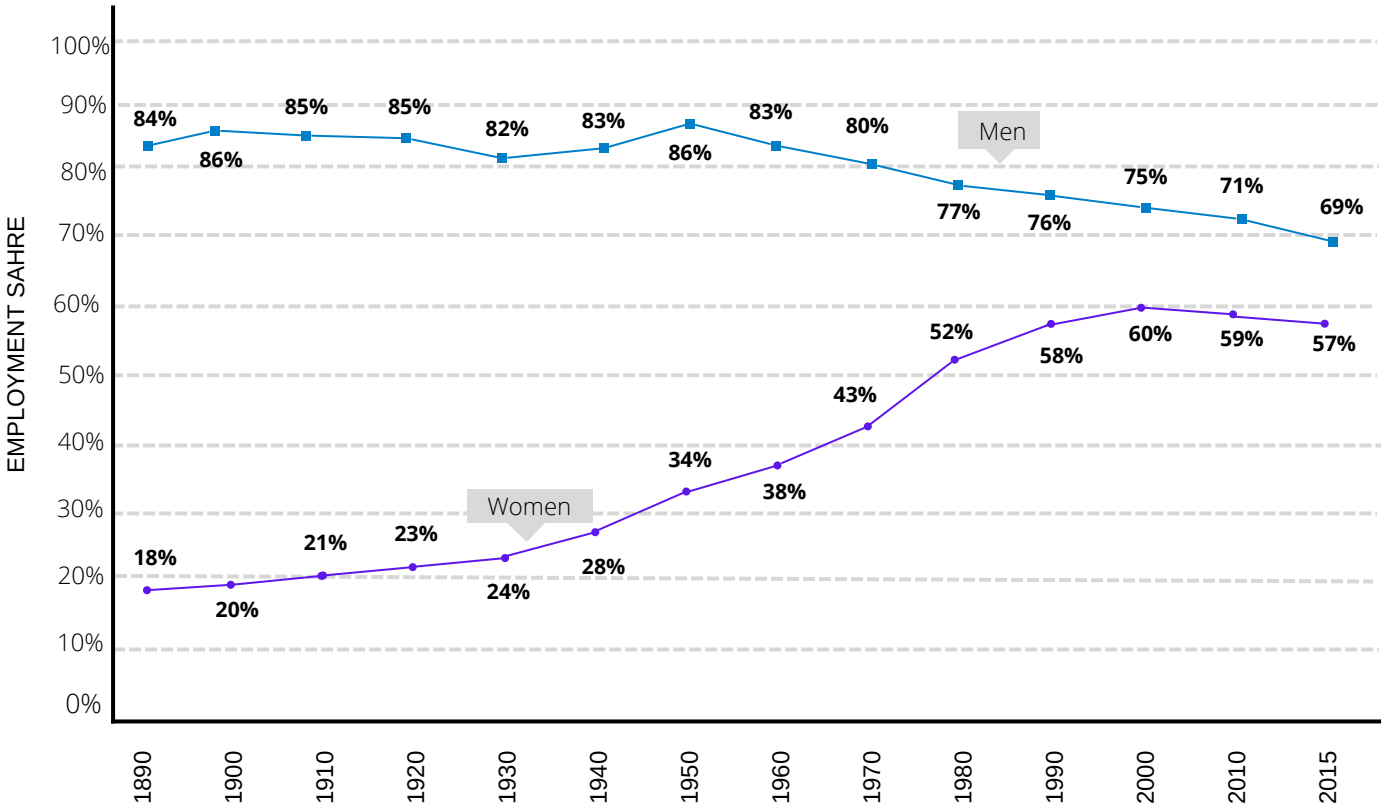


Although automation will change the face of industries and work, the biggest issue will not be that robots are taking away jobs, but rather that there will not be enough people to fill the new jobs that are created through new technology. A new Future of Work study by Korn Ferry indicates that the global talent shortage will be more than 85 million people, resulting in about $8.5 trillion in unrealized annual revenues.[v]

Businesses have faced shortages of skilled workers for several years. The large majority of companies worldwide (87%) are aware that they either already have a skills gap or will have one within a few years, according to a 2021 report by McKinsey & Company.[vi]

Since the pandemic, businesses have had an even smaller pool to draw from due to lower worker participation. In 2021, according to the U.S. Bureau of Labor Statistics, over 47 million Americans voluntarily quit their jobs. One major driver of The Great Resignation appears to be that many workers are no longer willing to tolerate low wages and/or poor working conditions that they accepted before the pandemic. The resignation rate is particularly high in sectors with a large number of frontline workers, e.g., hospitality, health care and retail.[vii]

Figure 1. The fraction of adults in paid employment has raisen for most of the past 125 years
EMPLOYMENT TO POPULATION RATE OF U.S. ADULTS BY SEX, 1890 - 2015



Source: Blau, Francine D., and Anne E. Winkler. The Economics of Women, Men and Work. 8th ed. New York: Oxford University Press, 2018, Table 5.1

An article in the Harvard Business Review lists various labor market trends that were accelerated or exacerbated by the pandemic.[viii] Worker retirement was in full swing among the baby boomer generation prior to the pandemic. The COVID-19 pandemic accelerated this movement as people left their jobs due things such as a higher susceptibility to serious illness from the virus and a then-strong stock market and housing market. A 2021 Women in the Workplace report found that one in three women are reconsidering their priorities and leaving the workforce, switching jobs, or cutting work hours. Many times, this is due to crushing childcare costs.[ix] There is evidence that many are "reshuffling" — that is, moving among different jobs in the same sector, or even between sectors. Finally, many workers have been reluctant going back to the office during the pandemic and this has led to an ongoing preference for work from home options. Even though the pandemic is subsiding, the preference for remote jobs, both from workers and employers, may remain.

According to Monica Moreno, CEO of the Job Connection staffing agency, "COVID has changed employees' priorities when evaluating remote opportunities as well as work/life balance. I receive three times more applicants on job postings for remote positions versus on-site positions.

"For those that had the opportunity to work from home and enjoyed the experience; I expect the rise in gas prices to further motivate hourly employees to search for remote positions. At least through the summer season and possibly beyond, employers may want to consider or continue remote, hybrid options or four-day work weeks in order to retain staff."

Workers have had to become more and more agile as disruptions such as automation and the COVID-19 pandemic have impacted the nature of work and created new expectations from employers.

To better understand local worker needs and identify challenges they face in the workplace, a 13-question survey was distributed to workers throughout Cd. Juarez/El Paso/Las Cruces. There was a total of 467 survey respondents— 184 from the El Paso/Las Cruces area and 283 from Juárez. Workers responded from a variety of target industries, professions, education levels. The survey responses were greatly influenced by the demographics of the respondents, and given the limitations of any imbalances in representation, the responses were viewed as a general guide on local workers' needs rather than a strict interpretation.

The survey asked what new technology was implemented in the workplace and the challenges that it has created for the participants. In the El Paso results, 39.43% of participants said their employers required them to upskill to keep job. They ranked the “Other” category as the second choice (27.43%), which included answers like unreasonable increased expectations and increased volume of work. In the southern side of the border, most of the participants (58.78%) also said their employer required them to upskill to keep their job. The second most selected option was “required to reskill due to displacement” (23.66%). The remainder of the options were selected by 10% or less of the respondents.

With many workers being required to upskill to keep their jobs, the survey question of whether they had to upskill themselves without the employer’s help is highly relevant. On both sides of the border, most participants said they have had to upskill themselves, with 61% from El Paso/Las Cruces and 85% from Cd. Juárez responding yes to the question.

Workers were asked about what resources they have used to upskill themselves. On one hand, the Las Cruces/El Paso participants selected a university as their top option (36.47%) followed by informal education (16.47%). Some other top selections were the option “Other” (14.71%), which included responses like state-provided training and professional development training, online certificates (12.94%), internal training programs (12.35%).

In contrast to the results from the El Paso/Las Cruces survey, the Juárez results showed that the most selected option for resources used to upskill was internal training programs (30.94%). Workers in Cd. Juarez also ranked informal education second, with 24.82%. The other options were ranked as the following: university (22.66%), online certificate (20.14%), and technical school (15.11%); the option “Other” had 12.23%.

When being asked what resources would make them more successful at their job, participants on both sides of the border selected on-the-job training (53.49% - Las Cruces/El Paso; 72.92% - Cd. Juárez. The second most selected option was managerial support (21.51% - Las Cruces/El Paso; 38.27% - Cd. Juárez). Access to reliable transportation was more important in Cd. Juarez than in the Las Cruces/El Paso area (1.16% - Las Cruces/El Paso; 11.55% - Juárez); and ‘access to reliable childcare was equally as important in the Las Cruces/El Paso area as in Cd. Juarez (8.14% - Las Cruces/El Paso; 8.66% - Juárez). Answers under the ‘Other’ option included flexible schedule, higher salaries, growth/career advancement opportunities, access to more educational resources, and better internet connection.

Overall, similar survey responses were seen across the Borderplex’s states and countries, suggesting that workers share the same experiences regardless of their location.

Luckily, technological change is not eliminating work altogether. It is simultaneously replacing existing work and creating new work.[x] There is an opportunity to innovate around advancing technology to create profitable businesses with jobs that meet workers’ needs.

The Future of Work Committee heard primarily from business leaders who took front and center of the conversations due to their position as job creators, while workers' needs were also identified and addressed. A root cause analysis of businesses' inability to attract and retain skilled talent highlighted the need for worker-centric policies.

Representatives from educational institutions, workforce development intermediaries, and businesses all considered and analyzed the facts. After the examination of the issues, four priorities emerged. Each one is addressed in the following sections.

KEY FINDINGS AND RECOMMENDATIONS

The following sections describe the priorities, challenges, key discussion points, recommendations, and examples identified and developed by the Borderplex Future of Work Committee.

The Committee discussions operated within certain parameters. The group heard primarily from business leaders because of their status as job-creators. The meetings were focused on the region's target industries to ensure the greatest impact on the economy, with the inclusion of education as an industry due to their critical role as the engines of talent pipelines as well as being major employers. While all levels of education are important to the conversation of the Future of Work, the group focused on solutions within the scope of post-secondary education to provide a more robust and impactful list of recommendations, although a few recommendations were made around high school education. Finally, the Committee could have focused on many aspects of the Future of Work, such as specific skills required; however, this group focused on ways to improve the relationship between industry, education, and economic development to operate more as a globally competitive system rather than siloed and disjointed institutions.

The Four Priority Areas identified by the Committee are:

PRIORITY 1	PRIORITY 2	PRIORITY 3	PRIORITY 4
Ensure there is an Agile Workforce System	Prioritize Relevance of Educational Programming	Build a System that Ensures Talent Availability	Cultivate a Thriving Innovation Ecosystem

PRIORITY 1: ENSURE THERE IS AN AGILE WORKFORCE SYSTEM

Challenge 1.1

Disrupt traditional education delivery models to make them more agile and able to keep up with changing industry needs.

KEY DISCUSSION POINTS:

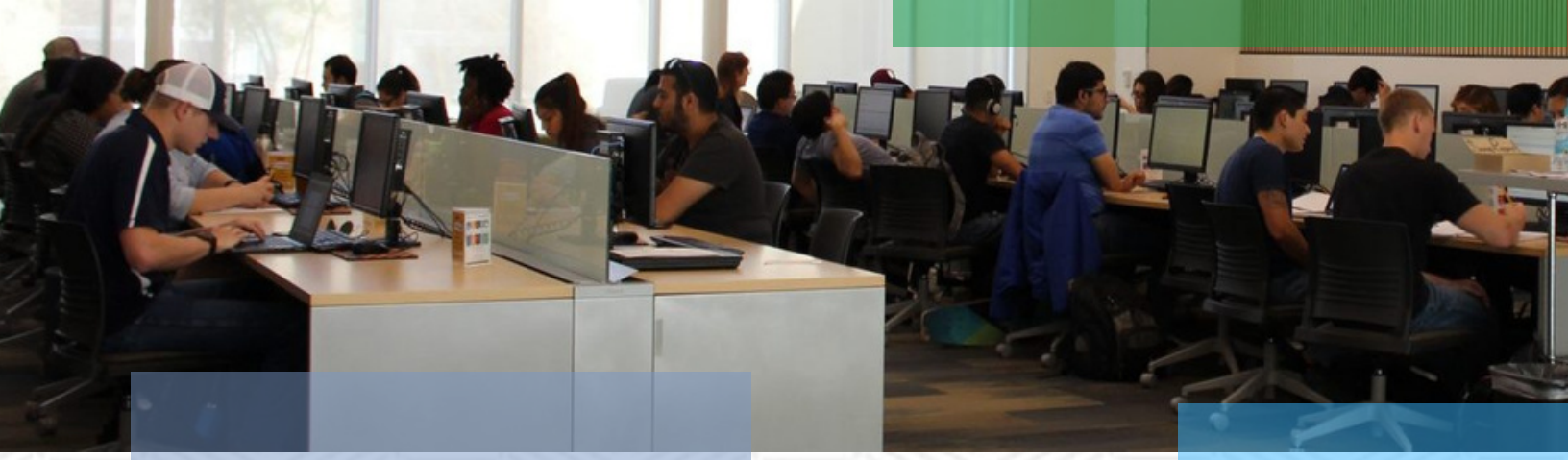
- New technology adoption is happening across all industries.
- There is a need for skilled trades just as much as traditional 4-year degrees, and a need to connect nontraditional workers with nontraditional education paths.
- Recent trends show accelerated adoption of digital services. This is a driving force behind industry technology adoption, and it will impact job types and skills needed.
- Industries need to be proactive in voicing their workforce needs and gaps.
- Curricula updates need to be fast-tracked. With universities being such large organizations, it takes considerable time to make curricula changes. Changes in the world happen much faster than university processes for curriculum changes.
- There is not enough engagement between industries and universities to preview those changes ahead of time. The value of change is not well identified or understood enough to motivate the change.
- There are various rates of technology adoption by companies, making it difficult for schools to know what technology skills to teach.
- There needs to be better alignment between postsecondary and secondary schools on the skills that are needed or are going to be needed in the future.

RECOMMENDATIONS:

- Create policies to allow fast-tracking of curricula updates under certain circumstances.
- Identify market benefits of industry involvement with local education systems and programs.
- Recognize, reward, and promote companies that have a community-focused culture that engage with educational institutions.
- Identify best practices for next-generation education delivery systems and capture data points on those that are relevant to the region.
- Foster career pathway opportunities (upskilling, reskilling, and new skilling) by using best practices for a region-centric educational delivery system that works in conjunction with local industry and educational institutions.

EXAMPLES:

- **CONREDES** works in conjunction with local industry and education to develop new curriculum; can be used for upskilling, reskilling, and new skilling initiatives.[xi]
- Partners in Education program at the School District of Palm Beach County. An enterprising initiative that allows businesses and community organizations to support public education with around 1300 business partners involved.[xii]
- Amazon Upskilling 2025 program. Amazon is investing more than $1.2 billion to provide free upskilling opportunities to more than 300,000 U.S. employees, helping them further their careers in high-paying, in-demand roles.[xiii]



Challenge 1.2

Provide the necessary resources to education institutions to enable them to adapt quickly to rapidly changing environments.

KEY DISCUSSION POINTS:

- Educational institutions need resources to stay up to speed with technological advancements and industry demand, e.g., time, money, right people, technology, etc. Students, faculty, and staff broadly lack access to new technologies. An increase in clinical positions in the medical field is also needed.
- Need a top-down prioritization of advanced technology courses and skillsets.
- Faculty members need guidance on how to teach with technology.
- Faculty need hands-on experience with technology.
- Workers believe that short term certificates and micro-credentials are useful for learning new skills in a rapidly changing environment.
- Increase schools' access to advanced technology by partnering with companies to use their latest technology and by forming collaborative agreements between schools to share the latest equipment.

RECOMMENDATIONS:

- Invest company time and money into program development, on-the-job training, co-ops or internships, and teacher externships.
- Lend schools the use of company facilities, labs, and equipment to ease the resource burden on schools.
- Integrate basic knowledge of Industry 4.0 technology (beyond robotics) in high school curricula to share the responsibility of educating students on advanced technology.
- Foster collaborative research between universities and companies to share the cost burden.
- Leverage business engagement mechanisms to foster potential funding opportunities for educational programs.
- Dedicate private and public funding to quick upskilling and reskilling, such as through a general obligation bond and US Department of Labor training funds for Industry 4.0 training and job automation response.

EXAMPLES:

- UTEP Smart Manufacturing certification example of industry/university partnership.
- Borderplex Industry 4.0 Consortium training program for train-the-trainer high school and college-level programs.
- Microsoft TechSpark Computer Science professional-led program to prepare computer science teachers
- Robert Bosch working with UTCJ; student rotation program at the company site; certification from Germany/Mexico dual program; focus on a 2-year technical program
- Triangle of Texas bonds for quick upskilling/reskilling programs. Bonds have been successfully passed in other communities in support of educational outcomes.
- US Department of Labor for quick upskilling/reskilling programs. In the past programs have been developed for large scale disruptions, e.g., Trade Adjustment Assistance (TAA) Program in response to passage of NAFTA.
- AI Center in Cd. Juarez develops products in conjunction with companies to fund operations.
- University dropouts in Cd. Juarez triggered change to allow for stackable certification program with option to lead to traditional 4-year degree.

Challenge 1.3

Build a stronger talent pool by increasing graduation rates and bringing more stop-outs back into the higher education system.

KEY DISCUSSION POINTS:

- Enrollment has declined in region (versus enrollment increase in other regions)
- Large stop out population, i.e., group of students that took some college courses then dropped out without a degree.
- Many economically disadvantaged students lack access to broadband (i.e., lack of infrastructure, devices, training, or a combination of those).
- Students do not believe their education is relevant to their career.
- During the pandemic, female college enrollment has dropped significantly in Las Cruces and El Paso Community Colleges due to childcare obligations. This may cause long-term, low female labor participation rates. There is a need for good, safe, and healthy childcare to allow women as well as fathers to reenter both school and the workforce on a sustainable basis.
- There is a need for flexible college schedules due to managing family care obligations.
- Industry certifications could be utilized as an introduction for colleges and could lead to enroll in other longer courses. Skill based (no prerequisites). “Little successes” that built the confidence level of students.

RECOMMENDATIONS:

- Integrate career-connected learning philosophy in schools, such as Career and Technical Education and Early College High Schools, which evidence shows prevents dropouts. Include industry-recognized certificate preparation.
- Offer shorter-term industry certifications in colleges and universities.
- Offer education programs with flexible times and locations.
- Present tangible goals within the degree program that connect directly to a career path.
- Redefine success using multiple success points. Present multiple definitions of academic success to reinforce the relevance and value proposition of higher education.
- Ramp up student services like childcare, transportation, engagement with nonprofit community partners to have direct links offered to students.
- Adopt policies for subsidizing childcare services (private or governmental).

EXAMPLES:

- NMSU Industry 4.0 micro-credentials are available to various industries
- Gallup Poll shows people would stay in school if they saw connection of education to career.[xiv]
- Mexico's Estancias program supports mothers who work, seek employment or study, as well as single parents with daughters, sons, girls, or boys in their care. [xv]
- Sacramento State, HornetAttain program in the College of Continuing Education, provides wraparound services to students to encourage reenrollment of dropout students.[xvi]
- A flexible spending account (FSA) is an individual account that can reimburse an employee for qualified medical expenses and work-related dependent care expenses.[xvii]
- Bridgecare allows parents to view providers, photos, prices at the county level, and consolidates data and shares with the government for tailored subsidy support.[xviii]

BEST PRACTICES

Workforce development intermediary programs have proven to enhance outcomes for students and non-student worker. These work directly with employers to identify skills training that will prepare students for existing jobs.

According to the MIT Work of the Future Report, the components of the most effective intermediaries are:

- Close relationships with employers (the so-called "dual customer" model).
- Support services and counseling for clients.
- Substantial investments in training to achieve the close relationship with employers.
- Intermediaries with staff expertise about industry and employer needs.

Challenge 1.4

The community should promote the attraction and retention of higher education faculty who are willing to adapt to changes in the marketplace.

KEY DISCUSSION POINTS:

- Competition for faculty is increasing. Faculty mobility has changed and impacted universities; faculty members had a long residence and now have a shorter residence, particularly in technology-related fields, business, and others.
- Slowness of management to adapt to the shift in mindset towards giving employees a work/life balance.
- Remote work poses challenges particularly for maintaining quality of customer service.
- Some schools created requirements for faculty to use digital tools. Faculty training is a challenge when teaching online.

RECOMMENDATIONS:

- Create programs that will co-locate industry professionals and faculty.
- Create programs that will incentivize industry professionals to work as faculty.
- Promote the hiring of entrepreneurial faculty who are willing to adapt to changes in the marketplace.
- Automate customer-facing processes to overcome challenges to providing quality customer service posed by remote work.

EXAMPLES:

- University of Michigan, Ford Motor Company Robotics Building – Ford engineers working at U-M will explore how the company's upright Digit robots can work in human spaces while taking autonomous vehicles from robotic computer simulations to on-road testing at U-M's nearby Mcity proving ground.[xix]
- El Paso Electric/UTEP teacher and professional exchange program includes the creation of exchange programs, joint research and professional development programs, and collaboration on community engagement projects.[xx]

PRIORITY 2: PRIORITIZE RELEVANCE OF EDUCATIONAL PROGRAMMING

Challenge 2.1

Align workforce development strategies to company and economic development strategies around emerging sectors to ensure that skilled talent is available.

KEY DISCUSSION POINTS:

- Emerging areas where there may be regional expertise and assets, where there is much promise for growth but currently a low regional job count include electric and autonomous vehicles, medical device manufacturing, and aerospace manufacturing.
- Companies and economic development strategies are looking at vertical integration, e.g., design and development, manufacturing, supply chain development, logistics services.
- Industry vertical for electronic vehicles (EV) includes energy R&D, i.e., energy generation, storage and distribution, particularly around renewable energy sources. May include cross-over with electric grids, batteries, and powering both vehicles and buildings.
- There is an industry-wide switch from combustion engine to EV and autonomous vehicles happening. This will mean large loss of jobs around traditional automotive manufacturing, which is currently a strong sector, and the need for skilling and reskilling around electric and autonomous vehicles, considering the end-to-end process from design to distribution.

RECOMMENDATIONS:

- Form education-corporate partnerships with companies from both outside and inside the region to identify needed skillsets in emerging industries. Create programs around both teacher development and curriculum development.
- Prioritize integration of emerging technology and skillsets into teacher education programs to create sustainable talent pipelines.
- Identify or create an intermediary to be an information hub for emerging industries and data to ensure relevance, quality, and uniformity of programs for regional businesses and education institutions.

EXAMPLES:

- El Paso Electric-funded program at Doña Ana Community College. Funded EV technical program and provided an EV and an EV charging station.
- Bridge2Careers communications effort to incorporate and communicate workforce needs of companies and align them to career pathways in educational institutions.
- CONREDES program in Cd. Juarez. Puts all education institutions and businesses at the same table to create curricula development processes that work for everyone. Key initial discussions focus on the challenges education institutions have had to develop programs, and companies communicate reasons behind the need for speed in development.

Challenge 2.2

Address skills gaps in advanced technologies and industries to help sustain and grow businesses.

KEY DISCUSSION POINTS:

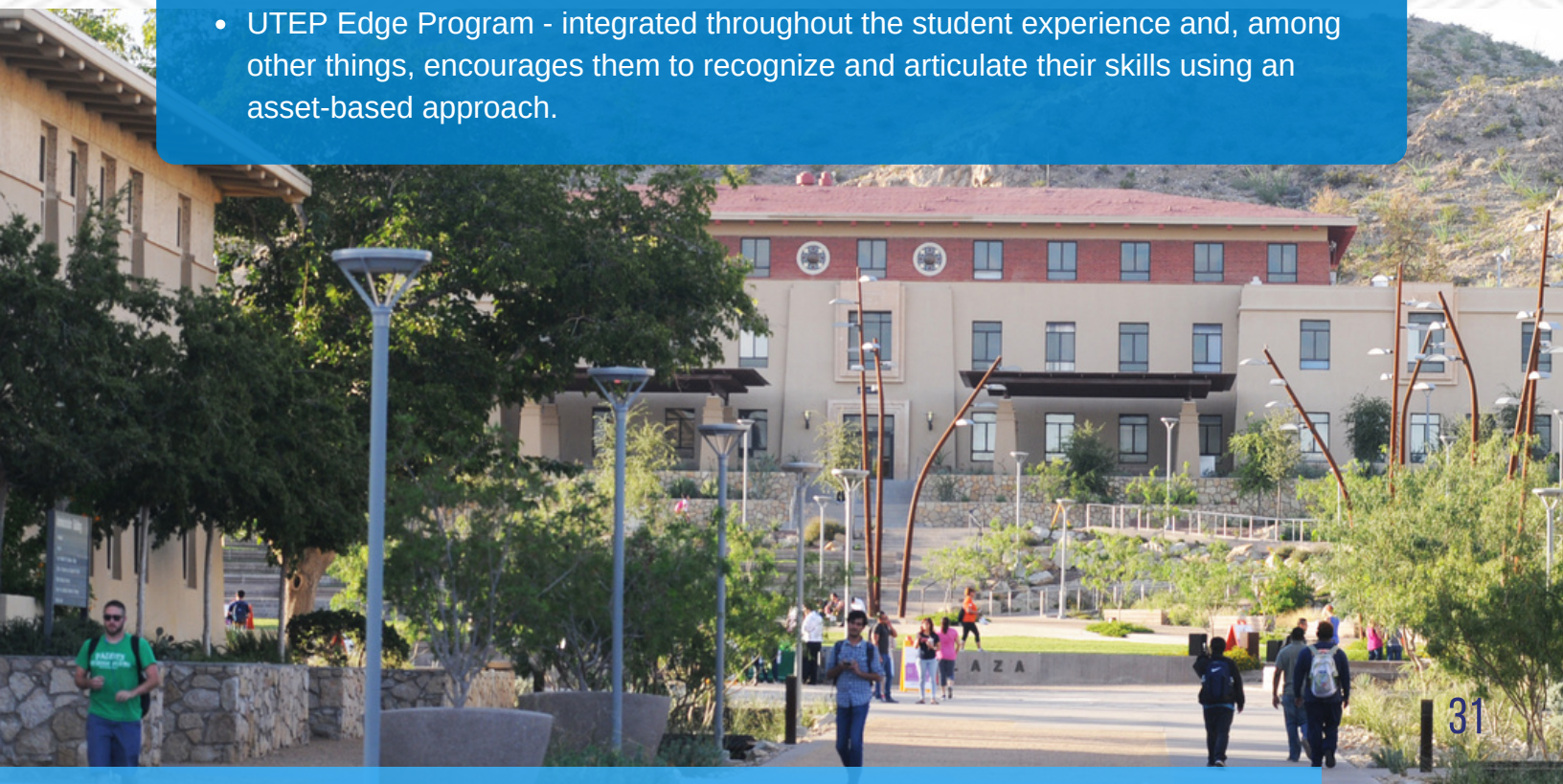
- Need to address skills gap to address inevitable future demand for digital technology skills, around technology such as virtual reality, augmented reality, virtualization, embedded systems development, and internet of things applications. This need for digital skills applies to both the target industries and emerging sectors. For example, in the emerging commercial space industry, the Low Earth Orbit economy will be supported by the advancements in STEM technologies, such as artificial intelligence, machine learning, data science, big data, cybersecurity, and software and hardware engineering.
- Nascent technology is not widely used regionally, leading to lack of early experience or exposure at the high school and/or collegiate level.
- Teachers throughout the region may lack the training to teach Industry 4.0 skills and companies sometimes do not have a methodology for how skills are developed.
- In the manufacturing industry, companies are hiring people with lower education credentials than needed and training them (and the cost for business is higher than if they recruited a skilled individual). Companies are also using collaborative robots to reduce operator dependence.
- Younger generations are easier to train on automation, but it is more difficult to retain them in the region.
- Across industries, business leaders noted weak or a lack of soft skills in their workers, particularly among young professionals. Non-technical skills are needed as much as, or nearly as much as, technical skills, e.g., interpersonal skills, such as how to be a good employee, to be a good colleague, and to have a good attitude towards work.

RECOMMENDATIONS:

- Create internal company rotation programs for younger generations. Provide formal training on leadership skills, organization, time management, flexible organizations, marketing, and teamwork.
- Begin augmenting education programs with skills in emerging technologies, e.g., augmented reality and virtual reality, as well as soft skills.
- Identify experts in technology who can teach the region's teachers and businesses. May look outside region for expertise.
- Team up across schools to develop micro-credentials that incorporate Industry 4.0 into the target industries.

EXAMPLES:

- NMSU Industry 4.0 micro-credentials are available to various industries.
- Texas Higher Education Coordinating Board's 60X30 Plan recently changed to enable institutions of higher learning to offer stackable credentials to nontraditional students, e.g., adult learners.
- Secretariat of Public Education (SEP), the Mexican national education board – promotes stackable credentialing.
- New Space New Mexico is a source of industry professionals in the commercial space industry that can work with educators.
- UTEP Edge Program - integrated throughout the student experience and, among other things, encourages them to recognize and articulate their skills using an asset-based approach.



Challenge 2.3

Increase company-education collaboration for optimal educational programs and talent pipelines.

KEY DISCUSSION POINTS:

- Competitiveness of companies and lack of trust results in lack of communication with schools about what skills they need their talent to have.
- Schools need to make quick curriculum changes to keep up with the fast pace of business.
- Skills gaps for advanced technology jobs are present and growing.
- Collaborative robots are being used to replace hard-to-find operators. Automation is increasingly being used.
- All education practitioners need to be versed in digital technology.
- Need to train teachers or find teachers trained in the latest technology; there are challenges in training the trainers.

RECOMMENDATIONS:

- Create forums for ongoing communication between business and education on a regional level. Develop trust and share best practices. Maximize visits of universities to companies, and companies to universities and colleges.
- Build regional industry-college program for skills training and career awareness.
- Re-educate teachers on broad career opportunities in the region and what skills and education paths exist.
- Promote technical career paths and communicate the strength of those careers.
- Place a greater emphasis in schools on passive and foundational sciences.
- Integrate the art of software development across disciplines, e.g., python language.

EXAMPLES:

- The Federation for Advanced Manufacturing Education (FAME) apprenticeship program.[xxi]
- CONREDES program model – builds understanding of respective challenges among businesses and education providers; coordinates university visits to companies.
- Microsoft AI Center – collaboration between industry and academia; could be a good framework to leverage in how organizations could create a similar potential framework for in-house upskilling of employees.
- Be Pro, Be Proud Program coordinates partners, volunteers, and future skilled trade workers to close the skills gap.[xxii]

BEST PRACTICE

The Federation for Advanced Manufacturing Education (FAME) is a classic apprenticeship program, developed with Toyota, that combines classroom learning with paid on-the-job experience, teaching skills in demand across an industry. A report by Opportunity America found that FAME graduates in Kentucky earn between 60 percent and 100 percent more than other career and technical education graduates from the same community colleges.

PRIORITY 3: BUILD A SYSTEM THAT ENSURES TALENT AVAILABILITY

Challenge 3.1

Retain the region's talent pools and attract talent from outside the region.

KEY DISCUSSION POINTS:

- Employers across industries noted the difficulty in attracting and retaining talent.
- Current trends show a low and diminishing labor pool. The lack of workers, now and in the future; causes are low birth rates, retirement, outward migration, and lack of access to affordable childcare and transportation.
- Base salaries are not as high as other regions or competitive. People leave their jobs for lesser amounts. This is costly because of the training and recruiting costs, plus loss of productivity.
- Remote work options are creating competition for workers between local and external companies.
- Professionals are often unprepared for the working environment and quit their jobs soon after beginning them, e.g., nursing and teaching.
- The region has an image problem because of border issues, and it impacts the reputation of the area as a high-quality place to live and work.

RECOMMENDATIONS:

- Improve competitiveness of wages. Connect to education-business partnerships that demonstrate money saved through that partnership, justifying higher wages. Program to provide analysis of profit-loss to help employers figure out how to increase wages.
- Create better corporate internal training, apprenticeship, and internship programs.
- Provide alternative, flexible pathways for those who want to finish their degree while continuing to work or care for relatives, etc.
- Utilize augmented reality and virtual reality in education to give professionals a more realistic training experience.
- Conduct a regional marketing campaign to control message about quality of life (e.g., search engine optimization campaign). It must target expats and current residents and demonstrate that it is a wonderful place to live.

EXAMPLES:

- Savannah Economic Development Authority in Georgia created a program to pay $2,000 to technology workers who are willing to relocate to the city and work in remote technology jobs.
- Boomerang New Mexico program, connects STEM professionals and graduates to companies based in New Mexico.[xxiii]
- Microsoft's Technology Education and Literacy in Schools (TEALS) program. See Wisconsin model, which is using a state sponsored apprenticeship model.
- Electronic Caregiver partnership with NMSU for virtual reality research, The Kinesiology and Psychology departments are leading a virtual reality-based research program at New Mexico State University. The program produces simulations to advance medical operations and training simulations.
- In Cd. Juarez, university drop-offs triggered change to allow for a stackable certification program with an option to lead to a traditional four-year degree.

CASE STUDY - MICROSOFT TEALS

Technology Education and Literacy in Schools (TEALS) is a Microsoft Philanthropies program that builds sustainable Computer Science (CS) programs in high schools. It focuses on serving students excluded from learning CS because of race, gender, or geography. TEALS helps teachers learn to teach CS by pairing them with industry volunteers and proven curricula.

Since 2018, the regional TEALS program has supported a total of 30 unique schools in the region: 4 in 2018, 19 in 2019, 24 in 2020, 30 in 2021. Thirty-five unique schools are expected to be added in 2022.

Challenge 3.2

Raise awareness of emerging regional economic opportunities to encourage more workers and educational programs in those fields.

KEY DISCUSSION POINTS:

- The community is potentially over-focusing on specific jobs/careers when there are wider opportunities for career growth.
- Need to build and enhance the workforce's interest in available careers.
- Need for better branding of career opportunities.
- Need better coordination between organizations to get the word out about opportunities to students.
- Need to get students excited about job opportunities, e.g., drones and robotics.
- Trends are tied to advances in additive manufacturing techniques, material sciences, novel infrastructure building, and safety engineering.
- Many skills are transferrable to emerging industries. For example, skills in commercial space and the "low-earth orbit economy" are parallel to transportation, advanced logistics, and supply chain management, which currently have a strong presence in the region.

RECOMMENDATIONS:

- Increase frequency and depth of communication between national labor departments, economic development organizations, and education regarding substantial workforce data. Add more specificity to the knowledge and skills needed for jobs in company job posts and governmental labor department resources.
- Make sure that schools have accurate and up-to-date labor market information to ensure that the skills taught to students are aligned with target industry needs. Ensure that schools are promoting existing jobs and careers as well as emerging industry opportunities.
- Create an initiative to raise public awareness of the current and future target industries and available jobs (must be a binational campaign).

EXAMPLES:

- Pathways2Careers provides straightforward tools that can sustain progress on the pathway to career readiness.[xxiv]
- Texas HB5- Rule that has mandated all 8th grade students must pick a career path to build their education around.
- New Mexico uses individualized education plans (IEP) and Next Step Plans.

CASE STUDY - PATHWAYS2CAREERS

New Mexico is the first state in the nation to have a new tool in its toolbox for maximizing students' ability to explore 21stCentury careers while mastering critical skills for the future of work: math concepts in Algebra and Geometry, critical thinking, problem-solving, financial literacy, and other skills needed for workforce success.

Pathway2Careers is a first-of-its-kind, career-connected curricula that seamlessly blends learning with real-world career exploration and application. It provides the long-awaited answer to students' question, "When am I ever going to use this?" Developed for the state by career-connected-learning leader NS4ed, Pathway2Careers introduces students to more than 650 high value careers (high wage, high demand) while teaching academic concepts in the authentic context of career application.

The comprehensive platform for Pre-Algebra, Algebra I and II, and Geometry provides current labor market information to students who are exposed to careers they have likely never seen. It equips students with information to evaluate income and growth potential, as well as what skills are needed in specific careers and the characteristics of people who traditionally enjoy those careers. It contains videos that illustrate what those careers do, as well as video interviews with those in those careers about their own career journeys. This Fall, Pathway2Careers will also include a guided career exploration curriculum, age appropriate for grades 6-12. With lessons that can be deployed across English Language Arts, Science, Social Studies, Math, and Physical Education, Pathway2Careers becomes the platform for whole school engagement in career exploration and preparation.

Piloted in New Mexico and currently being adopted in other states, Pathway2Careers is already illustrating the power of career-connected learning. Early research shows gains in student motivation and engagement, and double-digit increases academic performance after just one semester. After just two lessons, 100% of students in the pilot cohort indicated they were more interested in learning math this way and more interested in exploring careers.Teachers, who are fully supported with comprehensive professional learning on the curriculum, report that "Pathway2Careers is a curricula that all math teachers have been waiting for."

Challenge 3.3

Ensure that employers have experienced talent pools from which to draw.

KEY DISCUSSION POINTS:

- The region needs a variety of specialized and experienced professionals that are not available currently.
- Retirement of experienced professionals with needed skills is not being offset by new hires with equivalent skills.
- Hiring net-new skillsets is difficult because candidates do not have enough experience in the industry. In the aerospace industry, new hires would need at least 3-5 years to develop junior skills, and an additional 10 years to develop advanced and senior skills. In manufacturing, a major difficulty is finding people trained in software development who also have experience.
- Poaching employees is an issue for various industries, such as for government and defense contractors. For example, White Sands Testing Facility employees go to Blue Origin, Virgin Galactic, and other private space companies.
- Businesses wanting to attract professionals from outside the region must take into consideration the high salary and quality of life expectations.

RECOMMENDATIONS:

- Create border “bridge” programs to help professionals gain the knowledge needed to pass exams and gain professional credentials in the neighboring country.
- Develop “boomerang” programs that incentivize expats who have left the region to come home to fill high demand jobs.
- Create a skilled immigrant program to expand labor pool for high demand jobs.

EXAMPLES:

- Savannah Economic Development Authority in Georgia created a program to pay $2,000 to technology workers who are willing to relocate to the city and work in remote technology jobs.
- Skilled Immigrant Integration Program (World Education Services).[xxv]

Challenge 3.4

Enable workers to be successful at remote work to ensure remote job productivity.

KEY DISCUSSION POINTS:

- Many workers are leaving their jobs for remote jobs, and many job seekers will only work at remote jobs.
- Remote work has become more accepted as the norm by employers and workers.
- Need greater flexibility in the workplace, such as hybrid models and more work/life balance.
- Broadband infrastructure is needed to make remote and hybrid jobs possible and practical. This includes fiber, computers and devices, and digital skills training.
- Managers need guidance on how to effectively manage remote teams.

RECOMMENDATIONS:

- Fund, build, and support regional broadband infrastructure initiatives.
- Create and promote customized training programs for managers of remote and hybrid-remote teams.
- Train workers on remote working best practices through micro credentials.

EXAMPLES:

- Borderplex Connect is an El Paso and Doña Ana County-based collaborative dedicated to launching broadband initiatives.
- Doña Ana Community College training program for managers of remote teams (to address problems around managing teams remotely, e.g., ensuring work is done and ensuring time is being used wisely).

Challenge 3.5

Create more holistic, people-focused strategies for increasing educational attainment, labor participation, and productivity.

KEY DISCUSSION POINTS:

- Need to resolve differences between traditional ways of handling employees and changing expectations to be more inclusive of age, gender, and cultural differences.
- It is important to find different ways to communicate with employees as opposed to traditional meetings.
- Some companies view productivity because of interconnecting the mental, physical, emotional, and social.
- There are generational differences between retiring workforce and incoming workforce, creating a sea change in the workforce culture and expectations.
- Generational differences may require a change in the approach to education for the new generations of workers.
- Diversity adds to the creativity and quality of work.
- Good mental health can increase productivity and lead to higher retention rates. Remote work and other stressors are impacting workers' mental health, creating a need to provide mental health services.

RECOMMENDATIONS:

- Provide manager training for creating a highly productive team to include empathy training.
- Offer flexible workplaces that accommodate people of diverse backgrounds and expectations. Offer non-traditional work environments, flexible schedules, remote work options, and different training options.
- Provide wraparound services to employees, such as mental health and free yoga
- Provide employees with education on how to be self-sufficient (financial literacy, calculating cost of living, salary, etc.)

EXAMPLES:

- Curacubby's managers use needs assessments and progress reports for their direct reports to find out where employees are struggling and how the manager can help. They also provide mental health initiatives and yoga.
- A Johnson & Johnson program rotates people between different departments. They place an emphasis on creating more gender diversity.
- The company BRP provides wrap-around services and requires staff to leave at 5 p.m.
- The company ADP provides wrap around services, such as a fitness center and cafeteria.

PRIORITY 4: CULTIVATE A THRIVING INNOVATION ECOSYSTEM

Challenge 4.1

Reverse the current trend and begin generating pipelines of talent with design and development skillsets.

KEY DISCUSSION POINTS:

- Difficulty in finding people who are trained directly in design and development, which makes it hard to expand an R&D business line in this area.
- The area of design and development has high-skilled, high-paying jobs.
- The region has excellent quality engineers, and they are good candidates for design and development.
- Companies are moving towards the border where the costs are cheaper, and the labor force has a greater willingness to work than in other parts of the U.S. Rising interest rates will hit operations costs and there will be stronger motivation to cut costs. This is opening a window of opportunity to bring design and development jobs to the region.
- Simulation capabilities are important to save money; virtual testing or 3D printing are much cheaper than testing a real product. Creating skilled labor in simulation tech will be important. Simulation technology is digital twin, artificial intelligence, data analytics, 3D printing/additive manufacturing.

RECOMMENDATIONS:

- Create employer-led education curriculum development and teacher development around design and development.
- Incentivize business engagement to provide problems to be solved.
- Create new ways to keep up with the speed at which events are happening in the world and affecting the company, with the same resources and new value generated for the future. Identify real-world problems to be solved; educational institutions have some skills needed but they do not have real world problems to work on.

EXAMPLES:

- University of Michigan, Ford Motor Company Robotics Building – Ford engineers working at U-M explore how the company's upright Digit robots can work in human spaces while taking autonomous vehicles from robotic computer simulations to on-road testing at U-M's nearby Mcity proving ground.
- El Paso Electric/UTEP teacher and professional exchange program includes the creation of exchange programs, joint research and professional development programs, and collaboration on community engagement projects.

Challenge 4.2

Integrate entrepreneurship and innovation education throughout every level of school and across programs to cultivate the necessary skills for business and technology creation.

KEY DISCUSSION POINTS:

- Opportunities for innovation and entrepreneurship are everywhere, particularly around modern technology. For example, automation is leading to higher throughput and higher amounts of data in a shorter amount of time
- In education, teaching innovation is key to creating a pipeline of innovators and entrepreneurs.
- Industry leaders may need access to nascent technologies and receive education about that technology.
- IT applications are creating reliable research environments, e.g., digital twin and AR/VR technology can simulate a real-world testing environment.
- The pandemic accelerated the adoption of digital technology, increasing the urgency of the need to embrace it and taking advantage of it.
- The business case and customer expectations are driving adoption of virtual technology.
- The digitalization of industries creates a need for integrating cybersecurity education into entrepreneurship education; businesses must protect customer records while moving into a digital era.
- Reliable broadband infrastructure is needed for entrepreneurs and innovators to build successful digital businesses. The lack of reliable high-speed internet is pervasive in small and rural areas.

RECOMMENDATIONS:

- Create regional program for sharing knowledge of emerging, industry changing technology.
- Promote unique partnerships between higher education, innovation centers, and business.
- Systematically send locals to visit and study other areas that are adopting and using advanced technologies.
- Systematically bring experts from outside the region to share knowledge of advanced technology.
- Use schools and students to provide free design and prototyping services for local companies.
- Fund, build, and support regional broadband infrastructure initiatives.

EXAMPLES:

- The AI Center and The Center for Innovation and Integration of Advanced Technologies (CIITA) are innovation centers in Cd. Juarez (standalone and unrelated to a university).
- Free design and prototyping services are available through several local organizations, including NMSU Arrowhead Center, FIX Prototyping Lab, Doña Ana Community College advanced manufacturing center (informal), and FabLab El Paso.
- Dell Technologies World, a large technology conference.[xxvi]
- Borderplex Connect is a local group working on broadband initiatives.

CASE STUDY - DELL TECHNOLOGIES

Dell Technologies World is an example of a forum where businesspeople, researchers, and entrepreneurs can convene to see and hear first-hand trends of key technologies, their implementation, and their potential impact to the region's industries. Dell Technologies World is an annual premier event in which all technologists at heart can join the Dell Technologies community of customers and partners, and along industry's best minds, gather and celebrate the intersection of technology and human progress. In addition, conference attendees can tap into insights presented during the keynotes, as well as being able to benefit from 150+ technology sessions, ranging from introductory technology basics to deeply technical discussions.

CONCLUSION

The key to systemic change and improvement will be the collective commitment of the region's leaders to implement the Future of Work Report's recommendations. Many examples were given in the report as a guide on how to implement the recommendations towards a meaningful impact. These examples can be iterated to address specific challenges, and scaled regionally and to new industries, where applicable. On the flip side, leaders who currently oversee successful programming should be open to sharing best practices and partnering with institutions across the region who are tackling Future of Work challenges.

The Borderplex Alliance will be tracking the implementation of the recommendations in this report by identifying participating organizations, fulfilled recommendations, and priority areas in need of greater promotion.

The recommendations in this report can be adopted by a variety of institutions that form the interrelated and inseparable education-industry relationship. The hope is that this report, and the scope of work and leadership involved in its development, will support leaders who are ready and willing to implement changes within their organizations. Policies and funding should align with the needs of the industry and address the core concerns of industry and workers. The Future of Work Committee believes the adoption of these recommendations and the overall consideration of the priorities and challenges will help the region become more globally competitive by building resilient systems to ultimately improve the quality of life for citizens in the Borderplex region.

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APPENDIX

DEVELOPMENT PROCESS AND TOOLS

- Nomination Committee
- Focus on target industries
- Background reading on target industries
- Target industry-focused panels
- Committee breakout sessions
- Subcommittees for idea brainstorming
- Committee working meetings
- Regional worker survey
- Committee surveys (for selection of final recommendations)
- Collaborative drafting and editing

AGENDA

- June 2021 - Committee Member Orientation
- August 2021 - Business Services Industry
- September 2021 - Advanced Logistics Industry
- November 2021 - Aerospace Industry
- December 2021 - Committee Working Meeting
- January 2022 - Advanced Manufacturing Industry
- February 2022 - Life Sciences Industry
- March 2022 - Education Industry (Post-Secondary)
- April 2022 - Secondary Teacher Education & Advanced Digital Technologies
- May 2022 - Committee Working Meeting
- June 2022 - Final Meeting – Presentation of Final Draft
- July 2022 – Release and Promotion of Final Report

APPENDIX

PANELISTS

- Salomon Noble, CEO, Intermex
- Jonathan Kot, General Manager, Amazon El Paso
- Matt Silver, President and CEO, Forager
- Patricia Hynes, Director, NM FAA Center of Excellence for Commercial Space Transportation
- Eduardo Seyffert, Senior Engineer, Blue Origin
- Joe Bullington, Commercialization Manager, Jacobs Technology
- Steve Aragon, Program Manager & Sr. Test Engineer, Blue Halo
- Julio Chiu, Founder and CEO, SEISA Group
- Rocio Legarreta, Senior Director Quality, Johnson & Johnson
- Hugo Becerra, Managing Director, G Labels
- Amit Lopes, Regional Director, TMAC Paso del Norte Region
- Jesus Terrazas, Engineering Validation & Administration Manager, APTIV
- Miguel Velarde, CEO & Founder, Thincrs
- Steven Khuong, CEO, Curacubby
- Frank Garcia, CEO, Perikin Enterprises
- Rafael Rucobo, Commercial Leader/Managing Partner, HUMANTEK
- Nils Desmit, CEO, Makios
- Abel Salcido, Chief Technical Officer, Electronic Caregiver
- Alex Figueroa, President, Sunset Resources Group
- Rosie Sanchez, Managing Director for the department of IT, Texas Tech University Health Sciences Center
- John Duran, Assistant Chief Nursing Officer, Del Sol Medical Center
- Beth Brunk–Chavez, Dean of Extended University, UTEP
- Ken Van Winkle, Associate Vice Chancellor of External Relations, NMSU
- Juan Francisco Hernandez Paz, Dean of Engineering, UACJ
- William Serrata, President, El Paso Community College
- Joe Butler, Acting Vice President for Academic Affairs, Dona Ana Community College
- Maurilio Antonio Saenz Arredondo, Departamento de Asuntos Interinstitucionales, UTCJ
- Clifton S. Tanabe, Dean of College of Education, UTEP
- Rick Marlatt, Interim Director of the School of Teacher Preparation, Administration, and Leadership, NMSU
- Yeshica A. Marquez Melchor, Coordinator for the Degree in Education, UACJ
- Jonathan Childress, Community Engagement Manager, Microsoft
- Omar Saucedo, TechSpark Community Engagement Manager Mexico, Microsoft
- Addie Cook, AI Public Policy Lead, Google
- Frank Macha, Senior Technologist, Dell Technologies