America Works:

Education and Training for Tomorrow's Jobs

Achieving Better Results for Individuals, Employers, and the Economy

An Action Guide for Governors

National Governors Association • 2013-2014 Chair's Initiative

THE NATIONAL GOVERNORS ASSOCIATION (NGA), founded in 1908, is the collective voice of the nation's governors and one of Washington, D.C.'s, most respected public policy organizations. Its members are the governors of the 55 states, territories, and commonwealths. NGA provides governors and their senior staff members with services that range from representing states on Capitol Hill and before the Administration on key federal issues to developing and implementing innovative solutions to public policy challenges through the NGA Center for Best Practices. NGA also provides management and technical assistance to both new and incumbent governors.

THE NGA CENTER FOR BEST PRACTICES (NGA Center) is the only research and development firm that directly serves the nation's governors and their key policy staff. Governors rely on the NGA Center to provide tailored technical assistance for challenges facing their states, identify and share best practices from across the country, and host meetings of leading policymakers, program officials and scholars. Through research reports, policy analyses, cross-state learning labs, state grants, and other unique services, the NGA Center quickly informs governors what works, what does not, and what lessons can be learned from others grappling with similar issues.

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Executive Summary of the 2013-2014 Chair's Initiative

The world of work today is more complex and changing faster than it was when our parents grew up. The changes are making new demands on all of us as students, employees, employers, and industry and state leaders. Individuals need more education for today's jobs. Businesses need deeper, more diverse talent pools. And states must make investments in workforce improvement if they expect to spur economic growth. In order to compete at the state and national levels, we must adapt and improve.

Ensuring states' and citizens' future economic prosperity will require significant improvements to the education system and workforce training programs. It will require closer relationships among high schools, colleges, career-tech programs, workforce training providers, and employers. Governors are uniquely positioned to foster these stronger connections between education leaders and employers. They are the primary individuals responsible for both the quality of public education systems and the strength of state economies.

As National Governors Association (NGA) chair, **Oklahoma** Governor Mary Fallin chose to focus on the best ways to meet these new demands head on. Her initiative, *America Works: Education and Training for Tomorrow's Jobs*, is about making significant improvements to states' education systems and workforce training programs to align those systems with the needs of their economies. Put differently, it's about ensuring current and future workers have the education and training they need to secure good jobs with wages to access a middle-class lifestyle and beyond.

The yearlong initiative included:

- **More than 30 one-on-one meetings** with state and national experts in areas such as industry, education, workforce, and economic development to learn about best practices underway across the country;
- **Two regional summits** to highlight leading state examples with representation from 33 states and territories. Nearly 150 senior officials joined Governor Fallin, **American Samoa** Governor Lolo Matalasi Moliga, **Connecticut** Governor Dannel Malloy, and **Utah** Governor Gary Herbert for these meetings;
- **An interim report** to describe the benefit of a more educated workforce to individuals and the economy and introduce a state policy framework for leading change across the education and training pipeline. Governors also received state-specific data on the mismatch between their current population's educational attainment and the educational demand of their future jobs;
- **A keynote presentation from General Electric CEO Jeffrey Immelt** at the opening session of the NGA Winter Meeting to elevate the business perspective on the need for a talented workforce for the nation's governors in Washington, D.C.; and
- **A capstone national summit in Oklahoma City** to present the components of a comprehensive state approach to align education and workforce training pipelines to the needs of the economy. Nearly 110 senior state officials representing 29 states and territories joined Governor Fallin, **Iowa** Governor Terry Branstad, and **Missouri** Governor Jay Nixon at this meeting.

NGA synthesized the lessons learned and leading state examples from the work above and identified the four components of the policy framework that formed the foundation for the initiative and this guide. The governor-led approach and activities listed in this report not only will benefit state education and training systems and the businesses that make up states' economies, but also will improve access to economic opportunities for far more citizens. Preparing America's 21st century workforce to keep pace and stay competitive is a task that demands gubernatorial leadership. The initiative and this report demonstrate that governors are responding to that demand.

Executive Summary of the Report

In July 2013, National Governors Association (NGA) Chair **Oklahoma** Governor Mary Fallin launched a yearlong effort to better prepare Americans to work in the new economy through improved postsecondary education and workforce training. Her initiative, *America Works: Education and Training for Tomorrow's Jobs*, raised awareness about the significant benefits for individuals, businesses, and state economies when governors act to raise their population's educational attainment and better align their education and training systems with the future demands of employers.

Governors are increasingly aware that the emerging economy will provide few well-paying jobs for workers who have not earned a postsecondary degree or a relevant workforce certificate. Fifty years ago, nearly 80 percent of all jobs required only a high school diploma or less and most paid a good wage. Fast-forward to data from 2013 and that number drops to 35 percent for jobs available to high school graduates and dropouts, with more than two-thirds of those jobs paying less than $25,000 a year. So it is clear that a high school diploma is no longer adequate to guarantee a person a good job and economic success. Over the same period, jobs that demanded some education beyond a high school diploma have more than tripled. Based on those facts, it is clear that education past high school, either a two- or four-year college degree or relevant workforce certificate, is the "new minimum" to access a middle-class life or beyond.

Thus, the challenge and the path forward is clear. We must get more students to meet higher standards by the end of high school and then create opportunities for those students, as well as for returning adults, to successfully complete a degree or career-training program that prepares them for a well-paying job and career.

Through the America Works initiative, NGA has identified a set of actions that governors can take to improve the educational attainment of their citizens and the alignment of those credentials with employer demand. The following four policy components, undertaken in an integrated approach, suggest a way governors can improve and better align state education and training institution results with industry demand to provide a more talented workforce. Governors can:

- Articulate and implement a strong vision connecting a state's education and training pipeline with the needs of its economy to have more Americans achieve the "new minimum" of a postsecondary degree or certificate with labor market value;
- Integrate and use education and workforce data to inform policy, track progress, and measure success;
- Support and scale industry and education partnerships to get results; and
- Modify the use of resources and incentives to support the attainment of the integrated vision.

The precise mix of policies and priorities a governor could enact to close specific gaps in educational attainment will depend on the state's unique economic composition and demographics, the current educational attainment of its citizens, and the quality of its education and training pipeline.

Based on information gathered since the initiative launched last summer, this *Guide for Governors* describes four policy components and lays out key elements within each component that governors can use, providing examples from various states to illustrate best practices. That information is supplemented by guiding questions for state policymakers to help them set priorities.

Using a combination of the policy components outlined above, governors can promote a comprehensive effort to align the education and training pipeline with the needs of employers and thus benefit their citizens and their economies. NGA stands ready to continue to support governors and other state leaders in their efforts to increase the educational opportunities and economic success for their states.

Introduction

For most of the 20th century, Americans led the world in educational attainment. That resource provided America with a strong foundation on which it built its economic dominance during what came to be known as the "American Century." That was a period in which the United States leveraged its broad educational base and other resources to lead the world in economic growth, wealth creation, and technological innovation.[1]

Now, more than a decade into the 21st century, Americans risk falling behind as technological advances accelerate demands for talented workers. Today, the United States trails 11 other developed nations in postsecondary attainment among those 25 to 34 years old. It has fallen even farther behind in the percentage of young adults graduating from high school, trailing 21 developed nations.[2] Even more startling are the results of the 2012 Program for International Student Assessment (PISA) exam, which measures the performance of 15-year-olds in 65 countries. U.S. students ranked 20th, 23rd, and 30th in reading, science, and math, respectively, marking a decline in each subject.[3]

Failing to provide all Americans with opportunities to successfully navigate postsecondary education will limit far too many students' potential to enhance their livelihood and contribute to the economy.

An obvious link exists between the quality of the education pipeline and the skills of the future workforce. American adults do not fare well on international assessments of either. The Organization for Cooperation and Economic Development (OECD) recently released the 2013 results of the Program for the International Assessment of Adult Competencies (PIAAC), a proxy for workforce skills. On the assessment of numeracy, the average score for U.S. adults lagged the OECD average by the equivalent of two years of education, Finnish adults by four years, and Japanese adults by five years. On literacy, American adults scored the equivalent of a half year behind the OECD average, approximately three years behind adults in Finland and four years behind those in Japan.[4] The correlation between the scores on PISA (15-year-olds in 2006) and on PIAAC (20- to 22-year-olds in 2012) for the same age cohort is predictably high and discouraging. As the chart on page 6 shows, the United States is in the quadrant with below-average results for both its students and young workforce. It should come as no surprise that when enough students are not prepared to be internationally competitive, our future workforce suffers.

Looking at the education-to-workforce pipeline from the jobs side, it becomes abundantly clear that a postsecondary degree or relevant workforce certification is the "new minimum" for the future workforce to meet the demands of the emerging job market and have access to a middle-class life or beyond. Fifty years ago, nearly 80 percent of jobs required only a high school diploma or less, and most paid a good wage. Today, that number has dropped to 35 percent for jobs available to high school graduates and dropouts, with more than two-thirds of those jobs paying less than $25,000 a year.[5] The future economy will provide few well-paying jobs for workers who have a high school education or less.

As the demand for highly educated workers has increased, employment opportunities for those without postsecondary credentials have declined. The current lifetime wage premium for an individual who has a two- or four-year degree is $423,000 and $964,000, respectively, compared with a person who has a high school diploma.[6]

1 C. Goldin and L. Katz, The Race Between Education and Technology (Cambridge, MA: Belknap of the Harvard UP, 2009).

2 Education at a Glance 2013: OECD Indicators, charts A1.2 and A2.1 (Paris: OECD Publishing, 2013).

3 National Center for Education Statistics, Program for International Student Assessment, "Selected Findings from PISA 2012," http://nces.ed.gov/surveys/pisa/pisa2012/pisa2012highlights_1.asp Rankings are in the third paragraph under each subject heading. (accessed May 30, 2014)

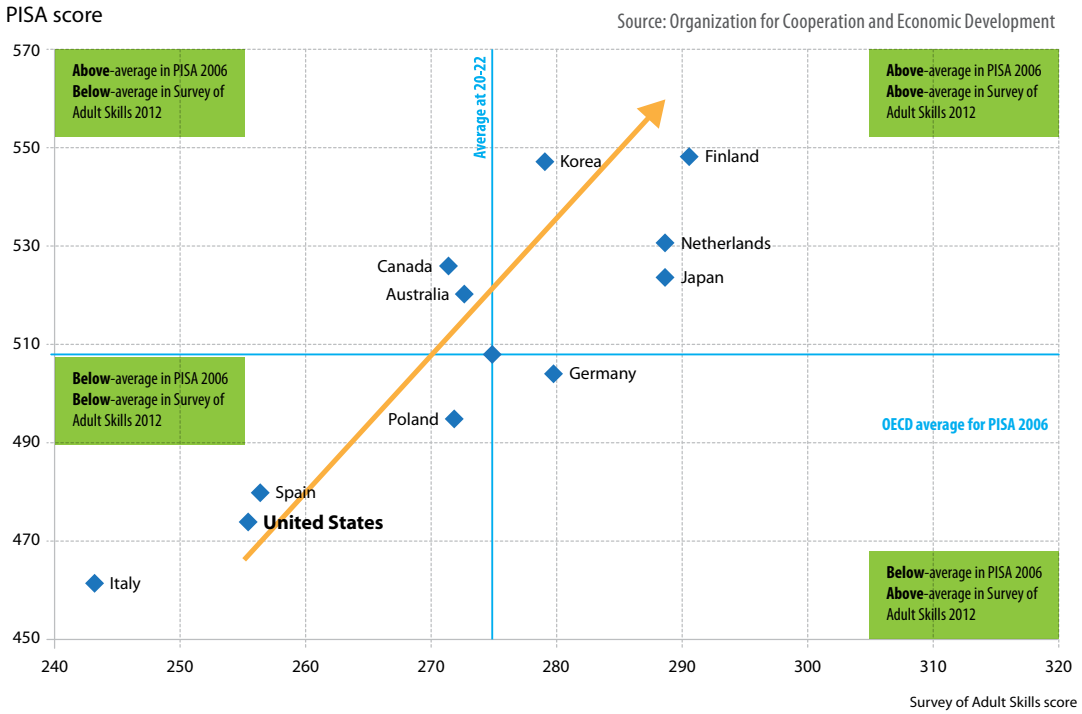
4 Organization for Cooperation and Economic Development, OECD Skills Outlook 2013 "First Results from the Survey of Adult Skills," http://skills.oecd.org/documents/OECD_Skills_Outlook_2013.pdf (accessed May 30, 2014).

5 National Governors Association Chair's Initiative 2013–2014, America Works: Education and Training for Tomorrow's Jobs (Washington, DC: National Governors Association Center for Best Practices, 2013), http://www.nga.org/files/live/sites/NGA/files/pdf/2013/CI1314AmericaWorks.pdf (accessed May 30, 2014).

6 A. Carnevale, S. Rose, and B. Cheah, The College Payoff: Education, Occupations, Lifetime Earnings (Washington, DC: Georgetown University Center on Education and the Workforce, August 2011), https://georgetown.box.com/s/ctg48m85ftqm7q1vex8y Wage data can be found on page 2 of the executive summary. (accessed May 30, 2014).

Skills Proficiency in PISA and in the OECD Survey of Adult Skills

Mean mathematics score in PISA 2006 among 15-year-olds and numeracy score in the Survey of Adult Skills 2012 among 20- to 22-year-olds.



Looking at the issue another way, the average person who graduates high school and then attains a two-year degree earns $1,727,000 over a lifetime. A typical high school graduate, in contrast, earns $1,304,000 over the same period. The roughly 32 percent difference in individual earnings can be the difference between living below or above the poverty line. In addition, the increased wages represent new dollars that can then be spent in the local economy, thereby driving business growth and expanding state and local tax revenues.

> *... a postsecondary degree or relevant workforce certification is the "new minimum" for the future workforce to meet the demands of the emerging job market and have access to a middle-class life or beyond.*
>
> *- Oklahoma Governor Mary Fallin*

Those troubling trends have direct economic consequences for individuals and states. Failing to provide all Americans with opportunities to successfully navigate postsecondary education will limit the potential of far too many students and members of the current workforce to enhance their livelihood and contribute to the economy. Similarly, a lack of skilled workers in a regional economy can constrain growth, limiting employers' ability to expand unless they move jobs to where talent resides or accept the cost of upgrading the skills of local workers.

Addressing the Challenge: Meeting the 'New Minimum'

In July 2013, NGA Chair **Oklahoma** Governor Mary Fallin launched a yearlong effort to address those challenges and better prepare Americans to work in the new economy through improved postsecondary education and workforce training. *America Works: Education and Training for Tomorrow's Jobs* raises awareness about the significant benefits for individuals, businesses, and state economies when governors act to raise their population's educational attainment and better align their education and training systems with the likely future demands of employers.

Governors are uniquely positioned to foster stronger connections between education leaders and employers as the individuals primarily responsible for both the quality of the public education system and the strength of their state economies. The initiative is about making significant improvements to education systems and workforce training programs to align those systems with the needs of business and labor markets. It is about ensuring that a new generation of workers can secure good jobs with living wages and access to the middle class.

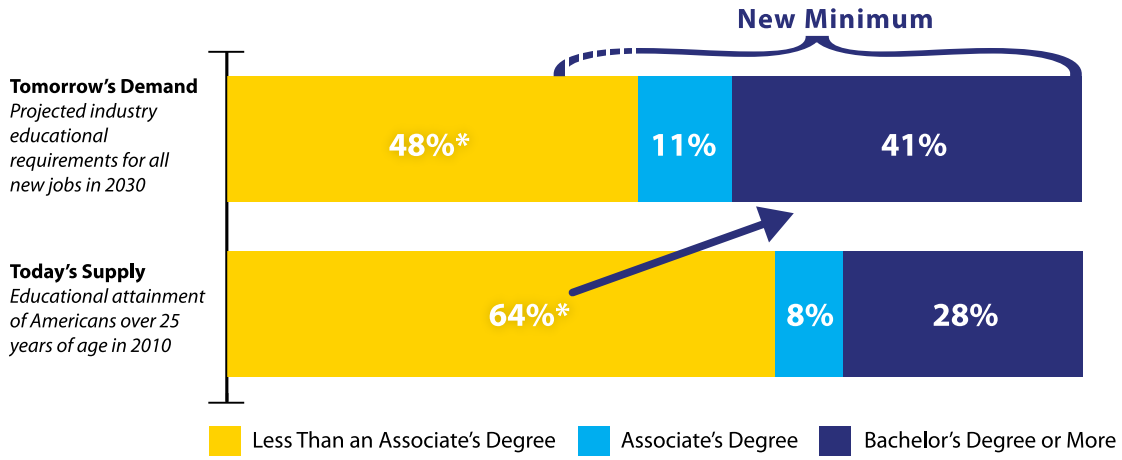
Every state can realize significant economic and social benefits from providing additional educational opportunities for its citizens. Based on trends that show potential economic growth by industry, Moody's Analytics projects that employers nationwide could demand slightly more than 24 million additional workers between 2013 and 2030, with roughly 13 million of those jobs requiring some postsecondary degree. Comparing that forecast with Moody's projection of educational attainment of the population over the same period, there could be a shortfall in excess of 3 million workers with postsecondary degrees. Such a shortfall would limit growth in affected industries as employers cut back on production or employ less educated (and presumably less productive) workers. More positively, meeting the projected industry demand would allow businesses to expand and incomes to rise by an estimated $540 billion over the next 17 years.

Without a substantial shift in today's system to enable current and future workers to attain higher levels of education, the nation will fall short of providing individuals with the "new minimum" of postsecondary education credentials (a relevant workforce certification or associate's degree or above). Failing to afford more students or members of the current workforce with opportunities to successfully navigate postsecondary education will limit many people's ability to achieve their potential and a higher standard of living.

The chart below shows the nation's projected mismatch between the educational level attained by Americans over 25 in 2010 versus the projected level of education required for new jobs in 2030. Although the number of young people with postsecondary credentials has continued to increase since the 1980s, the increase has not kept pace with the needs of employers. The "new minimum" is depicted by the blue bracket over the associate's degree and bachelor's degree categories and the part of the dotted bracket over the category for less than an associate's degree. The dotted portion of the bracket over the category for less than an associate's degree acknowledges that current national data on credentials less than an associate's degree do not provide solid information on the number and types of workforce certificates and job-training activities with value in the labor market. It represents a largely unknown area that many states and national organizations are working to address.

Mismatch In the Nation's Talent Pipeline

Current educational attainment and projected industry requirements by education level



* *Includes an unknown number of workforce certificates with labor market value that are part of the new minimum.*

Note: The state's current educational attainment is based on the U.S. Census Bureau's *American Community Survey, 2010.* Projected demand estimates are based on Moody's Analytics forecasts of employment by industry in 2030, multiplied by the nation's 2010 postsecondary attainment rate for each industry and summed to produce the nation's total job requirements by education level.

Although that picture of the mismatch at the national level is useful to start a conversation, it is crucial that states develop and analyze data at the state or regional level to begin developing policies to address the specific mismatch between their education and workforce training pipeline and their economy. State-specific disaggregated data will enable policymakers, educators, and employers to identify gaps and surpluses regarding the education pipelines' ability to meet the needs of the state's economy.

The mismatch between the education level of a state's residents today and the projected level of education required for good jobs in the future creates a complex policy problem that demands a government-wide, state-led solution. Although each state's response is likely to be unique, it almost always will require a statewide vision to correct the misalignment, access to data on both the supply and demand for an educated workforce to measure progress, new partnerships, and a significant change in how states allocate resources and use incentives to achieve better results. Through *America Works,* NGA has identified a set of actions governors can take to improve the educational attainment of their citizens and the alignment of those credentials with employer demand. The following four policy components, undertaken in an integrated approach, suggest ways governors can improve and better align state education and training institution results with industry demand for a more talented workforce.

America Works Policy Components

- Articulate and implement a strong vision connecting a state's education and training pipeline with the needs of its economy to have more Americans achieve the "new minimum" of a postsecondary degree or certificate with labor market value;
- Integrate and use education and workforce data to inform policy, track progress, and measure success;
- Support and scale industry and education partnerships to get results; and
- Modify the use of resources and incentives to support the attainment of the integrated vision.

The precise mix of policies and priorities that a governor could enact to close specific gaps in educational attainment will depend on the state's economic composition and demographics, the current educational attainment of its citizens, and the quality of its education and training pipeline. Based on information gathered since the initiative launched last summer, the following sections describe the four components and the key elements that governors can use, along with examples from various states to illustrate different approaches to achieve better results across a state. That information is further supplemented by a list of guiding questions for state policymakers to help states set priorities. Each section ends with a set of additional resources to help states learn from best practices and other reports and tools they can use to lead change in their state.

Articulate and implement a strong vision connecting education and training with the needs of the economy to have more Americans achieve the 'new minimum'

The work to align a state's education and training systems with the current and future demands of the economy is a complex task. It involves numerous state agencies and departments that administer programs or deliver services in the education and training pipeline, including kindergarten through 12th grade (K–12), career-tech, workforce training programs, and higher education.

It also requires a broad understanding among industry leaders and members of the public that a misalignment exists (assuming it does) and that action is required to correct it.

To make that challenge clear and to help guide the state's efforts to address it, governors can publicly articulate a vision to connect the education and training pipeline with the needs of their state's economy. But a vision alone is not sufficient to bring about the desired change. Lessons from leading states suggest that the elements for articulating and implementing a strong vision include:

- Set an educational attainment vision aligned to the needs of the economy;
- Designate a structure for coordinating state efforts across education, training, and economic development to increase alignment of the entire education and training pipeline; and
- Develop a policy agenda of measurable goals and strategies that represent a means to achieve the vision.

VISION:
Guiding Questions for State Policymakers to Help Target Areas in Need of State Action

1. Has the governor articulated a vision to improve the state's education and training pipeline, grow the economy and align the two efforts to enhance the quality of life for all of the state's residents?
2. Does the vision have clearly stated goals and strategies that together represent a means to achieve the vision, and are they measurable?
3. Do the goals target specific gaps in the state's talent development pipeline that can be filled in both the short term (2-5 years) and the long term (10+ years)?
4. What is the structure or process for coordinating the state's efforts under the leadership of the governor's office and with the involvement of industry leaders?
5. Is it clear who is responsible for achieving progress under each goal and strategy?

Set an educational attainment vision aligned to the economy

A state vision that seeks to align the education and training system with the state's economy should address three important audiences. First, it should elevate the message to residents that a relevant workforce certification or postsecondary degree is the "new minimum" for reaching the middle class and beyond. Second, it should communicate to business leaders that the state is committed to providing the talented workforce the economy will require in the future. Third, it should provide state agencies, departments, and postsecondary institutions with a clear goal or target that requires coordination and alignment across programs and services to attain the vision.

Governor Fallin shared her vision for **Oklahoma** at a statewide summit of more than 300 business and education leaders and state residents that emphasized generating wealth for Oklahomans as a means to improve their income level. To pursue the state's wealth-building vision, the governor articulated a clear need to improve the state's level of educational attainment. Citing an analysis by the Oklahoma Department of Commerce, Governor Fallin pointed out that 77 percent of all jobs created in Oklahoma by 2020 will require a relevant workforce certification, associate's degree, or above. However, only 54 percent of current working-age adults fit that criterion, leaving a 23 percentage point gap. Members of the governor's cabinet along the education and training pipeline then presented some of the strategies to attain Oklahoma's vision. They included adding more than 50,000 individuals with degrees and workforce certificates to the workforce by 2023 and focusing much of the state's efforts on five ecosystems, or key industries, with the greatest growth potential, competitive advantage, and capacity to generate wealth.[7]

Several governors have laid out similar state educational attainment visions tied to economic growth. In **Utah**, Governor Gary Herbert's administration created an integrated 10-year economic development plan that established a goal of 66 percent of all Utah adults holding a postsecondary certificate or degree by 2020. Introduced by the governor in 2012, the *On PACE to 66 percent by 2020* plan lays out a set of detailed priorities and indicators for measuring progress across four areas: preparing young learners, access for all students, complete certificates and degrees, and economic success.

7 The five ecosystems are: 1) aerospace and defense; 2) agriculture and bio-science; 3) energy; 4) information and financial services; and 5) transportation and distribution. To identify the five ecosystems, the Oklahoma Department of Commerce analyzed industry trends, sales revenue, wages, physical assets and export data.

I have called the 40-40-20 our North Star… We want employers in the state to be confident that they can locate here and grow here… we also want all of our graduates to be ready to contribute to our society and to our economy.

- Oregon Governor John Kitzhaber

In 2011, Governor John Kitzhaber announced "40-40-20" as **Oregon**'s statewide vision for connecting the education and training pipeline with the needs of the state's economy. By 2025, Oregon is working to ensure that:

- 40 percent of adults have earned a bachelor's degree or higher;
- 40 percent of adults have earned an associate's degree or postsecondary credential as their highest level of educational attainment; and
- The remaining 20 percent or fewer of all adults have earned a high school diploma or the equivalent as their highest level of educational attainment.

Designate a structure for coordinating state efforts across education, training, and economic development to increase alignment of the entire education and training pipeline

Once a vision has been set, a structure should be designated to coordinate activities across all relevant state agencies and departments responsible for attaining that vision. Each state's structure should reflect the unique emphasis of the state's vision and the roles and capacity of the various agencies and departments involved.

Some states choose to form a new council or state board outside of the existing state government structure. **Indiana** established a new Career Council in 2013 to better align its education and training pipeline to the workforce. Established through bipartisan legislation in 2013, the council is explicitly tasked with developing a strategic plan for aligning activities across the state's education, job skills development, and career training systems. The legislation named the governor as chair of the council, and laid out additional membership requirements for the body so that it would be made up of senior level leaders from all state entities responsible for education, workforce development, and economic development, as well as with strong representation from the private sector.

Another approach used by states is to appoint or hire a designated staff person to oversee the work across key agencies and divisions. In **Massachusetts**, Governor Deval Patrick not only issued an executive order creating a new Science, Technology, Engineering and Math (STEM) Education Council to oversee his state's alignment efforts regarding STEM education, he also issued a memorandum charging the secretary of labor and workforce development, the secretary of the executive office of education and the secretary of economic development to coordinate policies and programs. As a result, the three systems created and jointly fund a full-time staff position responsible for coordinating efforts to align education and training programs with the anticipated demands of industry. This individual is housed in the executive office of education, but reports to all three secretaries. In addition to regularly meeting with the secretaries, this individual helps to ensure the multiple statewide initiatives spearheaded by individual systems are better aligned and have a greater connection to the needs of the economy.

A third approach is to restructure the governor's cabinet to support tighter alignment and communication at the highest levels of state government. **Kentucky** Governor Steve Beshear's cabinet includes a secretary of education and workforce development who coordinates the state's preschool to grade 20 (P-20) programs and manages training and employment functions in the department of workforce investment. In **Arkansas**, Governor Mike Beebe created the Arkansas Workforce Cabinet upon entering office in 2007. The cabinet is made up of agency heads from the departments of economic development, workforce services, education, higher education, vocational education, career and adult education, science and technology authority and the Arkansas Association of Two-Year Colleges. The governor uses the cabinet and his oversight of agency budgets to ensure collaboration on shared agendas, including clarifying specific roles and responsibilities of each system within important statewide initiatives.

Develop a policy agenda of measurable goals and strategies that represent a means to achieve the vision

No statewide vision and corresponding strategy can serve as an effective vehicle for success without a policy agenda that stipulates measurable outcomes tracked over time. Progress toward achieving the goals articulated in the state's vision must be tracked. Without clear and quantifiable indicators of progress and success, governors will be unable to determine which existing or new strategies or programs are benefiting residents the most and which should be changed or eliminated.

Tennessee Governor Bill Haslam announced a new goal for educational attainment in his 2013 State of the State address. Citing workforce projections from the Georgetown Center on Education and the Workforce, the governor stated that 55 percent of Tennesseans will need a workforce certificate or degree beyond high school to get a job by 2025. Currently, only 32 percent of Tennesseans have earned an associate's degree or higher.[8] In order to address their need for higher levels of educational attainment to be prepared to fill the projected new jobs, the governor announced a new initiative called the Drive to 55.

> ***More Tennesseans have to believe that earning a certificate or degree beyond high school is not only possible but necessary.***
> ***- Tennessee Governor Bill Haslam***

A year after launching Drive to 55, Governor Haslam further defined his initiative in his 2014 State of the State address by elevating five key strategies that would guide the state's efforts to attain the vision:

1. **Get students ready.** Reduce the need for remedial courses; boost participation in dual enrollment and dual credit.
2. **Get students in.** Improve mentoring and guidance. Reduce financial barriers, especially to community colleges and colleges of applied technology.
3. **Get students out.** Enhance programs to increase graduation rates. Once they get in, they also must get out on time with as little debt as possible.
4. **Finish what we started with adult students.** Create new programs for the 940,000-plus adults with some college but no degree.
5. **Tie education directly to workforce needs.** All departments, educational institutions and employers will work together to identify skills gaps of the future and proactively fill them. They also will keep score, measuring investments to assure accountability and value.

To begin measuring investments and assuring accountability and value, Tennessee created a series of reports for each county that compares that county's performance to the state average on educational attainment level, high school graduation rate, college attendance rate, and average high school ACT scores. The report also provides information on the number of county residents participating in the specific strategies and programs that support the Drive to 55.

In **Oregon**, Governor Kitzhaber also incorporated an emphasis on accountability and measuring success into his 40-40-20 vision. To oversee the alignment of Oregon's vision with the state's education and training pipeline, Governor Kitzhaber created the Oregon Education Investment Board (OEIB) in 2011.[9]

Since its inception, the OEIB has been charged with defining metrics that form the basis of an "achievement compact" system between the OEIB and local educational institutions (for example, schools, community colleges, universities).

8 A. Carnevale, N. Smith, and J. Strohl, Help Wanted: Projections of Jobs and Education Requirements Through 2018, Tennessee Profile (Washington, DC: Georgetown University Center on Education and the Workforce, June 2010), https://georgetown.app.box.com/s/40alt67nit7n9apj612u (accessed May 30, 2014).

9 The OEIB was established in 2011 and is chaired by Governor Kitzhaber. It oversees the alignment of Oregon's pre-kindergarten to grade 16 education assets around the 40-40-20 goals.

The approach is structured to offer local education institutions considerable flexibility as they align efforts under the shared 40-40-20 vision, while maintaining common metrics for comparison at the state level intended to ensure accountability and broker good practice. The compacts in turn help to clarify the role of the state (represented by OEIB) and local education providers in supporting the 40-40-20 vision.

An executive order in 2013 to recharter the Oregon Workforce Investment Board (OWIB) also was designed to strengthen its role in defining metrics to oversee the local workforce investment boards' efforts to align with the 40-40-20 vision. The executive order explicitly calls upon local workforce investment boards to complement state investments to realize the 40-40-20 goal as part of a broader effort to redesign the workforce system, situating the OWIB in the center of a similar compact system around common metrics to ensure accountability and the scaling of good practice across local workforce investment boards.

Regardless of the approach to building and implementing a vision, success requires a thoughtful process to lead the complex change required. A good resource is the collective impact framework that lays out five conditions for leading a successful change effort: a common agenda, shared measurement systems, mutually reinforcing activities, continuous communication, and a backbone support organization.

Oregon's 40-40-20 Website

State Resource: A website for the state's 40-40-20 educational attainment vision.

Challenge: Communicate to residents that the state's vision to promote greater educational attainment is vital to every individual and to the state's economic future.

Addressing the Challenge: The website describes the state's vision; outlines the state's challenge; lays out how the education and training system is to be redesigned to attain the vision; provides updated information on progress thus far; and includes an updated list of presentations, research papers, videos, and other online resources.

Data: Integrate and use education and workforce data to inform policy, track progress, and measure success

Policymakers today have access to more information on states' education and workforce development systems and programs than ever before. However, too often the information available is disconnected and does not answer the most important questions facing state and local leaders. Governors are instrumental in getting states' data systems designed to answer key policy questions by connecting information on education and training outcomes to workforce outcomes and future employment needs. Governors also play a key role in ensuring those data are disseminated to state and local policymakers and institutional leaders in actionable formats, reports, and online tools to help set policy, budget, and programmatic priorities all along the pipeline.

The experience of several states suggests how data can be used to inform policy, track progress, and measure success. The most important lessons of that experience are:

- Identify key policy and budget questions and use integrated education and workforce data to answer them; and
- Disseminate information in actionable formats.

DATA:
Guiding Questions for State Policymakers to Help Target Areas in Need of State Action

1. What policy questions tied to the vision and its implementation do you wish you could answer but are unable to now because of a lack of good data?
2. Where are there gaps within and between the education, training, and labor market data systems that prevent you from answering key questions that can drive improvement in the system?
3. To what degree is information shared with the state's postsecondary institutions and other practitioners to improve their alignment with the needs of the state's workforce? How are they using that data to better serve their students?

Identify key policy and budget questions and use integrated education and workforce data to answer them

Many states are building longitudinal data systems to provide better information on how individuals progress over time through the entire education and training pipeline. Leading states are harnessing those data resources and sharpening their focus by elevating a set of key policy questions about the state's pipeline and workforce needs. That is in stark contrast to many states that get mired in the magnitude of discrete data points, which measure a system's outcomes only at a single point in time.

In **Maryland**, Governor Martin O'Malley and the general assembly made a deliberate effort to build the Maryland Longitudinal Data System Center around a set of key policy questions. Created through legislation in 2010, its purpose was to connect education and workforce data to help state policymakers, educators, and workforce development partners improve the education and training pipeline. A 12-member, cross-agency governing board was put in charge of the center and tasked with creating the list of priority policy questions. Those questions have served to guide the work of the center, its research agenda, and the overall development of the system. The 15 questions fell into four broad categories:

- Preparation for and transition to postsecondary education;
- Postsecondary access and persistence;
- Workforce transition; and
- Overarching research and policy concerns.

Similarly in **Kentucky**, a set of five questions has been used for more than a decade to drive public discourse around a comprehensive vision for postsecondary education. Those five questions are:

- Are more Kentuckians ready for postsecondary education?
- Is Kentucky postsecondary education affordable for its citizens?
- Do more Kentuckians have certificates and degrees?
- Are college graduates prepared for life and work in Kentucky?
- Are Kentucky's people, communities, and the economy benefiting?

The five questions emerged from the establishment of the Council for Postsecondary Education (CPE) in 1997. CPE serves as the coordinating agency for all public postsecondary institutions, including community colleges and postsecondary vocational technical schools under the Kentucky Community and Technical College System (KCTCS). Although the questions are formally tied to CPE's unique mission, they also delve into areas of overlap with workforce and economic development and articulate shared accountability for strategic goals with the education and workforce development and economic development cabinets.

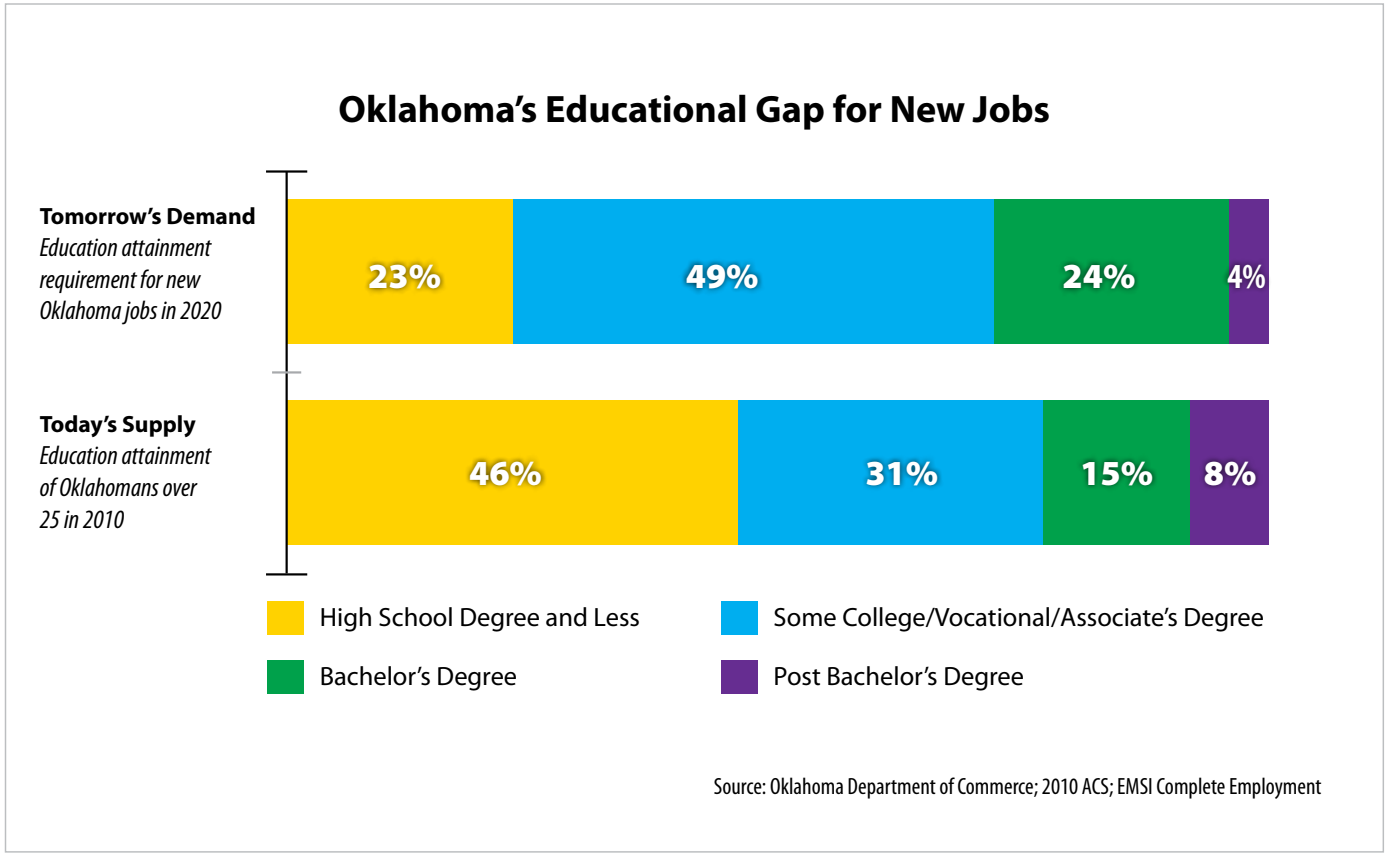
The evolution of **Kentucky**'s five questions on postsecondary educational attainment and alignment to the workforce coincided with the development of Kentucky's longitudinal data system (KLDS). In 2012, Governor Beshear moved the KLDS to the newly established Kentucky Center for Education and Workforce Statistics (KCEWS). As the state's data hub, KCEWS serves as a key strategic center for policymakers overseeing education, postsecondary education, workforce, and economic development.

Housed within the education and workforce development cabinet, the KLDS serves as an asset for examining specific and cross-cutting policy and budget issues. Examples include investigating how teacher preparation programs shape student learning outcomes, setting the benchmarks for eligible training provider status of proprietary postsecondary institutions, and determining the return on investment for adult education programs. The Kentucky Workforce Investment Board also is using the KLDS to develop metrics and a data dashboard to publish postsecondary degree and certificate outcomes at the county level.

Disseminate information in actionable formats

Once key policy questions are identified and a data infrastructure exists to answer those questions, then states are in a position to disseminate data products of high value to state and local policymakers in order to inform decisions. Below are a few examples and descriptions of data products that leading states are using to drive action.

In **Oklahoma**, the department of commerce analyzed the supply and projected demand for workers with a workforce certificate or degree beyond high school. It then created the supply-and-demand chart below. That tool has effectively communicated the size of the educational gap in Oklahoma and raised the urgency across the education and training pipeline to address it. The state is now working on regional versions of the dashboard, along with providing field-specific data and information on the postsecondary credentials most needed to local education and industry leaders, to shape the focus of their partnerships.



Source: Oklahoma Department of Commerce; 2010 ACS; EMSI Complete Employment

Tennessee's supply-and-demand dashboard identifies industry-specific skill gaps through 2025 statewide and regionally. State and local policymakers use the information to make decisions about program development. The state also provides the data to citizens on the Drive to 55 website to help residents make decisions about pursuing or continuing their postsecondary education. The website also includes a Career Path Projections Tool, which shows where job demand is and how many degrees are projected to be attained in that area.

In addition to providing a view of the education-to-workforce pipeline, KCTCS is using **Kentucky**'s longitudinal data system to align curricula with the needs of employers. KCTCS's Office of Research and Policy Analysis purchased current data as part of a software package of tools from a third-party vendor and used it to help identify Kentucky's 25 occupations in highest demand. It then parsed the information by region and engaged employers and local workforce investment boards to validate trends, dig deeper in terms of specific skill sets needed, and identify the timeframe and volume of demand to inform education program design. KCTCS shares that information with postsecondary institutions to help them determine high-demand and high-wage occupations that overlap with existing program offerings and to identify potential new program offerings.

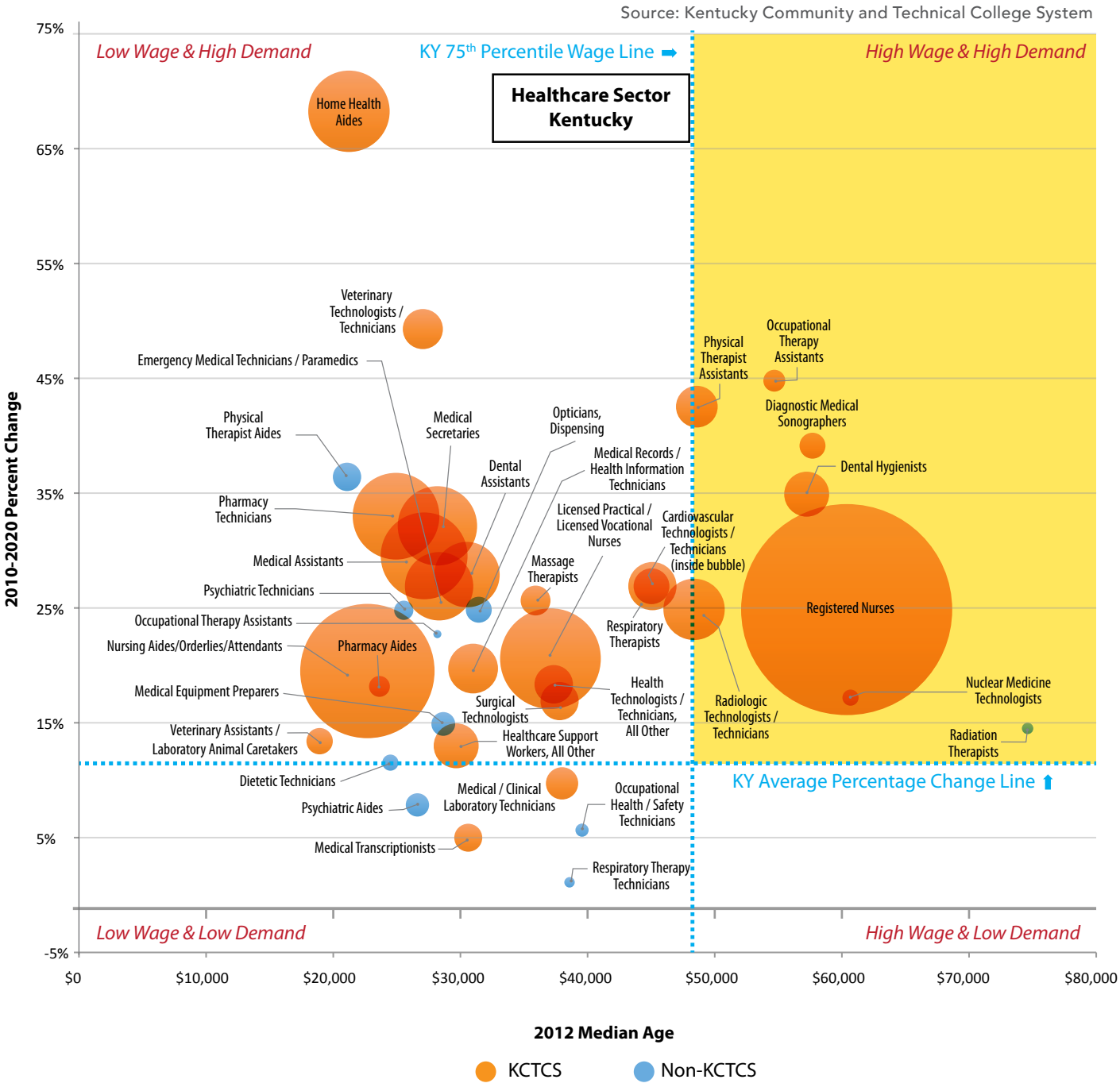
KCTCS also has developed innovative visual displays to show the alignment of program offerings to the state's high-wage and high-demand occupations. The chart below is limited to health care occupations in the state typically requiring an associate's degree or less in 2012. The horizontal axis shows the median wage for each occupation, and the vertical axis shows the projected percentage change in the number of jobs for that occupation. The size of each circle represents the projected total annual openings between 2010 and 2020.

The degree of labor market alignment across the system is depicted by the color of each circle. Yellow circles represent occupations for which KCTCS offers a related health care program. Alternately, blue circles indicate occupations for which KCTCS does not offer related training. A key goal is to ensure more job growth and a larger well-prepared workforce in the shaded quadrant in the upper right-hand corner, which includes occupations defined by KCTCS as high-wage and high-demand.

Similar charts have been produced for other KCTCS targeted industry sectors (for example, automotive/aircraft manufacturing, energy creation/transmission, business services and research and development, and transportation/distribution/logistics), which align with the priorities of the Kentucky Workforce Investment Board.[10] The charts also can be targeted to specific colleges or to any of the state's economic development regions to inform business-education partnership decisions.

10 More information available at: http://www.kysectorstrategies.com/

Aligning Postsecondary Program Offerings to High-Wage and High-Demand Occupations in Kentucky[11]



11 http://www.kctcs.edu/About_KCTCS/Institutional_Research/Occupational_Wage_and_Demand_Matrix.aspx (accessed May 30, 2014).

Several states including **Arkansas, Colorado, Florida, Missouri, Tennessee, Texas,** and **Virginia**, are providing workforce earnings data in the form of reports and data dashboards for students who graduate primarily from public colleges or universities.[12] For example, Missouri created the Wage Explorer dashboard to show future students the earnings attained by graduates within selected degree and certification programs and how those earnings differ among various regions. Tools of that type help students gain a better understanding of the growth prospects of the industries within a state and the potential value of the degrees or certificates they might choose to pursue. As the state examples demonstrate, when data is made available in actionable formats to policymakers, educators, and students, better decisions can be made across the education and training pipeline.

Additional state resources are provided below.

Maryland's Longitudinal Dashboard

State Resource: Interactive data dashboards from the Maryland Longitudinal Data System.

Challenge: Elevate key trends and information from the state's longitudinal data system.

Addressing the Challenge: The purpose of each featured dashboard on the Maryland website is to answer a specific policy question with the best information available.

Tennessee's Job Forecast Tool

State Resource: A job forecast website with interactive graphs on top career paths, career path projections, and trends in the supply and demand of various jobs.

Challenge: Present career path and employment demand information that is accessible both to the public and to policymakers.

Addressing the Challenge: Each graph is presented in an interactive format with options to customize the data by occupation and regional geography.

Colorado's Skills for Jobs Report

State Resource: An annual Skills for Jobs Report that assesses the state's anticipated workforce needs and the number of credentials institutions expect to issue to determine if supply is meeting demand across occupations.

Challenge: Understand the relationship between postsecondary credential completions and projected workforce demand.

Addressing the Challenge: Developing the report highlighted the need for cross-agency collaboration to use data at the sub-state regional level to create a clearer picture of the trends and how to address them.

Oklahoma's Job Match Website

State Resource: A website that matches job seekers and employers using more than resumes and job postings.

Challenge: Create a job-matching service that goes beyond job listings by occupation and matches candidates based on skill level and fit for the job.

Addressing the Challenge: The Oklahoma job-match website uses many criteria, including experience, education, skills, certifications, and licenses to match job seekers with open positions.

12 College Measures Web site, http://collegemeasures.org/esm/ (accessed May 30, 2014).

Partnerships: Support and scale industry and education partnerships to get better results

A primary reason for a mismatch between the education and training system and the labor market is a lack of scaled and systematic communication among industry, educators, and workforce trainers. There are several strong examples of institutions working with employers to align pieces of the education and training pipeline to the needs of the economy. Workforce investment boards, employer advisory panels at community and technical colleges or career and technical education institutions, industry associations, and chambers of commerce all dedicate part of their mission and activities to correcting the mismatch. Too often, however, their focus is on their own particular silo of activity, diminishing their effect. In order to implement the policy agenda in the governor's vision, it will be necessary to support and scale partnership efforts across education, workforce, and economic development activity at state and local levels. The experiences of several states suggest that the steps to supporting and scaling industry and education partnerships to attain the state's vision are:

- Designate a state-level entity to support and scale effective state and regional-level partnerships; and
- Use rigorous criteria to identify high-quality partnerships, expand where appropriate, and fill gaps as needed.

Designate a state-level entity to support and coordinate local and state-level partnerships

States can support the growth of partnerships between industry and education in several ways. Some states provide assistance to regional partnerships through the state workforce investment board, a preschool-to-grade 20 (P20) council, or another statewide entity that has representation across education, workforce, and economic development. In many states, those are the same cross-agency structures that oversee implementation of the governor's overarching vision.

For instance, the state vision contained in **Virginia**'s Workforce Development Strategic Plan is guided by the Virginia Workforce Board, which is the state's workforce investment board. In addition to guiding the vision and providing strategic leadership on policy, plans, and procedures on behalf of the governor, the board also oversees partnership-building activity through its Career Pathways Workgroup.[13] The workgroup is an eight-agency council made up of senior leadership across the education and training pipeline and is responsible for supporting a system of regional partnerships that is building career pathways in 15 different regions across the state. **Arizona** and **Maryland** also use the state workforce investment board or a lead state agency (the P-20 Council in Maryland) working together to drive policy change at the state level and support a network of sector partnerships at the regional level.[14]

13 The career pathway model has been embraced by a number of states and the federal agencies for Labor, Education, and Health and Human Services. In April 2012, the agencies issued joint guidance that defined career pathways as a series of connected education and training strategies and support services that enable individuals to secure industry relevant certification, obtain employment within an occupational area, and advance to higher levels of future education and employment in that area. Bridge programs and effective instruction to support learners' advancement in basic skills are key to the success of these efforts for low-skilled adults. Member agencies of the Career Pathways Workgroup include the Virginia Community College System, Virginia Economic Development Partnership, Virginia Employment Commission, State Council of Higher Education, and the Departments of Aging and Rehabilitative Services, Education, Labor and Industry, and Social Services.

14 Sector partnerships are regional partnerships of employers within one industry that bring together government, education and training, economic development, labor and community organizations to focus on the workforce needs of their industry. For more information please see L. Woolsey and G. Groves, State Sector Strategies Coming of Age: Implications for State Workforce Policymakers, National Governors Association Center for Best Practices, January 2013. The sector partnership approach has been evaluated and shown to produce positive outcomes for workers. A 2009 random-assignment evaluation of three sector partnerships indicated that worker participants earned significantly more (18 percent more, or $4,500 over 24 months) than the control group. The reason was that they were more likely to work, worked more consistently, and worked in jobs with higher wages. They also had higher-quality jobs, as measured by benefits such as health insurance, paid vacation, and paid sick leave. [S. Maguire, J. Freely, C. Clymer, M. Conway, D. Schwartz. Tuning in to Local Labor Markets: Findings from the Sectoral Employment Study, Public/Private Ventures, July 2010] http://www.aspenwsi.org/resource/ppvtuning-local-labor-market/ (accessed May 30, 2014).

Using an alternate partnership support strategy, several states have created entities that focus on the education and training needs of specific industries. **New Jersey** used this strategy when Governor Chris Christie's administration established seven industry-specific talent networks to connect employers, educators, job seekers, and workforce trainers. **Delaware** also is using this approach in the Accelerated Career Paths initiative that Governor Jack Markell announced in his 2014 State of the State address.

Similarly in **Illinois**, Governor Pat Quinn's administration created a system of Science, Technology, Education, and Math (STEM) Learning Exchanges, or public-private education and workforce partnerships, in nine key industries (agriculture, architecture and construction, energy, finance, health sciences, information technology, manufacturing, research and development, and transportation and logistics). Each state-level learning exchange is responsible for coordinating employer investments and partnership activities at the regional level with a network of K-12, postsecondary, and workforce partners. Each learning exchange has several other functions and responsibilities for its industry, including reviewing and updating academic programs of study, providing resources and professional development to teachers, increasing access to industry credentialing, and providing work-based learning opportunities. Each learning exchange is governed by education, business, and community partners and is required to have a strategic plan approved by the state. The exchanges operate as independent, voluntary public-private networks and are expected to track talent development performance regionally and statewide in their respective career clusters.

PARTNERSHIP:
Guiding Questions for State Policymakers to Help Target Areas in Need of State Action

1. Do you have a state organizational structure (for example, State WIB, P-20 Council) that identifies and supports high-quality partnerships among ndustry, education, and workforce traininginstitutions at the state and local levels? What is the level of support and cooperation that this organization receives from other relevant state departments and agencies?
2. Do you have criteria to identify strengths and weaknesses of existing partnerships? If so, how is it used to strengthen existing partnerships and promote new or emerging partnerships? If not, do you need assistance developing criteria and using it to improve existing state and local partnerships?
3. Is it known how many high-quality partnerships are currently active in areas identified as economic priorities for the state?
4. Are there processes in place that measure the results from these partnerships?
5. Are there opportunities to support new or emerging partnerships that may target gaps in the talent development pipelines for key industries identified by the state?

Another approach is to provide incentives for education, workforce, and economic development entities to align their efforts within their own regions of the state despite often conflicting organizational boundaries. Wisconsin has 72 counties, 11 workforce development areas, 9 regional economic development councils, and 16 technical colleges that don't align geographically and therefore seldom work in concert. As part of a $100 million investment in workforce development, **Wisconsin** Governor Scott Walker redirected $15 million in state resources to create Wisconsin Fast Forward, a grant program to increase collaboration among local workforce investment boards (LWIBs), economic development commissions (EDCs), and technical colleges to develop sustained training pipelines that align with employer needs. Launched in March of 2013, the state reports improved communication among LWIBs, EDCs, and technical colleges, which are meeting more regularly to coordinate Fast Forward grants.

In 2014, **Washington** Governor Jay Inslee similarly signed an economic development restructuring bill, which reaffirmed the core tenets of a 2009 economic and workforce development coordination bill. Alignment across these entities is directed to occur at the state and local levels to focus on job creation, employment, wages, and access to job-specific training. Strategies include joint strategic planning and the identification and support of targeted industry clusters. In addition to collaboration with the workforce development system and community and technical colleges, the department of commerce is also directed to work with the state's 10 centers of excellence, which serve as a clearinghouse for education and training resources for specific target industries.

Use rigorous criteria to identify high-quality partnerships, expand where appropriate, and fill gaps as needed

A state-level entity working to coordinate and support regional and state-level partnerships can increase its effectiveness in several ways. It can establish criteria to identify high-performing partnerships and provide targeted support and assistance. It can then use those criteria to further develop a set of measurements or indicators of partnership outcomes and identify which partnerships are working well and which are not. Finally, it can use the authority of the state to certify partnership entities of a demonstrated high quality and support new partnerships to fill gaps.

A new regional partnership effort in **Massachusetts** provides an example of using a set of criteria for high-quality partnerships. The state has used a sector partnership approach for nearly three decades, funding hundreds of local partnerships through the Workforce Competitiveness Trust Fund. More recently, Governor Patrick announced a new $18 million Manufacturing Futures Fund to help fill more than 100,000 expected openings over the next 10 years left by an aging and retiring workforce across 7,000 diverse companies. The fund seeds the development of collaborative regional partnerships of employers, educators, and workforce and economic development officials for every region of the state with a significant manufacturing presence. Important to the approach is that the state is using its vast experience with sector partnerships to guide the development of seven specific qualities, identified by promising practice research, to serve as criteria for receiving state grant funds. The seven qualities are:

1. It is clear to all manufacturing employers, employees, and potential employees in the region that all public and private stakeholders are working together to address current and future middle-skill talent issues in manufacturing;
2. The region has the ability to effectively assess the middle-skills education and training needs of all its manufacturers, for both incumbent workers and new hires;
3. The region develops and offers effective education and training programs (including clearly defined career pathways and stackable credentials) that meet the needs of its manufacturers and address the actual existing capabilities of workers and job seekers, and adjusts those programs in real time as those needs and capabilities evolve;
4. The region has the ability to effectively recruit, assess, and guide a wide range of job seekers as candidates for these education and training programs, including those currently unemployed;
5. The region has opportunities for those who are not currently qualified as candidates for those education and training programs to become qualified (math skills, English language skills or otherwise);
6. The region has the ability to place participants in education and training programs into apprenticeship and other on-the-job training experiences as an integral part of the process; and
7. The region takes collective responsibility for assessing and addressing the effectiveness of each of these aspects, especially in placing program graduates in new or higher-level manufacturing jobs.

Colorado also is using criteria to further develop measurements or indicators of partnership outcomes and identify what is working. The Workforce Development Council (the state workforce investment board) and the department of labor and employment have championed a sector partnership approach to better meet the workforce needs of key industries for nearly a decade. During Governor John Hickenlooper's administration, the partnership support model began to evolve to emphasize outcomes across workforce development, economic development, and education. To help measure the activity of the state's regional partnerships and determine progress in developing career pathways systems, the council has drafted an evaluation plan with proposed metrics to be included in a current dashboard for indicators that change during the year, an annual scorecard summarizing key data points, and an in-depth annual report on partnerships activity.

Last, several states including **Iowa, Kentucky, Missouri, Oklahoma,** and **Oregon** have taken the approach of certifying high-quality partnerships according to a set of criteria and branding them as "work-ready communities." Kentucky's work-ready community system provides incentives to local communities to demonstrate collaboration among workforce boards, economic development agencies, and secondary and postsecondary education institutions. Criteria for certification are defined by the Kentucky Work-Ready Community Steering Committee, which consists of representatives from all major partners. The criteria for certification include the National Career Readiness Certificate holders, as well as other community-level indicators for high school graduation rates, community commitment, educational attainment, soft skills development, and Internet availability. As of November 2013, 30 counties were certified as work-ready or in progress, and another 48 counties were working on their applications.[15]

The resources below provide additional state examples on supporting partnerships among educators, workforce trainers, and industry.

Colorado's Statewide Sector Strategy Toolkit

State Resource: A toolkit for seeding and scaling partnerships and career pathways across the state.

Challenge: Provide tools and information to regional efforts to build partnerships.

Addressing the Challenge: The toolkit includes a link to the state's map of active partnerships, a full set of partnership materials for getting started, and information on the statewide summit and other regional meetings.

Maryland's Partnership Grants

State Resource: Materials for a statewide grant competition to create industry-led partnerships to advance the skills of the state's workforce.

Challenge: Ensure that state grant dollars are allocated effectively.

Addressing the Challenge: The state partnership grant competition was conducted in two stages, including a planning and implementation phase.

Illinois' Learning Exchanges Website

State Resource: An interactive website for the nine statewide industry partnerships.

Challenge: Provide a digital home for statewide partnerships that employers and the public can use.

Addressing the Challenge: The website provides a central home for news and information on all the statewide partnerships. The state also supports a shared learning environment with dashboards, learning maps, and resources that can be standardized for integration across the education and training system.

15 http://kwib.ky.gov/workready/news/WorkReadyNov2013.doc

Resources & Incentives: Modify the use of resources and incentives to support the attainment of the integrated vision

States have many resources and incentives that support and influence their existing education, workforce training, and economic development systems. The allocation of funds and staff resources is one of the most significant. In addition to state appropriations that support various portions of the education and training pipeline, states also can tap several federal funding streams, which carry various rules and regulations guiding their use.[16] But other incentive structures exist as well, such as locating programs within state government and measuring success or positive outcomes. Governors have the ability to change the current structure of state funds and incentives and can influence the use of federal funds in the state's education and workforce training systems to better align results and improve quality. To do so, they would be helped by an accurate accounting of the total size of state and federal resources available and the programs they support. With that in hand, they are better able to make adjustments both to the alignment of funds and incentives across the entire system, as well as measure the effectiveness and efficiencies of programs and services.

RESOURCES:
Guiding Questions for State Policymakers to Help Target Areas in Need of State Action

1. Have recent efforts been made to map the state and federal resources available to the entire education and workforce training system?
2. Have state policies and other incentives associated with the accountability and regulatory structure in the education and training system been reviewed to identify opportunities for reform and innovation?
3. Does the state have the education and training capacity required to fill gaps identified in the talent development pipeline for key industries in the state?
4. Which state programs or systems currently have incentives in place that allocate funding based on a set of outcome or performance metrics?
5. Are there opportunities to expand existing performance-based funding programs or propose new ones?

The experiences of several states suggest that the steps to modifying the use of resources and incentives to support the integrated vision are:

- Review state and federal funding to identify opportunities to increase alignment between education and training and the needs of the economy;
- Develop or strengthen state policies or actions that align resources and incentives in support of the vision; and
- Enact or broaden performance funding programs to increase the effectiveness and efficiency of a state's postsecondary, workforce, and career-tech system.

Review state and federal funding to identify opportunities to increase alignment between education and the needs of the economy

A wide range of funding streams support states' education and training pipeline. Creating a state map of those assets and their uses can provide the information required to implement a state's strategic plan and fulfill the governor's vision.

Indiana's Career Council developed an asset map of all publicly funded education, job-skills development, and career training programs as one of its first key activities. The map was developed to inform the council's strategic planning process by building an understanding of which resources (federal and state) were flowing through the state and had the flexibility to support the council's subsequent alignment activities.

16 Examples include the Workforce Investment Act, Wagner-Peyser Act, Trade Adjustment Assistance, Registered Apprenticeship, Unemployment Insurance, Adult Education, Temporary Assistance for Needy Families, Supplemental Nutrition Assistance Program Employment and Training, Carl D. Perkins Career and Technical Education Act, and Pell Grant.

Indiana policymakers were surprised to find that two-thirds of the $650 million in public funding identified represented state funds ($200 million being state financial aid). The results challenged conventional thinking that the bulk of public resources available for education and training were tied to inflexible, program-specific requirements. Thus, the Career Council found increased latitude to implement its strategic plan.

In **Virginia**, the state's Career Pathway Workgroup used its collaboration across eight member agencies to identify and map all existing funding streams related to education and training, including the amount of funding available, program target populations, services offered and outcomes. That complex information was organized into an easy-to-read brochure for policymakers and the public. It also is being used by the governor's Workforce Investment Board to repurpose existing funding to better support the development of middle-skill credentials aligned with Virginia's growing economy.

Develop or strengthen state policies or actions that align resources and incentives in support of the vision

With a map of state and federal resources completed, states are in a stronger position to analyze the way existing resources are used across agencies and programs that make up their education and training system. Included in that analysis should be a list of relevant structures that create various incentives in the system, such as how program outcomes are measured and held accountable or whether there is a requirement to align strategic plans across state agencies.

From that understanding, a new set of policies or actions can be implemented to fill gaps or address challenges by realigning resources and creating new incentives in support of the common vision. For example, in 2005 **Arkansas** identified a gap in its Temporary Assistance to Needy Families (TANF) training pipeline. Too few participants in the state's TANF program were exiting the program and re-entering the workforce. In response, the state used its budget authority over the TANF block grant to repurpose approximately 10 percent from cash assistance to education and training, subsequently creating the Career Pathways Initiative (CPI) pilot in six community colleges.

In 2007, Governor Beebe expanded the program by establishing a joint partnership between the department of higher education and the department of workforce services, expanding the initiative to all 25 of the state's community colleges, and using TANF funds to support a performance-based funding formula.[17] Since 2005, students meeting the TANF criteria have used CPI to earn more than 24,000 certificates and degrees.[18]

Arizona provides another example of a state realigning resources and incentives to fill an education and training gap. The state launched its sector partnership initiative at the end of the recession without funds to provide grants to seed new partnerships. Instead, the Arizona Commerce Authority and the Workforce Arizona Council (the state workforce investment board) embedded their priorities into the state workforce plan, guidance for local area workforce plans, state apprenticeship and career pathway programs, and proposals for federal grants.

To coordinate those activities across state agencies, Arizona reallocated staff time and resources by creating a Strategic Partnerships Committee as part of the council that includes leadership from the departments of education, economic security, and commerce.

Beyond shifting resources to drive alignment, states can realign incentives by requiring agencies to demonstrate progress on a set of common metrics that are shared with the governor's office and other state leaders. **Washington**'s Core Measures, developed in 1996 and vetted by 16 states as part of an NGA project in 2004, still serve as a model for integrated performance metrics across multiple education and training programs.[19]

17 Each college annually refreshes a set of priority industry-driven career pathway programs, led by active employer groups, and receives funds based on the previous year's performance in program enrollment, credential attainment, employment in the field of study, and six-month retention on the job.

18 K. Rosa. "To Help Families Locally, Changes are Needed at the State Level," Spotlight on Poverty and Opportunity, The Source for News, Ideas and Action, Ideas for Action Awards, Northwest Area Foundation, November 30, 2012.

19 In Washington, the performance metrics cut across 15 state and federal funding streams and seven operating agencies in Washington, including adult basic education, apprenticeships, community and technical college technical education, worker retraining, division of vocational rehabilitation, department of services for the blind, private career schools, secondary career and technical education, Workforce Investment Act adult, youth and dislocated worker programs, and WorkFirst.

All programs, in addition to their unique federal performance requirements, report publicly on five common measures: employment, earnings, credential attainment, participant satisfaction, and employer satisfaction. **New Jersey** is implementing a similar standard set of performance metrics, following a balanced scorecard model, for more than 50 federal and state-funded programs in its education and training pipeline to better ensure workforce programs are effective and aligned with industry demand. New Jersey also is developing a series of program dashboards to deliver the information to policymakers and program managers. The effort is made possible through a partnership between the department of labor and workforce development, the office of the secretary of higher education, and the department of education and supported through a Workforce Data Quality Initiative grant from the U.S. Department of Labor.

Virginia provides another example of aligning metrics in a comprehensive effort to track progress on the state's goals and actions as a way to change incentives by changing what people pay attention to and what they are held accountable to accomplish. The Workforce Development Strategic Plan creates a unifying vision for each of the eight agencies with responsibility for the education and training pipeline and its connection to the workforce. To better align and communicate its efforts, the Workforce System Report Card on the next page was developed to be used across each of its eight member agencies and then made available to the public. The process for creating the report card was complex, requiring 24 different education and training programs to agree to a single set of approximately 30 common metrics across six broad goals.

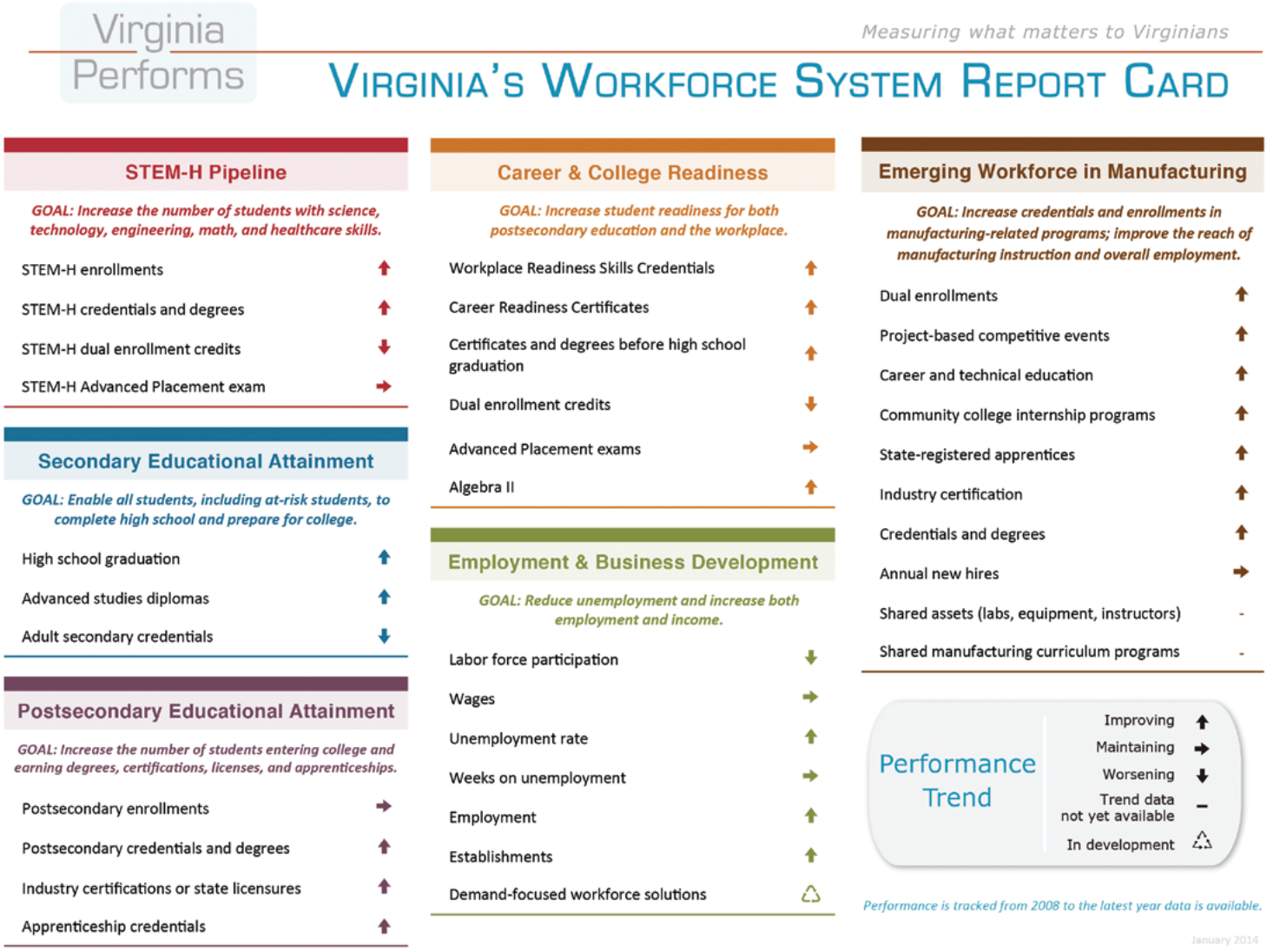
The National Career Readiness Certificate (NCRC) provides another example of creating new incentives in the education and labor markets. Twenty-three states are now using the NCRC to change the behavior of job seekers and employers. In **Iowa**, Governor Terry Branstad launched the Skilled Iowa initiative to elevate the need for work-related skills by encouraging or requiring the state's workforce centers, colleges, and high schools to offer the NCRC to assess abilities such as problem-solving, critical thinking, reading, and applied mathematical reasoning. As of May 2014, nearly 9,900 Skilled Iowa businesses representing more than 500,000 jobs—more than 30 percent of the state's employment—have agreed to consider the NCRC. Nearly 45,000 Iowans have earned an NCRC, including 8,000 high school students in the last year.

Increase the effectiveness and efficiency of a state's postsecondary, workforce, and career-tech system

Although realigning state resources and incentives to attain the state's vision is an important step, not all gaps in the education and training pipeline can be filled through greater alignment of the state system alone. Another important step is to expand the capacity of the current system by increasing the effectiveness and efficiency of key programs through performance funding initiatives.

Massachusetts is in its first year of implementing new legislation that distributes weighted funding to community colleges based on the number of graduates receiving a degree in a high-demand or STEM-related field. The implementation of this performance-based funding formula requires that the department of higher education work closely with the department of labor and workforce development to annually adjust the outcomes that the funding formula rewards—in this case identifying the high-need fields across the state and agreeing on the specific funding allocations for related degrees. In 2014, legislation was under consideration to expand performance-based funding to four-year institutions.

Another recent example is in **Wisconsin**, where the state has implemented a new performance-based model for funding the Wisconsin Technical College System (WTCS). Beginning in March 2014, 10 percent of state funding that WTCS receives will be contingent on the attainment of certain performance criteria. That percentage will increase to up to 30 percent by 2017. The metrics used to determine the funding align with Governor Walker's vision for workforce development, economic expansion and creation of family-supporting jobs central to economic vitality, stability, and quality of life in communities throughout the state.



Many instances exist of new state programs, national initiatives, or federal grant programs that attempt to change the structure of the current system to address a particular problem or challenge. Too often those attempts at reform come and go without altering how money is spent or how people are rewarded and success is acknowledged within the existing system. As these state examples demonstrate, enduring change happens when the resources and incentives within the current system shift in a manner that supports the goal or vision of the state. Additional tools and state examples for realigning resources and incentives are included on the next page.

Kentucky's Work-Ready Communities Toolkit

State Resource: Step-by-step guide for communities that want to by certified as work-ready.

Challenge: Communicate the value and process of work-ready certification to businesses, educators, trainers, and policymakers within the same community.

Addressing the Challenge: The guide provides steps for getting organized, gathering information, and filling out the application.

Tennessee's Outcome-Based Formula for Higher Education with Metrics that Connect to the Workforce

State Resource: An outcomes-based formula for funding public postsecondary institutions.

Challenge: Design a comprehensive formula for funding institutions.

Using the Tool: The formula rewards community colleges and universities for the production of specific outcomes that further the state's educational attainment and productivity goals.

Indiana's Asset Map

State Resource: An asset map template with instructions for completing the template

Challenge: Conduct an efficient and comprehensive mapping exercise of the state and federal resources available to the state's education and training pipeline.

Addressing the Challenge: The asset map template includes a suggested list of programs and information fields for collecting information, a list of instructions for completing the template, and an example of the information from Indiana's asset map.

Conclusion: Bring it all together

Preparing America's 21st century workforce to stay competitive demands gubernatorial leadership. Governors across the country are providing that leadership. As the state examples in this report demonstrate, significant efforts are underway to better align state education and training systems with the current and future needs of the economy. Increasing the educational attainment of individuals to provide access to the middle class and play a catalytic role in accelerating the economic growth of states requires a comprehensive state effort using all four of the policy components:

- Articulate and implement a strong vision connecting education and the needs of the economy to have more Americans achieve the "new minimum" of a postsecondary degree or certificate with labor market value;
- Integrate and use education and workforce data to inform policy, track progress, and measure success;
- Support and scale industry and education partnerships to get results; and
- Modify the use of resources and incentives to support the attainment of the integrated vision.

Because governors exert a significant influence on both public education and economic development, they are uniquely positioned to foster stronger connections between education and the workforce. Using a combination of the policy components outlined in this report, governors can do more to promote a comprehensive effort to align the education pipeline with the needs of employers and thus benefit their citizens and their economies.

NGA CENTER DIVISIONS

The NGA Center is organized into five divisions with some collaborative projects across all divisions. The NGA Center provides information, research, policy analysis, technical assistance and resource development for governors and their staff across a range of policy issues.

- Economic, Human Services & Workforce covers economic development and innovation, workforce development focused on industry-based strategies; pathways to employment and populations with special needs; and human services for children, youth, low-income families and people with disabilities.

- Education focuses on helping governors develop effective policy and support its implementation in the areas of early education, readiness, and quality; the Common Core State Standards, Science Technology Engineering and Math, and related assessments; teacher and leader effectiveness; competency-based learning; charter schools; data and accountability; and postsecondary (higher education and workforce training) access, success, productivity, accountability, and affordability. The division also works on policy issues related to bridging the system divides among the early childhood, K-12, postsecondary. and workforce systems.

- Environment, Energy & Transportation focuses on several issues, including improving energy efficiency, enhancing the use of both traditional and alternative fuels for electricity and transportation, developing a modern electricity grid, expanding economic development opportunities in the energy sector, protecting and cleaning up the environment, exploring innovative financing mechanisms for energy and infrastructure, and developing a transportation system that safely and efficiently moves people and goods.

- Health covers issues in the areas of health care service delivery and reform, including payment reform, health workforce planning, quality improvement, and public health and behavioral health integration within the medical delivery system. Other focus areas include Medicaid cost containment, state employee and retiree health benefits, maternal and child health, prescription drug abuse prevention, and health insurance exchange planning.

- Homeland Security & Public Safety focuses on emerging policy trends across a range of homeland security and public safety issues. Current issues include cybersecurity, prescription drug abuse, public safety broadband, sentencing and corrections reform, homeland security grant reform, justice information-sharing, and public health preparedness.

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