

# SHARED VISION, STRONG SYSTEMS

June 2014



**Alliance for Quality  
Career Pathways**

a project of CLASP

Framework  
Version 1.0

# Table of Contents

Acknowledgments	3
Section I: Introduction and About This Framework	5
Section II: Definitions and Conceptual Model	12
Section III: Criteria and Indicators for a Quality State Career Pathway System	17
Section IV: Criteria and Indicators for a Quality Local/Regional Career Pathway System	21
Section V: Career Pathway Participant Metrics	26
Appendix A: Methodology	35
Appendix B: DOL Six Key Elements and AQCP Framework	36
Appendix C: Glossary	37
Appendix D: Career Pathway Metrics Detail	43

# Acknowledgments

The Alliance for Quality Career Pathways Framework Version 1.0 was made possible by anchor support from the Joyce Foundation and additional support from the James Irvine Foundation and the Greater Twin Cities United Way. We are deeply grateful for the visionary program officers who, early on, saw the tremendous potential of this framework and invested in a tool that can help to improve career pathway systems across the country.

This framework was developed over two years using a consensus-based process. It has been a pleasure and an honor working with pioneering practitioner experts and agency leaders in career pathways from the ten leading states CLASP invited to participate in the Alliance. The following individuals were on Alliance state “travelling teams” and were our liaisons for each state. They volunteered hundreds of hours collectively to review multiple drafts and come to a consensus on the final version 1.0 herein; we are forever in their debt.

## Arkansas

**Abbie Robinson**, East Arkansas Community College; **Dr. Karon J. Rosa** and **Mark Lane**, Arkansas Department of Higher Education; **Sherri Bennett**, Arkansas Northeastern College

## California

**Linda Collins**, **Mike Williamson**, Career Ladders Project; **Debra Jones**, **Peter Davis**, **Richard Della Valle**, and **Van Ton-Quinlivan**, California Community Colleges Chancellor’s Office

## Illinois

**Brian Durham**, **Jennifer Foster**, **Dr. Karen Hunter Anderson**, and **Nathan Wilson**, Illinois Community College Board; **Peggy Heinrich**, Elgin Community College

## Kentucky

**Donna Davis**, **Harmony Little**, and **Shauna King-Simms**, Kentucky Community and Technical College System; **Elizabeth Kuhn**, Kentucky Cabinet for Workforce and Education; **Angie Taylor**, Gateway Community and Technical College; **Dr. Tammy Owen**, Henderson Community College

## Massachusetts

**Marta E. Montleon**, Diman Regional Vocational High School; **Marybeth Campbell**, Executive Offices of Education, Labor and Workforce Development and Housing and Economic Development; **Rebekah Lashman**, **Susan Lange**, and **Theresa Rowland**, Commonwealth Corporation

## Minnesota

**Alyssa Klein**, **Annie Welch**, and **Judy Mortrude**, Minnesota Department of Employment and Economic Development; **Marguerite Dummer**, Hennepin Technical College; **Mark Toogood**, Minnesota Department of Human Services; **Melanie Burns**, Minnesota State Colleges and Universities

## Oregon

**Dawn DeWolf**, Lane Community College; **Jane Hodgkins**, Oregon Coast Community College; **Mimi Maduro**, **Paul Schroeder**, and **Shalee Hodgson**, Oregon Department of Community Colleges and Workforce Development

## Virginia

**Elizabeth Creamer**, Advisor for Workforce Development, Secretary of Commerce and Trade, Office of Governor Terence McAuliffe; **Elizabeth J. Moran**, **Randall L. Stamper**, and **Wendy Kang**, Virginia Community College System; **Jeanian Clark**, Lord Fairfax Community College; **Sharon Peery**, Southwest Virginia Community College; **Shawn Avery**, Peninsula Council for Workforce Development

## Washington

**Jon Kerr**, **Marie Bruin**, **Tiffany Merkel**, and **Tina Bloomer**, Washington State Board for Community and Technical Colleges; **Paula Boyum**, Bellevue College; **Rod Taylor**, Spokane Community College

## Wisconsin

**Amy Charles**, **Leah Childress**, **Sandy Schmit**, and **Willa Panzer**, Wisconsin Technical College System; **Bethany Leonard**, Waukesha County Technical College; **Linda Preysz**, Wisconsin Department of Workforce Development

We also thank the members of our **National Advisory Group** who volunteered many hours reviewing

multiple drafts and shared their expertise and experience with us. They include: **Judy Alamprese** and **Karen Gardiner**, Abt Associates; **Debra Bragg**, Office of Community College Research and Leadership; **Mary Clagett**, Jobs for the Future; **Kim Green**, National Association of State Directors of Career Technical Education Consortium; **Gary Hoachlander**, ConnectEd California; **Lennox McLendon**, National Council of State Directors for Adult Education; **Israel Mendoza**, Consultant; **Darlene Miller**, National

Council for Workforce Education; **Deborah Mills**, Center for Occupational Research and Development; **Nan Poppe**, Consultant; **Ann Randazzo** and **Valerie Taylor**, Center for Energy Workforce Development; **Brandon Roberts**, Working Poor Families Project; **Bob Sheets**, Consultant; and **Mala Thakur**, National Youth Employment Coalition. **Eric Seleznow**, currently the Deputy Assistant Secretary for the Department of Labor's Employment and Training Administration, served on the National Advisory Group in his former position as state policy director at the National Skills Coalition.

# Section I: Introduction and About this Framework

## A. Introduction

*The Alliance for Quality Career Pathways* is a partner-driven, CLASP-led initiative funded by the Joyce Foundation, the James Irvine Foundation, and the Greater Twin Cities United Way. The purpose of Phase I from July 2012 through May 2014 was to invite and work with ten leading career pathway states—**Arkansas, California, Illinois, Kentucky, Massachusetts, Minnesota, Oregon, Virginia, Washington, and Wisconsin**—to develop a consensus framework that includes: (1) definitions and a conceptual model of career pathway systems, pathways, and programs; (2) criteria and quality indicators for career pathway systems; and (3) a set of interim and outcome metrics for measuring and managing career pathway participant progress and success. The first part of the framework describes the elements of a quality career pathway system; the second assesses how well the system has been built; and the third measures how well the system performs regarding participant success.

The Alliance for Quality Career Pathways (Alliance or AQCP) state and local regional partners are leading the nation in experience with developing and taking to scale career pathways. Phase I of the Alliance also included a National Advisory Group of stakeholders representing the education continuum from high school career and technical education through postsecondary education and a multitude of adult education and workforce development perspectives. This advisory group provided expert advice and feedback.

The goal of the Alliance is to help state and local/regional career pathway partnerships strengthen their systems—partnerships, policies, funding, and data/measures—to build, scale, and sustain quality career pathways. Specific objectives under this goal include:

- Strengthen local/regional economies through creation of industry sector-based career pathways to fill critical skill shortages identified by employers and use of labor market intelligence.<sup>1</sup>
- Improve the quality of industry sector-based career pathways and programs in order to help individuals with varying levels of abilities and needs improve their skills and earn credentials to help them move from poverty to achieve economic security and career advancement.
- Reduce racial and ethnic disparities in education and employment while at the same time increasing diversity in companies' talent pipelines.
- Scale up and sustain career pathways in local regions and states, creating comprehensive partnerships that include secondary career, technical, and postsecondary education, as well as adult education and workforce development services.
- Make progress toward establishing a consistent, transparent, and shared understanding of “quality” across the many agencies and organizations involved in career pathways. At this critical stage in career pathway system development, a shared understanding of quality will be helpful as interest continues to grow in scorecards, return on investment, and other more visible and cross-cutting performance models for youth and adult education and employment services.

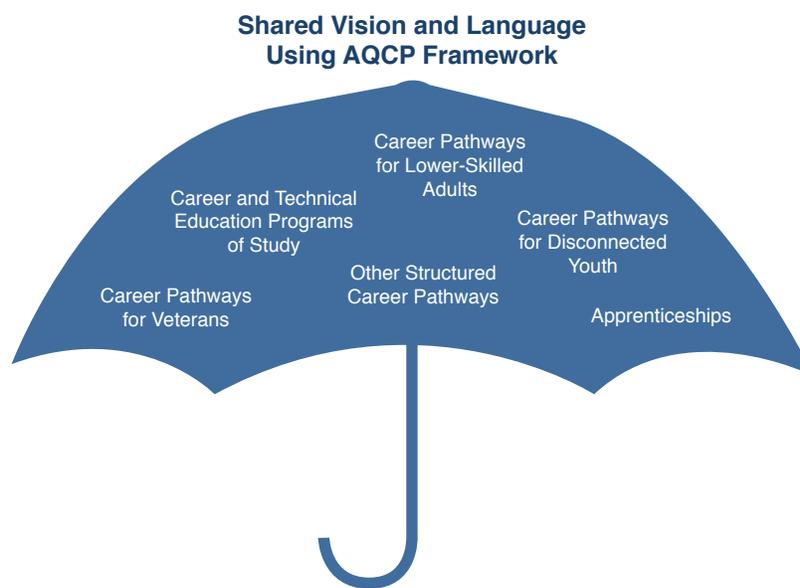
<sup>1</sup> See glossary in Appendix C for definition of labor market intelligence.

- Help state and local/regional career pathway partnerships move closer to shared accountability models necessary to smooth the path to more complete adoption of career pathways and systems. The set of career pathway participant metrics proposed in this framework can lay the groundwork for pilot-testing shared accountability models.
- Help state and local/regional career pathway partnerships improve and prepare for more extensive and rigorous evaluation of career pathways and systems. Public and private investors increasingly focus investments on “evidenced-based” practices and require more

rigorous evaluation. The Alliance framework provides a set of shared participant metrics career pathway partners can pilot to prepare for more rigorous evaluations. The framework’s comprehensive set of criteria and indicators can help prepare partners for evaluation of *career pathway systems* that are already beginning to emerge and will continue with increasing investments in “systems” versus simply “programs.”<sup>2</sup>

We aim for the Alliance framework to support an inclusive range of career pathways and programs—from youth to adult—to build a shared career pathway system using quality criteria and indicators and participant metrics (see figure 1).

Figure 1: An Umbrella Framework for Many Types of Career Pathways



<sup>2</sup> The Joyce Foundation funded the *Shifting Gears* system change initiative from 2007 to 2012. The Office of Career, Technical, and Adult Education (OCTAE) in the U.S. Department of Education began investing in policy frameworks supportive of career pathways with the *Policy to Performance* initiative and in career pathway systems with the *Advancing Career and Technical Education in State and Local Career Pathways Systems* project launched in 2012. OCTAE also launched the *Technical Assistance for States Developing Career Pathway Systems* earlier this year. Most recently, the fourth and final round of the TAACCCT (Trade Adjustment Assistance Community College and Career Training) grants provides additional funding to successful applicants proposing to advance state career pathway systems.

Today’s education and workforce development systems were designed for different times when credentials were not required by nearly two-thirds of the workforce<sup>i</sup> and lifelong learning was more avocational than a key ingredient to sustained individual economic security and global competitiveness.<sup>ii</sup>

As such, these systems were never designed to provide all workers with a seamless path to earning credentials and, despite all good intentions, have shortcomings and disconnects that can block the road to educational and economic success.

The career pathway approach reorients existing education and workforce services from myriad disconnected programs to a framework that focuses on the workforce needs of employers and on individuals in need of education and training to be successful on their career paths (see section II for the AQCP definition of the career pathway approach). In some communities, the career pathway approach includes an explicit focus on reducing racial and ethnic disparities in education and employment while at the same time increasing diversity in employers’ talent pipelines. Still other communities have merged the sector strategy approach with a career pathway approach in order to meet the needs of both workers/job seekers and employers.

The career pathway approach focuses on systems change to provide clear transitions, strong supports, and other elements critical to the success of participants. It is not simply a new model; it is a new way of doing business.<sup>3</sup> And a new way of doing business is necessary to make any progress on the significant education and skill challenges we face as a nation. For instance, according to a 2013 international assessment of adult skills, the *Survey of Adult Skills (PIACC)*, 18 percent of U.S. adults have low literacy skills, and 30 percent have low numeracy skills.<sup>iii</sup> The United States scored below the international average in all three basic skills domains assessed—significantly below average in the area of numeracy.<sup>iv</sup>

<sup>3</sup> Career pathways are not the only “way of doing business,” but should be a key strategy in a state or local/regional plan to build a strong workforce. Other important strategies include customized training, transitional jobs, degree completion strategies, among others.

These skill levels are too low for adults to succeed in postsecondary education, and many of these low-skilled adults struggle to succeed in the workplace.

Additionally, the United States has slipped from being an international leader to 12<sup>th</sup> among the 36 Organisation for Economic Co-operation and Development (OECD) countries in the percentage of young adults (ages 25 to 34) who have completed college.<sup>v</sup> Stronger career pathways for young people—especially those with lower skills and who may be disconnected from school and/or work—could help improve college completion and credential attainment. Finally, career pathways can help address our persistent challenge in meeting employers’ need for skilled workers.<sup>vi</sup> This approach not only improves skill and credential attainment; it also deeply engages employers and incorporates sector strategy principles, which helps to increase the relevancy and labor market value of the skills and credentials earned and participants’ employment prospects.

The Alliance will continue with a Phase II from June 2014 through December 2015 as a network of states and local regions dedicated to building quality career pathway systems, pathways, and programs. These career pathway partnerships will use the Alliance for Quality Career Pathways 1.0 Framework to identify strengths and areas for improvement in their systems. They also will also make progress on using shared career pathway participant metrics to continuously improve the performance of their systems.

## B. About this Framework

### 1. The Purpose and Parts of the Framework

The AQCP 1.0 Framework is a concrete resource to assist with the Alliance goal and objectives shared above. The framework includes three parts:

- a) Definitions and a conceptual model provide a more precise understanding of career pathway systems, pathways and programs, building upon past definitions and frameworks. Career pathway partners can use these definitions and conceptual model to develop a shared understanding of quality systems, pathways, and

programs they are collaborating to build. A more precise understanding is necessary to build systems, pathways, and programs strong enough to hold up under rigorous evaluation.

- b) Criteria and indicators for quality career pathway systems, pathways, and programs established for state and local/regional levels. These criteria and indicators can help partners build strong, functioning career pathways, which is a prerequisite to measuring the ultimate test of quality: successful participant outcomes and local impact. Additionally, a shared framework of quality criteria and specific indicators can help partners develop a continuous improvement process for successful cross-agency systems, pathways and programs. The AQCP criteria and indicators are based on the best collective “wisdom from the field” in order to assist partners in building quality career pathway systems, pathways, and programs while the evidence base for this approach grows.
- c) Career pathway participant metrics designed for partners to measure and manage the success of their career pathway systems, pathways, and programs. The menu of metrics proposed in this framework includes many already in use for performance accountability as well as metrics not currently used in state or federal systems. A unique feature of the AQCP metrics is that they are meant to measure the results of specific career pathways that cross systems. As such, they are designed primarily for continuous improvement purposes and are best positioned at this time to be used in pilot-testing with specific career pathways and programs to explore each metric’s utility for continuous improvement and their potential as a performance measurement system. The appropriate uses of the metrics are discussed further in Section V.

## 2. How the Framework Was Developed and Who Should Use It

The Alliance implemented an extensive and thorough process for developing the AQCP 1.0 Framework (see Appendix A for methodology). CLASP staff reviewed dozens of reports, studies, and other frameworks (see endnotes marked with an asterisk for emerging evaluation evidence supporting career pathways and see the AQCP *Reference Report* for documentation of other reports and frameworks that have informed the Alliance framework). Alliance partners in the ten Phase I states have shared and received feedback on the framework from dozens of stakeholders in their states. CLASP has presented the framework to over 600 people at various conferences and meetings. More than 550 people downloaded the “beta” or draft version of the framework for review in the last six months of 2013 (the review and feedback period).

The primary purpose of Version 1.0 of the framework is to help partners build, scale, and sustain career pathway systems, pathways, and programs. We anticipate that a variety of stakeholders will use the AQCP 1.0 Framework as described below.

State and local practitioners and career pathway system partners could find value in the framework by:

- Using the definitions and conceptual model to inspire a shared vision for career pathways systems, pathways, and programs;
- Using the criteria and indicators to guide development and improvement of career pathway systems, pathways, and programs;
- Using the career pathway participant metrics for continuous improvement and shared accountability across the various public and private systems and partners involved in career pathways (e.g., career and technical education, community colleges, workforce, adult education, human services, employers);
- Using it to communicate with each other—including employer partners—and with other stakeholders about the concept and value of career pathways; and

- Using it to communicate with participants about the concept of career pathways and the value of specific career pathways. Also, data on select metrics could be used to share information about the success of participants in specific career pathways.

Federal staff and career pathway partners (in Washington, D.C. and in regional offices) may find the framework to be a useful tool for assisting states and local regions in developing and strengthening career pathway systems, pathways, and programs. CLASP has worked closely with the U.S. Department of Labor (DOL) and Jobs for the Future to align the AQCP 1.0 Framework with the *Six Key Elements* framework in the *Career Pathways Toolkit: Six Key Elements for Success* developed for DOL in 2011 to help states relatively new to career pathways understand the key elements necessary to build pathways and support systems (see Appendix B). The DOL *Six Key Elements* can be used by partners to create a strategic plan for building career pathways while the AQCP 1.0 Framework provides the key indicators that can be used by partners in an ongoing operations review. ***Essentially, the Six Key Elements help partners build systems, and the AQCP framework helps partners check the quality of what has been built.***

Public, private, and philanthropic funders could use the framework to guide investments and technical assistance to help partners adopt a shared vision and build quality systems. We have learned through the framework development process that, although many Alliance partners have developed fairly robust career pathway programs, few have had the capacity or significant investment required to build more comprehensive career pathways or the systems—the cohesive combination of partnerships, resources, policies, and data/shared measures—to support them. Governors, legislators, and funder collaboratives may find this framework especially useful as they invest in career pathway systems and strive to develop a cross-funder shared vision and funding strategy. Such a shared vision and strategy would be useful for more cohesive investments and policy agendas.

Researchers may find the criteria and indicators in the framework useful in developing hypotheses for evaluations of career pathways and systems to

test which system indicators are correlated to better participant outcomes (using the AQCP metrics). Researchers have conducted some comparative evaluations of career pathway programs, i.e., evaluations of Washington State’s Integrated Basic Education (I-BEST), and are currently undertaking two random assignment evaluations of career pathway programs, i.e., *Innovative Strategies to Improve Self-Sufficiency* (ISIS) initiative and *Health Professions Opportunity Grants* (HPOG).<sup>vii</sup> However career pathways and systems do not lend themselves to comparative and random assignment evaluations. Therefore, a new method of measuring career pathway and system efficacy and impact is needed, such as a theory of change evaluation. We believe the AQCP framework could be a helpful starting point for developing a new method(s).

The AQCP criteria and indicators are based on Alliance partners’ experiential understanding of what works (“wisdom from the field”); however, research and evaluation are required to validate this work. Such evaluation would help to move the field from AQCP 1.0 system indicators toward evidence-based standards or benchmarks of quality systems and pathways. Until more career pathway systems are operational and robust enough to withstand rigorous evaluation, the best role for researchers is to conduct *formative* evaluations that help career pathway partners, funders, and the field better understand the current maturity level of career pathway systems and what it really takes to build, scale, and sustain them.

## Text Box 1: Examples of How the Alliance Partners and Others Have Used the AQCP Framework to Date

While still under development, the AQCP framework has proven useful to Alliance partners and other states. For example:

### *Use of AQCP Definitions and Conceptual Model*

Gateway Community and Technical College in **Kentucky** has previous experience with career pathways. College administrators are currently working with their employer partners on a fifth career pathway that is focused on logistics. The new Logistics Career Pathway consortium employers have been using the AQCP definitions and conceptual model to build multiple pathways in the logistics sector that include certificates and an associate degree. The plan is for the employer partners—22 logistics companies to date—who have joined together in a consortium to meet monthly, hosting at each of their companies. The Workforce Solutions and Innovation Division, which acts as the R&D for the college, has found using the AQCP model to be a bonus in their work on this logistics pathway.

**Missouri** (not an Alliance state in Phase I) is using the framework to guide the development of the state’s first-ever career pathways pilot initiative in customer service for young adults who recently transitioned from foster care. Partners are using the framework to help guide career pathway system building at both the local/regional and state levels.

### *Use of AQCP Criteria and Indicators for State and Local/Regional Systems*

**Minnesota** 2013-2014 FastTRAC Adult Career Pathway grantees completed a “beta” version of the self-assessment tool (system criteria and indicators) as a formative assessment of their career pathway programs and system. Experienced career pathway partners report the assessment tool provided them the opportunity both to celebrate their successes and make concrete plans for future work.

### *Use of AQCP Career Pathway Participant Metrics*

The Illinois Community College Board (ICCB) has collaborated with state education and workforce partners over the last year to establish a common vision and plan of action for building a cost-effective distributed education and workforce longitudinal data system that can be maintained and sustained. Among the Illinois Longitudinal Data System (ILDS) requirements, functions, and expectations are the establishment of a set of tools, systems, and processes internal to ILDS Agencies and shared across ILDS Agencies to support analysis and understanding of lifelong education and workforce policies and program outcomes. As part of ILDS and the parallel Workforce Data Quality Initiative (WDQI), Illinois is expanding and enhancing current Education to Workforce Performance Pipeline Measures. Illinois agencies have incorporated the AQCP metrics as part of the new pipeline measures and have identified data systems to track career pathway success across the education-to-workforce pipeline.

**Virginia’s** work with CLASP and the Alliance for Quality Career Pathways inspired the Commonwealth’s Career Pathways Work Group, comprised of representatives of eight agencies with responsibilities for 24 federal- and state-funded education, economic and workforce development, and human services programs to collaborate with the Council on Virginia’s Future to produce the Commonwealth’s first annual Workforce Report Card. Metrics included indicators of work readiness for all Virginians—from middle school students

to emerging, incumbent, transitional, and displaced workers. These indicators include STEM-H pipeline (Science, Technology, Education, Math, and Health) of program enrollment, workforce credentials, and degrees; Secondary and Postsecondary Education Attainment (high school and college graduation, industry certifications and licensures, apprenticeship credentials); Career and College Readiness (career readiness certificates, AP exams, high school “gateway” course completions like Algebra II), and Employment and Business Development (labor force participation, wages, new business establishments). Additional indicators are included for each section. Report cards are available for both the Commonwealth and its regions.

The Commonwealth’s work with the Alliance has also fueled two additional sections of the report card, including one to be released for the first time in June 2014. The first of these sections provides data on education and training capacity and pipeline development in a select industry cluster that is an economic development focus in Virginia. Last year’s report card featured manufacturing and included data on pipeline development ranging from dual-enrollment manufacturing-related courses in high school to certification attainment to the sharing of assets like labs, equipment, curricula, and instructors between education institutions and programs. In June, the Council on Virginia’s Future, the lead developers of the report card, will release the first report on regional collaboration to effect workforce solutions in targeted industry sectors. In short, the report card will for the first time document progress and best practices in regional career pathways system development.

CLASP and the Alliance for Quality Career Pathways were early advisors and supporters of Virginia’s Workforce Report Card, which has informed the work of the Governor’s Office, the Virginia Workforce Board, and the Virginia Chamber of Commerce’s Blueprint VA (an eight-year business plan for the Commonwealth), as well as that of local Workforce Investment Boards (WIBs).

## Section II: Definitions and Conceptual Model

The **career pathway approach** connects progressive levels of education, training, support services, and credentials for specific occupations in a way that optimizes the progress and success of individuals with varying levels of abilities and needs. This approach helps individuals earn marketable credentials, engage in further education and employment, and achieve economic success. Career pathways deeply engage employers and help meet their workforce needs; they also help states and communities strengthen their workforces and economies.<sup>viii</sup>

This approach is not simply a new model; it is a systems-transformation strategy.<sup>4</sup>

The career pathway approach can benefit a wide variety of participants including those who are younger or older, traditional or nontraditional, and on an academic or career and technical path. Career and technical education (CTE) programs of study, including those that lead to industry recognized credentials, are a critical component of career pathway systems, along with pathways serving lower-skilled adults, high school students, disconnected or “opportunity” youth, veterans, incumbent workers, and other targeted populations. Apprenticeships leading to industry recognized credentials also are important options in career pathway systems. State and local/regional partners, including employers, may want to think about framing their diverse career pathway efforts as a “suite” operating within one career pathway system.

The framework of system-building criteria and career pathway participant metrics proposed here is most applicable to the types of career pathway systems, pathways, and programs focused on adults and out-of-school youth in occupational career pathways. However, many of the criteria, indicators, and metrics could be applicable to those for other populations, such as secondary and postsecondary career and technical education students. We encourage education, workforce, and employer partners to think holistically

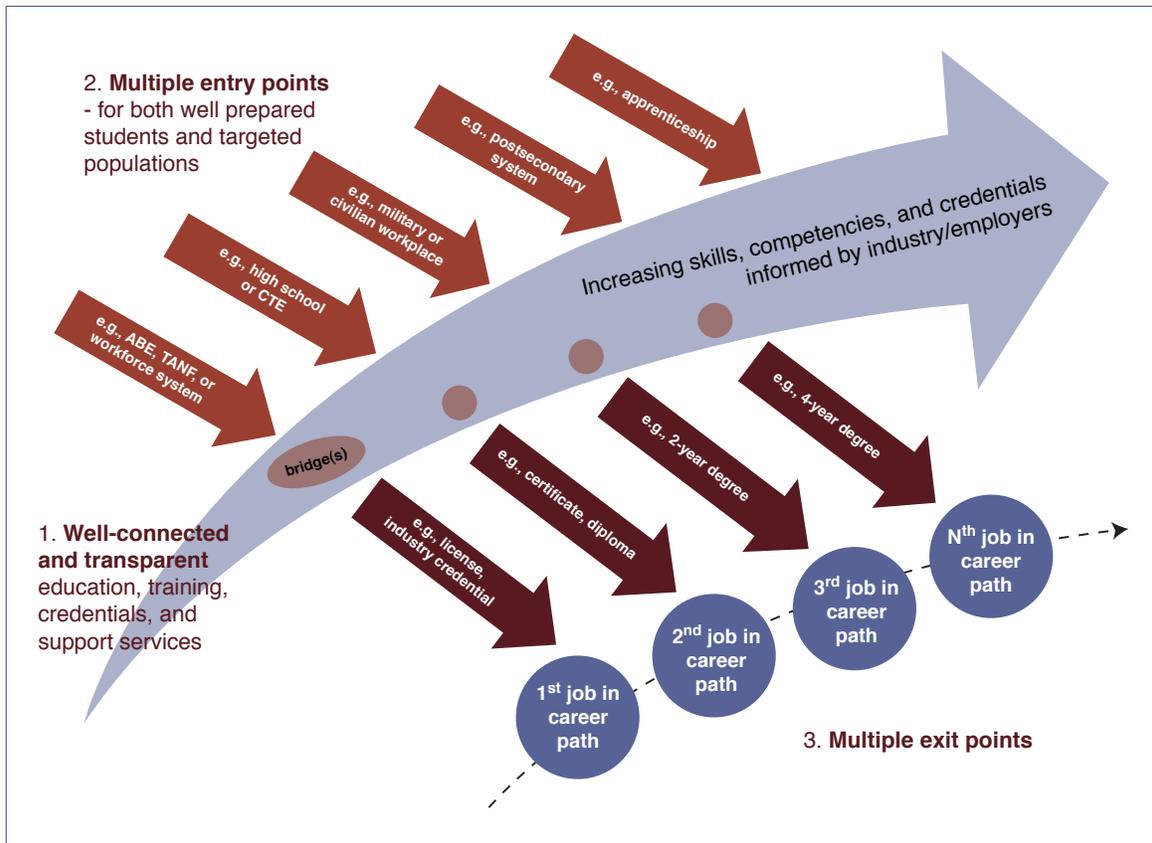
about their career pathway efforts and develop cohesive systems to support them.

**Career pathways** operationalize the career pathway approach and include three *features* (see figure 2 and text box 2):

1. **Well-connected and transparent education**, training, support services, and credentials within specific sectors or cross-sector occupations (often delivered via multiple linked and aligned programs);<sup>ix</sup>
2. **Multiple entry points** that enable well-prepared students as well as targeted populations with limited education, skills, English, and work experiences to successfully enter the career pathway. Targeted populations served by career pathways may include adult education or other lower-skilled adult students; English language learners; offenders or ex-offenders; certain high school students; disconnected or “opportunity” youth; some former military personnel; un- or under-employed adults; or others.
3. **Multiple exit points** at successively higher levels leading to self- or family-supporting employment and aligned with subsequent entry points.

<sup>4</sup> Career pathway partnerships may want to follow this definition with more information on their specific career pathways efforts and initiatives.

Figure 2: Three Essential Features of Career Pathways



For example, South Central College, a community and technical college in Minnesota, and its partners have built a set of health care career pathways that offers multiple entry points for different types of participants including lower skilled adults entering through a Minnesota FastTRAC bridge program, high school students entering through career and technical education, and traditional college students entering through the traditional college door. College and career navigation services are available for participants, and support services are tailored to individual needs. Partnerships with Workforce Investment Act Vocational Rehabilitation, Adult, and Youth program partners as well as Adult Basic Education ensure that academic and personal supports are part of the pathway for participants who need them. The pathway connects a variety of health care credentials to fit the lives of busy working parents or younger, more traditional students. Employment placement and retention services help participants who want to enter the workforce after obtaining the initial Nursing Assistant credential as well as participants who continue into longer programs. All credits and certificates count toward the next credential in the pathway, allowing participants who “stop out” for

work to come back onto the pathway with all their prior accomplishments recognized.

The purpose of aligning the offerings, entry points, and exit points in career pathways is to facilitate participants’ transitions through the pathway until they meet their goals, which generally are to get a good job and earn more money.<sup>x</sup> Participants may stop out of the career pathway at certain milestone points, i.e., after earning a credential, similar to traditional students stopping out between earning an undergraduate degree and a master’s or professional degree. Ideally, career pathway system partners have implemented various strategies and tools e.g., academic advising and supports, career navigation, and support services, to help participants continue along the pathway when they are ready.

Sometimes, the term “stackable credentials” is used interchangeably with “career pathways.” However, they are not the same. The U.S. Department of Labor and the Alliance for Quality Career Pathways define a stackable credential as “part of a sequence of credentials that can be accumulated over time to build individuals’ qualifications and help them move

along a career pathway up a career ladder to different and potentially higher paying jobs” (see glossary). Therefore, stackable credentials corresponds to just the first feature of a career pathway described above (well-connected offerings). Career pathways are more extensive and comprehensive efforts. Stackable credentials that are part of a quality career pathway system should be informed by labor market information and demonstrate evidence that they are valuable to employers and participants.

All three *features* of career pathways correspond to career and technical education programs of study. Although the statutory definition of programs of study in the Carl D. Perkins Career and Technical Education Act of 2006 (see glossary) focuses on the first essential feature of career pathways in the AQCP definition—well-connected education, training, etc.—as implemented, many of the more comprehensive programs of study also include and integrate the four essential career pathway *functions* described below. Career pathways and any linked and aligned programs that are part of the career pathway include four essential *functions*.<sup>xi</sup>

1. Participant-focused education and training;
2. Consistent and non-duplicative assessments of participants’ education, skills, and assets/needs;
3. Support services and career navigation assistance to facilitate transitions; and
4. Employment services and work experiences.

Examples of each of these four functions can include:

**Participant-focused education and training:**

- contextualized curriculum and instruction
- redesigned and accelerated remedial education<sup>xii</sup>
- GED-to-college bridge programs<sup>xiii</sup>
- integrated or concurrent education and training<sup>xiv</sup>
- learning communities<sup>xv</sup>
- chunked or modularized curriculum and instruction
- competency-based curriculum<sup>xvi</sup>
- self-paced instruction (may also be “guided” self-paced)
- technology-enabled, online, and/or hybrid instruction

**Text Box 2: Career Pathway and Program Features and Functions**

Essential **features** of quality career pathways include:

1. **Well-connected and transparent education, training, credentialing, and support service offerings** (often delivered via multiple linked and aligned programs);
2. **Multiple entry points** that enable well-prepared students as well as targeted populations with limited education, skills, English, and work experiences to successfully enter the career pathway; and
3. **Multiple exit points** at successively higher levels leading to self- or family-supporting employment and aligned with subsequent entry points.

Essential **functions** in quality career pathways and programs include:

1. Participant-focused education and training;
2. Consistent and non-duplicative assessments of participants’ education, skills, and assets/needs;
3. Support services and career navigation assistance to facilitate transitions; and
4. Employment services and work experiences.

- education and training offered at times and places and in formats that work for the targeted population—including non-semester-based schedules, block schedules, evening/weekend schedules, and employer-based education

**Support services:**<sup>xvii</sup>

- child care
- transportation assistance
- housing assistance
- mental health and counseling
- personal success skill development, such as reasoning, task flexibility, problem solving, planning, and execution skills

- workplace skills, such as understanding workplace etiquette, working in teams, etc.
- academic advising and supports (academic advisors, tutoring, learning communities, etc.)
- digital literacy skills
- leadership development for youth-focused pathways and programs
- citizen development for some pathway programs for youth and immigrants

**Career navigation assistance:**

- career exploration
- career coaching
- career navigation assistance

**Employment services:**

- assistance with resume writing
- mock interviews
- jobs fairs
- assistance finding employment

**Work experiences:**

- work simulations
- job shadowing
- on-the-job-training
- internships
- transitional jobs

Career pathways are diverse in the specific combinations of services they include and in the intensity of the service levels. In fact, one of the strengths of the career pathway approach is that the pathways are customized to the targeted industry, target population, and the local partners and context. That said, all career pathways and any linked and aligned programs should have at least some level of each of the features and functions described above.

The Alliance acknowledges that funding is limited to provide all four functions in an integrated comprehensive manner and not all career pathway participants will require a full measure of all of the functions. However, experience on the ground demonstrates that successful efforts creatively leverage resources from multiple partners—including sometimes from the participants themselves, i.e., peer

**Figure 3: Four Essential Functions of Career Pathways and Programs**



tutoring, carpools, etc.—to deliver the four essential functions of career pathways.

Career pathways and programs also vary in their length and number of credentials participants can earn. Career pathways include programs built within existing education systems (e.g., high school career and technical education, community colleges) but also include new programs built for disconnected youth or lower-skilled adults, such as bridge programs.<sup>5</sup>

A **career pathway system** is the cohesive combination of partnerships, resources and funding, policies, data, and shared accountability measures that support the development, quality, scaling and “dynamic sustainability” of career pathways and programs for youth and adults (see glossary for definitions of terms). A career pathway system is an overarching frame and is not couched within any one public education,

<sup>5</sup> For more information on career pathway bridge programs, see *Beyond Basic Skills*, by Marcie Foster, Julie Strawn, and Amy Ellen Duke-Benfield, CLASP, 2011 and *Farther Faster*, by Julie Strawn, CLASP, 2011.

workforce, or other system; however, one system may take the lead on developing the career pathway partnership. The value of a career pathway system is that it connects and aligns all other related public systems to each other and to private and non-profit partners. A career pathway system is not simply a short- or medium-term partnership assembled for the purposes of an initiative; however, these temporal partnerships can contribute to system building.

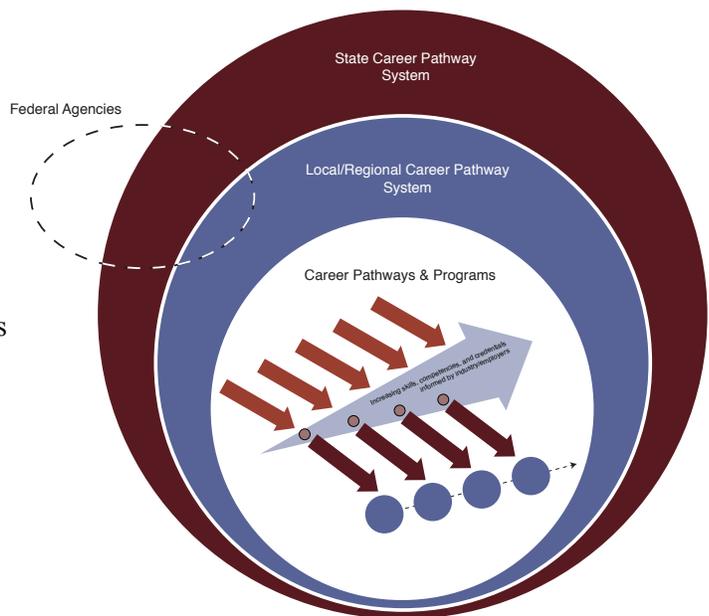
Career pathways and programs are the “heart” of career pathway systems and are, ideally, supported by an aligned and integrated local/regional career pathway system (see figure 4). The most efficient local/regional systems will build a few comprehensive career pathways within regional in-demand sectors and create multiple entry points to these pathways for various populations as well as provide the necessary services and supports to help individuals succeed. Ideally, a career pathway system should try to build one career pathway or a set of interrelated career pathways within each targeted industry sector and provide multiple entry points and customized career pathway functions for various types of individuals to succeed in the pathway. This would reflect a truly aligned, shared, and efficient system.

Ideally, a strong state career pathway system supports local/regional systems. A feedback loop between the state system, the local/regional system, and the federal agencies is important for ensuring that each learns from the other and mutually reinforces one another. For example, career pathway efforts have struggled with the poor alignment of federal performance measures between education and workforce programming, the lack of shared definitions for common performance accountability terms used across systems, a disconnected set of performance reporting periods, and other barriers to partners working collaboratively on a shared vision and strategy.

Other federal policies or lack thereof also pose barriers. For example, the absence of federal guidance clarifying that career pathway students in aid-eligible programs are eligible for student financial aid has stymied the development of aid-eligible career pathways. Also, the elimination of federal financial aid for students who do not have a high school diploma or equivalent but can prove their ability to benefit from college poses a barrier.

On the other hand, federal guidance and investments can and have been supportive of career pathways. For example, federal discretionary grant programs have provided opportunities for states and local regions to build and scale career pathways; the Office of Career, Technical, and Adult Education has issued clear guidance on how to use adult education funds for integrated education and training; and both the departments of labor and education have provided technical assistance on building career pathway systems, pathways, and programs. Similarly, state policies and practices can have a supportive or a dampening effect on career pathways.

Figure 4: Career Pathway Systems, Pathways, and Programs



## Section III: Criteria and Indicators for a Quality State Career Pathway System

The public, private, and nonprofit partners in a quality state career pathway system adhere to the criteria in text box 3.<sup>6</sup>

### Text Box 3: Criteria for Quality State Career Pathway Systems

1. **Commit to a Shared Vision and Strategy:** State system partners—in conjunction with local/regional partners—are committed to a shared vision of industry sector-based career pathways for youth and adults and to a strategy for building, scaling, and dynamically sustaining state and local/regional career pathway systems.
2. **Engage Employers and Integrate Sector Strategy Principles:** State system partners engage multiple employers, business associations, and labor unions in the state career pathway system and follow sector strategy principles including being demand-driven; employers are partners, not simply customers, of the career pathway system.
3. **Collaborate to Make Resources Available:** Each system partner identifies, prioritizes, and leverages resources available for career pathway systems, pathways, and programs.
4. **Implement Supportive State Policies:** State system partners implement supportive policies for career pathway systems, pathways, and programs.
5. **Use Data and Shared Measures:** State system partners use data to assess, demonstrate, and improve career pathway participant outcomes. (See Section V for shared measures.)

These criteria are further specified with the following indicators. All career pathway systems should strive to meet the indicators for “established systems; more mature systems should also strive to meet the indicators for “enhanced systems.”<sup>xviii</sup>

**Criterion 1 - Commit to a Shared Vision and Strategy:** State system partners—in conjunction with local/regional partners—are committed to a shared vision of industry sector-based career pathways for youth and adults and to a strategy for building, scaling, and dynamically sustaining state and local/regional career pathway systems (see text box 4 for possible partners).

### Indicators for Established Systems:

- 1.1 The state career pathway system is built and maintained by public, private, and nonprofit partners at the state level that support the essential features and functions in quality career pathways and programs (see text box 2).
- 1.2 System partners adopt a shared state strategy and formally commit their organizations to carrying out specific roles and responsibilities and to communicating and coordinating with each other to build, scale, and dynamically sustain the career pathway system.
- 1.3 System partners adopt a shared definition of a career pathway approach and key related concepts

<sup>6</sup> The criteria for state systems, as well as those for local/regional systems, are based on a review of the literature and wisdom from the field gathered through reviews by Alliance partners and reviews with national, state, and local audiences conducted by CLASP from July 2013 through May 2014.

and embed them into their own strategic plans/goals and into new and existing policies to support career pathways.<sup>7</sup>

1.4. System partners recognize, reward, and/or provide incentives to local/regional career pathway partners for implementing, scaling, and dynamically sustaining career pathway systems, pathways, and programs.

**Additional Indicators for Enhanced Systems:**

1.5. *System partners engage in visible and consistent messaging to show support for and promote the career pathway approach and system.*

1.6. *System partners link to and leverage other existing related initiatives.*

1.7. *State system partners communicate with local/regional partners about policies, practices, and resources to support career pathway systems.*

1.8. *System partners communicate lessons learned from state and local implementation of career pathways to federal partners in order to inform federal strategies and investments.*

**Criterion 2 - Engage Employers and Integrate Sector Strategy Principles:**<sup>xix</sup> State system partners engage multiple employers, business associations, and labor unions in the state career pathway system and follow sector strategy principles including being demand-driven; employers are partners, not simply customers, of the career pathway system.

**Indicators for Established and Enhanced Systems:**

2.1. Employer partners, business associations, and labor unions are engaged in and contribute to the career pathway system with time, funds, visible public support, and/or other resources.<sup>8</sup>

2.2. System partners integrate the following key principles of sector strategies into the career pathway system.<sup>xx</sup>

- a. Focus on regional, in-demand sectors or cross-sector occupations based on analysis of labor

<sup>7</sup> If the shared definition is developed and adopted in conjunction with local/regional partners, this is an indicator of an *enhanced* system.

<sup>8</sup> Employer partners could be from small or large firms and could have a statewide a single local/regional presence.

**Text Box 4: System Partners**

Career pathway system partners could include a variety of entities. Users may want to customize indicator 1.1 with their specific partners. ***The more system partners who are fully engaged, the more comprehensive the career pathway system, which typically improves quality, scale, and sustainability.*** System partners could include but are not limited to: public agencies (adult education, secondary education, career and technical education, higher education, workforce, health and human services, justice, corrections, economic development, transportation, energy, other); organizations (Workforce Investment Boards, Manufacturing Extension Partnerships, education commissions, chambers of commerce, other); family literacy providers; the governor; legislators; employers; industry associations; industry partnerships, labor unions; nonprofit organizations; philanthropic organizations; and others.

market intelligence and deep knowledge of the industry.

- b. Focus on “dual customers”—both the worker/job seeker and employer workforce needs.
- c. Focus on system and credential alignment; and
- d. Focus on workforce solutions for *multiple* employers within an industry sector or cross-sector occupation (such as within industry/sector partnerships).

2.3. System partners develop the capacity and provide data, resources, and assistance to support the use of labor market intelligence to regularly identify in-demand industry sectors and occupations.<sup>xxi</sup>

**Criterion 3 - Collaborate to Make Resources Available:** Each system partner identifies, prioritizes, and leverages resources available for career pathway systems, pathways, and programs.<sup>9</sup>

<sup>9</sup> “Resources” can include funding, staff or consultants, or other assets used to support the career pathway system. System partners may make resources available by coordinating different funding streams to support a shared career pathway strategy and/or by securing specific funding for the career pathway strategy.

**Indicators for Established Systems:**

- 3.1. The state career pathway system is convened and supported by designated staff.
- 3.2. The state career pathway system provides value-added training, technical assistance, and professional development for state and local/regional career pathway partners.
- 3.3. System partners leverage and coordinate **existing** federal, state, and/or, where possible, private/philanthropic resources to support the state and local/regional career pathway systems.
- 3.4. System partners leverage and coordinate **new** federal, state, and/or, where possible, private/philanthropic resources to support the state and local/regional career pathway systems.

**Additional Indicators for Enhanced Systems:**

- 3.5. *System partners adopt a joint funding strategy to build, scale, and sustain the state and local/regional career pathway systems.*

**Criterion 4 - Implement Supportive State Policies:**

State system partners implement supportive policies for career pathway systems, pathways, and programs.<sup>10</sup>

**Indicators for Established Systems:**

- 4.1. System partners provide clear and consistent guidance on cross-system alignment and the allowable use of federal and state resources to support career pathways.
- 4.2. System partners adjust *existing* policies and internal structures (as needed) in their respective agencies/organizations to remove barriers and to facilitate the successful development and implementation of both state and local/regional career pathway systems. Policy categories include those related to (see text box 5 for examples partners may want to consider):
- a. Access to and student success in career pathway programs; alignment; and non-duplication
  - b. Quality and labor market value of

- education, training, and credentials
- c. Funding and resources (also see criterion 3)
  - d. Academic and career navigation
  - e. Support services (as needed based on assessments of participants)
  - f. Data and performance measures (also see criterion 5)

- 4.3. System partners adopt and implement *new* policies and internal structures (as needed) in their respective agencies/organizations that support the successful development and implementation of both state and local/regional career pathway systems. (See policy categories in 4.2 and text box 5.)

**Additional Indicators for Enhanced Systems:**

- 4.4. *System partners—in conjunction with local/regional partners—adopt a shared policy agenda to support state and local/regional career pathway systems.*
- 4.5. *System partners—in conjunction with local/regional partners, as appropriate—pursue legislative policy reforms to support state and local/regional career pathway systems.*

**Criterion 5 – Use Data and Shared Measures:** State system partners use data to assess, demonstrate, and improve career pathway participant outcomes. (See Section V for shared measures that could be piloted.)<sup>11</sup>

**Indicators for Established Systems:**

- 5.1. System partners develop the capacity and provide data, resources, and assistance to support the use of longitudinal data at both the state and the local/regional levels for development and implementation of state and local/regional career pathway systems.
- 5.2. System partners adopt policies and procedures to promote the use of data (including labor market intelligence and longitudinal data) by institutions and program administrators at the state and local/regional levels for transparency, continuous improvement, and accountability.
- 5.3. System partners develop a plan to evaluate how well the **state and local/regional career pathway**

<sup>10</sup> Policies can include regulations, administrative policies, laws, and executive orders.

<sup>11</sup> This criterion and the indicators build on and are consistent with the Workforce Data Quality Campaign's (WDQC) policy agenda: see <http://www.workforcedqc.org/resources-events/resources/wdqc-policy-agenda>. CLASP is one of the national partners in the WDQC.

**systems** are performing and to provide support for their continuous improvement. The evaluation plan includes input from local/regional partners.

**Additional Indicators for Enhanced Systems:**

5.4. *System partners—in conjunction with local/regional partners—produce cross-agency data and publish reports on career pathway participants’ progress and success in earning credentials and achieving labor market outcomes using a consistent set of shared measures (see Section V). Results are presented in terms of progress and success along the career pathways, not by program/funding silos. Information is provided to system partners, policymakers, local/regional level partners, and participants/potential participants.*

5.5. *System partners use analysis of career pathway data on outcomes to implement (or recommend) policy changes to support state and local/regional career pathway systems.*

5.6. *System partners adopt, secure funding for, and implement a plan to evaluate how well **local/regional career pathway systems** are performing and to provide support for their continuous improvement. The evaluation plan includes input from local/regional partners.*

5.7. *System partners adopt, secure funding for, and implement a plan to evaluate how well the **state career pathway system** is supporting the local/regional systems and to continually improve state system performance. The evaluation plan includes input from local/regional partners.*

**Text Box 5: Examples of Supportive Career Pathway Policies**

Policies that are supportive of career pathways are clustered around several key categories (as noted above). Within each category, there are many specific policies that partnerships may want to explore. Partners should identify specific target policies together, using the following examples.

**Category A: Access to the career pathway, alignment, and non-duplication:** dual or concurrent enrollment; non-duplicative, targeted, co-requisite and/or accelerated remedial and developmental education; granting and articulating postsecondary credit to high school students and non-credit postsecondary students; prior learning assessment; defining and documenting credentials; aligning and integrating academic and technical education curriculum and standards (“horizontal alignment” in the CTE field); aligning and integrating curriculum and standards from grades 9-12 and across secondary/adult education and postsecondary education (“vertical alignment” in the CTE field); “auto-award” credentials or degrees to students who earn the credits; reduce or eliminate fees associated with awarding of a credential; consistent and non-duplicative assessments of participants’ education, skills, and support service assets/needs.

**Category B: Quality and labor market value of education, training, and credentials:** assure quality education, training, and credentials (including the joint use of standards); define and support college and career readiness standards; assure labor market relevance of education, training, and credentials; use data and labor market intelligence; professional development and building staff and system capacity.

**Category C: Funding and resources:** allowable uses of funding; state student financial aid; program eligibility.

**Category D: Academic and career navigation:** defining and supporting college and career readiness standards; provision of comprehensive guidance counseling, academic advising, and/or career navigation.

**Category E: Support services:** provision of child care, transportation, housing and other essential supports; TANF program eligibility; eligibility for health care.

**Category F: Data and performance measures:** development and use of longitudinal data systems; performance reporting requirements; financial reporting requirements.

## Section IV: Criteria and Indicators for a Quality Local/Regional Career Pathway System

Quality local/regional career pathway systems adhere to the same criteria as in a state system with an additional criterion focused on implementing and integrating evidence-based practices and processes for career pathways and programs (see criterion 6). Local/regional criteria are listed in text box 6.

### Text Box 6: Criteria for Quality Local/Regional Career Pathway Systems

1. **Commit to a Shared Vision and Strategy:** Local/regional partners—in conjunction with state partners—are committed to a shared vision of industry sector-based career pathways for youth and adults and to a strategy for building, scaling, and dynamically sustaining a local/regional career pathway system.
2. **Engage Employers and Integrate Sector Strategy Principles:** Local/regional partners engage multiple employers, business associations, and labor unions in the local/regional career pathway system and follow sector strategy principles including being demand-driven; employers are partners, not simply customers, of the career pathway system.
3. **Collaborate to Make Resources Available:** Each system partner identifies, prioritizes, and leverages resources available for the career pathway system, pathways, and programs.
4. **Implement Supportive Local/Regional Policies:** Local/regional partners implement supportive policies for the career pathway system, pathways, and programs.
5. **Use Data and Shared Measures:** Local/regional partners use data to assess, demonstrate, and improve career pathway participant outcomes.
6. **Implement and Integrate Evidence-Based Practices and Processes:** Local/regional partners implement practices and processes to provide the essential features and functions in quality career pathways and programs. Partners measure success and engage in a continuous improvement process in order to develop and integrate evidence-based practices and processes that optimize career pathway participant success.

These criteria are further specified with the following indicators. All career pathway systems should strive to meet the indicators for “established systems”; more mature systems should also strive to meet the indicators for “enhanced systems.”

**Criterion 1 - Commit to a Shared Vision and Strategy:** Local/regional partners—in conjunction with state partners—are committed to a shared vision of industry sector-based career pathways for youth and adults and to a strategy for building, scaling, and dynamically sustaining a local/regional career pathway system.<sup>xxii</sup>

### Indicators for Established Systems:

1.1. The local/regional career pathway system is built and maintained by public, private, and nonprofit partners at the local/regional level that support the essential features and functions in quality career pathways and programs (see text box 4 in Section III for examples of partners; see text box 2 in the Section II for features and functions).

1.2. System partners adopt a shared local/regional strategy and formally commit their organizations to carrying out specific roles and responsibilities and to

communicating and coordinating with each other to support the career pathway system.

1.3. System partners adopt a shared definition of career pathways and key related concepts and embed them into their own strategic plans/goals and into new and existing policies to support career pathways.<sup>12</sup>

**Additional Indicators for Enhanced Systems:**

1.4. System partners engage in visible and consistent messaging to show support for and to promote the career pathway approach and system.

1.5. System partners link to and leverage other existing related initiatives.

1.6. System partners communicate lessons learned from local/regional implementation of career pathways to state and federal partners in order to inform federal strategies and investments.

**Criterion 2 – Engage Employers and Integrate Sector Strategy Principles:**<sup>xxiii</sup> Local/regional partners engage multiple employers<sup>13</sup> (large and small), business associations and labor unions in the local/regional career pathway system and follow sector strategy principles including being demand-driven; employers are partners, not simply customers, of the career pathway system. (Also see indicators 6.10 and 6.11.)

**Indicators for Established Systems:**

2.1. Multiple employers, business associations and/or labor partners jointly develop and participate in the career pathway system (see text box 7).

2.2. Employer, business associations, and/or labor partners make a demonstrated investment—of time, money, in-kind support, etc.—in building, scaling, and dynamically sustaining the career pathway system.

<sup>12</sup> If the shared definition is developed and adopted in conjunction with the state system and other local/regional partners, i.e., a statewide shared definition, this is an indicator of an enhanced system.

<sup>13</sup> Existing employer groups may be found in occupational advisory committees at community colleges, chambers of commerce, workforce investment boards, industry/sector partnerships, etc.

**Text Box 7: Employer Participation**

**Employers, business associations, and labor union partners** fulfill an essential role in the career pathway partnership by providing real access to the job market.

Examples of participation:

Inform and validate career pathway alignment of skills, credentials, and employment;

Recruit participants from within their organizations and the larger community;

Provide training services and/or access to continued learning;

Provide leadership on continuous improvement processes;

Champion career pathway efforts with stakeholders;

Provide employment opportunities.

2.3. System partners use labor market intelligence on current and future industry sector demand to inform the development and ongoing relevance of career pathways.<sup>xxiv</sup>

2.4. System partners integrate the following key principles of sector strategies into the career pathway system:<sup>xxv</sup>

- a. Focus on regional, in-demand sectors or cross-sector occupations based on analysis of labor market intelligence.
- b. Focus on “dual customers”—both the worker/job seeker and employer workforce needs.
- c. Focus on system and credential alignment (corresponds to other criteria and indicators in this framework); and
- d. Focus on workforce solutions for a consortium of employers within an industry sector or cross-sector occupation, i.e., an industry or sector partnership.

**Additional Indicators for Enhanced Systems:**

2.5. *Employers and labor partners support participant involvement and progression in career pathways through their policies and practices to retain, reward, and advance employees.*

**Criterion 3 – Collaborate to Make Resources**

**Available:** Each system partner identifies, prioritizes, and leverages resources available for the career pathway system, pathways, and programs.

**Indicators for Established Systems:**

3.1. The local/regional career pathway system is convened and supported by designated staff; partners ensure adequate human and technology capacity as well as professional development.

3.2. System partners make available the necessary resources, tools, infrastructure, and time to support practitioners in providing the essential features and functions of career pathways and programs (see text box 2 in Section II).

3.3. System partners leverage and coordinate **existing** federal, state, and/or private/philanthropic resources to support the local/regional career pathway system, pathways, and programs.

3.4. System partners leverage and coordinate **new** federal, state, and/or private/philanthropic resources to support the local/regional career pathway system, pathways, and programs.

**Additional Indicators for Enhanced Systems:**

3.5. *Systems partners adopt a joint funding strategy to build, scale, and dynamically sustain the local/regional career pathway system, pathways, and programs.*

**Criterion 4 – Implement Supportive Local/Regional Policies:** Local/regional partners implement supportive policies for the career pathway system, pathways, and programs.

**Indicators for Established Systems:**

4.1. System partners provide clear and consistent guidance on cross-system alignment and the allowable

use of resources to support career pathways.

4.2. System partners adjust **existing** local/regional and institutional policies and internal structures to remove barriers and to facilitate the successful development and implementation of the essential features and functions of career pathways (text box 2 in Section II). Policy categories include those related to the following (see text box 5 in the Section III for policy examples partners may want to consider):

- a. Access to and student success in career pathway programs, alignment, and non-duplication
- b. Quality and labor market value of education, training, and credentials
- c. Funding and resources (also see criterion 3)
- d. Academic and career navigation
- e. Support services (as needed based on assessments of participants)
- f. Data and performance measures (also see criterion 5)

4.3. System partners adopt and implement **new** local/regional and institutional policies and internal structures that support the successful development and implementation of the essential features and functions of career pathways. (See policy categories in 4.2 and text box 2 in Section II).

**Additional Indicators for Enhanced Systems:**

4.4. *System partners—in conjunction with state partners—adopt a shared policy agenda to build, scale, and dynamically sustain the state and local/regional career pathway systems.*

4.5. *System partners—in conjunction with state partners as appropriate—pursue legislative policy reforms to support state and local/regional career pathway systems.*

**Criterion 5 – Use Data and Shared Measures:**

Local/regional partners use data to assess, demonstrate, and improve career pathway participant outcomes.

**Indicators for Established Systems:**

5.1. System partners—in conjunction with state partners—develop their capacity and provide data

to support the use of longitudinal data at the local/regional levels for development and implementation of state and local/regional career pathway systems. This includes, as appropriate, data collected by community-based career pathway programs as well as educational institutions.

5.2. System partners—in conjunction with state partners as appropriate—develop a plan to evaluate how well the local/regional career pathway system is performing and to support continuous improvement efforts. The evaluation plan includes input from all local/regional system partners and constituents.

***Additional Indicators for Enhanced Systems:***

5.3. System partners—in conjunction with state partners—produce cross-agency data and publish reports on career pathway participants’ progress and success in earning credentials and achieving labor market outcomes using a consistent set of shared measures (see Section V). Results are presented in terms of progress and success along the career pathways, not by federal program/funding silos. Information is provided to system partners, policymakers, local/regional level partners, and participants/potential participants.

5.4. System partners use a set of shared interim and outcome measures to drive continuous improvement of processes and practices relevant to career pathways (see Section V).

5.5. System partners use analysis of career pathway data on interim and outcomes measures to implement their own or recommend state and/or federal policy changes to support career pathway systems (see Section V).

5.6. System partners—in conjunction with state partners as appropriate—adopt, secure funding for, and implement a plan to evaluate how well the local/regional career pathway system is performing and to support continuous improvement efforts. The evaluation plan includes input from all local/regional system partners and constituents.

**Criterion 6 – Implement and Integrate Evidence-Based Practices and Processes:** Local/regional partners implement practices and processes to provide the essential features and functions in quality career pathways and programs. Partners measure success (see criterion 5) and engage in a continuous improvement process to develop and integrate a set of evidence-based practices and processes that optimize career pathway participant success.<sup>14</sup>

**Indicators for Established and Enhanced Systems** (see Section II for examples of career pathway features and functions):<sup>15</sup>

6.1. Each career pathway includes and measures the effectiveness of **well-connected and transparent education, training, credential, and support service offerings** (that may be delivered through multiple linked and aligned programs<sup>16</sup>).

6.2. Each career pathway has **multiple entry points** and evidence that they enable well-prepared participants, as well as targeted populations with limited education, skills, English, and work experiences, to successfully enter the career pathway (targeted populations served by career pathways may include adult education or other lower-skilled adult students, English Language learners, offenders or ex-offenders, high school students; disconnected or “opportunity” youth, some former military personnel, un- or under-employed adults, or others).

6.3. Each career pathway has **multiple exit points** with proven labor market value at successively higher levels leading to self- or family-supporting employment and aligned with subsequent entry points.

6.4. Each career pathway program provides **participant-focused education and training**.<sup>17</sup> (See Section II for examples of the terms in bold in indicators 6.4-6.11; see endnotes for current evidence of effectiveness.)

<sup>17</sup> For simplification, indicators 6.4 through 6.11 focus on the program level; if each of the programs within a career pathway meet these indicators, then the career pathway will meet these indicators.

- 6.5. Each career pathway program provides consistent and non-duplicative (across partners) ***assessment of participants' education, skills, and competencies***.<sup>18</sup>
- 6.6. Each career pathway program provides consistent and non-duplicative ***assessment of participants' support service assets and needs***.
- 6.7. Each career pathway program provides ***academic advising and supports*** that keep participants engaged as they move along the career pathway.
- 6.8. Each career pathway program provides ***career navigation assistance***.
- 6.9. Each career pathway program provides ***personal skill development and supports*** for participants assessed to need them.
- 6.10. Each career pathway program provides ***employment services*** for participants (see also criterion 2).
- 6.11. Each career pathway program provides ***work experiences*** for participants (see criterion 2).

---

<sup>18</sup> This information is useful both to appropriately place and assist participants and to design and improve career pathways and programs.

## Section V: Career Pathway Participant Metrics

### Overview

The purpose of the AQCP participant metrics is to provide a shared set of outcome metrics that can be used jointly by career pathway partners to measure career pathway participant progress and success.

The Alliance metrics include three types of measures:

- A) *Interim Outcomes* identify important progress steps, or “momentum points,” along a career pathway that may be attained by the participant prior to the overall results for the pathway;
- B) *Education and Training Outcomes along a pathway* include the primary educational and training results for the career pathway, including licenses and industry credentials, certificates, and degrees; and
- C) *Labor Market Outcomes* include the primary labor market results for the career pathway, to measure the progression in employment and earnings over time for pathway participants.

This section of the AQCP Framework Version 1.0 describes the differences between the AQCP metrics and existing measurement systems, discusses how the AQCP metrics can be used, and presents the AQCP definitions and measures.

### How the AQCP Participant Metrics are Different from Existing Measurement Systems

A number of the AQCP Education and Training Outcomes (group B) and the Labor Market Outcomes (group C) are already in use in federal and state accountability systems.<sup>19</sup> However, the AQCP participant metrics differ from existing measures in several ways. First, the AQCP metrics are applied to participants in specific pathways that likely span multiple educational and service settings and funding streams. The Alliance metrics should be viewed from the perspective of the career pathways and the

participants advancing through them rather than from the perspective of a particular institution or funding stream.

Second, the AQCP metrics are intended to be a shared set of metrics used jointly by partners as a “common language” across basic skills, workforce development, postsecondary and community based programs. Using a shared set of metrics provides a more coherent understanding of regional workforce development for public and non-profit partners, and, just as importantly, for employers.

By comparison, the AQCP Interim Outcomes (group A) are not widely used in state or federal accountability systems. These metrics will increase the focus on the progression and success of participants in career pathway education, training and employment over time and can reduce disincentives to serve participants with lower education and skill levels and barriers to college and labor market success. These distinctions are detailed below and summarized in Table 1.

***AQCP career pathway metrics are focused on results for participants within specific career pathways, rather than institutional or organizational outcomes.***

For example, a health care career pathway such as that developed by the community-based organization [Instituto del Progreso Latino](#) might involve an adult education program, a Licensed Practical Nurse program and an Associate Degree in Nursing program at a community college. It may also include supportive services and Individual Training Account (ITA) funding through a local Workforce Investment Act (WIA) adult training provider. Under the current federal and state performance measurement systems, each of these organizations and institutions is measured separately (the community-based organization, the college, and the WIA provider). They have different measures; different rules for determining which participants are included in the measures; and different timeframes for measurement. But more importantly, rarely do the measurement requirements isolate the outcomes for the career pathway itself; the outcomes are “rolled up” to the organizational or institutional levels, and the results of

<sup>19</sup> CLASP reviewed several existing measurement frameworks to develop the initial draft of the AQCP metrics. See the AQCP [Reference Report](#) for a table that cross-references the AQCP metrics to others currently in use. Also see the AQCP working paper, [A Framework for Measuring Career Pathways Innovation](#), for background discussion.

the pathway itself are largely invisible.

Existing measurement systems—with different goals, measures, and timeframes—make it difficult to connect education and employment services in a seamless way to help participants reach their educational and career goals. Career pathway metrics are intended to follow career pathway participants across organizational and institutional boundaries as they move along the pathway, and thereby allow the measurement of results for individual career pathways, using the applicable pathway metrics.

***AQCP career pathway metrics are meant to provide a cross-system view of results and to support shared accountability and improvement among partners.*** This would include the ability to measure the contributions of particular partners, such as those in adult education, workforce development, postsecondary education, to overall pathway results. It would also include the ability to measure the contributions of various fund sources such as WIA Title I, WIA Title II, or Perkins Career and Technical Education (CTE). In a typical career pathway, participants assisted by various fund sources enter the career pathway via one of several entry points (such as an adult education bridge program or a youth employment program), obtain one or more credentials along the pathway, and exit at one of several exit points (such as attainment of an industry certification or entry into training-related employment). By design, career pathways often require participants to move through multiple educational settings with support from multiple funding sources. Observing results for a

career pathway requires following participants across these educational settings and fund sources, just as it requires following participants across organizational or institutional boundaries.

Current federal and state measurement systems do not address this requirement very well. While there are common measures across some of the key funding sources, states are just now reaching a point through their State Longitudinal Data Systems (SLDS) where they can begin to identify the participants who are being assisted by multiple fund sources, and there are no simple ways to isolate how these fund sources are contributing to the success of a particular career pathway.

***AQCP career pathway metrics incorporate important interim outcomes that demonstrate progress toward pathway educational outcomes and employment outcomes.*** A developing body of research suggests that there are specific “momentum points” that are predictive of eventual educational success, such as completion of college “gatekeeper” math courses, or completion of at least 15 college credits.<sup>xxvi</sup> A set of evidence-based interim outcomes could be very useful in helping to guide continuous improvement and evaluation of career pathways. Inclusion of interim outcome metrics will also help to reduce disincentives to serving underprepared and lower-skilled participants who require additional services and a longer timeframe to succeed in postsecondary education and the labor market. Table 1 provides a summary of these distinctions.

**Table 1. AQCP Career pathway metrics shared accountability framework vs. current federal measures**

<b>Current federal performance measures and accountability framework</b>	<b>AQCP Career pathway metrics shared accountability framework</b>
Focus on state and institutional performance results.	Focus on performance results of career pathways and any linked and aligned programs.
Measure participant outcomes achieved while these participants are being served by specific fund sources.	Measure participant outcomes achieved along a career pathway that includes multiple fund sources and educational settings.

<p>Focus on a narrower subset of outcomes that are considered most relevant to the funded interventions.</p>	<p>Focus on a broader set of participant outcomes along the career pathway, including educational and labor market outcomes, and intended to capture important educational and employment development milestones that show progress for underprepared and lower skilled participants.</p>
--	---

## How to Use a Career Pathway Measurement Approach

The AQCP metrics are intended to measure progress and success for career pathway participants.

Version 1.0 of the metrics has a particular focus on those who may be entering a pathway from adult education, English as a Second Language, and workforce programs; although many of the metrics on credential attainment and labor market outcomes are relevant for programs serving vulnerable youth and secondary career and technical education (CTE) programs. We hope to continue working with leaders and practitioners in these fields to evolve the AQCP metrics to be more inclusive of vulnerable youth and CTE students in future versions.

Version 1.0 of the AQCP participant metrics is designed to support the development and further improvement of career pathway systems, pathways, and programs. After the metrics are thoroughly piloted on the ground, state and local/regional partnerships may use them to support the following functions:

1. Continuous improvement of career pathway systems, pathways, and programs. A continuous improvement process provides a structured approach to using information to improve participant results. The metrics can play an important role in guiding these efforts.
2. Further development and refinement of State Longitudinal Data Systems (SLDS). Taking a pathway view of measurement can help states make informed choices about the data sources, data elements and interconnections that may be needed as SLDS are implemented (see the short example from Illinois in Section I).
3. Increased transparency of outcomes for workforce, career and technical education, and postsecondary education programs showing participant progress and results through career pathways and across funding streams (see the

short example from Virginia in Section I).

4. Accountability for educational and employment-related outcomes. These metrics have been developed primarily for continuous improvement and system development purposes.
5. Long-term outcome reporting and evaluation of the impact of career pathways on participants. Outcome data have been used to evaluate the impact of career pathway programs and systems (i.e., the difference that career pathway programs and systems make in the results for participants). The performance outcome metrics in particular could be used as part of an impact evaluation of results (see the discussion in Section I on how researchers might use the AQCP framework).

## When to Use Career Pathway Metrics

Because state and local/regional partnerships are at different stages of implementation, they may or may not be “ready” to adopt and use the proposed AQCP participant metrics. More specifically, partners are likely to be in a position to measure the progress and success of individuals moving along career pathways only if the three essential features of career pathways as defined in Section II are well-established:

1. **Well-connected and transparent education,** training, support service, and credential offerings within specific sectors or cross-sector occupations (may include new program development or the re-design of existing programming);
2. **Multiple** clearly delineated **entry points** to the pathway, including for those with limited education, skills, English, and work experiences (such as bridge programs for individuals with low education and skill levels); and

3. **Multiple exit points** at successively higher levels leading to self- or family-supporting employment and aligned with subsequent entry points.

Career pathways with these three essential features must be designed and implemented on the ground before the Alliance metrics can be applied. Another pre-requisite is the availability of data systems needed to calculate and report on results on a cross-program basis for individuals advancing across educational and service settings and funding sources (see discussion of data systems at the end of this section).

### What Are Career Pathway Participant Metrics

This section presents a menu of career pathway participant metrics and key definitions. State and local/regional career pathway partnerships may adapt these definitions to reflect their specific pathways and state policies.

**Key Definitions for Application of Metrics:** One of the most significant decisions to be made in using career pathway participant metrics is: which participants should be included in each metric? To help answer this question, AQCP proposes the following definition for use with career pathway participant metrics:

- 1) **Career pathway participant:** *An individual who has enrolled in and is attending specific courses or activities or is receiving services (or combinations thereof) that have been designated as specific entry points for a career pathway.*

An important aspect of this definition is that individuals become career pathway participants by taking one or more actions that are associated with a specific career pathway, such as enrollment in specific courses, activities, or services—or combinations of them. For example, an individual who enters a healthcare contextualized bridge program may be considered a career pathway participant if the bridge has been identified as an entry point for a healthcare career pathway.

Another decision to be made in using the metrics is when to measure results for participants. To address this question, AQCP offers the following definitions:

- 2) **Career pathway leaver:** *A career pathway participant who is no longer enrolled in pathway courses, services, or activities and has not re-enrolled in pathway courses, services, or activities for a period of at least one year.<sup>20</sup> Career pathway leavers include:*
  - a. *participants who attained one or more of the interim outcomes (group A) or pathway education and training outcomes (group B) attainable in a career pathway prior to leaving the pathway; and*
  - b. *participants who did not attain one of these interim or pathway outcomes prior to leaving the pathway.*
- 3) **Career pathway credential completer:** *A career pathway participant who attained one or more of the pathway education and training outcomes (group B) attainable in a career pathway prior to leaving the pathway. These outcomes include marketable credentials as designated by the local/regional career pathway partnership, such as a license, industry certification, certificate, diploma, or degree. Career pathway credential completers include:*
  - a. *participants who have left the career pathway after attaining one of the above credentials; and*
  - b. *participants who are still enrolled in career pathway courses after attaining one of the above credentials, with the goal of attaining further credentials.*

<sup>20</sup> The Alliance partners engaged in the metrics workgroup discussed and debated the timeframe that should be used for identifying a career pathway leaver and agreed to propose a one year time period with the understanding that this time period should be tested through use of the metrics in subsequent phases of the Alliance. This time period may be adjusted in future versions of the framework based on what Alliance partners learn from testing this definition.

Using these definitions, career pathway participants can be divided into four categories illustrated in Table 2, which can help to inform disaggregation within the definitions above.<sup>21</sup>

Table 2: Career Pathway Participant Matrix		
	Left the pathway	Remains on the pathway
<b>Attained the outcome</b>	1) Attained an outcome and left the pathway  <i>Career pathway leaver (with attainment)</i>	2) Attained an outcome and remains engaged in the pathway  <i>If attained a credential outcome (from group B), would be a Career pathway credential completer</i>
<b>Did not attain the outcome</b>	3) Has not attained an outcome and left the pathway  <i>Career pathway leaver (no attainment)</i>	4) Has not attained an outcome and remains engaged in the pathway  <i>Career pathway participant</i>

The career pathway participant metrics incorporate a new method for determining when to measure results for participants. The more familiar “cohort measurement model” generally works best in situations where the program has a preferred “planned” duration, when entering participants are entering at the same point on the pathway, and when participants will be attending courses at more or less the same intensity, i.e. they are expected to move together along the pathway. A common example of the cohort measurement approach is a three-year graduation rate for an Associate degree program.

Another commonly used measurement model is the “exiter/completer model.” This model works best for short-term programs and interventions and for interventions with open enrollment or multiple enrollment points. An example of this model is workforce training programs that track employment outcomes for exiters—participants who leave the program after a prescribed period of non-participation.

The new model proposed in the Alliance framework is the “career pathways leaver/completer model,” which combines elements of the cohort measurement model and the exiter/completer model. This approach addresses a key limitation of the exiter/completer model by triggering measurement as participants attain education and training outcomes along the pathway, rather than deferring all measurement to the exit point. It also addresses a major limitation of the time-limited cohort measurement model because it does not impose measurement while the participant is still taking courses or receiving services in the pathway, even if the participant has not yet attained the credential or interim outcome. Accordingly, a participant who earns an initial credential or other outcome while engaged in the pathway will be counted in the interim (group A) or education and training (group B) metrics. Someone who does not earn a credential or other initial outcome but remains engaged in the pathway will not be counted in those metrics. This approach is intended to mesh more closely with the reality of the variety of career pathway entry points, exit points and levels of intensity that are seen in practice.

<sup>21</sup> Participants in categories (1) and (2) would be included in the numerator of the metrics in groups A and B below, and participants in categories (1), (2) and (3) would be included in the denominator of the metrics. Participants in category (4) are not included in the metrics, so long as they remain enrolled in the pathway.

**Proposed Metrics:** The AQCP participant metrics are intended to map to specific career pathways with the three features in the AQCP definition having been well-established. They form a “menu” from which

state and local/regional partnerships can select metrics that are appropriate for specific career pathways.

***It is critical to understand that not all career pathways will utilize all of these metrics.*** For example, specific career pathways will incorporate only those specific pathway education and training outcome metrics that are applicable. Similarly, the interim metric for completion of developmental/remedial education (A.3. below) would apply only to pathways that have a pre-college entry point through developmental/remedial instruction.

The AQCP metrics are organized into the following categories: (A) Interim Outcomes; (B) Education and Training Outcomes (along the pathway); and (C) Labor Market Outcomes. See Appendix D for detailed descriptions of each metric, the population to which it applies, and how to calculate it.

**“A” Group: Interim outcomes:** Interim outcomes identify important progress steps, or “momentum points,” that participants may attain prior to achieving the overall results for the pathway. They include measures that show the transition from pre-college instruction to college-level work and persistence following enrollment in college-level work. Career pathway partners should select only those metrics that are applicable to their specific career pathways.

Interim outcomes could be disaggregated to show the entry point through which participants first enter the pathway and to capture the transition of students from one educational setting to another. For example, each of these outcomes could be shown for adult education participants, bridge program participants, developmental education completers and others entering at various points along the pathway.

**A.1. Educational level gains:** A percentage based on career pathway participants who gained one or more educational levels (using Adult Education NRS levels or an equivalent academic skills assessment methodology) *divided by* those participants who gained one or more levels or left the career pathway (i.e., became a career pathway leaver) without gaining one or more educational levels.

**A.2. High school diploma or equivalency attainment:** A percentage based on career pathway participants who obtained a high school diploma or its equivalent *divided by* those participants who did not have a high school diploma or its equivalent at pathway entry, and either obtained the credential or left the career pathway (i.e., became a career pathway leaver) without obtaining the credential.

**A.3. Developmental/remedial education completion:** A percentage based on career pathway participants who enrolled in developmental/remedial coursework, and who obtained a passing grade in all such courses *divided by* those who obtained a passing grade in all such courses or left the career pathway (i.e., became a career pathway leaver) without doing so.

**A.4. College-level pathway course completion:** A percentage based on career pathway participants who initially entered the career pathway by enrolling in instruction at less than college level (including adult education or developmental education) who subsequently completed one or more college level pathway courses *divided by* those who enrolled in these courses or left the career pathway (i.e., became a career pathway leaver) without completing these courses.

**A.5. College-level math or English course completion:** A percentage based on career pathway participants who completed a college-level course in math or English *divided by* those who completed such courses or left the career pathway (i.e., became a career pathway leaver) without completing such a course.

**A.6. Retention in pathway coursework in subsequent term:** A percentage based on career pathway participants who enrolled in pathway coursework in the term following the term of initial pathway enrollment (other than summer terms), or in the subsequent term *divided by* those who were initially enrolled in the pathway.

**A.7. Pathway credit accumulation 1 (12 semester college credits or 15 quarter credits in pathway):** A percentage based on career pathway participants who accumulated 12 semester college credits or 15 quarterly college credits in pathway coursework *divided by* those who accumulated these college

credits or left the career pathway (i.e., became a career pathway leaver) prior to accumulating these credits.

**A.8. Pathway credit accumulation 2 (24 semester college credits or 30 quarter credits in pathway):** A percentage based on career pathway participants who accumulated 24 semester college credits or 30 quarterly college credits in pathway coursework *divided by* those who accumulated these credits or left the career pathway (i.e., became a career pathway leaver) prior to doing so.

**A.9. Earnings progression:** The average gain/loss of earnings for *pathway credential completers* based on a comparison of the third quarter after completing a credential and the quarter of credential completion. (A9 is similar to the earnings change metric C.5 in the “C” group.)

**“B” group: Education and training outcomes (along the pathway).** These metrics include the primary educational and training results *for the pathway*. They comprise several types of outcomes, including licenses and industry credentials (certifications, certificates, apprenticeship) and educational certificates, diplomas and degrees. (See the glossary for definitions and a discussion of “credentials.”) Application of these metrics to a particular career pathway would require that the specific licenses, certifications, certificates, and degrees that are available for pathway participants could be identified, so that pathway participants who obtain one or more of these outcomes can be included in the applicable metrics.

Not all of these metrics would apply to all career pathways, since not all pathways would necessarily offer each type of credential included in these metrics. Like the interim outcomes, pathway education and training outcomes could be disaggregated to show the entry point through which participants first entered the pathway and to capture the transition of students from one educational setting to another.

The goal of these metrics is to determine whether participants attain all of the education and training results associated with that pathway; therefore, participants would be included in the measured population for all of the metrics representing outcomes that are attainable for them if they remain on the career pathway.

**B.1. Pathway license, industry certification, or apprenticeship certificate attainment:** A percentage based on career pathway participants who obtained an occupational license, industry certification, or apprenticeship certificate in the career pathway *divided by* those who obtained such a credential or left the career pathway (i.e., became a career pathway leaver) prior to obtaining such a credential.

**B.2. Pathway certificate and diploma attainment:** A percentage based on pathway participants who obtained a certificate in the pathway *divided by* those who obtained such a certificate or left the career pathway (i.e., became a career pathway leaver) prior to obtaining a certificate.

**B.3. Pathway Associate degree attainment:** A percentage based on pathway participants who obtained an Associate degree in the pathway *divided by* those who obtained such a degree or left the career pathway (i.e., became a career pathway leaver) prior to obtaining an Associate degree.

**B.4. Pathway Associate degree attainment or transfer to a two- or four-year institution:** A percentage based on pathway participants who obtained an Associate degree in the pathway, or transferred to a two- or four-year institution *divided by* those who obtained such a degree or transfer, or left the career pathway (i.e., became a career pathway leaver) prior to obtaining an Associate degree or transferring. This includes participants who entered an applied baccalaureate program.<sup>22</sup>

**“C” group: Labor market outcomes.** Labor market outcome metrics include the primary labor market results for the career pathway. They measure both initial employment and earnings and progression in employment and earnings over time for pathway leavers. Taken together, these metrics are an attempt to gauge the extent to which career pathways help career pathway participants secure self- or family-supporting employment and further education and training opportunities (associated with the exit points in the three essential features of career pathways per the Alliance definition). It is probably not

<sup>22</sup> Career pathway partners may want to add an additional metric for Pathway Baccalaureate degree attainment if their career pathway extends to this educational level.

reasonable to envision all of these metrics as part of an accountability system, but each of them may provide important insights into the success of the career pathway and may be included as part of a system of metrics used to support continuous improvement and evaluation.

**C.1. Initial employment (second or third quarter after pathway exit):** Percent of career *pathway leavers* who are employed in the second or third calendar quarter after leaving the career pathway (i.e., becoming a career pathway leaver).

**C.2. Employment in targeted industry sector:** Percent of career pathway credential completers who are employed in the second or third full quarter after leaving the career pathway (i.e., becoming a career pathway leaver) in an industry sector targeted by the career pathway (for career pathways with specific industry targeting).

**C.3. Subsequent employment retention:** Percent of career *pathway leavers* employed in the second or third calendar quarters after leaving the career pathway who are also employed in the sixth or seventh full quarters after leaving the career pathway.

**C.4. Initial earnings:** The median quarterly earnings of *pathway leavers* who are employed in the third calendar quarter after leaving the pathway.

**C.5. Earnings change:** The average gain/loss of earnings for pathway leavers based on a comparison of the third quarter after leaving the pathway and the third quarter prior to pathway entry.

**C.6. Subsequent earnings:** The median quarterly earnings of career pathway leavers who are employed in the seventh calendar quarter after leaving the career pathway.

**NOTE:** With the exception of C.2 (targeted employment metric), each of the labor market metrics is applied to all career pathway participants who have left the pathway, including those who leave without obtaining a credential or attaining a pathway education and training outcome (i.e., categories (1) and (3) above). In other words, the denominator for most of the labor market measures includes participants who

have been engaged in a pathway and have left for a variety of reasons. There are two reasons for this suggestion:

- Including all leavers in the labor market metrics would count labor market results for pathway participants who exit the pathway to enter employment, even if the participants did so prior to obtaining a postsecondary or industry-recognized credential; and
- Including all leavers in the labor market metrics would better align these metrics with existing federal measures for accountability, thereby enhancing the prospects for wider use of the metrics.

### What Data Systems Are Needed for Career Pathway Metrics

As discussed above, a prerequisite for implementation of career pathway metrics is data systems that can be used to calculate and report on the metrics. All of the AQCP participant metrics will require access to student-level data. Many of them, especially interim outcome metrics, will require access to course-level data (or service-level data in the case of workforce agencies, community organizations, and other providers) that capture enrollment in and progress in pathway courses and associated activities or services.

Beyond general data availability for each metric, developing a career pathway metric system requires data to be brought together across systems and agencies in ways that may not have previously been achieved. As discussed, a key difference between the career pathway metrics and existing performance measurement systems is that the focus of career pathway metrics is on the results for the career pathway and its participants rather than on particular institutions or funding streams. Applying this concept in practice requires that each data collection system that contributes to pathway metrics calculations is able to identify the career pathway in which individual participants have been enrolled and uses consistent terms and definitions. Further, calculation of the metrics for a particular career pathway will require that participant data from multiple educational settings and funding sources is incorporated in a manner that

allows career pathway participation to be identified across these settings and over time. Organizing data across multiple settings to provide a longitudinal view of student results is an important objective of the State Longitudinal Data Systems (SLDS), but using these data to measure outcomes for specific career pathways represents a new function for these systems.

In some states, it is possible to track participants who enter a college-based pathway through adult education or a bridge program, continue into developmental education, and complete college-level work with a credential. However, it is more difficult to track participants who enter a pathway through a workforce program or a community-based organization, let alone a private educational institution. A fully developed SLDS that includes data not only on postsecondary students but also on students in adult education, workforce programs, and possibly even social service programs will be needed to track the multiple

transitions that should be part of career pathways. In addition, access to quarterly UI earnings data, as well as supplementary data on earnings from out-of-state and federal employees, will be needed to calculate labor market outcomes.

### **What Are the Next Steps for AQCP Metrics**

In Phase II of AQCP, CLASP aims to work with a few state and possibly local/regional career pathway partnerships to pilot the AQCP metrics and share lessons with the field. In this piloting, we hope to demonstrate the specific data elements and cross-system data matching capabilities that must be present for a state or local/regional career pathway partnership to implement each metric. We also hope to obtain initial results for several career pathways, so that state and local/regional career pathway partnerships can begin to assess these metrics for transparency, continuous improvement, and accountability.

## Appendix A: Methodology

The Alliance implemented an extensive and thorough process for developing this framework. CLASP staff reviewed dozens of reports, studies, and other frameworks (see endnotes marked with an asterisk for emerging evaluation evidence supporting career pathways and see the AQCP *Reference Report* for documentation of other reports and frameworks that have informed the Alliance framework). CLASP also conducted in-depth interviews with each Alliance state partner that lasted over one hour and included collecting several materials from the interviewees. Based on the review of the literature and interviews, CLASP prepared an initial draft of a “beta” framework that would be used for review and field-testing by the Alliance partners and others in the field. In April 2013, CLASP, the Alliance partners’ “travelling teams”<sup>23</sup> (representing community and technical colleges, workforce, adult education, career and technical education, human services, and community-based organizations), and the Joyce Foundation participated in an intensive two-day meeting to review and critique the entire draft beta framework. CLASP staff then conducted a series of working group calls with the Alliance traveling team members, conducted a day-long meeting with the National Advisory Group (NAG), updated the beta framework with feedback from the calls and the NAG meeting, and reached consensus among the Alliance partners on the updated draft, which was released in July 2013 for review through 2013.

During the review period, the Alliance partners presented the framework for review and feedback in dozens of meetings, calls, and webinars, representing hundreds of people. An additional 564 people downloaded the beta framework for review. CLASP presented the framework and received feedback in over 30 national and state presentations, meetings, and conference calls, representing over 600 people. Most people simply reviewed and commented on the criteria, indicators, and metrics. However, a few Alliance partners provided a deeper analysis of the participant metrics. Wisconsin and Minnesota completed the AQCP “field-testing guide” by mapping the Alliance metrics to a few specific career pathways and reporting the likely sources of data to measure the metrics. Illinois incorporated the field-testing of the metrics into its Workforce Data Quality Initiative to develop longitudinal metrics for health care career pathway participants. None of the states were able to conduct data runs to pilot the metrics due to limited staff capacity and the voluntary nature of this initiative; however, we are anticipating that a few may be able to do this in the next phase of the initiative.

In the first two months of 2014, CLASP staff incorporated and reconciled all of the feedback received and sent a draft version 1.0 to the Alliance partners and NAG members. In March and April, through another series of working group calls, partners provided feedback, CLASP edited the framework, and the Alliance partners reached consensus on a final version 1.0, which is contained herein. CLASP staff developed companion self-assessment tools that can be used with the framework.

<sup>23</sup> Each Alliance partners was asked to form a “traveling team” of four to six representatives who would be CLASP’s primary liaisons, would participate in regular conference calls, and would attend an in-person meeting. The traveling team was required to have at least one state-level representative and at least one local/regional representative. Each partner also was asked to form a “home team,” which would be a broader group of public agencies, state- and local-level organizations and associations, employers, philanthropy, and other partners the Alliance team wanted to include. The majority of the Alliance partners formed these teams and conducted reviews of the framework with at least the home team. See the Acknowledgements section for list of all traveling team members.

# Appendix B: DOL Six Key Elements and AQCP Framework

The DOL Six Key Elements provides steps career pathway partners can take to create a strategic plan for building career pathways while the AQCP 1.0 Framework provides the key performance indicators that can be used by partners in an ongoing operations review. *The Six Key Elements help partners build; the AQCP framework helps partners check the quality of what has been built.*

Figure 5: U.S. Department of Labor’s Six Key Elements

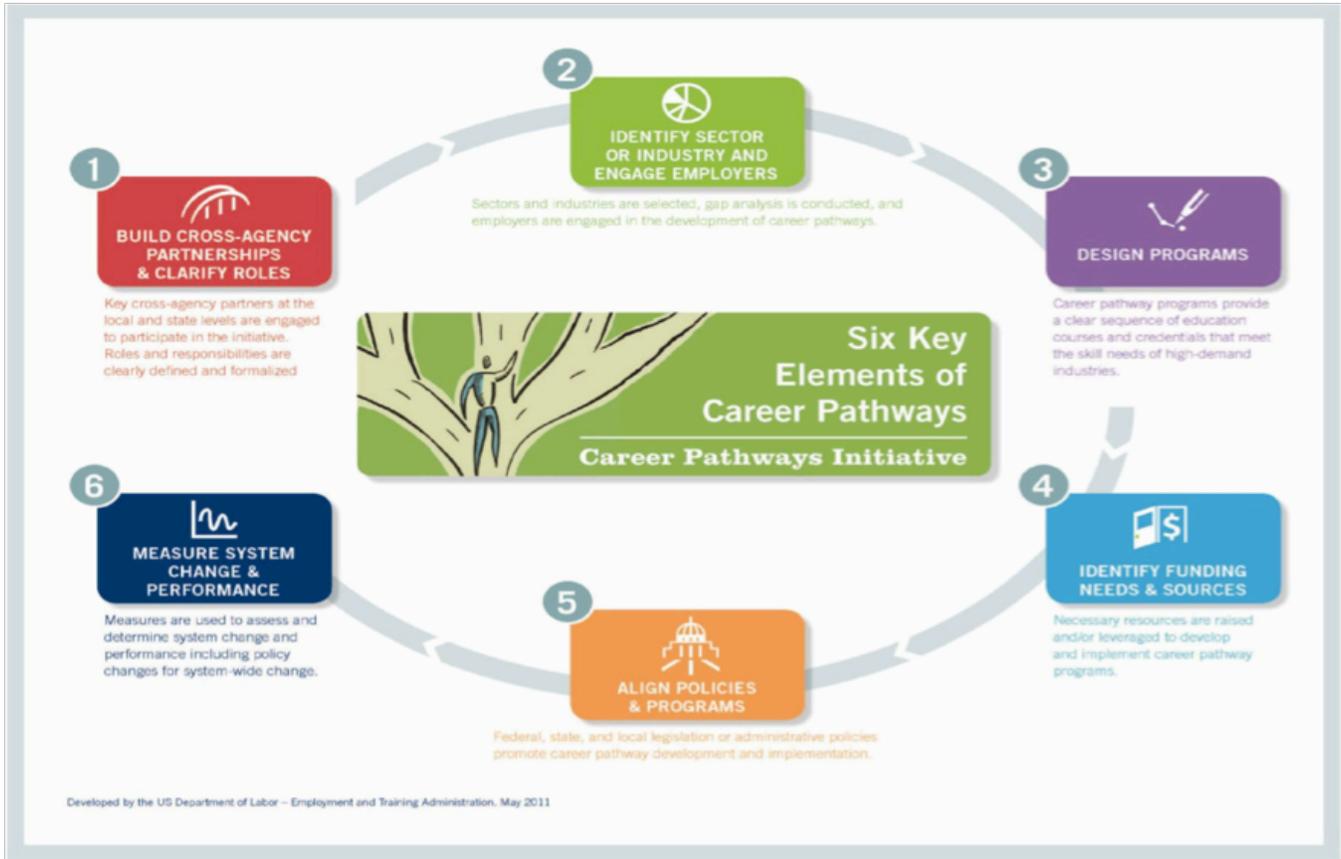
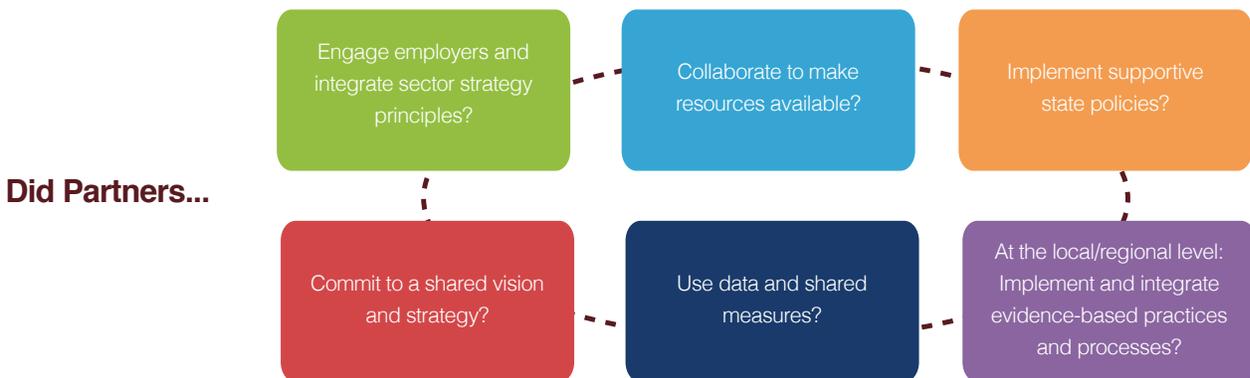


Figure 6: Alliance for Quality Career Pathways Framework Version 1.0 Criteria



## Appendix C: Glossary

**Assessment:** The process of gathering and documenting information about the achievement, skills, abilities, and personality variables of an individual. The process and tools used for the assessment must be reliable, valid, and diagnostic and must be used appropriately to place individuals in educational levels and programs and measure their progress.

**Assessment of prior learning:** A method of determining the knowledge and skills of a participant gained through work and life experience; military training and experience; and formal and informal education and training from in-state, out-of-state, and foreign institutions. Assessment of prior learning can be accomplished using methods such as individualized student portfolios, evaluation of corporate and military training, program evaluations, challenge exams, and standardized exams.<sup>24</sup>

**Braided funding/resources:** The weaving together of various state, federal, and private funding streams and resources to sufficiently fund an intervention or set of interventions (e.g. career pathways and programs). See *Funding Career Pathways and Career Pathway Bridges: A Federal Funding Toolkit for States*, CLASP, March 2013 (revised edition) for guidance on braiding federal funding to support career pathways.

**Bridge program:** See career pathway bridge program.

**Career ladders and lattices:** Devices that help people visualize and learn about the job options that are available as they progress through a career. Career ladders and lattices consist of a group of related jobs that comprise a career. They often include a

pictorial representation of job progression in a career as well as detailed descriptions of the jobs and the experiences that facilitate movement between jobs. Career ladder/lattices are not necessarily organization-specific; they frequently span multiple organizations because movement within one organization may not be possible. Career ladders display only vertical movement between jobs. In contrast, career lattices contain both vertical and lateral movement between jobs and may reflect more closely the career paths of today's work environment.<sup>25</sup>

**Career navigation assistance:** Services that assist participants in determining a career path, understanding the requirements for the jobs they seek, and accessing the education and training needed to achieve their goals.<sup>26</sup>

**Career pathway approach:** An approach that connects progressive levels of education, training, support services, and credentials for specific occupations in a way that optimizes the progress and success of individuals with varying levels of abilities and needs. This approach helps individuals earn marketable credentials, engage in further education and employment, and achieve economic success. Career pathways deeply engage employers and help meet their workforce needs; they also help states and communities strengthen their workforces and economies. This approach is not simply a new model; it is a systems-transformation strategy.

**Career pathways:** An operationalization of the career pathway approach that includes three essential features: (1) well-connected and transparent education, training, credential, and support service offerings within specific sectors or cross-sector occupations (often delivered via multiple linked and aligned programs); (2) multiple entry points that enable well-prepared students as well as targeted populations

<sup>24</sup> *State Policy Approaches to Support Prior Learning Assessments*, CAEL and HCM Strategists, 2012. <http://www.cael.org/pdfs/College-Productivity-Resource-Guide2012>.

<sup>25</sup> O\*Net Resource Center, <http://www.onetcenter.org/ladders.html>, accessed April 11, 2014.

<sup>26</sup> Choitz, Vickie, with Louis Soares and Rachel Pleasants. *A New National Approach to Career Navigation for Working Learners*. Center for American Progress, 2010. [http://cdn.americanprogress.org/wp-content/uploads/issues/2010/03/pdf/career\\_counseling.pdf](http://cdn.americanprogress.org/wp-content/uploads/issues/2010/03/pdf/career_counseling.pdf).

with limited education, skills, English, and work experiences to successfully enter the career pathway (targeted populations served by career pathways may include adult education or other lower-skilled adult students, English language learners, offenders or ex-offenders, certain high school students; disconnected or “opportunity” youth, some former military personal, un- or under-employed adults, or others); and (3) multiple exit points at successively higher levels leading to self- or family-supporting employment and aligned with subsequent entry points. Career pathways also include four essential functions: (a) participant-focused education and training; (b) consistent and non-duplicative assessments of participants’ education, skills, and assets/needs; (c) support services and career navigation assistance to facilitate transitions; and (d) employment services and work experiences.

**Career pathway bridge program:** An extension of the career pathways concept, but designed specifically to meet the needs of lower-skilled adults and youth. Career pathway bridge programs provide targeted basic skills or English language help to lower-skilled students to enable them to enter and succeed in career pathways.<sup>27</sup>

**Career pathway credential completer:** A career pathway participant who attained one or more of the pathway education and training outcomes (group B) attainable in a career pathway prior to leaving the pathway. These outcomes include marketable credentials as designated by the local/regional career pathway partnership, such as a license, industry certification, certificate, diploma or degree. Career pathway credential completers include:

- a. participants who have left the career pathway after attaining one of the above credentials; and
- b. participants who are still enrolled in career pathway courses after attaining one of the above credentials, with the goal of attaining further credentials.

**Career pathway leaver:** A career pathway participant who is no longer enrolled in pathway courses, services, or activities and has not re-enrolled in pathway

courses, services, or activities for a period of at least one year. Career pathway leavers include:

- a. participants who attained one or more of the interim outcomes (group A) or pathway education and training outcomes (group B) attainable in a career pathway prior to leaving the pathway; and
- b. participants who did not attain one of these interim or pathway outcomes prior to leaving the pathway.

**Career pathway participant:** An individual who has enrolled in and is attending specific courses or activities or is receiving services (or combinations thereof) that have been designated as specific entry points for a career pathway.

**Career pathway programs:** integrated sets of services representing each of the four essential functions of career pathways and that are aligned along a career pathway.

**Career pathway system:** The cohesive combination of partnerships, resources and funding, policies, data, and shared accountability measures that support the development, quality, scaling, and dynamic sustainability of career pathways and programs for youth and adults.

**Career and technical education programs of study:** The Carl D. Perkins Career and Technical Education Act of 2006 (“Perkins IV”) defines a program of study as: “a multiyear sequence of courses in a career and technical content area. The sequence: must include academic and CTE content in a non-duplicative progression of courses; must combine secondary and postsecondary program elements; may allow for dual or concurrent enrollment in a postsecondary program; and must lead to an industry-recognized credential or certificate at the postsecondary level or to an associate’s or bachelor’s degree.” Additional guidance from the Department of Education can be found in the document: “Career and Technical Programs of Study: A Design Framework.”

**“Chunked” or modularized curriculum:** A method by which programs can divide certificate or degree coursework into smaller sets of courses, thereby allowing adults already in the labor force to build

<sup>27</sup> Strawn, Julie. *Farther Faster: Six Promising Programs Show How Career Pathway Bridges Help Basic Skills Students Earn Credentials that Matter*. CLASP, 2011.

skills on a schedule more amenable to work and family life, while enabling firms to utilize exactly the minimum training they need.<sup>28</sup>

**Competency-based credentialing:** Model or method of awarding credit that uses defined learning outcomes and competencies instead of measuring learning through clock or credit hours.

**Contextualization:** An instructional technique that integrates concepts from occupational areas, industries, or sectors with basic skills education (e.g., a health careers bridge might teach math concepts in that context, such as measurement for proper medication dosage).<sup>29</sup>

**Credential:** an attestation of qualification or competence issued to an individual by a third party (such as an educational institution or an industry or occupational certifying organization) with the relevant authority or assumed competence to issue such a credential. A credential is awarded in recognition of an individual's attainment of measurable technical or occupational skills necessary to obtain employment or advance within an occupation. These technical or occupational skills are generally based on standards developed or endorsed by employers. Credentials include degrees, diplomas, certificates, certifications, and licenses.<sup>30</sup>

**Credit recognition:** The act of awarding educational credit for academic-equivalent competencies mastered through formal and informal occupational education and training completed at an educational institution or an industry or occupational certifying organization.

**Cross-sector occupation:** An occupation that exists in multiple industry sectors, i.e., an accountant or a forklift driver.

**Disconnected youth:** A low-income 16- to 24-year-old who also meets one or more of the following: has dropped out of high school; is within the age for compulsory school attendance but is over-age and under-credited (has not attended school for at least the most recent complete school year calendar quarter); has been subject to the juvenile or adult justice system or ordered by a court to an alternative school; is homeless/a runaway or under the care of the child welfare system; is pregnant or parenting and is not attending any school; has a disability; or is an English language learner.

**Dual/Concurrent enrollment:** Allowing basic skills students to enroll in occupational or academic courses at the same time they are enrolled in basic skills courses.<sup>31</sup> Allowing high school students to enroll in community college courses at the same time they are enrolled in high school.

**Employment services:** Services provided to participants that are designed to increase the employability of the un- or underemployed, which can include employment counseling, assistance with resume writing, mock interviews, job fairs, assistance with finding a job, and other similar services.

**Evidence-based practices or processes:** Practices or processes of demonstrated effectiveness as shown by theoretical knowledge, practice data, program evaluation results, implementation data, and/or synthesis research.<sup>32</sup>

**Hybrid instruction:** An instructional model that utilizes both online and face-to-face learning.

**Industry:** A specific grouping of companies with highly similar business activities within a sector. For example, the financial sector can be broken down into industries such as asset management, life insurance,

<sup>28</sup> [http://www.workingpoorfamilies.org/pdfs/bp-adultlearners\\_032907.pdf](http://www.workingpoorfamilies.org/pdfs/bp-adultlearners_032907.pdf).

<sup>29</sup> Foster, Marcie, Julie Strawn, and Amy Ellen Duke-Benfield. *Beyond Basic Skills: State Strategies to Connect Low-Skilled Adults to an Employer-Valued Postsecondary Education*, CLASP, 2011.

<sup>30</sup> Based on the Department of Labor's definition of credential found in Training and Employment Guidance Letter No. 15-10, *Increasing Credential, Degree, and Certificate Attainment by Participants of the Public Workforce System*.

<sup>31</sup> Foster, Marcie, Julie Strawn, and Amy Ellen Duke-Benfield. *Beyond Basic Skills: State Strategies to Connect Low-Skilled Adults*

<sup>32</sup> See *The Promise and Challenges of Evidence-Based Policy and Practice*, CLASP. <http://www.clasp.org/admin/site/publications/files/EBPF-Kinds-of-evidence-handout.pdf>.

and banking. Despite their differences in scope, the terms industry and sector are often incorrectly used interchangeably.

**Integrated education and training:** An instructional model that combines skills training with basic skills services to increase the educational and career advancement of participants by delivering these services simultaneously.<sup>33</sup>

**Labor market intelligence:** Data and other information that can be used to understand labor market conditions in a particular region or local area. This can include employment statistics, unemployment rates and unemployment insurance claims, wages and salaries, job projections, and qualitative intelligence from employers.

**Learning community:** A cohort of students who co-enroll in two, or sometimes three, courses that are linked by a common theme and are taught by a team of instructors who collaborate with each other around the syllabi and assignments.<sup>34</sup>

**Participant-focused education and/or training:** Education and/or training models that focus on the needs of the whole participant rather than those of others involved in the educational process, such as instructors, faculty, and administrators. Participant-centered education and/or training is focused on each participant’s needs, abilities, interests, and learning styles both inside and outside of the classroom. Examples include integrated education and training; contextualized curriculum and instruction; learning communities; chunked or modularized curriculum and instruction; competency-based curriculum; self-paced instruction (may also be “guided” self-paced); technology-enabled, online, and/or hybrid instruction; and education and training offered at times and places and in formats that work for the targeted population

—including non-semester-based schedules, block schedules, evening/weekend schedules, employer-based, etc.

**Program of study:** see career and technical education program of study.

**Scaling career pathways:** To increase the number of career pathways and programs available to participants and/or to increase the capacity of existing pathways and programs to serve more participants.

**Sector:** One of approximately 12 large segments in the economy. Despite their differences in scope, the terms industry and sector are often incorrectly used interchangeably.

**Sector initiatives:** Regional, industry-focused approaches to workforce and economic development that improve access to good jobs and/or increase job quality in ways that strengthen an industry’s workforce.<sup>35</sup>

**Sector strategies:** (definition 1 from the National Governors Association, National Network of Sector Practitioners, and Corporation for a Skilled Workforce in 2008): State-level efforts to provide strategic direction and resources towards the promotion and development of individual, regional sector initiatives.<sup>36</sup>

**Sector strategies:** (definition 2 from the National Governors Association, Corporation for a Skilled Workforce, and National Skills Coalition in 2013): Partnerships of employers within one industry that bring government, education, training, economic development, labor, and community organizations together to focus on the workforce needs of an industry within a regional labor market. At the state level, they are policies and investments that support the development of local sector partnerships.<sup>37</sup>

<sup>33</sup> Adapted from OVAE Program Memorandum *Use of Funds Under the Adult Education and Family Literacy Act (AEFLA) for Integrated Education and Training (IET)*. <http://www2.ed.gov/about/offices/list/ovae/pi/AdultEd/aepla-funds-for-iet.pdf>.

<sup>34</sup> Visher, Mary G. and Jedidiah Teshler with Phoebe Richman. *Breaking New Ground: An Impact Study of Career-Focused Learning Communities in Kingsborough Community College*. National Center for Postsecondary Research, 2011. [http://www.postsecondaryresearch.org/i/a/document/19638\\_Breaking-NCPR\\_FINAL.pdf](http://www.postsecondaryresearch.org/i/a/document/19638_Breaking-NCPR_FINAL.pdf)

<sup>35</sup> National Network of Sector Practitioners website, <http://www.insightcced.org/communities/nnspp.html>, accessed April 10, 2014.

<sup>36</sup> *An Evaluation Framework for State Sector Initiatives*, National Governors Association Center for Best Practices, National Network of Sector Practitioners, and Corporation for a Skilled Workforce, May 12, 2008.

<sup>37</sup> *State Sector Strategies Coming of Age: Implication for State Workforce Policymakers*, National Governors Association Center for Best Practices, Corporation for a Skilled Workforce, and National Skills Coalition, 2013.

**Stackable credential:** A credential that is part of a sequence of credentials that can be accumulated over time to build up an individual’s qualifications and help them to move along a career pathway or up a career ladder to different and potentially higher-paying jobs.<sup>38</sup>

**Sustainability, dynamic:** Not only continuing the career pathways, programs, and system beyond initial development but also supporting their adaption and continuous improvement over time based on experience, new information, data, and outcomes. In some cases, it may mean discontinuing career pathways and programs that are no longer in demand.

**Support services:** The range of supports that should be available to students to help them persist in and complete their education or training program. These can include financial stability support, personal support, academic support, and career preparation support.<sup>39</sup>

**Work experiences:** Opportunities provided to participants that enable them to develop occupation or sector-specific skills while on the job in a paid or unpaid capacity. Examples include work simulations, job shadowing, on-the-job-training, internships, transitional jobs, etc.

### Text Box 8: Credentials

“Credentials” is an umbrella term that includes degrees, diplomas, certificates, badges, professional/industry certifications, apprenticeships and licenses. Credentials vary in the awarding organization, the standards on which the award is based, and the rigor and type of assessment and validation processes used to attest to the skills, knowledge, and abilities people possess.<sup>xxvii</sup>

#### POSTSECONDARY EDUCATIONAL CREDENTIALS

Educational credentials include degrees, diplomas, and certificates that are awarded by accredited educational institutions based on successful completion of a course of study. These credentials vary in the specificity with which courses have clearly articulated learning outcomes that students must achieve to obtain the credential. These courses of study also vary in scope, duration, and level of effort, which has traditionally been calibrated by a metric of time-based credits. Postsecondary certificates are typically awarded for completion of a less-than-two-year course of study, but the duration varies substantially. Postsecondary diplomas are typically no more than 1 year or 30 credits in duration and include general education courses, as appropriate to the field of study. Associate-level degrees are awarded to students who complete 90 quarter credit hours or 60 semester credit hours of schooling, which typically requires two years to complete on a full-time schedule. In addition, educational institutions award certificates for completion of noncredit occupational training programs.

Portability of credentials across educational levels and institutions depends on articulation and transfer agreements. Associate Degrees have a general scope and are intended as a transfer function, while Applied Associate Degrees, which have a narrow technical scope and are intended for individuals in a specific field of study to gain employment, only transfer by specific transfer agreement.

Educational credentials are awarded once and carry no requirement from the awarding organization for repeated demonstration of knowledge and skills. However, to address rapidly changing knowledge and skill requirements, some certificates are now dated to indicate when these requirements were current.

<sup>38</sup> *Scaling Stackable Credentials: Implications for Implementation and Policy*, Evelyn Ganzglass, CLASP, March 2014, based on the definition from the U.S. Department of Labor.

<sup>39</sup> See CLASP Federal Funding for Support Services Appendix, 2013. <http://www.clasp.org/admin/site/documents/files/Appendix-Federal-Funding-for-Support-Services.pdf>.

## INDUSTRY OR OCCUPATIONAL CREDENTIALS

Industry or occupational credentials include certifications, licenses, and certificates.

**Certifications** are awarded by a third-party nongovernmental certification body, such as an industry or occupational association, based on an individual demonstrating through an examination process that she or he has mastered the required knowledge, skills, and abilities to perform a specific job. The examination can be written, oral, or performance-based. Quality certifications set the standards against which mastery is assessed through a defensible, industry-wide job analysis or role-delineation process and use examination processes that meet psychometric rigor to assure they are fair, valid, and reliable. A certification is typically a time-limited credential that may be renewed through a recertification process and rescinded for ethical violations and incompetence. Certification is often voluntary, but may be mandatory when tied to state licensure and preferred or required by an employer for hiring.

Certifications differ widely in quality and the breadth and level of competencies covered, as well as the types of assessments used in the certification process. Some certifications are knowledge-based, while others focus more on skills and abilities. For example, CompTIA's Strata IT Fundamentals certification having worked for a certain period of time, or successfully completing a complex certification-related task. Certifications also differ in whether they are vendor-neutral, as in the case of CompTIA certification in IT, or vendor-specific, as are Microsoft certifications.

**Licenses** to practice are granted by federal, state, or local government agencies based on predetermined criteria, which may include some combination of degree attainment, certifications, certificates, assessment, apprenticeship programs, and work experience. Licenses are time-limited and must be renewed periodically. Licenses are granted to provide a level of consumer protection and ensure safety and quality of work. Licensure requirements are defined by laws and regulations. Violation of the terms of the license can result in legal action.

**Certificates** are awarded under a variety of types of education and training. Employers, industry associations, and others award certificates of completion for their various training programs. Upon completion, participants in a registered apprenticeship receive a portable, nationally recognized certificate of completion issued by the U.S. Department of Labor (USDOL) or the State Apprenticeship Agency that certifies occupational proficiency. They may also receive interim credentials issued by USDOL and an Applied Associate Degree.

Source: *Scaling Stackable Credentials: Implications for Implementation and Policy*, Evelyn Ganzglass, CLASP, March 2014.

# Appendix D: Career Pathway Metrics Detail

This appendix includes a table for each of the suggested career pathway metrics. These tables provide a structured way of describing the metric elements, including where it would fit within the Alliance framework elements, what is measured, who is measured, timing of measurement, rationale for the metric, and related notes.

Metric Framework Category	Metric	Page
A. Interim outcomes	A.1. Educational level gains	44
	A.2. High school diploma or equivalency attainment	44
	A.3. Developmental/remedial education completion	45
	A.4. College-level pathway course completion	46
	A.5. College-level math or English course completion	46
	A.6. Retention in pathway coursework in subsequent term	47
	A.7. Pathway credit accumulation 1	48
	A.8. Pathway credit accumulation 2	48
	A.9. Earnings progression	49
B. Pathway education and training outcomes	B.1. Pathway license, industry certification, or apprenticeship certificate attainment	50
	B.2. Pathway certificate attainment	50
	B.3. Pathway Associate degree attainment	51
	B.4. Pathway Associate degree attainment or transfer to a two- or four-year institution	52
C. Labor market outcomes	C.1. Initial employment	53
	C.2. Employment in targeted industry sector	54
	C.3. Employment retention	54
	C.4. Initial earnings	55
	C.5. Initial earnings change	55
	C.6. Subsequent earnings	56

<b>Group “A”: Interim Outcomes</b>	
<b>Metric name:</b>	<b>A.1. Educational level gains</b>
<b>Description of what is being measured:</b>	A percentage based on career pathway participants who gained one or more educational levels (using Adult Education NRS levels or equivalent) divided by those participants who gained one or more levels or left the career pathway (i.e., became a career pathway leaver) without gaining one or more educational levels.
<b>Alliance Framework:</b>	A. Interim outcomes
<b>Population (career pathway participants to whom the metric will apply):</b>	Career pathway participants who have received an assessment of their basic academic skills indicating that they needed to receive adult basic education or adult secondary education to be able to successfully complete subsequent career pathway instruction.
<b>Denominator (career pathway participants for whom the measure has been applied):</b>	Population participants who gained one or more educational functioning levels, or who became a career pathway leaver without gaining one or more educational levels.
<b>Numerator (career pathway participants who achieved the result being measured):</b>	Denominator participants who gained one or more educational functioning levels.
<b>Discussion:</b>	This metric would probably only be applied to career pathways that included an entry point for participants needing adult education services. Measurement for career pathway population members would be triggered by attainment of the levels, or by leaving the pathway. Definition and assessment of results would be based on adult education national reporting system requirements, or equivalent arrangements developed in the states.
<b>Metric name:</b>	<b>A.2. High school diploma or equivalency attainment</b>
<b>Description of what is being measured:</b>	A percentage based on career pathway participants who obtained a high school diploma or its equivalent divided by those participants who did not have a high school diploma or its equivalent at pathway entry, and either obtained the credential or left the career pathway (i.e., became a career pathway leaver) without obtaining the credential.
<b>Alliance Framework:</b>	A. Interim outcomes
<b>Population (career pathway participants to whom the metric will apply):</b>	Career pathway participants who entered the career pathway without previously obtaining a high school diploma or its equivalent.

<b>Denominator (career pathway participants for whom the measure has been applied):</b>	Population participants who obtained a high school diploma or its equivalent, or who became a career pathway leaver prior to obtaining the credential.
<b>Numerator (career pathway participants who achieved the result being measured):</b>	Denominator participants who obtained a high school diploma or its equivalent.
<b>Discussion:</b>	This metric would probably only be applied to career pathways that included an entry point for participants lacking a high school diploma or its equivalent. Measurement for career pathway population members would be triggered by attainment of the high school diploma or its equivalent, or by leaving the pathway.
<b>Metric name:</b> <b>A.3. Developmental/remedial education completion</b>	
<b>Description of what is being measured:</b>	A percentage based on career pathway participants who enrolled in developmental/remedial coursework, and who obtained a passing grade in all such courses divided by those who obtained a passing grade in all such courses or left the career pathway (i.e., became a career pathway leaver) without doing so.
<b>Alliance Framework:</b>	A. Interim outcomes
<b>Population (career pathway participants to whom the metric will apply):</b>	Career pathway participants who enrolled in at least one developmental or remedial course.
<b>Denominator (career pathway participants for whom the measure has been applied):</b>	Population participants who obtained a passing grade in all developmental or remedial courses taken, or who became a career pathway leaver prior to obtaining a passing grade in all such courses.
<b>Numerator (career pathway participants who achieved the result being measured):</b>	Denominator participants who obtained a passing grade in all developmental or remedial courses taken.
<b>Discussion:</b>	This metric would only apply to career pathways that included an entry point for participants through developmental or remedial education. Since the metric is based on courses taken, it assumes that participants can be properly assigned to the metric if they take multiple developmental education courses.

<b>Metric name:</b>	<b>A.4. College-level pathway course completion</b>
<b>Description of what is being measured:</b>	A percentage based on career pathway participants who initially entered the career pathway by enrolling in instruction at less than college level (including adult education or developmental education) who subsequently completed one or more college level pathway courses divided by those who enrolled in these courses or left the career pathway (i.e., became a career pathway leaver) without completing these courses.
<b>Alliance Framework:</b>	A. Interim outcomes
<b>Population (career pathway participants to whom the metric will apply):</b>	Career pathway participants who initially entered the career pathway by enrolling in instruction at less than college level (including adult education or developmental education).
<b>Denominator (career pathway participants for whom the measure has been applied):</b>	Population participants who enrolled in one or more college level pathway courses, or who became a career pathway leaver without completing these courses.
<b>Numerator (career pathway participants who achieved the result being measured):</b>	Denominator participants who enrolled in one or more college level pathway courses.
<b>Discussion:</b>	College level pathway courses would include any instruction at the college level that is considered part of the career pathway, including general education courses required for completion of a pathway credential. See <i>career pathway course</i> definition.
<b>Metric name:</b>	<b>A.5 College-level math or English course completion</b>
<b>Description of what is being measured:</b>	A percentage based on career pathway participants who completed a college-level course in math or English divided by those who completed such courses or left the career pathway (i.e., became a career pathway leaver) without completing such a course.
<b>Alliance Framework:</b>	A. Interim outcomes
<b>Population (career pathway participants to whom the metric will apply):</b>	Career pathway participants who enrolled in a career pathway that requires the completion of at least one college-level course in math or English.
<b>Denominator (career pathway participants for whom the measure has been applied):</b>	Population participants who completed a college-level course in math or English or exited the pathway without completing such a course.

<b>Numerator (career pathway participants who achieved the result being measured):</b>	Denominator participants who completed a college-level course in math or English.
<b>Discussion:</b>	Completion of a college-level course in math or English could include credit obtained based on an assessment of prior learning or other demonstration of competency.
<b>Metric name:</b>	<b>A.6. Retention in pathway coursework in subsequent term</b>
<b>Description of what is being measured:</b>	A percentage based on career pathway participants who enrolled in pathway coursework in the term following the term of initial pathway enrollment (other than summer terms), or in the subsequent term divided by those who were initially enrolled in the pathway.
<b>Alliance Framework:</b>	A. Interim outcomes
<b>Population (career pathway participants to whom the metric will apply):</b>	Career pathway participants who enrolled in one or more college level pathway courses.
<b>Denominator (career pathway participants for whom the measure has been applied):</b>	Career pathway participants who enrolled in one or more college level pathway courses in a particular term.
<b>Numerator (career pathway participants who achieved the result being measured):</b>	Denominator participants who enrolled in pathway coursework in the term following the term of initial pathway enrollment (other than summer terms), or in the subsequent term.
<b>Discussion:</b>	This metric would apply only to career pathways that were more than one college term in duration. In its current form this metric refers to retention in pathway coursework as distinct from any coursework. One option could be to broaden the application to consider retention in any college coursework, whether it was part of the initial pathway.

<b>Metric name:</b>	<b>A.7. Pathway credit accumulation 1</b>
<b>Description of what is being measured:</b>	A percentage based on career pathway participants who accumulated 12 semester college credits or 15 quarterly college credits in pathway coursework divided by those who accumulated these college credits or left the career pathway (i.e., became a career pathway leaver) prior to accumulating these credits.
<b>Alliance Framework:</b>	A. Interim outcomes
<b>Population (career pathway participants to whom the metric will apply):</b>	Career pathway participants who enrolled in one or more college level pathway courses, in a career pathway that consists of at least 12 semester college credits or 15 quarterly college credits.
<b>Denominator (career pathway participants for whom the measure has been applied):</b>	Population participants who accumulated 12 semester college credits or 15 quarterly college credits in pathway coursework, or who left the career pathway (i.e., became a career pathway leaver) prior to accumulating these credits.
<b>Numerator (career pathway participants who achieved the result being measured):</b>	Denominator participants who accumulated 12 semester college credits or 15 quarterly college credits in pathway coursework.
<b>Discussion:</b>	See definition of <i>career pathway course</i> . Both of these metrics are based on similar credit accumulation metrics used by the <a href="#">Washington State Student Achievement Initiative (SAI)</a> . The SAI is based on momentum point research that documented the value of students receiving at least one year of college credit and attaining a credential ( <a href="#">Prince, Jenkins, 2005</a> ).
<b>Metric name:</b>	<b>A.8. Pathway credit accumulation 2</b>
<b>Description of what is being measured:</b>	A percentage based on career pathway participants who accumulated 24 semester college credits or 30 quarterly college credits in pathway coursework divided by those who accumulated these credits or left the career pathway (i.e., became a career pathway leaver) prior to doing so.
<b>Alliance Framework:</b>	A. Interim outcomes
<b>Population (career pathway participants to whom the metric will apply):</b>	Career pathway participants who enrolled in one or more college level pathway courses, in a career pathway that consists of at least 24 semester college credits or 30 quarterly college credits.
<b>Denominator (career pathway participants for whom the measure has been applied):</b>	Population participants who accumulated 24 semester college credits or 30 quarterly college credits in pathway coursework, or who left the career pathway (i.e., became a career pathway leaver) prior to accumulating these credits.

<b>Numerator (career pathway participants who achieved the result being measured):</b>	Denominator participants who accumulated 24 semester college credits or 30 quarterly college credits in pathway coursework.
<b>Discussion:</b>	See definition of <i>career pathway course</i> . Both of these metrics are based on similar credit accumulation metrics used by the <a href="#">Washington State Student Achievement Initiative (SAI)</a> . The SAI is based on momentum point research that documented the value of students receiving at least one year of college credit and attaining a credential ( <a href="#">Prince, Jenkins, 2005</a> ).
<b>Metric name:</b>	<b>A.9. Earnings progression</b>
<b>Description of what is being measured:</b>	The average gain/loss of earnings for <i>career pathway credential completers</i> <sup>40</sup> based on a comparison of the third quarter after completing a credential and the quarter of credential completion.
<b>Alliance Framework:</b>	A. Interim outcomes
<b>Population (career pathway participants to whom the metric will apply):</b>	Career pathway participants who completed a credential.
<b>Calculation:</b>	For each population participant, the UI-covered earnings amount for the quarter of credential completion is subtracted from the UI earnings amount for the third quarter after credential completion. The average of these earnings differences is computed for all pathway credential completers.
<b>Discussion:</b>	This is a new measure of earnings progression for participants who obtain credentials along the pathway, whether or not they leave the pathway and are included in the other earnings measures. A separate result should be calculated for each credential along the career pathway, based on the population of participants that completed each of the credentials. This metric is similar to the Labor Market Outcome metric C.5., in that it examines the change in earnings for the career pathway participant. This metric would apply only to career pathway participants who complete a credential, rather than all <i>career pathway leavers</i> , however.

<sup>40</sup> *Career pathway credential completer: A career pathway participant who attained one or more of the pathway education and training outcomes attainable in a career pathway prior to leaving the pathway. These outcomes include marketable credentials as designated by the local/regional career pathway system.*

Group “B”: Education and Training Outcomes (along the pathway)	
<b>Metric name:</b>	<b>B.1. Pathway license, industry certification, or apprenticeship certificate attainment</b>
<b>Description of what is being measured:</b>	A percentage based on career pathway participants who obtained an occupational license, industry certification, or apprenticeship certificate in the career pathway divided by those who obtained such a credential or left the career pathway (i.e., became a career pathway leaver) prior to obtaining such a credential.
<b>Alliance Framework:</b>	B. Pathway education and training outcomes
<b>Population (career pathway participants to whom the metric will apply):</b>	Career pathway participants who are enrolled in a career pathway program that leads to at least one occupational license, industry certification, or apprenticeship certificate.
<b>Denominator (career pathway participants for whom the measure has been applied):</b>	Population participants who obtained an occupational license, industry certification, or apprenticeship certificate in the career pathway, or who left the career pathway (i.e., became a career pathway leaver) prior to obtaining such a credential.
<b>Numerator (career pathway participants who achieved the result being measured):</b>	Denominator participants who obtained an occupational license, industry certification, or apprenticeship certificate in the career pathway.
<b>Discussion:</b>	<p>Since career pathways may offer multiple licenses, industry certifications, etc., there are two options for how this metric could be calculated:</p> <ul style="list-style-type: none"> <li>• A separate metric for each credential available in the pathway, with participants entering the population for each metric only for the credentials that are “in front” of them on the pathway (i.e., credentials they are working toward). This option would require knowledge of what credentials individual participants are working toward.</li> <li>• A single metric that counts as success any participant who obtained one <i>or more</i> credentials. Participants would count once in the metric whether they obtained a single credential or multiple credentials. This option would tend to undervalue stackable credentials, since they would only count once as a success.</li> </ul>
<b>Metric name:</b>	<b>B.2. Pathway certificate attainment</b>
<b>Description of what is being measured:</b>	A percentage based on pathway participants who obtained a certificate in the pathway divided by those who obtained such a certificate or left the career pathway (i.e., became a career pathway leaver) prior to obtaining a certificate.

<b>Alliance Framework:</b>	B. Pathway education and training outcomes
<b>Population (career pathway participants to whom the metric will apply):</b>	Career pathway participants who are enrolled in a career pathway program that leads to at least one certificate. In this context, certificates would include all career pathway credentials other than the licenses and industry certifications covered in B.1, and the Associate degree (B.3 and B.4), including technical diplomas.
<b>Denominator (career pathway participants for whom the measure has been applied):</b>	Population participants who obtained a certificate in the career pathway, or who left the career pathway (i.e., became a career pathway leaver) prior to obtaining such a certificate.
<b>Numerator (career pathway participants who achieved the result being measured):</b>	Denominator participants who obtained a certificate in the career pathway.
<b>Discussion:</b>	<p>Since career pathways may offer multiple certificates, there are two options for how this metric could be calculated:</p> <ul style="list-style-type: none"> <li>• A separate metric for each certificate available in the pathway, with participants entering the population for each metric only for the certificates that are “in front” of them on the pathway (i.e., certificates they are working toward). This option would require knowledge of what certificates individual participants are working toward.</li> <li>• A single metric that counts as success any participant who obtained one or more certificates. Participants would count once in the metric whether they obtained a single certificate or multiple certificates. This option would tend to undervalue stackable credentials, since they would only count once as a success.</li> </ul>
<b>Metric name:</b>	<b>B.3. Pathway Associate degree attainment</b>
<b>Description of what is being measured:</b>	A percentage based on pathway participants who obtained an Associate degree in the pathway divided by those who obtained such a degree or left the career pathway (i.e., became a career pathway leaver) prior to obtaining an Associate degree.
<b>Alliance Framework:</b>	B. Pathway education and training outcomes
<b>Population (career pathway participants to whom the metric will apply):</b>	Career pathway participants who are enrolled in a career pathway that leads to an Associate degree.

<b>Denominator (career pathway participants for whom the measure has been applied):</b>	Population participants who obtained an Associate degree in the career pathway, or who left the career pathway (i.e., became a career pathway leaver) prior to obtaining an Associate degree.
<b>Numerator (career pathway participants who achieved the result being measured):</b>	Denominator participants who obtained an Associate degree in the career pathway.
<b>Discussion:</b>	This metric would be appropriate for career pathways that are meant to lead to an Associate degree. This metric enables measurement of the overall performance of such pathways in transitioning participants to an Associate degree. An alternate version of the metric that may be more appropriate for accountability purposes would restrict the population for the metric to those participants who have entered the Associate degree program, i.e., eliminate those participants who leave the career pathway prior to enrolling in the Associate degree program. Another option for this metric could be to broaden it to include the attainment of any Associate degree, not just degrees related to the specific career pathway.
<b>Metric name:</b>	<b>B.4. Pathway Associate degree attainment or transfer to a two- or four-year institution</b>
<b>Description of what is being measured:</b>	A percentage based on pathway participants who obtained an Associate degree in the pathway, or transferred to a two- or four-year institution divided by those who obtained such a degree or transfer, or left the career pathway (i.e., became a career pathway leaver) prior to obtaining an Associate degree or transferring. This includes participants who entered an applied baccalaureate program.
<b>Alliance Framework:</b>	B. Pathway education and training outcomes
<b>Population (career pathway participants to whom the metric will apply):</b>	Career pathway participants who are enrolled in a career pathway program that leads to an Associate degree.
<b>Denominator (career pathway participants for whom the measure has been applied):</b>	Population participants who obtained an Associate degree in the career pathway, or transferred to a two- or four-year institution, or who left the career pathway (i.e., became a career pathway leaver) prior to obtaining an Associate degree or transferring.
<b>Numerator (career pathway participants who achieved the result being measured):</b>	Denominator participants who obtained an Associate degree in the career pathway, or transferred to a two- or four-year institution.

<b>Discussion:</b>	See related discussion for the prior metric. This metric is similar to metric B.3, but adds transfer to another college or university as a positive outcome. It is meant to provide credit for those pathway participants who transfer to another college, in spite of not completing a degree. This metric could also be broadened to include the attainment of any Associate degree, not just degrees related to the specific career pathway. Applying this metric will require that the data on transfer can be obtained.
--------------------	--

**Group “C”: Labor Market Outcomes**

<b>Metric name:</b>	<b>C.1. Initial employment</b>
<b>Description of what is being measured:</b>	Percent of career <i>pathway leavers</i> who are employed in the second or third calendar quarter after leaving the career pathway (i.e., becoming a career pathway leaver).
<b>Alliance Framework:</b>	C. Labor market outcomes
<b>Population (career pathway participants to whom the metric will apply):</b>	Career pathway participants
<b>Denominator (career pathway participants for whom the measure has been applied):</b>	Population participants who left the career pathway (i.e., became a career pathway leaver).
<b>Numerator (career pathway participants who achieved the result being measured):</b>	Denominator participants who have earnings (based on UI or other administrative earnings data <sup>41</sup> ) in the second or third calendar quarters after leaving the career pathway.
<b>Discussion:</b>	This metric would capture an initial measure of employment in the period following completion or exit from the pathway. It combines the original employment at exit metric and the original initial employment retention metric.

<sup>41</sup> Other administrative earnings data could include from WRIS-2 or from the Federal Employment Data Exchange System.

<b>Metric name:</b>	<b>C.2. Employment in targeted industry sector</b>
<b>Description of what is being measured:</b>	Percent of <i>career pathway credential completers</i> <sup>42</sup> who are employed in the second or third full quarter after leaving the career pathway (i.e., becoming a career pathway leaver) in an industry sector targeted by the career pathway (for career pathways with specific industry targeting).
<b>Alliance Framework:</b>	C. Labor market outcomes
<b>Population (career pathway participants to whom the metric will apply):</b>	Career pathway participants
<b>Denominator (career pathway participants for whom the measure has been applied):</b>	Career pathway completers who have left the career pathway.
<b>Numerator (career pathway participants who achieved the result being measured):</b>	Denominator participants who have earnings (based on UI or other administrative earnings data) in the second or third calendar quarter after leaving the career pathway.
<b>Discussion:</b>	This metric would capture the success of the pathway in helping pathway completers obtain employment in one of the industries targeted by the pathway. The metric is suggested for pathway credential completers rather than all pathway leavers, since entry into a targeted industry is a reasonable expectation of those who obtained a pathway educational or training outcome.
<b>Metric name:</b>	<b>C.3. Employment retention</b>
<b>Description of what is being measured:</b>	Percent of <i>career pathway leavers</i> employed in the second or third calendar quarters after leaving the career pathway who are also employed in the sixth or seventh full quarters after leaving the career pathway.
<b>Alliance Framework:</b>	C. Labor market outcomes
<b>Population (career pathway participants to whom the metric will apply):</b>	Career pathway participants

<sup>42</sup> *Career pathway credential completer: A career pathway participant who attained one or more of the pathway education and training outcomes attainable in a career pathway prior to leaving the pathway. These outcomes include marketable credentials as designated by the local/regional career pathway system.*

<b>Denominator (career pathway participants for whom the measure has been applied):</b>	Career pathway participants who have left the career pathway and who have UI covered earnings in the second or third calendar quarters after leaving the career pathway.
<b>Numerator (career pathway participants who achieved the result being measured):</b>	Denominator participants who have earnings (based on UI or other administrative earnings data) in the sixth or seventh calendar quarters after leaving the career pathway.
<b>Discussion:</b>	This metric is intended to capture longer-term employment retention by looking at the persistence of employment for pathway leavers in two subsequent quarters one full year later than the quarters examined for metric C.1.
<b>Metric name:</b>	<b>C.4. Initial earnings</b>
<b>Description of what is being measured:</b>	The median quarterly earnings of <i>pathway leavers</i> who are employed in the third calendar quarter after leaving the pathway.
<b>Alliance Framework:</b>	C. Labor market outcomes
<b>Population (career pathway participants to whom the metric will apply):</b>	Career pathway participants with earnings in the third calendar quarter after leaving the career pathway.
<b>Calculation:</b>	The median value of all earnings (based on UI or other administrative earnings data) amounts for population participants who have earnings of any amount in the third calendar quarter after leaving the career pathway.
<b>Discussion:</b>	This is the basic measure of initial earnings for pathway leavers. It applies only to those with earnings in the third quarter after leaving the career pathway.
<b>Metric name:</b>	<b>C.5. Initial earnings change</b>
<b>Description of what is being measured:</b>	The average gain/loss of earnings for pathway leavers based on a comparison of the third quarter after leaving the pathway and the third quarter prior to pathway entry.
<b>Alliance Framework:</b>	C. Labor market outcomes
<b>Population (career pathway participants to whom the metric will apply):</b>	Career pathway participants with earnings in the third calendar quarter after leaving the career pathway.

<b>Calculation:</b>	For each population participant, the earnings (based on UI or other administrative earnings data) amount for the third quarter prior to pathway entry is subtracted from the earnings amount for the third quarter after leaving the pathway. The average of these earnings differences is computed for all pathway leavers.
<b>Discussion:</b>	This is a measure of earnings change from pre-pathway to initial post-pathway. The metric would provide an incentive to recruit and place lower-income participants, since these persons are much more likely to exhibit an earnings increase in the immediate post-pathway period. This metric is similar to the Interim Outcome metric A.9., Earnings progression, in that it examines the change in earnings for the career pathway participant. This metric would apply to all <i>career pathway leavers</i> , however, not just those completing pathway credentials. Applying this metric will require that the quarter in which pathway participants entered the career pathway is known.
<b>Metric name:</b>	<b>C.6. Subsequent earnings</b>
<b>Description of what is being measured:</b>	The median quarterly earnings of career pathway leavers who are employed in the seventh calendar quarter after leaving the career pathway.
<b>Alliance Framework:</b>	C. Labor market outcomes
<b>Population (career pathway participants to whom the metric will apply):</b>	Career pathway participants with earnings in the seventh calendar quarter after leaving the career pathway.
<b>Calculation:</b>	The median value of all earnings (based on UI or other administrative earnings data) amounts for population participants who have earnings of any amount in the seventh calendar quarter after leaving the career pathway.
<b>Discussion:</b>	This metric would provide a measure of post-pathway earnings for leavers with earnings in post quarter seven.

**Endnotes:****\*= evaluation evidence**

- <sup>i</sup> Anthony P. Carnevale, Nicole Smith, Jeff Strohl, *Help Wanted: Projections of Jobs and Education Requirements Through 2018*, 2010.
- <sup>ii</sup> Harry J. Holzer and Erin Dunlop, *Just the Facts, Ma'am: Postsecondary Education and Labor Market Outcomes in the U.S.*, Institute for Research on Poverty, University of Wisconsin-Madison, IRP Discussion Paper, No. 1411-13, 2014, <http://www.irp.wisc.edu/publications/dps/pdfs/dp141113.pdf>.
- <sup>iii</sup> Marcie Foster and Kisha Bird, *From PIACC to Policy Solutions: Promoting Postsecondary and Economic Success for Low-Skilled Workers*, CLASP, 2013.
- <sup>iv</sup> *PIAAC: What the Data Say About the Skills of U.S. Adults*, American Institutes for Research, 2014, [http://piaacgateway.com/s/PIAAC-Results-Summary-Brochure\\_Final\\_041814.pdf](http://piaacgateway.com/s/PIAAC-Results-Summary-Brochure_Final_041814.pdf).
- <sup>v</sup> *Education at a Glance 2013*, OECD, 2013, Chart A1.1, available at <http://dx.doi.org/10.1787/888932846215>.
- <sup>vi</sup> See several recent surveys and reports, including the following. *What America Needs to Know about Higher Education Redesign: the 2013 Lumina Study of the American Public's Opinion on Higher Education and the U.S. Business Leaders Poll on Higher Education*, Gallup and the Lumina Foundation, 2014; *Northeastern University Business Elite National Poll, 3<sup>rd</sup> Installment of the Innovation Imperative Polling Series: Topline Report*, Northeastern University and FTI Consulting, 2014; *2012 Talent Shortage Survey: Research Results*, ManpowerGroup, 2012; *Workforce Investment Act: Local Areas Face Challenges Helping Employers Fill Some Types of Skilled Jobs*, Government Accounting Office, 2013.
- <sup>vii</sup> Theresa Anderson, Pamela Loprest, Teresa Derrick-Mills, Lauren Eyster, Elaine Morley, Alan Werner, *Health Profession Opportunity Grants Year Two Annual Report (2011–2012)*, OPRE, Abt Associates, Urban Institute, OPRE Report Number 2014-03, 2014, [http://www.acf.hhs.gov/sites/default/files/opre/hpog\\_second\\_annual\\_report.pdf](http://www.acf.hhs.gov/sites/default/files/opre/hpog_second_annual_report.pdf).
- <sup>viii</sup> \*Alan Werner, Catherine Dun Rappaport, Jennifer Bagnell Stuart, Jennifer Lewis, *Literature Review: Career Pathways Programs, Implementation, Systems and Outcome Evaluation of the Health Profession Opportunity Grants to Serve TANF Recipients and Other Low-income*, OPRE, Abt Associates, Urban Institute, OPRE Report #2013-24, 2013, [http://www.acf.hhs.gov/sites/default/files/opre/cp\\_lit\\_review\\_final\\_62613\\_edits.pdf](http://www.acf.hhs.gov/sites/default/files/opre/cp_lit_review_final_62613_edits.pdf); Theresa Anderson, Pamela Loprest, Teresa Derrick-Mills, Lauren Eyster, Elaine Morley, Alan Werner, *Health Profession Opportunity Grants Year Two Annual Report (2011–2012)*.
- <sup>ix</sup> Davis Jenkins and Sung-Woo Cho, *Get With the Program ... and Finish It: Building Guided Pathways to Accelerate Student Completion*, Community College Research Center (CCRC), Teachers College, Columbia University, CCRC Working Paper No. 66, 2014, <http://ccrc.tc.columbia.edu/media/k2/attachments/get-with-the-program-and-finish-it-2.pdf>; Davis Jenkins and Sung-Woo Cho, *Get With the Program: Accelerating Community College Students' Entry into and Completion of Programs of Study*, Community College Research Center (CCRC), Teachers College, Columbia University, CCRC Working Paper No. 32, 2012, <http://ccrc.tc.columbia.edu/media/k2/attachments/accelerating-student-entry-completion.pdf>. Guided pathways have similar characteristics to career pathways.
- <sup>x</sup> Tim Harmon, Neil Ridley, Rachel Zinn, *Workforce Results Matter: The Critical Role of Employment Outcome Data in Improving Transparency of Postsecondary Education and Training*, CLASP, 2014.
- <sup>xi</sup> David Fein, *Career Pathways as a Framework for Program Design and Evaluation A Working Paper from The Innovative Strategies for Increasing Self-Sufficiency (ISIS) Project*, OPRE, Abt Associates, OPRE Report 2012-30, 2012, [http://www.acf.hhs.gov/sites/default/files/opre/inno\\_strategies.pdf](http://www.acf.hhs.gov/sites/default/files/opre/inno_strategies.pdf). The AQCP career pathway functions are informed by the four major categories of “hallmark strategies” of career pathway programs described in Fein’s working paper.
- <sup>xii</sup> \*Craig Hayward and Terrence Willet, *Curricular Redesign and Gatekeeper Completion: A Multi-College Evaluation of the California Acceleration Project*, The Research & Planning Group for California Community Colleges, 2014, <http://cap.3csn.org/files/2014/04/RP-Evaluation-CAP.pdf>; \*Susan Scrivener and Michael J. Weiss, *More Graduates: Two-Year Results from an Evaluation of Accelerated Study in Associate Programs (ASAP) for Developmental Education Students*, MDRC, 2013, [http://www.mdrc.org/sites/default/files/More\\_Graduates.pdf](http://www.mdrc.org/sites/default/files/More_Graduates.pdf).
- <sup>xiii</sup> \*Vanessa Martin and Joseph Broadus, *Enhancing GED Instruction to Prepare Students for College and Careers: Early Success in LaGuardia Community College's Bridge to Health and Business Program*, MDRC, 2013, [http://www.mdrc.org/sites/default/files/Enhancing\\_GED\\_Instruction\\_brief.pdf](http://www.mdrc.org/sites/default/files/Enhancing_GED_Instruction_brief.pdf).
- <sup>xiv</sup> Elizabeth Zachry Rutschow and Shane Cray-Ross, *Beyond the GED: Promising Models for Moving High School Dropouts to College*, MDRC, 2014, [http://www.mdrc.org/sites/default/files/Beyond\\_the\\_GED\\_FR\\_0.pdf](http://www.mdrc.org/sites/default/files/Beyond_the_GED_FR_0.pdf); Julie Strawn, *Farther Faster: Six Promising Programs Show How Career Pathway Bridges Help Basic Skills Students Earn Credentials that Matter*, CLASP, 2011, <http://www.clasp.org/resources-and-publications/files/Farther-Faster.pdf>; John Wachen, Davis Jenkins, Clive Belfield, Michelle Van Noy, Amanda Richards, Kristen Kulongoski, *Contextualized College Transition Strategies for Adult Basic Skills Students: Learning from Washington State's I-BEST Program Model*, Community College Research Center (CCRC), Teachers College, Columbia University, 2012, <http://files.eric.ed.gov/fulltext/ED538999.pdf>; John Wachen, Davis Jenkins, Michelle Van Noy, et al., *How I-BEST Works: Findings from a Field Study of Washington State's Integrated Basic Education and Skills Training Program*, Community College Research Center (CCRC), Teachers College, Columbia University, 2010, <http://ccrc.tc.columbia.edu/media/k2/attachments/how-i-best-works-findings.pdf>.
- <sup>xv</sup> \*Michael J. Weiss, Alexander Mayer, Dan Cullinan, Alyssa Ratledge, Colleen Sommo, John Diamond, *A Random Assignment Evaluation of Learning Communities at Kingsborough Community College: Seven Years Later*, MDRC, 2014, [http://www.mdrc.org/sites/default/files/A\\_Random\\_Assignment\\_Evaluation\\_of\\_Learning\\_Communities\\_KCC.pdf](http://www.mdrc.org/sites/default/files/A_Random_Assignment_Evaluation_of_Learning_Communities_KCC.pdf); \*Susan Scrivener and Erin Coghlan, *Opening Doors to Student Success: A Synthesis of Findings from an Evaluation at Six Community Colleges*, MDRC, 2011, [http://www.mdrc.org/sites/default/files/policybrief\\_27.pdf](http://www.mdrc.org/sites/default/files/policybrief_27.pdf).

- xvi For examples of competency-based education and credentialing efforts, see: Evelyn Ganzglass, Keith Bird, Heath Prince, *Giving Credit Where Credit is Due: Creating a Competency-Based Qualifications Framework for Postsecondary Education and Training*, CLASP, 2011, <http://www.clasp.org/resources-and-publications/files/Giving-Credit.pdf>;
- xvii \*Susan Scrivener and Michael J. Weiss, *More Graduates: Two-Year Results from an Evaluation of Accelerated Study in Associate Programs (ASAP) for Developmental Education Students*; \*Susan Scrivener and Michael J. Weiss, *More Guidance, Better Results?: Three-Year Effects of an Enhanced Student Services Program at Two Community Colleges*, MDRC, 2009, [http://www.mdrc.org/sites/default/files/full\\_450.pdf](http://www.mdrc.org/sites/default/files/full_450.pdf).
- xviii \*Brandon Roberts and Derek Price, *Strengthening State Systems for Adult Learners: An Evaluation of the First Five Years of Shifting Gears*, The Joyce Foundation, 2012, [http://www.joycefdn.org/assets/1/7/SG\\_Strengthening\\_State\\_Systems\\_Report\\_-\\_final.pdf](http://www.joycefdn.org/assets/1/7/SG_Strengthening_State_Systems_Report_-_final.pdf).
- xix *Innovative Collaborations between Workforce Boards and Employers Helped Meet Local Needs*, United States Government Accountability Office, Report to Congressional Committees, 2012, <http://www.gao.gov/assets/590/587809.pdf>; \*Sheila Maguire, Joshua Freely, Carol Clymer, Maureen Conway, *Job Training That Works: Findings from the Sectoral Employment Impact Study*, Public/Private Ventures, 2009, [http://www.issuelab.org/resource/job\\_training\\_that\\_works\\_findings\\_from\\_the\\_sectoral\\_employment\\_impact\\_study](http://www.issuelab.org/resource/job_training_that_works_findings_from_the_sectoral_employment_impact_study). The 5 common elements were: a sector focus; concern for candidates' career match; integrated skills training; individualized services to support training completion and success on the job; and flexibility to adjust to a changing environment; *Employers Take the Lead: A Report on Wisconsin's Industry Partnership Project*, Center on Wisconsin Strategy (COWS), 2013, [http://www.cows.org/\\_data/documents/1489.pdf](http://www.cows.org/_data/documents/1489.pdf); *An Evaluation Framework for State Sector Strategies*, National Governors Association, Corporation for a Skilled Workforce, National Network of Sector Partners, 2008, <http://www.insightcced.org/uploads/nnsf/Evaluation-Framework-White-Paper.pdf>.
- xxi *Local Areas Face Challenges Helping Employers Fill Some Types of Skilled Jobs*, United States Government Accountability Office, Report to Congressional Committees, 2013, <http://www.gao.gov/assets/660/659322.pdf>. There are many sources of labor market information.
- xxii \*Brandon Roberts and Derek Price, *Strengthening State Systems for Adult Learners: An Evaluation of the First Five Years of Shifting Gears*.
- xxiii *Innovative Collaborations between Workforce Boards and Employers Helped Meet Local Needs*, 2012.
- xxiv *Local Areas Face Challenges Helping Employers Fill Some Types of Skilled Jobs*, United States Government Accountability Office.
- xxv \*Sheila Maguire, Joshua Freely, Carol Clymer, Maureen Conway, *Job Training That Works: Findings from the Sectoral Employment Impact Study*; *Employers Take the Lead: A Report on Wisconsin's Industry Partnership Project*, Center on Wisconsin Strategy (COWS); *An Evaluation Framework for State Sector Strategies*, National Governors Association.
- xxvi Vanessa Hein, Becky Smerdon, Megan Sambolt, *Predictors of Postsecondary Success*, College & Career Readiness & Success Center at American Institutes for Research, 2013, [http://www.ccrscenter.org/sites/default/files/CCRS%20Center\\_Predictors%20of%20Postsecondary%20Success\\_final\\_0.pdf](http://www.ccrscenter.org/sites/default/files/CCRS%20Center_Predictors%20of%20Postsecondary%20Success_final_0.pdf); D. Timothy Leinbach and Davis Jenkins, *Using Longitudinal Data to Increase Community College Student Success: A Guide to Measuring Milestone and Momentum Point Attainment*, Community College Research Center (CCRC), Teachers College, Columbia University, 2008, <http://ccrc.tc.columbia.edu/media/k2/attachments/longitudinal-data-momentum-point-research-tool.pdf>.
- xxvii *Call for a National Conversation on Creating a Competency-based Credentialing Ecosystem*, 2014, <http://www.clasp.org/resources-and-publications/files/Developing-a-Competency-Based-Credentialing-Ecosystem.pdf>.



**Alliance for Quality  
Career Pathways**

---

a project of CLASP