Designing a Performance Measurement System for Career Pathways

Prepared by:
Marian Negoita and Kate Dunham

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CONTENTS

Introduction

This memo provides guidance for career pathways system collaboratives aiming to develop performance measurement systems. The goal of career pathways initiatives is to build intentional partnerships among education, workforce development, economic development, human services, and employer partners and, in so doing, create a system that contributes both to better educational achievement and to correspondingly higher incomes, and, therefore, to lower income inequality. After a brief description of what career pathways are and why they are necessary, we provide information on the types of measures that might be used in a performance system for career pathways, along with specific examples of such measures. Finally, we outline a recommended process for selecting and customizing a specific set of measures and metrics, along with some advice on how to set performance targets.

Our thinking on the subject of career pathways performance measurement builds on the recent work begun by the Center for Law and Social Policy (CLASP). CLASP is currently leading a two-year, state-driven effort to identify metrics that characterize high quality career pathways systems and a set of performance metrics.[1] Although the approach we describe below differs from CLASP's in a number of ways, we want to acknowledge CLASP's work as a source of inspiration and express our gratitude for the pioneering work it and its partners are doing.

What are Career Pathways Systems and Why are they Necessary?

One of the most important labor market trends of the last few decades has been the increased premium placed on skills and education. Increasingly, good-paying jobs require a higher level of skills and credentials than ever before. In the early 1960s, the hourly wage of a typical college graduate was 1.5 times higher than that of typical high school graduate. By 2009, this ratio had increased to 1.95[2]. Current projections indicate that most of the jobs created during the next decade will require some education beyond a high school diploma[3].

Unfortunately, the labor supply has not kept pace with the demand for skilled workers. In 2010, the U.S. had fallen to 10th place among the OECD countries in terms of the percentage of the population

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[1] As part of its *Alliance for Quality Career Pathways,* CLASP's Center for Postsecondary and Economic Success is working with ten states "…to identify criteria that define high quality career pathways systems and a set of shared performance metrics for measuring and managing their success." See CLASP. 2013. *The Alliance for Quality Career Pathways Approach: Developing Criteria and Metrics for Quality Career Pathways: A Working Paper,* 1. This effort is expected to be completed in spring 2014.

[2] Autor 2011

[3] Holzer 2011; Prince and Choitz 2012

aged 25-34 with a college degree.[4] Falling postsecondary degree achievement has meant that a larger proportion of job seekers failed to secure a stable, well-paying job, leading to a sharp increase in the inequality of wages. While this has been a general trend, particular groups, including men, youth, and racial minorities, have been particularly affected.

One of the main factors behind this trend has been the disconnect between the private, education, and workforce development sectors. Youth, particularly those who are not enrolled in high school, often lack information about the skill requirements of various career options and/ or how to access postsecondary programs to attain those skills. Low-wage adult workers also often lack information about how earning a postsecondary credential or degree could help them increase their earnings as well as where and how to gain access to an appropriate program. Additionally, these youth and adults frequently lack the basic skills to enroll in and succeed in postsecondary education, so they need remedial programs to build their basic skill levels. However, because they often have families to support, these individuals cannot afford to participate in training for long periods of time or during regular school hours. Consequently, to be able to complete postsecondary credential or degree programs, they need accelerated programs—including "bridge" programs that help them make the jump to postsecondary programs—along with flexible hours and additional assistance, such as childcare reimbursement and case management.

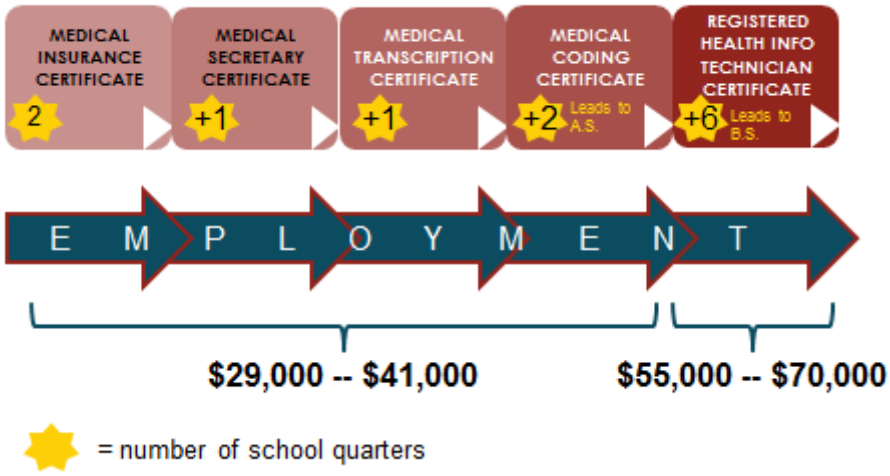
What are Career Pathways Systems?

Career pathways initiatives have the goal of increasing individuals' educational and skills attainment and improving their employment outcomes while meeting the needs of local employers and growing sectors and industries. To create a career pathways system that works effectively for program participants and employers, many organizations, agencies, and businesses work together to align their systems and services to satisfy employers' labor needs and help workers achieve their career goals.

These systems are local, regional, or statewide partnerships that have developed clearly specified sequences, or pathways, of education coursework and/or training-credentials aligned with employers' needs for competencies. Please see Exhibit 1: Example of a Health Information Technology Career Pathway.

[4] CLASP 2013, *A Framework for Measuring.*

Exhibit 1: Example of a Health Information Technology Career Pathway



In addition, career pathways systems typically include the following characteristics:

- **Sector Focus**—Career pathways education and training programs are aligned with the skill needs of industries important to the regional or state economies in which they are located. This can happen only if employers in the targeted industry sectors are actively engaged in determining the skill requirements for high-demand occupations.
- **Stackable Credentials**—Programs are arranged in a progression of "steps," each step culminating with the attainment of a credential. In the example above, there are five steps in the pathway.
- **Contextualized Learning**—The chosen curriculum and instructional strategies make employment a central context for learning.
- **Integrated Education and Training**—Combining occupational skills training with educational services in a seamless fashion.
- **Industry-recognized Credentials**—Programs lead to the attainment of industry-recognized degrees or credentials that have value in the labor market.
- **Multiple Entry and Exit Points**—Career pathways programs allow workers of varying skill levels to enter or advance within a specific sector or occupational field.
- **Intensive Wrap-Around Services**—Career pathways systems incorporate academic and career counseling and wrap-around support services (particularly at points of transition), and they support the development of individual career plans.

This system-based approach is intended to make it easier for people to earn industry-recognized credentials, earn them in a flexible manner, and achieve marketable skills so that they can find work in promising careers. These comprehensive education and training systems are particularly suited to meet the needs of working learners and non-traditional students.

How Does the Focus of State Career Pathways Systems Often Differ from that of Local or Regional Systems?

Although career pathways systems implemented at the state level may focus—just like local and regional systems—on implementing specific statewide career pathways, in many states, these systems are instead focused on providing support for the implementation of career pathways at the local or regional levels. In these cases, state career pathways partnerships concentrate on attempting to align funding, reporting, and service delivery policies and processes across multiple state-level educational and workforce programs. They may also focus on ensuring state legislative support and developing partnerships with large, statewide employers. In this memo, although we focus on performance measurement systems that aim to implement specific career pathways, we do occasionally refer specifically to measures and metrics that might be appropriate for state career pathways systems that are focused on creating a supportive state-level environment.

Do Career Pathways Systems Work?

Although to our knowledge there have been no rigorous studies evaluating the impact of the full career pathway model, the logic behind the approach is supported by rigorous evaluations in related areas. For example, in random assignment evaluations, career academies—small learning communities within broader high schools that target specific economic sectors for which students receive training and part-time employment, as well as other services—were associated with large increases in earnings, especially for at-risk young men, and these increases persisted through at least after high school[5]. At the postsecondary level, demonstration efforts have shown that several approaches related to the intensive provision of supportive services (including learning communities, mandatory counseling sessions, and merit-based financial aid) are capable of increasing course completion and credit attainment among low-income students enrolled in community colleges[6]. Further, programs that combine remedial and occupational training, like I-BEST in Washington State, have been shown to lead to better educational outcomes for students who took part, compared to similar students who did not participate. [7] And "sectoral" training programs, in which third parties work with employers in a particular sector to generate training for jobs in that sector plus support services for the disadvantaged, have been shown to generate large positive impacts for participants.[8]

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5 Kemple 2008

6 Richburg-Hayes et al. 2013; Brock 2010

7 Jenkins et al. 2009

8 Osterman 2007; Maguire et al. 2010; Roder and Elliott 2011

Components of a Career Pathways Performance Measurement System

The traditional way of assessing performance in educational and workforce development programs by examining post-program outcomes is not sufficient for career pathways systems or programs. There are two reasons for the need for more than post-program outcomes. First, career pathways, like any other innovative initiative that works in uncharted territory, is often not well served by ex post facto assessment of success or failure. These initiatives, especially in the beginning stages, are typically characterized by frequent shifts and program changes. Therefore, it is important for them to receive constant feedback as the initiative is progressing, which is impossible if evaluation efforts rely solely on performance outcomes.

Second, the sole use of outcome metrics to measure performance has often led to dysfunctional responses, including gaming, cream skimming, and "teaching to the test," all which attempt to attain performance targets without actually increasing the quality of services. This undesirable outcome takes place because the performance measures do not track or assess the process and quality of service delivery. Without disputing the fact that program beneficiaries have to obtain good outcomes for the programs to be assessed as successful, it is equally true that it is important to understand how those outcomes are obtained—especially at the program or local regional system level—so that program managers and operators can make early adjustments to identified problems and funders, and so that monitors can see that no gaming is occurring.

As a result of the considerations described above, we suggest that career pathways systems develop performance systems that include both implementation and outcome measures. Both types of measures are described below.

Implementation Measures

In our suggested performance system, implementation measures are intended to provide information on whether the career pathways collaborative is on track toward achieving its expected outcome goals. Although the data needed to assess the system's success in achieving such outcome goals are typically unavailable for months and sometimes years, the data for tracking implementation measures can be obtained very quickly. Consequently, we see implementation measures functioning much like the gauges in the cockpit of an airplane: they let pilots know how well the plane is operating so that they know whether they are likely to reach their destination. Similarly, by tracking and monitoring a set of implementation measures, career pathways leaders will have a real-time sense of how well their system is operating and how likely it is that it will lead to achievement of expected outcomes.

Dashboard and Informational Measures

To make the use of implementation measures as efficient as possible, we further recommend sub-dividing the implementation measures used in a career pathways performance system into what we call ***dashboard measures*** and ***informational measures***.

What are "Dashboard Measures?"

Dashboard measures are the highest priority implementation measures, and the only ones for which targets are set and progress on achieving those targets is tracked and reported out to the career pathways leadership. They are designed to deal with a major challenge related to the use of implementation measures for monitoring system-progress. That is, to monitor every aspect of a complex career pathways system's implementation would be an almost overwhelming task (witness the long list of example measures and metrics we outline below). To continue the metaphor begun above, this is similar to the challenge faced by commercial airline designers. To monitor a plane's operations (especially a plane as large and complex as a commercial airliner), the crew needs an entire wall and ceiling of gauges, but it is very hard for pilots to monitor all of those gauges all the time. To deal with this challenge, airplane designers typically locate the most important gauges right in the middle of the plane's dashboard and equip some of them with warning lights or sounds that go off when a critical aspect of the plane's functioning falls below expected levels.

Through the use of dashboard measures, we suggest a similar approach for career pathways systems. Although it will be important for systems to collect information on most of the measures described below, only some of them should be used to carefully monitor whether implementation is on track. For those key measures—dashboard measures—we suggest that systems set measurable targets for each quarter of operation and track whether or not those targets are achieved (guidance on selecting the most appropriate dashboard measures and metrics and setting targets for them is provided in a separate section below). In effect, monitoring those dashboard measures will institute an "early warning system" that will signal whenever the system's operation is not operating in such a way that participants will be able to achieve expected outcomes.

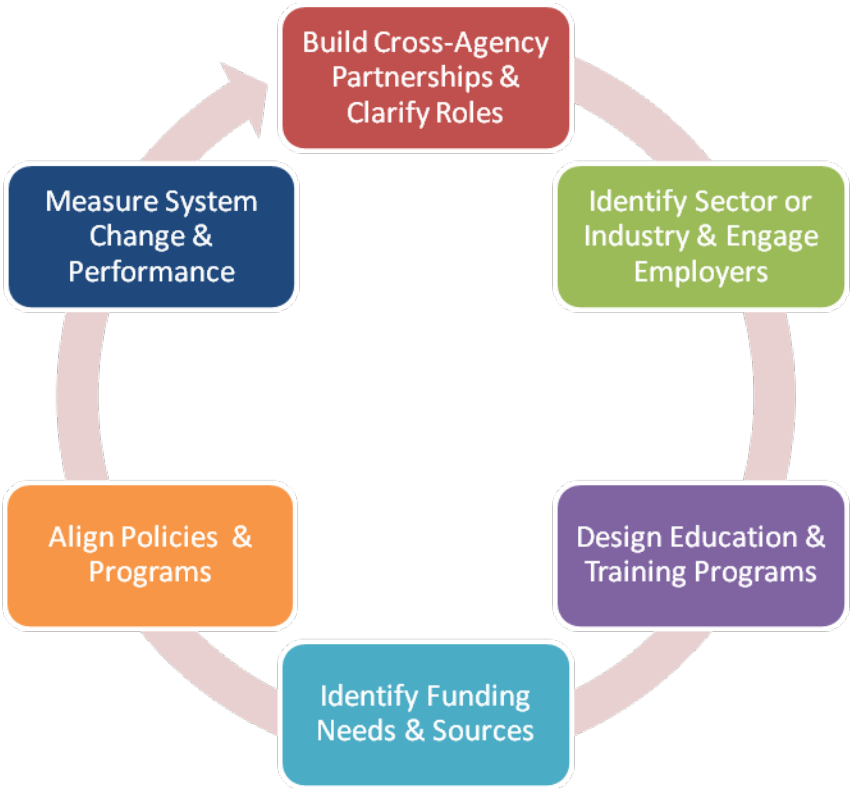
What are Informational Measures?

In addition to the small sub-set of dashboard measures, we also suggest that career pathways systems collect data on a larger group of implementation measures that we call ***informational measures***. These are designed to collect information on other important aspects of implementation, but they do not have achievement targets, nor are they monitored as closely or as often as dashboard measures. These measures effectively represent the airplane gauges on the ceiling of the cockpit that display information that might be important if the pilots need to diagnose a problem, but when things are running smoothly can be left alone so that the pilots can focus on other things. Similarly, these more "light touch" informational measures ensure that information on these other measures is available in case it is

needed to help diagnose problems, but without adding too much of an additional data-collection/monitoring burden.

Sample Implementation Measures that Signal Probable Long-Term Success

As discussed above, the primary role of implementation measures is to serve as early metrics of whether a career pathways system is on track to success. To be effective in doing this, it is critical to ensure that the elements assessed by those measures are indeed those that, according to the best available research, will result in a system that achieves successful outcomes. Unfortunately, as described above, there have been no large-scale impact evaluations of a fully-developed career pathways system that clearly delineate the critical elements that lead to success. However, as part of our previous work helping practitioners with the development of career pathways systems, SPR, with the assistance of Jobs for the Future and numerous other career pathways experts, developed a framework of six elements that appear to lead to successful career pathways.[9]



Building on this framework, we have developed sample implementation measures and metrics that are aligned with each of the six elements. These measures and metrics can be adopted as either dashboard or informational measures for use in performance systems for career pathways systems at the local,

[9] Kozumplik, et al. 2011. Please see the Career Pathways Toolkit to learn more about how to implement career pathways systems.

state, or regional levels. As some of the measures track activities that should take place only once, while others should track ongoing activities, we have included a column that specifies whether tracking should be one-time (OT) or ongoing (OG).

We have also added a column indicating whether a sample measure would likely be appropriate for use as a dashboard measure (D), an informational measure (I), or either one. We used the following criteria to make that assessment:

- A clear and reasonable target can be readily set for the measure.
- The measure is on-going. One-time only measures are relatively easy to monitor without formally selecting them as a dashboard measure. Also, they do not require target-setting, as when they are achieved is obvious.
- The measure is broad enough to capture information about multiple aspects of program implementation. This allows for use of fewer dashboard measures, which is easier for monitoring purposes.
  - Note, it may be appropriate to select narrow measures for use as dashboard measures if the particular aspect of implementation (such as participant receipt of supportive services) is considered critical to successful implementation by pathway leadership.

The sample implementation measures and metrics are listed below in Table 1.

Suggested Dashboard Measure (D) or Informational Measure (I)	One-Time (OT) or On-Going (OG)	**Table 1: Sample Career Pathways Implementation Measures**
	Success Element No. 1: Partnership Development and Maintenance	
I	OT	**Measure:** Cross-agency leadership team established that includes representatives from all key agencies, including education, workforce development, and employers. **Possible metrics:** List of members of leadership team and the names of their agencies. Date of leadership team's first meeting. Minutes from the leadership team's first meeting.
D	OG	**Measure:** Regular leadership team meetings held with most members in attendance. **Possible metrics:** Number of leadership team meetings per quarter/year. Percentage of leadership team members attending each meeting/all meetings each quarter/year.
I	OT	**Measure:** Document developed stating the shared vision, mission, and goals

Suggested Dashboard Measure (D) or Informational Measure (I)	One-Time (OT) or On-Going (OG)	Table 1: Sample Career Pathways Implementation Measures
		of the pathway system. **Possible metrics:** Electronic link to the document. Date of document's completion.
I	OT	**Measure:** Document developed describing the roles and responsibilities of each partner. **Possible metric:** Copy of document describing the roles and responsibilities of each partner. Date of document's completion.
I	OT	**Measure:** Lead/intermediary agency/individual selected to coordinate pathway efforts. **Possible metric:** Name of the selected agency/individual.
I	OT	**Measure:** Cross-agency operations team established that includes representatives from all key agencies involved in pathway operations. **Possible metrics:** List of members of operations team and the names and roles in operations of their agencies. Date of operation team's first meeting. Minutes from the operation team's first meeting.
D	OG	**Measure:** Regular operations team meetings held with most members in attendance. **Possible metrics:** Number of operations team meetings per quarter/year. Percentage of operations team members attending each meeting/all meetings each quarter/year.
	Success Element No. 2: Employer Engagement	
I	OT	**Measure:** Industry/sector focus selected. **Possible metric:** Name of the selected industry/sector.
I	OT	**Measure:** Employer outreach/marketing strategy developed. **Possible metric:** Document describing the roles and responsibilities of each partner for conducting outreach to employers. Date of document's completion.
D	OG	**Measure:** Employers participate regularly in pathway activities. **Possible metrics:** Number and names of employers that participate in any pathway activities each quarter/year. Number and percentage of such participating employers from targeted

Suggested Dashboard Measure (D) or Informational Measure (I)	One-Time (OT) or On-Going (OG)	Table 1: Sample Career Pathways Implementation Measures
		sector/industry in any quarter/year.
D	OG	**Measure:** Employers participate regularly in leadership team. **Possible metrics:** Number of employers that participate in leadership team meetings in each quarter/year. Percentage of employer members of pathway leadership group who attend meetings each quarter/year. Percentage of leadership meetings attended by each employer in each quarter/year.
I	OG	**Measure:** Employers assist with recruiting other employers. **Possible metrics:** Number of employers that assist with recruiting other employers in each quarter/year. Number of new employers recruited with assistance from existing employer partners in each quarter/year.
D/I	OG	**Measure:** Employers participate in reviews of labor supply/demand. **Possible metric:** Number of employers that participate in meetings on LMI each quarter/year.
I	OG	**Measure:** Employers participate in curriculum design. **Possible metrics:** Number of employers that review education/training program curricula each quarter/year. Number of employers that develop portions of the curricula each quarter/year.
D/I	OG	**Measure:** Employers participate as trainers/instructors. **Possible metric:** Number of employers that serve as instructors/trainers for pathway programs each quarter/year.
D/I	OG	**Measure:** Employers host training/work-based learning sites. **Possible metrics:** Number of employers that host training sites for pathway programs each quarter/year. Number of employers that host work-based learning sites (internships, job shadowing, etc.)[10] for pathway programs each quarter/year.
D/I	OG	**Measure:** Employers provide financial support. **Possible metrics:** Amount of funding provided by employers for the pathways

[10] Note that this metric could be divided into separate metrics to track each specific type of work-based learning.

Suggested Dashboard Measure (D) or Informational Measure (I)	One-Time (OT) or On-Going (OG)	Table 1: Sample Career Pathways Implementation Measures
		system in each quarter/year. Number and percentage of employers that provide funding for the pathway system in each quarter/year. Number and percentage of employers that provide funding for tuition reimbursement for pathway participants in each quarter/year.
I	OG	**Measure:** Employers assist with recruiting participants. **Possible metrics:** Number of employers that assist with recruiting participants in each quarter/year. Number of participants recruited with assistance from employer partners in each quarter/year.
	Success Element No. 3: Service Delivery	
I	OT	**Measure:** Participant target group(s) selected. **Possible metric:** Description of the selected target groups.
I	OT	**Measure:** Visual "road map[11]" for the pathway(s) developed. **Possible metrics:** Document that presents the road map. Date of road map's completion.
I	OT	**Measure:** Plan for implementing the "road map" developed. **Possible metrics:** Copy of plan. Date of plan's completion.
D	OG	**Measure:** Participant enrollment in pathways program(s). **Possible metrics:** Number and percentage of participants enrolled full-time and part-time in each "step" of the pathway. A "step" refers to a training program/course leading to a specific credential on the pathway.
I	OG	**Measure:** Pathway training/education programs offer flexible hours. **Possible Metric**: Number of pathway training/education programs that allow participants to participate in activities outside of normal business hours (M-F 9-5) each quarter/year. Number and percentage of participants who participate in programs with flexible hours.

[11] A "road map" illustrates the various programs that can be completed and credentials that can be earned in a pathway, as well as the various entry and exit points for the pathway. For an example, see Exhibit 1.

Suggested Dashboard Measure (D) or Informational Measure (I)	One-Time (OT) or On-Going (OG)	Table 1: Sample Career Pathways Implementation Measures
I	OG	**Measure:** Pathway training/education programs offer online activities. **Possible Metrics**: Number of pathway training/education programs that allow participants to participate in program activities via the Internet. Number and percentage of participants who participate in programs that allow them to participate in program activities via the Internet.
D	OG	**Measure:** Participants enrolled from specific target groups. **Possible metric:** Number and percentage of participants enrolled full-time and part-time from each specific target group.
I	OG	**Measure:** Assessments received by participants. **Possible metrics:** Number and percentage of participants assessed overall and disaggregated by specific type of assessment (basic skills, prior learning, strengths and barriers, etc.).[12] Length of time after enrollment participants receive their first assessment.
D/I	OG	**Measure:** Participants do not receive same type of assessment from different partners within the same year. **Possible Metrics**: Number and percentage of participants who are assessed by different partners using the same type of assessment each year. (For example, this metric would capture the number and percentage of participants who are assessed using the TABE by one partner and COMPASS by another.)
D/I	OG	**Measure:** Individual career/education plans developed. **Possible metrics:** Number and percentage of participants that develop an individual career/education plan. Length of time after enrollment that participants develop an individual career/education plan.
D/I	OG	**Measure:** Support services received by participants. **Possible metric:** Number, cost, and types of supportive services received by participants. Number and percentage of participants who receive support services during the quarter.
D/I	OG	**Measure:** Case management received by participants. **Possible metrics:** Number and percentage of participants who meet with case

[12] Note that this metric could be divided into separate metrics to track each specific type of assessment.

Suggested Dashboard Measure (D) or Informational Measure (I)	One-Time (OT) or On-Going (OG)	Table 1: Sample Career Pathways Implementation Measures
		managers at least once during the quarter. Number and percentage of participants who meet with case managers two or more times per month during the quarter.
D/I	OG	**Measure:** Career counseling received by participants. **Possible metrics:** Number and percentage of participants who receive career counseling at least once during the quarter. Number and percentage of participants who receive career counseling two or more times per month during the quarter.
I	OG	**Measure:** Case manager referrals. **Possible metric:** Number of participants who are referred from a participating agency/program to other agencies/programs.
D/I	OG	**Measure:** College adjustment/retention assistance received by participants. **Possible metrics:** Number and percentage of participants who receive college adjustment/retention assistance at least once during the quarter. Number and percentage of participants who receive college adjustment/retention assistance two or more times per month during the quarter.
D/I	OG	**Measure:** Placement assistance received by participants. **Possible metrics:** Number and percentage of participants who receive placement assistance at least once during the quarter. Number and percentage of participants who receive placement assistance two or more times per month during the quarter.
	Success Element No. 4: Funding[13]	
I	OT	**Measure:** Plan developed for providing sufficient funding for career pathways implementation. **Possible Metrics**: Copy of plan. Date of plan's completion.
I	OG	**Measure:** Funding sources.

[13] Note that the sample measures presented under the funding element, if they are broadened to focus on funding provided to all career pathways systems state-wide, would also be appropriate for state-level partnerships that aim to develop a supportive state environment for career pathways implementation.

Suggested Dashboard Measure (D) or Informational Measure (I)	One-Time (OT) or On-Going (OG)	Table 1: Sample Career Pathways Implementation Measures
		Possible metrics: Percentage of total system budget supported by each source of funds each year.
I	OG	**Measure:** Funding provided by partnership members. **Possible metrics:** Percentage of total system budget provided by each partner per quarter/year.
D	OG	**Measure:** Funding sustainability. **Possible metrics:** Percentage and amount of funding from time-limited funding sources (e.g., one-time grants) each year/quarter. Percentage and amount of funding by source that will expire in each quarter/year.
	Success Element No. 5: Policy Alignment[14]	
I	OT	**Measure** Statutory and administrative policy barriers to successful pathways implementation identified (such as siloed funding, data collection, and service delivery). **Possible Metric**: List and description of each identified barrier.
I	OT	**Measure:** Plan developed with concrete activities to address identified statutory and administrative policy barriers to successful pathways implementation. **Possible Metrics**: Copy of plan. Date of plan's completion.
D/I	OG	**Measure:** Solutions to identified barriers developed and implemented.[15] **Possible Metric**: Description of how identified barrier(s) was addressed and effect on the career pathways system. Date each barrier was addressed.
	Element No. 6: Performance Measurement[16]	

[14] Note that the sample measures presented under the policy and alignment element may be among the most appropriate for state-level partnerships that aim to develop a supportive state environment for career pathways implementation.

[15] The metrics for this measure should be customized to reflect the specific barriers identified. Similarly, the measure could be broken up into specific measures for each of the identified barriers to make it easier to track progress on dealing with them.

Suggested Dashboard Measure (D) or Informational Measure (I)	One-Time (OT) or On-Going (OG)	Table 1: Sample Career Pathways Implementation Measures
I	OT	**Measure: L**ogic model developed for the pathway(s). **Possible metrics:** Document that presents the logic model. Date of logic model's completion.
I	OT	**Measure:** Implementation and outcome measures selected for performance measurement system. **Possible Metric**: List of selected measures.
I	OG	**Measure:** Appropriate targets selected for dashboard and outcome measures. **Possible Metric**: List of targets by measure by quarter/year.
I	OT	**Measure:** Data sources and partner roles in data collection determined. **Possible Metric**: List of data sources by measure. Timeline for data collection activities by quarter/year. Description of roles of partners in data collection.
I	OT	**Measure:** System for sharing and reporting data developed. **Possible Metric**: Description of how data will be shared and reported. Template(s) for reporting data on each measure/metric to stakeholders. Timeline for data sharing and reporting activities by quarter/year. Description of roles of partners in data sharing and reporting.
I	OT	**Measure:** Performance measurement system operating. **Possible Metric**: Copy of performance reports developed each quarter/year.

[16] The guidance provided in subsequent sections of this memo should assist career pathways systems in achieving the measures presented in this section. The measures included under the performance measurement element, if they are broadened to focus on performance by all career pathways programs and systems state-wide, would also be appropriate for state-level partnerships that aim to develop a supportive state environment for career pathways implementation.

Outcome Measures

Outcomes measures can be defined as any benefits or changes to participants, programs, or systems apparently due to the operations of the system.[17] Outcome measures must play a central component in any career pathways performance measurement system because they provide evidence of whether career pathway systems are successful in achieving the goals of fixing coordination problems between education and workforce development systems and the labor market and, in so doing, contributing to better educational achievement and labor market success by participants.

When defining outcomes, most performance systems divide them into two or three types based on the expected timeframe of when the outcomes will be measured. In this memo, we follow that convention by dividing outcomes into three types: short-term (sometimes also called *initial*), medium-term (sometimes also called *intermediate*), and long-term. A brief description with examples of each type of outcome is presented below.

Short-Term Outcomes

Short-term outcomes provide early information on the success of career pathways. They are useful in that they provide preliminary evidence that the pathway program is being implemented in such a way that achievement of longer-term outcomes is likely. For example, the short-term outcome measures presented below are all captured quite early—before participants even complete the first "step[18]" of a career pathway, such as after completion of specific courses. Logically, these measures represent the first step on a participant's path to achieving medium and long-term outcomes (i.e., if a participant does not pass a required course within the step, the participant may be unable to complete the full program associated with the step and may not achieve the credential associated with the step[19]). To clarify how the system is working for different groups of participants (such as those that started in a basic skills bridge program versus a different entry point), the results for these and all subsequent outcomes should be disaggregated by key participant characteristics. Thus, positive short-term outcomes provide early signals to career pathways leaders whether or not the pathway is operating successfully or whether changes need to be made.

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[17] United Way 1996. Note that outcomes can only demonstrate implied causality. Only impacts, generated through experimental (random assignment) or quasi-experimental methods can demonstrate causality.

[18] A "step" as used in this memo represents a specific training program leading to a specific credential within the career pathway. Because "bridge" programs often do not lead by themselves to a specific credential, they may be considered part of the same step as any credential program that participants can access immediately following a bridge program.

[19] Of course, participants may be able to re-take failed courses and so may eventually be able to complete the full program associated with a particular step. That is why short-term outcomes provide only preliminary evidence about a system's success.

Table 2: Sample Short-Term Outcome Measures[20]	
	Measure: Participant attendance. **Possible Metric**: Number and percentage of participants who have not missed a certain number of sessions/classes per quarter or per course.
	Measure: Participant achievement of passing grades. **Possible Metric**: The number and percentage of participants who obtain a passing grade for each of the courses associated with the pathway.
	Measure: Participant basic skills increases. **Possible Metric**: Actual and percentage increase in participants' basic skills (reading, writing, and mathematics levels) following completion of a basic skills component/course.
	Measure: Participant retention in the first step of the pathway. **Possible Metric**: The number and percent of participants who return for subsequent semesters of a multi-term program or course that is part of the first step of the pathway.
	Measure: Participant completion of a basic skills bridge program. **Possible Metric**: Number and percentage of participants who complete a bridge program.
	Measure: Participant attainment of a high school diploma or equivalency after completion of a bridge program. **Possible Metric**: Number and percentage of participants who attain a high school diploma or equivalency after completion of a bridge program.
	Measure: Enrollment by bridge program completers in a postsecondary program. **Possible Metric**: The number and percent of bridge program completers who enroll in a postsecondary program on the pathway.

Medium-Term Outcomes

The medium-term outcomes presented below are attained following completion of a participant's first step on a career pathway.[21] These measures assess how successful participants have been in completing the specific training programs associated with their first step on the pathway toward the associated credential. If the participant enters or remains in the labor market full-time following completion of his or her first step on the pathway, these will also measure the participant's labor market success. As with short-term outcomes, these outcomes logically represent the next step in a participant's journey toward achieving the long-term outcomes presented below. These outcomes are

[20] Note that each of these short-term outcomes could also be used as medium-term outcomes to capture participant progress in completing subsequent steps of the pathway.

[21] Note that this does not mean completion of the first step on the pathway overall, since participants can enter at multiple steps on the pathway. Thus the "first step" referred to as part of the sample measures and metrics is specific to each participant and depends on the participant's point of entry to the pathway.

likely to be familiar to career pathways partners because the measures are similar to many post-program outcome measures required by a number of federal funding streams, such as the Workforce Investment Act.

Table 3: Sample Medium-Term Outcome Measures	
Education and Training	
	Measure: Attainment of a high school diploma or equivalency as part of a participant's first step of the pathway. **Possible Metric:** Number and percentage of participants who attain a high school diploma, G.E.D., or equivalency as part of their first step of the pathway.
	Measure: Attainment of any type of postsecondary credential as part of a participant's first step of the pathway. **Possible Metric**: Number and percentage of participants who complete at least one postsecondary credential of any type as part of their first step of the pathway.
	Measure: Completion of any type of postsecondary program as part of a participant's first step of the pathway. **Possible Metric**: Number and percentage of participants who complete at least one postsecondary program of any type as part of their first step of the pathway.
	Measure: Completion of a non-degree postsecondary program as part of a participant's first step of the pathway. **Possible Metric**: Number and percentage of participants who complete a non-degree postsecondary program as part of their first step of the pathway.
	Measure: Completion of a pre-apprenticeship program as part of a participant's first step of the pathway. **Possible Metric**: Number and percentage of participants who complete a pre-apprenticeship program as part of their first step of the pathway.
	Measure: Attainment of a personnel certification[22] as part of a participant's first step of the pathway. **Possible Metric**: Number and percentage of participants who attain a personnel certification as part of their first step of the pathway.
	Measure: Attainment of an occupational license[23] as part of a participant's first step of the pathway.

[22] According to the U.S. Department of Labor Employment and Training Administration's Training and Employment Guidance Letter 15-10, Attachment 2, a personnel certification "indicates that the individual has acquired the necessary knowledge skills and sometimes personal attributes to perform a specific occupation or skill." An example of such a certification is Novell Network Certified Engineer.

[23] Examples of occupational licenses include registered nurse, certified public accountant, and licensed practical or vocational nurse.

Table 3: Sample Medium-Term Outcome Measures	
	Possible Metric: Number and percentage of participants who attain an occupational license as part of their first step of the pathway.
	Measure: Attainment of a post-secondary award, certificate, or diploma[24] as part of a participant's first step of the pathway. **Possible Metric**: Number and percentage of participants who attain a post-secondary award, certificate, or diploma as part of their first step of the pathway.
	Measure: Attainment of Associate's Degree as part of a participant's first step of the pathway. **Possible Metric**: Number and percentage of participants who attain an Associate's Degree as part of their first step of the pathway.
	Measure: Attainment of Bachelor's Degree as part of a participant's first step of the pathway. **Possible Metric**: Number and percentage of participants who attain a Bachelor's Degree as part of their first step of the pathway.
Transitions	
	Measure: Participant continuation to subsequent pathway steps (completing a step is defined as completing a program and earning a credential). **Possible Metric**: Number and percentage of career pathways participants who complete at least one step and enroll in a program connected to another step.
Labor Market	
	Measure: Participant employment after completion of their first step of the pathway. **Possible Metric**: Number and percentage of participants who are employed after completion of their first step of the pathway who were not employed or have a notice of layoff at enrollment.
	Measure: Participant employment in an occupation related to their completed pathway training-focus after completion of their first step of the pathway. **Possible Metric**: Number and percentage of participants who are employed in an occupation related to their completed pathway training-focus after completion of their first step of the pathway.
	Measure: Participant employment in the sector(s) or industry(ies) on which the pathway system/program is focused after completion of their first step of the pathway. [25]

[24] According to the U.S. Department of Labor Employment and Training Administration's Training and Employment Guidance Letter 15-10, Attachment 2: a postsecondary award, certificate, or diploma "requires completion of an organized program of study at the postsecondary level."

[25] Note that for some occupations, such as Certified Nursing Assistant (CNA), because the occupation is tied to a specific industry (health care), there would be no need to measure whether the industry/sector of employment

Table 3: Sample Medium-Term Outcome Measures	
	Possible Metric: Number and percentage of participants who are employed in a sector or industry on which the pathway is focused after completion of their first step of the pathway.
	Measure: Participant wage/salary levels after completion of their first step of the pathway. **Possible Metric**: The number and percentage of participants who achieve *expected* starting wage/salary level goals after completion of their first step of the pathway. (For participants with limited experience in the occupation for which they were trained, these goals should be set based on local labor market information for workers who are employed in the specific pathway industry/sector.)
	Measure: Participant earnings after completion of their first step of the pathway. **Possible Metric**: Average earnings for participants in the first quarter after they have completed the first step on the pathway (unemployed and employed part-time participants who are continuing on to a second step on the pathway should be excluded).
	Measure: Participant earnings gains after completion of their first step of the pathway. **Possible Metric**: Average increase in earnings for participants in the first quarter after they have completed the first step on the pathway (unemployed and employed part-time participants who are continuing on to a second step on the pathway should be excluded; for dislocated workers, this metric should be changed to "percentage of pre-program earnings," since ample research has demonstrated that dislocated workers typically cannot exceed their pre-program earnings).
	Measure: Participant promotions after completion of their first step of the pathway. **Possible Metric**: Number and percentage of participants who achieve job promotions in the first quarter after completion of first pathways step (participants who are unemployed at enrollment or currently unemployed, and those who are employed part-time and continuing on to a second "step" on the pathway should be excluded).
	Measure: Participant receipt of employment benefits after completion of their first step of the pathway (benefits are defined as medical benefits, average days of vacation, and sick leave days paid by employer; average days of professional development work paid by employer; proportion of the 401(k) contribution matched by employer). **Possible Metric**: Number and percentage of participants who receive any kind of benefits[26] from an employer in the first quarter after completion of first pathways step (participants who received benefits at enrollment, are unemployed, or are employed part-time and continuing on to a second step on the pathway should be excluded).

is separate from the occupation. However, other occupations, such as website designer, could lead to employment in a wide range of industries/sectors, not just Information Technology (e.g. retail, insurance, government).

[26] Note that this metric could be replaced by metrics that specifically measure each receipt of type of benefit separately.

Table 3: Sample Medium-Term Outcome Measures	
	Measure: Participant employment retention after completion of their first step of the pathway. **Possible Metric**: Number and percentage of participants who are retained with the same employer for at least part of the second quarter after completion of their first pathways step (participants who are continuing on to a second step or who were unemployed in the first quarter after step-completion should be excluded).
Satisfaction[27]	
	Measure: Participant satisfaction with the pathways program after completion of their first step of the pathway. **Possible Metric**: Average level of satisfaction of career pathways participants with the pathway program after completion of their first step of the pathway.
	Measure: Employer satisfaction with participants who were hired after completion of their first step of the pathway. **Possible Metric**: Average level of employer satisfaction toward career pathways participants who get hired after completion of their first step of the pathway.

Long-Term Outcomes

The long-term outcome measures presented below are obtained following completion by a participant of one or more subsequent steps of the pathway.[28] Consequently, these provide the clearest evidence of a career pathways system's success in helping participants to navigate through multiple components of a career pathway and the labor market effects of doing so. Unfortunately, these are also the hardest outcomes to measure because few data systems that pre-date the development of the career pathways system are likely to be able to capture the data needed to track these outcomes.[29]

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[27] Although participant and employer satisfaction are important and should be measured, there are significant drawbacks to implementing these measures. First, satisfaction surveys are quite costly to conduct (although the advent of online technologies has made them cheaper). Second, to be reliable and valid, surveys need to be conducted by professional organizations, which adds to the cost. Third, there are significant challenges in measuring and interpreting satisfaction, as there are no objective measures of satisfaction.

[28] Note that each of these sample measures and metrics can be further specified to capture each of these outcomes following completion of each step in the pathway and following completion of the full pathway.

[29] While many aspects of the data required for measuring these outcomes are available, the critical data that is likely to be missing are fields connecting a participant's completion of prior steps on the pathway with his or her completion of subsequent steps. This is because, quite often, different organizations operate the programs associated with different steps. While these programs do capture data on which participants complete their own programs (i.e., their "step"), they do not capture whether those participants had completed an earlier step operated by another entity. For example, while a community college operating a medical coding technician program would certainly keep track in its MIS whether a participant completed its program, it would be unlikely

Table 4: Sample Long-Term Outcome Measures	
Education and Training	
	Measure: Attainment of a high school diploma or equivalency after a participant's completion of a subsequent step of the pathway. **Possible Metric**: Number and percentage of participants who attain a high school diploma or equivalency after completion of a subsequent step of the pathway.
	Measure: Attainment of any type of postsecondary credential after a participant's completion of a subsequent step of the pathway. **Possible Metric**: Number and percentage of participants who complete any type of postsecondary credential after completion of a subsequent step of the pathway.
	Measure: Completion of any type of postsecondary program as part of a participant's subsequent step of the pathway. **Possible Metric**: Number and percentage of participants who complete at least one postsecondary program of any type as part of a subsequent step of the pathway.
	Measure: Completion of a non-degree postsecondary program after a participant's completion of a subsequent step of the pathway. **Possible Metric**: Number and percentage of participants who complete a non-degree postsecondary program after completion of a subsequent step of the pathway.
	Measure: Completion of a pre-apprenticeship program after a participant's completion of a subsequent step of the pathway. **Possible Metric**: Number and percentage of participants who complete a pre-apprenticeship program after completion of a subsequent step of the pathway.
	Measure: Attainment of a personnel certification after a participant's completion of a subsequent step of the pathway. **Possible Metric**: Number and percentage of participants who attain a personnel certification after completion of a subsequent step of the pathway.
	Measure: Attainment of an occupational license after a participant's completion of a subsequent step of the pathway. **Possible Metric**: Number and percentage of participants who attain an occupational license after completion of a subsequent step of the pathway.
	Measure: Attainment of an award, certificate, or diploma after a participant's completion of a subsequent step of the pathway. **Possible Metric**: Number and percentage of participants who attain an award, certificate, or diploma after completion of a subsequent step of the pathway.
	Measure: Completion of an apprenticeship program after completion of a participant's

to track whether that same participant completed a bridge program provided by a non-profit as part of a prior step on the pathway, nor would it be likely to keep track of whether that participant subsequently went on to complete a Bachelor's Degree operated by a four-year university as part of a subsequent step on the pathway.

Table 4: Sample Long-Term Outcome Measures	
	subsequent step of the pathway. **Possible Metric**: Number and percentage of participants who complete an apprenticeship program after completion of a subsequent step of the pathway.
	Measure: Attainment of an apprenticeship certificate after completion of a subsequent step of the pathway. **Possible Metric**: Number and percentage of participants who attain an apprenticeship certificate after completion of a subsequent step of the pathway.
	Measure: Attainment of an Associate's Degree after a participant's completion of a subsequent step of the pathway. **Possible Metric**: Number and percentage of participants who attain an Associate's Degree after completion of a subsequent step of the pathway.
	Measure: Attainment of a Bachelor's Degree after a participant's completion of a subsequent step of the pathway. **Possible Metric**: Number and percentage of participants who attain a Bachelor's Degree after completion of a subsequent step of the pathway.
Transitions	
	Measure: Participant continuation to subsequent pathway steps (completing a step is defined as completing a program and earning a credential). **Possible Metric**: Number and percentage of career pathways participants who complete more than one step and enroll in a program connected to another step.
Labor Market	
	Measure: Participant employment after completion of a subsequent step of the pathway. **Possible Metric**: Number and percentage of participants who are employed after completion of a subsequent step of the pathway who, at enrollment, were not employed or had a notice of layoff.
	Measure: Participant employment in an occupation related to his completed pathway training-focus after completion of a subsequent step of the pathway. **Possible Metric**: Number and percentage of participants who are employed in an occupation related to their completed pathway training-focus after completion of a subsequent step of the pathway.
	Measure: Participant employment in the sector(s) or industry(ies) on which the pathway system/program is focused after completion of a subsequent step of the pathway. **Possible Metric**: Number and percentage of participants who are employed in a sector or industry on which the pathway is focused after completion of a subsequent step of the pathway.
	Measure: Participant wage/salary level after completion of a subsequent step of the pathway. **Possible Metric:** The number and percentage of participants who achieve expected

Table 4: Sample Long-Term Outcome Measures	
	starting wage/salary level goals after completion of a subsequent step of the pathway. (For participants with limited experience in the occupation for which they were trained, these goals should be set based on local labor market information for workers who are employed in the specific pathway industry/sector.)
	Measure: Participant earnings after completion of a subsequent step of the pathway. **Possible Metric**: Average earnings for participants in the first quarter after completion of a subsequent step of the pathway (unemployed and employed part-time participants who are continuing on to another step on the pathway should be excluded).
	Measure: Participant earnings gains after completion of a subsequent step of the pathway. **Possible Metric**: Average increase in earnings for participants in the first quarter after they have completed a subsequent step of the pathway (unemployed and employed part-time participants who are continuing on to another step on the pathway should be excluded; for dislocated workers, this metric should be changed to "percentage of pre-program earnings," since ample research has demonstrated that dislocated workers typically cannot exceed their pre-program earnings).
	Measure: Participant promotions after completion of a subsequent step of the pathway. **Possible Metric**: Number and percentage of participants who achieve job promotions in the first quarter after completion of a subsequent step of the pathway (participants who are unemployed after completion of their subsequent step, currently unemployed, or employed part-time and continuing on to another step on the pathway should be excluded).
	Measure: Participant receipt of employment benefits after completion of a subsequent step of the pathway (benefits are defined as medical benefits, average days of vacation, and sick leave days paid by employer; average days of professional development work paid by employer; proportion of the 401(k) contribution matched by employer). **Possible Metric**: Number and percentage of participants who receive any kind of benefits[30] from an employer in the first quarter after completion of a subsequent step of the pathway (participants who received benefits at enrollment and unemployed and employed part-time participants who are continuing on to another step on the pathway should be excluded).
	Measure: Participant employment retention after completion of a subsequent step of the pathway. **Possible Metric**: Number and percentage of participants who are retained with the same employer for at least part of the second quarter after completion of a subsequent step of the pathway (participants who are continuing on to another step or who were unemployed in the first quarter after step-completion should be excluded).

[30] This metric could be replaced by metrics that specifically measure each receipt of type of benefit separately.

Table 4: Sample Long-Term Outcome Measures	
Satisfaction[31]	
	Measure: Participant satisfaction with the pathways program after completion of a subsequent step of the pathway. **Possible Metric**: Average level of satisfaction of career pathways participants with the pathway program after completion of a subsequent step of the pathway.
	Measure: Employer satisfaction with participants who were hired after completion of a subsequent step of the pathway. **Possible Metric**: Average level of employer satisfaction toward career pathways participants who get hired after completion of a subsequent step of the pathway.

Recommended Process for Selecting Specific Measures and Metrics

We suggest that cross-agency career pathways leadership teams collaboratively determine which of these sample measures and metrics they will select for use or adaptation for their career pathways system. As discussed above, all of the measures and metrics outlined in the previous section are likely to be far too numerous to use in a specific career pathways system. Consequently, we suggest that cross-agency teams select only a subset of these measures for use in their system.

In addition, we strongly suggest that this selection process be done in a collaborative manner. Using a collaborative process will likely increase buy-in for the system among members of the partnership and make it more likely that the system will be successfully implemented. It is also likely to strengthen the partnership itself.[32]

Our suggested steps for such a collaborative selection process are presented below:

[31] Although participant and employer satisfaction are important and should be measured, there are significant drawbacks to implementing these measures. First, satisfaction surveys are quite costly to conduct (although the advent of online technologies has made them cheaper). Second, to be reliable and valid, surveys need to be conducted by professional organizations, which adds to the cost. Third, there are significant challenges in measuring and interpreting satisfaction, as there are no objective measures of satisfaction.

[32] To be successful, any cross-agency collaboration needs to be characterized by broad-based membership and commitment among the partners to communicate and work together effectively. Participation in assessment efforts has been consistently found to be a predictor of commitment by collaborative members. See deLancer Julnes 2001.

Step One: Distribute sample measures (from above) to all system partners and ask them to review.

- Ask each partner to review the sample implementation measures – dashboard and informational. Let them know that by including measures from each element presented, they can help to ensure that all six key components for successful implementation are in place.
- Ask each partner to review the sample outcome measures. Ask them to consider which outcomes make sense for the overall career pathways system.

Step Two: Partners should use the following criteria to assess the proposed measures, particularly to select dashboard and outcome measures.

- Given that collecting and analyzing data to measure performance is costly, career pathways collaborators should select only a small subset[33] of the measures for their performance system.
  - As part of this selection process, they should also select which of the implementation measures will be used as dashboard measures.
- Partners should generally select measures that are both important and feasible. Below are some questions that can be used to determine the importance and feasibility of a measure:
  - ***Importance***: How important is the component that is captured by each measure?
    - Would critical information be lost to pathways leaders, operators, and funders if certain measures are not selected?
  - ***Feasibility***: How easy will it be to obtain data to monitor progress on each measure?
    - If data is already collected that can be used to track progress on the measure (note that these discussions do not need to get into specific details; those details will be tackled during the development and selection of metrics described below; however, partners should have a sense of the burden associated with each proposed measure):
      - Are the partners who collect these data willing or able to share it with the group? [34]

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[33] The exact number selected will depend on the resources of the partners. While some will only be able to track four to six of each type of measure, others will have the resources to track most of the proposed measures.

[34] Data privacy provisions, such as those contained in the Family Educational Rights and Privacy Act (FERPA), may be interpreted by education agencies as limiting their right to grant partners access to education records. Also, sharing data with partners might require development of a specific data-use agreement among partners and additional programming by staff members, which might require significant additional resources.

        - If required data are collected by different partners, how challenging will it be to compile the data so that it can be used to coherently report on progress?[35]

    - If data is not already collected that could be used to track progress on this measure:

        - How might data be collected? Which partner or entity would take on this task?

        - How expensive would this new data collection likely be?

        - How difficult might it be to share these new data among partners?

- Partners should use a collaborative process in applying these criteria to select measures. One example of such a process is as follows:

    - Facilitate one or more meetings of all the partners. During these meetings, a discussion of the criteria should be conducted wherein partners can discuss their responses to the above importance and feasibility questions.

    - Following this discussion (at the same or a subsequent meeting or via email), partners can express their selection preferences.

        - If preferences are expressed during a meeting, a "dot voting" process may be used, whereby each partner is given a certain number of adhesive dots and they place them next to their preferred measures. Measures are selected according to the number of dots they receive.

Step Three: Partners should develop clear and measurable metrics for each of the selected measures.

- Appoint one or more members of the leadership group or an outside consultant to develop one or more clear and measurable metrics to assess progress on each of the selected measures. To create these metrics, the sub-committee or consultant can begin with the sample metrics presented above, but they will then need to customize these metrics to reflect the specifics of their pathway system. As part of this process, they will likely need to reach out to specific partners to gain a clearer understanding of what data they already collect and to brainstorm how to collect any new data that is required.

    - When developing metrics, the following criteria should be used:

        - Collecting, analyzing, and reporting on the data a metric requires should be as simple and easy as possible.

        - Metrics should be clearly connected to the intent of the measure (e.g., if a measure is intended to be related to funding sufficiency, a metric

[35] Technical differences between data collected from different sources may make compiling, analyzing, and reporting data difficult. These differences might include the use of different definitions for capturing similar data (such as different definitions of "low income" or "out-of-school") and the use of different participant identifiers (making matching of participants across systems challenging).

should not capture information about the percentage of participants who received an occupational certificate).

  - ~ Metrics should include information on the specific unit(s) of data that will be used, as well as specific timelines for measurement. For example, a metric might specify that the *percentage* or *number* of *participants* who achieve something such as *attaining an occupational license* will be tracked, and that results will be compiled *quarterly* or *annually*.

  - — During the development of these metrics, the sub-group or consultant tasked with developing them should also propose which specific partners or outside entities will be tasked with collecting, sharing, and reporting these data. By doing so, the pathways partnership members will be better able to assess the feasibility of the metrics in the next step.

- Once a draft set of these customized metrics is developed (along with the proposed assignment of specific partners to data collection and reporting), it should be circulated to all partners for review. This review should focus on the feasibility of these metrics.
- Via email or during a meeting of the leadership group, partners should have the opportunity to ask questions about the metrics and propose revisions or additions.
- Via email or during a meeting, partners should approve which specific metrics will be used. Depending on the number of metrics proposed, partners may need to prioritize among them to select a smaller sub-set.

Step Four: Partners should develop and adopt a plan for reporting the results of the measures/metrics and discussing their implications.

- Based on the timing of when metrics will be measured, as well as their own needs and preferences, the pathways leadership group should establish a process and timeline for reporting performance results. For an example of a possible process, please see **Box 1** below.

  - — If metric results will be measured on a quarterly basis, we suggest that partners should opt for the following process:

    - ~ Quarterly results communicated via a simple (one- to two-page), primarily quantitative report emailed to partners.

    - ~ Annual results communicated at an in-person meeting via a briefing and a slightly longer written report combining quantitative results with a limited amount of qualitative narrative. Following presentation of this briefing and report, the leadership group should discuss the results and any implications for operation of the pathway(s).

Box 1: PerformanceStat Example

A recent trend in the management of public services, generally known as PerformanceStat[1], could be adapted by career pathways collaboratives to actively manage their systems using real-time data. PerformanceStat originated in the acute need, felt by many city, state, and federal administrators, to access timely information about their areas of jurisdiction, to coordinate a vast number of interconnected public services, and in so doing, to improve efficiency and accountability.

The effort comprises three main elements. First, local agencies collect a number of metrics on a real-time basis and share this data using simple spreadsheets. This effort need not be particularly costly or burdensome. For example, in Maryland, local agencies use Microsoft Excel spreadsheets to send the state regular updates with all the measures they are tracking through StateStat, Maryland's performance measurement and management system. In turn, staff take local data reports and produce an executive dashboard of performance. Similarly, career pathways partners could track and report the measures that pertain to their local activities, and combine the data into one report. Second, partners hold a series of regularly scheduled meetings during which they review real-time data reports to detect any challenges and troubleshoot how to address them. In Maryland's case, the Governor uses the dashboard report in regular meetings held with various agencies.[2] The career pathways leadership team could adopt a similar deliberate approach to regularly share and review implementation and outcome data during meetings.

Finally, key to the success of a PerformanceStat-like approach is making system-wide data easily accessible to all career pathways partners and even the broader public. Having this information available broadly on partners' websites, for example, is advantageous because it keeps all partners informed about how their work fits into broader system-wide objectives and allows anyone to take initiative more quickly in diagnosing potential problems and making adjustments as they go along. Finally, reporting the data transparently and making it widely accessible fosters public trust in the career pathways system and may even attract new funding sources to the effort.

[1] Exemplified by systems like CitiStat, CompStat, and StateStat. See Behn 2008.

[2] Dorotinsky and Watkins 2009.

Setting Performance Targets for Dashboard and Outcome Measures

A performance measurement system does not consist only of metrics and measures. Another vital aspect is the setting of performance targets for most metrics, as well as determining whether those targets are met, and what happens when they are or are not. This is ultimately the responsibility of the career pathways leadership, together with the partners. This section lays out some recommendations regarding preparatory steps for setting targets.

What is a Reasonable Target?

One of the major challenges related to the design and operation of a performance measurement system is determining reasonable targets for each measure/metric. The setting of targets can often be quite highly contentious, because meeting or exceeding targets is viewed as proof that a system or program is working—while failing to achieve targets is seen as evidence that it is failing—and achievement of such targets is often linked to financial or other incentives or sanctions. Program or system operators often push for lower targets, while external stakeholders (such as funders) push for higher targets, and both argue that the targets are not "fair" or "realistic."

So, how can and should a system or program set performance targets that all stakeholders consider "fair?" Below we provide some suggestions for how this happy medium can be achieved for both dashboard and outcome measures, the two types of measures for which targets are required in our proposed measurement system.

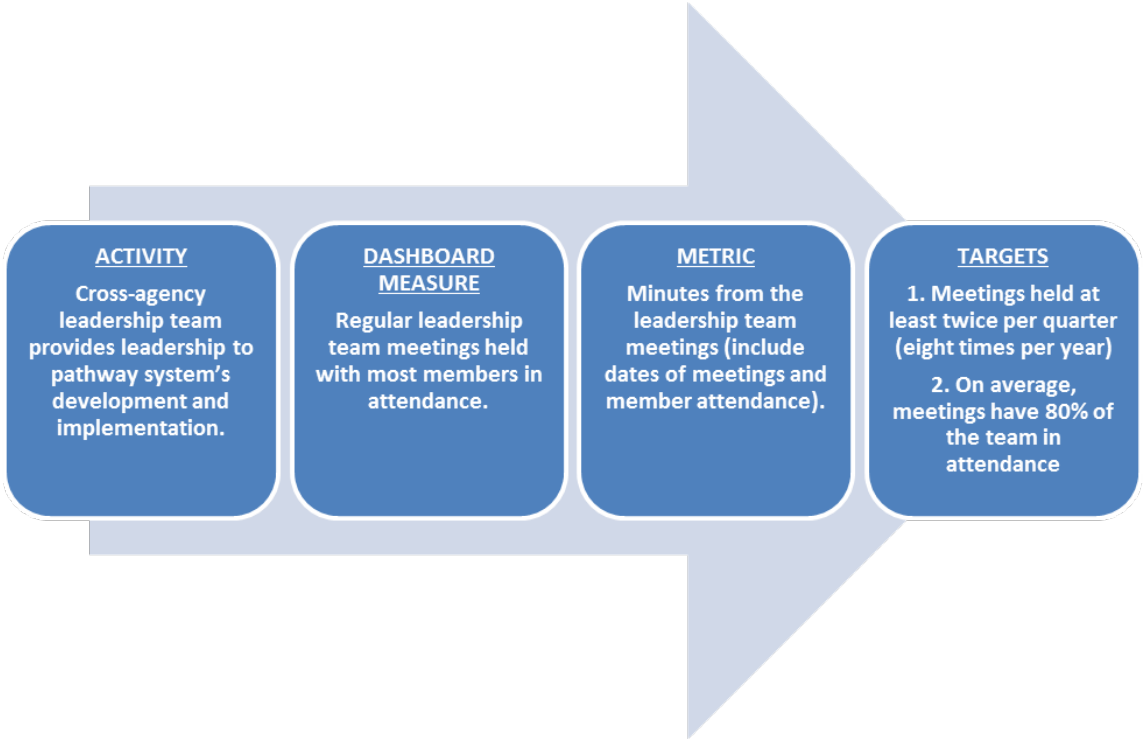
Setting Reasonable Targets for Dashboard Measures

Dashboard targets should be based on the expectations agreed upon by partners during the development of the implementation plan and revised as needed throughout implementation. As presented in the sample implementation measures included above, we expect that most career pathways partnerships will lay out their expectations implementation via the development of a comprehensive implementation plan. As part of the development of this plan, we assume that partners will detail specifics related to how they expect service delivery and system implementation to occur (such as how many employers they expect to be involved and in what ways; which partners will be providing funding and how much; and how many participants will be enrolled in each program of the pathway(s)). The specifics set out in this implementation plan should also be used as the initial targets for the selected dashboard measures, with targets being revised, as implementation proceeds, based on discussions among partners about what aspects of pathway operation seem to be working.

Possibly, as time goes on, pathway leaders may be able to set dashboard targets that are more closely correlated with successful attainment of outcomes. If resources are available, the partnership could use

quantitative multivariate techniques to model the association between certain aspects of service delivery and successful attainment of specific outcomes. For example, they may be able to determine whether receiving more than two case management sessions per month is associated with attainment of a postsecondary credential. Indeed, a very ambitious and resource-rich system could use an experimental approach to try to link specific interventions with specific outcomes and impacts. After several years of such efforts, career partnership systems may be able to determine which specific interventions and dosages of such interventions lead to optimal outcomes.

Exhibit 2: Example of Setting Targets for Dashboard Implementation Measure



Setting Reasonable Targets for Outcome Measures

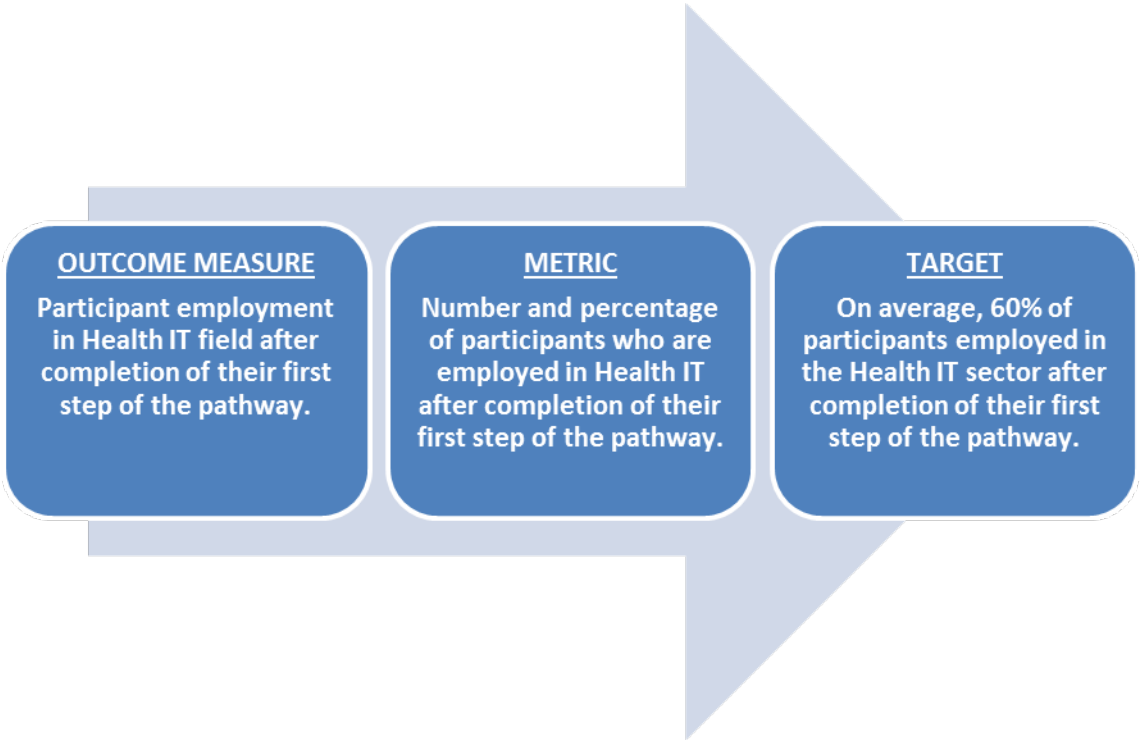
We suggest that career pathways collaborators wait to set outcome targets for a year or more, with targets set soonest for short-term outcomes and later for long-term outcomes. There are two basic reasons for this advice. First, waiting for a year or two to set outcome targets will allow baseline data on outcome attainment to be collected so that it can used as a fair basis for setting targets. By using multi-variate modeling, data on other, similar programs can be used to approximate the expected results from a new pathway system; however, due to the difficulty of finding existing career pathways systems that

are a good match[36] to a new one, it is likely better to wait and rely on data generated by the new pathway itself. Another reason for waiting to set targets is that during the initial implementation—especially one as complex as a career pathway(s)—it is likely that things will not go completely smoothly and that the collaborative will need to work out some initial challenges before they can be expected to attain successful outcomes.

During the one or two years when no targets are established, measures/metrics can still be monitored for whether results increase or decrease from one time period to another. Pathways leaders can use decreases in results as evidence that pathway operations may need to be adjusted, while increases would signal that things may be working as planned.

Following the baseline period, the leadership group should set specific numeric targets for each metric/measure, relying on the baseline data, but also using multi-variate techniques to control for expected changes in both external and internal factors (such as the state of the economy or target group). Systems should be judged to have "met" a target even if they come relatively close to it—for example within 10 or 20 percent—due to the fact that the expectations on which the targets are based may turn out to have been inaccurate (e.g., the economy may have fared worse than expected).

Exhibit 3: Example of Setting Target for Medium-Term Outcome Measure



[36] The pathways would need to be matched on multiple characteristics, such as industry, occupation, target group(s), or local economy.

Moving Forward

Developing a performance measurement system for a career pathways system is a complex and challenging endeavor. As many examples in this memo make clear, the development of such a system is critical to the success of a career pathways system at any level. Hopefully, this memo has provided useful advice and suggestions for the leaders and operators of career pathways systems regarding how to design a successful performance measurement system.

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