

A GOVERNOR'S ACTION GUIDE TO ACHIEVING
**GOOD JOBS FOR
ALL AMERICANS**



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Foreword by Governor Bullock

All Americans deserve a fair shot at a good job. Even though we witness incredible talent in all corners of our country, opportunity and access to good jobs are often limited. The 2018-19 National Governors Association (NGA) Chair's Initiative, *Good Jobs for All Americans*, aimed to understand the changing world of work and the factors that affect an individual's ability to connect to a good job and for businesses to access the talent they need to thrive in today's global economy.



Based on this understanding of the changes in the working world, "A Governor's Action Guide to Achieving Good Jobs for All Americans" offers a toolbox of high-impact actions that governors can take to connect workers to good jobs today and in the future. These actions fall into three categories:

- **Workforce of the future:** Governors can partner with businesses to identify the skills they will need in the future and how to best equip workers with these skills;
- **Second acts:** Governors can help midcareer workers succeed in the workforce through increased access to continuous learning opportunities, improved career transitions and holistic support; and
- **Rural resurgence:** Governors can empower the rural workforce by improving infrastructure and promoting communities' and residents' unique assets.

Good Jobs for All Americans convened three regional leadership workshops that brought together more than 200 experts in teams from 42 states. Workshop participants generously shared strategies they have used within each focus area. Pennsylvania Governor Tom Wolf hosted our first workshop in Pittsburgh; we held our second workshop in Las Vegas, Nevada; and I was pleased to be joined by both Iowa Governor Kim Reynolds and NGA Vice Chair, Maryland Governor Larry Hogan at the third workshop in Des Moines, Iowa. We previewed the results of the research and workshops at a Solutions Summit near the end of the yearlong initiative in beautiful Whitefish, Montana, where we hosted more than 130 experts in teams from 32 states.

One immediate finding from our research is that none of the systems change we talked about can occur without open and constant communication across partners. We were fortunate to have significant input and interest from partners in industry, philanthropy, education, economic development, workforce and human resources. Examples of best practices exist in many parts of the country, but it is only with help from all these partners that we can bring these efforts to every worker and business.

I am excited to share the results of our initiative. My intent is that this guide will serve as a springboard to further conversations both at NGA and in states about improving access to good jobs.

Sincerely,

Montana Governor Steve Bullock

Executive Summary

The world of work is changing. The economy is at an inflection point, where rapid technological transformation, demographic shifts and a tightening labor market have left businesses searching for skilled employees and current and future workers searching for pathways to good jobs. This uncertain time, however, also offers an opportunity for innovative leaders to create responsive, nimble training and workforce systems that prepare Americans for the jobs of the future.

Recognizing that governors are focused on creating and sustaining good jobs for their residents, National Governors Association Chair, Montana Governor Steve Bullock, launched a yearlong initiative titled *Good Jobs for All Americans* in July 2018. Throughout the initiative, Gov. Bullock convened state leaders, national experts and business representatives for a series of regional leadership workshops to discuss ways states can respond to workforce trends. These activities helped identify strategies that governors can implement to support future-oriented education and training for their residents:

- **The workforce of the future — aligning education and work**

and work: Governors can prepare workers for the future by adapting education and training programs to provide the skills businesses will need, integrating data to communicate these skills needs and establishing state leadership to close the skills gap.

- **Second acts — helping midcareer workers achieve success:**

To retain experienced workers and reengage displaced or underemployed workers, governors can increase access to continuous learning opportunities throughout workers' careers and address nonskill-related barriers workers often face when seeking to learn new skills, such as lack of transportation or child care.

- **Rural resurgence — empowering the rural workforce:**

To overcome the challenges rural communities face, governors can promote the assets of rural communities, invest in digital infrastructure and partnerships in rural regions, and integrate rural economic and workforce development efforts.



The Workforce of the Future: Aligning Education and Work



Technological innovation will result in new jobs as well as changes to existing jobs. In turn, workers must develop the technical and nontechnical skills necessitated by these changes. It is difficult to predict which skills workers will require in the future, but many high-growth jobs share a need for workers who have both specialized technical expertise and the ability to adapt to change. Governors can support development of such skills by working with education and business partners to expand existing programs or create new ones. To support the workforce of the future, governors can take

action in three main areas: (1) Support skills training that meets industry needs, (2) integrate data to communicate the skills businesses need and (3) establish state leadership to close the skills gap.

Support Skills Training That Meets Industry Needs

Improving educational attainment of skills that meet industry needs is important for ensuring that workers can succeed in the workplaces of today and those of tomorrow. By working closely with industry and postsecondary institutions, governors can promote strategies that help youth and adults access these educational opportunities. For example, governors can take advantage of industry partnerships to develop skills training programs that meet those partners' needs while aligning with a region's broader economic goals. Governors can also develop or expand industry-led, work-based learning opportunities, such as on-the-job skills development tied to relevant classroom instruction. These programs support both academic achievement and building skills that are relevant to industry, resulting in a pipeline of skilled workers to fill employers' needs. Governors can promote dual-enrollment programs, where high school students enroll in college courses. In this way, young people gain access to postsecondary education that gives them the skills and credentials they will need for good jobs in the future. Finally, governors can fund postsecondary institutions based on outcomes such as completion of degree programs and student labor market outcomes rather than on enrollment numbers.

Integrate Data to Communicate the Skills Businesses Need

Technological and demographic trends are changing the skills employers demand, highlighting the need for more sophisticated systems to collect and communicate data about these changes. Governors can integrate data on skills needs, educational attainment and labor market outcomes and proactively communicate this information to employers and workers. For example, governors can create a statewide data clearinghouse that integrates and shares real-time information about job and education needs across their state, enabling training providers and job seekers to make informed decisions about training options for in-demand occupations. In addition, governors can use state data on labor market projections and educational attainment to establish a statewide goal for the education level of the state's population, and then develop and implement policies that support achievement of that goal.

Establish State Leadership to Close the Skills Gap

Governors can provide leadership to ensure that state agencies coordinate their efforts to support workers and businesses. By creating clear lines of authority and communication, governors can help focus what may otherwise be disconnected efforts across multiple state agencies. This leadership can take several forms. One is to designate a state leadership coordination entity to guide cross-system efforts to address the state's skills gap. Another is for state government to model quality talent-development strategies in hiring and training its own workforce. These strategies can lead to policy and program alignment that positions state government to respond effectively to a rapidly changing labor market and supports workers' and businesses' efforts to do the same.

Second Acts: Helping Midcareer Workers Achieve Success



With 2019 U.S. unemployment rates at a historic low, governors have a prime opportunity to update the skills of their current workforce and reintegrate workers who have been absent from the civilian workforce. By investing in the skills development of midcareer workers, governors can help them adjust to disruptions in the workplace and help employers benefit from an experienced and diverse workforce. To support updating the skills of midcareer workers, governors can take action in three main areas: (1) expand access to continuous learning, (2) promote seamless job transitions and (3) provide holistic support to midcareer workers.

Expand Access to Continuous Learning

As technologies evolve and employers' skills needs shift, workers will need to develop additional skills, which can open doors to new opportunities and lead to higher wages. Examples of these continuous learning opportunities include apprenticeships or on-the-job training for incumbent workers, peer mentorships, and new credentials or certifications. To support expanded access to continuous learning, governors can strengthen partnerships between businesses and community colleges, which are well positioned to provide skills training and credentials to midcareer workers. Further, governors can launch statewide continuous learning accounts to help workers pay for continuing education. Finally, governors can provide tax credits to employers that offer incumbent worker training to offset a portion of the cost of such programs and encourage more businesses to offer such opportunities to their employees.

Promote Seamless Job Transitions

Governors can help workers more seamlessly transition between jobs by providing information to employers and workers about qualifications and skill needs, reducing legal barriers and increasing access to supportive services. For example, governors can create a digital badging system that records an individual's continuous learning and the skills he or she acquires either formally or informally; employers could access such a system to verify a job candidate's skills. Similarly, where state occupational licensing requirements vary from state to state, governors can work together to minimize the barriers such licensing requirements often create so that workers from one state can find employment in another, if necessary. Finally, governors can limit unnecessary noncompete agreements, which often prohibit midcareer workers from seeking new employment opportunities in a changing economy.

Provide Holistic Support to Midcareer Workers

A holistic approach to helping midcareer workers develop new skills considers each worker's unique needs, connecting services and developing networks to help individuals gain a good job and advance along their career path. For example, a low-income, midcareer worker may not be able to take advantage of continuing education opportunities because he or she would have to stop earning an income during studies or take on additional expenses related to training or education. Governors can address this by increasing workers' access to peer coaching services, a successful model that can help workers gain and retain good jobs. In addition, governors can enact state-level paid family and medical leave programs so that workers can continue to be paid while recovering from a medical condition or taking care of a dependent. This benefit can boost retention and ultimately save on the expense of training new employees. Finally, governors can improve access to quality, affordable child care programs, which help working parents remain in the workforce and take advantage of career advancement opportunities.

Rural Resurgence: Empowering the Rural Workforce



In today's tightening labor market, rural communities are a potential source of underused talent. However, these communities also face unique challenges that affect workers' access to good jobs. The Great Recession more severely affected rural America than urban and periurban areas, and rural areas have been slower to recover; by some measures, they still have not done so. In addition, rural areas have lower overall education attainment rates than urban areas. Despite these challenges, many rural communities continue to thrive, thanks to innovations by local, business and state leadership. States can boost rural communities' employment and economic vitality by capitalizing on their unique assets. Governors can empower the rural workforce by taking action in three areas: (1) build digital infrastructure and partnerships with anchor institutions in rural areas, (2) integrate rural economic and workforce development and (3) create networks that support communities and individuals.

Build Digital Infrastructure and Partnerships with Anchor Institutions in Rural Areas

Given the nature of their locations, rural areas are often disconnected from important resources, including high-speed broadband and the education and training programs that help workers develop the skills they need to succeed. To improve the connectedness and vitality of rural communities, governors can support community efforts to build capacity and infrastructure. For example, governors can expand access to broadband by providing state funds and capitalizing on national initiatives; broadband increases businesses' access to the national marketplace, connects workers to jobs and continuous learning opportunities, and increases rural workers' access to good jobs (e.g., telecommuting). In addition, governors can initiate and support partnerships with rural anchor institutions, which are major institutions that have deep roots and extensive investments in a community, to create skills development programs that respond to local employer needs.

Integrate Rural Economic and Workforce Development

A major roadblock to rural workforce development in many states is the difficulty inherent in connecting out-of-work rural residents with career opportunities, mostly because of the lack of jobs. To address this challenge, governors can integrate economic development solutions with workforce skill-development strategies to create more opportunities that encourage workers to remain in their home communities. For example, governors can encourage entrepreneurship in rural communities and promote an entrepreneurial ecosystem across both urban and rural markets. In addition, governors can help rural communities promote their unique assets to support job creation such as music, arts, natural and agricultural assets, and agritourism. Finally, governors can create education opportunities in the K-12 education system, building entrepreneurial skills in the workers of the future and creating opportunities for youth interested in starting small businesses.

Create Networks That Support Communities and Individuals

Governors can be conveners and connectors for rural communities, enhancing information sharing on community development successes and the availability of wraparound services. Further, governors can provide rural communities with the support necessary for development by strategically connecting labor, education and human services providers. For example, governors can recognize and share innovative initiatives and programs underway in rural communities, helping other rural communities across the state identify effective and scalable programs and learn from the successes of their peers. In addition, governors can support development of partnerships between rural-serving community organizations to address multiple challenges and provide holistic support to rural residents.

Introduction

The world of work is changing. The economy is at an inflection point, where rapid technological transformation, demographic shifts and a tightening labor market have left businesses searching for skilled employees and current and future workers searching for pathways to good jobs. Although uncertainty abounds, this is an opportunity for innovative leaders to create responsive, nimble education and workforce training systems that prepare Americans for the jobs of the future.

Recognizing that governors are focused on creating and sustaining good jobs for their residents, National Governors Association (NGA) Chair Montana Governor Steve Bullock launched a yearlong initiative called *Good Jobs for All Americans* in July 2018. Throughout the initiative, Gov. Bullock convened state leaders, national experts and business representatives for a series of regional leadership workshops to discuss ways states can respond to these trends. “A Governor’s Action Guide to Achieving Good Jobs for All Americans” is the culmination of those conversations; it outlines actions that governors can take to support future-oriented education and training for all their residents.

A variety of definitions exist for what constitutes a “good job.” For the *Good Jobs for All Americans* initiative, a “good job” is defined as one that provides a family-sustaining wage for workers and offers opportunities for continued career growth. Specific characteristics of good jobs will continue to evolve as external factors affect the economy and employer and worker needs, such as technological transformation, demographic shifts and a changing labor market.

A GOOD JOB PROVIDES A FAMILY-SUSTAINING WAGE FOR WORKERS IN A CONTEXT THAT OFFERS OPPORTUNITY FOR CONTINUED CAREER GROWTH.

Technological Transformation

The last decade ushered in technological changes that have transformed the way people work, including increased smartphone adoption, computer access and automation. Some experts predict that the rate of technological advancement will not slow any time soon.¹ In fact, many experts see technological adoption as exponential by nature: Once a process or platform has been created, new products appear quickly, increasing the opportunity for new products and services to enter the market.² Because of this cycle, employers can adopt new technologies that reduce costs and increase productivity; however, these advancements may disrupt employment for those without the skills needed to adjust to the affected field.

Technology is disrupting jobs and job tasks through the process of automation. A moderate estimate is that automation may result in the replacement of approximately 15 percent of jobs by 2030.³ Further, a large proportion of tasks within existing jobs will experience change resulting from technological advances and automation.⁴ Jobs most at risk of being eliminated are those with primarily routine tasks, regardless of the skill level of the worker.⁵ In the American economy, this shift will have the biggest impact on racial and ethnic minority workers, who are often overrepresented in jobs consisting of predominantly routine tasks.⁶ Because of the growth in automation and its effect on jobs, workers must be equipped not only with technical expertise in the technology in question but also with nontechnical skills such as communications, social perceptiveness, management and critical thinking.

Technological advancements are also changing the way people connect to employment opportunities. More Americans appear to be turning to alternative work arrangements, which include independent contractors, on-call workers and “gig” workers. By some estimates, this segment of the workforce is growing faster than the group seeking traditional full-time jobs.⁷ Further, the increase in broadband access and remote work technologies, including smartphones, webcasting and laptops, has given employees more flexible work options, such as remote work and telecommuting. According to the American Community Survey, from 2005 to 2016 the number of employees who regularly work at home had grown 140 percent, and 4.3 million employees teleworked at least half the time.⁸ Telework opportunities enable employees in need of child care or transportation or with medical issues to join the workforce. It is also an attractive option for Americans who live in remote rural areas or who do not want to relocate for work.

Demographic Shifts

Like developments in technology, American demographic changes will also cause new challenges and opportunities for employers and workers. By 2030, all baby boomers (those born between 1946 and 1964) will be over 65 years of age. As a result, one in five Americans will be of retirement age.⁹ At the same time, America’s birth rate is declining, which will result in a smaller pool of workers to fill the jobs that retirees vacate.¹⁰ Thus, employers can be expected to use labor-saving technologies and further engage traditionally underrepresented populations to meet their staffing needs.

These demographic shifts are particularly evident in rural areas. According to the U.S. Census Bureau, residents of rural communities are older than their urban counterparts and have a lower median income.¹¹ The older population in rural communities points to lower labor force participation and employment because individuals over 50 years of age drop out of the labor force at higher rates than younger individuals.¹² Similarly, the rate of unemployment in rural communities is often higher than the national average. For example, employment in rural areas fell 6 percent between 2007 and 2009 because of the recession.¹³ Although the overall economy began to rebound steadily in the first quarter of 2010, rural employment has stalled and even declined several times. The high rural unemployment rate indicates an opportunity to connect those displaced rural workers to skills training programs that can prepare them for new and existing jobs as well as ensure that rural communities do not fall farther behind in the shifting economy.

A Tightening Labor Market

The American economy has rebounded from the 2008 recession; the national unemployment rate dropped to 3.6 percent in April 2019, which was the lowest rate since December 1969.¹⁴ This low unemployment rate means that it can be difficult for employers to fill new or recently vacated positions, especially in highly skilled jobs for which workers must increasingly have technical expertise. Deloitte estimates that for the manufacturing sector alone, this skills gap could put at risk as much as \$2.5 trillion in economic output over the next decade.¹⁵

Business and public sector leaders recognize this gap as a challenge they must face during this time of change, but they also recognize it as an opportunity to engage previously underserved and lower skilled populations in new ways. Governors play an important role in supporting those populations by providing the skills and opportunities they need to connect with businesses, whether by increasing access to postsecondary pathways, apprenticeships and other work-based learning programs or by giving workers who were displaced during the recession or who are at risk of being displaced by automation to learn new skills.

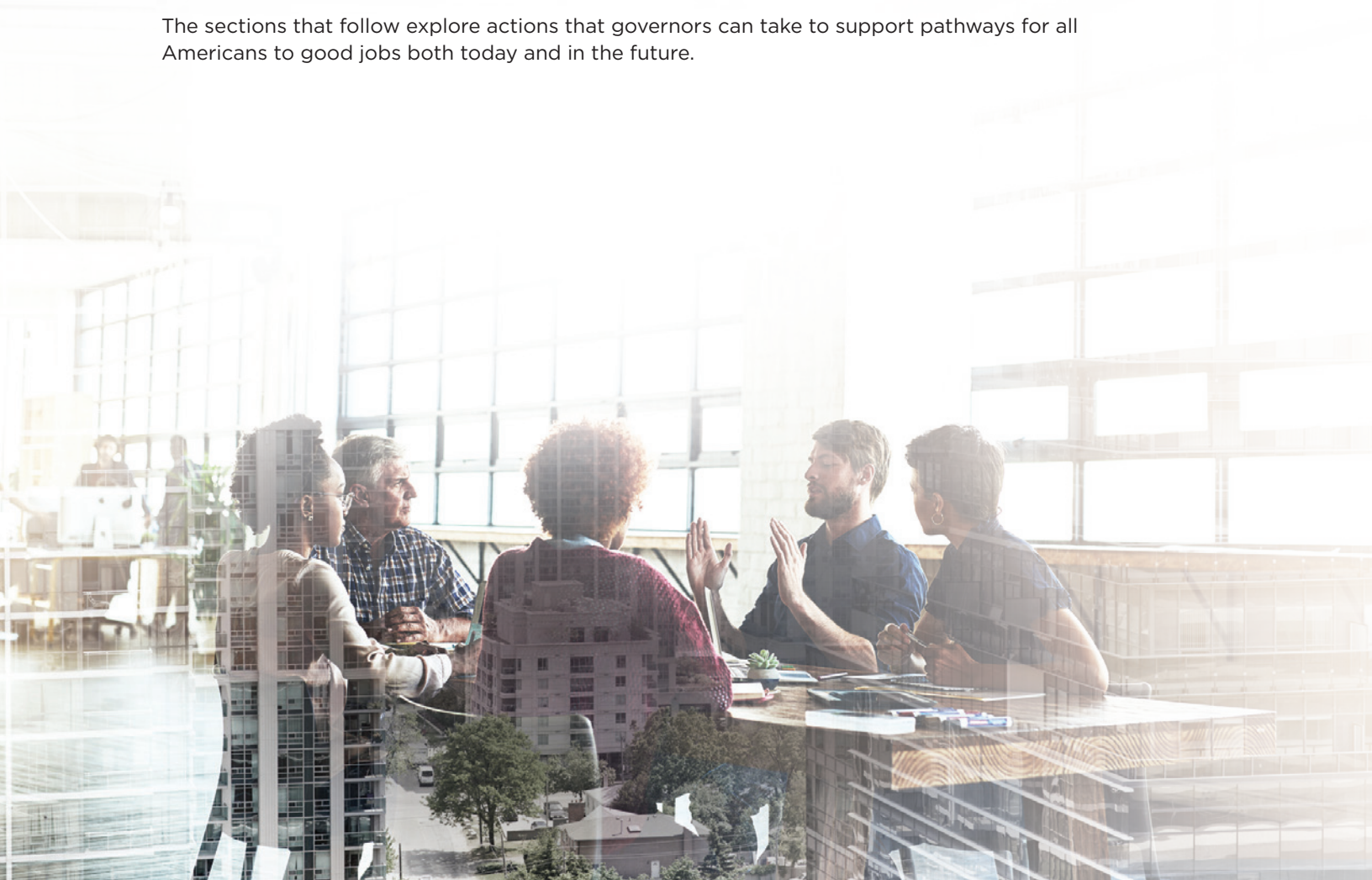
A Governor’s Action Guide

Though many states and localities have strong programs to help train and retrain workers for the jobs of the future, their efforts are often disconnected. Governors are uniquely positioned to align and elevate these disparate but often innovative efforts and identify policies and practices that can help all workers connect to good jobs.

This guide focuses on three principal areas in which governors can act to improve access to good jobs for all in light of the workforce trends discussed. Each focus area includes a menu of actions for governors to consider, with corresponding examples of how some governors have already implemented the actions. The three focus areas are:

- **The workforce of the future — aligning education and work:** Preparing workers for the future will require understanding the skills they need to succeed and ensuring access to more diverse pathways for acquiring those skills. Governors can align education and training programs with businesses' skills needs, integrate data to communicate these skills needs and establish state leadership to close the skills gap.
- **Second acts — helping midcareer workers achieve success:** In an effort to retain experienced workers and reengage displaced or underemployed workers, governors can increase access to learning opportunities throughout workers' careers so that they can better navigate job transitions. Governors can also address the nonskill-related barriers workers often face when seeking to learn new skills, such as lack of transportation or child care.
- **Rural resurgence — empowering the rural workforce:** To overcome the challenges rural communities face, governors can capitalize on the unique strengths and assets of rural communities and their residents. State leaders can invest in digital and relational capacity in rural regions to connect rural workers to good jobs. Governors can also integrate rural economic and workforce-development efforts to create networks that support individuals and families in these communities.

The sections that follow explore actions that governors can take to support pathways for all Americans to good jobs both today and in the future.



The Workforce of the Future: Aligning Education and Work



Technological innovation will result in new jobs and changes to existing jobs.¹⁶ In turn, workers must develop new and different technical and nontechnical skills to adapt to these changes. It is difficult to predict exactly which skills workers will need to succeed in this era of rapidly changing technology, but what many high-growth jobs share is a need for workers who have a blend of specialized technical expertise and the ability to adapt to change.¹⁷ The skills predicted to be most in demand across future jobs and least at risk of becoming

outdated include specialized technical skills and nontechnical skills such as social perceptiveness, judgment and decision making, complex problem solving and active learning (see Appendix A for a more detailed overview of skills predicted to be in demand).¹⁸ These skills will help workers access good jobs today and tomorrow and will help them more easily adapt to long-term shifts in the labor market. These **career and life skills** are aimed at making workers adaptable and agile in the face of technological change.

Providing opportunities for all current and future workers to develop career and life skills will require expanding public-private partnerships (PPPs) to identify the skills needed and to ensure that they are relevant in the workplace. These partnerships are needed at all levels of education and training systems so that current and future workers can gain the knowledge and skills they need to succeed in a changing labor market and economy.

Governors can lead this effort by working with education and business partners to expand quality programs or create new ones. Such expansion may require building a culture of experimentation within the state and tolerance for new ideas that challenge old ways of thinking. Governors can take the following actions to identify and build integrated systems that provide opportunities for youth and adults to acquire career and life skills:

- Support skills training that connects to industry needs;
- Integrate data to communicate skills needs; and
- Establish state leadership to close the skills gap.

CAREER AND LIFE SKILLS ARE THE COMBINATION OF HIGHLY SPECIALIZED TECHNICAL SKILLS AND NON-TECHNICAL SKILLS THAT HELP AN INDIVIDUAL ADAPT IN RESPONSE TO A CHANGING WORLD OF WORK. NON-TECHNICAL CAREER AND LIFE SKILLS INCLUDE SOCIAL PERCEPTIVENESS, JUDGEMENT AND DECISION-MAKING, COMPLEX PROBLEM SOLVING AND ACTIVE LEARNING.

Support Skills Training That Connects to Industry Need

By one estimate, as many as 95 percent of jobs created since 2008 have gone to individuals who have at least some postsecondary education.¹⁹ Governors can promote strategies that help youth and adults access educational opportunities connected to work. By working closely with industry and postsecondary institutions, governors can create multiple pathways for residents to access the training they need. Such partnerships typically operate at a local level, but governors can strengthen these efforts by providing frameworks, resources and tools that help local partners come together, understand and meet private sector skill needs.

Support Industry Sector Partnerships

Governors can implement industry partnerships to develop skills training programs that meet employers' needs. The industry partnership model brings businesses together with education and training providers to develop skills-based, industry-approved curricula. One study on these training programs found that individuals who complete such training earned 29 percent more than a control group.²⁰ Governors can support industry partnerships by providing an environment in which local and regional partnerships can grow and be sustained.

In his first term, Montana Governor Steve Bullock launched an industry partnership effort to build a business plan for the state. Through key industry networks (KINs) across 13 industries critical to Montana's economic success, more than 200 private-sector leaders provided dozens of actionable recommendations to state



policymakers, many of which became new policy. For example, the manufacturing KIN recommended that the state reduce the financial burden on manufacturers that participate in apprenticeship programs. As a result, the state passed a new tax credit for employers that participate in such programs.²² Beyond being a one-time event, these KINs continue to provide an ongoing forum for business and public partners to come together and solve their pressing issues, many of which go beyond workforce development. Further efforts have spun off from this approach, including Rural Partners, an effort focused on supporting economic development in rural communities.²³

Develop Industry-Led Work-Based Learning Programs

As governors focus on strategies to build career and life skills, many have chosen to develop or expand industry-led work-based learning opportunities. Work-based learning programs can take many forms, but the core component of a high-quality program is on-the-job skills development tied to relevant classroom instruction. These programs support academic achievement, but they also ensure that education is relevant to industry, which helps build a pipeline of skilled workers to fill employers' talent needs.

INDUSTRY SECTOR PARTNERSHIPS²¹

Although they go by many names, industry sector partnerships bring together multiple businesses in an industry to align education and skill development with broader economic needs within a region. They have been shown to deliver positive results to workers and businesses. Governors can support local partnerships by:

- ▶ Promoting and setting goals for industry partnerships;
- ▶ Providing rigorous labor market information and data to local partnerships;
- ▶ Sharing training with local leaders to increase their capacity to engage the private sector;
- ▶ Measuring and elevating the success of partnerships; and
- ▶ Aligning legislative and administrative policies to support these efforts.

Governors can provide information about work-based learning opportunities and encourage employers, workers and job seekers to participate in these programs. For example, North Carolina Governor Roy Cooper, in partnership with local employers, launched a Work-Based Learning Navigator portal for the state.²⁵ The portal provides a one-stop shop for students and teachers looking for internships, apprenticeships and other opportunities to connect working and learning. Gov. Cooper notes that “in the 21st-century economy, we can make every day career day, to succeed in connecting education to careers, putting employers and educators together to give students a real taste of the skills they need.”²⁶

In many states, educators and employers recognize work-based learning and apprenticeship as effective strategies, and they are working to expand these models. In Montana, seven out of 10 public two-year colleges and five out of seven tribal colleges are partnering with employers to provide the related instruction for apprentices directly with their apprenticeship program.²⁷ In 2018 alone, 115 apprenticeship programs were created and 815 new apprentices were enrolled in Montana.²⁸ Almost 90 percent of apprentices remain in Montana after their programs and tend to earn nearly \$20,000 more than the statewide average wage.²⁹ In Iowa, Waukee High School’s Aspiring Professional Experience (APEX) program is a collaboration among the high school, the local school district and more than 550 local employers to connect students to real work experiences.³⁰ In addition to earning college credit, APEX students participate in internships with companies and complete tasks related to their career interests. In 2018, Iowa Governor Kim Reynolds signed into law the Future Ready Iowa Act, which provides funding to help small to medium-sized businesses start new apprenticeship programs. In addition, the Iowa Apprenticeship Act authorized \$3 million in annual funding to defray ongoing apprenticeship program costs.³¹

Promote Models That Bridge High School and Postsecondary Education

To ensure that young people have access to postsecondary education that prepares them with career and life skills and the credentials they will need for the jobs of the future, governors can promote dual-enrollment programs that allow high school students to enroll in college courses. A recent study found that these programs increased degree attainment by as much as 25 percent.³²

Florida provides universal access to dual-enrollment programs through state statute.³³ School districts and community colleges in Florida are required to develop an articulated agreement that gives all public school students the opportunity to enroll in community college courses for postsecondary credit while enrolled in high school. These students receive access to the courses free of charge and can complete up to 25 percent of the requirements toward a degree before they leave high school. Florida also has a common course numbering system that makes it easier to transfer credits throughout the state, and all institutions involved in the numbering system must accept transfer credits.³⁴ This program enables students to graduate from high school well on their way to an associate degree or higher.³⁵

ELEMENTS OF HIGH-QUALITY WORK-BASED LEARNING PROGRAMS²⁴

In May 2019, NGA Solutions: The Center for Best Practices completed a Policy Academy on Scaling Work-Based Learning, in which 18 states and territories worked to scale existing work-based learning efforts and better connect education and industry to ensure high-quality work-based learning programs in states. Through the policy academy, states identified four elements of high-quality work-based learning programs:

- ▶ A clearly articulated partnership agreement among the employer, participant and education institution or intermediary organization that identifies expectations for each partner and the general structure of the experience;
- ▶ An authentic work experience, in which a participant engages in work supervised and mentored by an industry professional;
- ▶ A structured learning component designed to connect theory with practice and workplace skills; and
- ▶ An assessment and recognition of skills by a third party to ensure that recognition is aligned with the attainment of a credential or progress along a career pathway.

Tie Postsecondary Financing to Job Outcomes

Governors can assess whether their postsecondary institutions are effectively teaching in-demand skills by shifting funding to these institutions based on completion-of-degree programs and student labor market outcomes rather than on enrollment numbers. Such efforts depend heavily on state context, funding levels and other factors, but promising state efforts are underway to better connect postsecondary institution funding to outcomes.^{36,37}

In Tennessee, an outcomes-based financing model has yielded a robust set of metrics that reward all postsecondary institutions for degree attainment and reward community colleges for graduates' job placement. By focusing on outcomes, Tennessee's attainment rate increased by 8.9 percent between 2013 and 2017, exceeding the national average of 7.6 percent.³⁸

Integrate Data to Communicate Skills Needs

Technological and demographic trends are changing the skills employers demand, highlighting the need for more sophisticated systems to collect and communicate data about these changes. For example, 88 percent of small and medium-sized business owners say that they are not sure how to find candidates with the right skills.³⁹ Workers struggle to find reliable information about evolving skill demands and the education and training they need to gain in-demand skills. Governors can integrate data on skills needs, educational attainment and labor market outcomes to connect education and training systems with employers' skills needs.

Create a Clearinghouse to Provide Job Information

States can also implement a statewide data clearinghouse that integrates information about labor market demands and skills that businesses need. As many as 46 percent of workers believe that they need new skills to succeed in future jobs, but they often do not know what these skills are or where to acquire them.⁴⁰ Making things more difficult, many educational programs are not adequately aligned with state economic needs. For example, 96 percent of college and university chief academic officers believe that their institutions are very or somewhat effective at preparing students for the workforce.⁴¹ However, only 34 percent of business leaders agree or strongly agree that institutions are graduating students who have the skills those leaders need.⁴² This mismatch leaves many workers thinking that they are equipped to compete in the labor market when in fact they may not be adequately prepared at all.

Several states have launched robust websites that provide real-time information about job and education needs across their states. These clearinghouses provide information to training providers and job seekers, enabling them to make informed decisions about training options for in-demand occupations in their states.⁴³ For example, the Kentucky Center for Statistics (KYSTATS) regularly produces accessible and comprehensive information about in-demand skills across the commonwealth.⁴⁴ The Kentucky Future Skills Report that KYSTATS produces breaks down future job needs by local area, education level, industry and even specific occupation. This resource helps workers, students, educators and others understand which occupations are growing in their own community, projected wages for those occupations and the credentials or skills needed to enter those occupations.⁴⁵ Figure 1 illustrates projected occupational demand in the commonwealth and information such as required level of education, workforce skills and annual wages. The report also provides information about educational attainment and credential production in the commonwealth and outcomes data on earnings broken down by degree, industry and region.

The Montana Department of Labor & Industry and the Montana Office of the Commissioner of Higher Education collect and share data on outcomes of the state's public higher education system.⁴⁶ They do so by analyzing graduates' economic and vocational progress over the course of their careers. The resulting report helps students make informed decisions about their course of study and helps colleges align their workforce training systems with the state's economic needs.

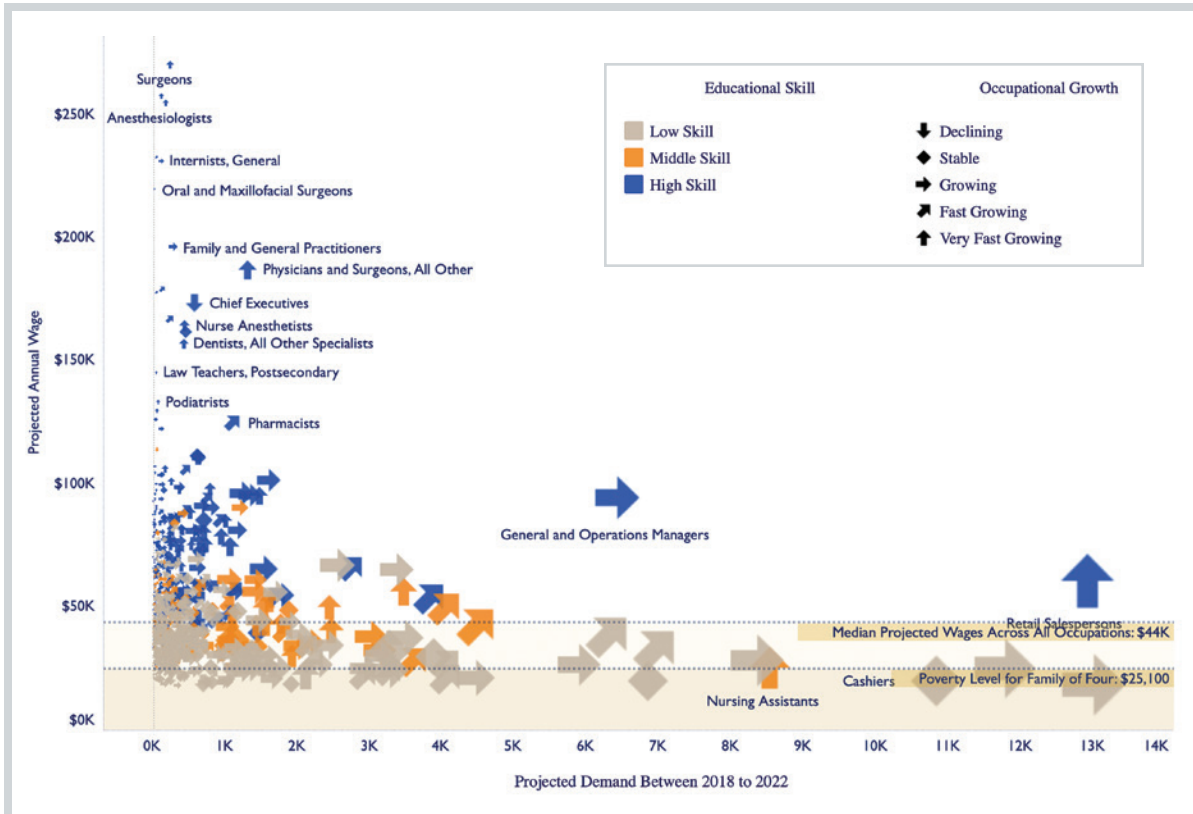


FIGURE 1: KYSTATS Five-Year Projected Outcomes by Health Care Occupation

Set Goals Connected to Labor Market Outcomes

Governors can integrate state data on labor market projections and educational attainment to establish a statewide goal for the education level of the state’s population. As employer demand for skilled workers increases, more than 40 states have set such attainment goals tied to predicted labor market needs.⁴⁷ For example, Arizona Governor Doug Ducey in his 2017 State of the State address promoted a goal of 60 percent of Arizona residents gaining postsecondary credentials by 2030, a goal established by an alliance of Arizona stakeholders called Achieve60AZ.⁴⁸ The group estimates that meeting this attainment goal would lead to an additional \$3.4 billion in new revenue for the state.⁴⁹ In 2014, former Virginia Governor Terry McAuliffe recognized the need for workers in the commonwealth’s growing health care industry, and he set a goal of producing 50,000 science, technology, engineering, mathematics and health care industry-recognized credentials to meet this need.⁵⁰ By 2017, Virginia met that goal and awarded more than 50,360 such credentials, a 36 percent increase over 2014.⁵¹ By publicly proclaiming attainment goals, governors can bring attention to the need for increased education and spur action for change.

UNDERSTANDING THE EDUCATION CONSUMER’S VOICE: FINDINGS FROM THE STRADA-GALLUP EDUCATION CONSUMER INSIGHTS SURVEY*

- ▶ Only 34 percent of current college students feel prepared to enter the job market;
- ▶ Only 26 percent of working adults agree strongly that their education is relevant to their work; and
- ▶ The more relevant people find their courses to their work and daily lives, the greater their belief that they received a high-quality education that was worth the cost.

*Gallup & Strada Education Network. (2018, May). From college to life: Relevance and the value of higher education. Retrieved from https://stradaeducation.gallup.com/reports/232583/from-college-to-life-part-2.aspx?g_source=link_news9&g_campaign=item_244139&g_medium=copy

To support achievement of their attainment goals, governors can use new research about consumer perceptions of their education experiences. The Strada-Gallup Education Consumer Insights survey provides information about how Americans view the relevance and effectiveness of their education. These data can inform state policymaking and help governors promote attainment of career and life skills and postsecondary credentials.⁵² Governors can use these survey results to begin conversations with academic institutions and employers to ensure the relevance of skills and credentials.

Establish State Leadership to Close the Skills Gap

Governors can ensure that state agencies are coordinating their efforts to support workers and businesses. By creating clear lines of authority and communication, governors can overcome what may otherwise be disconnected efforts spread across multiple state agencies. This leadership can manifest in many ways. One way is to designate a state leadership coordination entity to guide cross-system integration in addressing a state's skills gap. Another way is for state government to model quality talent development strategies in hiring and training its own workforce. These strategies can lead to policy and program alignment that positions state government to respond effectively to a rapidly changing labor market and support workers' and businesses' efforts to do the same.

Empower a Leadership Structure to Align State Systems

Governors recognize that development of career and life skills requires support from multiple state agencies and systems, including kindergarten through grade 12 (K-12) education, community and technical colleges, four-year universities, workforce development and economic development. To effectively align the work of these systems and prepare young people for the future, some governors have implemented cross-system leadership structures that guide the collaborative work of state agencies toward common education and workforce development goals.⁵³ Today, there are new opportunities for states to align their education and workforce systems by using common elements from several related federal programs. The Workforce Innovation and Opportunity Act (WIOA), the Every Student Succeeds Act and the Carl D. Perkins Career and Technical Education Act (Perkins) were written to intentionally support cross-system alignment, and governors now have more latitude to develop state plans for each program that are aligned with or connected to each other. Governors are actively considering how they can use federally required planning processes to align investments and support cross-system collaboration that advances the development of career and life skills.

In 2017, Indiana Governor Eric Holcomb recognized these opportunities and created a statewide Talent Plan. As a result of that work, Gov. Holcomb worked with the Legislature during the 2018 session to move the state workforce board under his office as the Governor's Workforce Cabinet. The newly created Workforce Cabinet was charged with aligning the state's education and workforce training programs, including those supported by federal dollars.⁵⁴ The 21-member cabinet includes 13 members from the business community; officials representing K-12 education, higher education, economic development and workforce development agencies; and the state's two community college presidents. The membership of the cabinet reflects the diverse array of stakeholders that must collaborate to make progress on cross-cutting challenges such as developing career and life skills. The cabinet has helped coordinate more than \$20 million in new funds to provide free skill development opportunities for workers entering high-demand fields and to reimburse employers for training costs that lead to hiring and greater worker retention.⁵⁵ By promoting cross-agency alignment informed by the private sector, the state can better support development of career and life skills that benefit workers and businesses.

Model Effective Talent Development Strategies

The trends that affect skill needs in the private sector are equally applicable to the public sector. Just as governors are partnering with the private sector to develop their skilled workforce, they can also focus on building career and life skills across the public-sector workforce to model effective training programs for industry and to build a talented state workforce. Like the private sector, the public sector is struggling to find employees who have the right mix of career and life skills to fill open positions resulting from changes in skill needs and demographic shifts, such as from retirement.⁵⁶ Given that state and local government employment accounts for more than 15 percent of all employment nationwide, an inability to fill these jobs can have a significant economic impact and negatively affect the quality of state services.⁵⁷

Several governors have addressed this challenge. Washington Governor Jay Inslee called for a transformation of leadership skills in state government, and the Washington Department of Enterprise Services' Workplace Learning and Performance team responded by designing new leadership development training for state employees.⁵⁸ Supervisors and managers who completed the training reported nearly 30 percent improvement in areas like building trust with staff and driving results in their jobs.⁵⁹ In Kentucky, Governor Matt Bevin's Secretary of Education and Workforce launched civil service apprenticeships in 2018 to develop workers who had the skills state agencies need.⁶⁰ The commonwealth set up an apprenticeship program and hired apprentices across multiple state agencies for high-demand occupations, including computer support specialist, direct support specialist and automotive technician specialist. The state's Office of Apprenticeship works in tandem with the state's Personnel Cabinet and each hiring agency to develop apprenticeship programs that meet their talent needs.

By providing clear leadership for public and private partners across the state, governors can align education and work to build an education and training system that supports workers and businesses. Governors can also invest in integrating data to communicate the need for future skills. Finally, governors can support skills training that is connected to industry demand. Taken together, these strategies can position a state to thrive into the future as work and the economy change.

Second Acts: Helping Midcareer Workers Achieve Success



With U.S. employment rates at a historic low in 2019, governors have a prime opportunity to lead their states’ efforts to improve the skills of their current workforce and identify new ways to train and reintegrate workers who have been absent from the civilian workforce.⁶¹ By investing in the skill development of midcareer workers, governors can help these workers adjust to disruptive changes in the workplace and help employers benefit from an experienced and diverse workforce.

Employers also see the value in growing their own talent and updating the skills of their current workers to overcome workforce shortages.⁶² According to a recent study by McKinsey & Company, 82 percent of companies that view the skills gap as a high priority believe that updating the skills of their workers rather than hiring new talent is a key component of the solution (see Figure 2). With the right tools and opportunities, midcareer workers can use their experience and evolving skills to bring renewed value to employers.

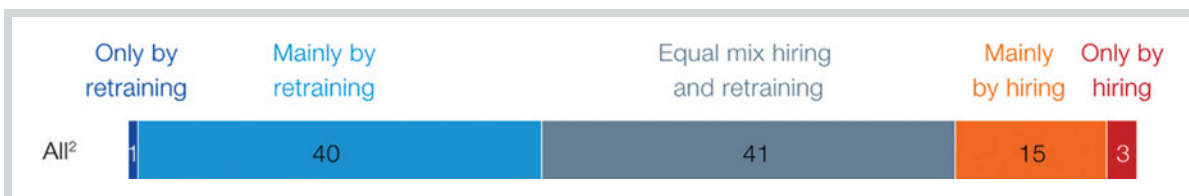


FIGURE 2: Private-Sector Organizations with More Than \$100 Million in Annual Revenue That View the Skills Gap as a Top-10 Priority, Percentage of Respondents

Source: McKinsey & Company, Nov. 2017.⁶³

However, according to the World Economic Forum, only 30 percent of current employees at risk of job displacement received training in the past year.⁶⁴ Low-skilled workers are only a third as likely as their more highly skilled peers to receive continuous learning opportunities through their employers.⁶⁵ In addition, workers in alternative work arrangements, which are on the rise, tend to have fewer of these opportunities than traditional workers.

Effectively updating the skills of midcareer workers will require both public and private investments across systems. Governors can direct their states’ education, workforce and economic development systems to collaboratively develop programs that address the skill needs of midcareer workers and the skills shortages of employers. Such an effort requires co-leadership with business to effectively identify which skills are in demand, drive the systems to meet this demand and invest the resources needed to update the workforce’s skills.

Governors can look at policy, funding and partnership opportunities directed at updating the skills of midcareer workers, ultimately placing them in good jobs. This guide provides examples of ways governors can expand access to continuous learning for all workers, help workers transition to jobs that match their skills and provide workers with the support necessary to remain successfully employed through life and career changes. Governors can take the following actions to update the skills of midcareer workers for success:

- Expand access to continuous learning;
- Promote seamless job transitions; and
- Provide holistic support for midcareer workers.

Expand Access to Continuous Learning

As technologies evolve and employers' skills needs shift, workers will need access to continuous learning opportunities to develop skills beyond those they required at the start of their careers. Continuous learning can open doors to improved job opportunities and lead to higher wages. Examples of continuous learning opportunities include apprenticeship or on-the-job training for incumbent workers, peer mentorships and access to education to gain new credentials or certifications. Governors can initiate the following strategies to help more workers access continuous learning and support more companies providing these opportunities as a core element of a good job.

“CONTINUOUS LEARNING” IS THE CONCEPT OF CONTINUAL SKILL AND KNOWLEDGE DEVELOPMENT THROUGHOUT ONE’S CAREER THAT POSITIONS AN INDIVIDUAL TO ADAPT TO CHANGING SKILLS NEEDS AND MAKES HIM OR HER COMPETITIVE IN THE LABOR MARKET. CONTINUOUS LEARNING CAN BE PROVIDED THROUGH THE CLASSROOM, ONLINE OR ON THE JOB.

Strengthen Partnerships between Community College and Business

Community colleges play a vital role in training midcareer workers. They often collaborate with employers to identify skill needs, develop programs aligned with those skill needs, train the trainers for on-the-job-training programs and issue industry-recognized credentials when training is complete. Community colleges are also ideal partners in providing new or updated skills for midcareer workers because they already serve older and nontraditional students.⁶⁶ In 2016, approximately 35 percent of public community college students were 25 years of age or older versus 20 percent of four-year public and private nonprofit college students.⁶⁷ Because of their experience in providing comprehensive education opportunities that respond to older students' needs, community colleges are better positioned to provide midcareer workers with courses that enhance skills and credentials that can lead to new or enhanced career pathways.



Governors can help community colleges and business partners work together to develop and scale high-quality learning opportunities for incumbent workers, such as apprenticeship. In Nevada, Truckee Meadows Community College (TMCC) worked closely with former Nevada Governor Brian Sandoval's Office of Workforce Innovation (OWINN) and Tesla to create an apprenticeship program in advanced manufacturing.⁶⁸ OWINN served as an intermediary between the college and Tesla and promoted apprenticeship, which was a key state workforce development strategy. TMCC now credits this connection with getting Tesla to commit to apprenticeship as a workforce strategy. Now, TMCC and Tesla share responsibility for the program, with TMCC conducting classroom education and

Tesla providing related on-the-job training for 50 apprentices to date, many of whom are veterans.⁶⁹ Nevada Governor Steve Sisolak made workforce development a top priority of his administration by proposing and securing \$4 million in the 2020 fiscal year budget to support further efforts by training providers, such as community colleges, to carry out workforce development programs in partnership with Nevada businesses.⁷⁰

Governors can also support connectivity between community colleges and businesses by strategically leveraging federal planning requirements. For example, to receive Perkins funding from the U.S. Department of Education, states must develop plans that illustrate how community colleges will develop programs of study that are aligned with industry demand.⁷¹ Community colleges are also identified as key training providers under WIOA.⁷² Eligible community college programs can qualify for WIOA funding. Further, under WIOA, community colleges are encouraged to partner with state and local workforce systems to update the skills of midcareer workers. Governors must approve state Perkins and WIOA plans before they are submitted, which is an opportunity for governors to strategically support partnerships between community college and business as part of a broader alignment of federal and state systems.

Governors can also use federal discretionary funding to support connectivity between businesses and community colleges. At the end of 2018, Virginia Governor Ralph Northam allocated \$5 million of WIOA federal discretionary funds to help the Virginia Community College System (VCCS) redesign career pathways to better prepare students with skills they will need for high-demand, well-paying jobs.⁷³ VCCS colleges competed for these funds by developing plans, endorsed by business, that show how their curricula align to the needs of current and future companies.⁷⁴

Initiate Continuous Learning Accounts

Some workers face cost challenges in accessing continuous learning opportunities, especially if their employer does not provide skill development opportunities. In response to this challenge, some governors have created statewide continuous learning accounts to help workers pay for learning opportunities. One example is a Lifelong Learning Account (LiLA), which is an education and training savings account available to all participating workers. The account is owned by the individual regardless of employment status. The funds in the account can be used for a variety of educational purposes, such as taking courses at a local community college or purchasing textbooks.⁷⁵ The worker and employer both contribute to the account, much like a 401(k) retirement account.⁷⁶ Continuous learning accounts are meant to supplement, not replace, employer-provided training. These accounts may be particularly beneficial for employees of companies that do not provide on-the-job training.

Maine using existing funding to pilot a statewide LiLA program in 2005. The state's Department of Labor Career Center manages the program, and the accounts are run through the Section 529 college savings program. This program is technically still in the pilot phase, but 18 employers and 71 employees opened accounts through Maine's LiLA, enabling many employees to return to school and finish their degrees.⁷⁷

Offer Continuous Learning Tax Credits

Employers benefit from updating the skills of midcareer employees, but the cost of providing continuous learning opportunities can be a barrier for some employers, particularly small and medium-sized businesses.⁷⁸ Governors can provide tax credits to employers that provide incumbent worker training that may offset some of the initial cost of developing and offering such programs, providing incentives for more business leaders to offer these valuable opportunities to their employees.

Several states have used tax credits to support continuous learning. In Connecticut, employers are credited 5 percent of all expenses incurred for worker training.⁷⁹ In Mississippi, employers receive a 50 percent tax credit for the cost of training an employee — up to \$2,500 per employee per year.⁸⁰ At least 13 states offer tax credits to employers for hiring apprentices.⁸¹

Promote Seamless Job Transitions

Whether governors are looking for ways to help individuals who have been disconnected from the workforce land a good job or move to a better job, they can take action to help with these transitions and remove barriers. Barriers to full, quality employment that governors can address include a lack of information about qualifications and skill needs between workers and employers, legal barriers and access to supportive services. The following are examples of ways governors can address the first two barriers.

Create a Digital Badging System to Record Acquired Skills

As workers transition from one job to another or reenter the workforce after an interruption, it is helpful for them to have access to a system that keeps track of skills they have acquired throughout their career, including from nontraditional experiences such as training in the military. A digital badging system creates an online platform to systematically record an individual's continuous learning and the skills acquired in formal and informal settings.⁸² An employer can use a digital badging system to access and verify a job candidate's skills, while a statewide system can use data on current and future skill demands and promote badges related to these demands.⁸³ In addition, coordinators of a badging system can advise individuals on which badges they should obtain based on their desired career path. As with the LiLA system, where the worker directs the progress and path of skills development, a badging system will ideally not be tied to an employer or to a specific educational institution but rather to the individual obtaining the skills.

Many businesses and business associations are independently tackling digital badging, but a statewide approach would be helpful in ensuring rigor, connecting overlapping badging systems and ensuring that badging is responsive to statewide labor market demand.⁸⁴ California has taken steps toward skills badging — specifically, for attainment of nontechnical skills. Leaders in the California Community College (CCC) system, state government and the business community collaboratively identified the top 10 workplace skills that businesses need in the 21st century, such as adaptability, communication and resilience, with corresponding assessments of those skills.⁸⁵ CCC institutions offer workshops, internships and other opportunities for individuals to earn their badges. Participants earn instructor-verified badges after receiving instruction through CCC institutions and passing an online assessment. If the participant is in a work-based learning program, he or she has the additional opportunity to earn a related employer-verified badge. Assessments are conducted through an online program called LaunchPath and coordinated and monitored by its site supervisors. The individuals who earn skills badges can display their competencies and accomplishments through LaunchPath when applying for jobs.



LaunchPath. 21st Century Skills Badging. [digital image]. Accessed 2 July 2019. Retrieved from <http://www.launchpath.com/Badging/21stCenturySkills/tabid/439/Default.aspx>

Minimize Barriers Created by Occupational Licensing Requirements

Workers licensed by state governments now make up nearly 25 percent of all employed Americans, up from 5 percent in the early 1950s.⁸⁶ Licenses are intended to set professional standards and ensure safety and quality of work, but they can also serve as barriers to employment both for midcareer workers looking to change jobs and for individuals seeking to enter the workforce. Licensing requirements can also make it difficult for workers to find jobs in another state, where their

license may not be valid. These barriers can be particularly challenging for veterans and military spouses, formerly incarcerated individuals, immigrants, and low-income and dislocated workers.

Governors can identify where licensure prohibits access to good jobs in their states. For example, Pennsylvania Governor Tom Wolf signed an executive order for the commonwealth to conduct a review of state professional and occupational licensure board requirements and processes, and then benchmark them against other states.⁸⁷ The resulting report showed that Pennsylvania is above the regional average for fees, training and continuing education requirements and that types of licenses exist in Pennsylvania that are not widely present in its neighboring states.⁸⁸ As a result of the report, Gov. Wolf issued several proposals, including elimination of 13 job licenses, a streamlined licensure process for relocating military spouses and a reduction in education requirements for some licenses.⁸⁹

Governors can also work to harmonize occupational licensing requirements with other states where possible and remove unnecessary barriers to labor market entry and mobility. For example, in 2017, Arizona Gov. Ducey signed an executive order requiring regulatory boards to justify any license that is not required by at least 25 other states.⁹⁰ In 2019, Gov. Ducey signed a first-of-its kind occupational license reciprocity policy to allow most workers who hold an occupational license in another state but establish residency in Arizona to continue to practice their profession with their out-of-state license.⁹¹

Limit Noncompete Agreements for Workers

Noncompete agreements can be barriers for midcareer workers looking for new employment opportunities in the changing economy. A noncompete agreement typically requires that an employee not enter a similar profession, occupation or trade that is in competition with his or her current employer. Some companies require their workers to sign noncompete agreements to avoid sharing confidential corporate data or to limit poaching of employees across their industry. However, noncompete agreements can stifle midcareer workers' ability to move to better jobs or even start their own business. They can also lead to an artificial suppression of wages below a competitive level.⁹²

Noncompete agreements can have benefits for employers, but states can limit those agreements that have undue negative effects.⁹³ In Illinois, the Freedom to Work Act prohibits noncompete agreements between an employer and low-wage employees. The law went into effect in 2017; as a result, several cases have already eliminated the use of noncompete agreements.⁹⁴ For example, Check Into Cash of Illinois LLC required employees, including those earning less than \$13 per hour, to sign a noncompete agreement saying that they will not work for a similar business within 15 miles of any of its 33 Illinois locations or 1,000 locations in other states for one year beyond their employment.⁹⁵ In a settlement following the Freedom to Work Act, the company ended its practice of imposing noncompete agreements. Governors can evaluate which types of noncompete agreements in their state are necessary for innovation and which types impose undue hardship on workers, and then take action to limit unnecessary noncompete agreements.

Provide Holistic Support for Midcareer Workers

A holistic supportive approach to reskilling midcareer workers considers the worker's unique set of needs and the connecting services and developing networks equipped to help motivate and shift an individual into a good job and move up in his or her career path. For example, a low-income, midcareer worker may not be able to take advantage of continuous learning opportunities, especially



if it means he or she must take a break from earning an income, pay for child care or take on other additional expenses on top of the training costs. Governors can leverage partners, funding streams and policy to anticipate needs and create a supportive infrastructure for workers. As a result, governors can help employers diversify their workforce and avoid underutilization of talent and skills in the workplace.⁹⁶

Provide Access to Peer Coaching

Coaching and other support provided by peers is an educational approach that works well for adult learners because it adapts classroom techniques to the adult learner's unique and often complex needs.⁹⁷ Through this type of support, a peer from a similar career background can help an individual through challenges and share solutions for overcoming these challenges, usually on an ongoing basis until the individual is successfully employed. Peer coaching can be provided to dislocated workers to help them overcome their professional and personal challenges in a time of rapid change and uncertainty.⁹⁸ Effective peer coaching takes into consideration the broader spectrum of the workers' needs to achieve successful placement and longevity in a good job.⁹⁹



West Virginia's workforce system has provided peer coaching for dislocated workers for the past 20 years.^{100,101} WorkForce West Virginia identifies volunteer coaches from dislocated industries who help their peers connect to career, housing and child care services. The peer coaching system was developed through Rapid Response funding from the U.S. Department of Labor, which is allocated to states to provide immediate aid to companies and workers affected by layoffs and plant closings.¹⁰² As West Virginia Governor Jim Justice said, "this program...will see to it that hard-working West Virginians who have been laid off from their work will be connected to the skills development and employment services they need to get back into the workforce."¹⁰³ From 2000 to 2019, the peer coaching system served 35,147 dislocated workers.

Enact Paid Family and Medical Leave

Adult workers benefit from state policies that help workers continue to get paid while recovering from a medical condition or taking care of a dependent. In 2013, almost 30 percent of workers aged 25-54 years left the workforce to take care of family members and just over 25 percent left because of chronic health conditions.¹⁰⁴ Paid family and medical leave, which encourages recovered workers to return to the workforce after an interruption, can boost retention and ultimately save on the expense of training new employees.¹⁰⁵

Currently, there is no national paid-leave program that helps workers continue to get paid while recovering from a medical condition or taking care of a dependent.¹⁰⁶ Although some employers provide paid family and medical leave, many lower skilled and lower paid workers are employed by businesses that do not offer these benefits, leading them to take unpaid leave or risk losing their jobs altogether.¹⁰⁷ More than half of voters in a 2018 survey said that they would face serious financial hardship if they had to take unpaid family or medical leave for several months.¹⁰⁸

In the absence of a national program, some governors are working with their legislatures to enact universal paid family and medical leave. California, Massachusetts, New Jersey, New York, Rhode Island and Washington have enacted paid family and medical leave policies.¹⁰⁹ California's program provides up to six weeks of paid leave to care for a dependent or to bond with a new child.¹¹⁰ It provides the employer with 55 percent of an employee's weekly wage (with a maximum and minimum) and is funded through employee-paid payroll taxes. As a result of this policy, Californians

in low-wage, high-turnover occupations are much more likely to return to work, and nine out of 10 businesses report little to no effect on productivity and profitability.¹¹¹

In 2018, Massachusetts Governor Charlie Baker signed the Paid Family Medical Leave law, which provides up to 20 weeks of paid medical leave and up to 12 weeks of paid family leave to all Massachusetts employees who qualify for unemployment insurance.¹¹² In Massachusetts, employees and employers split the cost of a payroll tax nearly equally.¹¹³

Improve Access to Child Care and Early Education

Access to affordable and quality child care and early education (pre-kindergarten classes) can help working parents and caretakers remain in the workforce and connect to good jobs.¹¹⁴ However, half of Americans live in areas with inadequate licensed child care options in their children's first few years.¹¹⁵ For many workers with access to quality programs, the cost of child care is not financially feasible. In many states, a year of child care exceeds a year's tuition and fees at four-year public universities.¹¹⁶



Access to affordable and quality child care programs can help working parents, especially those in low-income households, remain in the workforce and take advantage of career advancement opportunities.^{117, 118} Improved access to these programs for their children can also help parents be more productive in the workplace. According to a study by the U.S. Chamber of Commerce Foundation, 74 percent of working parents said their jobs have been affected by problems with their child care.¹¹⁹ These problems cost businesses over \$3 billion a year.¹²⁰

States like Maryland aim to address the lack of affordable child care by providing low-income families with a child care subsidy. Eligible families receive a need-based voucher for each child requiring care, based on the family's income and the child's age.¹²¹ The program is administered by the Maryland State Department of Education and funded through a combination of state and federal sources.¹²² Supporting parents must be working, in an approved training program or attending school.¹²³ In 2018, Maryland Governor Larry Hogan expanded access to the child care subsidies by raising the annual income eligibility limits from \$35,702 to \$71,525 for a family of four, so that more parents could take advantage of the program.¹²⁴

In 2014–15, state-funded early education served almost 1.4 million children.¹²⁵ However, only Florida, Georgia and Oklahoma offer universal early education for all 4-year-old children residing in their state without eligibility requirements.¹²⁶ In Alabama, the First Class Pre-K Voluntary Pre-Kindergarten (FCVPK) program funds full-day, full-year preschool education for all 4-year-olds.¹²⁷ In 2018, 28 percent of 4-year-olds were enrolled, compared to 1 percent in 2002, two years after it began. Alabama Governor Kay Ivey's 2020 budget proposal includes a \$25 million expansion of Alabama's state-funded FCVPK program, which would open an additional 200 classrooms next year.¹²⁸ Funding for FCVPK is distributed through competitive grants based on quality standard benchmarks, populations served and the need to cover basic operating expenses. State spending per child equaled \$4,826 in 2017–18.

The time is right for governors to support practices, policies and partnerships that better connect midcareer workers to good jobs. By considering the above actions, governors can not only work with business to provide continuous learning opportunities to help midcareer workers adjust to a constantly evolving world of work, but also remove barriers so that workers can transition to new and better jobs and provide holistic supports to help all workers find their own path to a successful career.

Rural Resurgence: Empowering the Rural Workforce



The term “rural” encompasses a variety of locations and circumstances, from traditional farming communities to rust belt towns to great expanses of land in the western United States. Many organizations have attempted to define rurality to make it easier for policymakers to isolate issues and solutions. This guide uses the Census Bureau definition (see box).¹²⁹ In today’s tightening labor market, rural communities provide employers with a source of largely underused talent. However, there is a unique set of challenges and opportunities that affect workers’ access to good jobs in rural communities.

ACCORDING TO THE CENSUS BUREAU, RURAL AREAS ARE THOSE WITH POPULATION OF FEWER THAN 2,500 PEOPLE THAT DO NOT HAVE DIRECT ACCESS TO A LARGE, MORE DENSELY POPULATED URBAN AREA.

Rural America was more severely impacted economically by the Great Recession than urban and periurban areas. These areas recovered more slowly; by some measures, certain areas remain unrecovered. According to the U.S. Department of Agriculture (USDA) Economic Research Service, rural unemployment related to the Great Recession peaked in 2010 at 10.3 percent.¹³⁰ By 2017, rural unemployment fell to 4.4 percent, but the rate fell at a slower pace than it did in urban communities.¹³¹ Further, rural America saw consistent population loss from 1976 to 2017.¹³² Though most rural communities have seen some small increases in population since 2017, this is not equally distributed across all rural areas and many communities are struggling as their populations and economies continue to shrink.¹³³



Rural areas also have lower overall education attainment rates than urban areas, according to the USDA Economic Research Service. In 2016, on average, 19 percent of rural residents had a bachelor's degree or higher compared with 26 percent of residents in urban areas. Those who do have bachelor's degrees may not be able to find careers locally and may move to larger, less rural communities to find better opportunities. As a result of these challenges, it can be difficult for rural areas to create traditional workforce development programs and attract high-paying jobs.

Despite these challenges, states continue to share success stories of how their rural communities continue to thrive, thanks to deliberate innovations by local leaders, businesses and state leadership. Rural communities from across the country have different assets, from physical beauty to fertile agricultural land to training and partnership opportunities provided by local businesses and organizations. Because rural communities are all different, a one-size-fits-all approach to policy may not be effective. States can create customized solutions to boost employment and economic vitality by leveraging the unique assets in each community. By working closely with key community partners, governors can implement targeted solutions to rural economic and workforce development challenges.

The following are actions governors can take to address the challenges facing rural communities and empower the rural workforce, acknowledging that solutions must be tailored to each rural community and state context and recognizing the great work already going on in rural communities across the country:

- Build digital infrastructure and partnerships with anchor institutions in rural areas;
- Integrate rural economic and workforce development; and
- Create networks that support communities and individuals.

Build Digital Infrastructure and Partnerships with Anchor Institutions in Rural Areas

Given their locations, rural areas are often disconnected from important resources, including high-speed broadband and education and training systems that can provide workers with skill development opportunities. To improve the connectedness and vitality of rural communities, governors can support community efforts to build capacity and infrastructure. These actions require investments in key infrastructure such as broadband access and skills development programs. These investments must be supported by creative solutions for ongoing funding and scalability across rural communities and leverage regional anchor institutions, defined below (see box).¹³⁴

Expand Access to Broadband

Rural areas are still less digitally connected than urban ones, which negatively affects worker and business success.¹³⁵ According to recent research by Microsoft, 19 million people in rural communities, or 31 percent of rural residents, do not have access to broadband internet.¹³⁶ Broadband connectivity is foundational to economic development in rural areas by giving small businesses access to the broader national marketplace and enabling larger businesses to maintain connections to rural offices. Many rural jobs, such as high-yield precision farming, also require broadband to operate.¹³⁷

Broadband access is also a vital component of connecting rural workers to jobs and continuous learning opportunities. Organizations often post job opportunities online, whether through their websites or via platforms such as LinkedIn. Broadband access also provides job seekers and workers with digital training and skills-improvement opportunities. Companies such as Google provide digital literacy skills-development courses that learners can access remotely.¹³⁸ Finally, as remote work becomes more commonplace, broadband connectivity will become even more important in providing rural workers with access to good jobs.¹³⁹

“Anchor institutions” are defined as enterprises, such as universities and hospitals, that are rooted in communities by investment, partnership or organizational mission.

One of the biggest barriers to broadband development in rural communities is the cost. Some states are using their own funds to encourage rural broadband development. For example, in July 2018, Gov. Reynolds launched the Governor’s Empower Rural Iowa Initiative by executive order. In support of this initiative, three task forces traveled through rural Iowa and asked workers and business owners to share their rural broadband needs, among other topics.¹⁴⁰ As a result of this exploration, Gov. Reynolds proposed legislation to create a fund, codified in state law, to support rural broadband development.¹⁴¹ Iowa’s effort to



expand rural broadband has already led to increased private-sector investment in rural areas. For example, Pillar Technology recently launched a technology training program in rural Jefferson, Iowa, made possible by the community’s access to broadband.¹⁴²

National initiatives have also increased rural access to high-speed internet at a reduced cost. For example, in March 2018, USDA launched its Broadband ReConnect Program, which offers \$600 million in federal loans and grants to states, cities and organizations to facilitate broadband investment in disconnected rural areas.¹⁴³ EducationSuperHighway is another national resource focused on improving internet access for public school classrooms.¹⁴⁴ The nonprofit works with governors in 22 states to set goals, identify opportunities for scalable infrastructure and increase affordability for school districts. EducationSuperHighway publishes an annual report that shows how states are closing the connectivity gap and provides recommendations for how governors can overcome remaining challenges.¹⁴⁵

“I BELIEVE THE HEART, SOUL, AND SPIRIT OF IOWA WILL ALWAYS REMAIN IN OUR SMALL TOWNS AND RURAL COMMUNITIES.”

— Iowa Governor Kim Reynolds

Create Partnerships with Rural Anchor Institutions

Anchor institutions serve an important role in rural communities and can strengthen these communities. Anchor institutions are major institutions with deep roots and extensive investments in a community.¹⁴⁶ Often the largest employers in their region, these institutions can include hospitals, universities, community colleges and libraries.¹⁴⁷ Because of their size, anchor institutions can invest significant financial and intellectual resources to strengthen the long-term success of their communities.

Governors can work with the education anchor institutions to create skills development programs that respond to local industry needs. For example, New York Governor Andrew Cuomo used state funds to partner with the State University of New York (SUNY) system to coordinate activities in rural communities. The SUNY site in rural Cobleskill, New York, created an Institute for Rural Vitality by using New York’s network of regional Economic Development Councils and StartUp New York, the governor’s economic development initiative.¹⁴⁸ To address issues faced by rural communities, the institute developed centers to address key challenges and solutions in the region, including the Center for Farm and Food Entrepreneurship, the Center for Business Development and the Center

for Art and Culture. Through these centers, students can conduct research, start businesses and complete internships with local organizations. Local high school students also can take courses on campus and earn college credit. SUNY Cobleskill's programs show how governors can partner with local postsecondary anchor institutions to activate the potential of rural communities.

Governors also can support workforce development programs in rural communities through partnerships between anchor institutions such as hospitals and community colleges. According to recent research from the *Journal of American Health and Drug Benefits*, rural hospitals serve almost 57 million people across the country, many of whom are aging.¹⁴⁹ These hospitals and rural clinics often face the same workforce shortages as other employers, and many are turning to community and educational partnerships to develop a homegrown workforce. States can play a role in supporting these connections. For example, Montana's Department of Labor and Industry is partnering with rural hospitals and 15 of the state's rural community colleges to create HealthCARE Montana, a rural health care apprenticeship program.¹⁵⁰ Hospitals are using this program to support workforce development in their communities and to nurture the talent of workers who can thrive and stay in their hometowns.

Integrate Rural Economic and Workforce Development

Throughout the *Good Jobs for All Americans* initiative, state leaders indicated that a major roadblock to rural workforce development is the inherent difficulty rural communities have connecting out-of-work residents with career opportunities, mostly because of a lack of jobs. To address this challenge, states are beginning to integrate economic development solutions with workforce skill development strategies — such as rural entrepreneurship and supporting community assets — to create more opportunities that encourage workers to remain in their home communities.

Facilitate Rural Entrepreneurial Growth

One strategy governors can implement to support job growth in rural communities is to encourage entrepreneurship. New firms in rural areas can provide much needed job growth.¹⁵¹ Governors can convene stakeholders and create linkages across their states that promote an entrepreneurial ecosystem in rural and urban markets.

Regional entrepreneurial development is encouraged in Pennsylvania through the Partnerships for Regional Economic Performance (PREP) program, administered by the Pennsylvania Department of Community and Economic Development. In fiscal 2018-19, PREP provided more than \$7 million in grants.¹⁵² These supported service providers that co-locate, develop formal partnership agreements or coordinate service delivery to support entrepreneurship. Grants are awarded across the state to providers in the state's 10 economic development regions, which include both urban and rural areas. To be eligible for funding, regions must demonstrate how they will work together to increase entrepreneurial growth across all communities. For example, the southwest region of Pennsylvania has used this program to offer specialized services such as business finance, international business development and technical assistance to companies interested in selling products and services to local, state and federal governments. In addition, PREP partners are now part of the commonwealth's new business retention and expansion program known as Engage! to proactively meet with business owners and key decision makers to make sure they are aware of resources to help sustain and grow their businesses.

In Tennessee, a PPP called Launch Tennessee (LaunchTN) supports small business development through a network of entrepreneur centers located in six regions across the state.¹⁵³ These centers deliver curriculum, mentors and other resources to entrepreneurs looking to build high-growth, sustainable businesses. Beyond the six regional centers, LaunchTN also provides digital tools on its website, including information about venture capital and grants and research programs interested in partnership. Potential entrepreneurs in rural communities can access these resources free of charge to develop a digital network and virtual economies of scale.

Use Community Assets to Support Job Creation

Arts, culture and natural assets have long been an important part of rural community identities. From music to art to agritourism, many rural regions have a rich history. As outlined in the recent NGA Solutions report, “Rural Prosperity through the Arts and Creative Sector,” governors and other state leaders can support the increased development and marketing of these cultural assets that attract visitors and new businesses and result in new resources for the community and workforce development.¹⁵⁴

Maryland uses arts and culture to promote economic development across the state. The Maryland State Arts Council, an agency within the Maryland Department of Commerce, designated 24 Arts and Entertainment (A&E) districts that are designed to support tourism and revitalize distressed rural and urban communities.¹⁵⁵ The state provides tax credits to businesses that support the arts in the designated regions. It also provides incentives to communities to develop amenities that attract artists, such as artist cooperatives that provide discounted places for artists to live and work. Since its inception in 2001, this program has boosted economic development in rural Maryland. In 2016, the A&E districts supported the creation of 8,594 jobs that pay nearly \$267 million in wages.¹⁵⁶



Create Gallery in Chestertown's Arts & Entertainment District (Photo by: Kevin B. Moore)

Governors can also use states' natural and agricultural assets to help create jobs and keep residents rooted in their communities. States can leverage natural assets like mountains, hiking trails, agriculture and other natural landmarks to increase tourism. Tax incentives can encourage the development of vital infrastructure that draws tourists and new residents to previously struggling communities. As tourism increases, so do opportunities for local development, including new restaurants, hotels, and other attractions and fringe amenities.

States such as Texas, Virginia and New York have designated wine trails, which run through rural and traditionally agricultural communities, to increase regional tourism. State tourism offices work with local farms to create regional maps for the trails, which they share via tourism sites and social media. These wine trails can work in tandem with other economic development efforts to create tourism-centric economic development strategies. For example, this strategy increased tourism in upstate New York. In 2012, the wine industry and its satellite tourism contributed over 6,400 new jobs and more than \$213 million in wages in the Finger Lakes Region of New York, according to a Cornell University Study.¹⁵⁷

Create K-12 Entrepreneurship Education Opportunities

Governors recognize that entrepreneurial skills are valuable to businesses today and in the future. Educators also see entrepreneurial education as a key to keeping students in their home communities.¹⁵⁸ West Virginia has turned to entrepreneurship as a source of economic growth in many of its communities. Strong gubernatorial leadership in partnership with anchor institutions can create opportunities for youths interested in starting small businesses.¹⁵⁹

The Governor's School of Entrepreneurship, a free summer program created by the West Virginia Department of Education and West Virginia University, is a three-week boot camp for high school students that teaches them the basics of business and allows them to participate in pitch and startup competitions.¹⁶⁰ During the school year, students have access to simulated workforce programs in career and technical education schools, and traditional K-12 schools offer business and marketing planning classes to support development of entrepreneurship skills.

Create Networks That Support Communities and Individuals

Governors can serve as conveners and connectors for rural communities to share information about community development successes and the availability of wraparound services. The development of broadband connection in rural communities makes it easier for governors to share promising practices across the state. Further, governors can provide rural communities with the supports necessary for development by working strategically to connect labor, education and human services providers.

Recognize and Share Innovative Community Solutions

Across states, rural communities may struggle to find effective, scalable workforce development programs.¹⁶¹ These communities can benefit from a network that shares successes and challenges across the state, connecting innovative community leaders with those who may be struggling. Governors can support this work by highlighting the innovative efforts underway in their rural communities.

For example, Iowa Great Places recognizes community efforts to cultivate their unique qualities.¹⁶² The program requirements emphasize regional development that supports the natural and historic assets of a town. To be designated an Iowa Great Place, communities must create unified visions and coordinated action plans that show how this designation will support economic and workforce growth. The Iowa Department of Cultural Affairs then administers community grants for citywide or building-specific projects that will inject new life into historic areas.¹⁶³ It also provides a toolkit for designees to engage in the broader Iowa Great Places network. This network requires existing designees to provide mentorship to struggling communities.



Develop a Network of Support Services

Individuals often need access to a variety of supportive services to engage in continuous learning or to enter and retain employment. This is especially true for residents of rural communities who face unique and complex barriers to entry into the workforce, including:

- Gaps in transportation access, particularly for the poorest residents of rural communities;
- Lack of affordable child care facilities; and
- Health barriers, including opioid abuse.

Although many rural areas have disparate programs that may address one or two barriers, governors and other state leaders can support development of partnerships between rural-serving community organizations to address multiple challenges and provide holistic support to rural residents.

Many community programs in rural areas have embraced a two-generational approach to this work. A two-generational approach focuses on the whole family, creating opportunities and providing wraparound services for both children and adults simultaneously.¹⁶⁴ For example, Family Futures Downeast (FFD) in Maine aims to end the cycle of rural poverty by enrolling parents in evening college classes to help them advance in their career paths. To achieve this goal, several organizations partner to offer education and wraparound services such as transportation, child care and housing. Partners include two postsecondary institutions, a local workforce center, two community development nonprofits and an early education provider.¹⁶⁵ FFD uses local, county, state and federal partnerships to connect these services and help ensure success.

Conclusion

The 2018–19 NGA Chair’s Initiative set out to identify policies and practices governors can implement to better connect all Americans to good jobs today and in the future. By studying how technological change will affect jobs, identifying in-demand skills, sharing new ways of working, and understanding changes in population and geographic opportunity, governors are well-equipped to develop timely and informed responses. Governors can take a variety of actions to help current and future workers access good jobs across their states:

- **Workforce of the Future: Aligning Education and Work.** Governors can work with public and private-sector partners to identify skills needed today and in the future, integrate data to communicate these skills needs and establish state leadership to close the skills gap.
- **Second Acts: Helping Midcareer Workers Achieve Success.** Governors can increase access to continuous learning opportunities, implement policies that promote seamless job transitions and provide holistic support for midcareer workers, especially those who face barriers to employment.
- **Rural Resurgence: Empowering the Rural Workforce.** Governors can invest in digital and relational capacity in rural regions, better integrate rural economic and workforce development efforts, and create networks that support rural communities and residents.

Governors, in partnership with the private sector, are well positioned to lead the implementation of targeted solutions that improve access to good jobs, designed with their states’ unique context and needs in mind. As a result of governors’ efforts, workers and businesses alike can achieve successful outcomes today and in the future.

APPENDIX A

TABLE A-1: Research on Current and Predicted Future Skill Needs

SKILLS IN-DEMAND TODAY

| LinkedIn: 2018 U.S. Emerging Jobs Report ¹⁶⁶ | | |
|---|---------------------|----------------|
| Oral communication | Social media | Leadership |
| People management | Business management | Graphic design |
| Development tools | Time management | Data science |

SKILLS PREDICTED TO BE IN-DEMAND IN THE FUTURE

| Burning Glass: The New Foundational Skills of the Digital Economy ¹⁶⁷ | Accenture: Bridging the Skills Gap in the Future Workforce ¹⁶⁸ | Pearson: The Future of Skills: Employment in 2030 ¹⁶⁹ |
|--|---|--|
| Analytical skills | Active learning | Active learning |
| Business process | Active listening | Coordination |
| Collaboration | Complex reasoning | Education and training |
| Communicating data | Creativity | Fluency of ideas |
| Communication | Critical thinking | Instructing |
| Computer programming | Deductive reasoning | Learning strategies |
| Creativity | Negotiation | Originality |
| Critical thinking | Persuasion | Psychology |
| Digital design | Service orientation | Sociology and anthropology |
| Digital security and privacy | Socioemotional intelligence | Social perceptiveness |
| Managing data | Social perceptiveness | |
| Project management | | |

ENDNOTES

- 1 Rose, M. & Ritchie, H. (2019). Technological progress. Retrieved from <https://ourworldindata.org/technological-progress>
- 2 Rose, M. & Ritchie, H. (2019). Technological progress. Retrieved from <https://ourworldindata.org/technological-progress>
- 3 Manyika, J., Lund, S., Chui, M., Bughin, J., Woetzel, J., Batra, P.,... Sanghvi, S. (2017, November). Jobs lost, jobs gained: Workforce transitions in a time of automation. Retrieved from <https://mck.co/2tp0OmZ>
- 4 Schneider, P., Bakhshi, H., & Armstrong, H. (2017). The future of skills: Employment in 2030. Retrieved from <https://futureskills.pearson.com/research/assets/pdfs/trends-for-the-us.pdf#page-8>
- 5 Dvorkin, M. (2016, January 4). Jobs involving routine tasks aren't growing. Retrieved from <https://www.stlouisfed.org/on-the-economy/2016/january/jobs-involving-routine-tasks-arent-growing>
- 6 Fadulu, L. (2017, December 21). The new casualties of automation. Retrieved from <https://www.theatlantic.com/education/archive/2017/12/the-new-casualties-of-automation/548948/>
- 7 Katz, L. F., & Krueger, A. B. (2019). *Understanding trends in alternative work arrangements in the United States* (NBER Working Paper No. 25425). Retrieved from <https://www.nber.org/papers/w25425.pdf>
- 8 Global Workplace Analytics. (2018, July). Telecommuting Trend Data. Retrieved from <https://globalworkplaceanalytics.com/telecommuting-statistics>
- 9 Vespa, J., Armstrong, D. M., & Medina, L. (2018, March). *Demographic turning points for the United States: Population projections for 2020 to 2060* (No. P25-114). Retrieved from https://www.census.gov/content/dam/Census/library/publications/2018/demo/P25_1144.pdf
- 10 Vespa, J., Armstrong, D. M., & Medina, L. (2018, March). *Demographic turning points for the United States: Population projections for 2020 to 2060* (No. P25-114). Retrieved from https://www.census.gov/content/dam/Census/library/publications/2018/demo/P25_1144.pdf
- 11 Cheeseman Day, J., Hays, D., & Smith, A. (2016, December 8). A glance at the age structure and labor force participation of rural America [blog post]. Retrieved from https://www.census.gov/newsroom/blogs/random-samplings/2016/12/a_glance_at_the_age.html
- 12 Cheeseman Day, J., Hays, D., & Smith, A. (2016, December 8). A glance at the age structure and labor force participation of rural America [blog post]. Retrieved from https://www.census.gov/newsroom/blogs/random-samplings/2016/12/a_glance_at_the_age.html
- 13 U.S. Department of Agriculture Economic Research Service. (2017, July 6). Rural employment and unemployment. Retrieved from <https://www.ers.usda.gov/topics/rural-economy-population/employment-education/rural-employment-and-unemployment/>
- 14 Trading Economics. (2019) United States unemployment rate. Retrieved from <https://tradingeconomics.com/united-states/unemployment-rate>
- 15 Pajula, S., Wellener, P., & Dollar, B. (2018). 2018 skills gap in manufacturing study. Retrieved from <https://www2.deloitte.com/us/en/pages/manufacturing/articles/future-of-manufacturing-skills-gap-study.html?id=us:2el:3pr:skill-gap18:awa:er:111418>
- 16 Manyika, J., Lund, S., Chui, M., Bughin, J., Woetzel, J., Batra, P.,... Sanghvi, S. (2017, November). Jobs lost, jobs gained: Workforce transitions in a time of automation. Retrieved from <https://mck.co/2tp0OmZ>
- 17 Accenture. (2018). *It's learning. Just not as we know it. How to accelerate skills acquisition in the age of intelligent technologies*. Retrieved from https://www.accenture.com/_acnmedia/Thought-Leadership-Assets/PDF/Accenture-Education-and-Technology-Skills-Research.pdf
- 18 Schneider, P., Bakhshi, H., & Armstrong, H. (2017). The future of skills: Employment in 2030. Retrieved from <https://futureskills.pearson.com/research/assets/pdfs/trends-for-the-us.pdf#page-8>
- 19 Carnevale, A. P., Jayasundera, T., & Gulish, A. (2016). *America's divided recovery: College haves and have-nots*. Retrieved from <https://lgyhoq479ufd3yna29x7ubjn-wpengine.netdna-ssl.com/wp-content/uploads/Americas-Divided-Recovery-web.pdf>
- 20 Maguire, S., Freely, J., Clymer, C., Conway, M., & Schwartz, D. (2010). *Tuning in to local labor markets. Findings from the Sectoral Employment Impact Study*. Retrieved from <http://ppv.issuelab.org/resources/5101/5101.pdf>
- 21 Bartlett, M., Cohen, T., Woolsey, L., & Simon, M. (n.d.). *ETA Sector Strategies Technical Assistance Initiative. State support for sector partnerships: A guide for action*. Retrieved from https://dcworks.dc.gov/sites/default/files/dc/sites/dcworks/publication/attachments/State_Support_Sector_Partnerships_Guide.pdf
- 22 Main Street Montana Project. (n.d.) *Manufacturing. Key industry network: Final recommendations*. Retrieved from http://mainstreetmontanaproject.com/wp-content/uploads/2019/03/Attachment-8_Manufacturing.pdf
- 23 Main Street Montana Home Page. (2019). Home page. Retrieved from <http://mainstreetmontanaproject.com>
- 24 Hauge, K. (2018, January). *States continue advancing strategies to scale work-based learning*. Retrieved from https://classic.nga.org/files/live/sites/NGA/files/pdf/2018/EO/Products/0118_States%20Continue%20Advancing%20Strategies%20to%20Scale%20Work-Based%20Learning.pdf
- 25 Navigator. (n.d.). About the Navigator. Retrieved from <https://wblnavigator.org/web/>
- 26 Hui, T. K. (2018, December 5). Making learning real: New website gives NC teachers access to business resources. *The News & Observer*. Retrieved from <https://www.newsobserver.com/news/local/article222613875.html>
- 27 Montana Department of Labor & Industry. (n.d.). Partners. Retrieved from <http://apprenticeship.mt.gov/employers/partners>
- 28 U.S. Department of Labor, Employment and Training Administration. (2019, March 6). Apprenticeship. Retrieved from https://doleta.gov/oa/data_statistics.cfm
- 29 Perry, M. (2018, February 2). *Governor Bullock recognizes Montana's first apprenticeship program in the manufacturing industry* [Press release]. Retrieved from liv.mt.gov/Newsroom/governor-bullock-recognizes-montanas-first-apprenticeship-program-in-the-manufacturing-industry
- 30 Waukee APEX. (n.d.). Aspiring Professional Experience (APEX). Retrieved from <http://www.waukeeapex.org/about/>

- 31 Office of the Governor of Iowa. (2018, November 13). *Gov. Reynolds, Lt. Gov. Gregg highlight National Apprenticeship Week* [Press release]. Retrieved from <https://governor.iowa.gov/2018/11/gov-reynolds-lt-gov-gregg-highlight-national-apprenticeship-week>
- 32 What Works Clearinghouse, U.S. Department of Education, & Institute of Education Sciences. (2017, February). *WWC intervention report*. Retrieved from https://ies.ed.gov/ncee/wwc/Docs/InterventionReports/wwc_dual_enrollment_022817.pdf
- 33 The Florida Senate. (2019). 2012 Florida statutes. Retrieved from <https://www.flsenate.gov/laws/statutes/2012/1007.271>
- 34 Florida Department of State, Florida Administrative Code & Florida Administrative Register. (2019, June 22). Rule 6A-14.064: College Credit Dual Enrollment. Retrieved from <https://www.flrules.org/gateway/ruleNo.asp?id=6A-14.064>
- 35 Florida College System. (2018, April). Accelerating college completion. Retrieved from https://www.floridacollegesystem.com/sites/www/Uploads/Publications/DataSnapshots/2018/FCS_Data_Snapshot_Dual_Enrollment_Time_to_Degree_04.06.2018.pdf
- 36 Lumina Foundation. (2018, March). *Outcomes-based funding strategies for postsecondary education: A case study*. Retrieved from <https://www.luminafoundation.org/files/resources/03-obf-strategies.pdf>
- 37 Callahan, M. K., Meehan, K., & Shaw, K. M. (2017, February). *Impact of OBF on student outcomes: Tennessee and Indiana*. Retrieved from <https://8rri53pm0cs22jk3vvqna1ub-wpengine.netdna-ssl.com/wp-content/uploads/2017/04/RFA-Summary-of-OBF-Impact-on-Student-Outcomes-in-Tennessee-and-Indiana-February-2017.pdf>
- 38 Lumina Foundation. (2019). A stronger nation. Retrieved from <http://strongernation.luminafoundation.org/report/2019/#nation&n-tdsid=byAttainment>
- 39 Sage-Gavin, E. (2018, September 13). Second acts: Reskilling mid-career workers. Presentation given at NGA Solutions Meeting; Pittsburgh, Pennsylvania.
- 40 Strada Education Network. (2018). Who's ready to upskill? Retrieved from <http://www.stradaeducation.org/wp-content/uploads/2019/03/State-Data-Brief-DIGITAL-1.pdf>
- 41 Jaschik, S., & Lederman, D. (2014). *The 2014 Inside Higher Ed survey of college & university chief academic officers*. Retrieved from http://www.insidehighered.com/system/files/media/IHE_ProvostsSurvey-final.pdf
- 42 Lumina Foundation. (2014, February 25). *The 2013 Lumina study of the American Public's opinion on higher education and U.S. business leaders poll on higher education. What America needs to know about higher education redesign*. Retrieved from <https://www.luminafoundation.org/files/resources/2013-gallup-lumina-foundation-report.pdf>
- 43 LinkedIn has produced state-level reports on in-demand occupations, skills and talent migration that are available upon request. Please contact economicgraph@linkedin.com for your state's report.
- 44 Kentucky Center for Statistics. (n.d.). Kentucky future skills report. Retrieved from <https://kcews.ky.gov/Latest/KFSR>
- 45 Kentucky Center for Statistics. (2018, December 12). *2018 Kentucky future skills report technical notes*. Retrieved from https://kystats.ky.gov/Content/Reports/2018_KFSR_TechnicalNotes.pdf
- 46 Watson, A., Wagner, B., Lacy, K., & Rose, E. (n.d.). *Meeting state worker demand: A report on the labor market outcomes for Montana colleges*. Retrieved from <https://www.gfcmu.edu/about/documents/StateCollegeReport.pdf>
- 47 Lumina Foundation. (2018, March). *Statewide educational attainment goals: A case study*. Retrieved from <https://www.luminafoundation.org/files/resources/01-statewide-attainment-goals.pdf>
- 48 Lumina Foundation. (2018, March). *Statewide educational attainment goals: A case study*. Retrieved from <https://www.luminafoundation.org/files/resources/01-statewide-attainment-goals.pdf>
- 49 Achieve60AZ. (2018, October). *Setting the goal* [Issue brief]. Retrieved from https://achieve60az.blog/wp-content/uploads/2019/02/Achieve60_Platform_Paper_V10.pdf
- 50 Inside Business. (2017, September 11). McAuliffe announces milestone in number of statewide STEM-H job credentials. Retrieved from https://pilotonline.com/inside-business/news/workplace-issues-human-resources/article_7884f648-ad01-5219-a565-92927b0d2de7.html
- 51 Inside Business. (2017, September 11). McAuliffe announces milestone in number of statewide STEM-H job credentials. Retrieved from https://pilotonline.com/inside-business/news/workplace-issues-human-resources/article_7884f648-ad01-5219-a565-92927b0d2de7.html
- 52 Strada Education Network. (2019). Stada-Gallup education consumer survey. Retrieved from <https://stradaeducation.gallup.com/home.aspx>
- 53 Bartlett, M. *Aligning state systems for a talent-driven economy: A road map for states*. Retrieved from https://www.nga.org/wp-content/uploads/2018/07/NGA_Talent-Driven-Economy_RoadMap.pdf
- 54 Indiana Governor's Workforce Cabinet. (2019). Next level jobs. Retrieved from <https://www.in.gov/gwc/>
- 55 State of Indiana. (2019). NextLevel Jobs Indiana. Retrieved from <https://www.nextleveljobs.org/>
- 56 Deloitte. (2017). State governments and the coming talent shortage. Competing—successfully—for talent in the public sector. Retrieved from <https://www2.deloitte.com/us/en/pages/public-sector/articles/talent-shortage-strategies.html>
- 57 Sauter, M. B. (2018, June 1). Public sector jobs: States where the most people work for the government. *USA Today*. Retrieved from <https://www.usatoday.com/story/money/economy/2018/06/01/states-where-the-most-people-work-for-government/35302753/>
- 58 Sauter, M. B. (2018, June 1). Public sector jobs: States where the most people work for the government. *USA Today*. Retrieved from <https://www.usatoday.com/story/money/economy/2018/06/01/states-where-the-most-people-work-for-government/35302753/>
- 59 Sauter, M. B. (2018, June 1). Public sector jobs: States where the most people work for the government. *USA Today*. Retrieved from <https://www.usatoday.com/story/money/economy/2018/06/01/states-where-the-most-people-work-for-government/35302753/>
- 60 Lerman, R., Marotta, J., & San Miguel, M. (2019, March). Leading by example: Public sector apprenticeships in Kentucky. Retrieved from https://www.urban.org/sites/default/files/publication/99914/leading_by_example_public_sector_apprenticeships_in_ky_0.pdf
- 61 Trading Economics. (2019). United States unemployment rate. Retrieved from <https://tradingeconomics.com/united-states/unemployment-rate>
- 62 Illanes, P., Lund, S., Mourshed, M., Rutherford, S., & Tyreman, M. (2018, January). Retraining and reskilling workers in the age of automation. Retrieved from <https://www.mckinsey.com/featured-insights/future-of-work/retraining-and-reskilling-workers-in-the-age-of-automation?reload>

- 63 Illanes, P., Lund, S., Mourshed, M., Rutherford, S., & Tyreman, M. (2018, January). Retraining and reskilling workers in the age of automation. Retrieved from <https://www.mckinsey.com/featured-insights/future-of-work/retraining-and-reskilling-workers-in-the-age-of-automation?reload>
- 64 Brende, B. (2019, April 15). We need a reskilling revolution. Here's how to make it happen. Retrieved from <https://www.weforum.org/agenda/2019/04/skills-jobs-investing-in-people-inclusive-growth/>
- 65 OECD iLibrary. (2019). Getting skills right: Future-ready adult learning systems. Retrieved from https://www.oecd-ilibrary.org/sites/9789264311756-en/1/1/3/index.html?itemId=/content/publication/9789264311756-en&_csp_=6256057e1502fec67451820bd2ced75f&itemlGO=oecd&itemContentType=book#execsumm-d1e222
- 66 Ma, J., & Baum, S. (2016, April). *Trends in community colleges: Enrollment, prices, student debt, and completion*. College Board Research, 8. Retrieved from <https://trends.collegeboard.org/sites/default/files/trends-in-community-colleges-research-brief.pdf>
- 67 The Hamilton Project. (2017, April 26). *Age distribution of undergraduate students, by type of institution*. Retrieved from http://www.hamiltonproject.org/charts/age_distribution_of_undergraduate_students_by_type_of_institution
- 68 Schindelheim, R. (2018, March 28). Nevada looks to apprenticeship programs to build on jobs growth. Retrieved from <https://workingnation.com/nevada-apprenticeship-programs-jobs/>
- 69 Eckland, R. A. (2019, March 18). Apprenticeship programs to fill skilled jobs gap. Retrieved from <http://www.tmc.edu/news/apprenticeship-programs-to-fill-skilled-jobs-gap.php>
- 70 Klimas, T. (2019, June 10). Email communication.
- 71 Zekus, K. (2019, February 14). Perkins V: How can states plan for genuine stakeholder engagement? Retrieved from <http://blog.careertech.org/?p=15032>
- 72 Campbell, C. & Love, I. (2016, December). *Leveraging community colleges in the Workforce Innovation and Opportunity Act: A blueprint for state policymakers*. Retrieved from https://www.ecs.org/wp-content/uploads/ECS_FundingReports_WIOA_F.pdf
- 73 Office of Virginia Governor Ralph S. Northam. (2018, November 27). *Governor Northam announces collaborative effort to transform Virginia Community College System* [Press release]. Retrieved from <https://www.governor.virginia.gov/newsroom/all-releases/2018/november/headline-836679-en.html>
- 74 Office of Virginia Governor Ralph S. Northam. (2018, November 27). *Governor Northam announces collaborative effort to transform Virginia Community College System* [Press release]. Retrieved from <https://www.governor.virginia.gov/newsroom/all-releases/2018/november/headline-836679-en.html>
- 75 Main, A. (2008, Fall). *Maine's lifelong learning accounts: Good news for workers, business, and the economy*. Retrieved from https://www1.maine.gov/labor/careerctr/docs/O908_lila_article.pdf
- 76 American Legislative Exchange Council. (2009, August 1). The Lifelong Learning Accounts Act. Retrieved from <https://www.alec.org/model-policy/the-lifelong-learning-accounts-act/>
- 77 For further information about the benefits of the LiLA program, contact the Maine Department of Labor at <https://www.maine.gov/labor/contact/index.html>
- 78 Taylor, T. (2017, June 2). The costs of training new employees, including hidden expenses. *Forbes*. Retrieved from <https://www.forbes.com/sites/adp/2017/06/02/the-costs-of-training-new-employees-including-hidden-expenses/#70d3cf49afb2>
- 79 Fitzpayne, A., & Pollack, E. (2017, May 12). Worker Training Tax Credit: Promoting employer investments in the workforce [Issue brief]. Retrieved from <https://www.aspeninstitute.org/publications/worker-training-tax-credit-promoting-greater-employer-investments-in-the-workforce/>
- 80 Mississippi Development Authority, Financial Resources Division. (2015, February). Skills Training Income Tax Credit. Retrieved from <https://msdev.mississippi.org/assets/incentives/skills-training-credits.pdf>
- 81 U.S. Department of Labor, Employment and Training Administration. (2019, March 6). Apprenticeship. Retrieved from https://doleta.gov/oa/data_statistics.cfm
- 82 MacArthur Foundation. (2013, August 31). *Digital badges help young people, adults demonstrate skills*. Retrieved from <https://www.macfound.org/programs/digital-badges/>
- 83 LinkedIn has produced state-level reports on in-demand occupations and skills that are available upon request. Please contact nreporter@linkedin.com for your state's report.
- 84 IBM, CompTIA, American Institute of CPAs, and the American Occupational Therapy Association are examples of businesses and business associations that run their own digital badging systems.
- 85 Wells, S. (2017, October 20). 21st century skills badging: A bridge from education to the workforce. Retrieved from <https://medium.com/read-write-participate/21st-century-skills-badging-a-bridge-from-education-to-the-workforce-350f8ac688c4>
- 86 The White House. (2015, July). *Occupational licensing: A framework for policymakers*. Retrieved from https://obamawhitehouse.archives.gov/sites/default/files/docs/licensing_report_final_nonembargo.pdf
- 87 The Office of Pennsylvania Governor Tom Wolf. (2017, October 25). *Governor Wolf to examine overhaul of Pennsylvania's professional licensing system* [Press release]. Retrieved from <https://www.governor.pa.gov/governor-wolf-examine-overhaul-pennsylvanias-professional-licensing-system/>
- 88 Pennsylvania Department of State, Bureau of Professional and Occupational Affairs. (2018, June 11). *Executive Order 2017-03: Review of State Professional and Occupational Licensure Board requirements and processes*. Retrieved from <https://www.dos.pa.gov/ProfessionalLicensing/Documents/EO2017-03-Executive-Report-Occupational-Licensing.pdf>
- 89 The Office of Pennsylvania Governor Tom Wolf. (2018, June 14). *Governor Wolf proposes job licensing reform to cut red tape, strengthen workforce* [Press release]. Retrieved from <https://www.governor.pa.gov/governor-wolf-proposes-job-licensing-reform-cut-red-tape-strengthen-workforce/>
- 90 The Office of Arizona Governor Douglas A. Ducey. (2017, March). *Executive Order 2017-03: Internal review of training requirements, continuing education, fees, and processes*. Retrieved from https://azgovernor.gov/sites/default/files/executive_order_2017-03.pdf
- 91 Employment & Training Reporter. (2019, April 29). 381.
- 92 Krueger, A. B., & Posner, E. A. (2018, February). *A proposal for protecting low-income workers from monopsony and collusion* (Policy Proposal 2018-05). Retrieved from http://www.hamiltonproject.org/assets/files/protecting_low_income_workers_from_monopsony_collusion_krueger_posner_pp.pdf

- 93 Rood, S. (2019). *Entrepreneurship in states: Fostering a startup-friendly economy*. Washington, DC: National Governors Association.
- 94 Illinois General Assembly. (2017, January 1). Public Act 099-0860. Retrieved from <http://www.ilga.gov/legislation/publicacts/fulltext.asp?Name=099-0860>
- 95 Illinois Attorney General Kwame Raoul. (2019, January 7). *Attorney General Madigan reaches settlement with national payday lender for imposing unlawful non-compete agreements* [Press release]. Retrieved from http://www.illinoisattorneygeneral.gov/pressroom/2019_01/20190107b.html
- 96 Committee for Economic Development. (2018, April 11). *Helping skilled workers return to work following a career break: Tapping under-utilized talent to grow the economy*. Retrieved from <https://www.ced.org/reports/helping-skilled-workers-return-to-work-following-a-career-break>
- 97 Parker, H. (2011, November 18). *Partnering effectively to better serve dislocated workers: A learning history of the Mid Michigan Partnership for Training in Healthcare* (M-PaTH). Retrieved from <http://skilledwork.org/wp-content/uploads/2014/01/MPaTH-CSW-WEB-Nov182011.pdf>
- 98 WorkForce West Virginia. (n.d.). Legal notice: Notice of request for proposal (RFP). Retrieved from https://workforcewv.org/images/files/PublicInfo/announcements/Peer_Support_Legal_Notice.pdf
- 99 WorkForce West Virginia. (n.d.). Legal notice: Notice of request for proposal (RFP). Retrieved from https://workforcewv.org/images/files/PublicInfo/announcements/Peer_Support_Legal_Notice.pdf
- 100 U.S. Department of Labor, Employment & Training Administration (ETA). Rapid response services. Retrieved from <https://www.doleta.gov/layout/>
- 101 Office of West Virginia Governor Jim Justice. (2019, January 22). *Gov. Justice announces federal funding for peer coaches to assist dislocated workers in transitioning and retraining for future employment* [Press release]. Retrieved from <https://governor.wv.gov/News/press-releases/2019/Pages/Gov.-Justice-announces-federal-funding-for-Peer-Coaches-to-assist-dislocated-workers-in-transitioning-and-retraining-for-fu.aspx>
- 102 U.S. Department of Labor, Employment & Training Administration (ETA). Rapid response services. Retrieved from <https://www.doleta.gov/layout/>
- 103 Office of West Virginia Governor Jim Justice. (2019, January 22). *Gov. Justice announces federal funding for peer coaches to assist dislocated workers in transitioning and retraining for future employment* [Press release]. Retrieved from <https://governor.wv.gov/News/press-releases/2019/Pages/Gov.-Justice-announces-federal-funding-for-Peer-Coaches-to-assist-dislocated-workers-in-transitioning-and-retraining-for-fu.aspx>
- 104 Opportunity America, the American Enterprise Institute for Public Policy Research, & the Brookings Institution. (2018). *Work, skills, community: Restoring opportunity for the working class*. Retrieved from http://opportunityamericaonline.org/wp-content/uploads/2018/10/WCG-final_web.pdf
- 105 Cornfield, J. Five myths about the burden of family leave on business. CNBC. Retrieved from <https://www.cnbc.com/2018/09/27/paid-family-leave-can-be-a-win-win-for-workers-and-employers.html>
- 106 OECD. Length of maternity leave, parental leave and paid father-specific leave. Retrieved from <http://www.oecd.org/gender/data/length-of-maternity-leave-parental-leave-and-paid-father-specific-leave.htm>
- 107 Montlake, S. (2018, July 12). Paid family leave: While US lags behind, more states set policies. *The Christian Science Monitor*. Retrieved from <https://www.csmonitor.com/Business/2018/0712/Paid-family-leave-While-US-lags-behind-more-states-set-policies>
- 108 National Partnership for Women & Families. (2018, October). Voters' views on paid family + medical leave: Findings from a national survey. Retrieved from <http://www.nationalpartnership.org/our-work/resources/workplace/paid-leave/voters-views-on-paid-family-medical-leave-survey-findings-august-2018.pdf>
- 109 Montlake, S. (2018, July 12). Paid family leave: While US lags behind, more states set policies. *The Christian Science Monitor*. Retrieved from <https://www.csmonitor.com/Business/2018/0712/Paid-family-leave-While-US-lags-behind-more-states-set-policies>
- 110 National Conference of State Legislatures. (2016, July 19). State family and medical leave laws. Retrieved from <http://www.ncsl.org/research/labor-and-employment/state-family-and-medical-leave-laws.aspx>
- 111 Appelbaum, E., & Milkman, R. (2013). *Unfinished business: Paid family leave in California and the future of U.S. work-family policy*. Ithaca, NY: Cornell University Press.
- 112 Ballotpedia. (2018). Massachusetts paid family and medical leave initiative. Retrieved from [https://ballotpedia.org/Massachusetts_Paid_Family_and_Medical_Leave_Initiative_\(2018\)](https://ballotpedia.org/Massachusetts_Paid_Family_and_Medical_Leave_Initiative_(2018))
- 113 Employers with fewer than 25 employees do not need to pay the employer portion of the payroll tax.
- 114 U.S. Chamber of Commerce Foundation. (2018, April 3). New data shows working parents look to business on childcare reform. Retrieved from <https://www.uschamberfoundation.org/blog/post/new-data-shows-working-parents-look-business-childcare-reform>
- 115 U.S. Chamber of Commerce Foundation. (n.d.). The bedrock of American business: High-quality early childhood education. Retrieved from <https://www.uschamberfoundation.org/early-childhood-education/the-business-case>
- 116 Zillman, C. (2018, October 22). Childcare costs more than college tuition in 28 U.S. states. *Fortune*. Retrieved from <http://fortune.com/2018/10/22/childcare-costs-per-year-us/>
- 117 Anderson, J., Yuriko Kato, L., & Riccio, J. A. (2006, March). *A new approach to low-wage workers and employers: Launching the Work Advancement and Support Center demonstration*. Retrieved from https://www.mdr.org/sites/default/files/full_9.pdf
- 118 CED. (2019). *Child care in state economies: 2019 update*. Retrieved from https://www.ced.org/assets/reports/childcareimpact/CED_Child%20Care%20in%20State%20Economies_Executive%20Summary_FINAL%201.29.19.pdf
- 119 U.S. Chamber of Commerce Foundation. *Graphic: The business case for high-quality childcare*. Retrieved from <https://www.uschamberfoundation.org/center-education-and-workforce/graphic-business-case-high-quality-childcare>
- 120 U.S. Chamber of Commerce Foundation. *Graphic: The business case for high-quality childcare*. Retrieved from <https://www.uschamberfoundation.org/center-education-and-workforce/graphic-business-case-high-quality-childcare>
- 121 Maryland Family Network. (2019). Child care subsidy: Maryland's Child Care Subsidy Program. Retrieved from <http://www.marylandfamilynetwork.org/resources/child-care-subsidy/>

- 122 Maryland Department of Education, Division of Early Childhood. (2018, August 1). Changes to subsidy eligibility. Retrieved from <https://earlychildhood.marylandpublicschools.org/changes-subsidy-eligibility>
- 123 Maryland Department of Education, Division of Early Childhood. (n.d.). Child Care Scholarship Program. Retrieved from <https://earlychildhood.marylandpublicschools.org/child-care-providers/child-care-scholarship-program>
- 124 Office of Maryland Governor Larry Hogan. (2018, August 1). *Governor Larry Hogan announces expanded eligibility for Maryland's Child Care Subsidy Program* [Press release]. Retrieved from <https://governor.maryland.gov/2018/08/01/governor-larry-hogan-announces-expanded-eligibility-for-marylands-child-care-subsidy-program/>
- 125 Barnett, W. S., Friedman-Krauss, A. H., Gomez, R. E., Horowitz, M., Weisenfeld, G. G., Clarke Brown, K. & Squires, J. H. (2016). *The state of preschool 2015: State preschool yearbook*. Retrieved from http://nieer.org/wp-content/uploads/2016/05/Yearbook_2015_rev1.pdf
- 126 Rock, A. (2018, July 16). Universal pre-K in the United States: Publicly funded pre-school in the United States. Retrieved from <https://www.verywellfamily.com/universal-pre-k-2764970>
- 127 Friedman-Krauss, A., Barnett, W. S., Garver, K. A., Hodges, K. S., Weisenfeld, G. G., & DiCrecchio, N. (2019). *The state of preschool 2018: State preschool yearbook*. Retrieved from http://nieer.org/wp-content/uploads/2019/04/YB2018_Full-ReportR.pdf
- 128 National Institute for Early Education Research. (2019, March 7). Pre-K task force endorses Gov. Ivey's first pre-K expansion recommendation. Retrieved from <http://nieer.org/news/pre-k-task-force-endorses-gov-iveys-first-pre-k-expansion-recommendation>
- 129 Ratcliffe, M., Burd, C., Holder, K., & Fields, A. (2016, December). *Defining rural at the U.S. Census Bureau: American community survey and geography brief*. Retrieved from https://www2.census.gov/geo/pdfs/reference/ua/Defining_Rural.pdf
- 130 U.S. Department of Agriculture, Economic Research Service. (2018, November). Rural America at a glance: 2018 edition. Retrieved from <https://www.ers.usda.gov/webdocs/publications/90556/eib-200.pdf>
- 131 U.S. Department of Agriculture, Economic Research Service. (2018, November). *Rural America at a glance: 2018 edition*. Retrieved from <https://www.ers.usda.gov/webdocs/publications/90556/eib-200.pdf>
- 132 U.S. Department of Agriculture. (2019, February 8). Population & migration: Overview. Retrieved from <https://www.ers.usda.gov/topics/rural-economy-population/population-migration/>
- 133 U.S. Department of Agriculture, Economic Research Service. Rural economy. Retrieved from <https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/rural-economy.aspx>
- 134 Democracy Collaborative. (n.d.). Anchor institutions. Retrieved from <https://democracycollaborative.org/democracycollaborative/anchorinstitutions/Anchor%20Institutions>
- 135 Perrin, A. (2017, May 19). Digital gap between rural and nonrural America persists. Retrieved from <http://www.pewresearch.org/fact-tank/2017/05/19/digital-gap-between-rural-and-nonrural-america-persists/>
- 136 Microsoft. (2018). *An update on connecting rural America: The 2018 Microsoft Airband Initiative*. Retrieved from https://blogs.microsoft.com/uploads/prod/sites/5/2018/12/MSFT-Airband_InteractivePDF_Final_12.3.18.pdf
- 137 American Farm Bureau Federation. (2019). Rural broadband. Retrieved from <https://www.fb.org/issues/technology/broadband/>
- 138 Grow with Google. (n.d.). Partners. Retrieved from <https://grow.google/partners/>
- 139 Microsoft. (2018). *An update on connecting rural America: The 2018 Microsoft Airband Initiative*. Retrieved from https://blogs.microsoft.com/uploads/prod/sites/5/2018/12/MSFT-Airband_InteractivePDF_Final_12.3.18.pdf
- 140 The Office of the Governor of Iowa Kim Reynolds. Governor's Empower Rural Iowa Initiative. Retrieved from <https://governor.iowa.gov/unleashing-opportunities/rural-iowa-initiative>
- 141 Iowa Association of Business and Industry. (2019, March 7). Empower Rural Iowa legislation advances. Retrieved from <https://iowaabi.org/news/legislative-news/empower-rural-iowa-legislation-advances/>
- 142 Eller, D. (2018, October 5). How young Iowans in one small town could land jobs paying \$75,000. Des Moines Register. Retrieved from <https://www.desmoinesregister.com/story/money/business/2018/10/05/des-moines-jefferson-pillar-technology-software-high-paying-jobs-paychecks-rural-iowa/1495555002/>
- 143 U.S. Department of Agriculture. (n.d.). ReConnect Loan and Grant Program overview. Retrieved from <https://www.usda.gov/reconnect/program-overview>
- 144 EducationSuperHighway. About. Retrieved from <https://www.educationsuperhighway.org/about/>
- 145 EducationSuperHighway. Explore state initiatives. Retrieved from <https://www.educationsuperhighway.org/states/>
- 146 Democracy Collaborative. (n.d.). Anchor institutions. Retrieved from <https://democracycollaborative.org/democracycollaborative/anchorinstitutions/Anchor%20Institutions>
- 147 Community-Wealth.org. Overview: Anchor institutions. Retrieved from <https://community-wealth.org/strategies/panel/anchors/index.html>
- 148 State University of New York (SUNY) Cobleskill. (2018). The Institute for Rural Vitality at SUNY Cobleskill. Retrieved from <https://www.cobleskill.edu/institute/index.aspx>
- 149 Rogenberg, F. R., & Santilli, J. (2018, February). Healthcare trends for 2018. *American Health & Drug Benefits*, 11(1), 48-54. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5902765/>
- 150 Montana State University. (n.d.). HealthCARE Montana. Retrieved from <http://healthinfo.montana.edu/workforce-development/healthcare-mt.html>
- 151 Pages, E. R. (n.d.). Igniting rural entrepreneurship: Where do workforce development programs fit in? Retrieved from <https://www.investinwork.org/-/media/Files/volume-two/Igniting%20Rural%20Entrepreneurship%20Where%20Do%20Workforce%20Development%20Programs%20Fit%20In.pdf?la=en>
- 152 Pennsylvania Department of Community and Economic Development. (2019). Partnerships for Regional Economic Performance. Retrieved from <https://dced.pa.gov/programs/prep/>
- 153 Launch Tennessee. (n.d.). About. Retrieved from <https://launchtn.org/about/>
- 154 Rood, S. (2019, January). *Rural prosperity through the arts & creative sector: A rural action guide for governors and states*. Retrieved from https://www.nga.org/wp-content/uploads/2019/01/NGA_RuralArtsReport.pdf

- 155 Maryland State Arts Council. (2018). Advancing the arts across Maryland: Arts & entertainment districts. Retrieved from <https://www.msac.org/programs/arts-entertainment-districts>
- 156 Maryland State Arts Council. (2018). Advancing the arts across Maryland: Arts & entertainment districts. Retrieved from <https://www.msac.org/programs/arts-entertainment-districts>
- 157 Christopherson, S. M. (2015, January 14). *Sources of economic development in the Finger Lakes region: The critical importance of tourism and perceptions of place*. Retrieved from http://www.greenchoices.cornell.edu/resources/publications/footprint/Economic_Development_in_Finger_Lakes.pdf
- 158 Appalachian Regional Commission. (2018, September). *Entrepreneurial ecosystems in Appalachia: Ecosystem development case studies*. Retrieved from https://www.arc.gov/assets/research_reports/EntrepreneurialEcosystemsCaseStudies2018.09.pdf
- 159 Appalachian Regional Commission. (2018, September). *Entrepreneurial ecosystems in Appalachia: Ecosystem development case studies*. Retrieved from https://www.arc.gov/assets/research_reports/EntrepreneurialEcosystemsCaseStudies2018.09.pdf
- 160 Governor's Schools of West Virginia. (2019). School of Entrepreneurship scheduled June 13–July 3, 2019. Retrieved from <https://govschools.wv.gov/gse/Pages/default.aspx>
- 161 Dabson, B. (2018). *The rural dimensions of workforce development*. Retrieved from <https://www.investinwork.org/-/media/Files/volume-two/The%20Rural%20Dimensions%20of%20Workforce%20Development.pdf?la=en>
- 162 Iowa Department of Cultural Affairs. (2019). Iowa great places. Retrieved from <https://iowaculture.gov/about-us/about/grants/iowa-great-places>
- 163 Iowa Department of Cultural Affairs. (n.d.). Iowa great places. Retrieved from <https://iowaculture.gov/sites/default/files/arts-grants-iowagreatplaces-places18.pdf>
- 164 ASCEND: The Aspen Institute. (n.d.). What is 2GEN? Retrieved from <https://ascend.aspeninstitute.org/two-generation/what-is-2gen/>
- 165 Family Futures Downeast. (2019). Home. Retrieved from <https://economicgraph.linkedin.com/research/linkedin-2018-emerging-jobs-report>
- 166 LinkedIn. (2018, December 13). LinkedIn's 2018 U.S. Emerging Jobs Report. Retrieved from <https://economicgraph.linkedin.com/research/linkedin-2018-emerging-jobs-report>
- 167 Markow, W. & Hughes, D. (2018). The New Foundational Skills of the Digital Economy: Developing the Professionals of the Future. Retrieved from https://www.burning-glass.com/wp-content/uploads/New_Foundational_Skills.pdf
- 168 Accenture. It's Learning: Just Not as We Know It. Retrieved from https://www.accenture.com/_acnmedia/Thought-Leadership-Assets/PDF/Accenture-Education-and-Technology-Skills-Research.pdf
- 169 Bakhshi, H., Downing, J., Osborne, M., & Schneider, P. (2017). The Future of Skills: Employment in 2030. Retrieved from https://media.nesta.org.uk/documents/the_future_of_skills_employment_in_2030_0.pdf



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