



RESEARCH REPORT

# Changing Workforce Systems

## A Framework for Describing and Measuring Systems Change

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# Executive Summary

In workforce development, *systems change* describes efforts and initiatives that go beyond providing direct services to individual jobseekers and aim to transform how organizations effectively support employers and the workforce. Practitioners and funders involved in such efforts may be working to foster collaboration, quality and accessibility, industry engagement, data-driven decisionmaking, or scale and sustainability in their local workforce systems. Workforce systems change initiatives aim to improve how the system serves employers and workers by coordinating or improving organizations, policies, or practices. Many organizations across the country are engaged in this work.

The long-term, complex nature of systems change work makes it difficult to track progress and measure outcomes toward goals. Because of the complexity and size of target systems and the slow pace of changing organizations, behaviors, and policies, the outcomes of systems change work are generally not immediately evident. Attributing systems change to a particular initiative is difficult. In addition, rigorously measuring how a system has changed may be resource intensive. Researchers and analysts agree that measurement is a major challenge, but still an imperative for programs. By tracking their initiatives' outcomes, practitioners, funders, and policymakers can generate evidence to inform programming and funding decisions and document the outcomes of their work.

We provide a conceptual framework of systems change goals and activities and offer measurement options that stakeholders can consult to suit their particular efforts. The framework provides a clear, common language for practitioners, funders, policymakers, and researchers to use when discussing this sometimes amorphous concept, and tools for thinking through measurement practices for their initiatives. By defining the key components of a local workforce system, systems change activities, and intended outcomes, this conceptual model provides a foundation for productive dialogue and practice. It applies to a wide range of initiatives that go beyond providing direct services to individual jobseekers and work for broader, sustained changes in workforce systems.

We drew from several sources of information to develop the framework. We conducted a literature review, investigated a range of current initiatives by examining the portfolio of programs supported through JPMorgan Chase's Workforce Readiness grants, and conducted in-depth, semistructured interviews with 10 grantees to explore their systems change goals, activities, and measurement practices. We developed the conceptual framework incorporating the insights from these sources and shared it for review with experts in the field.

The conceptual framework on page 9 depicts a logic model for systems change in workforce development. While the reality of systems change is complex, the framework provides a succinct illustration of the components of a workforce system, the range of systems change activities, and the system-level and employer- and worker-level goals of systems change work, on the right.

We provide a more detailed menu of systems change activities (page 12) that aligns with the framework, in addition to menus that provide ideas for how practitioners and funders can measure their progress on systems change activities (pages 28 and 29). Outputs measure the activities, and outcomes measure the progress toward goals. The menus list examples of metrics that may be used, depending on the systems change initiative.

The report grounds this conceptual framework in concrete examples of systems change efforts and measurement taking place in communities across the United States. Grantee interviewees also share their insights on lessons and considerations for practitioners and funders pursuing systems change work.

Organizations doing systems change work can use our framework to help describe their work and think through effective ways to measure their progress. Committing staff time and resources to data collection is a choice to consider in balance with other priorities. What an organization should measure varies based on the initiative's activities and goals and measurement costs and challenges. Our report suggests several low-cost approaches to collecting useful evidence.

For funders, this framework provides a common vocabulary and structure that can be used to better coordinate efforts with other funders and with the grantees and programs they support. One major challenge for funders, given the diversity of systems change activities, is how to take a customized approach to measuring systems change outputs and outcomes. We recommend that programs carefully consult with stakeholders and funders, taking into account their goals and the resources available for measurement, to choose the appropriate scale and focus of measurement. Funders should recognize that systems change is a messy and complicated endeavor that takes time, and grantees may not be able to show comprehensive evidence of success one year after a grant begins. Another key lesson for funders is the imperative to support grantees engaging in performance measurement and provide resources for the time and effort required.

We hope to cut through the amorphous concept of systems change by providing a clear framework that practitioners, funders, policymakers, researchers, and other stakeholders can use to describe their systems change goals and initiatives and assess their progress on key outcomes.

# Changing Workforce Systems

This report provides a conceptual framework for describing and measuring initiatives aimed at changing workforce systems. It speaks to practitioners, funders, and other stakeholders (e.g., policymakers and researchers) using this terminology and engaged in workforce issues. The framework proposes concepts and measures that break down the often ambiguous concept of “systems change” into clear mechanisms and metrics in the workforce development context. It provides considerations and suggestions for practitioners and funders grappling with the challenge of describing and measuring their systems change work, so they can effectively monitor and report on their progress.

In workforce development, *systems change* describes efforts and initiatives that go beyond providing direct services to individual jobseekers and aim to transform how organizations effectively support employers and the workforce. Organizations involved in such efforts may be working to foster collaboration, quality and accessibility, industry engagement, data-driven decisionmaking, or scale and sustainability in their local workforce systems. Workforce systems change initiatives aim to improve how the system serves employers and workers by coordinating or improving organizations, policies, or practices. Many organizations across the country are engaged in this work, echoing federal policy priorities emphasized in the Workforce Innovation and Opportunity Act of 2014 (WIOA) to promote “the alignment of workforce investment, education, and economic development systems in support of a comprehensive, accessible, and high-quality workforce development system in the United States.”<sup>1</sup> By tracking their initiatives’ outcomes, practitioners, funders, and policymakers can generate evidence to inform programming and funding decisions and document the outcomes of their work. The long-term, complex nature of systems change work, however, makes it difficult to track progress and measure outcomes toward goals, in contrast to direct service work, where progress is often easier to monitor using common performance metrics, such as the numbers of participants receiving training and obtaining employment.

In this report, we provide a conceptual framework of systems change goals and activities and offer measurement options that stakeholders can consult to suit their particular efforts. We describe the systems change activities, goals, and metrics of initiatives taking place in practice in local workforce systems across the country. The report is not intended to inform the design and implementation of systems change efforts, but rather to provide a clear, common language for practitioners, funders, policymakers, researchers, and other stakeholders to use when discussing this sometimes amorphous concept, and tools for thinking through measurement practices for their initiatives.

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## BOX 1

### **The Urban Institute's Partnership with JPMorgan Chase & Co.**

The Urban Institute is partnering with JPMorgan Chase over five years to inform and assess JPMorgan Chase's philanthropic investments in key initiatives. One of these is New Skills at Work, a \$250 million multiyear workforce development initiative that aims to expand and replicate effective approaches for linking education and training efforts with the skills and competencies employers need. The goals of the partnership include using data and evidence to inform JPMorgan Chase's philanthropic investments, assessing whether its programs are achieving desired outcomes, and informing the larger fields of policy, philanthropy, and practice. In service of these goals, this report provides a conceptual framework for systems change, a central strategy of New Skills at Work. The framework will also be used to guide the assessment of JPMorgan Chase's programs in workforce readiness and provide a resource to the field so stakeholders and practitioners can better understand their own systems change efforts and outcomes.

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## Developing the Framework

We drew from several sources of information to develop this framework. We began by conducting a literature review to understand how stakeholders define and measure systems change in human services and workforce development contexts. We drew from different fields and brought together lessons from multiple resources to put together a simple framework that would be relevant to the wide variety of workforce systems change initiatives that are implemented. We developed an initial framework based on that review and then refined and expanded it based on study of current systems change programs taking place across the country. We investigated a range of current initiatives by examining the portfolio of programs being supported through JPMorgan Chase's Workforce Readiness grants.

JPMorgan Chase provides hundreds of grants to a range of organizations across key markets in the United States, awarding almost 500 Workforce Readiness grants in more than 60 markets in 2014 and 2015. It distinguishes between direct service and systems change efforts in its portfolio. Its systems change grantees provide a window into current work in the field. We inventoried a sample of 50 recent (2014 and 2015) grants and examined their grant application materials for information on goals, activities, and measurement practices. From this group, we selected 10 grantees and conducted in-depth, semistructured interviews to explore these issues more thoroughly. We chose grantees purposively to capture a wide array of activities and geographic regions. Interviews with program



leadership and staff focused on the background of their systems change initiatives, their understanding of their goals and activities, their practices in measuring progress and outcomes, and other reflections on measurement and reporting. Table 1 lists brief descriptions of the initiatives featured in this report. We also interviewed staff from JPMorgan Chase to understand their views on systems change work. We developed the conceptual framework incorporating the insights from these different sources and shared it for review with experts in the field. Our interviews focused on systems change efforts at the local or state level, shaping the focus of this report. Nevertheless, many of the lessons for describing and measuring systems are relevant to regional and national systems change efforts as well.

TABLE 1

**Featured Systems Change Initiatives**

<b>Interviewees</b>	<b>Initiative</b>	<b>Description</b>	<b>Location</b>
<i>Neighborhood Centers Inc.</i> Angela Blanchard, Ann Hilbig, and Rene Solis	ASPIRE demonstration project	The ASPIRE demonstration project tests ways to better serve unemployed workers and fill the middle-skills gap through personalized support and training through the public workforce system. The project is testing different approaches to generate lessons for strategies that may be scaled up in the region.	Houston, Texas
<i>The Data Center</i> Allison Plyer	The Data Center’s Economic and Workforce research agenda	The Data Center conducts economic and workforce research and disseminates reports to decisionmakers to create an economy that provides inclusive opportunity across Southeast Louisiana.	New Orleans, Louisiana
<i>Science Foundation Arizona (SFAz)</i> Caroline VanIngen-Dunn	Middle Skills Internship Program	SFAz supports the creation of sustainable middle-skills STEM internship programs within community colleges and high schools, focusing on engineering, manufacturing, energy, IT, and health care. SFAz provides technical assistance to participating educational institutions and facilitates knowledge sharing.	Arizona
<i>Indiana Institute for Working Families</i> Jessica Fraser	Indiana Skills2Compete Coalition	The Indiana Skills2Compete Coalition is a group of state legislators, education policymakers, and business, labor, and community leaders that aims to increase the number of low-income, low-skilled adults attaining postsecondary credentials. The coalition uses research and data to inform public policy and support legislative initiatives.	Indiana
<i>Fund for Our Economic Future of Northeast Ohio</i> Bethia Burke	TalentNEO	TalentNEO is a skills-based hiring <sup>a</sup> pilot program in Northeast Ohio focused on changing how manufacturing and IT employers and jobseekers describe and assess skills.	Northeast Ohio
<i>New York City Department of Small Business Services</i> Sara Schlossberg	NYC Tech Talent Pipeline	The NYC Tech Talent Pipeline is a workforce intermediary for New York City’s technology industry that aims to identify employer needs, develop and test education and training programs, and scale strategies to build the pipeline of New Yorkers in the technology industry.	New York, New York

Interviewees	Initiative	Description	Location
<i>Chicagoland Workforce Funders Alliance</i> Matthew Bruce	The Genesis Movement	The Genesis Movement, led by the Illinois Manufacturing Excellence Center, encourages manufacturing employers to change their human resource and business practices to improve job quality and business productivity.	Chicago, Illinois
<i>East Los Angeles College</i> Dennis Garcia, Edward Knab, and Elaine Shibata	Third Party Logistics Center of Excellence (3PL CoE)	The 3PL CoE evaluates, develops, and monitors regional education and training programs for the logistics industry. The project facilitates communication and coordination between stakeholders, including employers and educational providers.	Los Angeles, California
<i>Seattle Housing Authority</i> Matt Helmer	Workforce Opportunity System (WOS)	The WOS is a joint initiative of the Seattle Housing Authority (SHA), Workforce Development Council of Seattle-King County, and Seattle Colleges <sup>b</sup> that connects SHA residents to education and job placement opportunities by facilitating access to community colleges and public workforce services.	Seattle, Washington
<i>JobsFirstNYC</i> Louis Miceli	Young Adult Workforce Development	JobsFirstNYC is an intermediary that works to improve the workforce system for young adults and accelerate the connection of out-of-school, out-of-work young adults to employment in New York City. The organization disseminates best practices and supports its partners in implementing strategies.	New York, New York

**Notes:** IT = information technology. STEM = science, technology, engineering, and math.

<sup>a</sup>Skills-based hiring is a practice whereby employers hire individuals on the basis of specific skill sets that can be measured through an assessment tool that identifies skills scores. Instead of focusing on résumés and degrees, individuals are matched to jobs based on these scores and competencies.

<sup>b</sup>Seattle Colleges consists of three colleges and a vocational school offering workforce education and training, professional-technical programs, bachelor's degrees, and transfer degree programs.

## Grappling with Systems Change

In this section, we focus on the existing literature on systems change and systems change measurement. We aim to build on research in workforce and other human service fields, taking into account the broad range of systems change work in local workforce systems. We highlight key systems change concepts, discuss measurement approaches and challenges, and explore application to the field of workforce development.

## Core Principles of Systems Change

Several key principles are common across a wide range of systems change efforts:

**Systems change focuses on changing policy, practice, perceptions, funding, and institutions.** Although different authors and initiatives describe the categories differently, we see that most systems change efforts aim to change policy, practice, perceptions, funding, and institutions, rather than primarily provide direct services to individual jobseekers. Some authors use broader categories, such as context, components, connections, infrastructure, and scale (Coffman 2007), or simply pathways and institutional structures (Latham 2014). Others add additional categories, such as information (Hebert, Parks, and Schneider n.d.; Plastrik et al. 2001).

**Collaboration and relationships are central components of systems change.** The relationships among actors and institutions in a system and the pursuit of better coordination, collaboration, and alignment across actors and sectors are common features of systems change efforts. Although some initiatives focus on one key actor, nearly all include some focus on developing effective relationships between actors who are not sufficiently connected. Latham (2014) points out that collaboratives are often the agent behind a systems change initiative, because an individual organization cannot address systemic issues on its own; while others note that “collective action” is often required (Siegel, Winey, and Kornetsky 2015). Many emphasize relationships as a key strategy (Plastrik and Taylor 2001b) or outcome to be measured (Mt. Auburn Associates 2012). *Collective impact* is a closely related approach, which focuses on uniting actors around a shared agenda to address social problems (Preskill, Parkhurst, and Juster 2014).

**Systems change initiatives are complex and multilevel.** Systems change initiatives are ambitious and complicated, seeking to solve intractable problems and changing deeply institutionalized features of multipart, complex systems. Initiatives may focus on one major actor (e.g., a major educational provider) or across a wider group of organizations. As Coffman (2007) points out, systems initiatives “are complex and...involve multiple programs and players and feature outcomes at multiple levels.” That is, systems change has a “nested nature” (Mt. Auburn Associates 2014), with relevant outcomes at system and subsystem levels and impacts all the way down to individuals.

**The desired effects are sustained and institutionalized.** A key precept of systems change is changing the system in a long-term, sustained fashion, so that new patterns of behavior and mechanisms endure and become institutionalized. New ways of doing business become “a new norm” (Roberts and Price 2012), ensuring that actions lead to continued and renewed action to ensure a positive trajectory. A closely related concept of systems change is *scale*, the full expansion of services to serve needed

demand in the target population (Asera, McDonnell, and Soricone 2013; Coffman 2007; Hebert et al. 2005; Korwin 2016; Latham 2014; Roberts and Price 2012; Soricone 2015). Scaling, or expanding, high-quality services and programs is a goal of many systems change efforts.

## Approaches to Measurement

In addition to defining and describing initiatives, practitioners, funders, and other stakeholders such as policymakers and researchers have to contend with the challenge of measuring the progress of systems change initiatives. There are several challenges to rigorous measurement. Because of the complexity and size of target systems and the slow pace of changing organizations, behaviors, and policies, the outcomes of systems change work are generally not immediately evident. In addition, attributing systems change to a particular initiative is difficult. Even if one could measure a change in levels of coordination or other intended outcome in a system, factors outside an organization's control may have contributed to that change, such as changes in economic conditions or public policy. In addition, rigorously measuring how a system has changed may be resource intensive and expensive and therefore unrealistic for organizations to take on.

Researchers and analysts agree that measurement is a major challenge, but still an imperative for programs. They point out that funders are looking for evidence that programs are achieving progress and intended outcomes and are increasingly demanding that data be collected (Mt. Auburn Associates 2014).

Several systems change programs have been studied through formal evaluation studies, which grapple directly with designing measurement and collecting data to provide feedback on their progress. Evaluators design their measurement approach based on a program's articulated *theory of change*, which states the assumptions behind how a program's activities will produce outcomes and long-term change. Coffman (2007) suggests that this is the dominant approach to evaluating systems change efforts, and helpful guides exist for evaluators and programs (Hargreaves 2010; Latham 2014). Mt. Auburn Associates (2015) highlight several formal evaluations of systems change initiatives in a recent review.<sup>2</sup> Other systems change evaluations have been conducted on Living Cities' The Integration Initiative (Mt. Auburn 2012, 2015), the Joyce Foundation's Shifting Gears initiative (Roberts and Price 2012), and the National Implementation Evaluation of the Health Profession Opportunity Grants funded by the US Department of Health and Human Services (Bernstein et al. 2016). The Aspen Institute has led several evaluations of systems change efforts, including studies of JobsFirstNYC (JobsFirstNYC 2014) and of the Genesis Movement, two initiatives featured in this report.

Beyond program-specific indicators rooted in a formal theory of change, experts have offered ideas for categories of outcomes that might be useful depending on the specifics of the initiative goals and activities (Coffman 2007; Plastrik and Taylor 2001b; Soricone 2015). We drew from these and others to develop our metrics suggestions later in this report. We also emphasize that the outcomes of systems change initiatives are often and appropriately described in qualitative terms. Programs can describe how systems change activities achieved particular milestones or intended changes in policy, practice, relationships, funding flows, or other areas (Roberts and Price 2012; Soricone 2015).

## Changing Workforce Development Systems

Our framework for systems change in workforce development was informed by a recent effort to define local workforce systems (Eyster et al. 2016). Eyster and coauthors (2016, 2) define a local workforce system as “the organizations and activities that prepare people for employment, help workers advance in their careers, and ensure a skilled workforce exists to support local industry and the local economy over time.” They do not limit their definition to the federally funded public workforce system but rather incorporate different organizations across the community that provide key functions to serve and support individuals and employers. This approach grounded our understanding of the key actors in local workforce systems (box 2). Our main focus in this report is local- or state-level systems change, though many of the key concepts and lessons are relevant to other efforts.

There have been several additional reports on systems change that focus explicitly on workforce development. This work focused primarily on funder collaboratives and sector initiatives, which we build on to integrate a broad range of systems change initiatives. The National Fund for Workforce Solutions<sup>3</sup> recently developed a framework for its initiatives, elaborating four focus areas for changing workforce development systems: educational and workforce development systems, employer practices, federal and state policies and investments, and funder perspectives and investments (Soricone 2015, 2016). These categories align closely with the types of organizations listed in box 2 and emphasize both the actors and practices that may be targets of change. Aspen Institute scholars relate a similar list of components in laying out the targets of structural change in sector strategies: industry practices, education and training systems, and public policy. They articulate how a wide range of organizations and actors in a community all touch on and affect workers’ prospects: “An industry’s employment ‘system’ can include the formal education system, organized labor, trade associations, the regulatory environment, the state’s workforce development system, and certainly employers themselves. How each acts and how they interact with one another, all impact how low-income

individuals are either welcomed or not into a particular labor market” (Conway et al. 2007, 12). They also make the point that such strategies should both meet employers’ needs and serve individual workers. These are key principles that provide the theoretical grounding of our conceptual framework, which we present in the next section.

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## BOX 2

### Organizations in a Local Workforce System

- **Employers, industry, and the workforce**, including business and trade associations, industry organizations, employers, labor unions, and staffing agencies.
- **Education and training providers**, including two-year colleges, four-year colleges and universities, K–12 public school districts, nondegree education and training providers, and adult education providers.
- **Government and the public sector**, including American Job Centers, workforce development boards, public libraries, public social service agencies, economic development agencies, elected officials, and local, state, and federal governments.
- **Nonprofit and collaborative entities and funders**, including community- and faith-based organizations, foundations and philanthropic organizations, workforce service providers, and workforce intermediaries.

Source: Eyster et al. (2016).

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## Overview of the Conceptual Framework

This section provides an overview of our systems change framework, including the logic model, menu of activities, and menus of metrics. Subsequent sections provide more detail regarding systems change components, goals, activities, and measurement, with examples from initiatives around the country.

**FIGURE 1**  
**A Logic Model for Systems Change Initiatives**

## SYSTEM COMPONENTS

### EMPLOYERS, INDUSTRY, AND THE WORKFORCE

Business and trade associations, industry organizations, employers, labor unions, and staffing agencies.

### EDUCATION AND TRAINING PROVIDERS

Two-year colleges, four-year colleges and universities, K–12 public school districts, nondegree education and training providers, and adult education providers.

### GOVERNMENT AND THE PUBLIC SECTOR

American Job Centers, workforce development boards, public libraries, public social service agencies, economic development agencies, elected officials, and local, state, and federal governments.

### NONPROFIT AND COLLABORATIVE ENTITIES AND FUNDERS

Community- and faith-based organizations, foundations and philanthropic organizations, workforce service providers, and workforce intermediaries.

## ACTIVITIES

### IDENTIFY SYSTEM NEEDS

Identify and highlight challenges and opportunities in a workforce system.

### DEVELOP A SYSTEMS CHANGE PLAN

With input from appropriate stakeholders, determine strategies to improve a workforce system.

### COORDINATE OR IMPROVE SYSTEM COMPONENTS

Strengthen the capacity of system components, change practices, or build connections.

### TRACK SYSTEMS CHANGE PROGRESS AND MAKE CONTINUOUS IMPROVEMENT

Regularly collect and assess data to measure progress towards goals and make adjustments.

### SCALE OR REPLICATE STRATEGIES OR SOLUTIONS

Expand and sustain effective programs, policies, or approaches, or replicate strategies in new contexts.

## GOALS

### SYSTEM-LEVEL GOALS

#### COLLABORATION

Actors have a shared vision or coordinated approach to serving workers and employers and effectively work together to solve problems and share best practices.

#### QUALITY AND ACCESSIBILITY

Services are visible and accessible to and meet the needs of those who need them, especially people with disadvantages or barriers to employment.

#### INDUSTRY ENGAGEMENT

The system is informed by business needs, and employers are invested partners in workforce efforts.

#### DATA-DRIVEN DECISIONMAKING

Actors collect and use quality data to design and continuously improve programs and services.

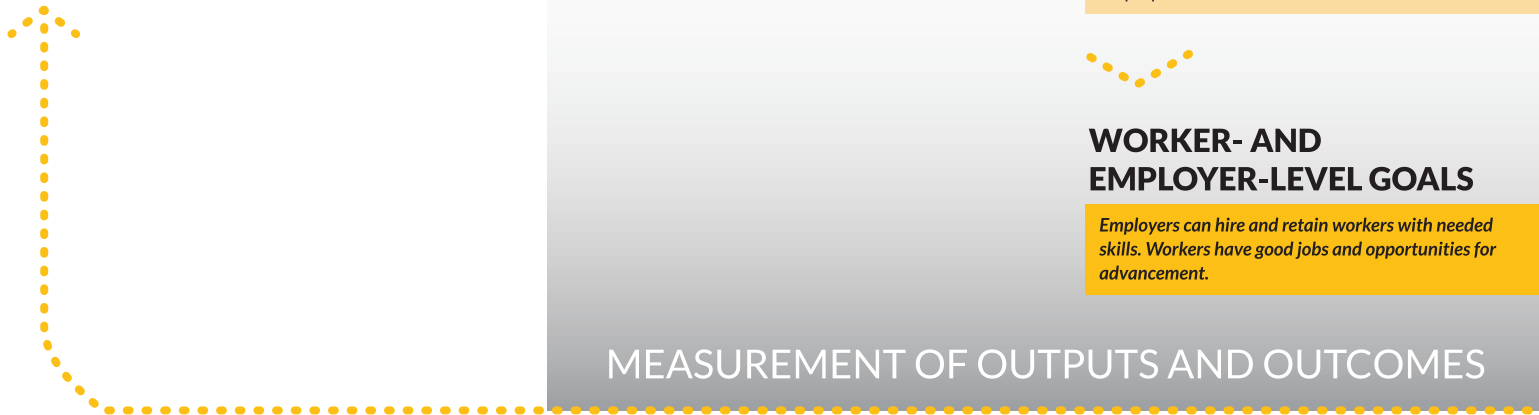
#### SCALE AND SUSTAINABILITY

The system has adequate programs, funding, and policies to reliably meet the needs of individuals and employers over time.

### WORKER- AND EMPLOYER-LEVEL GOALS

*Employers can hire and retain workers with needed skills. Workers have good jobs and opportunities for advancement.*

MEASUREMENT OF OUTPUTS AND OUTCOMES



## Logic Model

Figure 1 depicts a logic model for systems change in workforce development. The purpose of this diagram is to describe the components of a workforce system and the range of activities and goals of systems change work. This model provides a framework that can be helpful for describing how systems change initiatives work.

The first column shows system components, or major actors in a workforce system. In other logic models, these might be called the *inputs*. As described in the preceding section, we follow other literature in defining the components of the workforce system. These components align with the types of organizations listed in box 2. Depending on the specific systems change initiative, these components can serve different roles: as leaders or partners in initiatives, as targets of systems change, or as contextual factors. Often, there is overlap and the part of the system targeted for change might also be a partner in implementation. Not all these components are part of every initiative, but they are still important contextual factors.

The second column shows categories of systems change activities, further described in figure 3. Our definition of systems change includes many possible activities, reflecting the diversity of the initiatives we learned about in our interviews and application review. Many initiatives follow a general developmental cycle, represented in the logic model in five stages: (1) identify system needs, (2) develop a systems change plan, (3) coordinate or improve system components, (4) track systems change progress and make continuous improvement, and (5) scale or replicate strategies or solutions. Systems change projects might not follow this order, and some initiatives focus on one or two of these stages. But this categorization offers a framework for thinking about the multistage process of changing a workforce system.

The third column shows the goals of systems change work. There are two tiers of goals: 1) system-level goals and 2) worker- and employer-level goals. Systems change work is about changing how the workforce system functions. Therefore, system-level goals are the direct outcomes of the systems change activities. These goals reflect the desired characteristics of a workforce system. Systems change initiatives may focus on one or more of these goals. Although there is some overlap, these five goals are distinct, important objectives in systems change work.

As shown in figure 2, system-level goals support the ultimate goal of workforce systems: to improve outcomes for individual jobseekers, workers, and employers, sometimes called “customers” of the system. The worker- and employer-level goals are, “Employers can hire and retain workers with needed



skills. Workers have good jobs and opportunities for advancement.” Systems change efforts—despite their diversity in activities and system-level goals—are united by this shared, overarching goal.

**FIGURE 2**  
**Systems Change Goals**



Improving the system’s collaboration, quality and accessibility, industry engagement, data-driven decisionmaking, and scale and sustainability are the *mechanisms* by which outcomes improve for workers and employers. In this way, system-level goals lead to worker- and employer-level goals. This mechanism does not necessarily imply that system-level goals are fully achieved before worker- and employer-level goals are reached. Accomplishing any system-level goal can take a long time, and progress is often incremental and not always linear. Depending on the particular effort, improvements for some workers and employers may happen quickly, but it may take a long time to fully achieve scale and sustainability. To clarify how systems change works, it is important to lay out both tiers of goals, at the system level and customer level.

Movement and sequence in this model are communicated through the arrows, depicting the connections between system components, activities, system-level goals, and worker- and employer-level goals. The arrow around the model illustrates how achieving goals feeds into and transforms the nature of the system components.

The gray box around the activities and goals shows that it may be appropriate to measure outputs and outcomes throughout different parts of the systems change initiative. The logic model shows the systems change process: the system components are inputs for various activities that lead to system-level goals which in turn promote worker- and employer-level goals.

**FIGURE 3**  
**Menu of Systems Change Activities**

**IDENTIFY SYSTEM NEEDS**

**Identify and highlight challenges and opportunities in a local workforce system.**

Work with employers, workers, service providers, and other stakeholders to identify system needs, assets, and possible solutions	Collect historical and baseline data through surveys, interviews, or administrative datasets	Assess quality and availability of services, policies, and funding, as well as duplications and inefficiencies	Assess employer demand and labor supply	Identify and map system structure and leadership	Produce reports, maps, dashboards, or datasets (e.g., regular reports on labor market data)	Disseminate findings and recommendations through media, briefings, or community outreach
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**DEVELOP A SYSTEMS CHANGE PLAN**

**With input from appropriate stakeholders, determine strategies to improve a local workforce system.**

Research best practices and solutions	Draft a plan that articulates rationale, goals, strategies, resources, timeline, and metrics for success	Identify leadership, implementation partners, and oversight or advisory partners	Identify priorities and assess feasibility	Revise or refine a plan with input from stakeholders	Disseminate and publicize plan through media or community outreach	Gather input, negotiate with different stakeholders, and build consensus around strategies and priorities	Develop a strategy to fund identified strategies
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**COORDINATE OR IMPROVE SYSTEM COMPONENTS**

**Strengthen the capacity of system components, change practices, or build connections.**

EMPLOYERS, INDUSTRY, AND THE WORKFORCE	EDUCATION AND TRAINING PROVIDERS	GOVERNMENT AND THE PUBLIC SECTOR	NONPROFIT AND COLLABORATIVE ENTITIES AND FUNDERS	CONNECTIONS AND PARTNERSHIPS
Advocate for improved job quality through litigation, organizing, or policy advocacy	Develop or revise training curricula in partnership with employers	Advocate for government policies, regulations, or practices	Pool or align funding or create a funding collaborative	Create, run, or support a coordinating body, intermediary, collaborative, or partnership
Encourage employers to provide funding for training	Standardize curricula and credentials across the system	Advocate for new and sustained public appropriations	Create or test a new funding structure	Develop or broker agreements for partnerships between organizations
Provide technical assistance to employers	Develop a shared technology platform for referrals or peer learning across organizations	Publish and disseminate policy recommendations	Invest in or seek funding for high-performing, demand-driven programs	Develop shared resources and tools to support collaboration
	Design or conduct trainings for service providers or provide other professional development	Conduct briefings for elected officials and other policymakers	Provide professional development and support knowledge sharing to increase capacity	Foster peer learning across organizations
	Pilot innovative programs or strategies		Build connections with stakeholders across components	

**TRACK SYSTEMS CHANGE PROGRESS AND MAKE CONTINUOUS IMPROVEMENT**

**Regularly collect and assess data to measure progress towards goals and make adjustments.**

Collect data and regularly report on initiative outputs and outcomes	Track contextual factors and system-level data to inform improvements	Record best practices and lessons learned	Obtain regular feedback from program participants, implementation partners, and employers through interviews, surveys, or convenings	Participate in evaluation research (e.g., cost-benefit analysis, implementation analysis, outcomes study, impact study)	Regularly update or refine systems change plan	Convene oversight or advisory council to monitor quality and suggest improvements	Monitor model programs to determine replicability and scalability
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**SCALE OR REPLICATE STRATEGIES OR SOLUTIONS**

**Expand and sustain effective programs, policies, or approaches, or replicate strategies in new contexts.**

Replicate promising strategies for new sectors, locations, or target populations	Create toolkits, resources, or guides to promote best practices or effective programs	Scale down or combine efforts that are duplicative or not aligned with industry	Create a marketing or public awareness campaign to expand visibility of strategy
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## Menu of Systems Change Activities

Figure 3 lays out a detailed menu of activities that fall within our framework. It illustrates the steps involved in systems change work, describing the range of specific activities we observe in the workforce development field. We call this a *menu* because these are potential activities that programs and funders can choose to pursue to achieve systems change goals. The five main categories of activities echo our logic model. We compiled this comprehensive list drawing primarily from our grant review and semistructured interviews.

The first two categories, “identify system needs” and “develop a systems change plan,” set the stage for implementing changes and include such activities as interviewing or surveying stakeholders, researching solutions, obtaining buy-in from key actors, and writing an actionable, measurable plan. The third category, “coordinate or improve system components,” is the heart of most systems change efforts and encompasses the most activities. We organize this category by the system components targeted for change; this aligns with the four system components in the logic model. We add a fifth category because some activities are not focused on a single systems component but rather promote connections and partnerships between components. The final two categories, “track systems change progress and make continuous improvement” and “scale or replicate strategies or solutions,” include activities to measure and improve systems change efforts and bring effective solutions to scale.

## Menus of Systems Change Metrics

Figures 4 and 5 (pages 28 and 29) provide ideas for how practitioners and funders can measure systems change progress. The menus align with the activities and goals columns of the logic model: outputs measure the activities, and outcomes measure the progress toward system-level goals and worker- and employer-level goals. The menus include examples of metrics that may be appropriate for various systems change initiatives. These are not comprehensive lists. We describe the differences between these metrics, including advantages and disadvantages, in more detail below.

# The Framework in Practice

This section provides examples of systems change goals, activities, and measurement. We conducted interviews with staff at 10 organizations engaged in various systems change initiatives across the country (table 1). The interviews allow us to illustrate our conceptual framework in practice through the on-the-ground perspectives of specific system change efforts. The initiatives and staff member insights also provide additional lessons and considerations for practitioners and funders pursuing systems change work.

## Systems Change Goals

Systems change initiatives in workforce development aim to improve the system and outcomes for the system's customers (i.e., workers and employers). System-level goals support the ultimate goal of improving worker and employer outcomes. In this section, we use examples from the field to describe the range of goals among systems change initiatives. Many initiatives that change local workforce systems aim to advance several goals.

### SYSTEM-LEVEL GOALS

**Collaboration** refers to the goal of actors having a shared vision or coordinated approach to serving workers and employers and effectively working together to solve problems and share

#### **COLLABORATION**

Actors have a shared vision or coordinated approach to serving workers and employers and effectively work together to solve problems and share best practices.

best practices. Different parts of the system will have priorities that sometimes conflict and make collaboration difficult, but coordination can make systems function more effectively and efficiently. Collaboration is a key goal for several initiatives featured in our interviews. East Los Angeles College, a two-year college in Monterey Park, California, has a systems change initiative called the Third Party Logistics Center of Excellence (3PL CoE). The goal of this initiative is to facilitate communication and coordination among employers and educators through various activities and tools, including an online platform that enables stakeholders to share concerns, resources, and best practices about job training for the logistics industry. One project leader described the effort as a response to “fractured efforts that were reinventing square one....There wasn't a lot of coordination between groups, and [East Los Angeles College] saw a need to have a central clearinghouse.”

### **QUALITY AND ACCESSIBILITY**

Services are visible and accessible to and meet the needs of those who need them, especially people with disadvantages or barriers to employment.

Many systems change efforts seek to enhance the *quality and accessibility* of training and placement services. Quality and accessibility refers to the goal of having

services that are visible and accessible to those who need them and meet their needs, especially for people with disadvantages or barriers to employment. This goal is key for the Workforce Opportunity System (WOS), a joint initiative of the Seattle Housing Authority (SHA), Workforce Development Council of Seattle-King County, and Seattle Colleges. The WOS aims to connect SHA residents to education and job placement opportunities by facilitating access to community colleges and public workforce services. An interviewee at the SHA described the goal as follows: “How do we change the education and training infrastructure in our city in a way that helps support our residents and other low-income populations to be more successful in the classroom and labor market...? It’s a marshalling of resources, efforts, and strategies that serve a population that traditionally has not been a large focus of those systems: low-wage workers who often need a myriad of long-term, intense navigation and support services.” The WOS works to improve access to programs by developing partnerships and referral systems to help SHA residents interested in going to college or finding employment. Another goal is improving the effectiveness of training programs for this population, specifically improving the labor market returns of community college and job training programs.

*Industry engagement* is related to collaboration but focuses on employers and industry. The goal refers to having a system that is informed by business needs and where

### **INDUSTRY ENGAGEMENT**

The system is informed by business needs, and employers are invested partners in workforce efforts.

employers are invested partners in workforce efforts. Industry engagement helps workforce programs train workers more effectively in the skills employers demand (Spaulding and Martin-Caughey 2015). It can also lead to improvements in employer behavior, including increased hiring of workforce program participants, better job quality, and more investments in training (Conway et al. 2007). Industry engagement is an important goal of the New York City Tech Talent Pipeline. Launched by Mayor de Blasio in May 2014 and supported by the New York City Department of Small Business Services and the Workforce Development Corporation, the NYC Tech Talent Pipeline is the city’s technology industry partnership. As a workforce intermediary, the NYC Tech Talent Pipeline is designed to deliver quality talent for the city’s businesses and quality jobs for New Yorkers by equipping the workforce with the skills businesses need and connections to employment. The NYC Tech Talent Pipeline’s advisory board, which consists of 28 chief executive officers, chief technology officers, and chief information officers from the city’s leading tech employers, works with the city and local training and education institutions

to define needs, develop training and education solutions to meet those needs, and drive the adoption of what works at scale. An interviewee at the Department of Small Business Services said the NYC Tech Talent Pipeline initiative aims to “affect the way that multiple systems engage in the tech ecosystem,” including employers. It aims to influence “employer practices, including hiring, training, and selection,” so that employers see New York City residents as an effective candidate pool for in-demand technology jobs.

**DATA-DRIVEN DECISIONMAKING**

Actors collect and use quality data to design and continuously improve programs and services.

*Data-driven decisionmaking* refers to having

actors collect and use quality data to design and continuously improve programs and services.

Service delivery is informed by evidence, whether that means system research to set priorities, performance management data collection, program evaluation research, or other tools for generating and analyzing data. This goal is central to The Data Center, a research organization in Southeast Louisiana that collects and analyzes data on workforce and economic development for the region. The organization publishes and disseminates research to “address the most pressing questions that decisionmakers have about how to increase prosperity in the region.”<sup>4</sup> The Data Center aims to change or inform policies or practices based on data and analysis. It is not an advocacy organization, and neutrality is important to it, but the organization’s work informs advocacy efforts and local policies: “Actionable, reliable data is vital to inform workforce and economic development choices for the region....The Data Center injects data and evidence into conversations where decisions are being made based on no data.”

*Scale and sustainability* refers to the system having adequate programs, funding, and policies to reliably meet the needs of individuals and employers over time. One

**SCALE AND SUSTAINABILITY**

The system has adequate programs, funding, and policies to reliably meet the needs of individuals and employers over time.

organization we interviewed was the Fund for Our Economic Future of Northeast Ohio, a philanthropic collaboration with the mission to advance economic growth with equitable access to opportunity for the people of Northeast Ohio. One of the fund’s initiatives is TalentNEO, a skills-based hiring pilot. Scale and sustainability are among the long-term goals for TalentNEO. The skills-based hiring model was piloted in New Mexico by the nonprofit Innovate+Educate and produced promising results, including reductions in cost-to-hire and time-to-train for employers. In partnership with other foundations, the fund launched the pilot to understand whether the model could be successfully translated to industries in Northeast Ohio. A director at the fund described how its long-term goal is to integrate skills-based hiring into its initial target sectors (information technology and manufacturing), but also broadly across

other potential sectors, noting the natural evolution taking place in the initiative: “We didn’t initially focus on health care, but some employers have expressed interest. We then think about how that scaling happens and how we can enable that.” Other organizations we interviewed also talked about scale and sustainability as key systems change goals. A key goal is that grant-supported initiatives should leave behind a long-term effect. One interviewee at the Seattle Housing Authority said, “The ultimate test as to whether we’ve changed the system is to see what happens when the grant goes away: what is sustained, and how has that improved outcomes for our residents, and hopefully, other low-wage workers.”

### WORKER- AND EMPLOYER-LEVEL GOALS

All the goals discussed so far are about improving how the system functions. Having

*Employers can hire and retain workers with needed skills. Workers have good jobs and opportunities for advancement.*

a well-functioning system is not an end in and of itself, however. Systems improvement should ultimately improve a system’s ability to serve workers and employers and improve their outcomes. As shown in figure 2, the worker- and employer-level goals are as follows: “Employers can hire and retain workers with needed skills. Workers have good jobs and opportunities for advancement.” Improving collaboration or sustainability are only valuable if they lead to better outcomes for the customers of the system: employers and the workforce.

We heard this perspective on systems change work from most of the interviewees. Although their work mostly targeted organizations and practices, the organizations aimed to improve outcomes for individuals or employers, and often both. The long-term goals noted in the WOS online publicity materials are “measurable career placements and increased household wage earnings and financial stability among Seattle Housing Authority residents.”<sup>5</sup> The NYC Tech Talent Pipeline describes itself as “delivering quality jobs for New Yorkers and quality talent for New York’s businesses.”<sup>6</sup> At the Fund for Our Economic Future, the director we interviewed said, “The long-term vision is a change in the way people describe their qualifications and what people look for in a qualified worker, leading to better outcomes for people and businesses.” Despite their different approaches and system-level goals, these initiatives share an overarching goal to improve the economic success of individuals and businesses.

## Systems Change Activities

One motivation for this report is to describe the wide range of activities that programs are pursuing to bring about systems change to help funders and practitioners better define and conceptualize systems

change in a workforce context. Tackling systems change with several different strategies and through different stages of development makes sense given the complex nature of local workforce systems and their challenges. This section describes concrete examples for each activity group in the logic model, drawing from our interviews with organizations working on these critical steps.

## IDENTIFY SYSTEM NEEDS

Some systems change activities are focused on identifying and highlighting challenges and opportunities in a workforce system. Identifying system needs can include collecting historical or baseline labor market data, interviewing or surveying stakeholders to get their perspectives, mapping

### IDENTIFY SYSTEM NEEDS

Identify and highlight challenges and opportunities in a workforce system.

resources, producing reports, and disseminating findings. Identifying system need is a critical step for determining priorities for systems change efforts. A

senior policy analyst at the SHA noted, “You really do have to begin with data and research into how the system is performing before you figure out system change goals.” For the WOS project, the SHA executed data-sharing agreements with college partners to examine the baseline and progress of public housing residents in community college programs, assessing their access and outcomes to be able to design an appropriate intervention targeted at actual needs. The SHA also conducted a randomized survey of its working-age residents to better understand their educational and employment experiences, goals, and challenges. The Data Center’s activities fall primarily within this category of identifying system needs. Their work involves conducting research on the economic and workforce landscape in Southeast Louisiana and publishing and disseminating reports on their findings. One potential project The Data Center describes is analysis of credential and educational attainment data to understand how impending workforce demand would be filled and assess the sufficiency of investments in education. The Data Center disseminates findings through its website and social media and engages regional leaders through briefings and convenings.

Though identifying system needs may be initiated by research organizations or governmental entities, often practitioners and service providers identify needs based on their experiences on the ground. Neighborhood Centers Inc., a nonprofit organization in Houston that provides workforce development services, identified needed changes based on its direct-service work. Staff observed that a lot of the people who needed assistance were underemployed and working in low-wage jobs. Clients often lacked access to training opportunities or did not know about available positions for living-wage jobs. These observations led Neighborhood Centers to start ASPIRE, a demonstration project to develop and test solutions tailored to the underemployed population in its region.



## DEVELOP A SYSTEMS CHANGE PLAN

Another area of activities involves determining strategies to improve a local

workforce system, with input from appropriate stakeholders. This category may include such activities as negotiating with stakeholders, building consensus, and developing a plan for leadership and funding. Getting buy-in from relevant stakeholders is extremely important for implementing systems change initiatives, which often involve multiple partners. Negotiating different (and sometimes conflicting) missions and institutional goals and building relationships and trust between partners is central to a lot of systems change work. JobsFirstNYC (JobsFirst), which operates under a collective impact framework, relies on multiple partners to achieve its goals. JobsFirst is an intermediary that seeks to “bring out-of-school and out-of-work young adults into the economic life of New York City.”<sup>7</sup> According to the executive director, JobsFirst’s systems change work was driven by a yearlong strategic planning process that included “very involved, nuanced engagement with various communities of stakeholders.” JobsFirst solicited input from funders, employers, nonprofit organizations, and civic leadership to establish consensus around their goals. The planning process also led to a concrete set of strategies and specific projected outcomes to guide the effort.

## DEVELOP A SYSTEMS CHANGE PLAN

With input from appropriate stakeholders, determine strategies to improve a workforce system.

## COORDINATE AND IMPROVE SYSTEM COMPONENTS

The third category of activities represents the heart of systems change: trying to change how system

### COORDINATE OR IMPROVE SYSTEM COMPONENTS

Strengthen the capacity of system components, change practices, or build connections.

actors function. This category involves strengthening the capacity of system components, changing practices, or building overall collaboration. Almost all the organizations we interviewed were

working on coordinating or improving organizations and practices in the local workforce system, but the target of change varied. We provide examples of each below.

Organizations may focus on changing **employers, industry, and the workforce**. Many of the interviewees we spoke to emphasized changing business practices by encouraging or persuading employers to change hiring practices, invest in training, or improve job quality for their employees. The Chicagoland Workforce Funder Alliance supports the Genesis Movement, an effort to encourage manufacturing firms to intertwine “people, process, and product” strategies to enhance outcomes for the firms and their workers.<sup>8</sup> The Illinois Manufacturing Excellence Center leads the effort, and the activities involve consulting with individual companies to help them strategically integrate their business practices to make the firms more profitable while improving job quality for their workers. The

executive director of the Chicagoland Workforce Funder Alliance noted that “the real systems change is in actual changes in behavior and structures and policies [and] that’s the systems change we’re looking for....I think too often we skip over that part or don’t pay enough attention to that....It’s one thing to participate in an industry workforce partnership in health care and get the hospitals to talk to each other, get them to participate in a training program, tell them what curriculum to have, interview the graduates; it’s another thing to have that hospital actually look at its own budget and its own policies, the way that it behaves, and change those things.” Science Foundation Arizona, a public-private nonprofit organization that works to diversify and strengthen Arizona’s economy with a focus on education, developed a model for middle-skills STEM (science, technology, engineering, and math) internship programs to implement in community colleges and high schools. The programs provide interns to employers at no initial cost, in an effort to change employers’ views about where they might recruit for key positions. The director we interviewed explained that the idea is that employers will develop strong relationships with community colleges and go back to them for future skill needs if they see that graduates are effective interns and employees. Although none of the organizations we profiled were targeting labor unions, efforts to change union practices could also fall in this category.

Several organizations were working to change **education and training providers** and their practices by developing shared resources to improve coordination across this sector, providing technical assistance to build organizations’ capacity, revising training curricula to align with industry needs, or standardizing credentials. Science Foundation Arizona’s grant activities include providing technical assistance to educational institutions participating in the internship programs by facilitating peer-learning opportunities and managing pilot program efforts. Science Foundation Arizona works to connect participating organizations so they can learn from each other’s efforts to run high-quality programs, engage employers, and change relationships. In this way, Science Foundation Arizona’s activities strengthen the education providers’ ability to provide demand-driven, effective internship opportunities to students.

**Government and the public sector** can also be target domains for systems change activity, including efforts to advocate for new policies or appropriations and inform the field with policy and practice recommendations. The Indiana Skills2Compete Coalition was founded by the Indiana Institute for Working Families, a program of the Indiana Community Action Association. The coalition comprises representatives from the education and training field, public agencies, and the state legislature and aims to increase the number of low-income, low-skill adults attaining postsecondary credentials. This group’s systems change activities include conducting research to inform public policy, publishing and disseminating recommendations, conducting briefings, and building public awareness and support of

legislative initiatives. Each year, the coalition focuses on a specific set of policy recommendations, such as promoting a statewide prior-learning assessment policy or campaigning for increased public appropriations to support adult students. It coordinates this work through a coalition of representatives from higher education, public agencies, the private sector, community organizations, and the state legislature, who collaborate to form shared priorities and messages. Including state policymakers at the table is an important way for this systems change initiative to generate buy-in and increase the coalition's impact on legislation.

Other systems change work targets **nonprofit and collaborative entities and funders**, including community-based organizations, foundations, and intermediaries. Many organizations work to change philanthropic funding patterns and practices by testing new funding structures or pooling or aligning funding in new ways to better address system needs and reach key populations. The Chicagoland Workforce Funder Alliance, an example of the National Fund for Workforce Solutions model, fosters alignment across Chicago workforce funders by exploring and promoting opportunities for investment in innovative solutions to challenges that they are all working to address, but could address more effectively in collaboration with each other.

Many organizations' systems change activities are not targeted on a specific set of actors but rather work across domains to strengthen **connections or partnerships** between different parts of the system. Coordination activities include developing new partnerships and shared resources, fostering peer learning, and creating formal collaboratives. The NYC Tech Talent Pipeline is a coordinating body to foster better connection and collaboration between employers, educational and training institutions, community organizations, policymakers, funders, and New Yorkers. The NYC Tech Talent Pipeline works to develop alignment between employers' needs, expectations, and practices; the practices and programs in New York City's colleges and training providers; and the skills of the workforce.

#### TRACK SYSTEMS CHANGE PROGRESS AND MAKE CONTINUOUS IMPROVEMENT

A fourth category of work involves regularly collecting and assessing data to measure progress toward systems change goals and make adjustments. Activities in this area include soliciting feedback from program participants, employers, or implementation partners; convening an advisory council to monitor progress and suggest improvements;

tracking internal performance measures; and revising plans and strategies for an initiative. Neighborhood Centers does this work for the ASPIRE initiative. ASPIRE

#### **TRACK SYSTEMS CHANGE PROGRESS AND MAKE CONTINUOUS IMPROVEMENT**

Regularly collect and assess data to measure progress towards goals and make adjustments.

helps underemployed workers obtain living-wage, middle-skill jobs through collaborative work with employers, educational providers, and communities. The project tests approaches including holistic assessments, career coaching, and high-quality training opportunities. Neighborhood Centers is working with a third-party evaluator not only to build evidence for these different approaches but also inform the project's ongoing implementation. The CEO of Neighborhood Centers explained that it is important to make changes in real time to help the program participants rather than wait until the end of the initiative to report results. She describes a dynamic and continuous improvement learning cycle: "As soon as we're learning something that we can take to [the local workforce council] and our other partners and propose a modification, we're doing that." ASPIRE is intended to be learning "in real time," and sharing lessons through an evaluation council, which includes all partners and stakeholders. Involved actors are regularly informed and engaged to provide feedback and learn from evaluation findings.

#### SCALE OR REPLICATE STRATEGIES OR SOLUTIONS

The last category focuses on activities to expand and sustain effective programs, policies, or approaches or replicate strategies in new contexts. This work includes replicating successful programs for new sectors, locations, or populations; expanding a strategy's visibility; and creating resources to promote

##### **SCALE OR REPLICATE STRATEGIES OR SOLUTIONS**

Expand and sustain effective programs, policies, or approaches, or replicate strategies in new contexts.

best practices. Some of the representatives we interviewed hoped to scale up after piloting or building evidence for an approach. Interviewees at East Los Angeles College believe that their social media

platform within the 3PL CoE has the potential to be replicated for other industries or locations. They have already been contacted by other stakeholders in the state "looking to replicate this sort of approach across other industry or social sectors." They called replication a "natural evolutionary process." Others were already at the point of scaling or replicating their efforts. The Fund for Our Economic Future of Northeast Ohio is replicating a skills-based hiring approach that showed promise in New Mexico. Science Foundation Arizona's work includes developing an online STEM Network platform to disseminate resource guides to support the expansion of programs to additional educational institutions. This area of work also includes efforts to scale down or replace ineffective or obsolete programs and efforts. As an intermediary, the NYC Tech Talent Pipeline works to coordinate the many different training providers in New York City, "quickly scaling up or down investments in different types of training according to changing labor market and employer demand."<sup>9</sup>

## Systems Change Measurement

Measuring systems change is important. Practitioners and the organizations leading systems change initiatives need measurement to determine whether there has been progress toward goals and whether systems change happened. Measurement helps practitioners identify which strategies are effective and where improvements are needed. Measuring success can help practitioners obtain recognition and funding and may lead to replication or expansion of their efforts. Measurement helps funders understand their investments' outcomes and potential influence.

To generate ideas about potential measurement, we provide menus of ways to measure systems change (figures 4 and 5). The options vary in resource level required, ease of attribution, and complexity of data collection and analysis. In practice, organizations engaging in systems change work use many tools and metrics. This section includes examples of how the organizations we interviewed measure outputs and outcomes.

### MEASURING OUTPUTS

Outputs are the direct result of systems change activities. Measuring outputs involves answering the following questions: what happened, to what extent, and how well? Usually, outputs can be clearly identified and measured in a relatively short amount of time. One type of output is the simple completion of any activities listed in figure 3, such as convening an advisory board or brokering a data sharing agreement. Measuring this type of output is simple: did the activity happen? Outputs can also be measured quantitatively by tracking such metrics as number of employers engaged or number of briefings conducted. Measuring outputs quantitatively requires keeping track of the amount and frequency of different outputs. In addition, practitioners can assess outputs qualitatively by analyzing output characteristics or quality. Practitioners might look at how effectively reports promoted a new idea or how well partners worked together to solve problems. Figure 4 offers an illustrative list of metrics for outputs. Each systems change initiative will have a unique set of outputs and associated metrics based on its activities.

Many of the organizations we interviewed talked about measuring outputs. The Data Center tracks the number of reports it produces on different topics. Staff members also track metrics regarding their products' dissemination and reach. They track the number of decisionmakers and stakeholders who request information, the number of times they present their work to various audiences, and the number of media mentions. This year, The Data Center also developed a social media strategy and has metrics for the number of "impressions," followers, and readers, and the amount of social media-driven traffic

to The Data Center’s website. It also tracks the number of times its research findings are incorporated into other organizations’ materials.

Because its efforts are policy focused, Skills2Compete tracks whether legislation is passed and funds are appropriated. It also tracks outputs associated with steps to pass legislation: the number of coauthors of legislation, the number of legislators who sign the bill, the presence of bipartisan support, whether there were any hearings and how many, whether the bill came to a vote, and the vote count. Tracking these outputs is important for the organization to highlight its progress. The director notes that Indiana’s political climate makes it especially difficult to change policy: “I’m hypersensitive to how we can measure how important our work is in the absence of a policy victory because we may not ever have a policy victory on this issue. That’s part of the reason why there are so many metrics we look at, because policy change is hard-going here when it comes to these issues.” Although external factors can hinder a bill from being passed, tracking these other indicators of progress allows the organization to show quantifiable accomplishments to funders and stakeholders.

## MEASURING OUTCOMES

While outputs describe what happened as a direct result of the systems change activities, outcomes describe the longer-term results of the work. Outputs tell us whether the *activities* happened; outcomes tell us whether *systems change* happened. One interviewee noted, “We make a real distinction between the metrics that are associated with the activities, and the actual systems change.” Measuring outcomes is more difficult than measuring outputs because outcomes capture more complex information, they can take a long time to develop, and they are influenced by many factors outside the initiative. Figure 5 lists metrics that could be used to measure outcomes. They are organized into system-level outcomes and worker- and employer-level outcomes to correspond with the two tiers of goals in the logic model (figure 2).

**System-level outcomes.** Measuring progress toward system-level goals means measuring how the local workforce system has improved overall or how parts of the system have improved. The metrics in the first part of figure 5 are organized into categories aligned with the system-level goals in the logic model. How has the system improved in terms of collaboration, quality and accessibility, industry engagement, data-driven decisionmaking, or scale and sustainability as a result of a particular systems change initiative? Many system-level outcomes can be measured quantitatively. Increases in funding available to support training could be measured by looking at the total dollar amount of new funding, and increases in the level of participant satisfaction with programs could be measured through surveys. Measuring system-level outcomes qualitatively may also be more feasible and appropriate or can

complement quantitative metrics to tell a more complete story. Relating the story of systems change to stakeholders and funders through a combination of metrics enables an organization to trace its contribution to bringing about key outcomes.

The WOS in Seattle works to enhance collaboration between the SHA and education and workforce development providers. Although the effort is still under way, the WOS is starting to see evidence of stronger partnerships between these entities. The community colleges and Workforce Development Council invited the SHA to partner with them to pursue other funding and to serve on a review committee for requests for proposals that had been released. The SHA director said, “That had never happened before. We’d never had a seat at the table.” This example suggests an improvement in relationships that is leading to sustained collaboration.

Neighborhood Centers is working with a third-party evaluator to study the ASPIRE initiative. The evaluation involves assessing how the project has catalyzed changes broadly in the public workforce system. To measure systems change outcomes, the evaluation plan includes such questions as, “Are key workforce system actors becoming more committed to collecting and reporting on additional workforce development metrics?” and “Are workforce system actors advocating for expanding the use of assessment tools?”<sup>10</sup> These questions reflect the goals of data-driven decisionmaking and scale and sustainability. The evaluation will try to identify how much Centers and the ASPIRE initiative have contributed to intended system outcomes. Measurement will involve interviews with key informants representing different parts of the workforce system and surveys of clients to assess whether the system has changed from their point of view.

The Fund for Our Economic Future measures progress toward its system-level goals of industry engagement and scale and sustainability by looking at evidence that employers have changed their practices to adopt skills-based hiring. The increase in job postings that contain skills scores and the decrease in job postings that have specific educational requirements are quantitative indicators of system-level change. To assess quality and accessibility, the fund measures the extent to which organizations provide skills testing and where they are located. It also collects data about the number of people taking the assessment and how well they do.

***Worker- and employer-level outcomes.*** Systems change efforts in workforce development have diverse goals for improving the system itself, but they share the overarching goal of improving outcomes for the customers of the workforce system: individual workers, jobseekers, and employers. Most efforts try to change policy, practice, perceptions, funding, and institutions. But to know if systems change is effective, it is important to know if the employer and jobseeker customers of the workforce

system have better outcomes and if those improvements could be traced to the systems change initiative. Possible metrics for worker- and employer-level outcomes are shown at the bottom of figure 5: Have employment and wage levels increased overall or for specific groups? Has job retention increased? Are employees more satisfied with their jobs? Have hiring costs gone down for employers? Has business productivity increased? The ability to track these metrics depends on the availability of labor market and employer data for the industries or geographies of interest. Public surveys and administrative data are common sources of information for measuring these outcomes.

One challenge is identifying whether a systems change initiative caused the improvements for workers and employers captured in the data sources. In many cases, there are multiple organizations and actors, which may or may not be working together, that influenced systems change outcomes. In addition, contextual factors such as local economic conditions can have major positive or negative effects on the success of an initiative. One interviewee noted his organization could claim “partial credit” over changes in the city’s youth disconnection rate. He noted this is a time when that kind of credit matters, but “intermediaries in general are kind of reluctant to take responsibility for the outcomes of others, over which they do not have absolute control. And the mainstay of our work is with institutions that are *not* under our leadership, they’re not programs of ours....That is both exciting and risky.” This interviewee noted that for one initiative, an employer who was convinced to pilot a program to increase base wages found that employee retention went up from 28 to 85 percent within six months. This is an example of the type of information a systems change initiative might highlight to describe its influence on certain changes in outcomes.

But many factors contribute to labor market outcomes and business productivity, so in most cases, it is nearly impossible to definitively measure the role of a systems change initiative in changing worker and employer outcomes for an entire system. Qualitative data can provide some evidence: interviewing or surveying employers or jobseekers can determine whether they perceive that a systems change initiative resulted in better outcomes for themselves. Such information can also be used to check and verify results across multiple data sources.

Given this attribution challenge, many organizations do not attempt to take credit for worker- and employer-level outcomes at the system level and do not set explicit target goals for these outcomes. They may, however, be able to trace how their efforts helped a particular segment of the population or a group of employers. The ASPIRE initiative is looking at the outcomes for the individual workers involved in its programming. (The initiative aims to serve 1,000 underemployed workers.) The evaluator is measuring training enrollment and completion, hiring and retention, wages, and self-sufficiency. Even though the evaluation does not look at outcomes for all individuals in the system, it shows how



outcomes have improved for a segment of the population and speaks to the potential for larger systemwide impacts on underemployed workers.

JobsFirst set out intentional goals at the individual worker level and is pursuing a complex measurement strategy with support from an outside evaluator. Its strategic plan lays out the concrete goal of decreasing the number of unemployed or jobless and out-of-school young adults (or *opportunity youth*) in New York City by 5 percent by 2017. According to its strategic plan, JobsFirst needs to demonstrate that it has “influenced the acquisition of at least 1,800 new jobs for young adults beyond those already working each year” (Jobs First NYC 2012). Its measurement approach involves establishing a baseline by industry of youth between ages 18 and 24 working part-time and full-time. Then, it will select a representative sample among select industries and track the changes in the number of jobs in each industry over 12 to 18 months. The executive director described the multiple approaches to identify progress toward their overall goal. To isolate the role of its work on the system, JobsFirst looks at changes in the number of opportunity youth resulting from the work of organizations and employers with which it has worked directly or funded to identify its direct influence on the systems change. It also looks at organizations that it has influenced informally (identified by whether the organization has used its strategies) to calculate indirect influence, which gets partially weighted in the overall calculation. Last, it looks at the city’s overall measure of youth unemployment. Although JobsFirst cannot definitively establish causality, together, this information provides evidence about the initiative’s impact.

Many representatives of organizations we interviewed are tracking labor market outcomes for the system to support continuous improvement. According to one of its directors, the Fund for Our Economic Future tracks economic indicators not to monitor systems change, “but [to help] understand what needs to be changed.” Similarly, the Indiana Institute for Working Families tracks industry growth, poverty rates, and other metrics across the state. Although it does not use these metrics to track its own progress, the director said, “We consider it our job to know about these things.” Measuring worker- and employer-level outcomes becomes a functional activity of systems change work to inform efforts and assess the system’s status.

**FIGURE 4**  
**Menu of Systems Change Metrics**

## Outputs of Activities

IDENTIFY SYSTEM NEEDS								
Number, proportion, or diversity of stakeholders and target groups interviewed or surveyed during information gathering	Number and frequency of products or reports produced	Number of media mentions, online downloads, or citations of products	Number of briefings requested or conducted	Evidence of value of products or reports to stakeholders				
DEVELOP A SYSTEMS CHANGE PLAN								
Creation of a plan, including strategies for leadership, funding, implementation, measurement, and sustainability	Number of workers, employers, and other stakeholders involved in plan development	Amount of funding obtained for supporting systems change plan			Evidence of value of plans and support from stakeholders			
COORDINATE OR IMPROVE SYSTEM COMPONENTS								
Number of partnerships formed; number of contracts or memoranda of understanding developed	Frequency of communications between organizations	Number of curricula updated or aligned with employer needs	Number of programs using new curricula; number of students exposed to new curricula	Number of people referred between partner organizations	Number of organizations trained or staff completing professional development	Number of users of collaborative tools or technology		
Number of participants served in coordinated efforts	Number of convenings	Number of employers engaged in coordinated efforts	Number of employer "champions" of a program or practice	Number of service providers, funders, or employers that change their organizational practices	Number of bills written or passed; number of coauthors; number of hearings; number of "yes" votes	Amount of new appropriations or funding pooled, leveraged, or aligned		
TRACK SYSTEMS CHANGE PROGRESS AND MAKE CONTINUOUS IMPROVEMENT								
Establishment of accountability or evaluation system	Number of members or meetings of an oversight or advisory council	Amount and frequency of data collection	Number of stakeholders contacted for feedback	Number and frequency of reports	Frequency of assessments and improvements	New processes, internal reports, meetings using or in response to data collected	Quality of oversight and evaluations	Evidence of continuous, data-driven improvements
SCALE OR REPLICATE STRATEGIES OR SOLUTIONS								
Number of new or expanded programs	New sectors, locations, or populations served	Number of training slots available	New resources (e.g., curricula or guides) to promote replication of successful programs	Number of downloads of curricula or guides	Scope of replication compared with potential			

**FIGURE 5**  
**Menu of Systems Change Metrics**

## System-Level Outcomes

### COLLABORATION

Cost savings from reduced inefficiencies and duplications	Presence of effective coordinating bodies	Quantity and quality of partnerships	Plans for continued partnership among system actors	Joint decisionmaking between key stakeholders
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### QUALITY AND ACCESSIBILITY

Rates of graduation, credentialing, and job placement among education and workforce development providers	Percentage or level of participant satisfaction with programs	Percentage or level of employer satisfaction with programs	Level of parity across subgroups in educational attainment and labor market outcomes	Availability of supports for populations with barriers to employment	Level of public awareness of programs, services, and employment opportunities	Number of training slots available and extent to which it meets need	Availability of information on the performance and quality of training providers and institutions	Availability of avenues for clients of the system to provide feedback
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### INDUSTRY ENGAGEMENT

Level of employer awareness and use of programs, services, and potential employee recruitment sources	Quality and quantity of employer engagement, investment, and leadership on training issues	Training organizations and curricula aligned with industry	Quality and quantity of work-based learning opportunities
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### DATA-DRIVEN DECISIONMAKING

Quality and quantity of available data on system actors' activities, outputs, and outcomes	Evidence of effective data sharing and data management	Widespread, effective use of available data by system actors to inform their practice	Reduced barriers to changing or implementing new practices supported by evidence
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### SCALE AND SUSTAINABILITY

Amount of funding leveraged or activated and efficiently allocated	Amount of sustainable funding from employers	Availability of supports and extent to which this meets need	Costs of training and services at reasonable level
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## Worker- And Employer-Level Outcomes

Wage levels overall and for targeted subgroups	Rate of unemployment overall and for targeted subgroups	Rate of job retention overall and for targeted subgroups	Rate of promotions and wage increases	Job quality (e.g., availability of child care, health care, paid leave, and other benefits)
Employee satisfaction with job quality and advancement	Business productivity	Employer perceptions of skilled labor supply	Decreased costs for employers to hire employees	Effective matching between applicants and jobs

# Reflections for Systems Change Makers

This section includes suggestions for how practitioners and funders can use our framework to describe their systems change work and considerations for determining the appropriate approach to measuring systems change outputs and outcomes.

## Considerations for Practitioners

Organizations doing systems change work can use our framework to help describe their work and think through effective ways to measure their progress. In box 3, we provide some questions that programs might ask themselves to apply the conceptual framework to their systems change making and measurement.

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### BOX 3

#### Questions for Practitioners

Which component is the main target of your initiative?

How would you know that your work is making progress or achieving intended outcomes? What would change in the system? What would change for workers and employers? How would this look in the short, medium, and long term? How would you know a change was because of your initiative and not to other factors?

What activities are you planning to complete, and how do they contribute to your goals?

Which metrics seem appropriate for capturing your activities? Which might be most important to different stakeholders in your community? Which might be most important to current and potential funders of your work?

Are there any metrics you are already collecting or could easily begin to collect and report?

How would your funders react if you collected these metrics?

Are other programs doing this work in your community who might coordinate on collecting system-level data? Are there local researchers who might want to support you with an evaluation or data collection?

Committing staff time and resources to data collection is a choice to consider in balance with other priorities. What an organization should measure varies based on the initiative's activities and goals and measurement costs and challenges. Quantitative measures help organizations understand the scope of systems change and can be powerful testaments to widespread, sustainable change, but collecting quantitative metrics beyond the outputs of practitioners' activities is often challenging or costly. Also, quantitative measures by themselves may not tell the full story. One grantee noted that it can look at the number of employer partners, but it also thinks about which employers are meaningful partners. It tracks the number of individuals hired by each employer, but "it is important to understand what success means to each employer...to make sure we're serving each company's needs." Qualitative measurement is also important for telling the story of systems change and how a particular organization's work led to specific improvements.

One interviewee indicated that challenges in measuring systems change work make it difficult to acquire funding. Some funders want to see concrete evidence of the work's impact and shy away from funding systems change efforts. One interviewee said, "If there's a way I can frame the measurements and impact of our work to talk about the metrics, we might get some of those folks to see the light."

Programs can use low-cost approaches to collect useful evidence to inform their programming choices and generate shareable materials to attract future funding and stakeholder buy-in. According to the director we interviewed, the Fund for Our Economic Future does an "interview-based evaluation with partners to understand how they're engaging with the initiative...to inform the ongoing development of the work." The 3PL CoE surveys stakeholders every year. According to the interviewees, "As we do it year over year, the information becomes more valuable, because now we have benchmarks that we can begin to look back on and say, did we see improvements in that and what's happened over the last four years? So we can actually benchmark our performance survey to survey and begin drawing some conclusions about our effectiveness as an organization." Other organizations we interviewed, such as the Indiana Institute for Working Families and The Data Center, have detailed spreadsheets to track metrics and outputs. Organizations such as the Chicagoland Workforce Funder Alliance and Neighborhood Centers work with third-party evaluators.

We suggest several ideas for measurement strategies:

- Set up easy-to-use documents in which staff can record basic information about their work, such as number of individuals contacted, number of attendees at events, or number of events or presentations.

- Conduct follow-up surveys or collect feedback forms after meetings or from readers of publications.
- Automate collection of key metrics (e.g., scope and frequency of e-mail outreach) so that staff can do program work instead of recording information.
- Conduct interviews or surveys with key stakeholders to collect feedback on initiatives and activities. This might include a handful of meetings with stakeholders in different key target groups, where reflection could be structured to collect helpful feedback for programming decisions, as well as collect additional perspectives on a program’s impact.
- Seek funding for a third-party evaluation or internal capacity to track and measure outcomes.
- Record anecdotal information regarding the initiative’s impact.

Organizations should assess how well a measurement strategy is working and revise as needed. For systems change efforts, often multiple partners implement an initiative, so data come from multiple places, adding to the complexity of measurement. One of the organizations featured in this report tried using a common database with partners but found that there was too much variation in how the partners were using the database. The organization found that it worked better to have the partners submit their data to one organization that would compile everything. This strategy is not appropriate for every effort, but it illustrates how an organization dealt with a measurement challenge.

## Considerations for Funders

This framework provides a common vocabulary and structure that can be used for better coordinating efforts between funders and with their grantees and programs that they support. The logic model and the categories of activities and goals could be used to shape systems change strategy, categorize activities, and define priorities. We propose some questions in box 4 to support this process. A funder could choose to prioritize a particular systems change goal for its portfolio or work to “divide and conquer” with other funders so that some support work focused on one systems-level goal, system component, or type of activity, while other funders focus on the remaining gaps. The conceptual framework can help funders come to a shared definition of systems change, which at least one interviewee noted varied greatly from funder to funder.

One of the major challenges for funders, given the diversity of systems change activities, is how to take a customized, eclectic approach to measuring outputs and outcomes of systems change work. We

recommend that programs carefully consult with stakeholders and funders, taking into account their own goals and the resources available for measurement, to choose the appropriate scale and focus of measurement. Both qualitative and quantitative measures are valid and useful for assessing and understanding the progress and impact of systems change activities, but the chosen measures should align with funder expectations. As Conway and coauthors (2007, 5) point out, “programs seeking to create ‘systems change’ aren’t likely to be able to demonstrate outcomes that can be tracked in a database. As a result, programs should be encouraged by investors to report on a range of activities and outcomes—both large and small, as well as qualitative and quantitative—as a better gauge of effectiveness.” Preferably, we would see some coherence across comparable initiatives in the field. The more consistency of measurement there is, the more likely the field will produce a body of evidence that advances knowledge and practice.

Funders should also recognize that the appropriate way to measure progress may change over time. One interviewee representing a funding organization noted that he keeps in close contact with grantees. He noted that monitoring progress is even more critical for innovative, experimental initiatives where outcomes may not be clear at the outset. Some of the grantees we interviewed noted that their systems change initiatives led to unanticipated, positive outcomes in different spheres, such as increased knowledge sharing or collaboration between organizations. As initiatives develop, changing the measurement strategy or collecting additional metrics might be appropriate.

Another key lesson for funders is the imperative to support grantees engaging in performance measurement and provide resources for the time and effort required. Although our interviewees agreed that measurement is important for program improvement and for soliciting further support, some discussed the significant resources and time commitment needed to collect and analyze data. One interviewee thought it would be useful to develop a community of practice for tracking and measuring systems change: “That’s the part we still struggle with. How do we keep track of all this stuff?” Funders can support their grantees by providing tools for data tracking or connecting them with each other to share ideas and best practices. Funders who want to encourage continuous improvement and evidence-based programming should make sure that grantees are supported for the time and resources needed to collect good data.

In addition, given the collaborative nature of systems change work involving multiple organizations and the contextual factors beyond grantees’ control, funders should recognize that grantees often cannot claim full credit for systems change outcomes. Funders can ask grantees to reflect on these issues and consider key collaborators and external factors when they report on outcomes.

Lastly, funders should recognize that systems change is a messy and complicated endeavor that takes time, and grantees may not be able to show comprehensive evidence of success one year after a grant begins. It may be appropriate to collect outputs in the short term, and then give grantees more time to report on outcomes and evidence of sustainability.

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#### BOX 4

##### Questions for Funders

Is there one goal or component in the framework that gives you stronger leverage in solving the problems you want to address?

Are other funders focused on particular goals or components? Can you coordinate with them more effectively to align your efforts and avoid duplication?

Which outcomes are most important to your strategy? Which would make the strongest case that you are achieving systems change?

Which outcomes would you like to be able to aggregate or quantify across grants within your portfolio or across funders' portfolios?

Do you want your grantees to collect data on their outputs as well as their outcomes? What is reasonable to expect given their resources?

Which output or outcome metrics are most helpful for understanding your initiatives' progress? Do your grantees have the capacity to collect this information, and what can you do to help them?

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## Conclusion

This report cuts through the amorphous concept of systems change by providing a clear framework that practitioners, funders, policymakers, researchers, and other stakeholders can use to describe their systems change goals and initiatives and assess their progress on key outcomes. By defining the key components of a local workforce system, systems change activities, and intended outcomes, this conceptual model provides a foundation for productive dialogue and practice. It applies to a wide range of initiatives that go beyond providing direct services to individual jobseekers and work for broader, sustained changes in workforce systems. The report builds on existing research and practice, grounding concepts in concrete examples and perspectives from innovative systems change makers across the



country. It highlights several practical and conceptual challenges to measurement but provides ideas for practitioners and funders to advance the important work of improving outcomes for jobseekers and employers and collecting evidence to inform sound policymaking and investment.

# Notes

1. See Workforce Innovation and Opportunity Act of 2014, Sec. 2.
2. In the area of education and workforce, Mt. Auburn Associates reviewed evaluations of the Aspen Institute's Opportunity Youth Incentive Fund, the Lumina Foundation's Community Partnership for Attainment, the Gates Foundation's Communities Learning in Partnership, and the Annie E. Casey Foundation's Jobs Initiative.
3. The National Fund for Workforce Solutions model is "structured around the organization of regional funder collaboratives that engage both public and private funders and serve as conveners, fundraisers, and decisionmakers in both rural and urban communities. The collaboratives establish strategic priorities and guide investments" (Soricone 2015, vii).
4. See The Data Center grant application to JPMorgan Chase submitted October 10, 2015.
5. See "Seattle Workforce Opportunity System: Transforming Seattle's Workforce Leadership," Association of Community College Trustees, accessed December 2, 2016, <http://www.acct.org/files/Events/2015%20Congress/Seattle%20Workforce%20Opportunity%20System.pdf>.
6. See the NYC Tech Talent Pipeline website, <http://www.techtalentpipeline.nyc/>.
7. See "About Us," JobsFirstNYC, accessed December 2, 2016, <http://www.jobsfirstnyc.org/about-us>.
8. See The Genesis Movement website, <http://thegenesismovement.org>.
9. Workforce Development Corporation application to JPMorgan Chase, submitted April 10, 2014.
10. "ASPIRE Evaluation Plan," August 2016, prepared by Learning for Action for Neighborhood Centers Inc.

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