Moving Communities FORWARD

Future Opportunities for Rural Workforce and Rural Development

Cheryl Burkhart-Kriesel, Ph.D., University of Nebraska
Tanya J. Hall, Purdue University
Paul Hill, Ph.D., Utah State University
Sheila Martin, Ph.D., Association of Public and Land-grant Universities
Joy Moten-Thomas, Fort Valley State University
Jeff Sherman, Oregon State University
Mark C. White, Ph.D., University of Illinois, Urbana-Champaign
Michael D. Wilcox, Jr., Ph.D., Purdue University

NORTH CENTRAL REGIONAL CENTER FOR RURAL DEVELOPMENT

ASSOCIATION OF PUBLIC & LAND-GRANT UNIVERSITIES

Table of Contents

MODULE 3: Mapping Pathways to Economic Mobility

By Tanya J. Hall, Purdue University; Michael D. Wilcox, Jr., Ph.D., Purdue University; Joy Moten-Thomas, Fort Valley State University; and Paul Hill, Ph.D., Utah State University

MODULE 4: Recruiting and Supporting Rural Learners

By Jeff Sherman, Oregon State University

MODULE 5: Evaluation and Reflection

By Cheryl Burkhart-Kriesel, Ph.D., University of Nebraska, and Tanya J. Hall, Purdue University

Acknowledgements

This project would not have been possible without the enthusiastic participation of many people, including the following:

Curriculum Developers

- Developing Key Partnerships
  Michael Wilcox and Tanya Hall, Purdue University; Sheila Martin, APLU
- Identifying Workforce Assets and Needs
  Mark White, University of Illinois, Urbana-Champaign
- Mapping Pathways to Economic Mobility
  Michael Wilcox and Tanya Hall, Purdue University; and Paul Hill, Utah State University; Joy Moten-Thomas, Fort Valley State University
- Recruiting and Supporting Rural Leaners
  Jeff Sherman, Oregon State University
- Evaluation and Reflection
  Cheryl Burkhardt-Kriesel, University of Nebraska-Lincoln

Pilot Project Teams

- Crawford County, Indiana
  Tanya Hall and Michael Wilcox, Purdue University
- Hempstead County, Arkansas
  Terrie James, Hunter Goodman, and Tabatha Duvall, University of Arkansas
- Sevier County, Utah
  Kari Ure and McKay Erickson, Utah State University

External Reviewers

- Kenny Sherin, North Carolina State University and Kari O'Neill, South Dakota State University
- Fernando Quijano, Extension Educator, Community Economics, University of Minnesota Extension

Ascendium Education Group

We would also like to thank Kirstin Yeado, Program Officer with Ascendium Education Group, for her encouragement, support, and connections throughout this project.

Ascendium Education Group is a 501(c)(3) nonprofit organization committed to helping people reach the education and career goals that matter to them. Ascendium invests in initiatives designed to increase the number of students from low-income backgrounds who complete postsecondary degrees, certificates and workforce training programs, with an emphasis on first-generation students, incarcerated adults, rural community members, students of color and veterans. Ascendium's work identifies, validates and expands best practices to promote large-scale change at the institutional, system and state levels, with the intention of elevating opportunity for all. For more information, visit https://www.ascendiumphilanthropy.org.

About the Authors

Cheryl Burkhart-Kriesel, Ph.D.
Extension Specialist,
Nebraska Extension Rural Prosperity Nebraska,
University of Nebraska
cburkhartkriesel1@unl.edu

Tanya J. Hall
Regional Educator,
Purdue Extension Community Development,
Purdue University
tjhall@purdue.edu

Paul Hill, Ph.D.
Extension Professor,
Rural Online Initiative,
Washington County Director,
Utah State University
paul.hill@usu.edu

Sheila Martin, Ph.D.
Strategic Advisor for Economic and Community Engagement,
Association of Public and Land-grant Universities
sheilam@trihelixpartners.com

Joy Moten-Thomas
Former Assistant Administrator for Community Development and Outreach,
Fort Valley State University

Jeff Sherman
Director & Program Leader,
Oregon State University Extension, Open Campus & Juntos Program
jeff.sherman@oregonstate.edu

Mark C. White, Ph.D.
Clinical Associate Professor,
Department of Agricultural and Consumer Economics, University of Illinois, Urbana-Champaign
whitemc@illinois.edu

Michael D. Wilcox, Jr., Ph.D.
Purdue Extension's Assistant Director and Program Leader for Community Development,
Purdue University
wilcox16@purdue.edu

INTRODUCTION

Moving Communities FORWARD:

Creating Future Opportunities for Rural Workforce and Rural Development through Extension

By Sheila Martin, Ph.D., Association of Public and Land-grant Universities

Introduction

Welcome to FORWARD! You are probably reading this guide because you are interested in helping the communities in which you work, and their residents move FORWARD in tackling their workforce development challenges. This curriculum will help you work with communities to identify and address the career pathway needs of rural workers--particularly low-income rural workers—as well as employers in rural communities.

Purpose of the project

The purpose of this curriculum is to build cooperative extension professional's (CEP)'s capacity to serve as facilitators of workforce solutions in rural communities. Our focus on low-income workers is designed to support social and economic mobility for rural people and thereby improve the economic resilience of rural communities. Our focus includes both traditional low-income rural students graduating from high school and looking for their first career options and non-traditional low-income worker-learners such as displaced workers, incumbent workers in low-wage jobs, and those facing barriers to employment such as a history of incarceration.

This curriculum is designed to help you work with community stakeholders to design and implement career pathways that move low-income rural students and workers into and through pathways that lead to jobs in demand in local communities—with positive outcomes for low-income workers and employers. Low-income workers can learn about the opportunities available in their rural communities, the pathways of training and experiences needed to take advantage of those opportunities, and the resources available to connect them to the required training and experiences. Employers will develop an understanding of how they might recruit, train, and retain high quality workers that can fill available jobs and help companies grow.

Using this curriculum will help CEPs gain confidence in their ability to partner with workforce stakeholders and to generate broad agreement on the actions required to foster economic and social mobility for low-income workers and to meet the needs of rural businesses.

How and when to use this curriculum

Community objectives

You use this curriculum when:

- You have been asked by community leaders to assist in identifying the community's needs for workforce development.
- You see an underdeveloped workforce development eco-system in the community and limited effort to strengthen the ties across entities.
- You see the need to generate new opportunities for low-income workers and connect them with available jobs.
- You and the community leaders agree that Cooperative Extension can fill a gap by facilitating a community conversation about workforce development and job and training opportunities for low-income workers.

Participants and audiences

The local Cooperative Extension Professional
The key audience for this curriculum is the local Cooperative Extension professional who is working within a rural community to meet the needs expressed above.

The Cooperative Extension Specialists
The educator may call on Cooperative Extension specialists for assistance in customizing and delivering this curriculum. Specialists in labor market information, data analysis and mapping, workforce development, entrepreneurship, remote work, reaching Black, Indigenous, and People of Color (BIPOC) communities, and evaluation may all be helpful.

Community leaders
The community's economic development, education/training entities and business leaders will be key to making this program a success. They must be willing to participate by examining and legitimizing workforce data and by sharing information about their workforce needs. A key point of identifying whether a community is ready for this curriculum is the willingness of the leaders to come to the table for a discussion of these needs and how to meet them.

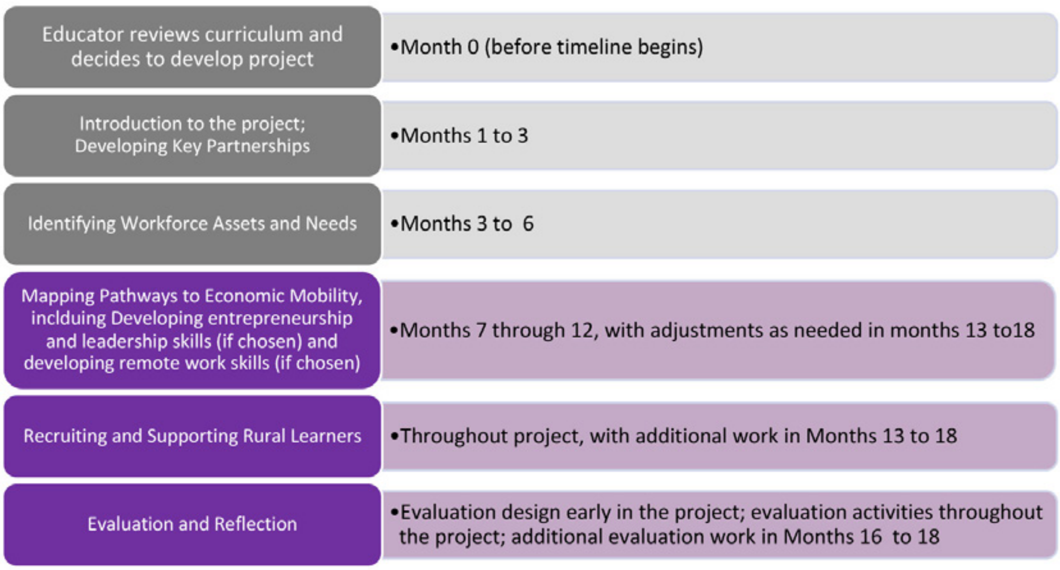
Low-income rural workers and students
The curriculum is ultimately designed to help communities build strategies to move easily overlooked low-income rural workers and students into living wage jobs. It will be important for the strategies developed through this curriculum to motivate these workers and students and their families to participate so that they might learn about career pathways and the training and experiences that can lead them to a family wage job in their community.

Implementation

Timelines
The pilot project participants tested this curriculum over the course of about five months. However, this was a very abbreviated schedule. Implementing each of the curriculum elements in your community will take time. A potential eighteen-month timeline appears below: the first six months are for planning and organizing (steps shown in grey), and the remaining year is for implementation (steps shown in purple). However, each community needs to assess its readiness and set the timeline accordingly. Your community may be more ready to jump in and move quickly through the process, or they may need additional time to become familiar with one or more of the curriculum elements. Therefore, you should adjust the timeline according to your community's needs. You should also be prepared to work on different elements of the curriculum simultaneously. For example, the evaluation component will need to be implemented throughout your project; similarly, identifying and recruiting rural students may need to begin months (or even years) before the students are actually taken through a curriculum in order to develop the partnerships necessary for success.

Not every community will choose to implement each of the curriculum elements. For example, entrepreneurship and leadership skills may be more important to some communities than others. These communities rely heavily on small business development and growth for their economic vitality. Others may decide that remote work should be an important part of their economic and workforce development strategy; others may discover that developing partnerships and strengthening the workforce development ecosystem is their priority.

Figure 1. An example timeline for a FORWARD project.



Participatory formats

As you design the timeline and format for your project, you will need to think carefully about the participatory formats you will use to deliver the curriculum to different audiences and stakeholders. In some communities, most of this work will be done within a community meeting of key stakeholders related to workforce and economic development. However, some of your work may be accomplished more effectively in one-on-one meetings. Our pilot projects differed in this respect depending on the comfort level of the workforce and economic development stakeholders with meeting together. Some parts of the curriculum may need to be executed during an after-school meeting with parents and/or students. Some may be delivered at existing meetings of community organizations. At times, you may need to conduct these meeting remotely, which will require that you work with remote collaboration tools.

Adapt the materials—including PowerPoints, worksheets, handouts and mapping tools—to the audience and the format you are using. A small meeting might not lend itself to a PowerPoint, but handouts of data sheets or pathways diagrams might be more useful.

FORWARD Curriculum Elements: Motivation, Context, and Summary

The curriculum includes the seven sections shown in Figure 2. Five of the sections are important for all communities (those shown in blue); two (Entrepreneurship and Leadership Skills and Remote Work) may be less important for some communities who choose different priorities in workforce pathways. Below, we offer some of the historical and policy context for each section.

Figure 2. Elements of the FORWARD Curriculum *Curriculum authors are listed in italics.*

Developing Key Partnerships *Tanya Hall, Sheila Martin, and Michael Wilcox*

- Develop the partnerships necessary to agree on plans, connect needs and assets, and identify and connect pathways.

Identifying Workforce Assets and Needs *Mark White*

- Use secondary and primary data to explore the community's workforce needs and assets.

Mapping Pathways to Economic Mobility, *Tanya Hall, Michael Wilcox, Joy Moten-Thomas and Paul Hill*

- Given workforce needs and assests, determine viable paths and advancement within family-wage careers. Includes sub-modules for Building Entrepreneurship and Leadership skills and Supporting Remote Work.

Recruiting and Supporting Rural Learners *Jeff Sherman*

- Use community connectins, existing programs such as 4-H, and new programming to recurit and support rural learners into and through career pathways.

Evaluation and Reflection *Cheryl Burkhart-Kreisal and Tanya Hall*

- Evaluate results for continuous improvement of workforce partnerships.

Developing Key Partnerships

Context

This part of the curriculum provides a starting point for the educator and the community to work together to build the partnerships necessary for success in the remainder of the project. It explains which partners must be at the table and their formal and informal roles in the workforce development system.

Building partnerships is key to working effectively to address workforce challenges in rural communities. While this is true in all communities, it may be especially crucial in rural communities where resources are often limited. Upskilling the existing labor force is essential because population density is low, many communities have suffered a loss of working age population, employers may have difficulty attracting new employees, and existing residents may have had limited opportunities for career exploration and development.

Over the past several decades, the landscape of who conducts training and how has changed substantially. Employers once conducted much of the training for their employees in-house. More recently, formal training programs have emerged, including workforce training within high schools and a variety of federally sponsored workforce programs aimed at different populations including the unemployed, dislocated workers, those affected by trade, low-income youth, recipients of TANF, and those requiring vocational rehabilitation. As the workforce training landscape became more complex, the federal government began requiring stronger collaboration among providers, including collocation at regional one-stop centers. In addition, many nonprofit providers offer workforce training services that may be funded by state and local government or through philanthropic donations. This complexity means that understanding the local workforce system landscape and building partnerships with the key players is an essential part of the Cooperative Extension Leader (CEL) preparation.

Content summary

This module provides information about the formal workforce development system and explains the key roles that different community groups and partners play in the formal and informal workforce development system. It provides an example of an environmental scan and a readiness assessment to determine where the community needs to begin this journey. It includes examples of agreements that may be necessary to develop the collaborations that can address workforce development needs, and it offers exercises and assessments to help the educator decide the degree to which partnerships already exist or need to be formed. It provides example PowerPoint slides for the educator to introduce the project and the role of partnerships in addressing workforce needs.

Learning objectives

1. Improved understanding of the national/state workforce development system.
2. Increased awareness and understanding of community workforce development partners and their areas of expertise at the local and regional level.
3. Improved understanding of the current level of interaction between community partners.
4. Enhanced understanding of local workforce development landscape through the eyes of a job seeker with regards to existing challenges, opportunities and sources of information

Audiences

The audiences for this part of the curriculum include all of the partners, i.e., community leaders, who will be necessary for success with the project. Those populations include:

1. Education and training providers, including
   - Community colleges and other higher education institutions.
   - Cooperative Extension.
   - Secondary education schools including school board members.
   - Vocational programs (career and technical education).
   - Adult education centers.
2. Businesses and business organizations
   - Human resources professionals from lager businesses.
   - Small business owners
   - Economic development organizations and chambers of commerce.
3. Community partners
   - Social service providers
   - Legal and corrections
   - Labor department (state and regional unemployment, training, and labor market information offices)
   - Rural transit groups
   - Nonprofits that provide support services, including training and wrap-around services such as childcare, transportation and other supports
4. Potential key influencers, such as elected officials and cultural navigators that can provide connection with cultural groups

Identifying Workforce Assets and Needs

Context

Before a community can develop and implement a plan for assisting local workers and meeting the workforce needs of employers, they need a data-based understanding of the local labor market situation. Labor market information (LMI) is a critical tool for helping students, job seekers, employers, and local leaders navigate their local labor market. A shared understanding of the needs of employers, the opportunities available to workers, and the skills required to take advantage of those opportunities is essential to formulating and implementing an effective plan. The information can help each stakeholder groups more effectively play their role in the system.

A strong working partnership with an LMI expert may be one of the most important partnerships for the CEP working in the workforce development area. Not everyone is good at identifying, accessing, manipulating, and presenting LMI data. While this curriculum will help you to understand the different sources and uses of LMI data, some CELs may find that they need to identify an LMI expert at the state or local state data center or LMI agency to help them.

Content summary

This module lists the many sources of labor market information, the questions they can answer, their sources, and how they can be used, and who will find them useful. It shows how to use these data to help your community answer important questions about workforce needs and assets, and it help educators understand how they can combine these data with other data sources to gain a more accurate picture of the workforce landscape in their community.

Learning objectives

- Understand how to use labor market information to answer important questions about workforce development needs, assets, and issues.
- Understand the different sources of labor market information, what questions they answer, where to find them, and how to use them.
- Understand how to incorporate qualitative data into regional workforce analysis to offer a more complete picture of workforce needs and assets.
- Understand how to guide community stakeholders toward setting workforce priorities using these data sources.

Audiences

This module is targeted toward the extension educator and specialist who may be working together to present information to the community to help them understand their workforce needs and assets. The module has a many different audiences:

- Community leaders will use this information to inform decisions regarding workforce training and economic development investments. For this audience, the module includes a PowerPoint deck that provides an example of how to present these data.
- Students and jobseekers who use LMI to find occupations that best meet their needs and the training they need to get those jobs
- Employers benefit from understanding these data and how to use them to identify where they might find skilled workers and what they must pay them to attract them to their company.
- Educators and counselors are interested in data that helps them guide students to occupations that will meet their needs and interests.
- Education and training providers use LMI to help determine the courses and programs they offer.

Mapping Pathways to Economic Mobility

Context

This element of the FORWARD curriculum helps extension educators and their community partners articulate pathways that workers/learners can follow to gain the skills they need to enter a career that will meet their needs for income and fulfilling work while filling employer workforce needs. A career pathway is a combination of education, training, and other services that meets the needs of industry and prepares an individual to be successful in a specific occupation or occupational cluster. It can provide clarity to job seekers on how to advance their career trajectory and provide a valuable tool to assist industry, workforce development, education, and other community partners to develop concrete processes for aligning their respective services to develop integrated pathways that make it easier for everyone to navigate.

This module also includes curriculum that can be used in communities that prioritize entrepreneurship or remote work as a career pathway. In many rural communities, small businesses provide a large percentage of jobs and preparing a worker to fill roles in small businesses may also help them to eventually start their own businesses. Some communities may find that remote work can be a viable strategy for creating opportunities for low-income workers. This module helps communities assess whether this is a good strategy for their community and how they might advance it.

Content summary

This module includes a description of a career pathway and describes a process for building them. It includes the following tools:

- A set of questions that CEPs should ask businesses to help them (and you) better understand their skill needs.
- A process for designing career pathways in partnership with the audiences listed above.
- Examples of career pathways for specific occupations.
- A description of a career pathway for people who want to support or create a microenterprise of their own. This section also discusses the importance of connecting the economic development strategy for supporting microenterprises with the career pathways offered.
- A guide for assessing your community's potential for using remote work as a workforce development strategy.

Learning objectives

The learning objectives for this module are:

1. Increase knowledge about career pathways, purpose and how they are created.
2. Develop strategies to work with community leaders/businesses to develop career pathways.
3. Improve awareness of how training/education programs are aligned to meet career pathway needs.
4. Enhance understanding of how to implement the developed career pathway in the community.
5. Increase awareness of existing industry career pathways and ways to incorporate unique pathways related to small businesses and remote work.

Audiences

The audiences for this module are:

- Community businesses that need to think comprehensively about their expectations for their positions and clearly define the necessary and realistic skill requirements.
- Students and job seekers who need a career development roadmap to take the guesswork out of understanding how they can progress in a career in the community's industries.
- Community partners (workforce development, education, human services and related systems) who need a process for better aligning and integrating the sources and resources needed by job seekers and workers to advance in their careers.

- Policymakers who are considering what the community's priorities should be for investments in career pathways that will lead to good opportunities for the location's workers.

Recruiting and Supporting Rural Learners

Context

Over the past several decades, many small and rural areas have struggled to recruit and retain rural learners and employees at the same rate of suburban and urban peers. The U.S. Census Bureau (2020) estimates that while rural areas declined by a half-percent between 2010 and 2020, urban and suburban areas grew by eight percent. However, as was seen in the "urban exodus" of the 2020 COVID-19 pandemic, there are reasons why some Americans may want to choose a more rural and small-town environment.

This loss of rural population means it is essential to recruit existing rural residents into career pathways that offer rural students and learners opportunities for social and economic mobility and rewarding careers while meeting the workforce needs of employers.

The CEP can work with community stakeholders to share information about rural career opportunities to students and workers who might otherwise not pursue them. By reaching out with programs specifically designed to recruit and train populations such as the BIPOC community, the working poor, and the formerly incarcerated, the partnerships organized by the CEP can help these people achieve economic mobility while helping employers develop the skilled labor they need for success. At the same time, these communities have the opportunity to address real issues, challenges, and divides that may keep some people from moving to or staying in rural areas.

Content summary

This module includes information for the educator that will help them prepare to facilitate meetings with stakeholders to help them develop strategies for recruiting learners and workers into local careers and career pathways. It includes a slide deck and handouts with exercises that will help the community understand how to make these opportunities more attractive to rural learners. It also includes case studies, examples, and contacts for rural workforce development programs that focus on low income and minority learner/workers.

Learning objectives

1. Identify community strengths and weaknesses impacting the recruitment and retention of job seekers and learners.
2. Increased understanding of challenges face by BIPOC and Asset Limited, Income Constrained, Employed (ALICE) populations.
3. Increased awareness of resources and approaches being used to improve recruitment and retention of job seekers and learners.

Audiences

- The extension educator that is working with the community to improve their recruitment of rural workers and learners.
- Stakeholders working with the educator to recruit rural learners and job seekers into career pathways in their communities.

Evaluating FORWARD Activities

Context

While some CEPs have experience with workforce development projects, many have not previously worked in this area. The FORWARD curriculum is new and each community will need to customize it for their own community. Therefore, the evaluation processes will provide great insight into the effectiveness of the curriculum and process. Extension professionals can anticipate three dimensions of evaluation:

1. An immediate assessment of each curriculum module;
2. A check-in process evaluation based on stakeholder input to assess how well the work is progressing; and
3. Longer-term ripple effects mapping.

For the pilot projects taking place during 2021-2022, the short timelines limited the opportunities to gather feedback on the mapped pathways from job seekers; however, future users of the FORWARD curriculum will have the opportunity to track their impact on job seekers over a longer period of time.

Learning objectives

- Understand best practices on evaluating effectiveness of the FORWARD program.
- Identify ways to gather input from stakeholders on the community process, curriculum and existing situation.
- Conduct a ripple effect mapping exercise to gather the longer-term outcomes of the FORWARD program within the community.
- Learn common metrics that can capture Extension outcomes and impact for program reporting purposes that can be elevated to state and national levels.

Audiences

The main audience for this module is the extension educator who will implement evaluation protocols to identify outcomes and impacts from the FORWARD program.

Content summary

The curriculum includes a summary of each of the three dimensions of the evaluation (immediate, stakeholder input, outcomes via ripple mapping). It also includes immediate assessment documents and a logic model that helps the educator understand the theory of change behind the FORWARD model.

Identifying Additional Programs and Resources

Throughout the curriculum, additional resources have been identified that assist the educator in connecting the community to other resources. In addition, APLU has developed a summary of previously existing workforce development resources created by or for Cooperative Extension. That summary is available here.

MODULE 1:

Developing Key Partnerships

By Tanya J. Hall, Purdue University; Sheila Martin, Ph.D., Association of Public and Land-grant Universities; and Michael D. Wilcox, Jr., Ph.D., Purdue University

Learning Objectives

- **Improved understanding of the national/state workforce development (WFD) system.**
- **Increased awareness and understanding of community WFD partners and their areas of expertise at the local and regional level.**
- **Improved understanding of current level of interaction between community partners.**
- **Enhanced understanding of local WFD landscape through the eyes of a job seeker in regards to existing challenges, opportunities and sources of information.**

Background

Partnerships allow for a robust array of training programs to exist, especially in rural communities where resources are limited and efficiencies in upskilling the existing labor force is critical. The challenge is that since the 1950's, the landscape of who does the training, how it is done and who regulates the training has changed tremendously.

Historically, employers conducted much of the training themselves via on-the-job experience that was either done under the mentorship of a seasoned veteran or by trial and error, more commonly the latter. In the 1950's, a cultural shift towards more formal training emerged which materialized via vocational or 'trade' courses at the high schools. This structured format of teaching physical job skills began to carry over to workplaces, ushering in the connection between education and business entities.[1]

While businesses were adapting to a changing training landscape for their workers, the federal government was also involved in providing jobs to upskill unemployed or underemployed individuals via apprenticeships, on-the-job trainings or summer job opportunities. Beginning in the 1980's, more emphasis was placed on consolidating education and job training programs via regional or community-based one-stop career centers. These centers were set up to assist all individuals and established mandatory partners. Today, these centers still exist with local workforce development boards responsible for distributing the federal and state workforce development funds.[2] To better understand the workforce development hierarchy, please review the Workforce 101 section.

As the nation's economy continues to rapidly change, the skills gap remains persistent. A considerable amount of variability exists in how much training one needs for a job across industries, making it difficult for one-stop career

[1] Austin, S. 2008. The Evolution of Workplace Training. EHS Today. Accessed on August 9, 2021 at https://www.ehstoday.com/training-and-engagement/article/21904600/the-evolution-of-workplace-training.

[2] History of Workforce Development. Pennsylvania Workforce Development Association. Accessed on August 9, 2021 at https://www.pawork.org/about-us/history-of-workforce-development/.

centers to offer or provide information about all training opportunities. Technology has stepped in to alleviate some of these challenges, but it also has its imperfections. Additional challenges have emerged that impacts how communities effectively reach and upskill the potential and existing labor force. A sampling of these challenges range from:

- Various learning styles (visual/auditory/kinesthetic)
- Generation gaps affecting values, attitudes and ways of learning
- Language and literacy barriers
- Continual turnover and absenteeism creating smaller training cohorts
- Availability and affordability of training
- Necessity of receiving training and lack of pay while receiving training
- Lack of awareness of where to receive training

Therefore, leveraging partners in the community to reach unemployed/underemployed individuals and pool training resources together to address the beforementioned challenges becomes critical. It is unrealistic for a business or even a group of businesses to be able to address all of these challenges on their own. Developing partnerships appears to be an easy endeavor, but much navigating needs to occur to create lasting collaborations.

> **As an Extension professional, know that the workforce development space has many key partners and Extension is not readily recognized as a workforce development partner. As a result, it is absolutely critical to develop these relationships into partnerships. Depending on the local situation, Extension may be questioned as to why it is entering into the WFD space compared to traditional programming efforts. Therefore, it is essential to be transparent about Extension's role in this WFD effort and to let all the key actors (e.g., workforce boards, local political groups, state agencies, etc.) know what they are going to be doing.**
>
> **Each of the WFD actors/partners have their turf. If the territoriality is not recognized, it can do more harm than good. Much of this territoriality is related to funding streams. Taking the time to develop key partnerships with the existing WFD partners, understanding their roles and how they operate is of paramount importance. Care must be taken to develop these partnerships and trust before launching the FORWARD program.**

The remainder of this section will give a high level overview of workforce development, talk about the various training types, potential partners that exist within a community/region, and ways to build key partnerships to address pressing skill shortages.

Workforce 101: A Tool for Understanding the Key Workforce Assets in Your Community

As an Extension professional putting together a plan for developing and implementing career pathways for low -income workers, it is important that you have familiarity with your community's workforce development assets. These assets include publicly funded workforce development agencies and programs as well as those funded by private philanthropy and businesses. This learning module will provide enough familiarity with these systems to enable you to identify and contact the people who can bring these resources to the table to help you accomplish your work.

The accompanying worksheet, listed under the Extension Educator Corner section, will help you get started identifying the organizations, people, and plans that are important to developing and implementing your career pathways.

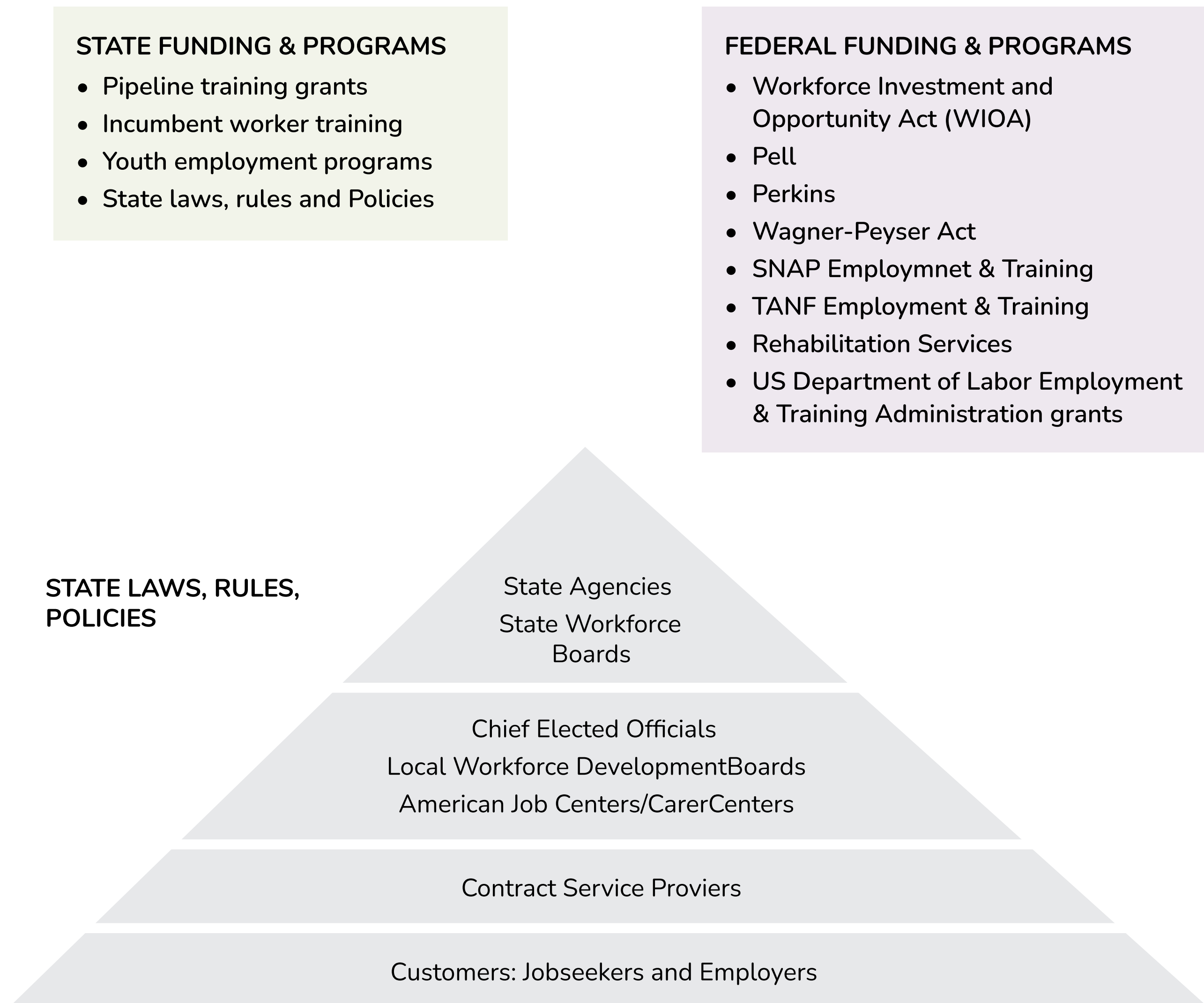
1. **What is the public workforce system?**
   The public workforce system includes federal, state, and local government-funded agencies and programs that provide services to workers, job seekers, and employers to support the economy by developing the talent of the nation's workforce. The system provides services for job seekers, including job search assistance, career readiness training, college and career navigation, services for out of school youth, and information and funding for skill training. The public workforce system also provides services for employers, such as customized training.

2. **Public workforce institutions**
   Figure 1 provides a graphic summary of the public workforce institutions that manage resources available to address workforce needs.[3] These resources are distributed by the U.S. Department of Labor and the U.S. Department of Education. In some states, state funding supplements the federal funding of workforce programs.

   When working regionally or locally, the key actors are the local or regional Workforce Development Board, the local community college, the K-12 school system, and locally influential training providers. They are usually the most fundamental actors in the workforce development system.

   - **State agencies** administer the workforce system for the state. They receive funding from the federal and state governments and distribute it to local workforce boards. State agencies involved in the workforce system include employment departments, K-12 education departments, health and human services, economic development, labor, and higher education boards.

Figure 1: Public Workforce Development Organizations



Source: Adapted from Snyder, 2021

[3] Snyder, Nancy. Workforce 101: An Introduction to the U.S. Workforce System. https://vimeo.com/552039826

- **The state workforce board** determines state-level goals and policies to guide how funding should be used.
- **A local or regional workforce board** is a group of community leaders and stakeholders appointed by local elected officials and charged with planning and oversight responsibilities for workforce programs and services in their area. They convene partners from industry sectors, develop strategies and policies to guide the use of federal and state funding, charter American Job Centers, analyze market data, and collect and manage performance data. Elected officials serve on these boards. They can usually be found through the website of the state workforce board. Note that there are a few states that don't have local or regional workforce boards, such as Utah. This site will help you locate the closest relevant workforce board.
- **American Job Centers** provide service such as job coaching, job search, referral, assistance for companies with filling positions. They are co-located with job search assistance services associated with the Unemployment Insurance systems and funded through the Wagner Peyser Act.
- **Contract service providers** provide training and other services needed by jobseekers. They include community colleges, K-12 schools, community-based organizations, and proprietary/private training schools.
- **The customers** of the workforce system are job seekers and the employers who need positions filled.

When working regionally or locally, the key actors are the local or regional Workforce Development Board, the local community college, the K-12 school system, and locally influential training providers. They are usually the most fundamental actors in the local workforce development system and the first contacts you should make when beginning this work.

3. **Public Workforce funding sources and legislation**
The public workforce system and its wide variety of programs are funded through federal legislation. In many states, state legislatures also allocate money to support workforce development. The primary sources of federal funding are as follows.

- **Workforce Innovation and Opportunity Act** – This legislation was signed in 2014 and brings together and coordinates a number of federal programs:
  - Employment and training services for adults, dislocated workers, and youth, and **Wagner-Peyser** services **administered by the Department of Labor** through formula grants to states;
  - Adult education and family literacy programs as well as state vocational rehabilitation services programs that assist individuals with disabilities – these are administered by the **Department of Education**.
- **Trade Adjustment Assistance** is a federal program administered by the U.S Department of Labor that provides support to workers who become unemployed or are threatened with job loss due to the impact of international trade. It offers these workers opportunities to obtain skills, credentials, resources and support necessary to rebuild skills for future jobs.
- **Vocational Rehabilitation** is a program administered by the Office of Special Education and Rehabilitative Services at the Department of Education. https://rsa.ed.gov/. It is a state-federal program that provides formula grants to state vocational rehabilitation agencies to help people who have physical or mental disabilities get or keep a job.
- **SNAP Education and Training** program is specifically for recipients of the Supplemental Nutrition Assistance Program (SNAP) administered by the USDA Food and Nutrition Service. The state SNAP office administers this program.
- **Temporary Assistance to Needy Families (TANF) Employment and Training program (WorkFirst)**. Employment and career services are provided to recipients of TANF benefits. These services are provided by the social services agency that administers TANF in each state. Services include job training, resume building, career planning, job coaching and mentoring, as well as child care services.

- **USDOL employment and training administration grants.** The U.S. Department of Labor provides competitive grant funding opportunities for training programs to supplement the formula funds provided to states under the programs described above. A variety of programs are funded by these competitive grants; they are authorized by a number of pieces of legislation.

4. **State and local workforce plans**
States are required under the Workforce Investment and Opportunity Act (WIOA) to develop a 4-year workforce strategy – a single plan for core programs. The core programs are as follows:
- the Adult program (Title I of WIOA),
- the Dislocated Worker program (Title I),
- the Youth program (Title I),
- the Adult Education and Family Literacy Act program (Title II), and
- the Wagner-Peyser Act Employment Service program (authorized under the Wagner-Peyser Act, as amended by title III),
- the Vocational Rehabilitation program (authorized under Title I of the Rehabilitation Act of 1973, as amended by Title IV).

The plans can also include other programs such as TANF and Perkins education programs- in their plans. Examples of some of these plans are linked below.

- Examples:
  i. Oregon Combined Plan 2020 [4]
  ii. North Carolina Unified State Plan 2020 [5]
  iii. Utah Unified Workforce plan 2020 [6]
  iv. Indiana State workforce plan 2020 [7]

5. **What local workforce boards are required to do**
As described above, federal, and in some cases, state funding is delivered to local workforce development boards from the state. The local workforce development boards have a responsibility to manage those resources effectively.[8] As provided in WIOA sec. 107 (d), the Local Workforce Development Board are required to do the following:
- In partnership with the County Executive, develop a comprehensive local plan, and a regional plan if the local area is part of a broader planning region, to implement WIOA. The Extension professional should examine this plan early on to see whether Cooperative Extension might work in alignment with this plan.
- Conduct workforce research and regional labor market analysis.
- Convene, broker, and leverage local workforce development system stakeholders to assist in development of a local plan and in identifying non-Federal expertise and resources to leverage support for workforce development activities.
- Lead efforts to engage with a diverse range of employers and entities in the region to promote business representation; to develop effective linkages with employers to support utilization of the workforce system; to ensure that workforce investment activities meet the needs of employers and support economic growth in the region and expand career advancement opportunities for system participants.
- Develop and implement career pathways by aligning the employment, training, education, and supportive services that are needed by adults and youth, particularly those with barriers to employment.

[4] Oregon WIOA State Plan: https://www.oregon.gov/WorkforceBoard/Documents/DOL_State_Plan_of_Oregon_16-19.pdf
[5] North Carolina WIOA State Plan: https://www.nccommerce.com/documents/nc-workforce-innovation-and-opportunity-act-unified-state-plan-2020
[6] Utah United Workforce Plan: https://jobs.utah.gov/wioa/wioastateplan.pdf
[7] Indiana State Workforce Plan: https://wioaplans.ed.gov/node/3551
[8] Urban Institute. Local workforce System Guide. https://workforce.urban.org/

- Lead efforts to identify and promote proven and promising practices and initiatives for meeting the needs of employers, workers, and job seekers.
- Develop strategies for using technology to maximize the accessibility and effectiveness of the local WDS for employers, workers and job seekers.
- Conduct oversight of youth activities, employment and training activities, one stop delivery system, and ensure appropriate use and management of the funds received by the local area.
- Select operators and providers.
- Coordinate with education providers and review applications to provide adult education and literacy activities to ensure that they are in line with the local plan.
- Develop a budget for the activities in the local area, consistent with the local plan and duties of the local board.
- Ensure accessibility for individuals with disabilities--both programmatic accessibility as well as physical accessibility in compliance with ADA regulations.

All of this means that your local workforce development board may already have identified some important career pathways for your local region. It will be very important that you investigate these plans to see what plans exist, what pathways have been developed, and their state of implementation.

Some examples of local workforce development plans are linked below:

- Eastern Washington Partnership Plan [9]
- Southwestern Area Workforce Development Board (NM) 2020-2023 Local Workforce Plan [10]
- Southeast Indiana Workforce Investment Board Local Plan [11]
- Mountain area (NC) workforce Development Consortium Local Area Plans [12]

6. **Additional tools for workforce development**
   There are some additional tools provided by federal law that may be helpful as you put together your career pathways and plans.

   - **Individual Training Accounts.** As part of the WIOA, individuals can use individual training accounts set up by local workforce agencies to pay for the training they need to meet the requirements of a career pathway. A legal description of ITAs is here; however, there is a lot of variation by state, and so it is important to check with state workforce agencies to understand how they work in your state.
   - **Pell grants** provide support for undergraduate training for low-income students. Federal Pell Grants usually are awarded only to undergraduate students who display exceptional financial need and have not earned a bachelor's, graduate, or professional degree. A Federal Pell Grant, unlike a loan, does not have to be repaid, except under certain circumstances. Some of the classes and programs that you develop for your career pathways may be eligible expenses for students who are able to obtain a Pell grant.

7. **Programs funded by private philanthropy**
   In recent years, foundations have funded a variety of programs related to workforce development in rural communities. The Walmart Foundation has funded the CREATE BRIDGES and similar programs to strengthen the workforce in retail, accommodations, tourism, and entertainment industries. Many local and community foundations are active in funding rural workforce development and empowerment projects. For example, the Oregon Community Foundation funds scholarships for child care workers to help with the costs of community-based education and training. The Benedum Foundation funds workforce development grants in Pennsylvania, West Virginia, and Georgia. For example, they awarded the Blue Ridge Community and Technical College a

[9] Eastern Washington Partnership Plan: https://www.wtb.wa.gov/wp-content/uploads/2019/06/EasternStrategicPlan2016-2020.pdf
[10] Southwestern Area Workforce Development Board: https://ef8511c5-3890-479e-b404-640be70ae727.filesusr.com/ugd/3c44a3_b6638bdc5af-14249b27e13759967977e.pdf
[11] Southeastern Indiana Workforce Investment Board: https://www.in.gov/dwd/workonesoutheast/files/Region-9-Local-Plan-FINAL.pdf
[12] Mountain Area (NC) Workforce Consortium Plan: https://www.mountainareaworks.org/py21-22-plan-2/

grant to develop a college-credit integrated production technologies program for Eastern Panhandle High school students. The Lilly Endowment funds a variety of workforce training programs in Indiana.

Potential Community Partners

When seeking partnerships to develop the workforce within your community or region – look for individuals who make decisions on behalf of the organization and/or are directly involved in the effort of training potential and current labor force participants (key influencers). You will want a mix of individuals who are visionary and pragmatic in order to enact the work at hand. In working with resource constrained individuals, a wraparound care approach may be necessary. This includes thinking of external constraints that affect a person's ability to work (i.e. childcare, housing, language/cultural barriers, transportation, proper work attire, etc.). It is recognized that not all of these partners are likely available in your community/region.

In Table 1, a list of potential community partners is outlined. Obvious partners in the workforce development space include those in the education and business sectors. In the community partners sector, the labor department is also an immediate choice. However, challenge yourself to think about the web of support that is needed in order for a person to be able to work, especially a rural limited resourced worker, to propel them into a sustaining employment situation.

Table 1: Strawman Guide of Potential Community Partners in the Workforce Development Arena

Sector	Potential Partners	Area of Expertise
Education	Community College	Adult learners; dual credit learners; industry partnerships
	Higher education institutions	Student learners; specialized course offerings; industry partnerships; specialized technical services
	Cooperative Extension	Connector of resources/partners; training provider; able to create curriculum to address training needs
	Secondary education schools	K-12 student pipeline; knowledge of state education system initiatives and career/technical programs
	Vocational programs	Knowledge of state's educational system initiatives and career/technical program; industry partnerships; technical training provider
	Adult education centers	Adult learners; industry partnerships; interest in lifelong learning
Business	Large business owners – HR department	Understanding challenges of hiring and retaining workers – in particular skill deficiencies. Awareness of their training partnership used for business.
	Small business owners	Challenges and opportunities to hiring and retaining workers.
	Economic development organization (county/regional)	Connection to local businesses; understanding of the economic development landscape; potentially knowledgeable of WFD training opportunities and funding channels that can be used; connector to resources/partners
Community Partners	Social services groups	Understanding or experience with resource constrained citizens; awareness of landscape of social services to assist individuals
	Department of Corrections (i.e. local jails; parole departments)	Familiarity with legal system; opportunities to train individuals with a felony conviction
	Labor department (i.e. unemployment offices; WFD training programs)*	Understanding of state's WFD program; existing WFD training system in the area; challenges/opportunities with WFD; industry partnerships
	Rural transit groups	Understanding of transit environment – challenges and opportunities
	Non-profits	Awareness of local services that can assist resource constrained individuals
Potential key influencers	Cultural navigators	Familiarity with cultural groups and ability to serve as a liaison between entities; awareness of needs and challenges

** Note that the labor department may have more than one player in this space. One would be the statewide public workforce system and another would be the regional or local workforce boards. While the two interact with each other, they are not the same.*

Constructing Formal Partnership Agreements

When the task force is first convened, it is helpful to create an agreement on how you all will work together. At some point (especially once you travel down the career pathway journey), formal partnerships will need to be established. Commonly, memorandum of understandings (MOUs) are created, which outline the expectations of each party. Below are several examples of MOUs that may be helpful when developing a MOU specific to your county/region's purposes.

Between community colleges and workforce boards regarding training

1. Memorandum of Understanding between Massachusetts Casino Career Training Institute [13]
    a. In response to workforce needs, a partnership with the Workforce Investment Boards/Regional Employment Boards (WIB/REB), the Massachusetts Community Colleges have established the Casino Careers Training Institute. This includes a collaboration with the various workforce development partners in each region within the Commonwealth. Through the Institute recruitment, screening, career counseling, training, job placement assistance and more will be provided by the colleges and the workforce partners.
2. Oregon TAA Memorandum of Understanding with Community Colleges [14]
    a. MOU to provide Community Colleges with an opportunity to communicate directly with the Trade Adjustment Assistance (TAA) Federal program administered by the Oregon Employment Department (OED) Central Trade Act Unit (CTAU). This to assist eligible participants to navigate the college system, and to increase individualized support for participants while in training.
3. Memorandum of Understanding Between the Board of County Commissioners and the North Carolina Cooperative Extension Service North Carolina State University and The North Carolina Cooperative Extension Program North Carolina A&T State University [15]
4. Memorandum of Understanding between Wyoming Department of workforce services and the University of Wyoming
    a. MOU parties are the Wyoming Department of Workforce Services, Research and Planning Section, and The University of Wyoming.
    b. Exclusively statistical purpose.

Between a local government and a union or business regarding apprenticeships

1. Memorandum of Understanding Workforce Development Council of Seattle-King County [16]
    a. This Memorandum of Understanding (MOU) is **among the Local Workforce Development Board** (Workforce Development Council of Seattle-King County), **the Chief Local Elected Officials** representing the City of Seattle and King County (CLEOs), and **the Workforce Innovation and Opportunity Act partners** relating to the operation of the WorkSource Seattle-King County one-stop service delivery system.
2. Memorandum of Understanding between Mountain Area Workforce development board and partners of the career center in Henderson County, NC [17]
    a. This Memorandum of Understanding is between the North Carolina Mountain Area Workforce Development Board, the Local Area Chief Elected Official (hereinafter referred to as CEO), and the NCWorks Career Center Henderson County partner agencies (hereinafter referred to as the Partners) to provide an aligned, collaborative and performance driven one-stop workforce delivery system for the citizens of Madison County.
3. Sample MOU - DOL YouthBuild Program and Local Workforce Development Board [18]
    a. Sample MOU was adapted from an existing Memorandum of Understanding (MOU) in which the YouthBuild program and the local American Job Center (AJC) had an existing relationship.

[13] MOU Massachusetts Casino Training Institute: https://www.springfield-ma.gov/planning/fileadmin/Planning_files/casino/proposals/penn/Exhibit_5-b_MOU_with_Mass_Casino_Carers_Training_Institute.pdf
[14] Oregon TAA MOU: https://taa.workforcegps.org/resources/2020/01/16/16/35/MOU_Community_Colleges
[15] North Carolina MOU: https://eod.ces.ncsu.edu/wp-content/uploads/2019/05/Memorandum-Of-Understanding.pdf?fwd=no
[16] Seattle – King County MOU: https://static1.squarespace.com/static/53c04ba6e4b0012ad48d079e/t/5abbd2ef352f53d186013bcc/1522258680173/WDC+SKC+2017+WIOA+MOU+final_1218-2017_EXECUTED.pdf
[17] NC MOU: http://www.landofsky.org/pdf/MAWD/MAWDB_AreaPlan_2020/CAREER_CENTER_MOU_HENDERSON2019_revised.pdf
[18] Sample MOU: https://youthbuild.workforcegps.org/resources/2018/04/30/13/47/~/link.aspx?_id=A69D960EDD6E4475B6D8DEEFB46FBDB3&_z=z

EXTENSION EDUCATOR CORNER

Extension Educator Corner

This module covered a tremendous amount of information. As an Extension professional, there are two key tasks that are important to complete before proceeding with this work.

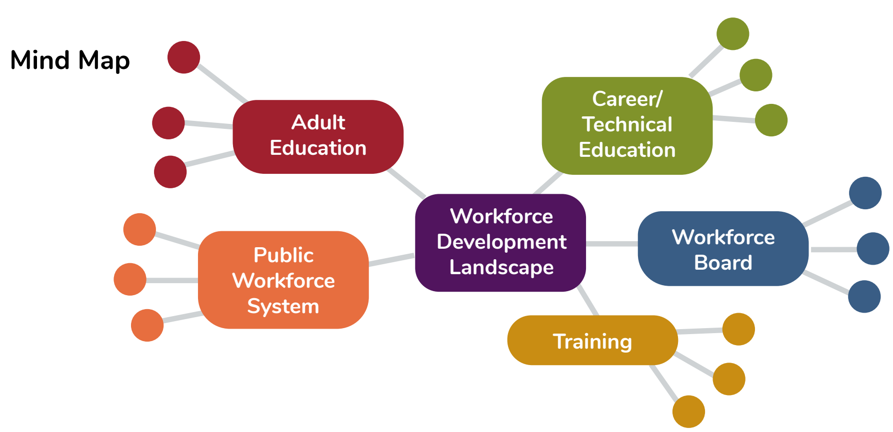
Task #1: Identify the key players in the local workforce development system

- What is the state workforce agency in your state?
- What is their web site?
- Which local Workforce Development Board covers your area?
- Do they have a current workforce development plan?
- Who are the members of the local workforce board?
- What sectors has the workforce board prioritized in their plan?
    - Have they already identified high-demand pathways?
    - Have they been implemented?
    - If not, why not?

Task #2: Assessing workforce development landscape in your county/region.

Building upon the work done in the first task, conduct the following activities in preparation of compiling a local taskforce centered on workforce development.

1. Using Table 1, identify the existing partners in your county/region who support rural low-income/under resourced workers.
2. Identify the appropriate contacts for each organization.
3. Using the Community Network analysis (found in the appendix), assess the partnership levels between each organization.
4. Review the results of the network analysis. Look for the strengths and weaknesses in the county/region's network related to workforce development.
    a. An alternative to the community network analysis is to convene the community partners and spend the first meeting discussing the WFD landscape. This information is likely best captured in a mind map format so that linkages can be captured across different partners. Recommended nodes would be adult education, career and technical education, workforce board, public workforce system and training.



5. Invite community partners to participate in a workforce development taskforce to review labor market information (LMI) data, identify next steps and work collaboratively to address workforce development roadblocks in the county/region.

Engage with Job Seekers/Low-Income Workers

Once you have gathered all the information regarding the workforce development landscape, now it is time to see if job seekers navigate the same landscape. To conduct this activity, assistance may be needed from community partners to identify where and how to engage with job seekers. Simple places would be via schools through the career and technical education program, adult education centers, community colleges or through existing informal connection points. The following activity is a facilitation exercise that gathers input from job seekers who can further inform where the watering holes are within the community as well as what barriers exist in hindering job searching or upward mobility within the chosen job market. Once you have completed the activity titled "What was your path", then you should have a good perspective of what the workforce development landscape looks like in your county/region and have some insight as to where barriers exist. This is helpful information as the task force begins identifying and crafting career pathways for job seekers.

What was your path?

Overview: This activity combines individual reflection, group discussion and facilitation to list the workforce development components that were used in the participant's lived experience. Viable pathways, along with gaps and constraints will be identified and connected.

Materials Needed: Butcher paper (or flip charts), markers, Post-It notes

Suggested Duration: 1 hour

Lesson Objectives: *The end of this lesson, participants will be able to:*

- Describe the steps taken during a successful and/or unsuccessful job search including (but not limited to) finding job openings, decision-making process when choosing to apply, application procedures, interviewing experience, post-interview follow-up, and on-boarding.
- Identify online and bricks-and-mortar sources of information used during a job search.
- Evaluate the information and services provides by governmental institutions/agencies, non-profits, faith-based and other entities that were consulted during a job search.
- Illustrate the job search pathways undertaken, the gaps encountered and the elements that contributed to success.

Activity:

1. Ask three people to tell "their story" regarding a successful or unsuccessful job search.
2. What are the similarities and differences in the stories?
3. Ask participants to share the assets (individual or community-level) that they have relied on in their job search. On a flip chart paper, record their responses. Repeat this activity by asking them to share the barriers and constraints that they have faced in their job search. Categories may include: childcare, clothing, transportation, access to technology, etc.). In other words, "What has made your job search/staying employed easier and/or more effective?" and "What has made your job search/staying employed more difficult?" How have you or might you overcome some of these difficulties?
4. Next, give each participant a marker and Post-It notes. Show the group the butcher paper outlining a grid. On this butcher paper (or flip chart paper in landscape orientation), create 3 rows and 8 columns. In the first row, label each column with a phase in the workforce development pathway:
   a. Self-evaluation (skills, education, experience, qualifications, etc.)
   b. Targeting (geography, industry sector, occupation, potential employers, etc.)
   c. Materials Preparation (cover letter, resume, portfolio, etc.)
   d. Opportunity Identification (Networking, web-based search, program-based, etc.)
   e. Application process / Initial Interviewing (phone or online screening calls)
   f. Formal Interview / Negotiating Offer
   g. Starting the Position / On-boarding
   h. Performance Evaluation / Professional Development / Promotion

5. Ask the group to fill out this grid with their experiences. They will write their answers on their post-it notes to place on the grid.
    a. First prompt: "As we have been discussing, think back to a time that you were searching for a job. This could be recently or some time ago. Preferably, a successful search. Using the Post It notes, write down individuals, institutions or groups – virtual or face-to-face - that you relied on to assist you with your search through each phase outlined below. This assistance may come in the form of research, preparation, execution or evaluation. Arrange by phase in the second row."
    b. Second prompt: "Now, in the third row, please add barriers and constraints that you have faced that have made each of these phases more difficult."
6. Have each participant share their answers. Allow for questions.
7. Summarize the results.
8. In terms of the assets, ask participants to discuss what assets have been the most effective.
9. In terms of the barriers, ask participants to discuss ways that they have successfully dealt with or overcome these issues. If the participants struggle to answer, ask the group to come up with some possible solutions.

Appendix: Additional Resources and Information Related to Key Partnerships

Work based training programs[19]

Common workforce development terms that refer to work based training of workers include the following:

1. On-the-job training (OTJ): Is a wage subsidy (typically at minimum wage) that covers 60-75% of an employee's wage while they are receiving training at a place of employment. These contracts usually cover between 6-9 months of training, and if the employer is satisfied with the worker's performance, is expected to hire them at the completion of the subsidized period. If the worker is not hired at training location, then sponsoring agency will attempt to place them in a regular job. Career support services (job coaching/counseling) is also typically provided to workers.
2. Apprenticeships: Commonly used within the trades, this training program is typically a partnership between businesses, unions and government that provides a structured training and work-based experience that leads to an industry specific certification or license. Apprenticeships are to be registered with the Department of Labor to ensure it meets the appropriate requirements. Workers are paid at an apprenticeship rate and upon completion, are hired by the employer at the normal wage.
3. Career pathways: Its purpose is to foster industry-driven training and alignment across workforce and education systems within a geographic region. This training is more focused on occupation and driven by employer demand. The pathways outline clear education and training steps workers can take to drive career advancement. Community partners work together to provide the necessary training and any wraparound services to support the worker.

To learn more about work-based training programs, consider reading a Brookings report[20] on how these programs can advance equity and advancement of young people. Additional adult training programs exist for specific segments of the workforce including: dislocated workers; Indian and Native American Programs; job corps; migrant and seasonal farmworkers; people with disabilities; safety and health; seniors; trade act programs; veterans; and youth programs. Information for each program can be found at the Department of Labor's website: https://www.dol.gov/general/topic/training/adulttraining

Case examples and best practices

Below are several case examples and best practices from across the nation.

Source: National Skills Coalition (has a lot of publications to peruse). Below are a few to review.

- **Partnering Up: How Industry Partnerships can bring work-based learning to scale:** https://www.nationalskillscoalition.org/wp-content/uploads/2020/12/Partnering-Up-Brief-FIN-LOW-RES.pdf
- **How adult education/CTE Collaborations benefit workers and businesses:** https://www.nationalskillscoalition.org/wp-content/uploads/2020/12/NSC-EL-PASO-Dec2018-Online-FIN.pdf
- **Powerful Partners: Businesses and Community Colleges:** https://www.nationalskillscoalition.org/wp-content/uploads/2020/12/Powerful-Partners-Businesses-and-Community-Colleges.pdf
- **Adult Education: A Crucial Foundation for Middle-Skill Jobs:** https://www.nationalskillscoalition.org/wp-content/uploads/2021/04/9.26-NSC-AdultEd-factsheet_final.pdf

Source: US Chamber Foundation

- **Building a More Inclusive Talent Marketplace: Increasing Opportunity Through Community and Business-Led initiatives:** https://www.uschamberfoundation.org/sites/default/files/T3_Network_OPReport_Sept20.pdf

19 Adult Education Programs: https://www.urban.org/sites/default/files/publication/93536/workforce-development-and-low-income-adults_and-youth.pdf
20 Brookings Report: https://www.brookings.edu/wp-content/uploads/2020/11/20201120_BrookingsMetro_Work-based-learning_Final_Report.pdf

Source: Career & Technical Education (CTE)

- Work Based Learning Tool Kit: https://cte.ed.gov/wbltoolkit/

Source: Youth.gov

- Programs and Initiatives Working to Reconnect Youth and Prevent Disconnection: https://youth.gov/youth-topics/opportunity-youth/programs-initiatives

Source: Workforce Strategies (United Way)

- Understanding ALICE in your workplace (Employer Strategies): https://workforcestrategies.unitedwaynnj.org/employer-strategies/index.php

Other resources

When conducting your environmental scan, you may want to use two additional resources to better understand the readiness of the community and/or to identify the network and its strength within the county/region. Those resources are listed below.

1. Community readiness assessment

In advance of tackling workforce development within a community or region, it helps to know whether the community is ready to address this issue and enact meaningful change. The leading resource on community readiness is from the Tri-Ethnic Center at Colorado State University.[21] The below community readiness assessment has been adapted from the process recommended from Colorado State University and relies on a Likert scale assessment. This assessment could be distributed at a large scale to assess the knowledge, leadership and community climate surrounding workforce development.

• • • Community Readiness Assessment • • •

For each statement below, indicate the extent to which that statement describes your county. Use the scale from 1 to 4 provided, where "1" indicates strong disagreement on the statement and a score of "4" indicates strong agreement with the statement. There is a "Don't Know" option if you are unsure how to measure the statement. This assessment will help determine how supportive and aware your community is towards workforce development.

A. Community knowledge of efforts	Don't Know	Strongly Disagree 1	2	3	Strongly Agree 4	Category Total
Residents recognize that available jobs exist in the county/region.						
Residents know of places where one can receive workforce development training.						
Residents know who among their community is working on providing education and skill development to adult workers.						
Residents are exposed to frequent communications on workforce development efforts in their county/region						
Residents are aware that continuous learning develops their workplace skills.						

Once you have responded to all of the statements, add the scores for each category and record it in the last column of the worksheet. Measuring each category allows your community to identify areas that need the most attention and ought to be addressed in the goalsetting exercise.

[21] Community Readiness: https://tec.colostate.edu/wp-content/uploads/2018/04/CR_Handbook_8-3-15.pdf

Community Readiness Assessment (cont.)

B. Leadership	Don't Know	Strongly Disagree 1	2	3	Strongly Agree 4	Category Total
The community's leadership structure is inclusive of resident ideas, feedback and involvement in community initiatives.						
Public recognition highlights available education and workforce training opportunities.						
Equal amount of workforce development attention and support is given to all businesses.						
Leaders have a coordinated effort in place to assist rural adult learners in finding and obtaining training or education needed to find work in the county/region.						
The community's leadership is aware of the importance of continuous learning for its residents as demonstrated through policies, practices and laws.						

C. Community Climate	Don't Know	Strongly Disagree 1	2	3	Strongly Agree 4	Category Total
Local organizations and groups are connected to one another, they trust one another and they seek opportunities for collaboration with each other.						
Programs and/or facilities, which focus on workforce development skill development, are accessible to businesses in the region.						
Specialized workforce development services (technical training, micro-enterprise education) exist in the region.						
A formalized process exists that supports adult learners in the region (i.e. No wrong door; single point location; network of service providers, funding, etc.)						
Residents and leaders care about the business climate in the county/region.						

Community Readiness Assessment – Analyzing Results

If the average score in any <u>one category</u> was:	Stages of Community Readiness	Description	Potential Goal
0	No awareness	Issue is not generally recognized by the community or leaders as a problem	Raise awareness of issue
0 - 0.49	Denial/resistance	At least some community members recognize that it is a problem, but there is little or no recognition that it might be a local problem	Raise awareness that the problem exists in the community
0.5 – 0.99	Vague awareness	Most feel that there is a local problem, but there is no immediate motivation to do anything about it	Raise awareness that the community can do something about the issue
1 – 1.49	Pre-planning	There is a clear recognition that something must be done, and there may even be a committee. However, efforts are not focused or detailed	Raise awareness with concrete ideas to address the issue
1.5 – 1.99	Preparation	Active leaders begin planning in earnest. Community offers modest support of efforts	Gather information to plan and improve programs to solve issue
2 – 2.49	Initiation	Enough information is available to justify efforts, and activities are underway	Provide community specific information
2.5 – 2.99	Stabilization	Activities are supported by administrators or community decision makers	Stabilize efforts/programs
3 – 3.49	Confirmation /Expansion	Standard efforts are in place. Community members feel comfortable using services to support expansions of efforts. Local data are regularly obtained	Expand and enhance services
3.5 - 4	High level of community ownership	Detailed and sophisticated knowledge exist about the issue. Effective evaluation is in place	Maintain momentum and continue growth

2. Network analysis (3 pages)

• • • Workforce Development Network Assessment • • •

Research shows that a well-connected and informed community is vital to the success of an initiative or major project. However, measuring the strength of a community's connections, or network, is difficult. As an Extension educator/agent, knowledge of this network will help you understand its strengths and challenges, and how this project can strengthen the existing network. To understand how to build and sustain successful networks for workforce development, and how these partnerships contribute in your community, complete the connection inventory below. The information you gather, whether from existing knowledge or through these connection assessments will help you have a 'picture' of the workforce development network within your county/region as well as the strength of those ties.

<u>Directions for Extension Educator/Agent:</u>

1. On the next page, identify organizations that are involved in the workforce development space in your county/region. Consider looking at the strawman guide of community partners to develop your list. Populate each line with one organization. Keep this list of organizations the same for all your assessments.

2. You are interested in learning how these organizations are connected to each other. Have each organization fill out their connection to the other organizations. This can be done on their own and sent back to you or via an interview process. If they identify other organizations that they are connected to in regards to workforce development, they can be added to their assessment. If there are organizations where there is no connection, just check "no connection".
3. Collect all the results. **<u>They are to be kept strictly confidential. Any sharing of results should only indicate overall connections between organizations, not the connection quality between two specific organizations.</u>**
4. Look at the responses. It may be helpful to develop a network analysis map (which can be done via paper and pencil or via computer (with some coding of responses). You are looking to see what organizations are connected to each other, level of formality and trust. The results can also show where the gaps lie within the county/region.

FIRST NAME: ____

LAST NAME: ____

ORGANIZATION: ____

ROLE: ____

DATE: ____

Connection Inventory Spreadsheet

	Description of Connection				**Type of Connection**	**Connection Quality**			
					CHOOSE ONE: **Formal**: Connection is between the overall organization (not tied to certain people). **Informal**: Connection would be lost if certain people left their organization.	Does this organization keep its word, do a good job, and respond to your organization and client needs?			
Organization Name	**No Connection** (We do not work with each other)	**Cooperative** (We know of each other and share information)	**Coordinative** (We work side-by-side on a few projects)	**Collaborative** (We rely on each other to achieve common goals)		**Little Trust** (poor connection)	**Some Trust** (fair connection)	**Good Trust** (solid connection)	**High Trust** (excellent connection)
	☐	☐	☐	☐	FORMAL OR INFORMAL	1	2	3	4
	☐	☐	☐	☐	FORMAL OR INFORMAL	1	2	3	4
	☐	☐	☐	☐	FORMAL OR INFORMAL	1	2	3	4
	☐	☐	☐	☐	FORMAL OR INFORMAL	1	2	3	4
	☐	☐	☐	☐	FORMAL OR INFORMAL	1	2	3	4
	☐	☐	☐	☐	FORMAL OR INFORMAL	1	2	3	4
	☐	☐	☐	☐	FORMAL OR INFORMAL	1	2	3	4
	☐	☐	☐	☐	FORMAL OR INFORMAL	1	2	3	4
	☐	☐	☐	☐	FORMAL OR INFORMAL	1	2	3	4
	☐	☐	☐	☐	FORMAL OR INFORMAL	1	2	3	4
	☐	☐	☐	☐	FORMAL OR INFORMAL	1	2	3	4
	☐	☐	☐	☐	FORMAL OR INFORMAL	1	2	3	4
	☐	☐	☐	☐	FORMAL OR INFORMAL	1	2	3	4

MODULE 2:

Identifying Workforce Assets and Needs

Labor Market Information Resource Guide

By Mark C. White, Ph.D., University of Illinois, Urbana-Champaign

Contents

Overview

When used properly, Labor Market Information (LMI) makes important contributions to regional and community workforce development efforts. LMI allows community leaders to make decisions based on facts rather than anecdotes, and this in turn can strengthen their workforce planning and program design efforts. Moreover, this information can help stakeholders craft the compelling and diverse messages needed to recruit supporters and encourage learners to participate in their initiatives.

Within the context of the broader FORWARD curriculum, the information presented below prepares extension educators to find and use the LMI necessary to create effective and impactful workforce initiatives and programs. In some instances, the extension educator may rely on a more experienced partner to gather and analyze these data and information. However, a greater knowledge and awareness about LMI can enable extension educators to ask better questions about the data and information they need for their community's workforce initiatives. Moreover, this foundational knowledge will also enable stakeholders to become better consumers of the information.

This module shows extension educators—and other regional and community leaders and actors—how to incorporate these data into their workforce development and career pathway efforts. It also lists publicly available data sources that can help answer key questions about a region's labor supply and demand. For each data variable, the material below identifies an appropriate data source, what that data covers, as well as key issues that data users must understand to use the data properly. These summaries also include links to each data source and an update schedule so users can use the most current data.

Learning Objectives

The information presented below will allow extension educators, and other regional leaders and stakeholders to:

- **Use labor market information to answer important questions about their community and/or region's workforce development needs, assets, and issues;**
- **Identify different sources of labor market information and the questions they answer;**
- **Incorporate qualitative data into their regional workforce analysis in order to offer a more complete picture of workforce needs and assets; and**
- **Understand how to use these data sources and information build consensus about the community and/or region's workforce priorities and inform their community's workforce strategies and programs.**

Introduction

Labor Market Information (LMI) is a critical tool for helping students, job seekers, employers and local leaders effectively navigate their local labor market. LMI is the body of information that deals with the functioning of labor markets and the determination of the supply of, and demand for, labor. It allows us to better understand employment and unemployment trends, average wages and income, population and demographic characteristics, the nature of economic activities and the types of workers needed to perform these activities, and how the demand for workers will change in the future.

There are several broad LMI user groups, and each group has distinct and specific LMI needs[1], including:

- **Students and jobseekers** use these data to find and select career and job opportunities;
- **Employers** use LMI to understand local prevailing wages for a given occupation;
- **Counselors** need this information to place students and workers in jobs and careers;
- **Education and training providers** use LMI to help determine the courses and programs they offer, and
- **Community leaders** use LMI to inform investment decisions regarding to workforce training and economic development investments.

Responding to this diversity of needs, therefore, requires a wide array of LMI resources. Several federal and state statistical agencies produce much of the publicly available LMI resources. The most prominent agencies include:

- **The U.S. Bureau of Labor Statistics (BLS):** BLS 'Counts the Jobs' and is the most prominent LMI provider. BLS produces national, state and sub-state employment and unemployment data, as well as employment and wage data for different industries and occupations. These data allow labor market actors to better understand their labor market and make critical decisions about their careers or their businesses.

- **State LMI agencies:** State LMI agencies[2] produce state and local labor market statistics in cooperation, and under the guidance of, BLS and the U.S. Employment and Training Administration (ETA). As a result, much of the data published by BLS is the same as what state LMI agencies publish. Since they have a more localized customer base, state LMI agencies also publish data that better meet the needs of their state and local customers (e.g., publishing data for locally-relevant geographies like workforce development board service areas). As part of their cooperative agreement with ETA, these agencies also develop short- and long-term employment projections.

- **The U.S. Census Bureau:** The Census Bureau is primarily known for 'Counting the People' through programs like the Decennial Census, Population and Housing Estimates, and the American Community Survey (ACS). These programs are critical for understanding regional growth or decline, as well as key population and labor force demographic characteristics. In addition to the population-oriented programs, the Census Bureau's economic programs also make important contributions with regards to county business patterns, exports, or business formations.

- **The U.S. Bureau of Economic Analysis (BEA):** BEA notably 'Counts the Money' and is a leading information source on Gross Domestic Product or Incomes. BEA's regional data can show, for instance, how wages have changed over time or how many jobs are wage and salary jobs and how many are sole proprietorships.

It is important to note that these agencies are not the only source of LMI. Other federal and state agencies publish useful and relevant data that can further understanding of state and local labor markets. For instance, the U.S. Department of Education and state departments of education often publish useful information on secondary and post-secondary degree completers which can shed light on the supply of workers in different fields.

Moreover, several data aggregators offer tools that make it easier for users to find the data necessary to answer their questions. Similarly, a number of proprietary data providers offer—for a fee—labor saving tools as well as modeled data

[1] LMI Institute. (2012) 'Labor Market Information Customers and Their Needs.' Arlington, VA: LMI Institute.
[2] The LMI Institute provides a directory of all state LMI Agencies: https://www.lmiontheweb.org/what-we-do/agency-directory/

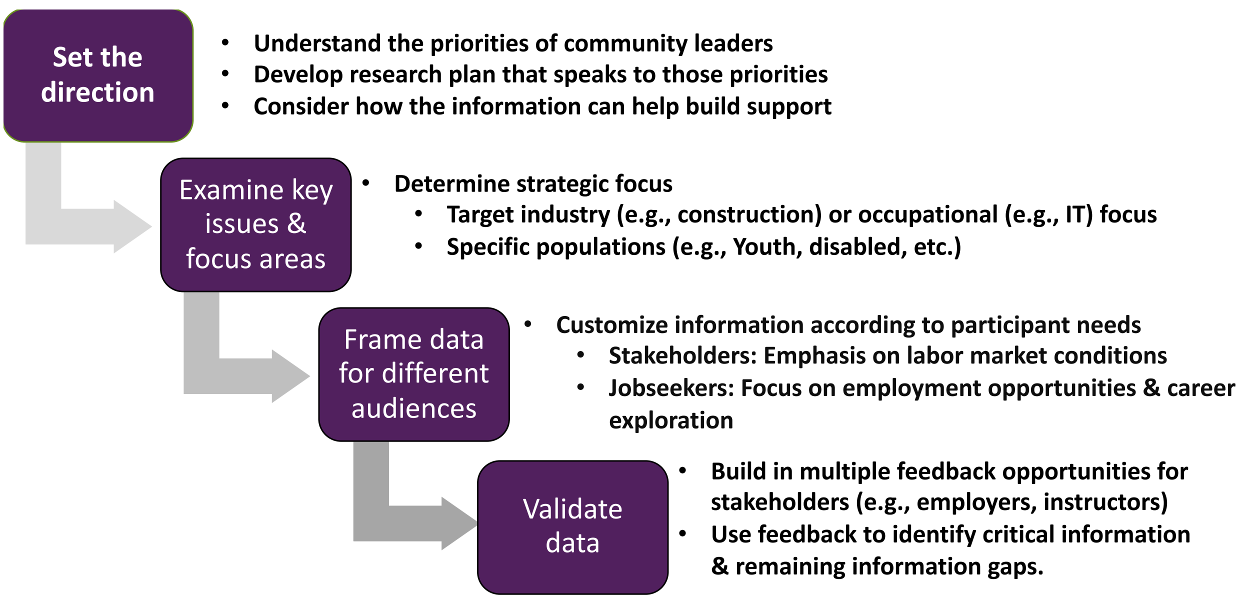
that allows for more detailed analysis than what is available through public sources. Also, qualitative data (e.g., focus groups, interviews, etc.) can supplement and complement these data; combined they can paint a more detailed and complete picture of regional labor markets and give workers, employers and community leaders a more solid understanding that can inform their workforce development efforts.

Assembling information to support community workforce initiatives

The information sources described in this module can enable regional and community stakeholders to paint a more complete picture of their local labor market's available opportunities. These data can, for instance, help map career pathways for in-demand occupations, identify 'entry points' for starting careers, and showcase the education and training requirements for each level. These pathways can also help education and training providers develop programs to facilitate educational "on ramps and off ramps". In short, they show the connected nature of different occupations and the range of career options available to students and workers.

However, establishing career pathways requires more than information. Rather, these programs also require collaborative action that draws on a variety of stakeholder groups. Weaving together and packaging the requisite information necessary to build this support requires several steps with each drawing upon, and catering to, different groups. This section describes the steps (highlighted in Figure 1) necessary to pull this information together so that it can effectively meet the needs of the initiative.

Figure 1. Assembling information to support community workforce initiatives



Set the direction

Before starting any career pathways initiative, program organizers must first understand the community's workforce priorities. For instance, community leaders may prefer to focus their efforts on jobs that pay good wages, or are in-demand across multiple industries, or create opportunities for disadvantaged populations. These priorities are key to shaping the research agenda, and for engaging and recruiting key stakeholders to participate in any community or regional effort.

Ideally, these priorities will reflect labor market challenges. For instance, if the region's population is shrinking and is characterized by significant out-migration (See Section 1b below), then workforce efforts might emphasize connecting younger workers to jobs and pathways that my help retain those regional workers. Similarly, if disadvantaged groups are underrepresented in certain activities (e.g., construction, manufacturing) then programs focused on diversity and inclusion might design ways to get workers from these communities into those fields (Sections 1e and 3b).

Labor Market Information can be used to articulate the scale and scope of these issues. They can be used to make compelling arguments for addressing these issues and therefore building a coalition of support to move the initiative forward. In some instances, state or regional actors may have gathered similar information or research and drawing on this pre-existing information can either save resources or speed up the process. For example, a state LMI agency may have already examined an industry's workforce needs in which case local actors just need to make sure they have enough local context to move forward. Similarly, organizers should also be aware of any similar programs already underway in the community, or underway in neighboring communities. This can help avoid redundancy, or perhaps presents opportunities to scale up existing efforts through greater collaboration.

Examine key issues and focus areas

Community initiatives are often most successful if they maintain a strategic focus rather than trying to be everything to everyone. This focus may reflect the community's priorities, but it might also simply come from the interests expressed by a group of engaged employers—a coalition of the willing—who have an interest and desire to take collective action to meet their specific workforce needs. Regardless, these focus areas may dictate the information needs necessary to support the initiative moving forward.

- Efforts that focus on *targeted industries* such as manufacturing, construction or healthcare will need to know the size and scale of the industry (Section 3a), the demographics of that industry (Section 3b), as well as an understanding of the staffing patterns within that industry to identify prominent occupations (Section 4b) and what is required of workers in those occupations. Additionally, employer input (Section 6a) will be necessary to better understand unique local needs as well as to help identify any mission critical occupations.
- Efforts placed on *selected occupational groups or fields* (e.g., IT, maintenance) will need information about occupational requirements (Section 4d) and wages (Section 4a), which industries and employers are most likely to employ these types of workers (Section 4b), and which local education and training providers prepare people to enter these fields (Section 5a).
- Other efforts may focus on *specific populations*, such as disadvantaged, underrepresented, disabled or youth workers. In these instances, it is important to fully understand the size of the group and how and in what ways are they currently participating in the local labor force (Section 1c to 1g). Industry demographics (Section 3b) can help identify where different types of workers—be they of a specific age demographic, gender, or race and ethnicity— are currently working and where they might be underrepresented.

Different Types of Community Workforce Priorities

- **Good paying jobs** are those that pay above the median wage, or a family-sustaining wage; if not placing people in these jobs, these efforts may look to start people in career pathways that relatively quickly can lead them to these good paying jobs.
- **Middle-skill jobs** typically require more than high school, less than a 4-year degree, and some OJT. These jobs are commonly found in sectors such as manufacturing, construction, or healthcare.
- **Pathway jobs** are steppingstones to other higher-paying jobs Identify jobs, provided workers access incremental education and training.
- **High demand jobs** are those that have grown, and are projected to grow, in the future.
- **Cross-cutting occupations** are those that are in-demand across multiple industries. These might include maintenance and repair or information technology occupations.
- **Uniquely competitive occupations** are those that are relatively concentrated in your region and critical to activities that provide the region with a unique competitive advantage (e.g., Cybersecurity in Northern Virginia, Furniture in Western North Carolina).
- **Diversity and inclusion efforts** may involve either supporting the types of jobs that employ people of different ages, genders, races, and ethnicities, or placing people in jobs where they may be relatively underrepresented.

Combined, this information can inform the design and direction of efforts to create employment and career pathways programs. It not only helps to identify potential opportunities, but also highlights the types of employers that organizers must engage to support the effort. For instance, if the initiative focuses on increasing youth employment opportunities and the data show that most workers aged 14-18 work in retail and food service then it might merit engaging employers from those sectors.

Frame data for different audiences

Once the relevant information has been gathered to support the initiative, it is important to remember that information needs vary by the audience. As illustrated in Figure 2, the needs of community stakeholders (e.g., extension educators, economic and workforce development professionals, community leaders) and jobseekers (e.g., students, dislocated workers) differ. For instance, many stakeholders require a wider array of labor market information that considers both issues of labor supply and labor demand. Conversely, jobseekers will want information that pertains primarily to what will help them find work or explore careers.

This distinction should also be clear when presenting the information to these different groups. For stakeholder groups, the LMI can increase their understanding of regional workforce opportunities and challenges or help them tell a compelling story to build support (financial or otherwise) for their efforts. This can be accomplished through reports, presentations, or targeted infographics. Jobseekers likely need more targeted information that lay out career pathways, set expectations about the wages and demand for potential jobs, or at the very least direct them toward resources that can aid their job search and career exploration.

Figure 2: Data relevance by user group

Data Type	Data Element	Extension Educator	WF-ED Professional	Community Leader	Educators & Counselors	Employers	Jobseekers
Population Trends & Characteristics	1a. Population trends	Use often	Use often	Use often	Use sometimes	Use sometimes	Use rarely
	1b. Components of population change	Use often	Use often	Use often	Use sometimes	Use sometimes	Use rarely
	1c. Age characteristics	Use often	Use often	Use often	Use sometimes	Use sometimes	Use rarely
	1d. Gender composition	Use often	Use often	Use often	Use rarely	Use sometimes	Use rarely
	1e. Racial and ethnic diversity	Use often	Use often	Use often	Use rarely	Use sometimes	Use rarely
	1f. Per capita income	Use often	Use often	Use often	Use rarely	Use sometimes	Use rarely
	1g. Poverty	Use often	Use often	Use often	Use rarely	Use rarely	Use rarely
Labor Force Trends & Characteristics	2a. Labor force size	Use often	Use often	Use often	Use rarely	Use sometimes	Use rarely
	2b. Unemployment	Use often	Use often	Use often	Use rarely	Use sometimes	Use rarely
	2c. Labor force participation rate	Use often	Use often	Use often	Use rarely	Use rarely	Use rarely
	2d. Educational attainment	Use often	Use often	Use often	Use sometimes	Use sometimes	Use rarely
	2e. Commuting patterns	Use often	Use often	Use often	Use sometimes	Use often	Use sometimes
Employment Drivers	3a. Current industry demand	Use often	Use often	Use sometimes	Use often	Use often	Use often
	3b. Industry demographics	Use often	Use often	Use sometimes	Use rarely	Use often	Use rarely
	3c. Measuring entrepreneurship	Use often	Use often	Use sometimes	Use rarely	Use rarely	Use rarely
Occupational Demand	4a. Occupational employment and wages	Use often	Use often	Use often	Use often	Use often	Use often
	4b. Industry staffing patterns	Use often	Use often	Use rarely	Use sometimes	Use sometimes	Use sometimes
	4c. Occupational projections	Use often	Use often	Use often	Use often	Use sometimes	Use often
	4d. Occupational requirements (O*Net)	Use often	Use often	Use rarely	Use often	Use often	Use often
	4e. Online job postings	Use often	Use often	Use often	Use often	Use often	Use often
Filling Needs	5a. Post-secondary completers	Use often	Use often	Use often	Use often	Use sometimes	Use often
	5b. Professional credentials	Use often	Use often	Use rarely	Use often	Use sometimes	Use often
Other sources	6a. Focus groups and interviews	Use often	Use often	Use rarely	Use rarely	Use rarely	Use rarely
	6b. Other data resources	Use often	Use often	Use sometimes	Use rarely	Use rarely	Use rarely

Use often
Use sometimes
Use rarely

Validate data with appropriate stakeholders

Throughout the process, program organizers should build in opportunities to validate all this information with employers and relevant training providers (i.e., community college instructors) to make sure the information developed reflects the on-the-ground reality in their region. This process is also important for determining which information is critical for advancing the effort and identifying any remaining information gaps. Throughout the process, always build in opportunities for new information and feedback loops. This feedback can strengthen these initiatives and shape how they need to evolve over time. Over the medium- and longer-term the challenges that regions and community face change. Establishing these feedback loops, can allow program organizers to adapt to changing labor market challenges or shifting regional concerns and priorities.

About this guide

This guide provides a resource to help find the information needed to support this process, and in doing so strengthen community efforts to address its pressing workforce challenges. These efforts — funded by the Ascendium Education Group and managed by the Association of Public and Land-Grant Universities (APLU) and the North Central Regional Center for Rural Development at Purdue University — will create a rural workforce engagement model for Cooperative Extension to implement. As a result, extension educators will work with their communities to design rural career pathways that meet both their communities' specific needs, and particularly the needs of rural low-income and non-traditional learners. The data resources highlighted here are critical for informing the design and implementation of those efforts.

These workforce efforts typically involve a wide variety of community members — including community leaders (be it extension educators, workforce or economic development leaders, counselors, educators (secondary or post-secondary), employers and jobseekers (both incumbent/displaced or students)—all of which play different roles. Each group needs LMI to inform their efforts to create community prosperity, find the workers they need, or select the right job or plan for the right career. Given their various roles, these different groups have different information needs but they all must have a grounded and solid understanding of the regional workforce.

Not all of the information presented in this guide will be directly relevant to every reader, either in their day-to-day job or in their participation in regional workforce initiatives. Figure 2 shows the data elements covered in this manual, and the frequency with which different user groups should look to use these data. For instance, community leaders who need to understand their local labor market conditions may focus primarily on sections 1 and 2. By contrast, readers assembling information to support jobseekers (or are jobseekers themselves) may prefer to jump ahead to sections 3 and 4 that highlight data resources that aid in finding employment opportunities and undertaking career exploration. This guide, therefore, represents a resource guide that explains and provides links to information that can help users answer their key labor market questions. It contains three broad sections:

- Resources for understand labor supply
- Resources for identifying labor demand
- Assembling information to support community workforce initiatives

For each labor supply and demand variable, we highlight why that variable matters and labor market questions it can help answer. We also identify who produces these data and any key considerations for which users must be aware of when using them. As noted earlier, these data will not answer every question but will nevertheless help community leaders ask better questions. As a result, this guide also discusses how more qualitative methods (e.g., focus groups, interviews) can be used to deepen understanding about regional workforce dynamics.

Although primarily intended as a resource for extension educators, this guide can benefit anyone looking to build their data literacy. In doing so, they can develop more strategic, and data-driven programs and initiatives. Recognizing that many organizations face resource constraints, particularly in rural areas, this guide emphasizes free, publicly available data sources over more expensive proprietary data sources. Nevertheless, publicly available data sources can provide sufficient information to allow users to ask better questions and identify areas that require additional research.

In addition to this written guide, we have also produced a PowerPoint file summarizing this information. This file also includes sample charts that show how these data might be used to convey this information. Similarly, we have also developed an Excel file containing the actual data and associated charts. This Excel file includes examples from regions across the nation, and users can use this file as a resource for pulling together data and charts for their own region. The section numbers used are consistent so as to connect the materials in this guide with the PowerPoint and Excel workbook.

Sources of Labor Supply

Sections 1 and 2 below focus on data sources that will allow readers to better understand the population and labor force trends and characteristics that shape the supply of labor in their region or community. Broader demographic factors can dictate the availability of labor within a given place. Finding workers is likely easier in places with growing populations and a relatively high proportion of prime working age residents. The regional and/or organizational goals will dictate the relevance of each of these variables, but these data can effectively illustrate some of the labor force challenges and/or opportunities that regions face.

1. Population trends and characteristics

Section 1 will introduce you to resources that will help you answer questions such as:

- How do demographic trends influence the regional labor supply?
- What does my potential labor pool look like?
- How does the regional standard of living compare to other regions, or the nation?

Population trends show whether regions are on a trajectory of growth or decline. At the most basic level, these trends reflect the overall size of the area labor force. Growing places tend to have more workers and more need for workers, while declining places may have more difficulty meeting their labor force needs. Moreover, what the population looks like with regards to age and diversity can dictate the regional availability of workers. For instance, places with a large proportion of prime age workers are likely to have a larger labor pool from which to pull. Similarly, relative measures of regional wealth (e.g., per capita income, poverty) can provide a sense of how well the economy works, in aggregate, for the region's population.

1a. Population change

The pace at which places gain or lose population can tell a great deal about their overall economic health. Counties or regions that grow faster than their respective state or the nation likely generate sufficient economic opportunities to attract new residents and retain existing residents. Growing populations also lead to more potential customers and workers for area businesses, and expanding tax revenues to support public services and local schools. Conversely, places with shrinking populations are more apt to struggle economically, as workers may pursue employment opportunities elsewhere and diminished tax bases may disrupt public services and raise the threat of consolidated schools.

Data from the U.S. Census Bureau's Population Estimates Program can answer questions about the direction and pace of regional population change. This program annually estimates the population for states, counties, and incorporated places (e.g., cities, towns, boroughs, etc.).[3] Using information related to births, deaths, federal tax returns, Medicare enrollment, and immigration, these estimates provide an annual update to the decennial census' base counts. They cover population changes that occur between July 1 and June 30—the 2021[4] vintage estimates the population change between July 1, 2020 and June 30, 2021. These data are crucial for understanding the scale and pace of population change. Moreover, they also play a key role in many federal funding allocation decisions.

Source: U.S. Census Bureau, Population Estimates Program

Update schedule: These data are released annually, typically during the second quarter of the year. The U.S. Census Bureau provides a release schedule for the exact release date.

[3] Although the estimates are not a head count like the Decennial Census, they are produced annually and allow us to see intercensal trends and the components of population change. They use the Decennial Census as benchmark, so the 2010 and 2020 estimates are very close to the Census population counts.

[4] With each annual release, the Population Estimates Program revises and updates the entire time series back to the previous Decennial Census.

1b. Components of population change

Aggregate population trends tell part of the story, but several underlying factors can further explain population growth or decline. At the most basic level, two primary factors—migration and natural change—dictate the trajectory of an area's population.

- **Migration (domestic and international):** Positive net migration (i.e., more people moving-in than moving-out) shows that places can attract new residents by creating attractive employment opportunities and/or offering an appealing quality of life. Net out-migration may result from an insufficient number of high-quality job opportunities to attract new residents and/or retain existing workers and residents.[5]
- **Natural Change (births minus deaths):** An area's age profile often determines natural change. For instance, places with a relatively greater share of people in their prime child-bearing years will likely experience greater natural increase than places with relatively older populations. Places with negative natural change often have relatively older populations. Other factors that may influence natural change include life expectancy and access to healthcare, amenities for retirees, and regional cost of living, among other factors.

Once again, the U.S. Census Bureau's annual population estimates show the components of population change at the state and county level. Examining these trends over time can illustrate why a region's population may be growing or declining. Inadequate job opportunities may lead to net out-migration, likely of prime working age adults, which in turn can lead to a disproportionately older population. By contrast, places with an abundance of employment opportunities may experience net in-migration of younger workers and people likely to have families. In these instances, a place may grow through both migration and natural increase.

Source: U.S. Census Bureau, Population Estimates Program

Update schedule: These data are released annually, typically during the second quarter of the year. The U.S. Census Bureau provides a release schedule for the exact release date.

1c. Age characteristics

There has long been a recognition that the aging of the baby boom generation will create significant workforce challenges. As the baby boom generation is now retiring and the millennial generation is fully in the labor force, many places experience difficulty finding workers in part because there are fewer workers to find. The age of a region's population, therefore, is a critical element for understanding the overall labor supply.

Examining the relative size of several key age cohorts can help show the potential number of workers. For instance, if a region has a large share of prime working age people (ages 25 to 54), relative to the state or the nation, then it likely has a strong pool of potential workers from which to pull. Similarly, if there are relatively large share of workers aged 25 to 34 than the region is probably an attractive place for younger people to live and work.

By contrast, regions with disproportionately older populations may face some workforce challenges, as there may not be enough people of working age to meet labor demand of area employers. Moreover, older residents are likely not starting families so there will not be enough young workers to replace those that are retiring. Comparing the share of the population aged 55 to 64 (pre-retirees) to those aged 15 to 24 (new workers), may provide some indication about a region's ability to replace the workers aging out of the workforce. This lack

[5] These data only speak to the volume of migration, not the direction. There are a variety of sources that address the directionality of migration flows. For instance, the U.S. Census Bureau's Flows Mapper (based on an American Community Survey question about where residents lived in the previous year) highlights some of these trends. Similarly, the IRS publishes migration data showing where people filed one year and where they filed the next. The U.S. Postal Service has data showing change of address information, although access to that data requires a Freedom of Information Act (FOIA) request. Several national moving companies (e.g., United Van Lines) publish customer surveys that show where and why their customers were moving, although these surveys often do not provide much geographic detail beyond the state level.

of working aged residents may be most pronounced in places that are able to attract retirees, where there are growing populations but not necessarily a growing labor force.

Information about population ages are available through the U.S. Census Bureau's population estimates and the American Community Survey (ACS). The annual population estimates provides these data—by 5-year age cohorts—annually as detailed as the county level. The American Community Survey's 5-year estimates provide this information at a more detailed geographic level and several additional age cohorts (e.g., Under 18, 18 to 24, 62 and older). However it is important to remember that the ACS is survey data, so users must be mindful of the margins of error particularly when working in relative smaller geographies (e.g., census tracts) or more rural areas. If the currency of the data is a more pressing factor, the ACS also provides 1-year estimates for larger geographies. Figure 3 describes the best uses for the 1- and 5-year estimates.

Source: U.S. Census Bureau, Population Estimates Program; The ACS subject table on Age and Sex (S0101) is available through data.census.gov.

Update schedule: The estimates data are released annually, subsequent to the population estimates discussed above. The U.S. Census Bureau provides a release schedule for the exact release date. The Census Bureau typically releases its 5-year ACS estimates in December.

Figure 3: Which ACS Estimates should you use?

<table>
<tr><th>1-year estimates</th><th>5-year estimates</th></tr>
<tr><td>• 12 months of collected data
• Data for areas with populations of 65,000+
• Smallest sample size
• Less reliable than the 5-year
• Most current data</td><td>• 60 months of collected data
• Data for all areas
• Largest sample size
• Most reliable
• Least current data</td></tr>
<tr><th>Best used when:</th><th>Best used when:</th></tr>
<tr><td>• Currency is more important than precision
• Analyzing large populations</td><td>• Precisions is more important than currency
• Analyzing small populations
• Examining tracts and other smaller geographies because 1-year estimates are not available</td></tr>
<tr><td colspan="2">When using ACS data:
• Be mindful of the margins of error, which are particularly relevant when analyzing smaller populations.
• Remain consistent when making comparisons (e.g., compare 5-year estimates to 5-year estimates, not 5-year to 1-year.</td></tr>
</table>

Source: https://www.census.gov/programs-surveys/acs/guidance/estimates.html

1d. Gender composition

In most instances, places have relatively balanced populations in terms of gender. Where there is a gender imbalance, there may be something about the economy and the available employment opportunities causing this imbalance. For instance, there is a disproportionately large number of men in parts of Alaska or Williams County, ND which have large extractive economies. In places where there may be a relatively larger share of women, the availability of childcare options may influence that ability of working age women to fully participate in the workforce.

Both the U.S. Census Bureau's population estimates and the ACS provide data on gender breakdown of the population. The annual population estimates provides these data to the county level, whereas the ACS' 5-year estimates provides data at more detailed geographies (e.g., census tracts). As always, ACS data users must be mindful of margins of error when using data that cover small geographies or rural locations.

Source: U.S. Census Bureau, Population Estimates Program; The ACS subject table on Age and Sex is available through data.census.gov.

Update schedule: The estimates data are released annually, subsequent to the population estimates discussed above. The U.S. Census Bureau provides a release schedule for the exact release date. The Census Bureau typically releases its 5-year ACS estimates in December.

1e. Racial and ethnic diversity

A region's racial and ethnic composition can influence work place strategies and cultures. These data help quantify the region's racial and ethnic composition and how it is changing over time. Comparisons with other regions, the state, and the nation, can further illustrate the region's relative diversity. Rapid growth rates of individual ethnicities can significantly change a region's racial or ethnic composition.

As ethnicities change, there may be an additional need to meet the needs of residents who do not speak English as their first language. Specifically, communication issues between supervisors and workers may arise between those speaking different languages. Additionally, developing training and education that is culturally and language appropriate may become a more important priority for the region's employers and training providers. Garnering broad community support for any kind of regional initiative also requires representative participation. Therefore, for any regional initiative to succeed, the people leading and participating in that initiative should reflect the community they serve.

As with age and gender, the U.S. Census Bureau's population estimates and the American Community Survey (ACS) provide data on the population's racial and ethnic composition. The population estimates provide these data at the county level, and ACS' 5-year estimates provides data at even more detailed geographies.

Source: U.S. Census Bureau, Population Estimates Program; The ACS subject tables on Race and Ethnicity are available through data.census.gov.

Update schedule: The estimates data are released annually, subsequent to the population estimates discussed above. The U.S. Census Bureau provides a release schedule for the exact release date. The Census Bureau typically releases its 5-year ACS estimates in December.

1f. Per capita income

Per Capita Income (PCI) provides an aggregate measure of the region's standard of living. It is derived by dividing the region's total personal income by the total number of residents. These measures make possible regional comparisons of wealth to the nation, state, or other regions. Changes in PCI can show whether a regional economy is growing or shrinking over time.[6] Rising PCI often reflect a strengthening economy, particularly if they are rising faster than the state or nation. Increased regional wealth means that there is more money available to be spent on retail, local services, or housing, which in turn can lead to more jobs and an expanded tax base through increased sales or property tax receipts. It should be noted that these measures do not speak to the region's income distribution. Personal income includes all forms of income including: wages and salaries, proprietor incomes, ownership of financial assets, and government transfer payments, among others. The U.S. Bureau of Economic Analysis (BEA) produces data on PCI for counties, states, and the nation. Their estimates measure pre-tax income.

[6] When looking at PCI over time, it is vital to remember to use 'constant' or 'real' dollars where values have been adjusted for inflation. The U.S. Bureau of Labor Statistics provides an easy to use inflation calculator. Additionally, the U.S. Bureau of Economic Analysis often publishes some of their data-sets using 'chained' dollars, which are inflation-adjusted values set to one year (e.g. 2012 dollars).

It is important to note that PCI is not the only available measure of regional wealth. The U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program provides aggregate measures of Median Household Income for counties, states, and the nation. MHI estimates often can be more helpful in evaluating a region's economic health, as it is less affected by outlying incomes (e.g., several individuals with very large incomes). Additionally, the American Community Survey also provides estimates by different characteristics such as race and ethnicity, and family type (e.g. children or no children) among others.

Source: U.S. Bureau of Economic Analysis, Regional Economic Accounts; U.S. Census Bureau, Small Area Income and Poverty Estimates; The ACS subject tables on household income are available through data.census.gov.

Update schedule: BEA releases its annual Local Area Personal Income data in November; The Census Bureau typically releases its 5-year ACS estimates in December.

1g. Poverty

Regional poverty rates reflect how well the economy works for the entire population. In regions with high poverty rates, many residents are unable to meet their basic needs. In such instances, this may mean that there is an insufficient number of employment opportunities for some populations, or large segments of the population are — for a wide array of reasons — unable to take advantage of the available opportunities. Poverty is often structural in nature, so over time high poverty places tend to remain high poverty places. Poverty rates provides some indication about the extent to which communities require various public assistance programs, or their eligibility for state and federal assistance that may support their workforce training and development activities.

The U.S. Census Bureau's SAIPE program provides annual model-based poverty estimates for states, counties and school districts. In addition to estimating the number and share of the population living in poverty, the SAIPE program also provides estimates for median household income, and poverty estimates for children (ages 0-17 and ages 5-17 in families). Poverty estimates for children aged 0-4 are available at the state and national level. Below the county level, the SAIPE program also estimates the number of relevant children (aged 5 to 17 years old) in poverty who are related to the householder for every school district in the country.

Source: U.S. Census Bureau, Small Area Income and Poverty Estimates.

Update schedule: Annual estimates are released in December. For instance, The Census Bureau plans to release the 2021 SAIPE data in December 2022.

2. Labor force trends and characteristics

Broad population trends have long-term implications for the regional workforce, and allow us to get a sense of the potential workforce and how these trends are changing over time. Trends such as labor force growth can dictate the overall availability of workers, the unemployment rate provides a sense of the number of people looking, but unable to find work, and labor force participation rates indicate the extent to which adults are active in the labor force.

Section 2 will introduce you to resources that will help you answer questions such as:

- How many potential workers are there overall?
- How many workers are able to find work?
- How well educated is the workforce?
- Where do people work relative to where they live, or how far are people willing to go to find work?

In addition to the general availability of workers, additional factors such as educational attainment speak to the relative capacity of the regional workforce. Similarly, commuting patterns illustrate how wide a net employers might cast to meet their workforce needs. Combined, these trends can help paint a broad picture of the regional labor market's overall health.

2a. Labor force size

The U.S. Bureau of Labor Statistics defines the labor force as "all people age 16 and older who are classified as either employed and unemployed."[7] This includes those with full-time jobs, part-time jobs, and the unemployed who are actively looking for a job. The labor force does not include full-time students who do not hold a job, stay at home parents, or discouraged workers who have stopped looking for work. There are several different ways to use these data to gauge the relative strength of the regional labor force. Although affected by seasonality, comparing the labor force to the same month in the prior year shows labor force performance on a year to year basis and the extent to which is growing or shrinking. Additionally, comparing regional labor force growth to that of neighboring, similar or competing labor markets can highlight its relative strength.

The Bureau of Labor Statistics (BLS) Local Area Unemployment Statistics produces the country's official monthly estimates of employment and unemployment for subnational areas (e.g., state, county, etc.).[8] Much like the Current Population Survey, LAUS uses a *'household'* concept of employment in that it counts people based on where they live.[9] The American Community Survey also published data pertaining to labor force characteristics. LAUS data are timelier since they are produced monthly, while the ACS data allows for more breakdowns by social, economic or demographic characteristics. The methods in producing these data differ, so that creates somewhat different responses.[10]

Source: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics; The ACS subject table on labor force and labor force participation is available through data.census.gov.

Update schedule: BLS publishes LAUS statewide estimates roughly 3 weeks after the reference month, and sub-state data 4–5 weeks following the reference month. The Census Bureau typically releases its 5-year ACS estimates in December.

2b. Unemployment

Unemployment is another common measure of labor market strength. Workers in regions with higher unemployment rates may experience greater difficulty in finding work, as employment opportunities may be more limited in number. In places with lower unemployment rates, workers who want to work are more likely able to find work. It is important to understand what the unemployment rate measures and does not measure. The unemployment rate is the percentage of people without work, but who are currently looking for work. Those who are not employed but not currently seeking paid work (such as homemakers and discouraged workers) are not considered unemployed, and therefore not included in the unemployment rate.

The underlying data were drawn from the BLS LAUS program which produces the monthly unemployment rate.[11] It measures the total unemployed as a percent of the civilian workforce. It basically includes all people who either have work, or are actively seeking work. It does not include discouraged workers who have fallen out of the workforce. It is important to note that this measure of unemployment rates also does not include longer-term unemployed (or discouraged workers) that have fallen out of the labor market. As with the labor force data mentioned above, these unemployment data use the household definition of employment.

[7] The U.S. Bureau of Labor Statistics' definition of Labor Force: https://www.bls.gov/cps/definitions.htm#lfconcepts

[8] The national estimates are produced through the Current Population Survey. The CPS is a household survey conducted by the U.S. Census Bureau for BLS.

[9] The 'Establishment' concept of employment counts people where they work. Other measures of employment, such as the Quarterly Census of Employment and Wages, are based on place of work.

[10] For more information about the differences between LAUS and ACS, see: https://www.bls.gov/lau/acsqa.htm

[11] The most commonly reported measure of unemployment is the U3, which measures the number of unemployed people in the labor market who are actively seeking employment. There are other, broader measures of unemployment. For instance, the U-6 is a broader measure of unemployment that includes discouraged workers and includes some workers working part time for economic reasons (working periodically but who cannot find full-time work).These data, however, are not available at the sub-state level. More information is available from the U.S. Bureau of Labor Statistics.

When examined over time and compared to other places, the unemployment rate can indicate the extent to which your region's unemployment rate[12] follow or diverge from broader state and national economic cycles. Therefore, the national and state unemployment rates can provide useful benchmarks when presenting these data. Looking at unemployment as a trend, rather than a point in time, can also help illustrate the region's economic trajectory. It is important to note that at the sub-state level, the unemployment data provided by BLS LAUS are not seasonally adjusted. As a result, it is important to understand the seasonality of employment, which is why month over year change (e.g., September 2022 v. September 2021) are often more appropriate than month to month changes.

Source: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics

Update schedule: These data are updated monthly.

2c. Labor force participation

The labor force participation rate shows the percentage of working-age adults (usually defined at those 16 years and over) participating in the labor force. Those who are currently employed and those who are unemployed, but actively seeking work are considered part of the labor force. These data help gauge the region's capacity to meet the demand for labor. Low labor force participation rates may indicate that the region may experience difficulty meeting its overall demand for labor, or that an insufficient number of work opportunities causes large numbers of discouraged workers to fall out of the workforce and stop actively looking for work. Additionally, several demographic trends can influence labor force participation. For instance, younger, more educated, and more expensive places tend to have higher labor force participation rates. By contrast, places with relatively older populations have lower labor force participation.

Nationally, the labor force participation rate has grown dramatically over the past 50 years, as large numbers of women entered the workforce. However, labor force participation has started to decline as the population ages and baby boomers leave the workforce. Other factors such as whether or not young adults pursue post-secondary education or enter the workforce, parents electing to work or stay home and raise children, or the participation in the informal economy, can also influence the overall labor force participation rate.[13]

ACS data on labor force characteristics includes information about labor force participation. These data not only show the region's overall labor force participation rate, but also the rates for key demographic groups (e.g., women, youth, etc.). ACS data users must be mindful of margins of error when using data that cover small geographies or rural locations. This is especially true when focusing on specific demographic groups (e.g., people aged 16 to 19 compared to the entire population), as the smaller the group the larger the margins of error.

Source: U.S. Census Bureau, American Community Survey. The ACS subject table on labor force and labor force participation is available through data.census.gov.

Update schedule: The 5-year ACS estimates are released annually in December.

2d. Educational attainment

Educational attainment data show the relative intellectual capacity of the region's adult population, and therefore can be considered a proxy for workforce quality. The educational attainment data presented here show the highest level of education completed by adults aged 25 and older (educational attainment is more fluid

[12] Unless your region is a predefined region (e.g., a metropolitan statistical area), you will have to calculate your own regional unemployment rate. If, for instance, you are working with a 4-county region and want to calculate the regional unemployment rate, then you would need to sum the total number of unemployed people in the four counties and divide by the total number of people in the four county labor force.

[13] It should be noted that the incarcerated population also counts in the total population number, so rural counties with a substantial institutionalized population are likely to have significantly lower labor force participation rates.

for people younger than 25). As with other measures, it is important to benchmark these data to the state or nation. Answering the 'compared to what?' questions can provide vital context and show whether the regional educational attainment rate is above or below average.

These data can help regional stakeholders prioritize their workforce development efforts. Areas with relatively low levels of educational attainment (e.g., disproportionate shares of adults with High School degrees or less) can strengthen the existing talent base by creating more opportunities to pursue additional education. This may involve creating programs to encourage people without high school degrees to complete GEDs, or promoting dual credit programs that make it easier for high school graduates to complete 2-year degrees or certificates, or connecting community college graduates to 4-years institutions. Additionally, the region might focus their economic development activities around creating more knowledge-intensive jobs as a way to attract more highly educated residents.

Much like the labor force participation indicators described above, educational attainment indicators also utilize the U.S. Census Bureau's American Community Survey. Benchmarking these data to other places can help set reasonable goals. Also, comparing the educational attainment rates of different populations can also inform any strategies that focus their efforts on the groups with the greatest needs.

Source: U.S. Census Bureau, American Community Survey. The ACS subject table educational attainments are available through data.census.gov.

Update schedule: The 5-year ACS estimates are typically released annually in December.

2e. Commuting patterns

The distance people are willing to travel to work can greatly influence the overall supply of available workers. Generally speaking, people will travel farther distances and endure longer commutes for higher quality jobs or if there are limited local employment opportunities. If a region generates a lot of quality jobs, it will attract more in-commuters, but a lack of jobs will lead people to travel outside the community for work. Regions that attract more workers than they lose are job centers, while the opposite is true for bedroom communities. Moreover, job centers are more likely to have activities that contribute to the region's overall economic base, while employment opportunities in bedroom communities are more apt to be locally-serving.

Commuting data can show the extent to which workers work and live in the same region. These data can help show the extent to which a region can generate sufficient job opportunities for its resident population or how those communities are functionally connected to neighboring areas. In a sense, commuting regions can show where there is a 'natural' economic region. This information, in turn, can inform workforce planning efforts by highlighting where there might be potential partners experiencing similar workforce concerns.

Commuting data are available through the Longitudinal Employer-Household Dynamics (LEHD) program, which is a partnership of the U.S. Census Bureau and state Labor Market Information (LMI) agencies.[14] Specifically, these data are available through the LEHD program's OnTheMap application. This application uses both firm- and person-level data, so that it can link workers to their employers. Based on where workers live or work, this tool allows users to consider the distance[15] and direction that workers travel, the commuting flows between places, and the overall inflow and outflow in a given areas.

These most recent available data are for 2019 (in September 2022). However, at the regional level the extent to which workers work and live in the same region tends to be relatively stable over time. Unless you are analyzing an extremely fast-changing region, the most recently available data should provide the necessary information.

[14] To identify your state's LMI agency, see here: https://www.bls.gov/bls/ofolist.htm

[15] Depending on the local context, some circumspect should be used when considering the share of workers traveling more than 50 miles. Since these data match home addresses to establishment addresses, it may include for instance, telecommuters or university students who work where they go to school but maintain their home address as their permanent address.

Source: U.S. Census Bureau, OnTheMap

Update schedule: These data are released on a less regular basis than other Census products. Notification of impending releases will be provided on the LEHD announcement page.

Telling the story of your available workforce

These data are important for setting expectations, understanding broader challenges and issues, gauging the overall health of the region and its labor force. Some of these data will be more effective and compelling in helping you tell your region's story, identifying key challenges or calling people to action. These data can also help you gauge the general health of the regional labor force and whether or not your region is on growth or decline trajectory.

Specifically, the data reviewed above can help you answer help you answer some key regional labor force questions.

- Are people moving to, or leaving, your region?
- What share of your population is of prime working age? Is that share growing or declining?
- How active are people in your regional labor force?
- Are there a significant number of people who want to work but cannot find a job?
- Is your region growing in wealth? How does this growth compare to the state or nation?
- How educated is your region's population? How does that compare to competing regions?
- What does your community's labor shed look like? Are you a job center or more residential in nature? From where does your region draw workers?

These data will not provide you with all the information you need to fully understand your region's labor supply. However, they will enable you to ask better questions so that subsequent research will allow you to dig deeper into regional priorities. These data also only tell part of the story, and the next section highlights data sources necessary to more fully understand the needs of local employers and the opportunities available to workers.

Sources of Labor Demand

This section identifies LMI sources that show where the demand for labor exists. Efforts to understand worker demand focus less on who is in the workforce, and more on what employers need these workers to do. These demand analyses typically use data pertaining to employment or skills to demonstrate employer need and worker opportunity. Historical data show the changing regional demand for labor, while employment projections offer some indicator of how that demand will change in the future.

Job seekers—including both incumbent workers and students—can use this information to identify in-demand career opportunities and better set their expectations about the typical education and training and compensation associated with those opportunities. Moreover, it can further help regional employers better understand the labor market and help guide educational institutions in planning relevant curriculum. After working through this section, readers will know the data sources that show which types of businesses need workers, and the types of workers those businesses need both now and in the future.

3. Employment drivers

Section 3 will introduce you to resources that will help you answer questions such as:

- What industries employ workers in my region?
- What wages do they pay?
- How has industry employment changed over time?
- What industries employ younger people or people of color?
- How many people in my region "make their own job" and what kind of business are they in?

Trends in industry employment provide a basic starting point for understanding the local or regional economy. Different industries make different contributions to the regional economy, and therefore dictate where different opportunities may arise. Broadly speaking, there are two different types of industries—export industries and locally-serving industry.

- **'Export' or 'economic base'** industries sell their products and services beyond the local market and *therefore bring new money into the community*. These industries include activities such as manufacturing, tourism, mining, some hospitals (that is, those that attract patients from outside the region by providing unique or specialized treatments), shopping malls that attract customers from outside the region, the pensions that retirees may bring to the region (from past saving or from government transfers).
- **'Locally-serving'** industries, such as retail, most restaurants, primary and secondary education, government services, and other local services, primarily rely on money that is recycled within the community. Changes in a region's population primarily drives growth in these industries; a growing population will generate more demand for more grocery stores, more schools, more barber shops, etc.

Understanding the distinction between export and locally-serving industries can help interpret broader industry trends and provide insight into what drives the regional economy and how other factors (e.g., population growth) may affect the nature and quality of available job opportunities. This section will cover where to find industry employment data and how it is structured, data sources about industry demographics, as well as sources that show the nature and extent of entrepreneurial activity that exists outside traditional wage and salary employment.

3a. Current industry demand

Employment by economic sectors provides some basic insight into a region's economic structure, and as a result an indication of where there is a demand for labor. For community leaders it is important to understand what their region makes, where they might have some kind of regional advantage, and which industries create wealth in the community. For job seekers, industry employment data can show—at the broadest level—where employment opportunities exist. Several different federal statistical agencies produce employment data, with the most common being the U.S. Bureau of Labor Statistics' Quarterly Census of Employment and Wages (QCEW).

QCEW draws upon the information contained in the administrative records of the Unemployment Insurance (UI) program. Therefore, these data count all the jobs found in firms that participate in the UI program and exclude, for instance, self-employed workers or members of the armed forces. The QCEW covers most of the jobs found in industries such as manufacturing but this coverage may not be as complete in industries like Real Estate that have relatively larger numbers of self-employed workers.[16] Moreover, BLS must suppress employment data if those data can potentially reveal an individual employer's identity. This most frequently occurs when much of the employment in a given industry or sector, and in a specific locality, can be attributed to one large employer. Data suppression is quite frequently a challenge in rural areas, where there are limited numbers of employers or where one large employer might represent a disproportionately large share of employment.[17]

BLS and state LMI agencies publish industry employment data using the North American Industry Classification System (NAICS). NAICS works by using a hierarchical number system that assigns a six-digit code to every business establishment. Figure 4 shows how to read NAICS codes. The first two digits designate the broadest level (the economic sector), and then the industry becomes more detailed as numbers get added to each NAICS code. These data can provide a regional economic snapshot by showing employment by sector, which when examined over time show the region's changing economic structure. For example, the data may show growing demand in healthcare and education but job losses in the region's manufacturing sector. In such an instance, community leaders need to both prepare future workers to meet the demand of growing sectors, while simultaneously identifying ways to transition workers from declining sectors to emerging job opportunities.

Figure 4: How to read North American Industry Classification System (NAICS) codes

NAICS Level	Example	
	NAICS Code	Description
Sector	31-33	Manufacturing
Subsector	311	Food Manufacturing
Industry group	3115	Dairy Product Manufacturing
Industry	31151	Dairy Product (except Frozen) Manufacturing
U.S. Industry	311513	Cheese Manufacturing

Source: https://www.census.gov/naics/

These data can therefore help community leaders to focus their workforce efforts, or help job seekers identify areas of growing or declining opportunities. That said, it is important to note that just because industries may experience declining aggregate employment does not mean that they do not have opportunities. As a result, it is important to incorporate other sources of information (e.g., other data, company interviews) in order to better understand these trends.

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages. QCEW data are also available through State LMI agencies.

Update schedule: QCEW data are released quarterly, with final annual data released in September.

[16] https://www.bls.gov/cew/questions-and-answers.htm

[17] Information about data suppression and disclosure can be found on the BLS website (see question 13).

Why are some of the QCEW for my county suppressed?

The U.S. Bureau of Labor Statistics suppresses some industry employment data to protect employer confidentiality. You will most likely encounter data suppression when you are looking at small geographic areas—both in terms of a unit (e.g., county) and size—and at employment in more detailed industries (e.g., pharmaceutical manufacturing v. the entire manufacturing sector).

In order to protect employer confidentiality, BLS follows the '80/3 rule' when publishing the Quarterly Census of Employment and Wages (QCEW). This means that BLS suppresses data when:

- One firm accounts for more than 80 percent of the area's employment in a given region, and/or
- There are fewer than three establishments in a given industry in a given place.

As a result, data suppression is most likely to occur in rural places where there is one dominant employer. In these instances, data users can shift to using the data that are published at greater levels of aggregation such as bigger geographies (e.g., MSAs) or less detailed NAICS industries. It should also be noted that just because the employment is not published does not mean that it does not exist. Local knowledge can sometimes to be used to fill in the blanks.

For more information:

- The Indiana Business Research Center
- U.S. Bureau of Labor Statistics

3b. Industry demographics

Industry demographics allow us to better understand who benefits from different types of economic and workforce development strategies. For instance, strategies designed to grow manufacturing or construction industries will generally create a disproportionate amount of employment opportunities for male workers. By contrast, efforts to expand the healthcare workforce will likely create a disproportionate number of opportunities for women.

Examining the racial and ethnic composition of different industries can show how representative the industry's workforce and the extent to which workers from racial or ethnic minorities are able to access jobs in these industries. Similarly, if your region wants to create youth employment opportunities, these data can highlight which industries are most likely to employ young people. Understanding these demographic differences can help regional stakeholders develop strategies that assist those groups of workers hurt by decline in a given industry, or who have been excluded from different industries. This information can therefore help to target specific groups for training and/or employment services. Moreover, understanding the age composition of a given industry can indicate which industries will most likely be hurt by impending retirements.

The Quarterly Workforce Indicators, which are another product of the Census LEHD program, provides data describing the demographic characteristics of an industry's workforce. These data are available—for age, gender, educational attainment and race and ethnicity—at the state, regional[18], and county level[19]. These data are available quarterly, and can be accessed through the QWI Explorer, or by using the LED Extraction Tool which allows for more extensive data downloads. These data can be used to compare the demographic composition of different industries within a single region, or they enable comparisons of a region's industry to competing regions, or the state or nation.

Source: U.S. Census Bureau, Quarterly Workforce Indicators

Update schedule: QCEW data are released quarterly, with a 9-12 month lag. Since these data are submitted and processed on a state-by-state basis, the data are available on a rolling basis so that smaller states data may be available before larger state.

[18] Since the QWI are a product of partnerships between the Census Bureau and individual state LMI agencies these regional groupings include workforce areas (which include the service area of local workforce boards, or groups of workforce boards). They also include Metropolitan Statistical Areas, but only the counties contained within one state. As an example, determining the demographics of the Kansas City region's manufacturing sector would require pulling data from both Missouri and Kansas.

[19] It should be noted that as of January 2023, four states (AK, AR, MI, MS) are no longer participating in the Local Employment Dynamics Partnership. As a result, these states are not currently producing updated data. For more information, refer to the U.S. Census Bureau's LEHD website: https://lehd.ces.census.gov/state_partners/

3c. Measuring entrepreneurship

Wage and salary jobs are not the only source of employment, or the only way workers can earn a living. Entrepreneurship offers another avenue for workers to either create their own job, or generate additional sources of supplementary income. The U.S. Bureau of Economic Analysis publishes data that show the number and proportion of workers generating income from self-employment or proprietorships.[20] These data are based on information that the BEA receives from the U.S. Internal Revenue Service.

These data reflect the willingness of area workers to take some of the risks associated with self-employment. It may also show how entrepreneurial workers are likely to be in their work habits. It should be noted that often rural counties have some of the greatest proportion of sole proprietors in their total workforce. This is due to the fact that in rural places there are insufficient numbers of wage and salary jobs, and as a result, workers have to create their own jobs; it is entrepreneurship out of necessity, more so than innovation. It may also be due to low wages forcing workers to generate a second source of income.

Gauging a region's level of entrepreneurship can inform community efforts to promote entrepreneurial ventures. However, potential entrepreneurs or self-employed workers need to understand the nature of these activities. The U.S. Census Bureau's nonemployer statistics help answer some of these questions. Nonemployers are businesses with no paid employees and receipts greater than $1,000 per year. Nonemployer establishments cover a wide range of activities including young enterprises looking to grow, "gig" workers, lifestyle entrepreneurs, or individuals just looking to earn supplemental income.

The nonemployer statistics show which industries offer individuals opportunities—according to their NAICS designation—to earn extra income or create their own jobs. These data can be interpreted in a number of ways. For instance, the data may reflect that in more recreational areas there are more opportunities to generate additional income from retail or real estate-related endeavors. The data may also show that there are potential business opportunities in areas that are underrepresented. Regardless, this is information can help paint a rough picture of what the region's entrepreneurial landscape looks like.

Source: U.S. Bureau of Labor Statistics, Regional Employment Data; U.S. Census Bureau, Nonemployer Statistics

Update schedule: BEA's regional data are updated annually in November, or roughly 11 months after the reference year. The U.S. Census Bureau updates its Nonemployer Statistics in the summer, approximately 17 months after the reference year.[21]

4. Understanding occupational demand

The industry data described above show aggregate demand for workers, and where the region anticipates growth or maintains a competitive edge. Industry data give us a broad sense of what regions make, but occupational employment data and projections allows us to understand what workers do, and what regional employers will need them to do in the future. Using these data requires, first and foremost, an understanding of the Standard Occupational Classification (SOC) System. The SOC System classifies all occupations in the

Section 4 will introduce you to resources that will help you answer questions such as:

- What are the most common occupations in my region?
- What do these different occupations pay?
- What industries are most likely to employ workers in these occupations?
- Which occupations are projected to grow in the future?

[20] Sole proprietorships comprise all entities that are required to file IRS Schedule C (Profit or Loss from Business) or Schedule F (Profit or Loss from Farming); these entities do not have employees.

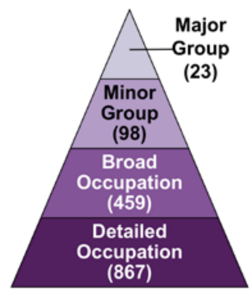
[21] 2019 is the most recently available year for the nonemployer statistics, as the pandemic created challenges for data collection and processing.

economy—including private, public, and military occupations—based on job duties, skills, education and/or training. These occupations are periodically updated to incorporate new or emerging occupations.[22]

The SOC System is a hierarchical system (like the NAICS system for industry data), and the 2018 SOC system includes 23 major groups, 98 minor groups, 459 broad occupations, and 867 detailed occupations. Figure 5 provides an example of how these occupations are structured. The U.S. BLS provides more detail about the SOC system in the 2018 SOC User Guide. Moreover, the BLS' Occupational Outlook Handbook includes detailed information about these occupations such as the nature of work, required training and education, common employing industries, and the future outlook for each occupation.

Figure 5: Organizing Occupations: The Standard Occupational Classification (SOC) System

- 51-0000: Production Occupations
  - 51-6000: Textile, Apparel, and Furnishings Workers
    - 51-6050: Tailors, Dressmakers, and Sewers
      - 51-6051: Hand Sewers



By the end of this section, readers will better understand sources of occupational data and how these data can help inform regional workforce training and development efforts. This section first describes the basic occupational employment and wage data that can identify in-demand jobs and set expectations about wages. It then shows how staffing patterns connect industries to occupations through staffing patterns. These staffing patterns can help illustrate how the demand for different occupations vary by industry. Similarly, occupational projections show how those needs are likely to change in the future, and the typical education, skills and experience levels required for different occupations. This information can enable both job seekers (e.g., students, incumbent and dislocated workers) as well as key stakeholders (e.g., educators, counselors) to map out potential career pathways.

4a. Occupational employment and wage statistics

The U.S. Bureau of Labor Statistics' Occupational Employment and Wage Statistics (OES) are critical resources for understanding labor demand and is the primary public source of wage information. BLS releases these data annually and they are based on information collected from 1.2 million establishments over a three-year period. Given the need for an appropriate sample size, OES data are not available for very detailed geographies. Rather, BLS releases these data for the nation, states, metropolitan statistical areas, as well as regional non-metro areas. In some instances, state Labor Market Information agencies (which produce these data as part of a cooperative agreement with BLS) may publish data for different geographic regions, such as workforce development board service areas.

These data are useful for job seekers, employers and community leaders. They can help measure the relative demand for different occupations since they show the region's most common occupations and which occupations are growing or declining. As a result, they can help jobseekers identify potential areas of opportunity and show employers and community leaders where there is regional demand for workers.

Wage data helps employers compare the wages they offer relative to the prevailing regional wage in an occupation. For workers, these wages can help set expectations for what they can earn in different jobs. This

[22] For instance, the 2010 SOC system added 'green' occupations such as Solar Photovoltaic Installers and Wind Turbine Technicians; the most recent 2018 SOC system added occupation such as Database Architects, Project Management Specialists, and Data Scientists.

information can help new workers select careers or incumbent workers make decisions about shifting jobs. For other key regional stakeholders (e.g., economic and workforce developers, post-secondary educational leaders), information about wages and occupation growth trends can help identify the jobs that present the best quality job opportunities.

As part of the OES, BLS publishes data on the mean and median wages for each occupation, as well as wages at the 10th, 25th, 75th and 90th percentiles. Wages at the different percentiles show the range of what employers are willing to pay for workers in these occupations. While it is most accurate to state that these data reflect the pay offered by high paying employers and low paying employers, they can also be used as a proxy for understanding potential wages for entry-level workers and for experienced workers in a given occupation.

Source: U.S. Bureau of Labor Statistics, Occupational Employment and Wage Statistics; State Labor Market Information agencies.

Update schedule: OES data are released annually in the spring.

4b. Industry staffing patterns

Different industries hire different types of workers, so occupations are distributed unevenly throughout the economy. The national industry-occupation staffing matrix can be used to better understand the relationship between industry employment and occupational employment. The staffing pattern matrix shows the occupational composition of a wide array of detailed industries. With this information, we can understand how growth or decline in a given NAICS industry will change the nature of occupational demand.

These estimates—particularly the reverse staffing patterns—can also be useful for job seekers or career counselors because they can show what industries are most likely to employ people in a given occupation. This can allow jobseekers to identify the range of industries where employers may demand workers in their desired occupation. This information can also prove useful for economic and workforce development practitioners. For instance, these data can provide a rough estimate of firm staffing needs. If a 200 person automotive parts manufacturer opens in a region—according to the national staffing matrix—we can assume that this manufacturer will need to roughly 10 maintenance and repair workers.

These data can also support broader cluster or sector strategies by showing the labor force needs of individual, regionally-important industries and informing how regions can help them meet their unique workforce needs. As a simple example, the staffing patterns show us that 90% of all veterinary technicians work in the veterinary services industry. Supporting that industry, therefore, requires creating a talent pipeline to meet the need for those workers. By contrast, 7% of all heavy and tractor-trailer truck drivers work for manufacturing firms. So in order to meet their needs, manufacturers must compete with other industries (e.g., distribution, construction, agriculture, etc.) to hire truck drivers. Also by identifying industries that hire significant numbers of (in this example) truck drivers, local leaders can better identify potential private sector employers who may be willing to participate or contribute to these kinds of local initiatives.

In addition to the national staffing patterns, U.S. BLS also provides state-level, industry-specific staffing patterns. These estimates can prove useful for states that have somewhat unique activities. For instance, cybersecurity is a prominent activity in the Washington, D.C. area due to the large amount of government and defense contracting. Nationwide, Information Security Analysts make up 1.5% of the national Computer Systems Design Industry (NAICS 5415) but in Maryland (4.6%), Virginia (4.5%), and the District of Columbia (3.9%) workers in these occupations represent a larger share of this industry's overall workforce. It is important to note, however, that the workforce needs of different firms and industries vary between and within industries. As a result, researchers should seek employer input to validate these estimates.

Source: The National Industry-Occupation Staffing Matrix Data are part of the U.S. Bureau of Labor Statistics Employment Projections Program.

Update schedule: U.S. BLS national pprojections data are released annually in September.

4c. Occupational projections

Industry and occupational employment projections demonstrate the changing nature of the labor demand, highlighting future opportunities for job seekers and areas of need for employers. The U.S. Bureau of Labor Statistics develops annual, 10-year national industry and occupational employment projections. The BLS—and state-produced—projections provide critical information about expected net employment change by both industry and occupation, average annual openings, and the typical education and experience requirements for different occupations. Combined, these projections support career exploration and counseling, as well as broader regional workforce planning.

In addition to BLS's national employment projections, state LMI agencies produce bi-annual state and sub-state projections. The sub-state projections are selected by states in ways to best meet their customer's needs. These geographies are typically metropolitan statistical areas or the service areas of workforce development boards. For both local leaders and local jobseekers these sub-state projections are likely to be the most relevant for the types of questions they need answered.

At the most basic level, these employment projections show net employment change within specific industries or occupations. As a result, they help job seekers, counselors, or community leaders identify industries and occupations with a bright outlook. Job seekers may prefer to move into growing careers and fields and the community's economic and educational leaders can work to ensure that institutions are prepared to meet that demand. For instance, projected growth in healthcare may encourage students to pursue careers in nursing or allied health professions. Similarly, the scale of change may inform the efforts of area community colleges to meet the projected demand.

That said, net change alone does not present a complete picture of where future employment opportunities may lie. Industries projected to lose net employment nevertheless possess quality employment opportunities. The BLS employment projections, however, also provide information about the number of replacement jobs (created by retirements or people leaving jobs) and that can better indicate the scale of opportunities available within a given industry or occupation. The average number of replacement jobs therefore provide an important complement to the net new job data.

Within the occupational employment projections, the BLS highlights the typical education (e.g., high school or less, 2-year degree, bachelor's degree, etc.), experience (e.g., none, less than 5 years, more than 5 years) and on-the-job training (e.g., short-, moderate-, long-term, apprenticeship) required for every occupation.[23] Whereas the projections of average job growth or openings highlights where opportunities are likely to exist, these categories show for whom these opportunities are available. These data can help set expectations for job seekers as they choose their careers, help counselors map out career pathways to guide students, and allow community leaders to determine how well their region's supply of workers aligns with the projected needs of employers.

These different elements—net job change, replacement jobs, and typical education and training requirements—tell different parts of a larger story. As will be shown below, they are also not the only source of information for better understanding individual occupations. That said, these data in aggregate can provide a much more robust picture of a region's future workforce needs. In some places, the state LMI agency uses these inputs to further aid career exploration.[24]

[23] The categories are defined on the BLS website.

[24] As noted above, the contents (e.g., geographic and industry detail; value-add analysis) of these projections varies from state to state. Links to each state's employment projections are available through the Projections Managing Partnership.

For instance, Missouri assigns A to F career grades to the nearly 800 occupations, based on factors such as job openings, growth and average wages. Additionally, they use the typical educational requirements for occupation to designate jobs are 'Now', 'Next' or 'Later' which speak to the amount of preparation people need to enter these occupations. Now occupations are those that do not require much by way of post-secondary education and experience. Next occupations are often more middle-skill occupations, and later occupations are those that typically require at least a 4-year degree. Job seekers, particularly younger workers, can use these designations to look at what now occupations can lead to occupations offering more opportunities and potential greater salaries.

Even if your state LMI agency does not provide this additional value-added information, basic filtering and sorting this information in a spreadsheet (e.g., MS Excel) should yield usable information to help identify relevant occupations. Individual priorities will drive some of these activities. Some users may look for jobs that provide the most opportunities, while others may be focus on, for instance, only middle skill (i.e., those requiring more than high school but less than a 4-year degree).

It is important to recognize that these projections are exactly that. No one has a crystal ball, so these projections are an educated guess about future workforce needs. Moreover, these projections are based on past trends so they cannot predict future shocks (e.g., recessions, pandemics, local closings, important technological changes, etc.). National projections are updated every year, while state projections tend to be updated every two years, so it is important to use the most recently released projections.

Source: U.S. Bureau of Labor Statistics, Employment Projections; State LMI agency projections

Update schedule: National projections are updated every year, while state projections tend to be updated every two years.

4d. Occupational requirements

In order to select and then prepare for a future career, students and workers need to better understand the types of knowledge and skills those occupations require. The O*Net database contains standardized and occupation-specific descriptors for over 1,000 occupations. This publicly-available database contains input from employers and workers in each occupation. It is a database that is continually being updated, as over 100 occupations are updated each year so the database is completely refreshed every 8-10 years; fast changing occupations are updated more regularly.[25]

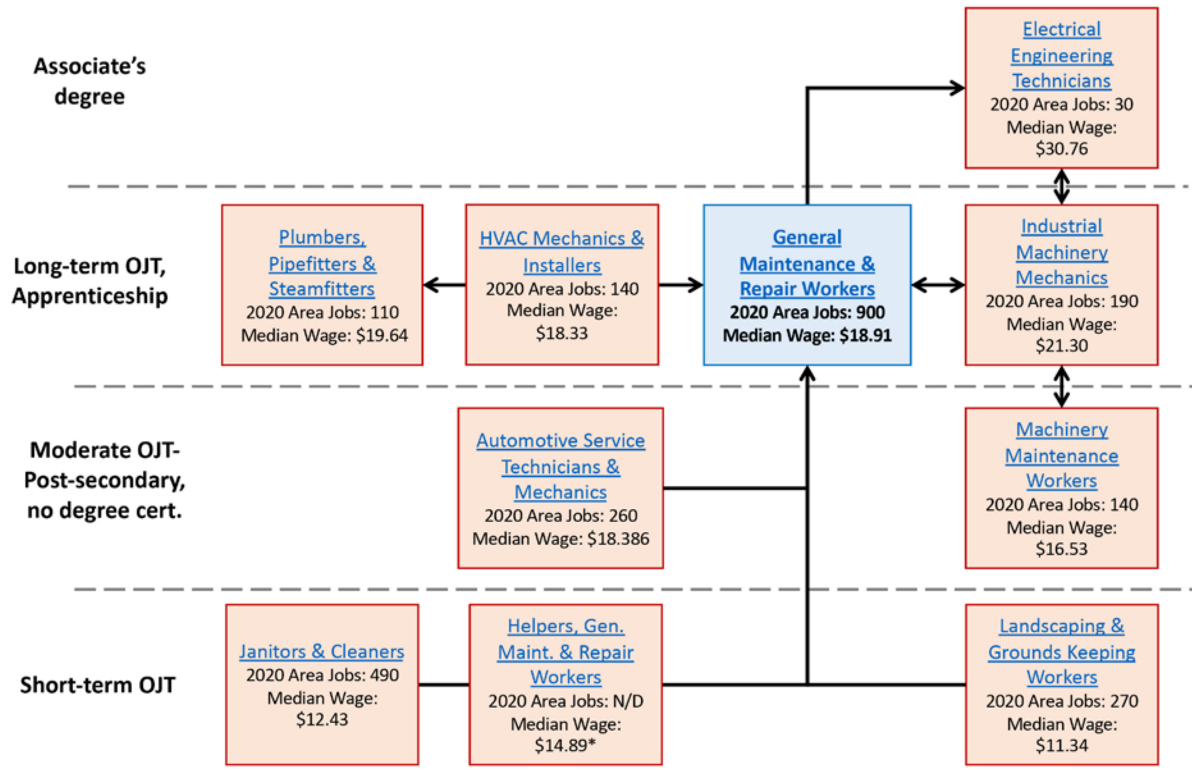
The O*Net database is particularly useful and relevant for students and job seekers exploring for, or looking to shift, careers. Through O*Net, they can learn the characteristics of different occupations, including the typical education and experience required for each occupation; regular tasks that workers in these occupations need to perform; common tools and technologies (e.g., machines or software packages); and the types of required knowledge, skills and abilities necessary to succeed in these occupations. The O*Net database also includes additional information about, for instance, the occupation's relative 'greenness', its outlook for growth, and the extent to which it is automated.

Using this information, the O*Net database provides a set of occupations requiring similar education, tasks, knowledge, skills and abilities. Connecting this information to other sources—like the Occupational Employment and Wages Statistics and the Occupational Employment Projections—can allow people to begin constructing basic career pathways or career lattices. Figure 6 provides an example of what this might look like for General Maintenance and Repair Workers (SOC 49-9071) in the Rocky Mount, NC MSA (Edgecombe and Nash Counties). These diagrams can show occupations that might prepare people to enter maintenance occupations, even if they lack the experience. It also shows other related occupations that might present growth

[25] The survey devices underlying this database can be found in the O*Net Resource Center.

opportunities if workers pursue additional training and experiences.[26] These types of diagrams do not provide all the answers, but nevertheless can help frame someone's career exploration activities.[27]

Figure 6: Career Pathways for General Maintenance & Repair Workers in the Rocky Mount, NC MSA



** State Median Wage*
*Source: O*Net; Federal Reserve Bank of Philedelphia Occupational Mobility Explorer, BLS 2020 Occupational Employment & Wage Statistics*

In addition to the information contained within the database, O*Net also offers several other tools to support career exploration. This includes the MyNextMove career exploration tool that allows users another avenue for exploring the O*Net database. Most notably, MyNextMove includes an interest profiler, which asks a series of questions to gauge a person's interests and work experience and those answers are then subsequently used to offer personalized career suggestions. The MyNextMove career exploration tool is primarily intended for students and people looking to enter the workforce. There is also a tool available—MyNextMove for Veterans—that allows transitioning military to explore potential career opportunities in the civilian workforce.

Source: The O*Net database is financially supported by a grant from the U.S. Department of Labor's Employment and Training Administration.

Update schedule: The O*Net database is updated on a rolling basis, with fast-changing occupations updated more regularly.

[26] The Philadelphia Federal Reserve Bank recently constructed an Occupational Mobility Explorer tool, which was intended to help people transfer from one occupation to another. That tool not only draws upon O*Net, but also several other public (e.g., OES, Occupational Projections) and Proprietary (e.g. Burning Glass Technologies analysis of online job advertisements) data sources. Data are available for the 33 largest U.S. metros, but much of this information is likely applicable to smaller places as well. This tool, and information about how it was constructed, can be found here: https://www.philadelphiafed.org/surveys-and-data/community-development-data/occupational-mobility-explorer

[27] A number of states have invested in similar and/or supporting research in order to map career pathways. These efforts are most commonly done through the state labor market information agency or state departments of educations. As a result, the organizers of local career pathways efforts should check with the state agencies to see if their state has these resources available.

4e. Online job postings

Over the past 15 to 20 years, online job postings have become an increasingly important source of labor market information. Lots of information can be discerned from these job postings, such as what occupations are employers looking to fill and what are the in-demand skills and certifications. Several proprietary data vendors (e.g., Lightcast—formerly EMSI Burning Glass, Chmura Economics) work to aggregate the data available in job postings and in doing so have created 'Real-Time LMI'. Real-Time LMI uses web technologies to scrape information from the websites of job boards (e.g., Monster, Career Builder), government agencies (e.g. USAjobs.gov), newspaper ads, and corporate websites.

Once aggregated and organized, these data can show how many job adverts are posted by regional employers, the types of firms and industries currently hiring, and the education, skills, and certifications these employers seek. Real-time LMI vendors gather these data daily (hence "real-time"), so they can provide more current data than more traditional LMI sources where there are months or yearlong lags between the data's collection and its publishing.

While these data can provide significant insight, it is important for users to understand the caveats that come with using these data. For instance, Real-Time LMI users must understand that these data measure online job advertisements, not actual jobs. So one job advertisement may represent multiple jobs or no jobs. Similarly, employers in some industries (e.g., IT, Healthcare) are more likely to advertise online than others (e.g., agriculture, construction). Moreover, subscriptions to these data tools can prove expensive and outside the budget for many. Many state LMI agencies have subscriptions to these tools, and many will often provide summaries of the in-demand jobs or skills sought by the state or region's (e.g., MSA or Workforce Board service area) employers. As a result, it is important to check with your state's LMI agency to see if they have access to these data, what they provide and if they can do a customized search that may inform your specific effort.

If access to proprietary job postings data proves unavailable or unaffordable, then the National Labor Exchange (NLx) can offer some basic access to online job postings.[28] The National Labor Exchange aggregates state job posting banks and then augments those postings with additional sources (e.g., CareerBuilder, Indeed, ZipRecruiter). Although this does not provide the analytical tools available through proprietary data vendors, it does allow users to see what types of jobs in a given occupation are available in their region. These postings are by no means a definitive measure of local occupational demand, but they can give job seekers and relevant stakeholders (e.g., counselors) a basic understanding of what area employers are looking for from applicants.

Source: The National Labor Exchange (NLx) is a supported by of the Direct Employers Association (DE) and the National Association of State Workforce Agencies (NASWA). Through its API, it provides content for federal resources such as CareerOneStop, MyNextMove, and MySkillsMyFuture.

Update schedule: NLx is updated continuously.

5. Filling needs

This section discusses data resources that can direct both jobseekers and regional stakeholders to identify the education and training resources that prepare people for in-demand occupations. Most notably, it will highlight post-secondary completer data that can show, among other things, a region's capacity to meet the demand in specific fields. Additionally, this section will highlight resources that allow jobseekers to identify professional credentials that are commonly required for different

Section 5 will introduce you to resources that will help you answer questions such as:

- How many people completed relevant degrees and completions from area post-secondary institutions?
- What are the relevant credentials for a given occupation?

[28] Access to the NLx search tool is available through "Find Jobs" button on O*Net's individual occupation summary reports.

occupations. Both are critical pieces of information for helping jobseekers and stakeholders determine how to move people through careers and for determining where regional gaps may exist.

5a. Post-secondary completers

Most occupations require some amount of postsecondary experience, training, or education. Understanding the region's postsecondary offerings allows jobseekers to identify where they can get the education they need, helps employers find potential workers and training resources, and enables community leaders to better gauge the region's capacity to meet the demand for critical occupations. Information about program completers is available through the US Department of Education's Integrated Post-secondary Education Data System (IPEDS).[29] Public and private post-secondary institutions submit an array of institutional data (e.g., enrollments, completers, student demographics) and those data are subsequently organized and published in IPEDS.

Program completer data are the most relevant as these data can show which institutions have relevant programs and the scale of those programs. Completer data are organized by Classification of Instructional Programs (CIP) codes. CIP codes help organize completions by field of study—and like NAICS and SOC codes—these data are available at varying levels of aggregation (e.g., 01-Agriculture, Agriculture Operations and Related Sciences; 01.09-Animal Sciences; 01.0905-Dairy Science). Understanding these programs allows a region to identify its training strengths and where there may be training gaps. It can also provide some indication which programs are likely to be affected by projected demands in specific occupations and will need to increase the number of graduates in order to provide the region with a sufficient number of workers.

As with all data, IPEDS completer data comes with several caveats. First, the program codes are assigned by each individual institution's office of institutional research and this can create some inconsistencies. For instance, one institution may classify its Construction Management program as 'Construction Management' (CIP 52.2001), but other institutions may not be as specific and list it under Business Administration, Management and Operations (CIP 52.02). As a result, it is always good practice to double check the information. Second, these data help show the extent to which area institutions can help meet employer needs to fill in-demand jobs, but not all jobs are filled by recent area graduates. Jobs can be filled by internal candidates, people working elsewhere in the region, or in-migrants moving to the region. Similarly, not all completers end up working in their field of study. As a result, it is misguided to measure gaps by subtracting the number of completers from the projected demand.

As part of the U.S. Department of Labor funded Workforce Data Quality Initiative, several state LMI agencies are creating longitudinal data systems that track the employment outcomes of program completers. These initiatives look to connect administrative databases to better track the employment outcomes of post-secondary program completers. In Missouri, for instance, the Missouri Scoreboard tracks both how many people complete programs at post-secondary institutions and how many of those completers end up working in their field of study and their wages. This information can benefit students as it can show them how much they can expect to earn upon completing their program. It also helps employers because it can show them where graduates are completing relevant programs and what they should expect to pay them when they enter the workforce. Not all state LMI agencies participate in these types of data programs, so once again it is important to check with your state's LMI agency to learn about what is available.

Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Educational Data System (IPEDS)

Update schedule: Institutions submit data to IPEDS annually, but IPEDS releases different data elements in three periods each year.

[29] Relative to other websites, the IPEDS data interface is not the most user-friendly. Among the IPEDS tools, the College Navigator is one of the easiest to use; this is particularly true if you are looking for information from a single institution. Some proprietary data vendors (e.g., Lightcast—formerly EMSI Burning Glass) make accessing these data easier, but that requires paying a subscription. Developing a relationship with your local institution's office of institutional research represents another possible strategy for gaining access to this type of information.

5b. Professional credentials

Most jobs do not require a post-secondary degree, but many jobs—particularly middle-skill jobs—often require workers to attain some kind of professional credential. Industry-recognized credentials are important tools for employers because it helps them better understand what workers know how to do because workers must demonstrate a defined set of skills before receiving the credential. By contrast, it may be less clear to employers what workers know how to do when they complete a degree program. However, not all credentials are the same and many of these differences arise from the type of organization awarding that credential. Beyond degrees, the primary type of credentials include certificates, certifications, and licenses.[30]

- **Certificates** are awards conferred by post-secondary institutions that show completion of a non-degree program of study.
- **Occupation certifications** are awarded by industry or professional associations. Individuals receiving certifications must demonstrate a designated set of knowledge, skills and abilities.
- **Occupational licenses** are awarded by state licensing boards. They are granted when workers demonstrate that they meet state standards for that occupation. Receiving the appropriate license allows workers to practice specific occupations or vocations (e.g. teachers, nurses, surveyors, etc.) within that state.

The requirements for certificates, certifications and licenses vary between state and employer; understanding these credentials is critical for entering or advancing within a given occupation. Moreover, understanding these differences can help jobseekers and counselors more effectively find the right credential for their situation. O*Net provides tools for users to find the relevant certifications or license requirements for each occupation. Given the variance in these requirements, the information from O*Net may not provide definitive answers. As a result, jobseekers will need to gather additional information from job counselors, employers, or just people with deeper industry knowledge more generally.

Source: The O*Net database is financially supported by a grant from the U.S. Department of Labor's Employment and Training Administration.

Update schedule: The O*Net database is updated on a rolling basis, with fast-changing occupations updated more regularly.

6. Integrating other sources

Section 6 will help you:

- Think through the benefits of qualitative research, and better understand the caveats associated with this research.
- Become more familiar with other data resources (e.g., proprietary sources, data aggregators) that can help you answer many basic labor market questions quickly.

This guide has primarily focused on publicly available LMI. These sources, however, are not the only resources for answering your region's critical labor market questions. This section will review other information resources. For instance, qualitative sources of information (e.g., focus groups, key informant interviews) can prove useful for interpreting and validating the findings from more quantitative analysis. In addition, the data resources described above have emphasized free, publicly available sources. There are also a number of resources that aggregate many of these data so it is a bit easier to assemble. As a result, this section will also review how data aggregators and proprietary data vendors can help answer labor market questions and some of the caveats that come with using those sources.

[30] Credential Engine. (2021). Counting U.S. postsecondary and secondary credentials. Washington, DC: Credential Engine.

6a. Focus groups and interviews

Quantitative data resources are very useful for identifying patterns, but more qualitative research (e.g., focus groups, key informant interviews) can uncover the processes that influence those patterns. As a result, this kind of input is essential for any efforts to fully understand the region's workforce needs. Any efforts to understand the local labor market and/or identify and map career pathways should include seeking input from key informants and subject matter experts such as employers and education and training providers.

These informants can help interpret and validate the quantitative research findings. For instance, local employers can help explain the extent to which their experiences in finding different types of workers or their specific skill needs, align or diverge from the regional or national trends emerging from the data. They can also explain how area training providers might better align their curriculum with the need of the region's employers. Similarly, educators or training providers can shed light on the extent to which student interest mirrors industry demand.

These meetings, therefore, will allow you to more fully understand the issues and challenges that employers face. These meetings also enable us to highlight workforce issues not readily apparent in the data and better interpret and validate the quantitative research findings. For instance, they can also help to identify what are the 'mission-critical' jobs and skills—those that are relatively few in number, but vital for the firm to fill in order to operate.

Focus groups that involve groups of similar employers are often a way to gather a lot of information relatively quickly and can show whether there is a consensus amongst employers about the region or industry's critical workforce issues and needs. There may be some instances, however, where one-on-one interviews may prove more effective because some employers may not feel comfortable sharing information about their business around other similar or competing employers. Regardless, an ancillary benefit of this kind of employer or stakeholder engagement is that they can give you a sense of which employers might be willing to participate in your regional initiative. In short, they provide an opportunity to identify potential partners or collaborators.

Although employer input can be very informative, there are several important caveats to keep in mind. First, the information you collect may prove anecdotal. Employers may either view their experiences as being uniquely specialized or they may view their unique experiences as representative of their industry or the region as a whole. As an illustration, consider discussions about wages. An area manufacturer may claim that they may experience difficulty filling the 'good' welding jobs they offer, but if that manufacturer is only paying $14 per hour and the regional wage data (See section 6a above) show that the median wage for welders is $20 per hour then it should not necessarily be taken at face value that the manufacturer is indeed offering 'good' jobs.

The researcher must therefore determine how unique or representative these experiences are by comparing them to available data or speaking to enough employers so that they have an adequate sample size. Often representatives from organizations that work with a lot of employers (e.g., chambers of commerce, industry associations) can provide useful context and insight about the representative nature of a company's experience. That said, their knowledge also tends to be secondhand knowledge and they may also have inherent biases (e.g., Chambers of Commerce and economic development organizations often prioritize the experiences of employers, labor unions the experiences of workers, etc.) so perspectives should also be taken into consideration.

It is also important to remember that a person's position influences their perspective. When seeking employer input, the company's HR manager may offer better insight about their hiring and training issues than the CEO because they often are more directly involved in these efforts. Speaking to multiple people in company may prove useful, but given people's time constraints that is not always easy or possible. It is also important to note that employers often speak from the perspective of what is good for their individual business, not necessarily what is good for individual workers. These are important contextual considerations—they do not invalidate the employer's input, but rather they are just additional factors worth considering.

The qualitative information gathered through focus groups or key informant interviews can also be used to communicate the findings more effectively. This information can help 'put a face' on the data, and in doing so make the analysis more compelling. This not only can help build greater understanding of the issues, but can also build greater support from the subsequent workforce development activities. They can also be used to help justify why and how the community is undertaking specific workforce development strategies.

6b. Other data resources

Much of this guide focused on identifying publicly available data resources, but as noted earlier these are not the only available sources of LMI. Many state LMI agencies or other workforce intermediaries (e.g., community colleges) may produce special reports or conduct employer surveys that can provide helpful information. As a result, it is important to familiarize yourself with what, and how regularly, these different state and regional workforce actors produce. Moreover, there are also a wide variety of other tools for getting the labor market information you need. This section reviews two types of these data resources—data aggregators and proprietary data vendors.

Data aggregators

Accessing the data described above requires navigating the websites of each data provider. In order to ease access to publicly available data, several agencies, organizations and institutions have created online tools that aggregate these data. Depending on the nature of the request, these data aggregation tools can make gathering this information more efficient. Some of the more prominent data aggregation tools include:

- StatsAmerica is a data aggregation tool developed and maintained by Indiana University's Indiana Business Research Center. It is supported by the U.S. Economic Development Administration, in part to make it easier for regional planning organizations to complete their Comprehensive Economic Development Strategies. Nevertheless, StatsAmerica is a useful resource for a wide array of users, particularly those interested in county or regional economic and demographic trends. It provides tools that allow for side-by-side profiles of states, counties, towns, and customized regions (groups of counties). It also has tools for measuring innovation and distress, as well as links to a myriad of economic development resources.
- The Federal Reserve Bank of St. Louis' Federal Reserve Economic Data (FRED) is an online database that provides time series data from thousands of economic data series. It offers a relative quick and easy method for accessing data showing how a county's unemployment or labor force numbers have changed over time. Users can download charts and the corresponding data. There are several additional tools that allows users to create and share maps made from FRED data.
- The U.S. Census Bureau's Quickfacts tool allows users to access basic census data (including demographic, housing, education, economic, transportation, and business variables) in a quick and efficient manner. Moreover, Quickfacts lets users make side-by-side comparisons of their county or community to other counties, their state, or the nation. This tool allows users to access many of the labor supply variables described above.
- Some organizations and institutions develop value-added tools that use data to help users better understand a specific issues. There are a wide variety of these tools available, but several relevant examples include:
    - The Rural Innovation Center's Tech Talent Tracker gives users the information they need to better understand their county's digital economy. For example, it includes information about employment in digital jobs, computer science graduates, and broadband usage among others.
    - The MIT Living Wage Calculator enables users to better understand what workers need to make in order to support themselves and their family. Different estimates are available based on family situation and type (e.g., single or double earner household, no children or children, etc.). This tool provides a useful reference point for helping workers get into jobs that actually allow them to meet their basic needs.

With all these resources it is important to make sure you know the source data. In many instances, these data aggregators pull from many of the same data sources discussed above so all the same caveats apply. Moreover, depending on the manner in which these aggregators assemble their data there may be an additional time lag between the time the data are collected and the time the aggregation site is updated. So if data currency is a priority, then it may prove useful to check what data are available from the original data providers to ensure you have the more recent data available.

Proprietary data vendors

In addition to the publicly-available data sources reviewed above, there are also a number of proprietary data sources that can further aid labor market analysis. Vendors of these proprietary data are value-added disseminators of LMI. Using public data sources as inputs, these data vendors often sell modeled employment estimates. These estimates help users overcome data suppressions and provide users with employment data that is more detailed in terms of geographies, industries, and occupations.[31] They may also use information from the Census Bureau to provide additional demographic data. One of the common selling points for subscribing to one of these proprietary data sources is that the vendors allow customers to access user-friendly and labor-saving tools thereby allowing them to access the information more quickly and efficiently. Over the past fifteen years, data vendors have also developed tools to access 'Real-Time' LMI (job postings data, discussed in greater detail above).

Unlike free publicly-available data, these proprietary sources can prove expensive or beyond the budget of many potential users. However, several caveats apply for users with access to these proprietary sources. There are some 'black box' elements to these proprietary data sources, users must familiarize themselves with the basic inputs and methods the vendor uses to generate these data.[32] These caveats are important for user to accurately interpret the data and then subsequently explain it to their constituents. Whether it is public data or proprietary data, users need to know the strengths and weaknesses of the data they use. Where possible, it is also beneficial to periodically compare vendor data to similar public sources to ensure quality (the latter of which is usually a key input for the former).

[31] This can be important if users want to find data, for instance, for their organizations specific service area as these service areas often do not align with the pre-defined geographies (e.g., MSAs) used by public data agencies.

[32] As an earlier example related to Real-Time LMI showed, this may mean being clear about what the data show (online job postings) and what they do not show (actual jobs), or recognizing that some firms and industries are more likely to advertise online than others and how that may skew the results.

Concluding Thoughts

All communities have unique needs based on the nature of their workforce and the needs of their employers. The data sources described above can assist extension educators, and other community leaders more generally, to identify and design pathways that meet both the specific needs of their communities and particularly the low-income and non-traditional learners entering the labor force. No one data source will answer all the questions that arise, so fully informing these efforts requires use of multiple data sources. For instance:

- The characteristics of the local labor force partially determines regional priorities. For instance, places with chronic poverty and low educational attainment rates may have different needs and pose fewer opportunities than fast growing places. Therefore, examining the supply of workers allows for deeper understanding of local context.
- Identifying the industries driving regional growth and employment generation leads to broad insights into the nature and extent of the opportunities available to local workers. Manufacturing-oriented regions often need workers with mechanical and technical skills, which more recreational regions tend to need workers to fill more service-oriented and seasonal jobs.
- Understanding industry demand allows jobseekers to more effectively select occupations that present attractive career opportunities within the context of their local economy. By matching their personal qualifications to the typical requirements of these occupations, job seekers can begin to determine an entry point for potential careers. Similarly, incumbent workers can use the information about occupational requirements to find occupations that need workers with similar knowledge, skills and abilities, but tend to offer better career opportunities or pay.
- The ability to locate regional education and training resources can help workers better access the programs they need to prepare for, or advance in, potential careers. Many careers require some form of credential rather than a degree, so identifying and then pursuing these credentials can help workers secure and maintain their jobs.

Standing up programs that move disadvantaged, low-income, and non-traditional learners into promising careers often requires a coalition of employers, counselors, and community leaders. These different groups all have different priorities and therefore different data needs. Although LMI can be utilized to answer many of the relevant questions that arise, these data do not provide all the answers. Rather, they can help organizers to ask better questions and identify areas where they need additional information. It should also be noted that this kind of labor market research should not occur in a vacuum. Organizers should actively engage other partners (e.g., employers, community leaders, subject matter experts, etc.) to help interpret and validate the information and findings.

Your state's labor market information agency will be a critical resource for accessing and using much of the data presented above. These agencies have people who can help answer any LMI questions that may arise and will likely be aware of any additional resources that may be helpful. Therefore, developing relationships with people in these agencies can prove useful for both current and future endeavors. In addition to LMI agencies, other organizations like economic development organizations, planning commissions, and workforce boards sometimes engage in labor market research. As a result, these organizations can help support this kind of applied research, or at the very least they may be a local resource available to answer questions as they arise.

MODULE 3:

Mapping Pathways to Economic Mobility

By Tanya J. Hall, Purdue University; Michael D. Wilcox, Jr., Ph.D., Purdue University; Joy Moten-Thomas, Fort Valley State University; and Paul Hill, Ph.D., Utah State University

Learning Objectives

- **Increase knowledge about career pathways, purpose and how they are created**
- **Develop strategies to work with community leaders/businesses to develop career pathways**
- **Improve awareness of how training/education programs are aligned to meet career pathway needs**
- **Enhance understanding of how to implement the developed career pathway in the community**
- **Increase awareness of existing industry career pathways and ways to incorporate unique pathways related to small businesses and remote work**

Background

The federal Workforce Innovation and Opportunity Act (WIOA) defines the term "career pathway" as a combination of rigorous and high-quality education, training, and other services that —

- Align with the skill needs of industries in the economy of the state or regional economy involved;
- Prepare an individual to be successful in any of a full range of secondary or postsecondary education options, including apprenticeships registered under the Act of August 16, 1937;
- Include counseling to support an individual in achieving the individual's education and career goals;
- Include, as appropriate, education offered concurrently with and in the same context as workforce preparation activities and training for a specific occupation or occupational cluster;
- Organize education, training, and other services to meet the particular needs of an individual in a manner that accelerates the educational and career advancement of the individual to the extent practicable;
- Enable an individual to attain a secondary school diploma or its recognized equivalent, and at least one recognized postsecondary credential; and
- Help an individual enter or advance within a specific occupation or occupational cluster .

A simpler definition of career pathways is a method of providing clarity to job seekers on how to advance their career trajectory within a specific industry. Career pathways are also a valuable tool to assist industry, workforce development agencies, education and training entities and other community partners develop concrete processes for aligning their respective services to develop integrated pathways that make it easier for everyone to navigate.

Typically, career pathways are industry-driven and designed to outline a connected system of education and training programs that build upon each other to help a job seeker/worker advance in their career. The state of Michigan published a report, "A Practical Guide to Developing Career Pathways ," and defined these key features of career pathways:

- They connect and articulate the full range of K-12, adult education, post-secondary, and other education and training, with seamless transitions between "levels" and no "dead ends";
- They have multiple on- and off-ramps to make it easy for individuals to start, stop, and re-enter education and training;
- They embed "stackable" industry-recognized credentials[1];
- They make work a central context for learning, through on-the-job training, Registered Apprenticeship, work-based internships and mentorships, and other avenues;
- They accelerate educational and career advancement through assessment of prior learning and experience, integrated "basic" education and technical training, and other strategies; and
- They provide integrated supports like coaching and advising, and services like childcare and transportation assistance, especially at education and career transition points.

Given the amount of work it takes to develop the career pathways, questions may arise about the value proposition of doing this work. WIOA makes development of career pathways a function of the state and local workforce boards. While the Act encourages the activities of career pathway development and planning by education and workforce services, in reality Extension professionals are faced with a wide variety of situations pertaining to the workforce development presence in their communities. Thus, career pathways may not be developed and/or known in areas with fewer networks or resources. Extension can serve the role of strengthening the local workforce development ecosystem by focusing on the development of career pathways. The Michigan report outlined the benefit of crafting career pathways for the three beneficiaries: businesses (employers), students/job seekers/workers, and community partners.

Benefits to businesses

- A process for thinking comprehensively about their expectations for each of their positions and clearly defining both necessary and realistic requirements;
- An opportunity to ensure that education and training are aligned to actual industry and company needs;
- A ready talent pipeline with the right education, skills, and credentials;
- A strategy for increasing employee retention;
- A model for supporting career advancement, succession planning, and back-filling; and
- A process for connecting to new and more diversified talent pools in tight labor markets facing worker shortages.

Benefits for students/job seekers/workers

- A career development "roadmap" that takes the mystery and guesswork out of understanding what careers and career progression look like in various industries and what the real requirements are for career advancement
- A way for students/job seekers/workers, particularly those with multiple barriers to employment and advancement, to see themselves in careers and have access to career development information and experience they might not otherwise be exposed to;
- Education and training that is aligned to "real-world" occupational progressions and workforce needs;
- More opportunities to learn on the job;
- Accelerated career advancement opportunities;
- New career entry and advancement opportunities, particularly for individuals with barriers to employment and career development; and
- Integrated supports and career coaching.

[1] U.S. Department of Labor defines a stackable credential as one that is "part of a sequence of credentials that can be accumulated over time to build up an individual's qualifications and help them to move along a career pathway or up a career ladder to different and potentially higher-paying jobs." Source: Scaling "Stackable Credentials": Implications for Implementation and Policy. 2014. Center for Postsecondary and Economic Success . Accessed at: https://files.eric.ed.gov/fulltext/ED561777.pdf

Benefits to community partners (workforce development, education, human services, and related systems)

- A process for better aligning and integrating services and resources;
- Reduced duplication of efforts and investments;
- Improved outcomes for a variety of customer groups;
- Improved access to and engagement of previously-disengaged populations;
- Better connections to business and industry partners and alignment with their workforce needs;
- Stronger relationships with other public partners; and
- Increased opportunities for better service utilization and coordinated service planning and delivery.

Within our rural communities, there will likely not be large industry clusters to draw upon. However, there could be similarly related industries within each region, which requires looking at all the smaller industries. These smaller industries may be filled with businesses ranging in size from sole proprietors up to those employing 100 employees. In this mix, there will likely be many small businesses or microenterprises. Coupled with these business types, there could be diversity in the manner of how an employee works — namely working remotely. This remote work could be for an employer in/out of the region or in more of an entrepreneurial nature via freelance work or owning their own businesses. Recognizing the diversity in business types in rural communities, this section of FORWARD will explore how communities can craft career pathways for three areas of focus: traditional industry, small businesses/microenterprises and remote work. For example, the Minnesota State CareerWise[2] platform has defined over 500 career pathways, listed by career clusters (Figure 1). A person can select one of the career pathways and it shows a pathway progression. In this example, the Natural Resources Systems pathway was chosen. Here one can see what jobs are available in this field for people with a high school diploma, GED or all the way up to an advanced degree. On this platform, once you click on a job title, it takes you to a page outlining the requirements for the job and other descriptive information about the occupation itself (Figure 2). Locally, when creating or enhancing existing career pathways, locations where to obtain the training needed for each occupation would be needed. This allows the student/job seeker/worker to know where to go to find the training.

Taking the time to build out these career pathways specific to your county/region necessitates conversations between businesses, education institutions and community partners to define what is needed for students/job seekers/workers

Figure 1: Career Pathways via Minnesota State CAREERWise

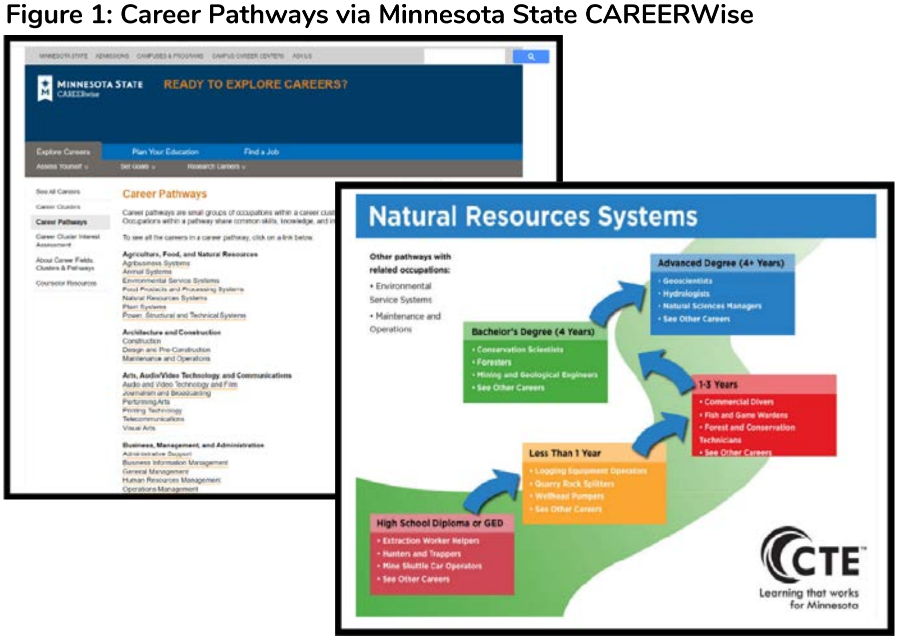
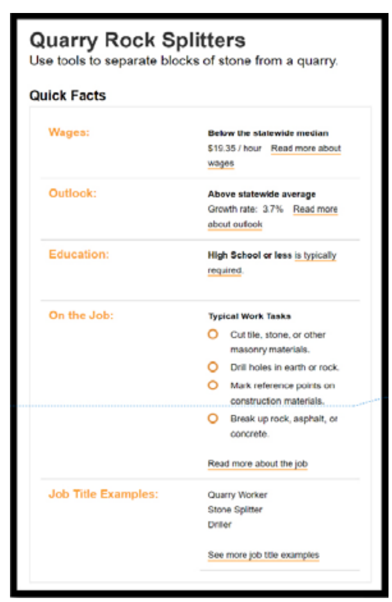


Figure 2: Career Pathways via Minnesota State CAREERWise Job Title Specifics



[2] Minnesota State CareerWise: https://careerwise.minnstate.edu/

to be able to advance within each career pathway. Ultimately, these career pathways conversations should guide each entity's work in how they serve their respective audiences to benefit the county/region at large.

Additional community partners who serve as frequent touchpoints for rural low-income workers/job seekers can be equipped to become knowledgeable about where to find these career pathways and how to assist individuals to navigate the pathways. Through these partnerships, the community/region can develop stronger networks to foster a viable workforce for local employers and micro-enterprises.

The Process of Crafting Local Career Pathways

Developing career pathways follows a sequential process. As an Extension professional, consider yourself as the convener bringing the various community organizations, education and industry personnel together. While industry/business organizations will be an important component of the career pathway development, they do not need to be engaged the entire time. Rather, it's important that information is gathered in a concise manner and clearly communicated back to the task force team. Engaging with business in this manner is respectful of their time operating a business and leaving the work of public partners to the tasks at hand.

The sequential process is as follows:

1. **Convener[3] pulls a task force team together to form a partnership (see Module 1: Developing Key Partnerships).** Typically, task force members will be public entities with businesses being engaged at the appropriate time. When this task force team meets (may be a series of meetings), the following needs to occur:
   a. A basic level of understanding about each organization's specific goals, resources, program performance measures and requirements. While several organizations have similar missions, how they measure success may vary.
   b. Decision on how the task force will work together. This may entail crafting a MOU. Please refer to Module 1: Developing Key Partnerships for more information.
   c. Review workforce development data. Refer to Module 2: Identifying Workforce Assets and Needs for more information.
   d. Determine the task force focus — industry and/or microbusinesses. Analyze data specific to this industry to get an initial sense of the industry's occupational mix, employment size and future industry projections to get a sense where employment growth is going to occur.
   e. Determine how the task force will engage with businesses within the industry/microbusiness landscape to listen to their workforce challenges.
2. **Engage with targeted businesses.** At this point, secondary data has been gathered and reviewed to understand the general workforce development landscape. Now, information needs to be gathered from businesses who are actively engaged in the current workforce landscape. Engagement can happen in a variety of ways: survey, data presentation (using information from the workforce development data) or focus group[4]. The latter two options would likely yield the most beneficial information and robust conversation. Ultimately, the desired gathered information would be the job progression paths with named occupations, skills and compensation levels and their experiences in regards to workforce, business outlook, future job needs and training partnerships. In the appendix, sample questions have been compiled that could be used to guide the discussion in addition to a handout on career pathways for businesses.

Topics/Questions to ask businesses:

1. Challenges filling openings
2. Greatest need for workers/skills
3. Skill requirements to advance
4. Locations where individuals receive those skills
5. Main pathways in the industry
6. Identify key occupations along pathway (entry to advanced)
7. Increasing compensation levels along pathway
8. Industry/technology changes
9. Demand for business goods/services
10. Anticipated future job needs
11. Current training partners

[3] Convener could be the Extension professional bringing the group together or it could be an existing group that the Extension professional joins, depending on the community.

[4] More information on conducting a focus group can be found in the appendix.

It is anticipated that this business engagement will occur over a series of discussions. As a convener, it's important to ensure the businesses are driving the conversations, rather than the public task force partners. Intentional thought needs to be given as to who engages with the businesses. Recognize that some businesses will be able to provide detailed information regarding the career pathway, necessary certifications/skills/education and changing compensation levels.[5] Others may only provide high level anecdotal information. This will require additional research by task force members to fill the gaps, thus this process may be a slight yo-yo process going back and forth between the business and task force.

3. **Develop a career pathway map.** Using the information gathered from the original secondary data, input from businesses and additional research conducted begin crafting a visual map of the occupational progressions, entry level to advanced. Be sure to include the average education, training, experience, skill levels, required credentials and salary ranges at each level of the pathway. Take a look at the gathered career pathways to see if the focus industry already has an example and modify as needed. If not, create your own visual career pathway. Share the draft pathway maps with the businesses for their feedback, refine as needed and finalize.

   Congratulations!! Your task force team has successfully mapped a career pathway. At this point in the process, the public partners should be ready to roll up their sleeves and cross-reference the career pathway(s) against their portfolio of education and training programs. Below are the next steps in this process, summarized briefly. The next step is crucial in that industry partners have provided valuable information and their time. Now the task force can work to serve the industry/businesses by ensuring the necessary education/training programs are in place and that rural residents can find/complete the training to become gainfully employed or able to progress through their careers.

4. **Analyze the region's education and training portfolio.** Review the available education and training resources that currently exist in the region that fulfill the needs of the focus industry. During this exercise, examine what is effective training and where improvements/gaps exist in the system by gathering feedback from the industry partners. They will be able to share which training approaches are working well and reasons for its effectiveness. These industry partners can also share what programs are not meeting industry needs and where modifications need to be made to become more effective. Once these facets are examined, that leaves the gaps in training needs versus availability. Gaps or deficiencies to look for include: 1) areas that are creating an oversupply of talent in non-relevant training areas relative to actual occupational demand for each occupation identified in the industry's pathway; 2) gaps in training resources: non-existent training programs or deficiencies in existing training programs such as quantity of training facilities, educational staff, equipment, training slot availabilities and supplies. Summarize the findings from the gap, oversupply analysis and industry partner discussions to identify the priorities for refining existing programs or developing new training programs.

5. **Start the designing/modification of education and training programs with public partners.** More than likely, the public partners will need to know the desired competencies. Therefore, the task force will need to review, develop or modify competency models with industry partners, which will validate the career pathway progression. An industry competency model is a collection of competencies, knowledge and skills that define successful performance in an industry or a cluster of related occupations. These models articulate the business/industry requirements necessary for the curriculum, skill assessment instruments and certifications. Consider this a basic building block that guides the development of courses/training programs that match the career pathway progression. For tools/resources on competency models, visit The Competency Model Clearinghouse at https://www.careeronestop.org/competencymodel/home.aspx.

6. **Determine the training programs' sustainability model.** Once the training needs have been identified and solutions have been determined, now a focus turns to the sustainability of the program. How will it be funded? Do policies need to be changed to support the program? Is additional staffing needed — how will that be supported?

[5] Some businesses may not have career pathways developed for their employees. Therefore, guiding questions may need to be asked to help the business identify where career pathways could be developed and what could comprise those training points. Help may be needed from the local labor department and other workforce development ecosystem partners to assist this business further. The intent is to empower the business to develop their own career pathways with support from the local workforce development ecosystem partners.

Who will manage the licensing/certification — if needed? Are there roadblocks related to credit transfer or credit for prior learning? How will the program reach its intended audience? Are there collaborations or MOUs that need to be established across organizations? These are a sampling of the questions that need to be considered by the task force.

7. **Develop an implementation and assessment plan.** Once the education/training programs have been finalized and validated by industry partners, the next step is to think about how to operationalize and how success will be measured. Operationalizing the program may entail defining clear roles and responsibilities of partners (business and public partners), timelines, partners' resource commitments, outreach and ways to adapt the program for different audience needs. Assessments need to be considered before deployment as the appropriate evaluation methods will support continuous improvement of the career pathway system. Therefore, clarification on what data is needed and how it will be collected in addition to defining success will need to be accomplished.
8. **Implement programming, evaluate outcomes and adjust as necessary.** Launch the program, track, analyze and share outcomes data related to impacts. Continuously meet with business and public partners to ensure the implementation is going well and gather feedback on improvements that need to be made. Based on this feedback, adjust the program as necessary.

Example Career Pathways (Industry-specific)

Many career pathways exist online for relatively common industries. Below are several career pathway examples that can provide guidance (not an exhaustive list).

1. Advance CTE | Career Clusters: https://careertech.org/career-clusters/. Includes information about necessary knowledge, skills and plan of study for each pathway.
2. Natural Resources: Natural Resources Systems Pathway | Minnesota State CAREERwise (minnstate.edu)
3. Career Maps in Clean Energy: https://www.energy.gov/eere/education/map-career-clean-energy
4. Nursing Career Pathway: https://nursinglicensemap.com/blog/nursing-career-pathways/
5. Early Childhood Education: http://www.elacindiana.org/elacindiana/wp-content/uploads/2016/08/Indiana-Early-Childhood-and-Out-of-School-Learning-Career-Pathways_3-11-16_Final-1.pdf
6. Agribusiness Career Pathway: https://www.minnstate.edu/careerexploration/guide/afnr/careerpathways/agribusiness.html
7. Governance: Governance Pathway | Minnesota State CAREERwise (minnstate.edu)

If your community finds an existing mapped career pathway, feel free to take what has been compiled and customize it for your county/region. If an existing focus industry is not found, one of these career pathways can serve as a template as your task force works together to create one specific for your county/region.

Entrepreneurial Career Pathways

Section objectives:

Participants should be able to:

- **Define entrepreneurship, entrepreneurial communities and entrepreneurial development**
- **Identify entrepreneur types and how they fit in to the entrepreneurial career pathway**
- **Explain how entrepreneurs fit into economic development and how they are commonly supported**
- **Explain the importance of entrepreneurs and small businesses in the local economy**
- **Describe how entrepreneurship development is supported locally/regionally**
- **Discuss how working for/with an entrepreneur/small business is similar and different from working for a large business**
- **Identify common pinch points and how to effectively address them in an entrepreneurial career pathway**

> **NOTE:** This section of Module 3 was developed to assist communities in strengthening their working relationships with their community's entrepreneurs/small businesses and to gain a better understanding of entrepreneur's existing workforce needs. The Extension educator and FORWARD task force are tasked with working together to identify and help individuals who are unemployed and underemployed consider pursuing local employment opportunities provided by their community's entrepreneurs/small businesses. The Extension educator and FORWARD task force will work with program participants to identify obstacles that are negatively affecting entrepreneurial career pathways. This section will help program participants gain access to resources needed to effectively secure and maintain employment through an entrepreneurial career pathway.

Why entrepreneurial career pathways

Much of the focus of career pathways has been on industries. However, please do not overlook the importance of entrepreneurs, who are often owners of small businesses that provide many goods and services within our rural communities. While the entrepreneur, by definition, is the one directly taking on the risk of owning the business, these business owners require any staff they may hire to behave in entrepreneurial ways to help keep the business in operation. In other words, an employee of an entrepreneur essentially needs to be an entrepreneur because they are a representative of the business (and thus the goods and services provided). Therefore, working for an entrepreneur and/or small business can be very different from being an employee at a larger firm. And building an entrepreneurial workforce requires a strong entrepreneurial ecosystem of support that fosters entrepreneurship AND an entrepreneurial mindset amongst the workforce.

Given that preparing and supporting an entrepreneurial workforce may differ from some of the more traditional pathways to employment, this section will start with some basic definitions, then explore the role of entrepreneurship in the local economy and connect economic development to workforce development.

A community member was once overheard saying, "Spelling 'entrepreneur' is hard enough. Understanding what an entrepreneur is, even harder!" Therefore, let's begin our discussion on how to create entrepreneurial career pathways by providing some working definitions.

- Entrepreneurs and their businesses may be described as innovators, "high tech," "start-ups," self-employed or small businesses. There are probably as many definitions of "entrepreneur" as entrepreneurs. For our purposes, we will consider **entrepreneurs** as people who take on the risk of creating and growing enterprises.
- **Entrepreneurship** is the process through which entrepreneurs create and grow enterprises.
- **Entrepreneurial communities** are those where significant economic and social entrepreneurial activity exists and where an effective system of private and public support fosters entrepreneurship.
- Finally, **entrepreneurship development** refers to the process of building an infrastructure of public and private policies and practices that foster entrepreneurship. For this curriculum, the critical aspect of entrepreneurship development is developing entrepreneurial career pathways.

Effectively supporting entrepreneurial career pathways can span personal assessments to skill building and experiential learning at the individual level and network building peer support at the business and community level. Understanding what is needed begins with understanding the entrepreneur types and needs.

There are many different types of entrepreneurs who have many different motivations. Here are four:

- *Survival entrepreneurs* are in business because they have few options to make a living. In times of recession, the number of such entrepreneurs increases. The literature often refers to this group as "necessity" entrepreneurs — distinct from those who start a business in response to a perceived opportunity.
- *Lifestyle entrepreneurs* are those who seek to balance personal and business goals, such as living in a particular community or raising a family — their primary aim is to employ themselves, often developing a business out of a hobby.

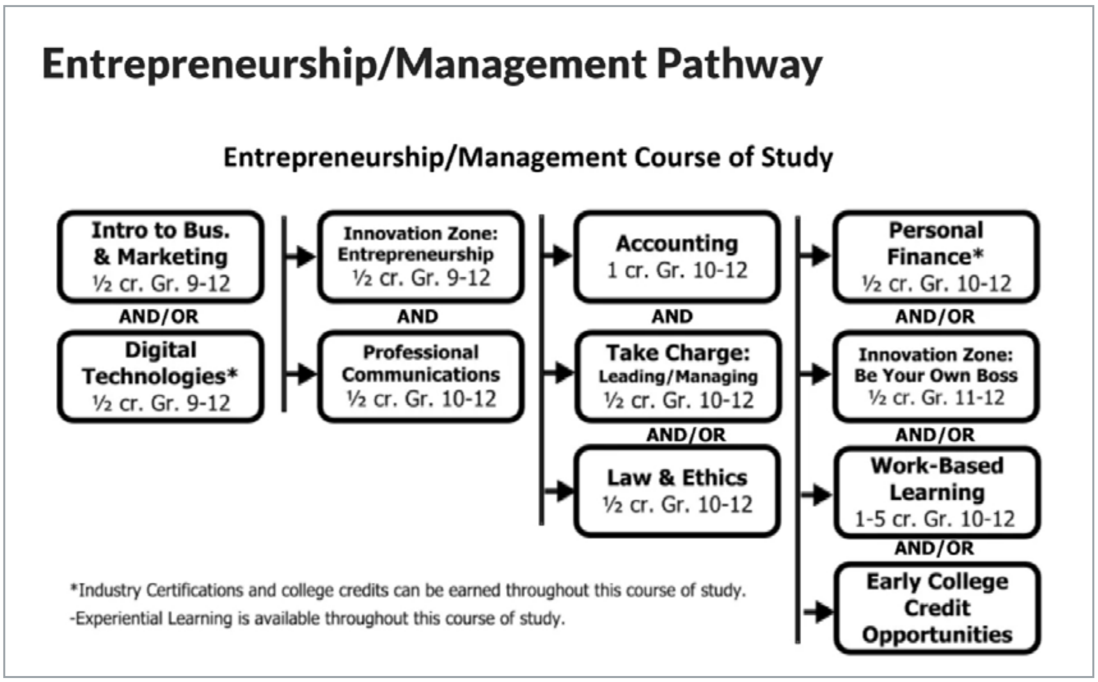
  Survival and Lifestyle entrepreneurs are less likely to be employers, so they are not encountered as frequently when building entrepreneurial career pathways.
- *Growth entrepreneurs* are focused on building their businesses quickly; some refer to them as gazelles.

- *Serial entrepreneurs* are focused on creating multiple businesses either concurrently or in succession.
  Economic developers are most interested in growth and serial entrepreneurs because these are the job and wealth creators. In both cases, these entrepreneurs take their new ideas and expand on them through business creation and growth. Remember that no one can predict who will ultimately be successful. Survival and lifestyle entrepreneurs can evolve to become growth companies over time.

This typology can be useful when your community considers how best to encourage and support entrepreneurship as each has specific needs and challenges.

Suppose there is a desire to build up entrepreneurship muscle in the region. In that case, it is worth identifying how to construct a pathway to equip employees with the skills necessary for them and their small businesses employer to succeed. The Madison Metropolitan School District (Wisconsin) provides one example of an entrepreneurship pathway constructed for high school students (Figure 3). While at the high school level, it provides insight into some of the training topics that could be relevant in the entrepreneurship space.

Figure 3: High School Entrepreneurship/Management Pathway



Source: Madison Metropolitan School District: https://www.madison.k12.wi.us/career-technical-education/academictechnical-skills/business-marketing-and-information-technology/entrepreneurshipmanagement-pathway

The pathway above is workforce development driven, addressing the skills and talent requirements of potential entrepreneurs and employees that may seek employment in the entrepreneurship sector. In practice, at the individual level, youth experience entrepreneurship through programs such as Junior Achievement, Network for Teaching Entrepreneurship, YouthBiz, 4-H's 'Be The "E"' and FFA's Supervised Agricultural Experience. These experiential learning opportunities allow youth to try on entrepreneurship and learn more about what it takes to conceive, conceptualize, prototype, test, evaluate, capitalize, launch and grow a business. From an economic development point of view, this process can result in job creation (oftentimes in the form of new 'nonemployer' businesses, so one business, one job), and the business owner bears all of the responsibility of making the business a success. However, from a workforce development perspective, these experiences prepare participants to work for an entrepreneur as much as it may lead to them starting a business.

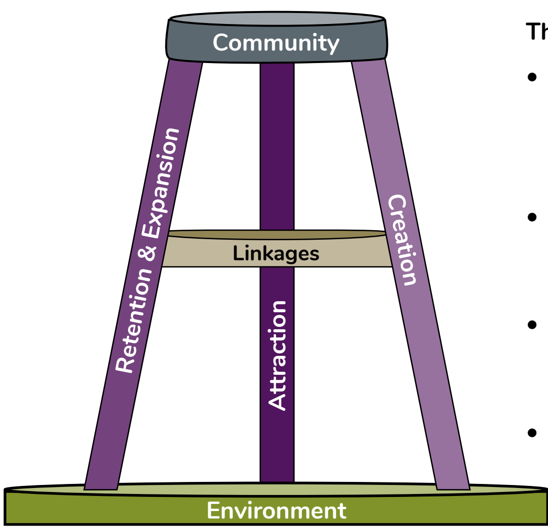
At the community level, the entrepreneurship process is often bolstered by the Small Business Administration, Small Business Development Centers, economic development organizations (local, regional, and state), colleges and universities and a myriad of other elements that function in the entrepreneurial ecosystem. In addition, Cooperative Extension plays a key role in supporting entrepreneurship at all levels (see an example from Wisconsin). The desired result is supporting businesses that thrive and potentially grow into an 'employer' business where people can find employment opportunities.

It is worth remembering that two prevailing issues are vital to developing a career pathway for small businesses: economic development and the reality of working for/with an entrepreneur. So let's take a look.

Practitioners often consider economic develpoment a "three-legged stool." This perspective is based on research and experience. There are three main ways that economic development professionals can promote economic vitality in their community: attraction, retention & expansion, and creation, or entrepreneurship.

The "three-legged stool" is often invoked to convey that communities should take a balanced approach to economic development (with all three legs being of equal length or emphasis) so the "stool" — representing your economy — is stable (Figure 4). This stabilization is strengthened if there are strong linkages between these approaches. In other words, entrepreneurship efforts should complement attraction, business retention, and expansion activities.

Figure 4: The "Three-Legged Stool" of Economic Development



The three-legged stool ...

- Represents three main ways that economic development professionals can promote economic vitality in their community
- Often invoked to convey communities should take a balanced approach to economic development
- Suggests entrepreneurship should also complement attraction, business retention, and expansion activities
- Emphasizes how a community brings it all together!

It is also important to note that the community and the environment play critical roles. All aspects of the economy are rooted in the environment (natural capital) in which they operate and contribute significantly to quality of life. Your community is what brings it all together. If your community is not supportive of economic development efforts, then the probability of success is very limited.

For decades, the conventional wisdom for economic development has been that new economic activity has to be recruited from elsewhere rather than grown locally. As a result, a whole economic development industry has been created focused on marketing, recruitment, associated tax, and other financial incentives.

This has led to escalating competition between counties, regions, and states to attract companies considering relocation or expansion, often at enormous cost to the "winning" area and with a relatively lower probability of success.

From a workforce development perspective, attraction strategies may bring workers from the previous location or create new opportunities for local people in the new location for the business. These firms often make decisions based on the current workforce in the new area and prepare in-house training to overcome any potential deficits. Business retention and expansion strategies aim to retain the current workforce and to recruit from the local area where they are already located. This may require upskilling their current workforce or acting more like a new firm that has to attract and train talent. Both of these economic development strategies involve established businesses and are familiar to economic development professionals.

In contrast, economic development professionals often overlook the third leg, entrepreneurship. However, particularly for rural areas, entrepreneurship needs to be a fundamental economic development strategy as entrepreneurs, and small businesses are the drivers of local and regional economies. They also need to be explicitly incorporated into workforce development strategies. One way to recognize the importance of entrepreneurship is to examine the data.

Entrepreneurship classifications often invoke the number of employees (i.e. nonemployer firms, establishments with less than five employees or 5 to 9 employees, etc.). In reality, entrepreneurs and their businesses come in all sorts of flavors — including sector and firm size.

First, let's consider the smallest of firms as entrepreneurial.

Table 1: Employment and Payroll of Establishments by Establishment Size in the United States (2020)

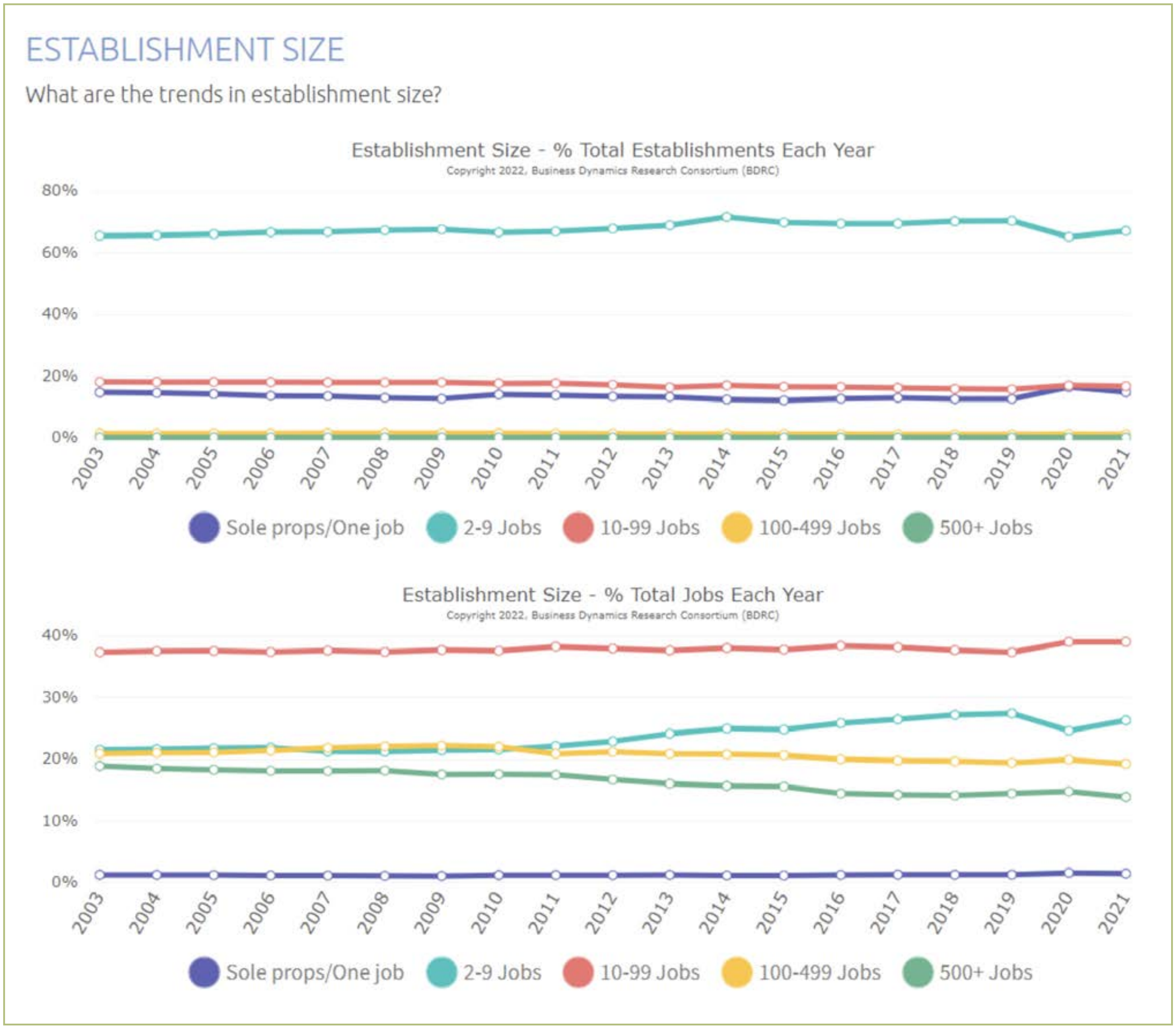
Employment size of establishments	Number of establishments	Establishments	Number of employees	Employees	Annual Payroll	Payroll
All establishments	8,000,178	100.0%	134,163,349	100.0%	7,564,809,878,000	100.0%
less than 5 employees	4,401,231	55.0%	7,204,643	5.4%	386,966,607,000	5.1%
5 to 9 employees	1,419,054	17.7%	9,417,614	7.0%	406,525,684,000	5.4%
10 to 19 employees	998,865	12.5%	13,521,041	10.1%	590,948,217,000	7.8%
20 to 49 employees	738,035	9.2%	22,268,895	16.6%	988,374,065,000	13.1%
50 to 99 employees	243,345	3.0%	16,711,637	12.5%	833,854,358,000	11.0%
100 to 249 employees	139,178	1.7%	20,910,680	15.6%	1,161,465,689,000	15.4%
250 to 499 employees	37,915	0.5%	12,847,431	9.6%	817,684,077,000	10.8%
500 to 999 employees	13,836	0.2%	9,447,821	7.0%	682,591,570,000	9.0%
1,000 employees or more	8,719	0.1%	21,833,587	16.3%	1,696,399,611,000	22.4%

Source: https://data.census.gov/cedsci/table?q=CBP2020.CB2000CBP&tid=CBP2020.CB2000CBP&hidePreview=true

In the United States, over half (55%) of all business establishments have five or fewer employees, and eighty-five percent have less than twenty employees (Table 1). These businesses account for an annual payroll of over $1.38 trillion dollars and employ over thirty million people. Many of these establishments are located in rural areas. And, given these establishments' location and size, not all will be equipped to attract and train employees solely on their own, creating a need at the community or regional level for workforce development initiatives.

While these numbers are impressive for the smallest of establishments, it should be noted that seventy-seven percent of all employment in the United States is by establishments employing twenty or more employees. However, Figure 5 shows that employment by establishments with 10-99 employees (along with 2-9 employees) occupy a larger share of employment than the largest of establishments (100-499 and 500+). And their share has been growing or remained steady since 2003 (versus declining for the larger establishments). Also, it is important to remember that "establishments" differ from "firms." The Bureau of Labor Statistics considers an establishment to be a "single physical location where one predominant activity occurs" versus a firm which can be an "establishment or a combination of establishments." (BLS, 2016). This means that establishments are local, and their workforce development needs will need to be addressed locally.

Figure 5: Establishment Size and Employment by Establishment Size in the United States (2021)



Source: *http://youreconomy.org/indexts.lasso?state=US&county=&msa=*

Large or small, numerous or few, the take-home message from this data needs to be clear. Entrepreneurs and small businesses play an important role in the local economy, including:

- As Employers: creating new jobs and playing a significant role in hiring part-time workers and new workforce entrants
- As Tax Revenue Generators: broadening tax base, thus generating greater property and income tax revenues
- As Economic Supporters: buying and supplying local products and services. Income generated typically not exported out of local community

- As Property Owners and Renters: leasing space from local property owners and filling vacant storefronts downtown
- As Providers of Economic Stability: small homegrown firms are, by definition, owned and operated by people who have a personal stake in the community and are more likely to remain

So, given what you know now about entrepreneurship, entrepreneurs and small business in your local community, now is a good time to discuss how they are supported and what it will take to develop/strengthen an entrepreneurial career pathway.

For starters, let's think about the common characteristics of successful entrepreneurs. Harvard Business School has identified ten, we can think of these as the "DNA" of an entrepreneur. These characteristics include:

1. Curiosity
2. Structured Experimentation
3. Adaptability
4. Decisiveness
5. Team Building
6. Risk Tolerance
7. Comfortable with Failure
8. Persistence
9. Independent
10. Risk Takers

While the literature suggests that these are important for entrepreneurs, our challenge is to understand how to support and work for such individuals. Certainly, when thinking about employees, this list of characteristics might not capture the characteristics one typically seeks. This is why entrepreneurial career pathways are different, potential employees need to balance their skills, experience and entrepreneurial know-how with that of the entrepreneur who has assumed the risk of starting this business and trying to find employees that are a 'good fit' with their vision, passion and goals.

> **NOTE:** This would be a great opportunity to have one or two local entrepreneurs as guests to talk about their views on these characteristics and what they are looking for in employees. It would be ideal if these would be entrepreneurs that are looking to hire one of the program participants as a part of this training exercise or have experience with successfully hiring and managing staff.

In the article, "Employment vs. Entrepreneurship: Similarities and Differences," the editorial team at Indeed.com examines how employment and entrepreneurship differ and some characteristics that these workforce opportunities share. We could aggregate the categories in the article as follows:

DIFFERENCES		
Human Resources	**Work Expectations**	**Internal/External Factors**
Benefits	Collaboration	Competition
Company policies	Decision-making	Financial investment
Compensation plan	Independence	Opportunities
Job security	Project diversity	Risk
Work schedule	Responsibility	
	Work environment	

Differences may appear in schedule flexibility and whether one's work effects the workplace or the marketplace. Similarities may include aspects of payment, professional growth, work-life balance, client management, and expectations.

At the end of the day, an entrepreneur carries all of the risk of owning the business. The employee of an entrepreneur shares some of the burden of successfully representing the entrepreneur's goods and services and effectively managing relationships and aspects of the business under the leadership of the business owner. The importance of customer service in the entrepreneurial career pathway cannot be over-emphasized, along with soft skills, intentional onboarding, and continuous professional development, so the employee of the entrepreneur/small business can provide the support needed to make the business, and the employee's work experience, successful.

Remote Work Career Pathway

Rural communities with a narrow array of career opportunities in their region can consider another approach to diversify employment options and skill up their residents — via remote work opportunities. Rather than targeting a particular industry, this approach focuses on the individual's ability to work remotely while maximizing their skill set that may have limited application within their geographic region. Remote work is simply another strategy to equip individuals to pursue, obtain and maintain well-paying employment opportunities while reducing the outmigration of workers. Additionally, these remote work opportunities can be applicable to a person who needs flexibility in their schedule (i.e. working parents and caregivers), been incarcerated or disabled and cannot thrive in a traditional workplace environment. Therefore, remote work opportunities exist for employees, freelancers and entrepreneurs.

To be an effective remote worker, individuals need the correct set of skills to operate well and independent of others. Utah State University has developed a Rural Online Initiative (ROI) that offers rural residents the specialized skills and career support they need to succeed as a remote worker. ROI has courses on how to become a remote work professional, leading remote employee teams, finding a remote job and negotiating for remote work arrangements. These trainings are available anywhere and numerous land grant Extension systems serve as affiliate chapters to support the workers in their respective state.

Oftentimes, remote work is viewed as an individuals' choice. However, communities can intentionally choose to position themselves to support remote work as a career pathway and economic development strategy to equip both their existing labor force and recruit remote workers to their area. In considering this economic development strategy, communities need to undertake a data-driven approach to determine the benefits, challenges, barriers and feasibility of implementing a remote work program. In working with communities, Utah State University recommends the following steps:

1. Identify descriptive data from reliable secondary sources in considering remote workforce development as a career pathway and economic development strategy.
2. Validate information with employers, key stakeholders and other informants.
3. Based on labor market analysis, complete the remote work initiative assessment.

If the remote work initiative assessment indicates that this career pathway is a good fit for the community, this leads to additional conversations about how to support this economic development strategy. Recommended areas of consideration by community leaders/stakeholders include:

1. Broadband infrastructure
2. Housing – part of the economic development strategy when recruiting remote workers
3. Spaces, places and programs to allow remote workers to meet and network
4. Targeted workforce development efforts on skills aligned with remote work opportunities for local workers
5. Workforce attraction efforts — leverage individual's existing connections to the communities
6. Quality of life investments

The method to creating a career pathway is similar for both industries and remote work opportunities. Both require intentionality by community stakeholders to develop or leverage local resources to support the local workforce and potentially attract others to the community. In this module's Appendix, Utah State University's "Assessing the Potential for Remote Work as a Workforce Developent Strategy" provides a more detailed set of action steps and resources for your community on this topic.

Engage with Your Community's Workers

Once a career pathway model has been developed, check with rural learners to gain their feedback (which we will discuss in Module 4: Recruiting and Supporting Rural Learners). You are seeking information on easy to understand, usefulness and adjustments needed. Take this feedback to the task force and make modifications, as needed.

Appendix

Focus Group Guide[6]

The Focused Focus Group
QUESTION GENERATOR

By Melinda Grismer, Purdue Center for Regional Development (mgrismer@purdue.edu)

COMMUNITY NEED: **Example: To discover which "quality of place" features are most valued by the residents of Dubois County, Ind., for a workforce recruitment campaign**

OPENING: **ROUND ROBIN QUESTIONS**
DESIGNED TO BE ANSWERED QUICKLY
USED TO IDENTIFY CHARACTERISTICS PARTICIPANTS HAVE IN COMMON
FACTUAL QUESTIONS (as opposed to attitude or opinion-based questions)

Example: Each focus group participant has 30 seconds to introduce himself/herself answering these questions:
1) # of years living/working in [your] County
2) Where in the county he/she lives/works
3) Specific occupation/job title

INTRODUCTORY: **POPCORN QUESTIONS**
DESIGNED TO INTRODUCE THE GENERAL TOPIC OF DISCUSSION
PARTICIPANTS REFLECT ON PAST EXPERIENCES
PARTICIPANTS CONNECT WITH THE OVERALL TOPIC
QUESTIONS NOT CRITICAL TO ANALYSIS, BUT TO FOSTERING CONVERSATION

Example:
1) Briefly share your thoughts about your county. First of all, what would you say are the ONE to TWO things you like most about your county?
2) What ONE to TWO things concern you most about your county?

TRANSITION: **RESPONSE-SPURRING QUESTIONS/COULD EMBED SHORT SURVEY HERE**
DESIGNED TO MOVE CONVERSATION INTO THE KEY, STUDY-DRIVING QUESTIONS
SERVE AS THE LOGICAL LINK BETWEEN INTRODUCTORY & KEY QUESTIONS

PARTICIPANTS BECOMING AWARE OF HOW OTHERS VIEW THE TOPIC
Example:
1) Do residents of your county regularly use its parks, trails, and public spaces?
2) Are your downtown areas thriving?
3) Does your county celebrate and promote its culture and heritage (arts, music, local foods, festivals, etc.)
4) In your county, do residents have access to fresh, locally sourced foods?
5) Are there activities available for children, teens, and families to do?
6) Does your county have places where people can gather to socialize or conduct business (such coffee shops, parks, public library)?

[6] Powerpoint can be found at: https://www.nacdep.net/assets/docs/2018-Conference/2018-Sessions/The%20Focused%20Focus%20Group--FINALPPT6-8-18.pptx; Worksheet is found at: https://www.nacdep.net/assets/docs/2018-Conference/2018-Sessions/The%20Focused%20Focus%20Group--WORKSHEET6-8-18.docx

7) Is it easy to find information about activities and events that are occurring?
8) Is there a variety of local restaurants and dining experiences to enjoy?
9) Do out-of-town visitors enjoy coming to your county?
10) Are people in your community open-minded and welcoming to people o many races, religions, sexual orientations, etc.?
11) Are there a number of activities for young adults (21-35 years of age)?

KEY:

OPEN-ENDED QUESTIONS
DESIGNED TO DRIVE THE STUDY
NO MORE THAN 2-6 QUESTIONS IN THIS CATEGORY
USUALLY THE FIRST QUESTIONS DEVELOPED (with the end result in mind)
QUESTIONS NOT CRITICAL TO ANALYSIS, BUT TO FOSTERING CONVERSATION

Example: Which of these "quality of place" features do you find the most attractive—and why? (Have participants brainstorm out loud. Write down answers on flip chart paper and categorize.)

1) Friendliness of the community, its people, feeling of being "at home"
2) Safety, lack of traffic and congestion
3) Rural surroundings, small town feel
4) Educational opportunities for youth and adults
5) Housing options in the quality and price range desired
6) Digital connectivity via broadband/wireless to your home/office

ENDING:

SUMMARY QUESTIONS
DESIGNED TO BRING CLOSURE TO THE DISCUSSION
ENABLES PARTICIPANTS TO PRIORITIZE PREVIOUS COMMENTS
ENABLES PARTICIPANTS TO REFLECT BACK ON PREVIOUS COMMENTS
QUESTIONS CRITICAL TO ANALYSIS, PARTICULARLY IF STRATEGIES WERE SUGGESTED

Example: Based on your previous comments, what is the MOST IMPORTANT thing that you believe the county should do to provide quality of place to current and future residents of Dubois County?

CONCLUSION:

WRAP-UP COMMENTS

A. We'll email synthesized notes to the whole group
B. We'll let you know the results of the overall campaign (as it rolls out)
C. Thank you for your time and for your thoughtful contributions to this exercise! Your feedback was much appreciated!

Sample Questions to Ask Employers

1. Main pathways in the industry
    i. What training is needed to be in this industry?
    ii. What is required versus what are stackable trainings (i.e. advanced topics)?
2. Identify key occupations along pathway (entry to advanced)
    i. Tell me how a person could progress within your company. What would be their occupations, how does their role change, what training do they need and how does the compensation change?
    ii. How do you identify when a person is able to advance to the next level or take on a new job responsibility?
3. Skill requirements to advance
    i. What skills must a person have to advance to the next level or new job?
    ii. Of these skills – which ones are on the job training/experience versus external training?
    iii. Are these skills industry standard or specific to this business?
4. Locations where individuals receive those skills
    i. Where can individuals receive the necessary skills for our business?
    ii. What are the preferred methods for receiving these trainings?
    iii. What has worked well/not so well in the past for trainings?
5. Increasing compensation levels along pathway
    i. How does one increase their level of compensation within your business?
    ii. Is there a marked difference in pay levels once a person gains new skills/credentials/training/job title?
6. Industry/technology changes
    i. Looking at your industry, what technology advances are happening?
    ii. Which of those technology changes do you see happening at your business in the future?
    iii. Is your current workforce ready for those changes in technology?
    iv. What is needed to equip your workers to adopt these new technologies?
7. Challenges filling openings
    i. Please share your experience in filling job openings. Where do you post your open positions?
    ii. What is the hiring process like?
    iii. How do you onboard new employees?
    iv. How qualified are prospective new hires?
    v. Where are the job applications coming from? (county/region/out-of-state)
8. Demand for business outputs
    i. Tell me about the market for your business products. What has been the level of demand for your products or services?
    ii. What factors affect the demand for your product or services?
9. Anticipated future job needs
    i. In looking 2-3 years out, what do you foresee as future job needs?
    ii. Are there job positions that you do not have today that will likely be needed in the future? If so, what are they? What skills will be needed for this job?
10. Current training partners
    i. Who are your current training partners?
    ii. Who are your preferred training partners?
    iii. What experiences have you had in the past with various training partners?
    iv. What do you need from a training partner?

Career Mapping Handout

Career Pathways: What is it and its purpose?

Career pathways is a method of providing clarity to job seekers on how to advance their career trajectory within a specific industry. Career pathways are also a valuable tool to assist industry, workforce development, education and other community partners in developing concrete processes for aligning their respective services to develop integrated pathways that make it easier for everyone to navigate.

Typically, career pathways are industry-driven and designed to outline a connected system of education and training programs that build upon each other to help a job seeker/worker advance in their career. The state of Michigan published a report, "A Practical Guide to Developing Career Pathways[7]," and defined these key features of career pathways:

- They connect and articulate the full range of K-12, adult education, post-secondary, and other education and training, with seamless transitions between "levels" and no "dead ends";
- They have multiple on- and off-ramps to make it easy for individuals to start, stop, and re-enter education and training;
- They embed "stackable" industry-recognized credentials;
- They make work a central context for learning, through on-the-job training, Registered Apprenticeship, work-based internships and mentorships, and other avenues;
- They accelerate educational and career advancement through assessment of prior learning and experience, integrated "basic" education and technical training, and other strategies; and
- They provide integrated supports like coaching and advising and services like childcare and transportation assistance, especially at education and career transition points.

Given the amount of work it takes to develop the career pathways, questions may arise about the value proposition of doing this work. Know that the federal Workforce Innovation Opportunity Act (WIOA) makes development of career pathways a function of the state and local workforce boards. The Act also encourages the activities of career pathway development and planning by education and workforce services.[8] A Michigan report outlined the benefit of crafting career pathways for the three beneficiaries: businesses (employers), students/job seekers/workers, and community partners.

Businesses

- A process for thinking comprehensively about their expectations for each of their positions and clearly defining both necessary and realistic requirements;
- An opportunity to ensure that education and training are aligned to actual industry and company needs;
- A ready talent pipeline with the right education, skills, and credentials;
- A strategy for increasing employee retention;
- A model for supporting career advancement, succession planning, and back-filling; and
- A process for connecting to new and more diversified talent pools in tight labor markets facing worker shortages.

Students/Job Seekers/Workers

- A career development "roadmap" that takes the mystery and guesswork out of understanding what careers and career progression look like in various industries and what the real requirements are for career advancement
- A way for students/job seekers/workers, particularly those with multiple barriers to employment and advancement, to see themselves in careers and have access to career development information and experience they might not otherwise be exposed to;
- Education and training that is aligned to "real-world" occupational progressions and workforce needs;

---

[7] A Practical Guide to Developing Career Pathways. 2018. Michigan. Accessed at: https://www.michigan.gov/documents/ted/R5_5_MICPFramework_20180730_629836_7.pdf

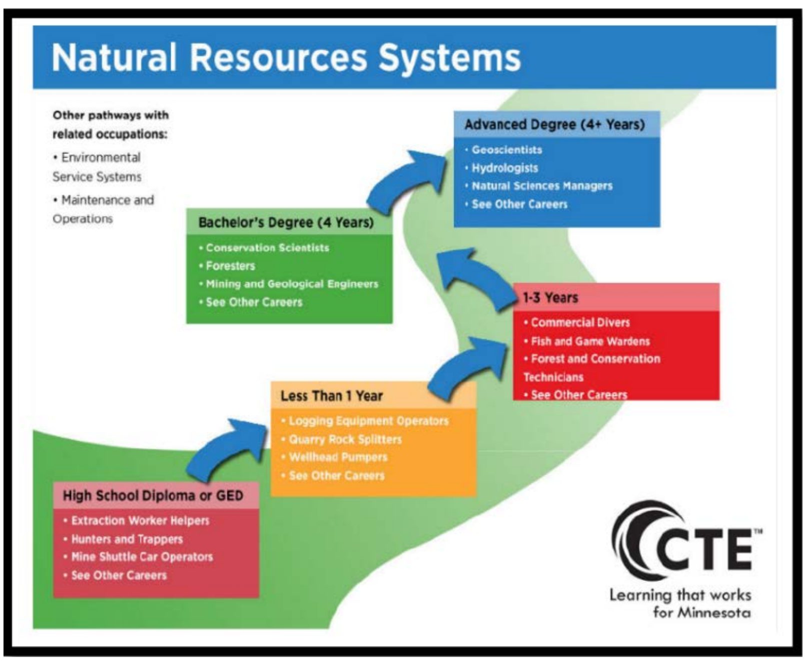
[8] Career Pathways Toolkit: A Guide for System Development. https://wdr.doleta.gov/directives/attach/TEN/TEN_17-15_Attachment_Acc.pdf

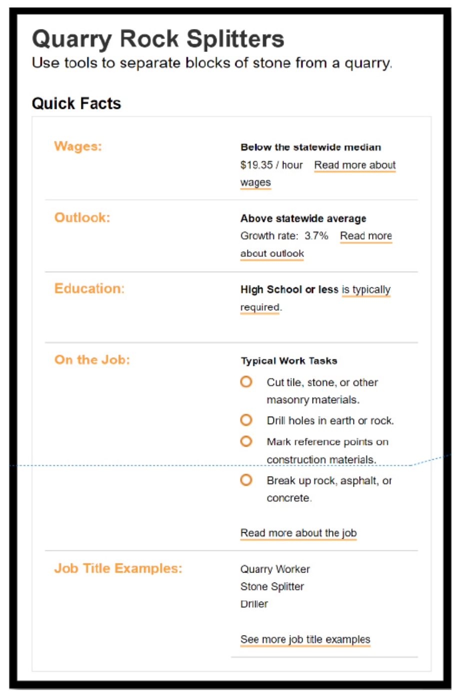
- More opportunities to learn on the job;
- Accelerated career advancement opportunities;
- New career entry and advancement opportunities, particularly for individuals with barriers to employment and career development; and
- Integrated supports and career coaching.

Community Partners (workforce development, education, human services, and related systems)

- A process for better aligning and integrating services and resources;
- Reduced duplication of efforts and investments;
- Improved outcomes for a variety of customer groups;
- Improved access to and engagement of previously-disengaged populations;
- Better connections to business and industry partners and alignment with their workforce needs;
- Stronger relationships with other public partners; and
- Increased opportunities for better service utilization and coordinated service planning and delivery.

Example of Career Pathway





Utah State University Remote Work Assessment

Assessing the Potential for Remote Work as a Workforce Development Strategy

BACKGROUND

Many rural communities face high levels of unemployment and poverty due to automation within extractive industries (e.g., mining, timber, agriculture). As these nonmetropolitan areas recovered more slowly from the Great Recession (Pender et al., 2019), the overall economic recovery of jobs post pandemic has been slowest for persistently poor rural counties (Dobis et al., 2021).

Some communities have pursued the idea of remote work as a strategy for offering new employment opportunities to rural residents and reducing outmigration of young people pursuing education and careers (Hill et al., 2021; Murray, 2022). Even prior to the onset of the Covid-19 pandemic, remote work opportunities were expanding, and the pandemic rapidly accelerated this trend (The Future of the Office, 2020). Some of these shifts may have lasting impacts on telecommuting patterns in the United States, presenting new possibilities for rural communities to capture better paying jobs for rural residents (Hughes et al., 2022).

Remote work requires skills that many rural residents may not possess. As such, Utah State University (USU) Extension has developed the Rural Online Initiative (ROI) program to offer rural residents the specialized skills and career support they need for success as a remote worker. The initiative offers courses in becoming a remote work professional, leading teams of remote employees, finding a remote job, and negotiating for remote work arrangements. As a USU Extension program, the ROI also partners with Utah 4-H to provide rural high school students with learning opportunities designed to increase their awareness of the concept of remote work (Schmutz et al., 2022). Based on USU Extension's experience with remote work training courses, their faculty have developed the following assessment questions and tasks for Cooperative Extension Professionals (CEPs) and their stakeholders who may be interested in pursuing remote work as part of a career pathway and economic development strategy.

A thorough analysis for pursuing a remote work initiative as a rural economic strategy should use a data-driven approach to:

1. Identifying the benefits of remote jobs in a rural community.
2. Identifying the challenges to implementing a remote work training program.
3. Identifying obvious and potential barriers to success of such a program.
4. Match with the "strategic focus" of a community's workforce and economic development strategy; remote work should be only one aspect of a community's overall strategic economic development plan.

TASK #1

Identify descriptive data from reliable secondary sources in considering remote workforce development as a career pathway and economic development strategy.

Data Sources:

- U.S. Bureau of Labor Statistics (DoL) bls.gov
- Employment and Training Administration (DoL) dol.gov/agencies/eta
- U.S. Census Bureau census.gov
- U.S. Bureau of Economic Analysis bea.gov
- State labor market information agencies bls.gov/bls/ofolist.htm
- Private sources and proprietary data vendors (any data collected by a private business)
- St. Louis Federal Reserve's Economic Data (FRED) fred.stlouisfed.org

UtahStateUniversity

Remote Online Initiative • Extension

Remote work strategy descriptive data (See the "Identifying workforce needs" element of the FORWARD curriculum, also called the LMI Resource Guide).

1. ***Labor trends by industry***
   a. Question: What are the top growing industries across the country, your state, region, and county?
   b. Data: National, state, regional, and county secondary data

2. ***Labor market trends***
   a. Question: What are the unemployment levels in your state, region, and county?
   b. Question: What are the age characteristics of the labor market in your state, region, and county?
   c. Data: State, regional, and county secondary data

3. ***Population trajectory***
   a. Question: What is the average household income in your state, region, and county?
   b. Data: State, regional, and county secondary data

4. ***Per capita income, average household income***
   a. Question: What is the population trajectory in your state, region, and county?
   b. Data: State, regional, and county secondary data

5. ***Educational attainment***
   a. Question: What is the average educational attainment in your state, region, and county?
   b. Data: State, regional, and county secondary data

6. ***Net migration trends***
   a. Question: What are the migration trends in your state, region and county?
   b. Question: What are the commuting patterns in your state, region and county?
   c. Data: State, regional, and county secondary data

7. ***Availability and accessibility of broadband access***
   a. Question: What are the limitations of broadband/fiber access in your state, region and county?
   b. Data: State, regional, and county secondary data

TASK #2

Validate information with employers and other key stakeholders and informants.

1. Qualitative data can help interpret findings and can build support
2. Obtain qualitative data through interviews and surveys and interpret findings
3. Build support for subsequent efforts with key stakeholders

TASK #3

Based on labor market analysis, answer the remote work initiative assessment.

1. Does your community have higher than state average unemployment?	YES	NO
2. Does your community have low economic diversity?	YES	NO
3. Does your community have high rates of poverty?	YES	NO
4. Does your community have below average household income?	YES	NO
5. Is your community experiencing population decline?	YES	NO
6. Is your community experiencing negative net migration?	YES	NO
7. Is the educational attainment in your community at or above a high school diploma/GED?	YES	NO
8. Does your community have reliable broadband/fiber access?	YES	NO

Answering "yes" to the majority of these questions signals that a specialized remote work training program could be a viable community workforce initiative.

A remote work micro-credential awarded from an institution of higher education may help an individual determine how their current skills are transferable to a remote job. Such training would also acquaint them with career paths that might be of interest in the future and what skills they need to learn to get there.

Examples of short-term strategic options

- Improve broadband/fiber access
  > HB304 le.utah.gov/~2021/bills/static/HB0304.html
  > Utah Broadband Center le.utah.gov/interim/2021/pdf/00003346.pdf
- Tax incentives to employers to hire remote workers in rural areas.
  > HB390 le.utah.gov/~2018/bills/static/HB0390.html
  > HB110 le.utah.gov/~2019/bills/static/HB0110.html
- Grants for rural counties to establish co-working spaces
  > HB296 le.utah.gov/~2019/bills/static/HB0296.html
- Specialized training for rural residents in the best practices of remote work and finding a remote job
  > HB327 le.utah.gov/~2018/bills/static/HB0327.html
  > Remote work training program remoteworkcertificate.com
- Grow with Google digital skills lessons and career certificates
  > Workforce development: Build basic digital skills grow.google
  > Applied digital skills applieddigitalskills.withgoogle.com/en/learn

The Center on Rural Innovation offers six recommendations for rural leaders to consider when creating economic and workforce development strategies and programs (Rembert, 2021):

1. Build the broadband infrastructure of the future, and make sure people know where it is.
2. When attracting remote workers, incorporate housing into your economic development strategy.
3. Create spaces, places, and programs where remote workers can meet and network.
4. When working to increase remote employment for local workers, focus workforce development efforts on skills aligned with remote work professions.
5. When attracting remote workers, target workers that already have connections to your community.
6. Invest in quality of life.

REFERENCES

Dobis, E. A., Krumel, T., Cromartie, J., Conley, K. L., Sanders, A., & Ortiz, R. (2021). Rural America at a glance: 2021 edition. U.S. Department of Agriculture. ers.usda.gov/publications/pub-details/?pubid=102575

Hill, P. A., Ali, A. D., Narine, L. K., Spielmaker, D. M., & Schmutz, A. T. (2021). Evaluating Utah's Rural Online Initiative: Empowering Utah's rural communities through remote work. The Journal of Extension 58(5). Article 21. tigerprints.clemson.edu/joe/vol58/iss5/21/

Hughes, D. W., Willis, D. & Crissy, H. (2022). What does COVID-19 mean for the workplace of the future? Choices: A publication of the Agricultural & Applied Economics Association. choicesmagazine.org/choices-magazine/theme-articles/making-it-count-applying-science-to-support-universal-broadband/what-does-covid-19-mean-for-the-workplace-of-the-future

Murray, L. E. (2022, May). Preparing rural Americans for the post pandemic economy: Lessons from Utah. The Public Policy Center of The Conference Board [Virtual roundtable]. conference-board.org/pdfdownload.cfm?masterProductID=39541

Pender, J., Hertz, T., Cromartie, J., & Farrigan, T. (2019) Rural America at a glance: 2019 edition. U.S. Department of Agriculture. ers.usda.gov/ publications/pub-details/?pubid=95340

Rembert, A. (2021, October). The rise of remote work in rural America. Center of Rural Innovation. ruralinnovation.us/resources/reports/therise-of-remote-work-in-rural-america/

Schmutz, A. T., Campbell, A., Bean, A., Ali, A. D., Hill, P. A., & Swadley, E. A. (2022). Preparing rural youth for the future of work through remote work education. Outcomes and Impact Quarterly, 2(2), Article 4. https://digitalcommons.usu.edu/oiq/vol2/iss2/4/

The Future of the Office. (2020, September). Covid-19 has forced a radical shift in working habits, mostly for the better. The Economist. economist.com/briefing/2020/09/12/covid-19-has-forced-a-radical-shift-in-working-habits

MODULE 4:

Recruiting and Supporting Rural Learners

By Jeff Sherman, Oregon State University

Learning Objectives

- **Identify community strengths and weaknesses impacting the recruitment and retention of job seekers/learners**
- **Increased understanding of challenges faced by BIPOC and ALICE populations in navigating these pathways**
- **Increased awareness of resources and approaches being used to improve recruitment and retention of job seekers/learners**

Background

Over the past several decades many small and rural areas have struggled to recruit and retain rural learners and employees at the same rate of suburban and urban peers. The U.S. Census Bureau (2020) estimates that while rural areas declined by a half-percent between 2010 and 2020, urban and suburban areas grew by eight percent. However, as was seen in the "urban exodus" of the 2020 COVID-19 pandemic, there are reasons why some Americans may want to choose a more rural and small-town environment.

Community stakeholders have a unique opportunity to share opportunities about living in rural communities, while also addressing real issues, challenges, and divides which may keep some people from moving to rural areas. Utilizing the Abelsen et al. (2020) framework, this section will introduce the methodology to help stakeholders create a plan to recruit, and retain rural learners.

Extension professionals are positioned to facilitate these conversations as experts in their communities, connectors to university resources, and trusted partners to the education system and industry partners.

These sections and activities were adapted from the, "Framework for Remote Rural Workforce Stability Model," shown in Figure 1 and are intended to help Extension professionals navigate stakeholder conversations around career exploration, connecting to students/learners, and developing programs.

Figure 1: Framework for Remote Rural Workforce Stability Model

Source: https://human-resources-health.biomedcentral.com/articles/10.1186/s12960-020-00502-x

Creating a Plan*

The first part of any plan for recruiting and retaining rural learners is just that, a "plan." This section is intended to help each stakeholder map the assets in rural communities and share across industry sectors. Each stakeholder will have a unique view and perspective of the community, and will provide valuable insight into how to address gaps.

Extension programs are uniquely poised to address career pathways through in-depth community needs assessments and advisory boards. This section provides a practical approach to outlining where the opportunities lie for expanding existing programs and creating new programs to meet the needs of the community.

The facilitator will ask stakeholders to begin outlining the strengths and opportunities for improvement (gaps). Being honest about the assets in the community and the challenges will allow the community to begin addressing ways to recruit and retain rural learners and employees.

- **What are the strengths in your community? Why would someone choose to live here?**
  Examples:
  - Are there excellent schools?
  - Low crime rates?
  - A strong sense of connectedness and community?
  - Low cost of living?

- **Where are the gaps in livability? Have you heard anyone say, "I would love to live here, but ________?**
  Examples:
  - Affordable housing?
  - Access to quality health care?
  - Spaces for BIPOC communities (see BIPOC section below) "Do folks perceive that they would 'belong' here?"

- **Who are the target recruits?**
  - What are the most in demand careers in the community?
  - If you are targeting high school and community college students, what are ways in which you could implement career exploration into curriculum or existing youth programs?
  - Are there ways you can think of to eliminate barriers for students to participate in career exploration?

Recruit and Connect

Once there is an outline of the plan, stakeholders will begin thinking about the incentives and support mechanisms which would attract students/learners to their specific industry or business. These questions will revolve around how information will be shared out about the industries, careers, and how the businesses are supporting families. Here is a real example outcome from a rural community in the Pacific Northwest that went through this activity:

> ***Community "A" identified the need to attract and retain healthcare professionals, specifically Spanish-speaking professionals. The local hospital worked with Extension on a pilot program to provide a career exploration day offered in both English and Spanish. Extension organized with the local high school, chiropractors, pharmacies, veterinarians, elder care facilities, eye clinics, and the community college to offer every high school Sophomore student the opportunity explore over 20 healthcare careers in one day.***
>
> ***Extension designed a program evaluation and provided data back to partners for adjustments in future programming. In the following year, 10 of the 20 participants provided paid internships for students over the summer. By year five, several local businesses were offering full college scholarships to students who complete a high school internship with them. Future evaluation could focus on students returning to their communities after completion of their secondary education.***

Extension facilitators may want to design their own questions to ask during this section, and below are ideas to begin thinking about potential solutions:

- **What are the employee's opportunities to grow within the industry/business?**
  - What are the benefits of local careers?
  - What would be the reason a student a student would be excited about this career?
  - How do students learn about these opportunities now in your industry?
  - If someone is interested in continued growth, what does advancement look like?

- **If you are interested in recruiting employees from out of the community, how will leadership and management help new employees integrate into the community?**
  - Are there social events/networking opportunities outside of the day-to-day work?

- **What are other opportunities in the community for the entire family?**
  - How will you help attract families? Are there programs to help find other career opportunities for multiple-earner households?
- **What are the work-life policies within the industry/business?**
  - How flexible is the work day?
  - How much sick leave, personal time, vacation can the person expect?
    - Is this in line with the other businesses? Would changing this policy attract more employees?

Retain

Retention of rural learners and employees is an area of focus which should be intentionally addressed. Stakeholders have to spend time developing a plan for recruiting talent, training existing labor forces, and investing in families, but if the employees aren't satisfied in the work or the work environment the investment could be lost. Culture, sense-of-belonging and on-going training are some of the tactics this section will focus on.

- Organizational/business culture
  - What is your culture? Define your culture in 1-2 sentences
  - Do employees feel like they are supported by leadership/management?
    - Have you asked current employees/learners what their needs are, and if they are satisfied?
    - Is there a culture of being able to bring up issues?
    - How would you describe the team dynamics?

- On-going training
  - Is there a scheduled plan for on-going professional development?
  - How are skills developed over time with learners/employees?
  - What are the opportunities for leadership development?

*Adapted from the Abelsen et al. framework, "Plan, recruit, retain: a framework for local healthcare organizations to achieve a stable remote rural workforce"

BIPOC and ALICE Audiences

BIPOC

When thinking about recruiting and retaining a rural workforce, it is important to consider how you are being intentional about recruiting Black, Indigenous, and People of Color (BIPOC) into communities. This can often be an uncomfortable conversation for our rural and smaller communities, as many of these communities tend to be more demographically white. Do people of color feel safe and supported in your community? What change is needed? Not addressing these issues can have long term impact on community vitality and livability.

What are the reasons why BIPOC communities may choose more rural areas? What are the local resources available to families of color when they choose our rural areas? How are you being intentional about our workforce culture, in regards to racial diversity, inclusive ethos, and ongoing training? Being intentional about inclusion efforts, identifying gaps in resources, and investing resources may promote actions that can open your industries and communities to a wider demographic of individuals and families.

Often, rural and remote areas have great schools, lower cost of living, increased sense of community, and additional job opportunities. Our rural areas may lack some of the resources and space for communities of color. What are those gaps, and how could you as individual businesses and industries address those gaps? Significant change can be driven by employers who need employees to feel a sense of belonging within the community.

Communities and stakeholders can start by looking at the workplace itself. Is the workplace an inclusive space where diversity is encouraged, celebrated, and discussed? How is the workplace making intentional investments in learning about racial divides? How has the leadership and management made investments in intentionally creating the ideal workplace for communities of color?

Resources from outside organizations like Courageous Conversations About Race and the Racial Equity Institute may allow for organizations to lean into the uncomfortable conversations about why more people of color are not choosing to live in rural communities.

An example program to highlight in this areas is *The Connecting for Children project* which was designed to provide relationship education to families in Mid-Missouri. Although the Latino population accounts for only 3% of Missouri families (US Census, 2010), Latinos accounted for 40% of families served in this project. This project was focused on:

- Increase Cultural Competence
- Latinos are heterogeneous individuals whose countries of origin, migration patterns, socioeconomic profiles, and physical characteristics vary.
- The data show a strong desire to maintain the Spanish language while increasing proficiency in English. Based on this, the program was culturally adapted, the materials were translated, and the program was implemented in Spanish.
- The concept of familsmo involves an obligation of the family to share responsibility in rearing children, providing financial and emotional support, and decision-making. The value of familismo guided the selection of activities and arrangements for the program.
- Being simpático (good-natured and pleasant) is also related to valuing warm, friendly, interpersonal relationships (Antshel, 2002; Levine & Padilla, 1980). A bilingual recruiter/trainer who was friendly and communicated with warmth was instrumental in building a relationship with participants.
- Build Relationships with Existing Service Providers
- One important way to reach participants is to create partnerships with established programs and organizations that serve the Latino community. The partnerships was also useful in consolidating resources that were helpful to the families, allowing the program to offer education on a specific topic as well as connect families to a variety of resources and information
- Build Relationships with the Latino Community
- Hiring staff who used knowledge of the culture and the community was the most important strategy employed.

After reading this example, what are ways in which you can build an intentional program to serve communities in a culturally-relevant context?

ALICE

Asset limited, income constrained, employed (ALICE) is a way to talk about employees who are employed, make an income above the federal poverty level, but not enough money to meet the day-to-day demands of basic needs. More information is available here.

As noted by the ALICE National Overview (2018), 42% of households could not meet the basic needs of their households. These are employees who may not make enough money to meet their basic needs, but are still fully employed. These employees are living in your communities, and may be clear candidates for workforce development, training, and advancement in industries and businesses.

More information and state date can be found on the Unite For ALICE website, and each educator should familiarize themselves with this data before the activity. How will this information be incorporated into your presentation?

EXTENSION EDUCATOR CORNER

Educator Corner

Preparation for the activity: Recruitment of Rural Students/Learners

As the educator, what can you do to provide information about the current trends in the community? Any information you are able to obtain on the local demographics will be a valuable start to the activity, in order to begin defining a path forward in rural workforce development recruitment and retention. Here are a few idea:

Data on demographic trends:

- Who lives here?
  - What are the historical demographic trends
- What are the major industries?
- What is the average education level of the community?

Conversations with rural students/learners – BIPOC populations:

- What do our BIPOC populations tell you about our community? Do they feel safe and welcomed? What do the partner organizations say?
  - Example: A 2019 university study found that 60% of students of color in rural youth programs had experienced some form of discrimination within their school in the last year.
    - If you had heard that about your programs/community, what is the response? What are the next steps?
- What are their needs? (This may include community change, livability suggestions, access to training and resources, etc.)

Key informant interviews:

- What are the identified needs in workforce development?
- How can you recruit more employees to the community?
- What is the future of the community if you don't make a change?

Activity: Recruitment of Rural Students/Learners

Objectives:

1. Extension facilitators will invite local employers and stakeholders to a conversation, so that the participant(s) will be able to:
    - Understand the strengths and weaknesses in the local community
    - Identify the best ways to recruit rural learners into identified programs
    - Reduce barriers for students
    - Design outreach methods that clearly articulate the value of the program
    - Understand successful models across the country which have recruited diverse individuals into programs
    - Create an action plan for outreach about the program

* This can be offered as a session with multiple people designing the outreach plan, or individually to create the recruitment and retention plan.

Supplies needed:

- (In-person) Sticky notes, blank easel paper, markers
- (Virtual) Drafted slides in Jam Board and practice using sticky notes to show participants

Time: 40 minutes

Introduction to recruiting learners for stakeholders:
(1 minute) By this point in the curriculum, you have identified a need for a workforce training program in the community, in a specific industry. You have determined that there are local partners who will help deliver the curriculum, but how will students/learners be recruited to attend the training? In order to recruit, you must first understand who would be our ideal candidates to attend the training, and how you will convince them this training will benefit them.

To get started, let's draft a plan for who you will target, how you will find them, and why they will want to participate:

Facilitator Presentation:

Begin by identifying the demographic trends of the community, based on your prior research outlined in the Educator Corner on previous page. As a reminder, this may include data on demographic trends, conversations with rural students/learners — BIPOC populations, and key informant interviews.

Facilitator-led Activity 1:

Identifying your community strengths, getting started activity:

- (3 minutes) Using sticky notes (or, if virtual, use a digital whiteboard like: https://jamboard.google.com/) write characteristics of your community which would make someone want to move there. Where are the opportunities for improvement?
    - One sticky note per idea.

Facilitator-led Activity 2:

Identifying your current target demographics, getting started activity:

- (3 minutes) Using sticky notes (or, if virtual, use a digital whiteboard like: https://jamboard.google.com/) write characteristics of the ideal candidate (ex. entrepreneurs, desire to work in a technology field, ability to speak Spanish, etc.)
    - One characteristic per sticky note
- (10 minutes) Take 10 minutes to group all of the sticky notes into categories/themes, and name each theme

- (5 minutes) Under each theme write bullet points for where you might be able to find candidates/students/learners for your area (Ex.: graduating high school seniors, local employers, etc.)
  - After each bullet point, write the name of someone in the community who you could help you reach out to potential participants
- (5 minutes) What is a potential solution for the problem? Who do you need next to help find a solution?
  - Individually do this activity and the facilitator asks for folks to share their ideas

Example outcome of this activity:

> *A community identified need in a rural community for skilled welders, or the businesses were going to have to move to a larger neighboring city to attract employees. The employers came together and identified the target population could be high school graduates and/or adults who were willing to learn a new skill and change careers.*
>
> *The employers brought together the local high school, who had closed their welding program, the local community college who did not have a welding facility, and OSU Extension led the brainstorming activity about a potential next step. The community college offered to pay their instructor from the main campus to teach welding certification courses at night, if students paid for college credit. The high school offered the shop facilities and scheduled for the building to be open late, if the community college would pay for welding supplies.*
>
> *After six months, four adults received welding certifications and full-time employment and five high school students completed their first college credits, and all enrolled in college after high school.*

Facilitator-led Activity 3:

Developing an employee value proposition (the why?)

- **Why would someone want to work with your industry/business?**
  - *Now that you have identified ideal participants and where to find them, the next step is clearly articulating the program in a succinct way that is intriguing.*
    - (5 minutes) In five minutes, develop the start of an elevator pitch for prospective students/learners. The pitch could include:
      - Why this industry?
      - Why this training?
      - How this program could lead to other opportunities, etc.
      - Will there be a cost to the program?
      - Is this program unique and special?

Example elevator pitch from Activity 2:

> *Welding is one of the top paying careers in XYZ County. Our industry has starting wages above $30/hour, flexible schedules, retirement matching, healthcare, and the opportunity for advancement. With this training, a novice welder will be able to complete a certification and be eligible for a career immediately.*

  - (5 minutes) IF there is more than one person designing this outreach plan, have each person do this separately, and then decide on a favorite pitch, or combine pitches to make the best one!
  - [SLIDE] Your draft plan has been created!!

[SLIDE] *Best practices for recruitment: Throughout these next sections, think about your draft outreach plan. A good plan is one that can be tweaked as needed. As you hear an idea that you would want to incorporate into your plan, please feel free to make those edits.*

[SLIDE] Examples for recruiting learners (Juntos)

- Case study: In Oregon, high school graduation rates were continuing to decline among Hispanic/Latino students. This decline in graduation rates meant many students were not able to attend college, apply for many jobs, or advance in careers. Schools came to the OSU Extension Service for ways to help. A curriculum out of North Carolina State University, called "Juntos" [Who-n-toes] was discovered as a way to teach families and students, together, about how the education system works, how to apply for college, and ways to engage with the school system. OSU Extension intentionally designed the program to reduce barriers for attendance by the whole family. These program components included: providing the workshop at 5:30 with a hot and culturally-relevant meal for families and offering childcare inside the facility. In order to build trust and relationships with the schools, Juntos is physically located in the high schools and middle school and administrators are encouraged to attend, even if they do not speak the language. By the end of the next school year, 50 families had attended the program and 100% of students had graduated high school, and 92% of those students went on to college.

[SLIDE] Who is missing?

- Who are you missing? Often, when designing programs, it is easy to reach out to people whom we feel most comfortable. There are ways to reach out to new audiences. It is also important to be culturally sensitive when working with new audiences, and finding partners in the community who currently serve these populations can help expand outreach.
  - [Handout in packet] Take a minute to read through the list below. Would your program be applicable to:
    - Learners from other races/ethnicities? _______
      If yes, who is a local partner to reach that audience? ___________
    - Formerly incarcerated individuals? _______
      If yes, who is a local partner to reach that audience? ___________
    - Master Gardeners, 4-H adult volunteers? _______
      If yes, who is a local partner to reach that audience? ___________
    - Spanish Speaking community? _______
      If yes, who is a local partner to reach that audience? ___________
    - Current or Future Entrepreneurs? _______
      If yes, who is a local partner to reach that audience? ___________
    - Youth participants/4-H members? _______
      If yes, who is a local partner to reach that audience? ___________
    - Other? _______, _______
      If yes, who is a local partner to reach that audience? ___________
  - Write the name of someone who you could ask about the best ways to communicate to each group. Is there a community partner who serves this audience who would be able to help you reach this group in a culturally respectful way?
  - [ACTIVITY] Read through the example programs (Handout #3) for any last ideas on how to recruit learners for the program

[SLIDE] Strategies to retain learners: the final component of the recruitment plan is how to retain learners once they have started the program.

- Will there be certificate (or other credential) at the end? Make sure learners know what the certificate will do for them, in the early stages of the curriculum.
- "Graduation" at the end of the program can be a great incentive for individuals to complete the program. Make intentional time to celebrate the accomplishments of finishing.
- Considerations of potential barriers to navigate

[HANDOUT] Develop a localized plan to know your community resources/people. Using the handout in your packet, fill in the plan for recruitment of the program, and how you will begin addressing the needs within your organization.

Facilitator Presentation:

Case Examples and Best Practices
Rural workforce development program examples

Low Income/minority focus:

1. **Move Forward – Community Development Program**
   Move Forward is a poverty reduction program of Cornell Cooperative Extension (CCE) of Chemung County. The current components include:
   - Administering the internationally recognized Poverty Stoplight survey which helps community residents assess their overall well-being and develop action plans to take steps out of poverty.
   - The Chemung County Poverty Reduction Coalition, a group of individuals representing various community organizations, which meets 2X per month to share needs, information and resources to help community residents.
   - Chemung County Human Resources List-serv — a list serv dedicated for members and community partners of the Coalition to share information, needs, and/or opportunities.
   - Participation in the Southern Tier Health Equity Taskforce, which is tasked with identifying hard to reach and/or underserved populations and helping them gain access to and information about the COVID-19 vaccine.
   - Natural Leaders Initiative training, an 8 session, interactive program designed to build the confidence and capacity of primarily low-income and/or minority residents. Leadership and participation in the CCE Poverty and Economic Hardship Program Work Team, a state-wide group of Extension educators and Cornell faculty, which meets monthly to learn together about poverty and share best practices and resources.
     – Andy Fagan (agf1@cornell.edu)
     – The external audience is primarily low income families in and around the City of Elmira, NY and across Chemung County. The internal audience is other Extension professionals

2. **Enhancing Rural Education/Business Connectivity: A New Model to Advance Workforce Development Opportunities**
   With a seed grant of $10,000 through The Ohio State University CARES, the Chamber partnered with the OSU Alber Enterprise Center and OSU Extension to survey business and educational institutions to identify opportunities that might help orient workers to future jobs in Hardin County. Fifty-eight businesses employing almost 2,000 people and representing all sectors (including education) responded to an OSU Extension Business Retention & Expansion (BR&E) Signature Program survey including one-on-one interviews by the team.
   - This resulted in the development of a web based platform to connect resources and communicate opportunities to benefit youth, the unemployed, underemployed and future workforce.
   - This model creates linkages that focus on creation of a workforce development communications model that can be replicated in other areas.
     – Nancy Bowen-Ellzey (bowen-ellzey.1@osuedu)
     – http://hdl.handle.net/1811/84968

3. **4-H Tech Changemakers**
   A teen-led program that empowers young people to change their community's future using technology and digital skills. The program introduces teens to opportunities that will help them build leadership skills, take action, present to local government officials, and develop a strong, positive reputation in their community. Teens participating in the program grow into responsible contributing citizens in an environment where they can make decisions and mistakes safely. Students also explore careers in the tech industry in partnership with those local industries.
   - The 4-H Tech Changemakers program teaches website development, social media marketing, and drone mapping to local farmers. The program has met with the state governor, has been supported local growers' association, and even helped save the loss of over two acres of soybeans of a local farmer using a drone.
     – 4-H Tech Changemakers – Wisconsin 4-H Citizenship

4. **Community and Rural Development at NC State Extension – Signature Programs:**
   - Cultivate NC focuses on community systems change by offering planning services, direct technical assistance on development projects, technical training's for agents, engagement in interdepartmental and multi-state collaborations, and evaluations of Extension partner programs.
     - Program Contact: Jackie Murphy Miller (jackie_miller@ncsu.edu)
   - Latino Programs provide leadership for Extension's initiatives to build organizational capacity to engage effectively with Latino and other diverse audiences. This program partners with the N.C. Cooperative Extension Service, NC State's College of Agriculture and Life Sciences, and/or University colleagues to contribute, co-submit and/or co-PI awarded grant and gift funds to support Latino and new audiences programming.
     - Program Contact: Cintia Aguilar (cintia_aguilar@ncsu.edu)
   - The Local Food Program at NC State Extension provides training and support for County Local Food Coordinators and other Extension Agents engaged in local food work. The Program Manager makes resources available on its portal, provides training on local food systems and resources created by the Local Food Program Team, and creates opportunities for cross county and cross program communication.
     - Program Contact: Joanna Lelekacs (joanna_lelekacs@ncsu.edu)
   - Youth Entrepreneurship Wayne Food Initiative (WFI) Youth Leadership Youth Food Councils. The Food Youth Initiative (FYI) is a project housed at the Center for Environmental Farming Systems (CEFS), and carried out with many community partners, with the mission of envisioning and supporting the advancement of a just food system where youth envision and support the advancement of a just food system.
     - Program Contact: Hannah Dankbar https://www.ces.ncsu.edu/profile/hannah-dankbar/

Recruitment/outreach BIPOC focus:

1. **Getting Them in the Door: Strategies for Recruiting Latinos to Family Life Education Programs**
   The Connecting for Children project was designed to provide relationship education to families in Mid-Missouri. Although the Latino population accounts for only 3% of Missouri families (US Census, 2010), Latinos accounted for 40% of families served in this project.
   - Increase cultural competence
   - Latinos are heterogeneous individuals whose countries of origin, migration patterns, socioeconomic profiles, and physical characteristics vary.
   - The data show a strong desire to maintain the Spanish language while increasing proficiency in English. Based on this, the program was culturally adapted, the materials were translated, and the program was implemented in Spanish.
   - The concept of familsmo involves an obligation of the family to share responsibility in rearing children, providing financial and emotional support, and decision-making. The value of familismo guided the selection of activities and arrangements for the program.
   - Being simpático (good-natured and pleasant) is also related to valuing warm, friendly, interpersonal relationships (Antshel, 2002; Levine & Padilla, 1980). A bilingual recruiter/trainer who was friendly and communicated with warmth was instrumental in building a relationship with participants.
   - Build relationships with existing service providers
   - One important way to reach participants is to create partnerships with established programs and organizations that serve the Latino community. The partnerships was also useful in consolidating resources that were helpful to the families, allowing the program to offer education on a specific topic as well as connect families to a variety of resources and information
   - Build relationships with the Latino community

- Hiring staff who used knowledge of the culture and the community was the most important strategy employed.
  - Program Contact: Kim Allen (Kimberly_allen@ncsu.edu), Alejandra Gudino (GudinoA@Missouri.edu), Christina Crawford (CrawfordCL@Missouri.edu).

2. **Reaching Native American, Indigenous, and Tribal Communities**
   Strategies that Extension faculty can use to achieve success in teaching and programming for Native American clientele. Some of these strategies may also apply to Extension programming with other diverse groups.

- Building trust
  - Recognizing contributions of clientele, being willing to become part of their lives, and working with them are ways to develop trust. Agents may initially have to be "unproductive" in terms of traditional programming to nurture a trusting relationship. Attending community events is another way to create visibility and develop trust.
- Family networking
  - A primary strategy for reaching Native Americans with Extension programming is to first involve key people who then invite their extended family members. Family members often make up most of the clientele at each workshop.
- Using extenders
  - Another useful strategy for education in the Native American community is to use extenders of Extension information.
  - Volunteers have been known to increase outreach beyond all reasonable expectation, contacting people who might never have been served by Extension, bringing greater diversity to our clientele, and targeting specialized groups.
  - Networking with other organizations within the Navajo tribal system has increased outreach and brought people to Extension programs that may never have been reached.
  - Workshops for organizations serving the Native American community have also been successful.
- Continual communication
  - Everyone attending Extension workshops is put on a newsletter mailing list. Keeping in regular personal contact with key people in the various agencies and communities such as Navajo Food Distribution, Save the Children, 4-H leaders, and Headstart is a necessity. To maintain visibility and contact, I don't miss the opportunity to strike up a conversation with a stranger while waiting in line, giving him or her a ride, or speaking at a community event.
- Attitude and sensitivity
  - Program Contact: Joyce L. Alves

Resources

Abelsen, B., Strasser, R., Heaney, D. et al. Plan, recruit, retain: a framework for local healthcare organizations to achieve a stable remote rural workforce. Hum Resour Health **18**, 63 (2020). https://doi.org/10.1186/s12960-020-00502-x

Oregon numbers on the decreasing college-going rate for Oregon rural learners: http://educationnorthwest.org/news/supporting-rural-oregon-students-high-school-and-beyond

Full report: https://www.tfff.org/sites/default/files/RuralPostsecondary_Summary.pdf

https://www.portofmorrow.com/workforce-training/home

Example of rural technical training partner: https://bakerti.org/

Technical scholarship page example: https://bakerti.org/scholarships/

Why is college access a barrier by the numbers: https://www.niche.com/about/enrollment-insights/rural-student-recruitment-and-trends/

Might be a good complement: http://pellinstitute.org/indicators/downloads/dialogues-2017_essays_Ruiz_Perna.pdf

Why colleges are wrong about recruiting rural students: https://eab.com/insights/daily-briefing/enrollment/what-colleges-get-wrong-about-recruiting-rural-students/

Tips for employees recruiting rural employees: https://www.titustalent.com/insights/how-to-recruit-in-rural-america/

A resource to check out- https://workethic.org/bring-your-a-game-to-work/

Funding for the trades : https://drive.google.com/file/d/13FvbtUhzhwbp1d-RKrlW1ADWtrS896OX/view

MODULE 5:

Evaluation and Reflection

By Cheryl Burkhart-Kriesel, Ph.D., University of Nebraska and Tanya J. Hall, Purdue University

In this module, we will cover the recommended evaluation of the FORWARD program. As an Extension professional, you can plan to conduct multiple iterations of evaluation. Different entities will see the FORWARD program through their own perspectives:

Perspectives of Program Evaluation

The viewpoint of ...		*their interest focuses on ...*
Job seekers	→	knowledge and awareness gained
Stakeholders	→	enabling workforce development change
Employers	→	the effects on operations
Community	→	the effects on community vitality

Therefore, the evaluation process is compartmentalized in three dimensions. The first dimension is the curriculum knowledge gained, second dimension is stakeholder input and the overall process, and the third dimension captures the outcomes generated from this effort. Depending on the situation, some communities may be building stronger workforce development ecosystems, others may be able to strengthen existing pathways and some may complete the development of new career pathways. Regardless of where the community ends up as a result of this effort, there are evaluation opportunities to capture impact.

Dimensions of Program Evaluation

First dimension	Short-term outcomes	Immediate evaluation: Assess knowledge and awarenes gained
Second dimension	Medium-term outcomes	6-12 months: Stakeholder input to assess process
Third dimension	Long-term outcomes	12-18 months: Ripple effect mapping of program impacts

First Dimension: Immediate Assessment

Half-page immediate evaluations will be conducted at the conclusion of each module. The purpose of these assessments is to measure level of awareness and knowledge gained in relationship to the module's learning objectives. These are to be completed by the task force members and collected by the Extension professional. The assessments are posted in the Appendix of this section.

As an Extension professional, these half page assessments can be used for your program evaluation – both at the local and state level. More information on ways to document your efforts is listed in the Educator Resources section.

Second Dimension: Stakeholder Input

The second dimension can be viewed as a 'check-in' to determine what is going well versus what needs to be fine-tuned. Depending on the community's efforts, the amount of evaluation conducted at this level will be situational in nature. Below are several recommendations on how to gather stakeholder input six to twelve months after the start of this effort.

Focus group

The purpose of this focus group is to gather input on the community process and the curriculum. This step is the midpoint between the assessments completed at the end of the modules and the ripple mapping conducted at the 12–18-month mark since the start of the FORWARD program. Between six to twelve months, a focus group is to be convened. Focus group attendees should include the workforce development partnership team that was convened by you to implement this program. An hour will likely be enough time to address the following questions:

1. What did you perceive as the purpose of the FORWARD program?
2. What key lessons did you learn from this process that could help the community in the future?
3. What pieces of the process were difficult to navigate?
4. How effective were the modules in navigating your group through the process of creating career pathways?
5. What else would you like to share with me regarding the FORWARD program?

If additional information is needed on how to conduct a focus group, please visit the Community Tool Box, Chapter 3[1], where it discusses how to conduct focus groups.

Interviews with employers

Employers will be affected by the work undertaken by the FORWARD program. It is important to gather their feedback on how the program impacted them. The recommended format is to interview key employers touched by the program. Below are a few sample questions that could be used:

1. What new possibilities for training and/or career growth were explored for your employees?
2. How did the workforce development effort affect your business?
3. What new possibilities were discovered to support your business?
4. What do you plan to do differently as a result of the workforce development efforts?

Interviews or focus groups with job seekers

Throughout the process, there should be touchpoints with the job seekers in the county/region. The initial touchpoint occurs when identifying their process for finding information about job opportunities/trainings in the area as well as challenges; this could help you understand the current situation. Ideally interviews or focus groups with job seekers would happen after the creation of career maps within your community. This may or may not happen in all communities. If it does happen, the questions below can guide the information gathering process.

Once the career pathwayhas been developed, go back to job seekers and identify the following through an interview/focus group process:

1. Does the career pathway make sense?
2. Is it helpful?
3. How would they use this career pathway?
4. What changes (if any) need to be made to the career pathway?
5. Who would they share this career map with in the community?
6. Where should these career pathways be located throughout the community? How should they be accessed?

[1] https://ctb.ku.edu/en/table-of-contents/assessment/assessing-community-needs-and-resources/conduct-focus-groups/main

The goal of mapping career pathways is to streamline the process and understanding of how workers can advance further within their career. It is also to help individuals "see" the possible progression within an industry, understand what steps are needed to advance, and where the resources can be found to propel them forward.

A secondary goal of the career pathway development is to develop stronger coordination between private and public partners, assist employers, and help job seekers find meaningful employment. The work undertaken with this effort should extend to other industries in the county or region. Of course, some thought should be given to the sustainability of the work as local economies will continue to evolve with the changing technologies and markets.

Third Dimension: Identifying Outcomes via Ripple Effect Mapping

Workforce development is a complex topic and tackling it via mapping career pathways is only one piece of the overall puzzle. What makes it unique is that the local area (county/region) can manage the development of career pathways by leveraging partners in the region to communicate job opportunities for their residents. For many communities, this is likely a new endeavor with many moving parts. Therefore, the use of ripple effect mapping (REM) evaluation is likely a good fit to identify the outcomes generated from this work.

REM has been used by Extension professionals for several years to document outcomes. It is a facilitated activity that can be done either in-person or virtually. A guide for conducting ripple mapping for this purpose is listed in the Educator Resources section. Additional resources on ripple mapping can be found from Washington State University Extension and the University of Minnesota Extension. Both entities have resources that be viewed pub field guides and other resources from past webinars.

Invitations to participate in the REM exercise should be extended to the workforce development partnership team, employers, job seekers and any other stakeholders involved in the program. Plan on this exercise taking up to two hours to complete. The ripple effect mapping exercise is designed to draw out medium and long-term outcomes from the FORWARD program. Therefore, it is recommended that the REM be conducted 12-18 months after the program began in the county.

Educator Resources

FORWARD program indicators

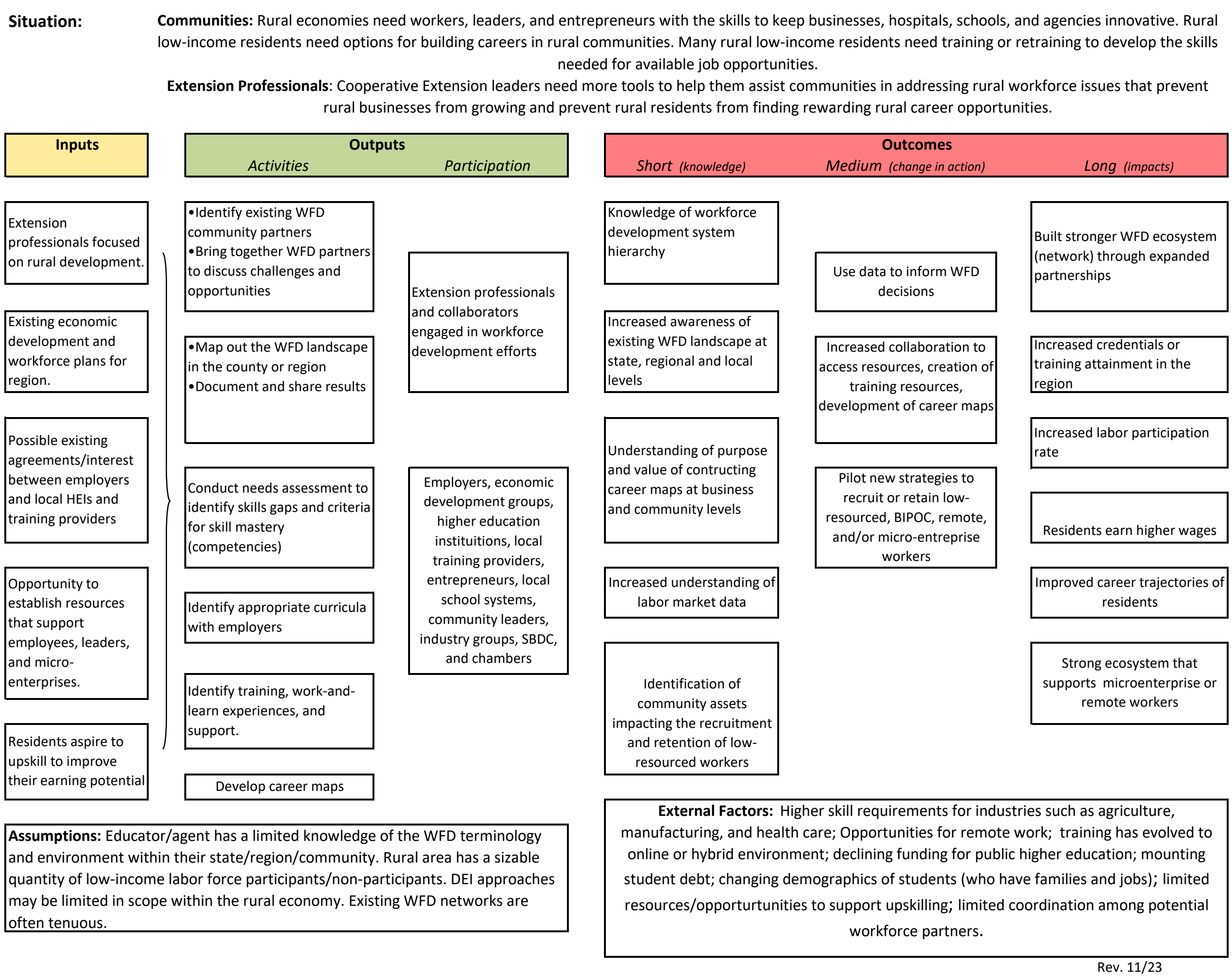
It is critical to document the impact of your work with the FORWARD program that can be communicated to your superiors and stakeholders at the local, state, and national levels. The North Central Regional Center for Rural Development (NCRCRD) has a set of indicators that have been similarly adopted by the Southern Regional Center for Rural Development (SRCRD). These indicators are reported at the national level to the National Institute of Food and Agriculture (NIFA), and are good starting points in addition to your state's reporting indicators. Below are recommended indicators to capture:

1. Educational contacts (number of participants involved in FORWARD)
2. Number of racial minority contacts (or other similar demographic information)
3. Number of community or organizational plans developed (i.e., new strategies, career maps, strategic plans, etc.)
4. Number of community and organizational strategies, polices, and plans adopted or implemented
5. Business indicators (number of jobs created or retained)
6. Dollar value of:
   a. efficiencies and savings (this could be included in the ripple mapping exercise — allow attendees to determine value)
   b. grants and resources leveraged/generated by communities (related to FORWARD efforts)
   c. resources leveraged by businesses

Logic model

Figure 1 below illustrates the Workforce Engagement logic model. Note the situation, assumptions and external factors. Throughout the program, the half-page assessments will collect most of the short-term outcomes. The medium-term outcomes are to be documented through the interviews. The long-term outcomes will emerge during the ripple effect mapping exercise 12-18 months after the initiation of the program. The full size logic model is also in the appendix.

Figure 1: Workforce Engagement Logic Model



Ripple Effect Mapping

Ripple Effect Mapping (REM) typically happens several months after starting the program to allow for the resulting actions to bubble up from the community discussion. This will vary with each community, but it is recommended to use this technique 12 to 18 months after the workforce effort has begun. The Extension professional leads the mapping exercise and can recruit community partners to help organize and connect the stakeholder input during the exercise. Ripple Effect Mapping is both an evaluation of past actions and a planning tool for future community direction.

All community stakeholders that were involved in the effort are invited to participate in the session. It is helpful to have a mix of participants who represent the steering committee, organizational partners (non-profit and for-profit), employers and job seekers so that as many impacts as possible can be recorded.

The detailed "how to" process listed below is a tangible, low tech example of how REM was implemented in a workforce development situation. After the face-to-face meeting, the map can be recreated in a variety of digital formats for a more permanent record. Another option could be to have this type of discussion virtually using online whiteboards like Jamboard or Miro. However, the virtual option sometimes loses some of the creativity that comes through personal group dynamics.

Materials list:

- Adequate wall space to hang paper
- Sticky Note flip chart paper: Ripple Map Size suggestion: 3' x 2' (3 pages across and 2 pages up and down with a ½ inch overlap so you don't write on the walls)
- Markers: First Ripple **Blue**; Second Ripple **Green**; Third Ripple **Purple**; **Red** for Most Significant; Community Capitals **Black**
- Blue painting tape or poster hanging tape (so you don't damage walls) for extra support on walls
- Clear packing tape (to tape poster pages together when the ripple map is completed)
- Sign-up sheet
- Consent forms and media release forms (as required by your state)
- Business cards

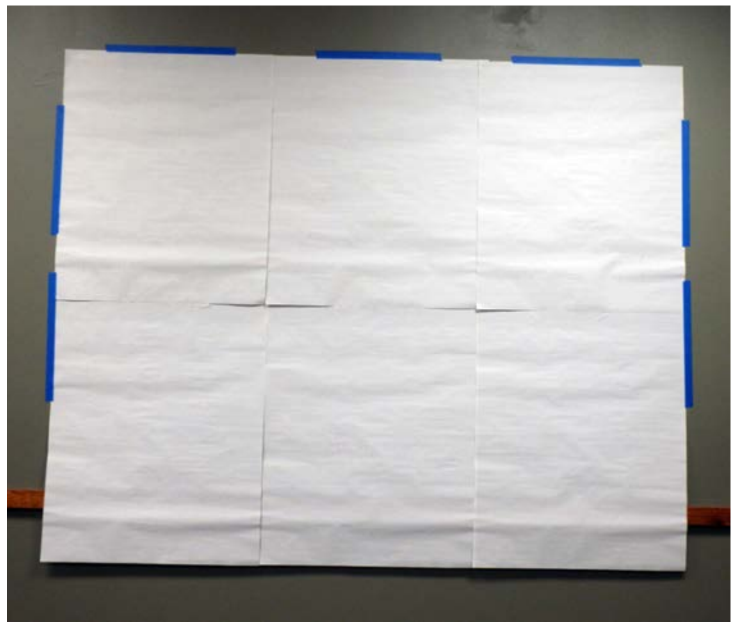


PHOTO 1. This is what your wall may look like once you tape your flip chart paper on the wall. There are 3 pages across and 2 pages up and down.

Ripple mapping instructions:

1. Welcome and introductions (pass around a sign-up sheet to collect contact information.)
2. If used by your state, ask for signed consent forms and media release forms. Explain purpose of forms.
3. Explain the "why" of Ripple Effect Mapping. The purpose of this activity is to look at how the work in the community has made a difference. We can use that information to think about what we can learn from our work together, how we can use that information going forward and how we can evaluate that work.
4. Confirm the topic and write in the center of the map (using a black marker): Workforce

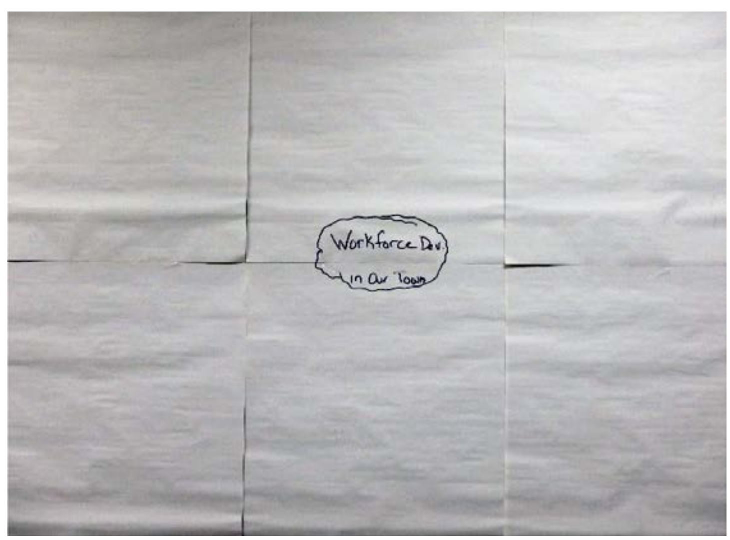


PHOTO 2. The community name and name of the program are in the center of the map.

Development/Community Name. Explain that the group should reflect on all their community accomplishments during effort and any that have happened since.

5. Begin by asking people to share, in pairs, for about 5 minutes how they feel their work has made a difference in the community. Remind them to consider their work in the community during the formal workforce development process.

6. Write the each of the following capitals (using a **black marker**) around the outside of the map. Share a brief description of each capital[2] as follows:

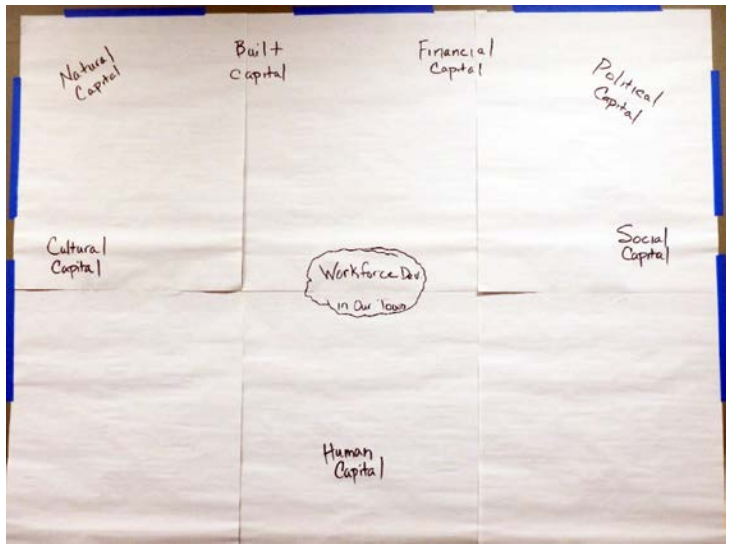


PHOTO 3. Community Capitals are written around the outside edge of the map.

   a. Start with natural capital (N) because it frames what is possible in a place. Natural capital includes natural resources assets as well as those in our environment. For communities interested in tourism or those focused on agriculture, natural capital is very important.
   b. We often think of cultural capital (C) in terms of language, dress, traditions, music, etc. but cultural capital also includes our everyday ways of thinking and doing. Some communities might say for example, "A great asset here is our work ethic." That is an example of cultural capital.
   c. Human capital (H) refers to our health, knowledge, skills, and understanding. It also includes self-efficacy or our belief we can make things happen.
   d. When we talk about social capital (S), we are focusing on connections and relationships. We want to look at the networks people are involved in including those where people know each other well and bond together as well as those that are based on weak ties but link us to resources and information. Social capital exists where there are norms of reciprocity and trust.
   e. Political capital (P) is often thought of in terms of policy, laws and running for office. Political capital includes the incentives or disincentives that link to certain types of behavior, but it also is about whose voices are heard and respected.
   f. Financial capital (F) is most often a focus of community development efforts. It includes not only loans and investments but also gifts and philanthropy. Investments in financial capital lead to higher profits, more jobs and businesses.
   g. Built capital (B) capital refers to our tangible infrastructure such as the roads we drive on, the towers that support our cell phone service and Internet access, and water treatment plants.

7. Explain the three levels of ripple process and the purpose of this tool is to better understand the impact of the workforce development program on the community. Think about it as a pebble tossed into a pond. Ripples in the pond keep extending outward, influencing a much greater area of the pond than just where the pebble landed. That is what happens when we take action in the community; the effects often go way beyond the action.

[2] An excellent resource explaining the Community Capitals can be found at: Community-Capitals-Beaulieu.pdf (cdextlibrary.org).

8. Begin mapping the **first ripple** with the question — **What happened a result of the workforce development program?** Were there actions or efforts in the community that came about or were linked to the program that surprised you?

   Use a **blue marker** to put each item near the center of the map. You may choose to put each item near the capital it best represents or you may even put the capital's initial after the item, as shown in Photo 4. You can also use the capitals as a discussion point for activities that may represent more than one capital. You can also probe for more ideas by asking about changes in the capitals not yet mentioned. As you go through the ripple map process, let the participants know that you can add any additional items for each ripple that they may think of later.

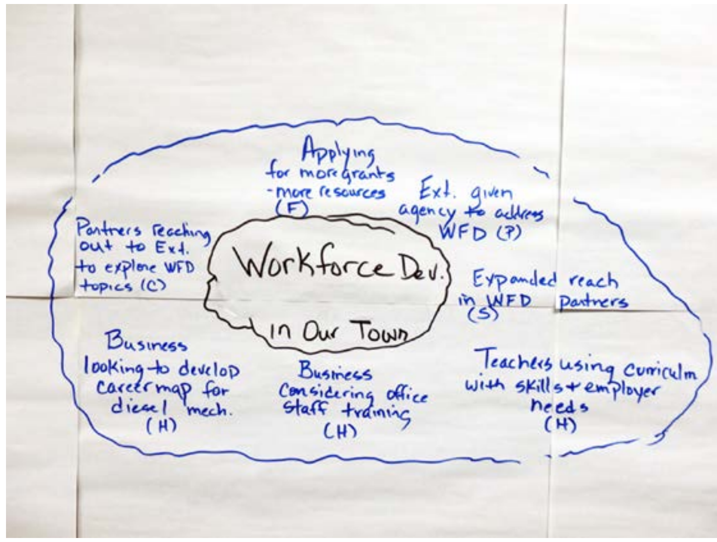


PHOTO 4. The first ripple of the map has been added to answer the question, "what happened a result of the workforce development program?"

9. Begin mapping the **second ripple**, using a **green marker**, by focusing on items in the first ripple and using questions like these: **How did these actions benefit the community? How are people doing things differently?** Write the answers to these questions near the item on the first ripple to which it is connected. It is beneficial to draw an arrow from the item in the first ripple to the item in the second ripple to which it is connected. Sometimes the answer to the second ripple question will relate back to more than one activity in the first ripple so drawing arrows can get messy, but that is ok. No one said a Ripple Effect Map needed to be neat. In this example, we didn't use arrows because we thought it might end up making it hard to read in the photos.

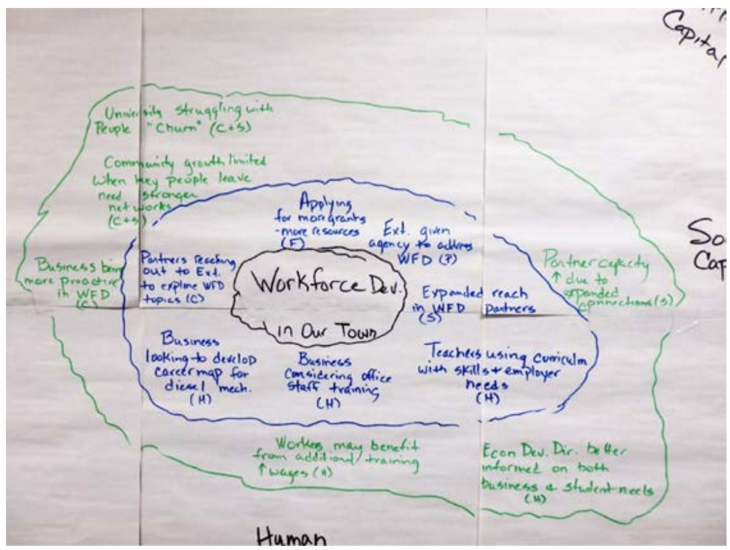


PHOTO 5. The second ripple of the map has been added to answer questions such as: How did these actions benefit the community? How are people doing things differently?

Here are some examples of prompting questions:

- o New opportunities?
- o Changes in attitudes or behavior?
- o New connections with people or organizations?
- o New resources?
- o More resources to strengthen businesses, attract newcomers, opportunities for residents?
- o Changes in leadership?
- o Changes to enhance natural assets or parks?
- o New events or changes to events?

10. Begin mapping the **third ripple**, using a **purple marker** by asking the question, **what changes are you seeing in your community's systems, institutions, and organizations?** (Are everyday ways of thinking and doing changing? How?) Again, you may wish to use an arrow to link items in the second ripple to those in the third ripple.

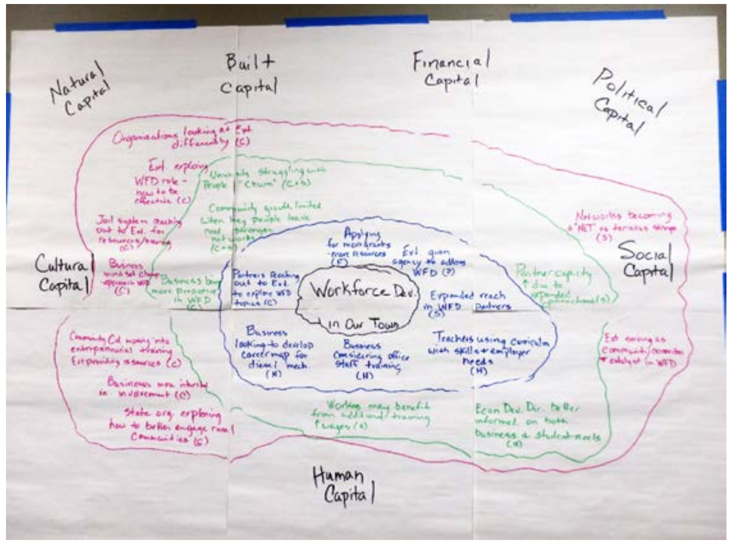


PHOTO 6. The third ripple of the map has been added to answer the question: "what changes are you seeing you seeing in your community's systems, institutions and organizations?

11. Ask, **"What do you think the most significant change is on the map? Why?"** Use a **red marker** to star the item(s). Photo 7 provides a broad sketch of the process using colors and the asterisks.

12. Initiate a brief discussion for how the map can help with evaluation. Looking at the map and thinking about the impact of your work, what questions about your work would you like to have answers to?

13. Initiate a brief discussion on how this reflection process can provide insights into next steps. "What are the implications of what we learned about our impact from the mapping that will be helpful in the next round of our work?"

    This is an appropriate time to note the sometimes the outcomes that are viewed as the most important are often unintended. When the group started the workforce development program, they may not have anticipated the added benefit of connecting resources and developing workforce networks or the possible conversations about future workforce training centers.

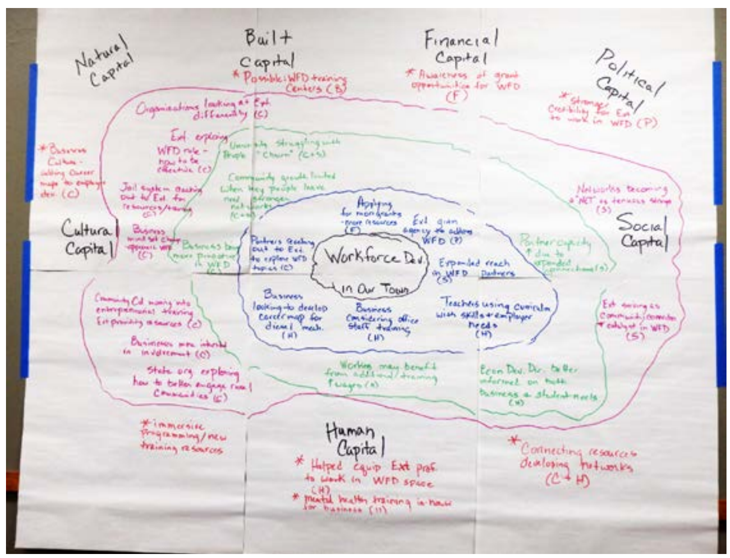


PHOTO 7. A red asterisk can be added is several ways. It might be linked to a specific input during the process, or it might become more of a summary statement related to one of the capitals. In this example the group wanted to summarize what they were seeing in each capital, so these summary statements were * and written in red for added emphasis.

14. Final Reflections (record on flip chart paper): What are your next steps? Which action teams will continue? Will new action teams be formed? Who will continue to lead this effort forward now that you have this momentum? Who do you wish was involved in the project to better expand the impact? Who will contact them and invite them to become involved? (Encourage specific answers to these questions.) Leave the final reflections with the group.

    Remind the group that, as an Extension professional, your role will probably shift at this time. Depending on the situation, share how you see your role evolving so that the participants are confident they can continue moving the community forward. Let them know that you and other members of the Extension staff are still available for assistance and to help answer questions or locate resources.

Photo 8. Don't forget the Next Steps. It will keep the effort moving forward.

15. Thank everyone for participating. Have business cards available for those who may want to contact you later.

Acknowledgement

This document was adapted by Cheryl Burkhart-Kriesel, Extension Specialist, Nebraska Extension Rural Prosperity Nebraska, with permission, from a worksheet developed by Peggy Schlechter, Field Specialist, South Dakota State University Extension Community Vitality for the *Marketing Hometown America* program.

For additional information on the original document, Schlechter can be contacted at peggy.schlechter@sdstate.edu; for this adapted version, Burkhart-Kriesel can be contacted at cburkhartkriesel1@unl.edu.

Appendix A: Immediate Assessment Documents

Program: Future Opportunities for Rural Workforce and Rural Development (FORWARD)

Module/Session: Developing Key Partnerships/Workforce Development 101

Location: ____

Date: ____

Instructions: The purpose of this survey is to gather your input on the FORWARD program. Please do not write your name on this survey. You must be 18 years old to complete this survey. Your participation is voluntary and responses are anonymous.

1. **As a result of this Extension program: (check one response per row)**

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I learned something that I didn't know before.					
I learned some helpful information.					
I better understand the workforce development system.					
I increased my awareness of community workforce development partners and their areas of expertise.					
I better understand the local workforce development landscape through the eyes of a job seeker.					

2. **After participating in this session, I plan to try something new in response to what I learned.**

   Circle one: Yes No Not Sure

3. **How USEFUL did you find this Extension session?**

   Circle one: Not at all Slightly Moderately Very Extremely

Program: Future Opportunities for Rural Workforce and Rural Development (FORWARD)

Module/Session: Labor Market Information

Location: ______________________________

Date: ______________________________

Instructions: The purpose of this survey is to gather your input on the FORWARD program. Please do not write your name on this survey. You must be 18 years old to complete this survey. Your participation is voluntary and responses are anonymous.

1. **As a result of this Extension program: (check one response per row)**

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I learned something that I didn't know before.					
I learned some helpful information.					
I increased my knowledge about the area's labor supply and where to find this information.					
I better understand the labor demand and the resources to find this information.					
I have improved confidence in interpreting data to support community workforce initiatives.					

2. **After participating in this session, I plan to try something new in response to what I learned.**

   Circle one: Yes No Not Sure

3. **How USEFUL did you find this Extension session?**

   Circle one: Not at all Slightly Moderately Very Extremely

Program: Future Opportunities for Rural Workforce and Rural Development (FORWARD)

Module/Session: Recruiting Rural Learners

Location: ____

Date: ____

Instructions: The purpose of this survey is to gather your input on the FORWARD program. Please do not write your name on this survey. You must be 18 years old to complete this survey. Your participation is voluntary and responses are anonymous.

1. **As a result of this Extension program: (check one response per row)**

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I learned something that I didn't know before.					
I learned some helpful information.					
I increased my awareness of community strengths/ weaknesses impacting the recruitment and r etention of job seekers.					
I better understand the challenges faced by BIPOC and ALICE populations.					
I have increased awareness of resources and approaches being used to improve recruitment and retention of job seekers.					

2. **After participating in this session, I plan to try something new in response to what I learned.**

   Circle one: Yes No Not Sure

3. **How USEFUL did you find this Extension session?**

   Circle one: Not at all Slightly Moderately Very Extremely

Program: Future Opportunities for Rural Workforce and Rural Development (FORWARD)

Module/Session: Mapping Career Pathways

Location: ____

Date: ____

Instructions: The purpose of this survey is to gather your input on the FORWARD program. Please do not write your name on this survey. You must be 18 years old to complete this survey. Your participation is voluntary and responses are anonymous.

1. **As a result of this Extension program: (check one response per row)**

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I learned something that I didn't know before.					
I learned some helpful information.					
I increased my knowledge about career pathways and its purpose.					
I have improved awareness of how training/ education programs are aligned to meet career pathway needs.					
I have enhanced understanding of how to implement the developed career pathway in the community.					

2. After participating in this session, I plan to try something new in response to what I learned.

   Circle one: Yes No Not Sure

3. How USEFUL did you find this Extension session?

   Circle one: Not at all Slightly Moderately Very Extremely

Appendix B: Logic Model (full-size)

Situation: **Communities:** Rural economies need workers, leaders, and entrepreneurs with the skills to keep businesses, hospitals, schools, and agencies innovative. Rural low-income residents need options for building careers in rural communities. Many rural low-income residents need training or retraining to develop the skills needed for available job opportunities.

Extension Professionals: Cooperative Extension leaders need more tools to help them assist communities in addressing rural workforce issues that prevent rural businesses from growing and prevent rural residents from finding rewarding rural career opportunities.

Inputs

- Extension professionals focused on rural development.
- Existing economic development and workforce plans for region.
- Possible existing agreements/interest between employers and local HEIs and training providers
- Opportunity to establish resources that support employees, leaders, and micro-enterprises.
- Residents aspire to upskill to improve their earning potential

Outputs

Activities

- •Identify existing WFD community partners
•Bring together WFD partners to discuss challenges and opportunities
- •Map out the WFD landscape in the county or region
•Document and share results
- Conduct needs assessment to identify skills gaps and criteria for skill mastery (competencies)
- Identify appropriate curricula with employers
- Identify training, work-and-learn experiences, and support.
- Develop career maps

Participation

- Extension professionals and collaborators engaged in workforce development efforts
- Employers, economic development groups, higher education institutions, local training providers, entrepreneurs, local school systems, community leaders, industry groups, SBDC, and chambers

Outcomes

Short (knowledge)

- Knowledge of workforce development system hierarchy
- Increased awareness of existing WFD landscape at state, regional and local levels
- Understanding of purpose and value of contructing career maps at business and community levels
- Increased understanding of labor market data
- Identification of community assets impacting the recruitment and retention of low-resourced workers

Medium (change in action)

- Use data to inform WFD decisions
- Increased collaboration to access resources, creation of training resources, development of career maps
- Pilot new strategies to recruit or retain low-resourced, BIPOC, remote, and/or micro-entreprise workers

Long (impacts)

- Built stronger WFD ecosystem (network) through expanded partnerships
- Increased credentials or training attainment in the region
- Increased labor participation rate
- Residents earn higher wages
- Improved career trajectories of residents
- Strong ecosystem that supports microenterprise or remote workers

Assumptions: Educator/agent has a limited knowledge of the WFD terminology and environment within their state/region/community. Rural area has a sizable quantity of low-income labor force participants/non-participants. DEI approaches may be limited in scope within the rural economy. Existing WFD networks are often tenuous.

External Factors: Higher skill requirements for industries such as agriculture, manufacturing, and health care; Opportunities for remote work; training has evolved to online or hybrid environment; declining funding for public higher education; mounting student debt; changing demographics of students (who have families and jobs); limited resources/opportunturities to support upskilling; limited coordination among potential workforce partners.

Rev. 11/23