

# Creating an **EDUCATION & WORKFORCE PIPELINE** for Your Community/Region

Breakthrough Opportunity Series

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# I. Introduction

Education and workforce development is a critical issue in many communities and regions and is often the most limited factor in economic development.

A 2016 survey of 508 employers in northwest Arkansas by the Northwest Arkansas Council revealed that over half of these employers reported that finding skilled labor was the biggest obstacle they face. This compares with only 10 percent of employers in 2012 describing lack of skilled labor as the biggest challenge.

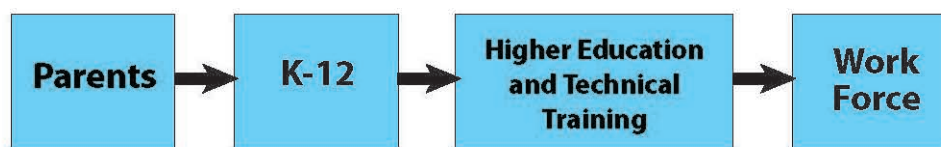
Source: <http://www.nwacouncil.org/news/2016/mar/17/survey-employers-ready-add-3100-jobs-over-three-ye/>

This is significant, as workforce development has not been on the agenda of most local and regional economic development organizations until recently. For the most part, finding work has always been viewed as an individual responsibility. The federal system of workforce development boards and one-stop job centers was created to help connect workers with jobs but does not offer workforce development services to communities. It is reasonable to ask why a community should care about workforce development when there are already resources for persons looking for work. Perhaps the most compelling reason is the highly competitive economic development environment that places a high value on the quality of the workforce. Places that have a ready-to-work labor force will be positioned to take advantage of opportunities that emerge.

The Workforce Pipeline provides a comprehensive community development model for creating a competitive workforce. In recent years, many organizations, including the U.S. Chamber of Commerce, have promoted simpler versions of the pipeline that focus on the employer-worker relationship. This approach does not address real-world complexities and the role of local institutions. Influential local institutions include day care, schools, nonprofit organizations that provide services to youth and families, continuing education, libraries, health care and even the quality of digital communication infrastructure. Communities that support these institutions and promote collaboration are more likely to have a competitive 21st century workforce.

A major employer recently stated that they are not just interested in the current workforce in a particular community; they want to know about the pipeline – the education and workforce development system that will produce an effective workforce for years to come. So we can portray a talent pipeline in these simple terms:

## Simple Education and Workforce Pipeline



Every community, county, region or state has a pipeline of people who end up in the workforce, or unemployed, or perhaps even in prison. Some communities' pipelines are very effective and prepare their youth and adults to fulfill the employment and entrepreneurial opportunities well, while others are ineffective, producing workers unable to meet the demands of today's economy.

This pipeline is adapted from the excellent work developing an education and workforce pipeline by Ed Morrison with the Purdue University Center for Regional Development. It is an attempt to describe how every community, region, state or nation produces workers and the process they go through to join the workforce. Although not shown on the pipeline, some children start to school from a poverty background.

## II. Breakthrough Solutions – Creating Vibrant, Sustainable and Resilient Communities

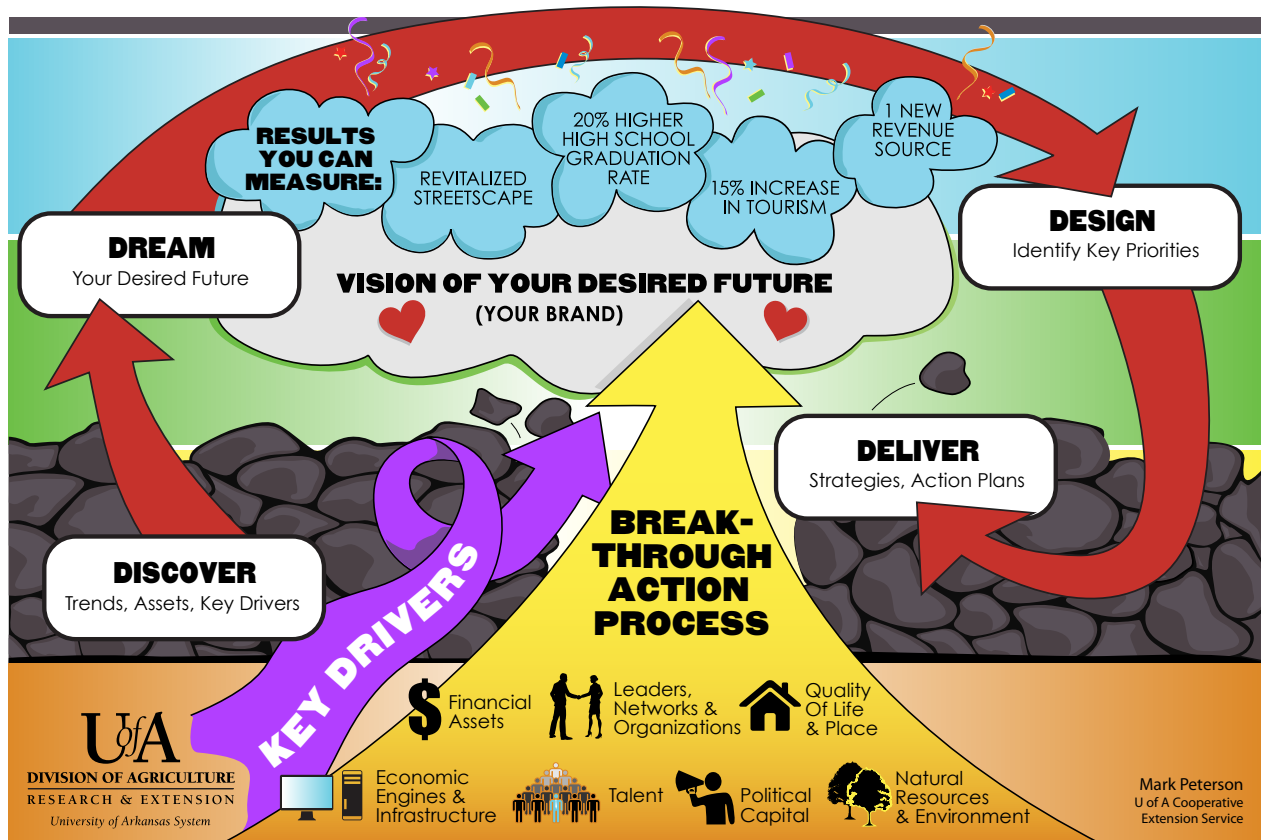
The Breakthrough Solutions Program is a partnership initiative with the purpose of equipping communities and regions in Arkansas to be vibrant, sustainable and resilient in the 21st century economy. This program supports communities and regions as they plan for and take action, has 20 Breakthrough Solutions partners and an annual conference. For more information about the Breakthrough Solutions program and partners, go here:

<http://www.uaex.uada.edu/business-communities/strategic-planning/breakthrough-solutions.aspx>.

The Breakthrough Solutions Model 2.0 is a good fit for education and workforce preparation initiatives, as it demonstrates that:

- citizens and community leaders can really make a difference in their communities,
- an asset-opportunity mindset is effective to move toward action,

### Breakthrough Solutions Model 2.0



- breakthrough solutions are often needed to address deeply entrenched barriers to effective education and workforce preparation, and
- communities that come together and take action will be the ones that will survive and prosper, while those that do not will fade away.

The Breakthrough Solutions Model provides a way for communities and regions to leverage their assets to realize their desired future, leading to measurable results. It has four basic steps:

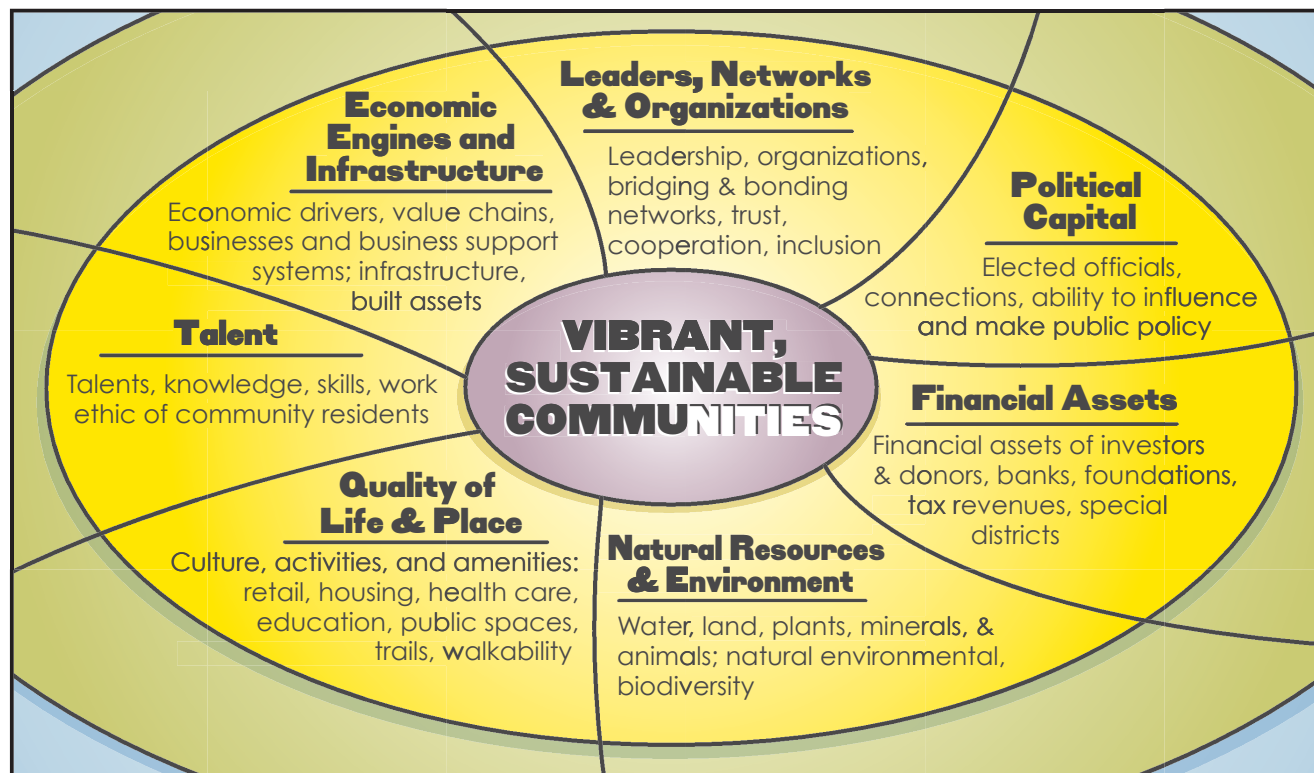
- 1) **Discover** – Trends, Assets and Key Drivers
- 2) **Dream** – Describe Your Desired Future
- 3) **Design** – Identify Key Priorities, and
- 4) **Deliver** – Strategies and Action Plans

Breakthrough Solutions provides a community or county with:

- A way to take a fresh look at their community challenges and asset-based opportunities from several perspectives,
- A process to prioritize key issues and opportunities for their community, and
- The opportunity to receive follow-up technical assistance from the University of Arkansas Cooperative Extension Service and Breakthrough Solutions Partners.

It also taps and leverages the many assets of the county, as described in this strengths and assets map.

## Strengths and Assets Map Wealth in Your Community



While the focus of this publication is on education and workforce preparation, assets and stakeholders from the other asset categories need to be engaged to fully address education and workforce preparation.

### **Potential Breakthroughs in Education and Workforce Development**

A breakthrough is a major improvement, a leap forward in progress. When we look at very successful education and workforce initiatives, we often discover breakthroughs such as the following:

- Bringing together key education and workforce stakeholders in your community or region to identify what is working really well and to address the greatest opportunities and challenges facing the community. This moves your community from silos that do not communicate well to a network and system that is much more effective.
- Taking a strategic approach to education and workforce development in your community, driven by data that reflects the real world, as well as insights and anecdotal evidence from the stakeholders.
- Viewing your local economy and education and workforce pipeline from a new economy approach and identifying the most promising economic sectors and strategies to lay the groundwork for the future of your community. This often entails using technology and the internet in new ways to overcome distance and other barriers.
- Identifying focus areas that have great need or great potential for development, learning from other communities, tapping resources in and out of the community and becoming a national model for education and workforce preparation.

## **III. Education and Workforce Pipeline**

During the past year, our team has had numerous conversations with rural community and business leaders in Arkansas and Missouri. Some challenges to maintaining a strong local workforce have been consistently mentioned by community leaders. We anticipate that you also might face the challenges listed below in your community but encourage you to visit with your local business leaders to identify other challenges and opportunities that might be unique to your locality.

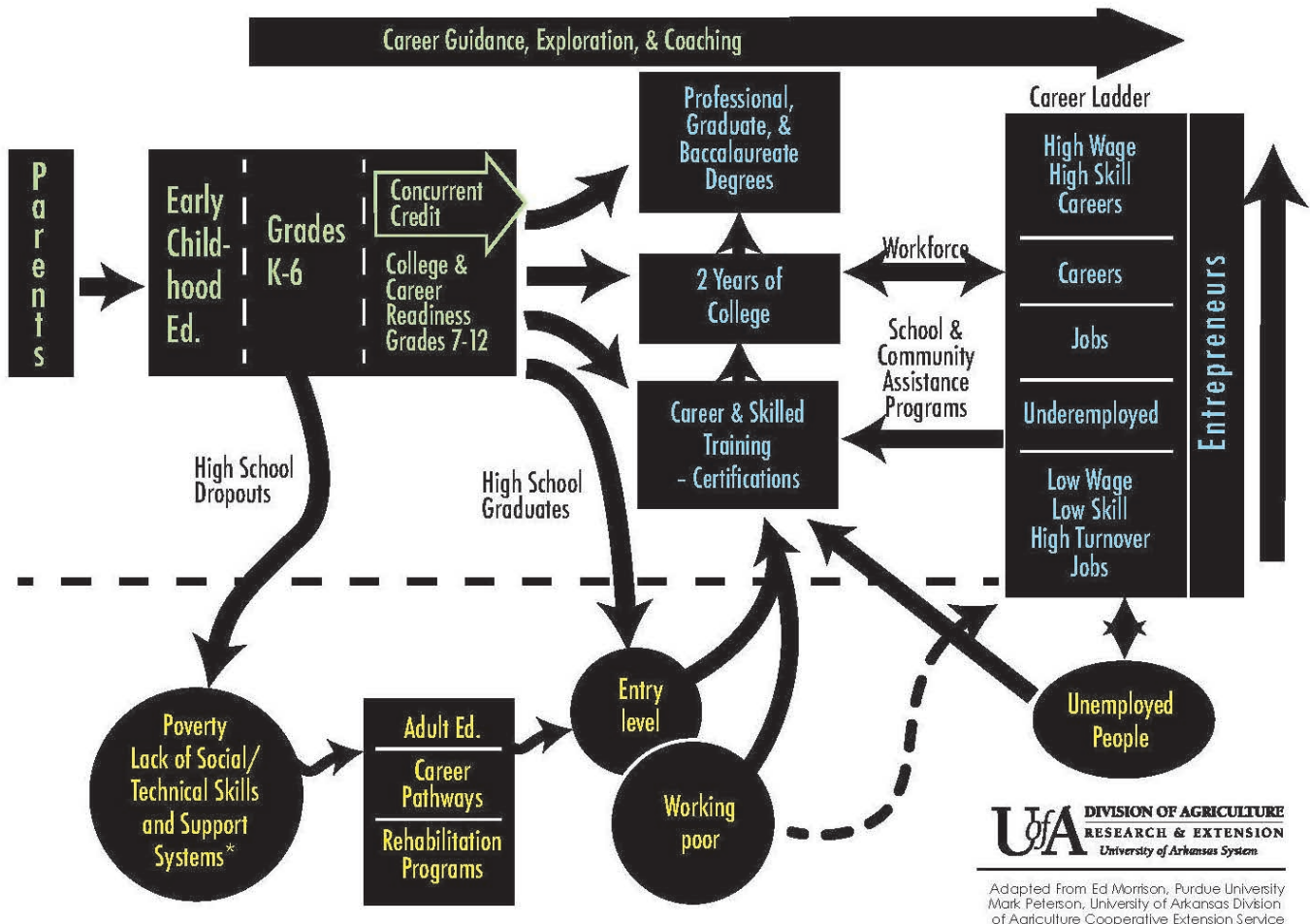
### **Education and Workforce Challenges**

- Mismatch of graduates and jobs
- Lack of STEM education
- High school dropout rates
- Workforce lacks motivation, soft skills
- Drugs in the workforce
- Employers don't communicate with educators
- High school counselors out of touch
- Preparation for jobs, not careers
- Students are bored with school
- Lack of broadband
- No communication between K-12 and parents

The pipeline on page 9 portrays the different elements of education and workforce development in your community, county, region or state.



# Education and Workforce Pipeline



NOTE: The Education and Workforce Pipeline was adapted from "Workforce Development in a Nutshell" by Ed Morrison, Purdue University Center for Regional Development, Economic Development Institute, March 2005.

To see how it applies to your community, discuss the following questions.

## Discussion Questions

- 1) Review the pipeline graphic, and trace the path of someone who was raised in your community, went off to college and then came back to live and work in your community.
- 2) Now do the same for someone who dropped out of high school. Where are they now?
- 3) Describe two communities in terms of the pipeline – one where the education and workforce development is top notch and another where it is very ineffective. What do you think are the differences and the likely outcomes?
- 4) How does the pipeline describe your community or region?
- 5) Identify and review education and workforce development programs or initiatives in your community or state, and map them on the pipeline. What parts of the pipeline do they not address?
- 6) Identify the most important economic sectors in your community, and discuss whether the pipeline produces the workers and entrepreneurs you need for that economic sector. (Thus, you will need a pipeline of farmers in an agricultural area and a pipeline of musicians in a strong culture of music.)



- 7) Is there a high percentage of people in your community or county in poverty? What are the implications of this for your workforce and what can you do to get them out of poverty?
- 8) Is there a high unemployment rate in your community? The category of unemployed people in your community may include several subgroups, including individuals who:
- just completed their training and education and are seeking employment,
  - lost their job due to a layoff or other reasons and are seeking employment,
  - have quit looking for employment because they have not been successful finding suitable employment, and
  - who are not looking for employment because of a variety of other reasons – lack of hard and soft skills and training, drug or alcohol problems, perceived benefit in not working, etc.

Making these distinctions would be helpful to a workforce task force seeking to address these issues, as each of the above categories would require different kinds of assistance.

- 9) Do you have employers unable to find workers at the same time you have many unemployed people in your community? Employers often complain about not being able to find workers even though there are unemployed persons looking for work. Economists who study labor markets have identified several potential explanations:
- Some jobs pay low wages and may even be seasonal, thus not attractive to many individuals who don't want to join the ranks of the working poor.
  - There may be a mismatch between the skills of the unemployed and the skills required by the employer; some workers simply do not have the needed skills or experience.
  - It is also possible that the worker is over qualified, and the employer may see this person as leaving when a better opportunity comes along.
  - Some unemployed persons may be unable to pass a drug test.
  - Skilled workers who have an earnings history with income higher than the employer is offering are reluctant to take a step backwards.
  - Other factors include day care or commuting costs, and benefits offered such as health insurance, potential for earnings growth and vacation.

This document does not address the community and family environmental factors for workforce development, although those are significant factors. A useful reference to identify these factors is [www.countyhealthrankings.org/our-approach](http://www.countyhealthrankings.org/our-approach).

## IV. Education and Workforce Pipeline With Data

Adding data to these elements makes it even more useful, as it provides insights into what is really going on in your community or region. Key points about using data with the pipeline:

- To address workforce development in your community, you will need to create an action team or working group of stakeholders. Involve them in identifying and providing key data points for the pipeline. The following graphic shows some important data points to identify.
- While this graphic shows a snapshot in time; it is better to show the trends over time for each of these data points.
- It is also important to recognize that some data refers to a school district, while other data refers to counties.
- Any data you can add sheds light on challenges and opportunities for workforce development in your community.

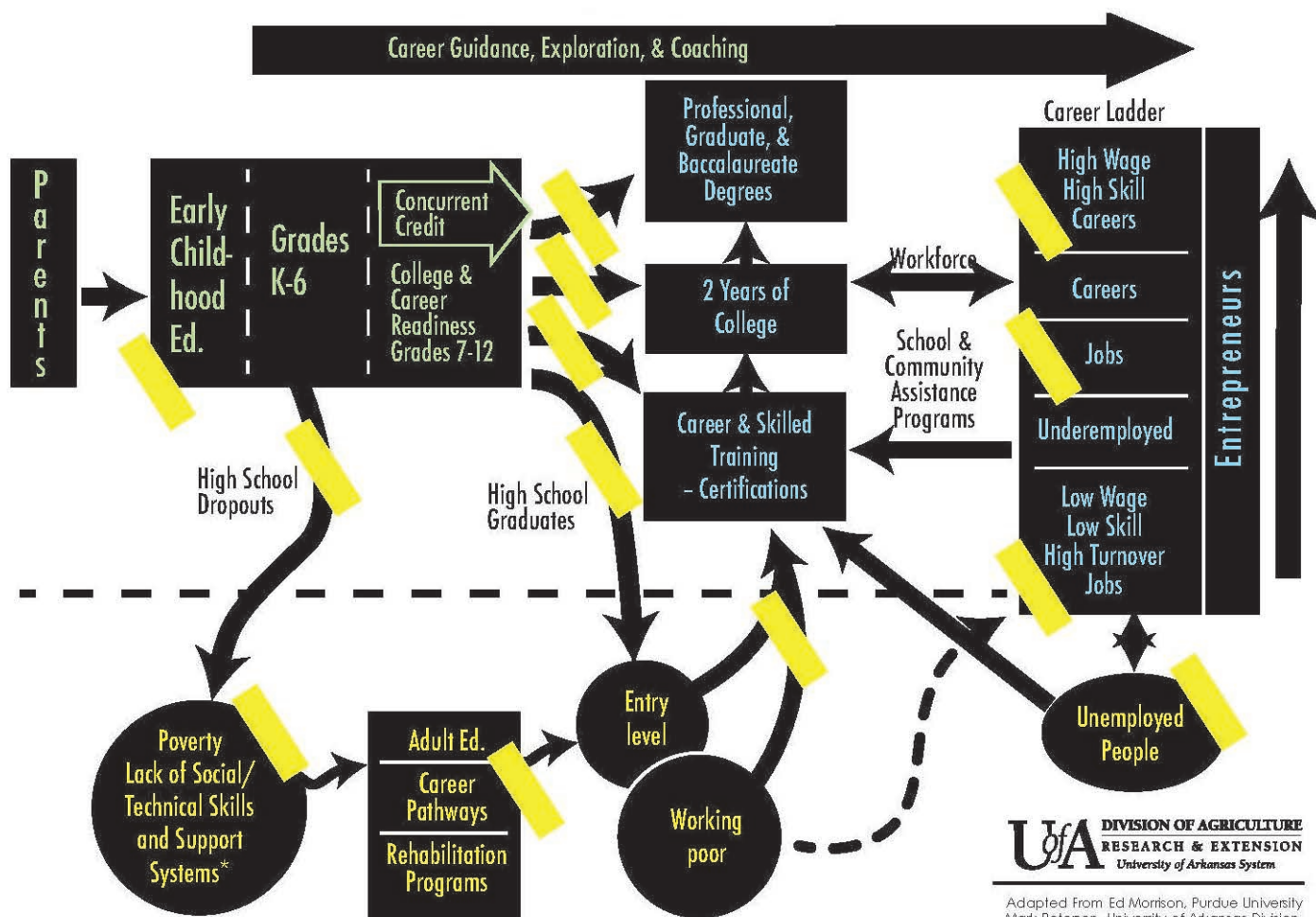
- Benchmarking your community, county or region with surrounding areas or state averages also provides valuable information.
- The underground economy is not represented in this data.

See APPENDIX A – Guide to Data Resources for the Talent Pipeline and APPENDIX B – Additional Resources for Workforce Preparation.

**Example:** When the Newport Economic Development Commission in Newport, Arkansas, was contacted by a prospective manufacturer considering the community for their next facility, they expressed a concern about the workforce available in the area. The NEDC contracted with a firm to conduct a statistically valid survey of people living within an hour's drive of the community, asking if they would be willing to drive a certain distance for different wages. In addition, the top seven employers in the community agreed to share the zip codes from which they were drawing employees and the number who came from each community. All of this information provided the company with a comfort level in being able to obtain the needed employees for the facility.

**Example:** The average cost to keep a prisoner in many states is \$22,000/year. What if that could be used to fund that person going to college?

## Talent Pipeline With Data



NOTE: Lifetime earnings are listed in millions of dollars.

Adapted From: Ed Morrison, Purdue University  
Mark Peterson, University of Arkansas Division  
of Agriculture Cooperative Extension Service

Take a look at this graphic and the data for your community and address these questions:

## Discussion Questions

- 1) Does this confirm your understanding of your community?
- 2) Are there any surprises?
- 3) Is there a gap between the unfilled jobs that are available and the unemployment rate? How would you explain this?
- 4) What is working well in your community?
- 5) What issues or opportunities need to be addressed?

## The Working Poor

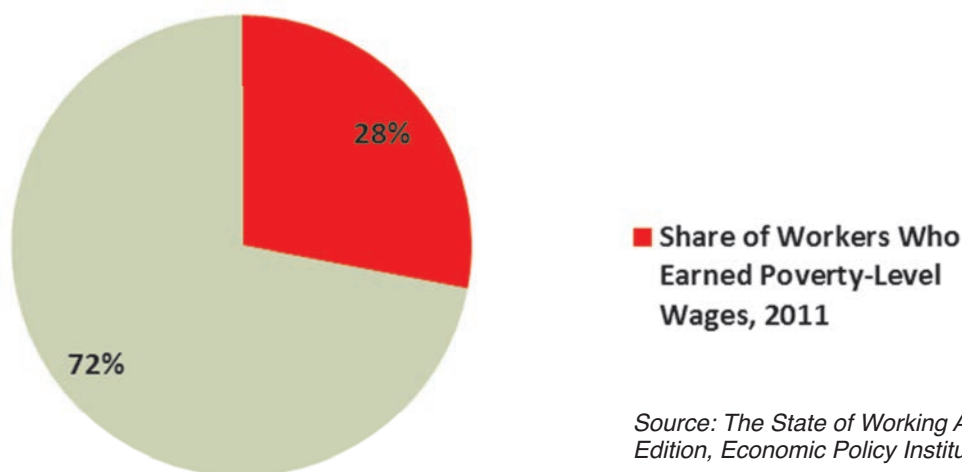
In every community, there is a class of worker often labeled “the working poor,” a significant portion of our workforce. As you can see from the following graphics,

- 28 percent of American workers in 2011 earn poverty-level wages.
- 71.6 percent of families or individuals receiving public assistance under the age of 65 have someone in the household working. See “Balancing paychecks and public assistance: How higher wages would strengthen what government can do” Briefing Paper #418 by David Cooper, February 3, 2016.

The Bureau of Labor Statistics defines the working poor as people who spend 27 weeks or more in a year in the labor force either working or looking for work but whose incomes fall below the poverty level [1]. In 2015 an estimated 9.5 million workers are classified as working poor [2]. It is useful to keep in mind the poverty rate for a family of four is \$24,300 in 2016, a threshold that is considered by many researchers to be too low [3]. The working poor are more likely to be female, black or Hispanic, have low levels of educational attainment and be single parents [4].

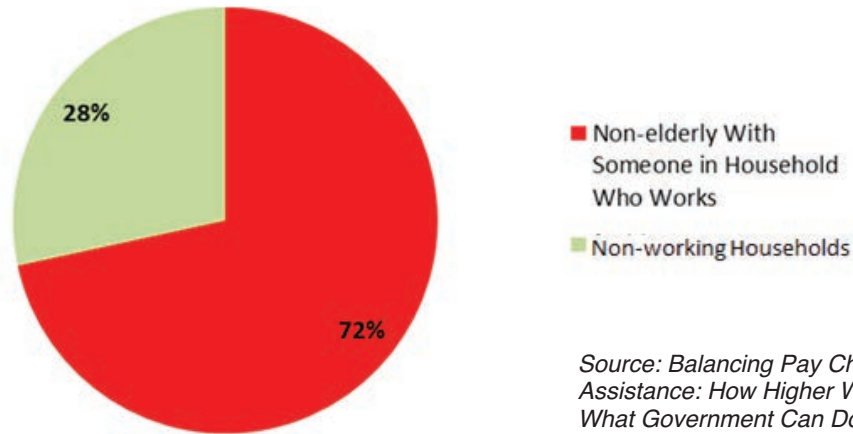
The stagnation of wages for all workers over the last forty years has created a large class of low wage workers, estimated to be as much as one-third of the entire workforce, who are teetering on the brink of poverty [5, 6]. Unlike many workforce development approaches, the Workforce Pipeline recognizes this segment of the workforce and provides a context for the community to identify and implement programs and services to address the needs of these workers.

### United States Workforce



Source: *The State of Working America, 12th Edition*, Economic Policy Institute.

## U.S. Population Receiving Public Assistance, 2012-2014

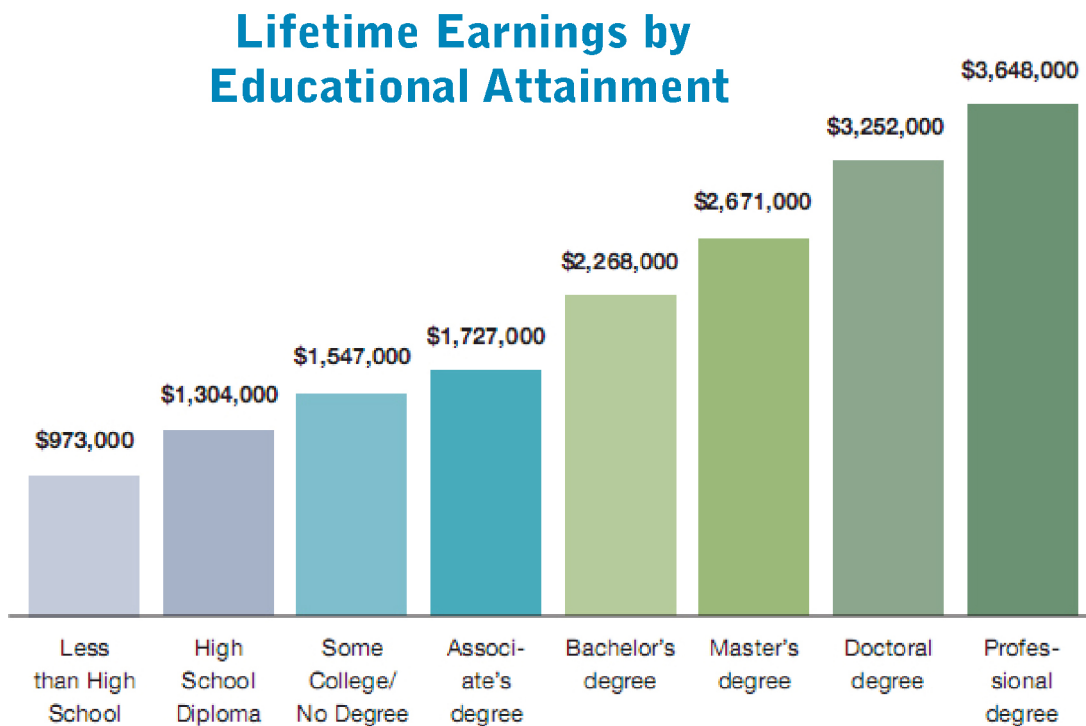


Source: *Balancing Pay Checks and Public Assistance: How Higher Wages Would Strengthen What Government Can Do* by David Cooper.

*NOTE: In addition to this statistical (“hard”) data, soft data is also important and valuable, which includes anecdotal stories, newspaper or magazine stories, and photos of particular situations or people.*

## V. Education and Workforce Lifetime Earnings

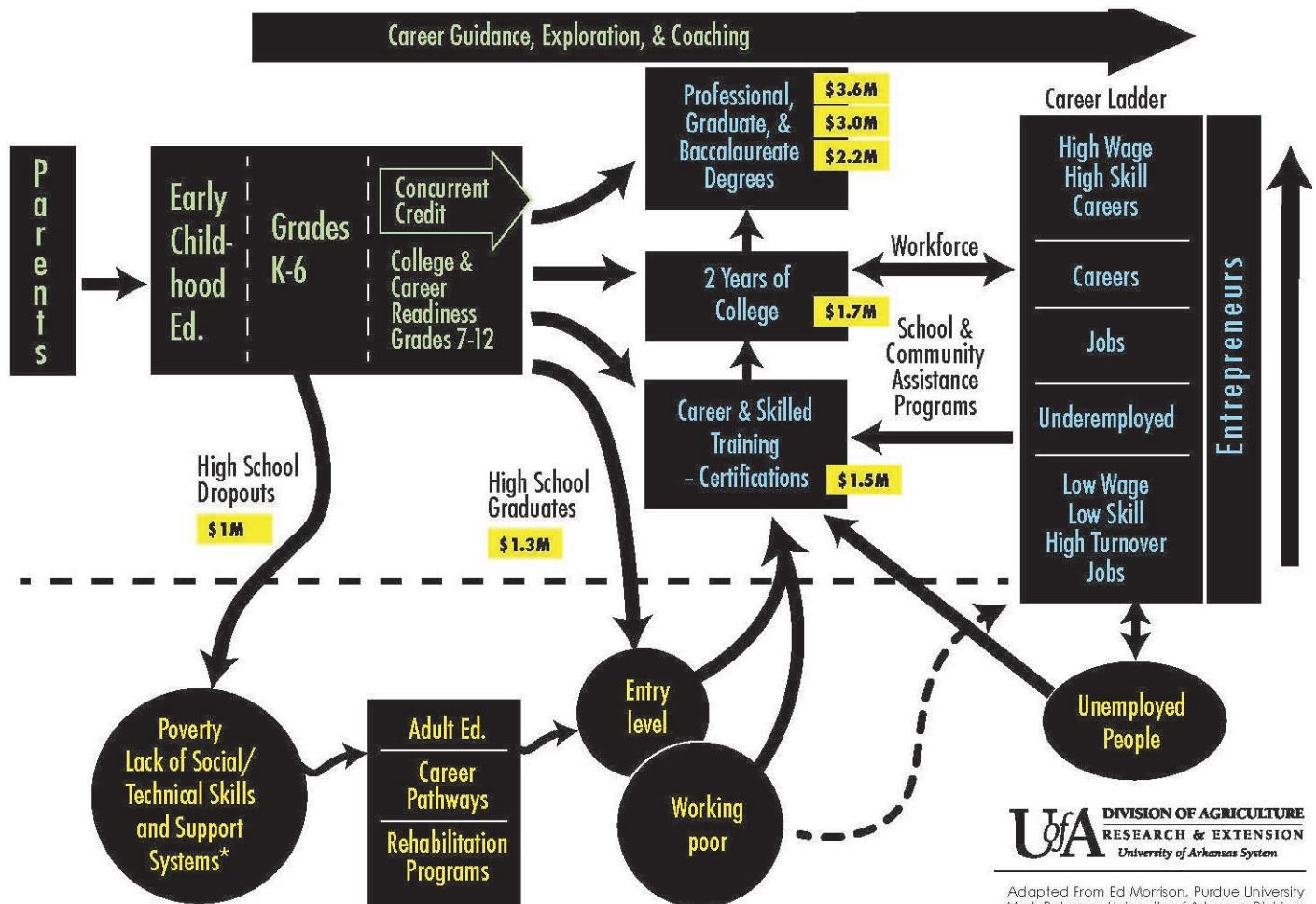
One of the most compelling reasons for communities to work to improve their education and workforce development capacities is that higher skills and education lead to higher incomes. So a community that makes a concerted effort over time to increase its educational and skill level will benefit from higher incomes, greater community prosperity and increased local government revenues. This is shown in the following graph:



Source: “The College Payoff: Education, Occupations, Lifetime Earnings,” report from Georgetown University’s Center on Education and the Workforce, August 4, 2015.

When we apply this to the pipeline, we see how these different education and skill levels impact the entire system.

## Education and Workforce Pipeline Lifetime Earnings



## VI. New Economy Careers and Jobs

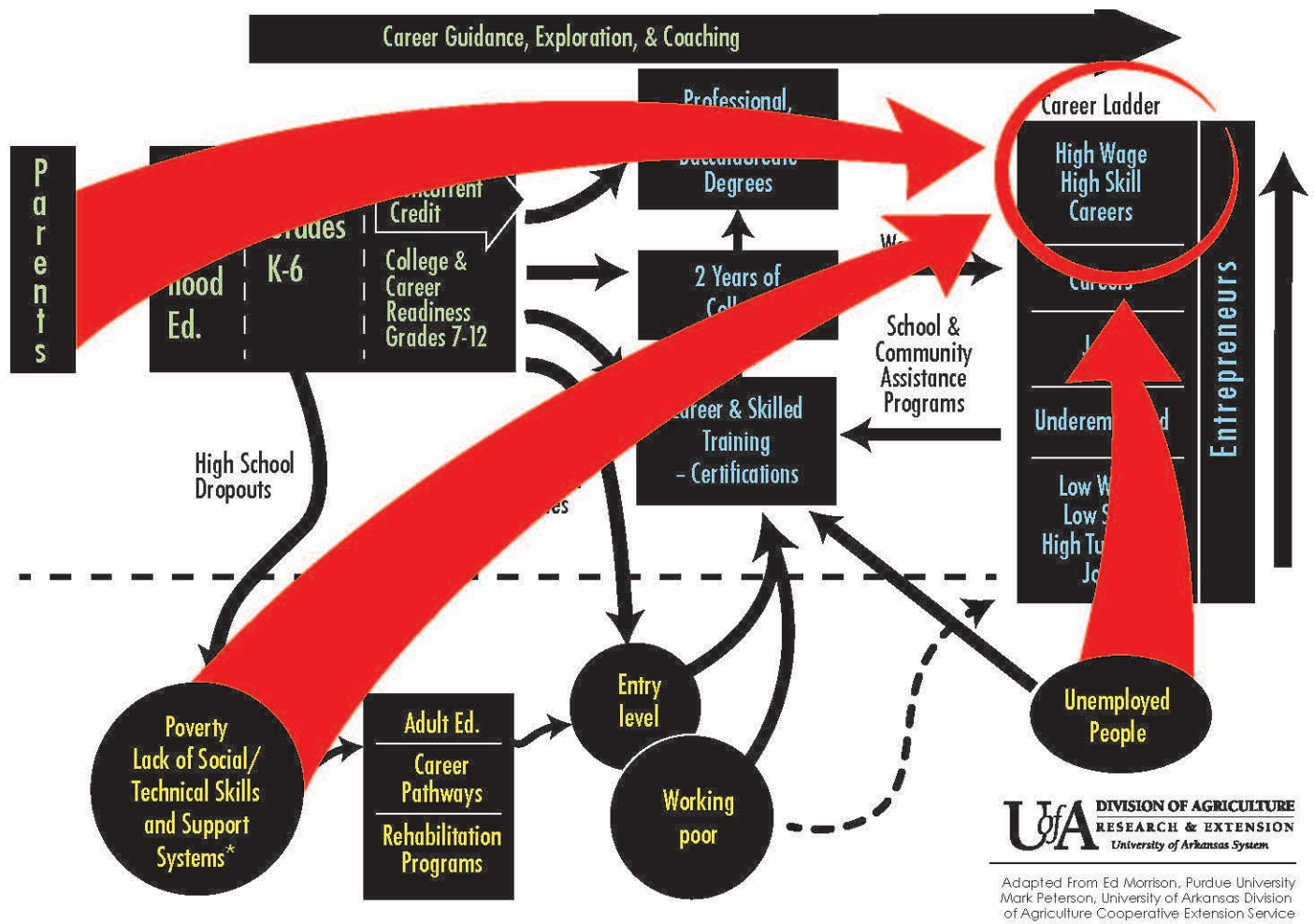
Related to increased income for higher skill and educational levels is the increasing use of information and technologies in the new economy. This is in contrast to the old economy, which depended more on manual labor. Many of those jobs have gone overseas, so it is important to understand the new economy and its key drivers:

- Increased globalization – the flow of information, goods, services, labor and capital across national borders as never before; this has outsourced many lower paying jobs overseas but created opportunities to export goods and services we create.
- Use of broadband and the internet in all aspects of a business enterprise,
- Greater use of information and knowledge in the creation and production of goods and services, thus reducing menial labor and creating higher paying careers and jobs,
- More jobs and careers can be done from any community or location that has high speed broadband.



So a community examining its needs for education and workforce should not only look at the current needs of its employers but those economic sectors that have promise for growth and what would it take to move in that direction.

## New Economy Education and Workforce Pipeline



## VII. Education and Workforce Stakeholders

To address the most critical issues in need of attention, or potentials, it is important to identify and involve the stakeholders in education and workforce development.

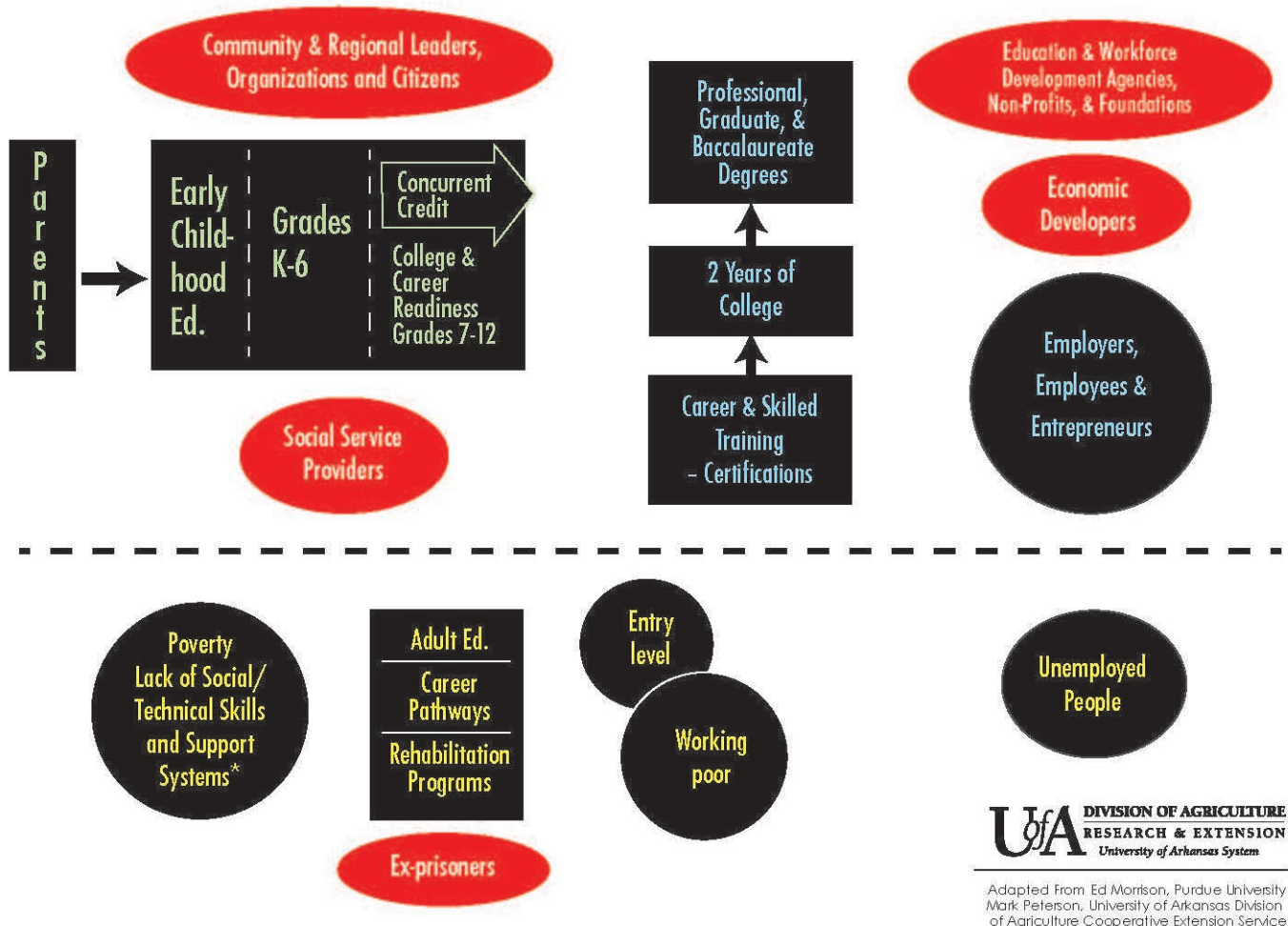
### Discussion Questions

- 1) When you look at the education and workforce preparation stakeholders in your community, do they all network and communicate together, or do they operate as silos, with one group not knowing what the other groups are doing?
- 2) Which stakeholders are participating and communicating and who is not?
- 3) Who is not at the table that needs to be?
- 4) Who is involved in addressing this issue?
- 5) Who do you need to involve for your workforce initiative to be successful?



In addition to the educational institutions and employers, this graphic shows some other stakeholders that can contribute to education and workforce development. Some communities or regions may also have educational cooperatives, career education centers and/or adult education centers. Note that you will want to involve local, regional and statewide stakeholders in your development process. Appendix C has additional suggestions for possible stakeholders to involve.

## Education and Workforce Pipeline Stakeholders

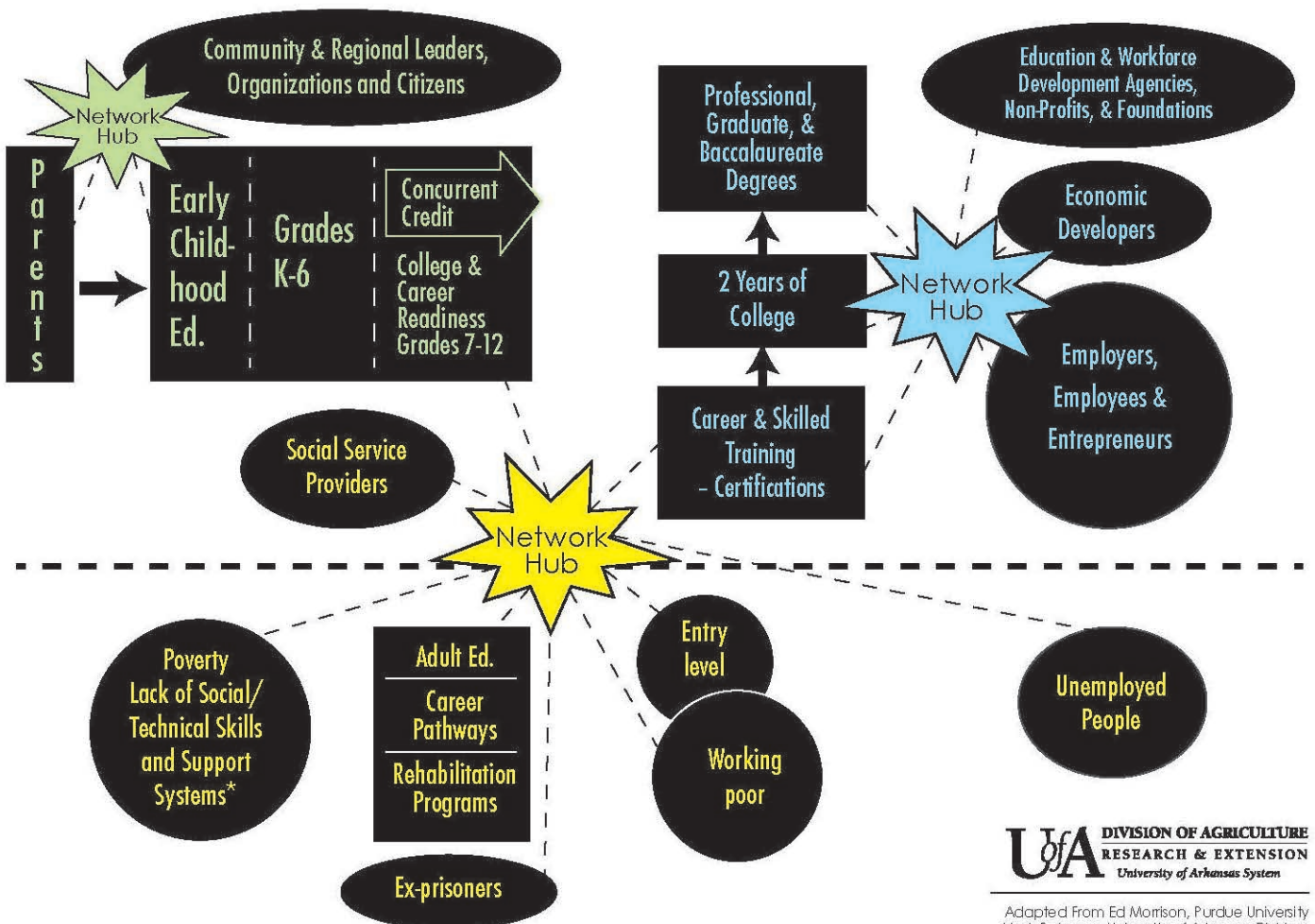


## VIII. Network System

For education and workforce development to be effective, it requires various stakeholders to communicate with each other about the needs, opportunities and issues facing the workforce and employers in your community. This may require forming network hubs – organizations, coalitions or alliances – in which stakeholders meet on a regular basis to share information and discuss issues. The following graphic shows some examples of these hubs. Because it is not feasible for ALL stakeholders to meet and discuss ALL of the issues and opportunities, successful communities tend to use more than one network hub.

*NOTE: The Arkansas Department of Career Education has been instrumental in developing regional education and industry advisory councils in Arkansas. You can learn more about them in APPENDIX D – Regional Education and Industry Advisory Councils.*

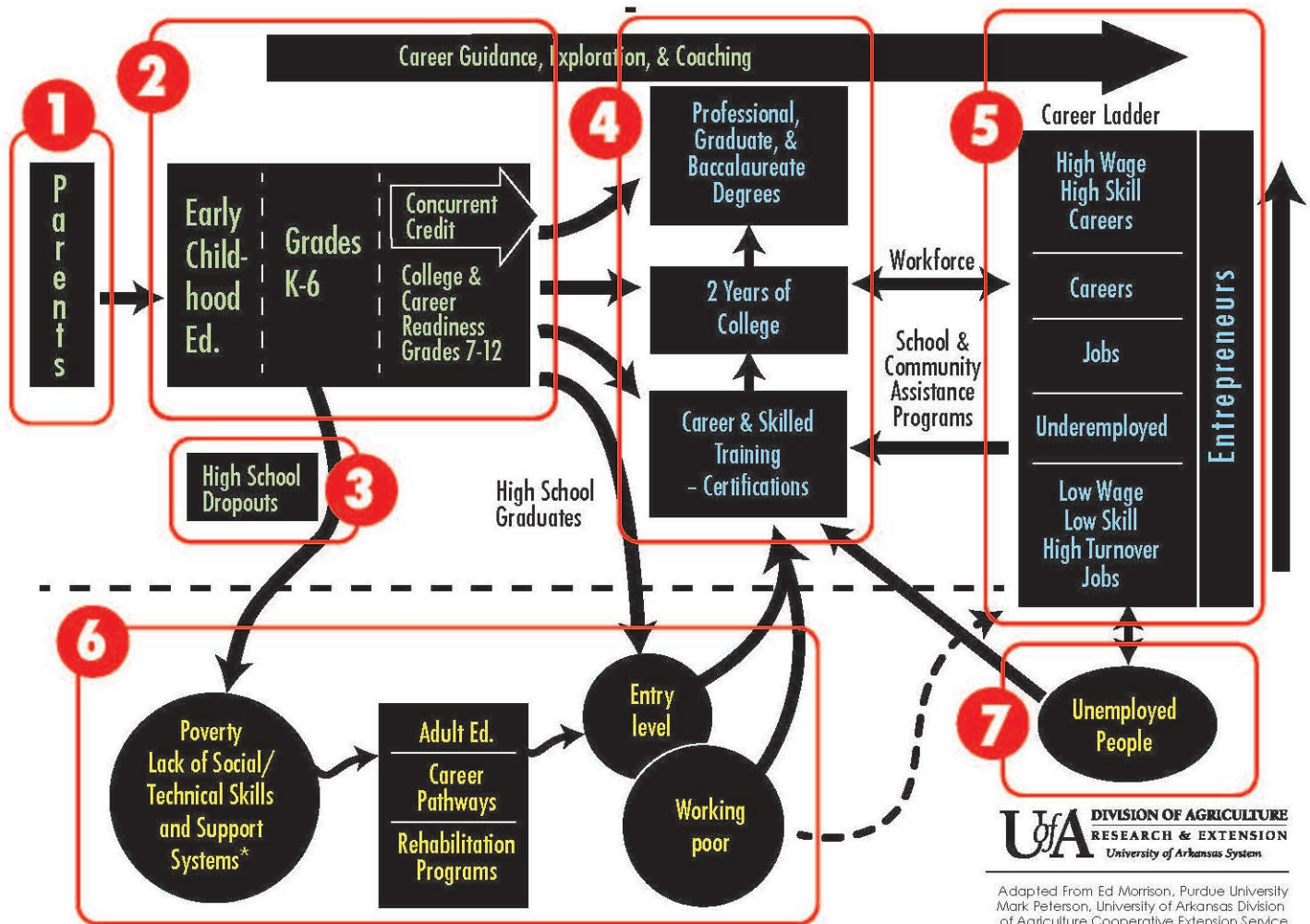
### Education and Workforce Pipeline Networks



# IX. Education and Workforce Focus Areas

To address particular issues, it is helpful to identify possible strategies within different focus areas. While the following focus areas are common ways to address particular components of the pipeline, it is also common for new initiatives to cross these boundaries and address more than one. For each focus area, you will need to engage the stakeholders that are concerned with that issue area, then use the Breakthrough Solutions Action Planning Process in Appendix C to address the issue.

## Education and Workforce Pipeline Focus Areas



# **X. Possible Strategies in Focus Areas**

## **Focus Area #1 – Support for Parents**

- Parent training programs
- Teen pregnancy prevention
- Prenatal care
- Pre-K programs
- All day kindergarten
- Nutrition and health
- Money management
- Manage work and family

## **Focus Area #2 – K-12**

- Reading intervention programs – seek for all children reading and comprehending well by the third grade

## **Focus Area #3 – Dropout Reduction Programs**

- National Drop-out Prevention Center, [www.dropoutprevention.org](http://www.dropoutprevention.org)
- Workforce youth councils
- Truancy laws

## **Focus Area #4 – Pre-K Through 14 for Everyone**

- Every child needs a post-secondary plan for two years of additional school beyond high school
- Career pathways
- School-to-work
- Tech-prep
- Employer consortia working with high school and community colleges
- Employability certificates – Work Keys and New Basic Skills
- Skills standards
- Survey high school students to discover what they plan to do after high school graduation and why. If they are going off to higher education or technical training, are they willing to come back and, if not, why not?

## **Focus Area #5 – Stronger Connections With Employers**

- Workforce literacy programs
- Customized training
- Employer consortia

## **Focus Area #6 – More Options to Help Low-Skilled People Move Into the Workforce**

- Workplace literacy programs
- Flexible post-secondary options
- Adult education
- Career pathways

## **Focus Area #7 – More Effective Training Options for the Unemployed**

- Focus on skill assessment and training
- Entrepreneurship training

# XI. Additional Strategies

To address the most critical issues in need of attention, or potentials, it is important to identify and involve the stakeholders in education and workforce development.

## Work Ready Communities Program

Many states are developing Work Ready Community programs that empower communities, counties and states with processes, data and tools deployed in a common workforce development framework to drive economic growth. You can learn about Arkansas's program here:

<http://workreadycommunities.org/AR>, and Missouri's program here:

<https://ded.mo.gov/getcertified/get-started>.

## ForwARd – A New Vision for Arkansas Education

ForwARd is a partnership of the Winthrop Rockefeller Foundation, Walton Family Foundation and Arkansas State Board of Education that is committed to helping every Arkansas student graduate prepared for success in college and the workplace. To realize this vision, the ForwARd steering committee has developed recommendations aimed at dramatically improving student achievement, closing the achievement gap and making Arkansas a leading state in education.

After a lengthy study process that involved 550 individuals in 48 focus groups, the steering committee developed recommendations in each of these focus areas: Pre-K, Teaching and Learning, Teacher Pipeline, Effective Leadership, Support Beyond the Classroom, Academically Distressed Schools, and Systems and Policies. You can learn more about it here:

<http://forwardarkansas.org/wp-content/uploads/2016/01/ForwARdVisions2015.pdf>.

## Create a Talent Recruitment Campaign

Create a Talent Recruitment Campaign to attract workers and entrepreneurs to your community or region.

**Example:** Louisville (<http://www.greaterlouisville.com/workinlou/>), Montreal (<http://www.montrealinternational.com/en/strategic-talents/>), Cleveland (<https://globalcleveland.org/>), Calgary (<http://www.bepartoftheenergy.ca/>), Raleigh (<http://www.workinthetriangle.com/>) and Houston (<https://www.thecitywithnolimits.com/>) are among other big cities that are entering the new battle for skilled workers. Emerging best practices in talent attraction include:

- Early and active participation of area companies in the design and execution of a talent attraction campaign;
  - A sustained and integrated communications effort that encompasses a mix of social media, advertising, media relations, job fairs and special events;
  - Well organized, visually compelling, informative websites offering links to specific job offerings.
- Big cities aren't the only ones in the talent attraction game. Belknap County, New Hampshire (<http://www.belknapedc.org/lrlocaltalent.html>), a rural area two hours north of Boston, recently launched a talent attraction initiative. The program aims to bring home young professionals who grew up in the area and have moved away. The approach is paired with a regional radio campaign which tells the story of available openings in the county's increasingly creative economy.



**Example:** Northwest Arkansas Council Launches Website to Market the Region to Job Seekers. To address that challenge of attracting workers to an area they have never visited, the Northwest Arkansas Council has launched a new website to market the growing region of more than 500,000 people. The Finding NWA website (<https://findingnwa.com/>) will provide recruiters working for those companies and out-of-state job seekers with information about living and working in the region. The overall program will continue to evolve as new needs are identified. Read more on the initiative here: <http://talkbusiness.net/2016/07/northwest-arkansas-council-launches-website-to-market-the-region-to-job-seekers/>

**Example:** Retention and Recruitment: Ideas for the Future of Arkansas.

The Under 40 Forum, a two-day summit held in April, 2016, brought together 40 Under 40 honorees to discuss how to recruit and retain talent in Arkansas. Sponsored by the Winthrop Rockefeller Institute and the Clinton School of Public Service, the summit yielded a report that describes what is working and not working to recruit and retail talent in Arkansas, as well as recommendations in these areas: Quality of Living, Education, Economic Opportunity and Regionalism Beyond Northwest Arkansas. You can see the report here: <http://rockefellerinstitute.org/uploads/Under40Report.pdf>.

*NOTE: A community's workforce recruitment campaign may target potential employees of manufacturing or service employers, entrepreneurs, small business people, telecommuters or professionals such as doctors, attorneys, pharmacists or accountants.*

## Addressing Complex Issues

Communities and regions face many complex issues that cannot be easily addressed. A simple but powerful tool for addressing these issues is the Stray Dog Causal Model, which asks the question “Why” three times. The Stray Dog Causal Model is good to address such issues as:

- Why is there a high dropout rate in our high school?
- Why is there a high teen pregnancy rate?
- Why are drugs in the workforce such a big problem?
- Why isn't our workforce showing up to work on time on a regular basis?

The Stray Dog Causal Model is explained in Appendix D in more detail.

*NOTE: One of the challenges facing many communities is the chicken and egg problem with regard to workforce and jobs. How can you attract jobs if you do not have a workforce, and how can you develop a workforce if there are no jobs. Entrepreneurship and growing your existing businesses partially addresses this issue.*

## XII. Summary

The Education and Workforce Pipeline does not provide answers to communities facing education and workforce issues. But what it does do is to provide a comprehensive, strategic approach to education and workforce development that enables a community to recognize the good things they already have underway and identify the greatest opportunities and issues that they can then address. Just as this represents the pioneering work of Ed Morrison from Purdue and input from several knowledgeable individuals, so can you in your community build on the work of others and learn from key stakeholders in your community or region. Thanks to all who have been involved with this initiative so far, and we look forward to hearing about great things happening in your community or region.



# References

- [1] <http://poverty.ucdavis.edu/faq/who-are-working-poor-america>
- [2] <http://www.census.gov/library/publications/2016/demo/p60-256.html>
- [3] <https://www.americanprogress.org/issues/poverty/reports/2009/08/25/6582/its-time-for-a-better-poverty-measure/>
- [4] <http://www.bls.gov/opub/reports/working-poor/archive/a-profile-of-the-working-poor-2013.pdf>
- [5] <http://www.epi.org/publication/charting-wage-stagnation/>
- [6] <https://www.oxfamamerica.org/static/media/files/Working-Poor-in-America-report-Oxfam-America.pdf>

# APPENDIX A. Guide to Data Resources for the Education and Workforce Pipeline\*

Attaching data to the pipeline will have several benefits. Facts will help the community identify the most important assets and needs. When developing goals for your efforts, it will be possible to use quantifiable targets for improvement. Evaluating the effectiveness of programs and activities is evidence-based instead of anecdotal. Facts and figures are powerful communication tools that show you have done your homework. To compete for grants, it is nearly always necessary to have data backing up your request for funding. You may use this data to compare your county with neighboring or comparable counties and with your state as well.

This summary of data resources is organized under themes that correspond with many of the topics in the pipeline. For each theme, a short description of the data sources is provided with a link to the data provider. A short list of key indicators is also provided to help guide the search for information. In every state, there is a Census State Data Center that can provide assistance. This link will help you locate the Center closest to you: <http://www.census.gov/about/partners/sdc/member-network.html>.

**Parents:** The Census Bureau is the only source of data that describes the characteristics of households with children. The Decennial Census is published every ten years and has the advantage of being very accurate because nearly every household participates; 2010 is the most recent version. The American Community Survey (ACS) is an annual series of data based on a sample of households. When using the ACS it is always best to select the five-year average data because the margin of error is lower than the one- and three-year estimates. Data is available for all incorporated places, counties and states. The Decennial Census and ACS data is available at the American Factfinder site (see link below).

**Website link:** <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

## **Key Indicators:**

- 1) Married couple families by age of children
- 2) Male householder, no wife present by age of children
- 3) Female householder, no husband present by age of children
- 4) Grandparents responsible for grandchildren

**Early Childhood Education:** There is no data resource for early childhood education because very few states have universal pre-K programs. This data will have to be gathered locally. Private day care providers, Head Start and school districts may all be operating programs in your community. Develop a list of these resources and consider using a simple survey to gather data about enrollment and the issues and opportunities for early childhood education.

**Children:** The Census Bureau publishes several profiles describing characteristics of children, but they are currently not available for all counties. The data is available for all urban counties and most rural counties with a city of 10,000 or more. In rural counties, there are still several useful tabulations that are included in data published for households and families. Another excellent source of information about children is the Kids Count data profile prepared by the Annie E. Casey Foundation. This profile is available for all states and counties and includes ranking and ratings for nearly two dozen key indicators.

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\* Prepared by Pat Curry, ExCEED, University of Missouri Extension.

**Website link:** <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>  
<http://datacenter.kidscount.org/>

**Key Indicators:**

- 1) Total number of children by age
- 2) Children by type of household
- 3) Children in poverty
- 4) Kids Count indicators and rankings

**School Characteristics:** Data for public schools is available from three sources. The best source will normally be the department of education in your state. A directory to state departments of education is available at the U.S. Department of Education website (see Website link below). Most schools will also have copies of the report cards issued by the state department of education. An alternative source is the Data Tools page at the National Center for Education Statistics. This site has data for all school districts in the United States, but there is far less information here than at most state sites.

**Website link:** <http://www2.ed.gov/about/contacts/state/index.html>  
<http://nces.ed.gov/datatools/>

**Key Indicators:**

- 1) Enrollment by grade
- 2) Attendance rate
- 3) Dropout rate/high school graduation rate
- 4) School performance indicators including scores on standardized tests
- 5) Low income and participation in free and reduced-price meals
- 6) High school graduates career and education plans

**Educational Attainment:** The Census Bureau publishes an extensive array of educational attainment data in the American Community Survey which is available at the American Factfinder site. This data is one of the most important and widely used indicators of labor force quality.

**Website link:** <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

**Key Indicators:**

- 1) Poverty status by educational attainment
- 2) Geographic mobility by educational attainment
- 3) Sex and age by educational attainment

**High School Graduation Rates:** One of the most quoted indicators is high school dropout rate. You can learn more here:

**Website link:** Link to US DOE Legal Guidance on Four-year Adjusted Cohort Graduation Rate  
<http://www2.ed.gov/policy/elsec/reg/proposal/uniform-grad-rate.html>

Link to US DOE Non-Regulatory Guidance on Four-year Adjusted Cohort Graduation Rate  
<http://www2.ed.gov/policy/elsec/guid/hsgrguidance.pdf>

**Poverty and Socioeconomic Characteristics:** These data can be used to profile the persons and households below the dashed line on the pipeline. This includes the unemployed, persons and households in poverty and the working poor. The Census Bureau is the only source of data for most of these indicators and is the only provider that has data for geographic areas smaller than a county. The Bureau

of Labor Statistics publishes the official monthly unemployment statistics and has several data tools to explore occupational and economic trends influencing employment opportunities. Another useful source of data is the Living Wage Calculator prepared by the Massachusetts Institute of Technology. This tool provides county level calculations of living wages by household size.

**Website link:** <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>  
<http://www.bls.gov/data/>  
<http://livingwage.mit.edu/>

**Key Indicators:**

- 1) Disability and mobility limitations
- 2) Participation in Food Stamp/SNAP programs
- 3) Poverty population by age, sex and race
- 4) Poverty by employment status and work experience
- 5) Poverty by educational attainment
- 6) Income deficit for persons in poverty
- 7) Unemployment rates
- 8) Living wages

**Career Ladder – Local Economy:** The Career Ladder includes two different types of data. Occupational data is the most important because the education and job training systems are designed around teaching occupational skills. Occupational data is available from the Bureau of Labor statistics and the Census Bureau. The Bureau of Labor Statistics publishes detailed data on occupations, but the data is not available for rural counties. In rural areas, they combine several counties into nonmetropolitan regions. The Census publishes a tabulation of the occupational characteristics of the resident population by sex with an estimate of median earnings.

Data that describes local economic conditions can be viewed and downloaded from several sites; nearly all of them are limited to county and state geographies. StatsAmerica is one of the easiest to use and provides several tools that are useful for creating a profile at the county level. Your Economy is a unique source of information describing business growth and decline for counties.

**Website links:** <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>  
<http://www.bls.gov/oes/>  
<http://www.bls.gov/data/>  
<http://www.statsamerica.org/Default.aspx>  
<http://www.youreconomy.org/>

**Key Indicators:**

- 1) Occupation by sex and earnings
- 2) Place of work (proportion of the population commuting out of the county or city of residence)
- 3) Proprietors and proprietors earnings (small business indicator)
- 4) Total number of jobs by industry
- 5) Average wages
- 6) Labor force participation rates
- 7) Business openings, expansions and contractions

# APPENDIX B: Additional Resources for Workforce Development

Although each community is unique in both its workforce development challenges and resources available, there are several national initiatives that can be of assistance to your local efforts. If you aren't already engaged with the following potential partners, explore how they can support your local workforce preparation efforts. As you work with each of these individual organizations, ask them about additional partners you should be working with.

## Arkansas and Missouri Resources

### Arkansas Education and Workforce Development Resources

- Arkansas Community Foundation – Aspire Arkansas has education data for each county in the state: <http://www.arcf.org/ToolsforSmartGiving/County-by-CountyStats.aspx>
- Arkansas Department of Education – <http://www.arkansased.gov/>
  - ◇ High School Graduation Rates – see Arkansas Department of Education Graduation Rate webpage: <http://www.arkansased.gov/divisions/public-school-accountability/school-performance/graduation-rate> (second pdf down on the righthand side)
- Arkansas Department of Higher Education – <http://www.adhe.edu/>
- Arkansas Department of Career Education – <http://ace.arkansas.gov/Pages/default.aspx>
- Arkansas Department of Workforce Services – <http://www.dws.arkansas.gov/>
- Arkansas Economic Development Commission – <http://arkansasedc.com/>
- Link to 2015 Update of Building a Grad Nation (see Appendices J and K)  
[http://gradnation.org/sites/default/files/18006\\_CE\\_BGN\\_Full\\_vFNL.pdf](http://gradnation.org/sites/default/files/18006_CE_BGN_Full_vFNL.pdf)

### Missouri Education and Workforce Development Resources

- EXCEED, Missouri Extension Community Economic and Entrepreneurial Development, University of Missouri - Columbia – <http://extension.missouri.edu/exceed>.
- Missouri Department of Economic Development – <https://ded.mo.gov>
- Missouri Department of Economic Development, Division of Workforce Development  
<https://jobs.mo.gov/>
- Missouri Department of Elementary and Secondary Education – <https://dese.mo.gov>
- Missouri Department of Higher Education – <http://dhe.mo.gov/>
  - ◇ College and Career Readiness – <http://dhe.mo.gov/CollegeAndCareerReadiness.php>
- Missouri KIDS COUNT – <http://missourikidscountdata.org/>
- Missouri State Workforce Development Board –  
[http://www.workforceinvestmentworks.com/workforce\\_board\\_info.asp?st=MO](http://www.workforceinvestmentworks.com/workforce_board_info.asp?st=MO)
  - ◇ Location of regional Workforce Investment Boards within Missouri –  
<https://www.servicelocator.org/workforcesystem/default.aspx?loc=MO&lst=2>
- Office of Social and Economic Development Analysis (OSED) – University of Missouri - Columbia – <http://osed.missouri.edu/>

## Resources Across States

### Apprenticeships

- You can learn what various states are doing with registered apprenticeships here: <https://www.dol.gov/sites/default/files/2016-apprenticeship-state-project-summaries.pdf>

### Cooperative Extension Service (based at your state's "land-grant" university)

- Over 100 years of bringing university resources out to the community – including health and nutrition, basic parenting skills, community development and business development support – <https://nifa.usda.gov/extension>

### Early Childhood/Elementary Age

- **Parents as Teachers** (basic parenting skills) – <http://www.parentsasteachers.org/>
- **Head Start** (day care for children of lower income parents, work skills for those parents) – <https://eclkc.ohs.acf.hhs.gov/hslc/HeadStartOffices>
- **YMCA network** (mentoring programs, after school programs, camps) – <http://www.ymca.net/>
- **Junior Achievement** (curriculum from K-12 to provide better understanding of the work world and business skills) – <https://www.juniorachievement.org/web/ja-usa/home>
- **The Leader in Me** (Stephen Covey's 7 Habits for elementary age youth) – [http://www.theleaderinme.org/?gclid=CNWKzIe5\\_8wCFZaEaQodJA0Bpw](http://www.theleaderinme.org/?gclid=CNWKzIe5_8wCFZaEaQodJA0Bpw)
- **4-H** (over 100 years of providing opportunities for youth to set and meet goals) – [http://www.4-h.org/?gclid=CO3m1szA\\_8wCFQ2QaQodeu0C\\_A](http://www.4-h.org/?gclid=CO3m1szA_8wCFQ2QaQodeu0C_A)
- **Arkansas Campaign for Grade-Level Reading** – <http://www.ar-qlr.net/>  
*NOTE: This web page has hotlinks to several organizations involved in K-12 education in Arkansas: <http://www.ar-qlr.net/about/advisory-committee/>*

### Job Trends/Availability Projections

- **Occupational Outlook** – <http://www.bls.gov/ooh/>

### Low Income Community Members

- **Community action agency** – [http://www.communityactionpartnership.com/index.php?option=com\\_spreadsheets&view=search&spreadsheet=cap&Itemid=188](http://www.communityactionpartnership.com/index.php?option=com_spreadsheets&view=search&spreadsheet=cap&Itemid=188)

### Middle/High School Age

- **Manufacturing Day** (national initiative involving private sector business and chamber of commerce) – <http://www.mfgday.com/>
- **Reality Day** (several hour simulation of basic costs/skills needed for living in the "real" world) – Chamber/Rotary/Extension

### Workforce Development Boards

- Workforce development boards are regional coalitions supporting workforce development established by federal government. They include regional career centers and direct federal, state and local funding to workforce development programs. You can find the closest one to your community here: <http://www.servicelocator.org/workforcecontacts.asp>.

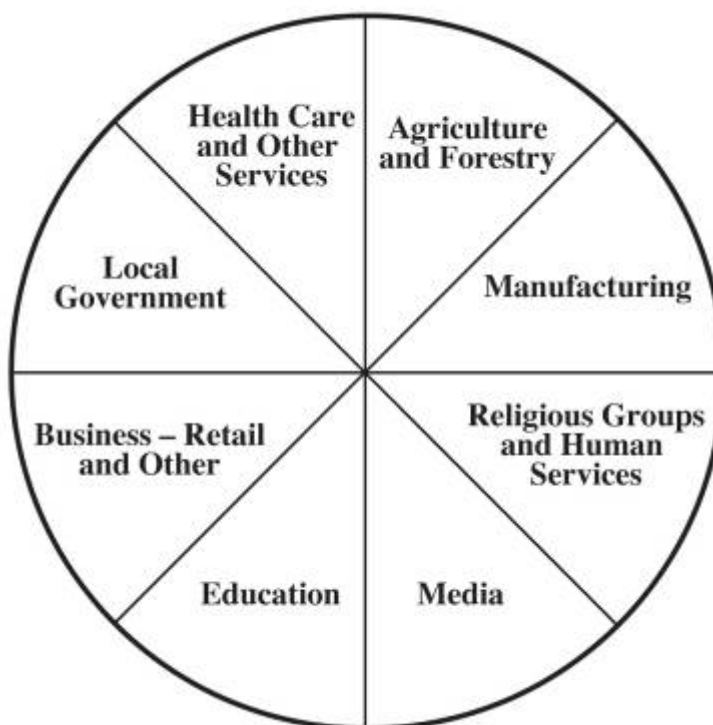


# APPENDIX C: Stakeholder Groups to Involve

Review the community sector wheel and the stakeholder list, with a particular focus on who in these groups:

- Is directly involved in education and workforce development.
- Has a passion to really work to improve education and workforce development in the community or region.

## Community Sector Wheel



Review the following checklist, considering stakeholders at the local, regional and state levels:

### Local Government – PUBLIC SECTOR

- \_\_\_ City and county government – elected and appointed officials
- \_\_\_ Law enforcement agencies
- \_\_\_ Other state and national elected officials or agencies in your community

### Business – PRIVATE SECTOR

- \_\_\_ Chamber of Commerce and other economic development groups
- \_\_\_ Financial lenders, accountants, attorneys and other professionals
- \_\_\_ Transportation firms

- \_\_\_ Utilities, including Internet service providers
- \_\_\_ Major employers
- \_\_\_ Small business representatives
- \_\_\_ Creative economy artisans

### **Organizations – NONPROFIT SECTOR**

- \_\_\_ Faith-based organizations
- \_\_\_ Civic clubs, community development corporations
- \_\_\_ Community foundations
- \_\_\_ Arts, cultural and historical groups
- \_\_\_ Other nonprofits and informal organizations

### **Media**

- \_\_\_ Newspapers, radio, TV
- \_\_\_ Online newspapers, bloggers, social media users

### **Health Care**

- \_\_\_ Hospitals
- \_\_\_ Physicians and other health care professionals
- \_\_\_ Home health agencies
- \_\_\_ Mental health organizations
- \_\_\_ Emergency responders

### **Agriculture, Forestry and Aquaculture**

- \_\_\_ Agricultural, forestry and aquaculture producers and suppliers
- \_\_\_ Agricultural organizations, including the county fair board
- \_\_\_ Value added processors and shippers

### **Education (students, faculty, administration, parents)**

- \_\_\_ Public and private schools
- \_\_\_ Vo-tech schools
- \_\_\_ Colleges and universities
- \_\_\_ County office of the University Extension Service

### **Various Demographic Groups**

- \_\_\_ Individuals from all age groups – high school and college students, 20- and 30-year-olds, middle age citizens and senior citizens
- \_\_\_ Diverse racial and ethnic representation
- \_\_\_ A mixture of old-timers and newcomers into the community

### **Other Groups**

# APPENDIX D – Regional Education and Industry Advisory Councils

This information on regional education and industry advisory councils was created by and is currently used by the Arkansas Department of Career Education:

## Purpose for Regional Education and Industry Advisory Councils

We know:

- Globalization has rewritten the rules of competition.
- Economies and demographics are changing.
- The talent bar for success is rising.
- The tools for learning and skills acquisition are changing.
- Expectations for return on investment (ROI) in education and business is rising.
- Funding for career and technical education has remained stagnant in Arkansas.
- All high schools, career centers and community colleges have advisory councils all requesting the same employers in the area to participate in their councils.
- Employers want to be a part of the education and training pipeline.
- Advisory councils are the number one critical element from Technical Assistance Visits
  - ◇ Not meeting regularly in all programs of study.
  - ◇ Not providing minutes or sign-in sheets.
  - ◇ Not getting good representation from employers.
  - ◇ Not effectively addressing the issues or following up with employer advice.

We must:

- Re-think credentials and their value in the local/regional workforce.
- Review duplication of services between secondary and postsecondary programs.
- Provide educators, students and their families with regional current and relevant labor market information to make informed career planning decisions.
- Address skills gaps, particularly for middle skills jobs.
  - ◇ Over-supply in low demand employment areas.
  - ◇ Under-supply in high employment demand areas.
- Align and strengthen the connections between educational entities in:
  - ◇ Digital Learning.
  - ◇ Concurrent Credit.
  - ◇ Project/Community based learning.
  - ◇ End the high school dropout epidemic with meaningful training programs.
- Review regional alignment of education, workforce and economic development assets to create clear pathways and smooth transitions to employment and meet the needs of new and existing employers.
- Engage businesses in a meaningful way developing partnerships for:
  - ◇ Work-based learning experiences.
  - ◇ Shared training (workplace or classroom lab).
  - ◇ Equipment and/or facilities sharing.
- Re-examine college and career readiness.
  - ◇ Credentials, diplomas and degrees.
  - ◇ Skilled and technical training.
  - ◇ Employability.

- Review MOU agreements between the high school, career center and post-secondary school for Perkins alignment in at least one program of study.
- Establish the foundation for Career Ready Communities.
  - ◇ Regional communities are based upon economic regions that cross county and state lines.
  - ◇ Partnerships between government, education and industry stakeholders.

## **Regional Business and Industry Advisory Council Expectations**

- 1) Focus on the economic impact that targeted education and training will have when creating a viable workforce for existing and potential employers.
- 2) Establish partnerships between educators, employers and economic developers.
- 3) Establish platforms for follow-up between employers, postsecondary schools and career training programs.
- 4) Demonstrate to employers the desire to meet their workforce needs by improving what we teach.
- 5) Identify and target in-demand and high growth occupational fields in the economic region.
- 6) Align secondary and postsecondary Career and Technical Education (CTE) programs for smooth career pathway transition.
- 7) Determine skills gaps and resolve with appropriate and relevant technical training for students.
- 8) Obtain recommendations for CTE program course additions and changes.
- 9) Find grant opportunities for specific skill set training to improve workforce placement.
- 10) Identify, develop and promote concurrent and articulated credit courses.
- 11) Identify required or preferred industry certifications.
- 12) Determine stakeholders that should participate in future regional advisory councils.
- 13) Get current, relevant and local labor market information in the hands of students, parents, counselors and school administrators so they can make informed education and training decisions.
- 14) Find employers willing to participate in career awareness and development activities for students with job shadowing, speaking in the classroom, career fairs, industry tours for interested students, mentorships for serious students and internships for work-based learning.
- 15) Identify employers willing to share equipment, tools or materials with schools for hands-on learning which will in turn prepare students for those jobs.
- 16) Evaluate current program effectiveness and set goals to improve positive placement.
- 17) Collaborate to promote and expose students to high demand occupational areas having low student interest.
- 18) Determine how to integrate soft skills, transferable skills, and employability skills in technical skills training programs.

## **Regional Advisory Council Checklist / Evaluation**

### **Regional Advisory Council and Partnerships**

- 1) \_\_\_\_ The business and industry advisory council is represented by all stakeholders in the targeted pathways.
- 2) \_\_\_\_ The advisory council meets at least once annually with minutes taken for all participants.
- 3) \_\_\_\_ The advisory council meeting is facilitated by a member of a neutral economic developer.
- 4) \_\_\_\_ Has sufficient planning for location, date, media, refreshments, facilitators and planned questions.

### **The advisory council has representation from:**

- 5) \_\_\_\_ Area high schools with similar programs in targeted pathways.
- 6) \_\_\_\_ All school district and postsecondary administrators.
- 7) \_\_\_\_ Arkansas community colleges representatives.
- 8) \_\_\_\_ Education Coop CTE coordinators.

- 9) \_\_\_\_ Career center directors.
- 10) \_\_\_\_ Apprenticeship program representatives.
- 11) \_\_\_\_ Economic developers and Chamber of Commerce representatives.
- 12) \_\_\_\_ Industry stakeholders (decision-makers).
- 13) \_\_\_\_ Professional organization representatives.
- 14) \_\_\_\_ ACE CTE coordinators and advisors.

**The advisory council facilitators are prepared with:**

- 15) \_\_\_\_ Follow-up reports and minutes from previous meetings.
- 16) \_\_\_\_ Predetermined questions with expectations and outcomes for each meeting.
- 17) \_\_\_\_ Labor market information including current and projected job availability.
- 18) \_\_\_\_ Area post-secondary schools programs.
- 19) \_\_\_\_ Knowledge of student competency expectations at each level of training.
- 20) \_\_\_\_ Curriculum.
- 21) \_\_\_\_ Facilities, equipment and tools requirements.
- 22) \_\_\_\_ Assessments and credentialing opportunities.
- 23) \_\_\_\_ Grant opportunities and funding sources.
- 24) \_\_\_\_ Opportunities for shared training and internship programs.

**The instructor is knowledgeable of:**

- 25) \_\_\_\_ Industry skills training availability.
- 26) \_\_\_\_ Current knowledge of equipment, technology, tools and safety procedures.
- 27) \_\_\_\_ Professional organizations and training opportunities.
- 28) \_\_\_\_ Articulation agreements for postsecondary credit opportunities for students.
- 29) \_\_\_\_ Student organizations and activities for extended learning and leadership.
- 30) \_\_\_\_ Digital on-line and concurrent learning opportunities for students.

**The advisory council makes recommendations for:**

- 31) \_\_\_\_ Pathway course offerings to align and provide foundation for postsecondary program.
- 32) \_\_\_\_ Curriculum materials and software.
- 33) \_\_\_\_ Industry credentialing.
- 34) \_\_\_\_ Equipment and facilities needed for effective training.
- 35) \_\_\_\_ Teacher externships.
- 36) \_\_\_\_ Student internships, extended learning and work-based learning opportunities.
- 37) \_\_\_\_ Career guidance programs and activities (resource speakers, college and career fairs).
- 38) \_\_\_\_ College and industry tours.
- 39) \_\_\_\_ Knowledgeable industry resource speakers for the classroom.
- 40) \_\_\_\_ Adequate career action planning.

**The advisory council analysis for skills gaps include:**

- 41) \_\_\_\_ Reasons for jobs that are difficult to fill.
- 42) \_\_\_\_ Teaching of relevant occupational skills.
- 43) \_\_\_\_ Outdated education programs, equipment, curriculum, training or technology.
- 44) \_\_\_\_ Insufficient work-based learning opportunities.
- 45) \_\_\_\_ Lack of non-traditional participation.
- 46) \_\_\_\_ Occupational pathway student completion and certification.
- 47) \_\_\_\_ Employability and soft skills.

**Planning Meeting Next Steps Agenda:**

- 48) \_\_\_\_ Determine economic and education region.
- 49) \_\_\_\_ Determine regional advisory council date and location.

- 50) \_\_\_\_ Determine format depending on facilities and targeted pathways.
- 51) \_\_\_\_ Review labor market information and education program completion.
- 52) \_\_\_\_ Determine high priority targeted pathways/industry sectors.
- 53) \_\_\_\_ Review alignment of secondary, postsecondary and occupational demand areas.
- 54) \_\_\_\_ Determine stakeholders.
- 55) \_\_\_\_ Determine B & I panel facilitator.
- 56) \_\_\_\_ Determine career pathway chairs and facilitators.
- 57) \_\_\_\_ Determine major objectives/outcomes (alignment of secondary, career center, college and industry).
- 58) \_\_\_\_ Determine group sizes to match up with room sizes.
- 59) \_\_\_\_ Determine media coverage.
- 60) \_\_\_\_ Determine refreshments/meals and presenter gifts.
- 61) \_\_\_\_ Determine panel questions that must be addressed in each pathway.
- 62) \_\_\_\_ Determine follow-up procedures and next steps.
- 63) \_\_\_\_ Determine success evaluation process.

**Outcomes and expectations:**

- 64) \_\_\_\_ The curriculum being taught is relevant and covers all aspects of the industry.
- 65) \_\_\_\_ Articulated or concurrent credit opportunities for area high school students with agreements on file.
- 66) \_\_\_\_ There are digital learning courses available for secondary and postsecondary students.
- 67) \_\_\_\_ Teaching materials are current in the knowledge, skills and abilities required for entry-level positions.
- 68) \_\_\_\_ Equipment and technology is current in industry.
- 69) \_\_\_\_ The program includes safety and hazardous materials handling training meeting industry standards.
- 70) \_\_\_\_ There are work-based learning opportunities including internships, apprenticeships and mentorships.
- 71) \_\_\_\_ There are industry exposure opportunities in job shadowing, industry tours, career fairs and externships.
- 72) \_\_\_\_ There is a clear education and training pathway with foundation courses, advanced courses, postsecondary certification and industry credentialing.
- 73) \_\_\_\_ Local career pathway plans of study are clearly evident to students and parents.

*Source: Arkansas Department of Career Education – <http://ace.arkansas.gov/cte/Pages/default.aspx>*



# APPENDIX E: Breakthrough Solutions Action Planning Process

Your workforce issue: \_\_\_\_\_

Stakeholders for this issue: \_\_\_\_\_

Describe the situation or issue today (bullet points and stats): (10 min)

What is Working Well

Challenges

\*  
\*  
\*

What would this look like in 5 or 10 years if you are really successful in addressing this issue? (10 min)

\*  
\*  
\*

Describe your assets:

Brainstorm opportunities:

(15 min)

\*  
\*  
\*  
\*

\*  
\*  
\*  
\*

Identify your top 1-3 priorities and describe them as goals:

(5 min)

(Create at least one short-term goal that can be accomplished within 3 months)

\*  
\*  
\*

Describe action steps for the next 30 days: (Start with fact-finding)

(15 min)

Who	Action Step
-----	-------------

*	
*	
*	

Who else needs to be involved? (individuals, organizations, networks)

(5 min)

\*  
\*

Who will invite them?

\*  
\*

When will we meet again (date, time, place):

How will we stay in touch:

List of team members:

\*  
\*  
\*

\*  
\*  
\*

# APPENDIX F: Addressing Complex Issues – the Stray Dog Model

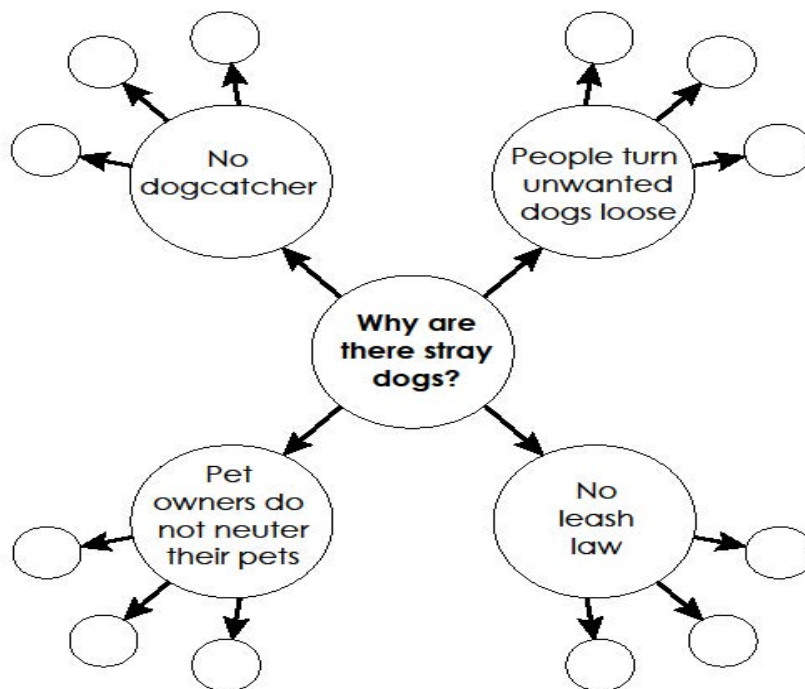
Communities and regions face many complex issues that cannot be easily addressed. A simple but powerful tool for addressing these issues is the Stray Dog Causal Model.

Here are the steps to follow in the model:

- 1) Write an issue (like “Why are there stray dogs in our community?”) on a flip chart and draw a circle around it.
- 2) Ask the group “What do you see as the three or four primary reasons there are stray dogs in your community?”
- 3) Write these responses around the first circle, draw circles around them, with arrows from the first circle.
- 4) Now take each of these responses (such as “No leash law”) and ask them what causes this.
- 5) Write the responses around “No Leash Law” and draw circles around them.
- 6) Take one of those reasons and ask why there is no leash law, and continue.
- 7) You may need more sheets of paper, but it will uncover root causes, and many opportunities for taking action.
- 8) Review the big sheets and identify the top one to three actions that are most likely to be effective.

You are asking “WHY” three times.

## Addressing Complex Issues The Stray Dog Causal Model



This model is useful to address questions such as:

- Why is there a high dropout rate in our high school?
- Why is there a high teen pregnancy rate?
- Why are drugs in the workforce such a big problem?
- Why isn't our workforce showing up to work on time on a regular basis?

*Source: Mike Hamilton, University of Arkansas Cooperative Extension Service*

When planning for a year, plant corn.

When planning for a decade, plant trees.

When planning for life, train and educate people.

*Chinese Proverb Guanzi (c. 645BC)*

For more information, contact:

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Pat Curry, Project Manager, ExCEED (Community Economic and Entrepreneurial Development), University of Missouri Extension, 211 Gentry Hall, Columbia, Missouri 65211, currymp@missouri.edu, 573.882.9509

Wayne Miller, Professor - Extension Economist, University of Arkansas Cooperative Extension Service, 2301 South University, Little Rock AR 72204, wmillier@uada.edu, 501-671-2085

## Breakthrough Solutions Partners

Breakthrough Solutions is a program of the University of Arkansas Division of Agriculture Cooperative Extension Service, with the following partners:

Arkansas Community Colleges  
Arkansas Community Foundation  
Arkansas Geographic Information Office  
Arkansas Human Development Corporation  
Arkansas Manufacturing Solutions, AEDC  
Arkansas State Chamber of Commerce/AIA  
AT&T Arkansas  
Conway County Economic Development Commission  
Cromwell Architects Engineers  
Electric Cooperatives of Arkansas  
Entergy Business Development  
Federal Reserve Bank of St. Louis, Little Rock Branch  
Ken Hubbell and Associates  
Newport Economic Development Commission  
Simmons Bank  
Strategic Consultants  
University of Central Arkansas Center for Community and Economic Development  
University of Arkansas at Little Rock Institute of Economic Advancement  
University of Arkansas at Little Rock School of Public Affairs  
University of Arkansas at Little Rock Small Business Technology and Development Center

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