



A Tool for Sustaining Career Pathways Efforts

Prepared for
Office of Career, Technical, and Adult Education
U.S. Department of Education

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December 2015

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The *Advancing Career and Technical Education (CTE) in State and Local Career Pathways* project was funded by the U.S. Department Education, Office of Career, Technical, and Adult Education under Contract No. ED-VAE-12-C-0068 and directed by Jobs for the Future.

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This report is available at: <http://www.cte.ed.gov>

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LIST OF ABBREVIATIONS

CTE	career and technical education
GWDC	Governor’s Workforce Development Council
LINCS	Literacy Information and Communication System
MOU	memorandum of understanding
OCTAE	Office of Career, Technical, and Adult Education
POS	programs of study
RAMP	Regional Advanced Manufacturing Partnership
REB	Regional Employment Board
<i>WIOA</i>	<i>Workforce Innovation and Opportunity Act</i>

A Tool for Sustaining Career Pathways Efforts

INTRODUCTION

Career pathways leverage education, workforce development, and social service supports to help people obtain the skills they need to find employment and advance in their careers. Fundamentally, a career pathways system is about the coordination of people and resources. It is about changing the way education and training are organized and delivered—aligning programming, financing, and services within and across providers to smooth individuals’ transitions into and out of education and training programs and employment. Recognizing the potential benefits that a comprehensive career pathways system can offer, the federal government, states, and an increasing number of communities—in collaboration with foundations, community-based organizations, and employers—are investing significant resources to support the design and expansion of these comprehensive systems to serve youth and adults.

As states and local communities move from program start-up toward implementation, **strategies are needed to sustain the essential program and systems changes that will be made along the way.** Sustainability efforts should be integrated into career pathways system development and implementation efforts from the outset to ensure systems are robust and positioned for longevity.

This paper outlines key considerations for putting career pathways into operation and provides a checklist of action items that states or local communities can use to assess the status of their sustainability efforts. It draws in part from research on change management theory, which has produced strategies for sustaining organizational shifts. To help illustrate these points, the paper draws on lessons learned from states participating in the [*Advancing Career and Technical Education in State and Local Career Pathways Systems*](#) project, a three-year initiative funded by the U.S. Department of Education, Office of Career, Technical, and Adult Education (OCTAE).

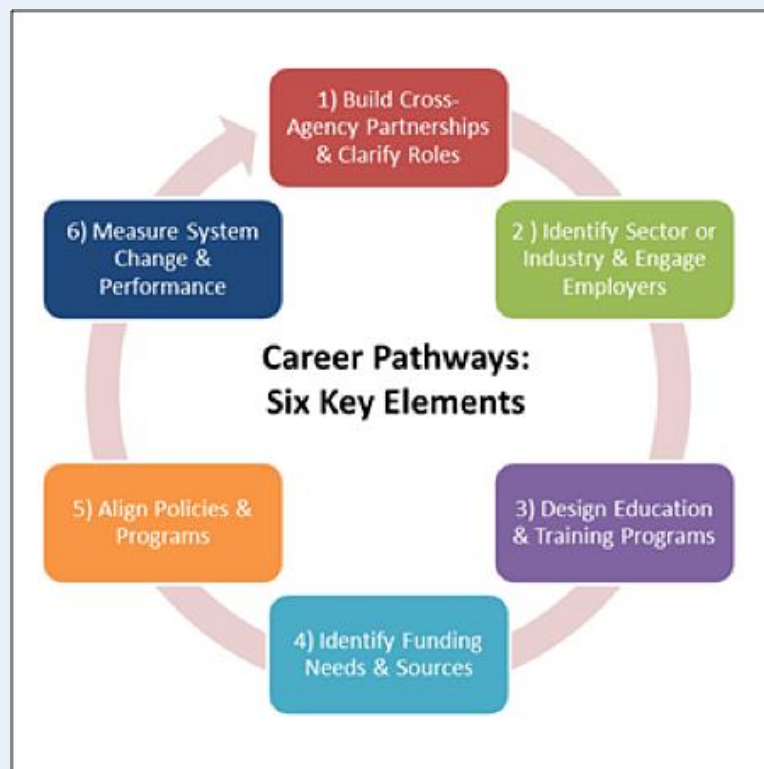
Advancing Career and Technical Education in State and Local Career Pathways Systems

Project work focused on aligning states' career and technical education (CTE) programs of study (POS) with on-going state and local efforts to develop career pathways systems. Five states (Colorado, Kansas, Massachusetts, Minnesota, and Oregon), selected through a competitive process, received support from coaches and subject matter experts, with their efforts guided by an *Integrated Model for the Provision of Technical Assistance* (Jobs for the Future 2014).

The model combines six elements for developing career pathways from the U.S. Departments of Labor, Education, and Health and Human Services (shown in Figure 1) with a framework for the establishment of CTE POS from OCTAE (U.S. Department of Labor 2015; U.S. Department of Education 2015).

As states and local communities carry out these actions to establish career pathways systems, it is important that strategies for sustaining the resulting systems changes be embedded in all development and implementation undertakings, so that career pathways approaches become the new way of doing business over time.

Figure 1. Career Pathways: Six Key Elements



States' work in the *Advancing Career and Technical Education in State and Local Career Pathways Systems* project centered on connecting CTE POS to existing career pathways systems. A CTE POS describes a sequenced progression of courses that span secondary and postsecondary education. Students participating in such programs are expected to master rigorous academic and technical content that is aligned to state standards. High school students also have the option of earning dual credit that may be applied toward their collegiate studies. Although they operate as a separate program with a specific set of objectives, state CTE POS are an essential, contributing component of a career pathways system.

Implications of Organizational Change Management Theory

Research on change management offers a helpful lens for viewing sustainability in the context of career pathways systems. In particular, the literature highlights the importance of planning for sustainability on Day 1 of systems planning and operation, and building and sustaining the cultural change that such work entails.

Managing for sustainability means managing for change, and that begins on Day 1.

The science of industrial-organizational psychology, and the leading change theorists it has produced, speak of “managing change” not only as a way of breaking down resistance to new ideas but, importantly, *as a way of sustaining change by anchoring it in organizational culture*. Two leading advocates of evidence-based approaches to change management—Kurt Lewin and John Kotter—have put forward models that offer a roadmap to sustainability. Strategies contained within these models can be used to frame work on pathways development in the context of a larger change management initiative.

Kurt Lewin, recognized as the founder of social psychology, studied the forces that drive organizational change. Based on his research findings, in 1947, Lewin advanced a three-stage theory of change that describes the factors businesses must address if they are to transform behavior (Medley 2008). Key steps include *unfreezing* to prepare to take action; *transitioning* to move toward a new equilibrium; and *refreezing* to reinforce newly established norms. Although disarmingly simple, Lewin’s model has endured because it effectively describes the factors that drive human behavior and, in so doing, provides a framework for anticipating, planning, and directing change.

John Kotter is a contemporary expert in institutional transformation and change management. While a professor at the Harvard Business School, Kotter began researching companies and their leaders to uncover why only a small percentage of firms ultimately achieved their business objectives. In 1995, Kotter published “Leading Change: Why Transformation Efforts Fail” in the *Harvard Business Review*, putting forward an eight-step process for coordinating institutional change initiatives (1995).¹ Designed to promote companywide buy-in to the change process, Kotter’s eight-step model offers a comprehensive, strategic process for preparing organizations to transform.

Although the two models differ in their characterization of the change process and the manner in which it occurs, they share some essential features (Table 1). For example, Lewin’s approach to “unfreeze” is directed at lowering organizational resistance to change. This may occur by challenging staff to question their existing business model and consider new approaches. Kotter expands upon this concept by identifying a consecutive set of steps that build collective support for transformative change. This may include conducting an objective assessment of the environment in which an organization or system operates and sharing the information with staff to help them appreciate the competitive realities that they face.

While both Lewin and Kotter focused their work at the organizational level, the concepts they identified are transferable to any human services system and therefore to our focus on career pathways sustainability efforts. A functional career pathways system consists of multiple agencies with differing missions, all sharing a common goal of preparing individuals for career and life success. In a sense, a career pathways system is like a large corporation: individual units may be focused on differing aspects of the business, but each contributes to its larger success.

¹ Kotter’s 8-Step Process for Leading Change. Kotter International (website): <http://www.kotterinternational.com/the-8-step-process-for-leading-change/>.

Table 1. Comparison of Lewin’s and Kotter’s Change Theory Models

Kurt Lewin’s 3-Phase Change Theory	John Kotter’s 8-Step Process
Unfreeze Prepare to move away from the status quo	1. Establish a sense of urgency 2. Create a guiding coalition 3. Develop a vision and strategy 4. Communicate the change vision
Transition Devise strategies and take actions to change from the current condition	5. Empower broad-based action 6. Generate short-term wins 7. Consolidate gains and make more change
Refreeze Implement changes based on performance expectations and organizational culture	8. Anchor new approaches in the culture

For our purposes, the key tenets of these models can be distilled into three critical factors that, when addressed early and intentionally, can contribute to career pathways sustainability:

- craft (and agree upon) a compelling vision to build support for change,
- engage partners and stakeholders in the change process, and
- adopt new behaviors, practices, and processes.

The following sections describe approaches that states and local communities can take to sustain career pathways systems. This paper is organized by the three factors, described above, that contribute to sustainability, and draws on examples provided by the *Advancing Career and Technical Education in State and Local Career Pathways Systems* states. Sustainability checklists are listed at the end of each section, with a complete checklist included in Appendix A. You can use these checklists to help your state or local community integrate sustainability strategies into its career pathways system development efforts.

I. CRAFT A COMPELLING VISION TO BUILD SUPPORT FOR CHANGE

A robust career pathways system aligns education and training services offered by a range of state and local agencies, augmented with support from regional or local community groups and employers. Pathways systems are characterized by their distributed authority and network of people and relationships. No one person or state agency has singular oversight; consequently, a well-designed system is one in which organizations work together—aligning services, supports, and resources—to smooth individuals’ transition into and out of education and training programs.

Securing buy-in from pathways partners requires that state and/or local leaders articulate and communicate a clear and compelling vision of what a career pathways system is and what it can accomplish. Ultimately, this vision will unite individual partners and organizations, compelling them to pursue the larger goals of a pathways system while still attending to their own programmatic goals and priorities. Addressing longstanding organizational norms and building enthusiasm for change are critical first steps in the transformative process.

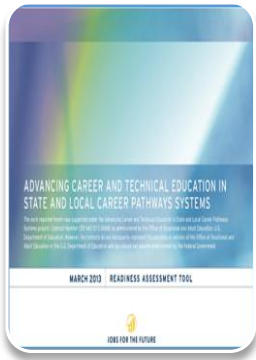
Envision Sustainability

Because a true career pathways system is not housed within an individual entity, state and local leaders must collaborate to make a call to action that cuts across agency lines. At the federal level, the urgency of this vision has been articulated by the U.S. Departments of Education, Labor, and Health and Human Services, which issued a [joint letter of support](#) and a proposed framework for the establishment of career pathways, demonstrating a robust federal commitment to pathways development.

“[A career pathways system is] a series of connected education and training strategies and support services that enable individuals to secure industry relevant certification and obtain employment within an occupational area and to advance to higher levels of future education and employment.”

—U.S. Departments of Education, Labor, and Health and Human Services (2012)

Identifying System Progress and Goals



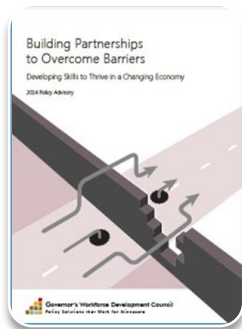
[Link to career readiness assessment](#)

States participating in the *Advancing Career and Technical Education in State and Local Career Pathways Systems* project started by completing a readiness assessment to determine their progress toward developing a comprehensive career pathways system. Criteria were based on an *Integrated Model for the Provision of Technical Assistance* that includes CTE POS (see Text Box 1, page 4), which identifies six key elements or actions that states and local communities can take to establish pathways systems. State teams rated their progress along a continuum for the development of career pathways, informing pathways design and implementation efforts. The end goal—sustainability—was included as a measure of progress in the assessment. This exercise required system leaders not only to assess their progress but also to identify system goals, such as adopting a shared cross-agency vision to guide system development and promote sustainability from the start.

Establish Management Structures and Supports

Engaging the right individuals in the pursuit of a common vision and shared set of goals is crucial to maintaining pathways over time. While support from visible, high-level leaders is necessary to endorse the system and provide impetus needed for systems change, ongoing oversight typically comes from a steering committee, made up of representatives from different state or local agencies, employers, community organizations, and other stakeholder groups. This pathways steering committee plays a critical role in articulating the cross-system vision for career pathways and in securing the cross-agency commitment to make necessary system changes.

Adopting a State-Level Infrastructure for Career Pathways Partnerships



[Link to Minnesota Partnership Advisory Brief](#)

To promote its statewide vision for career pathways and to sustain efforts begun under the *Advancing Career and Technical Education in State and Local Career Pathways Systems* project, Minnesota has identified the state's Governor's Workforce Development Council (GWDC) as the entity that will lead career pathways systems implementation efforts going forward. The state council is charged with convening state leaders—drawn from business, education, workforce, labor, community organizations, and government under the newly enacted *Workforce Innovation and Opportunity Act (WIOA)*—to help develop policies to promote a highly skilled workforce and economic growth. In 2015, to underscore the importance of career pathways to the state's continued economic development, the GWDC in Minnesota formed a standing Career Pathways Partnership committee. This committee will continue the work initiated through the state's involvement in the project, with a focus on determining what a comprehensive career pathways system looks like in Minnesota, and aligning the multiple pathways efforts that are ongoing in the state.

Build a Common Understanding

Pathways engage diverse partners with different funding streams and targeted populations. Getting these partners to agree upon a common vision for a career pathways system often entails consensus-building: all must agree to what a career pathways system is and how functional pathways benefit partners and participants. Centering communications on a common message is critical to fostering support for the kinds of system changes that are required for career pathways adoption over time.

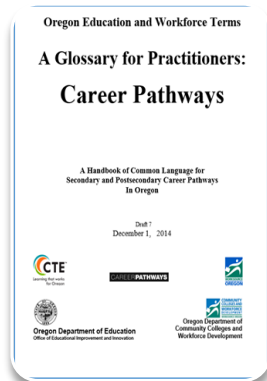
Producing a Statement of Purpose



[Link to Minnesota mission statement](#)

Representatives from Minnesota's education and training agencies participating in the *Advancing Career and Technical Education in State and Local Career Pathways Systems* project collaborated to craft a mission statement for their system development efforts. This one-page brief served both as a marketing tool to communicate project work to state policymakers and to solicit the involvement of other state agencies and groups. The process of developing a mission statement helped team members clarify the vision of what a career pathways system was intended to accomplish and, in so doing, helped build esprit de corps among individuals who, because they worked in different state agencies located throughout the state, had limited interaction with one another even as they worked to accomplish similar goals for their service populations.

Establishing a Glossary of Career Pathways Terms



[Link to Oregon glossary](#)

Recognizing that state staff were using different language to describe a career pathways system, the Marketing & Communications Committee of the Oregon Career Pathways team created a glossary of terms to build a common understanding of pathways across the state. Committee members identified key terms used to describe a pathways system and worked to secure agreement on how they might be defined. These ranged from descriptions of associated state programs, such as Adult Basic Skills and Oregon Skill Sets, to key national initiatives and organizations, such as the Alliance for Quality Career Pathways and National Career Pathways Network. In the glossary, committee members clarified programmatic terminology commonly used by state educators, grounding it within the broader career pathways model. Posted on [WorkSource Oregon](#), a website dedicated to helping connect state businesses and workers to the resources they need for success, the glossary provides a framework for structuring career pathways messaging and ensuring that the vision for pathways development is understood by various partners.

Communicate the Vision

Career pathways system leaders play an important role in crafting how pathway opportunities are communicated and the appropriate channels for publicizing their worth. Engaging the field is critical to sustaining career pathways systems over time because program operations occur at the local level. Strong buy-in and support for the work can be built by regularly engaging key groups that are critical to its success. A variety of communication tools—such as websites, social media, brochures, and videos—can facilitate outreach to a broad audience.

Messaging “It Takes a Village”



[Link to Minnesota presentation](#)

To spread the vision of what a career pathway can accomplish, the Rochester (MN) partnership created a set of communication tools that included a PowerPoint slide deck describing the local career pathways system and listing its members. Team members delivered the presentation, entitled “It Takes a Village to Create and Sustain a Career Pathway,” at several statewide meetings of secondary and postsecondary administrators and educators. The messaging was particularly effective because it engaged representatives from local organizations, including the secondary school district, postsecondary technical college, and workforce training partners, in showing how the individual agencies contributed to forming the whole. As a culminating activity, the partnership created a YouTube video of their presentation. These tools—and the village metaphor—provide a consistent message for partners to use when talking about their career pathways systems and a lasting forum to communicate the partnership’s vision.

Checklist

- ✓ Have high-level state leaders defined and shared a compelling vision for career pathways?
- ✓ Does a mission statement exist to support the vision by laying out the purposes of the career pathways system and the goals and objectives to be achieved?
- ✓ Has an interagency career pathways steering committee been formed to help implement and sustain the vision?
- ✓ Does a work plan for the steering committee exist?
- ✓ Have definitions of key pathways terms and concepts been established?
- ✓ Have marketing materials been developed to communicate the vision?

II. ENGAGE PARTNERS AND STAKEHOLDERS IN THE CHANGE PROCESS

Relationships play a critical role in maintaining career pathways systems over time. Sustaining systems change requires actively engaging partners in ongoing dialogue to share information about program work, progress, and outcomes, and to make course corrections when needed. To build and sustain successful partnerships, an infrastructure must guide partners' mutual work, grounded in the shared vision.

Career pathways are intended to help individuals attain industry-recognized postsecondary credentials and employment. Strong partnerships with employers are required to clarify current and future labor market needs and skill demands, and to ensure continued alignment between pathways programs and targeted occupations in high-demand industries. Without employer engagement and system relevance, sustainability is not possible.

Engage a Broad Range of Partners

In addition to system partners such as education, workforce, and support services providers, important stakeholders in sustainability efforts include employers, community-based organizations, and even participants themselves. To encourage participants to enroll and persist in a career pathway, states have worked to build trusted relationships among partnering agencies and developed recruiting materials that describe the trajectory and benefits of pathways participation. These materials help to motivate others to join system development efforts and motivate students to pursue their long-term education and career goals.

Supporting Collective Impact



[Link to the Regional Employment Board website](#)

The Regional Employment Board (REB) of Hampden County, located in Springfield, Massachusetts, is spearheading a collective impact effort to grow the area's local economy. REB leaders have convened key stakeholders—drawn from across the education, workforce development, and employer communities—to develop strategies around five collective impact components, building (1) a common agenda, (2) shared measurement strategies, (3) mutually reinforcing activities, (4) continuous communication, and (5) a backbone support organization. While the effort is still in its early stages, participation has been robust, and the group is committed to using collective impact as the operational vehicle to drive significant economic development efforts in the region over the next five years, most notably around a new casino project and Chinese railcar contract.

Promote Long-Term Employer Engagement

Employer involvement is essential to the ongoing success of career pathways systems. To ensure continued relevance to labor market demand, employer input should be gathered throughout the life of a career pathways system and not just during its initial planning phases. States use various methods to engage employers for the long term, including gathering input and data to analyze career opportunities, convening employers to discuss their needs, and recognizing the contributions of employer partners.

Expanding Employer Involvement from the Regional to State Level

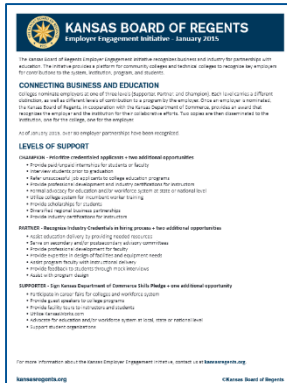


[Link to Itasca project](#)

To promote employer involvement in the Twin Cities, the region launched the Itasca project (named after the city in Minnesota where it started). Itasca is an employer-led civic alliance made up of private sector chief executive officers, the Governor, the mayors of Minneapolis and St. Paul, county commissioners, chair of the Metropolitan Council, the leaders of the higher education institutions, and the leaders of major foundations and the United Way. Itasca staff work with participating schools and employers in a partnership that includes an academic planning process that takes into account labor market needs. Employers are asked to review curriculum to identify misalignment and provide input to strengthen instruction.

Based on the success of the regional effort, the state career pathways team worked to expand Itasca's work throughout the state. For example, the Rochester local partnership agreed to pilot Itasca as part of the state's goal of improving employer engagement in career pathways development efforts. In this way, the state has created a structure for gathering employer input throughout pathways system implementation.

Recognizing Employer Participation



[Link to Kansas Employer Engagement Initiative](#)

To recognize businesses and industries that have successfully partnered with education, the Kansas Board of Regents launched an Employer Engagement Initiative. The initiative provides a formal means for community and technical colleges to publicly acknowledge employer contributions to the postsecondary system, as well as individual colleges. Employers may be nominated by a college at one of three levels—Supporter, Partner, or Champion—with each level reflecting a successively higher level of contribution. The Kansas Board of Regents and Kansas Department of Commerce cooperate to reward employers and institutions. As of 2015, the state had recognized over 150 employers for their efforts. This recognition offers employers motivation for long-term involvement.

Understanding Employers Needs



[Link to Hampden County Employer Survey](#)

Employers are the lifeblood of a region. To ensure that career pathways development meets regional needs, the Hampden County REB (MA) developed a 10-page, 30-question survey that digs into details around jobs, recruitment, and innovation in advanced manufacturing. This survey is being used to identify needs so future education and workforce investments can be tailored to the region. The surveys are an efficient, sustainable way to gather accurate information and employer input into regional education and workforce programming.

Checklist

- ✓ Do partners meet on a regular basis to share their career pathways work, network new opportunities, and consider ways to expand their collaborations?
- ✓ Has information been provided to potential pathways participants to outline the various education and training opportunities and long-term benefits of the career pathways system?
- ✓ Are employers an active and critical part of the career pathways planning team?
- ✓ Do employers understand the return on investment for participation in a career pathways system?
- ✓ Is there an ongoing analysis of skills sets and workforce projections?

III. ADOPT NEW BEHAVIORS, PRACTICES, AND PROCESSES

Changing political contexts, turnover in agency leadership and staff, and competition for resources in times of fiscal austerity all present obstacles to career pathways stability. Once initial objectives are achieved, states and local communities will want to take steps to lock down new processes and connections. Without action, there is a danger that systems may revert to their original form.

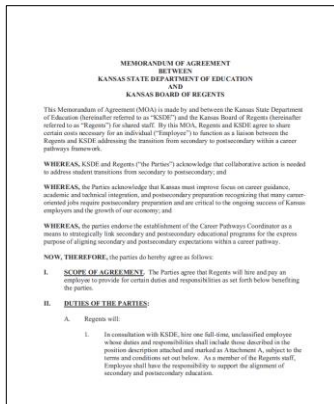
People want to see results if they are to remain engaged. One means of securing buy-in is to regularly assess and share the results of the progress that is being made in building pathways. Well-designed performance metrics can provide valuable information that can be used to help maintain partner interest and support and identify areas in need of improvement.

Sustaining change requires solidifying the new roles of partners and the changes they have made in the organization and delivery of their programs and services. To institutionalize these relationships and systems changes, it is important to reinforce partnerships; formalize program redesign efforts; identify policy changes that are necessary to sustain system gains; leverage resources that are necessary to sustain career pathways systems; and use cross-system data and performance metrics to provide information on system outcomes and drive continuous improvement. These are all strategies that are consistent with the six key elements (see Figure 1 1, p.5). In other words, states and local communities must be intentional about sustaining behaviors, practices, and processes while carrying out their career pathways system development and implementation efforts. This process of refreezing new norms is critical if change is to last.

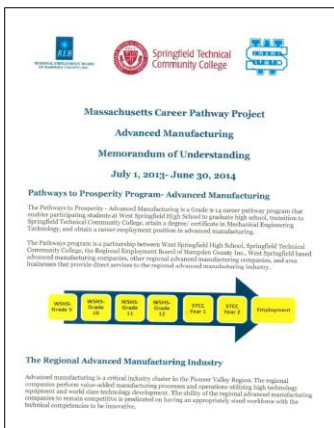
Formalize and Continually Reinforce Partner Roles

Career pathways cut across agencies and organizations. To help clarify roles, memorandum of understanding (MOUs) are effective tools for laying out the roles and responsibilities of partnering groups, including state agencies, employers, and other community and stakeholder organizations. These interagency agreements can be crucial to sustaining relationships among career pathways system partners, which can be difficult to maintain as staff transition into and out of key leadership and instructional positions. Guidebooks to support communities in building and maintaining pathways also can be used to ensure continuity when key staff depart.

Creating MOUs to Structure Relationships



[Link to Kansas MOU](#)



[Link to Massachusetts MOU](#)

To clarify the expectations of participating agencies within the Kansas state partnership, the Kansas Department of Education and Kansas Board of Regents developed an MOU that functions as a written contract between the agencies for sharing costs to support a staff member to oversee the career pathways initiative. The MOU lays out the purpose of collaboration between the two agencies, namely to facilitate seamless transitions from secondary to postsecondary education, and ensures that all signatories understand the overall purpose and scope of the effort, along with their respective responsibilities. The terms of the MOU extend for six months and are automatically renewed for three one-year periods thereafter.

Similarly, the REB in Hampden County (MA) developed an MOU to structure roles and responsibilities for key stakeholders in the Massachusetts Career Pathway Project in Advanced Manufacturing. In signing the agreement, the partners, which include the REB, the Regional Advanced Manufacturing Partnership (RAMP), West Springfield High School, and Springfield Technical Community College, formally documented expectations for their participation. For example, the MOU identifies the REB as the project facilitator and convenor (among other roles) and specifies RAMP's commitment to providing work-based learning opportunities and hiring program participants. The current MOU is in place for one year, with the expectation that it will be reviewed several months prior to its end date, modified if necessary, and renewed for another three years.

Create an Infrastructure for Partnership Communications

Once partner roles are established, the partnership needs to be nurtured over time to ensure that it is maintained and strengthened. One strategy for sustaining partnerships is to provide an infrastructure to support partner communications and work, such as by convening regular meetings and creating shared workspaces.

Convening Partners on a Regular Basis for Dialogue



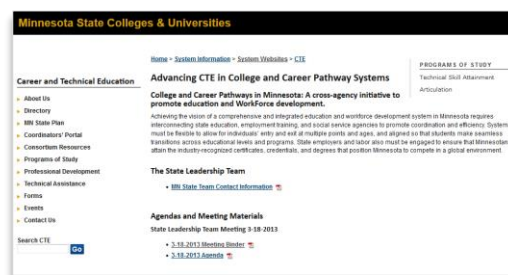
[Link to LINCS website](#)

To build connections and share best practices, individuals participating in the *Advancing Career and Technical Education in State and Local Career Pathways Systems* project attended quarterly cross-agency meetings. These meetings were used to update team members on project activities and to network new opportunities for collaboration. Invited guests also provided information on related efforts, such as the development of a statewide longitudinal data system to track pathway participants' progress.

Participating states also engaged in dialog in an online moderated private forum on the [Literacy Information and Communication System \(LINCS\)](#) website. Supported by the U.S. Department of Education, LINCS functions as a professional learning platform to support adult educators in accessing resources and sharing ideas.

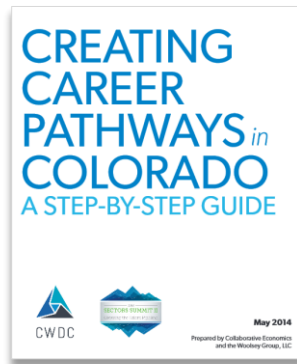
Driving users to a dedicated project site contributed to improving communications among participating states. Team members accessed the site to read project bulletins, find information on upcoming events, and obtain contact information for other members. LINCS also served as a clearinghouse for showcasing state products and sharing career pathways resources and tools.

State teams also opted to create their own dedicated websites to support internal project communications. For example, the Minnesota state team created their own project website, open to the public, to catalog project work and provide connections to other state initiatives. Maintained on the website of the Minnesota State Colleges & Universities system office, team members used the site to post meeting agendas and binder materials, to access state project resources, and to download information on other related state initiatives.



[Link to Minnesota website](#)

Formalizing the Pathway



[Link to Colorado pathways guide](#)

Colorado created a career pathways guide to support education and training providers in designing functional pathways. The guide lays out a five-part, step-by-step process for pathways development that includes 17 discrete activities. To help ground planning activities, pathways development is anchored within the state's Sector Partnership approach, which connects employers within a given industry with the education, training, and community assets necessary to address industry needs.

The guide underscores the importance of using labor market data to direct education and training toward in-demand occupations in targeted industries. It also provides strategies to help providers design and communicate career pathways options to students and jobseekers. This includes strategies for helping individuals understand the training requirements and work expectations of identified careers. Users can complete a shared action plan to begin closing identified gaps to improve service provision.

Documenting Processes



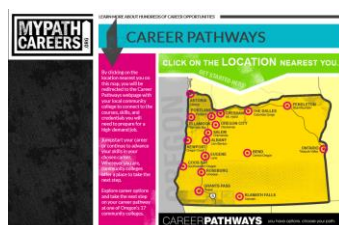
[Link to Rogue Community College case study](#)

A central goal for Oregon's participation in the *Advancing Career and Technical Education in State and Local Career Pathways Systems* project was the creation of a health care certificate for the state's career pathways system. To document project work, Rogue Community College developed a case study report summarizing the college's efforts to produce the basic healthcare certificate. This included a description of the strategies used to jumpstart development, the challenges encountered along the way, and the evolution of the certificate over time. Issues of sustainability also were addressed. This document was intended as a guide to assist other sites interested in pursuing development of a related certification; indeed, since first introduced, the certificate has been adapted by two other colleges for use in their healthcare programs.

Mapping Pathways Connections



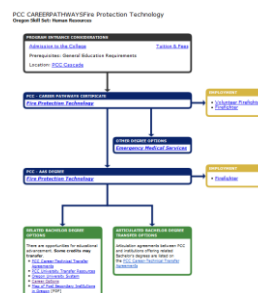
[Link to Oregon pathways website](#)



[Link to Oregon's My Path Careers website](#)

Oregon's 17 community colleges offer students access to more than 400 career pathways in CTE. To help high school students learn about their career training options, the state has created an interactive website that enables students to locate community colleges offering CTE POS that align with their secondary CTE studies. Students may use the site to identify affiliated career areas and programs offered within the college and to download a career pathway roadmap to assist them in selecting courses. A parallel site, "My Path Careers," allows individuals to find community colleges that offer career pathways related to their interest.

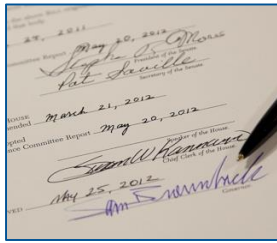
Roadmaps function as visual tools to help individuals learn about the career opportunities within a program area, the certificates and degrees offered, and the types of jobs and wages that program graduates will earn upon exit. Pathway flowcharts, accessible within the community college site, illustrate the time required to complete a skill award and how certificates and degrees may be stacked to allow individuals to enter and exit programs over time to advance in their career. Click the icon to the right to see an illustration of a career pathway offered at Portland Community College in fire protection technology.



Connect to Supportive Legislation and Policies

State policy is one strategy for sustaining career pathway systems over time. Legislative, administrative, and even institutional policies and policy changes can facilitate long-term program operation and/or alignment by supporting student participation in career pathways and offering incentives for employers and other stakeholders. For example, supportive state policies might provide students with opportunities to earn dual credit or receive postsecondary tuition assistance, or might encourage employers to offer work-based learning placements. States may also offer incentives or flexibility for educational and social service institutions to work together on career pathways system development.

Tuition Assistance and Incentive Program



[Link to Kansas tuition assistance legislation](#)

To promote dual-credit opportunities, Kansas established legislation in 2012 to cover the cost of tuition for high school students admitted to a CTE course or program offered within a community college, technical college, or institute of technology. To encourage CTE programs to award technical certifications, the bill provides for a \$1,000 award to school districts for each high school student who graduates with an industry-recognized credential in a high-need occupation identified by the state secretary of labor, in consultation with the State Board of Regents and State Board of Education. The legislation also directed the State Board of Regents to initiate development of a statewide articulation agreement for CTE programs to support students in transferring their credits earned within high school to a postsecondary institution of their choice.

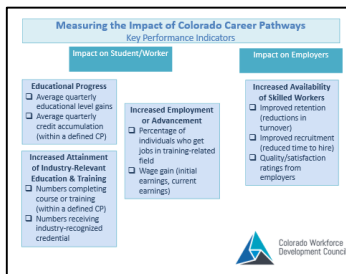
Secure Long-Term Funding and Other Support

Revenue plans for career pathways systems require not only funds for start-up and the initial year of operation but a realistic view of funding over a period of years. While additional funds may be needed to catalyze system development, once operational, career pathways systems typically function with relatively minimal additional investment, in part because partners collaborate to use existing resources in more coordinated and strategic ways. Accordingly, funds from different federal, state, or local revenue streams must be leveraged, or braided, to sustain efforts.

Measuring and Sharing System Results

While the long-term results of career pathways systems may take years to be realized, there is a need to assess system operations—to document participant outcomes, inform program improvement, and build an evidence base for key strategies, all essential for system sustainability. Individual program metrics, however, are unlikely to provide the information needed to assess overall performance. Under *WIOA*, common performance measures are required for programs under its jurisdiction (i.e., workforce development, adult education, vocational rehabilitation, and employment service programs). It is important that states and local communities find ways to share data and performance metrics across all partner programs when implementing career pathways systems to assess the real effects of systems change over time.

Developing Statewide Metrics



[Link to Colorado performance indicators](#)

The Colorado Workforce Development Council has established a set of statewide metrics for use in measuring the impact of career pathways in the state. The metrics are designed to capture various aspects of the pathways system and include:

- **key performance indicators** that assess critical pathway effects on student and worker progress, attainment, and transition; employer access to skilled workers; and the scale, depth, and scope of pathways that are active and in use, and
- **discretionary performance indicators** that teams may choose to use to assess the effects of pathways on system participants.

Checklist

- ✓ Has an MOU or other agreement been drafted and signed that binds agencies to long-term support of the career pathways system?
- ✓ Does the partnership have regular meetings and a dedicated workspace to house project materials and document activities?
- ✓ Are there supportive policies that help sustain pathways components?
- ✓ Are data shared with all partners and are key decisions (i.e., professional development, curriculum) based on data?
- ✓ Have career pathways metrics been established to track partnership and participant outcomes?
- ✓ Is there a career pathways funding plan that includes a start-up budget and a long-term sustainability plan with revenue streams projections and budget?
- ✓ Are partners working to identify current and future opportunities to braid or leverage funds across federal and state sources?
- ✓ Are partners collaborating to leverage private-sector funds to support programs?
- ✓ Is there a career pathways funding team to develop the plan and supervise, guide, direct, and motivate the partnering organizations to collaborate on funding?
- ✓ Have supportive legislation and policies been developed and implemented for career pathways?

CONCLUSION

Career pathways offer long-term solutions to important education and workforce challenges—helping individuals improve their educational and employment outcomes over time. As states and local communities move to develop and implement career pathways, it is critical that they manage for sustainability beginning on Day 1.

Drawing in part from research on change management theory, this paper identifies three critical factors that, when addressed early and intentionally, can contribute to the sustainability of career pathways:

- craft (and agree upon) a compelling vision to build support for change,
- engage partners and stakeholders in the change process, and
- adopt new behaviors, practices, and processes.

These factors involve building support for breaking old habits and norms, supporting individuals as they transition to new work relationships and approaches, and formalizing new arrangements so that they may persist in the long run. And, as illustrated by states participating in the *Advancing Career and Technical Education in State and Local Career Pathways Systems* project supported by OCTAE, these strategies can be addressed throughout system development and implementation activities.

Fundamentally, pathways are complex partnerships that require people in multiple agencies, organizations, and sectors to work together in new ways. Strong leadership is critical to ensuring system stability and uniting partners from various agencies with a shared vision and set of goals. Leadership also promotes the necessary cultural climate to help build momentum for the cross-agency communications and alignment that are necessary to establish pathways and sustain change.

Use the Career Pathways Sustainability Checklist, included at the end of this report, to identify and assess your state's or local community's progress toward building a foundation for the long-term success of its career pathways system development efforts.

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RESOURCES

The following list provides resources that may assist state and local communities in sustaining aspects of their career pathways systems.

Alliance for Quality Career Pathways Local/Regional System and Metrics Self-Assessment Tool. Center for Law and Social Policy (September 2014). Web link:

<http://www.clasp.org/resources-and-publications/publication-1/AQCP-Local-Regional-Partnership-Self-Assessment-Tool-draft-092414.pdf>

The self-assessment tool is designed to evaluate and improve upon the work of local and regional organizations participating in career pathways, with a separate tool available for state agencies. The tool can be used to measure progress, identify challenges, and capture action items to serve as a guide in strategic planning.

Beyond the Skills Gap: Making Education Work for Students, Employers, and Communities.

M.A. McCarthy, New America (October 2014). Web link:

https://static.newamerica.org/attachments/732-beyond-the-skills-gap/20141013_BeyondTheSkillsGap.pdf

Using a healthcare career pathway as an example, this paper examines how postsecondary institutions can better meet the needs of students seeking specific skills or credentials with value in the labor market. It explains the changes needed in higher education policy to create programs aligned with employers' needs.

Career Pathways—Approaches to the Delivery of Education, Training, Employment, and Human Services. Summary of Responses to a Request for Information. U.S. Department of Education, Office of Career, Technical, and Adult Education (February 2015). Web link:

https://lincs.ed.gov/publications/pdf/CP_RFI.pdf

This report compiles public comments submitted in response to a request for information issued by the U.S. Departments of Education, Health and Human Services, and Labor. Responses are organized by facilitators and obstacles to career pathways, recommendations, and promising approaches.

Designing a Performance Measurement System for Career Pathways. Social Policy Research Associates for the U.S. Department of Labor (June 2013). Web link:

<http://www.spra.com/wordpress2/wp-content/uploads/2015/03/Career-Pathways-System-Measurement.pdf>

This memo was designed for use by career pathways partnerships seeking to develop performance measures. It provides a comprehensive description of career pathways systems and examines how they function, outlines their shared characteristics, and explains the differences between state, local, and regional systems.

Funding Career Pathways: A Federal Funding Toolkit for State and Local/Regional Career Pathways Partnerships. Center for Law and Social Policy (February 2015). Web link: <http://www.clasp.org/resources-and-publications/publication-1/Career-Pathways-Funding-Toolkit-2015-8.pdf>

This resource summarizes resources available from federal programs that might be leveraged to support career pathways systems.

Making Youth Employment Work: Essential Elements for a Successful Strategy. U.S. Chamber of Commerce Foundation, Center for Education and Workforce (2015). Web link: https://www.uschamberfoundation.org/sites/default/files/media-uploads/021927_Youth_Employment_FIN.pdf

This report highlights the benefits of attracting younger workers into the workforce, including promoting innovation and diversity, filling skills gaps, and creating a sustainable workforce. It provides examples of programs that use partnerships to accomplish this goal, such as Right Skills Now, a fast-track training program and community college partnership.

Managing the Talent Pipeline: A New Approach to Closing the Skills Gap. U.S. Chamber of Commerce Foundation, Center for Education and Workforce (2014). Web link: <https://www.uschamberfoundation.org/sites/default/files/Managing%20the%20Talent%20Pipeline.pdf>

This paper describes a “demand-driven” approach to managing the talent pipeline, with the employer as the “end-use customer.” It is grouped into four sections that explain the need for a demand-driven system; discuss the use of supply chain management to enhance partnerships with education and workforce providers; present foundational principles for the new talent pipeline; and highlight implications of such a system for students, employers, workforce providers, and other stakeholders.

Measuring Business Impact: A Workforce Development Practitioner’s Guide. L. Soricone, N. Singh, R. Lashman, Commonwealth Corporation (November 2011). Web link: <http://www.commcorp.org/resources/detail.cfm?ID=899>

This resource seeks to build the capacity of workforce development practitioners by presenting information on measures of business impact and strategies for engaging business partners through case studies. *Business impact* is defined as changes that occur as the result of a training program.

The Pathways to Prosperity Network: A State Progress Report, 2012-2014. Pathways to Prosperity Network (June 2014). Web link: <http://www.jff.org/publications/pathways-prosperity-network-state-progress-report-2012-2014>

This report presents progress to date on the work of the Pathways to Prosperity Network, a group of ten states working to build career pathways that create meaningful educational and career options for students. The report presents evidence to support the continued need for this work, including trends in the youth unemployment rate and the projected sub-bachelor's degree job growth. It highlights the need for employers to be actively involved in creating pipelines and pathways for young professionals.

Ready to Work: Job-Driven Training and American Opportunity (A Presidential Memorandum on Job-Driven Training). The White House (July 2014). Web link: https://www.whitehouse.gov/sites/default/files/docs/skills_report.pdf

Drafted in response to the January 28, 2014, State of the Union address, this report calls for a new focus on job training programs to ensure workers have the skills needed to secure and maintain good jobs. The report builds on information gathered from key constituents, including hiring managers, educators and the workforce, as well as findings from the Department of Labor's (DOL) report, [What Works In Job Training: A Synthesis of the Evidence](#), and examples of best practices from Department of Labor grant programs.

Shared Vision, Strong Systems: The Alliance for Quality Career Pathways Framework Version 1.0. Center for Law and Social Policy (June 2014). Web link: <http://www.clasp.org/resources-and-publications/files/aqcp-framework-version-1-0/AQCP-Framework.pdf>

This document presents best practices and lessons learned from the ten participating states in the Alliance for Quality Career Pathways (AQCP) initiative. It includes background information on AQCP, a conceptual framework for career pathways, and examples of its use to date. It also examines the criteria for, and measures of, success in quality career pathways systems.

Taking Root: The Virginia Career Pathways System. M. Goldberg and J. Alssid, Workforce Strategy Center (September 2012). Web link: <http://www.elevatevirginia.org/wp-content/uploads/2014/04/Taking-Root-Final.pdf>

This report highlights the successes and lessons learned from Virginia's career pathways system. Virginia's success strategies include creating effective cross-agency communication, ensuring partner buy-in, and engaging an outside organization to facilitate the system development process.

Using Performance-Based Funding to Incentivize Change. S., Klein, RTI International (January 2015). Web link: http://www.rti.org/pubs/performance-based_funding_to_incentivize_change_b.pdf

This paper examines how a performance-based funding model creates incentives for state education systems to improve local performance by linking increased funding to positive outcomes. The paper outlines a process for integrating performance-based funding into state resource distribution formulas.

Workforce Partnership Guidance Tool. National Fund for Workforce Solutions (November 2010). Web link: http://www.jff.org/sites/default/files/publications/NFWS_workforce_guidance_tool_111110.pdf

This document serves as a guide to organizations currently engaged in or seeking to join a workforce partnership. The tool is grouped into three parts: organizing a workforce partnership; convening, operating, and sustaining a partnership; and achieving the goals of the partnership.

APPENDIX A: CAREER PATHWAYS SUSTAINABILITY CHECKLIST

Craft a Compelling Vision to Build Support for Change

Rank your development and implementation progress toward building leadership and a vision for your career pathways system using the measurement criteria below. Assign your rankings based on the current status of your sustainability development efforts for each item and the level of priority you associate with it. Use the findings from this self-assessment to identify areas of focus and to establish a timeline of activities to begin your systems-building efforts.

Measurement Criteria	Current Status	Importance
Have high-level state leaders shared a compelling vision for career pathways or call to action?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial
Does a mission statement exist to support the vision by laying out the purposes of the career pathways system and the goals and objectives to be achieved?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial
Has an interagency career pathways steering committee been formed to help implement and institutionalize the vision?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial
Does a work plan for the steering committee exist?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial
Have definitions of key pathways terms and concepts been established?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial
Have marketing materials been developed to communicate the vision?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial
Overall Status	Current Status	Importance
Based on your review of the measurement criteria, rank (1) your current status of sustainability adoption and (2) the level of importance you ascribe to this element.	<input checked="" type="radio"/> None <input checked="" type="radio"/> In Progress <input checked="" type="radio"/> Operational	<input checked="" type="radio"/> Low <input checked="" type="radio"/> Moderate <input checked="" type="radio"/> Crucial

Engage Partners and Stakeholders in the Change Process

Rank your development and implementation progress toward sustaining partnership coordination for your career pathways system using the measurement criteria below. Assign your rankings based on the current status of your sustainability development efforts for each item and the level of priority you associate with it. Use the findings from this self-assessment to identify areas of focus and to establish a timeline of activities to begin your systems-building efforts.

Measurement Criteria	Current Status	Importance
Do partners meet on a regular basis to share their career pathways work, network new opportunities, and consider ways to expand their collaborations?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial
Has information been provided to potential pathways participants to outline the various education and training opportunities and long-term benefits of the career pathways system?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial
Are employers an active and critical part of the career pathways planning team?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial
Do employers understand the return on investment for participation in a career pathways system?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial
Is there an ongoing analysis of skill sets and workforce projections?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial
Overall Status	Current Status	Importance
Based on your review of the measurement criteria, rank (1) your current status of sustainability adoption and (2) the level of importance you ascribe to this element.	<input checked="" type="radio"/> None <input checked="" type="radio"/> In Progress <input checked="" type="radio"/> Operational	<input checked="" type="radio"/> Low <input checked="" type="radio"/> Moderate <input checked="" type="radio"/> Crucial

Adopt New Behaviors, Practices, and Processes

Rank your development and implementation progress toward creating sustained training and supports for your career pathways system using the measurement criteria below. Assign your rankings based on the current status of your sustainability development efforts for each item and the level of priority you associate with it. Use the findings from this self-assessment to identify areas of focus and to establish a timeline of activities to begin your systems-building efforts.

Measurement Criteria	Current Status	Importance
Has an MOU or other agreement been drafted and signed that binds agencies to long-term support of the career pathway?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial
Does the partnership have regular meetings and a dedicated workspace to house project materials and document activities?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial
Are there supportive policies that help implement pathways components?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial
Have career pathways metrics been established to track partnership and participant outcomes?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial
Are measures in place to assess the degree to which partners are collaborating and the results of career pathways programs?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial
Are data shared with all partners and key decisions (i.e., professional development, curriculum) based on data?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial
Is there a career pathways funding plan that includes a start-up budget and a long-term sustainability plan with revenue stream projections and budget?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial
Are partners working to identify current and future opportunities to braid or leverage funds across federal and state sources?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial
Are partners collaborating to leverage private sector funds to support programs?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial

Measurement Criteria	Current Status	Importance
Is there a career pathways funding team to develop the plan and supervise, guide, direct, and motivate the partnering organizations to collaborate on funding?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial
Have supportive legislation and policies been developed and implemented for career pathways?	<input type="checkbox"/> None <input type="checkbox"/> In Progress <input type="checkbox"/> Operational	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Crucial
Overall Status	Current Status	Importance
Based on your review of the measurement criteria, rank (1) your current status of sustainability adoption and (2) the level of importance you ascribe to this element.	<input checked="" type="radio"/> None <input checked="" type="radio"/> In Progress <input checked="" type="radio"/> Operational	<input checked="" type="radio"/> Low <input checked="" type="radio"/> Moderate <input checked="" type="radio"/> Crucial